DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 49TH FIGHTER WING (ACC)
HOLLOMAN AIR FORCE BASE, NEW MEXICO

ENTERED

JUL 2010

JUN 17 2010

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Dear New Mexico Environment Department

Holloman AFB is pleased to submit the April 2009-January 2010 Long Term Monitoring Report (OT-16, DP-30, SD-33, and SS-39) for your review.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

If you have any questions, please contact Mr. David Scruggs of our Asset Management Flight at (575) 572-5395.

Sincerely

17 Jun '10
A. DAVID BUDAK, YF-3, DAFC

Attachment:
April 2009-January 2010 Long Term Monitoring Report
cc:

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FINAL

APRIL 2009 – JANUARY 2010 LONG-TERM MONITORING REPORT FOR OT-16 (SWMUs 118 AND 132 AND AOC-A), DP-30/SD-33 (SWMU 113B), AND SS-39 (SWMUs 165, 167, 177, 179, AND 181) HOLLOMAN AIR FORCE BASE, NEW MEXICO EPA ID# NM6572124422

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TABLE OF CONTENTS

1.0 INTRODUCTION 1-1
1.1 BASIS FOR LONG-TERM MONITORING 1-1
1.2 PURPOSE 1-1
1.3 REPORT ORGANIZATION 1-2

2.0 BACKGROUND 2-1
2.1 FACILITY BACKGROUND 2-1
2.2 SITE-SPECIFIC BACKGROUND 2-2
2.2.1 OT-16 – Existing Entomology Shop Area 2-2
2.2.2 DP-30/SD-33 – Grease Trap Disposal Pits And Cooking Grease Disposal Trench 2-3
2.2.3 SS-39 – Missile Fuel Spill Area 2-4

3.0 SAMPLING PROCEDURES 3-1
3.1 VARIATIONS FROM THE WORK PLAN 3-1
3.2 DATA EVALUATION 3-2
3.3 PROJECT REPORTING 3-3
3.4 DATA VALIDATION 3-3
3.5 SS-39 PRE-PACK WELL INSTALLATION 3-3
3.6 WATER LEVEL MEASUREMENTS 3-4
3.7 GROUNDWATER PURGING AND SAMPLING 3-4

4.0 GROUNDWATER MONITORING RESULTS 4-1
4.1 OT-16 – EXISTING ENTOMOLOGY SHOP AREA 4-1
4.1.1 Hydrogeology 4-1
4.1.2 Groundwater Sampling Results 4-2
4.2 DP-30/SD-33 – GREASE TRAP DISPOSAL PIT AND COOKING GREASE DISPOSAL TRENCH 4-2
4.2.1 Hydrogeology 4-3
4.2.2 Groundwater Sampling Results 4-3
4.3 SS-39 – MISSILE FUEL SPILL AREA 4-5
4.3.1 Hydrogeology 4-5
4.3.2 Groundwater Sampling Results 4-6

5.0 HUMAN HEALTH RISK ASSESSMENT 5-1
5.1 CHEMICALS OF POTENTIAL CONCERN 5-1
5.1.1 DP-30/SD-33 – Grease Trap disposal Pits and Cooking Grease Disposal Trench 5-2
5.1.2 SS-39 – Missile Fuel Spill Area 5-2
5.2 RECEPTORS 5-2
5.3 RISK CHARACTERIZATION 5-4
5.3.1 Carcinogenic Risks for HAFB Groundwater 5-4
5.4 NONCARCINOGENIC RISKS FOR HAFB GROUNDWATER 5-4
5.5 SUMMARY 5-5

6.0 SUMMARY AND RECOMMENDATIONS 6-1
6.1 OT-16 (SWMUS 118 AND 132 AND AOC-A) 6-1
6.1.1 Summary 6-1
6.1.2 Recommendations 6-1
6.2 DP-30/SD-33 (SWMU 113B) 6-1
6.2.1 Summary 6-2
6.2.2 Recommendations 6-3
6.3 SS-39 (SWMUS 165, 167, 177, 179, 181) 6-3
6.3.1 Summary 6-4
6.3.2 Recommendations 6-5

7.0 REFERENCES 7-1

TABLES

Table 3-1 Monitoring Well Construction Details for OT-16, DP-30/SD-33, and SS-39
Table 4-1 Groundwater Level Measurements, OT-16 (SWMUs 118 and 132 and AOC-A) - Existing Entomology Shop Area
Table 4-2 Groundwater Quality Parameters, OT-16 (SWMUs 118 and 132 and AOC-A) - Existing Entomology Shop Area
Table 4-3 Summary of Groundwater Detections (April 2009 - January 2010), OT-16 (SWMUs 118 and 132 and AOC-A) - Existing Entomology Shop Area
Table 4-4 Groundwater Monitoring Analytical Results, OT-16 (SWMUs 118 and 132 and AOC-A) - Existing Entomology Shop Area
Table 4-5 Groundwater Level Measurements, DP-30/SD-33 (SWMU 113B) - Grease Trap Disposal Pits and Cooking Grease Disposal Trench
Table 4-6 Groundwater Quality Parameters, DP-30/SD-33 (SWMU 113B) - Grease Trap Disposal Pits and Cooking Grease Disposal Trench
Table 4-7 Summary of Groundwater Detections (July 2009 - January 2010), DP-30/SD-33 (SWMU 113B) - Grease Trap Disposal Pits and Cooking Grease Disposal Trench
Table 4-8 Groundwater Monitoring Analytical Results, DP-30/SD-33 (SWMU 113B) - Grease Trap Disposal Pits and Cooking Grease Disposal Trench
Table 4-9 Groundwater Level Measurements, SS-39 (SWMUs 165, 177, 179, and 181) - Missile Fuel Spill Area
Table 4-10 Groundwater Quality Parameters, SS-39 (SWMUs 165, 177, 179, and 181) - Missile Fuel Spill Area
Table 4-11 Summary of Groundwater Detections (July 2009 - January 2010), SS-39 (SWMUs 165, 177, 179, and 181) - Missile Fuel Spill Area
Table 4-12 Groundwater Monitoring Analytical Results, SS-39 (SWMUs 165, 177, 179, and 181) - Missile Fuel Spill Area

FIGURES

Figure 2-1 Installation Location Map
Figure 2-2 Site Location Map
Figure 2-3 OT-16 Site Map
Figure 2-4 DP-30/SD-33 Site Map
Figure 2-5 SS-39 Site Map
Figure 4-1 OT-16 Groundwater Potentiometric Surface Map (April 2009)
Figure 4-2 OT-16 Groundwater Potentiometric Surface Map (July 2009)
Figure 4-3 OT-16 Groundwater Potentiometric Surface Map (October 2009)
Figure 4-4 OT-16 Groundwater Potentiometric Surface Map (January 2010)
Figure 4-5 DP-30/SD-33 Groundwater Potentiometric Surface Map (July 2009)
Figure 4-6 DP-30/SD-33 Groundwater Potentiometric Surface Map (October 2009)
Figure 4-7 DP-30/SD-33 Groundwater Potentiometric Surface Map (January 2010)
Figure 4-8 DP-30/SD-33 Groundwater Sampling Exceedances
Figure 4-9 Trichloroethene (TCE) Trends at DP-30/SD-33
Figure 4-10 SS-39 Groundwater Potentiometric Surface Map (July 2009)
Figure 4-11 SS-39 Groundwater Potentiometric Surface Map (January 2010)

FIGURES (CONTINUED)

Figure 4-12 SS-39 Groundwater Sampling Exceedances
Figure 4-13 Perchlorate Trends at SS-39
Figure 4-14 Perchlorate Concentration Gradient at SS-39
Figure 4-15 Trichloroethene (TCE) Concentration Gradient at SS-39

APPENDICES

APPENDIX A Data Review Checklists
APPENDIX B Chain of Custody Records
APPENDIX C Laboratory Analytical Data – Attached CD-ROM
APPENDIX D Field Data Forms
APPENDIX E Human Health Risk Assessment

ACRONYMS

ACC	Air Combat Command
AMC	Air Materiel Command
AOC	Area of Concern
bgs	below ground surface
BHC	benzene hexachloride
cm^2/day	square centimeters per day
CMS	Corrective Measures Study
COC	chemical of concern
COPC	chemical of potential concern
CRDL	contract required detection limit
DQO	data quality objective
EE/CA	Engineering Evaluation/Cost Analysis
EPA	U.S. Environmental Protection Agency
ERP	Environmental Restoration Program
FEC	Foothills Engineering Consultants, Inc.
gal	gallon(s)
GPS	global positioning system
ft	foot (or feet)
HAFB	Holloman Air Force Base
HGL	HydroGeoLogic, Inc.
HHRA	Human Health Risk Assessment
HI	Hazard Index
ILCR	incremental lifetime cancer risk
in.	inch (es)
IRP	Installation Restoration Program
JP	jet propellant
LTM	long-term monitoring
LUC	land-use controls
m^3/hour	cubic meters per hour
MCL	maximum contaminant level
µg/L	micrograms per liter
mg/L	milligrams per liter
NFA	no further action
NMAC	New Mexico Administrative Code
NMED	New Mexico Environment Department
NMWQCC	New Mexico Water Quality Control Commission
NOD	Notice of Deficiency
PCB	polychlorinated biphenyl
PVC	polyvinyl chloride
RCRA	Resource Conservation and Recovery Act
RI	Remedial Investigation
RFI	RCRA Facility Investigation
RSL	regional screening level
SWMU	Solid Waste Management Unit
TAL	target analyte list
TCE	trichloroethene
TDS	total dissolved solids

Tetra Tech	Tetra Tech, Inc.
TPH	total petroleum hydrocarbons
Radian	Radian Corporation
UDMH	unsymmetrical dimethylhydrazine
USACE	U.S. Army Corps of Engineers
USAF	U.S. Air Force
VOC	volatile organic compound

1.0 INTRODUCTION

This Long-Term Monitoring (LTM) Report was prepared by Tetra Tech, Inc. (Tetra Tech) on behalf of Holloman Air Force Base (HAFB) for the Environmental Restoration Program (ERP) sites OT-16 – Existing Entomology Shop Area [Solid Waste Management Units (SWMUs) 118 and 132 and Area of Concern (AOC)-A], DP-30/SD-33 – Grease Trap Disposal Pits and Cooking Grease Disposal Trench (SWMU 113B), and SS-39 – Missile Fuel Spill Area (SWMUs 165, 167, 177, 179, and 181). Tetra Tech has prepared this document under contract to the U.S. Air Force Center for Engineering and the Environment, Contract No. FA4890-06-D-0009, Task Order Number 5002, in accordance with the New Mexico Environment Department (NMED) Hazardous and Radioactive Materials Bureau position paper on *General Reporting Requirements for Routine Groundwater Monitoring at RCRA Sites* (NMED, 2003).

This report presents the results, analysis, and recommendations for the following:

<u>OT-16</u>

- Quarterly groundwater sampling events (April, July, and October 2009; and January 2010).

<u>DP-30/SD-33 and SS-39</u>

- Semi-annual groundwater sampling events (July 2009 and January 2010); and

- A Human Health Risk Assessment (HHRA) conducted by Tetra Tech, for sites DP-30/SD-33 and SS-39.

1.1 BASIS FOR LONG-TERM MONITORING

Remedial Investigations (RIs) were conducted in 1992 at OT-16, DP-30/SD-33, and SS-39 and followed by biennial LTM. In 2000, a Decision Document was submitted to NMED for site OT-16; however, this document was rejected. Based upon historical groundwater sampling results, NMED stated that further characterization is required at these sites to examine the risk to human health and the environment in order to determine if further monitoring and/or remedial action is needed or whether risk based closure can be obtained.

1.2 PURPOSE

This LTM Report is part of the on-going effort to characterize groundwater quality at sites OT-16, DP-30/SD-33, and SS-39 to ensure that degradation to groundwater quality is not occurring and that the

sites are not acting as continuing sources for groundwater contamination. The overall objective of this LTM Program is to obtain Regulatory Site Closure for these four sites.

1.3 REPORT ORGANIZATION

This April 2009 – January 2010 LTM Report presents site-specific background information, results of the HHRA, groundwater sampling procedures, analytical results, and recommendations. The document contains the following sections:

- Section 1 – Introduction
- Section 2 – Background
- Section 3 – Sampling Procedures
- Section 4 – Groundwater Monitoring Results
- Section 5 – Human Health Risk Assessment
- Section 6 – Summary And Recommendations
- Section 7 – References

The tables and figures referenced in this LTM report are included following Section 6. This report also includes three appendices.

- Appendix A provides the laboratory data review checklists.
- Appendix B provides the Chain of Custody Records.
- Appendix C contains laboratory analytical data, which is provided on the attached CD-ROM.
- Appendix D presents the field data forms.
- Appendix E contains the complete HHRA.

2.0 BACKGROUND

The following sections present location and background information for HAFB and the individual sites that are addressed in this LTM Report.

2.1 FACILITY BACKGROUND

HAFB is situated in south-central New Mexico, in the northwest-central part of Otero County. HAFB is located approximately 75 miles northeast of El Paso, Texas, and seven miles west of Alamogordo, New Mexico. HAFB occupies approximately 50,000 acres in the northeast quarter of section Township 17 South, Range 8 East. Additional land extending northward is occupied by the White Sands Missile Range testing facilities. An installation location map is included as Figure 2-1. The locations of OT-16, DP-30/SD-33, and SS-39 with respect to the surrounding area are shown on Figure 2-2.

HAFB, formally Alamogordo Army Airfield, was initiated as a temporary facility during World War II, with construction commencing on February 6, 1942. Its status, mission, and Command have periodically changed over its 68-year history.

Prior to 1942, the property occupied by HAFB was undeveloped rangeland. The Alamogordo Army Airfield was established in 1942 and was deactivated in 1945. The facility was reactivated in 1945 and was operated by the Air Materiel Command (AMC) until 1951. AMC tested pilot-less aircraft, guided missiles, and other equipment. The facility mission remained largely unchanged until 1971. However, the facility identification changed several times during the 20-year span:

- Air Force Missile Test Center (1951-1952),
- Holloman Air Development Center (1952-1957), and
- Air Force Missile Test Center (1957-1971).

The Tactical Air Command operated the facility from 1972 to 1992 and housed the 49th Tactical Fighter Wing, 479th Tactical Training Wing, 833rd Air Division, and 4449th Mobile Support Squadron. In 1992, HAFB was realigned under the Air Combat Command (ACC). Currently, HAFB is still operated under the Command of the ACC.

2.2 SITE-SPECIFIC BACKGROUND

The following sections present an overview of the characteristics and history at sites OT-16, DP-30/SD-33, and SS-39.

2.2.1 OT-16 – Existing Entomology Shop Area

The Existing Entomology Shop Area [OT-16 (SWMUs 118 and 132 and AOC-A)] was located at former Building 21 in the southeastern portion of the Main Base Area and is approximately 0.5 acres in size. A site map is provided on Figure 2-3. OT-16 encompasses former Building 21, a former truck wash rack (SWMU 79), a former pesticide plastic holding tank (SWMU 118), a former disposal pit (SWMU 132), and a former transformer pad (AOC-A). All concrete structures and features were demolished and removed in the mid-1990s. The site currently consists of a gravel and concrete-paved vehicle parking area and a large concrete pad used by the Honor Guard for training. Four monitoring wells (MW16-01 through MW16-04) are currently present on-site.

Prior to its conversion into an entomology shop in 1977, Building 21 was a power plant that contained six diesel generators and several transformers for power generation. After its conversion, Building 21 was utilized as the Base herbicide and pesticide storage facility. The weighing and mixing of the chemicals prior to application was conducted within the shop. From 1977 to 1980, rinse water from washing pesticide mixing equipment was discharged to a septic tank drain field located on the northwest side of the building (CH2M Hill, 1983). After 1980, rinse water and unused pesticides were collected in a 12-gal plastic aboveground holding tank (SWMU 118). Activities within the Entomology Shop ceased in 1992.

OT-16 was identified as a potential contaminant source during an Installation Restoration Program (IRP) records search conducted in 1983. A Phase I RI was conducted in 1992 by the Radian Corporation (Radian) (Radian, 1992). Based on the baseline risk assessment for OT-16, the RI concluded that no action was necessary, but recommended additional site characterization. A Phase II Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) conducted in 1994 included additional sampling and recommended a conditional no further action (NFA) determination based on the remediation of total petroleum hydrocarbons (TPH)-contaminated soils that were discovered during the Phase II RFI. In 1996, approximately 107 tons of TPH-contaminated soil and 111 tons of polychlorinated biphenyls (PCB)-contaminated soil were excavated and removed from the site. Biennial LTM began in 1997. In 2005, an LTM Report requested NFA under Criterion 5. This request was denied by NMED, which requested eight more quarters of groundwater data prior to approving the NFA request.

2.2.2 DP-30/SD-33 – Grease Trap Disposal Pits And Cooking Grease Disposal Trench

The Grease Trap Disposal Pits (DP-30) and the Cooking Grease Disposal Trench (SD-33) (SWMU 113B) are located in the southeastern portion of HAFB, northwest of the airfield and Sabre Road and west of the Fire Protection Training Area. As shown on Figure 2-4, DP-30 and SD-33 are located on opposite sides of an unpaved and unnamed service road, approximately 15 ft apart. The unnamed service road connects the two sites to Sabre Road and provides vehicle access. The area north of DP-30/SD-33 is restricted. Several highly restricted buildings are located near the two sites; consequently, unauthorized access to the DP-30/SD-33 area is prohibited.

DP-30 and SD-33 are currently unpaved, undeveloped, and moderately vegetated with shrubs and grasses. DP-30 is located immediately north of the unpaved service road and encompasses approximately 0.76 acres. Several linear depressions, most likely remnants of former disposal and site investigation trenches, cross the site in primarily northwest-southeast and secondary northeast-southwest orientations. SD-33 is located south of the unpaved service road and encompasses approximately 0.17 acres. A semi-circular shaped soil berm is located along the northern edge of SD-33. The soil berm is approximately 4 ft high and 50 ft long and composed primarily of reworked native soil. Several metal signs indicate the area was a former disposal unit. As with site DP-30, several linear depressions, most likely remnants of former disposal and site investigation trenches, cross the site in a northwest-southeast orientation. The two sites cover an area of approximately 2 acres combined.

The disposal pits/trenches consisted of elongated excavations approximately 40 to 50 ft long and 2 to 3 ft wide. Drilling and trenching activities indicated that the depths of the disposal pits/trenches ranged from 2.5 to 9 ft below ground surface (bgs). The pits reportedly received wastes from HAFB grease traps, oil/water separators, and grit from the wastewater treatment system. Occasionally, the pits/trenches would accept sludge from vacuum trucks used to unclog sewer lines at the Primate Research Laboratory (Radian, 1992). One interviewee indicated that quantities of various pesticides were also disposed of in the pits/trenches; however, this could not be verified.

Soil and groundwater samples were collected from the Grease Trap Disposal Pits during an RI conducted by the Radian (Radian 1992). Soil and waste sludge samples contained volatile organic compounds (VOCs), metals, oils and grease, and pesticides. Four groundwater monitoring wells (MW30&33-01, MW30&33-02, MW30&33-03, and MW30&33-04) were installed during the RI. Analytes reported above the contract required detection limit (CRDL) in groundwater included metals (antimony, beryllium, cadmium, chromium, copper, nickel, zinc, lead, and selenium) and toluene.

Based on several soil analytes exceeding action levels, the risk screen performed in the RI indicated that unacceptable risk for sites DP-30/SD-33. Therefore, it was recommended that a feasibility study and corrective measures study be conducted, and if necessary, the implementation of an IRP Remedial Action/ RCRA Corrective Action Remedy.

The Corrective Measure Study (CMS) prepared by Radian in December 1992, stated that an Engineering Evaluation/Cost Analysis (EE/CA) would be performed to determine the appropriate remedial alternative to the removal of buried waste in order to achieve site closure. A subsequent Decision Document was signed by NMED and the Base Commander in September 1995, which alternatively recommended NFA for groundwater with groundwater monitoring based on the absence of exposure pathways and receptors and the remote locations of the two sites. LTM began in 1995. In 2005, a Supplemental RFI Work Plan was completed by HydroGeoLogic, Inc. (HGL) and submitted to NMED to address additional characterization requirements at these sites. Upon review of the Supplemental RFI Work Plan, NMED recommended that semi-annual groundwater monitoring would be required at DP-30/SD-33.

2.2.3 SS-39 – Missile Fuel Spill Area

The Missile Fuel Spill Area [SS-39 (SWMUs 165, 167, 177, 179, and 181)], is located in the central portion of HAFB at the Test Sled Launch Area, at Building 1176, and along the northern slope of the Lost River Drainage Basin. A site map is provided on Figure 2-5. The site consists of two outfall areas located downgradient of the oxidizer and propellant spill drainpipes and drainage troughs and sumps located near Building 1176. Previous reports indicate that Building 1176 Pond (SWMU 165) is located between Building 1176 and the Lost River; however, no evidence of the pond was found at the reported location or at any location in the vicinity of Building 1176 (Radian, 1992).

The central portion of the slope to the Lost River is moderately hummocky in topography. Steeply incised rills and drainage swales are present throughout the area, trending in a north-south orientation toward the Lost River. Vegetation consisting of salt cedars, shrubs, and grasses are present throughout this area with a vegetation line running along the edge of the basin. Relief decreases near the base of the slope until nearly flat with an overall southerly dip toward the center of the drainage basin. The edge of the basin typically marks the high water level during and immediately after heavy rainstorms. An unpaved service road parallels the basin edge providing access to the lower portion of the site.

Historical activities within and adjacent to SS-39 included the fueling, detanking, and routine maintenance of test sleds. The launch pad at the south end of the sled test track was constructed with a

concrete collection basin (SWMU 167) and a water deluge system. Spilled oxidizers and fuels were delivered to separate drains, diluted with water, and flushed into the Lost River. In 1975, catch basins were installed to collect the spilled liquid fuels (Discharge Box, SWMU 179). Oxidizer vent lines from the engines were also installed and designed to discharge into the catch basins. Fuels used at the track included unsymmetrical dimethylhydrazine (UDMH), aniline, jet propellant (JP)-4, inhibited red fuming nitric acid, inhibited white fuming acid, liquid oxygen, JPX, and solid rocket propellants. Solvents such as trichloroethene (TCE) were commonly used in sled maintenance activities (FEC, 1997). Since 1975, no propellants have been intentionally released to the open drains.

SS-39 was identified as a potential contaminant source during a 1983 IRP records search. An RI was completed in 1992 revealing arsenic, beryllium, lead, and TCE in soils near Building 1176 (Radian, 1992). Additionally, TCE, carbon tetrachloride, and lead were detected in groundwater at SS-39. The RI concluded that additional field investigation was warranted. Additional fieldwork at SS-39 was performed by Radian in 1993. Groundwater samples were collected at SS-39 from 15 temporary groundwater sampling locations using direct push methods, and screened in the field for chlorinated compounds. Eight groundwater samples were submitted to the laboratory for confirmation analysis. Results of these analyses indicated that TCE was present above the New Mexico Water Quality Control Commission (NMWQCC) Standard and the U.S. Environmental Protection Agency (EPA) maximum contaminant level (MCL) at four locations, and above the EPA MCL at two additional locations. A 1995 request for NFA was not granted. Further delineation of groundwater was completed in 1998, and the subsequent RI report requested NFA. Conditional closure of SS-39 required LTM for VOCs and total dissolved solids (TDS) biennially for 10 years. The site was added to the LTM program in 1997 and continued on a biennial basis until December 2005. Supplemental RFI activities were conducted in May and July 2006, which and included sediment and soil sample collection and installation of four permanent and five temporary wells. A soil source for TCE was identified in vicinity of SWMU 177, and contaminants in groundwater consisted of TCE and perchlorate. After the 2005 submittal of the Supplemental RFI Work Plan by HGL and HGL's response to the Notice of Deficiency (NOD) in 2006, NMED required groundwater LTM activities be conducted on a semi-annual basis.

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3.0 SAMPLING PROCEDURES

The approved LTM Program protocol for HAFB was first established for the 1995 baseline sampling and was implemented for the 2006 and 2007 events. The 2009 and 2010 sampling events applied the same protocol followed during the previous sampling events. All analytical procedures followed SW-846 methods with the groundwater samples being analyzed as follows:

- TDS by Method SM19 2540C
- Metals by EPA Method 6010B/6020 and 7470A
- Perchlorate by Method DEN-LC-0024
- Pesticides [dieldrin, gamma-benzene hexachloride (BHC), and Alpha-BHC] by EPA Method 8081A
- VOCs by EPA Method 8260B

Groundwater monitoring and sampling activities conducted during April, July, and October 2009; and January 2010 were conducted in accordance with the site-specific work plans of OT-16 (HGL, 2006) as well as DP-30/SD-33 and SS-39 (USACE, 2003). Variations from the specified procedures are discussed in the following section.

3.1 VARIATIONS FROM THE WORK PLAN

The sampling procedures and analytical protocol presented in the LTM Work Plan (USACE, 2003; HGL, 2006) were followed; however, deviations did occur based on the issues presented below:

- During the July 2009 sampling event, monitoring well MW30&33-05 at site DP-30/SD-33 was found damaged and was not sampled. MW30&33-05 was abandoned and a replacement monitoring well (MW30&33-05R) was installed. The replacement well was sampled during the October 2009 sampling event in substitution of the July 2009 sampling event.

- Monitoring well MW39-12 at site SS-39 was submerged underwater during the July 2009 sampling event. The temporary monitoring well was reinstalled and sampled during the October 2009 sampling event in substitution of the July 2009 sampling event.

- Vegetation was previously encountered within monitoring well MW39-03 at site SS-39. Due to its compromised condition, monitoring well MW39-03 was not sampled.

- Monitoring well MW39-04 at site SS-39 was dry during water level collection and thus was not sampled.

3.2 DATA EVALUATION

Analytical results from the 2009 and 2010 sampling events were reviewed and compared with the results of the previous LTM events in order to determine whether further action or additional investigation at any site is warranted. Although historical data dates back to 1989 for some of these sites, quarterly and semi-annual sampling to support site closure commenced in 2006 (DP-30/SD-33 and SS-39) and 2008 (OT-16). Thus, the sampling events corresponding to this LTM Program will be used to determine site closure.

Natural TDS levels in the plume areas of DP-30/SD-33 and SS-39 are above 10,000 mg/L, and are thus above the threshold at which groundwater is not considered a potential domestic or agricultural water supply (NMAC, 20.6.2.3101). Because groundwater is not considered a potential source of domestic water at sites DP-30/SD-33 and SS-39, the EPA Regional Screening Level (RSL) for tap water were not used to compare analytical results. Although the TDS values at site OT-16 did not exceed the 10,000 mg/L threshold during the 2009 through 2010 sampling events, the EPA RSL Standard for tap water will not be used to compare analytical results due to several conditions, including:

- TDS values have exceeded 10,000 mg/L during past LTM sampling events.
- TDS values have ranged widely since LTM began in 2008 (2,340 to 14,000 mg/L) indicating a possible dilution source (i.e., storm water concentration, water line leak, sewer line leak).
- TDS concentrations at OT-16, which are mostly below 10,000 mg/L, are not typical of the surrounding area and thus OT-16 is not a potential source of domestic water. This isolated occurrence of TDS values below 10,000 mg/L is another indication that groundwater is potentially being diluted by other water sources.

NMWQCC Standards and EPA MCLs are used for comparison purposes in the data tables to identify constituents that are potential contaminants and require evaluation. This comparison is conducted in order to ascertain whether plume stabilization/reduction is occurring.

3.3 PROJECT REPORTING

This LTM report summarizes contamination and provides a comparison of results from quarterly and semi-annual sampling events conducted from 2006 to the present at each site. Potentiometric surface maps were prepared for each site based on the water level measurements collected during each sampling event and are included following Section 6 (behind the Figures tab). When possible, information was tabulated similar to prior LTM reports to provide easy comparison between sampling rounds.

3.4 DATA VALIDATION

Detailed information regarding laboratory methods and data quality is provided in the data review checklists included in Appendix A. The Chain of Custody Record for all samples is included in Appendix B. The laboratory analytical data deliverable packages are included on a CD-ROM as Appendix C. In summary, data completeness of the laboratory analyses for all samples collected at sites OT-16, DP-30/SD-33, and SS-39 was determined to be 100 percent during each sampling event, which meets the project data quality objective (DQO) of 95 percent. Based on the data review and validation, the analytical data were determined to be acceptable, representative, comparable, and useable for its intended purpose.

3.5 SS-39 PRE-PACK WELL INSTALLATION

In support of RFI activities, NMED required the installation of several monitoring wells within the Lost River drainage basin to define the southern extent of the TCE plume. The Lost River Drainage Basin is subject to periodic flooding after large rain events, and repeated flooding would most likely compromise the long-term structural integrity of any monitoring wells installed within the basin. In addition, the U.S. Air Force (USAF) and U.S. Army Corps of Engineers (USACE) do not permit permanent structures to be constructed within the Lost River Drainage Basin (Livingston, 2006). Therefore, five pre-pack monitoring wells, designated MW39-08 through MW39-12 (Figure 2-5), are utilized to collect groundwater samples from within the Lost River Drainage Basin during each LTM sampling event. Survey stakes and a global positioning system (GPS) are used to locate the pre-pack well locations for repeated sampling events. The pre-pack monitoring wells are constructed of a 2-in. diameter, 5 ft long, 0.010-slotted Schedule 40 polyvinyl chloride (PVC) well screen wrapped with a stainless steel wire mesh containing a 0.25 in. thick filter pack. The screen is capped with a flush-jointed well cap and attached to a 2-in. diameter, 5 ft long Schedule 40 PVC riser pipe. The pre-pack wells are installed through an open borehole drilled using a 3-in. decontaminated stainless steel hand auger. The hand auger borings are

completed to maximum depths ranging between 5 to 10 ft bgs. After installation, the pre-pack wells are allowed to sit undisturbed for a minimum of 12 hours prior to groundwater sampling. Once groundwater sampling activities are completed, the pre-pack wells are removed from the subsurface, decontaminated, and placed in dedicated storage containers. The abandoned boreholes are backfilled with the sediment removed during borehole advancement.

3.6 WATER LEVEL MEASUREMENTS

Prior to initiating groundwater sampling activities, static water levels are obtained from the four permanent monitoring wells (MW16-01 through MW16-04) at OT-16, five permanent monitoring wells (MW30&33-01 through MW30&33-05R) at DP-30/SD-33, and eight permanent monitoring wells (MW39-01 through MW39-07 and MW39-06D) and five pre-pack monitoring wells (MW39-08 through MW39-12) at SS-39. Monitoring well construction and survey information for the monitoring wells at OT-16, DP-30/SD-33, and SS-39 are summarized in Table 3-1. Water level measurements were collected by lowering an audible sounding probe attached to a graduated tape into the well until the alarm sounded, indicating the air/water boundary in the well. The corresponding value on the tape, measured to the nearest 0.01 ft from the top of the PVC casing, was then recorded as "Depth to Water." The alarm was then turned off, and the probe was lowered to the bottom of the well. The corresponding measurement, to the nearest 0.01 ft, was recorded as "Total Well Depth." The probe and tape were then removed from the well and decontaminated. This process was repeated for all of the monitored wells. MW39-04 was determined to be dry during water level collection, consistent with historical conditions. Vegetation was encountered within well MW39-03 during RFI activities. Due to its compromised condition, MW39-03 is not sampled.

3.7 GROUNDWATER PURGING AND SAMPLING

The wells within OT-16 require quarterly monitoring and were sampled in April, July, and October 2009; and January 2010. The wells at OT-16 are purged of three casing volumes prior to sampling using 2-in. diameter disposable Teflon® bailers. The wells within DP-30/SD-33 and SS-39 are monitored semi-annually and were sampled in July 2009 and January 2010, with the exception of monitoring wells MW30&33-05 at DP-30/SD-33 and MW39-012 at SS-39. These wells were sampled in October 2009 in substitution of the July 2009 sampling event for reasons described in Section 4.1. All wells at these sites were purged using a low-flow pump fitted with disposable tubing and employing low-flow purging and sampling methods. During the purging process, water quality parameters (pH, specific conductance, temperature, oxidation-reduction potential, turbidity, and salinity) were measured using a water quality

meter. Well purging was considered complete when stabilization of the water quality parameters was achieved in accordance with the work plan (USACE, 2003 and HGL 2006). In general, water quality parameter stabilization was achieved after purging approximately 2 to 3 groundwater casing volumes from each well. After achieving stabilization, the appropriate sample containers were filled using direct fill sampling techniques.

Groundwater samples collected at OT-16 were submitted to an offsite laboratory for analysis of TDS, dieldrin, gamma-BHC, and alpha-BHC. Groundwater samples collected from DP-30/SD-33 were submitted to an offsite laboratory for analysis of TDS, target analyte list (TAL) total and dissolved metals, and VOCs. Groundwater samples collected at SS-39 were submitted to an off-site laboratory and analyzed for TDS, RCRA 8 total and dissolved metals, perchlorate, and VOCs.

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4.0 GROUNDWATER MONITORING RESULTS

The following sections present a summary of the findings from the fieldwork conducted as part of the LTM conducted at sites OT-16, DP-30/SD-33, and SS-39 during the April 2009 – January 2010 events.

4.1 OT-16 – EXISTING ENTOMOLOGY SHOP AREA

The following sections present the hydrogeologic and analytical results from the quarterly ground sampling events conducted in April, July, and October 2009; and January 2010. January 2010 marked the second year and the eighth and final sampling event, as required by NMED.

4.1.1 Hydrogeology

The groundwater level data collected during the quarterly sampling events and associated calculated groundwater elevations are summarized in Table 4-1. Water level and total well depth measurements were recorded on the individual sample data sheets included in Appendix D. The results of the static water level measurements were used to prepare the April, July, October 2009; and January 2010 groundwater potentiometric surface maps (Figures 4-1, 4-2, 4-3, and 4-4; respectively). As shown on the figures, groundwater flow at OT-16 is primarily to the south-southwest.

Groundwater parameter measurements obtained during the purging process were recorded on groundwater field sampling data sheets, which have been included in Appendix D. Table 4-2 summarizes the groundwater quality parameters recorded for this and previous sampling events, which are shown to be consistent throughout the LTM period.

After reviewing the groundwater elevation data, it was determined that there may be hydrologic conditions that may be influencing the results of groundwater monitoring. As shown in Table 4-1, fluctuations in groundwater elevations for monitoring wells MW16-01 through MW16-04 varied from 0.86 ft above mean sea level (msl) (MW16-02) to 3.53 ft above msl (MW16-03) from January 2009 to January 2010. This data compared to groundwater elevation fluctuations at DP-30/SD-33, which varied from 0.43 ft above msl (MW30&33-02) to 0.77 ft above msl, appears to be skewed.

4.1.2 Groundwater Sampling Results

Groundwater was sampled from the four on-site monitoring wells (MW16-01, -02, -03, and -04) in April, July, and October 2009; and January 2010 and analyzed for TDS and pesticides (gamma-BHC, alpha-BHC, and dieldrin). The groundwater sample data sheets for both events have been included in Appendix D.

Groundwater analytical results from the four sampling events are summarized in Table 4-3. EPA MCLs and NMWQCC Standards are also included in the table for comparison purposes. Complete analytical results from all eight sampling events are presented in Table 4-4. A summary of the results per analyte is present in the following paragraphs.

Total Dissolved Solids

TDS concentrations at OT-16 ranged from 3,180 mg/L (MW16-03) to 5,760 mg/L (MW16-02) in April 2009, from 2,340 mg/L (MW16-01) to 6,470 mg/L (MW16-02) in July 2009, from 3,020 mg/L (MW16-01) to 5,590 (MW16-04) in October 2009, and from 2,380 mg/L (MW16-03) to 4,450 mg/L (MW16-04) in January 2010.

Pesticides

Dieldrin was detected during the October 2009 sampling event in monitoring well MW16-01 at a concentration two times below the NMWQCC Standard. Gamma-BHC was detected during the January 2010 sampling event in monitoring well MW16-02 at approximately 6.5 times below the NMWQCC Standard. None of the pesticides have exceeded the available standards during any of the eight sampling events at OT-16.

4.2 DP-30/SD-33 – GREASE TRAP DISPOSAL PIT AND COOKING GREASE DISPOSAL TRENCH

The following sections present the hydrogeologic and analytical results from the semi-annual ground sampling events conducted in July 2009 and January 2010. Monitoring well MW30&33-05 was found damaged during the July 2009 sampling event. Therefore, a replacement well (MW30&33-05R) was installed and sampled in October 2009 in substitution of the July 2009 sampling event.

4.2.1 Hydrogeology

A summary of the groundwater measurements and calculated groundwater elevations for the July and October 2009 and January 2010 events is provided on Table 4-5. Water quality parameters were collected during the purging of the wells and are summarized on Table 4-6. Water level and total well depth measurements were recorded on the individual sample data sheets included in Appendix D. The results of the water level measurements were used to prepare the July and October 2009 and January 2010 groundwater potentiometric surface maps (Figures 4-5, 4-6, and 4-7, respectively). As shown on Figures 4-5, 4-6, and 4-7, the groundwater potentiometric surface at DP-30/SD-33 is nearly flat, with an overall slight gradient to the south-southeast during the three sampling events.

No field observations or conditions that would influence the results of groundwater monitoring were noted.

4.2.2 Groundwater Sampling Results

Groundwater was sampled from four of the five permanent monitoring wells (MW30&33-01 through MW30&33-04) at the site in July 2009 and January 2010. Groundwater was sampled from a replacement well (MW30&33-05R) in October 2009. All samples were analyzed for TDS, total and dissolved TAL metals, and VOCs. The groundwater sample data sheets for both events have been included in Appendix D.

DP-30/SD-33 groundwater analytical positive results from the July and October 2009 and January 2010 events are summarized in Table 4-7. Historical groundwater analytical data from the previous six semi-annual events conducted in July 2006, January 2007, July 2007, January 2008, July 2008, and January 2009 are summarized in Table 4-8. NMWQCC Standards and EPA MCLs are also included in these tables for comparison purposes. The location of sample exceedances and the concentration observed are shown on Figure 4-8. A summary of the July and October 2009 and January 2010 results is presented in the following paragraphs.

<u>Total Dissolved Solids</u>

TDS groundwater concentrations at DP-30/SD-33 were detected at greater than 10,000 mg/L in all five wells and ranged from 34,300 mg/L (MW30&33-01) to 39,500 mg/L (MW30&33-03) in July 2009 and 13,600 mg/L (MW30&33-05R) to 28,100 mg/L (MW30&33-03) in January 2010. A TDS concentration above 10,000 mg/L is the point where groundwater is no longer considered a potential domestic or

agricultural water supply (NMAC, 20.6.2.3101). The TDS results for all three sampling events are consistent with historic results.

Total Metals

Sample analysis for total metals exhibited EPA MCL exceedances of antimony and selenium. Total arsenic exceeded both the NMWQCC Standard and the EPA MCL.

- Antimony exceeded the EPA MCL (6 µg/L) in January 2010 at monitoring well MW30&33-02 (10 µg/L).
- Selenium exceeded the EPA MCL (50 µg/L) in July 2009 at monitoring well MW30&33-03 (50.2 µg/L) and in January 2010 at monitoring well MW30&33-02 (54.7 µg/L).
- Arsenic exceeded both the NMWQCC Groundwater Standard (0.448 µg/L) and the EPA MCL (10 µg/L) in July 2009 at monitoring well MW30&33-01 (28.9 µg/L), in October 2009 at monitoring well MW30&33-05R (15.3 µg/L), and in January 2010 at monitoring wells MW30&33-01 (13.3 µg/L) and MW30&33-02 (14.3 µg/L).

Total metal exceedances seem to be sporadic, with no evidence of a consistent trend. These inconsistent results are most likely attributable to high TDS concentrations.

Dissolved Metals

Arsenic was the only metal that exceeded action levels in groundwater samples analyzed for dissolved metals. Arsenic exceeded both the NMWQCC Standard (0.448 µg/L) and the EPA MCL (10 µg/L) in July 2009 at monitoring wells MW30&33-01 (26.5 µg/L), MW30&33-02 (28.2 µg/L), and MW30&33-04 (31.6 µg/L). Arsenic also exceeded these standards in October 2009 at monitoring well MW30&33-05R (15.4 µg/L). Dissolved metal exceedances seem to be sporadic, with no evidence of a consistent trend. These inconsistent results are most likely attributable to high TDS concentrations.

Volatile Organic Compounds

Of the VOCs analyzed, only TCE was observed at concentrations above action levels.

- In July 2009, TCE exceeded the EPA MCL (5 µg/L) at monitoring wells MW30&33-02 (7.7 µg/L), and MW30&33-03 (6.9 µg/L).
- In October 2009, TCE exceeded both the NMWQCC Groundwater Standard (16.5 µg/L) and the EPA MCL (5 µg/L) at monitoring well MW30&33-05R (21 µg/L).
- In January 2010, TCE exceeded the EPA MCL at monitoring wells MW30&33-02 (10.6 µg/L) and MW30&33-03 (8.2 µg/L) and exceeded both the NMWQCC Groundwater Standard and the EPA MCL at monitoring well MW30&33-05R (30.6 µg/L).

As shown on Figure 4-9, TCE concentrations have remained stable within samples collected from monitoring wells MW30&33-02, -03, and -04 since 2006. TCE concentrations in samples collected from monitoring well MW30&33-05/MW30&33-05R have continued to decrease since semi-annual monitoring activities began during the July 2006 sampling event.

4.3 SS-39 – MISSILE FUEL SPILL AREA

The following sections present the hydrogeologic and analytical results from the semi-annual ground sampling events conducted in July 2009 and January 2010. Monitoring well MW39-12 was submerged under water during the July 2009 sampling event. Therefore, monitoring well MW39-12 was sampled in October 2009 in substitution of the July 2009 sampling event.

4.3.1 Hydrogeology

The groundwater level data collected during the July 2009 and January 2010 sampling events and associated calculated groundwater elevations are summarized in Table 4-9. Water level and total well depth measurements were recorded on the individual sample data sheets included in Appendix D. The results of the static water level measurements were used to prepare the July 2009 and January 2010 groundwater potentiometric surface maps (Figures 4-10 and 4-11, respectively). As shown on the figures, groundwater flow at SS-39 is primarily to the south-southwest, consistent with previous events.

Groundwater parameter measurements obtained during the purging process were recorded on groundwater field sampling data sheets, which have been included in Appendix D. Table 4-10 summarizes the groundwater quality parameters recorded for this and previous semi-annual events, which are shown to be consistent throughout the period.

No field observations or conditions that would influence the results of groundwater monitoring were noted.

4.3.2 Groundwater Sampling Results

Groundwater samples were collected from monitoring wells MW39-02, -05, -06, -06D, and -07 through -11 at the site in July 2009; from monitoring well MW39-12 in October 2009; and from monitoring wells MW39-02, -05, -06, -06D, and -07 through -12 in January 2010. All samples were analyzed for TDS, total and dissolved RCRA metals, perchlorate, and VOCs. MW39-03 was not sampled due to previous observations of vegetation within the well. MW39-04 was not sampled because it was dry during water level measurements. The groundwater sample data sheets for both events have been included in Appendix D.

SS-39 groundwater analytical results from the July and October 2009 and January 2010 events are summarized in Table 4-11. Historical groundwater analytical data from the previous six semi-annual events conducted in July 2006, January 2007, July 2007, January 2008, July 2008, and January 2009 are summarized in Table 4-12. NMWQCC Standards and EPA MCLs are also included in these tables for comparison purposes. The location of sample exceedances and the concentration observed are shown on Figure 4-12. A summary of the results per analyte is present in the following paragraphs:

<u>Total Dissolved Solids</u>

TDS concentrations at SS-39 were detected at greater than 10,000 mg/L in all ten monitoring wells and ranged from 12,200 mg/L (MW39-02) to 134,000 mg/L (MW39-11) in July 2009 and from 11,300 mg/L (MW39-02) to 107,000 mg/L (MW39-09) in January 2010. A TDS concentration above 10,000 mg/L is the point where groundwater is no longer considered a potential domestic or agricultural water supply (NMAC, 20.6.2.3101). The TDS results for all three events are consistent with historic results.

<u>Total Metals</u>

Analysis for total metals identified arsenic, lead, and selenium at concentrations that exceeded either NMWQCC Standards and/or EPA MCLs.

- Arsenic exceeded both the NMWQCC Standard (0.448 µg/L) and the EPA MCL (10 µg/L) in October 2009 at monitoring well MW39-12 (22.1 µg/L).

- Lead exceeded the EPA MCL (15 µg/L) in July 2009 at monitoring well MW39-08 (41.2 µg/L).

- Selenium exceeded the EPA MCL (50 µg/L) in July 2009 at monitoring wells MW39-05 (109 µg/L), MW39-06D (92.2 µg/L), MW39-07 (60 µg/L), MW39-09 (91.3 µg/L), MW39-10 (111 µg/L), and MW39-11 (104 µg/L); in October 2009 at monitoring well MW39-12 (95.4 µg/L); and in January 2010 at monitoring wells MW39-05 (84 µg/L), MW39-06 (57.7 µg/L), MW39-06D (103 µg/L), MW39-08 (80.9 µg/L), MW39-09 (85.5 µg/L), MW39-10 (68.6 µg/L), MW39-11 (108 µg/L), and MW39-12 (72.2 µg/L).

Total metal exceedances seem to be sporadic, with no evidence of a consistent trend. These inconsistent results are most likely attributable to high TDS concentrations.

Dissolved Metals

Dissolved arsenic and selenium were detected in several of the monitoring wells at concentrations exceeding the NMWQCC Standards and/or the EPA MCLs.

- Arsenic exceeded both the NMWQCC Standard (0.448 µg/L) and the EPA MCL (10 µg/L) in July 2009 at monitoring well MW39-02 (23.2 µg/L) and in October 2009 at monitoring well MW39-12 (15.5 µg/L)

- Selenium exceeded the EPA MCL (50 µg/L) in July 2009 at monitoring wells MW39-05 (87.5 µg/L), MW39-06D (111 µg/L), and MW39-11 (125 µg/L); in October 2009 at monitoring well MW39-12 (98.8 µg/L); and in January 2010 at monitoring wells MW39-05 (79.1 µg/L), MW39-06D (102 µg/L), MW39-08 (76.1 µg/L), MW39-11 (82.3 µg/L), and MW39-12 (71 µg/L).

Dissolved metal exceedances seem to be sporadic, with no evidence of a consistent trend. These inconsistent results are most likely attributable to high TDS concentrations.

Perchlorate

Perchlorate was detected above the NMWQCC Standard (24.5 µg/L) during all three sampling events. The exceedances occurred in eight of the ten monitoring wells that were sampled as indicated below.

- MW39-06 in July 2009 (28 µg/L) and in January 2010 (25 µg/L),

- MW39-06D in July 2009 (28 µg/L) and in January 2010 (28 µg/L),
- MW39-07 in July 2009 (59 µg/L) and in January 2010 (51 µg/L),
- MW39-08 in July 2009 (74 µg/L) and in January 2010 (65 µg/L),
- MW39-09 in July 2009 (190 µg/L) and in January 2010 (150 µg/L)
- MW39-10 in July 2009 (170 µg/L) and in January 2010 (130 µg/L),
- MW39-11 in July 2009 (110 µg/L) and in January 2010 (81 µg/L), and
- MW39-12 in October 2009 (76) and in January 2010 (51 µg/L).

Although perchlorate concentrations are above NMWQCC Standards, the concentrations within the monitoring wells on the side slope of SS-39 (MW39-02, -05, -06, and -06D) show a stable trend and a steadily decreasing trend in monitoring well MW39-07. A chart illustrating perchlorate trends in the monitoring wells on the side slope at SS-39 can be found on Figure 4-13. However, perchlorate concentrations within the Lost River Basin are highly variable. A perchlorate concentration gradient map depicting the January 2010 data is shown on Figure 4-14. As shown on this figure, perchlorate concentrations are highest within the Lost River Drainage Basin at monitoring wells MW39-09 and MW39-10.

Volatile Organic Compounds

Carbon Tetrachloride, chloroform, methylene chloride, and TCE were the only VOCs that were detected in concentrations above NMWQCC Standards or EPA MCLs during the three sampling events.

- Carbon tetrachloride exceeded the NMWQCC Standard (1.9 µg/L) in July 2009 at monitoring wells MW39-02 (3 µg/L) and MW39-06 (2.2 µg/L) and in January 2010 at monitoring well MW39-06 (2.1 µg/L).

- Chloroform exceeded the NMWQCC Standard (1.9 µg/L) at monitoring well MW39-06 in both July 2009 (2.3 µg/L) and January 2010 (2 µg/L).

- Methylene chloride exceeded the EPA MCL (5 µg/L) in July 2009 at monitoring well MW39-06D (6.2 µg/L).

- TCE was detected above the NMWQCC Standard (16.5 µg/L) and/or the EPA MCL (5 µg/L) during the July 2009 and January 2010 sampling events. The exceedances occurred in six of the ten monitoring wells that were sampled as indicated below.

  - MW39-02 in July 2009 (17.7 µg/L) and January 2010 (25.1 µg/L),
  - MW39-05 in July 2009 (14 µg/L) and January 2010 (25.9 µg/L),
  - MW39-06 in July 2009 (108 µg/L) and January 2010 (208 µg/L),
  - MW39-06D in July 2009 (342 µg/L) and January 2010 (328 µg/L),
  - MW39-08 in July 2009 (10.3 µg/L) and January 2010 (26 µg/L), and
  - MW39-11 in July 2009 (47.3 µg/L) and January 2010 (39.5 µg/L).

Carbon Tetrachloride detections appear to be limited to monitoring wells MW39-02 and MW39-06. Concentrations of carbon tetrachloride appear to be stable, ranging from 1.5 to 3.13 µg/L at MW39-02 and from 1.51 to 2.4 µg/L at MW39-06, which indicates that SS-39 is not a continuing source of carbon tetrachloride.

Chloroform detections are also limited to monitoring wells MW39-02 and MW39-06. Concentrations of chloroform are stable, ranging from 1.1 to 2 µg/L at MW39-02 and from 2.2 to 2.85 µg/L at MW39-06, which indicates that SS-39 is not a continuing source of chloroform.

Exceedances of methylene chloride are limited to monitoring wells MW39-06 and MW39-06D. The exceedances are sporadic with no apparent trends. Methylene chloride has only exceeded the EPA MCL during January 2009 at MW39-06 and -06D and July 2009 at MW39-06D. Methylene chloride concentrations appear to be stable indicating that SS-39 is not a continuing source of methylene chloride.

TCE concentrations are either stable or decreasing at all monitoring wells with the exception of monitoring well MW39-06D. A concentration gradient map is shown on Figure 4-15. As shown this figure, the highest concentrations of TCE are found at monitoring wells MW39-06 and MW39-06D, which in January 2010 were detected at 208 µg/L and 328 µg/L, respectively. Concentrations of TCE in the remaining monitoring wells were 39.5 µg/L and below. In samples collected at MW39-06D, concentrations have ranged from 75 to 477 µg/L since July 2006 with a slightly increasing trend.

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5.0 HUMAN HEALTH RISK ASSESSMENT

This section summarizes the results of the HHRA, which was conducted to characterize the risks to humans associated with the potential current or future exposures to chemicals in groundwater at DP-30/SD-33 and SS-39 at HAFB. This assessment evaluates the potential risks to human health if no remedial action is taken and, therefore, represents the "No Action" alternative. The complete HHRA for groundwater at these two sites is included as Appendix E.

The methods for the HHRA consisted of the following six steps:

- **Step 1** – Data evaluation – The selection of chemicals of potential concern (COPCs) for groundwater at HAFB. The COPCs identified in Step 1 are evaluated quantitatively (when possible) and discussed qualitatively otherwise.
- **Step 2** – Exposure assessment – The identification of potential current and future human receptors that may be exposed to the COPCs, the evaluation of the pathways by which the receptors may be exposed, and the estimation of chemical intake resulting from exposure.
- **Step 3** – Toxicity assessment – An assessment of toxicity of each COPC including the presentation of the toxicity criteria (i.e., cancer slope factors, reference doses) typically used by EPA to estimate risk.
- **Step 4** – Risk characterization – The estimation of cancer and non-cancer risks using the intakes and toxicity criteria presented in the exposure assessment and toxicity assessment, respectively.
- **Step 5** – Uncertainty analysis – The identification of major uncertainties affecting the interpretation of the HHRA results.
- **Step 6** – Summary and Conclusions – The summary and conclusions of the HHRA.

The objectives of the HHRA were to (1) document and evaluate risks to human health; (2) determine the need, if any, for remedial action; and (3) identify chemicals of concern (COCs).

5.1 CHEMICALS OF POTENTIAL CONCERN

COPCs in groundwater are summarized for each site in Tables 2.4 through 2.6 of Appendix E. COPCs include inorganics, perchlorate, and VOCs.

5.1.1 DP-30/SD-33 – Grease Trap disposal Pits and Cooking Grease Disposal Trench

COPCs for groundwater at DP-30/SD-33 are listed in Table 2.4 of the complete HHRA, which is included in Appendix E, and include antimony, arsenic, manganese, thallium, and TCE. All groundwater samples at DP-30/SD-33 were collected at depths greater than 10 ft bgs.

5.1.2 SS-39 – Missile Fuel Spill Area

COPCs for groundwater at SS-39 are listed in Tables 2.5 and 2.6 of the complete HHRA, which is included in Appendix E, and include arsenic, cadmium, selenium, perchlorate, carbon tetrachloride, chloroform, naphthalene, and TCE. These chemicals are COPCs for groundwater at all depths at SS-39.

5.2 RECEPTORS

Potential current and future receptors considered include:

- Industrial Workers,
- Construction Workers,
- Agricultural Workers,
- Residents,
- Trespassers, and
- Visitors.

Industrial Workers

As there are no potable wells utilized onsite, industrial workers would not be exposed to groundwater through ingestion or dermal contact. Industrial workers may be exposed to inhalation of vapors intruding into a building. There are currently no buildings on the sites in question, and none are expected in the future but was evaluated to be conservative.

The industrial worker was assumed to be onsite 250 days/year for 25 years.

Construction Worker

At site DP-30/SD-33, groundwater was found at depths greater than 10 ft bgs; therefore, this pathway is not complete for that site. Groundwater was found between 0 and 10 ft bgs at SS-39, thus the construction worker pathway was evaluated for site SS-39.

The construction worker was assumed to be onsite 250 days/year for 1 year. The trench was assumed to contain groundwater every other day or 125 days/year. The incidental ingestion rate of groundwater in a trench was assumed to be 0.1 liters/day (EPA, 2002) and was assumed to be exposed 1 hour/day to groundwater in trench. The construction worker was expected to be dermally exposed to groundwater to his hands, forearms, lower legs, and feet or 5672 cm^2/day [Exhibit C-1 of RAGS E, Dermal Guidance (EPA, 2004)]. The inhalation rate of the construction worker was assumed to be 0.83 m^3/hour.

Agricultural Workers and Resident

The areas of contamination do not include agricultural use areas, nor is agricultural use planned in the future, so exposure to agricultural workers would not be a complete pathway. This pathway was not evaluated further.

Resident

Currently, there are no residential structures at DP-30/SD-33 or SS-39. Future residential use is not expected at either site. Additionally, as there are no potable wells utilized onsite, hypothetical residents would not be exposed to groundwater through ingestion or dermal contact. This pathway was not evaluated further.

Trespassers/Visitors

The area north of DP-30/SD-33 is restricted. Several highly restricted buildings are located near the two sites; consequently, unauthorized access to the DP-30/SD-33 area is prohibited and trespassers and visitors are unlikely. Because of its central location on HAFB, trespassers are considered unlikely at SS-39 because of its distance from facility boundaries. SS-39 is not an area frequented by visitors. This pathway was not evaluated further.

5.3 RISK CHARACTERIZATION

Information from the exposure and toxicity assessments were evaluated to estimate cancer risks and hazard indices (HI) in the risk characterization. Total noncarcinogenic and carcinogenic risk estimates for the exposure routes, as well as the cumulative risks for each receptor are presented in Table 3.2 of the complete HHRA, which is included in Appendix E. Total noncarcinogenic and carcinogenic risk estimates for the vapor intrusion exposure route are presented in Tables 5.1 and 5.2 of the complete HHRA, which is included in Appendix E.

5.3.1 Carcinogenic Risks for HAFB Groundwater

The incremental lifetime cancer risk (ILCR) estimates developed for a construction worker exposed to unfiltered inorganics and organics in groundwater were as follows:

Receptor	**Media and Cancer Risk Estimate**		**Table**
SS-39 0-10 ft bgs	Groundwater	7.4E-07	3.2 (Appendix E)

ILCR estimates calculated the construction worker at SS-39 do not exceed 1E-06, the conservative end of the EPA target risk range.

ILCR estimates calculated for a commercial/industrial worker exposed to VOC intrusion into buildings were as follows:

Receptor	**Media and Cancer Risk Estimate**		**Table**
DP-30/ SD-33	Groundwater	5.6E-06	5.1 (Appendix E)
SS-39	Groundwater	5.1E-05	5.2 (Appendix E)

The ILCR estimates for the commercial/industrial worker at DP-30/ SD-33 and SS-39 are within the EPA target risk range of 1E-04 to 1E-06 but exceeds the conservative end of the range (1E-06), due to inhalation of TCE. The ICLR estimate for inhalation of other VOCs at SS-39 is 1.7E-07.

5.4 NONCARCINOGENIC RISKS FOR HAFB GROUNDWATER

HIs developed for a construction worker exposed to unfiltered inorganics and organics in groundwater were as follows:

Receptor	Media and Hazard Index		Table in Appendix
SS-39 0-10 ft bgs	Groundwater	0.28	3.2 (Appendix E)

HIs developed for a commercial/industrial worker exposed to VOC intrusion into buildings were as follows:

Receptor	Media and Hazard Index		Table in Appendix
DP-30/ SD-33	Groundwater	0.0036	5.1 (Appendix E)
SS-39	Groundwater	0.032	5.2 (Appendix E)

HIs calculated for both a construction worker in an excavation and for vapor intrusion are less than one, indicating that adverse noncarcinogenic health effects are not anticipated under the conditions established in the exposure assessment.

5.5 SUMMARY

The COPCs for DP-30/SD-33 include antimony, arsenic, manganese, thallium, and TCE. The COPCs for SS-39 include arsenic, cadmium, selenium, perchlorate, carbon tetrachloride, chloroform, naphthalene, and TCE.

The potential receptors for these COPCs include industrial workers exposed to inhalation of vapors intruding into a building at both DP-30/SD-33 and SS-39, and construction workers that may come into contact with shallow groundwater while excavating or performing work in a trench (0 to 10 ft bgs) at SS-39.

ILCR estimates calculated the construction worker at SS-39 do not exceed 1E-06, the conservative end of the EPA target risk range.

The ILCR estimates for carcinogenic risks for the commercial/industrial worker at DP-30/ SD-33 and SS-39 are within the EPA target risk range of 1E-04 to 1E-06 but exceeds the conservative end of the range (1E-06), due to inhalation of TCE. The ICLR estimate for inhalation of other VOCs at SS-39 is 1.7E-07.

HIs calculated for vapor intrusion at both sites are less than one, indicating that adverse noncarcinogenic health effects are not anticipated under the conditions established in the exposure assessment.

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6.0 SUMMARY AND RECOMMENDATIONS

This April 2009 – January 2010 LTM report concludes the fifth through the eighth sampling events for OT-16 and the seventh and eighth sampling events for SD-30/SD-33 and SS-39. Groundwater samples were submitted for site-specific chemical analysis and analytical results were evaluated and compared with historical results. Results were generally consistent with previous sampling events. Site-specific summaries and recommendations are included in the sections below:

6.1 OT-16 (SWMUS 118 AND 132 AND AOC-A)

The following sections present a summary and the recommendation for site OT-16.

6.1.1 Summary

Tetra Tech has conducted the eighth and final groundwater sampling event, as required by NMED. During the eight sampling events at OT-16, only dieldrin and gamma-BHC have been detected. Detections of dieldrin have only occurred at monitoring wells MW16-01 and MW16-02. Detections of dieldrin are less frequent than during the previous sampling events. Samples collected from monitoring well MW16-01 exhibited detections of dieldrin in January 2009 and not again until October 2009. Dieldrin has only been detected in samples collected at MW16-02 during the July and October 2008 sampling events. Dieldrin was not detected in any samples collected in January 2010. Gamma-BHC has only been detected during the January 2010 sampling event in a sample collected from monitoring well MW16-02. The observed concentrations for dieldrin and gamma-BHC do not exceed the NMWQCC Standards or the EPA MCLs.

6.1.2 Recommendations

The data shows that OT-16 is not acting as a source area for pesticides and no longer poses a threat to groundwater quality. Further characterization of groundwater contamination at OT-16 is no longer necessary. Therefore, it is recommended that LTM at site OT-16 be discontinued. Additionally, it is recommended that NFA status under NMED Criterion 5 be granted for OT-16.

6.2 DP-30/SD-33 (SWMU 113B)

The following sections present a summary and the recommendation for site DP-30/SD-33.

6.2.1 Summary

According to sampling results, only TCE is a site-related groundwater contaminant. When detected above screening criteria, metals were generally detected at similar concentrations in dissolved and total metals sample results. All of the metal exceedances occurred in monitoring wells with high TDS concentrations and all of the exceedances are within the same order of magnitude. Furthermore, TDS are not consistent from round to round and the highest TDS concentrations are not associated with the highest TCE concentrations. This suggests that the elevated metals concentrations are unrelated to the site but are likely related to high TDS concentrations. The TDS concentrations in all of the monitoring wells were above 10,000 mg/L, which is the point where groundwater is no longer considered a potential domestic or agricultural water supply (NMAC, 20.6.2.3101).

Although TCE was detected above the NMWQCC Standard and/or the EPA MCL, since 2006 concentrations have been steadily decreasing in samples collected from the source area wells (MW30&33-05 and MW30&33-05R) and remained stable in samples collected from downgradient wells (MW30&33-02, MW30&33-03, and MW30&33-04), as illustrated on Figure 5-9. The data show that the plume has stabilized and is decreasing, indicating that DP-30/SD-33 is not acting as a continuing source of groundwater contamination. Historically, TCE has been detected in the waste material present in three former disposal trenches located in the south-central portion of DP-30 and immediately north of MW30&33-05 and MW30&33-05R. The continual decrease of TCE concentrations in the groundwater at MW30&33-05 and MW30&33-05R demonstrates that the residual material is not acting as a continuous source of groundwater contamination. Additionally, the daughter product of TCE breakdown (cis-1,2-dichloroethene) is present in samples collected from monitoring wells MW30&33-05 and MW30&33-05R indicating the potential of TCE biodegradation. Groundwater water level measurements collected during LTM events indicate that groundwater flow is primarily in a southeastern direction along a very low hydraulic gradient. Both the southerly flow direction and low hydraulic gradient explains the minimal migration of TCE beyond the extent of SD-33.

An HHRA conducted by Tetra Tech, which is included as Appendix E, characterized the risks to humans associated with the potential current or future exposures to chemicals in groundwater at DP-30/SD-33. The potential receptors at DP-30/SD-33 include industrial workers that may be exposed to inhalation of vapors intruding into a building. There are currently no buildings on the sites in question, and none are expected in the future but was evaluated in the HHRA to be conservative. Construction workers may come into contact with shallow groundwater while excavating or performing work in a trench 0 to 10 ft bgs. However, Site DP-30/SD-33 did not have groundwater from 0 to 10 ft bgs; therefore, this pathway is not

complete for this site. The ILCR estimates for carcinogenic risks for the commercial/industrial worker at DP-30/ SD-33 are within the EPA target risk range of 1E-04 to 1E-06 but exceeds the conservative end of the range, due to inhalation of TCE. HIs calculated for vapor intrusion at DP-30/SD/33 are less than 1, indicating that adverse noncarcinogenic health effects are not anticipated under the conditions established in the exposure assessment.

6.2.2 Recommendations

Based upon the above information, it is recommended that LTM be discontinued and conditional site closure be granted at DP-30/SD-33 with Land-Use Restrictions (LUCs). LUCs at the site would restrict the construction of buildings due to the risk of vapor intrusion. Although TCE was detected above the NMWQCC Standard and/or the EPA MCL, it is recommended that LTM cease and a conditional site closure be granted for DP-30/SD-33 for the following reasons:

- TCE concentrations have been decreasing in monitoring wells MW30&33-05 and -05R, which are the source wells, since 2006.
- TCE has either been stable or decreasing in all other downgradient wells (MW39-02, -03, and -04) since 2006.
- Cis-1,2-dichloroethene, the breakdown product of TCE, has been detected in samples collected from monitoring wells MW39-05 and -05R since 2006, indicating the potential for biodegradation of TCE at DP-30/SD-33.
- The data indicates that TCE concentrations are stable and decreasing, indicating that DP-30/SD-33 is not acting as a continued source of TCE contamination.
- An HHRA conducted for groundwater at DP-30/SD-33 indicated that the only significant risk to human health is vapor intrusion of TCE into buildings, which can be avoided with LUCs restricting development at this site.

6.3 SS-39 (SWMUS 165, 167, 177, 179, 181)

The following sections present a summary and the recommendation for site SS-39.

6.3.1 Summary

When detected above screening criteria, metals were generally detected at similar concentrations in dissolved and total metals sample results. All of the metal exceedances occurred in monitoring wells with high TDS concentrations and all of the exceedances are within the same order of magnitude. Furthermore, TDS are not consistent from round to round and the highest TDS concentrations are not associated with the highest TCE concentrations. This suggests that the elevated metals concentrations are unrelated to the site but are likely related to high TDS concentrations. The TDS concentrations in all of the monitoring wells were above 10,000 mg/L, which is the point where groundwater is no longer considered a potential domestic or agricultural water supply (NMAC, 20.6.2.3101).

According to sampling results, carbon tetrachloride, chloroform, methylene chloride, and TCE are the only site-related groundwater contaminants. Carbon tetrachloride, chloroform, and methylene chloride concentrations appear to be stable, indicating SS-39 is not acting as a continued source of groundwater contamination for these chemicals. As previously reported in the SS-39 RFI, perchlorate concentrations increase closer to the Lost River drainage basin; indicating the source of the perchlorate in this area appears to be the Lost River drainage basin and not SS-39 (HGL, 2007). TCE concentrations appear to be stable or decreasing in all monitoring wells with the exception of MW39-06D. However, the source areas of TCE, which include the two drainage troughs and sumps that drained wastewater from Building 1176, show stable concentrations that are lower than concentrations exhibited at monitoring wells downgradient. This indicates that the higher concentrations of TCE have moved downgradient and that the source areas are not a continued source of groundwater contamination.

Soil sampling results from the 1991 RI and the 2006 Supplemental RFI indicate that cadmium, chromium, lead, tetrachloroethene, and TCE are present at concentrations that exceed action levels in the area of the drainage sumps located downgradient of Building 1176.

An HHRA conducted for groundwater at SS-39 indicated that the only significant risk to human health is vapor intrusion of TCE into buildings, which can be avoided with LUCs requiring proper ventilation at all current and future buildings at the site.

Sampling results from the 1991 RI and the 2006 Supplemental RFI indicate that cadmium, chromium, lead, tetrachloroethene, and TCE are present at concentrations that exceed action levels in the area of the drainage sumps located downgradient of Building 1176.

6.3.2 Recommendations

Based upon the above information, it is recommended that contaminated soils in the area of the two drainage sumps, the source of TCE contamination, be removed. Following this corrective measure, it is recommended that several rounds of semi-annual groundwater monitoring be conducted to ensure that TCE concentrations are stable. Once TCE concentrations are found to be stable or decreasing, conditional site closure with LUCs can be achieved. Based on the HHRA conducted for HAFB groundwater, LUCs at site SS-39 would restrict the construction of buildings unless proper ventilation is installed to reduce/eliminate vapor intrusion of TCE into current and future buildings.

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7.0 REFERENCES

Bhate (Bhate Associates), 2006. *2005 Long-Term Groundwater Monitoring Report, Holloman Air Force Base, New Mexico*. May.

CH2M Hill, 1983. *Installation Restoration Program Records Search for Holloman Air Force Base*. August.

EPA (U.S. Environmental Protection Agency), 2002. *Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites*. OSWER 9355.4-24. December 2002.

EPA, 2004. *ProUCL Version 4.0 Statistical Software to Compute Upper Confidence Limits of the Unknown Population Mean*.

FEC (Foothills Engineering Consultants, Inc.), 1997. *Final Sampling and Analysis Plan, Long-Term Groundwater Monitoring Program, Holloman Air Force Base, New Mexico*. July.

HGL (HydroGeoLogic, Inc.) 2006. *OT-16 (SWMUs 118 and 132 and AOC 32) Long Term Monitoring Work Plan, Holloman Air Force Base, Alamogordo, New Mexico*. November.

HGL (HydroGeoLogic, Inc.), 2007. *Supplemental RCRA Facility Investigation, DP-30/SD-33 (SWMU 113), SS-39 (SWMUs 165, 177, 179, and 181), and SD-27 (SWMU 141), Holloman Air Force Base, Alamogordo, New Mexico*. May.

Livingston, K., 2006. Personal communication between Mr. Kelly Livingston, Holloman Air Force Base Civil Engineering Squadron Environmental Department and Mr. Brett Brodersen and Miss Sarah Gillette of Hydrogeologic, Inc. regarding installation of monitoring wells within the Lost River drainage basin. May.

NMAC (New Mexico Administrative Code) 20.6.2.3101. *Environmental Protection Water Quality Ground and Surface Water Protection*.

NMED (New Mexico Environment Department), 2003. *General Reporting Requirements for Routine Groundwater Monitoring at RCRA Sites*. February 14.

Radian Corporation, 1992. *Remedial Investigation Report, Investigation, Study, and Recommendation for 29 Waste Sites*. October.

USACE (U.S. Army Corp of Engineers) – Omaha District, 2003. *Final Work Plan for the Long-Term Groundwater Monitoring Program, Holloman Air Force Base, New Mexico*. March.

TABLES

Table 3-1
Monitoring Well Construction Details for OT-16, DP-30/SD-33, and SS-39
Holloman AFB, New Mexico

Well ID	Installation Date	Survey Data					Boring Information		Well Construction Information						
		Northing[1]	Easting[1]	Elevation (ft msl)			Borehole Depth (ft bgs)	Borehole diameter (in)	Total Well Depth (ft bgs)	PVC Diameter (in)	Length of Riser Pipe (ft)[3]	Screen Slot Size (in)	Length of Screen (ft)	Screened Interval (ft bgs)	
				Top of Casing[2]	Top of Monument[2]	Ground[2]								Top	Bottom
OT-16 - Former Entomology Shop Area															
MW-16-01	8/13/1991	669399.400	553922.90	4079.90	NP	NP	14.0	7.50	14.0	2	7.1	0.01	9.5	4.10	14.00
MW-16-02	8/13/1991	669306.300	553866.70	4077.71	NP	NP	14.5	7.50	14.2	2	7.0	0.01	9.5	4.30	14.20
MW-16-03	8/13/1991	669245.600	553885.30	4076.89	NP	NP	14.5	7.50	14.0	2	6.5	0.01	9.5	4.00	14.00
MW-16-04	8/13/1991	669260.100	553946.90	4077.30	NP	NP	15.5	7.50	13.0	2	6.3	0.01	9.5	3.10	13.00
DP-30/SD-33 - Grease Trap Disposal Pits and Cooking Grease Disposal Trench															
MW30&33-01	8/28/1991	676382.234	1692954.76	4104.460	4106.52	4105.38	31.0	7.50	30.80	2	20.49	0.01	9.5	19.35	28.85
MW30&33-02	8/27/1991	675814.196	1693088.88	4103.711	4106.09	4104.37	32.5	7.50	31.45	2	23.72	0.01	9.5	22.00	31.75
MW30&33-03	8/28/1991	675864.760	1693203.05	4102.685	4105.15	4103.39	25.0	7.50	26.30	2	25.76	0.01	9.5	24.00	23.75
MW30&33-04	8/28/1991	675962.302	1693280.77	4101.985	4104.41	4102.92	30.5	7.50	30.95	2	30.5	0.01	9.5	29.00	28.75
MW30&33-05[4]	6/12/2006	676092.849	1693119.47	4106.360	4106.43	4103.14	30.8	6.25	32.45	2	22.45	0.01	9.5	19.17	28.92
MW30&33-05R	8/22/2009	11929496.439	1309375.275	4103.057	Not specified	Not specified	30.0	6.25	30.00	2	Not specified	0.01	10.0	17.8	27.75
SS-39 - Missile Fuel Spill Area															
MW39-01	9/25/1991	685830.382	1671298.19	4061.89	4061.89	4059.92	28.0	7.50	27.5	2	20.25	0.01	9.5	17.75	27.25
MW39-02	9/25/1991	685113.105	1670479.98	4053.06	4052.85	4051.42	25.5	7.50	24.5	2	17.45	0.01	9.5	14.75	24.25
MW39-03	9/25/1991	685124.020	1670833.30	4042.71	4042.36	4040.20	14.0	7.50	14.0	2	6.75	0.01	9.5	4.25	13.75
MW39-04	9/25/1991	685319.268	1671156.83	4055.48	4055.14	4053.56	24.0	7.50	23.1	2	15.55	0.01	9.5	13.35	22.85
MW39-05	6/14/2006	684944.840	1669838.81	4038.53	4038.46	4035.84	15.3	6.25	15.33	2	Not specified	0.01	10.0	5.00	15.00
MW39-06	6/13/2006	684858.132	1670521.45	4040.88	4040.78	4037.41	16.8	6.25	16.3	2	3.33	0.01	10.0	6.00	16.00
MW39-06D	6/13/2006	684846.261	1670531.07	4040.23	4040.14	4037.07	26.8	6.25	26.8	2	3.13	0.01	10.0	16.50	26.50
MW39-07	6/14/2006	684804.006	1671083.81	4040.13	4040.20	4037.05	14.8	6.25	14.78	2	3.07	0.01	10.0	4.70	14.40
MW39-08	Event[5]	684654.799	1670377.33	NA	NA	4034.05	8.5	3.0	8.5	2	5.0	0.01	5.0	3.50	8.50
MW39-09	Event[5]	684612.479	1670592.70	NA	NA	4034.09	10.0	3.0	10.0	2	5.0	0.01	5.0	5.00	10.00
MW39-10	Event[5]	684650.942	1670853.50	NA	NA	4034.20	8.5	3.0	8.5	2	5.0	0.01	5.0	3.50	8.50
MW39-11	Event[5]	684669.596	1670101.08	NA	NA	4034.11	6.0	3.0	6.0	2	5.0	0.01	5.0	1.00	6.00
MW39-12	Event[5]	684691.675	1669910.95	NA	NA	4033.75	9.5	3.0	9.5	2	5.0	0.01	5.0	4.50	9.50

Notes:
[1] All locations are in NAD 83 State Plane New Mexico C Grid with the exception of well MW30&33-05R whose location is in US survey feet.
[2] NAVD 88
[3] Includes stickup
[4] Well has been abandonded due to damage observed during the July 2009 sampling event.
[5] Installed every sampling event - measurements from January 2009
amsl - above mean sea level
bgs - below ground surface
ft - feet
ID - identification
in - inches
NA - not applicable
NAD 83 - North American Datum 1983
NAVD 88 - North American Vertical Datum 1988
NP - not provided
PVC - polyvinyl chloride

Table 4-1
Groundwater Level Measurements
OT-16 (SWMUs 118 and 132 and AOC-A) - Existing Entomology Shop Area
Holloman AFB, New Mexico

	Water Level Data								Water Level Data							
	April-08		Jul-08		Oct-08		Jan-09		April-09		Jul-09		Oct-09		Jan-10	
Well	Depth to Water (ft BTOC)	Groundwater Elevation (ft amsl)	Depth to Water (ft BTOC)	Groundwater Elevation (ft amsl)	Depth to Water (ft BTOC)	Groundwater Elevation (ft amsl)	Depth to Water (ft BTOC)	Groundwater Elevation (ft amsl)	Depth to Water (ft BTOC)	Groundwater Elevation (ft amsl)	Depth to Water (ft BTOC)	Groundwater Elevation (ft amsl)	Depth to Water (ft BTOC)	Groundwater Elevation (ft amsl)	Depth to Water (ft BTOC)	Groundwater Elevation (ft amsl)
MW16-01	8.24	4071.66	6.38	4073.52	6.66	4073.24	7.25	4072.65	7.42	4072.48	6.76	4073.14	8.18	4071.72	7.28	4072.62
MW16-02	7.34	4070.37	5.61	4072.10	5.80	4071.91	6.60	4071.11	6.67	4071.04	6.21	4071.50	7.06	4070.65	6.41	4071.30
MW16-03	6.62	4070.27	4.88	4072.01	4.98	4071.91	5.89	4071.00	8.98	4067.91	5.45	4071.44	6.32	4070.57	8.68	4068.21
MW16-04	6.80	4070.50	5.45	4071.85	5.19	4072.11	6.05	4071.25	6.12	4071.18	6.06	4071.24	6.58	4070.72	8.87	4068.43

Notes:
amsl - above mean sea level
BTOC - below top of casing
ft - feet

Table 4-2
Groundwater Quality Parameters
OT-16 (SWMUs 118 and 132 and AOC-A) - Existing Entomology Shop Area
Holloman AFB, New Mexico

Well	pH								Specific Conductance (S/m)								Temperature (ºC)							
	April-08	Jul-08	Oct-08	Jan-09	April-09	Jul-09	Oct-09	Jan-10	April-08	Jul-08	Oct-08	Jan-09	April-09	Jul-09	Oct-09	Jan-10	April-08	Jul-08	Oct-08	Jan-09	April-09	Jul-09	Oct-09	Jan-10
MW16-01	7.34	7.41	7.25	7.51	7.25	7.31	7.36	6.46	18.44	3.92	3.81	3.61	3.60	3.58	3.94	3.84	18.13	23.67	22.86	17.60	17.30	22.96	22.70	19.16
MW16-02	7.45	7.41	7.28	7.84	7.50	7.20	7.50	6.24	33.09	4.59	4.54	5.81	6.14	4.37	6.34	6.09	18.13	24.13	23.47	17.40	17.10	25.07	22.96	18.88
MW16-03	7.25	7.28	7.36	7.63	7.35	6.93	7.38	6.62	20.63	4.31	3.82	4.05	4.00	4.33	4.62	4.76	17.26	24.69	23.68	17.40	16.40	23.18	24.49	18.30
MW16-04	7.55	6.83	7.23	7.67	7.39	6.44	7.63	6.56	23.90	5.15	5.32	5.16	4.52	4.78	5.62	5.73	17.81	23.26	24.18	17.50	16.40	23.17	23.73	18.97

Notes:

ºC - degrees Celsius

mg/L - milligrams per liter

mV - millivolt

NC - not collected

NTU - nephelometric turbidity unit

S/m - siemens per meter

% - percent

Table 4-2
Groundwater Quality Parameters
OT-16 (SWMUs 118 and 132 and AOC-A) - Existing Entomology Shop Area
Holloman AFB, New Mexico

Well	Turbidity (NTU)								Oxidation Reduction Potential (mV)								Dissolved Oxygen (mg/L)							
	April-08	Jul-08	Oct-08	Jan-09	April-09	Jul-09	Oct-09	Jan-10	April-08	Jul-08	Oct-08	Jan-09	April-09	Jul-09	Oct-09	Jan-10	April-08	Jul-08	Oct-08	Jan-09	April-09	Jul-09	Oct-09	Jan-10
MW16-01	1.38	23.67	2.43	101.00	10.00	167.00	108.00	48.80	121.60	260.00	124.40	NC	--	133.00	261.00	137.00	3.91	3.91	2.51	6.18	10.84	3.32	4.47	5.31
MW16-02	2.48	289.00	2.94	191.00	10.00	107.00	513.00	71.50	80.30	259.00	150.70	NC	--	144.00	214.00	148.00	5.47	5.32	4.05	7.32	9.81	6.66	5.54	6.39
MW16-03	1.57	478.00	7.48	161.00	53.00	142.00	136.00	62.20	125.20	268.00	115.20	NC	--	349.00	205.00	119.00	3.04	4.33	4.17	6.04	10.34	4.48	4.64	6.16
MW16-04	1.80	19.90	3.46	68.00	10.00	48.70	228.00	63.60	79.70	265.00	122.00	NC	--	362.00	188.00	121.00	5.52	6.41	3.09	7.88	10.10	6.52	7.38	8.01

Notes:

ºC - degrees Celsius

mg/L - milligrams per liter

mV - millivolt

NC - not collected

NTU - nephelometric turbidity unit

S/m - siemens per meter

% - percent

Table 4-2
Groundwater Quality Parameters
OT-16 (SWMUs 118 and 132 and AOC-A) - Existing Entomology Shop Area
Holloman AFB, New Mexico

Well	Salinity (%)							
	April-08	Jul-08	Oct-08	Jan-09	April-09	Jul-09	Oct-09	Jan-10
MW16-01	1.09	0.20	2.01	0.18	0.18	0.18	0.20	0.20
MW16-02	2.02	0.24	2.42	0.30	0.32	0.22	0.34	0.30
MW16-03	1.25	0.22	2.01	0.20	0.20	0.22	0.24	0.20
MW16-04	1.45	0.27	2.87	0.27	0.23	0.24	0.30	0.30

Notes:

ºC - degrees Celsius

mg/L - milligrams per liter

mV - millivolt

NC - not collected

NTU - nephelometric turbidity unit

S/m - siemens per meter

% - percent

Table 4-3
Summary of Groundwater Detections (April 2009 - January 2010)
OT-16 (SWMUs 118 and 132 and AOC-A) - Existing Entomology Shop Area
Holloman AFB, New Mexico

		Sample Name:	MW-16-01																MW-16-02							
		Date Collected:	04/09/2009		04/09/2009		07/06/2009		07/06/2009		10/06/2009		10/06/2009		01/05/2010		01/05/2010		04/09/2009		07/06/2009		10/06/2009		01/05/2010	
		QC Type:	Regular		Field Duplicate		Regular		Field Duplicate		Regular		Field Duplicate		Regular		Field Duplicate		Regular		Regular		Regular		Regular	
Analyte	**NMWQCC[1]**	**MCL[2]**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
General Chemistry (mg/L)																										
Solids, total dissolved[3]	n/a	n/a	3700		3630		2340	J	5400	J	3020		3100		2720		2570		5760		6470	J	5120		4170	
Pesticides (µg/L)																										
Dieldrin	0.042	n/a	0.0096	U	0.0096	U	0.01	U	0.01	U	0.02	J	0.015	J	0.01	U	0.0097	U	0.048	UJ	0.01	U	0.01	U	0.01	U
Gamma-BHC (lindane)	0.610909091	0.2	0.0096	U	0.0096	U	0.01	U	0.01	U	0.01	U	0.01	U	0.01	U	0.0097	U	0.048	U	0.01	U	0.01	U	0.097	J

Notes:

[1] NMAC 20.6.2.3103

[2] December 2009 U.S. EPA Maximum Contaminant Level (MCL)

[3] Groundwater with TDS concentrations above 10,000 mg/L is not considered a potential domestic or agricultural water supply (NMAC, 20.6.2.3101).

EPA - United States Environmental Protection Agency
J - estimated value
mg/L - milligrams per liter
n/a - not available
NMWQCC - New Mexico Water Quality Control Commission
Q - analytical result qualifier
Result - reported analytical concentration
µg/L - micrograms per liter
U - not detected
UJ - estimated non-detect

Table 4-3
Summary of Groundwater Detections (April 2009 - January 2010)
OT-16 (SWMUs 118 and 132 and AOC-A) - Existing Entomology Shop Area
Holloman AFB, New Mexico

		Sample Name:	MW-16-03								MW-16-04							
		Date Collected:	04/09/2009		07/06/2009		10/06/2009		01/05/2010		04/09/2009		07/06/2009		10/06/2009		01/05/2010	
		QC Type:	Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular	
Analyte	**NMWQCC[1]**	**MCL[2]**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
General Chemistry (mg/L)																		
Solids, total dissolved[3]	n/a	n/a	3180		6170	J	4690		2380		4200		6120	J	5590		4450	
Pesticides (µg/L)																		
Dieldrin	0.042	n/a	0.0096	U	0.01	U	0.01	UJ	0.0098	U	0.039	U	0.01	U	0.01	UJ	0.0097	U
Gamma-BHC (lindane)	0.610909091	0.2	0.0096	U	0.01	U	0.01	U	0.0098	U	0.039	U	0.01	U	0.01	U	0.0097	U

Notes:

[1] NMAC 20.6.2.3103

[2] December 2009 U.S. EPA Maximum Contaminant Level (MCL)

[3] Groundwater with TDS concentrations above 10,000 mg/L is not considered a potential domestic or agricultural water supply (NMAC, 20.6.2.3101).

EPA - United States Environmental Protection Agency
J - estimated value
mg/L - milligrams per liter
n/a - not available
NMWQCC - New Mexico Water Quality Control Commission
Q - analytical result qualifier
Result - reported analytical concentration
µg/L - micrograms per liter
U - not detected
UJ - estimated non-detect

Table 4-4
Groundwater Monitoring Analytical Results
OT-16 (SWMUs 118 and 132 and AOC-A) - Existing Entomology Shop Area
Holloman AFB, New Mexico

		Sample Name:	MW16-01																					
		Date Collected:	04/01/2008		04/01/2008		07/11/2008		07/11/2008		10/07/2008		10/07/2008		01/06/2009		01/06/2009		04/09/2009		04/09/2009		07/06/2009	
		Sampling Company:	Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech	
		QC Type:	Regular		Field Duplicate		Regular		Field Duplicate		Regular		Field Duplicate		Regular		Field Duplicate		Regular		Field Duplicate		Regular	
Analyte	**NMWQCC[1]**	**EPA MCL[2]**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
General Chemistry (mg/L)																								
Solids, total dissolved[3]	n/a	n/a	3010		3120		3380		3420		3210		3490		3130		3370		3700		3630		2340	J
Pesticides (µg/L)																								
Alpha-BHC	0.106666667	n/a	0.0098	U	0.0097	U	0.01	U	0.0097	U	0.0097	U	0.0097	U	0.0098	U	0.0097	U	0.0096	U	0.0096	U	0.01	U
Dieldrin	0.042	n/a	0.016	J	0.015	J	0.013	J	0.014	J	0.014	J	0.013	J	0.0098	U	0.011	J	0.0096	U	0.0096	U	0.01	U
Gamma-BHC (lindane)	0.610909091	0.2	0.0098	U	0.0097	U	0.01	U	0.0097	U	0.0097	U	0.0097	U	0.0098	U	0.0097	U	0.0096	U	0.0096	U	0.01	U

Notes:

[1] NMAC 20.6.2.3103

[2] December 2009 U.S. EPA Maximum Contaminant Level (MCL)

[3] Groundwater with TDS concentrations above 10,000 mg/L is not considered a potential domestic or agricultural water supply (NMAC, 20.6.2.3101).

EPA - United States Environmental Protection Agency
J - estimated value
mg/L - milligrams per liter
n/a - not available
NMWQCC - New Mexico Water Quality Control Commission
Q - analytical result qualifier
Result - reported analytical concentration
µg/L - micrograms per liter
U - not detected
UJ - estimated non-detect

Table 4-4
Groundwater Monitoring Analytical Results
OT-16 (SWMUs 118 and 132 and AOC-A) - Existing Entomology Shop Area
Holloman AFB, New Mexico

		Sample Name:	MW16-01										MW16-02											
		Date Collected:	07/06/2009		10/06/2009		10/06/2009		01/05/2010		01/05/2010		04/01/2008		07/11/2008		10/07/2008		01/06/2009		04/09/2009		07/06/2009	
		Sampling Company:	Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech	
		QC Type:	Field Duplicate		Regular		Field Duplicate		Regular		Field Duplicate		Regular		Regular		Regular		Regular		Regular		Regular	
Analyte	**NMWQCC[1]**	**EPA MCL[2]**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
General Chemistry (mg/L)																								
Solids, total dissolved[3]	n/a	n/a	5400	J	3020		3100		2720		2570		5010		3880		4440		4840		5760		6470	J
Pesticides (µg/L)																								
Alpha-BHC	0.106666667	n/a	0.01	U	0.01	U	0.01	U	0.01	U	0.0097	U	0.0098	U	0.01	U	0.0097	U	0.0096	U	0.048	U	0.01	U
Dieldrin	0.042	n/a	0.01	U	0.02	J	0.015	J	0.01	U	0.0097	U	0.0098	U	0.011	J	0.011	J	0.0096	U	0.048	UJ	0.01	U
Gamma-BHC (lindane)	0.610909091	0.2	0.01	U	0.01	U	0.01	U	0.01	U	0.0097	U	0.0098	U	0.01	U	0.049	U	0.0096	U	0.048	U	0.01	U

Notes:

[1] NMAC 20.6.2.3103

[2] December 2009 U.S. EPA Maximum Contaminant Level (MCL)

[3] Groundwater with TDS concentrations above 10,000 mg/L is not considered a potential domestic or agricultural water supply (NMAC, 20.6.2.3101).

EPA - United States Environmental Protection Agency
J - estimated value
mg/L - milligrams per liter
n/a - not available
NMWQCC - New Mexico Water Quality Control Commission
Q - analytical result qualifier
Result - reported analytical concentration
µg/L - micrograms per liter
U - not detected
UJ - estimated non-detect

Table 4-4
Groundwater Monitoring Analytical Results
OT-16 (SWMUs 118 and 132 and AOC-A) - Existing Entomology Shop Area
Holloman AFB, New Mexico

		Sample Name:	MW16-02				MW16-03															
		Date Collected:	10/06/2009		01/05/2010		04/01/2008		07/11/2008		10/07/2008		01/06/2009		04/09/2009		07/06/2009		10/06/2009		01/05/2010	
		Sampling Company:	Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech	
		QC Type:	Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular	
Analyte	**NMWQCC[1]**	**EPA MCL[2]**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
General Chemistry (mg/L)																						
Solids, total dissolved[3]	n/a	n/a	5120		4170		3580		3490		3230	J	3440	J	3180		6170	J	4690		2380	
Pesticides (µg/L)																						
Alpha-BHC	0.106666667	n/a	0.01	U	0.01	U	0.0097	U	0.01	U	0.0098	U	0.0098	U	0.0096	U	0.01	U	0.01	U	0.0098	U
Dieldrin	0.042	n/a	0.01	U	0.01	U	0.0097	U	0.01	U	0.0098	U	0.0098	U	0.0096	U	0.01	U	0.01	UJ	0.0098	U
Gamma-BHC (lindane)	0.610909091	0.2	0.01	U	0.097	J	0.0097	U	0.01	U	0.0098	U	0.0098	U	0.0096	U	0.01	U	0.01	U	0.0098	U

Notes:

[1] NMAC 20.6.2.3103

[2] December 2009 U.S. EPA Maximum Contaminant Level (MCL)

[3] Groundwater with TDS concentrations above 10,000 mg/L is not considered a potential domestic or agricultural water supply (NMAC, 20.6.2.3101).

EPA - United States Environmental Protection Agency
J - estimated value
mg/L - milligrams per liter
n/a - not available
NMWQCC - New Mexico Water Quality Control Commission
Q - analytical result qualifier
Result - reported analytical concentration
µg/L - micrograms per liter
U - not detected
UJ - estimated non-detect

Table 4-4
Groundwater Monitoring Analytical Results
OT-16 (SWMUs 118 and 132 and AOC-A) - Existing Entomology Shop Area
Holloman AFB, New Mexico

		Sample Name:	MW16-04															
		Date Collected:	04/01/2008		07/11/2008		10/07/2008		01/06/2009		04/09/2009		07/06/2009		10/06/2009		01/05/2010	
		Sampling Company:	Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech	
		QC Type:	Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular	
Analyte	**NMWQCC[1]**	**EPA MCL[2]**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
General Chemistry (mg/L)																		
Solids, total dissolved[3]	n/a	n/a	3330		4230		4230		14000		4200		6120	J	5590		4450	
Pesticides (µg/L)																		
Alpha-BHC	0.106666667	n/a	0.0096	U	0.0098	U	0.0097	U	0.0097	U	0.039	U	0.01	U	0.01	U	0.0097	U
Dieldrin	0.042	n/a	0.0096	U	0.0098	U	0.0097	U	0.0097	U	0.039	U	0.01	U	0.01	UJ	0.0097	U
Gamma-BHC (lindane)	0.610909091	0.2	0.0096	U	0.0098	U	0.0097	U	0.0097	U	0.039	U	0.01	U	0.01	U	0.0097	U

Notes:

[1] NMAC 20.6.2.3103

[2] December 2009 U.S. EPA Maximum Contaminant Level (MCL)

[3] Groundwater with TDS concentrations above 10,000 mg/L is not considered a potential domestic or agricultural water supply (NMAC, 20.6.2.3101).

EPA - United States Environmental Protection Agency
J - estimated value
mg/L - milligrams per liter
n/a - not available
NMWQCC - New Mexico Water Quality Control Commission
Q - analytical result qualifier
Result - reported analytical concentration
µg/L - micrograms per liter
U - not detected
UJ - estimated non-detect

Table 4-5
Groundwater Level Measurements
DP-30/SD-33 (SWMU 113B) - Grease Trap Disposal Pits and Cooking Grease Disposal Trench
Holloman AFB, New Mexico

	Water Level Data										Water Level Data							
	Jul-06		Jan-07		Jul-07		Jan-08		Jul-08		Jan-09		Jul-09		Oct-09		Jan-10	
Well	Depth to Water (ft BTOC)	Groundwater Elevation (ft amsl)	Depth to Water (ft BTOC)	Groundwater Elevation (ft amsl)	Depth to Water (ft BTOC)	Groundwater Elevation (ft amsl)	Depth to Water (ft BTOC)	Groundwater Elevation (ft amsl)	Depth to Water (ft BTOC)	Groundwater Elevation (ft amsl)	Depth to Water (ft BTOC)	Groundwater Elevation (ft amsl)	Depth to Water (ft BTOC)	Groundwater Elevation (ft amsl)	Depth to Water (ft BTOC)	Groundwater Elevation (ft amsl)	Depth to Water (ft BTOC)	Groundwater Elevation (ft amsl)
MW30&33-01	23.10	4083.42	22.26	4084.26	22.18	4084.34	22.19	4084.33	22.59	4084.45	22.05	4084.99	22.34	4084.70	22.41	4082.05	22.50	4081.96
MW30&33-02	23.10	4082.99	22.31	4083.78	22.07	4084.02	22.18	4083.91	22.52	4083.80	21.98	4084.34	22.2	4084.12	22.32	4081.39	22.41	4081.30
MW30&33-03	22.03	4083.12	22.29	4082.86	21.01	4084.14	20.95	4084.20	21.44	4083.91	21.92	4083.23	21.15	4084.20	21.24	4081.45	21.31	4081.38
MW30&33-04	21.10	4083.31	20.32	4084.09	20.13	4084.28	20.15	4084.26	20.49	4084.01	19.99	4084.51	20.22	4084.28	20.32	4081.67	20.43	4081.56
MW30&33-05	22.86	4083.57	22.05	4084.38	21.90	4084.53	21.95	4084.48	22.32	4084.04	21.78	4084.58	NC	NC	--	--	--	--
MW30&33-05R*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	21.25	4081.81	21.34	4081.72

Notes:

* Monitoring well was installed in July 2009 to replace MW30&33-05.

amsl - above mean sea level

BTOC - below top of casing

ft - feet

NC - Water levels were not collected due to the well being damaged.

Table 4-6
Groundwater Quality Parameters
DP-30/SD-33 (SWMU 113B) - Grease Trap Disposal Pits and Cooking Grease Disposal Trench
Holloman AFB, New Mexico

Well ID	pH									Specific Conductance (S/m)									Temperature (ºC)						
	Jul-06	Jan-07	Jul-07	Jan-08	Jul-08	Jan-09	Jul-09	Oct-09	Jan-10	Jul-06	Jan-07	Jul-07	Jan-08	Jul-08	Jan-09	Jul-09	Oct-09	Jan-10	Jul-06	Jan-07	Jul-07	Jan-08	Jul-08	Jan-09	Jul-09
MW30&33-01	7.09	7.31	7.26	7.09	6.91	7.55	7.05	NC	7.29	30	24.42	2.76	32.4	37.3	25.3	45.3	NC	40.7	20.73	18.4	20.3	15.88	19.7	18.1	21.06
MW30&33-02	7.15	7.28	7.25	7.11	7.31	7.65	7.14	NC	6.98	39.28	30.8	3.78	41.46	57.3	34	66.3	NC	54.4	20.24	16.42	26.7	14.28	20.51	17	22.52
MW30&33-03	7.12	7.15	7.74	7.07	7.49	7.56	6.99	NC	6.95	22.3	28.76	4.38	44.71	57.2	31.8	18.2	NC	51.4	40.26	16.42	22.9	16.02	19.75	15.4	21.65
MW30&33-04	6.96	7.12	7.1	6.94	7.38	7.38	6.85	NC	6.76	29.79	24.06	2.32	36.1	50.9	28.8	15.7	NC	43.9	26.96	17.03	25.7	17.14	19.92	17.5	20.63
MW30&33-05	6.92	7.14	7.12	6.9	7.44	7.17	NA	NA	NA	27.66	22.43	2.6	30.61	41	33.8	NA	NA	NA	30.17	18.02	28.4	16.83	20.1	18	NA
MW30&33-05R[(2)]	NC	NC	NC	NC	NC	NC	--	6.99	7	--	--	--	--	--	--	--	52.7	38.4	--	--	--	--	--	--	--

Notes:
[(1)] - result in percent saturation
[(2)] - Monitoring well was installed in July 2009 to replace MW30&33-05.
ºC - degrees Celsius
ID - identification
mg/L - milligrams per liter
mV - millivolt
NA - Data is not available for this well. The well was damaged sometime between January and July 2009 and was abandoned.
NC - not collected
NTU - nephelometric turbidity unit
ppt - parts per thousand
S/m - siemens per meter
-- meter malfunctioned
% - percent

Table 4-6
Groundwater Quality Parameters
DP-30/SD-33 (SWMU 113B) - Grease Trap Disposal Pits and Cooking Grease Disposal Trench
Holloman AFB, New Mexico

Well ID	Temperature (ºC)		Turbidity (NTU)									Oxidation Reduction Potential (mV)									Dissolved Oxygen (mg/L)				
	Oct-09	Jan-10	Jul-06	Jan-07	Jul-07	Jan-08	Jul-08	Jan-09	Jul-09	Oct-09	Jan-10	Jul-06	Jan-07	Jul-07	Jan-08	Jul-08	Jan-09	Jul-09	Oct-09	Jan-10	Jul-06	Jan-07	Jul-07	Jan-08	Jul-08
MW30&33-01	NC	17.1	31	164	0	0.5	918	--	14.4	NC	0	225.8	20.8	33	121.2	156	22.1	294	NC	119	5.3	3.5	0.85	0.85	2.33
MW30&33-02	NC	17.48	50	80	1.7	1.49	68.9	--	54.8	NC	-5.2	208.9	-24.6	5	141.5	195	--	292	NC	140	5.7	4.42	1.96	5.21	4.3
MW30&33-03	NC	14.67	4.2	13	0	1.35	55.2	15	100	NC	-6.2	24.55	-21.4	90	135	182	--	112	NC	134	5.78	2.66	2.82	2.3	3.47
MW30&33-04	NC	14.16	3.6	43.8	1.2	1	30	--	230	NC	-6.5	202.1	-17.1	-19	136.8	167	20.31	117	NC	143	5.71	1.95	0.69	433.15[1]	3
MW30&33-05	NA	NA	6	123	0.15	0.2	25	--	NA	NA	NA	81.8	20.6	24	57.3	184	--	NA	NA	NA	3.3	1.91	0.2	0.31	3
MW30&33-05R[2]	20.58	15.65	--	--	--	--	--	--	--	87.5	0	--	--	--	--	--	--	--	106	128	--	--	--	--	--

Notes:
[1] - result in percent saturation
[2] - Monitoring well was installed in July 2009 to replace MW30&33-05.
ºC - degrees Celsius
ID - identification
mg/L - milligrams per liter
mV - millivolt
NA - Data is not available for this well. The well was damaged sometime between January and July 2009 and was abandoned.
NC - not collected
NTU - nephelometric turbidity unit
ppt - parts per thousand
S/m - siemens per meter
-- meter malfunctioned
% - percent

Table 4-6
Groundwater Quality Parameters
DP-30/SD-33 (SWMU 113B) - Grease Trap Disposal Pits and Cooking Grease Disposal Trench
Holloman AFB, New Mexico

Well ID	Dissolved Oxygen (mg/L)				Salinity								
	Jan-09	Jul-09	Oct-09	Jan-10	Jul-07	Jan-07 (ppt)	Jul-07 (%)	Jan-08 (ppt)	Jul-08 (%)	Jan-09 (%)	Jul-09 (%)	Oct-09 (%)	Jan-10 (%)
MW30&33-01	9.65	1.05	NC	3.48	NC	28.06	1.7	25.05	3.13	1.54	2.97	NC	2.6
MW30&33-02	8.72	3.44	NC	5.55	NC	36.55	2.4	34.32	3.81	2.14	4*	NC	3.5
MW30&33-03	9.23	3.43	NC	7.86	NC	34.5	2.9	35.71	3.8	1.98	1.08	NC	3.3
MW30&33-04	9.01	1.92	NC	3.38	NC	284.5	1.4	27.27	3.33	1.79	0.92	NC	2.8
MW30&33-05	12.29	NA	NA	NA	NC	25.92	1.6	22.97	2.65	2.12	NA	NA	NA
MW30&33-05R(2)	--	--	0.14	3.85	--	--	--	--	--	--	--	3.47	2.4

Notes:
(1) - result in percent saturation
(2) - Monitoring well was installed in July 2009 to replace MW30&33-05.
ºC - degrees Celsius
ID - identification
mg/L - milligrams per liter
mV - millivolt
NA - Data is not available for this well. The well was damaged sometime between January and July 2009 and was abandoned.
NC - not collected
NTU - nephelometric turbidity unit
ppt - parts per thousand
S/m - siemens per meter
-- meter malfunctioned
% - percent

Table 4-7
Summary of Groundwater Detections (July 2009 - January 2010)
DP-30/SD-33 (SWMU 113B) - Grease Trap Disposal Pits and Cooking Grease Disposal Trench
Holloman AFB, New Mexico

		Sample Name:	MW30&33-01				MW30&33-02				MW30&33-03				MW30&33-04						MW30&33-05R					
		Date Collected:	07/08/2009		01/07/2010		07/08/2009		01/07/2010		07/08/2009		01/07/2010		07/08/2009		07/08/2009		01/07/2010		10/06/2009		01/07/2010		01/07/2010	
		QC Type:	Regular		Regular		Regular		Regular		Regular		Regular		Regular		Field Duplicate		Regular		Regular		Regular		Field Duplicate	
Analyte	**NMWQCC[1]**	**EPA MCL[2]**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
General Chemistry (mg/L)																										
Solids, total dissolved[3]	n/a	n/a	34300		19800		38700		27200		39500		28100		35500		31100		21800		25300		13600		18100	
Dissolved Metals (µg/L)																										
Aluminum	36500	n/a	46.9		130		55	U	149		55	U	158		55	U	55	U	143		120		153		164	
Antimony	14.6	6	18	U	9	U	23	U	9	U	23	U	9	U	23	U	23	U	9	U	12	U	9	U	9	U
Arsenic	0.448	10	**26.5**		11	U	**28.2**		11	U	27	U	11	U	27	U	**31.6**		11	U	**15.4**		11	U	11	U
Barium	7300	2000	20	U	12.7		25	U	15.2		25	U	22.6		25	U	25	U	12.8		34.3		25.7		27.4	
Calcium	n/a	n/a	741000		674000	J	854000		839000		831000		757000		725000		778000		684000		709000		672000		704000	
Cobalt	n/a	n/a	4	U	1	U	5	U	1	U	5	U	1	U	5	U	5	U	1	U	1.9		1.6		1.4	
Copper	1460	1300	27.9		5	U	56		5	U	25	U	5	U	25	U	25	U	5	U	5	U	5	U	5	U
Iron	25550	n/a	92	U	92	U	120	U	226		120	U	92	U	120	U	120	U	92	U	92	U	92	U	92	U
Magnesium	n/a	n/a	1320000		1240000		1680000		1830000		1720000		1620000		1560000		1670000		1440000		1280000		1100000		1160000	
Manganese	876	n/a	4	U	1	U	5	U	1	U	5	U	1	U	5	U	5	U	1	U	661		455		452	
Nickel	730	n/a	9.4		2.3	U	12	U	2.3	U	12	U	2.3	U	12	U	12	U	2.3	U	8.7		5.4		4.9	
Potassium	n/a	n/a	15700		20200	J	20800		29700		12500		15900		7150		7650		8120		19400		18000		20000	
Selenium	182.5	50	23.6		22.8	J	44.6		32.1		46.2		29.3		17	U	26.3		20.6		20		14.1		15.5	
Silver	182.5	n/a	7.6		1.4	U	7	U	1.4	U	7	U	1.4	U	7	U	7	U	1.4	U	1.4	U	1.4	U	1.4	U
Sodium	n/a	n/a	5260000		4970000		6790000		6410000		7010000		6200000		5980000		6040000		5320000		4590000		4150000		4280000	
Vanadium	182.5	n/a	48.5		37.9	J	32.6		26.8		22.8		17.1		38.1		39		30		34.3		45.6		44.7	
Zinc	10950	n/a	35.4		7.4	U	45.1		7.4	U	37	U	7.4	U	37	U	37	U	7.4	U	7.4	U	7.4	U	7.4	U
Total Metals (µg/L)																										
Aluminum	36500	n/a	44	U	96.1		55	U	114		55	U	110		55	U	55	U	89.5		108		251		107	
Antimony	14.6	6	18	U	9	U	23	U	10		23	U	9	U	23	U	23	U	9	U	9	U	9	U	9	U
Arsenic	0.448	10	**28.9**		**13.3**	J	27	U	**14.3**	J	27	U	11	UJ	27	U	27	U	11	UJ	**15.3**		11	UJ	11	UJ
Barium	7300	2000	20	U	11.9		25	U	14.4		25	U	22.1		25	U	25	U	12.7		34.3		27.4		26.4	
Calcium	n/a	n/a	670000		683000	J	919000		874000		866000		803000		761000		743000		708000		713000		722000		716000	
Cobalt	n/a	n/a	4	U	1	U	5	U	1	U	5	U	1	U	5	U	5	U	1	U	1.5		1.1		1	U
Copper	1460	1300	20	U	5	U	52.1		5	U	25	U	5	U	25	U	25	U	5	U	5	U	5	U	5	U
Iron	25550	n/a	92	U	92	U	120	U	169		120	U	105		120	U	120	U	92	U	92	U	92	U	92	U
Magnesium	n/a	n/a	1190000		1240000		1830000		1800000		1790000		1690000		1640000		1590000		1500000		1220000		1230000		1160000	
Manganese	876	n/a	4	U	1	U	5	U	1	U	5	U	1	U	5	U	5	U	1	U	672		493		477	
Nickel	730	n/a	9.2	U	2.3	U	12	U	2.3	U	12	U	2.3	U	12	U	12	U	2.3	U	10.1		6.5		5.6	
Potassium	n/a	n/a	14300		20300	J	23200		30900		13000		17100		7410		7480		8810		20200		20400		20400	
Selenium	182.5	50	20.5		37.6	J	40.1		54.7		50.2		49.2		17.2		19.9		37.2		22		32.5		25.8	
Silver	182.5	n/a	5.6	U	1.4	U	7	U	1.4	U	7	U	1.4	U	7	U	7	U	1.4	U	1.4	U	1.4	U	1.4	U
Sodium	n/a	n/a	5290000		5000000		7180000		6750000		6990000		6450000		5930000		6070000		5570000		4660000		4600000		4450000	
Vanadium	182.5	n/a	41.9		38.2	J	29.6		27.2		24		17.7		37.9		39.2		30.7		35.9		48.4		47.1	
Zinc	10950	n/a	30	U	7.4	U	44.6		7.4	U	37	U	7.4	U	37	U	37	U	7.4	U	7.4	U	7.4	U	7.4	U

Table 4-7
Summary of Groundwater Detections (July 2009 - January 2010)
DP-30/SD-33 (SWMU 113B) - Grease Trap Disposal Pits and Cooking Grease Disposal Trench
Holloman AFB, New Mexico

		Sample Name:	MW30&33-01				MW30&33-02				MW30&33-03				MW30&33-04						MW30&33-05R					
		Date Collected:	07/08/2009		01/07/2010		07/08/2009		01/07/2010		07/08/2009		01/07/2010		07/08/2009		07/08/2009		01/07/2010		10/06/2009		01/07/2010		01/07/2010	
		QC Type:	Regular		Regular		Regular		Regular		Regular		Regular		Regular		Field Duplicate		Regular		Regular		Regular		Field Duplicate	
Analyte	**NMWQCC[1]**	**EPA MCL[2]**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Volatile Organic Compounds (µg/L)																										
1,1-Dichloroethane	24.17598602	n/a	0.24	U	0.24	U	1.8		2.2		1.3		1.5		1.1		1		1.2		6		8.8		8.2	
1,1-Dichloroethene	339.5348837	7	0.54	U	0.54	U	0.54	U	0.54	U	0.54	U	0.54	U	0.54	U	0.54	U	0.54	U	0.86	J	1.2		1.1	
Chloroform	1.92753085	80	0.28	U	0.28	U	0.71	J	0.75	J	0.51	J	0.56	J	0.47	J	0.48	J	0.52	J	0.28	U	0.33	J	0.36	J
Cis-1,2-dichloroethene	365	70	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	9.7		14.9		13.9	
Trichloroethene	16.5434842	5	0.32	U	0.32	U	7.7		10.6		6.9		8.2		4.4		4.5		5.2		**21**		**30.6**		**29.2**	

Notes:

[1] NMAC 20.6.2.3103

[2] December 2009 U.S. EPA Maximum Contaminant Level

[3] The TDS concentrations in all of the monitoring wells were above 10,000 mg/L, which is the point where groundwater is no longer considered a potential domestic or agricultural water supply (NMAC, 20.6.2.3101).

Bold fields represent exceedances of NMWQCC standards

Highlighted fields represent exceedances EPA MCLs

Highlighted and bold fields represent exceedances of both NMWQCC standards and EPA MCLs

EPA - United States Environmental Protection Agency
HGL - HydroGeoLogic, Inc.
J - estimated value
mg/L - milligrams per liter
n/a - not available
n/a* - HGL only presented data summary tables in previous reports; therefore, data results for these fields are not available.
-- not analyzed
NMWQCC - New Mexico Water Quality Control Commission
Q - analytical result qualifier
Result - reported analytical concentration
U - not detected
UJ - estimated non-detect
µg/L - micrograms per liter

Table 4-8
Groundwater Monitoring Analytical Results
DP-30/SD-33 (SWMU 113B) - Grease Trap Disposal Pits and Cooking Grease Disposal Trench
Holloman AFB, New Mexico

		Sample Number:	MW30&33-01								MW30&33-02								MW30&33-03							
		Sample Date:	07/11/2008		01/09/2009		07/08/2009		01/07/2010		07/11/2008		01/09/2009		07/08/2009		01/07/2010		7/15/2006		7/15/2006		17-Jan-2007		17-Jul-2007	
		Sampling Company:	Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		HGL		HGL		HGL		HGL	
		QC Type:	Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Field Duplicate		Regular		Regular	
Analyte	**NMWQCC[1]**	**EPA MCL[2]**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
General Chemistry (mg/L)																										
Solids, total dissolved[3]	n/a	n/a	24500		18900	J	34300		19800		26900		31700		38700		27200		35400		--		28700		32000	J
Dissolved Metals (µg/L)																										
Aluminum	36500	n/a	115	U	44	U	46.9		130		114	U	44	U	55	U	149		9.8	U	9.8	U	30	U	1,000	U
Antimony	14.6	6	18	U	18	U	18	U	9	U	23	U	18	U	23	U	9	U	3.2	U	3.2	U	5	UJ	100	U
Arsenic	0.448	10	14	U	22	U	**26.5**		11	U	18	U	22	U	**28.2**		11	U	3.6	U	3.6	U	5	U	50	U
Barium	7300	2000	20	U	20	U	20	U	12.7		25	U	20	U	25	U	15.2		0.4	U	0.4	U	15	J	24	J
Beryllium	73	4	4	U	4	U	4	U	1	U	5	U	4	U	5	U	1	U	46		41		2.5	U	3	J
Cadmium	18.25	5	4	U	4	U	4	U	1	U	5	U	4	U	5	U	1	U	n/a*		n/a*		n/a*		n/a*	
Calcium	n/a	n/a	689000		735000		741000		674000	J	854000		980000		854000		839000		969,000		978,000		903,000		880,000	
Chromium	109.5	100	6.4	U	8	U	8	U	2	U	8	U	8	U	10	U	2	U	n/a*		n/a*		n/a*		n/a*	
Cobalt	n/a	n/a	3.3	U	4	U	4	U	1	U	4.2	U	4	U	5	U	1	U	32		34		5	UJ	25	U
Copper	1460	1300	8.4	U	20	U	27.9		5	U	11	U	20	U	56		5	U	n/a*		n/a*		n/a*		n/a*	
Iron	25550	n/a	92	U	3700	U	92	U	92	U	120	U	3700	U	120	U	226		2.8	U	2.8	U	10	UJ	750	U
Lead	n/a	15	8	U	8	U	8	U	8	U	10	U	8	U	10	U	8	U	n/a*		n/a*		n/a*		n/a*	
Magnesium	n/a	n/a	1350000		1230000		1320000		1240000		1800000		1810000		1680000		1830000		0.2		0.2		1,460,000		1,800,000	
Manganese	876	n/a	2	U	4	U	4	U	1	U	2.5	U	4	U	5	U	1	U	n/a*		n/a*		n/a*		n/a*	
Mercury	0.561538462	2	0.14	U	0.15	J	0.15	UJ	0.15	U	0.14	U	0.15	U	0.15	UJ	0.15	U	n/a*		n/a*		n/a*		n/a*	
Molybdenum	n/a	n/a	--		--		--		--		--		--		--		--		--		--		--		28	J
Nickel	730	n/a	9.2	U	9.2	U	9.4		2.3	U	12	U	9.2	U	12	U	2.3	U	21		0.4	U	5	UJ	50	U
Potassium	n/a	n/a	23800	U	15700	J	15700		20200	J	30600	U	25300	J	20800		29700		21,700		20,900		10,400		7,900	
Selenium	182.5	50	35	J	24	J	23.6		22.8	J	37.9	J	41.7		44.6		32.1		5.5	U	5.5	U	10	UJ	26	J
Silver	182.5	n/a	4.8	U	5.6	U	7.6		1.4	U	6	U	5.6	U	7	U	1.4	U	n/a*		n/a*		n/a*		n/a*	
Sodium	n/a	n/a	5070000		3120000	J	5260000		4970000		6890000		3860000	J	6790000		6410000		5,870,000		6,070,000		7,860,000		7,000,000	
Thallium	2.409	2	14	U	14	U	14	U	3.6	U	17	U	14	U	18	U	3.6	U	**109**		27.7	U	5	UJ	110	U
Vanadium	182.5	n/a	39.5	J	40.6	J	48.5		37.9	J	29.3	J	30.2	J	32.6		26.8		1	U	1	U	20	UJ	26	U
Zinc	10950	n/a	15	U	30	U	35.4		7.4	U	19	U	30	U	45.1		7.4	U	3	U	3	U	5	UJ	100	U
Total Metals (µg/L)																										
Aluminum	36500	n/a	18700		44	U	44	U	96.1		458	U	44	U	55	U	114		--		--		54		1,000	U
Antimony	14.6	6	36	U	18	U	18	U	9	U	23	U	18	U	23	U	10		--		--		50	U	**25**	J
Arsenic	0.448	10	14	U	22	U	**28.9**		**13.3**	J	18	U	22	U	27	U	**14.3**	J	--		--		5	U	50	U
Barium	7300	2000	228	J	20	U	20	U	11.9		25	U	20	U	25	U	14.4		--		--		15		22	J
Beryllium	73	4	4	U	4	U	4	U	1	U	5	U	4	U	5	U	1	U	n/a*		n/a*		n/a*		n/a*	
Cadmium	18.25	5	4	U	4	U	4	U	1	U	5	U	4	U	5	U	1	U	n/a*		n/a*		n/a*		n/a*	
Calcium	n/a	n/a	1070000		724000		670000		683000	J	1040000		985000		919000		874000		--		--		924,000		870,000	
Chromium	109.5	100	22.8	J	8	U	8	U	2	U	8	U	8	U	10	U	2	U	n/a*		n/a*		n/a*		n/a*	
Cobalt	n/a	n/a	16.3	J	4	U	4	U	1	U	4.2	U	4	U	5	U	1	U	--		--		5	U	8.7	J
Copper	1460	1300	8.4	U	20	U	20	U	5	U	11	U	20	U	52.1		5	U	n/a*		n/a*		n/a*		n/a*	
Iron	25550	n/a	14600		3700	U	92	U	92	U	4800	U	3700	U	120	U	169		--		--		129		750	U
Lead	n/a	15	21.5		8	U	8	U	8	U	10	U	8	U	10	U	8	U	n/a*		n/a*		n/a*		n/a*	
Magnesium	n/a	n/a	1420000		1230000		1190000		1240000		1950000		1820000		1830000		1800000		--		--		1,510,000		1,800,000	
Manganese	876	n/a	**1080**		4	U	4	U	1	U	18.4	J	4	U	5	U	1	U	--		--		1	J	50	U
Mercury	0.561538462	2	0.14	U	0.27	J	0.15	UJ	0.15	U	0.14	U	0.15	U	0.15	UJ	0.15	U	--		--		0.2	U	0.3	U
Molybdenum	n/a	n/a	--		--		--		--		--		--		--		--		--		--		--		33	J
Nickel	730	n/a	26.7	J	9.2	U	9.2	U	2.3	U	12	U	9.2	U	12	U	2.3	U	n/a*		n/a*		n/a*		n/a*	
Potassium	n/a	n/a	25900	U	15800	J	14300		20300	J	23900	U	24900	J	23200		30900		--		--		8,910		8,500	J

Table 4-8
Groundwater Monitoring Analytical Results
DP-30/SD-33 (SWMU 113B) - Grease Trap Disposal Pits and Cooking Grease Disposal Trench
Holloman AFB, New Mexico

		Sample Number:	MW30&33-01								MW30&33-02								MW30&33-03							
		Sample Date:	07/11/2008		01/09/2009		07/08/2009		01/07/2010		07/11/2008		01/09/2009		07/08/2009		01/07/2010		7/15/2006		7/15/2006		17-Jan-2007		17-Jul-2007	
		Sampling Company:	Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		HGL		HGL		HGL		HGL	
		QC Type:	Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Field Duplicate		Regular		Regular	
Analyte	**NMWQCC[1]**	**EPA MCL[2]**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Total Metals (µg/L)																										
Selenium	182.5	50	33.2	J	27.4	J	20.5		37.6	J	34.2	J	33.3	J	40.1		54.7		--		--		10	U	29	J
Silver	182.5	n/a	4.8	U	5.6	U	5.6	U	1.4	U	6	U	5.6	U	7	U	1.4	U	n/a*		n/a*		n/a*		n/a*	
Sodium	n/a	n/a	5470000		3150000	J	5290000		5000000		6700000		3840000	J	7180000		6750000		--		--		7,710,000		7,000,000	
Thallium	2.409	2	14	U	14	U	14	U	3.6	U	17	U	**14.7**	J	18	U	3.6	U	--		--		50	U	110	U
Vanadium	182.5	n/a	84.2	J	42.3	J	41.9		38.2	J	35.1	J	32.7	J	29.6		27.2		--		--		19	U	32	U
Zinc	10950	n/a	65.3	U	30	U	30	U	7.4	U	19	U	30	U	44.6		7.4	U	n/a*		n/a*		n/a*		n/a*	
Volatile Organic Compounds (µg/L)																										
1,1,1,2-Tetrachloroethane	5.24202143	n/a	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	n/a*		n/a*		n/a*		n/a*	
1,1,1-Trichloroethane	9125	200	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	n/a*		n/a*		n/a*		n/a*	
1,1,2,2-Tetrachloroethane	0.671337768	n/a	0.21	U	0.21	U	0.21	U	0.21	U	0.21	U	0.21	U	0.21	U	0.21	U	n/a*		n/a*		n/a*		n/a*	
1,1,2-Trichloro-1,2,2-trifluoroethane	59189.18919	n/a	0.34	U	0.34	U	0.34	U	0.34	U	0.34	U	0.34	U	0.34	U	0.34	U	n/a*		n/a*		n/a*		n/a*	
1,1,2-Trichloroethane	2.417598602	5	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	n/a*		n/a*		n/a*		n/a*	
1,1-Dichloroethane	24.17598602	n/a	0.24	U	0.24	U	0.24	U	0.24	U	1		1.6		1.8		2.2		0.49	J	--		3.61		1	U
1,1-Dichloroethene	339.5348837	7	0.54	U	0.54	U	0.54	U	0.54	U	0.54	U	0.54	U	0.54	U	0.54	U	0.0736	U	--		0.54	J	1	U
1,1-Dichloropropene	n/a	n/a	0.23	U	0.23	U	0.23	U	0.23	U	0.23	U	0.23	U	0.23	U	0.23	U	n/a*		n/a*		n/a*		n/a*	
1,2,3-Trichlorobenzene	n/a	n/a	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	n/a*		n/a*		n/a*		n/a*	
1,2,3-Trichloropropane	0.096	n/a	0.34	U	0.34	U	0.34	U	0.34	U	0.34	U	0.34	U	0.34	U	0.34	U	n/a*		n/a*		n/a*		n/a*	
1,2,4-Trichlorobenzene	8.156424581	70	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	n/a*		n/a*		n/a*		n/a*	
1,2,4-Trimethylbenzene	n/a	n/a	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U	n/a*		n/a*		n/a*		n/a*	
1,2-Dibromo-3-chloropropane	0.008032449	0.2	0.32	U	0.32	U	0.32	U	0.32	U	0.32	U	0.32	U	0.32	U	0.32	U	n/a*		n/a*		n/a*		n/a*	
1,2-Dibromoethane	0.065331096	0.05	0.28	U	0.28	U	0.28	U	0.28	U	0.28	U	0.28	U	0.28	U	0.28	U	n/a*		n/a*		n/a*		n/a*	
1,2-Dichlorobenzene	370.1408451	600	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	n/a*		n/a*		n/a*		n/a*	
1,2-Dichloroethane	1.493124676	5	0.34	U	0.34	U	0.34	U	0.34	U	0.34	U	0.34	U	0.34	U	0.34	U	n/a*		n/a*		n/a*		n/a*	
1,2-Dichloropropane	3.859826057	5	0.21	U	0.21	U	0.21	U	0.21	U	0.21	U	0.21	U	0.21	U	0.21	U	n/a*		n/a*		n/a*		n/a*	
1,3,5-Trimethylbenzene	n/a	n/a	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	n/a*		n/a*		n/a*		n/a*	
1,3-Dichlorobenzene	n/a	n/a	0.23	U	0.23	U	0.23	U	0.23	U	0.23	U	0.23	U	0.23	U	0.23	U	0.0672	U	--		--		--	
1,3-Dichloropropane	n/a	n/a	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	n/a*		n/a*		n/a*		n/a*	
1,4-Dichlorobenzene	4.271786825	75	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U	n/a*		n/a*		n/a*		n/a*	
1-Chlorohexane	n/a	n/a	0.27	U	0.27	U	0.27	U	0.27	U	0.27	U	0.27	U	0.27	U	0.27	U	n/a*		n/a*		n/a*		n/a*	
2,2-Dichloropropane	n/a	n/a	0.28	U	0.28	U	0.28	U	0.28	U	0.28	U	0.28	U	0.28	U	0.28	U	n/a*		n/a*		n/a*		n/a*	
2-Butanone	7064.516129	n/a	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	0.394	U	--		5	U	5	U
2-Butylbenzene	n/a	n/a	0.28	U	0.28	U	0.28	U	0.28	U	0.28	U	0.28	U	0.28	U	0.28	U	n/a*		n/a*		n/a*		n/a*	
2-Chloroethyl vinyl ether	n/a	n/a	1	UJ	1	UJ	1	UJ	1	UJ	1	UJ	1	UJ	1	U	1	U	n/a*		n/a*		n/a*		n/a*	
2-Chlorotoluene	730	n/a	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	n/a*		n/a*		n/a*		n/a*	
2-Hexanone	n/a	n/a	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	n/a*		n/a*		n/a*		n/a*	
2-Propylbenzene	n/a	n/a	0.25	U	0.25	U	--		--		0.25	U	0.25	U	--		--		n/a*		n/a*		n/a*		n/a*	
4-Bromofluorobenzene	n/a	n/a	--		--		--		--		--		--		--		--		--		--		48.4		--	
4-Chlorotoluene	n/a	n/a	0.21	U	0.21	U	0.21	U	0.21	U	0.21	U	0.21	U	0.21	U	0.21	U	n/a*		n/a*		n/a*		n/a*	
4-Methyl-2-pentanone	1990.909091	n/a	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	n/a*		n/a*		n/a*		n/a*	
Acetone	21782.8877	n/a	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	n/a*		n/a*		n/a*		n/a*	
Acetonitrile	n/a	n/a	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	n/a*		n/a*		n/a*		n/a*	
Acrolein	0.041619156	n/a	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	n/a*		n/a*		n/a*		n/a*	
Acrylonitrile	0.454334161	n/a	2	UJ	2	U	2	U	2	U	2	UJ	2	U	2	U	2	U	n/a*		n/a*		n/a*		n/a*	
Allyl chloride	n/a	n/a	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	n/a*		n/a*		n/a*		n/a*	
Benzene	4.129822301	5	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.0495	U	--		1	U	1	U

Table 4-8
Groundwater Monitoring Analytical Results
DP-30/SD-33 (SWMU 113B) - Grease Trap Disposal Pits and Cooking Grease Disposal Trench
Holloman AFB, New Mexico

		Sample Number:	MW30&33-01								MW30&33-02								MW30&33-03							
		Sample Date:	07/11/2008		01/09/2009		07/08/2009		01/07/2010		07/11/2008		01/09/2009		07/08/2009		01/07/2010		7/15/2006		7/15/2006		17-Jan-2007		17-Jul-2007	
		Sampling Company:	Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		HGL		HGL		HGL		HGL	
		QC Type:	Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Field Duplicate		Regular		Regular	
Analyte	**NMWQCC[1]**	**EPA MCL[2]**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Benzyl Chloride	n/a	n/a	0.36	U	0.36	U	0.36	U	0.36	U	0.36	U	0.36	U	0.36	U	0.36	U	n/a*		n/a*		n/a*		n/a*	
Volatile Organic Compounds (µg/L)																										
Bromobenzene	n/a	n/a	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	n/a*		n/a*		n/a*		n/a*	
Bromochloromethane	n/a	n/a	0.23	U	0.23	U	0.23	U	0.23	U	0.23	U	0.23	U	0.23	U	0.23	U	n/a*		n/a*		n/a*		n/a*	
Bromodichloromethane	1.172827869	80	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	n/a*		n/a*		n/a*		n/a*	
Bromoform	85.06329114	80	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	n/a*		n/a*		n/a*		n/a*	
Bromomethane	8.661016949	n/a	0.78	U	0.78	U	0.78	U	0.78	U	0.78	U	0.78	U	0.78	U	0.78	U	n/a*		n/a*		n/a*		n/a*	
Carbon disulfide	1042.857143	n/a	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	n/a*		n/a*		n/a*		n/a*	
Carbon tetrachloride	1.99316827	5	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U	n/a*		n/a*		n/a*		n/a*	
Chlorobenzene	91.25	100	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U	n/a*		n/a*		n/a*		n/a*	
Chloroethane	20857.14286	n/a	0.48	U	0.48	U	0.48	U	0.48	U	0.48	U	0.48	U	0.48	U	0.48	U	n/a*		n/a*		n/a*		n/a*	
Chloroform	1.92753085	80	0.28	U	0.28	U	0.28	U	0.28	U	0.64	J	0.66	J	0.71	J	0.75	J	0.26	J	--		1.72		1	U
Chloromethane	17.75044784	n/a	0.61	U	0.61	U	0.61	U	0.61	U	0.61	U	0.61	U	0.61	U	0.61	U	n/a*		n/a*		n/a*		n/a*	
cis-1,2-dichloroethene	365	70	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.101	U	--		0.35	J	1	U
cis-1,3-dichloropropene	n/a	n/a	0.21	U	0.21	U	0.21	U	0.21	UJ	0.21	U	0.21	U	0.21	U	0.21	U	n/a*		n/a*		n/a*		n/a*	
cis-1,4-Dichloro-2-butene	n/a	n/a	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	n/a*		n/a*		n/a*		n/a*	
Cymene	n/a	n/a	0.32	U	0.32	U	0.32	U	0.32	U	0.32	U	0.32	U	0.32	U	0.32	U	n/a*		n/a*		n/a*		n/a*	
Dibromochloromethane	1.470868284	80	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	n/a*		n/a*		n/a*		n/a*	
Dibromofluoromethane	n/a	n/a	--		--		--		--		--		--		--		--		--		--		52.4		--	
Dibromomethane	365	n/a	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	n/a*		n/a*		n/a*		n/a*	
Dichlorodifluoromethane	394.5945946	n/a	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	n/a*		n/a*		n/a*		n/a*	
Ether, tert-butyl methyl	124.6607805	n/a	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	n/a*		n/a*		n/a*		n/a*	
Ethyl methacrylate	3285	n/a	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	n/a*		n/a*		n/a*		n/a*	
Ethylbenzene	14.76103031	700	0.43	U	0.43	U	0.43	U	0.43	U	0.43	U	0.43	U	0.43	U	0.43	U	n/a*		n/a*		n/a*		n/a*	
Hexachlorobutadiene	8.615384615	n/a	0.69	U	0.69	U	0.69	U	0.69	U	0.69	U	0.69	U	0.69	U	0.69	U	n/a*		n/a*		n/a*		n/a*	
Hexane	876	n/a	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	n/a*		n/a*		n/a*		n/a*	
Iodomethane	n/a	n/a	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	n/a*		n/a*		n/a*		n/a*	
Isopropylbenzene	679.0697674	n/a	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	n/a*		n/a*		n/a*		n/a*	
m,p-Xylene	n/a	n/a	0.78	U	0.78	U	0.78	U	0.78	U	0.78	U	0.78	U	0.78	U	0.78	U	0.0363	U	--		1	U	2	U
Methacrylonitrile	1.042857143	n/a	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	n/a*		n/a*		n/a*		n/a*	
Methyl methacrylate	1419.444444	n/a	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	n/a*		n/a*		n/a*		n/a*	
Methylene chloride	48.03172785	5	1	U	1	U	1	U	5	U	1	U	1	U	1	U	1	U	n/a*		n/a*		n/a*		n/a*	
Naphthalene	1.431176471	n/a	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	n/a*		n/a*		n/a*		n/a*	
n-Propylbenzene	n/a	n/a	--		--		0.25	U	0.25	U	--		--		0.25	U	0.25	U	n/a*		n/a*		n/a*		n/a*	
o-Xylene	1431.372549	n/a	0.37	U	0.37	U	0.37	U	0.37	U	0.37	U	0.37	U	0.37	U	0.37	U	n/a*		n/a*		n/a*		n/a*	
Pentachloroethane	n/a	n/a	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	n/a*		n/a*		n/a*		n/a*	
Propionitrile	n/a	n/a	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	n/a*		n/a*		n/a*		n/a*	
Sec-butyl benzene	n/a	n/a	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	n/a*		n/a*		n/a*		n/a*	
Styrene	1622.222222	100	0.36	U	0.36	U	0.36	U	0.36	U	0.36	U	0.36	U	0.36	U	0.36	U	n/a*		n/a*		n/a*		n/a*	
Tert-butyl benzene	n/a	n/a	0.32	U	0.32	U	0.32	U	0.32	U	0.32	U	0.32	U	0.32	U	0.32	U	n/a*		n/a*		n/a*		n/a*	
Tetrachloroethene	1.081290425	5	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U	n/a*		n/a*		n/a*		n/a*	
Toluene	2281.25	1000	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	--		--		47.8		--	
Trans-1,2-dichloroethene	106.8292683	100	0.45	U	0.45	U	0.45	U	0.45	U	0.45	U	0.45	U	0.45	U	0.45	U	n/a*		n/a*		n/a*		n/a*	
Trans-1,3-dichloropropene	n/a	n/a	0.21	U	0.21	U	0.21	U	0.21	U	0.21	U	0.21	U	0.21	U	0.21	U	n/a*		n/a*		n/a*		n/a*	
Trans-1,4-Dichloro-2-Butene	n/a	n/a	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	n/a*		n/a*		n/a*		n/a*	
Trichloroethene	16.5434842	5	0.32	U	0.36	J	0.32	U	0.32	U	5.2		7.4		7.7		10.6		3.53		--		**21.1**		5.8	

Table 4-8
Groundwater Monitoring Analytical Results
DP-30/SD-33 (SWMU 113B) - Grease Trap Disposal Pits and Cooking Grease Disposal Trench
Holloman AFB, New Mexico

		Sample Number:	MW30&33-01								MW30&33-02								MW30&33-03							
		Sample Date:	07/11/2008		01/09/2009		07/08/2009		01/07/2010		07/11/2008		01/09/2009		07/08/2009		01/07/2010		7/15/2006		7/15/2006		17-Jan-2007		17-Jul-2007	
		Sampling Company:	Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		HGL		HGL		HGL		HGL	
		QC Type:	Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Field Duplicate		Regular		Regular	
Analyte	**NMWQCC[1]**	**EPA MCL[2]**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Volatile Organic Compounds (µg/L)																										
Trichlorofluoromethane	1288.235294	n/a	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	n/a*		n/a*		n/a*		n/a*	
Vinyl acetate	412.4293785	n/a	3.6	U	3.6	U	3.6	U	3.6	U	3.6	U	3.6	U	3.6	U	3.6	U	n/a*		n/a*		n/a*		n/a*	
Vinyl chloride	0.860694883	2	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	n/a*		n/a*		n/a*		n/a*	

Notes:

[1] NMAC 20.6.2.3103

[2] December 2009 U.S. EPA Maximum Contaminant Level

[3] The TDS concentrations in all of the monitoring wells were above 10,000 mg/L, which is the point where groundwater is no longer considered a potential domestic or agricultural water supply (NMAC, 20.6.2.3101).

Bold fields represent exceedances of NMWQCC standards

Highlighted fields represent exceedances EPA MCLs

Highlighted and bold fields represent exceedances of both NMWQCC standards and EPA MCLs

EPA - United States Environmental Protection Agency
HGL - HydroGeoLogic, Inc.
J - estimated value
mg/L - milligrams per liter
n/a - not available
n/a* - HGL only presented data summary tables in previous reports; therefore, data results for these fields are not available.
-- not analyzed
NMWQCC - New Mexico Water Quality Control Commission
Q - analytical result qualifier
Result - reported analytical concentration
U - not detected
UJ - estimated non-detect
µg/L - micrograms per liter

Table 4-8
Groundwater Monitoring Analytical Results
DP-30/SD-33 (SWMU 113B) - Grease Trap Disposal Pits and Cooking Grease Disposal Trench
Holloman AFB, New Mexico

		Sample Number:	MW30&33-03										MW30&33-04													
		Sample Date:	15-Jan-2008		07/11/2008		01/09/2009		07/08/2009		01/07/2010		7/15/2006		1/17/2007		7/19/2007		1/15/2008		07/11/2008		01/09/2009		07/08/2009	
		Sampling Company:	HGL		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		HGL		HGL		HGL		HGL		Tetra Tech		Tetra Tech		Tetra Tech	
		QC Type:	Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular	
Analyte	**NMWQCC[1]**	**EPA MCL[2]**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
General Chemistry (mg/L)																										
Solids, total dissolved[3]	n/a	n/a	29000		31900		29300		39500		28100		25100		24700		25000		24000		22600		28000		35500	
Dissolved Metals (µg/L)																										
Aluminum	36500	n/a	200	J	129	U	44	U	55	U	158		9.8	U	30	U	1000	U	160	J	139	U	44	U	55	U
Antimony	14.6	6	100	U	23	U	18	U	23	U	9	U	3.2	U	5	UJ	100	U	100	U	18	U	18	U	23	U
Arsenic	0.448	10	50	U	18	U	22	U	27	U	11	U	3.6	U	5	U	50	U	50	U	14	U	22	U	27	U
Barium	7300	2000	25	J	25	U	20.6	J	25	U	22.6		6	J	11	J	55	U	55	U	20	U	20	U	25	U
Beryllium	73	4	20	U	5	U	4	U	5	U	1	U	4		2.5	U	20	U	20	U	4	U	4	U	5	U
Cadmium	18.25	5	n/a*		5	U	4	U	5	U	1	U	n/a*		n/a*		n/a*		n/a*		4	U	4	U	5	U
Calcium	n/a	n/a	840,000		860000		876000		831000		757000		781000		744000		740000		730000		705000		760000		725000	
Chromium	109.5	100	n/a*		8	U	8	U	10	U	2	U	n/a*		n/a*		n/a*		n/a*		6.4	U	8	U	10	U
Cobalt	n/a	n/a	25	U	4.2	U	4	U	5	U	1	U	3	J	5	UJ	25	U	25	U	3.3	U	4	U	5	U
Copper	1460	1300	n/a*		11	U	20	U	25	U	5	U	n/a*		n/a*		n/a*		n/a*		8.4	U	20	U	25	U
Iron	25550	n/a	750	UJ	120	U	3700	U	120	U	92	U	7	J	10	UJ	750	UJ	750	UJ	92	U	3700	U	120	U
Lead	n/a	15	n/a*		10	U	8	U	10	U	8	U	n/a*		n/a*		n/a*		n/a*		8	U	8	U	10	U
Magnesium	n/a	n/a	1,800,000		1920000		1610000		1720000		1620000		0.2		1290000		1400000		1500000		1660000		1520000		1560000	
Manganese	876	n/a	n/a*		2.5	U	4	U	5	U	1	U	n/a*		n/a*		n/a*		n/a*		2	U	4	U	5	U
Mercury	0.561538462	2	n/a*		0.14	U	0.15	U	0.15	UJ	0.15	U	n/a*		n/a*		n/a*		n/a*		0.14	U	0.15	U	0.15	UJ
Molybdenum	n/a	n/a	43	J	--		--		--		--		--		--		70	U	70	U	--		--		--	
Nickel	730	n/a	50	U	12	U	9.2	U	12	U	2.3	U	4	J	5	UJ	50	U	50	U	9.2	U	9.2	U	12	U
Potassium	n/a	n/a	8,000	J	23100	U	12400	J	12500		15900		14900		6070		1800	J	2200	J	14200	U	7390	J	7150	
Selenium	182.5	50	24	J	46	J	24.6	J	46.2		29.3		5.5	U	10	UJ	75	U	75	U	29.3	J	14	U	17	U
Silver	182.5	n/a	n/a*		6	U	5.6	U	7	U	1.4	U	n/a*		n/a*		n/a*		n/a*		4.8	U	5.6	U	7	U
Sodium	n/a	n/a	6,800,000		6470000		3640000	J	7010000		6200000		4370000		6300000		5300000	J	5400000		5800000		3340000	J	5980000	
Thallium	2.409	2	110	U	17	U	**18.5**	J	18	U	3.6	U	27.7	U	5	UJ	110	U	110	U	14	U	14	U	18	U
Vanadium	182.5	n/a	30		20.7	J	22.3	J	22.8		17.1		12		26	J	43	U	39		31.2	J	32.7	J	38.1	
Zinc	10950	n/a	100	U	19	U	30	U	37	U	7.4	U	41		5	UJ	100	U	100	U	15	U	30	U	37	U
Total Metals (µg/L)																										
Aluminum	36500	n/a	200	J	171	U	44	U	55	U	110		--		607		1000	U	270	J	813		44	U	55	U
Antimony	14.6	6	100	U	23	U	18	U	23	U	9	U	--		50	U	**30**	J	100	U	36	U	18	U	23	U
Arsenic	0.448	10	50	U	18	U	22	U	27	U	11	UJ	--		5	U	50	U	50	U	**28.8**	J	22	U	27	U
Barium	7300	2000	24	J	25	U	21.5	J	25	U	22.1		--		14		55	U	18	J	20	U	20	U	25	U
Beryllium	73	4	n/a*		5	U	4	U	5	U	1	U	n/a*		n/a*		n/a*		n/a*		4	U	4	U	5	U
Cadmium	18.25	5	n/a*		5	U	4	U	5	U	1	U	n/a*		n/a*		n/a*		n/a*		4	U	4	U	5	U
Calcium	n/a	n/a	840,000		943000		873000		866000		803000		--		809000		750000		700000		858000		774000		761000	
Chromium	109.5	100	n/a*		8	U	8	U	10	U	2	U	n/a*		n/a*		n/a*		n/a*		6.4	U	8	U	10	U
Cobalt	n/a	n/a	25	U	4.2	U	4	U	5	U	1	U	--		5	U	6.9	J	25	U	3.3	U	4	U	5	U
Copper	1460	1300	n/a*		11	U	20	U	25	U	5	U	n/a*		n/a*		n/a*		n/a*		8.4	U	20	U	25	U
Iron	25550	n/a	750	UJ	4800	U	3700	U	120	U	105		--		576		750	UJ	750	UJ	3680	U	3700	U	120	U
Lead	n/a	15	n/a*		10	U	8	U	10	U	8	U	n/a*		n/a*		n/a*		n/a*		8	U	8	U	10	U
Magnesium	n/a	n/a	1,800,000		1930000		1600000		1790000		1690000		--		1380000		1400000		1400000		1840000		1560000		1640000	
Manganese	876	n/a	50	U	10	J	4	U	5	U	1	U	--		10	J	50	U	50	U	18.7	J	4	U	5	U
Mercury	0.561538462	2	0.3	U	0.14	U	0.15	U	0.15	UJ	0.15	U	--		0.2	U	0.099	J	0.3	U	0.14	U	0.15	U	0.15	UJ
Molybdenum	n/a	n/a	40	J	--		--		--		--		--		--		70	U	70	U	--		--		--	
Nickel	730	n/a	n/a*		12	U	9.2	U	12	U	2.3	U	n/a*		n/a*		n/a*		n/a*		9.2	U	9.2	U	12	U
Potassium	n/a	n/a	7,700	J	17900	U	12600	J	13000		17100		--		5700	U	2600	J	2100	J	12000	U	8120	J	7410	

Table 4-8
Groundwater Monitoring Analytical Results
DP-30/SD-33 (SWMU 113B) - Grease Trap Disposal Pits and Cooking Grease Disposal Trench
Holloman AFB, New Mexico

		Sample Number:	MW30&33-03										MW30&33-04													
		Sample Date:	15-Jan-2008		07/11/2008		01/09/2009		07/08/2009		01/07/2010		7/15/2006		1/17/2007		7/19/2007		1/15/2008		07/11/2008		01/09/2009		07/08/2009	
		Sampling Company:	HGL		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		HGL		HGL		HGL		HGL		Tetra Tech		Tetra Tech		Tetra Tech	
		QC Type:	Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular	
Analyte	**NMWQCC[1]**	**EPA MCL[2]**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Total Metals (µg/L)																										
Selenium	182.5	50	25	J	24.7	J	32.1	J	50.2		49.2		--		10	U	75	U	75	U	16.8	J	23	J	17.2	
Silver	182.5	n/a	n/a*		6	U	5.6	U	7	U	1.4	U	n/a*		n/a*		n/a*		n/a*		4.8	U	5.6	U	7	U
Sodium	n/a	n/a	6,600,000	J	6960000		3610000	J	6990000		6450000		--		6250000		5300000	J	5200000	J	6080000		3400000	J	5930000	
Thallium	2.409	2	110	U	**18.9**	J	14	U	18	U	3.6	U	--		50	U	**39**	J	110	U	**20.4**	J	14	U	18	U
Vanadium	182.5	n/a	30		25	J	22.1	J	24		17.7		--		31		38	U	40		38.7	J	33.1	J	37.9	
Zinc	10950	n/a	n/a*		19	U	30	U	37	U	7.4	U	n/a*		n/a*		n/a*		n/a*		15	U	30	U	37	U
Volatile Organic Compounds (µg/L)																										
1,1,1,2-Tetrachloroethane	5.24202143	n/a	n/a*		0.2	U	0.2	U	0.2	U	0.2	U	n/a*		n/a*		n/a*		n/a*		0.2	U	0.2	U	0.2	U
1,1,1-Trichloroethane	9125	200	n/a*		0.33	U	0.33	U	0.33	U	0.33	U	n/a*		n/a*		n/a*		n/a*		0.33	U	0.33	U	0.33	U
1,1,2,2-Tetrachloroethane	0.671337768	n/a	n/a*		0.21	U	0.21	U	0.21	U	0.21	U	n/a*		n/a*		n/a*		n/a*		0.21	U	0.21	U	0.21	U
1,1,2-Trichloro-1,2,2-trifluoroethane	59189.18919	n/a	n/a*		0.34	U	0.34	U	0.34	U	0.34	U	n/a*		n/a*		n/a*		n/a*		0.34	U	0.34	U	0.34	U
1,1,2-Trichloroethane	2.417598602	5	n/a*		0.26	U	0.26	U	0.26	U	0.26	U	n/a*		n/a*		n/a*		n/a*		0.26	U	0.26	U	0.26	U
1,1-Dichloroethane	24.17598602	n/a	1	U	1.1		2.6		1.3		1.5		3.38		3.44		2.1		1.7		2.1		1.5		1.1	
1,1-Dichloroethene	339.5348837	7	1	U	0.54	U	0.54	U	0.54	U	0.54	U	0.0736	U	1	U	1	U	1	U	0.54	U	0.54	U	0.54	U
1,1-Dichloropropene	n/a	n/a	n/a*		0.23	U	0.23	U	0.23	U	0.23	U	n/a*		n/a*		n/a*		n/a*		0.23	U	0.23	U	0.23	U
1,2,3-Trichlorobenzene	n/a	n/a	n/a*		0.5	U	0.5	U	0.5	U	0.5	U	n/a*		n/a*		n/a*		n/a*		0.5	U	0.5	U	0.5	U
1,2,3-Trichloropropane	0.096	n/a	n/a*		0.34	U	0.34	U	0.34	U	0.34	U	n/a*		n/a*		n/a*		n/a*		0.34	U	0.34	U	0.34	U
1,2,4-Trichlorobenzene	8.156424581	70	n/a*		0.5	U	0.5	U	0.5	U	0.5	U	n/a*		n/a*		n/a*		n/a*		0.5	U	0.5	U	0.5	U
1,2,4-Trimethylbenzene	n/a	n/a	n/a*		0.22	U	0.22	U	0.22	U	0.22	U	n/a*		n/a*		n/a*		n/a*		0.22	U	0.22	U	0.22	U
1,2-Dibromo-3-chloropropane	0.008032449	0.2	n/a*		0.32	U	0.32	U	0.32	U	0.32	U	n/a*		n/a*		n/a*		n/a*		0.32	U	0.32	U	0.32	U
1,2-Dibromoethane	0.065331096	0.05	n/a*		0.28	U	0.28	U	0.28	U	0.28	U	n/a*		n/a*		n/a*		n/a*		0.28	U	0.28	U	0.28	U
1,2-Dichlorobenzene	370.1408451	600	n/a*		0.2	U	0.2	U	0.2	U	0.2	U	n/a*		n/a*		n/a*		n/a*		0.2	U	0.2	U	0.2	U
1,2-Dichloroethane	1.493124676	5	n/a*		0.34	U	0.34	U	0.34	U	0.34	U	n/a*		n/a*		n/a*		n/a*		0.34	U	0.34	U	0.34	U
1,2-Dichloropropane	3.859826057	5	n/a*		0.21	U	0.21	U	0.21	U	0.21	U	n/a*		n/a*		n/a*		n/a*		0.21	U	0.21	U	0.21	U
1,3,5-Trimethylbenzene	n/a	n/a	n/a*		0.2	U	0.2	U	0.2	U	0.2	U	n/a*		n/a*		n/a*		n/a*		0.2	U	0.2	U	0.2	U
1,3-Dichlorobenzene	n/a	n/a	1	U	0.23	U	0.23	U	0.23	U	0.23	U	0.0672	U	--		--		1	U	0.23	U	0.23	U	0.23	U
1,3-Dichloropropane	n/a	n/a	n/a*		0.26	U	0.26	U	0.26	U	0.26	U	n/a*		n/a*		n/a*		n/a*		0.26	U	0.26	U	0.26	U
1,4-Dichlorobenzene	4.271786825	75	n/a*		0.22	U	0.22	U	0.22	U	0.22	U	n/a*		n/a*		n/a*		n/a*		0.22	U	0.22	U	0.22	U
1-Chlorohexane	n/a	n/a	n/a*		0.27	U	0.27	U	0.27	U	0.27	U	n/a*		n/a*		n/a*		n/a*		0.27	U	0.27	U	0.27	U
2,2-Dichloropropane	n/a	n/a	n/a*		0.28	U	0.28	U	0.28	U	0.28	U	n/a*		n/a*		n/a*		n/a*		0.28	U	0.28	U	0.28	U
2-Butanone	7064.516129	n/a	5	UJ	2	U	2	U	2	U	2	U	0.394	U	5	U	5	UJ	5	UJ	2	U	2	U	2	U
2-Butylbenzene	n/a	n/a	n/a*		0.28	U	0.28	U	0.28	U	0.28	U	n/a*		n/a*		n/a*		n/a*		0.28	U	0.28	U	0.28	U
2-Chloroethyl vinyl ether	n/a	n/a	n/a*		1	UJ	1	UJ	1	U	1	U	n/a*		n/a*		n/a*		n/a*		1	UJ	1	UJ	1	U
2-Chlorotoluene	730	n/a	n/a*		0.25	U	0.25	U	0.25	U	0.25	U	n/a*		n/a*		n/a*		n/a*		0.25	U	0.25	U	0.25	U
2-Hexanone	n/a	n/a	n/a*		5	U	5	U	5	U	5	U	n/a*		n/a*		n/a*		n/a*		5	U	5	U	5	U
2-Propylbenzene	n/a	n/a	n/a*		0.25	U	0.25	U	--		--		n/a*		n/a*		n/a*		n/a*		0.25	U	0.25	U	--	
4-Bromofluorobenzene	n/a	n/a	--		--		--		--		--		--		49.3		--		--		--		--		--	
4-Chlorotoluene	n/a	n/a	n/a*		0.21	U	0.21	U	0.21	U	0.21	U	n/a*		n/a*		n/a*		n/a*		0.21	U	0.21	U	0.21	U
4-Methyl-2-pentanone	1990.909091	n/a	n/a*		2	U	2	U	2	U	2	U	n/a*		n/a*		n/a*		n/a*		2	U	2	U	2	U
Acetone	21782.8877	n/a	n/a*		10	U	10	U	10	U	10	U	n/a*		n/a*		n/a*		n/a*		10	U	10	U	10	U
Acetonitrile	n/a	n/a	n/a*		5	U	5	U	5	U	5	U	n/a*		n/a*		n/a*		n/a*		5	U	5	U	5	U
Acrolein	0.041619156	n/a	n/a*		5	U	5	U	5	U	5	U	n/a*		n/a*		n/a*		n/a*		5	U	5	U	5	U
Acrylonitrile	0.454334161	n/a	n/a*		2	UJ	2	U	2	U	2	U	n/a*		n/a*		n/a*		n/a*		2	UJ	2	U	2	U
Allyl chloride	n/a	n/a	n/a*		2	U	2	U	2	U	2	U	n/a*		n/a*		n/a*		n/a*		2	U	2	U	2	U
Benzene	4.129822301	5	1	U	0.4	U	0.4	U	0.4	U	0.4	U	0.0495	U	1	U	1	U	1	U	0.4	U	0.4	U	0.4	U

Table 4-8
Groundwater Monitoring Analytical Results
DP-30/SD-33 (SWMU 113B) - Grease Trap Disposal Pits and Cooking Grease Disposal Trench
Holloman AFB, New Mexico

		Sample Number:	MW30&33-03										MW30&33-04													
		Sample Date:	15-Jan-2008		07/11/2008		01/09/2009		07/08/2009		01/07/2010		7/15/2006		1/17/2007		7/19/2007		1/15/2008		07/11/2008		01/09/2009		07/08/2009	
		Sampling Company:	HGL		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		HGL		HGL		HGL		HGL		Tetra Tech		Tetra Tech		Tetra Tech	
		QC Type:	Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular	
Analyte	**NMWQCC[(1)]**	**EPA MCL[(2)]**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Benzyl Chloride	n/a	n/a	n/a*		0.36	U	0.36	U	0.36	U	0.36	U	n/a*		n/a*		n/a*		n/a*		0.36	U	0.36	U	0.36	U
Volatile Organic Compounds (µg/L)																										
Bromobenzene	n/a	n/a	n/a*		0.26	U	0.26	U	0.26	U	0.26	U	n/a*		n/a*		n/a*		n/a*		0.26	U	0.26	U	0.26	U
Bromochloromethane	n/a	n/a	n/a*		0.23	U	0.23	U	0.23	U	0.23	U	n/a*		n/a*		n/a*		n/a*		0.23	U	0.23	U	0.23	U
Bromodichloromethane	1.172827869	80	n/a*		0.2	U	0.2	U	0.2	U	0.2	U	n/a*		n/a*		n/a*		n/a*		0.2	U	0.2	U	0.2	U
Bromoform	85.06329114	80	n/a*		0.33	U	0.33	U	0.33	U	0.33	U	n/a*		n/a*		n/a*		n/a*		0.33	U	0.33	U	0.33	U
Bromomethane	8.661016949	n/a	n/a*		0.78	U	0.78	U	0.78	U	0.78	U	n/a*		n/a*		n/a*		n/a*		0.78	U	0.78	U	0.78	U
Carbon disulfide	1042.857143	n/a	n/a*		0.4	U	0.4	U	0.4	U	0.4	U	n/a*		n/a*		n/a*		n/a*		0.4	U	0.4	U	0.4	U
Carbon tetrachloride	1.99316827	5	n/a*		0.22	U	0.22	U	0.22	U	0.22	U	n/a*		n/a*		n/a*		n/a*		0.22	U	0.22	U	0.22	U
Chlorobenzene	91.25	100	n/a*		0.22	U	0.22	U	0.22	U	0.22	U	n/a*		n/a*		n/a*		n/a*		0.22	U	0.22	U	0.22	U
Chloroethane	20857.14286	n/a	n/a*		0.48	U	0.48	U	0.48	U	0.48	U	n/a*		n/a*		n/a*		n/a*		0.48	U	0.48	U	0.48	U
Chloroform	1.92753085	80	1	U	0.48	J	1		0.51	J	0.56	J	1.29		1.29		1	U	1	U	0.86	J	0.61	J	0.47	J
Chloromethane	17.75044784	n/a	n/a*		0.61	U	0.61	U	0.61	U	0.61	U	n/a*		n/a*		n/a*		n/a*		0.61	U	0.61	U	0.61	U
cis-1,2-dichloroethene	365	70	1	U	0.2	U	0.2	U	0.2	U	0.2	U	0.17	J	1	U	1	U	1	U	0.2	U	0.2	U	0.2	U
cis-1,3-dichloropropene	n/a	n/a	n/a*		0.21	U	0.21	U	0.21	U	0.21	U	n/a*		n/a*		n/a*		n/a*		0.21	U	0.21	U	0.21	U
cis-1,4-Dichloro-2-butene	n/a	n/a	n/a*		1	U	1	U	1	U	1	U	n/a*		n/a*		n/a*		n/a*		1	U	1	U	1	U
Cymene	n/a	n/a	n/a*		0.32	U	0.32	U	0.32	U	0.32	U	n/a*		n/a*		n/a*		n/a*		0.32	U	0.32	U	0.32	U
Dibromochloromethane	1.470868284	80	n/a*		0.2	U	0.2	U	0.2	U	0.2	U	n/a*		n/a*		n/a*		n/a*		0.2	U	0.2	U	0.2	U
Dibromofluoromethane	n/a	n/a	--		--		--		--		--		--		52.2		--		--		--		--		--	
Dibromomethane	365	n/a	n/a*		0.3	U	0.3	U	0.3	U	0.3	U	n/a*		n/a*		n/a*		n/a*		0.3	U	0.3	U	0.3	U
Dichlorodifluoromethane	394.5945946	n/a	n/a*		1	U	1	U	1	U	1	U	n/a*		n/a*		n/a*		n/a*		1	U	1	U	1	U
Ether, tert-butyl methyl	124.6607805	n/a	n/a*		0.26	U	0.26	U	0.26	U	0.26	U	n/a*		n/a*		n/a*		n/a*		0.26	U	0.26	U	0.26	U
Ethyl methacrylate	3285	n/a	n/a*		1	U	1	U	1	U	1	U	n/a*		n/a*		n/a*		n/a*		1	U	1	U	1	U
Ethylbenzene	14.76103031	700	n/a*		0.43	U	0.43	U	0.43	U	0.43	U	n/a*		n/a*		n/a*		n/a*		0.43	U	0.43	U	0.43	U
Hexachlorobutadiene	8.615384615	n/a	n/a*		0.69	U	0.69	U	0.69	U	0.69	U	n/a*		n/a*		n/a*		n/a*		0.69	U	0.69	U	0.69	U
Hexane	876	n/a	n/a*		0.5	U	0.5	U	0.5	U	0.5	U	n/a*		n/a*		n/a*		n/a*		0.5	U	0.5	U	0.5	U
Iodomethane	n/a	n/a	n/a*		1	U	1	U	1	U	1	U	n/a*		n/a*		n/a*		n/a*		1	U	1	U	1	U
Isopropylbenzene	679.0697674	n/a	n/a*		0.2	U	0.2	U	0.2	U	0.2	U	n/a*		n/a*		n/a*		n/a*		0.2	U	0.2	U	0.2	U
m,p-Xylene	n/a	n/a	2	U	0.78	U	0.78	U	0.78	U	0.78	U	0.0363	U	1	U	2	U	2	U	0.78	U	0.78	U	0.78	U
Methacrylonitrile	1.042857143	n/a	n/a*		5	U	5	U	5	U	5	U	n/a*		n/a*		n/a*		n/a*		5	U	5	U	5	U
Methyl methacrylate	1419.444444	n/a	n/a*		1	U	1	U	1	U	1	U	n/a*		n/a*		n/a*		n/a*		1	U	1	U	1	U
Methylene chloride	48.03172785	5	n/a*		1	U	1	U	1	U	1	U	n/a*		n/a*		n/a*		n/a*		1	U	1	U	1	U
Naphthalene	1.431176471	n/a	n/a*		1	U	1	U	1	U	1	U	n/a*		n/a*		n/a*		n/a*		1	U	1	U	1	U
n-Propylbenzene	n/a	n/a	n/a*		--		--		0.25	U	0.25	U	n/a*		n/a*		n/a*		n/a*		--				0.25	U
o-Xylene	1431.372549	n/a	n/a*		0.37	U	0.37	U	0.37	U	0.37	U	n/a*		n/a*		n/a*		n/a*		0.37	U	0.37	U	0.37	U
Pentachloroethane	n/a	n/a	n/a*		2	U	2	U	2	U	2	U	n/a*		n/a*		n/a*		n/a*		2	U	2	U	2	U
Propionitrile	n/a	n/a	n/a*		10	U	10	U	10	U	10	U	n/a*		n/a*		n/a*		n/a*		10	U	10	U	10	U
Sec-butyl benzene	n/a	n/a	n/a*		0.25	U	0.25	U	0.25	U	0.25	U	n/a*		n/a*		n/a*		n/a*		0.25	U	0.25	U	0.25	U
Styrene	1622.222222	100	n/a*		0.36	U	0.36	U	0.36	U	0.36	U	n/a*		n/a*		n/a*		n/a*		0.36	U	0.36	U	0.36	U
Tert-butyl benzene	n/a	n/a	n/a*		0.32	U	0.32	U	0.32	U	0.32	U	n/a*		n/a*		n/a*		n/a*		0.32	U	0.32	U	0.32	U
Tetrachloroethene	1.081290425	5	n/a*		0.22	U	0.22	U	0.22	U	0.22	U	n/a*		n/a*		n/a*		n/a*		0.22	U	0.22	U	0.22	U
Toluene	2281.25	1000	--		0.35	U	0.35	U	0.35	U	0.35	U	--		48.1		--		--		0.35	U	0.35	U	0.35	U
Trans-1,2-dichloroethene	106.8292683	100	n/a*		0.45	U	0.45	U	0.45	U	0.45	U	n/a*		n/a*		n/a*		n/a*		0.45	U	0.45	U	0.45	U
Trans-1,3-dichloropropene	n/a	n/a	n/a*		0.21	U	0.21	U	0.21	U	0.21	U	n/a*		n/a*		n/a*		n/a*		0.21	U	0.21	U	0.21	U
Trans-1,4-Dichloro-2-Butene	n/a	n/a	n/a*		2	U	2	U	2	U	2	U	n/a*		n/a*		n/a*		n/a*		2	U	2	U	2	U
Trichloroethene	16.5434842	5	3.6		6.1		13.8		6.9		8.2		14.2		15.6		11		8		10.1		7.5		4.4	

Table 4-8
Groundwater Monitoring Analytical Results
DP-30/SD-33 (SWMU 113B) - Grease Trap Disposal Pits and Cooking Grease Disposal Trench
Holloman AFB, New Mexico

		Sample Number:	MW30&33-03										MW30&33-04													
		Sample Date:	15-Jan-2008		07/11/2008		01/09/2009		07/08/2009		01/07/2010		7/15/2006		1/17/2007		7/19/2007		1/15/2008		07/11/2008		01/09/2009		07/08/2009	
		Sampling Company:	HGL		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		HGL		HGL		HGL		HGL		Tetra Tech		Tetra Tech		Tetra Tech	
		QC Type:	Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular	
Analyte	**NMWQCC[1]**	**EPA MCL[2]**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Volatile Organic Compounds (µg/L)																										
Trichlorofluoromethane	1288.235294	n/a	n/a*		0.5	U	0.5	U	0.5	U	0.5	U	n/a*		n/a*		n/a*		n/a*		0.5	U	0.5	U	0.5	U
Vinyl acetate	412.4293785	n/a	n/a*		3.6	U	3.6	U	3.6	U	3.6	U	n/a*		n/a*		n/a*		n/a*		3.6	U	3.6	U	3.6	U
Vinyl chloride	0.860694883	2	n/a*		0.3	U	0.3	U	0.3	U	0.3	U	n/a*		n/a*		n/a*		n/a*		0.3	U	0.3	U	0.3	U

Notes:

[1] NMAC 20.6.2.3103

[2] December 2009 U.S. EPA Maximum Contaminant Level

[3] The TDS concentrations in all of the monitoring wells were above 10,000 mg/L, which is the point where groundwater is no longer considered a potential domestic or agricultural water supply (NMAC, 20.6.2.3101).

Bold fields represent exceedances of NMWQCC standards

Highlighted fields represent exceedances EPA MCLs

Highlighted and bold fields represent exceedances of both NMWQCC standards and EPA MCLs

EPA - United States Environmental Protection Agency
HGL - HydroGeoLogic, Inc.
J - estimated value
mg/L - milligrams per liter
n/a - not available
n/a* - HGL only presented data summary tables in previous reports; therefore, data results for these fields are not available.
-- not analyzed
NMWQCC - New Mexico Water Quality Control Commission
Q - analytical result qualifier
Result - reported analytical concentration
U - not detected
UJ - estimated non-detect
µg/L - micrograms per liter

Table 4-8
Groundwater Monitoring Analytical Results
DP-30/SD-33 (SWMU 113B) - Grease Trap Disposal Pits and Cooking Grease Disposal Trench
Holloman AFB, New Mexico

		Sample Number:	MW30&33-04				MW30&33-05																			
		Sample Date:	07/08/2009		01/07/2010		7/15/2006		1/17/2007		1/17/2007		7/16/2007		7/16/2007		1/14/2008		1/14/2008		07/11/2008		07/11/2008		01/07/2009	
		Sampling Company:	Tetra Tech		Tetra Tech		HGL		HGL		HGL		HGL		HGL		HGL		HGL		Tetra Tech		Tetra Tech		Tetra Tech	
		QC Type:	Field Duplicate		Regular		Regular		Regular		Field Duplicate		Regular		Field Duplicate		Regular		Field Duplicate		Regular		Field Duplicate		Regular	
Analyte	**NMWQCC[1]**	**EPA MCL[2]**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
General Chemistry (mg/L)																										
Solids, total dissolved[3]	n/a	n/a	31100		21800		24500		21500		--		21000		--		19000		18000		22500		22100		21000	
Dissolved Metals (µg/L)																										
Aluminum	36500	n/a	55	U	143		9.8	U	30	U	30	U	1000	U	1000	U	1000	U	1000	U	116	U	147	U	46.3	J
Antimony	14.6	6	23	U	9	U	3.2	U	5	UJ	5	UJ	100	U	**42**	J	100	U	100	U	18	U	18	U	18	U
Arsenic	0.448	10	**31.6**		11	U	3.6	U	5	U	5	U	50	U	50	U	50	U	50	U	14	U	14	U	22	U
Barium	7300	2000	25	U	12.8		14		17	J	18	J	26	J	55	U	19	J	18	J	20	U	20	U	20	U
Beryllium	73	4	5	U	1	U	4		2.5	U	2.5	U	20	U	20	U	20	U	20	U	4	U	4	U	4	U
Cadmium	18.25	5	5	U	1	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		4	U	4	U	4	U
Calcium	n/a	n/a	778000		684000		785000		771000		754000		760000		750000		740000		730000		687000		735000		785000	
Chromium	109.5	100	10	U	2	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		6.4	U	6.4	U	8	U
Cobalt	n/a	n/a	5	U	1	U	4	J	5	UJ	5	UJ	6.5	J	11	J	25	U	25	U	3.3	U	3.3	U	4	U
Copper	1460	1300	25	U	5	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		8.4	U	8.4	U	20	U
Iron	25550	n/a	120	U	92	U	19		10	UJ	10	UJ	750	U	750	U	750	UJ	750	UJ	92	U	92	U	3700	U
Lead	n/a	15	10	U	8	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		8	U	8	U	8	U
Magnesium	n/a	n/a	1670000		1440000		259		53		1150000		1200000		1200000		1200000		1200000		1230000		1320000		1210000	
Manganese	876	n/a	5	U	1	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		2	U	10.7	J	98.1	
Mercury	0.561538462	2	0.15	UJ	0.15	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.14	U	0.14	U	0.15	U
Molybdenum	n/a	n/a	--		--		--		--		--		27	J	32	J	32	J	31	J	--		--		--	
Nickel	730	n/a	12	U	2.3	U	7		9	UJ	7	UJ	50	U	50	U	50	U	50	U	9.2	U	9.2	U	9.2	U
Potassium	n/a	n/a	7650		8120		47000		13300		11900		16000		17000		17000	J	16000	J	32100	U	35800	U	29100	J
Selenium	182.5	50	26.3		20.6		5.5	U	10	UJ	10	UJ	75	U	75	U	75	U	75	U	16.4	J	24	J	14	U
Silver	182.5	n/a	7	U	1.4	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		4.8	U	4.8	U	5.6	U
Sodium	n/a	n/a	6040000		5320000		3970000		5860000		5320000		4300000		4300000		4300000		4200000		4310000		4620000		2900000	J
Thallium	2.409	2	18	U	3.6	U	27.7	U	5	UJ	5	UJ	110	U	110	U	110	UJ	110	UJ	14	U	14	U	14	U
Vanadium	182.5	n/a	39		30		14		31	J	32	J	42	U	50	U	32		34		38	J	39.8	J	42.2	J
Zinc	10950	n/a	37	U	7.4	U	133		5	UJ	5	UJ	100	U	100	U	100	U	100	U	15	U	15	U	30	U
Total Metals (µg/L)																					--		--		--	
Aluminum	36500	n/a	55	U	89.5		--		1020	J	1440	J	1000	U	1000	U	1000	U	1000	U	26900		19900		85.4	J
Antimony	14.6	6	23	U	9	U	--		50	U	50	U	100	U	**32**	J	100	U	100	U	36	U	18	U	18	U
Arsenic	0.448	10	27	U	11	UJ	--		5	U	5	U	50	U	50	U	50	U	50	U	**23.3**	J	**31.3**	J	22	U
Barium	7300	2000	25	U	12.7		--		27		31		49	J	21	J	26	J	19	J	315	J	245	J	20	U
Beryllium	73	4	5	U	1	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		4	U	4	U	4	U
Cadmium	18.25	5	5	U	1	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		4	U	4	U	4	U
Calcium	n/a	n/a	743000		708000		--		843000		812000		760000		750000		770000		750000		1560000		1400000		862000	
Chromium	109.5	100	10	U	2	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		31	J	24.5	J	8	U
Cobalt	n/a	n/a	5	U	1	U	--		5	U	5	U	14	J	17	J	25	U	25	U	14.6	J	11.5	J	4	U
Copper	1460	1300	25	U	5	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		8.4	U	8.4	U	20	U
Iron	25550	n/a	120	U	92	U	--		1100		1410		750	U	750	U	750	UJ	750	UJ	23600		17200		3700	U
Lead	n/a	15	10	U	8	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		22		20.1		8.7	U
Magnesium	n/a	n/a	1590000		1500000		--		1290000		1230000		1200000		1200000		1300000		1200000		1280000		1290000		1330000	
Manganese	876	n/a	5	U	1	U	--		105		99		29	J	14	J	76		70		**1460**		**1190**		110	
Mercury	0.561538462	2	0.15	UJ	0.15	U	--		0.2	U	0.2	U	0.3	U	0.3	U	0.3	U	0.3	U	0.14	U	0.14	U	0.15	U
Molybdenum	n/a	n/a	--		--		--		--		--		47	J	35	J	35	J	35	J	--		--		--	
Nickel	730	n/a	12	U	2.3	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		33.2	J	27.3	J	9.2	U
Potassium	n/a	n/a	7480		8810		--		22100		14700		17000		17000		18000	J	17000	J	36500	U	33100	U	33000	J

Table 4-8
Groundwater Monitoring Analytical Results
DP-30/SD-33 (SWMU 113B) - Grease Trap Disposal Pits and Cooking Grease Disposal Trench
Holloman AFB, New Mexico

		Sample Number:	MW30&33-04				MW30&33-05																			
		Sample Date:	07/08/2009		01/07/2010		7/15/2006		1/17/2007		1/17/2007		7/16/2007		7/16/2007		1/14/2008		1/14/2008		07/11/2008		07/11/2008		01/07/2009	
		Sampling Company:	Tetra Tech		Tetra Tech		HGL		HGL		HGL		HGL		HGL		HGL		HGL		Tetra Tech		Tetra Tech		Tetra Tech	
		QC Type:	Field Duplicate		Regular		Regular		Regular		Field Duplicate		Regular		Field Duplicate		Regular		Field Duplicate		Regular		Field Duplicate		Regular	
Analyte	**NMWQCC[(1)]**	**EPA MCL[(2)]**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Total Metals (µg/L)																										
Selenium	182.5	50	19.9		37.2		--		10	U	10	U	75	U	75	U	75	U	75	U	22.8	J	17.9	J	15.9	J
Silver	182.5	n/a	7	U	1.4	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		4.8	U	4.8	U	5.6	U
Sodium	n/a	n/a	6070000		5570000		--		5950000		5570000		4200000		4300000		4400000		4300000		4850000		4640000		3120000	J
Thallium	2.409	2	18	U	3.6	U	--		50	U	50	U	110	U	110	U	110	UJ	110	UJ	14	U	14	U	**16.9**	J
Vanadium	182.5	n/a	39.2		30.7		--		36		36		42	U	56	U	38		36		121	J	102	J	47.5	J
Zinc	10950	n/a	37	U	7.4	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		112		80.8		30	U
Volatile Organic Compounds (µg/L)																					--		--		--	
1,1,1,2-Tetrachloroethane	5.24202143	n/a	0.2	U	0.2	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.2	U	0.2	U	0.2	U
1,1,1-Trichloroethane	9125	200	0.33	U	0.33	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.33	U	0.33	U	0.33	U
1,1,2,2-Tetrachloroethane	0.671337768	n/a	0.21	U	0.21	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.21	U	0.21	U	0.21	U
1,1,2-Trichloro-1,2,2-trifluoroethane	59189.18919	n/a	0.34	U	0.34	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.34	U	0.34	U	0.34	U
1,1,2-Trichloroethane	2.417598602	5	0.26	U	0.26	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.26	U	0.26	U	0.26	U
1,1-Dichloroethane	24.17598602	n/a	1		1.2		11.5		11.1		11		8.7		8.6		8.7		8.6		9.2		8.9		8.7	
1,1-Dichloroethene	339.5348837	7	0.54	U	0.54	U	1.44		1.92		1.81		1.7		1.7		1.4		1.5		1.5		1.4		1.3	
1,1-Dichloropropene	n/a	n/a	0.23	U	0.23	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.23	U	0.23	U	0.23	U
1,2,3-Trichlorobenzene	n/a	n/a	0.5	U	0.5	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.5	U	0.5	U	0.5	U
1,2,3-Trichloropropane	0.096	n/a	0.34	U	0.34	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.34	U	0.34	U	0.34	U
1,2,4-Trichlorobenzene	8.156424581	70	0.5	U	0.5	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.5	U	0.5	U	0.5	U
1,2,4-Trimethylbenzene	n/a	n/a	0.22	U	0.22	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.22	U	0.22	U	0.22	U
1,2-Dibromo-3-chloropropane	0.008032449	0.2	0.32	U	0.32	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.32	U	0.32	U	0.32	U
1,2-Dibromoethane	0.065331096	0.05	0.28	U	0.28	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.28	U	0.28	U	0.28	U
1,2-Dichlorobenzene	370.1408451	600	0.2	U	0.2	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.2	U	0.2	U	0.2	U
1,2-Dichloroethane	1.493124676	5	0.34	U	0.34	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.34	U	0.34	U	0.34	U
1,2-Dichloropropane	3.859826057	5	0.21	U	0.21	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.21	U	0.21	U	0.21	U
1,3,5-Trimethylbenzene	n/a	n/a	0.2	U	0.2	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.2	U	0.2	U	0.2	U
1,3-Dichlorobenzene	n/a	n/a	0.23	U	0.23	U	0.07	J	--		--		--		--		1	U	1	U	0.23	U	0.23	U	0.23	U
1,3-Dichloropropane	n/a	n/a	0.26	U	0.26	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.26	U	0.26	U	0.26	U
1,4-Dichlorobenzene	4.271786825	75	0.22	U	0.22	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.22	U	0.22	U	0.22	U
1-Chlorohexane	n/a	n/a	0.27	U	0.27	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.27	U	0.27	U	0.27	U
2,2-Dichloropropane	n/a	n/a	0.28	U	0.28	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.28	U	0.28	U	0.28	U
2-Butanone	7064.516129	n/a	2	U	2	U	0.59	J	5	U	5	U	5	U	5	U	5	U	5	U	2	U	2	U	2	U
2-Butylbenzene	n/a	n/a	0.28	U	0.28	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.28	U	0.28	U	0.28	U
2-Chloroethyl vinyl ether	n/a	n/a	1	U	1	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		1	UJ	1	UJ	1	UJ
2-Chlorotoluene	730	n/a	0.25	U	0.25	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.25	U	0.25	U	0.25	U
2-Hexanone	n/a	n/a	5	U	5	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		5	U	5	U	5	U
2-Propylbenzene	n/a	n/a	--		--		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.25	U	0.25	U	0.25	U
4-Bromofluorobenzene	n/a	n/a	--		--		--		47.3		48.4		--		--		--		--		--		--		--	
4-Chlorotoluene	n/a	n/a	0.21	U	0.21	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.21	U	0.21	U	0.21	U
4-Methyl-2-pentanone	1990.909091	n/a	2	U	2	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		2	U	2	U	2	U
Acetone	21782.8877	n/a	10	U	10	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		10	U	10	U	10	U
Acetonitrile	n/a	n/a	5	U	5	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		5	U	5	U	5	U
Acrolein	0.041619156	n/a	5	U	5	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		5	U	5	U	5	U
Acrylonitrile	0.454334161	n/a	2	U	2	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		2	UJ	2	UJ	2	U
Allyl chloride	n/a	n/a	2	U	2	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		2	U	2	U	2	U
Benzene	4.129822301	5	0.4	U	0.4	U	0.29	J	1	U	1	U	1	U	1	U	1	U	1	U	0.4	U	0.4	U	0.4	U

Table 4-8
Groundwater Monitoring Analytical Results
DP-30/SD-33 (SWMU 113B) - Grease Trap Disposal Pits and Cooking Grease Disposal Trench
Holloman AFB, New Mexico

		Sample Number:	MW30&33-04				MW30&33-05																			
		Sample Date:	07/08/2009		01/07/2010		7/15/2006		1/17/2007		1/17/2007		7/16/2007		7/16/2007		1/14/2008		1/14/2008		07/11/2008		07/11/2008		01/07/2009	
		Sampling Company:	Tetra Tech		Tetra Tech		HGL		HGL		HGL		HGL		HGL		HGL		HGL		Tetra Tech		Tetra Tech		Tetra Tech	
		QC Type:	Field Duplicate		Regular		Regular		Regular		Field Duplicate		Regular		Field Duplicate		Regular		Field Duplicate		Regular		Field Duplicate		Regular	
Analyte	**NMWQCC[1]**	**EPA MCL[2]**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Benzyl Chloride	n/a	n/a	0.36	U	0.36	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.36	U	0.36	U	0.36	U
Volatile Organic Compounds (µg/L)																										
Bromobenzene	n/a	n/a	0.26	U	0.26	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.26	U	0.26	U	0.26	U
Bromochloromethane	n/a	n/a	0.23	U	0.23	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.23	U	0.23	U	0.23	U
Bromodichloromethane	1.172827869	80	0.2	U	0.2	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.2	U	0.2	U	0.2	U
Bromoform	85.06329114	80	0.33	U	0.33	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.33	U	0.33	U	0.33	U
Bromomethane	8.661016949	n/a	0.78	U	0.78	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.78	U	0.78	U	0.78	U
Carbon disulfide	1042.857143	n/a	0.4	U	0.4	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.4	U	0.4	U	0.4	U
Carbon tetrachloride	1.99316827	5	0.22	U	0.22	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.22	U	0.22	U	0.22	U
Chlorobenzene	91.25	100	0.22	U	0.22	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.22	U	0.22	U	0.22	U
Chloroethane	20857.14286	n/a	0.48	U	0.48	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.48	U	0.48	U	0.48	U
Chloroform	1.92753085	80	0.48	J	0.52	J	0.48	J	0.52	J	0.53	J	1	U	1	U	1	U	1	U	0.45	J	0.45	J	0.42	J
Chloromethane	17.75044784	n/a	0.61	U	0.61	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.61	U	0.61	U	0.61	U
cis-1,2-dichloroethene	365	70	0.2	U	0.2	U	7.5		7.68		7.62		6.1		6.2		6		5.8		5.8		5.6		5.9	
cis-1,3-dichloropropene	n/a	n/a	0.21	U	0.21	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.21	U	0.21	U	0.21	U
cis-1,4-Dichloro-2-butene	n/a	n/a	1	U	1	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		1	U	1	U	1	U
Cymene	n/a	n/a	0.32	U	0.32	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.32	U	0.32	U	0.32	U
Dibromochloromethane	1.470868284	80	0.2	U	0.2	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.2	U	0.2	U	0.2	U
Dibromofluoromethane	n/a	n/a	--		--		--		51.1		52.1		--		--		--		--		--		--		--	
Dibromomethane	365	n/a	0.3	U	0.3	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.3	U	0.3	U	0.3	U
Dichlorodifluoromethane	394.5945946	n/a	1	U	1	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		1	U	1	U	1	U
Ether, tert-butyl methyl	124.6607805	n/a	0.26	U	0.26	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.26	U	0.26	U	0.26	U
Ethyl methacrylate	3285	n/a	1	U	1	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		1	U	1	U	1	U
Ethylbenzene	14.76103031	700	0.43	U	0.43	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.43	U	0.43	U	0.43	U
Hexachlorobutadiene	8.615384615	n/a	0.69	U	0.69	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.69	U	0.69	U	0.69	U
Hexane	876	n/a	0.5	U	0.5	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.5	U	0.5	U	0.5	U
Iodomethane	n/a	n/a	1	U	1	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		1	U	1	U	1	U
Isopropylbenzene	679.0697674	n/a	0.2	U	0.2	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.2	U	0.2	U	0.2	U
m,p-Xylene	n/a	n/a	0.78	U	0.78	U	0.04	J	1	U	1	U	2	U	2	U	2	U	2	U	0.78	U	0.78	U	0.78	U
Methacrylonitrile	1.042857143	n/a	5	U	5	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		5	U	5	U	5	U
Methyl methacrylate	1419.444444	n/a	1	U	1	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		1	U	1	U	1	U
Methylene chloride	48.03172785	5	1	U	1	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		1	U	1	U	1	U
Naphthalene	1.431176471	n/a	1	U	1	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		1	U	1	U	1	U
n-Propylbenzene	n/a	n/a	0.25	U	0.25	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		--		--		--	
o-Xylene	1431.372549	n/a	0.37	U	0.37	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.37	U	0.37	U	0.37	U
Pentachloroethane	n/a	n/a	2	U	2	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		2	U	2	U	2	U
Propionitrile	n/a	n/a	10	U	10	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		10	U	10	U	10	U
Sec-butyl benzene	n/a	n/a	0.25	U	0.25	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.25	U	0.25	U	0.25	U
Styrene	1622.222222	100	0.36	U	0.36	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.36	U	0.36	U	0.36	U
Tert-butyl benzene	n/a	n/a	0.32	U	0.32	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.32	U	0.32	U	0.32	U
Tetrachloroethene	1.081290425	5	0.22	U	0.22	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.22	U	0.22	U	0.22	U
Toluene	2281.25	1000	0.35	U	0.35	U	--		46.9		47		--		--		--		--		0.35	U	0.35	U	0.35	U
Trans-1,2-dichloroethene	106.8292683	100	0.45	U	0.45	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.45	U	0.45	U	0.45	U
Trans-1,3-dichloropropene	n/a	n/a	0.21	U	0.21	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.21	U	0.21	U	0.21	U
Trans-1,4-Dichloro-2-Butene	n/a	n/a	2	U	2	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		2	U	2	U	2	U
Trichloroethene	16.5434842	5	4.5		5.2		**59.3**		**58.1**		**55.7**		**51**		**49**		**43**		**44**		**42.5**		**41.7**		**35.2**	

Table 4-8
Groundwater Monitoring Analytical Results
DP-30/SD-33 (SWMU 113B) - Grease Trap Disposal Pits and Cooking Grease Disposal Trench
Holloman AFB, New Mexico

		Sample Number:	MW30&33-04				MW30&33-05																			
		Sample Date:	07/08/2009		01/07/2010		7/15/2006		1/17/2007		1/17/2007		7/16/2007		7/16/2007		1/14/2008		1/14/2008		07/11/2008		07/11/2008		01/07/2009	
		Sampling Company:	Tetra Tech		Tetra Tech		HGL		HGL		HGL		HGL		HGL		HGL		HGL		Tetra Tech		Tetra Tech		Tetra Tech	
		QC Type:	Field Duplicate		Regular		Regular		Regular		Field Duplicate		Regular		Field Duplicate		Regular		Field Duplicate		Regular		Field Duplicate		Regular	
Analyte	**NMWQCC[(1)]**	**EPA MCL[(2)]**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Volatile Organic Compounds (µg/L)																										
Trichlorofluoromethane	1288.235294	n/a	0.5	U	0.5	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.5	U	0.5	U	0.5	U
Vinyl acetate	412.4293785	n/a	3.6	U	3.6	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		3.6	U	3.6	U	3.6	U
Vinyl chloride	0.860694883	2	0.3	U	0.3	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.3	U	0.3	U	0.3	U

Notes:
(1) NMAC 20.6.2.3103
(2) December 2009 U.S. EPA Maximum Contaminant Level
(3) The TDS concentrations in all of the monitoring wells were above 10,000 mg/L, which is the point where groundwater is no longer considered a potential domestic or agricultural water supply (NMAC, 20.6.2.3101).
Bold fields represent exceedances of NMWQCC standards
Highlighted fields represent exceedances EPA MCLs
Highlighted and bold fields represent exceedances of both NMWQCC standards and EPA MCLs
EPA - United States Environmental Protection Agency
HGL - HydroGeoLogic, Inc.
J - estimated value
mg/L - milligrams per liter
n/a - not available
n/a* - HGL only presented data summary tables in previous reports; therefore, data results for these fields are not available.
-- not analyzed
NMWQCC - New Mexico Water Quality Control Commission
Q - analytical result qualifier
Result - reported analytical concentration
U - not detected
UJ - estimated non-detect
µg/L - micrograms per liter

Table 4-8
Groundwater Monitoring Analytical Results
DP-30/SD-33 (SWMU 113B) - Grease Trap Disposal Pits and Cooking Grease Disposal Trench
Holloman AFB, New Mexico

		Sample Number:	MW30&33-05		MW30&33-05R					
		Sample Date:	01/09/2009		10/06/2009		01/07/2010		01/07/2010	
		Sampling Company:	Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech	
		QC Type:	Field Duplicate		Regular		Regular		Field Duplicate	
Analyte	**NMWQCC[1]**	**EPA MCL[2]**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
General Chemistry (mg/L)										
Solids, total dissolved[3]	n/a	n/a	22200		25300		13600		18100	
Dissolved Metals (µg/L)										
Aluminum	36500	n/a	45.8	J	120		153		164	
Antimony	14.6	6	18	U	12	U	9	U	9	U
Arsenic	0.448	10	22	U	**15.4**		11	U	11	U
Barium	7300	2000	20	U	34.3		25.7		27.4	
Beryllium	73	4	4	U	1	U	1	U	1	U
Cadmium	18.25	5	4	U	1	U	1	U	1	U
Calcium	n/a	n/a	778000		709000		672000		704000	
Chromium	109.5	100	8	U	2	U	2	U	2	U
Cobalt	n/a	n/a	4	U	1.9		1.6		1.4	
Copper	1460	1300	20	U	5	U	5	U	5	U
Iron	25550	n/a	3700	U	92	U	92	U	92	U
Lead	n/a	15	8	U	8	U	8	U	8	U
Magnesium	n/a	n/a	1190000		1280000		1100000		1160000	
Manganese	876	n/a	113		661		455		452	
Mercury	0.561538462	2	0.15	U	0.15	U	0.15	U	0.15	U
Molybdenum	n/a	n/a	--		--		--		--	
Nickel	730	n/a	9.2	U	8.7		5.4		4.9	
Potassium	n/a	n/a	28700	J	19400		18000		20000	
Selenium	182.5	50	14	U	20		14.1		15.5	
Silver	182.5	n/a	5.6	U	1.4	U	1.4	U	1.4	U
Sodium	n/a	n/a	2870000	J	4590000		4150000		4280000	
Thallium	2.409	2	14	U	3.6	U	3.6	U	3.6	U
Vanadium	182.5	n/a	41.4	J	34.3		45.6		44.7	
Zinc	10950	n/a	30	U	7.4	U	7.4	U	7.4	U
Total Metals (µg/L)			--		--		--		--	
Aluminum	36500	n/a	67.6	J	108		251		107	
Antimony	14.6	6	18	U	9	U	9	U	9	U
Arsenic	0.448	10	22	U	**15.3**		11	UJ	11	UJ
Barium	7300	2000	20	U	34.3		27.4		26.4	
Beryllium	73	4	4	U	1	U	1	U	1	U
Cadmium	18.25	5	4	U	1	U	1	U	1	U
Calcium	n/a	n/a	762000		713000		722000		716000	
Chromium	109.5	100	8	U	2	U	2	U	2	U
Cobalt	n/a	n/a	4	U	1.5		1.1		1	U
Copper	1460	1300	20	U	5	U	5	U	5	U
Iron	25550	n/a	3700	U	92	U	92	U	92	U
Lead	n/a	15	8	U	8	U	8	U	8	U
Magnesium	n/a	n/a	1170000		1220000		1230000		1160000	
Manganese	876	n/a	109		672		493		477	
Mercury	0.561538462	2	0.15	U	0.15	U	0.15	U	0.15	U
Molybdenum	n/a	n/a	--		--		--		--	
Nickel	730	n/a	9.2	U	10.1		6.5		5.6	
Potassium	n/a	n/a	27800	J	20200		20400		20400	

Table 4-8
Groundwater Monitoring Analytical Results
DP-30/SD-33 (SWMU 113B) - Grease Trap Disposal Pits and Cooking Grease Disposal Trench
Holloman AFB, New Mexico

		Sample Number:	MW30&33-05		MW30&33-05R					
		Sample Date:	01/09/2009		10/06/2009		01/07/2010		01/07/2010	
		Sampling Company:	Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech	
		QC Type:	Field Duplicate		Regular		Regular		Field Duplicate	
Analyte	**NMWQCC[1]**	**EPA MCL[2]**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Total Metals (µg/L)										
Selenium	182.5	50	14.6	J	22		32.5		25.8	
Silver	182.5	n/a	5.6	U	1.4	U	1.4	U	1.4	U
Sodium	n/a	n/a	2820000	J	4660000		4600000		4450000	
Thallium	2.409	2	14	U	3.6	U	3.6	U	3.6	U
Vanadium	182.5	n/a	40.4	J	35.9		48.4		47.1	
Zinc	10950	n/a	30	U	7.4	U	7.4	U	7.4	U
Volatile Organic Compounds (µg/L)			--		--		--		--	
1,1,1,2-Tetrachloroethane	5.24202143	n/a	0.2	U	0.2	U	0.2	U	0.2	U
1,1,1-Trichloroethane	9125	200	0.33	U	0.33	U	0.33	U	0.33	U
1,1,2,2-Tetrachloroethane	0.671337768	n/a	0.21	U	0.21	U	0.21	U	0.21	U
1,1,2-Trichloro-1,2,2-trifluoroethane	59189.18919	n/a	0.34	U	0.34	UJ	0.34	U	0.34	U
1,1,2-Trichloroethane	2.417598602	5	0.26	U	0.26	U	0.26	U	0.26	U
1,1-Dichloroethane	24.17598602	n/a	7.7		6		8.8		8.2	
1,1-Dichloroethene	339.5348837	7	1.2		0.86	J	1.2		1.1	
1,1-Dichloropropene	n/a	n/a	0.23	U	0.23	U	0.23	U	0.23	U
1,2,3-Trichlorobenzene	n/a	n/a	0.5	U	0.5	U	0.5	U	0.5	U
1,2,3-Trichloropropane	0.096	n/a	0.34	U	0.34	U	0.34	U	0.34	U
1,2,4-Trichlorobenzene	8.156424581	70	0.5	U	0.5	U	0.5	U	0.5	U
1,2,4-Trimethylbenzene	n/a	n/a	0.22	U	0.22	U	0.22	U	0.22	U
1,2-Dibromo-3-chloropropane	0.008032449	0.2	0.32	U	0.32	U	0.32	U	0.32	U
1,2-Dibromoethane	0.065331096	0.05	0.28	U	0.28	U	0.28	U	0.28	U
1,2-Dichlorobenzene	370.1408451	600	0.2	U	0.2	U	0.2	U	0.2	U
1,2-Dichloroethane	1.493124676	5	0.34	U	0.34	U	0.34	U	0.34	U
1,2-Dichloropropane	3.859826057	5	0.21	U	0.21	U	0.21	U	0.21	U
1,3,5-Trimethylbenzene	n/a	n/a	0.2	U	0.2	U	0.2	U	0.2	U
1,3-Dichlorobenzene	n/a	n/a	0.23	U	0.23	U	0.23	U	0.23	U
1,3-Dichloropropane	n/a	n/a	0.26	U	0.26	U	0.26	U	0.26	U
1,4-Dichlorobenzene	4.271786825	75	0.22	U	0.22	U	0.22	U	0.22	U
1-Chlorohexane	n/a	n/a	0.27	U	0.27	U	0.27	U	0.27	U
2,2-Dichloropropane	n/a	n/a	0.28	U	0.28	U	0.28	U	0.28	U
2-Butanone	7064.516129	n/a	2	U	2	U	2	U	2	U
2-Butylbenzene	n/a	n/a	0.28	U	0.28	U	0.28	U	0.28	U
2-Chloroethyl vinyl ether	n/a	n/a	1	UJ	1	U	1	U	1	U
2-Chlorotoluene	730	n/a	0.25	U	0.25	U	0.25	U	0.25	U
2-Hexanone	n/a	n/a	5	U	5	U	5	U	5	U
2-Propylbenzene	n/a	n/a	0.25	U	--		--		--	
4-Bromofluorobenzene	n/a	n/a	--		--		--		--	
4-Chlorotoluene	n/a	n/a	0.21	U	0.21	U	0.21	U	0.21	U
4-Methyl-2-pentanone	1990.909091	n/a	2	U	2	U	2	U	2	U
Acetone	21782.8877	n/a	10	U	10	U	10	U	10	U
Acetonitrile	n/a	n/a	5	U	5	U	5	U	5	U
Acrolein	0.041619156	n/a	5	U	5	U	5	U	5	U
Acrylonitrile	0.454334161	n/a	2	U	2	UJ	2	U	2	U
Allyl chloride	n/a	n/a	2	U	2	U	2	U	2	U
Benzene	4.129822301	5	0.4	U	0.4	U	0.4	U	0.4	U

Table 4-8
Groundwater Monitoring Analytical Results
DP-30/SD-33 (SWMU 113B) - Grease Trap Disposal Pits and Cooking Grease Disposal Trench
Holloman AFB, New Mexico

		Sample Number:	MW30&33-05		MW30&33-05R					
		Sample Date:	01/09/2009		10/06/2009		01/07/2010		01/07/2010	
		Sampling Company:	Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech	
		QC Type:	Field Duplicate		Regular		Regular		Field Duplicate	
Analyte	**NMWQCC[1]**	**EPA MCL[2]**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Benzyl Chloride	n/a	n/a	0.36	U	0.36	U	0.36	U	0.36	U
Volatile Organic Compounds (µg/L)										
Bromobenzene	n/a	n/a	0.26	U	0.26	U	0.26	U	0.26	U
Bromochloromethane	n/a	n/a	0.23	U	0.23	U	0.23	U	0.23	U
Bromodichloromethane	1.172827869	80	0.2	U	0.2	U	0.2	U	0.2	U
Bromoform	85.06329114	80	0.33	U	0.33	U	0.33	U	0.33	U
Bromomethane	8.661016949	n/a	0.78	U	0.78	U	0.78	U	0.78	U
Carbon disulfide	1042.857143	n/a	0.4	U	0.4	U	0.4	U	0.4	U
Carbon tetrachloride	1.99316827	5	0.22	U	0.22	U	0.22	U	0.22	U
Chlorobenzene	91.25	100	0.22	U	0.22	U	0.22	U	0.22	U
Chloroethane	20857.14286	n/a	0.48	U	0.48	U	0.48	U	0.48	U
Chloroform	1.92753085	80	0.38	J	0.28	U	0.33	J	0.36	J
Chloromethane	17.75044784	n/a	0.61	U	0.61	U	0.61	U	0.61	U
cis-1,2-dichloroethene	365	70	5.5		9.7		14.9		13.9	
cis-1,3-dichloropropene	n/a	n/a	0.21	U	0.21	U	0.21	U	0.21	U
cis-1,4-Dichloro-2-butene	n/a	n/a	1	U	1	U	1	U	1	U
Cymene	n/a	n/a	0.32	U	0.32	U	0.32	U	0.32	U
Dibromochloromethane	1.470868284	80	0.2	U	0.2	U	0.2	U	0.2	U
Dibromofluoromethane	n/a	n/a	--		--		--		--	
Dibromomethane	365	n/a	0.3	U	0.3	U	0.3	U	0.3	U
Dichlorodifluoromethane	394.5945946	n/a	1	U	1	U	1	U	1	U
Ether, tert-butyl methyl	124.6607805	n/a	0.26	U	0.26	U	0.26	U	0.26	U
Ethyl methacrylate	3285	n/a	1	U	1	UJ	1	U	1	U
Ethylbenzene	14.76103031	700	0.43	U	0.43	U	0.43	U	0.43	U
Hexachlorobutadiene	8.615384615	n/a	0.69	U	0.69	U	0.69	U	0.69	U
Hexane	876	n/a	0.5	U	0.5	U	0.5	U	0.5	U
Iodomethane	n/a	n/a	1	U	1	U	1	U	1	U
Isopropylbenzene	679.0697674	n/a	0.2	U	0.2	U	0.2	U	0.2	U
m,p-Xylene	n/a	n/a	0.78	U	0.78	U	0.78	U	0.78	U
Methacrylonitrile	1.042857143	n/a	5	U	5	U	5	U	5	U
Methyl methacrylate	1419.444444	n/a	1	U	1	UJ	1	U	1	U
Methylene chloride	48.03172785	5	1	U	1	U	1	U	5	U
Naphthalene	1.431176471	n/a	1	U	1	U	1	U	1	U
n-Propylbenzene	n/a	n/a	--		0.25	U	0.25	U	0.25	U
o-Xylene	1431.372549	n/a	0.37	U	0.37	U	0.37	U	0.37	U
Pentachloroethane	n/a	n/a	2	U	2	U	2	U	2	U
Propionitrile	n/a	n/a	10	U	10	UJ	10	U	10	U
Sec-butyl benzene	n/a	n/a	0.25	U	0.25	U	0.25	U	0.25	U
Styrene	1622.222222	100	0.36	U	0.36	U	0.36	U	0.36	U
Tert-butyl benzene	n/a	n/a	0.32	U	0.32	U	0.32	U	0.32	U
Tetrachloroethene	1.081290425	5	0.22	U	0.22	U	0.22	U	0.22	U
Toluene	2281.25	1000	0.35	U	0.35	U	0.35	U	0.35	U
Trans-1,2-dichloroethene	106.8292683	100	0.45	U	0.45	U	0.45	U	0.45	U
Trans-1,3-dichloropropene	n/a	n/a	0.21	U	0.21	U	0.21	U	0.21	U
Trans-1,4-Dichloro-2-Butene	n/a	n/a	2	U	2	U	2	U	2	U
Trichloroethene	16.5434842	5	**32.4**		**21**		**30.6**		**29.2**	

Table 4-8
Groundwater Monitoring Analytical Results
DP-30/SD-33 (SWMU 113B) - Grease Trap Disposal Pits and Cooking Grease Disposal Trench
Holloman AFB, New Mexico

		Sample Number:	MW30&33-05		MW30&33-05R					
		Sample Date:	01/09/2009		10/06/2009		01/07/2010		01/07/2010	
		Sampling Company:	Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech	
		QC Type:	Field Duplicate		Regular		Regular		Field Duplicate	
Analyte	**NMWQCC[(1)]**	**EPA MCL[(2)]**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Volatile Organic Compounds (µg/L)										
Trichlorofluoromethane	1288.235294	n/a	0.5	U	0.5	U	0.5	U	0.5	U
Vinyl acetate	412.4293785	n/a	3.6	U	3.6	UJ	3.6	U	3.6	U
Vinyl chloride	0.860694883	2	0.3	U	0.3	U	0.3	U	0.3	U

Notes:
[(1)] NMAC 20.6.2.3103
[(2)] December 2009 U.S. EPA Maximum Contaminant Level
[(3)] The TDS concentrations in all of the monitoring wells were above 10,000 mg/L, which is the point where groundwater is no longer considered a potential domestic or agricultural water supply (NMAC, 20.6.2.3101).
Bold fields represent exceedances of NMWQCC standards
Highlighted fields represent exceedances EPA MCLs
Highlighted and bold fields represent exceedances of both NMWQCC standards and EPA MCLs
EPA - United States Environmental Protection Agency
HGL - HydroGeoLogic, Inc.
J - estimated value
mg/L - milligrams per liter
n/a - not available
n/a* - HGL only presented data summary tables in previous reports; therefore, data results for these fields are not available.
-- not analyzed
NMWQCC - New Mexico Water Quality Control Commission
Q - analytical result qualifier
Result - reported analytical concentration
U - not detected
UJ - estimated non-detect
µg/L - micrograms per liter

Table 4-9
Groundwater Level Measurements
SS-39 (SWMUs 165, 167, 177, 179, and 181) - Missile Fuel Spill Area
Holloman AFB, New Mexico

	Water Level Data									Water Level Data						
	Jul-06		Jan-07		Jul-07		Jan-08		Jul-08		Jan-09		Jul-09		Jan-10	
Well	Depth to Water (ft BTOC)	Groundwater Elevation (ft amsl)	Depth to Water (ft BTOC)	Groundwater Elevation (ft amsl)	Depth to Water (ft BTOC)	Groundwater Elevation (ft amsl)	Depth to Water (ft BTOC)	Groundwater Elevation (ft amsl)	Depth to Water (ft BTOC)	Groundwater Elevation (ft amsl)	Depth to Water (ft BTOC)	Groundwater Elevation (ft amsl)	Depth to Water (ft BTOC)	Groundwater Elevation (ft amsl)	Depth to Water (ft BTOC)	Groundwater Elevation (ft amsl)
MW39-01	NC	NC	23.78	4038.11	23.83	4038.06	24.01	4037.88	24.57	4037.32	24.37	4037.52	24.7	4037.19	24.65	4037.24
MW39-02	18.36	4043.53	17.09	4035.76	17.38	4035.68	17.85	4035	18.37	4034.69	18.07	4034.99	NC	NC	18.13	4034.93
MW39-03	NC	NC	6.82	4035.54	6.75	4035.61	NC	NC	7.92	4034.79	7.64	4035.07	7.45	4035.26	7.66	4035.05
MW39-04	NC	NC	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
MW39-05	5.6	4032.86	4.55	4033.91	4.68	4033.78	4.78	4033.68	5.16	4033.37	4.91	4033.62	5.03	4033.5	5	4033.53
MW39-06	7.16	4031.30	5.94	4034.84	6.32	4034.46	6.51	4034.27	6.70	4034.18	6.65	4034.23	6.56	4034.32	6.71	4034.17
MW39-06D	6.89	4033.89	5.76	4034.38	6.15	4033.99	6.45	4033.69	6.52	4033.71	6.54	4033.69	6.47	4033.76	6.62	4033.61
MW39-07	6.7	4033.44	5.16	4035.04	5.41	4034.79	5.77	4034.43	5.90	4034.23	5.85	4034.28	5.85	4034.28	5.85	4034.28
MW39-08	4.83	4029.22	5.28	4028.77	4.89	4029.16	3.99	NC	4.72	NC	2.21	4033.26	3.93	4033.27	1.8	4033.15
MW39-09	4.09	4023.00	4.75	4029.34	4.20	4029.89	2.30	NC	1.47	NC	2.31	4032.98	1.87	4033.22	3.77	4032.97
MW39-10	1.62	4032.58	1.41	4032.79	5.32	4028.88	5.63	NC	4.95	NC	2.94	4033.26	5.23	4033.18	2.61	4032.39
MW39-11	5.47	4028.64	5.32	4028.79	4.54	4029.57	5.31	NC	5.79	NC	5.35	4032.81	3.82	4032.09	3.35	4032.82
MW39-12	5.8	4027.95	5.38	4028.37	3.32	4030.43	5.38	NC	NC	NC	1.90	4032.45	NC	NC	2.52	4032.6

Notes:
amsl - above mean sea level
BTOC - below top of casing
Dry - well measured dry
ft - feet
NC - not collected

Table 4-10
Groundwater Quality Parameters
SS-39 (SWMUs 165, 167, 177, 179, and 181) - Missile Fuel Spill Area
Holloman AFB, New Mexico

	pH									Specific Conductance (S/m)									Temperature (ºC)					
Well	**Jul-06**	**Jan-07**	**Jul-07**	**Jan-08**	**July-08**	**Jan-09**	**Jul-09**	**Oct-09**	**Jan-10**	**Jul-06**	**Jan-07**	**Jul-07**	**Jan-08**	**July-08**	**Jan-09**	**Jul-09**	**Oct-09**	**Jan-10**	**Jul-06**	**Jan-07**	**Jul-07**	**Jan-08**	**July-08**	**Jan-09**
MW39-02	7.00	7.48	7.15	7.27	6.96	6.66	6.54	NM	7.01	18.98	16.32	1.74	23.04	NM	20.80	9.50	NM	27.40	27.93	18.01	22.50	13.00	19.68	18.50
MW39-05	7.09	7.14	7.13	7.11	6.93	6.71	6.94	NM	7.01	81.36	59.95	6.88	86.84	NM	85.90	--	NM	--	24.01	14.75	24.20	14.81	23.34	17.90
MW39-06	7.01	7.23	7.06	7.01	6.82	6.70	6.93	NM	7.12	41.57	31.03	4.15	45.01	NM	41.90	19.60	NM	62.20	23.16	13.78	27.90	14.63	21.77	14.70
MW39-06D	7.09	6.95	7.60	6.80	6.71	6.61	6.68	NM	6.48	114.70	86.99	9.99*	147.40	NM	100.00	52.30	NM	--	26.34	17.59	22.60	14.01	18.68	16.90
MW39-07	7.00	7.06	7.05	7.13	6.94	6.75	6.89	NM	6.96	62.27	50.95	5.00	67.72	NM	62.80	27.40	NM	84.50	24.74	13.12	25.00	15.70	21.20	16.50
MW39-08	7.13	7.45	8.04	7.56	7.43	4.01	7.74	NM	7.51	102.30	64.71	9.99*	126.10	NM	100.00	--	NM	--	32.00	9.28	29.60	15.57	28.59	14.50
MW39-09	7.49	7.27	8.10	7.70	7.24	7.40	6.73	NM	7.28	94.21	81.34	9.99*	128.20	NM	100.00	0.00	NM	--	29.24	10.98	29.50	12.37	22.65	15.10
MW39-10	7.43	7.47	7.44	7.67	7.21	7.73	7.28	NM	6.94	102.40	34.23	9.99*	123.50	NM	100.00	--	NM	--	30.23	7.93	29.10	10.92	27.31	15.70
MW39-11	7.05	7.23	7.40	7.32	7.14	5.95	7.21	NM	7.34	122.80	84.90	9.99*	132.50	NM	100.00	65.40	NM	--	28.43	10.91	34.10	12.90	26.65	16.30
MW39-12	6.98	7.28	7.61	7.75	7.38	5.93	NM	7.32	7.60	127.80	89.32	9.99*	180.30	NM	100.00	NM	--	--	28.72	11.22	33.00	11.62	25.45	16.20

Notes:
(1) - result in percent saturation
ºC - degrees Celsius
mg/L - milligrams per liter
mV - millivolt
NM - not measured
NTU - nephelometric turbidity unit
ppt - parts per thousand
S/m - siemens per meter
% - percent
* - reading exceeded instrument maximum values
-- meter malfunctioned

Table 4-10
Groundwater Quality Parameters
SS-39 (SWMUs 165, 167, 177, 179, and 181) - Missile Fuel Spill Area
Holloman AFB, New Mexico

	Temperature (ºC)			Turbidity (NTU)									Oxidation Reduction Potential (mV)								
Well	**Jul-09**	**Oct-09**	**Jan-10**	**Jul-06**	**Jan-07**	**Jul-07**	**Jan-08**	**July-08**	**Jan-09**	**Jul-09**	**Oct-09**	**Jan-10**	**Jul-06**	**Jan-07**	**Jul-07**	**Jan-08**	**July-08**	**Jan-09**	**Jul-09**	**Oct-09**	**Jan-10**
MW39-02	21.34	NM	17.29	3.40	56.30	0.00	32.60	106.50	0.00	29.40	NM	0.00	87.70	-17.80	87.00	182.50	188.30	18.18	116.00	NM	138.00
MW39-05	24.11	NM	15.06	2.06	190.00	0.00	8.70	367.80	10.00	46.70	NM	5.00	92.30	144.50	135.00	160.90	148.50	5.52	212.00	NM	130.00
MW39-06	22.17	NM	16.56	2.71	265.00	0.00	2.90	222.90	13.00	35.40	NM	79.30	42.90	-14.40	-6.00	138.80	144.00	6.78	101.00	NM	124.00
MW39-06D	21.51	NM	18.91	9.81	18.00	2.40	5.54	611.00	0.00	15.60	NM	0.70	84.10	158.00	111.00	208.40	184.70	6.72	118.00	NM	116.00
MW39-07	23.14	NM	13.35	24.00	950.00	0.40	30.00	330.00	10.00	119.00	NM	10.50	46.10	147.50	-14.00	152.20	147.70	6.22	107.00	NM	139.00
MW39-08	30.51	NM	14.06	19.70	700.00	3.60	14.50	784.20	2.00	27.10	NM	4.60	49.10	133.40	115.00	102.80	158.30	4.35	205.00	NM	46.00
MW39-09	29.29	NM	15.15	32.10	NM	54.00	10.10	797.90	0.00	105.00	NM	68.70	42.10	117.90	102.00	112.10	158.70	NM	337.00	NM	139.00
MW39-10	29.81	NM	16.14	2.67	150.00	7.50	11.90	771.30	0.00	57.10	NM	0.00	50.70	98.80	-32.00	188.60	156.30	8.86	252.00	NM	120.00
MW39-11	28.91	NM	15.23	45.00	90.00	36.00	630.00	738.80	1.00	18.50	NM	57.80	26.10	155.10	-21.00	250.90	158.30	7.19	84.00	NM	106.00
MW39-12	NM	26.36	12.20	40.00	NM	8.70	680.00	783.40	0.00	NM	8.00	70.50	53.20	164.30	-41.00	186.90	122.80	3.37	NM	176.00	116.00

Notes:
(1) - result in percent saturation
ºC - degrees Celsius
mg/L - milligrams per liter
mV - millivolt
NM - not measured
NTU - nephelometric turbidity unit
ppt - parts per thousand
S/m - siemens per meter
% - percent
* - reading exceeded instrument maximum values
-- meter malfunctioned

Table 4-10
Groundwater Quality Parameters
SS-39 (SWMUs 165, 167, 177, 179, and 181) - Missile Fuel Spill Area
Holloman AFB, New Mexico

Well	Dissolved Oxygen (mg/L)									Salinity							Salinity	
	Jul-06	Jan-07	Jul-07	Jan-08	July-08	Jan-09	Jul-09	Oct-09	Jan-10	Jul-06	Jan-07 (ppt)	Jul-07 (%)	Jan-08 (ppt)	July-08 (%)	Jan-09 (%)	Jul-09	Oct-09	Jan-10
MW39-02	5.78	4.23	1.71	415.58[1]	41.80	8.54	3.90	NM	4.29	NM	18625.00	1.00	18.17	NM	1.25	0.53	NM	1.70
MW39-05	0.99	1.48	0.03	0.30	23.20	6.55	0.44	NM	2.33	NM	74.61	4.0*	78.70	NM	4.0*	4.00	NM	--
MW39-06	1.05	2.98	0.00	0.31	23.30	7.45	2.78	NM	2.42	NM	39621.00	2.70	37.41	NM	2.68	1.17	NM	--
MW39-06D	2.78	1.07	0.00	0.97	19.40	5.27	2.12	NM	3.48	NM	101.80	4.0*	157.03	NM	4.0*	3.44	NM	4.00
MW39-07	1.22	1.45	0.00	0.55	26.50	7.63	6.08	NM	1.55	NM	65.80	3.30	57.68	NM	4.0*	1.70	NM	4.00
MW39-08	0.45	2.93	1.04	2.76	60.30	10.53	0.83	NM	2.83	NM	93.16	4.0*	120.60	NM	4.0*	4.00	NM	4.00
MW39-09	1.42	3.76	2.47	312.14[1]	56.20	11.02	8.04	NM	5.21	NM	107.00	4.0*	137.33	NM	4.0*	0.00	NM	--
MW39-10	0.72	13.38	0.53	2.43	36.10	11.92	0.21	NM	3.96	NM	69.83	4.0*	136.70	NM	4.0*	4.00	NM	4.00
MW39-11	0.78	1.74	0.69	292.8[1]	43.80	12.79	3.62	NM	4.24	NM	116.10	4.0*	151.50	NM	4.0*	4.00	NM	--
MW39-12	1.08	1.76	0.18	117.8[1]	42.20	11.01	NM	0.00	4.70	NM	122.40	4.0*	141.51	NM	4.0*	NM	0.00	--

Notes:
[1] - result in percent saturation
ºC - degrees Celsius
mg/L - milligrams per liter
mV - millivolt
NM - not measured
NTU - nephelometric turbidity unit
ppt - parts per thousand
S/m - siemens per meter
% - percent
* - reading exceeded instrument maximum values
-- meter malfunctioned

Table 4-11
Summary of Groundwater Detections (July 2009 - January 2010)
SS-39 (SWMUs 165, 177, 179, and 181) - Missile Fuel Spill Area
Holloman AFB, New Mexico

		Sample Name:	MW39-02				MW39-05				MW39-06				MW39-06D									
		Date Collected:	07/08/2009		01/07/2010		07/08/2009		01/07/2010		07/07/2009		01/06/2010		07/07/2009		07/07/2009		07/07/2009		01/06/2010		01/06/2010	
		QC Type:	Regular		Regular		Regular		Regular		Regular		Regular		Regular		Field Duplicate		Field Duplicate		Regular		Field Duplicate	
Analyte	**NMWQCC[1]**	**EPA MCL[2]**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
General Chemistry (mg/L)																								
Solids, total dissolved[3]	n/a	n/a	12200		11300		85500		85000		33200		28000		98600		--		78900		102000		99000	
Dissolved Metals (µg/L)																								
Arsenic	0.448	10	**23.2**		22	UJ	110	U	110	UJ	27	U	27	UJ	110	U	--		110	U	110	UJ	110	UJ
Barium	7300	2000	20	U	21.3		100	U	100	U	25	U	25	U	100	U	--		100	U	100	U	100	U
Lead	n/a	15	8	U	8	U	40	U	40	U	10	U	10	U	40	U	--		40	U	40	U	40	U
Selenium	182.5	50	37.1		43.8		87.5		79.1		38.3		40.9		111		--		68	U	68	U	102	
Silver	182.5	n/a	6.6		5.6	U	28	U	28	U	7	U	7	U	28	U	--		28	U	28	U	28	U
Total Metals (µg/L)																								
Arsenic	0.448	10	22	U	22	UJ	110	U	110	UJ	27	U	27	UJ	110	U	--		110	U	110	UJ	110	UJ
Barium	7300	2000	20	U	20	U	100	U	100	U	25	U	25	U	100	U	--		100	U	100	U	100	U
Lead	n/a	15	8	U	8	U	40	U	40	U	10	U	10	U	40	U	--		40	U	40	U	40	U
Selenium	182.5	50	38.5		39.9		109		84		32.6		57.7		92.2		--		86.4		103		73.2	
Silver	182.5	n/a	5.6	U	5.6	U	28	U	28	U	7	U	7	U	28	U	--		28	U	28	U	28	U
Perchlorate (µg/L)																								
Perchlorate	24.5	n/a	15		11		24		17		**28**		**25**		**28**		**26**				**28**		**27**	
Volatile Organic Compounds (µg/L)																								
1,1,1-Trichloroethane	9125	200	0.33	U	0.5	J	0.33	U	0.33	U	0.33	U	1.7	U	1.7	U	--		1.7	U	0.33	U	0.33	U
1,1-Dichloroethene	339.5348837	7	0.54	U	0.54	U	0.54	U	0.54	U	1.2		2.7	U	2.7	U	--		2.7	U	2.4		2.1	
2-Butanone	7064.516129	n/a	2	U	2	U	2	U	2	U	2	U	10	U	10	U	--		10	U	2	U	2	U
2-Hexanone	n/a	n/a	5	U	5	U	5	U	5	U	5	U	25	U	25	U	--		25	U	5	U	5	U
4-Methyl-2-pentanone	1990.909091	n/a	2	U	2	U	2	U	2	U	2	U	10	U	10	U	--		10	U	2	U	2	U
Acetone	21782.8877	n/a	10	U	10	U	10	U	10	U	10	UJ	50	U	50	UJ	--		50	UJ	10	U	10	U
Bromomethane	8.661016949	n/a	0.78	U	0.78	U	0.78	U	0.78	U	0.78	U	3.9	U	3.9	U	--		3.9	U	0.78	U	0.78	U
Carbon tetrachloride	1.99316827	5	**3**		1.5		0.22	U	0.22	U	**2.2**		**2.1**	J	1.1	U	--		1.1	U	0.22	U	0.22	U
Chloroform	1.92753085	80	1.7		1.8		0.28	U	0.28	U	**2.3**		**2**	J	1.4	U	--		1.4	U	0.82	J	0.78	J
Chloromethane	17.75044784	n/a	0.61	U	0.61	U	0.61	U	0.61	U	0.61	U	3.1	U	3.1	U	--		3.1	U	0.61	U	0.61	U
Cis-1,2-dichloroethene	365	70	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	1	U	1	U	--		1	U	0.2	U	0.2	U

Table 4-11
Summary of Groundwater Detections (July 2009 - January 2010)
SS-39 (SWMUs 165, 177, 179, and 181) - Missile Fuel Spill Area
Holloman AFB, New Mexico

		Sample Name:	MW39-02				MW39-05				MW39-06				MW39-06D									
		Date Collected:	07/08/2009		01/07/2010		07/08/2009		01/07/2010		07/07/2009		01/06/2010		07/07/2009		07/07/2009		07/07/2009		01/06/2010		01/06/2010	
		QC Type:	Regular		Regular		Regular		Regular		Regular		Regular		Regular		Field Duplicate		Field Duplicate		Regular		Field Duplicate	
Analyte	**NMWQCC[1]**	**EPA MCL[2]**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Volatile Organic Compounds (µg/L)																								
Methylene chloride	48.03172785	5	1	U	1	U	1	U	1	U	1	U	25	U	6.2	J	--		5.5	J	1	U	1	U
Tetrachloroethene	1.081290425	5	0.22	U	0.35	J	0.22	U	0.22	U	0.33	J	1.1	U	1.1	U	--		1.1	U	0.22	U	0.22	U
Trichloroethene	16.5434842	5	**17.7**		**25.1**		14		**25.9**		**108**		**208**		**336**		--		**342**		**328**		**319**	

Notes:

[1] NMAC 20.6.2.3103

[2] December 2009 U.S. EPA Maximum Contaminant Level

[3] The TDS concentrations in all of the monitoring wells were above 10,000 mg/L, which is the point where groundwater is no longer considered a potential domestic or agricultural water supply (NMAC, 20.6.2.3101).

Bold fields represent exceedances of NMWQCC standards

Highlighted fields represent exceedances EPA MCLs

Highlighted and bold fields represent exceedances of both NMWQCC standards and EPA MCLs

EPA - United States Environmental Protection Agency
HGL - HydroGeoLogic, Inc.
J - estimated value
MCL - maximum contaminant level
mg/L - milligrams per liter
n/a - not available
n/a* - HGL only presented data summary tables in previous reports; therefore, data results for these fields are not available.
-- not analyzed
NMWQCC - New Mexico Water Quality Control Commission
Q - analytical result qualifier
Result - reported analytical concentration
U - not detected
UJ - estimated non-detect
µg/L - micrograms per liter

Table 4-11
Summary of Groundwater Detections (July 2009 - January 2010)
SS-39 (SWMUs 165, 177, 179, and 181) - Missile Fuel Spill Area
Holloman AFB, New Mexico

		Sample Name:	MW39-07				MW39-08				MW39-09				MW39-10				MW39-11				MW39-12			
		Date Collected:	07/08/2009		01/07/2010		07/07/2009		01/06/2010		07/07/2009		01/06/2010		07/07/2009		01/06/2010		07/07/2009		01/06/2010		10/06/2009		01/06/2010	
		QC Type:	Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular	
Analyte	**NMWQCC[1]**	**EPA MCL[2]**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
General Chemistry (mg/L)																										
Solids, total dissolved[3]	n/a	n/a	23000		41900		88800		103000		122000		107000		110000		107000		134000		105000		128000		98700	
Dissolved Metals (µg/L)																										
Arsenic	0.448	10	54	U	54	UJ	110	U	110	UJ	110	U	110	UJ	110	U	110	UJ	110	U	110	UJ	**15.5**		110	UJ
Barium	7300	2000	50	U	50	U	100	U	100	U	100	U	100	U	100	U	100	U	100	U	100	U	49.4		100	U
Lead	n/a	15	20	U	20	U	40	U	40	U	40	U	40	U	40	U	40	U	40	U	40	U	40	U	40	U
Selenium	182.5	50	36.4	J	34	U	68	U	76.1		68	U	68	U	68	U	68	U	125		82.3		98.8		71	
Silver	182.5	n/a	14	U	14	U	28	U	28	U	28	U	28	U	28	U	28	U	28	U	28	U	2.8	U	28	U
Total Metals (µg/L)																										
Arsenic	0.448	10	54	U	54	UJ	110	U	110	UJ	110	U	110	UJ	110	U	110	UJ	110	U	110	UJ	**22.1**		110	UJ
Barium	7300	2000	50	U	50	U	100	U	100	U	100	U	152		100	U	100	U	100	U	100	U	47		100	U
Lead	n/a	15	20	U	20	U	41.2		40	U	40	U	40	U	40	U	40	U	40	U	40	U	40	U	40	U
Selenium	182.5	50	60		34	U	68	U	80.9		91.3		85.5		111		68.6		104		108		95.4		72.2	
Silver	182.5	n/a	14	U	14	U	28	U	28	U	28	U	28	U	28	U	28	U	28	U	28	U	2.8	U	28	U
Perchlorate (µg/L)																										
Perchlorate	24.5	n/a	**59**		**51**		**74**		**65**		**190**		**150**		**170**		**130**		**110**		**81**		**76**		**51**	
Volatile Organic Compounds (µg/L)																										
1,1,1-Trichloroethane	9125	200	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U
1,1-Dichloroethene	339.5348837	7	0.54	U	0.54	U	0.54	U	0.54	U	0.54	U	0.54	U	0.54	U	0.54	U	0.54	U	0.54	U	0.54	U	0.54	U
2-Butanone	7064.516129	n/a	2	U	2	U	2	U	2.7	J	2	U	3.7	J	2	U	2.4	J	2	U	5		2	U	5.4	
2-Hexanone	n/a	n/a	5	U	5	U	5	U	50.6		5	U	15		5	U	7.8	J	13.6		100		5	U	33.4	
4-Methyl-2-pentanone	1990.909091	n/a	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2.2	J	2	U	2	U
Acetone	21782.8877	n/a	10	U	10	U	10	U	12.9	J	10	U	16.7	J	10	U	14	J	10	U	31.1	J	10	U	26.1	J
Bromomethane	8.661016949	n/a	0.78	U	0.78	U	0.78	U	0.78	U	0.78	U	0.78	U	0.78	U	1.8	J	0.78	U	0.78	U	0.78	U	0.85	J
Carbon tetrachloride	1.99316827	5	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U
Chloroform	1.92753085	80	0.28	U	0.28	U	0.28	U	0.28	U	0.28	U	0.28	U	0.28	U	0.28	U	0.28	U	0.28	U	0.28	U	0.28	U
Chloromethane	17.75044784	n/a	0.61	U	0.61	U	0.67	J	0.61	U	0.61	U	0.61	U	0.61	U	1.6	J	0.61	U	0.61	U	0.61	U	1.1	J
Cis-1,2-dichloroethene	365	70	0.2	U	0.2	U	0.71	J	0.46	J	0.2	U	0.2	U	0.2	U	0.2	U	0.21	J	0.2	U	0.2	U	0.2	U

Table 4-11
Summary of Groundwater Detections (July 2009 - January 2010)
SS-39 (SWMUs 165, 177, 179, and 181) - Missile Fuel Spill Area
Holloman AFB, New Mexico

		Sample Name:	MW39-07				MW39-08				MW39-09				MW39-10				MW39-11				MW39-12			
		Date Collected:	07/08/2009		01/07/2010		07/07/2009		01/06/2010		07/07/2009		01/06/2010		07/07/2009		01/06/2010		07/07/2009		01/06/2010		10/06/2009		01/06/2010	
		QC Type:	Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular	
Analyte	**NMWQCC[1]**	**EPA MCL[2]**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Volatile Organic Compounds (µg/L)																										
Methylene chloride	48.03172785	5	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Tetrachloroethene	1.081290425	5	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U
Trichloroethene	16.5434842	5	1.4		0.93	J	10.3		**26**		0.32	U	0.32	U	0.37	J	0.32	U	**47.3**		**39.5**		1.3		0.96	J

Notes:

[1] NMAC 20.6.2.3103

[2] December 2009 U.S. EPA Maximum Contaminant Level

[3] The TDS concentrations in all of the monitoring wells were above 10,000 mg/L, which is the point where groundwater is no longer considered a potential domestic or agricultural water supply (NMAC, 20.6.2.3101).

Bold fields represent exceedances of NMWQCC standards

Highlighted fields represent exceedances EPA MCLs

Highlighted and bold fields represent exceedances of both NMWQCC standards and EPA MCLs

EPA - United States Environmental Protection Agency
HGL - HydroGeoLogic, Inc.
J - estimated value
MCL - maximum contaminant level
mg/L - milligrams per liter
n/a - not available
n/a* - HGL only presented data summary tables in previous reports; therefore, data results for these fields are not available.
-- not analyzed
NMWQCC - New Mexico Water Quality Control Commission
Q - analytical result qualifier
Result - reported analytical concentration
U - not detected
UJ - estimated non-detect
µg/L - micrograms per liter

Table 4-12
Groundwater Monitoring Analytical Results
SS-39 (SWMUs 165, 177, 179, and 181) - Missile Fuel Spill Area
Holloman AFB, New Mexico

		Sample Number:	MW-39-02																MW39-05									
		Sample Date:	7/15/2006		1/17/2007		7/19/2007		1/17/2008		7/10/2008		1/8/2009		7/8/2009		1/7/2010		7/13/2006		1/18/2007		7/19/2007		1/17/2008		7/10/2008	
		Sampling Company:	HGL		HGL		HGL		HGL		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		HGL		HGL		HGL		HGL		Tetra Tech	
		QC Type:	Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular	
Analysis	**NMWQ (1)**	**(2)**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
General Chemistry (mg/L)																												
Solids, total dissolved(3)	n/a	n/a	16300		15700		19000		15000		16900		15800		12200		11300		69400		83900		77000		64000		57900	
Dissolved Metals (µg/L)																												
Arsenic	0.448	10	3.6	U	5	U	100	U	50	U	7.2	U	11	U	**23.2**		22	UJ	2.5	U	5	U	200	U	50	U	72	U
Barium	7300	2000	7	J	14	J	110	UJ	55	U	14.8	J	16.8	J	20	U	21.3		37		15	J	220	UJ	23	J	100	U
Cadmium	18.25	5	0.5	U	1	UJ	22	U	11	U	2	U	2	U	4	U	4	U	2		1	UJ	44	U	11	U	20	U
Chromium	109.5	100	3.5	U	7	J	100	U	50	U	3.2	U	4	U	8	U	8	U	0.2	U	5	UJ	200	U	50	U	32	U
Lead	n/a	15	n/a*		n/a*		n/a*		n/a*		4	U	6	J	8	U	8	U	n/a*		n/a*		n/a*		n/a*		40	U
Mercury	0.5615385	2	n/a*		n/a*		n/a*		n/a*		0.14	U	0.15	U	0.15	UJ	0.15	U	n/a*		n/a*		n/a*		n/a*		0.14	U
Selenium	182.5	50	14		10	UJ	150	U	75	U	27.3		24.7		37.1		43.8		45		10	UJ	300	U	35	J	93.4	J
Silver	182.5	--	0.1	U	2	UJ	50	U	25	U	2.4	U	2.8	U	6.6		5.6	U	11		2	UJ	21	J	25	U	24	U
Total Metals (µg/L)																												
Arsenic	0.448	10	--		5	U	100	U	50	U	**12.6**	J	**14.9**	J	22	U	22	UJ	--		5	U	200	U	50	U	72	U
Barium	7300	2000	--		14		110	U	55	U	18.1	J	18.1	J	20	U	20	U	--		19		220	U	30	J	248	J
Cadmium	18.25	5	--		1	U	22	U	11	U	2	U	2	U	4	U	4	U	--		1	U	44	U	11	U	20	U
Chromium	109.5	100	--		14		100	U	50	U	3.2	U	4	U	8	U	8	U	--		5	U	200	U	50	U	32	U
Lead	n/a	15	--		5	U	66	U	33	U	4	U	7	U	8	U	8	U	--		5	U	130	U	33	U	40	U
Mercury	0.5615385	2	n/a*		n/a*		n/a*		n/a*		0.14	U	0.15	U	0.15	UJ	0.15	U	n/a*		n/a*		n/a*		n/a*		0.14	U
Selenium	182.5	50	--		10	U	150	U	75	U	28.9		29.7		38.5		39.9		--		10	U	300	U	38	J	62	U
Silver	182.5	n/a	--		2	U	50	U	25	U	2.4	U	2.8	U	5.6	U	5.6	U	--		2	U	32	J	25	U	24	U
Perchlorate (µg/L)																												
Perchlorate	24.5	n/a	12		75	U	10		11		12		21		15		11		**29**		600	U	**31**		24		23	
Unsymmetrical Dimethylhydrazine (UMDH) (µg/L)																												
1,1-Dimethylhydrazine	n/a	n/a	n/a*		n/a*		n/a*		n/a*		--		23	U	--		--		n/a*		n/a*		n/a*		n/a*		--	
Volatile Organic Compounds (µg/L)																												
1,1,1,2-Tetrachloroethane	5.2420214	n/a	n/a*		n/a*		n/a*		n/a*		0.2	U	0.2	U	0.2	U	0.2	U	n/a*		n/a*		n/a*		n/a*		0.2	U
1,1,1-Trichloroethane	9125	200	n/a*		n/a*		n/a*		n/a*		0.33	U	0.35	J	0.33	U	0.5	J	n/a*		n/a*		n/a*		n/a*		0.33	U
1,1,2,2-Tetrachloroethane	0.6713378	n/a	n/a*		n/a*		n/a*		n/a*		0.21	U	0.21	U	0.21	U	0.21	U	n/a*		n/a*		n/a*		n/a*		0.21	U
1,1,2-Trichloro-1,2,2-trifluoroethane	59189.189	n/a	n/a*		n/a*		n/a*		n/a*		0.34	U	0.34	U	0.34	U	0.34	U	n/a*		n/a*		n/a*		n/a*		0.34	U
1,1,2-Trichloroethane	2.4175986	5	n/a*		n/a*		n/a*		n/a*		0.26	U	0.26	U	0.26	U	0.26	U	n/a*		n/a*		n/a*		n/a*		0.26	U
1,1-Dichloroethane	24.175986	n/a	0.0299	U	1	U	1	U	1	U	0.24	U	0.24	U	0.24	U	0.24	U	0.0299	U	1	U	1	U	1	U	0.24	U
1,1-Dichloroethene	339.53488	7	0.0736	U	0.54	J	1	U	1	U	0.54	U	0.54	U	0.54	U	0.54	U	0.0736	U	1	U	1	U	1	U	0.54	U
1,1-Dichloropropene	n/a	n/a	n/a*		n/a*		n/a*		n/a*		0.23	U	0.23	U	0.23	U	0.23	U	n/a*		n/a*		n/a*		n/a*		0.23	U
1,2,3-Trichlorobenzene	n/a	n/a	n/a*		n/a*		n/a*		n/a*		0.5	U	0.5	U	0.5	U	0.5	U	n/a*		n/a*		n/a*		n/a*		0.5	U
1,2,3-Trichloropropane	0.096	n/a	n/a*		n/a*		n/a*		n/a*		0.34	U	0.34	U	0.34	U	0.34	U	n/a*		n/a*		n/a*		n/a*		0.34	U
1,2,4-Trichlorobenzene	8.1564246	70	n/a*		n/a*		n/a*		n/a*		0.5	U	0.5	U	0.5	U	0.5	U	n/a*		n/a*		n/a*		n/a*		0.5	U
1,2,4-Trimethylbenzene	n/a	n/a	n/a*		n/a*		n/a*		n/a*		0.22	U	0.22	U	0.22	U	0.22	U	n/a*		n/a*		n/a*		n/a*		0.22	U
1,2-Dibromo-3-chloropropane	0.0080324	0.2	n/a*		n/a*		n/a*		n/a*		0.32	U	0.32	U	0.32	U	0.32	U	n/a*		n/a*		n/a*		n/a*		0.32	U
1,2-Dibromoethane	0.0653311	0.05	n/a*		n/a*		n/a*		n/a*		0.28	U	0.28	U	0.28	U	0.28	U	n/a*		n/a*		n/a*		n/a*		0.28	U
1,2-Dichlorobenzene	370.14085	600	n/a*		n/a*		n/a*		n/a*		0.2	U	0.2	U	0.2	U	0.2	U	n/a*		n/a*		n/a*		n/a*		0.2	U
1,2-Dichloroethane	1.4931247	5	n/a*		n/a*		n/a*		n/a*		0.34	U	0.34	U	0.34	U	0.34	U	n/a*		n/a*		n/a*		n/a*		0.34	U
1,2-Dichloropropane	3.8598261	5	n/a*		n/a*		n/a*		n/a*		0.21	U	0.21	U	0.21	U	0.21	U	n/a*		n/a*		n/a*		n/a*		0.21	U
1,3,5-Trimethylbenzene	n/a	n/a	n/a*		n/a*		n/a*		n/a*		0.2	U	0.2	U	0.2	U	0.2	U	n/a*		n/a*		n/a*		n/a*		0.2	U
1,3-Dichlorobenzene	n/a	n/a	n/a*		n/a*		n/a*		n/a*		0.23	U	0.23	U	0.23	U	0.23	U	n/a*		n/a*		n/a*		n/a*		0.23	U
1,3-Dichloropropane	n/a	n/a	n/a*		n/a*		n/a*		n/a*		0.26	U	0.26	U	0.26	U	0.26	U	n/a*		n/a*		n/a*		n/a*		0.26	U
1,4-Dichlorobenzene	4.2717868	75	n/a*		n/a*		n/a*		n/a*		0.22	U	0.22	U	0.22	U	0.22	U	n/a*		n/a*		n/a*		n/a*		0.22	U
1-Chlorohexane	n/a	n/a	n/a*		n/a*		n/a*		n/a*		0.27	U	0.27	U	0.27	U	0.27	U	n/a*		n/a*		n/a*		n/a*		0.27	U
2,2-Dichloropropane	n/a	n/a	n/a*		n/a*		n/a*		n/a*		0.28	U	0.28	U	0.28	U	0.28	U	n/a*		n/a*		n/a*		n/a*		0.28	U

Table 4-12
Groundwater Monitoring Analytical Results
SS-39 (SWMUs 165, 177, 179, and 181) - Missile Fuel Spill Area
Holloman AFB, New Mexico

		Sample Number:	MW-39-02																MW39-05									
		Sample Date:	7/15/2006		1/17/2007		7/19/2007		1/17/2008		7/10/2008		1/8/2009		7/8/2009		1/7/2010		7/13/2006		1/18/2007		7/19/2007		1/17/2008		7/10/2008	
		Sampling Company:	HGL		HGL		HGL		HGL		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		HGL		HGL		HGL		HGL		Tetra Tech	
		QC Type:	Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular	
Analysis	**NMWQ [1]**	**[2]**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Volatile Organic Compounds (µg/L)																												
2-Butanone	7064.5161	n/a	0.394	U	5	U	5	U	5	U	2	U	2	U	2	U	2	U	0.394	U	5	U	5	U	5	U	2	U
2-Butylbenzene	n/a	n/a	n/a*		n/a*		n/a*		n/a*		0.28	U	0.28	U	0.28	U	0.28	U	n/a*		n/a*		n/a*		n/a*		0.28	U
2-Chloroethyl vinyl ether	n/a	n/a	n/a*		n/a*		n/a*		n/a*		1	UJ	1	UJ	1	U	1	U	n/a*		n/a*		n/a*		n/a*		1	UJ
2-Chlorotoluene	730	n/a	n/a*		n/a*		n/a*		n/a*		0.25	U	0.25	U	0.25	U	0.25	U	n/a*		n/a*		n/a*		n/a*		0.25	U
2-Hexanone	n/a	n/a	n/a*		n/a*		n/a*		n/a*		5	U	5	U	5	U	5	U	n/a*		n/a*		n/a*		n/a*		5	U
2-Propylbenzene	n/a	n/a	n/a*		n/a*		n/a*		n/a*		0.25	U	0.25	U	--	--	--		n/a*		n/a*		n/a*		n/a*		0.25	U
4-Bromofluorobenzene	n/a	n/a	--		48		--		--		--		--		--		--		--		44.8		--		--		--	
4-Chlorotoluene	n/a	n/a	n/a*		n/a*		n/a*		n/a*		0.21	U	0.21	U	0.21	U	0.21	U	n/a*		n/a*		n/a*		n/a*		0.21	U
4-Methyl-2-pentanone	1990.9091	n/a	n/a*		n/a*		n/a*		n/a*		2	U	2	U	2	U	2	U	n/a*		n/a*		n/a*		n/a*		2	U
Acetone	21782.888	n/a	0.854	U	10	UJ	5	UJ	5	U	10	U	10	U	10	U	10	U	0.854	U	10	UJ	5	UJ	5	U	10	U
Acetonitrile	n/a	n/a	n/a*		n/a*		n/a*		n/a*		5	U	5	U	5	U	5	U	n/a*		n/a*		n/a*		n/a*		5	U
Acrolein	0.0416192	n/a	n/a*		n/a*		n/a*		n/a*		5	U	5	U	5	U	5	U	n/a*		n/a*		n/a*		n/a*		5	U
Acrylonitrile	0.4543342	n/a	n/a*		n/a*		n/a*		n/a*		2	UJ	2	U	2	U	2	U	n/a*		n/a*		n/a*		n/a*		2	UJ
Allyl chloride	n/a	n/a	n/a*		n/a*		n/a*		n/a*		2	U	2	U	2	U	2	U	n/a*		n/a*		n/a*		n/a*		2	U
Aniline	n/a	n/a	n/a*		n/a*		n/a*		n/a*		--		0.99	U	--		--		n/a*		n/a*		n/a*		n/a*		--	
Benzene	4.1298223	5	0.0495	U	1	U	1	U	1	U	0.4	U	0.4	U	0.4	U	0.4	U	0.07	J	1	U	1	U	1	U	0.4	U
Benzyl Chloride	n/a	n/a	n/a*		n/a*		n/a*		n/a*		0.36	U	0.36	U	0.36	U	0.36	U	n/a*		n/a*		n/a*		n/a*		0.36	U
Bromobenzene	n/a	n/a	n/a*		n/a*		n/a*		n/a*		0.26	U	0.26	U	0.26	U	0.26	U	n/a*		n/a*		n/a*		n/a*		0.26	U
Bromochloromethane	n/a	n/a	n/a*		n/a*		n/a*		n/a*		0.23	U	0.23	U	0.23	U	0.23	U	n/a*		n/a*		n/a*		n/a*		0.23	U
Bromodichloromethane	1.1728279	80	0.0651	U	1	U	1	U	1	U	0.2	U	0.2	U	0.2	U	0.2	U	0.0651	U	1	U	1	U	1	U	0.2	U
Bromoform	85.063291	80	0.0859	U	1	U	1	U	1	U	0.33	U	0.33	U	0.33	U	0.33	U	0.0859	U	1	U	1	U	1	U	0.33	U
Bromomethane	8.6610169	n/a	n/a*		n/a*		n/a*		n/a*		0.78	U	0.78	U	0.78	U	0.78	U	n/a*		n/a*		n/a*		n/a*		0.78	U
Carbon disulfide	1042.8571	n/a	n/a*		n/a*		n/a*		n/a*		0.4	U	0.4	U	0.4	U	0.4	U	n/a*		n/a*		n/a*		n/a*		0.4	U
Carbon tetrachloride	1.9931683	5	**3.13**		**3.08**		**2.2**		**2.2**		**4**		**3.8**		**3**		1.5		0.121	U	1	U	1	U	1	U	0.22	U
Chlorobenzene	91.25	100	0.0217	U	1	U	1	U	1	U	0.22	U	0.22	U	0.22	U	0.22	U	0.03	J	1	U	1	U	1	U	0.22	U
Chloroethane	20857.143	n/a	n/a*		n/a*		n/a*		n/a*		0.48	U	0.48	U	0.48	U	0.48	U	n/a*		n/a*		n/a*		n/a*		0.48	U
Chloroform	1.9275308	80	1.38		1.44		1.5		1.1		**1.6**		**2.2**		1.7		1.8		0.0475	U	1	U	1	U	1	U	0.28	U
Chloromethane	17.750448	n/a	0.23	U	1	U	1	U	1	U	0.61	U	0.61	U	0.61	U	0.61	U	0.23	U	1	U	1	U	1	U	0.61	U
cis-1,2-dichloroethene	365	70	0.101	U	1	U	1	U	1	U	0.2	U	0.2	U	0.2	U	0.2	U	0.101	U	1	U	1	U	1	U	0.2	U
cis-1,3-dichloropropene	n/a	n/a	n/a*		n/a*		n/a*		n/a*		0.21	U	0.21	U	0.21	U	0.21	U	n/a*		n/a*		n/a*		n/a*		0.21	U
cis-1,4-Dichloro-2-butene	n/a	n/a	n/a*		n/a*		n/a*		n/a*		1	U	1	U	1	U	1	U	n/a*		n/a*		n/a*		n/a*		1	U
Cymene	n/a	n/a	n/a*		n/a*		n/a*		n/a*		0.32	U	0.32	U	0.32	U	0.32	U	n/a*		n/a*		n/a*		n/a*		0.32	U
Dibromochloromethane	1.4708683	80	n/a*		n/a*		n/a*		n/a*		0.2	U	0.2	U	0.2	U	0.2	U	n/a*		n/a*		n/a*		n/a*		0.2	U
Dibromofluoromethane	n/a	n/a	--		52.4		--		--		--		--		--		--		--		53.5		--		--		--	
Dibromomethane	365	n/a	n/a*		n/a*		n/a*		n/a*		0.3	U	0.3	U	0.3	U	0.3	U	n/a*		n/a*		n/a*		n/a*		0.3	U
Dichlorodifluoromethane	394.59459	n/a	n/a*		n/a*		n/a*		n/a*		1	U	1	U	1	U	1	U	n/a*		n/a*		n/a*		n/a*		1	U
Ether, tert-butyl methyl	124.66078	n/a	n/a*		n/a*		n/a*		n/a*		0.26	U	0.26	U	0.26	U	0.26	U	n/a*		n/a*		n/a*		n/a*		0.26	U
Ethyl methacrylate	3285	n/a	n/a*		n/a*		n/a*		n/a*		1	U	1	U	1	U	1	U	n/a*		n/a*		n/a*		n/a*		1	U
Ethylbenzene	14.76103	700	n/a*		n/a*		n/a*		n/a*		0.43	U	0.43	U	0.43	U	0.43	U	n/a*		n/a*		n/a*		n/a*		0.43	U
Hexachlorobutadiene	8.6153846	n/a	n/a*		n/a*		n/a*		n/a*		0.69	U	0.69	U	0.69	U	0.69	U	n/a*		n/a*		n/a*		n/a*		0.69	U
Hexane	876	n/a	n/a*		n/a*		n/a*		n/a*		0.5	U	0.5	U	0.5	U	0.5	U	n/a*		n/a*		n/a*		n/a*		0.5	U
Iodomethane	n/a	n/a	n/a*		n/a*		n/a*		n/a*		1	U	1	U	1	U	1	U	n/a*		n/a*		n/a*		n/a*		1	U
Isopropylbenzene	679.06977	n/a	n/a*		n/a*		n/a*		n/a*		0.2	U	0.2	U	0.2	U	0.2	U	n/a*		n/a*		n/a*		n/a*		0.2	U
m,p-Xylene	n/a	n/a	0.04	J	1	U	2	U	2	U	0.78	U	0.78	U	0.78	U	0.78	U	1	U	1	U	2	U	2	U	0.78	U
Methacrylonitrile	1.0428571	n/a	n/a*		n/a*		n/a*		n/a*		5	U	5	U	5	U	5	U	n/a*		n/a*		n/a*		n/a*		5	U
Methyl methacrylate	1419.4444	n/a	n/a*		n/a*		n/a*		n/a*		1	U	1	U	1	U	1	U	n/a*		n/a*		n/a*		n/a*		1	U
Methylene chloride	48.031728	5	0.689	U	5	U	1.3	U	1.3	U	1	U	1	U	1	U	1	U	0.689	U	5	U	1.3	U	1.3	U	1	U

Table 4-12
Groundwater Monitoring Analytical Results
SS-39 (SWMUs 165, 177, 179, and 181) - Missile Fuel Spill Area
Holloman AFB, New Mexico

		Sample Number:	MW-39-02																MW39-05									
		Sample Date:	7/15/2006		1/17/2007		7/19/2007		1/17/2008		7/10/2008		1/8/2009		7/8/2009		1/7/2010		7/13/2006		1/18/2007		7/19/2007		1/17/2008		7/10/2008	
		Sampling Company:	HGL		HGL		HGL		HGL		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		HGL		HGL		HGL		HGL		Tetra Tech	
		QC Type:	Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular	
Analysis	**NMWQ [1]**	**[2]**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Volatile Organic Compounds (µg/L)																												
naphthalene	1.4311765	n/a	n/a*		n/a*		n/a*		n/a*		1	U	1	U	1	U	1	U	n/a*		n/a*		n/a*		n/a*		1	U
n-Propylbenzene	n/a	n/a	n/a*		n/a*		n/a*		n/a*		--		--		0.25	U	0.25	U	n/a*		n/a*		n/a*		n/a*		--	
o-Xylene	1431.3725	n/a	n/a*		n/a*		n/a*		n/a*		0.37	U	0.37	U	0.37	U	0.37	U	n/a*		n/a*		n/a*		n/a*		0.37	U
Pentachloroethane	n/a	n/a	n/a*		n/a*		n/a*		n/a*		2	U	2	U	2	U	2	U	n/a*		n/a*		n/a*		n/a*		2	U
Propionitrile	n/a	n/a	n/a*		n/a*		n/a*		n/a*		10	U	10	U	10	U	10	U	n/a*		n/a*		n/a*		n/a*		10	U
Sec-butyl benzene	n/a	n/a	n/a*		n/a*		n/a*		n/a*		0.25	U	0.25	U	0.25	U	0.25	U	n/a*		n/a*		n/a*		n/a*		0.25	U
Styrene	1622.2222	100	n/a*		n/a*		n/a*		n/a*		0.36	U	0.36	U	0.36	U	0.36	U	n/a*		n/a*		n/a*		n/a*		0.36	U
Tert-butyl benzene	n/a	n/a	n/a*		n/a*		n/a*		n/a*		0.32	U	0.32	U	0.32	U	0.32	U	n/a*		n/a*		n/a*		n/a*		0.32	U
Tetrachloroethene	1.0812904	5	n/a*		n/a*		n/a*		n/a*		0.22	U	0.32	J	0.22	U	0.35	J	n/a*		n/a*		n/a*		n/a*		0.22	U
Toluene	2281.25	1000	--		47.2		--		--		0.35	U	0.35	U	0.35	U	0.35	U	--		46.5		--		--		0.35	U
Trans-1,2-dichloroethene	106.82927	100	n/a*		n/a*		n/a*		n/a*		0.45	U	0.45	U	0.45	U	0.45	U	n/a*		n/a*		n/a*		n/a*		0.45	U
Trans-1,3-dichloropropene	n/a	n/a	n/a*		n/a*		n/a*		n/a*		0.21	U	0.21	U	0.21	U	0.21	U	n/a*		n/a*		n/a*		n/a*		0.21	U
Trans-1,4-Dichloro-2-Butene	n/a	n/a	n/a*		n/a*		n/a*		n/a*		2	U	2	U	2	U	2	U	n/a*		n/a*		n/a*		n/a*		2	U
Trichloroethene	16.543484	5	13.3		**19.8**		**29**		**17**		13.3		**28.9**		**17.7**		**25.1**		**25**		**20.4**		**26**		**17**		9.5	
Trichlorofluoromethane	1288.2353	n/a	n/a*		n/a*		n/a*		n/a*		0.5	U	0.5	U	0.5	U	0.5	U	n/a*		n/a*		n/a*		n/a*		0.5	U
Vinyl acetate	412.42938	n/a	n/a*		n/a*		n/a*		n/a*		3.6	U	3.6	U	3.6	U	3.6	U	n/a*		n/a*		n/a*		n/a*		3.6	U
Vinyl chloride	0.8606949	2	n/a*		n/a*		n/a*		n/a*		0.3	U	0.3	U	0.3	U	0.3	U	n/a*		n/a*		n/a*		n/a*		0.3	U

Notes:
[1] NMAC 20.6.2.3103
[2] December 2009 U.S. EPA Maximum Contaminant Level
[3] The TDS concentrations in all of the monitoring wells were above 10,000 mg/L, which is the point where groundwater is no longer considered a potential domestic or agricultural water supply (NMAC, 20.6.2.3101).
Bold fields represent exceedances of NMWQCC standards
Highlighted fields represent exceedances EPA MCLs
Highlighted and bold fields represent exceedances of both NMWQCC standards and EPA MCLs
EPA - United States Environmental Protection Agency
HGL - HydroGeoLogic, Inc.
J - estimated value
MCL - maximum contaminant level
mg/L - milligrams per liter
n/a - not available
n/a* - HGL only presented data summary tables in previous reports; therefore, data results for these fields are not available.
-- not analyzed
NMWQCC - New Mexico Water Quality Control Commission
Q - analytical result qualifier
Result - reported analytical concentration
U - not detected
UJ - estimated non-detect
µg/L - micrograms per liter

Table 4-12
Groundwater Monitoring Analytical Results
SS-39 (SWMUs 165, 177, 179, and 181) - Missile Fuel Spill Area
Holloman AFB, New Mexico

		Sample Number:	MW39-05						MW39-06																			
		Sample Date:	1/8/2009		7/8/2009		1/7/2010		7/13/2006		1/17/2007		1/17/2007		7/17/2007		7/17/2007		1/15/2008		7/10/2008		1/8/2009		7/7/2009		1/6/2010	
		Sampling Company:	Tetra Tech		Tetra Tech		Tetra Tech		HGL		HGL		HGL		HGL		HGL		HGL		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech	
		QC Type:	Regular		Regular		Regular		Regular		Regular		Field Duplicate		Regular		Field Duplicate		Regular		Regular		Regular		Regular		Regular	
Analysis	**NMWQ (1)**	**(2)**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
General Chemistry (mg/L)																												
Solids, total dissolved(3)	n/a	n/a	75400		85500		85000		32500		35500		--		33000	J	2300000	J	30000		30800		32200		33200		28000	
Dissolved Metals (µg/L)																												
Arsenic	0.448	10	54	U	110	U	110	UJ	2.5	U	5	U	5	U	**31**	J	100	U	50	U	18	U	27	U	27	U	27	UJ
Barium	7300	2000	50	U	100	U	100	U	12		12	J	12	J	110	U	110	U	55	U	25	U	25	U	25	U	25	U
Cadmium	18.25	5	10	U	20	U	20	U	0.5	U	1	UJ	1	UJ	22	U	22	U	11	U	5	U	5	U	5	U	5	U
Chromium	109.5	100	20	U	40	U	40	U	0.2	U	5	UJ	5	UJ	100	U	100	U	50	U	8	U	10	U	10	U	10	U
Lead	n/a	15	20	U	40	U	40	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		10	U	10	U	10	U	10	U
Mercury	0.5615385	2	0.15	U	0.15	UJ	0.15	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.14	U	0.25	J	0.15	UJ	0.15	U
Selenium	182.5	50	74.2	J	87.5		79.1		2.3	U	10	UJ	10	UJ	150	U	57	J	32	J	43.4	J	40.5	J	38.3		40.9	
Silver	182.5	--	14	U	28	U	28	U	0.2	U	2	UJ	2	UJ	50	U	14	J	25	U	6	U	7	U	7	U	7	U
Total Metals (µg/L)																												
Arsenic	0.448	10	54	U	110	U	110	UJ	--		5	U	5	U	50	U	**43**	J	50	U	18	U	27	U	27	U	27	UJ
Barium	7300	2000	50	U	100	U	100	U	--		37		26	J	22	J	110	U	55	U	168	J	25	U	25	U	25	U
Cadmium	18.25	5	10	U	20	U	20	U	--		1	U	1	U	11	U	22	U	11	U	5	U	5	U	5	U	5	U
Chromium	109.5	100	20	U	40	U	40	U	--		5	U	5	U	50	U	100	U	50	U	15.6	J	10	U	10	U	10	U
Lead	n/a	15	20	U	40	U	40	U	--		5	U	5	U	33	UJ	66	UJ	33	U	22.4	J	10	U	10	U	10	U
Mercury	0.5615385	2	0.15	U	0.15	UJ	0.15	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.14	U	0.15	U	0.15	UJ	0.15	U
Selenium	182.5	50	87.5	J	109		84		--		10	U	10	U	28	J	52	U	32	U	54.9		28.9	J	32.6		57.7	
Silver	182.5	n/a	14	U	28	U	28	U	--		2	U	2	U	25	U	50	U	25	U	6	U	7	U	7	U	7	U
Perchlorate (µg/L)																												
Perchlorate	24.5	n/a	**27**		24		17		**37**		300	U	300	U	**36**		**38**		**27**		**29**		**38**		**28**		**25**	
Unsymmetrical Dimethylhydrazine (UMDH) (µg/L)																												
1,1-Dimethylhydrazine	n/a	n/a	23	U	--		--		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		--		23	U	--		--	
Volatile Organic Compounds (µg/L)																												
1,1,1,2-Tetrachloroethane	5.2420214	n/a	0.2	U	0.2	U	0.2	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.2	U	0.4	U	0.2	U	1	U
1,1,1-Trichloroethane	9125	200	0.33	U	0.33	U	0.33	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.33	U	0.66	U	0.33	U	1.7	U
1,1,2,2-Tetrachloroethane	0.6713378	n/a	0.21	U	0.21	U	0.21	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.21	U	0.42	U	0.21	U	1.1	U
1,1,2-Trichloro-1,2,2-trifluoroethane	59189.189	n/a	0.34	U	0.34	U	0.34	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.34	U	0.68	U	0.34	U	1.7	U
1,1,2-Trichloroethane	2.4175986	5	0.26	U	0.26	U	0.26	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.26	U	0.52	U	0.26	U	1.3	U
1,1-Dichloroethane	24.175986	n/a	0.24	U	0.24	U	0.24	U	0.03	J	1	U	1	U	1	U	1	U	1	U	0.24	U	0.48	U	0.24	U	1.2	U
1,1-Dichloroethene	339.53488	7	0.54	U	0.54	U	0.54	U	2.02		1.83		1.88		1.9		1.5		1.2		1		1.8	J	1.2		2.7	U
1,1-Dichloropropene	n/a	n/a	0.23	U	0.23	U	0.23	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.23	U	0.46	U	0.23	U	1.2	U
1,2,3-Trichlorobenzene	n/a	n/a	0.5	U	0.5	U	0.5	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.5	U	1	U	0.5	U	2.5	U
1,2,3-Trichloropropane	0.096	n/a	0.34	U	0.34	U	0.34	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.34	U	0.68	U	0.34	U	1.7	U
1,2,4-Trichlorobenzene	8.1564246	70	0.5	U	0.5	U	0.5	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.5	U	1	U	0.5	U	2.5	U
1,2,4-Trimethylbenzene	n/a	n/a	0.22	U	0.22	U	0.22	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.22	U	0.44	U	0.22	U	1.1	U
1,2-Dibromo-3-chloropropane	0.0080324	0.2	0.32	U	0.32	U	0.32	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.32	U	0.64	U	0.32	U	1.6	U
1,2-Dibromoethane	0.0653311	0.05	0.28	U	0.28	U	0.28	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.28	U	0.56	U	0.28	U	1.4	U
1,2-Dichlorobenzene	370.14085	600	0.2	U	0.2	U	0.2	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.2	U	0.4	U	0.2	U	1	U
1,2-Dichloroethane	1.4931247	5	0.34	U	0.34	U	0.34	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.34	U	0.68	U	0.34	U	1.7	U
1,2-Dichloropropane	3.8598261	5	0.21	U	0.21	U	0.21	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.21	U	0.42	U	0.21	U	1.1	U
1,3,5-Trimethylbenzene	n/a	n/a	0.2	U	0.2	U	0.2	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.2	U	0.4	U	0.2	U	1	U
1,3-Dichlorobenzene	n/a	n/a	0.23	U	0.23	U	0.23	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.23	U	0.46	U	0.23	U	1.2	U
1,3-Dichloropropane	n/a	n/a	0.26	U	0.26	U	0.26	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.26	U	0.52	U	0.26	U	1.3	U
1,4-Dichlorobenzene	4.2717868	75	0.22	U	0.22	U	0.22	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.22	U	0.44	U	0.22	U	1.1	U
1-Chlorohexane	n/a	n/a	0.27	U	0.27	U	0.27	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.27	U	0.54	U	0.27	U	1.4	U
2,2-Dichloropropane	n/a	n/a	0.28	U	0.28	U	0.28	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.28	U	0.56	U	0.28	U	1.4	U

Table 4-12
Groundwater Monitoring Analytical Results
SS-39 (SWMUs 165, 177, 179, and 181) - Missile Fuel Spill Area
Holloman AFB, New Mexico

		Sample Number:	MW39-05						MW39-06																			
		Sample Date:	1/8/2009		7/8/2009		1/7/2010		7/13/2006		1/17/2007		1/17/2007		7/17/2007		7/17/2007		1/15/2008		7/10/2008		1/8/2009		7/7/2009		1/6/2010	
		Sampling Company:	Tetra Tech		Tetra Tech		Tetra Tech		HGL		HGL		HGL		HGL		HGL		HGL		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech	
		QC Type:	Regular		Regular		Regular		Regular		Regular		Field Duplicate		Regular		Field Duplicate		Regular		Regular		Regular		Regular		Regular	
Analysis	**NMWQ (1)**	**(2)**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Volatile Organic Compounds (µg/L)																												
2-Butanone	7064.5161	n/a	2	U	2	U	2	U	0.394	U	5	U	5	U	5	U	5	U	5	U	2	U	4	U	2	U	10	U
2-Butylbenzene	n/a	n/a	0.28	U	0.28	U	0.28	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.28	U	0.56	U	0.28	U	1.4	U
2-Chloroethyl vinyl ether	n/a	n/a	1	UJ	1	U	1	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		1	UJ	2	UJ	1	U	5	U
2-Chlorotoluene	730	n/a	0.25	U	0.25	U	0.25	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.25	U	0.5	U	0.25	U	1.3	U
2-Hexanone	n/a	n/a	5	U	5	U	5	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		5	U	10	U	5	U	25	U
2-Propylbenzene	n/a	n/a	0.25	U	--		--		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.25	U	0.5	U	--		--	
4-Bromofluorobenzene	n/a	n/a	--		0.21	U	0.21	U	--		47.2		47.3		--		--		--		--		--		0.21	U	1.1	U
4-Chlorotoluene	n/a	n/a	0.21	U	2	U	2	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.21	U	0.42	U	2	U	10	U
4-Methyl-2-pentanone	1990.9091	n/a	2	U	--		--		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		2	U	4	U	--		--	
Acetone	21782.888	n/a	10	U	10	U	10	U	0.854	U	10	UJ	10	UJ	5	UJ	5	UJ	5	U	10	U	20	U	10	UJ	50	U
Acetonitrile	n/a	n/a	5	U	5	U	5	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		5	U	10	U	5	U	25	U
Acrolein	0.0416192	n/a	5	U	5	U	5	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		5	U	10	U	5	U	25	U
Acrylonitrile	0.4543342	n/a	2	U	2	U	2	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		2	UJ	4	U	2	U	10	U
Allyl chloride	n/a	n/a	2	U	2	U	2	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		2	U	4	U	2	U	10	U
Aniline	n/a	n/a	0.98	U	--		--		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		--		0.99	U	--		--	
Benzene	4.1298223	5	0.4	U	0.4	U	0.4	U	0.09	J	1	U	1	U	1	U	1	U	1	U	0.4	U	0.8	U	0.4	U	2	U
Benzyl Chloride	n/a	n/a	0.36	U	0.36	U	0.36	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.36	U	0.72	U	0.36	U	1.8	U
Bromobenzene	n/a	n/a	0.26	U	0.26	U	0.26	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.26	U	0.52	U	0.26	U	1.3	U
Bromochloromethane	n/a	n/a	0.23	U	0.23	U	0.23	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.23	U	0.46	U	0.23	U	1.2	U
Bromodichloromethane	1.1728279	80	0.2	U	0.2	U	0.2	U	0.14	J	1	U	1	U	1	U	1	U	1	U	0.2	U	0.4	U	0.2	U	1	U
Bromoform	85.063291	80	0.33	U	0.33	U	0.33	U	0.0859	U	1	U	1	U	1	U	1	U	1	U	0.33	U	0.66	U	0.33	U	1.7	U
Bromomethane	8.6610169	n/a	0.78	U	0.78	U	0.78	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.78	U	1.6	U	0.78	U	3.9	U
Carbon disulfide	1042.8571	n/a	0.4	U	0.4	U	0.4	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.4	U	0.8	U	0.4	U	2	U
Carbon tetrachloride	1.9931683	5	0.22	U	0.22	U	0.22	U	1.51		1.93		1.88		**2.3**		1	U	**2.4**		**2.3**		**2.2**		**2.2**		**2.1**	J
Chlorobenzene	91.25	100	0.22	U	0.22	U	0.22	U	0.0217	U	1	U	1	U	1	U	1	U	1	U	0.22	U	0.44	U	0.22	U	1.1	U
Chloroethane	20857.143	n/a	0.48	U	0.48	U	0.48	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.48	U	0.96	U	0.48	U	2.4	U
Chloroform	1.9275308	80	0.28	U	0.28	U	0.28	U	**2.85**		**2.52**		**2.52**	J	**2.2**		1	U	**2.2**		**2.4**		**2.4**		**2.3**		**2**	J
Chloromethane	17.750448	n/a	0.61	U	0.61	U	0.61	U	0.37	J	1	U	1	U	1	U	1	U	1	U	0.61	U	1.2	U	0.61	U	3.1	U
cis-1,2-dichloroethene	365	70	0.2	U	0.2	U	0.2	U	0.12	J	1	U	1	U	1	U	1	U	1	U	0.2	U	0.4	U	0.2	U	1	U
cis-1,3-dichloropropene	n/a	n/a	0.21	U	0.21	U	0.21	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.21	U	0.42	U	0.21	U	1.1	U
cis-1,4-Dichloro-2-butene	n/a	n/a	1	U	1	U	1	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		1	U	2	U	1	U	5	U
Cymene	n/a	n/a	0.32	U	0.32	U	0.32	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.32	U	0.64	U	0.32	U	1.6	U
Dibromochloromethane	1.4708683	80	0.2	U	0.2	U	0.2	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.2	U	0.4	U	0.2	U	1	U
Dibromofluoromethane	n/a	n/a	--		0.3	U	0.3	U	--		51.9		51.6		--		--		--		--		--		0.3	U	1.5	U
Dibromomethane	365	n/a	0.3	U	1	U	1	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.3	U	0.6	U	1	U	5	U
Dichlorodifluoromethane	394.59459	n/a	1	U	--		--		n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		1	U	2	U	--		--	
Ether, tert-butyl methyl	124.66078	n/a	0.26	U	0.26	U	0.26	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.26	U	0.52	U	0.26	U	1.3	U
Ethyl methacrylate	3285	n/a	1	U	1	U	1	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		1	U	2	U	1	U	5	U
Ethylbenzene	14.76103	700	0.43	U	0.43	U	0.43	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.43	U	0.86	U	0.43	U	2.2	U
Hexachlorobutadiene	8.6153846	n/a	0.69	U	0.69	U	0.69	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.69	U	1.4	U	0.69	U	3.5	U
Hexane	876	n/a	0.5	U	0.5	U	0.5	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.5	U	1	U	0.5	U	2.5	U
Iodomethane	n/a	n/a	1	U	1	U	1	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		1	U	2	U	1	U	5	U
Isopropylbenzene	679.06977	n/a	0.2	U	0.2	U	0.2	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.2	U	0.4	U	0.2	U	1	U
m,p-Xylene	n/a	n/a	0.78	U	0.78	U	0.78	U	1	U	1	U	1	U	2	U	2	U	2	U	0.78	U	1.6	U	0.78	U	3.9	U
Methacrylonitrile	1.0428571	n/a	5	U	5	U	5	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		5	U	10	U	5	U	25	U
Methyl methacrylate	1419.4444	n/a	1	U	1	U	1	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		1	U	2	U	1	U	5	U
Methylene chloride	48.031728	5	1	U	1	U	1	U	0.689	U	5	U	5	U	1.3	U	1.3	U	1.3	U	1	U	7.7	J	1	U	25	U

Table 4-12
Groundwater Monitoring Analytical Results
SS-39 (SWMUs 165, 177, 179, and 181) - Missile Fuel Spill Area
Holloman AFB, New Mexico

		Sample Number:	MW39-05						MW39-06																			
		Sample Date:	1/8/2009		7/8/2009		1/7/2010		7/13/2006		1/17/2007		1/17/2007		7/17/2007		7/17/2007		1/15/2008		7/10/2008		1/8/2009		7/7/2009		1/6/2010	
		Sampling Company:	Tetra Tech		Tetra Tech		Tetra Tech		HGL		HGL		HGL		HGL		HGL		HGL		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech	
		QC Type:	Regular		Regular		Regular		Regular		Regular		Field Duplicate		Regular		Field Duplicate		Regular		Regular		Regular		Regular		Regular	
Analysis	**NMWQ [1]**	**[2]**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Volatile Organic Compounds (µg/L)																												
naphthalene	1.4311765	n/a	1	U	1	U	1	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		1	U	2	U	1	U	5	U
n-Propylbenzene	n/a	n/a	--		0.25	U	0.25	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		--		--		0.25	U	1.3	U
o-Xylene	1431.3725	n/a	0.37	U	0.37	U	0.37	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.37	U	0.74	U	0.37	U	1.9	U
Pentachloroethane	n/a	n/a	2	U	2	U	2	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		2	U	4	U	2	U	10	U
Propionitrile	n/a	n/a	10	U	10	U	10	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		10	U	20	U	10	U	50	U
Sec-butyl benzene	n/a	n/a	0.25	U	0.25	U	0.25	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.25	U	0.5	U	0.25	U	1.3	U
Styrene	1622.2222	100	0.36	U	0.36	U	0.36	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.36	U	0.72	U	0.36	U	1.8	U
Tert-butyl benzene	n/a	n/a	0.32	U	0.32	U	0.32	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.32	U	0.64	U	0.32	U	1.6	U
Tetrachloroethene	1.0812904	5	0.22	U	0.22	U	0.22	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.38	J	0.44	U	0.33	J	1.1	U
Toluene	2281.25	1000	0.35	U	0.35	U	0.35	U	--		46.9		46.8		--		--		--		0.35	U	0.7	U	0.35	U	1.8	U
Trans-1,2-dichloroethene	106.82927	100	0.45	U	0.45	U	0.45	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.45	U	0.9	U	0.45	U	2.3	U
Trans-1,3-dichloropropene	n/a	n/a	0.21	U	0.21	U	0.21	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.21	U	0.42	U	0.21	U	1.1	U
Trans-1,4-Dichloro-2-Butene	n/a	n/a	2	U	2	U	2	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		2	U	4	U	2	U	10	U
Trichloroethene	16.543484	5	**19.1**		14		**25.9**		**366**	J	**219**		**219**	J	**220**		**440**		**120**		**94.4**		**158**		**108**		**208**	
Trichlorofluoromethane	1288.2353	n/a	0.5	U	0.5	U	0.5	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.5	U	1	U	0.5	U	2.5	U
Vinyl acetate	412.42938	n/a	3.6	U	3.6	U	3.6	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		3.6	U	7.2	U	3.6	U	18	U
Vinyl chloride	0.8606949	2	0.3	U	0.3	U	0.3	U	n/a*		n/a*		n/a*		n/a*		n/a*		n/a*		0.3	U	0.6	U	0.3	U	1.5	U

Notes:
[1] NMAC 20.6.2.3103
[2] December 2009 U.S. EPA Maximum Contaminant Level
[3] The TDS concentrations in all of the monitoring wells were above 10,000 mg/L, which is the point where groundwater is no longer considered a potential domestic or agricultural water supply (NMAC, 20.6.2.3101).
Bold fields represent exceedances of NMWQCC standards
Highlighted fields represent exceedances EPA MCLs
Highlighted and bold fields represent exceedances of both NMWQCC standards and EPA MCLs
EPA - United States Environmental Protection Agency
HGL - HydroGeoLogic, Inc.
J - estimated value
MCL - maximum contaminant level
mg/L - milligrams per liter
n/a - not available
n/a* - HGL only presented data summary tables in previous reports; therefore, data results for these fields are not available.
-- not analyzed
NMWQCC - New Mexico Water Quality Control Commission
Q - analytical result qualifier
Result - reported analytical concentration
U - not detected
UJ - estimated non-detect
µg/L - micrograms per liter

Table 4-12
Groundwater Monitoring Analytical Results
SS-39 (SWMUs 165, 177, 179, and 181) - Missile Fuel Spill Area
Holloman AFB, New Mexico

		Sample Number:	MW39-06D																							
		Sample Date:	7/13/2006		1/18/2007		7/17/2007		1/15/2008		1/15/2008		7/10/2008		7/10/2008		1/8/2009		1/8/2009		7/7/2009		7/7/2009		7/7/2009	
		Sampling Company:	HGL		HGL		HGL		HGL		HGL		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech	
		QC Type:	Regular		Regular		Regular		Regular		Field Duplicate		Regular		Field Duplicate		Regular		Field Duplicate		Regular		Field Duplicate		Field Duplicate	
Analysis	**NMWQ (1)**	**(2)**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
General Chemistry (mg/L)																										
Solids, total dissolved(3)	n/a	n/a	119000		110000		98000	J	120000		110000		111000		109000		97600		99200		98600		--		78900	
Dissolved Metals (µg/L)																										
Arsenic	0.448	10	2.5	U	5	U	100	U	50	U	**18**	J	72	U	**110**		110	U	110	U	110	U	--		110	U
Barium	7300	2000	51		17	J	110	U	30	J	30	J	100	U	100		100	U	100	U	100	U	--		100	U
Cadmium	18.25	5	3	J	1	UJ	22	U	11	U	11	U	20	U	**20**		20	U	20	U	20	U	--		20	U
Chromium	109.5	100	0.2	U	5	UJ	100	U	50	U	50	U	32	U	40		40	U	40	U	40	U	--		40	U
Lead	n/a	15	n/a*		n/a*		n/a*		n/a*		n/a*		40	U	40		40	U	40	U	40	U	--		40	U
Mercury	0.5615385	2	n/a*		n/a*		n/a*		n/a*		n/a*		0.14	U	0.15		0.15	U	0.2	J	0.15	UJ	--		0.15	UJ
Selenium	182.5	50	55		10	UJ	79	J	65	J	62	J	120	J	68		102	J	68	U	111		--		68	U
Silver	182.5	--	12		2	UJ	50	U	25	U	25	U	24	U	28		28	U	28	U	28	U	--		28	U
Total Metals (µg/L)																										
Arsenic	0.448	10	--		**17**		**65**	J	50	U	**14**	J	72	U	72	U	110	U	110	U	110	U	--		110	U
Barium	7300	2000	--		17	J	110	U	31	J	31	J	100	U	100	U	100	U	100	U	100	U	--		100	U
Cadmium	18.25	5	--		1	U	12	J	11	U	11	U	20	U	20	U	20	U	20	U	20	U	--		20	U
Chromium	109.5	100	--		5	U	100	U	50	U	50	U	32	U	32	U	40	U	40	U	40	U	--		40	U
Lead	n/a	15	--		5	U	66	UJ	33	U	33	U	40	U	40	U	40	U	40	U	40	U	--		40	U
Mercury	0.5615385	2	n/a*		n/a*		n/a*		n/a*		n/a*		0.14	U	0.14	U	0.15	U	0.15	U	0.15	UJ	--		0.15	UJ
Selenium	182.5	50	--		10	U	82	J	67	J	68	J	62	U	62	U	91.5	J	104	J	92.2		--		86.4	
Silver	182.5	n/a	--		2	U	14	J	25	U	25	U	24	U	24	U	28	U	28	U	28	U	--		28	U
Perchlorate (µg/L)																										
Perchlorate	24.5	n/a	**35**		600	U	**34**		**32**		**27**		**31**		**32**		**33**		**31**		**28**		**26**		--	
Unsymmetrical Dimethylhydrazine (UMDH) (µg/L)																										
1,1-Dimethylhydrazine	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*				--		23	U	23	U	--		--		--	
Volatile Organic Compounds (µg/L)																										
1,1,1,2-Tetrachloroethane	5.2420214	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		1	U	1	U	2	U	1	U	1	U	--		1	U
1,1,1-Trichloroethane	9125	200	n/a*		n/a*		n/a*		n/a*		n/a*		1.7	U	1.7	U	3.3	U	1.7	U	1.7	U			1.7	U
1,1,2,2-Tetrachloroethane	0.6713378	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		1.1	U	1.1	U	2.1	U	1.1	U	1.1	U	--		1.1	U
1,1,2-Trichloro-1,2,2-trifluoroethane	59189.189	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		1.7	U	1.7	U	3.4	U	1.7	U	1.7	U	--		1.7	U
1,1,2-Trichloroethane	2.4175986	5	n/a*		n/a*		n/a*		n/a*		n/a*		1.3	U	1.3	U	2.6	U	1.3	U	1.3	U	--		1.3	U
1,1-Dichloroethane	24.175986	n/a	0.0299	U	1	U	1	U	1	U	1	U	1.2	U	1.2	U	2.4	U	1.2	U	1.2	U	--		1.2	U
1,1-Dichloroethene	339.53488	7	0.24	J	1.42		1.5		1	U	1	U	2.7	U	2.7	U	5.4	U	2.7	U	2.7	U	--		2.7	U
1,1-Dichloropropene	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		1.2	U	1.2	U	2.3	U	1.2	U	1.2	U	--		1.2	U
1,2,3-Trichlorobenzene	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		2.5	U	2.5	U	5	U	2.5	U	2.5	U	--		2.5	U
1,2,3-Trichloropropane	0.096	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		1.7	U	1.7	U	3.4	U	1.7	U	1.7	U	--		1.7	U
1,2,4-Trichlorobenzene	8.1564246	70	n/a*		n/a*		n/a*		n/a*		n/a*		2.5	U	2.5	U	5	U	2.5	U	2.5	U	--		2.5	U
1,2,4-Trimethylbenzene	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		1.1	U	1.1	U	2.2	U	1.1	U	1.1	U	--		1.1	U
1,2-Dibromo-3-chloropropane	0.0080324	0.2	n/a*		n/a*		n/a*		n/a*		n/a*		1.6	U	1.6	U	3.2	U	1.6	U	1.6	U	--		1.6	U
1,2-Dibromoethane	0.0653311	0.05	n/a*		n/a*		n/a*		n/a*		n/a*		1.4	U	1.4	U	2.8	U	1.4	U	1.4	U	--		1.4	U
1,2-Dichlorobenzene	370.14085	600	n/a*		n/a*		n/a*		n/a*		n/a*		1	U	1	U	2	U	1	U	1	U	--		1	U
1,2-Dichloroethane	1.4931247	5	n/a*		n/a*		n/a*		n/a*		n/a*		1.7	U	1.7	U	3.4	U	1.7	U	1.7	U	--		1.7	U
1,2-Dichloropropane	3.8598261	5	n/a*		n/a*		n/a*		n/a*		n/a*		1.1	U	1.1	U	2.1	U	1.1	U	1.1	U	--		1.1	U
1,3,5-Trimethylbenzene	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		1	U	1	U	2	U	1	U	1	U	--		1	U
1,3-Dichlorobenzene	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		1.2	U	1.2	U	2.3	U	1.2	U	1.2	U	--		1.2	U
1,3-Dichloropropane	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		1.3	U	1.3	U	2.6	U	1.3	U	1.3	U	--		1.3	U
1,4-Dichlorobenzene	4.2717868	75	n/a*		n/a*		n/a*		n/a*		n/a*		1.1	U	1.1	U	2.2	U	1.1	U	1.1	U	--		1.1	U
1-Chlorohexane	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		1.4	U	1.4	U	2.7	U	1.4	U	1.4	U	--		1.4	U
2,2-Dichloropropane	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		1.4	U	1.4	U	2.8	U	1.4	U	1.4	U	--		1.4	U

Table 4-12
Groundwater Monitoring Analytical Results
SS-39 (SWMUs 165, 177, 179, and 181) - Missile Fuel Spill Area
Holloman AFB, New Mexico

		Sample Number:	MW39-06D																							
		Sample Date:	7/13/2006		1/18/2007		7/17/2007		1/15/2008		1/15/2008		7/10/2008		7/10/2008		1/8/2009		1/8/2009		7/7/2009		7/7/2009		7/7/2009	
		Sampling Company:	HGL		HGL		HGL		HGL		HGL		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech	
		QC Type:	Regular		Regular		Regular		Regular		Field Duplicate		Regular		Field Duplicate		Regular		Field Duplicate		Regular		Field Duplicate		Field Duplicate	
Analysis	**NMWQ (1)**	**(2)**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Volatile Organic Compounds (µg/L)																										
2-Butanone	7064.5161	n/a	0.394	U	5	U	5	U	5	U	5	U	10	U	10	U	20	U	10	U	10	U	--		10	U
2-Butylbenzene	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		1.4	U	1.4	U	2.8	U	1.4	U	1.4	U	--		1.4	U
2-Chloroethyl vinyl ether	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		5	UJ	5	UJ	10	UJ	5	UJ	5	U	--		5	U
2-Chlorotoluene	730	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		1.3	U	1.3	U	2.5	U	1.3	U	1.3	U	--		1.3	U
2-Hexanone	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		25	U	25	U	50	U	25	U	25	U	--		25	U
2-Propylbenzene	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		1.3	U	1.3	U	2.5	U	1.3	U	--		--		--	
4-Bromofluorobenzene	n/a	n/a	--		43.4		--		--		--		--		--		--		--		1.1	U	--		1.1	U
4-Chlorotoluene	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		1.1	U	1.1	U	2.1	U	1.1	U	10	U	--		10	U
4-Methyl-2-pentanone	1990.9091	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		10	U	10	U	20	U	10	U	--		--		--	
Acetone	21782.888	n/a	1.88	J	10	UJ	5	UJ	5	U	5	U	50	U	50	U	100	U	50	U	50	UJ	--		50	UJ
Acetonitrile	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		25	U	25	U	50	U	25	U	25	U	--		25	U
Acrolein	0.0416192	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		25	U	25	U	50	U	25	U	25	U	--		25	U
Acrylonitrile	0.4543342	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		10	UJ	10	UJ	20	U	10	U	10	U	--		10	U
Allyl chloride	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		10	U	10	U	20	U	10	U	10	U	--		10	U
Aniline	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		--		--		0.99	U	1	U	--		--		--	
Benzene	4.1298223	5	0.09	J	1	U	1	U	1	U	1	U	2	U	2	U	4	U	2	U	2	U	--		2	U
Benzyl Chloride	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		1.8	U	1.8	U	3.6	U	1.8	U	1.8	U	--		1.8	U
Bromobenzene	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		1.3	U	1.3	U	2.6	U	1.3	U	1.3	U	--		1.3	U
Bromochloromethane	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		1.2	U	1.2	U	2.3	U	1.2	U	1.2	U	--		1.2	U
Bromodichloromethane	1.1728279	80	0.0651	U	1	U	1	U	1	U	1	U	1	U	1	U	2	U	1	U	1	U	--		1	U
Bromoform	85.063291	80	0.0859	U	1	U	1	U	1	U	1	U	1.7	U	1.7	U	3.3	U	1.7	U	1.7	U	--		1.7	U
Bromomethane	8.6610169	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		3.9	U	3.9	U	7.8	U	3.9	U	3.9	U	--		3.9	U
Carbon disulfide	1042.8571	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		2	U	2	U	4	U	2	U	2	U	--		2	U
Carbon tetrachloride	1.9931683	5	0.121	U	1	U	1	U	1	U	1	U	1.1	U	1.1	U	2.2	U	1.1	U	1.1	U	--		1.1	U
Chlorobenzene	91.25	100	0.04	J	1	U	1	U	1	U	1	U	1.1	U	1.1	U	2.2	U	1.1	U	1.1	U	--		1.1	U
Chloroethane	20857.143	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		2.4	U	2.4	U	4.8	U	2.4	U	2.4	U	--		2.4	U
Chloroform	1.9275308	80	0.27	J	0.65	J	1	U	1	U	1	U	1.4	U	1.4	U	2.8	U	1.4	U	1.4	U	--		1.4	U
Chloromethane	17.750448	n/a	0.23	U	0.51	J	1	U	1	U	1	U	3.1	U	3.1	U	6.1	U	3.1	U	3.1	U	--		3.1	U
cis-1,2-dichloroethene	365	70	0.101	U	1	U	1	U	1	U	1	U	1	U	1	U	2	U	1	U	1	U	--		1	U
cis-1,3-dichloropropene	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		1.1	U	1.1	U	2.1	U	1.1	U	1.1	U	--		1.1	U
cis-1,4-Dichloro-2-butene	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		5	U	5	U	10	U	5	U	5	U	--		5	U
Cymene	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		1.6	U	1.6	U	3.2	U	1.6	U	1.6	U	--		1.6	U
Dibromochloromethane	1.4708683	80	n/a*		n/a*		n/a*		n/a*		n/a*		1	U	1	U	2	U	1	U	1	U	--		1	U
Dibromofluoromethane	n/a	n/a	--		51.7		--		--		--		--		--		--		--		1.5	U	--		1.5	U
Dibromomethane	365	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		1.5	U	1.5	U	3	U	1.5	U	5	U	--		5	U
Dichlorodifluoromethane	394.59459	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		5	U	5	U	10	U	5	U	--		--		--	
Ether, tert-butyl methyl	124.66078	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		1.3	U	1.3	U	2.6	U	1.3	U	1.3	U	--		1.3	U
Ethyl methacrylate	3285	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		5	U	5	U	10	U	5	U	5	U	--		5	U
Ethylbenzene	14.76103	700	n/a*		n/a*		n/a*		n/a*		n/a*		2.2	U	2.2	U	4.3	U	2.2	U	2.2	U	--		2.2	U
Hexachlorobutadiene	8.6153846	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		3.5	U	3.5	U	6.9	U	3.5	U	3.5	U	--		3.5	U
Hexane	876	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		2.5	U	2.5	U	5	U	2.5	U	2.5	U	--		2.5	U
Iodomethane	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		5	U	5	U	10	U	5	U	5	U	--		5	U
Isopropylbenzene	679.06977	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		1	U	1	U	2	U	1	U	1	U	--		1	U
m,p-Xylene	n/a	n/a	1	U	1	U	2	U	2	U	2	U	3.9	U	3.9	U	7.8	U	3.9	U	3.9	U	--		3.9	U
Methacrylonitrile	1.0428571	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		25	U	25	U	50	U	25	U	25	U	--		25	U
Methyl methacrylate	1419.4444	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		5	U	5	U	10	U	5	U	5	U	--		5	U
Methylene chloride	48.031728	5	0.689	U	5	U	1.3	U	1.3	U	1.3	U	5	U	5	U	27.5	J	13.5	J	6.2	J	--		5.5	J

Table 4-12
Groundwater Monitoring Analytical Results
SS-39 (SWMUs 165, 177, 179, and 181) - Missile Fuel Spill Area
Holloman AFB, New Mexico

		Sample Number:	MW39-06D																							
		Sample Date:	7/13/2006		1/18/2007		7/17/2007		1/15/2008		1/15/2008		7/10/2008		7/10/2008		1/8/2009		1/8/2009		7/7/2009		7/7/2009		7/7/2009	
		Sampling Company:	HGL		HGL		HGL		HGL		HGL		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech	
		QC Type:	Regular		Regular		Regular		Regular		Field Duplicate		Regular		Field Duplicate		Regular		Field Duplicate		Regular		Field Duplicate		Field Duplicate	
Analysis	**NMWQ [1]**	**[2]**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Volatile Organic Compounds (µg/L)																										
naphthalene	1.4311765	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		5	U	5	U	10	U	5	U	5	U	--		5	U
n-Propylbenzene	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		--		--		--		--		1.3	U	--		1.3	U
o-Xylene	1431.3725	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		1.9	U	1.9	U	3.7	U	1.9	U	1.9	U	--		1.9	U
Pentachloroethane	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		10	U	10	U	20	U	10	U	10	U	--		10	U
Propionitrile	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		50	U	50	U	100	U	50	U	50	U	--		50	U
Sec-butyl benzene	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		1.3	U	1.3	U	2.5	U	1.3	U	1.3	U	--		1.3	U
Styrene	1622.2222	100	n/a*		n/a*		n/a*		n/a*		n/a*		1.8	U	1.8	U	3.6	U	1.8	U	1.8	U	--		1.8	U
Tert-butyl benzene	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		1.6	U	1.6	U	3.2	U	1.6	U	1.6	U	--		1.6	U
Tetrachloroethene	1.0812904	5	n/a*		n/a*		n/a*		n/a*		n/a*		1.1	U	1.1	U	2.2	U	1.1	U	1.1	U	--		1.1	U
Toluene	2281.25	1000	--		45.4		--		--		--		1.8	U	1.8	U	3.5	U	1.8	U	1.8	U	--		1.8	U
Trans-1,2-dichloroethene	106.82927	100	n/a*		n/a*		n/a*		n/a*		n/a*		2.3	U	2.3	U	4.5	U	2.3	U	2.3	U	--		2.3	U
Trans-1,3-dichloropropene	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		1.1	U	1.1	U	2.1	U	1.1	U	1.1	U	--		1.1	U
Trans-1,4-Dichloro-2-Butene	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		10	U	10	U	20	U	10	U	10	U	--		10	U
Trichloroethene	16.543484	5	**113**		**464**	J	**470**		**75**	J	**92**	J	**355**		**332**		**464**		**477**		**336**		--		**342**	
Trichlorofluoromethane	1288.2353	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		2.5	U	2.5	U	5	U	2.5	U	2.5	U	--		2.5	U
Vinyl acetate	412.42938	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		18	U	18	U	36	U	18	U	18	U	--		18	U
Vinyl chloride	0.8606949	2	n/a*		n/a*		n/a*		n/a*		n/a*		1.5	U	1.5	U	3	U	1.5	U	1.5	U	--		1.5	U

Notes:
[1] NMAC 20.6.2.3103
[2] December 2009 U.S. EPA Maximum Contaminant Level
[3] The TDS concentrations in all of the monitoring wells were above 10,000 mg/L, which is the point where groundwater is no longer considered a potential domestic or agricultural water supply (NMAC, 20.6.2.3101).
Bold fields represent exceedances of NMWQCC standards
Highlighted fields represent exceedances EPA MCLs
Highlighted and bold fields represent exceedances of both NMWQCC standards and EPA MCLs
EPA - United States Environmental Protection Agency
HGL - HydroGeoLogic, Inc.
J - estimated value
MCL - maximum contaminant level
mg/L - milligrams per liter
n/a - not available
n/a* - HGL only presented data summary tables in previous reports; therefore, data results for these fields are not available.
-- not analyzed
NMWQCC - New Mexico Water Quality Control Commission
Q - analytical result qualifier
Result - reported analytical concentration
U - not detected
UJ - estimated non-detect
µg/L - micrograms per liter

Table 4-12
Groundwater Monitoring Analytical Results
SS-39 (SWMUs 165, 177, 179, and 181) - Missile Fuel Spill Area
Holloman AFB, New Mexico

		Sample Number:	MW39-06D				MW39-07																		MW39-08			
		Sample Date:	1/6/2010		1/6/2010		7/12/2006		7/14/2006		1/18/2007		7/19/2007		1/17/2008		7/10/2008		1/8/2009		7/8/2009		1/7/2010		7/14/2006		1/18/2007	
		Sampling Company:	Tetra Tech		Tetra Tech		HGL		HGL		HGL		HGL		HGL		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		HGL		HGL	
		QC Type:	Regular		Field Duplicate		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular	
Analysis	**NMWQ (1)**	**(2)**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
General Chemistry (mg/L)																												
Solids, total dissolved(3)	n/a	n/a	102000		99000		57300		--		66200		60000		45000		53500		56400		23000		41900		102000		105000	
Dissolved Metals (µg/L)																												
Arsenic	0.448	10	110	UJ	110	UJ	--		**20**		5	U	200	U	**15**	J	36	U	54	U	54	U	54	UJ	**36**		5	U
Barium	7300	2000	100	U	100	U	--		1.4	U	9	J	220	UJ	55	U	50	U	50	U	50	U	50	U	24		11	J
Cadmium	18.25	5	20	U	20	U	--		0.5	U	1	UJ	44	U	11	U	10	U	10	U	10	U	10	U	5	J	1	UJ
Chromium	109.5	100	40	U	40	U	--		0.2	U	5	UJ	200	U	50	U	16	U	20	U	20	U	20	U	1	J	5	UJ
Lead	n/a	15	40	U	40	U	n/a*		n/a*		n/a*		n/a*		n/a*		20	U	20	U	20	U	20	U	n/a*		n/a*	
Mercury	0.5615385	2	0.15	U	0.15	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.14	U	0.15	U	0.15	UJ	0.15	U	n/a*		n/a*	
Selenium	182.5	50	68	U	102		--		21		10	UJ	300	U	75	U	31	U	34	U	36.4	J	34	U	53		10	UJ
Silver	182.5	--	28	U	28	U	--		7		2	UJ	100	U	25	U	12	U	14	U	14	U	14	U	9		2	UJ
Total Metals (µg/L)																												
Arsenic	0.448	10	110	UJ	110	UJ	5	U	--		5	U	200	U	**21**	J	36	U	**59.1**	J	54	U	54	UJ	--		5	U
Barium	7300	2000	100	U	100	U	19		--		44		220	U	55	U	389	J	50	U	50	U	50	U	--		60	
Cadmium	18.25	5	20	U	20	U	0.4	UJ	--		1	U	44	U	11	U	10	U	10	U	10	U	10	U	--		1	U
Chromium	109.5	100	40	U	40	U	1.4	U	--		5	U	200	U	50	U	26.5	J	20	U	20	U	20	U	--		5	U
Lead	n/a	15	40	U	40	U	1.6	UJ	--		5	U	130	U	33	U	38.4	J	20	U	20	U	20	U	--		5	U
Mercury	0.5615385	2	0.15	U	0.15	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.14	U	0.15	U	0.15	UJ	0.15	U	n/a*		n/a*	
Selenium	182.5	50	103		73.2		1.6	U	--		10	U	97	J	75	U	31	U	34	U	60		34	U	--		10	U
Silver	182.5	n/a	28	U	28	U	0.2	U	--		2	U	100	U	25	U	12	U	14	U	14	U	14	U	--		2	U
Perchlorate (µg/L)																												
Perchlorate	24.5	n/a	**28**		**27**		**100**		--		300	U	**91**		**74**		**66**		**63**		**59**		**51**		**59**		600	U
Unsymmetrical Dimethylhydrazine (UMDH) (µg/L)																												
1,1-Dimethylhydrazine	n/a	n/a	--		--		n/a*		n/a*		n/a*		n/a*		n/a*		--		23	U	--		--		n/a*		n/a*	
Volatile Organic Compounds (µg/L)																												
1,1,1,2-Tetrachloroethane	5.2420214	n/a	0.2	U	0.2	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.2	U	0.2	U	0.2	U	0.2	U	n/a*		n/a*	
1,1,1-Trichloroethane	9125	200	0.33	U	0.33	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.33	U	0.33	U	0.33	U	0.33	U	n/a*		n/a*	
1,1,2,2-Tetrachloroethane	0.6713378	n/a	0.21	U	0.21	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.21	U	0.21	U	0.21	U	0.21	U	n/a*		n/a*	
1,1,2-Trichloro-1,2,2-trifluoroethane	59189.189	n/a	0.34	U	0.34	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.34	U	0.34	U	0.34	U	0.34	U	n/a*		n/a*	
1,1,2-Trichloroethane	2.4175986	5	0.26	U	0.26	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.26	U	0.26	U	0.26	U	0.26	U	n/a*		n/a*	
1,1-Dichloroethane	24.175986	n/a	0.24	U	0.24	U	0.0299	U	--		1	U	1	U	1	U	0.24	U	0.24	U	0.24	U	0.24	U	0.0299	U	1	U
1,1-Dichloroethene	339.53488	7	2.4		2.1		0.0736	U	--		1	U	1	U	1	U	0.54	U	0.54	U	0.54	U	0.54	U	0.0736	U	1	U
1,1-Dichloropropene	n/a	n/a	0.23	U	0.23	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.23	U	0.23	U	0.23	U	0.23	U	n/a*		n/a*	
1,2,3-Trichlorobenzene	n/a	n/a	0.5	U	0.5	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.5	U	0.5	U	0.5	U	0.5	U	n/a*		n/a*	
1,2,3-Trichloropropane	0.096	n/a	0.34	U	0.34	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.34	U	0.34	U	0.34	U	0.34	U	n/a*		n/a*	
1,2,4-Trichlorobenzene	8.1564246	70	0.5	U	0.5	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.5	U	0.5	U	0.5	U	0.5	U	n/a*		n/a*	
1,2,4-Trimethylbenzene	n/a	n/a	0.22	U	0.22	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.22	U	0.22	U	0.22	U	0.22	U	n/a*		n/a*	
1,2-Dibromo-3-chloropropane	0.0080324	0.2	0.32	U	0.32	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.32	U	0.32	U	0.32	U	0.32	U	n/a*		n/a*	
1,2-Dibromoethane	0.0653311	0.05	0.28	U	0.28	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.28	U	0.28	U	0.28	U	0.28	U	n/a*		n/a*	
1,2-Dichlorobenzene	370.14085	600	0.2	U	0.2	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.2	U	0.2	U	0.2	U	0.2	U	n/a*		n/a*	
1,2-Dichloroethane	1.4931247	5	0.34	U	0.34	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.34	U	0.34	U	0.34	U	0.34	U	n/a*		n/a*	
1,2-Dichloropropane	3.8598261	5	0.21	U	0.21	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.21	U	0.21	U	0.21	U	0.21	U	n/a*		n/a*	
1,3,5-Trimethylbenzene	n/a	n/a	0.2	U	0.2	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.2	U	0.2	U	0.2	U	0.2	U	n/a*		n/a*	
1,3-Dichlorobenzene	n/a	n/a	0.23	U	0.23	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.23	U	0.23	U	0.23	U	0.23	U	n/a*		n/a*	
1,3-Dichloropropane	n/a	n/a	0.26	U	0.26	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.26	U	0.26	U	0.26	U	0.26	U	n/a*		n/a*	
1,4-Dichlorobenzene	4.2717868	75	0.22	U	0.22	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.22	U	0.22	U	0.22	U	0.22	U	n/a*		n/a*	
1-Chlorohexane	n/a	n/a	0.27	U	0.27	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.27	U	0.27	U	0.27	U	0.27	U	n/a*		n/a*	
2,2-Dichloropropane	n/a	n/a	0.28	U	0.28	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.28	U	0.28	U	0.28	U	0.28	U	n/a*		n/a*	

Table 4-12
Groundwater Monitoring Analytical Results
SS-39 (SWMUs 165, 177, 179, and 181) - Missile Fuel Spill Area
Holloman AFB, New Mexico

		Sample Number:	MW39-06D				MW39-07																		MW39-08			
		Sample Date:	1/6/2010		1/6/2010		7/12/2006		7/14/2006		1/18/2007		7/19/2007		1/17/2008		7/10/2008		1/8/2009		7/8/2009		1/7/2010		7/14/2006		1/18/2007	
		Sampling Company:	Tetra Tech		Tetra Tech		HGL		HGL		HGL		HGL		HGL		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		HGL		HGL	
		QC Type:	Regular		Field Duplicate		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular	
Analysis	**NMWQ (1)**	**(2)**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Volatile Organic Compounds (µg/L)																												
2-Butanone	7064.5161	n/a	2	U	2	U	0.394	U	--		5	U	5	U	5	U	2	U	2	U	2	U	2	U	0.394	U	5	U
2-Butylbenzene	n/a	n/a	0.28	U	0.28	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.28	U	0.28	U	0.28	U	0.28	U	n/a*		n/a*	
2-Chloroethyl vinyl ether	n/a	n/a	1	U	1	U	n/a*		n/a*		n/a*		n/a*		n/a*		1	UJ	1	UJ	1	UJ	1	UJ	n/a*		n/a*	
2-Chlorotoluene	730	n/a	0.25	U	0.25	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.25	U	0.25	U	0.25	U	0.25	U	n/a*		n/a*	
2-Hexanone	n/a	n/a	5	U	5	U	n/a*		n/a*		n/a*		n/a*		n/a*		5	U	5	U	5	U	5	U	n/a*		n/a*	
2-Propylbenzene	n/a	n/a	--		--		n/a*		n/a*		n/a*		n/a*		n/a*		0.25	U	0.25	U	--		--		n/a*		n/a*	
4-Bromofluorobenzene	n/a	n/a	0.21	U	0.21	U	--		--		45.5		--		--		--		--		0.21	U	0.21	U	--		43.8	
4-Chlorotoluene	n/a	n/a	2	U	2	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.21	U	0.21	U	2	U	2	U	n/a*		n/a*	
4-Methyl-2-pentanone	1990.9091	n/a	--		--		n/a*		n/a*		n/a*		n/a*		n/a*		2	U	2	U	--		--		n/a*		n/a*	
Acetone	21782.888	n/a	10	U	10	U	0.854	U	--		10	UJ	5	UJ	5	U	10	U	10	U	10	U	10	U	0.854	U	10	UJ
Acetonitrile	n/a	n/a	5	U	5	U	n/a*		n/a*		n/a*		n/a*		n/a*		5	U	5	U	5	U	5	U	n/a*		n/a*	
Acrolein	0.0416192	n/a	5	U	5	U	n/a*		n/a*		n/a*		n/a*		n/a*		5	U	5	U	5	U	5	U	n/a*		n/a*	
Acrylonitrile	0.4543342	n/a	2	U	2	U	n/a*		n/a*		n/a*		n/a*		n/a*		2	UJ	2	U	2	U	2	U	n/a*		n/a*	
Allyl chloride	n/a	n/a	2	U	2	U	n/a*		n/a*		n/a*		n/a*		n/a*		2	U	2	U	2	U	2	U	n/a*		n/a*	
Aniline	n/a	n/a	--		--		n/a*		n/a*		n/a*		n/a*		n/a*		--		0.98	U	--		--		n/a*		n/a*	
Benzene	4.1298223	5	0.4	U	0.4	U	0.0495	U	--		1	U	1	U	1	U	0.4	U	0.4	U	0.4	U	0.4	U	1	U	1	U
Benzyl Chloride	n/a	n/a	0.36	U	0.36	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.36	U	0.36	U	0.36	U	0.36	U	n/a*		n/a*	
Bromobenzene	n/a	n/a	0.26	U	0.26	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.26	U	0.26	U	0.26	U	0.26	U	n/a*		n/a*	
Bromochloromethane	n/a	n/a	0.23	U	0.23	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.23	U	0.23	U	0.23	U	0.23	U	n/a*		n/a*	
Bromodichloromethane	1.1728279	80	0.2	U	0.2	U	0.0651	U	--		1	U	1	U	1	U	0.2	U	0.2	U	0.2	U	0.2	U	0.0651	U	1	U
Bromoform	85.063291	80	0.33	U	0.33	U	0.0859	U	--		1	U	1	U	1	U	0.33	U	0.33	U	0.33	U	0.33	U	0.0859	U	1	U
Bromomethane	8.6610169	n/a	0.78	U	0.78	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.78	U	0.78	U	0.78	U	0.78	U	n/a*		n/a*	
Carbon disulfide	1042.8571	n/a	0.4	U	0.4	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.4	U	0.4	U	0.4	U	0.4	U	n/a*		n/a*	
Carbon tetrachloride	1.9931683	5	0.22	U	0.22	U	0.121	U	--		1	U	1	U	1	U	0.22	U	0.22	U	0.22	U	0.22	U	0.121	U	1	U
Chlorobenzene	91.25	100	0.22	U	0.22	U	1	U	--		1	U	1	U	1	U	0.22	U	0.22	U	0.22	U	0.22	U	1	U	1	U
Chloroethane	20857.143	n/a	0.48	U	0.48	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.48	U	0.48	U	0.48	U	0.48	U	n/a*		n/a*	
Chloroform	1.9275308	80	0.82	J	0.78	J	0.11	J	--		1	U	1	U	1	U	0.28	U	0.28	U	0.28	U	0.28	U	0.23	J	1	U
Chloromethane	17.750448	n/a	0.61	U	0.61	U	0.23	U	--		1	U	1	U	1	U	0.61	U	0.61	U	0.61	U	0.61	U	0.23	U	1	U
cis-1,2-dichloroethene	365	70	0.2	U	0.2	U	0.101	U	--		1	U	1	U	1	U	0.2	U	0.2	U	0.2	U	0.2	U	0.101	U	1	U
cis-1,3-dichloropropene	n/a	n/a	0.21	U	0.21	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.21	U	0.21	U	0.21	U	0.21	U	n/a*		n/a*	
cis-1,4-Dichloro-2-butene	n/a	n/a	1	U	1	U	n/a*		n/a*		n/a*		n/a*		n/a*		1	U	1	U	1	U	1	U	n/a*		n/a*	
Cymene	n/a	n/a	0.32	U	0.32	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.32	U	0.32	U	0.32	U	0.32	U	n/a*		n/a*	
Dibromochloromethane	1.4708683	80	0.2	U	0.2	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.2	U	0.2	U	0.2	U	0.2	U	n/a*		n/a*	
Dibromofluoromethane	n/a	n/a	0.3	U	0.3	U	--		--		51.7		--		--		--		--		0.3	U	0.3	U	--		52.8	
Dibromomethane	365	n/a	1	U	1	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.3	U	0.3	U	1	U	1	U	n/a*		n/a*	
Dichlorodifluoromethane	394.59459	n/a	--		--		n/a*		n/a*		n/a*		n/a*		n/a*		1	U	1	U	--		--		n/a*		n/a*	
Ether, tert-butyl methyl	124.66078	n/a	0.26	U	0.26	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.26	U	0.26	U	0.26	U	0.26	U	n/a*		n/a*	
Ethyl methacrylate	3285	n/a	1	U	1	U	n/a*		n/a*		n/a*		n/a*		n/a*		1	U	1	U	1	U	1	U	n/a*		n/a*	
Ethylbenzene	14.76103	700	0.43	U	0.43	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.43	U	0.43	U	0.43	U	0.43	U	n/a*		n/a*	
Hexachlorobutadiene	8.6153846	n/a	0.69	U	0.69	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.69	U	0.69	U	0.69	U	0.69	U	n/a*		n/a*	
Hexane	876	n/a	0.5	U	0.5	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.5	U	0.5	U	0.5	U	0.5	U	n/a*		n/a*	
Iodomethane	n/a	n/a	1	U	1	U	n/a*		n/a*		n/a*		n/a*		n/a*		1	U	1	U	1	U	1	U	n/a*		n/a*	
Isopropylbenzene	679.06977	n/a	0.2	U	0.2	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.2	U	0.2	U	0.2	U	0.2	U	n/a*		n/a*	
m,p-Xylene	n/a	n/a	0.78	U	0.78	U	1	U	--		1	U	2	U	2	U	0.78	U	0.78	U	0.78	U	0.78	U	1	U	1	U
Methacrylonitrile	1.0428571	n/a	5	U	5	U	n/a*		n/a*		n/a*		n/a*		n/a*		5	U	5	U	5	U	5	U	n/a*		n/a*	
Methyl methacrylate	1419.4444	n/a	1	U	1	U	n/a*		n/a*		n/a*		n/a*		n/a*		1	U	1	U	1	U	1	U	n/a*		n/a*	
Methylene chloride	48.031728	5	1	U	1	U	0.689	U	--		5	U	1.3	U	1.3	U	1	U	1	U	1	U	1	U	0.689	U	5	U

Table 4-12
Groundwater Monitoring Analytical Results
SS-39 (SWMUs 165, 177, 179, and 181) - Missile Fuel Spill Area
Holloman AFB, New Mexico

		Sample Number:	MW39-06D				MW39-07																		MW39-08			
		Sample Date:	1/6/2010		1/6/2010		7/12/2006		7/14/2006		1/18/2007		7/19/2007		1/17/2008		7/10/2008		1/8/2009		7/8/2009		1/7/2010		7/14/2006		1/18/2007	
		Sampling Company:	Tetra Tech		Tetra Tech		HGL		HGL		HGL		HGL		HGL		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		HGL		HGL	
		QC Type:	Regular		Field Duplicate		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular	
Analysis	**NMWQ [1]**	**[2]**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Volatile Organic Compounds (µg/L)																												
naphthalene	1.4311765	n/a	1	U	1	U	n/a*		n/a*		n/a*		n/a*		n/a*		1	U	1	U	1	U	1	U	n/a*		n/a*	
n-Propylbenzene	n/a	n/a	0.25	U	0.25	U	n/a*		n/a*		n/a*		n/a*		n/a*		--		--		0.25	U	0.25	U	n/a*		n/a*	
o-Xylene	1431.3725	n/a	0.37	U	0.37	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.37	U	0.37	U	0.37	U	0.37	U	n/a*		n/a*	
Pentachloroethane	n/a	n/a	2	U	2	U	n/a*		n/a*		n/a*		n/a*		n/a*		2	U	2	U	2	U	2	U	n/a*		n/a*	
Propionitrile	n/a	n/a	10	U	10	U	n/a*		n/a*		n/a*		n/a*		n/a*		10	U	10	U	10	U	10	U	n/a*		n/a*	
Sec-butyl benzene	n/a	n/a	0.25	U	0.25	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.25	U	0.25	U	0.25	U	0.25	U	n/a*		n/a*	
Styrene	1622.2222	100	0.36	U	0.36	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.36	U	0.36	U	0.36	U	0.36	U	n/a*		n/a*	
Tert-butyl benzene	n/a	n/a	0.32	U	0.32	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.32	U	0.32	U	0.32	U	0.32	U	n/a*		n/a*	
Tetrachloroethene	1.0812904	5	0.22	U	0.22	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.22	U	0.22	U	0.22	U	0.22	U	n/a*		n/a*	
Toluene	2281.25	1000	0.35	U	0.35	U	--		--		45.9		--		--		0.35	U	0.35	U	0.35	U	0.35	U	--		45.6	
Trans-1,2-dichloroethene	106.82927	100	0.45	U	0.45	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.45	U	0.45	U	0.45	U	0.45	U	n/a*		n/a*	
Trans-1,3-dichloropropene	n/a	n/a	0.21	U	0.21	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.21	U	0.21	U	0.21	U	0.21	U	n/a*		n/a*	
Trans-1,4-Dichloro-2-Butene	n/a	n/a	2	U	2	U	n/a*		n/a*		n/a*		n/a*		n/a*		2	U	2	U	2	U	2	U	n/a*		n/a*	
Trichloroethene	16.543484	5	**328**		**319**		0.37	J	--		1.55		1	U	1	U	0.76	J	2		1.4		0.93	J	**49.6**		**38.9**	
Trichlorofluoromethane	1288.2353	n/a	0.5	U	0.5	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.5	U	0.5	U	0.5	U	0.5	U	n/a*		n/a*	
Vinyl acetate	412.42938	n/a	3.6	U	3.6	U	n/a*		n/a*		n/a*		n/a*		n/a*		3.6	U	3.6	U	3.6	U	3.6	U	n/a*		n/a*	
Vinyl chloride	0.8606949	2	0.3	U	0.3	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.3	U	0.3	U	0.3	U	0.3	U	n/a*		n/a*	

Notes:
[1] NMAC 20.6.2.3103
[2] December 2009 U.S. EPA Maximum Contaminant Level
[3] The TDS concentrations in all of the monitoring wells were above 10,000 mg/L, which is the point where groundwater is no longer considered a potential domestic or agricultural water supply (NMAC, 20.6.2.3101).
Bold fields represent exceedances of NMWQCC standards
Highlighted fields represent exceedances EPA MCLs
Highlighted and bold fields represent exceedances of both NMWQCC standards and EPA MCLs
EPA - United States Environmental Protection Agency
HGL - HydroGeoLogic, Inc.
J - estimated value
MCL - maximum contaminant level
mg/L - milligrams per liter
n/a - not available
n/a* - HGL only presented data summary tables in previous reports; therefore, data results for these fields are not available.
-- not analyzed
NMWQCC - New Mexico Water Quality Control Commission
Q - analytical result qualifier
Result - reported analytical concentration
U - not detected
UJ - estimated non-detect
µg/L - micrograms per liter

Table 4-12
Groundwater Monitoring Analytical Results
SS-39 (SWMUs 165, 177, 179, and 181) - Missile Fuel Spill Area
Holloman AFB, New Mexico

		Sample Number:	MW39-08												MW39-09													
		Sample Date:	7/18/2007		1/16/2008		7/10/2008		1/8/2009		7/7/2009		1/6/2010		7/14/2006		7/14/2006		1/18/2007		7/18/2007		1/16/2008		7/9/2008		1/7/2009	
		Sampling Company:	HGL		HGL		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		HGL		HGL		HGL		HGL		HGL		Tetra Tech		Tetra Tech	
		QC Type:	Regular		Regular		Regular		Regular		Regular		Regular		Regular		Field Duplicate		Regular		Regular		Regular		Regular		Regular	
Analysis	**NMWQ (1)**	**(2)**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
General Chemistry (mg/L)																												
Solids, total dissolved(3)	n/a	n/a	110000		97000		88800		109000		88800		103000		107000		110000		131000		140000		110000		132000		--	
Dissolved Metals (µg/L)																												
Arsenic	0.448	10	200	U	50	U	72	U	110	U	110	U	110	UJ	**29**		**25**		5	U	200	U	50	U	72	U	--	
Barium	7300	2000	220	UJ	25	J	100	U	100	U	100	U	100	U	24		25		6	J	220	UJ	55	U	100	U	--	
Cadmium	18.25	5	44	U	11	U	20	U	20	U	20	U	20	U	2		2		1	UJ	44	U	11	U	20	U	--	
Chromium	109.5	100	200	U	50	U	32	U	40	U	40	U	40	U	0.2	U	0.2	U	5	UJ	200	U	50	U	32	U	--	
Lead	n/a	15	n/a*		n/a*		40	U	40	U	40	U	40	U	n/a*		n/a*		n/a*		n/a*		n/a*		40	U	--	
Mercury	0.5615385	2	n/a*		n/a*		0.14	U	0.15	U	0.15	UJ	0.15	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.14	U	--	
Selenium	182.5	50	300	U	65	J	62	U	68	U	68	U	76.1		28		29		10	UJ	300	U	55	J	89.7	J	--	
Silver	182.5	--	100	U	25	U	24	U	28	U	28	U	28	U	8		7		2	UJ	100	U	25	U	24	U	--	
Total Metals (µg/L)																												
Arsenic	0.448	10	200	U	50	U	72	U	110	U	110	U	110	UJ	--		--		5	U	200	U	50	U	72	U	--	
Barium	7300	2000	220	U	25	J	100	U	100	U	100	U	100	U	--		--		277		220	U	19	J	122	J	--	
Cadmium	18.25	5	44	U	11	U	20	U	20	U	20	U	20	U	--		--		1	U	44	U	11	U	20	U	--	
Chromium	109.5	100	200	U	50	U	32	U	40	U	40	U	40	U	--		--		5	U	200	U	50	U	32	U	--	
Lead	n/a	15	130	U	33	U	40	U	40	U	41.2		40	U	--		--		38		130	U	33	U	40	U	--	
Mercury	0.5615385	2	n/a*		n/a*		0.14	U	0.15	U	0.15	UJ	0.15	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.14	U	--	
Selenium	182.5	50	300	U	65	J	140	J	68	U	68	U	80.9		--		--		10	U	300	U	55	J	92.9	J	--	
Silver	182.5	n/a	100	U	25	U	24	U	28	U	28	U	28	U	--		--		2	U	100	U	25	U	24	U	--	
Perchlorate (µg/L)																												
Perchlorate	24.5	n/a	**99**		**84**		**83**		**81**		**74**		**65**		**110**		**130**		600	U	**160**		**180**		**150**		**150**	
Unsymmetrical Dimethylhydrazine (UMDH) (µg/L)																												
1,1-Dimethylhydrazine	n/a	n/a	n/a*		n/a*		--		23	U	--		--		n/a*		n/a*		n/a*		n/a*		n/a*		--		23	U
Volatile Organic Compounds (µg/L)																												
1,1,1,2-Tetrachloroethane	5.2420214	n/a	n/a*		n/a*		0.2	U	0.2	U	0.2	U	0.2	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.2	U	--	
1,1,1-Trichloroethane	9125	200	n/a*		n/a*		0.33	U	0.33	U	0.33	U	0.33	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.33	U	--	
1,1,2,2-Tetrachloroethane	0.6713378	n/a	n/a*		n/a*		0.21	U	0.21	U	0.21	U	0.21	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.21	U	--	
1,1,2-Trichloro-1,2,2-trifluoroethane	59189.189	n/a	n/a*		n/a*		0.34	U	0.34	U	0.34	U	0.34	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.34	U	--	
1,1,2-Trichloroethane	2.4175986	5	n/a*		n/a*		0.26	U	0.26	U	0.26	U	0.26	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.26	U	--	
1,1-Dichloroethane	24.175986	n/a	1	U	1	U	0.24	U	0.24	U	0.24	U	0.24	U	0.0299	U	0.0299	U	1	UJ	1	U	1	U	0.24	U	--	
1,1-Dichloroethene	339.53488	7	1	U	1	U	0.54	U	0.54	U	0.54	U	0.54	U	0.0736	U	0.0736	U	1	UJ	1	U	1	U	0.54	U	--	
1,1-Dichloropropene	n/a	n/a	n/a*		n/a*		0.23	U	0.23	U	0.23	U	0.23	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.23	U	--	
1,2,3-Trichlorobenzene	n/a	n/a	n/a*		n/a*		0.5	U	0.5	U	0.5	U	0.5	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.5	U	--	
1,2,3-Trichloropropane	0.096	n/a	n/a*		n/a*		0.34	U	0.34	U	0.34	U	0.34	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.34	U	--	
1,2,4-Trichlorobenzene	8.1564246	70	n/a*		n/a*		0.5	U	0.5	U	0.5	U	0.5	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.5	U	--	
1,2,4-Trimethylbenzene	n/a	n/a	n/a*		n/a*		0.22	U	0.22	U	0.22	U	0.22	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.22	U	--	
1,2-Dibromo-3-chloropropane	0.0080324	0.2	n/a*		n/a*		0.32	U	0.32	U	0.32	U	0.32	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.32	U	--	
1,2-Dibromoethane	0.0653311	0.05	n/a*		n/a*		0.28	U	0.28	U	0.28	U	0.28	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.28	U	--	
1,2-Dichlorobenzene	370.14085	600	n/a*		n/a*		0.2	U	0.2	U	0.2	U	0.2	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.2	U	--	
1,2-Dichloroethane	1.4931247	5	n/a*		n/a*		0.34	U	0.34	U	0.34	U	0.34	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.34	U	--	
1,2-Dichloropropane	3.8598261	5	n/a*		n/a*		0.21	U	0.21	U	0.21	U	0.21	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.21	U	--	
1,3,5-Trimethylbenzene	n/a	n/a	n/a*		n/a*		0.2	U	0.2	U	0.2	U	0.2	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.2	U	--	
1,3-Dichlorobenzene	n/a	n/a	n/a*		n/a*		0.23	U	0.23	U	0.23	U	0.23	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.23	U	--	
1,3-Dichloropropane	n/a	n/a	n/a*		n/a*		0.26	U	0.26	U	0.26	U	0.26	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.26	U	--	
1,4-Dichlorobenzene	4.2717868	75	n/a*		n/a*		0.22	U	0.22	U	0.22	U	0.22	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.22	U	--	
1-Chlorohexane	n/a	n/a	n/a*		n/a*		0.27	U	0.27	U	0.27	U	0.27	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.27	U	--	
2,2-Dichloropropane	n/a	n/a	n/a*		n/a*		0.28	U	0.28	U	0.28	U	0.28	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.28	U	--	

Table 4-12
Groundwater Monitoring Analytical Results
SS-39 (SWMUs 165, 177, 179, and 181) - Missile Fuel Spill Area
Holloman AFB, New Mexico

		Sample Number:	MW39-08												MW39-09													
		Sample Date:	7/18/2007		1/16/2008		7/10/2008		1/8/2009		7/7/2009		1/6/2010		7/14/2006		7/14/2006		1/18/2007		7/18/2007		1/16/2008		7/9/2008		1/7/2009	
		Sampling Company:	HGL		HGL		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		HGL		HGL		HGL		HGL		HGL		Tetra Tech		Tetra Tech	
		QC Type:	Regular		Regular		Regular		Regular		Regular		Regular		Regular		Field Duplicate		Regular		Regular		Regular		Regular		Regular	
Analysis	**NMWQ [1]**	**[2]**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Volatile Organic Compounds (µg/L)																												
2-Butanone	7064.5161	n/a	5	U	5	UJ	2	U	3.6	J	2	U	2.7	J	0.394	U	0.394	U	5	UJ	5	U	5.4	J	2	U	--	
2-Butylbenzene	n/a	n/a	n/a*		n/a*		0.28	U	0.28	U	0.28	U	0.28	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.28	U	--	
2-Chloroethyl vinyl ether	n/a	n/a	n/a*		n/a*		1	UJ	1	UJ	1	U	1	U	n/a*		n/a*		n/a*		n/a*		n/a*		1	UJ	--	
2-Chlorotoluene	730	n/a	n/a*		n/a*		0.25	U	0.25	U	0.25	U	0.25	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.25	U	--	
2-Hexanone	n/a	n/a	n/a*		n/a*		5	U	5	U	5	U	50.6		n/a*		n/a*		n/a*		n/a*		n/a*		5	U	--	
2-Propylbenzene	n/a	n/a	n/a*		n/a*		0.25	U	0.25	U	--		--		n/a*		n/a*		n/a*		n/a*		n/a*		0.25	U	--	
4-Bromofluorobenzene	n/a	n/a	--		--		--		--		0.21	U	0.21	U	--		--		42.8	J	--		--		--		--	
4-Chlorotoluene	n/a	n/a	n/a*		n/a*		0.21	U	0.21	U	2	U	2	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.21	U	--	
4-Methyl-2-pentanone	1990.9091	n/a	n/a*		n/a*		2	U	2	U	--		--		n/a*		n/a*		n/a*		n/a*		n/a*		2	U	--	
Acetone	21782.888	n/a	5	UJ	5	U	10	U	24.7	J	10	U	12.9	J	10	U	10	U	10	UJ	5	UJ	5.3	J	10	U	--	
Acetonitrile	n/a	n/a	n/a*		n/a*		5	U	5	U	5	U	5	U	n/a*		n/a*		n/a*		n/a*		n/a*		5	U	--	
Acrolein	0.0416192	n/a	n/a*		n/a*		5	U	5	U	5	U	5	U	n/a*		n/a*		n/a*		n/a*		n/a*		5	U	--	
Acrylonitrile	0.4543342	n/a	n/a*		n/a*		2	UJ	2	U	2	U	2	U	n/a*		n/a*		n/a*		n/a*		n/a*		2	UJ	--	
Allyl chloride	n/a	n/a	n/a*		n/a*		2	U	2	U	2	U	2	U	n/a*		n/a*		n/a*		n/a*		n/a*		2	U	--	
Aniline	n/a	n/a	n/a*		n/a*		--		0.98	U	--		--		n/a*		n/a*		n/a*		n/a*		n/a*		--		--	
Benzene	4.1298223	5	1	U	1	U	0.4	U	0.4	U	0.4	U	0.4	U	1	U	1	U	1	UJ	1	U	1	U	0.4	U	--	
Benzyl Chloride	n/a	n/a	n/a*		n/a*		0.36	U	0.36	U	0.36	U	0.36	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.36	U	--	
Bromobenzene	n/a	n/a	n/a*		n/a*		0.26	U	0.26	U	0.26	U	0.26	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.26	U	--	
Bromochloromethane	n/a	n/a	n/a*		n/a*		0.23	U	0.23	U	0.23	U	0.23	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.23	U	--	
Bromodichloromethane	1.1728279	80	1	U	1	U	0.2	U	0.2	U	0.2	U	0.2	U	0.0651	U	0.0651	U	1	UJ	1	U	1	U	0.2	U	--	
Bromoform	85.063291	80	1	U	1	U	0.33	U	0.33	U	0.33	U	0.33	U	0.16	J	0.0859	U	1	UJ	1	U	1	U	0.33	U	--	
Bromomethane	8.6610169	n/a	n/a*		n/a*		0.78	U	0.78	U	0.78	U	0.78	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.78	U	--	
Carbon disulfide	1042.8571	n/a	n/a*		n/a*		0.4	U	0.4	U	0.4	U	0.4	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.4	U	--	
Carbon tetrachloride	1.9931683	5	1	U	1	UJ	0.22	U	0.22	U	0.22	U	0.22	U	0.121	U	0.121	U	1	UJ	1	U	1	UJ	0.22	U	--	
Chlorobenzene	91.25	100	1	U	1	U	0.22	U	0.22	U	0.22	U	0.22	U	1	U	1	U	1	UJ	1	U	1	U	0.22	U	--	
Chloroethane	20857.143	n/a	n/a*		n/a*		0.48	U	0.48	U	0.48	U	0.48	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.48	U	--	
Chloroform	1.9275308	80	1	U	1	U	0.28	U	0.28	U	0.28	U	0.28	U	0.0475	U	0.0475	U	1	UJ	1	U	1	U	0.28	U	--	
Chloromethane	17.750448	n/a	1	U	1	U	0.61	U	0.61	U	0.67	J	0.61	U	0.37	J	0.37	J	0.59	J	1	U	1	U	0.61	U	--	
cis-1,2-dichloroethene	365	70	1	U	1	U	0.2	U	0.2	U	0.71	J	0.46	J	0.101	U	0.101	U	1	UJ	1	U	1	U	0.2	U	--	
cis-1,3-dichloropropene	n/a	n/a	n/a*		n/a*		0.21	U	0.21	U	0.21	U	0.21	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.21	U	--	
cis-1,4-Dichloro-2-butene	n/a	n/a	n/a*		n/a*		1	U	1	U	1	U	1	U	n/a*		n/a*		n/a*		n/a*		n/a*		1	U	--	
Cymene	n/a	n/a	n/a*		n/a*		0.32	U	0.32	U	0.32	U	0.32	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.32	U	--	
Dibromochloromethane	1.4708683	80	n/a*		n/a*		0.2	U	0.2	U	0.2	U	0.2	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.2	U	--	
Dibromofluoromethane	n/a	n/a	--		--		--		--		0.3	U	0.3	U	--		--		52.1	J	--		--		--		--	
Dibromomethane	365	n/a	n/a*		n/a*		0.3	U	0.3	U	1	U	1	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.3	U	--	
Dichlorodifluoromethane	394.59459	n/a	n/a*		n/a*		1	U	1	U	--		--		n/a*		n/a*		n/a*		n/a*		n/a*		1	U	--	
Ether, tert-butyl methyl	124.66078	n/a	n/a*		n/a*		0.26	U	0.26	U	0.26	U	0.26	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.26	U	--	
Ethyl methacrylate	3285	n/a	n/a*		n/a*		1	U	1	U	1	U	1	U	n/a*		n/a*		n/a*		n/a*		n/a*		1	U	--	
Ethylbenzene	14.76103	700	n/a*		n/a*		0.43	U	0.43	U	0.43	U	0.43	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.43	U	--	
Hexachlorobutadiene	8.6153846	n/a	n/a*		n/a*		0.69	U	0.69	U	0.69	U	0.69	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.69	U	--	
Hexane	876	n/a	n/a*		n/a*		0.5	U	0.5	U	0.5	U	0.5	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.5	U	--	
Iodomethane	n/a	n/a	n/a*		n/a*		1	U	1	U	1	U	1	U	n/a*		n/a*		n/a*		n/a*		n/a*		1	U	--	
Isopropylbenzene	679.06977	n/a	n/a*		n/a*		0.2	U	0.2	U	0.2	U	0.2	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.2	U	--	
m,p-Xylene	n/a	n/a	2	U	2	U	0.78	U	0.78	U	0.78	U	0.78	U	1	U	1	U	1	UJ	2	U	2	U	0.78	U	--	
Methacrylonitrile	1.0428571	n/a	n/a*		n/a*		5	U	5	U	5	U	5	U	n/a*		n/a*		n/a*		n/a*		n/a*		5	U	--	
Methyl methacrylate	1419.4444	n/a	n/a*		n/a*		1	U	1	U	1	U	1	U	n/a*		n/a*		n/a*		n/a*		n/a*		1	U	--	
Methylene chloride	48.031728	5	1.3	U	1.3	U	1	U	1	U	1	U	1	U	0.689	U	0.689	U	0.58	J	1.3	U	1.3	U	1	U	--	

Table 4-12
Groundwater Monitoring Analytical Results
SS-39 (SWMUs 165, 177, 179, and 181) - Missile Fuel Spill Area
Holloman AFB, New Mexico

		Sample Number:	MW39-08												MW39-09													
		Sample Date:	7/18/2007		1/16/2008		7/10/2008		1/8/2009		7/7/2009		1/6/2010		7/14/2006		7/14/2006		1/18/2007		7/18/2007		1/16/2008		7/9/2008		1/7/2009	
		Sampling Company:	HGL		HGL		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		HGL		HGL		HGL		HGL		HGL		Tetra Tech		Tetra Tech	
		QC Type:	Regular		Regular		Regular		Regular		Regular		Regular		Regular		Field Duplicate		Regular		Regular		Regular		Regular		Regular	
Analysis	**NMWQ [1]**	**[2]**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Volatile Organic Compounds (µg/L)																												
naphthalene	1.4311765	n/a	n/a*		n/a*		1	U	**2.3**	J	1	U	1	U	n/a*		n/a*		n/a*		n/a*		n/a*		1	U	--	
n-Propylbenzene	n/a	n/a	n/a*		n/a*		--		--		0.25	U	0.25	U	n/a*		n/a*		n/a*		n/a*		n/a*		--		--	
o-Xylene	1431.3725	n/a	n/a*		n/a*		0.37	U	0.37	U	0.37	U	0.37	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.37	U	--	
Pentachloroethane	n/a	n/a	n/a*		n/a*		2	U	2	U	2	U	2	U	n/a*		n/a*		n/a*		n/a*		n/a*		2	U	--	
Propionitrile	n/a	n/a	n/a*		n/a*		10	U	10	U	10	U	10	U	n/a*		n/a*		n/a*		n/a*		n/a*		10	U	--	
Sec-butyl benzene	n/a	n/a	n/a*		n/a*		0.25	U	0.25	U	0.25	U	0.25	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.25	U	--	
Styrene	1622.2222	100	n/a*		n/a*		0.36	U	0.36	U	0.36	U	0.36	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.36	U	--	
Tert-butyl benzene	n/a	n/a	n/a*		n/a*		0.32	U	0.32	U	0.32	U	0.32	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.32	U	--	
Tetrachloroethene	1.0812904	5	n/a*		n/a*		0.22	U	0.22	U	0.22	U	0.22	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.22	U	--	
Toluene	2281.25	1000	--		--		0.35	U	0.35	U	0.35	U	0.35	U	--		--		44.7	J	--		--		0.35	U	--	
Trans-1,2-dichloroethene	106.82927	100	n/a*		n/a*		0.45	U	0.45	U	0.45	U	0.45	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.45	U	--	
Trans-1,3-dichloropropene	n/a	n/a	n/a*		n/a*		0.21	U	0.21	U	0.21	U	0.21	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.21	U	--	
Trans-1,4-Dichloro-2-Butene	n/a	n/a	n/a*		n/a*		2	U	2	U	2	U	2	U	n/a*		n/a*		n/a*		n/a*		n/a*		2	U	--	
Trichloroethene	16.543484	5	**30**		**26**		**20.4**		**17.3**		10.3		**26**		0.0495	U	0.06	J	1	UJ	1	U	1	U	0.32	U	--	
Trichlorofluoromethane	1288.2353	n/a	n/a*		n/a*		0.5	U	0.5	U	0.5	U	0.5	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.5	U	--	
Vinyl acetate	412.42938	n/a	n/a*		n/a*		3.6	U	3.6	U	3.6	U	3.6	U	n/a*		n/a*		n/a*		n/a*		n/a*		3.6	U	--	
Vinyl chloride	0.8606949	2	n/a*		n/a*		0.3	U	0.3	U	0.3	U	0.3	U	n/a*		n/a*		n/a*		n/a*		n/a*		0.3	U	--	

Notes:
[1] NMAC 20.6.2.3103
[2] December 2009 U.S. EPA Maximum Contaminant Level
[3] The TDS concentrations in all of the monitoring wells were above 10,000 mg/L, which is the point where groundwater is no longer considered a potential domestic or agricultural water supply (NMAC, 20.6.2.3101).
Bold fields represent exceedances of NMWQCC standards
Highlighted fields represent exceedances EPA MCLs
Highlighted and bold fields represent exceedances of both NMWQCC standards and EPA MCLs
EPA - United States Environmental Protection Agency
HGL - HydroGeoLogic, Inc.
J - estimated value
MCL - maximum contaminant level
mg/L - milligrams per liter
n/a - not available
n/a* - HGL only presented data summary tables in previous reports; therefore, data results for these fields are not available.
-- not analyzed
NMWQCC - New Mexico Water Quality Control Commission
Q - analytical result qualifier
Result - reported analytical concentration
U - not detected
UJ - estimated non-detect
µg/L - micrograms per liter

Table 4-12
Groundwater Monitoring Analytical Results
SS-39 (SWMUs 165, 177, 179, and 181) - Missile Fuel Spill Area
Holloman AFB, New Mexico

		Sample Number:	MW39-09						MW39-10																	
		Sample Date:	1/7/2009		7/7/2009		1/6/2010		7/14/2006		1/18/2007		7/18/2007		1/16/2008		7/9/2008		1/7/2009		1/7/2009		7/7/2009		1/6/2010	
		Sampling Company:	Tetra Tech		Tetra Tech		Tetra Tech		HGL		HGL		HGL		HGL		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech	
		QC Type:	Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular	
Analysis	**NMWQ (1)**	**(2)**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
General Chemistry (mg/L)																										
Solids, total dissolved(3)	n/a	n/a	128000		122000		107000		106000		112000		130000		110000		129000		--		127000		110000		107000	
Dissolved Metals (µg/L)																										
Arsenic	0.448	10	110	U	110	U	110	UJ	**22**		5	U	200	U	50	U	72	U	--		110	U	110	U	110	UJ
Barium	7300	2000	100	U	100	U	100	U	28		9	J	220	UJ	55	U	100	U	--		100	U	100	U	100	U
Cadmium	18.25	5	20	U	20	U	20	U	1		1	UJ	44	U	11	U	20	U	--		20	U	20	U	20	U
Chromium	109.5	100	40	U	40	U	40	U	0.2	U	5	UJ	200	U	50	U	32	U	--		40	U	40	U	40	U
Lead	n/a	15	40	U	40	U	40	U	n/a*		n/a*		n/a*		n/a*		40	U	--		40	U	40	U	40	U
Mercury	0.5615385	2	0.15	U	0.15	UJ	0.15	U	n/a*		n/a*		n/a*		n/a*		0.14	U	--		0.15	U	0.15	UJ	0.15	U
Selenium	182.5	50	68	U	68	U	68	U	2.3	U	10	UJ	300	U	33	J	62	U	--		90.4	J	68	U	68	U
Silver	182.5	--	28	U	28	U	28	U	6		2	UJ	100	U	25	J	24	U	--		28	U	28	U	28	U
Total Metals (µg/L)																										
Arsenic	0.448	10	110	U	110	U	110	UJ	--		5	U	200	U	50	U	72	U	--		110	U	110	U	110	UJ
Barium	7300	2000	100	U	100	U	152		--		11		220	U	26	J	115	J	--		162	J	100	U	100	U
Cadmium	18.25	5	20	U	20	U	20	U	--		1	U	44	U	11	U	20	U	--		20	U	20	U	20	U
Chromium	109.5	100	40	U	40	U	40	U	--		5	U	200	U	50	U	32	U	--		40	U	40	U	40	U
Lead	n/a	15	40	U	40	U	40	U	--		5	U	130	U	33	U	40	U	--		40	U	40	U	40	U
Mercury	0.5615385	2	0.15	U	0.15	UJ	0.15	U	n/a*		n/a*		n/a*		n/a*		0.14	U	--		0.15	U	0.15	UJ	0.15	U
Selenium	182.5	50	68	U	91.3		85.5		--		10	U	300	U	35	J	109	J	--		68	U	111		68.6	
Silver	182.5	n/a	28	U	28	U	28	U	--		2	U	100	U	25	U	24	U	--		28	U	28	U	28	U
Perchlorate (µg/L)																										
Perchlorate	24.5	n/a	--		**190**		**150**		**130**		600	U	**86**		**220**		**150**		**140**		--		**170**		**130**	
Unsymmetrical Dimethylhydrazine (UMDH) (µg/L)																										
1,1-Dimethylhydrazine	n/a	n/a	--		--		--		n/a*		n/a*		n/a*		n/a*		--		23	U	--		--		--	
Volatile Organic Compounds (µg/L)																										
1,1,1,2-Tetrachloroethane	5.2420214	n/a	0.2	U	0.2	U	0.2	U	n/a*		n/a*		n/a*		n/a*		0.2	U	--		0.2	U	0.2	U	0.2	U
1,1,1-Trichloroethane	9125	200	0.33	U	0.33	U	0.33	U	n/a*		n/a*		n/a*		n/a*		0.33	U	--		0.33	U	0.33	U	0.33	U
1,1,2,2-Tetrachloroethane	0.6713378	n/a	0.21	U	0.21	U	0.21	U	n/a*		n/a*		n/a*		n/a*		0.21	U	--		0.21	U	0.21	U	0.21	U
1,1,2-Trichloro-1,2,2-trifluoroethane	59189.189	n/a	0.34	U	0.34	U	0.34	U	n/a*		n/a*		n/a*		n/a*		0.34	U	--		0.34	U	0.34	U	0.34	U
1,1,2-Trichloroethane	2.4175986	5	0.26	U	0.26	U	0.26	U	n/a*		n/a*		n/a*		n/a*		0.26	U	--		0.26	U	0.26	U	0.26	U
1,1-Dichloroethane	24.175986	n/a	0.24	U	0.24	U	0.24	U	0.0299	U	1	U	1	U	1	U	0.24	U	--		0.24	U	0.24	U	0.24	U
1,1-Dichloroethene	339.53488	7	0.54	U	0.54	U	0.54	U	0.0736	U	1	U	1	U	1	U	0.54	U	--		0.54	U	0.54	U	0.54	U
1,1-Dichloropropene	n/a	n/a	0.23	U	0.23	U	0.23	U	n/a*		n/a*		n/a*		n/a*		0.23	U	--		0.23	U	0.23	U	0.23	U
1,2,3-Trichlorobenzene	n/a	n/a	0.5	U	0.5	U	0.5	U	n/a*		n/a*		n/a*		n/a*		0.5	U	--		0.5	U	0.5	U	0.5	U
1,2,3-Trichloropropane	0.096	n/a	0.34	U	0.34	U	0.34	U	n/a*		n/a*		n/a*		n/a*		0.34	U	--		0.34	U	0.34	U	0.34	U
1,2,4-Trichlorobenzene	8.1564246	70	0.5	U	0.5	U	0.5	U	n/a*		n/a*		n/a*		n/a*		0.5	U	--		0.5	U	0.5	U	0.5	U
1,2,4-Trimethylbenzene	n/a	n/a	0.22	U	0.22	U	0.22	U	n/a*		n/a*		n/a*		n/a*		0.22	U	--		0.22	U	0.22	U	0.22	U
1,2-Dibromo-3-chloropropane	0.0080324	0.2	0.32	U	0.32	U	0.32	U	n/a*		n/a*		n/a*		n/a*		0.32	U	--		0.32	U	0.32	U	0.32	U
1,2-Dibromoethane	0.0653311	0.05	0.28	U	0.28	U	0.28	U	n/a*		n/a*		n/a*		n/a*		0.28	U	--		0.28	U	0.28	U	0.28	U
1,2-Dichlorobenzene	370.14085	600	0.2	U	0.2	U	0.2	U	n/a*		n/a*		n/a*		n/a*		0.2	U	--		0.2	U	0.2	U	0.2	U
1,2-Dichloroethane	1.4931247	5	0.34	U	0.34	U	0.34	U	n/a*		n/a*		n/a*		n/a*		0.34	U	--		0.34	U	0.34	U	0.34	U
1,2-Dichloropropane	3.8598261	5	0.21	U	0.21	U	0.21	U	n/a*		n/a*		n/a*		n/a*		0.21	U	--		0.21	U	0.21	U	0.21	U
1,3,5-Trimethylbenzene	n/a	n/a	0.2	U	0.2	U	0.2	U	n/a*		n/a*		n/a*		n/a*		0.2	U	--		0.2	U	0.2	U	0.2	U
1,3-Dichlorobenzene	n/a	n/a	0.23	U	0.23	U	0.23	U	n/a*		n/a*		n/a*		n/a*		0.23	U	--		0.23	U	0.23	U	0.23	U
1,3-Dichloropropane	n/a	n/a	0.26	U	0.26	U	0.26	U	n/a*		n/a*		n/a*		n/a*		0.26	U	--		0.26	U	0.26	U	0.26	U
1,4-Dichlorobenzene	4.2717868	75	0.22	U	0.22	U	0.22	U	n/a*		n/a*		n/a*		n/a*		0.22	U	--		0.22	U	0.22	U	0.22	U
1-Chlorohexane	n/a	n/a	0.27	U	0.27	U	0.27	U	n/a*		n/a*		n/a*		n/a*		0.27	U	--		0.27	U	0.27	U	0.27	U
2,2-Dichloropropane	n/a	n/a	0.28	U	0.28	U	0.28	U	n/a*		n/a*		n/a*		n/a*		0.28	U	--		0.28	U	0.28	U	0.28	U

Table 4-12
Groundwater Monitoring Analytical Results
SS-39 (SWMUs 165, 177, 179, and 181) - Missile Fuel Spill Area
Holloman AFB, New Mexico

		Sample Number:	MW39-09						MW39-10																	
		Sample Date:	1/7/2009		7/7/2009		1/6/2010		7/14/2006		1/18/2007		7/18/2007		1/16/2008		7/9/2008		1/7/2009		1/7/2009		7/7/2009		1/6/2010	
		Sampling Company:	Tetra Tech		Tetra Tech		Tetra Tech		HGL		HGL		HGL		HGL		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech	
		QC Type:	Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular	
Analysis	**NMWQ (1)**	**(2)**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Volatile Organic Compounds (µg/L)																										
2-Butanone	7064.5161	n/a	2.8	J	2	U	3.7	J	0.394	U	5	U	5	U	5	UJ	2	U	--		2	U	2	U	2.4	J
2-Butylbenzene	n/a	n/a	0.28	U	0.28	U	0.28	U	n/a*		n/a*		n/a*		n/a*		0.28	U	--		0.28	U	0.28	U	0.28	U
2-Chloroethyl vinyl ether	n/a	n/a	1	UJ	1	U	1	U	n/a*		n/a*		n/a*		n/a*		1	UJ	--		1	UJ	1	U	1	U
2-Chlorotoluene	730	n/a	0.25	U	0.25	U	0.25	U	n/a*		n/a*		n/a*		n/a*		0.25	U	--		0.25	U	0.25	U	0.25	U
2-Hexanone	n/a	n/a	127	J	5	U	15		n/a*		n/a*		n/a*		n/a*		5	U	--		10.8	J	5	U	7.8	J
2-Propylbenzene	n/a	n/a	0.25	U	--		--		n/a*		n/a*		n/a*		n/a*		0.25	U	--		0.25	U	--		--	
4-Bromofluorobenzene	n/a	n/a	--		0.21	U	0.21	U	--		43.4		--		--		--		--		--		0.21	U	0.21	U
4-Chlorotoluene	n/a	n/a	0.21	U	2	U	2	U	n/a*		n/a*		n/a*		n/a*		0.21	U	--		0.21	U	2	U	2	U
4-Methyl-2-pentanone	1990.9091	n/a	2	U	--		--		n/a*		n/a*		n/a*		n/a*		2	U	--		2	U	--		--	
Acetone	21782.888	n/a	15.5	J	10	U	16.7	J	10	U	10	UJ	5	UJ	5	U	10	U	--		10	U	10	U	14	J
Acetonitrile	n/a	n/a	5	U	5	U	5	U	n/a*		n/a*		n/a*		n/a*		5	U	--		5	U	5	U	5	U
Acrolein	0.0416192	n/a	5	U	5	U	5	U	n/a*		n/a*		n/a*		n/a*		5	U	--		5	U	5	U	5	U
Acrylonitrile	0.4543342	n/a	2	U	2	U	2	U	n/a*		n/a*		n/a*		n/a*		2	UJ	--		2	U	2	U	2	U
Allyl chloride	n/a	n/a	2	U	2	U	2	U	n/a*		n/a*		n/a*		n/a*		2	U	--		2	U	2	U	2	U
Aniline	n/a	n/a	0.97	U	--		--		n/a*		n/a*		n/a*		n/a*		--		--		0.99	U	--		--	
Benzene	4.1298223	5	0.4	U	0.4	U	0.4	U	0.0495	U	1	U	1	U	1	U	0.4	U	--		0.4	U	0.4	U	0.4	U
Benzyl Chloride	n/a	n/a	0.36	U	0.36	U	0.36	U	n/a*		n/a*		n/a*		n/a*		0.36	U	--		0.36	U	0.36	U	0.36	U
Bromobenzene	n/a	n/a	0.26	U	0.26	U	0.26	U	n/a*		n/a*		n/a*		n/a*		0.26	U	--		0.26	U	0.26	U	0.26	U
Bromochloromethane	n/a	n/a	0.23	U	0.23	U	0.23	U	n/a*		n/a*		n/a*		n/a*		0.23	U	--		0.23	U	0.23	U	0.23	U
Bromodichloromethane	1.1728279	80	0.2	U	0.2	U	0.2	U	0.0651	U	1	U	1	U	1	U	0.2	U	--		0.2	U	0.2	U	0.2	U
Bromoform	85.063291	80	0.33	U	0.33	U	0.33	U	0.0859	U	1	U	1	U	1	U	0.33	U	--		0.33	U	0.33	U	0.33	U
Bromomethane	8.6610169	n/a	0.78	U	0.78	U	0.78	U	n/a*		n/a*		n/a*		n/a*		0.78	U	--		0.78	U	0.78	U	1.8	J
Carbon disulfide	1042.8571	n/a	0.4	U	0.4	U	0.4	U	n/a*		n/a*		n/a*		n/a*		0.4	U	--		0.4	U	0.4	U	0.4	U
Carbon tetrachloride	1.9931683	5	0.22	U	0.22	U	0.22	U	0.121	U	1	U	1	U	1	UJ	0.22	U	--		0.22	U	0.22	U	0.22	U
Chlorobenzene	91.25	100	0.22	U	0.22	U	0.22	U	1	U	1	U	1	U	1	U	0.22	U	--		0.22	U	0.22	U	0.22	U
Chloroethane	20857.143	n/a	0.48	U	0.48	U	0.48	U	n/a*		n/a*		n/a*		n/a*		0.48	U	--		0.48	U	0.48	U	0.48	U
Chloroform	1.9275308	80	0.28	U	0.28	U	0.28	U	0.0475	U	1	U	1	U	1	U	0.28	U	--		0.28	U	0.28	U	0.28	U
Chloromethane	17.750448	n/a	0.61	U	0.61	U	0.61	U	0.34	J	1	U	1	U	1	U	0.61	U	--		0.69	J	0.61	U	1.6	J
cis-1,2-dichloroethene	365	70	0.2	U	0.2	U	0.2	U	0.101	U	1	U	1	U	1	U	0.2	U	--		0.2	U	0.2	U	0.2	U
cis-1,3-dichloropropene	n/a	n/a	0.21	U	0.21	U	0.21	U	n/a*		n/a*		n/a*		n/a*		0.21	U	--		0.21	U	0.21	U	0.21	U
cis-1,4-Dichloro-2-butene	n/a	n/a	1	U	1	U	1	U	n/a*		n/a*		n/a*		n/a*		1	U	--		1	U	1	U	1	U
Cymene	n/a	n/a	0.32	U	0.32	U	0.32	U	n/a*		n/a*		n/a*		n/a*		0.32	U	--		0.32	U	0.32	U	0.32	U
Dibromochloromethane	1.4708683	80	0.2	U	0.2	U	0.2	U	n/a*		n/a*		n/a*		n/a*		0.2	U	--		0.2	U	0.2	U	0.2	U
Dibromofluoromethane	n/a	n/a	--		0.3	U	0.3	U	--		52.4		--		--		--		--		--		0.3	U	0.3	U
Dibromomethane	365	n/a	0.3	U	1	U	1	U	n/a*		n/a*		n/a*		n/a*		0.3	U	--		0.3	U	1	U	1	U
Dichlorodifluoromethane	394.59459	n/a	1	U	--		--		n/a*		n/a*		n/a*		n/a*		1	U	--		1	U	--		--	
Ether, tert-butyl methyl	124.66078	n/a	0.26	U	0.26	U	0.26	U	n/a*		n/a*		n/a*		n/a*		0.26	U	--		0.26	U	0.26	U	0.26	U
Ethyl methacrylate	3285	n/a	1	U	1	U	1	U	n/a*		n/a*		n/a*		n/a*		1	U	--		1	U	1	U	1	U
Ethylbenzene	14.76103	700	0.43	U	0.43	U	0.43	U	n/a*		n/a*		n/a*		n/a*		0.43	U	--		0.43	U	0.43	U	0.43	U
Hexachlorobutadiene	8.6153846	n/a	0.69	U	0.69	U	0.69	U	n/a*		n/a*		n/a*		n/a*		0.69	U	--		0.69	U	0.69	U	0.69	U
Hexane	876	n/a	0.5	U	0.5	U	0.5	U	n/a*		n/a*		n/a*		n/a*		0.5	U	--		0.5	U	0.5	U	0.5	U
Iodomethane	n/a	n/a	1	U	1	U	1	U	n/a*		n/a*		n/a*		n/a*		1	U	--		1	U	1	U	1	U
Isopropylbenzene	679.06977	n/a	0.2	U	0.2	U	0.2	U	n/a*		n/a*		n/a*		n/a*		0.2	U	--		0.2	U	0.2	U	0.2	U
m,p-Xylene	n/a	n/a	0.78	U	0.78	U	0.78	U	1	U	1	U	2	U	2	U	0.78	U	--		0.78	U	0.78	U	0.78	U
Methacrylonitrile	1.0428571	n/a	5	U	5	U	5	U	n/a*		n/a*		n/a*		n/a*		5	U	--		5	U	5	U	5	U
Methyl methacrylate	1419.4444	n/a	1	U	1	U	1	U	n/a*		n/a*		n/a*		n/a*		1	U	--		1	U	1	U	1	U
Methylene chloride	48.031728	5	1	U	1	U	1	U	0.689	U	5	U	1.3	U	1.3	U	1	U	--		1	U	1	U	1	U

Table 4-12
Groundwater Monitoring Analytical Results
SS-39 (SWMUs 165, 177, 179, and 181) - Missile Fuel Spill Area
Holloman AFB, New Mexico

		Sample Number:	MW39-09						MW39-10																	
		Sample Date:	1/7/2009		7/7/2009		1/6/2010		7/14/2006		1/18/2007		7/18/2007		1/16/2008		7/9/2008		1/7/2009		1/7/2009		7/7/2009		1/6/2010	
		Sampling Company:	Tetra Tech		Tetra Tech		Tetra Tech		HGL		HGL		HGL		HGL		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech	
		QC Type:	Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular	
Analysis	**NMWQ [1]**	**[2]**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Volatile Organic Compounds (µg/L)																										
naphthalene	1.4311765	n/a	**1.8**	J	1	U	1	U	n/a*		n/a*		n/a*		n/a*		1	U	--		1	U	1	U	1	U
n-Propylbenzene	n/a	n/a	--		0.25	U	0.25	U	n/a*		n/a*		n/a*		n/a*		--		--		--		0.25	U	0.25	U
o-Xylene	1431.3725	n/a	0.37	U	0.37	U	0.37	U	n/a*		n/a*		n/a*		n/a*		0.37	U	--		0.37	U	0.37	U	0.37	U
Pentachloroethane	n/a	n/a	2	U	2	U	2	U	n/a*		n/a*		n/a*		n/a*		2	U	--		2	U	2	U	2	U
Propionitrile	n/a	n/a	10	U	10	U	10	U	n/a*		n/a*		n/a*		n/a*		10	U	--		10	U	10	U	10	U
Sec-butyl benzene	n/a	n/a	0.25	U	0.25	U	0.25	U	n/a*		n/a*		n/a*		n/a*		0.25	U	--		0.25	U	0.25	U	0.25	U
Styrene	1622.2222	100	0.36	U	0.36	U	0.36	U	n/a*		n/a*		n/a*		n/a*		0.36	U	--		0.36	U	0.36	U	0.36	U
Tert-butyl benzene	n/a	n/a	0.32	U	0.32	U	0.32	U	n/a*		n/a*		n/a*		n/a*		0.32	U	--		0.32	U	0.32	U	0.32	U
Tetrachloroethene	1.0812904	5	0.22	U	0.22	U	0.22	U	n/a*		n/a*		n/a*		n/a*		0.22	U	--		0.22	U	0.22	U	0.22	U
Toluene	2281.25	1000	0.35	U	0.35	U	0.35	U	--		45.4		--		--		0.35	U	--		0.35	U	0.35	U	0.35	U
Trans-1,2-dichloroethene	106.82927	100	0.45	U	0.45	U	0.45	U	n/a*		n/a*		n/a*		n/a*		0.45	U	--		0.45	U	0.45	U	0.45	U
Trans-1,3-dichloropropene	n/a	n/a	0.21	U	0.21	U	0.21	U	n/a*		n/a*		n/a*		n/a*		0.21	U	--		0.21	U	0.21	U	0.21	U
Trans-1,4-Dichloro-2-Butene	n/a	n/a	2	U	2	U	2	U	n/a*		n/a*		n/a*		n/a*		2	U	--		2	U	2	U	2	U
Trichloroethene	16.543484	5	0.32	U	0.32	U	0.32	U	0.0495	U	1	U	1	U	1	U	0.32	J	--		0.32	U	0.37	J	0.32	U
Trichlorofluoromethane	1288.2353	n/a	0.5	U	0.5	U	0.5	U	n/a*		n/a*		n/a*		n/a*		0.5	U	--		0.5	U	0.5	U	0.5	U
Vinyl acetate	412.42938	n/a	3.6	U	3.6	U	3.6	U	n/a*		n/a*		n/a*		n/a*		3.6	U	--		3.6	U	3.6	U	3.6	U
Vinyl chloride	0.8606949	2	0.3	U	0.3	U	0.3	U	n/a*		n/a*		n/a*		n/a*		0.3	U	--		0.3	U	0.3	U	0.3	U

Notes:
[1] NMAC 20.6.2.3103
[2] December 2009 U.S. EPA Maximum Contaminant Level
[3] The TDS concentrations in all of the monitoring wells were above 10,000 mg/L, which is the point where groundwater is no longer considered a potential domestic or agricultural water supply (NMAC, 20.6.2.3101).
Bold fields represent exceedances of NMWQCC standards
Highlighted fields represent exceedances EPA MCLs
Highlighted and bold fields represent exceedances of both NMWQCC standards and EPA MCLs
EPA - United States Environmental Protection Agency
HGL - HydroGeoLogic, Inc.
J - estimated value
MCL - maximum contaminant level
mg/L - milligrams per liter
n/a - not available
n/a* - HGL only presented data summary tables in previous reports; therefore, data results for these fields are not available.
-- not analyzed
NMWQCC - New Mexico Water Quality Control Commission
Q - analytical result qualifier
Result - reported analytical concentration
U - not detected
UJ - estimated non-detect
µg/L - micrograms per liter

Table 4-12
Groundwater Monitoring Analytical Results
SS-39 (SWMUs 165, 177, 179, and 181) - Missile Fuel Spill Area
Holloman AFB, New Mexico

		Sample Number:	MW39-11																		MW39-12							
		Sample Date:	7/13/2006		7/14/2006		1/18/2007		7/18/2007		1/17/2008		7/10/2008		1/8/2009		7/7/2009		1/6/2010		7/13/2006		7/14/2006		1/18/2007		7/18/2007	
		Sampling Company:	HGL		HGL		HGL		HGL		HGL		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		HGL		HGL		HGL		HGL	
		QC Type:	Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular	
Analysis	**NMWQ (1)**	**(2)**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
General Chemistry (mg/L)																												
Solids, total dissolved(3)	n/a	n/a	124000		--		141000		150000		130000		137000		134000		134000		105000		136000		--		140000		150000	
Dissolved Metals (µg/L)																												
Arsenic	0.448	10	--		**39**		5	U	250	U	**17**	J	72	U	110	U	110	U	110	UJ	--		**37**		5	U	200	U
Barium	7300	2000	--		22		9	J	280	UJ	55	U	100	U	100	U	100	U	100	U	--		7	J	9	J	220	UJ
Cadmium	18.25	5	--		6		1	UJ	55	U	11	U	20	U	20	U	20	U	20	U	--		4		1	UJ	44	U
Chromium	109.5	100	--		2	J	5	UJ	250	U	50	U	32	U	40	U	40	U	40	U	--		2	J	5	UJ	200	U
Lead	n/a	15	n/a*		n/a*		n/a*		n/a*		n/a*		40	U	40	U	40	U	40	U	n/a*		n/a*		n/a*		n/a*	
Mercury	0.5615385	2	n/a*		n/a*		n/a*		n/a*		n/a*		0.14	U	0.15	U	0.15	UJ	0.15	U	n/a*		n/a*		n/a*		n/a*	
Selenium	182.5	50	--		58		10	UJ	380	U	65	J	91.4	J	78.2	J	125		82.3		--		60		10	UJ	300	U
Silver	182.5	--	--		6		2	UJ	130	U	25	U	24	U	28	U	28	U	28	U	--		7		2	UJ	100	U
Total Metals (µg/L)																												
Arsenic	0.448	10	--		--		5	U	250	U	**20**	J	72	U	110	U	110	U	110	UJ	--		--		5	U	250	U
Barium	7300	2000	--		--		11		280	U	160		100	U	100	U	100	U	100	U	--		--		143		280	U
Cadmium	18.25	5	--		--		1	U	55	U	11	U	20	U	20	U	20	U	20	U	--		--		1	U	55	U
Chromium	109.5	100	--		--		5	U	250	U	46	J	32	U	40	U	40	U	40	U	--		--		5	U	250	U
Lead	n/a	15	--		--		5	U	170	U	33	U	40	U	40	U	40	U	40	U	--		--		5	U	170	U
Mercury	0.5615385	2	n/a*		n/a*		n/a*		n/a*		n/a*		0.14	U	0.15	U	0.15	UJ	0.15	U	n/a*		n/a*		n/a*		n/a*	
Selenium	182.5	50	--		--		46	U	380	U	79		62	U	92.2	J	104		108		--		--		10	U	380	U
Silver	182.5	n/a	--		--		2	U	130	U	25	U	24	U	28	U	28	U	28	U	--		--		2	U	130	U
Perchlorate (µg/L)																												
Perchlorate	24.5	n/a	**130**		--		750	U	**120**		**100**		**110**		**95**		**110**		**81**		**110**		--		750	U	**230**	
Unsymmetrical Dimethylhydrazine (UMDH) (µg/L)																												
1,1-Dimethylhydrazine	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		--		23	U	--		--		n/a*		n/a*		n/a*		n/a*	
Volatile Organic Compounds (µg/L)																												
1,1,1,2-Tetrachloroethane	5.2420214	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		0.2	U	0.2	U	0.2	U	0.2	U	n/a*		n/a*		n/a*		n/a*	
1,1,1-Trichloroethane	9125	200	n/a*		n/a*		n/a*		n/a*		n/a*		0.33	U	0.33	U	0.33	U	0.33	U	n/a*		n/a*		n/a*		n/a*	
1,1,2,2-Tetrachloroethane	0.6713378	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		0.21	U	0.21	U	0.21	U	0.21	U	n/a*		n/a*		n/a*		n/a*	
1,1,2-Trichloro-1,2,2-trifluoroethane	59189.189	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		0.34	U	0.34	U	0.34	U	0.34	U	n/a*		n/a*		n/a*		n/a*	
1,1,2-Trichloroethane	2.4175986	5	n/a*		n/a*		n/a*		n/a*		n/a*		0.26	U	0.26	U	0.26	U	0.26	U	n/a*		n/a*		n/a*		n/a*	
1,1-Dichloroethane	24.175986	n/a	0.0299	U	--		1	U	1	U	1	U	0.24	U	0.24	U	0.24	U	0.24	U	0.0299	U	--		1	U	1	U
1,1-Dichloroethene	339.53488	7	0.0736	U	--		1	U	1	U	1	U	0.54	U	0.54	U	0.54	U	0.54	U	0.0736	U	--		1	U	1	U
1,1-Dichloropropene	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		0.23	U	0.23	U	0.23	U	0.23	U	n/a*		n/a*		n/a*		n/a*	
1,2,3-Trichlorobenzene	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		0.5	U	0.5	U	0.5	U	0.5	U	n/a*		n/a*		n/a*		n/a*	
1,2,3-Trichloropropane	0.096	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		0.34	U	0.34	U	0.34	U	0.34	U	n/a*		n/a*		n/a*		n/a*	
1,2,4-Trichlorobenzene	8.1564246	70	n/a*		n/a*		n/a*		n/a*		n/a*		0.5	U	0.5	U	0.5	U	0.5	U	n/a*		n/a*		n/a*		n/a*	
1,2,4-Trimethylbenzene	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		0.22	U	0.22	U	0.22	U	0.22	U	n/a*		n/a*		n/a*		n/a*	
1,2-Dibromo-3-chloropropane	0.0080324	0.2	n/a*		n/a*		n/a*		n/a*		n/a*		0.32	U	0.32	U	0.32	U	0.32	U	n/a*		n/a*		n/a*		n/a*	
1,2-Dibromoethane	0.0653311	0.05	n/a*		n/a*		n/a*		n/a*		n/a*		0.28	U	0.28	U	0.28	U	0.28	U	n/a*		n/a*		n/a*		n/a*	
1,2-Dichlorobenzene	370.14085	600	n/a*		n/a*		n/a*		n/a*		n/a*		0.2	U	0.2	U	0.2	U	0.2	U	n/a*		n/a*		n/a*		n/a*	
1,2-Dichloroethane	1.4931247	5	n/a*		n/a*		n/a*		n/a*		n/a*		0.34	U	0.34	U	0.34	U	0.34	U	n/a*		n/a*		n/a*		n/a*	
1,2-Dichloropropane	3.8598261	5	n/a*		n/a*		n/a*		n/a*		n/a*		0.21	U	0.21	U	0.21	U	0.21	U	n/a*		n/a*		n/a*		n/a*	
1,3,5-Trimethylbenzene	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		0.2	U	0.2	U	0.2	U	0.2	U	n/a*		n/a*		n/a*		n/a*	
1,3-Dichlorobenzene	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		0.23	U	0.23	U	0.23	U	0.23	U	n/a*		n/a*		n/a*		n/a*	
1,3-Dichloropropane	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		0.26	U	0.26	U	0.26	U	0.26	U	n/a*		n/a*		n/a*		n/a*	
1,4-Dichlorobenzene	4.2717868	75	n/a*		n/a*		n/a*		n/a*		n/a*		0.22	U	0.22	U	0.22	U	0.22	U	n/a*		n/a*		n/a*		n/a*	
1-Chlorohexane	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		0.27	U	0.27	U	0.27	U	0.27	U	n/a*		n/a*		n/a*		n/a*	
2,2-Dichloropropane	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		0.28	U	0.28	U	0.28	U	0.28	U	n/a*		n/a*		n/a*		n/a*	

Table 4-12
Groundwater Monitoring Analytical Results
SS-39 (SWMUs 165, 177, 179, and 181) - Missile Fuel Spill Area
Holloman AFB, New Mexico

		Sample Number:	MW39-11																		MW39-12							
		Sample Date:	7/13/2006		7/14/2006		1/18/2007		7/18/2007		1/17/2008		7/10/2008		1/8/2009		7/7/2009		1/6/2010		7/13/2006		7/14/2006		1/18/2007		7/18/2007	
		Sampling Company:	HGL		HGL		HGL		HGL		HGL		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		HGL		HGL		HGL		HGL	
		QC Type:	Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular	
Analysis	**NMWQ (1)**	**(2)**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Volatile Organic Compounds (µg/L)																												
2-Butanone	7064.5161	n/a	0.394	U	--		5	U	5	U	5	U	2	U	6		2	U	5		0.394	U	--		5	U	5	U
2-Butylbenzene	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		0.28	U	0.28	U	0.28	U	0.28	U	n/a*		n/a*		n/a*		n/a*	
2-Chloroethyl vinyl ether	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		1	UJ	1	UJ	1	U	1	U	n/a*		n/a*		n/a*		n/a*	
2-Chlorotoluene	730	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		0.25	U	0.25	U	0.25	U	0.25	U	n/a*		n/a*		n/a*		n/a*	
2-Hexanone	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		5	U	272	J	13.6		100		n/a*		n/a*		n/a*		n/a*	
2-Propylbenzene	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		0.25	U	0.25	U	--		--		n/a*		n/a*		n/a*		n/a*	
4-Bromofluorobenzene	n/a	n/a	--		--		42.9		--		--		--		--		0.21	U	0.21	U	--		--		42.3		--	
4-Chlorotoluene	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		0.21	U	0.21	U	2	U	2.2	J	n/a*		n/a*		n/a*		n/a*	
4-Methyl-2-pentanone	1990.9091	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		2	U	4	J	--		--		n/a*		n/a*		n/a*		n/a*	
Acetone	21782.888	n/a	3.12	J	--		10	UJ	5	UJ	5	U	10	U	40.5		10	U	31.1	J	0.854	U	--		10	UJ	5	UJ
Acetonitrile	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		5	U	5	U	5	U	5	U	n/a*		n/a*		n/a*		n/a*	
Acrolein	0.0416192	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		5	U	5	U	5	U	5	U	n/a*		n/a*		n/a*		n/a*	
Acrylonitrile	0.4543342	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		2	UJ	2	U	2	U	2	U	n/a*		n/a*		n/a*		n/a*	
Allyl chloride	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		2	U	2	U	2	U	2	U	n/a*		n/a*		n/a*		n/a*	
Aniline	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		--		0.99	U	--		--		n/a*		n/a*		n/a*		n/a*	
Benzene	4.1298223	5	0.06	J	--		1	U	1	U	1	U	0.4	U	0.4	U	0.4	U	0.4	U	0.0495	U	--		1	U	1	U
Benzyl Chloride	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		0.36	U	0.36	U	0.36	U	0.36	U	n/a*		n/a*		n/a*		n/a*	
Bromobenzene	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		0.26	U	0.26	U	0.26	U	0.26	U	n/a*		n/a*		n/a*		n/a*	
Bromochloromethane	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		0.23	U	0.23	U	0.23	U	0.23	U	n/a*		n/a*		n/a*		n/a*	
Bromodichloromethane	1.1728279	80	0.0651	U	--		1	U	1	U	1	U	0.2	U	0.2	U	0.2	U	0.2	U	0.0651	U	--		1	U	1	U
Bromoform	85.063291	80	0.0859	U	--		1	U	1	U	1	U	0.33	U	0.33	U	0.33	U	0.33	U	0.0859	U	--		1	U	1	U
Bromomethane	8.6610169	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		0.78	U	0.78	U	0.78	U	0.78	U	n/a*		n/a*		n/a*		n/a*	
Carbon disulfide	1042.8571	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		0.4	U	0.4	U	0.4	U	0.4	U	n/a*		n/a*		n/a*		n/a*	
Carbon tetrachloride	1.9931683	5	0.121	U	--		1	U	1	U	1	U	0.22	U	0.22	U	0.22	U	0.22	U	0.121	U	--		1	U	1	U
Chlorobenzene	91.25	100	0.03	J	--		1	U	1	U	1	U	0.22	U	0.22	U	0.22	U	0.22	U	0.0217	U	--		1	U	1	U
Chloroethane	20857.143	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		0.48	U	0.48	U	0.48	U	0.48	U	n/a*		n/a*		n/a*		n/a*	
Chloroform	1.9275308	80	0.0475	U	--		1	U	1	U	1	U	0.28	U	0.28	U	0.28	U	0.28	U	0.0475	U	--		1	U	1	U
Chloromethane	17.750448	n/a	0.36	J	--		0.43	J	1	U	1	U	0.61	U	0.61	U	0.61	U	0.61	U	0.28	J	--		0.42	J	1	U
cis-1,2-dichloroethene	365	70	0.25	J	--		1	U	1	U	1	U	0.2	U	0.2	U	0.21	J	0.2	U	0.101	U	--		1	U	1	U
cis-1,3-dichloropropene	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		0.21	U	0.21	U	0.21	U	0.21	U	n/a*		n/a*		n/a*		n/a*	
cis-1,4-Dichloro-2-butene	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		1	U	1	U	1	U	1	U	n/a*		n/a*		n/a*		n/a*	
Cymene	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		0.32	U	0.32	U	0.32	U	0.32	U	n/a*		n/a*		n/a*		n/a*	
Dibromochloromethane	1.4708683	80	n/a*		n/a*		n/a*		n/a*		n/a*		0.2	U	0.2	U	0.2	U	0.2	U	n/a*		n/a*		n/a*		n/a*	
Dibromofluoromethane	n/a	n/a	--		--		52.2		--		--		--		--		0.3	U	0.3	U	--		--		53.8		--	
Dibromomethane	365	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		0.3	U	0.3	U	1	U	1	U	n/a*		n/a*		n/a*		n/a*	
Dichlorodifluoromethane	394.59459	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		1	U	1	U	--		--		n/a*		n/a*		n/a*		n/a*	
Ether, tert-butyl methyl	124.66078	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		0.26	U	0.26	U	0.26	U	0.26	U	n/a*		n/a*		n/a*		n/a*	
Ethyl methacrylate	3285	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		1	U	1	U	1	U	1	U	n/a*		n/a*		n/a*		n/a*	
Ethylbenzene	14.76103	700	n/a*		n/a*		n/a*		n/a*		n/a*		0.43	U	0.43	U	0.43	U	0.43	U	n/a*		n/a*		n/a*		n/a*	
Hexachlorobutadiene	8.6153846	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		0.69	U	0.69	U	0.69	U	0.69	U	n/a*		n/a*		n/a*		n/a*	
Hexane	876	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		0.5	U	0.5	U	0.5	U	0.5	U	n/a*		n/a*		n/a*		n/a*	
Iodomethane	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		1	U	1	U	1	U	1	U	n/a*		n/a*		n/a*		n/a*	
Isopropylbenzene	679.06977	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		0.2	U	0.2	U	0.2	U	0.2	U	n/a*		n/a*		n/a*		n/a*	
m,p-Xylene	n/a	n/a	1	U	--		1	U	2	U	2	U	0.78	U	0.78	U	0.78	U	0.78	U	1	U	--		1	U	2	U
Methacrylonitrile	1.0428571	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		5	U	5	U	5	U	5	U	n/a*		n/a*		n/a*		n/a*	
Methyl methacrylate	1419.4444	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		1	U	1	U	1	U	1	U	n/a*		n/a*		n/a*		n/a*	
Methylene chloride	48.031728	5	0.689	U	--		5	U	1.3	U	1.3	U	1	U	1	U	1	U	1	U	0.689	U	--		5	U	1.3	U

Table 4-12
Groundwater Monitoring Analytical Results
SS-39 (SWMUs 165, 177, 179, and 181) - Missile Fuel Spill Area
Holloman AFB, New Mexico

		Sample Number:	MW39-11																		MW39-12							
		Sample Date:	7/13/2006		7/14/2006		1/18/2007		7/18/2007		1/17/2008		7/10/2008		1/8/2009		7/7/2009		1/6/2010		7/13/2006		7/14/2006		1/18/2007		7/18/2007	
		Sampling Company:	HGL		HGL		HGL		HGL		HGL		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech		HGL		HGL		HGL		HGL	
		QC Type:	Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular		Regular	
Analysis	**NMWQ [1]**	**[2]**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Volatile Organic Compounds (µg/L)																												
naphthalene	1.4311765	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		1	U	**2.7**	J	1	U	1	U	n/a*		n/a*		n/a*		n/a*	
n-Propylbenzene	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		--		--		0.25	U	0.25	U	n/a*		n/a*		n/a*		n/a*	
o-Xylene	1431.3725	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		0.37	U	0.37	U	0.37	U	0.37	U	n/a*		n/a*		n/a*		n/a*	
Pentachloroethane	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		2	U	2	U	2	U	2	U	n/a*		n/a*		n/a*		n/a*	
Propionitrile	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		10	U	10	U	10	U	10	U	n/a*		n/a*		n/a*		n/a*	
Sec-butyl benzene	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		0.25	U	0.25	U	0.25	U	0.25	U	n/a*		n/a*		n/a*		n/a*	
Styrene	1622.2222	100	n/a*		n/a*		n/a*		n/a*		n/a*		0.36	U	0.36	U	0.36	U	0.36	U	n/a*		n/a*		n/a*		n/a*	
Tert-butyl benzene	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		0.32	U	0.32	U	0.32	U	0.32	U	n/a*		n/a*		n/a*		n/a*	
Tetrachloroethene	1.0812904	5	n/a*		n/a*		n/a*		n/a*		n/a*		0.22	U	0.22	U	0.22	U	0.22	U	n/a*		n/a*		n/a*		n/a*	
Toluene	2281.25	1000	--		--		45.3		--		--		0.35	U	0.35	U	0.35	U	0.35	U	--		--		45.4		--	
Trans-1,2-dichloroethene	106.82927	100	n/a*		n/a*		n/a*		n/a*		n/a*		0.45	U	0.45	U	0.45	U	0.45	U	n/a*		n/a*		n/a*		n/a*	
Trans-1,3-dichloropropene	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		0.21	U	0.21	U	0.21	U	0.21	U	n/a*		n/a*		n/a*		n/a*	
Trans-1,4-Dichloro-2-Butene	n/a	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		2	U	2	U	2	U	2	U	n/a*		n/a*		n/a*		n/a*	
Trichloroethene	16.543484	5	**44.1**		--		**31.3**		**25**		1	U	10.3		11.4		**47.3**		**39.5**		2.6		--		2.01		1.6	
Trichlorofluoromethane	1288.2353	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		0.5	U	0.5	U	0.5	U	0.5	U	n/a*		n/a*		n/a*		n/a*	
Vinyl acetate	412.42938	n/a	n/a*		n/a*		n/a*		n/a*		n/a*		3.6	U	3.6	U	3.6	U	3.6	U	n/a*		n/a*		n/a*		n/a*	
Vinyl chloride	0.8606949	2	n/a*		n/a*		n/a*		n/a*		n/a*		0.3	U	0.3	U	0.3	U	0.3	U	n/a*		n/a*		n/a*		n/a*	

Notes:
[1] NMAC 20.6.2.3103
[2] December 2009 U.S. EPA Maximum Contaminant Level
[3] The TDS concentrations in all of the monitoring wells were above 10,000 mg/L, which is the point where groundwater is no longer considered a potential domestic or agricultural water supply (NMAC, 20.6.2.3101).
Bold fields represent exceedances of NMWQCC standards
Highlighted fields represent exceedances EPA MCLs
Highlighted and bold fields represent exceedances of both NMWQCC standards and EPA MCLs
EPA - United States Environmental Protection Agency
HGL - HydroGeoLogic, Inc.
J - estimated value
MCL - maximum contaminant level
mg/L - milligrams per liter
n/a - not available
n/a* - HGL only presented data summary tables in previous reports; therefore, data results for these fields are not available.
-- not analyzed
NMWQCC - New Mexico Water Quality Control Commission
Q - analytical result qualifier
Result - reported analytical concentration
U - not detected
UJ - estimated non-detect
µg/L - micrograms per liter

Table 4-12
Groundwater Monitoring Analytical Results
SS-39 (SWMUs 165, 177, 179, and 181) - Missile Fuel Spill Area
Holloman AFB, New Mexico

		Sample Number:	MW39-12									
		Sample Date:	1/17/2008		7/10/2008		1/8/2009		10/6/2009		1/6/2010	
		Sampling Company:	HGL		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech	
		QC Type:	Regular		Regular		Regular		Regular		Regular	
Analysis	**NMWQ (1)**	**(2)**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
General Chemistry (mg/L)												
Solids, total dissolved(3)	n/a	n/a	120000		129000		143000		128000		98700	
Dissolved Metals (µg/L)												
Arsenic	0.448	10	**14**	J	72	U	110	U	**15.5**		110	UJ
Barium	7300	2000	23	J	100	U	100	U	49.4		100	U
Cadmium	18.25	5	11	U	**30.5**	J	20	U	2	U	20	U
Chromium	109.5	100	50	U	32	U	40	U	4	U	40	U
Lead	n/a	15	n/a*		40	U	40	U	40	U	40	U
Mercury	0.5615385	2	n/a*		0.14	U	0.15	U	0.15	U	0.15	U
Selenium	182.5	50	51	J	62	U	118	J	98.8		71	
Silver	182.5	--	25	U	24	U	28	U	2.8	U	28	U
Total Metals (µg/L)												
Arsenic	0.448	10	50	U	72	U	110	U	22.1		110	UJ
Barium	7300	2000	39	J	107	J	100	U	47		100	U
Cadmium	18.25	5	11	U	**38.2**	J	20	U	2	U	20	U
Chromium	109.5	100	50	U	32	U	40	U	4	U	40	U
Lead	n/a	15	14	J	40	U	40	U	40	U	40	U
Mercury	0.5615385	2	n/a*		0.14	U	0.15	U	0.15	U	0.15	U
Selenium	182.5	50	62	J	186	J	95.7	J	95.4		72.2	
Silver	182.5	n/a	25	U	24	U	28	U	2.8	U	28	U
Perchlorate (µg/L)												
Perchlorate	24.5	n/a	**80**		**78**		**93**		**76**		**51**	
Unsymmetrical Dimethylhydrazine (UMDH) (µg/L)												
1,1-Dimethylhydrazine	n/a	n/a	n/a*		--		23	U	--		--	
Volatile Organic Compounds (µg/L)												
1,1,1,2-Tetrachloroethane	5.2420214	n/a	n/a*		0.2	U	0.2	U	0.2	U	0.2	U
1,1,1-Trichloroethane	9125	200	n/a*		0.33	U	0.33	U	0.33	U	0.33	U
1,1,2,2-Tetrachloroethane	0.6713378	n/a	n/a*		0.21	U	0.21	U	0.21	U	0.21	U
1,1,2-Trichloro-1,2,2-trifluoroethane	59189.189	n/a	n/a*		0.34	U	0.34	U	0.34	UJ	0.34	U
1,1,2-Trichloroethane	2.4175986	5	n/a*		0.26	U	0.26	U	0.26	U	0.26	U
1,1-Dichloroethane	24.175986	n/a	1	U	0.24	U	0.24	U	0.24	U	0.24	U
1,1-Dichloroethene	339.53488	7	1	U	0.54	U	0.54	U	0.54	U	0.54	U
1,1-Dichloropropene	n/a	n/a	n/a*		0.23	U	0.23	U	0.23	U	0.23	U
1,2,3-Trichlorobenzene	n/a	n/a	n/a*		0.5	U	0.5	U	0.5	U	0.5	U
1,2,3-Trichloropropane	0.096	n/a	n/a*		0.34	U	0.34	U	0.34	U	0.34	U
1,2,4-Trichlorobenzene	8.1564246	70	n/a*		0.5	U	0.5	U	0.5	U	0.5	U
1,2,4-Trimethylbenzene	n/a	n/a	n/a*		0.22	U	0.22	U	0.22	U	0.22	U
1,2-Dibromo-3-chloropropane	0.0080324	0.2	n/a*		0.32	U	0.32	U	0.32	U	0.32	U
1,2-Dibromoethane	0.0653311	0.05	n/a*		0.28	U	0.28	U	0.28	U	0.28	U
1,2-Dichlorobenzene	370.14085	600	n/a*		0.2	U	0.2	U	0.2	U	0.2	U
1,2-Dichloroethane	1.4931247	5	n/a*		0.34	U	0.34	U	0.34	U	0.34	U
1,2-Dichloropropane	3.8598261	5	n/a*		0.21	U	0.21	U	0.21	U	0.21	U
1,3,5-Trimethylbenzene	n/a	n/a	n/a*		0.2	U	0.2	U	0.2	U	0.2	U
1,3-Dichlorobenzene	n/a	n/a	n/a*		0.23	U	0.23	U	0.23	U	0.23	U
1,3-Dichloropropane	n/a	n/a	n/a*		0.26	U	0.26	U	0.26	U	0.26	U
1,4-Dichlorobenzene	4.2717868	75	n/a*		0.22	U	0.22	U	0.22	U	0.22	U
1-Chlorohexane	n/a	n/a	n/a*		0.27	U	0.27	U	0.27	U	0.27	U
2,2-Dichloropropane	n/a	n/a	n/a*		0.28	U	0.28	U	0.28	U	0.28	U

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Holloman AFB, New Mexico

		Sample Number:	MW39-12									
		Sample Date:	1/17/2008		7/10/2008		1/8/2009		10/6/2009		1/6/2010	
		Sampling Company:	HGL		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech	
		QC Type:	Regular		Regular		Regular		Regular		Regular	
Analysis	**NMWQ [1]**	**[2]**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Volatile Organic Compounds (µg/L)												
2-Butanone	7064.5161	n/a	5	U	2	U	3	J	2	U	5.4	
2-Butylbenzene	n/a	n/a	n/a*		0.28	U	0.28	U	0.28	U	0.28	U
2-Chloroethyl vinyl ether	n/a	n/a	n/a*		1	UJ	1	UJ	1	U	1	U
2-Chlorotoluene	730	n/a	n/a*		0.25	U	0.25	U	0.25	U	0.25	U
2-Hexanone	n/a	n/a	n/a*		5	U	81.3	J	5	U	33.4	
2-Propylbenzene	n/a	n/a	n/a*		0.25	U	0.25	U	--		--	
4-Bromofluorobenzene	n/a	n/a	--		--		--		0.21	U	0.21	U
4-Chlorotoluene	n/a	n/a	n/a*		0.21	U	0.21	U	2	U	2	U
4-Methyl-2-pentanone	1990.9091	n/a	n/a*		2	U	2	U	--		--	
Acetone	21782.888	n/a	5	U	10	U	15	J	10	U	26.1	J
Acetonitrile	n/a	n/a	n/a*		5	U	5	U	5	U	5	U
Acrolein	0.0416192	n/a	n/a*		5	U	5	U	5	U	5	U
Acrylonitrile	0.4543342	n/a	n/a*		2	UJ	2	U	2	UJ	2	U
Allyl chloride	n/a	n/a	n/a*		2	U	2	U	2	U	2	U
Aniline	n/a	n/a	n/a*		--		0.98	U	--		--	
Benzene	4.1298223	5	1	U	0.4	U	0.4	U	0.4	U	0.4	U
Benzyl Chloride	n/a	n/a	n/a*		0.36	U	0.36	U	0.36	U	0.36	U
Bromobenzene	n/a	n/a	n/a*		0.26	U	0.26	U	0.26	U	0.26	U
Bromochloromethane	n/a	n/a	n/a*		0.23	U	0.23	U	0.23	U	0.23	U
Bromodichloromethane	1.1728279	80	1	U	0.2	U	0.2	U	0.2	U	0.2	U
Bromoform	85.063291	80	1	U	0.33	U	0.33	U	0.33	U	0.33	U
Bromomethane	8.6610169	n/a	n/a*		0.78	U	0.78	U	0.78	U	0.85	J
Carbon disulfide	1042.8571	n/a	n/a*		0.4	U	0.4	U	0.4	U	0.4	U
Carbon tetrachloride	1.9931683	5	1	U	0.22	U	0.22	U	0.22	U	0.22	U
Chlorobenzene	91.25	100	1	U	0.22	U	0.22	U	0.22	U	0.22	U
Chloroethane	20857.143	n/a	n/a*		0.48	U	0.48	U	0.48	U	0.48	U
Chloroform	1.9275308	80	1	U	0.28	U	0.28	U	0.28	U	0.28	U
Chloromethane	17.750448	n/a	1	U	0.61	U	0.61	U	0.61	U	1.1	J
cis-1,2-dichloroethene	365	70	1	U	0.2	U	0.2	U	0.2	U	0.2	U
cis-1,3-dichloropropene	n/a	n/a	n/a*		0.21	U	0.21	U	0.21	U	0.21	U
cis-1,4-Dichloro-2-butene	n/a	n/a	n/a*		1	U	1	U	1	U	1	U
Cymene	n/a	n/a	n/a*		0.32	U	0.32	U	0.32	U	0.32	U
Dibromochloromethane	1.4708683	80	n/a*		0.2	U	0.2	U	0.2	U	0.2	U
Dibromofluoromethane	n/a	n/a	--		--		--		0.3	U	0.3	U
Dibromomethane	365	n/a	n/a*		0.3	U	0.3	U	1	U	1	U
Dichlorodifluoromethane	394.59459	n/a	n/a*		1	U	1	U	--		--	
Ether, tert-butyl methyl	124.66078	n/a	n/a*		0.26	U	0.26	U	0.26	U	0.26	U
Ethyl methacrylate	3285	n/a	n/a*		1	U	1	U	1	UJ	1	U
Ethylbenzene	14.76103	700	n/a*		0.43	U	0.43	U	0.43	U	0.43	U
Hexachlorobutadiene	8.6153846	n/a	n/a*		0.69	U	0.69	U	0.69	U	0.69	U
Hexane	876	n/a	n/a*		0.5	U	0.5	U	0.5	U	0.5	U
Iodomethane	n/a	n/a	n/a*		1	U	1	U	1	U	1	U
Isopropylbenzene	679.06977	n/a	n/a*		0.2	U	0.2	U	0.2	U	0.2	U
m,p-Xylene	n/a	n/a	2	U	0.78	U	0.78	U	0.78	U	0.78	U
Methacrylonitrile	1.0428571	n/a	n/a*		5	U	5	U	5	U	5	U
Methyl methacrylate	1419.4444	n/a	n/a*		1	U	1	U	1	UJ	1	U
Methylene chloride	48.031728	5	1.3	U	1	U	1	U	1	U	1	U

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		Sample Number:	MW39-12									
		Sample Date:	1/17/2008		7/10/2008		1/8/2009		10/6/2009		1/6/2010	
		Sampling Company:	HGL		Tetra Tech		Tetra Tech		Tetra Tech		Tetra Tech	
		QC Type:	Regular		Regular		Regular		Regular		Regular	
Analysis	**NMWQ [1]**	**[2]**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Volatile Organic Compounds (µg/L)												
naphthalene	1.4311765	n/a	n/a*		1	U	1	J	1	U	1	U
n-Propylbenzene	n/a	n/a	n/a*		--		--		0.25	U	0.25	U
o-Xylene	1431.3725	n/a	n/a*		0.37	U	0.37	U	0.37	U	0.37	U
Pentachloroethane	n/a	n/a	n/a*		2	U	2	U	2	U	2	U
Propionitrile	n/a	n/a	n/a*		10	U	10	U	10	UJ	10	U
Sec-butyl benzene	n/a	n/a	n/a*		0.25	U	0.25	U	0.25	U	0.25	U
Styrene	1622.2222	100	n/a*		0.36	U	0.36	U	0.36	U	0.36	U
Tert-butyl benzene	n/a	n/a	n/a*		0.32	U	0.32	U	0.32	U	0.32	U
Tetrachloroethene	1.0812904	5	n/a*		0.22	U	0.22	U	0.22	U	0.22	U
Toluene	2281.25	1000	--		0.35	U	0.35	U	0.35	U	0.35	U
Trans-1,2-dichloroethene	106.82927	100	n/a*		0.45	U	0.45	U	0.45	U	0.45	U
Trans-1,3-dichloropropene	n/a	n/a	n/a*		0.21	U	0.21	U	0.21	U	0.21	U
Trans-1,4-Dichloro-2-Butene	n/a	n/a	n/a*		2	U	2	U	2	U	2	U
Trichloroethene	16.543484	5	12		1.1		1.9		1.3		0.96	J
Trichlorofluoromethane	1288.2353	n/a	n/a*		0.5	U	0.5	U	0.5	U	0.5	U
Vinyl acetate	412.42938	n/a	n/a*		3.6	U	3.6	U	3.6	UJ	3.6	U
Vinyl chloride	0.8606949	2	n/a*		0.3	U	0.3	U	0.3	U	0.3	U

Notes:
[1] NMAC 20.6.2.3103
[2] December 2009 U.S. EPA Maximum Contaminant Level
[3] The TDS concentrations in all of the monitoring wells were above 10,000 mg/L, which is the point where groundwater is no longer considered a potential domestic or agricultural water supply (NMAC, 20.6.2.3101).
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Highlighted fields represent exceedances EPA MCLs
Highlighted and bold fields represent exceedances of both NMWQCC standards and EPA MCLs
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HGL - HydroGeoLogic, Inc.
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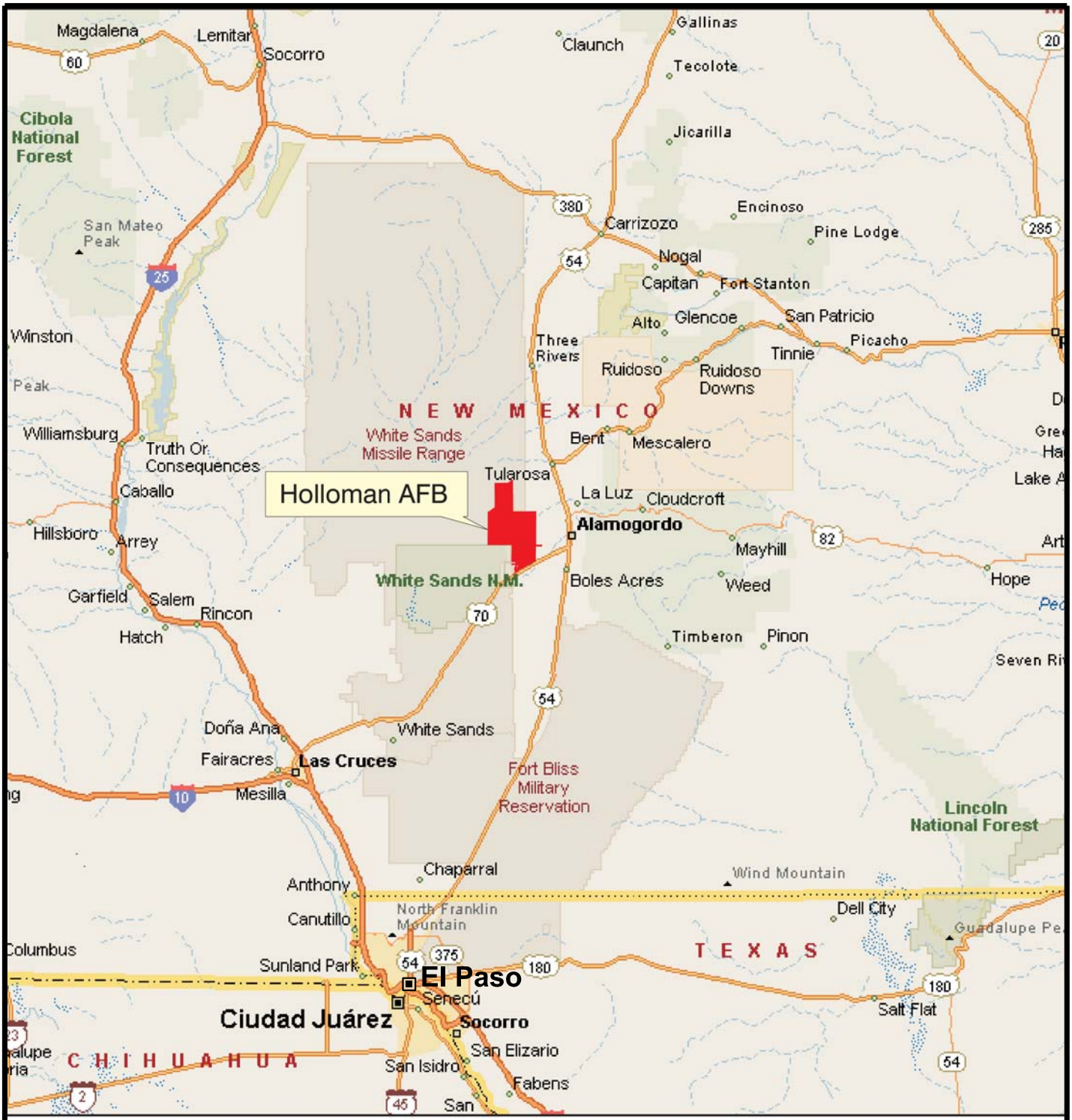
NMWQCC - New Mexico Water Quality Control Commission
Q - analytical result qualifier
Result - reported analytical concentration
U - not detected
UJ - estimated non-detect
µg/L - micrograms per liter

FIGURES



-N-

0 25 MILES

APPROX. SCALE

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DATE: 3-8-2010
SOURCE: Holloman Air Force Base

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LONG-TERM MONITORING REPORT
HOLLOMAN AIR FORCE BASE
ALAMOGORDO, NEW MEXICO

TETRA TECH

FIGURE 2-1
HOLLOMAN AIR FORCE BASE
INSTALLATION LOCATION MAP

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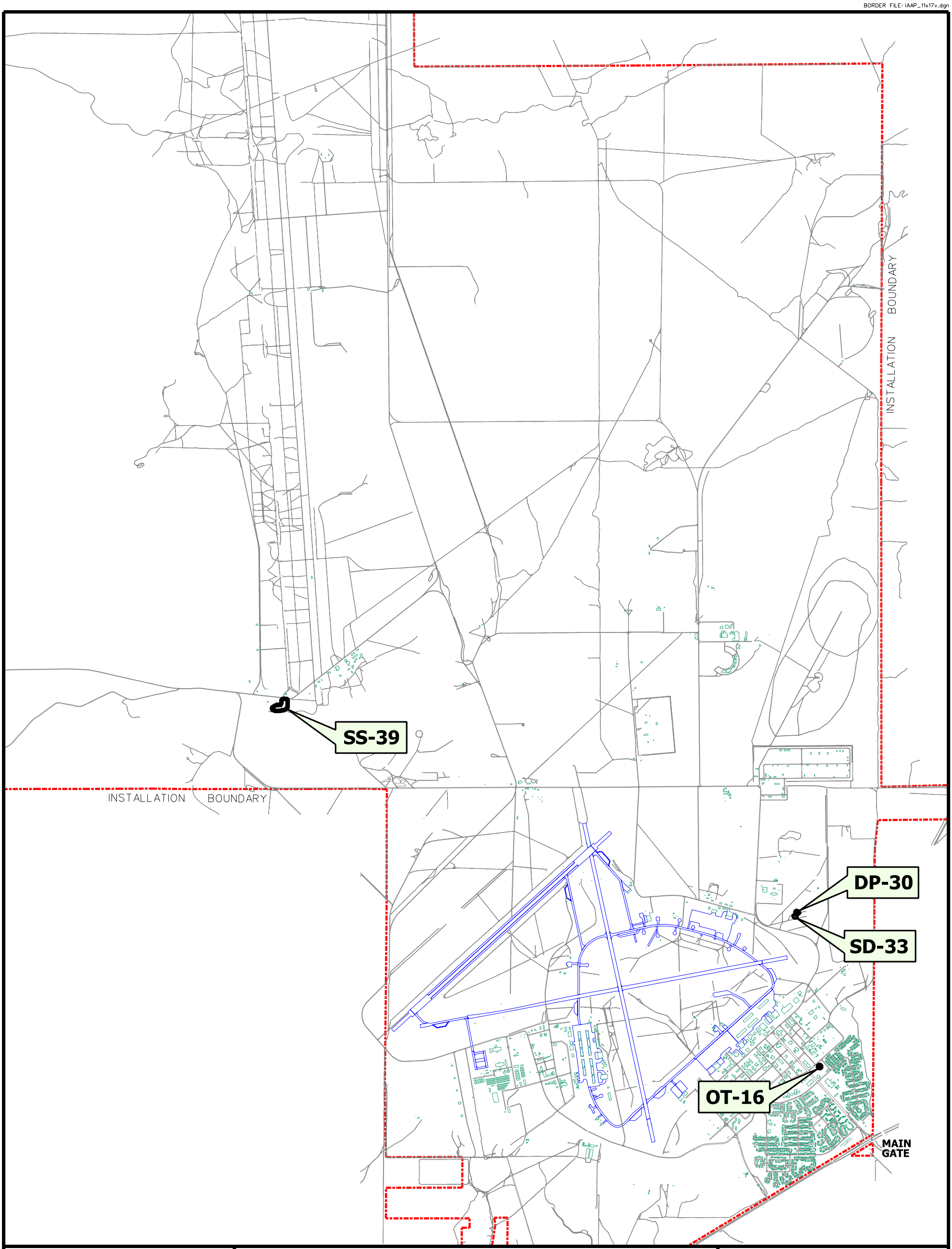

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DATE: 3-8-2010
SOURCE: Holloman AFB

ALL COORDINATES ARE ON THE NEW MEXICO STATE PLANE , CENTRAL ZONE IN FEET BASED ON NAD83 ADJUSTMENT OF 1996. THE VERTICAL CONTROL REFERENCE DATUM IS NAVD88.

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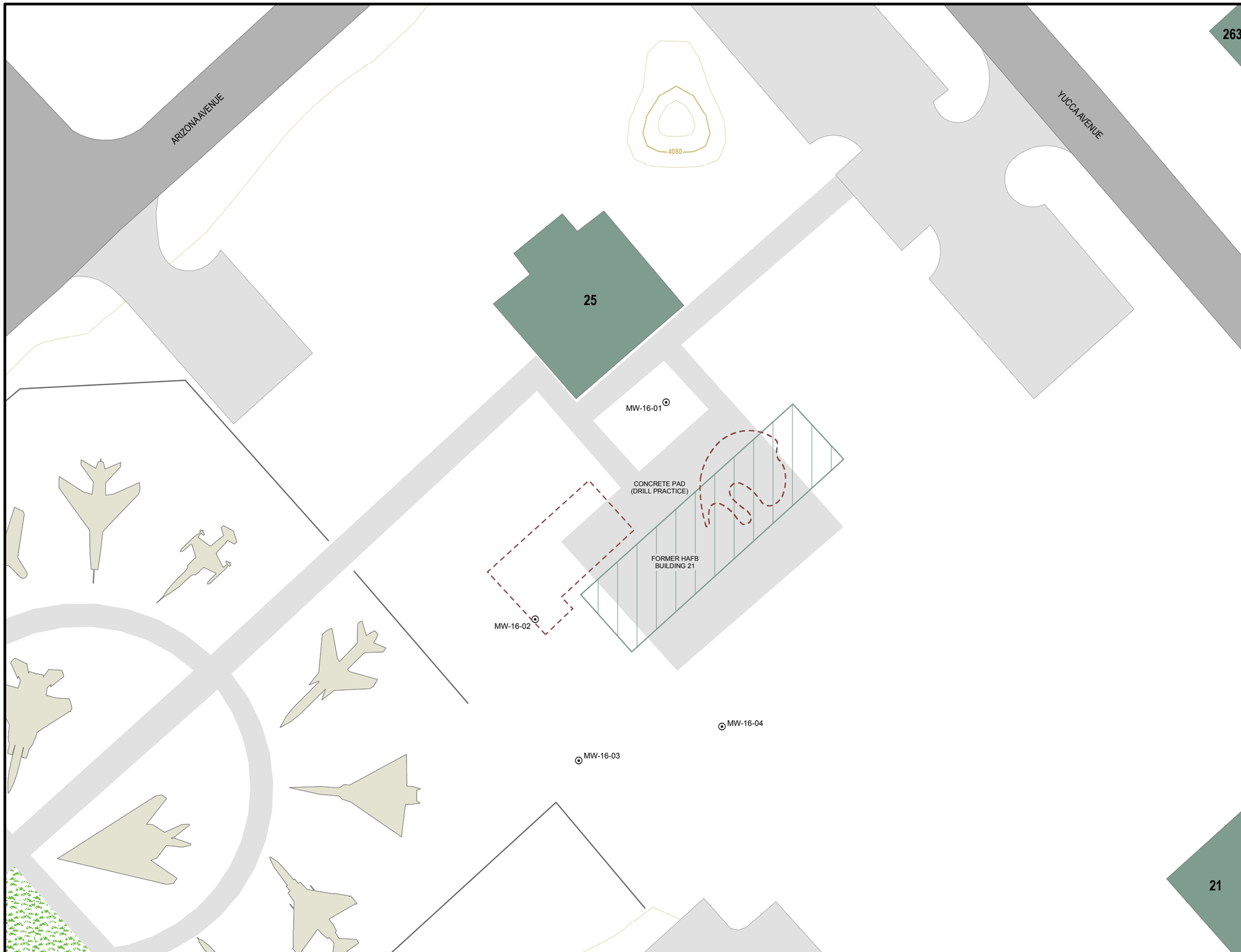
LONG-TERM MONITORING REPORT
HOLLOMAN AIR FORCE BASE
ALAMOGORDO, NEW MEXICO

-N-

METERS
0 1000 2000
0 4000 8000
FEET

TETRA TECH

FIGURE 2-2
SITE LOCATION MAP



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SOURCE: HGL

ALL COORDINATES ARE ON THE NEW MEXICO STATE PLANE, CENTRAL ZONE IN FEET BASED ON NAD83 ADJUSTMENT OF 1996. THE VERTICAL CONTROL REFERENCE DATUM IS NAVD88.

LEGEND

- MONITORING WELL
- EXCAVATION AREA
- 14 HOLLOMAN AFB BUILDING
- ROAD AREA
- PAVED PARKING
- CONCRETE PAD/WALK
- INDEX CONTOUR (10')
- INTERVAL CONTOUR (2')

N

0 20 40 80
FEET

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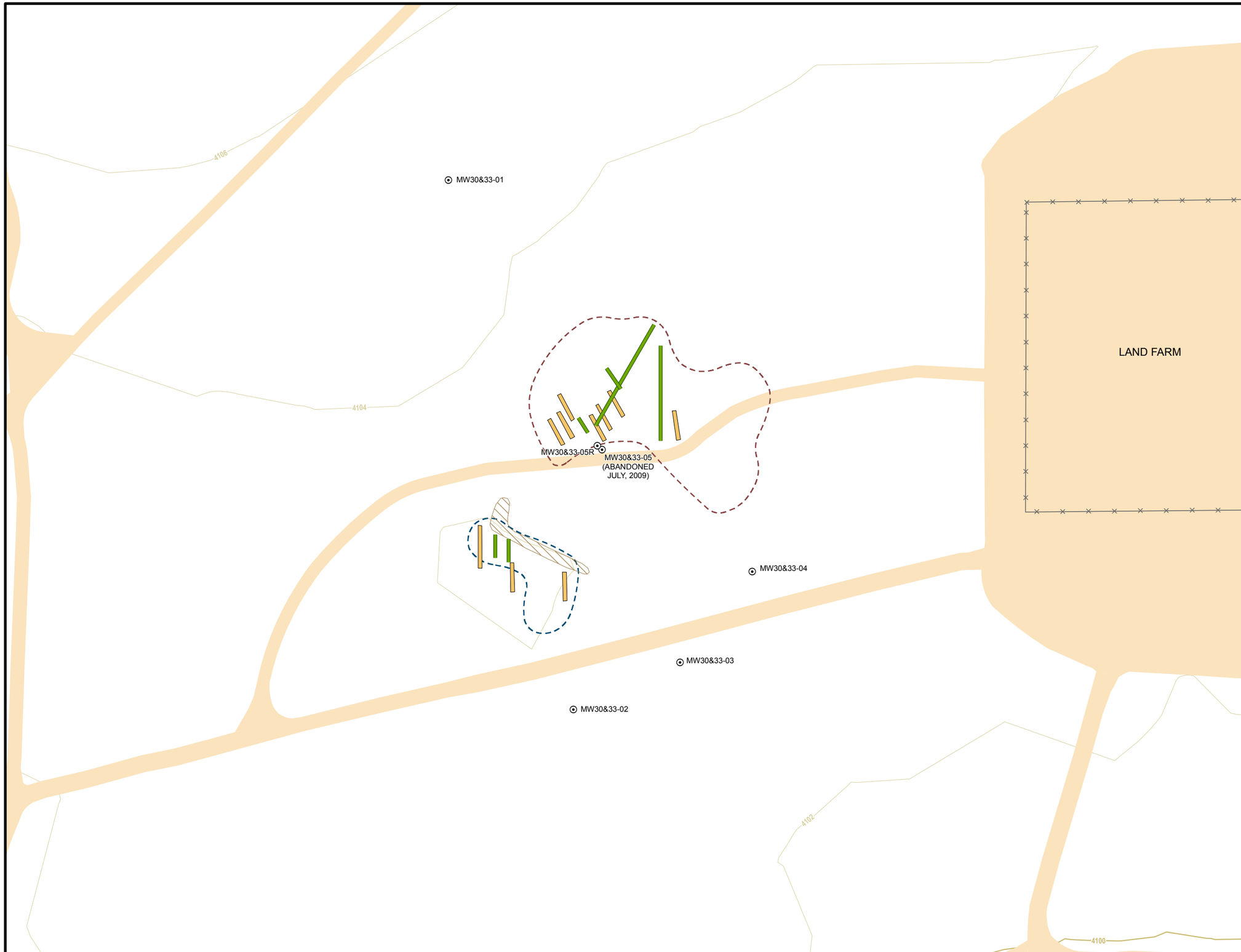
LONG-TERM MONITORING REPORT
HOLLOMAN AIR FORCE BASE
ALAMOGORDO, NEW MEXICO

TETRA TECH

FIGURE 2-3
OT-16 SITE MAP



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DATE: 4-23-2010
SOURCE: HGL

ALL COORDINATES ARE ON THE NEW MEXICO STATE PLANE, CENTRAL ZONE IN FEET BASED ON NAD83 ADJUSTMENT OF 1996. THE VERTICAL CONTROL REFERENCE DATUM IS NAVD88.

LEGEND

- MONITORING WELL
- INDEX CONTOUR (10')
- INTERVAL CONTOUR (2')
- RFI OBSERVED TRENCHES
- RI OBSERVED TRENCHES
- DP-30 SITE BOUNDARY
- SD-33 SITE BOUNDARY
- SOIL BERM
- LAND FARM FENCE
- ROAD/PARKING (UNPAVED)

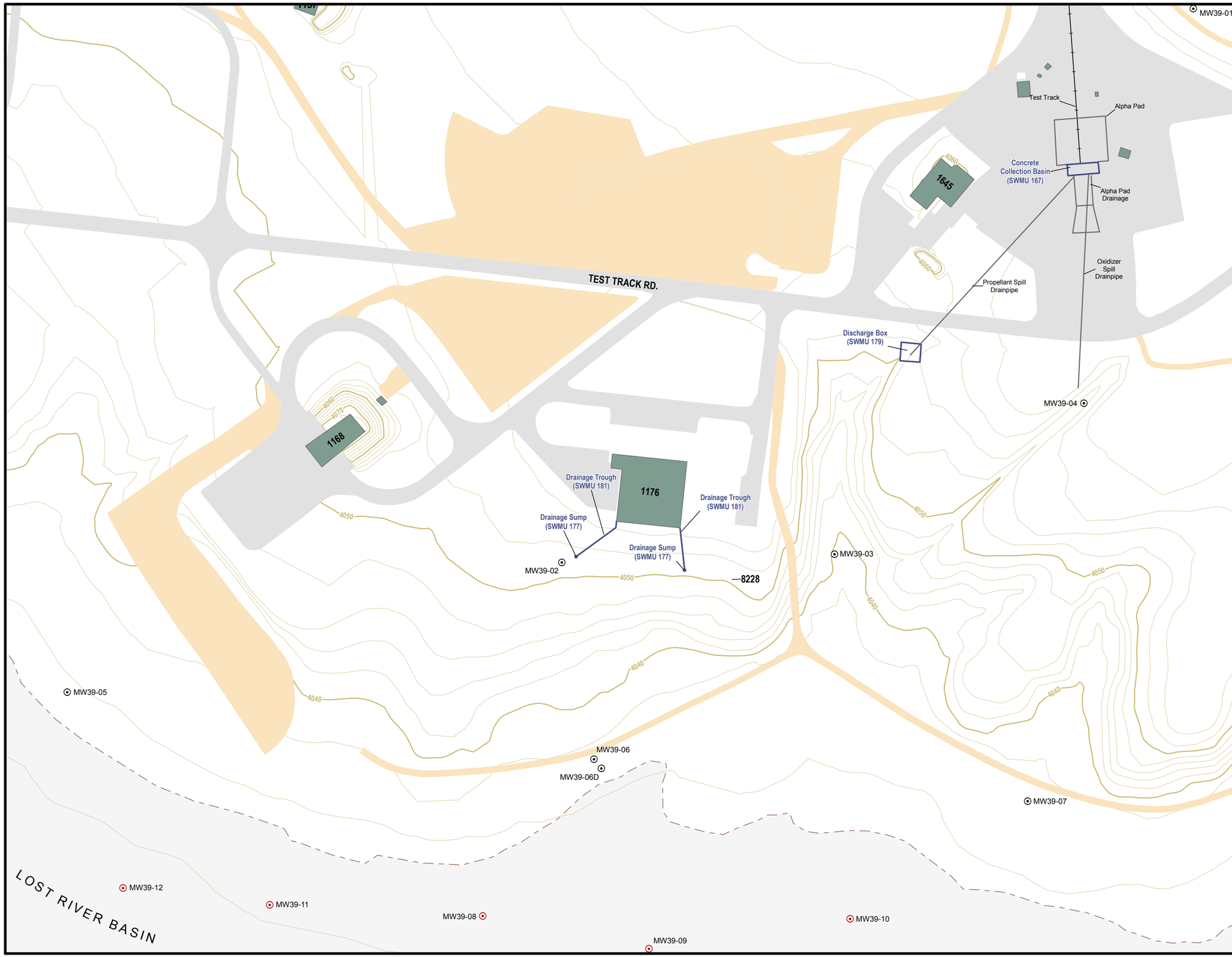
N

0 50 100 200
FEET

APRIL 2009 - JANUARY 2010
LONG-TERM MONITORING REPORT
HOLLOMAN AIR FORCE BASE
ALAMOGORDO, NEW MEXICO

TETRA TECH

FIGURE 2-4
DP-30/SD-33 SITE MAP



ARCMAP FILENAME: Fig2-5 LTM.mxd
DATE: 4-23-2010
SOURCE: HGL

ALL COORDINATES ARE ON THE NEW MEXICO STATE PLANE, CENTRAL ZONE IN FEET BASED ON NAD83 ADJUSTMENT OF 1996. THE VERTICAL CONTROL REFERENCE DATUM IS NAVD88.

LEGEND

- PERMANENT MONITORING WELL
- PRE-PACKED MONITORING WELL (INSTALLED DURING SAMPLING)
- INDEX CONTOUR (10')
- INTERVAL CONTOUR (2')
- 14 HOLLOMAN AFB BUILDING
- ROAD/PARKING (PAVED)
- ROAD/PARKING (UNPAVED)
- WETLAND AREA
- SWMU BOUNDARY

N

0 60 120 240
FEET

APRIL 2009 - JANUARY 2010
LONG-TERM MONITORING REPORT
HOLLOMAN AIR FORCE BASE
ALAMOGORDO, NEW MEXICO

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FIGURE 2-5
SS-39 SITE MAP

ARCMAP FILENAME: Fig4-1 LTM.mxd
DATE: 4-23-2010
SOURCE: HGL

ALL COORDINATES ARE ON THE NEW MEXICO STATE PLANE, CENTRAL ZONE IN FEET BASED ON NAD83 ADJUSTMENT OF 1996. THE VERTICAL CONTROL REFERENCE DATUM IS NAVD88.

LEGEND

- MONITORING WELL
- GROUNDWATER ELEVATION COUNTOUR (FT. MSL)
- EXCAVATION AREA
- 14 HOLLOMAN AFB BUILDING
- ROAD AREA
- PAVED PARKING
- CONCRETE PAD/WALK
- INDEX CONTOUR (10')
- INTERVAL CONTOUR (2')

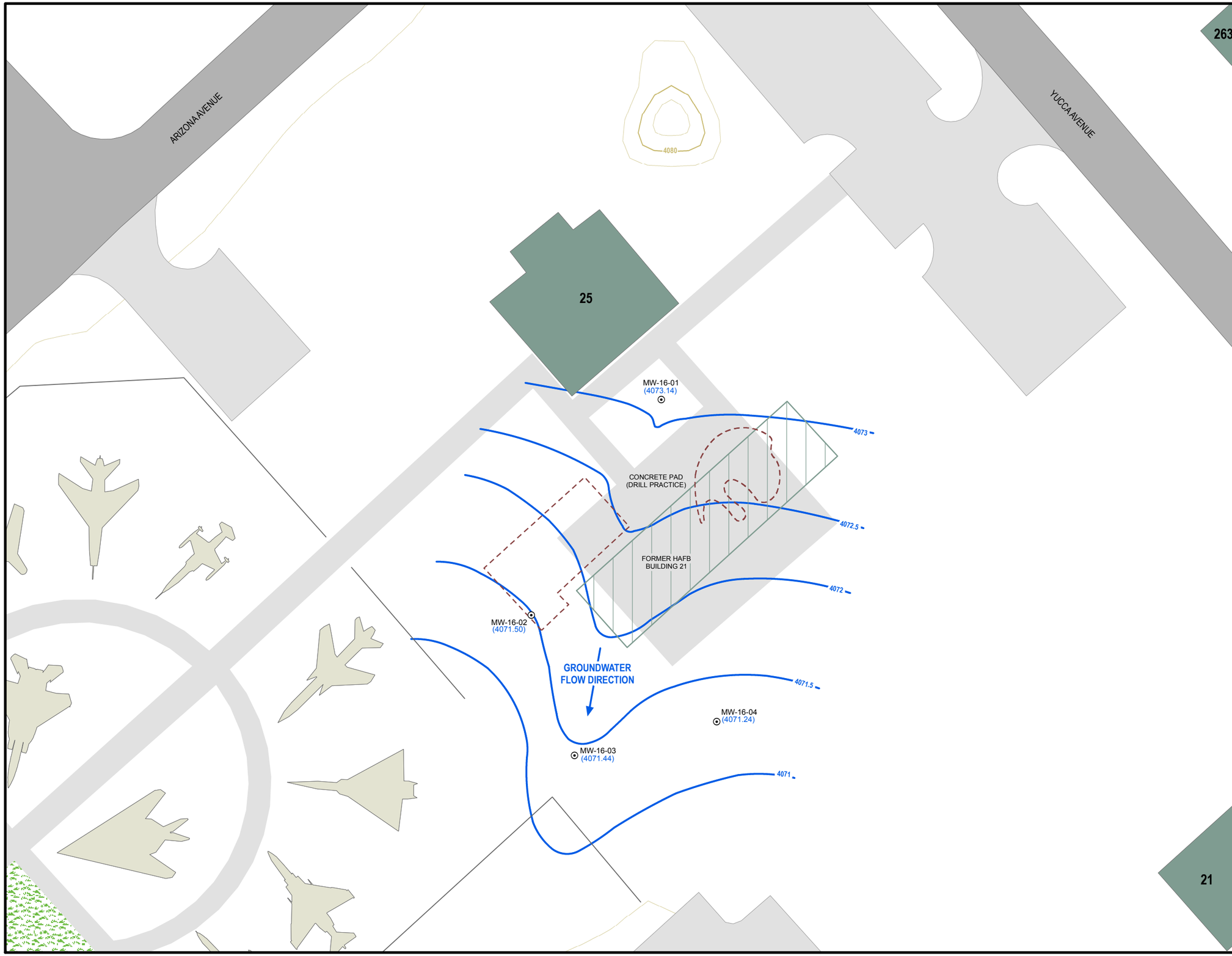
N

0 20 40 80
FEET

APRIL 2009 - JANUARY 2010
LONG-TERM MONITORING REPORT
HOLLOMAN AIR FORCE BASE
ALAMOGORDO, NEW MEXICO

TETRA TECH

FIGURE 4-1
OT-16 GROUNDWATER POTENTIOMETRIC SURFACE MAP (APRIL, 2009)



ARCMAP FILENAME: Fig4-2 LTM.mxd
DATE: 4-23-2010
SOURCE: HGL

ALL COORDINATES ARE ON THE NEW MEXICO STATE PLANE, CENTRAL ZONE IN FEET BASED ON NAD83 ADJUSTMENT OF 1996. THE VERTICAL CONTROL REFERENCE DATUM IS NAVD88.

LEGEND

- MONITORING WELL
- GROUNDWATER ELEVATION COUNTOUR (FT. MSL)
- EXCAVATION AREA
- 14 HOLLOMAN AFB BUILDING
- ROAD AREA
- PAVED PARKING
- CONCRETE PAD/WALK
- INDEX CONTOUR (10')
- INTERVAL CONTOUR (2')

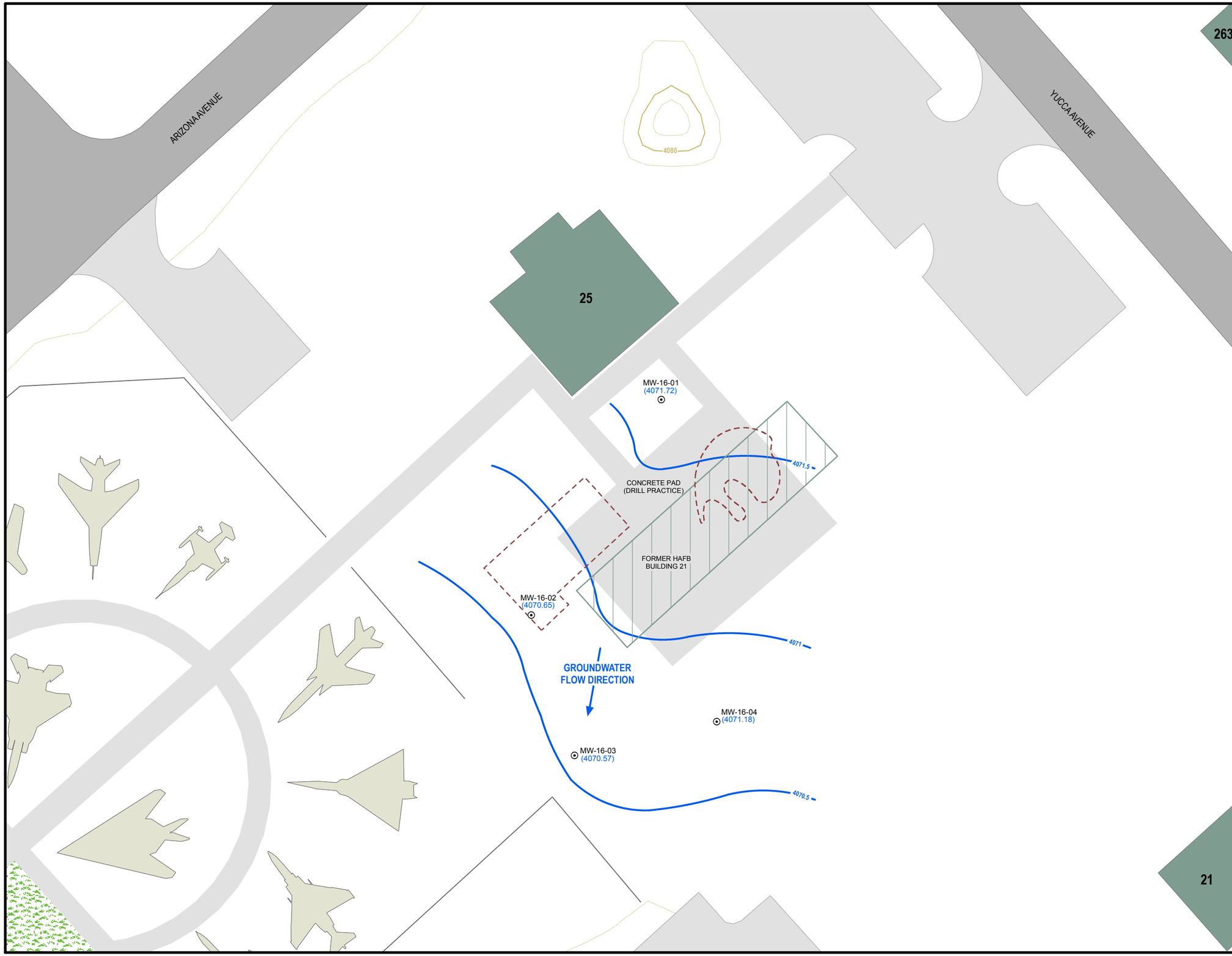
N

0 20 40 80
FEET

APRIL 2009 - JANUARY 2010
LONG-TERM MONITORING REPORT
HOLLOMAN AIR FORCE BASE
ALAMOGORDO, NEW MEXICO

TETRA TECH

FIGURE 4-2
OT-16 GROUNDWATER
POTENTIOMETRIC SURFACE
MAP (JULY, 2009)



ARCMAP FILENAME: Fig4-3 LTM.mxd
DATE: 4-23-2010
SOURCE: HGL

ALL COORDINATES ARE ON THE NEW MEXICO STATE PLANE, CENTRAL ZONE IN FEET BASED ON NAD83 ADJUSTMENT OF 1996. THE VERTICAL CONTROL REFERENCE DATUM IS NAVD88.

LEGEND

- MONITORING WELL
- GROUNDWATER ELEVATION COUNTOUR (FT. MSL)
- EXCAVATION AREA
- 14 HOLLOMAN AFB BUILDING
- ROAD AREA
- PAVED PARKING
- CONCRETE PAD/WALK
- INDEX CONTOUR (10')
- INTERVAL CONTOUR (2')

N

0 20 40 80
FEET

APRIL 2009 - JANUARY 2010
LONG-TERM MONITORING REPORT
HOLLOMAN AIR FORCE BASE
ALAMOGORDO, NEW MEXICO

TETRA TECH

FIGURE 4-3
OT-16 GROUNDWATER
POTENTIOMETRIC SURFACE
MAP (OCTOBER, 2009)

ARCMAP FILENAME: Fig4-3 LTM.mxd
DATE: 4-23-2010
SOURCE: HGL

ALL COORDINATES ARE ON THE NEW MEXICO STATE PLANE, CENTRAL ZONE IN FEET BASED ON NAD83 ADJUSTMENT OF 1996. THE VERTICAL CONTROL REFERENCE DATUM IS NAVD88.

LEGEND

- MONITORING WELL
- GROUNDWATER ELEVATION COUNTOUR (FT. MSL)
- EXCAVATION AREA
- 14 HOLLOMAN AFB BUILDING
- ROAD AREA
- PAVED PARKING
- CONCRETE PAD/WALK
- INDEX CONTOUR (10')
- INTERVAL CONTOUR (2')

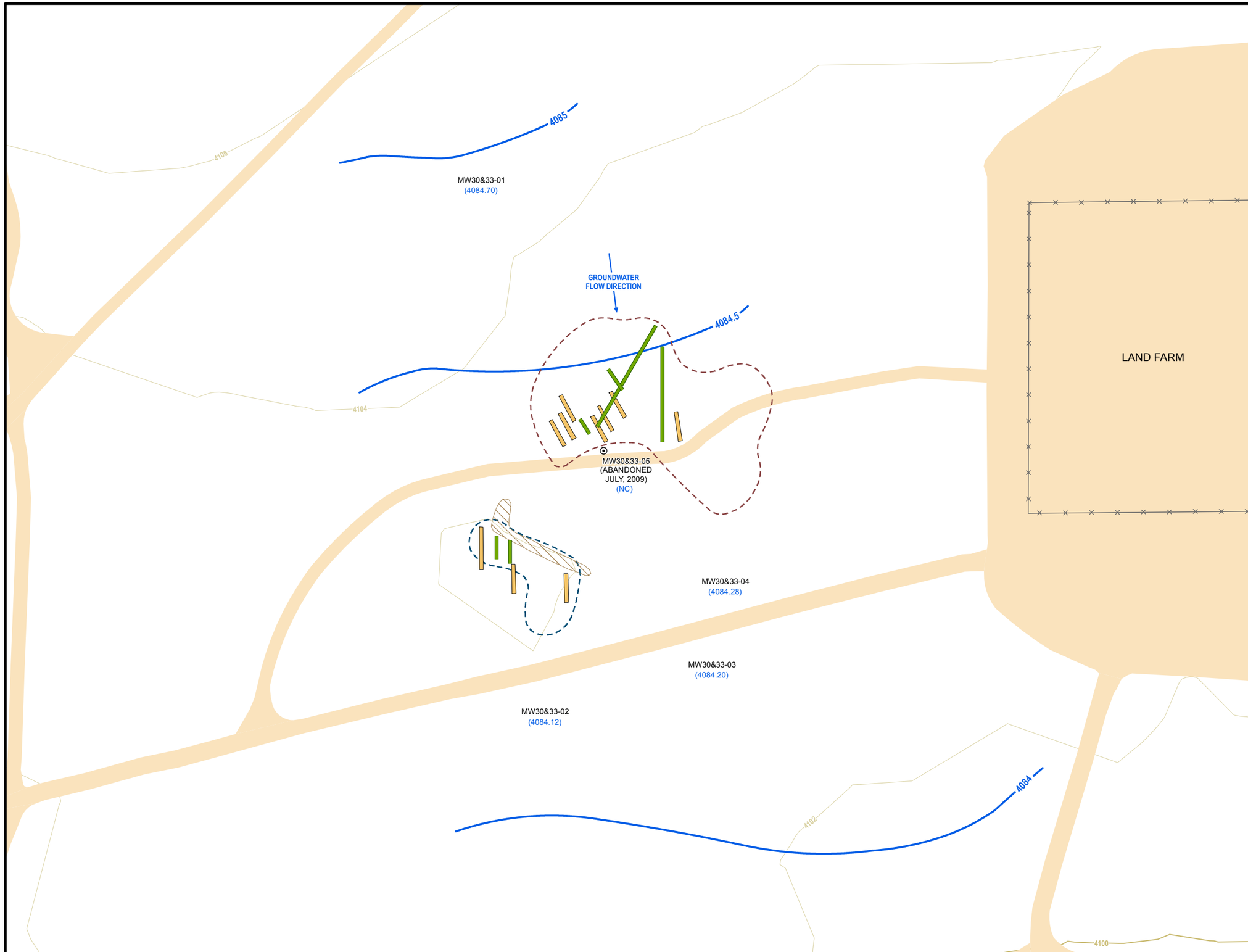
N

0 20 40 80
FEET

APRIL 2009 - JANUARY 2010
LONG-TERM MONITORING REPORT
HOLLOMAN AIR FORCE BASE
ALAMOGORDO, NEW MEXICO

TETRA TECH

FIGURE 4-4
OT-16 GROUNDWATER POTENTIOMETRIC SURFACE MAP (JANUARY, 2010)



ARCMAP FILENAME: Fig4-5 LTM.mxd
DATE: 3-8-2010
SOURCE: HGL

ALL COORDINATES ARE ON THE NEW MEXICO STATE PLANE, CENTRAL ZONE IN FEET BASED ON NAD83 ADJUSTMENT OF 1996. THE VERTICAL CONTROL REFERENCE DATUM IS NAVD88.

LEGEND

- MONITORING WELLS
- GROUNDWATER ELEVATION CONTOUR (FT. MSL)
- INDEX CONTOUR (10')
- INTERVAL CONTOUR (2')
- RFI OBSERVED TRENCHES
- RI OBSERVED TRENCHES
- DP-30 SITE BOUNDARY
- SD-33 SITE BOUNDARY
- SOIL BERM
- LAND FARM FENCE
- ROAD/PARKING (UNPAVED)

NOTES:

1) NC - NOT COLLECTED DUE TO WELL DAMAGE

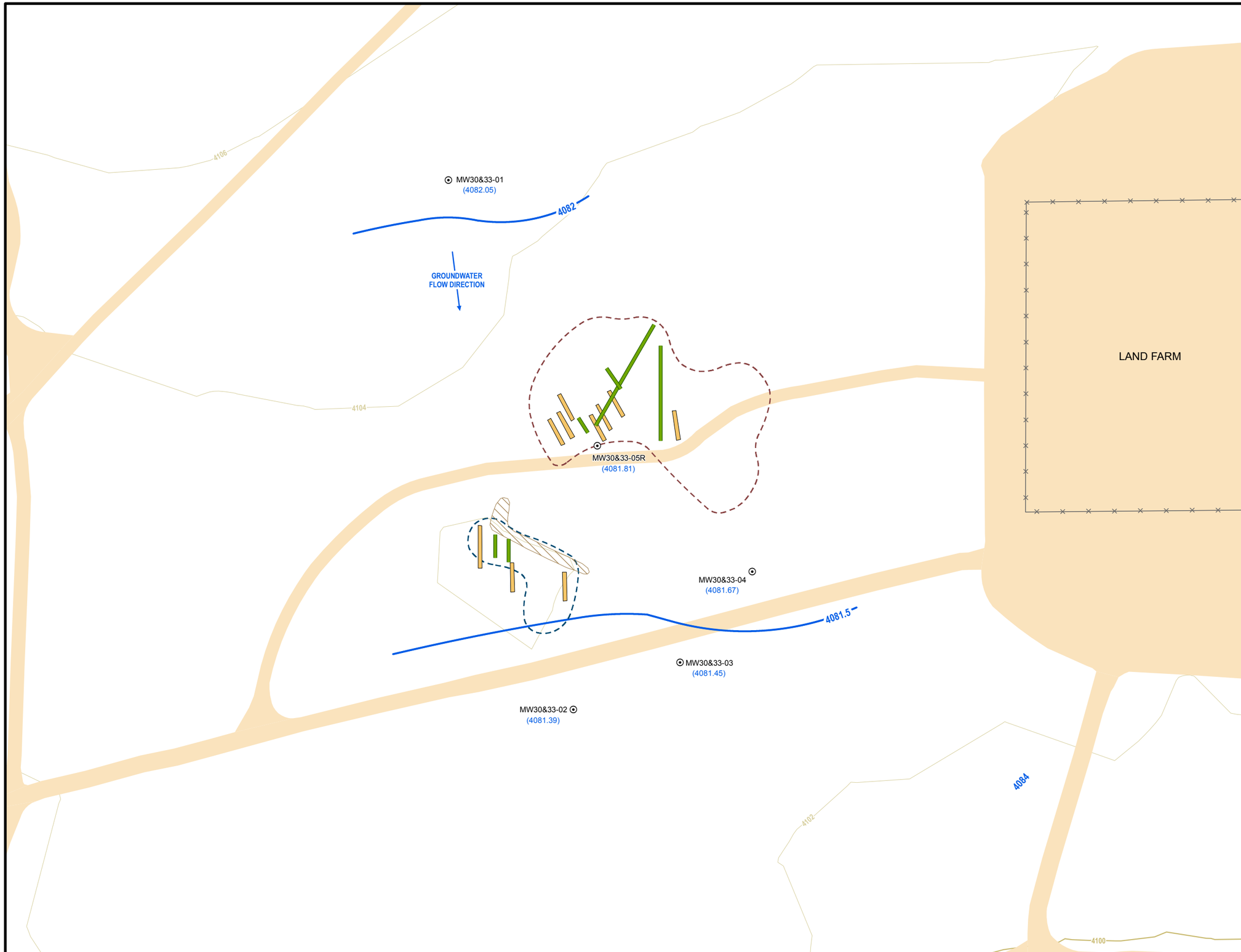
N

0 50 100 200
FEET

APRIL 2009 - JANUARY 2010
LONG-TERM MONITORING REPORT
HOLLOMAN AIR FORCE BASE
ALAMOGORDO, NEW MEXICO

TETRA TECH

FIGURE 4-5
DP-30/SD-33 GROUNDWATER POTENTIOMETRIC SURFACE MAP (JULY, 2009)



ARCMAP FILENAME: Fig4-6 LTM.mxd
DATE: 4-23-2010
SOURCE: HGL

ALL COORDINATES ARE ON THE NEW MEXICO STATE PLANE, CENTRAL ZONE IN FEET BASED ON NAD83 ADJUSTMENT OF 1996. THE VERTICAL CONTROL REFERENCE DATUM IS NAVD88.

LEGEND

- MONITORING WELLS
- GROUNDWATER ELEVATION CONTOUR (FT. MSL)
- INDEX CONTOUR (10')
- INTERVAL CONTOUR (2')
- RFI OBSERVED TRENCHES
- RI OBSERVED TRENCHES
- DP-30 SITE BOUNDARY
- SD-33 SITE BOUNDARY
- SOIL BERM
- LAND FARM FENCE
- ROAD/PARKING (UNPAVED)

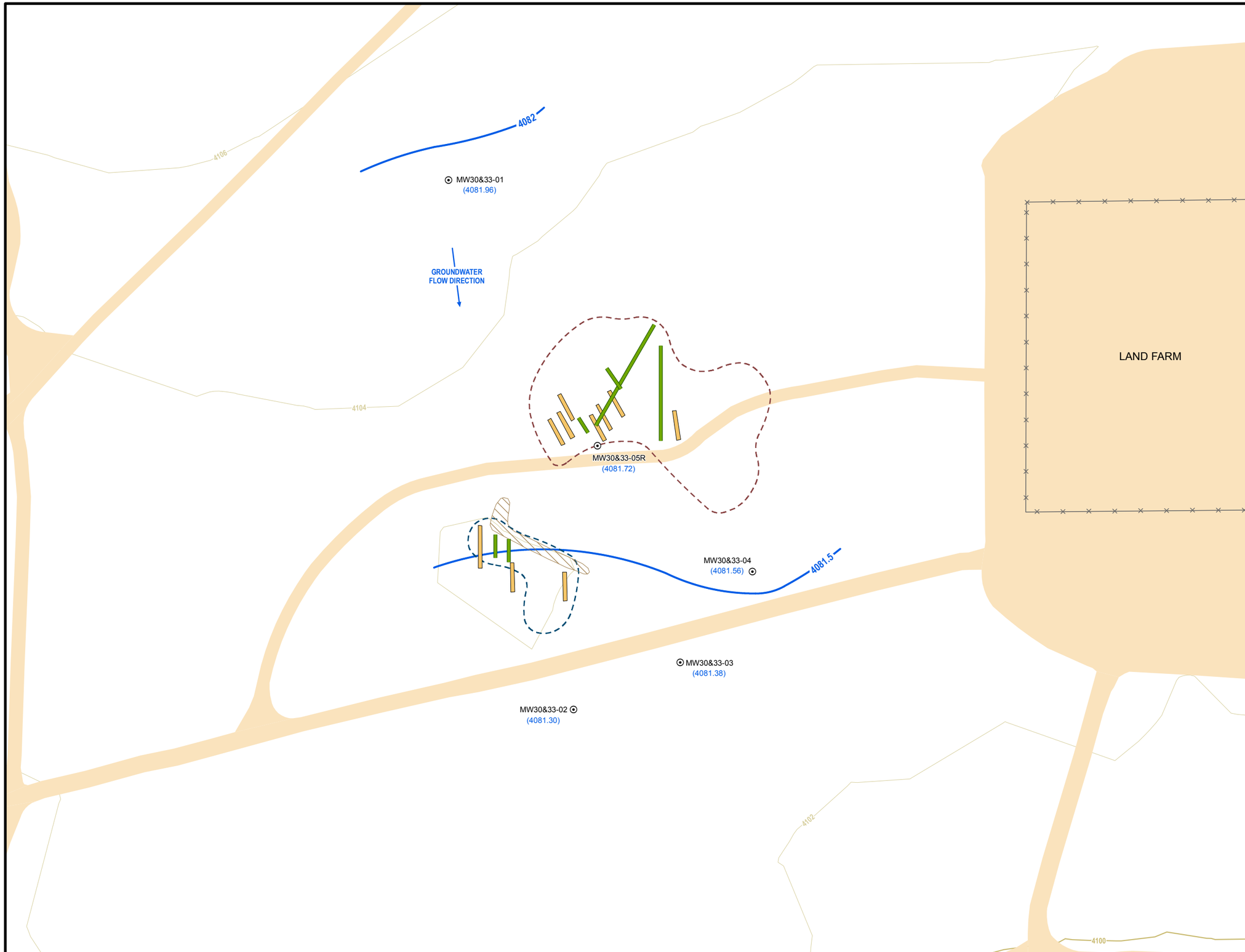
N

0 50 100 200
FEET

APRIL 2009 - JANUARY 2010
LONG-TERM MONITORING REPORT
HOLLOMAN AIR FORCE BASE
ALAMOGORDO, NEW MEXICO

TETRA TECH

FIGURE 4-6
DP-30/SD-33 GROUNDWATER POTENTIOMETRIC SURFACE MAP (OCTOBER, 2009)



ARCMAP FILENAME: Fig4-7 LTM.mxd
DATE: 4-23-2010
SOURCE: HGL

ALL COORDINATES ARE ON THE NEW MEXICO STATE PLANE, CENTRAL ZONE IN FEET BASED ON NAD83 ADJUSTMENT OF 1996. THE VERTICAL CONTROL REFERENCE DATUM IS NAVD88.

LEGEND

- MONITORING WELLS
- GROUNDWATER ELEVATION CONTOUR (FT. MSL)
- INDEX CONTOUR (10')
- INTERVAL CONTOUR (2')
- RFI OBSERVED TRENCHES
- RI OBSERVED TRENCHES
- DP-30 SITE BOUNDARY
- SD-33 SITE BOUNDARY
- SOIL BERM
- LAND FARM FENCE
- ROAD/PARKING (UNPAVED)

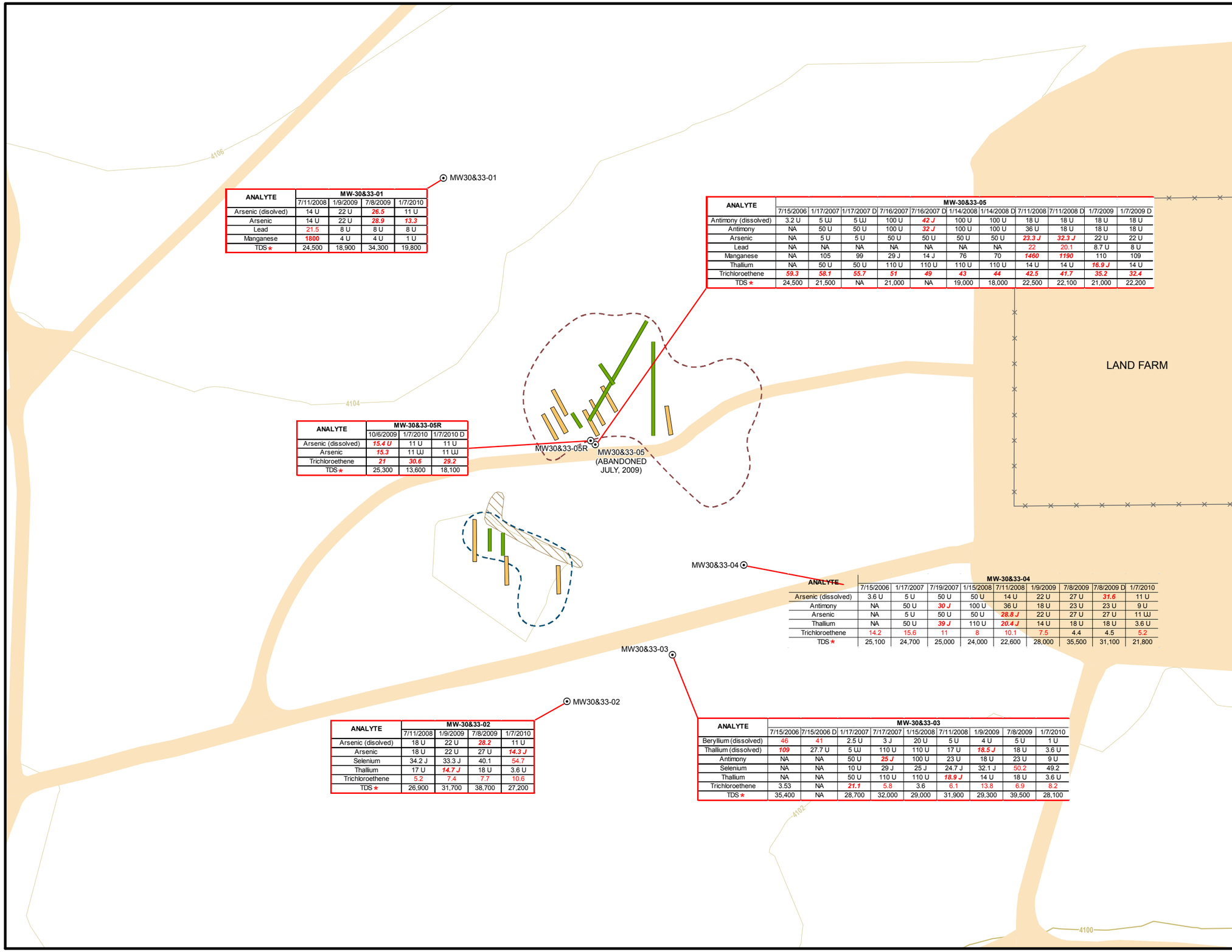
N

0 50 100 200
FEET

APRIL 2009 - JANUARY 2010
LONG-TERM MONITORING REPORT
HOLLOMAN AIR FORCE BASE
ALAMOGORDO, NEW MEXICO

TETRA TECH

FIGURE 4-7
DP-30/SD-33 GROUNDWATER POTENTIOMETRIC SURFACE MAP (JANUARY, 2010)



ANALYTE	MW-30&33-01			
	7/11/2008	1/9/2009	7/8/2009	1/7/2010
Arsenic (disolved)	14 U	22 U	***26.5***	11 U
Arsenic	14 U	22 U	***28.9***	***13.3***
Lead	21.5	8 U	8 U	8 U
Manganese	**1800**	4 U	4 U	1 U
TDS *	24,500	18,900	34,300	19,800

ANALYTE	MW-30&33-05										
	7/15/2006	1/17/2007	1/17/2007 D	7/16/2007	7/16/2007 D	1/14/2008	1/14/2008 D	7/11/2008	7/11/2008 D	1/7/2009	1/7/2009 D
Antimony (dissolved)	3.2 U	5 UJ	5 UJ	100 U	***42 J***	100 U	100 U	18 U	18 U	18 U	18 U
Antimony	NA	50 U	50 U	100 U	***32 J***	100 U	100 U	36 U	18 U	18 U	18 U
Arsenic	NA	5 U	5 U	50 U	50 U	50 U	50 U	***23.3 J***	***32.3 J***	22 U	22 U
Lead	NA	NA	NA	NA	NA	NA	NA	22	20.1	8.7 U	8 U
Manganese	NA	105	99	29 J	14 J	76	70	***1460***	***1190***	110	109
Thallium	NA	50 U	50 U	110 U	110 U	110 U	110 U	14 U	14 U	***16.9 J***	14 U
Trichloroethene	***59.3***	***58.1***	***55.7***	***51***	***49***	***43***	***44***	***42.5***	***41.7***	***35.2***	***32.4***
TDS *	24,500	21,500	NA	21,000	NA	19,000	18,000	22,500	22,100	21,000	22,200

ANALYTE	MW-30&33-05R		
	10/6/2009	1/7/2010	1/7/2010 D
Arsenic (dissolved)	***15.4 U***	11 U	11 U
Arsenic	***15.3***	11 UJ	11 UJ
Trichloroethene	***21***	***30.6***	***29.2***
TDS *	25,300	13,600	18,100

ANALYTE	MW-30&33-04								
	7/15/2006	1/17/2007	7/19/2007	1/15/2008	7/11/2008	1/9/2009	7/8/2009	7/8/2009 D	1/7/2010
Arsenic (dissolved)	3.6 U	5 U	50 U	50 U	14 U	22 U	27 U	***31.6***	11 U
Antimony	NA	50 U	***30 J***	100 U	36 U	18 U	23 U	23 U	9 U
Arsenic	NA	5 U	50 U	50 U	***28.8 J***	22 U	27 U	27 U	11 UJ
Thallium	NA	50 U	***39 J***	110 U	***20.4 J***	14 U	18 U	18 U	3.6 U
Trichloroethene	14.2	15.6	11	8	10.1	7.5	4.4	4.5	5.2
TDS *	25,100	24,700	25,000	24,000	22,600	28,000	35,500	31,100	21,800

ANALYTE	MW-30&33-02			
	7/11/2008	1/9/2009	7/8/2009	1/7/2010
Arsenic (disolved)	18 U	22 U	***28.2***	11 U
Arsenic	18 U	22 U	27 U	***14.3 J***
Selenium	34.2 J	33.3 J	40.1	54.7
Thallium	17 U	***14.7 J***	18 U	3.6 U
Trichloroethene	5.2	7.4	7.7	10.6
TDS *	26,900	31,700	38,700	27,200

ANALYTE	MW-30&33-03								
	7/15/2006	7/15/2006 D	1/17/2007	7/17/2007	1/15/2008	7/11/2008	1/9/2009	7/8/2009	1/7/2010
Beryllium (dissolved)	46	41	2.5 U	3 J	20 U	5 U	4 U	5 U	1 U
Thallium (dissolved)	***109***	27.7 U	5 UJ	110 U	110 U	17 U	***18.5 J***	18 U	3.6 U
Antimony	NA	NA	50 U	***25 J***	100 U	23 U	18 U	23 U	9 U
Selenium	NA	NA	10 U	29 J	25 J	24.7 J	32.1 J	50.2	49.2
Thallium	NA	NA	50 U	110 U	110 U	***18.9 J***	14 U	18 U	3.6 U
Trichloroethene	3.53	NA	***21.1***	5.8	3.6	6.1	13.8	6.9	8.2
TDS *	35,400	NA	28,700	32,000	29,000	31,900	29,300	39,500	28,100

ARCMAP FILENAME: Fig4-8 LTM.mxd
DATE: 3-8-2010
SOURCE: HGL

ALL COORDINATES ARE ON THE NEW MEXICO STATE PLANE, CENTRAL ZONE IN FEET BASED ON NAD83 ADJUSTMENT OF 1996. THE VERTICAL CONTROL REFERENCE DATUM IS NAVD88.

LEGEND

- MONITORING WELL
- INDEX CONTOUR (10')
- INTERVAL CONTOUR (2')
- RFI OBSERVED TRENCHES
- RI OBSERVED TRENCHES
- DP-30 SITE BOUNDARY
- SD-33 SITE BOUNDARY
- SOIL BERM
- ROAD/PARKING (UNPAVED)

GROUNDWATER EXCEEDANCE THRESHOLDS

ANALYTE	NMWQ (NMAC 20.6.2.3103)	EPA MCL (DEC. 2009)
Antimony - dissolved (µg/L)	14.6	6
Arsenic - dissolved (µg/L)	0.448	10
Beryllium - dissolved (µg/L)	73	4
Thallium - dissolved (µg/L)	2.409	2
Antimony (µg/L)	14.6	6
Arsenic (µg/L)	0.448	10
Lead (µg/L)	n/a	15
Manganese (µg/L)	876	n/a
Selenium (µg/L)	182.5	50
Thallium (µg/L)	2.409	2
Trichloroethene (µg/L)	16.5434842	5

* THE TDS CONCENTRATIONS IN ALL OF THE MONITORING WELLS WERE ABOVE 10,000 mg/L, WHICH IS THE POINT WHERE GROUNDWATER IS NO LONGER CONSIDERED A POTENTIAL DOMESTIC OR AGRICULTURAL WATER SUPPLY. (NMAC, 20.6.2.3101)

NOTES:

1) D - DUPLICATE
2) NA - NOT ANALYZED
3) TDS - SOLIDS, TOTAL DISSOLVED
4) QUALIFIER 'U' - NOT DETECTED
5) QUALIFIER 'J' - ESTIMATED VALUE
6) RED VALUES EXCEED EPA MCLS
7) **RED and BOLD** EXCEED NMWQ STANDARDS
8) ***RED, BOLD and ITALICIZED*** VALUES EXCEED BOTH EPA AND NMWQ STANDARDS

N

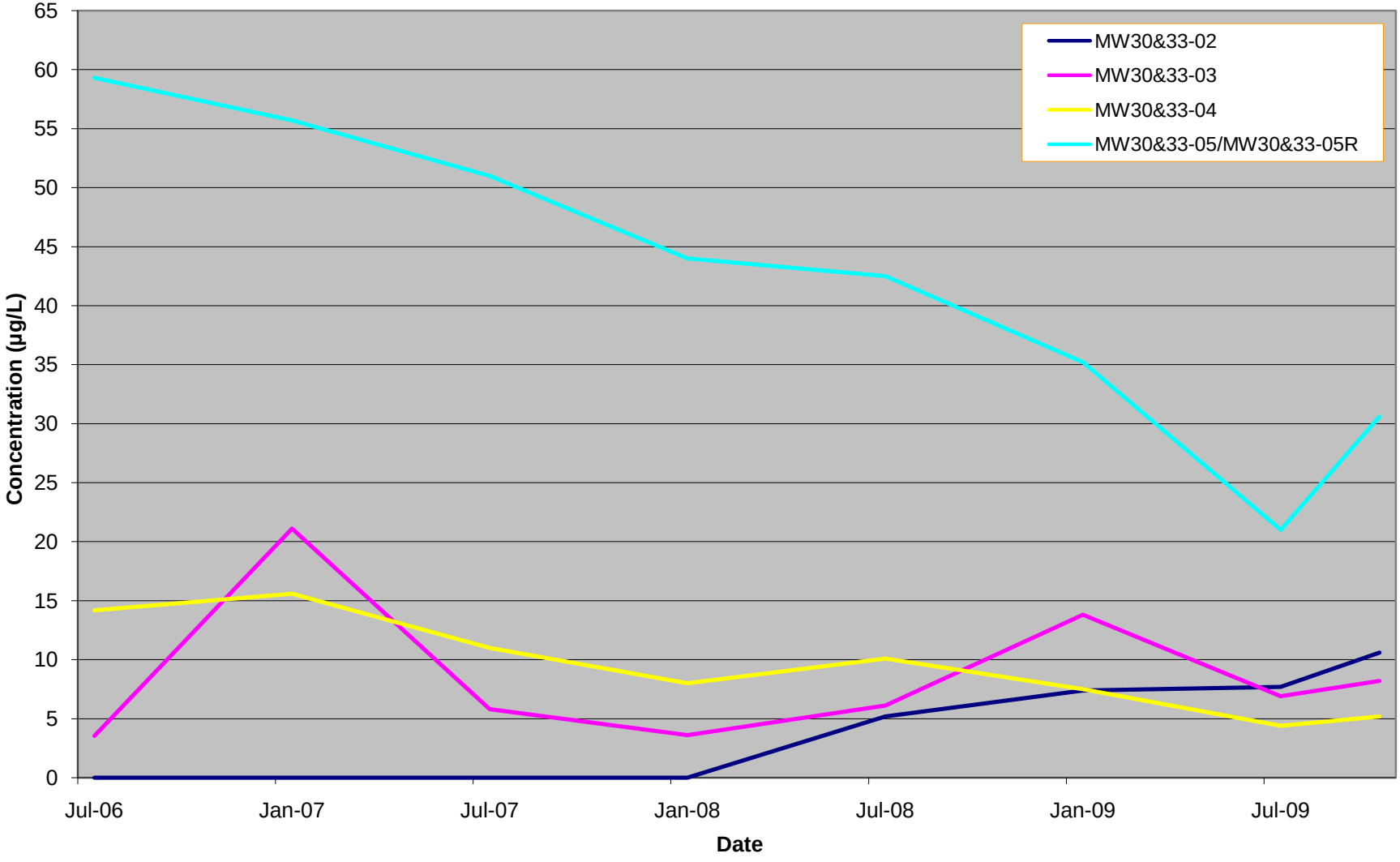
0 50 100 200
FEET

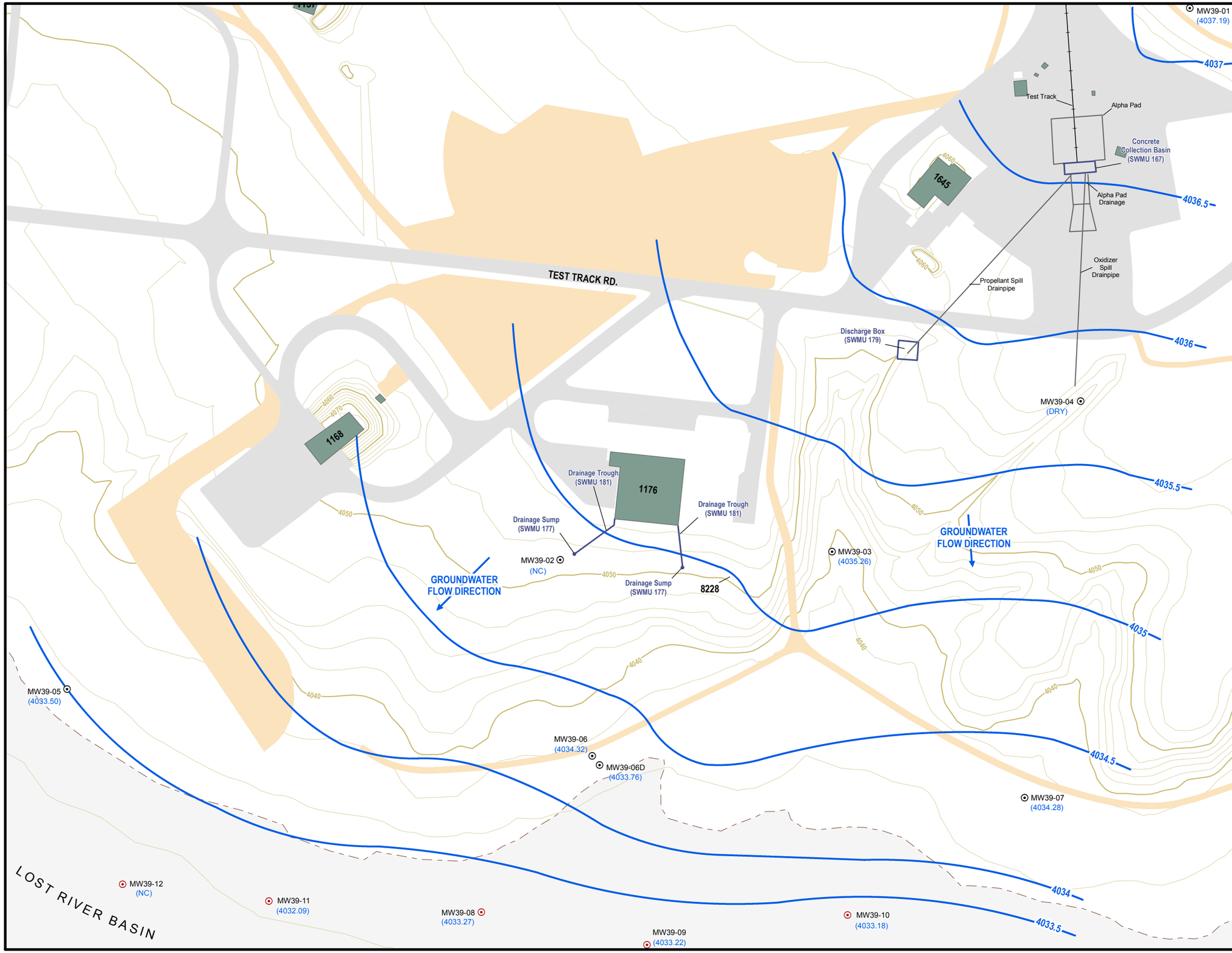
APRIL 2009 - JANUARY 2010
LONG-TERM MONITORING REPORT
HOLLOMAN AIR FORCE BASE
ALAMOGORDO, NEW MEXICO

TETRA TECH

FIGURE 4-8
DP-30/SD-33 GROUNDWATER SAMPLING EXCEEDANCES

Figure 4-9
Trichloroethene (TCE) Trends at DP-30/SD-33
Holloman AFB, New Mexico





ARCMAP FILENAME: Fig4-10 LTM.mxd
DATE: 4-23-2010
SOURCE: HGL

ALL COORDINATES ARE ON THE NEW MEXICO STATE PLANE, CENTRAL ZONE IN FEET BASED ON NAD83 ADJUSTMENT OF 1996. THE VERTICAL CONTROL REFERENCE DATUM IS NAVD88.

LEGEND

- PERMANENT MONITORING WELL
- PRE-PACKED MONITORING WELL (INSTALLED DURING SAMPLING)
- GROUNDWATER ELEVATION CONTOUR (FT. MSL)
- INDEX CONTOUR (10')
- INTERVAL CONTOUR (2')
- 14 HOLLOMAN AFB BUILDING
- ROAD/PARKING (PAVED)
- ROAD/PARKING (UNPAVED)
- WETLAND AREA
- SWMU BOUNDARY

NOTES:

1) NC - NOT COLLECTED

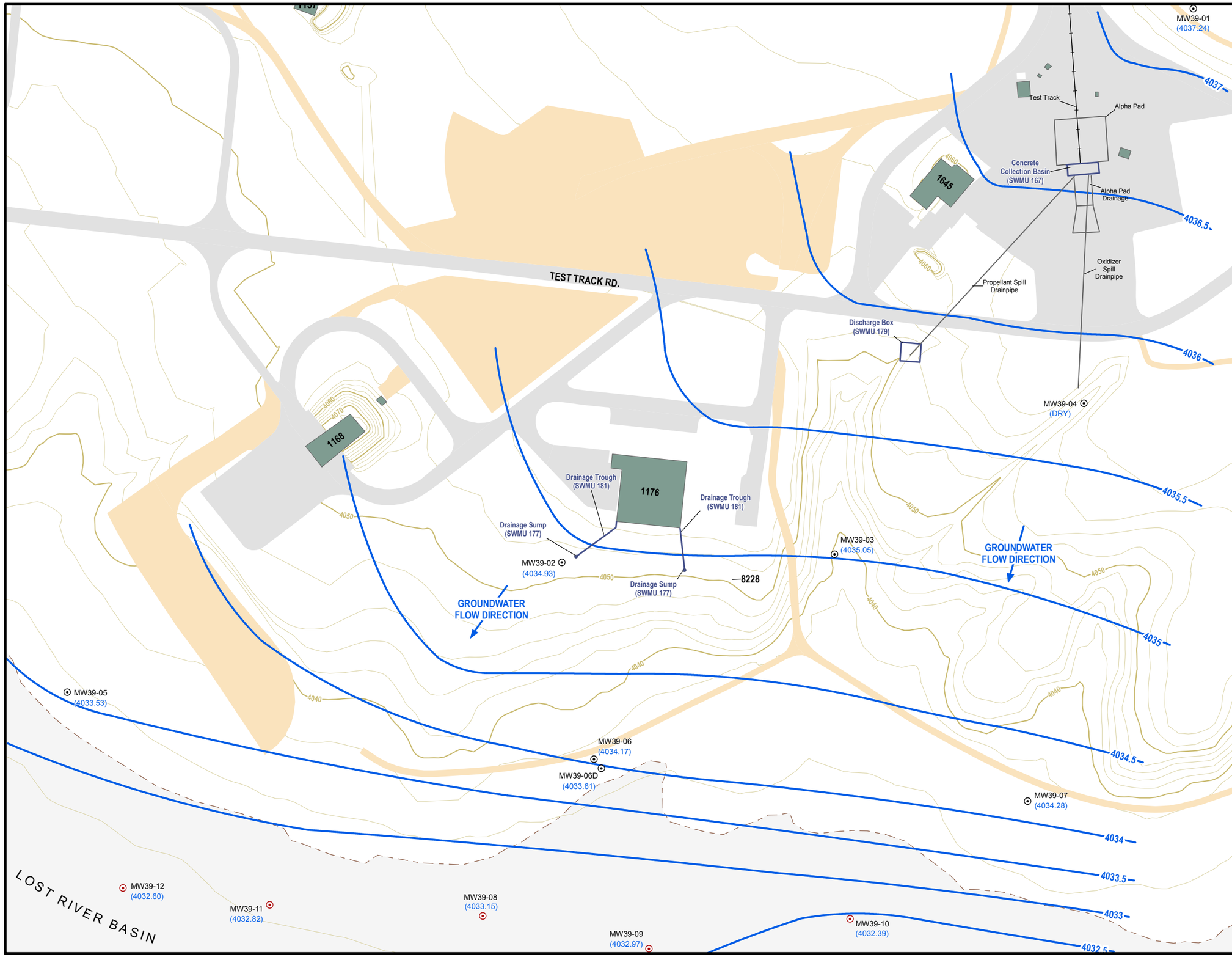
N

0 60 120 240
FEET

APRIL 2009 - JANUARY 2010
LONG-TERM MONITORING REPORT
HOLLOMAN AIR FORCE BASE
ALAMOGORDO, NEW MEXICO

TETRA TECH

FIGURE 4-10
SS-39 GROUNDWATER POTENTIOMETRIC SURFACE MAP (JULY, 2009)



ARCMAP FILENAME: Fig4-11 LTM.mxd
DATE: 4-23-2010
SOURCE: HGL

ALL COORDINATES ARE ON THE NEW MEXICO STATE PLANE, CENTRAL ZONE IN FEET BASED ON NAD83 ADJUSTMENT OF 1996. THE VERTICAL CONTROL REFERENCE DATUM IS NAVD88.

LEGEND

- PERMANENT MONITORING WELL
- PRE-PACKED MONITORING WELL (INSTALLED DURING SAMPLING)
- GROUNDWATER ELEVATION CONTOUR (FT. MSL)
- INDEX CONTOUR (10')
- INTERVAL CONTOUR (2')
- 14 HOLLOMAN AFB BUILDING
- ROAD/PARKING (PAVED)
- ROAD/PARKING (UNPAVED)
- WETLAND AREA
- SWMU BOUNDARY

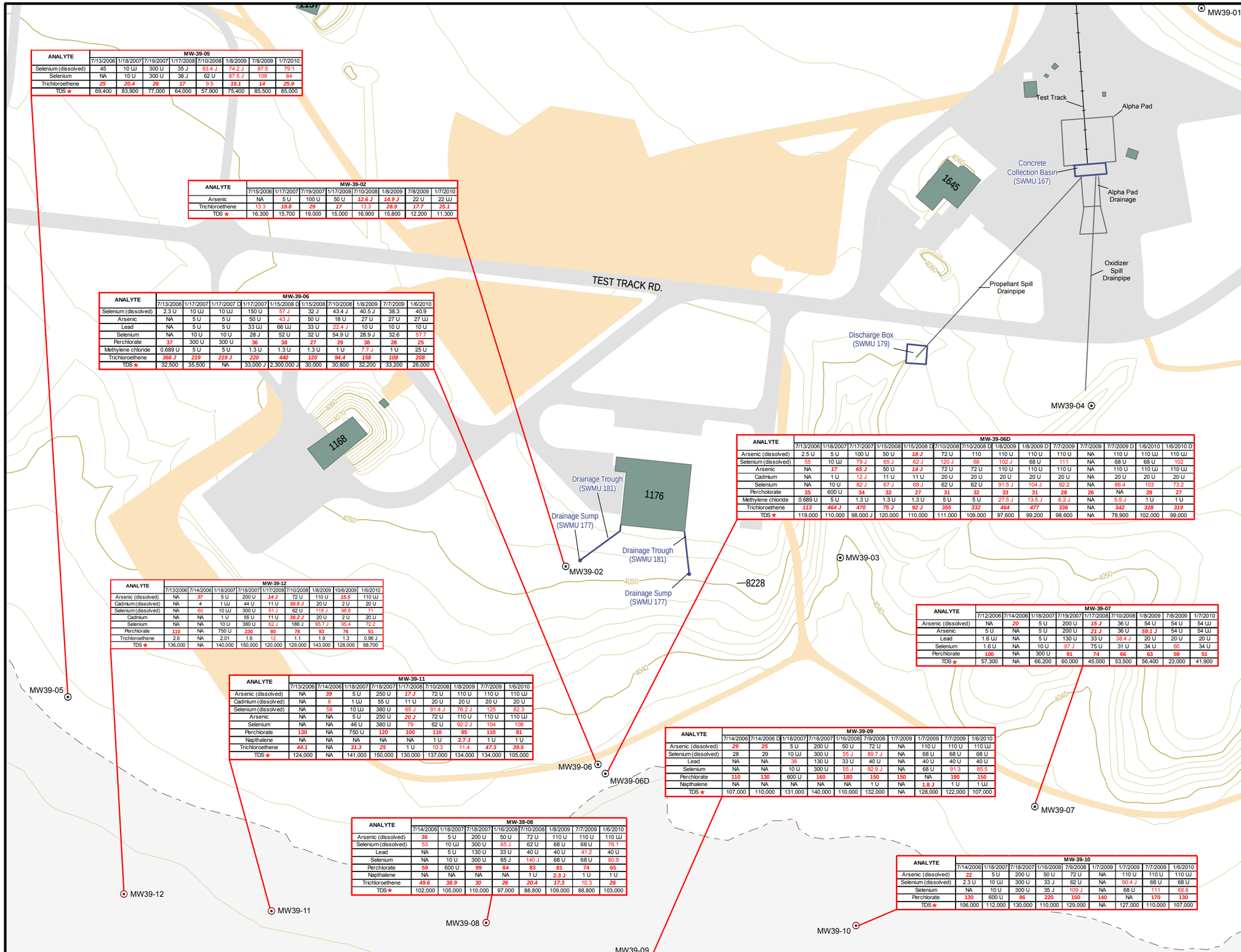
N

0 60 120 240
FEET

APRIL 2009 - JANUARY 2010
LONG-TERM MONITORING REPORT
HOLLOMAN AIR FORCE BASE
ALAMOGORDO, NEW MEXICO

TETRA TECH

FIGURE 4-11
SS-39 GROUNDWATER POTENTIOMETRIC SURFACE MAP (JANUARY, 2010)



ANALYTE	MW-39-05							
	7/13/2006	1/18/2007	7/19/2007	1/17/2008	7/10/2008	1/8/2009	7/8/2009	1/7/2010
Selenium (dissolved)	45	10 UJ	300 U	35 J	93.4 J	74.2 J	87.5	79.1
Selenium	NA	10 U	300 U	38 J	62 U	87.5 J	109	84
Trichloroethene	***25***	***20.4***	***26***	***17***	9.5	***19.1***	***14***	***25.9***
TDS *	69,400	83,900	77,000	64,000	57,900	75,400	85,500	85,000

ANALYTE	MW-39-02							
	7/15/2006	1/17/2007	7/19/2007	1/17/2008	7/10/2008	1/8/2009	7/8/2009	1/7/2010
Arsenic	NA	5 U	100 U	50 U	***12.6 J***	***14.9 J***	22 U	22 UJ
Trichloroethene	13.3	***19.8***	***29***	***17***	13.3	***28.9***	***17.7***	***25.1***
TDS *	16,300	15,700	19,000	15,000	16,900	15,800	12,200	11,300

ANALYTE	MW-39-06									
	7/13/2006	1/17/2007	1/17/2007 D	1/17/2007	1/15/2008 D	1/15/2008	7/10/2008	1/8/2009	7/7/2009	1/6/2010
Selenium (dissolved)	2.3 U	10 UJ	10 UJ	150 U	57 J	32 J	43.4 J	40.5 J	38.3	40.9
Arsenic	NA	5 U	5 U	50 U	43 J	50 U	18 U	27 U	27 U	27 UJ
Lead	NA	5 U	5 U	33 UJ	66 UJ	33 U	22.4 J	10 U	10 U	10 U
Selenium	NA	10 U	10 U	28 J	52 U	32 U	54.9 U	28.9 J	32.6	57.7
Perchlorate	37	300 U	300 U	36	38	27	29	38	28	25
Methylene chloride	0.689 U	5 U	5 U	1.3 U	1.3 U	1.3 U	1 U	7.7 J	1 U	25 U
Trichloroethene	***366 J***	***219***	***219 J***	***220***	***440***	***120***	***94.4***	***158***	***108***	***208***
TDS *	32,500	35,500	NA	33,000 J	2,300,000 J	30,000	30,800	32,200	33,200	28,000

ANALYTE	MW-39-06D													
	7/13/2006	1/18/2007	7/17/2007	1/15/2008	1/15/2008 D	7/10/2008	7/10/2008 D	1/8/2009	1/8/2009 D	7/7/2009	7/7/2009	7/7/2009 D	1/6/2010	1/6/2010 D
Arsenic (dissolved)	2.5 U	5 U	100 U	50 U	***18 J***	72 U	110	110 U	110 U	110 U	NA	110 U	110 UJ	110 UJ
Selenium (dissolved)	55	10 UJ	79 J	65 J	62 J	120 J	68	102 J	68 U	111	NA	68 U	68 U	102
Arsenic	NA	***17***	***65 J***	50 U	***14 J***	72 U	72 U	110 U	110 U	110 U	NA	110 U	110 UJ	110 UJ
Cadmium	NA	1 U	12 J	11 U	11 U	20 U	20 U	20 U	20 U	20 U	NA	20 U	20 U	20 U
Selenium	NA	10 U	82 J	67 J	68 J	62 U	62 U	91.5 J	104 J	92.2	NA	86.4	103	73.2
Perchlorate	35	600 U	34	32	27	31	32	33	31	28	26	NA	28	27
Methylene chloride	0.689 U	5 U	1.3 U	1.3 U	1.3 U	5 U	5 U	27.5 J	13.5 J	6.2 J	NA	5.5 J	1 U	1 U
Trichloroethene	***113***	***464 J***	***470***	***75 J***	***92 J***	***355***	***332***	***464***	***477***	***336***	NA	***342***	***328***	***319***
TDS *	119,000	110,000	98,000 J	120,000	110,000	111,000	109,000	97,600	99,200	98,600	NA	78,900	102,000	99,000

ANALYTE	MW-39-12								
	7/13/2006	7/14/2006	1/18/2007	7/18/2007	1/17/2008	7/10/2008	1/8/2009	10/6/2009	1/6/2010
Arsenic (dissolved)	NA	***37***	5 U	200 U	***14 J***	72 U	110 U	***15.5***	110 UJ
Cadmium (dissolved)	NA	4	1 UJ	44 U	11 U	***30.5 J***	20 U	2 U	20 U
Selenium (dissolved)	NA	60	10 UJ	300 U	51 J	62 U	118 J	98.8	71
Cadmium	NA	NA	1 U	55 U	11 U	***38.2 J***	20 U	2 U	20 U
Selenium	NA	NA	10 U	380 U	62 J	186 J	95.7 J	95.4	72.2
Perchlorate	110	NA	750 U	230	80	78	93	76	51
Trichloroethene	2.6	NA	2.01	1.6	12	1.1	1.9	1.3	0.96 J
TDS *	136,000	NA	140,000	150,000	120,000	129,000	143,000	128,000	98,700

ANALYTE	MW-39-07								
	7/12/2006	7/14/2006	1/18/2007	7/19/2007	1/17/2008	7/10/2008	1/8/2009	7/8/2009	1/7/2010
Arsenic (dissolved)	NA	***20***	5 U	200 U	***15 J***	36 U	54 U	54 U	54 UJ
Arsenic	5 U	NA	5 U	200 U	***21 J***	36 U	***59.1 J***	54 U	54 UJ
Lead	1.6 UJ	NA	5 U	130 U	33 U	38.4 J	20 U	20 U	20 U
Selenium	1.6 U	NA	10 U	97 J	75 U	31 U	34 U	60	34 U
Perchlorate	100	NA	300 U	91	74	66	63	59	51
TDS *	57,300	NA	66,200	60,000	45,000	53,500	56,400	23,000	41,900

ANALYTE	MW-39-11								
	7/13/2006	7/14/2006	1/18/2007	7/18/2007	1/17/2008	7/10/2008	1/8/2009	7/7/2009	1/6/2010
Arsenic (dissolved)	NA	***39***	5 U	250 U	***17 J***	72 U	110 U	110 U	110 UJ
Cadmium (dissolved)	NA	6	1 UJ	55 U	11 U	20 U	20 U	20 U	20 U
Selenium (dissolved)	NA	58	10 UJ	380 U	65 J	91.4 J	78.2 J	125	82.3
Arsenic	NA	NA	5 U	250 U	***20 J***	72 U	110 U	110 U	110 UJ
Selenium	NA	NA	46 U	380 U	79	62 U	92.2 J	104	108
Perchlorate	130	NA	750 U	120	100	110	95	110	81
Napthalene	NA	NA	NA	NA	NA	1 U	2.7 J	1 U	1 U
Trichloroethene	***44.1***	NA	***31.3***	***25***	1 U	10.3	11.4	***47.3***	***39.5***
TDS *	124,000	NA	141,000	150,000	130,000	137,000	134,000	134,000	105,000

ANALYTE	MW-39-09									
	7/14/2006	7/14/2006 D	1/18/2007	7/18/2007	1/16/2008	7/9/2008	1/7/2009	1/7/2009	7/7/2009	1/6/2010
Arsenic (dissolved)	***29***	***25***	5 U	200 U	50 U	72 U	NA	110 U	110 U	110 UJ
Selenium (dissolved)	28	29	10 UJ	300 U	55 J	89.7 J	NA	68 U	68 U	68 U
Lead	NA	NA	38	130 U	33 U	40 U	NA	40 U	40 U	40 U
Selenium	NA	NA	10 U	300 U	55 J	92.9 J	NA	68 U	91.3	85.5
Perchlorate	110	130	600 U	160	180	150	150	NA	190	150
Napthalene	NA	NA	NA	NA	NA	1 U	NA	1.8 J	1 U	1 UJ
TDS *	107,000	110,000	131,000	140,000	110,000	132,000	NA	128,000	122,000	107,000

ANALYTE	MW-39-08							
	7/14/2006	1/18/2007	7/18/2007	1/16/2008	7/10/2008	1/8/2009	7/7/2009	1/6/2010
Arsenic (dissolved)	***36***	5 U	200 U	50 U	72 U	110 U	110 U	110 UJ
Selenium (dissolved)	53	10 UJ	300 U	65 J	62 U	68 U	68 U	76.1
Lead	NA	5 U	130 U	33 U	40 U	40 U	41.2	40 U
Selenium	NA	10 U	300 U	65 J	140 J	68 U	68 U	80.9
Perchlorate	59	600 U	99	84	83	81	74	65
Napthalene	NA	NA	NA	NA	1 U	2.3 J	1 U	1 U
Trichloroethene	***49.6***	***38.9***	***30***	***26***	***20.4***	***17.3***	10.3	***26***
TDS *	102,000	105,000	110,000	97,000	88,800	109,000	88,800	103,000

ANALYTE	MW-39-10								
	7/14/2006	1/18/2007	7/18/2007	1/16/2008	7/9/2008	1/7/2009	1/7/2009	7/7/2009	1/6/2010
Arsenic (dissolved)	***22***	5 U	200 U	50 U	72 U	NA	110 U	110 U	110 UJ
Selenium (dissolved)	2.3 U	10 UJ	300 U	33 J	62 U	NA	90.4 J	68 U	68 U
Selenium	NA	10 U	300 U	35 J	109 J	NA	68 U	111	68.6
Perchlorate	130	600 U	86	220	150	140	NA	170	130
TDS *	106,000	112,000	130,000	110,000	129,000	NA	127,000	110,000	107,000

ARCMAP FILENAME: Fig4-13 LTM.mxd
DATE: 4-23-2010
SOURCE: HGL

ALL COORDINATES ARE ON THE NEW MEXICO STATE PLANE, CENTRAL ZONE IN FEET BASED ON NAD83 ADJUSTMENT OF 1996. THE VERTICAL CONTROL REFERENCE DATUM IS NAVD88.

LEGEND

- PERMANENT MONITORING WELL
- PRE-PACKED MONITORING WELL (INSTALLED DURING SAMPLING)
- INDEX CONTOUR (10')
- INTERVAL CONTOUR (2')
- 14 HOLLOMAN AFB BUILDING
- ROAD/PARKING (PAVED)
- ROAD/PARKING (UNPAVED)
- WETLAND AREA
- SWMU BOUNDARY

GROUNDWATER EXCEEDANCE THRESHOLDS

ANALYTE	NMWQ (NMAC 20.6.2.3103)	EPA MCL (DEC. 2009)
Arsenic - dissolved (µg/L)	14.6	6
Cadmium - dissolved (µg/L)	0.448	10
Lead - disolved (µg/L)	73	4
Selenium - disolved (µg/L)	2.409	2
Arsenic (µg/L)	14.6	6
Cadmium (µg/L)	0.448	10
Lead (µg/L)	n/a	15
Selenium (µg/L)	876	n/a
Perchlorate (µg/L)	182.5	50
Methylene chloride (µg/L)	2.409	2
Naphthalene (µg/L)	2.409	2
Trichloroethene (µg/L)	16.5434842	5

* THE TDS CONCENTRATIONS IN ALL OF THE MONITORING WELLS WERE ABOVE 10,000 mg/L, WHICH IS THE POINT WHERE GROUNDWATER IS NO LONGER CONSIDERED A POTENTIAL DOMESTIC OR AGRICULTURAL WATER SUPPLY. (NMAC, 20.6.2.3101)

NOTES:

1) D - DUPLICATE
2) NA - NOT ANALYZED
3) TDS - SOLIDS, TOTAL DISSOLVED
4) QUALIFIER 'U' - NOT DETECTED
5) QUALIFIER 'J' - ESTIMATED VALUE
6) RED VALUES EXCEED EPA MCLS
7) **RED and BOLD** EXCEED NMWQ STANDARDS
8) ***RED, BOLD and ITALICIZED*** VALUES EXCEED BOTH EPA AND NMWQ STANDARDS

N

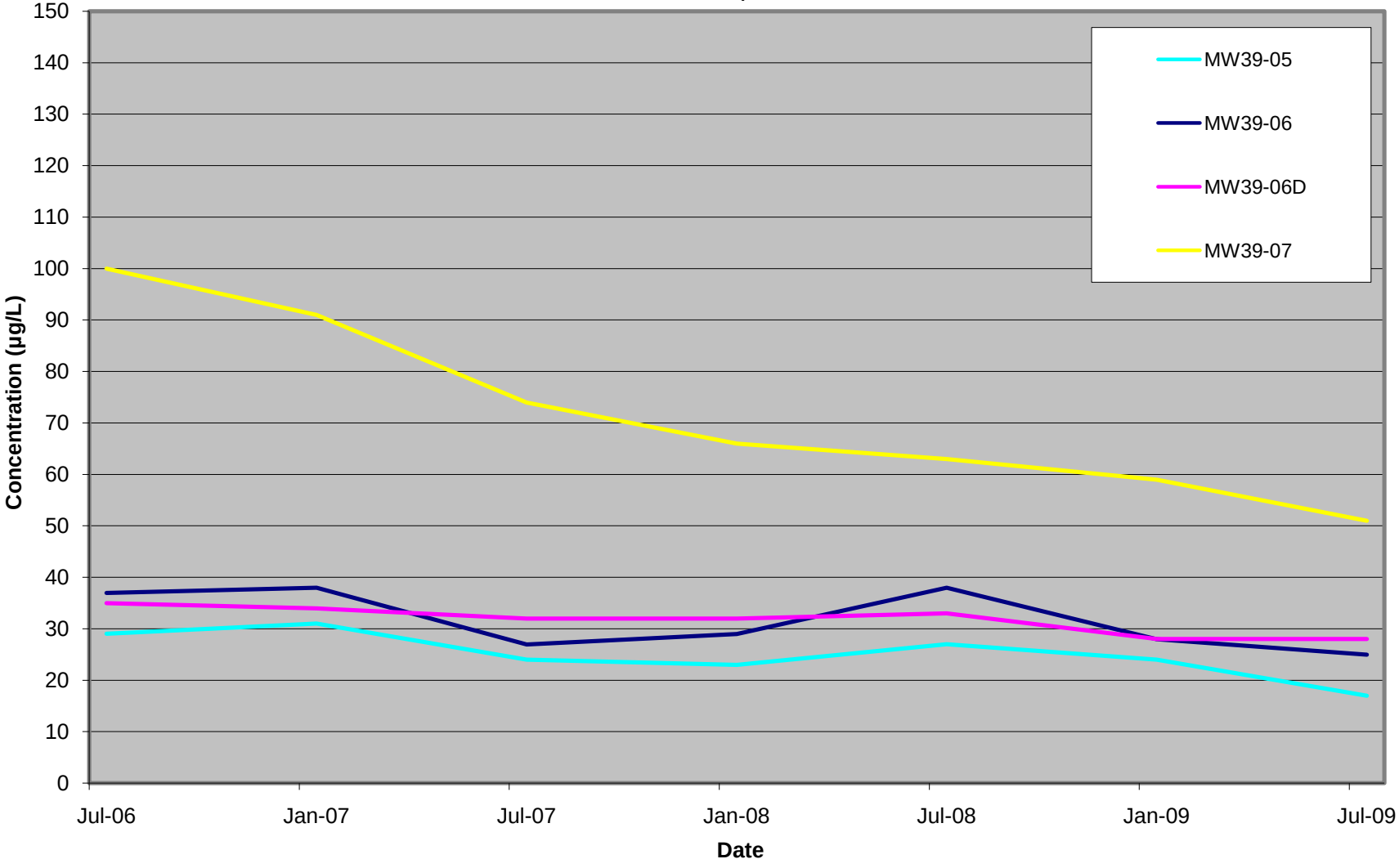
0 60 120 240
FEET

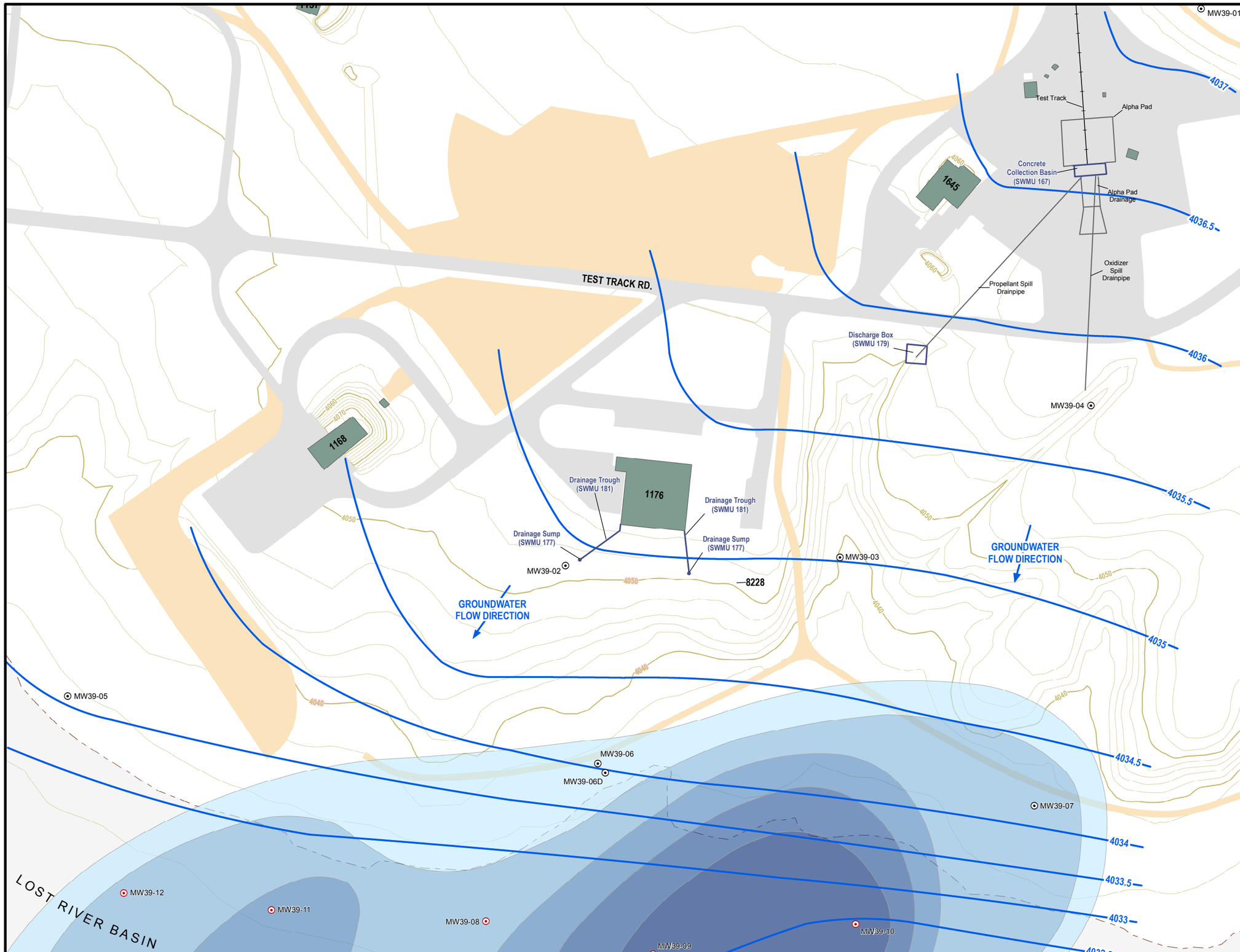
APRIL 2009 - JANUARY 2010
LONG-TERM MONITORING REPORT
HOLLOMAN AIR FORCE BASE
ALAMOGORDO, NEW MEXICO

TETRA TECH

FIGURE 4-12
SS-39 GROUNDWATER
SAMPLING EXCEEDANCES

Figure 4-13
Perchlorate Trends at SS-39 (Side Slope of Lost River Drainage Basin)
Holloman AFB, New Mexico





ARCMAP FILENAME: Fig4-14 LTM.mxd
DATE: 4-23-2010
SOURCE: HGL

ALL COORDINATES ARE ON THE NEW MEXICO STATE PLANE, CENTRAL ZONE IN FEET BASED ON NAD83 ADJUSTMENT OF 1996. THE VERTICAL CONTROL REFERENCE DATUM IS NAVD88.

LEGEND

- PERMANENT MONITORING WELL
- PRE-PACKED MONITORING WELL (INSTALLED DURING SAMPLING)
- GROUNDWATER ELEVATION CONTOUR (FT. MSL, JAN 2010)
- INDEX CONTOUR (10')
- INTERVAL CONTOUR (2')
- 14 HOLLOMAN AFB BUILDING
- ROAD/PARKING (PAVED)
- ROAD/PARKING (UNPAVED)
- WETLAND AREA
- SWMU BOUNDARY

PERCHLORATE CONCENTRATION (µg/L)

- 24.5-50
- 51-75
- 76-100
- 101-125
- 126-150

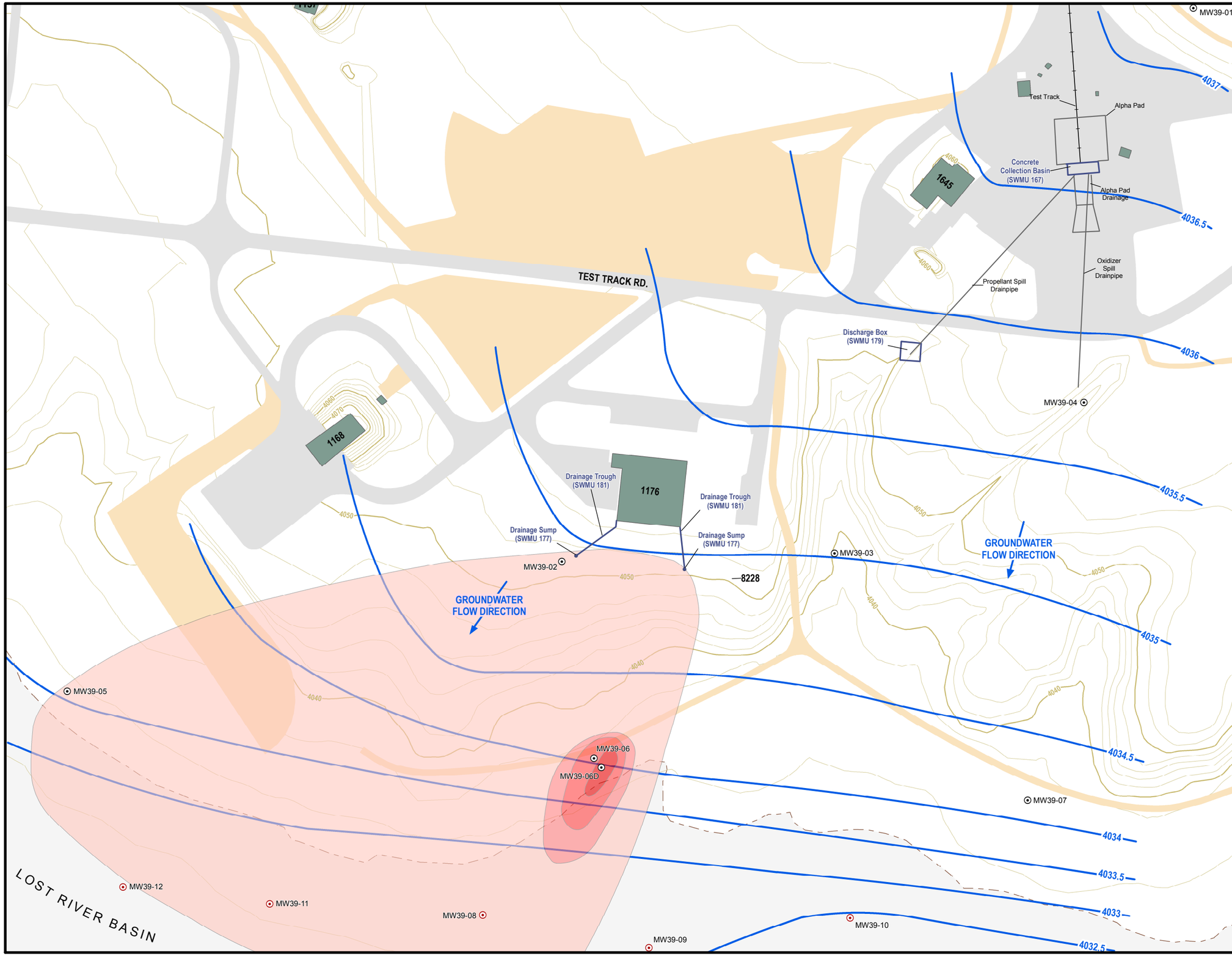
N

0 60 120 240
FEET

APRIL 2009 - JANUARY 2010
LONG-TERM MONITORING REPORT
HOLLOMAN AIR FORCE BASE
ALAMOGORDO, NEW MEXICO

TETRA TECH

FIGURE 4-14
SS-39 PERCHLORATE
CONENTRATION GRADIENT
(JANUARY, 2010)



ARCMAP FILENAME: Fig4-15 LTM.mxd
DATE: 4-23-2010
SOURCE: HGL

ALL COORDINATES ARE ON THE NEW MEXICO STATE PLANE, CENTRAL ZONE IN FEET BASED ON NAD83 ADJUSTMENT OF 1996. THE VERTICAL CONTROL REFERENCE DATUM IS NAVD88.

LEGEND

- PERMANENT MONITORING WELL
- PRE-PACKED MONITORING WELL (INSTALLED DURING SAMPLING)
- GROUNDWATER ELEVATION CONTOUR (FT. MSL, JAN 2010)
- INDEX CONTOUR (10')
- INTERVAL CONTOUR (2')
- 14 HOLLOMAN AFB BUILDING
- ROAD/PARKING (PAVED)
- ROAD/PARKING (UNPAVED)
- WETLAND AREA
- SWMU BOUNDARY

TCE CONCENTRATION (µg/L)

- 5-100
- 101-200
- 201-300
- 301-400

N

0 60 120 240
FEET

APRIL 2009 - JANUARY 2010
LONG-TERM MONITORING REPORT
HOLLOMAN AIR FORCE BASE
ALAMOGORDO, NEW MEXICO

TETRA TECH

FIGURE 4-15
SS-39 TRICHLOROETHENE (TCE)
CONENTRATION GRADIENT
(JANUARY, 2010)

APPENDIX A

DATA REVIEW CHECKLISTS

Data Review Checklist

Project Name:	Holloman AFB	SDG/Report No.:	D0A080569
Project No.:	100-TEN-T93002-1	Lab ID:	TestAmerica
No. of Samples:	11 and MS/MSD	Matrix:	Water

Area Reviewed	**Reviewed**	**Anomalies**		**Qualification Required**
		Yes	No	Y or N (or N/A)
1. Hold Time/Preservation.	Yes		X	N
2. Instrument Performance Check	Yes		X	N
3. Calibrations	Yes		X	N
4. Blanks (Method and/or Field QC)	Yes		X	N
5. Surrogates	N/A	---	---	N/A
6. MS/MSD	Yes		X	N
7. LCS	Yes		X	N
8. Internal Standards	Yes		X	N
9. Duplicates (field, lab)	Yes		X	N
10. Serial Dilution	N/A	---	---	N/A
11. Laboratory Case Narrative	Yes		X	N
12. Completeness of Data Package	Yes		X	N
13. Other issues	Yes		X	N

The following section is intended to specify areas evaluated and to provide an explanation (where applicable) for those areas where problems were identified during review. Only applicable methods are listed.

Comments/Discussion:

1. **Hold Time/Preservation**.
Cooler temperature at receipt was 2.3 degrees C.
Samples were analyzed within the holding time – 28 days.
2. **Instrument Performance Check**
6860: Interference Check Sample (ICS) recovery is within 70%-130%.
3. **Calibrations (Initial and Continuing)**
6860: Initial calibration (ICAL) r $\geq$ 0.995; Initial calibration verification %difference < 15%.
Continuing calibration verification %difference < 15% at the midpoint.
Limit of Detection Verification Standard (LODV) recoveries were within 70%-130%.
4. **Blanks (Method and/or Field QC)**
6860: Perchlorate was not detected in the laboratory method blank or reagent blanks at the method detection limit.

5. **Surrogates**
N/A
6. **MS/MSD**
6860: MS/MSD ran on MW-39-07-010710. Recoveries and RPDs were acceptable.
7. **LCS (and LCS duplicate, if applicable)**
6860: Recovery is within 80%-120%.
8. **Internal Standards**
6860: Areas were within 50% - 150% of the standards.
Relative retention times were between 1.0 ± 2% (0.98 – 1.02).
9. **Duplicates (field, lab)**
6860: One field duplicate pair was analyzed: MW-39-06D-010610 and MW-39-DUP01-010610. The results were in agreement.
10. **Serial Dilution**
N/A
11. **Laboratory Case Narrative**
Acceptable
12. **Completeness of Data Package**
Acceptable
13. **Other Issues**
None
Overall: Useable as reported.
Reviewed by: Maureen McMyler 02/12/10

Data Review Checklist

Project Name:	Holloman AFB	SDG/Report No.:	D9G090307
Project No.:	100-TEN-T93002-1	Lab ID:	TestAmerica
No. of Samples:	10 and MS/MSD	Matrix:	Water

Area Reviewed	**Reviewed**	**Anomalies**		**Qualification Required**
		Yes	No	Y or N (or N/A)
1. Hold Time/Preservation.	Yes		X	N
2. Instrument Performance Check	Yes		X	N
3. Calibrations	Yes	X		N
4. Blanks (Method and/or Field QC)	Yes		X	N
5. Surrogates	N/A	---	---	N/A
6. MS/MSD	Yes	X		N
7. LCS	Yes		X	N
8. Internal Standards	Yes		X	N
9. Duplicates (field, lab)	Yes		X	N
10. Serial Dilution	N/A	---	---	N/A
11. Laboratory Case Narrative	Yes		X	N
12. Completeness of Data Package	Yes		X	N
13. Other issues	Yes		X	N

The following section is intended to specify areas evaluated and to provide an explanation (where applicable) for those areas where problems were identified during review. Only applicable methods are listed.

Comments/Discussion:

1. **Hold Time/Preservation**.
Cooler temperature at receipt was 4.1 degrees C.
Samples were analyzed within the holding time – 28 days.
2. **Instrument Performance Check**
6860: Interference Check Sample (ICS) recovery is within 70%-130%.
3. **Calibrations (Initial and Continuing)**
6860: Initial calibration (ICAL) r $\geq$ 0.995; Initial calibration verification %difference < 15%.
Continuing calibration verification (CCV) %difference < 15% at the midpoint.
Limit of Detection Verification Standard (LODV) recoveries were within 70%-130% for 2 of the 3 LODVs. One LODV was reported at 69.6%. The sample concentrations are much higher than the reporting limit. The LODV can be rounded to 70. The CCVs are acceptable. For these three reasons, no qualification will be applied.
4. **Blanks (Method and/or Field QC)**
6860: Perchlorate was not detected in the laboratory method blank or reagent blanks at the method

detection limit.
5. **Surrogates**
N/A
6. **MS/MSD**
6860: MS/MSD ran on MW-39-07-070809. Recovery in the MS was above limits. Recovery in the MSD was below limits. The RPD was acceptable.
The sample concentration is >4x the amount spiked, so recovery criteria are not applicable.
No qualification is necessary.
7. **LCS (and LCS duplicate, if applicable)**
6860: Recovery is within 80%-120%.
8. **Internal Standards**
6860: Areas were within 50% - 150% of the standards.
Relative retention times were between 1.0 ± 2% (0.98 – 1.02).
9. **Duplicates (field, lab)**
6860: One field duplicate pair was analyzed: MW-39-06D-070709 and MW-39-DUP01-070709. The results were in agreement.
10. **Serial Dilution**
N/A
11. **Laboratory Case Narrative**
Acceptable
12. **Completeness of Data Package**
Acceptable
13. **Other Issues**
None
Overall: Useable as reported.
Reviewed by: Maureen McMyler 02/12/10

Data Review Checklist

Project Name:	Holloman AFB	SDG/Report No.:	D9J080289
Project No.:	100-TEN-T93002-1	Lab ID:	TestAmerica
No. of Samples:	1	Matrix:	Water

Area Reviewed	**Reviewed**	**Anomalies**		**Qualification Required**
		Yes	No	Y or N (or N/A)
1. Hold Time/Preservation.	Yes		X	N
2. Instrument Performance Check	Yes		X	N
3. Calibrations	Yes		X	N
4. Blanks (Method and/or Field QC)	Yes	X		N
5. Surrogates	N/A	---	---	N/A
6. MS/MSD	Yes	X		N
7. LCS	Yes		X	N
8. Internal Standards	Yes		X	N
9. Duplicates (field, lab)	N/A	---	---	N/A
10. Serial Dilution	N/A	---	---	N/A
11. Laboratory Case Narrative	Yes		X	N
12. Completeness of Data Package	Yes		X	N
13. Other issues	Yes		X	N

The following section is intended to specify areas evaluated and to provide an explanation (where applicable) for those areas where problems were identified during review. Only applicable methods are listed.

Comments/Discussion:

1. **Hold Time/Preservation**.
Cooler temperature at receipt was 3.9 degrees C.
Samples were analyzed within the holding time – 28 days.
2. **Instrument Performance Check**
6860: Interference Check Sample (ICS) recovery is within 70%-130%.
3. **Calibrations (Initial and Continuing)**
6860: Initial calibration (ICAL) r $\geq$ 0.995; Initial calibration verification %difference < 15%.
Continuing calibration verification %difference < 15% at the midpoint.
Limit of Detection Verification Standard (LODV) recoveries were within 70%-130.
4. **Blanks (Method and/or Field QC)**
6860: Perchlorate was not detected in the method blank.
It was detected in one of the laboratory reagent blanks at less than ½ the reporting limit, which is allowed.

5. **Surrogates**
N/A
6. **MS/MSD**
6860: MS/MSD ran on unrelated sample. Recoveries were below limits. The RPD was acceptable.
The sample is unrelated, so no qualification is necessary.
7. **LCS (and LCS duplicate, if applicable)**
6860: Recovery is within 80%-120%.
8. **Internal Standards**
6860: Areas were within 50% - 150% of the standards.
Relative retention times were between 1.0 ± 2% (0.98 – 1.02).
9. **Duplicates (field, lab)**
N/A
10. **Serial Dilution**
N/A
11. **Laboratory Case Narrative**
Acceptable
12. **Completeness of Data Package**
Acceptable
13. **Other Issues**
None
Overall: Useable as reported.
Reviewed by: Maureen McMyler 02/08/10

Data Review Checklist

Project Name:	Holloman AFB	SDG/Report No.:	F64511
Project No.:	100-TEN-T93002-1	Lab ID:	Accutest
No. of Samples:	5	Matrix:	Water

Area Reviewed	**Reviewed**	**Anomalies**		**Qualification Required**
		Yes	No	Y or N (or N/A)
1. Hold Time/Preservation.	Yes		X	N
2. Instrument Performance Check	Yes		X	N
3. Calibrations	Yes	X		N
4. Blanks (Method and/or Field QC)	Yes		X	N
5. Surrogates	Yes		X	N
6. MS/MSD	Yes	X		Y
7. LCS	Yes		X	N
8. Internal Standards	N/A	---	---	N/A
9. Duplicates (field, lab)	Yes		X	N
10. Serial Dilution	N/A	---	---	N/A
11. Laboratory Case Narrative	Yes		X	N
12. Completeness of Data Package	Yes		X	N
13. Other issues	Yes	X		N

The following section is intended to specify areas evaluated and to provide an explanation (where applicable) for those areas where problems were identified during review. Only applicable methods are listed.

Comments/Discussion:

1. **Hold Time/Preservation**.
Cooler temperatures at receipt were 2.6 and 3.0 degrees C.
Samples were prepared and analyzed within holding times.
2. **Instrument Performance Check (Method and/or Field QC)**
8081A: DDT and Endrin breakdowns are below 15%.
3. **Calibrations (Initial and Continuing)**
8081A: ICAL %RSD < 20%; CCV %difference < 15% for most. CCV% difference was 20.5% (biased low) for dieldrin in batch GKK1089/Lab File ID KK31679.D analyzed on 4/14/09. The average %D of the compounds was <15%. . It was an opening CCV for the blank and LCS. It was not used as a bracketing CCV for any samples. No qualification is needed.
4. **Blanks (Method and/or Field QC)**
SM19 2540C: Total dissolved solids (TDS) were not detected in the blank.
8081A: No pesticides were detected in the blank.

5. **Surrogates**
8081A: Recoveries and retention times were within limits.
6. **MS/MSD**
8081A: MS/MSD ran on MW-16-02-040909. MSD recovery for gamma-BHC (Lindane) is above control limits. The compound was not detected in the original sample, so the possibility of high bias does not exist. No qualification is required.
RPD for dieldrin is above control limits. The dieldrin result in MW-16-02-040909 should be considered estimated and qualified "UJ".
7. **LCS (and LCS duplicate, if applicable)**
8081A: Recoveries were within limits.
8. **Internal Standards**
N/A
9. **Duplicates (field, lab)**
SM19 2540C: DUP ran MW-16-02-040909. RPD was within limits.
One field duplicate pair was analyzed: MW-16-01-040909 and MW-16-DUP01-040909. All results were in agreement.
10. **Serial Dilution**
N/A
11. **Laboratory Case Narrative**
Acceptable
12. **Completeness of Data Package**
Acceptable
13. **Other Issues**
8081A: MW-16-04-040909 and MW-16-02-040909 were diluted because of matrix interferences. Both have elevated reporting limits.
Overall: Useable as qualified.
Reviewed by: Maureen McMyler 02/08/10

Data Review Checklist

Project Name:	Holloman AFB	SDG/Report No.:	F66500
Project No.:	100-TEN-T93002-1	Lab ID:	Accutest
No. of Samples:	5	Matrix:	Water

Area Reviewed	**Reviewed**	**Anomalies**		**Qualification Required**
		Yes	No	Y or N (or N/A)
1. Hold Time/Preservation.	Yes	X		Y
2. Instrument Performance Check	Yes		X	N
3. Calibrations	Yes		X	N
4. Blanks (Method and/or Field QC)	Yes		X	N
5. Surrogates	Yes		X	N
6. MS/MSD	Yes		X	N
7. LCS	Yes		X	N
8. Internal Standards	N/A	---	---	N/A
9. Duplicates (field, lab)	Yes	X		Y
10. Serial Dilution	N/A	---	---	N/A
11. Laboratory Case Narrative	Yes		X	N
12. Completeness of Data Package	Yes		X	N
13. Other issues	Yes		X	N

The following section is intended to specify areas evaluated and to provide an explanation (where applicable) for those areas where problems were identified during review. Only applicable methods are listed.

Comments/Discussion:

1. **Hold Time/Preservation**.
Cooler temperatures at receipt were 3.0 and 3.2 degrees C.
Pesticide aliquots were prepared and analyzed within holding times.
SM19 2540C: All samples were analyzed outside of the 7-day holding time. Results should be considered estimated and qualified "J".
2. **Instrument Performance Check (Method and/or Field QC)**
8081A: DDT and Endrin breakdowns are below 15%.
3. **Calibrations (Initial and Continuing)**
8081A: ICAL %RSD < 20%; CCV %difference < 15%.
4. **Blanks (Method and/or Field QC)**
SM19 2540C: Total dissolved solids (TDS) were not detected in the blank.
8081A: No pesticides were detected in the blanks.

5. **Surrogates**
8081A: Recoveries and retention times were within limits.
6. **MS/MSD**
8081A: MS/MSD ran on MW16-03-070609. Recoveries and RPDs were within limits.
7. **LCS (and LCS duplicate, if applicable)**
8081A: Recoveries were within limits.
8. **Internal Standards**
N/A
9. **Duplicates (field, lab)**
SM19 2540C: DUP ran MW16-03-070609. RPD was within limits.
One field duplicate pair was analyzed: MW16-01-070609 and MW16-DUP01-070609. Pesticide results were in agreement. TDS results had an RPD of 79%. TDS results should be considered estimated in the two samples.
10. **Serial Dilution**
N/A
11. **Laboratory Case Narrative**
Acceptable
12. **Completeness of Data Package**
Acceptable
13. **Other Issues**
None
Overall: Useable as qualified.
Reviewed by: Maureen McMyler 02/08/10

Data Review Checklist

Project Name:	Holloman AFB	SDG/Report No.:	F66519
Project No.:	100-TEN-T93002-1	Lab ID:	Accutest
No. of Samples:	10 and 1 TB	Matrix:	Water

Area Reviewed	**Reviewed**	**Anomalies**		**Qualification Required**
		Yes	No	Y or N (or N/A)
1. Hold Time/Preservation.	Yes		X	N
2. Instrument Performance Check	Yes		X	N
3. Calibrations	Yes	X		Y
4. Blanks (Method and/or Field QC)	Yes	X		N
5. Surrogates	Yes		X	N
6. MS/MSD	Yes	X		Y
7. LCS	Yes		X	N
8. Internal Standards	Yes	X		N
9. Duplicates (field, lab)	Yes	X		N
10. Serial Dilution	Yes	X		N
11. Laboratory Case Narrative	Yes		X	N
12. Completeness of Data Package	Yes		X	N
13. Other issues	Yes	X		N

The following section is intended to specify areas evaluated and to provide an explanation (where applicable) for those areas where problems were identified during review. Only applicable methods are listed.

Comments/Discussion:

1. **Hold Time/Preservation**.
Cooler temperatures at receipt were 3.6 and 4.0 degrees C.
Samples were prepared and analyzed within holding times.
2. **Instrument Performance Check (Method and/or Field QC)**
6010B: Interference check samples' recoveries were acceptable.
8260B: BFB abundances were acceptable.
3. **Calibrations (Initial and Continuing)**
7471A: Initial calibration verification (ICV) and continuing calibration verification (CCV) recoveries were between 80% and 120%. The low calibration check standard for mercury was below the lower control limit. All mercury results should be qualified "UJ".
6010B: ICV and CCV recoveries were between 90% and 110% for analytes of interest. The low calibration check standard for lead was above the lower control limit in prep batch MA7359. No

qualification is needed.
8260B: Initial calibration (ICAL) %RSD < 15% or r>0.99; CCV %difference < 20% for most compounds.
In the CCAL from 7/17/09, acetone percent difference (%D) was 21%, biased low. Acetonitrile and acrylonitrile %D were high, but they were not detected in any samples. Acetone results should be considered estimated and qualified "UJ" in MW39-06-070709, MW39-06D-070709, and MW39-DUP01-070709.
4. **Blanks (Method and/or Field QC)**
SM19 2540C: Total dissolved solids were not detected in the blank above the reporting limit (RL).
7471A: Mercury was not detected in the blanks above the RL.
6010B: Metals were not detected in the method blanks above the RL. Lead, selenium, and cadmium were detected in calibration blanks below the RL. The concentrations of lead and selenium in the samples were greater than 10 times the amount in the blanks. Cadmium was not detected in the samples. No qualification is needed.
8260B: 1,2,3-trichlorobenzene was detected below the RL in both method blanks. The compound was not detected in the associated samples, so no qualification is needed. No volatile compounds were detected in the trip blank.
5. **Surrogates**
8260B: Recoveries were within limits.
6. **MS/MSD**
7471A: MS/MSD ran on MW39-07-070809 for total and dissolved. Recoveries and RPDs were within limits.
6010B: MS/MSD ran on MW-39-07-070809 for total and dissolved. Recoveries and RPDs were within limits, except for MS recoveries of dissolved arsenic and dissolved selenium, which were high. Arsenic was not detected in the original sample, so the possibility of high bias does not exist. The selenium result may be biased high and should be qualified "J".
8260B: MS/MSD ran on MW39-07-070809. Recoveries for the following compounds were above acceptable limits: 2-hexanone, 4-methyl-2-pentanone, acrylonitrile, ethyl methacrylate (MS only), and methyl methacrylate. The RPDs were within limits. The compounds were not detected in the original sample, so the possibility for high bias does not exist. No qualification is needed.
Recoveries for 2-chloroethyl vinyl ether were zero percent. Since recovery in the LCS is acceptable, the result should be considered estimated, biased low and qualified "UJ".
MS/MSD ran on an unrelated sample in batch VJ2899. Recoveries for 2-chloroethyl vinyl ether were zero percent and cis-1,2-dichloroethylene was below limits. Since the sample is unrelated, no qualification is needed.
7. **LCS (and LCS duplicate, if applicable)**
7471A: Recoveries were within limits.
6010B: Recoveries were within limits.
8260B: Recoveries were within limits.

8. **Internal Standards**
8260B: Tert Butyl Alcohol-D10 areas were high in MW39-10-070709, MW39-11-070709, and MW39-09-070709. The samples were re-analyzed to confirm IS failure. Tert Butyl Alcohol-D10 was not used to calculate concentrations because the associated compounds were not detected in the samples. No qualification is needed.
9. **Duplicates (field, lab)**
SM19 2540C: Ran on MW-39-07-070809. RPD was above control limits. RPD is allowed due to low duplicate and sample concentration.
7471A: Ran on MW39-07-070809 for total and dissolved. RPDs were not calculated because mercury was not detected in either the originals or the duplicates.
6010B: Ran on MW-39-07-070809 for total and dissolved. RPDs for arsenic (dissolved only) and selenium exceeded the lab's control limits. The concentrations in the sample and duplicate were <5x the RL and the difference between the results was <RL. No qualification is necessary.
One field duplicate pair was analyzed: MW39-06D-070709 and MW39-DUP01-070709. All results were in agreement. Dissolved selenium was detected in the original sample below the reporting limit, but not in the field duplicate. No qualification is necessary.
10. **Serial Dilution**
7471A: Ran on MW39-07-070809 for total and dissolved. RPDs were not calculated because mercury was not detected in either the originals or the dilutions.
6010B: Ran on MW-39-07-070809 for total and dissolved. RPDs for selenium were outside control limits. The initial concentrations were <50x the IDL, so no qualification is needed.
11. **Laboratory Case Narrative**
Acceptable
12. **Completeness of Data Package**
Acceptable
13. **Other Issues**
6010B: There were elevated reporting limits for all metals because of matrix interference.
8260B: Methylene chloride is a suspected lab contaminant in MW39-06D-070709 and MW39-DUP01-070709. Both were dilution runs.
Overall: Useable as qualified.

Reviewed by: Maureen McMyler 02/15/10

Data Review Checklist

Project Name:	Holloman AFB	SDG/Report No.:	F66523
Project No.:	100-TEN-T93002-1	Lab ID:	Accutest
No. of Samples:	5 and 1 TB	Matrix:	Water

Area Reviewed	**Reviewed**	**Anomalies**		**Qualification Required**
		Yes	No	Y or N (or N/A)
1. Hold Time/Preservation.	Yes		X	N
2. Instrument Performance Check	Yes		X	N
3. Calibrations	Yes	X		Y
4. Blanks (Method and/or Field QC)	Yes	X		N
5. Surrogates	Yes		X	N
6. MS/MSD	Yes	X		Y
7. LCS	Yes		X	N
8. Internal Standards	Yes		X	N
9. Duplicates (field, lab)	Yes	X		N
10. Serial Dilution	Yes	X		N
11. Laboratory Case Narrative	Yes		X	N
12. Completeness of Data Package	Yes		X	N
13. Other issues	Yes	X		N

The following section is intended to specify areas evaluated and to provide an explanation (where applicable) for those areas where problems were identified during review. Only applicable methods are listed.

Comments/Discussion:

1. **Hold Time/Preservation**.
Cooler temperatures at receipt were 2.0 and 2.8 degrees C.
Samples were prepared and analyzed within holding times.
2. **Instrument Performance Check (Method and/or Field QC)**
6010B: Interference check samples' recoveries were acceptable.
8260B: BFB abundances were acceptable.
3. **Calibrations (Initial and Continuing)**
7471A: Initial calibration verification (ICV) and continuing calibration verification (CCV) recoveries were between 80% and 120%. The low calibration check standard for mercury was below the lower control limit. All mercury results should be qualified "UJ".
6010B: ICV and CCV recoveries were between 90% and 110% for analytes of interest.
8260B: Initial calibration (ICAL) %RSD < 15% or r>0.99 for 7/11/09; CCV %difference (%D) < 20%.
4. **Blanks (Method and/or Field QC)**
SM19 2540C: Total dissolved solids were not detected in the blanks above the reporting limit (RL).
7471A: Mercury (Hg) was not detected in the blanks above the RL.

6010B: No metals were detected in the blanks above the RL. Potassium was detected above the MDL in the calibration and prep blanks. The concentrations of potassium in the samples were greater than 5x the amount in the blanks. No qualification is needed.
8260B: 1,2,3-trichlorobenzene was detected below the reporting limit (RL) in the blank from batch VJ2895. Chloroform was detected below the RL in the blank from batch VJ2896. Methyl chloride (chloromethane) and methylene chloride were detected in the trip blank. The compounds were not detected in the specific samples associated with the blanks, so no qualification is needed.
5. **Surrogates**
8260B: Recoveries were within limits.
6. **MS/MSD**
7471A: MS/MSD ran on MW-39-07-070809 (F66519) and MW30&33-DUP01-070809. Recoveries and RPDs were within limits.
6010B: MS/MSD ran on MW-39-07-070809 (F66519). Recoveries for the following metals were outside the lab's control limits: calcium (MS only), magnesium (MS only), potassium, and sodium. The concentrations in the samples were greater than 4 times the amount spiked, so the recovery criteria do not apply. No qualification is needed.
8260B: MS/MSD ran on MW39-07-070809 (F66519). Recoveries for the following compounds were above acceptable limits: 2-hexanone, 4-methyl-2-pentanone, acrylonitrile, ethyl methacrylate (MS only), and methyl methacrylate. In batch VJ2896, MS/MSD ran on MW30&33-01-070809. The following recoveries were above the lab's control limits: 2-hexanone, 4-methyl-2-pentanone, and methyl methacrylate. The RPDs were within limits. The compounds were not detected in the original samples, so the possibility for high bias does not exist. No qualification is needed.
Recoveries for 2-chloroethyl vinyl ether were zero percent in both. Since recovery in the LCS is acceptable, the results should be considered estimated, biased low and qualified “UJ” in MW30&33-01-070809 and MW39-07-070809 in work order F66519.
7. **LCS (and LCS duplicate, if applicable)**
7471A: Recoveries were within limits.
6010B: Recoveries were within limits.
8260B: Recoveries were within limits.
8. **Internal Standards**
8260B: Area and retention times were within acceptable limits.
9. **Duplicates (field, lab)**
One field duplicate pair was analyzed: MW30&33-04-070809 and MW30&33-DUP01-070809. Most results were in agreement with RPDs < 30%. Selenium was detected in the field duplicate below the RL. It was not detected in the original sample. No qualification is needed.
SM19 2540C: Ran on unrelated samples. RPD was outside control limits on one sample. No qualification because the sample is unrelated.
7471A: Ran on MW-39-07-070809 (F66519) and MW30&33-DUP01-070809. RPDs were within control limits.
6010B: Ran on MW-39-07-070809 (F66519). RPDs for selenium, thallium, and vanadium are outside the limits. The sample concentrations are <5x the RL, so the RPD criteria do not apply. No qualification is necessary.

10. **Serial Dilution**
7471A: Ran on MW-39-07-070809 (F66519) and MW30&33-DUP01-070809. RPDs were within control limits.
6010B: Ran on MW-39-07-070809 (F66519). RPDs for potassium, selenium, thallium, and vanadium are outside control limits. Percent difference is allowable for selenium, thallium, and vanadium because the initial sample concentration is < 50 times IDL. Potassium should be qualified in the original sample. No qualification for this work order.
11. **Laboratory Case Narrative**
Acceptable
12. **Completeness of Data Package**
Acceptable
13. **Other Issues**
6010B: There were elevated reporting limits because of matrix interference.
Overall: Useable as qualified.

Reviewed by: Maureen McMyler 02/18/10

Data Review Checklist

Project Name:	Holloman AFB	SDG/Report No.:	F68616
Project No.:	100-TEN-T93002-1	Lab ID:	Accutest
No. of Samples:	2 and 1 TB	Matrix:	Water

Area Reviewed	**Reviewed**	**Anomalies**		**Qualification Required**
		Yes	No	Y or N (or N/A)
1. Hold Time/Preservation.	Yes		X	N
2. Instrument Performance Check	Yes		X	N
3. Calibrations	Yes	X		Y
4. Blanks (Method and/or Field QC)	Yes	X		Y
5. Surrogates	Yes		X	N
6. MS/MSD	Yes	X		N
7. LCS	Yes	X		N
8. Internal Standards	Yes	X		N
9. Duplicates (field, lab)	Yes	X		N
10. Serial Dilution	Yes	X		N
11. Laboratory Case Narrative	Yes		X	N
12. Completeness of Data Package	Yes		X	N
13. Other issues	Yes	X		N

The following section is intended to specify areas evaluated and to provide an explanation (where applicable) for those areas where problems were identified during review. Only applicable methods are listed.

Comments/Discussion:

1. **Hold Time/Preservation**.
Cooler temperature at receipt was 3.8 degrees C.
Samples were prepared and analyzed within holding times.
2. **Instrument Performance Check (Method and/or Field QC)**
6010B: Interference check samples' recoveries were acceptable.
8260B: BFB abundances were acceptable.
3. **Calibrations (Initial and Continuing)**
7471A: Initial calibration verification (ICV) and continuing calibration verification (CCV) recoveries were between 80% and 120%.
6010B: ICV and CCV recoveries were between 90% and 110% for analytes of interest. The low calibration check standard recovery was below limits for antimony in instrument batch MA7594. Antimony results were not taken from that run, so data are not affected.
8260B: Initial calibration (ICAL) %RSD < 15% or r>0.99; CCV %difference (%D) < 20% for most compounds. The following compounds had %Ds greater than 20% in the continuing calibration: dichlorodifluoromethane (high), Freon 113 (low), acrylonitrile (low), vinyl acetate (low),

propionitrile (low), methyl methacrylate (low), ethyl methacrylate (low). All of the compounds except dichlorodifluoromethane should be considered estimated, biased low and qualified "UJ".
4. **Blanks (Method and/or Field QC)**
SM19 2540C: Total dissolved solids were not detected in the blank above the reporting limit (RL).
7471A: Mercury (Hg) was not detected in the blanks above the RL.
6010B: No metals were detected in the blanks above the RL. Antimony, beryllium, potassium, and thallium were detected above the absolute value of the MDL in the method blanks. Beryllium and thallium were not detected in the samples. Potassium recoveries in the samples were greater than 5x the amount in the blank. Dissolved antimony result in MW30&33-05R-100609 should be considered non-detect at the reporting limit – qualified "U".
8260B: No compounds were detected in the method blank or trip blank.
5. **Surrogates**
8260B: Recoveries were within limits.
6. **MS/MSD**
7471A: MS/MSD ran on unrelated sample. Recoveries and RPDs were within limits.
6010B: MS/MSD ran on unrelated sample. Recoveries were above acceptable limits for the following metals: magnesium (MSD only), manganese (MSD only), potassium, and sodium. Manganese and potassium concentration were greater than 4 times the amount spiked. No qualification, since the sample is unrelated.
8260B: MS/MSD ran on unrelated sample. MS recoveries were outside acceptable limits for the following compounds: 1-chlorohexane, 2-chloroethyl vinyl ether, acetonitrile, cis-1,3-dichloropropene, dichlorodifluoromethane, methyl tert butyl ether, and vinyl acetate. MSD recoveries were outside acceptable limits for the following compounds: 1,1,2-trichloroethane, 1,1-dichloropropene, 1,2-dichloropropane, 1,3-dichloropropane, 1-chlorohexane, 2-chloroethyl vinyl ether, acetonitrile, cis-1,2-dichloroethylene, cis-1,3-dichloropropene, dichlorodifluoromethane, ethyl methacrylate, ethylbenzene, methyl tert butyl ether, toluene, and vinyl acetate. Since the samples are not related, no qualification is needed.
7. **LCS (and LCS duplicate, if applicable)**
7471A: Recoveries were within limits.
6010B: Recoveries were within limits.
8260B: Recoveries were within limits, except dichlorodifluoromethane, which was high. The compound was not detected in the associated samples, so there is no possibility of high bias. No qualification is needed.
8. **Internal Standards**
8260B: Area and retention times were within acceptable limits for most. Tert Butyl Alcohol-D10 areas (recoveries) were high in MW39-12-100609. No associated compounds were detected, so it was not used for quantification. Data are not affected.
9. **Duplicates (field, lab)**
SM19 2540C: Ran on unrelated sample. RPD was above limits. Concentrations were less than 5 times the RL, so RPD criteria do not apply No qualification is needed.
7471A: Ran on unrelated sample. RPD was within limits.

6010B: Ran on unrelated sample. RPDs for chromium, lead, and zinc are outside control limits. Sample concentrations were less than 5 times the RL, so RPD criteria do not apply. Also, no qualification is needed because the sample is not related.
10. **Serial Dilution**
7471A: Ran on unrelated sample. RPDs were within limits.
6010B: Ran on unrelated sample. RPDs for aluminum, barium, calcium, chromium, lead, manganese, and vanadium were outside acceptable limits. The concentrations were less than 50 times the IDL, for all except calcium and manganese. Since the sample is unrelated, no qualification is needed.
11. **Laboratory Case Narrative**
Acceptable
12. **Completeness of Data Package**
Acceptable
13. **Other Issues**
6010B: There were elevated reporting limits because of matrix interference.
8260B: MW39-12-100609 was treated with an anti-foaming agent.
Overall: Useable as qualified.

Reviewed by: Maureen McMyler 02/19/10

Data Review Checklist

Project Name:	Holloman AFB	SDG/Report No.:	F68624
Project No.:	100-TEN-T93002-1	Lab ID:	Accutest
No. of Samples:	5	Matrix:	Water

Area Reviewed	**Reviewed**	**Anomalies**		**Qualification Required**
		Yes	No	Y or N (or N/A)
1. Hold Time/Preservation.	Yes		X	N
2. Instrument Performance Check	Yes		X	N
3. Calibrations	Yes	X		Y
4. Blanks (Method and/or Field QC)	Yes		X	N
5. Surrogates	Yes		X	N
6. MS/MSD	Yes		X	N
7. LCS	Yes		X	N
8. Internal Standards	N/A	---	---	N/A
9. Duplicates (field, lab)	Yes	X		N
10. Serial Dilution	N/A	---	---	N/A
11. Laboratory Case Narrative	Yes		X	N
12. Completeness of Data Package	Yes		X	N
13. Other issues	Yes		X	N

The following section is intended to specify areas evaluated and to provide an explanation (where applicable) for those areas where problems were identified during review. Only applicable methods are listed.

Comments/Discussion:

1. **Hold Time/Preservation**.
Cooler temperatures at receipt were 4.0 and 4.8 degrees C.
Samples prepared and analyzed within holding times.
2. **Instrument Performance Check (Method and/or Field QC)**
8081A: DDT and Endrin breakdowns are below 15%.
3. **Calibrations (Initial and Continuing)**
8081A: ICAL %RSD < 20%; CCV %difference < 15% for most. CCV% difference was 16% (biased low) for dieldrin in batch GKK1173-Lab file ID KK34423.D analyzed on 10/14/09. The average %D of the compounds was <15%. . It was a bracketing CCV for MW16-03-100609, MW16-04-100609, MW16-02-100609, MW16-DUP01-100609, and the QC samples. Dieldrin in the associated samples should be considered estimated, biased low and qualified “UJ” or “J”.
4. **Blanks (Method and/or Field QC)**
SM19 2540C: Total dissolved solids (TDS) were not detected in the blank.
8081A: No pesticides were detected in the blank.

5. **Surrogates**
8081A: Recoveries and retention times were within limits.
6. **MS/MSD**
8081A: MS/MSD ran on MW16-03-100609. Recoveries and RPDs were within limits.
7. **LCS (and LCS duplicate, if applicable)**
8081A: Recoveries were within limits.
8. **Internal Standards**
N/A
9. **Duplicates (field, lab)**
SM19 2540C: DUP ran MW16-03-100609. RPD was outside limits. The concentration in the sample is less than 5x the reporting limit. No qualification is needed.
One field duplicate pair was analyzed: MW16-01-100609 and MW16-DUP01-100609. Dieldrin was detected in both samples. The RPD was 28.6%. Both were below the reporting limit, so no additional qualification is needed.
10. **Serial Dilution**
N/A
11. **Laboratory Case Narrative**
Acceptable
12. **Completeness of Data Package**
Acceptable
13. **Other Issues**
None
Overall: Useable as qualified.
Reviewed by: Maureen McMyler 02/08/10

Data Review Checklist

Project Name:	Holloman AFB	SDG/Report No.:	F70644
Project No.:	100-TEN-T93002-1	Lab ID:	Accutest
No. of Samples:	5	Matrix:	Water

Area Reviewed	**Reviewed**	**Anomalies**		**Qualification Required**
		Yes	No	Y or N (or N/A)
1. Hold Time/Preservation.	Yes		X	N
2. Instrument Performance Check	Yes		X	N
3. Calibrations	Yes		X	N
4. Blanks (Method and/or Field QC)	Yes		X	N
5. Surrogates	Yes		X	N
6. MS/MSD	Yes		X	N
7. LCS	Yes		X	N
8. Internal Standards	N/A	---	---	N/A
9. Duplicates (field, lab)	Yes		X	N
10. Serial Dilution	N/A	---	---	N/A
11. Laboratory Case Narrative	Yes		X	N
12. Completeness of Data Package	Yes		X	N
13. Other issues	Yes	X		Y

The following section is intended to specify areas evaluated and to provide an explanation (where applicable) for those areas where problems were identified during review. Only applicable methods are listed.

Comments/Discussion:

1. **Hold Time/Preservation**.
Cooler temperatures at receipt were 4.2 and 4.6 degrees C.
Samples prepared and analyzed within holding times.
2. **Instrument Performance Check (Method and/or Field QC)**
8081A: DDT and Endrin breakdowns are below 15%.
3. **Calibrations (Initial and Continuing)**
8081A: ICAL %RSD < 20%; CCV %difference < 15%.
4. **Blanks (Method and/or Field QC)**
SM19 2540C: Total dissolved solids (TDS) were not detected in the blank.
8081A: No pesticides were detected in the blank.
5. **Surrogates**
8081A: Recoveries and retention times were within limits.

6. **MS/MSD**

8081A: MS/MSD ran on MW16-03-010510. Recoveries and RPDs were within limits.

7. **LCS (and LCS duplicate, if applicable)**

8081A: Recoveries were within limits.

8. **Internal Standards**

N/A

9. **Duplicates (field, lab)**

SM19 2540C: DUP ran MW16-03-010510. RPD was within limits.

One field duplicate pair was analyzed: MW16-01-010510 and MW16-DUP01-010510. All results were in agreement.

10. **Serial Dilution**

N/A

11. **Laboratory Case Narrative**

Acceptable

12. **Completeness of Data Package**

Acceptable

13. **Other Issues**

In MW16-02-010510, primary and confirmation results for gamma-BHC (Lindane) differ by more than 40%. The lab reported the lower value. The result should be considered estimated and qualified "J".

Overall: Useable as qualified.

Reviewed by: Maureen McMyler 02/08/10

Data Review Checklist

Project Name:	Holloman AFB	SDG/Report No.:	F70660
Project No.:	100-TEN-T93002	Lab ID:	Accutest
No. of Samples:	11 and 1 TB	Matrix:	Water

Area Reviewed	**Reviewed**	**Anomalies**		**Qualification Required**
		Yes	No	Y or N (or N/A)
1. Hold Time/Preservation.	Yes		X	N
2. Instrument Performance Check	Yes		X	N
3. Calibrations	Yes	X		Y
4. Blanks (Method and/or Field QC)	Yes	X		Y
5. Surrogates	Yes		X	N
6. MS/MSD	Yes	X		Y
7. LCS	Yes	X		Y
8. Internal Standards	Yes	X		N
9. Duplicates (field, lab)	Yes	X		N
10. Serial Dilution	Yes		X	N
11. Laboratory Case Narrative	Yes		X	N
12. Completeness of Data Package	Yes		X	N
13. Other issues	Yes	X		N

The following section is intended to specify areas evaluated and to provide an explanation (where applicable) for those areas where problems were identified during review. Only applicable methods are listed.

Comments/Discussion:

1. **Hold Time/Preservation**.
Cooler temperatures at receipt ranged from 3.8 to 4.6 degrees C.
Samples were prepared and analyzed within holding times.
8260B: MW39-09-010610 was not preserved to a pH < 2. It was analyzed within 7 days, so the data are not affected.
2. **Instrument Performance Check (Method and/or Field QC)**
6010B: Interference check samples' recoveries were acceptable.
8260B: BFB abundances were acceptable.
3. **Calibrations (Initial and Continuing)**
7471A: Initial calibration verification (ICV) and continuing calibration verification (CCV) recoveries were between 80% and 120%.
6010B: ICV and CCV recoveries were between 90% and 110% for analytes of interest. The low calibration check standard for arsenic was below the lower control limit. All arsenic results should be

qualified “UJ”.
8260B: Initial calibration (ICAL) %RSD < 15% or r>0.99; CCV %difference < 20%
4. **Blanks (Method and/or Field QC)**
SM19 2540C: Total dissolved solids were not detected in the blank above the reporting limit (RL).
7471A: Mercury was not detected in the blanks above the RL.
6010B: Metals were not detected in the method blanks above the RL.
8260B: Acrolein, methylene chloride, and 1,2,3-trichlorobenzene were detected in the method blank of batch VJ3080. Methylene chloride was detected in the trip blank. Methylene chloride in MW39-06-010610 should be considered the result of lab contamination and qualified “U” at the reporting limit.
5. **Surrogates**
8260B: Recoveries were within limits.
6. **MS/MSD**
7471A: MS/MSD ran on MW39-07-010710 for total and dissolved. Recoveries and RPDs were within limits.
6010B: MS/MSD ran on MW39-07-010710 for total and dissolved. Recoveries were within limits, except for selenium in the total MSD and the dissolved MS, which were high. RPDs were within limits. Since the selenium was not detected in the original sample, there is no potential for high bias. No qualification is needed.
8260B: MS/MSD ran on MW39-07-010710. Recoveries for the following compounds were above acceptable limits: 1,1,2,2-tetrachloroethane (MSD only), 1,2,3-trichloropropane, 1,2-dibromo-3-chloropropane, 2-hexanone, 4-methyl-2-pentanone, acrylonitrile, ethyl methacrylate (MSD only), methacrylonitrile, methyl ethyl ketone, methyl methacrylate, methyl Tert Butyl Ether (MSD only), naphthalene (MSD only), propionitrile, vinyl acetate (MSD only). The compounds were not detected in the associated sample, so the possibility of high bias does not exist. No qualification is needed.
Recoveries for 2-chloroethyl vinyl ether were zero percent. Since recovery in the LCS is acceptable, the results should be considered estimated, biased low, “UJ”, instead of unusable in MW39-07-010710. MSD recovery was low for cis-1,3-dichloropropene (MSD only). Since all other QC was acceptable, no qualification is needed for it. RPD for acrylonitrile was high.
MS/MSD ran on an unrelated sample in batch VJ3081. Recoveries for 2-chloroethyl vinyl ether, 2-hexanone, acrylonitrile (MS only), cis-1,3-dichloropropene, methyl methacrylate, and propionitrile (MSD only) were outside control limits. RPDs of acrylonitrile and hexachlorobutadiene were high. Since the sample is unrelated, no qualification is needed.
7. **LCS (and LCS duplicate, if applicable)**
7471A: Recoveries were within limits.
6010B: Recoveries were within limits.
8260B: Acetone and pentachloroethane recoveries were above the control limits in batch VJ3080. Pentachloroethane was not detected in the associated samples, so the possibility of high bias does not exist. Acetone recoveries in MW39-09-010610, MW39-11-010610, MW39-12-010610, and MW39-08-010610 may be biased high. They should be considered estimated and qualified "J".

Acetone, acrolein, and methyl ethyl ketone (2-butanone) recoveries were above control limits in batch VJ3081. Acetone and methyl ethyl ketone (2-butanone) recoveries in sample MW39-10-010610 should be considered estimated, biased high, and qualified "J".
8. **Internal Standards**
8260B: Tert Butyl Alcohol-D10 areas were high in MW39-09-010610, MW39-11-010610, MW39-12-010610, and MW39-08-010610. Tert Butyl Alcohol-D10 was not used to calculate any concentrations because the associated compounds were not detected in the samples. No qualification is needed.
9. **Duplicates (field, lab)**
SM19 2540C: Ran on MW39-07-010710. RPD was within limits
7471A: Ran on MW39-07-010710 for total and dissolved. RPDs were not calculated because mercury was not detected in either the originals or the duplicates.
6010B: Ran on MW39-07-010710 for total and dissolved. RPDs for selenium exceeded the lab's control limits. Selenium was not detected in the original sample. The concentrations in the duplicates are <5x the reporting limits (RL) and the difference between the results is <RL. No qualification is necessary.
One field duplicate pair was analyzed: MW39-06D-010610 and MW39-DUP01-010610.
Selenium (dissolved) was detected below the reporting limit in the FD. It was not detected in the original sample. Selenium (total) was detected below the reporting limits in both with an RPD of 33%.
No qualification is necessary.
10. **Serial Dilution**
7471A: Ran on MW39-07-010710 for total and dissolved. RPDs were not calculated because mercury was not detected in either the originals or the dilutions.
6010B: Ran on MW39-07-010710 for total and dissolved. RPDs were not calculated because metals were not detected in either the originals or the dilutions.
11. **Laboratory Case Narrative**
Acceptable
12. **Completeness of Data Package**
Acceptable
13. **Other Issues**
6010B: There were elevated reporting limits because of matrix interference.
Overall: Useable as qualified.

Reviewed by: Maureen McMyler 02/12/10

Data Review Checklist

Project Name:	Holloman AFB	SDG/Report No.:	F70691
Project No.:	100-TEN-T93002	Lab ID:	Accutest
No. of Samples:	6 and 1 TB	Matrix:	Water

Area Reviewed	**Reviewed**	**Anomalies**		**Qualification Required**
		Yes	No	Y or N (or N/A)
1. Hold Time/Preservation.	Yes		X	N
2. Instrument Performance Check	Yes		X	N
3. Calibrations	Yes	X		N
4. Blanks (Method and/or Field QC)	Yes	X		Y
5. Surrogates	Yes		X	N
6. MS/MSD	Yes	X		Y
7. LCS	Yes		X	N
8. Internal Standards	Yes		X	N
9. Duplicates (field, lab)	Yes	X		Y
10. Serial Dilution	Yes	X		N
11. Laboratory Case Narrative	Yes		X	N
12. Completeness of Data Package	Yes		X	N
13. Other issues	Yes	X		N

The following section is intended to specify areas evaluated and to provide an explanation (where applicable) for those areas where problems were identified during review. Only applicable methods are listed.

Comments/Discussion:

1. **Hold Time/Preservation**.
Cooler temperatures at receipt ranged from 2.0 to 2.6 degrees C.
Samples were prepared and analyzed within holding times.
2. **Instrument Performance Check (Method and/or Field QC)**
6010B: Interference check samples' recoveries were acceptable.
8260B: BFB abundances were acceptable.
3. **Calibrations (Initial and Continuing)**
7471A: Initial calibration verification (ICV) and continuing calibration verification (CCV) recoveries were between 80% and 120%.
6010B: ICV and CCV recoveries were between 90% and 110% for analytes of interest. The low calibration check standard recovery was below limits for arsenic in instrument batch MA7773. All total arsenic results should be considered estimated and qualified "J" or "UJ".
8260B: Initial calibration (ICAL) %RSD < 15% or r>0.99; CCV %difference (%D) < 20 CCAL in batch VJ3081. In batch VJ3082, cis-1,4-Dichloro-2-Butene, trans-1,4-Dichloro-2-Butene, and vinyl acetate CCAL%Ds were high. None of the compounds were detected in the samples, so the possibility of high

bias does not exist. No qualification is needed.
In batch VJ3082, cis-1,4-Dichloro-2-Butene, trans-1,4-Dichloro-2-Butene, and vinyl acetate CCAL%Ds were high. None of the compounds were detected in the samples, so the possibility of high bias does not exist. No qualification is needed.
4. **Blanks (Method and/or Field QC)**
SM19 2540C: Total dissolved solids were not detected in the blank above the reporting limit (RL).
7471A: Mercury (Hg) was not detected in the blanks above the RL.
6010B: No metals were detected in the blanks above the RL. Aluminum and potassium were detected in the prep blank of batch MP17583. Potassium and thallium were detected above the absolute value of the MDL in the prep blank of batch MP17591. Thallium was not detected in the samples. The concentrations of aluminum and potassium in the samples were > 5x the amount in the blank in most cases. No qualification is needed.
8260B: Methylene chloride was detected in the blanks from batches VJ3081 and VJ3082 and in the trip blank. Methylene chloride detections in MW30&33-01-010710 and MW30&33-DUP01-010710 may be attributed to lab contamination. They should be considered non-detect at the reporting limit and qualified "U".
5. **Surrogates**
8260B: Recoveries were within limits.
6. **MS/MSD**
7471A: MS/MSD ran on MW-30&33-01-010909 for total and dissolved. Recoveries and RPDs were within limits.
6010B: MS/MSD ran on MW30&33-01-010710 for total and dissolved. In batch MP17583 for total metals, the following recoveries were outside the lab's control limits: calcium (low), copper (high), magnesium (low), potassium (high), selenium (high), silver (high), and sodium (low/high). The concentrations of calcium, magnesium, and sodium in the sample were >4x the amount spiked, so the recovery criteria do not apply. Copper and silver were not detected in the sample, so the possibility of high bias does not exist. Total selenium and potassium results in MW30&33-01-010710 should be qualified “J”, estimated. In batch MP17591 for dissolved metals, only the MS was reported. The following recoveries were outside the lab's control limits: aluminum (high), calcium (low), copper (high), magnesium (high), potassium (high), selenium (high), silver (high), and sodium (low). The concentrations of calcium, magnesium, and sodium in the sample were >4x the amount spiked, so the recovery criteria do not apply. Copper and silver were not detected in the sample, so the possibility of high bias does not exist. Dissolved selenium and potassium results in MW30&33-01-010710 should be qualified “J”, estimated.
8260B: MS/MSD ran on MW30&33-01-010710 in batch VJ3081. The following recoveries were above the lab's control limits: 2-hexanone, 4-methyl-2-pentanone (MSD only), acrylonitrile (MS only), methyl methacrylate, and propionitrile (MSD only). The compounds were not detected in the associated samples, so the possibility of high bias does not exist. RPDs for acrylonitrile and hexachlorobutadiene are outside control limits. No qualification.
Recoveries for 2-chloroethyl vinyl ether (zero percent) and cis-1,3-dichloropropene were low. Since recovery of 2-chloroethyl vinyl ether in the LCS is acceptable, the results of it and cis-1,3-dichloropropene should be considered estimated, biased low and qualified “UJ”.
MS/MSD ran on unrelated sample in batch VJ3082. A few recoveries and RPDs were outside control limits. Since the samples are unrelated, no qualification is needed.

7. **LCS (and LCS duplicate, if applicable)**
7471A: Recoveries were within limits.
6010B: Recoveries were within limits.
8260B: Recoveries were within limits for most compounds. Recoveries for acetone, acrolein, and methyl ethyl ketone (2-butanone) were above control limits in both batches. The compounds were not detected in the associated samples, so the possibility of high bias does not exist. No qualification is needed.
8. **Internal Standards**
8260B: Area and retention times were within acceptable limits.
9. **Duplicates (field, lab)**
One field duplicate pair was analyzed: MW-30&33-05-010710 and MW-30&33-DUP01-010910. Most results were in agreement with RPDs were < 30%. Total aluminum had a high RPD, but was detected below the reporting limit in both samples. No qualification is needed.
SM19 2540C: Ran on MW30&33-01-010710. RPD was within control limits.
7471A: Ran on MW30&33-01-010710 and unrelated sample. RPDs were within control limits.
6010B: Ran on MW30&33-01-010710. In batch MP17583, RPD for manganese is above control limits. In batch MP17591, RPD for silver is above control limits. In both cases, the concentration in the sample is less than 5 times the RL, so the RPD criteria are not applicable. No qualification is needed.
10. **Serial Dilution**
7471A: Ran on MW30&33-01-010710 and unrelated sample. RPDs were within control limits.
6010B: Ran on MW30&33-01-010710. RPDs for the following total metals were above lab control limits in batch MP17583: aluminum, arsenic, barium, calcium, manganese, potassium, selenium, and vanadium. The initial concentrations of aluminum, arsenic, barium, manganese, and selenium were <50x the IDL, so no qualification is needed. Calcium, potassium, and vanadium results should be considered estimated and qualified "J". RPDs for the following dissolved metals were above lab control limits in batch MP17591: arsenic, barium, calcium, potassium, selenium, silver, and vanadium. The initial concentrations of arsenic, barium, selenium, and silver were <50x the IDL, so no qualification is needed. Calcium, potassium, and vanadium results in MW30&33-01-010710 should be considered estimated and qualified "J".
11. **Laboratory Case Narrative**
Acceptable
12. **Completeness of Data Package**
Acceptable
13. **Other Issues**
6010B: There were elevated reporting limits because of matrix interference.
Overall: Useable as qualified.

Reviewed by: Maureen McMyler 02/19/10

APPENDIX B

CHAIN OF CUSTODY RECORDS

APRIL 2009 CHAIN OF CUSTODY RECORDS

COC-011

Accutest Laboratories Southeast
Chain of Custody

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL. 407-425-6700 • FAX: 407-425-0707
www.accutest.com

Accutest JOB #

PAGE 1 OF 1

Accutest Quote #

SKIFF# 29644

Client / Reporting Information

Company Name: TETRA TECH
Address: 800 OAK RIDGE TURNPIKE A-600
City: OAK RIDGE State: TN Zip: 37830
Project Contact: GINGER.MULLINS@TETRATECH.COM E-mail
Phone#: 865-599-2349
Sampler(s) Name(s) (Printed): V. MULLINS/A. MORENO

Project Information

Project Name: HOLLOMAN AFB
Street
City State
Project #: T93002
Fax #
Client Purchase Order #: 1041533

Analytical Information

Accutest Sample #	Field ID / Point of Collection	Date	Time	Sampled By:	Matrix	Total # of Bottles	Other	None	HCl	NaOH	HNO3	H2SO4	NaOH+ZnAc	DI Water	MeOH	Gamma-BHC	Alpha-BHC	Dieldrin	TDS
	MW16-04-040909	4/9/09	0835	AM	GW	3		X								X	X	X	X
	MW16-03-040909	4/9/09	0900	AM	GW	3		X								X	X	X	X
	MW16-02-040909	4/9/09	0925	AM	GW	3		X								X	X	X	X
	MW16-02-MS/MSD-040909	4/9/09	0925	AM	GW	3		X								X	X	X	X
	MW16-01-040909	4/9/09	0955	AM	GW	3		X								X	X	X	X
	MW16-DUP01-040909	4/9/09	—	AM	GW	3		X								X	X	X	X

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe

LAB USE ONLY

TURNAROUND TIME (Business Days)

Approved By: / Rush Code

- [x] 10 Days Standard
- [ ] 7 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] OTHER

Emergency or Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [x] REDT1 (EPA LEVEL 3) ERPIMS
- [ ] FULT1 (EPA LEVEL 4)
- [x] EDD'S

Comments / Remarks

FEDEX 8684 4331 7966
8684 4331 7977

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
	4/9/09 1600	2 FED EX	3		4
Relinquished by: 5	Date Time:	Received By: 6	Relinquished by: 7	Date Time:	Received By: 8

Lab Use Only: Custody Seal in Place: Y N Temp Blank Provided: Y N Preserved where Applicable: Y N Total # of Coolers: Cooler Temperature (s) Celsius: _____

JULY 2009 CHAIN OF CUSTODY RECORDS

Chain of Custody Record

TAL-4124-280 (0508)

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica ~~TA-COC-004~~ TA-COC-005

THE LEADER IN ENVIRONMENTAL TESTING

Client: TETRA TECH INC	Project Manager: GINGER.MULLINS@TETRATECH.COM	Date:	Chain of Custody Number: 114609
Address: 800 OAK RIDGE TURNPIKE A-600	Telephone Number (Area Code)/Fax Number: 865-599-2349	Lab Number:	Page ____ of ____
City: OAK RIDGE; State: TN; Zip Code: 37830	Site Contact: G. MULLINS	Lab Contact:	
Project Name and Location (State): HOLLOMAN AFB, NM	Carrier/Waybill Number:		
Contract/Purchase Order/Quote No.: 80188 LISA DRIELL			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil		Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH		Analysis (Attach list if more space is needed): PERCHLORATE 6860											Special Instructions/ Conditions of Receipt
MW39-10-070709	7/7/09	1036		X				X							X											
MW39-11-070709	7/7/09	1135		X				X							X											
MW39-09-070709	7/7/09	1358		X				X							X											
MW39-08-070709	7/7/09	1512		X				X							X											
MW39-06-070709	7/7/09	1536		X				X							X											
MW39-06D-070709	7/7/09	1635		X				X							X											
MW39-DUP01-070709	7/7/09	—		X				X							X											
MW39-02-070809	7/8/09	1110		X				X							X											
MW39-05-070809	7/8/09	1125		X				X							X											
MW39-07-070809	7/8/09	1230		X				X							X											
MW39-07-MS-070809	7/8/09	1230		X				X							X											
MW39-07-MSD-070809	7/8/09	1230		X				X							X											

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☒ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	7/8/09	1300	1. Received By	7/8/09	1300
2. Relinquished By	7/8/09	1500	2. Received By: FEDEX		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

COC-014

Accutest Laboratories Southeast
Chain of Custody

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL. 407-425-6700 • FAX: 407-425-0707
www.accutest.com

Accutest JOB # | PAGE 1 OF 1

Accutest Quote # | SKIFF#

Client / Reporting Information

Company Name: TETRA TECH
Address: 800 OAK RIDGE TURNPIKE A-600
City: OAK RIDGE State: TN Zip: 37830
Project Contact: GINGER.MULLINS@TETRATECH.COM E-mail:
Phone#: 865-559-2349
Sampler(s) Name(s) (Printed): A. MORENO / J. BENNETT

Project Information

Project Name: HOLLOMAN AFB
Street:
City: ALAMOGORDO State: NM
Project #: T93002
Fax #:
Client Purchase Order #: 1041533

Analytical Information

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe

Accutest Sample #	Field ID / Point of Collection	Collection DATE	Collection TIME	SAMPLED BY:	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NaOH-ZNAC	DI WATER	MEOH	VOCs 8260	TAL METALS TOTAL	TAL METALS DISS	TDS	LAB USE ONLY
	~~MW30833-05-070809~~	~~7/8/09~~		~~AM/JB~~	~~GW~~	~~6~~			~~X~~	~~X~~						~~X~~	~~X~~	~~X~~	~~X~~	
	MW30833-03-070809	7/8/09	1510	AM/JB	GW	6			X	X						X	X	X	X	
	MW30833-02-070809	7/8/09	1624	AM/JB	GW	6			X	X						X	X	X	X	
	MW30833-04-070809	7/8/09	1625	AM/JB	GW	6			X	X						X	X	X	X	
	MW30833-01-070809	7/8/09	1500	AM/JB	GW	6			X	X						X	X	X	X	
	MW30833-01-MS-070809	7/8/09	1500	AM/JB	GW	6			X	X						X	X	X	X	
	MW30833-01-MSD-070809	7/8/09	1500	AM/JB	GW	6			X	X						X	X	X	X	
	MW30833-DUP01-070809	7/8/09	—	—	GW	6			X	X						X	X	X	X	
	TB02-070809	7/8/09	—	—	W	2			X							X				

TURNAROUND TIME (Business Days)

Approved By: / Rush Code

- [X] 10 Days Standard
- [ ] 7 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] OTHER

Emergency or Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [X] REDT1 (EPA LEVEL 3) ERPIMS
- [ ] FULT1 (EPA LEVEL 4)
- [X] EDD'S

Comments / Remarks

LAB FILTERED METALS
FEDEX 8696 4911 0267
8696 4911 0289

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler	Date Time:	Received By:	Relinquished by :	Date Time:	Received By:
1	7/8/09 1715	2	3	7/8/09 1900	4 FEDEX
Relinquished by:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
5		6	7		8

Lab Use Only: Custody Seal in Place: Y N Temp Blank Provided: Y N Preserved where Applicable: Y N Total # of Coolers: Cooler Temperature (s) Celsius: _____

COC-013

Accutest Laboratories Southeast
Chain of Custody

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TEL. 407-425-6700 • FAX: 407-425-0707
www.accutest.com

Accutest JOB #

Accutest Quote #

SKIFF#

Client / Reporting Information

Company Name: TETRA TECH
Address: 800 OAK RIDGE TURNPIKE A-600
City: OAK RIDGE State: TN Zip: 37830
Project Contact: GINGER.MULLINS@TETRATECH.COM E-mail
Phone#: 865-599-2349
Sampler(s) Name(s) (Printed): A. MORENO J. BENNETT

Project Information

Project Name: HOLLOMAN AFB
Street
City: ALAMOGORDO State: NM
Project #: T93002
Fax #
Client Purchase Order #: 10415533

Analytical Information

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe

Accutest Sample #	Field ID / Point of Collection	Date	Time	Sampled By	Matrix	Total # of Bottles	Other	None	HCl	NaOH	HNO3	H2SO4	NaOH+ZnAc	DI Water	MeOH	VOCs 8260	TDS	Metals Total 6 RCRA	Metals Diss 6 RCRA								LAB USE ONLY
	MW39-10-070709	7/7/09	1036	AM/JB	GW	6			X		X					X	X	X	X								
	MW39-11-070709	7/7/09	1135	AM/JB	GW	6			X		X					X	X	X	X								
	MW39-09-070709	7/7/09	1358	AM/JB	GW	6			X		X					X	X	X	X								
	MW39-08-070709	7/7/09	1512	AM/JB	GW	6			X		X					X	X	X	X								
	MW39-06-070709	7/7/09	1556	AM/JB	GW	6			X		X					X	X	X	X								
	MW39-06D-070709	7/7/09	1635	AM/JB	GW	6			X		X					X	X	X	X								
	MW39-DUP01-070709	7/7/09	—	AM/JB	GW	6			X		X					X	X	X	X								
	MW39-02-070809	7/8/09	1110	AM/JB	GW	6			X		X					X	X	X	X								
	MW39-05-070809	7/8/09	1125	AM/JB	GW	6			X		X					X	X	X	X								
	MW39-07-070809	7/8/09	1230	AM/JB	GW	6			X		X					X	X	X	X								
	MW39-07-MS-070809	7/8/09	1230	AM/JB	GW	6			X		X					X	X	X	X								
	MW39-07-MSD-070809	7/8/09	1230	AM/JB	GW	6			X		X					X	X	X	X								

TURNAROUND TIME (Business Days)

Approved By: / Rush Code

- [X] 10 Days Standard
- [ ] 7 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] OTHER

Emergency or Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [X] REDT1 (EPA LEVEL 3) ERPIMS
- [ ] FULT1 (EPA LEVEL 4)
- [X] EDD'S

Comments / Remarks

LAB FILTERED METALS
FEDEX 869649110278
869649110304

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished by :	Date Time:	Received By:
1	7/8/09 1330	2	3	7/8/09 1500	4 FEDEX
Relinquished by:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
5		6	7		8

Lab Use Only: Custody Seal in Place: Y N Temp Blank Provided: Y N Preserved where Applicable: Y N Total # of Coolers: Cooler Temperature (s) Celsius:

COC-013

Accutest Laboratories Southeast
Chain of Custody

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL. 407-425-6700 • FAX: 407-425-0707
www.accutest.com

Accutest JOB #

Accutest Quote #

SKIFF#

Client / Reporting Information

Company Name: TETRA TECH
Address: 900 OAK RIDGE TURNPIKE A-600
City: OAK RIDGE State: TN Zip: 37830
Project Contact: GINGER.MULLINS@TETRATECH.COM E-mail:
Phone#: 865-599-2349
Sampler(s) Name(s) (Printed)

Project Information

Project Name: HOLLOMAN AFB
Street
City: ALAMOGORDO State: NM
Project #: T93002
Fax #
Client Purchase Order #

Analytical Information

VOCs 8260

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe

Accutest Sample #	Field ID / Point of Collection	COLLECTION DATE	TIME	SAMPLED BY:	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NAOH-ZNAC	DI WATER	MEOH	VOCs 8260	LAB USE ONLY
	TB01-070809	7/8/09	—	—	W	2			X								

TURNAROUND TIME (Business Days)

Approved By: / Rush Code

- [X] 10 Days Standard
- [ ] 7 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] OTHER

Emergency or Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [X] REDT1 (EPA LEVEL 3) ERPIMS
- [ ] FULT1 (EPA LEVEL 4)
- [X] EDD'S

Comments / Remarks

LAB FILTERED METALS
FEDEX 8696 4911 0278
8696 4911 0301

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished by :	Date Time:	Received By:
1	7/8/09 1330	2	3	7/8/09 1800	4 FEDEX
Relinquished by:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
5		6	7		8

Lab Use Only: Custody Seal in Place: Y N Temp Blank Provided: Y N Preserved where Applicable: Y N Total # of Coolers: Cooler Temperature (s) Celsius: _____

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COC-012

Accutest JOB #

PAGE 1 OF 1

Accutest Quote #

SKIFF#

Client / Reporting Information

Company Name: TETRA TECH
Address: 800 OAK RIDGE TURNPIKE A-600
City: OAK RIDGE State: TN Zip: 37830
Project Contact: GINGER MULLINS@TETRATECH.COM E-mail:
Phone#: 865-599-2349
Sampler(s) Name(s) (Printed): A. MORENO, J. BENNATT

Project Information

Project Name: HOLLOMAN AFB
Street:
City: ALAMOGORDO State: NM
Project #: T93002
Fax #:
Client Purchase Order #:

Analytical Information

Accutest Sample #	Field ID / Point of Collection	Collection Date	Collection Time	Sampled By:	Matrix	Total # of Bottles	Other	None	HCl	NaOH	HNO3	H2SO4	NaOH+ZnAc	DI Water	MeOH	Gamma-BHC	Alpha-BHC	Dieldrin	TDS								Matrix Codes / LAB USE ONLY
	MW16-04-070609	7/6/09	1523		GW	3		X								X	X	X	X								
	MW16-03-070609	7/6/09	1543		GW	3		X								X	X	X	X								
	MW16-03-MS-070609	7/6/09	1543		GW	3		X								X	X	X	X								
	MW16-03-MSD-070609	7/6/09	1543		GW	3		X								X	X	X	X								
	MW16-02-070609	7/6/09	1620		GW	3		X								X	X	X	X								
	MW16-01-070609	7/6/09	1645		GW	3		X								X	X	X	X								
	MW16-DUP01-070609	7/6/09	—		GW	3		X								X	X	X	X								

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe

TURNAROUND TIME (Business Days)

Approved By: / Rush Code

- [X] 10 Days Standard
- [ ] 7 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] OTHER

Emergency or Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [X] REDT1 (EPA LEVEL 3) ERPIMS
- [ ] FULT1 (EPA LEVEL 4)
- [X] EDD'S

Comments / Remarks

FEDEX 869649110290
869649110315

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
	7/6/09 1700	2	3		4
Relinquished by:	**Date Time:**	**Received By:**	**Relinquished by:**	**Date Time:**	**Received By:**
	7/7/09 1500	6 FED EX	7		8

Lab Use Only: Custody Seal in Place: Y N Temp Blank Provided: Y N Preserved where Applicable: Y N Total # of Coolers: Cooler Temperature (s) Celsius: _____

OCTOBER 2009 CHAIN OF CUSTODY RECORDS

Chain of Custody Record

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica TA-COC-06

THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124-280 (0508)

Client: TETRA TECH INC	Project Manager: GINGER.MULLINS@TETRATECH.COM	Date: 10/7/09	Chain of Custody Number: 114610
Address: 800 OAK RIDGE TURNPIKE A-600	Telephone Number (Area Code)/Fax Number: 865-599-2349	Lab Number	Page 1 of 1
City: OAK RIDGE; State: TN; Zip Code: 37830	Site Contact: G. MULLINS	Lab Contact	
Project Name and Location (State): HOLLOMAN AFB, NM	Carrier/Waybill Number: 8654 5880 2375		
Contract/Purchase Order/Quote No.: 80188 LISA DRIELL			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil		Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH		Analysis (Attach list if more space is needed): PERCHLORATE 6860											Special Instructions/ Conditions of Receipt
MW39-12-100609	10/6/09	1035		X				X							X											

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☒ 21 Days ☐ Other _____

QC Requirements (Specify):

	Date	Time		Date	Time
1. Relinquished By			1. Received By	10/6/09	1100
2. Relinquished By	~~10/6/09~~	~~1100~~	2. Received By: FED EX	10/7/09	1230
3. Relinquished By	10/7/09	1230	3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Accutest Laboratories Southeast
Chain of Custody

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www.accutest.com

COC-016

Accutest JOB #

PAGE 1 OF 1

Accutest Quote #

SKIFF#

Client / Reporting Information

Company Name: TETRA TECH
Address: 800 OAK RIDGE TURNPIKE A-600
City: OAK RIDGE State: TN Zip: 37830
Project Contact: GINGER.MULLINS@TETRATECH.COM
Phone#: 865-599-2349
Sampler(s) Name(s) (Printed)

Project Information

Project Name: HOLLOMAN AFB
Street
City: ALAMOGORDO State: NM
Project #: T93002
Fax #
Client Purchase Order #

Analytical Information

Accutest Sample #	Field ID / Point of Collection	Collection Date	Time	Sampled By	Matrix	Total # of Bottles	Other	None	HCl	NaOH	HNO3	H2SO4	NaOH-ZnAc	DI Water	MeOH	Gamma BHC	Alpha BHC	Dieldrin	TDS
	MW16-03-100609	10/6/09	1540	JB	GW	3		X								X	X	X	X
	MW16-03-MS-100609	10/6/09	1540	JB	GW	3		X								X	X	X	X
	MW16-03-MSD-100609	10/6/09	1540	JB	GW	3		X								X	X	X	X
	MW16-04-100609	10/6/09	1600	JB	GW	3		X								X	X	X	X
	MW16-02-100609	10/6/09	1630	JB	GW	3		X								X	X	X	X
	MW16-01-100609	10/6/09	1700	JB	GW	3		X								X	X	X	X
	MW16-DUP01-100609	10/6/09	—	JB	GW	3		X								X	X	X	X

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe

LAB USE ONLY

TURNAROUND TIME (Business Days)

Approved By: / Rush Code

- [x] 10 Days Standard
- [ ] 7 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] OTHER

Emergency or Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [x] REDT1 (EPA LEVEL 3) ERPIMS
- [ ] FULT1 (EPA LEVEL 4)
- [x] EDD'S

Comments / Remarks

FED EX 8696 4911 0256
8692 9697 2158

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
1	10/6/09 1730	2	3	10/7/09 1100	4 FED EX
Relinquished by:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
5		6	7		8

Lab Use Only: Custody Seal in Place: Y N Temp Blank Provided: Y N Preserved where Applicable: Y N Total # of Coolers: Cooler Temperature (s) Celsius: _____

Accutest Laboratories Southeast
Chain of Custody

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COC-~~014~~015

Accutest JOB #

PAGE 1 OF 1

Accutest Quote #

SKIFF#

Client / Reporting Information

Company Name: TETRA TECH
Address: 8000 OAK RIDGE TURNPIKE A-600
City: OAK RIDGE State: TN Zip: 37830
Project Contact: GUNTER.MULLINS@TETRATECH.COM E-mail:
Phone#: 865-599-2349
Sampler(s) Name(s) (Printed)

Project Information

Project Name: HOLLOMAN AFB
Street
City: ALAMOGORDO State: NM
Project #: TG3002
Fax #
Client Purchase Order #

Analytical Information

Accutest Sample #	Field ID / Point of Collection	Date	Time	Sampled By	Matrix	Total # of Bottles	Other	None	HCl	NaOH	HNO3	H2SO4	NaOH-ZnAc	DI Water	MeOH	VOCs 8260	TDS	Metals 8260 - Total	Metals 8260 - Diss	Metals Tal - Total	Metals Tal - Diss					Matrix Codes / Lab Use Only
	MW39-12-100609	10/6/09	1035	JB	GW	6			X		X					X	X	X	X							
	MW30833-05R-100609	10/6/09	1410	JB	GW	6			X		X					X	X			X	X					
	TB01-100609	10/6/09	—	—	GW	2			X							X										

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe

TURNAROUND TIME (Business Days)

Approved By: / Rush Code

- [X] 10 Days Standard
- [ ] 7 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] OTHER

Emergency or Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [X] REDT1 (EPA LEVEL 3) ERPIMS
- [ ] FULT1 (EPA LEVEL 4)
- [X] EDD'S

Comments / Remarks

LAB FILTERED METALS

FEDEX 8696 4911 0245

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
1	10/6/09	2	3	10/7/09 1100	4 FED EX
Relinquished by: 5	Date Time:	Received By: 6	Relinquished by: 7	Date Time:	Received By: 8

Lab Use Only: Custody Seal in Place: Y N Temp Blank Provided: Y N Preserved where Applicable: Y N Total # of Coolers: Cooler Temperature (s) Celsius: _____

JANUARY 2010 CHAIN OF CUSTODY RECORDS

Chain of Custody Record

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TA-COC-07

TAL-4124-280 (1007)

Client	Project Manager	Date	Chain of Custody Number
TETRA TECH, INC.	GINGER.MULLINS@TETRATECH.COM	1/7/10	100392
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	
800 OAK RIDGE TURNPIKE A-600	865-599-2349		Page 1 of 2
City / State / Zip Code	**Site Contact / Lab Contact**		
OAK RIDGE / TN / 37830	G. MULLINS / L. URIELL		
Project Name and Location (State)	**Carrier/Waybill Number**		
HOLLOMAN AFB, NM	8641 1005 2195 FEDEX		
Contract/Purchase Order/Quote No.			
80188 LISA URIELL			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil		Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH		Perchlorate 6860	Special Instructions/ Conditions of Receipt
MW39-10-010610	1/6/10	1113		X				X							X	
MW39-09-010610	1/6/10	1125		X				X							X	
MW39-11-010610	1/6/10	1330		X				X							X	
MW39-06D-010610	1/6/10	1430		X				X							X	
MW39-12-010610	1/6/10	1445		X				X							X	
MW39-06-010610	1/6/10	1555		X				X							X	
MW39-08-010610	1/6/10	1557		X				X							X	
MW39-DUP01-010610	1/6/10	—		X				X							X	
MW39-02-010710	1/7/10	0940		X				X							X	
MW39-07-010710	1/7/10	0955		X				X							X	
MW39-07-MS-010710	1/7/10	0955		X				X							X	
MW39-07-MSD-010710	1/7/10	0955		X				X							X	

Analysis (Attach list if more space is needed)

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months
(A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☒ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	1/7/10	1100	1. Received By	1/7/10	1100
2. Relinquished By	1/7/10	1400	2. Received By FEDEX	1/7/10	1400
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Chain of Custody Record

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica TA-COC-07

THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124-280 (0508)

Client: TETRA TECH, INC.	Project Manager: GINGER.MULLINS@TERATECH.COM	Date: 1/7/10	Chain of Custody Number: 123573
Address: 800 OAK RIDGE TURNPIKE A-600	Telephone Number (Area Code)/Fax Number: 865-599-2349	Lab Number	Page 2 of 2
City: OAK RIDGE; State: TN; Zip Code: 37830	Site Contact: G. MULLINS	Lab Contact: L. URIELL	
Project Name and Location (State): HOLLOMAN AFB, NM	Carrier/Waybill Number: 8641 1005 2195		
Contract/Purchase Order/Quote No.: 80188 LISA URIELL			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil		Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH		Analysis (Attach list if more space is needed): PERCHLORATE 6860											Special Instructions/ Conditions of Receipt
MW39-05-010710	1/7/10	1030		X				X							X											

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☒ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	1/7/10	1100	1. Received By	1/7/10	1100
2. Relinquished By	1/7/10	1400	2. Received By: FEDEX	1/7/10	1400
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Accutest Laboratories Southeast
Chain of Custody

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www.accutest.com

COC-019

Accutest JOB #

PAGE 1 OF 1

Accutest Quote #

SKIFF# 32505

Client / Reporting Information

Company Name: TETRA TECH
Address: 800 OAK RIDGE TURNPIKE A-600
City: OAK RIDGE State: TN Zip: 37830
Project Contact: GINGER.MULLINS@TETRATECH.COM E-mail:
Phone#: 865-599-2349
Sampler(s) Name(s) (Printed): J. BENNETT / A. MORENO

Project Information

Project Name: HOLLOMAN AFB
Street:
City: ALAMOGORDO State: NM
Project #: T93002
Fax #:
Client Purchase Order #:

Analytical Information

Accutest Sample #	Field ID / Point of Collection	Collection Date	Time	Sampled By:	Matrix	Total # of Bottles	Other	None	HCl	NaOH	HNO3	H2SO4	NaOH+ZnAc	DI Water	MeOH	VOCs 8260	TAL Metals Total	TAL Metals-Diss	TDS								Matrix Codes (LAB USE ONLY)
	MW30&33-01-010710	1/7/10	1440	AM	GW	6			X		X					X	X	X	X								
	MW30&33-01-MS-010710	1/7/10	1440	AM	GW	6			X		X					X	X	X	X								
	MW30&33-01-MSD-010710	1/7/10	1440	AM	GW	6			X		X					X	X	X	X								
	MW30&33-02-010710	1/7/10	1442	JB	GW	6			X		X					X	X	X	X								
	MW30&33-03-010710	1/7/10	1525	JB	GW	6			X		X					X	X	X	X								
	MW30&33-04-010710	1/7/10	1520	JB	GW	6			X		X					X	X	X	X								
	MW30&33-05R-010710	1/7/10	1605	AM	GW	6			X		X					X	X	X	X								
	MW30&33-DUP01-010710	1/7/10	—	—	GW	6			X		X					X	X	X	X								
	TB02-010710	1/7/10	—	—	W	2			X							X											

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe

TURNAROUND TIME (Business Days)

Approved By: / Rush Code

- [x] 10 Days Standard
- [ ] 7 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] OTHER

Emergency or Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [x] REDT1 (EPA LEVEL 3) ERPIMS
- [ ] FULT1 (EPA LEVEL 4)
- [x] EDD'S

Comments / Remarks

FEDEX 8705 1620 6520
8705 1620 6689

LAB FILTERED METALS

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished by :	Date Time:	Received By:
1	1/7/10 1700	2	3	1/8/10 1000	4 FEDEX
Relinquished by:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
5		6	7		8

Lab Use Only: Custody Seal in Place: Y N Temp Blank Provided: Y N Preserved where Applicable: Y N Total # of Coolers: Cooler Temperature (s) Celsius: _____

COC-018

Accutest Laboratories Southeast
Chain of Custody

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www.accutest.com

Accutest JOB #

Accutest Quote #

SKIFF# 32619

Client / Reporting Information

Company Name: TETRA TECH
Address: 800 OAK RIDGE TURNPIKE A600
City: OAK RIDGE State: TN Zip: 37830
Project Contact: GINGER.MULLINS@TETRATECH.COM E-mail:
Phone#: 865-559-2349
Sampler(s) Name(s) (Printed): J. BENNETT / A. MORENO

Project Information

Project Name: HOLLOMAN AFB SS-39
Street:
City: ALAMOGORDO State: NM
Project #: T93002
Fax #:
Client Purchase Order #:

Analytical Information

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe

Accutest Sample #	Field ID / Point of Collection	Collection DATE	Collection TIME	SAMPLED BY:	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NaOH+ZnAc	DI WATER	MeOH	VOCs 8260	8 RCRA METALS TOTAL	8 RCRA METALS DISSOLVED	TDS								LAB USE ONLY
	MW39-10-010610	1/6/10	1113	JB	GW	6			X		X					X	X	X	X								
	MW39-09-010610	1/6/10	1125	AM	GW	6			X		X					X	X	X	X								
	MW39-11-010610	1/6/10	1330	AM	GW	6			X		X					X	X	X	X								
	MW39-06D-010610	1/6/10	1436	JB	GW	6			X		X					X	X	X	X								
	MW39-12-010610	1/6/10	1445	AM	GW	6			X		X					X	X	X	X								
	MW39-06-010610	1/6/10	1555	AM	GW	6			X		X					X	X	X	X								
	MW39-08-010610	1/6/10	1557	JB	GW	6			X		X					X	X	X	X								
	MW39-DUP01-010610	1/6/10	—	—	GW	6			X		X					X	X	X	X								
	TB01-010610	1/6/10	—	—	W	3			X							X											
	MW39-02-010710	1/7/10	0940	AM	GW	6			X		X					X	X	X	X								
	MW39-07-010710	1/7/10	0955	JB	GW	6			X		X					X	X	X	X								
	MW39-07-MS-010710	1/7/10	0955	JB	GW	6			X		X					X	X	X	X								

TURNAROUND TIME (Business Days)

Approved By: / Rush Code

- [X] 10 Days Standard
- [ ] 7 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] OTHER

Emergency or Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [X] REDT1 (EPA LEVEL 3) ERPIMS
- [ ] FULT1 (EPA LEVEL 4)
- [X] EDD'S

Comments / Remarks

LAB FILTERED METALS
FED EX 8705 1620 6597
8705 1620 6510
8692 9697 2169

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished by :	Date Time:	Received By:
1	1/7/10 1100	2	3	1/7/10 1400	4 FEDEX
Relinquished by:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
5		6	7		8

Lab Use Only: Custody Seal in Place: Y N Temp Blank Provided: Y N Preserved where Applicable: Y N Total # of Coolers: Cooler Temperature (s) Celsius:

Accutest Laboratories Southeast
Chain of Custody

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TEL. 407-425-6700 • FAX: 407-425-0707
www.accutest.com

COC-018

Accutest JOB #

PAGE 2 OF 2

Accutest Quote #

SKIFF#

Client / Reporting Information

Company Name: TETRA TECH
Address: 800 OAK RIDGE TURNPIKE A-600
City: OAK RIDGE State: TN Zip: 37830
Project Contact: E-mail: GINGER.MULLINS@TETRATECH.COM
Phone#: 865-599-2349
Sampler(s) Name(s) (Printed)

Project Information

Project Name: HOLLOMAN AFB
Street
City: ALAMOGORDO State: NM
Project #: T9300 2
Fax #
Client Purchase Order #

Analytical Information

Accutest Sample #	Field ID / Point of Collection	Date	Time	Sampled By	Matrix	Total # of Bottles	Other	None	HCl	NaOH	HNO3	H2SO4	NaOH-ZnAc	DI Water	MeOH	VOCs 8260	8 RCRA METALS TOTAL	8 RCRA METALS DISSOLVED	TDS
	MW39-07-MSD-010710	1/7/10	0955	JB	GW	6			X		X					X	X	X	X
	MW39-05-010710	1/7/10	1030	AM	GW	6			X		X					X	X	X	X

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe

LAB USE ONLY

TURNAROUND TIME (Business Days)

Approved By: / Rush Code

- [x] 10 Days Standard
- [ ] 7 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] OTHER

Emergency or Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [x] REDT1 (EPA LEVEL 3) ERPIMS
- [ ] FULT1 (EPA LEVEL 4)
- [x] EDD'S

Comments / Remarks

LAB FILTERED METALS

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished By Sampler:	Date Time:	Received By:	Relinquished by :	Date Time:	Received By:
1	1/7/10 1100	2	3	1/7/10 1400	4 FED EX
Relinquished by:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
5		6	7		8

Lab Use Only: Custody Seal in Place: Y N Temp Blank Provided: Y N Preserved where Applicable: Y N Total # of Coolers: Cooler Temperature (s) Celsius: _____

Accutest Laboratories Southeast
Chain of Custody

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COC-017

Accutest JOB #

PAGE 1 OF 1

Accutest Quote #

SKIFF# 32506

Client / Reporting Information

Company Name: TETRA TECH
Address: 800 OAK RIDGE TURNPIKE A-600
City: OAK RIDGE State: TN Zip: 37830
Project Contact: GINGER HUCKINS E-mail: GINGER.HUCKINS@TETRATECH.COM
Phone#: 865-599-2349
Sampler(s) Name(s) (Printed): J. BENNETT / A. MORENO

Project Information

Project Name: HOLLOMAN AFB
Street:
City: ALAMOGORDO State: NM
Project #: T93002
Fax #:
Client Purchase Order #:

Analytical Information

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe

Accutest Sample #	Field ID / Point of Collection	Collection DATE	Collection TIME	SAMPLED BY	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NaOH+ZNAC	DI WATER	MEOH	GAMMA BHC	ALPHA BHC	DIELDRIN	TDS	LAB USE ONLY
	MW16-04-010510	1/5/10	1350	JB	GW	3		X								X	X	X	X	
	MW16-03-010510	1/5/10	1406	JB	GW	3		X								X	X	X	X	
	MW16-03-MS-010510	1/5/10	1406	JB	GW	3		X								X	X	X	X	
	MW16-03-MSD-010510	1/5/10	1406	JB	GW	3		X								X	X	X	X	
	MW16-02-010510	1/5/10	1431	JB	GW	3		X								X	X	X	X	
	MW16-01-010510	1/5/10	1450	JM	GW	3		X								X	X	X	X	
	~~MW16-DUP01-10060~~																			
	MW16-DUP01-010510	1/5/10	—	JB	GW	3		X								X	X	X	X	

TURNAROUND TIME (Business Days)

Approved By: / Rush Code

- [x] 10 Days Standard
- [ ] 7 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] OTHER

Emergency or Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [x] REDT1 (EPA LEVEL 3) ERPIMS
- [ ] FULT1 (EPA LEVEL 4)
- [x] EDD'S

Comments / Remarks

FEDEX 8702 8502 3118
8702 8502 3129

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date, Time:	Received By:	Relinquished by :	Date Time:	Received By:
1	1/5/10 1600	2	3	1/6/10 1400	4 FEDEX
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
5		6	7		8

Lab Use Only: Custody Seal in Place: Y N Temp Blank Provided: Y N Preserved where Applicable: Y N Total # of Coolers: Cooler Temperature (s) Celsius: _____

APPENDIX C

LABORATORY ANALYTICAL DATA
(ATTACHED CD-ROM)

Southeast ACCUTEST Laboratories

IT'S ALL IN THE CHEMISTRY

04/28/09

Technical Report for

Tetra Tech, Inc

Holloman AFB; Alamogordo, NM

100-TEN-T93002

Accutest Job Number: F64511

Sampling Date: 04/09/09

Report to:

Tetra Tech
800 Oak Ridge Tpk. Suite A600
Oak Ridge, TN 37830
Virginia.Mullins@tetratech.com

ATTN: Ginger Mullins

Total number of pages in report: 76

ACCUTEST LABORATORIES 50 YEARS 1956-2006

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Harry Behzadi, Ph.D.
Laboratory Director

Client Service contact: Sue Bell 407-425-6700

Certifications: FL (DOH E83510), NC (573), NJ (FL002), MA (FL946), IA (366), LA (03051), KS (E-10327), SC, AK

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.

Test results relate only to samples analyzed.

Note: This report is password protected to disallow document modification or assembly.
A password to unlock this report is available from your client service representative.

Table of Contents

-1-

Section 1: Sample Summary 3
Section 2: Case Narrative/Conformance Summary 4
Section 3: Sample Results 5
3.1: F64511-1: MW-16-04-040909 6
3.2: F64511-2: MW-16-03-040909 8
3.3: F64511-3: MW-16-02-040909 10
3.4: F64511-4: MW-16-01-040909 12
3.5: F64511-5: MW-16-DUP01-040909 14
Section 4: Misc. Forms 16
4.1: Chain of Custody 17
Section 5: GC Semi-volatiles - QC Data Summaries 19
5.1: Method Blank Summary 20
5.2: Blank Spike Summary 24
5.3: Matrix Spike/Matrix Spike Duplicate Summary 26
5.4: DDT/Endrin Breakdown Checks 27
5.5: Surrogate Recovery Summaries 33
5.6: GC Surrogate Retention Time Summaries 34
5.7: Initial and Continuing Calibration Summaries 40
Section 6: General Chemistry - QC Data Summaries 74
6.1: Method Blank and Spike Results Summary 75
6.2: Duplicate Results Summary 76

Sample Summary

Tetra Tech, Inc

Job No: F64511

Holloman AFB; Alamogordo, NM
Project No: 100-TEN-T93002

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
F64511-1	04/09/09	08:35 AM	04/10/09	AQ	Ground Water	MW-16-04-040909
F64511-2	04/09/09	09:00 AM	04/10/09	AQ	Ground Water	MW-16-03-040909
F64511-3	04/09/09	09:25 AM	04/10/09	AQ	Ground Water	MW-16-02-040909
F64511-3D	04/09/09	09:25 AM	04/10/09	AQ	Water Dup/MSD	MW-16-02-040909
F64511-3S	04/09/09	09:25 AM	04/10/09	AQ	Water Matrix Spike	MW-16-02-040909
F64511-4	04/09/09	09:05 AM	04/10/09	AQ	Ground Water	MW-16-01-040909
F64511-5	04/09/09	00:00 AM	04/10/09	AQ	Ground Water	MW-16-DUP01-040909

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Tetra Tech, Inc **Job No:** F64511

Site: Holloman AFB; Alamogordo, NM **Report Date:** 4/24/2009 4:00:29 PM

5 Samples were collected on 04/09/2009 and were received at Accutest SE on 04/10/2009 properly preserved, at 3 Deg. C and intact. These Samples received an Accutest job number of F64511. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Extractables by GC by Method SW846 8081A

Matrix: AQ **Batch ID:** OP28657

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Samples F64511-3MS, F64511-3MSD were used as the QC samples indicated.

Matrix Spike Duplicate Recovery for gamma-BHC (Lindane) is outside control limits. Probable cause: due to matrix interference.

RPD for MSD for Dieldrin is outside control limits for sample OP28657-MSD. Probable cause due to sample non-homogeneity.

F64511-1, F64511-3: Dilution required due to matrix interference.

Wet Chemistry by Method SM19 2540C

Matrix: AQ **Batch ID:** GN34639

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample F64511-3DUP was used as the QC sample for Solids, Total Dissolved.

Matrix: AQ **Batch ID:** GN34682

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

F64511-2 for Solids, Total Dissolved: No QC analyzed due to limited volume of sample.

Accutest Laboratories Southeast (ALSE) certifies that this report meets the project requirements for analytical data produced for the samples as received at ALSE and as stated on the COC. ALSE certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the ALSE Quality Manual except as noted above. This report is to be used in its entirety. ALSE is not responsible for any assumptions of data quality if partial data packages are used.

Narrative prepared by:

Date: April 24, 2009

Ellen Pampel, Inorganic QA (signature on file)

Friday, April 24, 2009

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MW-16-04-040909		
Lab Sample ID:	F64511-1	**Date Sampled:**	04/09/09
Matrix:	AQ - Ground Water	**Date Received:**	04/10/09
Method:	SW846 8081A SW846 3510C	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	TT17606.D	4	04/16/09	FS	04/13/09	OP28657	GTT565
Run #2							

	Initial Volume	Final Volume
Run #1	1020 ml	10.0 ml
Run #2		

Pesticide Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
319-84-6	alpha-BHC	ND	0.20	0.039	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.20	0.039	ug/l	
60-57-1	Dieldrin	ND	0.20	0.039	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	74%		42-127%
2051-24-3	Decachlorobiphenyl	77%		27-127%

(a) Dilution required due to matrix interference.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-16-04-040909		
Lab Sample ID:	F64511-1	**Date Sampled:**	04/09/09
Matrix:	AQ - Ground Water	**Date Received:**	04/10/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	4200	1000	100	mg/l	10	04/13/09 11:55	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW-16-03-040909		
Lab Sample ID:	F64511-2	**Date Sampled:**	04/09/09
Matrix:	AQ - Ground Water	**Date Received:**	04/10/09
Method:	SW846 8081A SW846 3510C	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	ST80407.D	1	04/15/09	FS	04/13/09	OP28657	GST2028
Run #2							

	Initial Volume	Final Volume
Run #1	1040 ml	10.0 ml
Run #2		

Pesticide Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
319-84-6	alpha-BHC	ND	0.048	0.0096	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.048	0.0096	ug/l	
60-57-1	Dieldrin	ND	0.048	0.0096	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	78%		42-127%
2051-24-3	Decachlorobiphenyl	29%		27-127%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-16-03-040909		
Lab Sample ID:	F64511-2	**Date Sampled:**	04/09/09
Matrix:	AQ - Ground Water	**Date Received:**	04/10/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved [a]	3180	1000	100	mg/l	10	04/16/09 07:48	LE	SM19 2540C

(a) No QC analyzed due to limited volume of sample.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW-16-02-040909		
Lab Sample ID:	F64511-3	**Date Sampled:**	04/09/09
Matrix:	AQ - Ground Water	**Date Received:**	04/10/09
Method:	SW846 8081A SW846 3510C	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	ST80408.D	5	04/15/09	FS	04/13/09	OP28657	GST2028
Run #2							

	Initial Volume	Final Volume
Run #1	1040 ml	10.0 ml
Run #2		

Pesticide Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
319-84-6	alpha-BHC	ND	0.24	0.048	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.24	0.048	ug/l	
60-57-1	Dieldrin	ND	0.24	0.048	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	78%		42-127%
2051-24-3	Decachlorobiphenyl	51%		27-127%

(a) Dilution required due to matrix interference.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-16-02-040909		
Lab Sample ID:	F64511-3	**Date Sampled:**	04/09/09
Matrix:	AQ - Ground Water	**Date Received:**	04/10/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	5760	1000	100	mg/l	10	04/13/09 11:55	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW-16-01-040909		
Lab Sample ID:	F64511-4	**Date Sampled:**	04/09/09
Matrix:	AQ - Ground Water	**Date Received:**	04/10/09
Method:	SW846 8081A SW846 3510C	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	KK31693.D	1	04/14/09	FS	04/13/09	OP28657	GKK1089
Run #2							

	Initial Volume	Final Volume
Run #1	1040 ml	10.0 ml
Run #2		

Pesticide Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
319-84-6	alpha-BHC	ND	0.048	0.0096	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.048	0.0096	ug/l	
60-57-1	Dieldrin	ND	0.048	0.0096	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	79%		42-127%
2051-24-3	Decachlorobiphenyl	51%		27-127%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-16-01-040909		
Lab Sample ID:	F64511-4	**Date Sampled:**	04/09/09
Matrix:	AQ - Ground Water	**Date Received:**	04/10/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	3700	1000	10	mg/l	1	04/13/09 11:55	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW-16-DUP01-040909		
Lab Sample ID:	F64511-5	**Date Sampled:**	04/09/09
Matrix:	AQ - Ground Water	**Date Received:**	04/10/09
Method:	SW846 8081A SW846 3510C	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	KK31694.D	1	04/14/09	FS	04/13/09	OP28657	GKK1089
Run #2							

	Initial Volume	Final Volume
Run #1	1040 ml	10.0 ml
Run #2		

Pesticide Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
319-84-6	alpha-BHC	ND	0.048	0.0096	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.048	0.0096	ug/l	
60-57-1	Dieldrin	ND	0.048	0.0096	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	73%		42-127%
2051-24-3	Decachlorobiphenyl	45%		27-127%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-16-DUP01-040909		
Lab Sample ID:	F64511-5	**Date Sampled:**	04/09/09
Matrix:	AQ - Ground Water	**Date Received:**	04/10/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	3630	1000	100	mg/l	10	04/13/09 11:55	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result >= MDL but < RL

4

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Certification Exceptions
- Chain of Custody

COC-011

Accutest Laboratories Southeast
Chain of Custody

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TEL. 407-425-6700 • FAX: 407-425-0707
www.accutest.com

ACCUTEST.

Accutest JOB # F64511 | PAGE 1 OF 1 | Accutest Quote # | SKIFF# 29644

Client / Reporting Information

Company Name: TETRA TECH
Address: 800 OAK RIDGE TURNPIKE A-600
City: OAK RIDGE State: TN Zip: 37830
Project Contact: GINGER.MULLINS@TETRATECH.COM E-mail
Phone#: 865-599-2349
Sampler(s) Name(s) (Printed): V. MULLINS / A. MORENO

Project Information

Project Name: HOLLOMAN AFB
Street
City State
Project #: T93002
Fax #
Client Purchase Order #: 1041533

Analytical Information

Accutest Sample #	Field ID / Point of Collection	DATE	TIME	SAMPLED BY:	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NaOH+ZnAc	DI WATER	MeOH	GAMMA-BHC	ALPHA-BHC	DIELDRIN	TDS
1	MW16-04-040909	4/9/09	0835	AM	GW	3		X								X	X	X	X
2	MW16-03-040909	4/9/09	0900	AM	GW	3		X								X	X	X	X
3	MW16-02-040909	4/9/09	0935	AM	GW	3		X								X	X	X	X
3D	MW16-02-MS/MSD-040909	4/9/09	0935	AM	GW	3		X								X	X	X	X
4	MW16-01-040909	4/9/09	0955	AM	GW	3		X								X	X	X	X
5	MW16-DUP01-040909	4/9/09	—	AM	GW	3		X								X	X	X	X

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe

LAB USE ONLY

TURNAROUND TIME (Business Days) — Approved By: / Rush Code

- [x] 10 Days Standard
- [ ] 7 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] OTHER

Emergency or Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [x] REDT1 (EPA LEVEL 3) ERPIMS
- [ ] FULT1 (EPA LEVEL 4)
- [x] EDD'S

Comments / Remarks

FEDEX 8684 4331 7966
8684 4331 7977

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
	4/9/09 1600	2 FED EX	3 FX	4/10/09 9:8	4 (Accutest) 4/10/09 9:18
Relinquished by: 5	Date Time:	Received By: 6	Relinquished by: 7	Date Time:	Received By: 8

Lab Use Only: Custody Seal in Place: Y N Temp Blank Provided: Y N Preserved where Applicable: Y N Total # of Coolers: 7 Cooler Temperature (s) Celsius: 2.6 3.0

4.1 4

F64511: Chain of Custody
Page 1 of 2

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: F64511 CLIENT: Tetra Tech PROJECT: Holbrooman

DATE/TIME RECEIVED: 4/10/09 9:00 # OF COOLERS RECEIVED: 2 COOLER TEMPS: 2.6 3.0

METHOD OF DELIVERY: (FEDEX) UPS ACCUTEST COURIER GREYHOUND DELIVERY OTHER

AIRBILL NUMBERS: 8684 4331 9977

COOLER INFORMATION

- [ ] CUSTODY SEAL NOT PRESENT OR NOT INTACT
- [ ] CHAIN OF CUSTODY NOT RECEIVED (COC)
- [ ] ANALYSIS REQUESTED IS UNCLEAR OR MISSING
- [ ] SAMPLE DATES OR TIMES UNCLEAR OR MISSING
- [ ] TEMPERATURE CRITERIA NOT MET
- [ ] WET ICE RECEIVED IN COOLER

TRIP BLANK INFORMATION

- [ ] TRIP BLANK PROVIDED
- [x] TRIP BLANK NOT PROVIDED
- [x] TRIP BLANK NOT ON COC
- [ ] TRIP BLANK INTACT
- [ ] TRIP BLANK NOT INTACT
- [ ] RECEIVED WATER TRIP BLANK
- [ ] RECEIVED SOIL TRIP BLANK

SAMPLE INFORMATION

- [ ] SAMPLE LABELS NOT PRESENT ON ALL BOTTLES
- [ ] CORRECT NUMBER OF CONTAINERS USED
- [ ] SAMPLE RECEIVED IMPROPERLY PRESERVED
- [ ] INSUFFICIENT VOLUME FOR ANALYSIS
- [ ] TIMES ON COC DOES NOT MATCH LABEL(S)
- [ ] ID'S ON COC DOES NOT MATCH LABEL(S)
- [ ] VOC VIALS HAVE HEADSPACE (MACRO BUBBLES)
- [ ] BOTTLES RECEIVED BUT ANALYSIS NOT REQUESTED
- [ ] NO BOTTLES RECEIVED FOR ANALYSIS REQUESTED
- [ ] UNCLEAR FILTERING INSTRUCTIONS
- [ ] UNCLEAR COMPOSITING INSTRUCTIONS
- [ ] SAMPLE CONTAINER(S) RECEIVED BROKEN
- [ ] % SOLIDS JAR NOT RECEIVED
- [ ] 5035 FIELD KIT NOT FROZEN WITHIN 48 HOUR'S
- [ ] RESIDUAL CHLORINE PRESENT

(APPLICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS)

MISC. INFORMATION

NUMBER OF ENCORES ? 0

NUMBER OF 5035 FIELD KITS ? 0

NUMBER OF LAB FILTERED METALS ? 0

SUMMARY OF COMMENTS:

TECHNICIAN SIGNATURE/DATE [signature] 4/10/09 TECHNICIAN SIGNATURE/DATE [signature] 4-10-09

ASBD 12/17/07

4.1 4

F64511: Chain of Custody
Page 2 of 2

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- DDT/Endrin Breakdown Checks
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: F64511
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP28657-MB	KK31681.D	1	04/14/09	FS	04/13/09	OP28657	GKK1089

The QC reported here applies to the following samples: **Method:** SW846 8081A

F64511-1, F64511-2, F64511-3, F64511-4, F64511-5

CAS No.	Compound	Result	RL	MDL	Units	Q
319-84-6	alpha-BHC	ND	0.050	0.010	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.050	0.010	ug/l	
60-57-1	Dieldrin	ND	0.050	0.010	ug/l	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	65%	42-127%
2051-24-3	Decachlorobiphenyl	70%	27-127%

Method Blank Summary

Job Number: F64511
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP28657-MB	ST80399.D	1	04/15/09	FS	04/13/09	OP28657	GST2028

The QC reported here applies to the following samples: **Method:** SW846 8081A

F64511-1, F64511-2, F64511-3, F64511-4, F64511-5

CAS No.	Compound	Result	RL	MDL	Units	Q
319-84-6	alpha-BHC	ND	0.050	0.010	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.050	0.010	ug/l	
60-57-1	Dieldrin	ND	0.050	0.010	ug/l	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	69%	42-127%
2051-24-3	Decachlorobiphenyl	78%	27-127%

Method Blank Summary

Job Number: F64511
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP28657-MB	TT17605.D	1	04/16/09	FS	04/13/09	OP28657	GTT565

The QC reported here applies to the following samples: **Method:** SW846 8081A

F64511-1, F64511-2, F64511-3, F64511-4, F64511-5

CAS No.	Compound	Result	RL	MDL	Units	Q
319-84-6	alpha-BHC	ND	0.050	0.010	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.050	0.010	ug/l	
60-57-1	Dieldrin	ND	0.050	0.010	ug/l	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	65%	42-127%
2051-24-3	Decachlorobiphenyl	81%	27-127%

Method Blank Summary

Job Number: F64511
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP28657-MB	TT17623.D	1	04/17/09	ME	04/13/09	OP28657	GTT566

The QC reported here applies to the following samples: **Method:** SW846 8081A

F64511-1, F64511-2, F64511-3, F64511-4, F64511-5

CAS No.	Compound	Result	RL	MDL	Units	Q
319-84-6	alpha-BHC	ND	0.050	0.010	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.050	0.010	ug/l	
60-57-1	Dieldrin	ND	0.050	0.010	ug/l	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	63%	42-127%
2051-24-3	Decachlorobiphenyl	75%	27-127%

Blank Spike Summary

Job Number: F64511
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP28657-BS	KK31680.D	1	04/14/09	FS	04/13/09	OP28657	GKK1089

The QC reported here applies to the following samples: **Method:** SW846 8081A

F64511-1, F64511-2, F64511-3, F64511-4, F64511-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
319-84-6	alpha-BHC	0.5	0.49	98	77-132
58-89-9	gamma-BHC (Lindane)	0.5	0.50	100	80-136
60-57-1	Dieldrin	0.5	0.50	100	80-136

CAS No.	Surrogate Recoveries	BSP	Limits
877-09-8	Tetrachloro-m-xylene	80%	42-127%
2051-24-3	Decachlorobiphenyl	75%	27-127%

Blank Spike Summary

Job Number: F64511
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP28657-BS	ST80398.D	1	04/15/09	FS	04/13/09	OP28657	GST2028

The QC reported here applies to the following samples: **Method:** SW846 8081A

F64511-1, F64511-2, F64511-3, F64511-4, F64511-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
319-84-6	alpha-BHC	0.5	0.50	100	77-132
58-89-9	gamma-BHC (Lindane)	0.5	0.54	108	80-136
60-57-1	Dieldrin	0.5	0.58	116	80-136

CAS No.	Surrogate Recoveries	BSP	Limits
877-09-8	Tetrachloro-m-xylene	82%	42-127%
2051-24-3	Decachlorobiphenyl	88%	27-127%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F64511
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP28657-MS	ST80409.D	5	04/15/09	FS	04/13/09	OP28657	GST2028
OP28657-MSD	ST80410.D	5	04/15/09	FS	04/13/09	OP28657	GST2028
F64511-3 [a]	ST80408.D	5	04/15/09	FS	04/13/09	OP28657	GST2028

The QC reported here applies to the following samples: **Method:** SW846 8081A

F64511-1, F64511-2, F64511-3, F64511-4, F64511-5

CAS No.	Compound	F64511-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
319-84-6	alpha-BHC	ND		0.962	0.80	83	0.90	94	12	77-132/16
58-89-9	gamma-BHC (Lindane)	ND		0.962	1.2	125	1.4	146*	15	80-136/17
60-57-1	Dieldrin	ND		0.962	1.1	114	1.3	135	17*	80-136/16

CAS No.	Surrogate Recoveries	MS	MSD	F64511-3	Limits
877-09-8	Tetrachloro-m-xylene	90%	97%	78%	42-127%
2051-24-3	Decachlorobiphenyl	67%	55%	51%	27-127%

(a) Dilution required due to matrix interference.

DDT/Endrin Breakdown Check

Job Number: F64511
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample:	GKK1089-DDT	**Injection Date:**	04/14/09
Lab File ID:	KK31656.D	**Injection Time:**	12:06
Instrument ID:	GCKK		

Compound	Response Signal 1	Response Signal 2
4,4'-DDD	186931	25821
4,4'-DDE	128362	0
4,4'-DDT	11607701	1991463
DDT Breakdown [a]	2.6 %	1.3 %
Endrin aldehyde	162669	23463
Endrin ketone	234648	37858
Endrin	12547966	1995987
Endrin Breakdown [b]	3.1 %	3 %

(a) Calculated as: (DDD + DDE) / (DDD + DDE + DDT) x 100
(b) Calculated as: (Endrin Aldehyde + Endrin Ketone) / (Endrin Aldehyde + Endrin Ketone + Endrin) x 100

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
GKK1089-IC1089	KK31658.D	04/14/09	12:49	00:43	Initial cal 10
GKK1089-IC1089	KK31659.D	04/14/09	13:04	00:59	Initial cal 20
GKK1089-ICC1089	KK31660.D	04/14/09	13:20	01:14	Initial cal 40
GKK1089-IC1089	KK31661.D	04/14/09	13:36	01:30	Initial cal 60
GKK1089-IC1089	KK31662.D	04/14/09	13:51	01:46	Initial cal 80
GKK1089-IC1089	KK31663.D	04/14/09	14:07	02:01	Initial cal 5
GKK1089-IC1089	KK31664.D	04/14/09	14:22	02:17	Initial cal 500
GKK1089-IC1089	KK31665.D	04/14/09	14:38	02:32	Initial cal 200
GKK1089-ICV1089	KK31667.D	04/14/09	15:13	03:08	Initial cal verification 40
GKK1089-CC1089	KK31679.D	04/14/09	18:20	06:15	Continuing cal 40
OP28657-BS	KK31680.D	04/14/09	18:36	06:30	Blank Spike
OP28657-MB	KK31681.D	04/14/09	18:51	06:46	Method Blank
GKK1089-CC1089	KK31688.D	04/14/09	20:40	08:35	Continuing cal 40
F64511-4	KK31693.D	04/14/09	21:58	09:53	MW-16-01-040909
F64511-5	KK31694.D	04/14/09	22:14	10:08	MW-16-DUP01-040909
GKK1089-CC1089	KK31695.D	04/14/09	22:29	10:23	Continuing cal 40
OP28632-MB	KK31696.D	04/14/09	22:45	10:39	Method Blank
ZZZZZZ	KK31697.D	04/14/09	23:00	10:54	(unrelated sample)
GKK1089-ECC1089	KK31698.D	04/14/09	23:16	11:10	Ending cal 40

DDT/Endrin Breakdown Check

Job Number: F64511
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample:	GST2024-DDT	**Injection Date:**	03/26/09
Lab File ID:	ST80246.D	**Injection Time:**	11:09
Instrument ID:	GCST		

Compound	Response Signal 1	Response Signal 2
4,4'-DDD	159982	12967
4,4'-DDE	108437	8327
4,4'-DDT	12996925	1662529
DDT Breakdown [a]	2 %	1.3 %
Endrin aldehyde	188496	16905
Endrin ketone	252226	26752
Endrin	15819785	1349877
Endrin Breakdown [b]	2.7 %	3.1 %

(a) Calculated as: (DDD + DDE) / (DDD + DDE + DDT) x 100
(b) Calculated as: (Endrin Aldehyde + Endrin Ketone) / (Endrin Aldehyde + Endrin Ketone + Endrin) x 100

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
GST2024-ICC2024	ST80247.D	03/26/09	11:25	00:16	Initial cal 40
GST2024-IC2024	ST80248.D	03/26/09	11:47	00:38	Initial cal 5
GST2024-IC2024	ST80249.D	03/26/09	12:03	00:54	Initial cal 10
GST2024-IC2024	ST80250.D	03/26/09	12:19	01:10	Initial cal 20
GST2024-IC2024	ST80251.D	03/26/09	12:34	01:25	Initial cal 60
GST2024-IC2024	ST80252.D	03/26/09	12:50	01:41	Initial cal 80
GST2024-IC2024	ST80253.D	03/26/09	13:06	01:57	Initial cal 500
GST2024-IC2024	ST80254.D	03/26/09	13:22	02:13	Initial cal 200
GST2024-ICV2024	ST80255.D	03/26/09	13:42	02:33	Initial cal verification 40
OP28438-MB	ST80256.D	03/26/09	13:58	02:49	Method Blank
ZZZZZZ	ST80257.D	03/26/09	14:14	03:05	(unrelated sample)
GST2024-CC2024	ST80258.D	03/26/09	14:30	03:21	Continuing cal 40
OP28425-BS	ST80259.D	03/26/09	14:45	03:36	Blank Spike
OP28425-MB	ST80260.D	03/26/09	15:01	03:52	Method Blank
ZZZZZZ	ST80261.D	03/26/09	15:17	04:08	(unrelated sample)
ZZZZZZ	ST80262.D	03/26/09	15:33	04:24	(unrelated sample)
ZZZZZZ	ST80263.D	03/26/09	15:49	04:40	(unrelated sample)
GST2024-CC2024	ST80266.D	03/26/09	16:36	05:27	Continuing cal 40
ZZZZZZ	ST80268.D	03/26/09	17:08	05:59	(unrelated sample)
ZZZZZZ	ST80269.D	03/26/09	17:24	06:15	(unrelated sample)
ZZZZZZ	ST80270.D	03/26/09	17:39	06:30	(unrelated sample)
ZZZZZZ	ST80271.D	03/26/09	17:55	06:46	(unrelated sample)
ZZZZZZ	ST80272.D	03/26/09	18:11	07:02	(unrelated sample)
ZZZZZZ	ST80273.D	03/26/09	18:27	07:18	(unrelated sample)

DDT/Endrin Breakdown Check

Job Number: F64511
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GST2024-DDT
Lab File ID: ST80246.D
Instrument ID: GCST
Injection Date: 03/26/09
Injection Time: 11:09

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	ST80274.D	03/26/09	18:43	07:34	(unrelated sample)
ZZZZZZ	ST80275.D	03/26/09	18:58	07:49	(unrelated sample)
F63892-41	ST80276.D	03/26/09	19:14	08:05	(used for QC only; not part of job F64511)
GST2024-CC2024	ST80277.D	03/26/09	19:30	08:21	Continuing cal 40
OP28425-MS	ST80283.D	03/26/09	21:04	09:55	Matrix Spike
OP28425-MSD	ST80284.D	03/26/09	21:20	10:11	Matrix Spike Duplicate
GST2024-ECC2024	ST80285.D	03/26/09	21:36	10:27	Ending cal 40

DDT/Endrin Breakdown Check

Job Number: F64511
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample:	GST2028-DDT	**Injection Date:**	04/15/09
Lab File ID:	ST80383.D	**Injection Time:**	14:23
Instrument ID:	GCST		

Compound	Response Signal 1	Response Signal 2
4,4'-DDD	613154	58797
4,4'-DDE	622794	60378
4,4'-DDT	10781441	1290314
DDT Breakdown [a]	10.3 %	8.5 %
Endrin aldehyde	611165	60462
Endrin ketone	26652	1421
Endrin	15102914	1611160
Endrin Breakdown [b]	4.1 %	3.7 %

(a) Calculated as: (DDD + DDE) / (DDD + DDE + DDT) x 100
(b) Calculated as: (Endrin Aldehyde + Endrin Ketone) / (Endrin Aldehyde + Endrin Ketone + Endrin) x 100

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
GST2028-CC2024	ST80384.D	04/15/09	14:49	00:26	Continuing cal 40
GST2028-CC2024	ST80385.D	04/15/09	15:21	00:58	Continuing cal 500
GST2028-CC2024	ST80386.D	04/15/09	15:39	01:16	Continuing cal 200
OP28653-BS	ST80387.D	04/15/09	15:55	01:32	Blank Spike
OP28653-MB	ST80388.D	04/15/09	16:10	01:47	Method Blank
ZZZZZZ	ST80389.D	04/15/09	16:26	02:03	(unrelated sample)
ZZZZZZ	ST80390.D	04/15/09	16:42	02:19	(unrelated sample)
ZZZZZZ	ST80391.D	04/15/09	16:57	02:34	(unrelated sample)
F64510-5	ST80394.D	04/15/09	17:44	03:21	(used for QC only; not part of job F64511)
OP28653-MS	ST80395.D	04/15/09	18:00	03:37	Matrix Spike
OP28653-MSD	ST80396.D	04/15/09	18:16	03:53	Matrix Spike Duplicate
GST2028-CC2024	ST80397.D	04/15/09	18:32	04:09	Continuing cal 40
OP28657-BS	ST80398.D	04/15/09	18:47	04:24	Blank Spike
OP28657-MB	ST80399.D	04/15/09	19:03	04:40	Method Blank
ZZZZZZ	ST80400.D	04/15/09	19:18	04:55	(unrelated sample)
ZZZZZZ	ST80401.D	04/15/09	19:34	05:11	(unrelated sample)
ZZZZZZ	ST80402.D	04/15/09	19:50	05:27	(unrelated sample)
ZZZZZZ	ST80403.D	04/15/09	20:06	05:43	(unrelated sample)
GST2028-CC2024	ST80404.D	04/15/09	20:21	05:58	Continuing cal 40
F64511-2	ST80407.D	04/15/09	21:08	06:45	MW-16-03-040909
F64511-3	ST80408.D	04/15/09	21:24	07:01	MW-16-02-040909
OP28657-MS	ST80409.D	04/15/09	21:40	07:17	Matrix Spike
OP28657-MSD	ST80410.D	04/15/09	21:55	07:32	Matrix Spike Duplicate
GST2028-ECC2024	ST80411.D	04/15/09	22:11	07:48	Ending cal 20

DDT/Endrin Breakdown Check

Job Number: F64511
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample:	GTT565-DDT	**Injection Date:**	04/16/09
Lab File ID:	TT17576.D	**Injection Time:**	10:21
Instrument ID:	GCTT		

Compound	Response Signal 1	Response Signal 2
4,4'-DDD	75388	227702
4,4'-DDE	32617	88122
4,4'-DDT	3452671	7227658
DDT Breakdown [a]	3 %	4.2 %
Endrin aldehyde	66243	176808
Endrin ketone	108904	260251
Endrin	4347100	8439246
Endrin Breakdown [b]	3.9 %	4.9 %

(a) Calculated as: (DDD + DDE) / (DDD + DDE + DDT) x 100
(b) Calculated as: (Endrin Aldehyde + Endrin Ketone) / (Endrin Aldehyde + Endrin Ketone + Endrin) x 100

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
GTT565-IC565	TT17578.D	04/16/09	11:12	00:51	Initial cal 5
GTT565-IC565	TT17579.D	04/16/09	11:28	01:07	Initial cal 10
GTT565-IC565	TT17580.D	04/16/09	11:43	01:22	Initial cal 20
GTT565-ICC565	TT17581.D	04/16/09	11:59	01:38	Initial cal 40
GTT565-IC565	TT17582.D	04/16/09	12:14	01:53	Initial cal 60
GTT565-IC565	TT17583.D	04/16/09	12:30	02:09	Initial cal 80
GTT565-IC565	TT17585.D	04/16/09	13:01	02:40	Initial cal 200
GTT565-IC565	TT17587.D	04/16/09	14:08	03:48	Initial cal 500
GTT565-ICV565	TT17588.D	04/16/09	14:24	04:03	Initial cal verification 40
OP28690-LBS	TT17589.D	04/16/09	14:43	04:22	Blank Spike
OP28690-LB	TT17590.D	04/16/09	14:58	04:38	Leachate Blank
F64508-1	TT17592.D	04/16/09	15:35	05:14	(used for QC only; not part of job F64511)
OP28690-MS	TT17593.D	04/16/09	15:50	05:30	Matrix Spike
OP28690-MSD	TT17594.D	04/16/09	16:06	05:45	Matrix Spike Duplicate
GTT565-CC565	TT17595.D	04/16/09	16:21	06:01	Continuing cal 40
GTT565-CC565	TT17604.D	04/16/09	18:41	08:21	Continuing cal 40
OP28657-MB	TT17605.D	04/16/09	18:57	08:36	Method Blank
F64511-1	TT17606.D	04/16/09	19:13	08:52	MW-16-04-040909
GTT565-ECC565	TT17607.D	04/16/09	19:28	09:08	Ending cal 40

DDT/Endrin Breakdown Check

Job Number: F64511
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample:	GTT566-DDT	**Injection Date:**	04/17/09
Lab File ID:	TT17609.D	**Injection Time:**	09:29
Instrument ID:	GCTT		

Compound	Response Signal 1	Response Signal 2
4,4'-DDD	31167	95469
4,4'-DDE	53808	130827
4,4'-DDT	3616625	6999180
DDT Breakdown [a]	2.3 %	3.1 %
Endrin aldehyde	133804	337146
Endrin ketone	186226	427692
Endrin	4352796	7887082
Endrin Breakdown [b]	6.8 %	8.8 %

(a) Calculated as: (DDD + DDE) / (DDD + DDE + DDT) x 100
(b) Calculated as: (Endrin Aldehyde + Endrin Ketone) / (Endrin Aldehyde + Endrin Ketone + Endrin) x 100

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
GTT566-CC565	TT17610.D	04/17/09	09:45	00:15	Continuing cal 40
GTT566-CC565	TT17611.D	04/17/09	10:00	00:30	Continuing cal 200
GTT566-CC565	TT17612.D	04/17/09	10:16	00:46	Continuing cal 500
OP28688-BS	TT17613.D	04/17/09	10:33	01:03	Blank Spike
OP28688-MB	TT17614.D	04/17/09	10:48	01:18	Method Blank
ZZZZZZ	TT17615.D	04/17/09	11:04	01:34	(unrelated sample)
F64564-1	TT17616.D	04/17/09	11:19	01:49	(used for QC only; not part of job F64511)
OP28688-MS	TT17617.D	04/17/09	11:35	02:05	Matrix Spike
OP28688-MSD	TT17618.D	04/17/09	11:50	02:20	Matrix Spike Duplicate
ZZZZZZ	TT17619.D	04/17/09	12:06	02:36	(unrelated sample)
ZZZZZZ	TT17620.D	04/17/09	12:22	02:52	(unrelated sample)
GTT566-CC565	TT17622.D	04/17/09	13:20	03:51	Continuing cal 40
OP28657-MB	TT17623.D	04/17/09	13:55	04:26	Method Blank
ZZZZZZ	TT17624.D	04/17/09	14:11	04:41	(unrelated sample)
GTT566-CC565	TT17625.D	04/17/09	14:26	04:57	Continuing cal 40
GTT566-ECC565	TT17636.D	04/17/09	17:17	07:48	Ending cal 20

Semivolatile Surrogate Recovery Summary

Job Number: F64511
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Method: SW846 8081A **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S2 [a]
F64511-1	TT17606.D	74.0	77.0
F64511-2	ST80407.D	78.0	29.0
F64511-3	ST80408.D	78.0	51.0
F64511-4	KK31693.D	79.0	51.0
F64511-5	KK31694.D	73.0	45.0
OP28657-BS	KK31680.D	80.0	75.0
OP28657-BS	ST80398.D	82.0	88.0
OP28657-MB	KK31681.D	65.0	70.0
OP28657-MB	ST80399.D	69.0	78.0
OP28657-MB	TT17605.D	65.0	81.0
OP28657-MB	TT17623.D	63.0	75.0
OP28657-MS	ST80409.D	90.0	67.0
OP28657-MSD	ST80410.D	97.0	55.0

Surrogate Compounds	Recovery Limits
S1 = Tetrachloro-m-xylene	42-127%
S2 = Decachlorobiphenyl	27-127%

(a) Recovery from GC signal #1

GC Surrogate Retention Time Summary

Job Number: F64511
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Check Std:	GKK1089-CC1089	**Injection Date:**	04/14/09
Lab File ID:	KK31679.D	**Injection Time:**	18:20
Instrument ID:	GCKK	**Method:**	SW846 8081A

	S1 [a] RT	S2 [a] RT
Check Std	4.53	9.50

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S2 [a] RT
OP28657-BS	KK31680.D	04/14/09	18:36	4.53	9.50
OP28657-MB	KK31681.D	04/14/09	18:51	4.53	9.50

Surrogate Compounds

S1 = Tetrachloro-m-xylene
S2 = Decachlorobiphenyl

(a) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: F64511
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Check Std:	GKK1089-CC1089	**Injection Date:**	04/14/09
Lab File ID:	KK31688.D	**Injection Time:**	20:40
Instrument ID:	GCKK	**Method:**	SW846 8081A

	S1 [a] RT	S2 [a] RT
Check Std	4.53	9.50

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S2 [a] RT
F64511-4	KK31693.D	04/14/09	21:58	4.53	9.50
F64511-5	KK31694.D	04/14/09	22:14	4.53	9.50

Surrogate Compounds

S1 = Tetrachloro-m-xylene
S2 = Decachlorobiphenyl

(a) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: F64511
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Check Std:	GST2028-CC2024	**Injection Date:**	04/15/09
Lab File ID:	ST80397.D	**Injection Time:**	18:32
Instrument ID:	GCST	**Method:**	SW846 8081A

	S1 [a] RT	S2 [a] RT
Check Std	4.58	9.49

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S2 [a] RT
OP28657-BS	ST80398.D	04/15/09	18:47	4.58	9.49
OP28657-MB	ST80399.D	04/15/09	19:03	4.58	9.49
ZZZZZZ	ST80400.D	04/15/09	19:18	4.58	9.50
ZZZZZZ	ST80401.D	04/15/09	19:34	4.58	9.49
ZZZZZZ	ST80402.D	04/15/09	19:50	4.58	9.49
ZZZZZZ	ST80403.D	04/15/09	20:06	4.58	9.49

Surrogate Compounds

S1 = Tetrachloro-m-xylene
S2 = Decachlorobiphenyl

(a) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: F64511
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Check Std:	GST2028-CC2024	**Injection Date:**	04/15/09
Lab File ID:	ST80404.D	**Injection Time:**	20:21
Instrument ID:	GCST	**Method:**	SW846 8081A

	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
Check Std	4.58	4.59	9.49	9.56

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
F64511-2	ST80407.D	04/15/09	21:08	4.58		9.49	
F64511-3	ST80408.D	04/15/09	21:24	4.58		9.50	
OP28657-MS	ST80409.D	04/15/09	21:40	4.58		9.49	
OP28657-MSD	ST80410.D	04/15/09	21:55	4.58		9.49	
GST2028-ECC2024	ST80411.D	04/15/09	22:11	4.58	4.59	9.49	9.56

Surrogate Compounds

S1 = Tetrachloro-m-xylene
S2 = Decachlorobiphenyl

(a) Retention time from GC signal #1
(b) Retention time from GC signal #2

GC Surrogate Retention Time Summary

Job Number: F64511
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Check Std:	GTT565-CC565	**Injection Date:**	04/16/09
Lab File ID:	TT17595.D	**Injection Time:**	16:21
Instrument ID:	GCTT	**Method:**	SW846 8081A

	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
Check Std	4.25	4.19	9.07	8.98

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
OP28657-MB	TT17605.D	04/16/09	18:57	4.25		9.07	
F64511-1	TT17606.D	04/16/09	19:13	4.25		9.07	
GTT565-ECC565	TT17607.D	04/16/09	19:28	4.25	4.19	9.07	8.98

Surrogate Compounds

S1 = Tetrachloro-m-xylene
S2 = Decachlorobiphenyl

(a) Retention time from GC signal #1
(b) Retention time from GC signal #2

GC Surrogate Retention Time Summary

Job Number: F64511
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Check Std:	GTT566-CC565	**Injection Date:**	04/17/09
Lab File ID:	TT17622.D	**Injection Time:**	13:20
Instrument ID:	GCTT	**Method:**	SW846 8081A

	S1 [a] RT	S2 [a] RT
Check Std	4.24	9.07

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S2 [a] RT
OP28657-MB	TT17623.D	04/17/09	13:55	4.24	9.07
ZZZZZZ	TT17624.D	04/17/09	14:11	4.24	9.06

Surrogate Compounds

S1 = Tetrachloro-m-xylene
S2 = Decachlorobiphenyl

(a) Retention time from GC signal #1

Initial Calibration Summary

Job Number: F64511
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GKK1089-ICC1089
Lab FileID: KK31660.D

Response Factor Report ECD 5

Method : C:\MSDCHEM\1\METHODS\8081A.M (Chemstation Integrator)
Title : Pesticides by 608 or 8081
Last Update : Tue Apr 14 14:57:16 2009
Response via : Initial Calibration

Calibration Files
5 =KK31663.D 10 =KK31658.D 20 =KK31659.D 40 =KK31660.D
60 =KK31661.D 80 =KK31662.D c200=KK31665.D t500=KK31664.D

Compound	5	10	20	40	60	80	c200	t500	Avg	%RSD
1) Tetrachloro-	4.008	3.754	3.851	3.635	3.699	3.416			3.727 E5	5.38
2) alpha-BHC	4.689	4.363	4.696	4.482	4.402	4.275			4.484 E5	3.88
3) gamma-BHC (L	4.247	4.023	4.298	4.026	4.097	3.890			4.097 E5	3.72
4) beta-BHC	1.839	1.689	1.747	1.652	1.683	1.656			1.711 E5	4.17
5) delta-BHC	3.930	3.725	3.973	3.822	3.907	3.745			3.850 E5	2.66
6) Heptachlor	3.578	3.243	3.470	3.175	3.122	2.957			3.257 E5	7.04
7) Aldrin	3.800	3.529	3.717	3.365	3.393	3.257			3.510 E5	6.06
8) Heptachlor E	3.466	3.089	3.175	2.896	2.831	2.742			3.033 E5	8.79
9) gamma-Chlord	3.450	3.165	3.294	3.177	3.174	3.144			3.234 E5	3.65
10) alpha-Chlord	3.356	3.022	3.097	2.975	3.104	2.961			3.086 E5	4.71
11) Endosulfan	3.118	2.790	2.889	2.634	2.690	2.538			2.776 E5	7.45
12) 4,4'-DDE	3.332	3.018	3.207	3.039	3.084	2.952			3.105 E5	4.50
13) Dieldrin	3.439	3.155	3.312	3.042	3.065	2.947			3.160 E5	5.83
14) Endrin	2.773	2.559	2.700	2.440	2.464	2.277			2.536 E5	7.16
15) 4,4'-DDD	2.679	2.381	2.697	2.485	2.502	2.427			2.529 E5	5.18
16) Endosulfan I	2.907	2.647	2.782	2.566	2.617	2.449			2.661 E5	6.09
17) Endrin Aldeh	2.290	2.011	2.164	2.035	2.137	1.991			2.105 E5	5.43
18) 4,4'-DDT	2.331	2.234	2.393	2.300	2.540	2.233			2.338 E5	4.95
19) Endosulfan S	2.630	2.318	2.409	2.307	2.402	2.271			2.389 E5	5.44
20) Methoxychlor	1.189	1.052	1.090	1.024	1.107	0.981			1.074 E5	6.74
21) Endrin Keton	2.903	2.515	2.708	2.496	2.675	2.434			2.622 E5	6.65
22) Chlordane-A							1.285		1.285 E4	0.00
23) Chlordane-B							1.631		1.631 E4	0.00
24) Chlordane-C							7.354		7.354 E3	0.00
25) Chlordane-D							4.181		4.181 E4	0.00
26) Chlordane-E							4.222		4.222 E4	0.00
27) Chlordane-F							8.563		8.563 E3	0.00
28) Toxaphene								2.988	2.988 E6	0.00
29) Decachlorobi	2.618	2.190	2.282	2.248	2.570	2.435			2.390 E5	7.44

Signal #2

1) Tetrachloro-	6.038	5.804	6.075	5.768	5.834	5.448			5.828 E4	3.87
2) alpha-BHC	7.095	6.892	7.792	7.101	7.177	6.788			7.141 E4	4.91
3) gamma-BHC (L	6.490	6.265	6.969	6.489	6.416	6.155			6.464 E4	4.34
4) beta-BHC	2.816	2.592	2.812	2.679	2.753	2.738			2.732 E4	3.11
5) delta-BHC	5.883	5.675	6.561	5.891	6.085	5.691			5.964 E4	5.52
6) Heptachlor	5.314	4.960	5.305	5.188	4.924	4.713			5.067 E4	4.75
7) Aldrin	5.914	5.551	6.032	5.541	5.522	5.155			5.619 E4	5.59
8) Heptachlor E	5.299	4.972	5.281	4.736	4.694	4.468			4.908 E4	6.85
9) gamma-Chlord	5.434	5.082	5.388	5.146	5.174	5.090			5.219 E4	2.94
10) alpha-Chlord	5.214	4.924	5.125	5.047	5.116	4.864			5.048 E4	2.62
11) Endosulfan	4.913	4.397	4.849	4.375	4.386	4.079			4.500 E4	7.09
12) 4,4'-DDE	4.328	4.660	4.764	3.890	4.874	4.539			4.509 E4	7.92
13) Dieldrin	5.121	5.101	5.325	4.919	4.975	4.770			5.035 E4	3.80
14) Endrin	3.879	3.876	4.083	3.837	3.819	3.616			3.852 E4	3.88
15) 4,4'-DDD	4.385	3.936	4.304	4.093	4.166	4.032			4.153 E4	4.06

Initial Calibration Summary

Job Number: F64511
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GKK1089-ICC1089
Lab FileID: KK31660.D

16)	Endosulfan I	4.375	4.130	4.305	4.139	4.253	3.886			4.181 E4	4.13
17)	Endrin Aldeh	3.429	3.083	3.356	3.191	3.328	3.064			3.242 E4	4.68
18)	4,4'-DDT	3.623	3.383	3.897	3.786	4.005	3.715			3.735 E4	5.85
19)	Endosulfan S	3.649	3.277	3.610	3.404	3.531	3.327			3.466 E4	4.42
20)	Methoxychlor	1.808	1.581	1.739	1.638	1.821	1.615			1.700 E4	6.07
21)	Endrin Keton	4.544	3.998	4.392	4.031	4.371	3.926			4.210 E4	6.08
22)	Chlordane-A							1.991		1.991 E3	0.00
23)	Chlordane-B							2.428		2.428 E3	0.00
24)	Chlordane-C							1.365		1.365 E3	0.00
25)	Chlordane-D							5.533		5.533 E3	0.00
26)	Chlordane-E							4.586		4.586 E3	0.00
27)	Chlordane-F							1.406		1.406 E3	0.00
28)	Toxaphene								3.853	3.853 E5	0.00
29)	Decachlorobi	4.108	3.482	3.682	3.542	3.912	3.721			3.741 E4	6.26

(#) = Out of Range ### Number of calibration levels exceeded format ###

8081A.M Wed Apr 15 10:43:31 2009

5.7 5

Initial Calibration Verification

Job Number: F64511
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GKK1089-ICV1089
Lab FileID: KK31667.D

Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\1\DATA\0414PEST\KK31667.D\ECD1A.CH Vial: 11
Signal #2 : C:\MSDCHEM\1\DATA\0414PEST\KK31667.D\ECD2B.CH
Acq On : 4-14-09 03:13:30 PM Operator: fouads
Sample : icv1089-40 Inst : ECD 5
Misc : op28581,gkk1089,30.4,,,10,5,soil Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\1\METHODS\8081A.M (Chemstation Integrator)
Title : Pesticides by 608 or 8081
Last Update : Tue Apr 14 14:57:16 2009
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene		----------NA----------				
2		alpha-BHC	40.000	40.358	-0.9	101	0.00	4.82- 5.02
3		gamma-BHC (Lindane)	40.000	40.033	-0.1	102	0.00	5.09- 5.29
4		beta-BHC	40.000	39.653	0.9	103	0.00	5.26- 5.46
5		delta-BHC	40.000	41.102	-2.8	104	0.00	5.47- 5.67
6		Heptachlor	40.000	40.548	-1.4	104	0.00	5.58- 5.78
7		Aldrin	40.000	38.555	3.6	101	0.00	5.87- 6.07
8		Heptachlor Epoxide	40.000	39.958	0.1	105	0.00	6.24- 6.44
9		gamma-Chlordane	40.000	41.134	-2.8	105	0.00	6.47- 6.67
10		alpha-Chlordane	40.000	40.099	-0.2	104	0.00	6.54- 6.74
11		Endosulfan I	40.000	40.535	-1.3	107	0.00	6.59- 6.79
12		4,4'-DDE	40.000	39.702	0.7	101	0.00	6.70- 6.90
13		Dieldrin	40.000	41.530	-3.8	108	0.00	6.84- 7.04
14		Endrin	40.000	41.755	-4.4	108	0.00	7.04- 7.24
15		4,4'-DDD	40.000	42.613	-6.5	108	0.00	7.18- 7.38
16		Endosulfan II	40.000	40.037	-0.1	104	0.00	7.25- 7.45
17		Endrin Aldehyde	40.000	35.389	11.5	91	0.00	7.37- 7.57
18		4,4'-DDT	40.000	39.377	1.6	100	0.00	7.47- 7.67
19		Endosulfan Sulfate	40.000	41.793	-4.5	108	0.00	7.59- 7.79
20		Methoxychlor	40.000	42.725	-6.8	112	0.00	7.93- 8.13
21		Endrin Ketone	40.000	40.777	-1.9	107	0.00	8.05- 8.25
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl		----------NA----------				

***** Signal #2 *****

1	S	Tetrachloro-m-xylene		----------NA----------				
2		alpha-BHC	40.000	40.667	-1.7	102	0.00	4.74- 4.94
3		gamma-BHC (Lindane)	40.000	39.328	1.7	98	0.00	5.04- 5.24
4		beta-BHC	40.000	41.861	-4.7	107	0.00	5.28- 5.48
5		delta-BHC	40.000	41.445	-3.6	105	0.00	5.50- 5.71
6		Heptachlor	40.000	41.902	-4.8	102	0.00	5.35- 5.55
7		Aldrin	40.000	39.950	0.1	101	0.00	5.61- 5.81
8		Heptachlor Epoxide	40.000	40.297	-0.7	104	0.00	6.07- 6.27
9		gamma-Chlordane	40.000	41.821	-4.6	106	0.00	6.30- 6.50

Initial Calibration Verification

Job Number: F64511
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GKK1089-ICV1089
Lab FileID: KK31667.D

10		alpha-Chlordane	40.000	41.171	-2.9	103	0.00	6.36- 6.56
11		Endosulfan I	40.000	41.175	-2.9	106	0.00	6.42- 6.62
12		4,4'-DDE	40.000	23.388	41.5#	68	0.00	6.51- 6.71
13		Dieldrin	40.000	41.786	-4.5	107	0.00	6.67- 6.87
14		Endrin	40.000	44.154	-10.4	111	0.00	6.94- 7.14
15		4,4'-DDD	40.000	43.210	-8.0	110	0.00	7.04- 7.24
16		Endosulfan II	40.000	40.389	-1.0	102	0.00	7.21- 7.41
17		Endrin Aldehyde	40.000	35.006	12.5	89	0.00	7.38- 7.58
18		4,4'-DDT	40.000	42.690	-6.7	105	0.00	7.28- 7.48
19		Endosulfan Sulfate	40.000	43.633	-9.1	111	0.00	7.59- 7.79
20		Methoxychlor	40.000	43.681	-9.2	113	0.00	7.83- 8.03
21		Endrin Ketone	40.000	42.488	-6.2	111	0.00	8.11- 8.31
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
KK31660.D 8081A.M Wed Apr 15 11:46:03 2009

5.7 5

Continuing Calibration Summary

Job Number: F64511
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GKK1089-CC1089
Lab FileID: KK31679.D

Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\1\DATA\0414PEST\KK31679.D\ECD1A.CH Vial: 23
Signal #2 : C:\MSDCHEM\1\DATA\0414PEST\KK31679.D\ECD2B.CH
Acq On : 4-14-09 06:20:33 PM Operator: fouads
Sample : cc1089-40 Inst : ECD 5
Misc : op28653,gkk1089,30.1,,,10,1,soil Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\1\METHODS\8081A.M (Chemstation Integrator)
Title : Pesticides by 608 or 8081
Last Update : Tue Apr 14 14:57:16 2009
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene	40.000	33.355	16.6#	86	0.00	4.43- 4.63
2		alpha-BHC	40.000	35.489	11.3	89	0.00	4.82- 5.02
3		gamma-BHC (Lindane)	40.000	35.589	11.0	91	0.00	5.09- 5.29
4		beta-BHC	40.000	34.386	14.0	89	0.00	5.26- 5.46
5		delta-BHC	40.000	31.628	20.9#	80	0.00	5.47- 5.67
6		Heptachlor	40.000	20.789	48.0#	53	0.00	5.58- 5.78
7		Aldrin	40.000	30.807	23.0#	80	0.00	5.87- 6.07
8		Heptachlor Epoxide	40.000	32.736	18.2#	86	0.00	6.24- 6.44
9		gamma-Chlordane	40.000	28.146	29.6#	72	0.00	6.47- 6.67
10		alpha-Chlordane	40.000	27.426	31.4#	71	0.00	6.54- 6.74
11		Endosulfan I	40.000	24.489	38.8#	65	0.00	6.59- 6.79
12		4,4'-DDE	40.000	28.835	27.9#	74	0.00	6.70- 6.90
13		Dieldrin	40.000	31.811	20.5#	83	0.00	6.84- 7.04
14		Endrin	40.000	25.620	35.9#	67	0.00	7.04- 7.24
15		4,4'-DDD	40.000	26.616	33.5#	68	0.00	7.18- 7.38
16		Endosulfan II	40.000	29.311	26.7#	76	0.00	7.25- 7.45
17		Endrin Aldehyde	40.000	28.420	28.9#	73	0.00	7.37- 7.57
18		4,4'-DDT	40.000	18.239	54.4#	46	0.00	7.47- 7.67
19		Endosulfan Sulfate	40.000	28.846	27.9#	75	0.00	7.59- 7.79
20		Methoxychlor	40.000	20.926	47.7#	55	0.00	7.93- 8.13
21		Endrin Ketone	40.000	33.224	16.9#	87	0.00	8.05- 8.25
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	40.000	25.889	35.3#	69	0.00	9.40- 9.60

***** Signal #2 *****

1	S	Tetrachloro-m-xylene	40.000	38.359	4.1	97	0.00	4.26- 4.46
2		alpha-BHC	40.000	38.206	4.5	96	0.00	4.74- 4.94
3		gamma-BHC (Lindane)	40.000	36.376	9.1	91	0.00	5.04- 5.24
4		beta-BHC	40.000	36.085	9.8	92	0.00	5.28- 5.48
5		delta-BHC	40.000	36.719	8.2	93	0.00	5.50- 5.71
6		Heptachlor	40.000	29.616	26.0#	72	0.00	5.35- 5.55
7		Aldrin	40.000	36.086	9.8	91	0.00	5.61- 5.81
8		Heptachlor Epoxide	40.000	27.328	31.7#	71	0.00	6.07- 6.27
9		gamma-Chlordane	40.000	33.746	15.6#	86	0.00	6.30- 6.50

Continuing Calibration Summary

Job Number: F64511
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GKK1089-CC1089
Lab FileID: KK31679.D

10		alpha-Chlordane	40.000	33.191	17.0#	83	0.00	6.36- 6.56
11		Endosulfan I	40.000	31.520	21.2#	81	0.00	6.42- 6.62
12		4,4'-DDE	40.000	28.796	28.0#	83	0.00	6.51- 6.71
13		Dieldrin	40.000	29.746	25.6#	76	0.00	6.67- 6.87
14		Endrin	40.000	31.235	21.9#	78	0.00	6.94- 7.14
15		4,4'-DDD	40.000	33.025	17.4#	84	0.00	7.04- 7.24
16		Endosulfan II	40.000	33.320	16.7#	84	0.00	7.21- 7.41
17		Endrin Aldehyde	40.000	26.057	34.9#	66	0.00	7.38- 7.58
18		4,4'-DDT	40.000	22.920	42.7#	57	0.00	7.28- 7.48
19		Endosulfan Sulfate	40.000	33.645	15.9#	86	0.00	7.59- 7.79
20		Methoxychlor	40.000	25.289	36.8#	66	0.00	7.83- 8.03
21		Endrin Ketone	40.000	32.315	19.2#	84	0.00	8.11- 8.31
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	40.000	28.011	30.0#	74	0.00	9.19- 9.39

(#) = Out of Range SPCC's out = 0 CCC's out = 0
KK31660.D 8081A.M Wed Apr 15 10:42:32 2009

5.7 5

Continuing Calibration Summary

Job Number: F64511
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GKK1089-CC1089
Lab FileID: KK31688.D

Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\1\DATA\0414PEST\KK31688.D\ECD1A.CH Vial: 23
Signal #2 : C:\MSDCHEM\1\DATA\0414PEST\KK31688.D\ECD2B.CH
Acq On : 4-14-09 08:40:42 PM Operator: fouads
Sample : cc1089-40 Inst : ECD 5
Misc : op28657,gkk1089,1040,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\1\METHODS\8081A.M (Chemstation Integrator)
Title : Pesticides by 608 or 8081
Last Update : Tue Apr 14 14:57:16 2009
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene	40.000	39.634	0.9	102	0.00	4.43- 4.63
2		alpha-BHC	40.000	41.282	-3.2	103	0.00	4.82- 5.02
3		gamma-BHC (Lindane)	40.000	40.706	-1.8	104	0.00	5.09- 5.29
4		beta-BHC	40.000	40.912	-2.3	106	0.00	5.26- 5.46
5		delta-BHC	40.000	41.484	-3.7	104	0.00	5.47- 5.67
6		Heptachlor	40.000	38.508	3.7	99	0.00	5.58- 5.78
7		Aldrin	40.000	40.661	-1.7	106	0.00	5.87- 6.07
8		Heptachlor Epoxide	40.000	39.977	0.1	105	0.00	6.24- 6.44
9		gamma-Chlordane	40.000	40.470	-1.2	103	0.00	6.47- 6.67
10		alpha-Chlordane	40.000	40.399	-1.0	105	0.00	6.54- 6.74
11		Endosulfan I	40.000	39.919	0.2	105	0.00	6.59- 6.79
12		4,4'-DDE	40.000	40.482	-1.2	103	0.00	6.70- 6.90
13		Dieldrin	40.000	40.192	-0.5	104	0.00	6.84- 7.04
14		Endrin	40.000	38.242	4.4	99	0.00	7.04- 7.24
15		4,4'-DDD	40.000	42.786	-7.0	109	0.00	7.18- 7.38
16		Endosulfan II	40.000	40.336	-0.8	105	0.00	7.25- 7.45
17		Endrin Aldehyde	40.000	41.149	-2.9	106	0.00	7.37- 7.57
18		4,4'-DDT	40.000	32.502	18.7#	83	0.00	7.47- 7.67
19		Endosulfan Sulfate	40.000	41.193	-3.0	107	0.00	7.59- 7.79
20		Methoxychlor	40.000	32.558	18.6#	85	0.00	7.93- 8.13
21		Endrin Ketone	40.000	41.555	-3.9	109	0.00	8.05- 8.25
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	40.000	39.301	1.7	104	0.00	9.40- 9.60

***** Signal #2 *****

1	S	Tetrachloro-m-xylene	40.000	40.420	-1.1	102	0.00	4.26- 4.46
2		alpha-BHC	40.000	41.376	-3.4	104	0.00	4.74- 4.94
3		gamma-BHC (Lindane)	40.000	41.859	-4.6	104	0.00	5.04- 5.24
4		beta-BHC	40.000	41.608	-4.0	106	0.00	5.28- 5.48
5		delta-BHC	40.000	42.470	-6.2	107	0.00	5.50- 5.71
6		Heptachlor	40.000	40.128	-0.3	98	0.00	5.35- 5.55
7		Aldrin	40.000	41.763	-4.4	106	0.00	5.61- 5.81
8		Heptachlor Epoxide	40.000	38.829	2.9	101	0.00	6.07- 6.27
9		gamma-Chlordane	40.000	42.378	-5.9	107	0.00	6.30- 6.50

Continuing Calibration Summary

Job Number: F64511
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GKK1089-CC1089
Lab FileID: KK31688.D

10		alpha-Chlordane	40.000	39.957	0.1	100	0.00	6.36- 6.56
11		Endosulfan I	40.000	40.139	-0.3	103	0.00	6.42- 6.62
12		4,4'-DDE	40.000	32.412	19.0#	94	0.00	6.51- 6.71
13		Dieldrin	40.000	41.271	-3.2	106	0.00	6.67- 6.87
14		Endrin	40.000	38.011	5.0	95	0.00	6.94- 7.14
15		4,4'-DDD	40.000	41.943	-4.9	106	0.00	7.04- 7.24
16		Endosulfan II	40.000	38.480	3.8	97	0.00	7.21- 7.41
17		Endrin Aldehyde	40.000	40.184	-0.5	102	0.00	7.38- 7.58
18		4,4'-DDT	40.000	32.668	18.3#	81	0.00	7.28- 7.48
19		Endosulfan Sulfate	40.000	41.626	-4.1	106	0.00	7.59- 7.79
20		Methoxychlor	40.000	34.571	13.6	90	0.00	7.83- 8.03
21		Endrin Ketone	40.000	41.370	-3.4	108	0.00	8.11- 8.31
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	40.000	37.001	7.5	98	0.00	9.19- 9.39

(#) = Out of Range SPCC's out = 0 CCC's out = 0
KK31660.D 8081A.M Wed Apr 15 10:42:33 2009

5.7 5

Continuing Calibration Summary

Job Number: F64511
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GKK1089-CC1089
Lab FileID: KK31695.D

Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\1\DATA\0414PEST\KK31695.D\ECD1A.CH Vial: 23
Signal #2 : C:\MSDCHEM\1\DATA\0414PEST\KK31695.D\ECD2B.CH
Acq On : 14 Apr 2009 10:29 pm Operator: fouads
Sample : cc1089-40 Inst : ECD 5
Misc : op28657,gkk1089,1040,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\1\METHODS\8081A.M (Chemstation Integrator)
Title : Pesticides by 608 or 8081
Last Update : Tue Apr 14 14:57:16 2009
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene	40.000	39.155	2.1	100	0.00	4.43- 4.63
2		alpha-BHC	40.000	41.027	-2.6	103	0.00	4.82- 5.02
3		gamma-BHC (Lindane)	40.000	40.307	-0.8	103	0.00	5.09- 5.29
4		beta-BHC	40.000	39.633	0.9	103	0.00	5.26- 5.46
5		delta-BHC	40.000	39.848	0.4	100	0.00	5.47- 5.67
6		Heptachlor	40.000	38.106	4.7	98	0.00	5.58- 5.78
7		Aldrin	40.000	39.221	1.9	102	0.00	5.87- 6.07
8		Heptachlor Epoxide	40.000	38.839	2.9	102	0.00	6.24- 6.44
9		gamma-Chlordane	40.000	39.545	1.1	101	0.00	6.47- 6.67
10		alpha-Chlordane	40.000	39.524	1.2	103	0.00	6.54- 6.74
11		Endosulfan I	40.000	39.479	1.3	104	0.00	6.59- 6.79
12		4,4'-DDE	40.000	40.244	-0.6	103	0.00	6.70- 6.90
13		Dieldrin	40.000	39.378	1.6	102	0.00	6.84- 7.04
14		Endrin	40.000	36.712	8.2	95	0.00	7.04- 7.24
15		4,4'-DDD	40.000	38.334	4.2	98	0.00	7.18- 7.38
16		Endosulfan II	40.000	39.033	2.4	101	0.00	7.25- 7.45
17		Endrin Aldehyde	40.000	39.148	2.1	101	0.00	7.37- 7.57
18		4,4'-DDT	40.000	30.677	23.3#	78	0.00	7.47- 7.67
19		Endosulfan Sulfate	40.000	39.533	1.2	102	0.00	7.59- 7.79
20		Methoxychlor	40.000	31.820	20.4#	83	0.00	7.93- 8.13
21		Endrin Ketone	40.000	40.505	-1.3	106	0.00	8.05- 8.25
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	40.000	38.645	3.4	103	0.00	9.40- 9.60

***** Signal #2 *****

1	S	Tetrachloro-m-xylene	40.000	40.173	-0.4	101	0.00	4.26- 4.46
2		alpha-BHC	40.000	40.768	-1.9	102	0.00	4.74- 4.94
3		gamma-BHC (Lindane)	40.000	41.358	-3.4	103	0.00	5.04- 5.24
4		beta-BHC	40.000	40.473	-1.2	103	0.00	5.28- 5.48
5		delta-BHC	40.000	41.059	-2.6	104	0.00	5.50- 5.71
6		Heptachlor	40.000	40.851	-2.1	100	0.00	5.35- 5.55
7		Aldrin	40.000	39.809	0.5	101	0.00	5.61- 5.81
8		Heptachlor Epoxide	40.000	39.395	1.5	102	0.00	6.07- 6.27
9		gamma-Chlordane	40.000	40.481	-1.2	103	0.00	6.30- 6.50

Continuing Calibration Summary

Job Number: F64511
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GKK1089-CC1089
Lab FileID: KK31695.D

10		alpha-Chlordane	40.000	39.534	1.2	99	0.00	6.36- 6.56
11		Endosulfan I	40.000	38.934	2.7	100	0.00	6.42- 6.62
12		4,4'-DDE	40.000	27.997	30.0#	81	0.00	6.51- 6.71
13		Dieldrin	40.000	39.883	0.3	102	0.00	6.67- 6.87
14		Endrin	40.000	37.304	6.7	94	0.00	6.94- 7.14
15		4,4'-DDD	40.000	40.428	-1.1	103	0.00	7.04- 7.24
16		Endosulfan II	40.000	38.161	4.6	96	0.00	7.21- 7.41
17		Endrin Aldehyde	40.000	38.923	2.7	99	0.00	7.38- 7.58
18		4,4'-DDT	40.000	31.910	20.2#	79	0.00	7.28- 7.48
19		Endosulfan Sulfate	40.000	40.336	-0.8	103	0.00	7.59- 7.79
20		Methoxychlor	40.000	33.369	16.6#	87	0.00	7.83- 8.03
21		Endrin Ketone	40.000	40.255	-0.6	105	0.00	8.11- 8.31
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	40.000	37.268	6.8	98	0.00	9.19- 9.39

(#) = Out of Range SPCC's out = 0 CCC's out = 0
KK31660.D 8081A.M Wed Apr 15 13:12:03 2009

5.7 5

Initial Calibration Summary

Job Number: F64511
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GST2024-ICC2024
Lab FileID: ST80247.D

Response Factor Report ECD 3

Method : C:\HPCHEM\1\METHODS\8081A.M (Chemstation Integrator)
Title : Pesticides by 608 or 8081
Last Update : Fri Mar 27 08:59:15 2009
Response via : Initial Calibration

Calibration Files
5 =ST80248.D 10 =ST80249.D 20 =ST80250.D 40 =ST80247.D
60 =ST80251.D 80 =ST80252.D c200=ST80254.D t500=ST80253.D

Compound	5	10	20	40	60	80	c200	t500	Avg	%RSD
1) Tetrachloro-	4.575	4.598	4.711	4.666	4.681	4.776			4.668 E5	1.58
2) alpha-BHC	5.678	5.776	5.974	5.952	6.309	6.350			6.006 E5	4.56
3) gamma-BHC (L	5.105	5.127	5.302	5.171	5.639	5.791			5.356 E5	5.42
4) beta-BHC	2.383	2.203	2.228	2.124	2.218	2.226			2.230 E5	3.78
5) delta-BHC	5.087	5.014	5.291	5.178	5.597	5.525			5.282 E5	4.47
6) Heptachlor	3.576	3.817	4.043	3.616	4.156	4.095			3.884 E5	6.46
---- Linear regr., Force(0,0) ---- Coefficient = 0.9959										
Response Ratio = 0.00000 + 404465.80349 *A										
7) Aldrin	4.875	4.739	4.840	4.719	4.522	4.613			4.718 E5	2.83
8) Heptachlor E	4.253	4.179	4.185	4.074	4.069	3.953			4.119 E5	2.61
9) gamma-Chlord	4.257	4.312	4.288	4.351	4.222	4.519			4.325 E5	2.43
10) alpha-Chlord	4.014	3.930	4.023	3.982	4.041	4.065			4.009 E5	1.18
11) Endosulfan	3.807	3.748	3.711	3.616	3.548	3.667			3.683 E5	2.52
12) 4,4'-DDE	4.238	4.121	4.118	4.031	4.058	4.108			4.112 E5	1.74
13) Dieldrin	4.159	4.026	4.019	4.072	4.199	4.006			4.080 E5	1.98
14) Endrin	3.492	3.244	3.479	3.245	3.203	3.214			3.313 E5	4.07
15) 4,4'-DDD	3.501	3.213	3.237	3.193	3.209	3.224			3.263 E5	3.60
16) Endosulfan I	3.162	3.060	3.104	2.794	3.064	3.168			3.059 E5	4.50
17) Endrin Aldeh	2.901	2.626	2.670	2.509	2.642	2.592			2.656 E5	4.97
18) 4,4'-DDT	2.988	2.945	3.064	2.783	3.022	3.127			2.988 E5	3.96
19) Endosulfan S	3.149	3.026	3.165	3.016	3.114	3.319			3.131 E5	3.54
20) Methoxychlor	1.620	1.502	1.482	1.352	1.368	1.403			1.455 E5	6.94
21) Endrin Keton	3.276	3.091	3.141	2.843	3.053	3.180			3.097 E5	4.73
22) Chlordane-A							1.830		1.830 E4	0.00
23) Chlordane-B							2.123		2.123 E4	0.00
24) Chlordane-C							1.203		1.203 E4	0.00
25) Chlordane-D							6.435		6.435 E4	0.00
26) Chlordane-E							7.534		7.534 E4	0.00
27) Chlordane-F							1.201		1.201 E4	0.00
28) Toxaphene								3.075	3.075 E6	0.00
29) Decachlorobi	2.386	2.290	2.177	2.198	2.269	2.341			2.277 E5	3.55

Signal #2

1) Tetrachloro-	5.278	5.552	5.843	5.470	5.615	5.666			5.570 E4	3.42
2) alpha-BHC	5.993	6.308	6.891	6.499	6.849	6.887			6.571 E4	5.65
3) gamma-BHC (L	5.549	5.791	6.408	5.860	6.322	6.410			6.057 E4	6.12
4) beta-BHC	2.527	2.659	2.747	2.543	2.761	2.802			2.673 E4	4.37
5) delta-BHC	5.437	5.759	6.327	5.888	6.139	6.279			5.972 E4	5.74
6) Heptachlor	4.029	4.837	5.229	4.477	5.114	5.140			4.804 E4	9.76
---- Linear regr., Force(0,0) ---- Coefficient = 0.9954										
Response Ratio = 0.00000 + 50429.26887 *A										
7) Aldrin	5.122	5.615	5.970	5.594	5.760	5.799			5.643 E4	5.13
8) Heptachlor E	4.799	5.035	5.181	4.894	5.021	4.938			4.978 E4	2.65
9) gamma-Chlord	5.005	5.090	5.470	5.053	5.378	5.462			5.243 E4	4.13

Initial Calibration Summary

Job Number: F64511
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GST2024-ICC2024
Lab FileID: ST80247.D

10)	alpha-Chlord	4.639	4.852	5.223	4.763	5.109	5.163			4.958	E4	4.83
11)	Endosulfan	4.489	4.582	4.731	4.418	4.679	4.603			4.584	E4	2.53
12)	4,4'-DDE	4.868	5.143	5.322	5.166	5.132	5.419			5.175	E4	3.65
13)	Dieldrin	4.704	5.053	5.330	4.993	5.214	5.228			5.087	E4	4.41
14)	Endrin	2.535	3.034	3.466	2.995	3.478	3.587			3.183	E4	12.63
15)	4,4'-DDD	3.515	3.897	4.370	3.917	4.319	4.418			4.073	E4	8.75
16)	Endosulfan I	3.967	4.085	4.496	4.118	4.454	4.359			4.246	E4	5.15
17)	Endrin Aldeh	3.378	3.343	3.500	3.205	3.592	3.661			3.446	E4	4.92
18)	4,4'-DDT	3.495	3.723	4.057	3.559	4.113	4.293			3.873	E4	8.43
19)	Endosulfan S	3.683	3.709	3.894	3.582	3.858	3.914			3.773	E4	3.56
20)	Methoxychlor	2.066	2.082	2.130	1.834	1.977	1.983			2.012	E4	5.24
21)	Endrin Keton	4.304	4.316	4.491	4.107	4.371	4.502			4.349	E4	3.35
22)	Chlordane-A							2.187		2.187	E3	0.00
23)	Chlordane-B							2.635		2.635	E3	0.00
24)	Chlordane-C							1.378		1.378	E3	0.00
25)	Chlordane-D							6.882		6.882	E3	0.00
26)	Chlordane-E							5.665		5.665	E3	0.00
27)	Chlordane-F							1.762		1.762	E3	0.00
28)	Toxaphene								3.651	3.651	E5	0.00
29)	Decachlorobi	4.110	4.153	4.161	3.927	4.034	4.076			4.077	E4	2.14

(#) = Out of Range ### Number of calibration levels exceeded format ###

8081A.M Fri Mar 27 10:47:49 2009

5.7 5

Initial Calibration Verification

Job Number: F64511
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GST2024-ICV2024
Lab FileID: ST80255.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\0326PEST\ST80255.D\ECD1A.CH Vial: 14
Signal #2 : C:\HPCHEM\1\DATA\0326PEST\ST80255.D\ECD2B.CH
Acq On : 26 Mar 2009 1:42 pm Operator: marke
Sample : icv2024-40 Inst : ECD 3
Misc : op28438,gst2024,30.0,,,10,1,soil Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\HPCHEM\1\METHODS\8081A.M (Chemstation Integrator)
Title : Pesticides by 608 or 8081
Last Update : Fri Mar 27 08:59:15 2009
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene		----------NA----------				
2		alpha-BHC	40.000	39.312	1.7	99	0.00	4.90- 5.10
3		gamma-BHC (Lindane)	40.000	38.235	4.4	99	0.00	5.18- 5.38
4		beta-BHC	40.000	38.512	3.7	101	0.00	5.36- 5.56
5		delta-BHC	40.000	39.185	2.0	100	0.00	5.56- 5.76
		----------	Amount	Calc.	%Drift	----------		
6		Heptachlor	40.000	36.770	8.1	103	0.00	5.65- 5.85
		----------	Amount	Calc.	%Drift	----------		
7		Aldrin	40.000	37.600	6.0	94	0.00	5.94- 6.14
8		Heptachlor Epoxide	40.000	38.662	3.3	98	0.00	6.31- 6.51
9		gamma-Chlordane	40.000	37.748	5.6	94	0.00	6.54- 6.74
10		alpha-Chlordane	40.000	38.430	3.9	97	0.00	6.60- 6.80
11		Endosulfan I	40.000	39.462	1.3	100	0.00	6.65- 6.85
12		4,4'-DDE	40.000	39.543	1.1	101	0.00	6.76- 6.96
13		Dieldrin	40.000	39.546	1.1	99	0.00	6.90- 7.10
14		Endrin	40.000	38.635	3.4	99	0.00	7.11- 7.31
15		4,4'-DDD	40.000	38.267	4.3	98	0.00	7.24- 7.44
16		Endosulfan II	40.000	40.044	-0.1	110	0.00	7.32- 7.52
17		Endrin Aldehyde	40.000	31.737	20.7#	84	0.00	7.44- 7.64
18		4,4'-DDT	40.000	38.900	2.8	104	0.00	7.53- 7.73
19		Endosulfan Sulfate	40.000	39.720	0.7	103	0.00	7.66- 7.86
20		Methoxychlor	40.000	38.642	3.4	104	0.00	7.98- 8.18
21		Endrin Ketone	40.000	36.880	7.8	100	0.00	8.12- 8.32
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl		----------NA----------				

***** Signal #2 *****

1	S	Tetrachloro-m-xylene		----------NA----------				
2		alpha-BHC	40.000	41.198	-3.0	104	0.00	4.97- 5.17
3		gamma-BHC (Lindane)	40.000	39.850	0.4	103	0.00	5.26- 5.46
4		beta-BHC	40.000	41.285	-3.2	109	0.00	5.50- 5.70
5		delta-BHC	40.000	40.754	-1.9	103	0.00	5.73- 5.93

Initial Calibration Verification

Job Number: F64511
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GST2024-ICV2024
Lab FileID: ST80255.D

			Amount	Calc.	%Drift			
6		Heptachlor	40.000	38.280	4.3	108	0.00	5.62- 5.82

			Amount	Calc.	%Drift			
7		Aldrin	40.000	37.068	7.3	93	0.00	5.89- 6.09
8		Heptachlor Epoxide	40.000	40.034	-0.1	102	0.00	6.33- 6.53
9		gamma-Chlordane	40.000	39.667	0.8	103	0.00	6.57- 6.77
10		alpha-Chlordane	40.000	39.434	1.4	103	0.00	6.62- 6.82
11		Endosulfan I	40.000	41.778	-4.4	108	0.00	6.68- 6.88
12		4,4'-DDE	40.000	41.315	-3.3	103	0.00	6.76- 6.96
13		Dieldrin	40.000	40.744	-1.9	104	0.00	6.93- 7.13
14		Endrin	40.000	43.703	-9.3	116	0.00	7.19- 7.39
15		4,4'-DDD	40.000	40.482	-1.2	105	0.00	7.27- 7.47
16		Endosulfan II	40.000	39.279	1.8	101	0.00	7.45- 7.65
17		Endrin Aldehyde	40.000	34.350	14.1	92	0.00	7.61- 7.81
18		4,4'-DDT	40.000	41.529	-3.8	113	0.00	7.53- 7.73
19		Endosulfan Sulfate	40.000	40.387	-1.0	106	0.00	7.83- 8.03
20		Methoxychlor	40.000	40.507	-1.3	111	0.00	8.03- 8.23
21		Endrin Ketone	40.000	39.682	0.8	105	0.00	8.33- 8.53
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
ST80247.D 8081A.M Fri Mar 27 10:49:25 2009

5.7 5

Continuing Calibration Summary

Job Number: F64511
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GST2028-CC2024
Lab FileID: ST80397.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\0415PEST\ST80397.D\ECD1A.CH Vial: 16
Signal #2 : C:\HPCHEM\1\DATA\0415PEST\ST80397.D\ECD2B.CH
Acq On : 15 Apr 2009 6:32 pm Operator: fouads
Sample : cc2024-40 Inst : ECD 3
Misc : op28653,gst2028,30.1,,,10,10,soil Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\HPCHEM\1\METHODS\8081A.M (Chemstation Integrator)
Title : Pesticides by 608 or 8081
Last Update : Thu Apr 16 08:46:22 2009
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene	40.000	40.263	-0.7	101	0.00	4.49- 4.69
2		alpha-BHC	40.000	41.688	-4.2	105	0.00	4.87- 5.07
3		gamma-BHC (Lindane)	40.000	40.955	-2.4	106	0.00	5.14- 5.34
4		beta-BHC	40.000	37.259	6.9	98	0.00	5.32- 5.52
5		delta-BHC	40.000	36.826	7.9	94	0.00	5.52- 5.72
		----------	Amount	Calc.	%Drift	----------		
6		Heptachlor	40.000	44.496	-11.2	124	0.00	5.61- 5.81
		----------	Amount	Calc.	%Drift	----------		
7		Aldrin	40.000	41.374	-3.4	103	0.00	5.90- 6.10
8		Heptachlor Epoxide	40.000	39.156	2.1	99	0.00	6.27- 6.47
9		gamma-Chlordane	40.000	39.298	1.8	98	0.00	6.50- 6.70
10		alpha-Chlordane	40.000	40.203	-0.5	101	0.00	6.57- 6.77
11		Endosulfan I	40.000	38.638	3.4	98	0.00	6.61- 6.81
12		4,4'-DDE	40.000	39.680	0.8	101	0.00	6.73- 6.93
13		Dieldrin	40.000	39.208	2.0	98	0.00	6.86- 7.06
14		Endrin	40.000	38.420	3.9	98	0.00	7.07- 7.27
15		4,4'-DDD	40.000	38.121	4.7	97	0.00	7.20- 7.40
16		Endosulfan II	40.000	39.216	2.0	107	0.00	7.28- 7.48
17		Endrin Aldehyde	40.000	34.987	12.5	93	0.00	7.41- 7.61
18		4,4'-DDT	40.000	35.335	11.7	95	0.00	7.49- 7.69
19		Endosulfan Sulfate	40.000	36.794	8.0	95	0.00	7.62- 7.82
20		Methoxychlor	40.000	30.865	22.8#	83	0.00	7.95- 8.15
21		Endrin Ketone	40.000	36.769	8.1	100	0.00	8.08- 8.28
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	40.000	36.178	9.6	94	0.00	9.40- 9.60

***** Signal #2 *****

1	S	Tetrachloro-m-xylene	40.000	44.417	-11.0	113	0.00	4.49- 4.69
2		alpha-BHC	40.000	45.274	-13.2	114	0.00	4.93- 5.13
3		gamma-BHC (Lindane)	40.000	44.269	-10.7	114	0.00	5.22- 5.42
4		beta-BHC	40.000	40.296	-0.7	106	0.00	5.47- 5.67
5		delta-BHC	40.000	37.489	6.3	95	0.00	5.69- 5.89

Continuing Calibration Summary

Job Number: F64511
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GST2028-CC2024
Lab FileID: ST80397.D

			Amount	Calc.	%Drift			
6		Heptachlor	40.000	38.880	2.8	109	0.00	5.58- 5.78

			Amount	Calc.	%Drift			
7		Aldrin	40.000	42.528	-6.3	107	0.00	5.85- 6.05
8		Heptachlor Epoxide	40.000	39.600	1.0	101	0.00	6.29- 6.49
9		gamma-Chlordane	40.000	36.138	9.7	94	0.00	6.53- 6.73
10		alpha-Chlordane	40.000	39.809	0.5	104	0.00	6.59- 6.79
11		Endosulfan I	40.000	39.124	2.2	101	0.00	6.64- 6.84
12		4,4'-DDE	40.000	38.289	4.3	96	0.00	6.72- 6.92
13		Dieldrin	40.000	35.479	11.3	90	0.00	6.89- 7.09
14		Endrin	40.000	45.610	-14.0	121	0.00	7.15- 7.35
15		4,4'-DDD	40.000	39.239	1.9	102	0.00	7.23- 7.43
16		Endosulfan II	40.000	37.468	6.3	97	0.00	7.41- 7.61
17		Endrin Aldehyde	40.000	33.643	15.9#	90	0.00	7.57- 7.77
18		4,4'-DDT	40.000	30.542	23.6#	83	0.00	7.49- 7.69
19		Endosulfan Sulfate	40.000	33.030	17.4#	87	0.00	7.79- 7.99
20		Methoxychlor	40.000	30.618	23.5#	84	0.00	8.00- 8.20
21		Endrin Ketone	40.000	31.751	20.6#	84	0.00	8.29- 8.49
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	40.000	33.500	16.3#	87	0.00	9.47- 9.67

(#) = Out of Range SPCC's out = 0 CCC's out = 0
ST80247.D 8081A.M Thu Apr 16 10:34:38 2009

5.7 5

Continuing Calibration Summary

Job Number: F64511
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GST2028-CC2024
Lab FileID: ST80404.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\0415PEST\ST80404.D\ECD1A.CH Vial: 16
Signal #2 : C:\HPCHEM\1\DATA\0415PEST\ST80404.D\ECD2B.CH
Acq On : 15 Apr 2009 8:21 pm Operator: fouads
Sample : cc2024-40 Inst : ECD 3
Misc : op28657,gst2028,1020,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\HPCHEM\1\METHODS\8081A.M (Chemstation Integrator)
Title : Pesticides by 608 or 8081
Last Update : Thu Apr 16 08:46:22 2009
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene	40.000	41.836	-4.6	105	0.00	4.49- 4.69
2		alpha-BHC	40.000	41.797	-4.5	105	0.00	4.87- 5.07
3		gamma-BHC (Lindane)	40.000	42.934	-7.3	111	0.00	5.14- 5.34
4		beta-BHC	40.000	39.166	2.1	103	0.00	5.32- 5.52
5		delta-BHC	40.000	38.928	2.7	99	0.00	5.52- 5.72
		----------	Amount	Calc.	%Drift	----------		
6		Heptachlor	40.000	45.314	-13.3	127	0.00	5.61- 5.81
		----------	Amount	Calc.	%Drift	----------		
7		Aldrin	40.000	42.686	-6.7	107	0.00	5.90- 6.10
8		Heptachlor Epoxide	40.000	41.320	-3.3	104	0.00	6.27- 6.47
9		gamma-Chlordane	40.000	41.972	-4.9	104	0.00	6.50- 6.70
10		alpha-Chlordane	40.000	41.452	-3.6	104	0.00	6.57- 6.77
11		Endosulfan I	40.000	40.924	-2.3	104	0.00	6.61- 6.81
12		4,4'-DDE	40.000	42.478	-6.2	108	0.00	6.73- 6.93
13		Dieldrin	40.000	43.716	-9.3	110	0.00	6.86- 7.06
14		Endrin	40.000	39.074	2.3	100	0.00	7.07- 7.27
15		4,4'-DDD	40.000	41.273	-3.2	105	0.00	7.20- 7.40
16		Endosulfan II	40.000	43.764	-9.4	120	0.00	7.28- 7.48
17		Endrin Aldehyde	40.000	38.756	3.1	103	0.00	7.41- 7.61
18		4,4'-DDT	40.000	38.727	3.2	104	0.00	7.49- 7.69
19		Endosulfan Sulfate	40.000	37.935	5.2	98	0.00	7.62- 7.82
20		Methoxychlor	40.000	36.690	8.3	99	0.00	7.95- 8.15
21		Endrin Ketone	40.000	39.574	1.1	108	0.00	8.08- 8.28
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	40.000	39.447	1.4	102	0.00	9.40- 9.60

***** Signal #2 *****

1	S	Tetrachloro-m-xylene	40.000	45.055	-12.6	115	0.00	4.49- 4.69
2		alpha-BHC	40.000	46.618	-16.5#	118	0.00	4.93- 5.13
3		gamma-BHC (Lindane)	40.000	46.021	-15.1#	119	0.00	5.22- 5.42
4		beta-BHC	40.000	43.236	-8.1	114	0.00	5.47- 5.67
5		delta-BHC	40.000	41.496	-3.7	105	0.00	5.69- 5.89

Continuing Calibration Summary

Job Number: F64511
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GST2028-CC2024
Lab FileID: ST80404.D

			Amount	Calc.	%Drift			
6		Heptachlor	40.000	43.345	-8.4	122	0.00	5.58- 5.78
			Amount	Calc.	%Drift			
7		Aldrin	40.000	41.587	-4.0	105	0.00	5.85- 6.05
8		Heptachlor Epoxide	40.000	42.678	-6.7	109	0.00	6.29- 6.49
9		gamma-Chlordane	40.000	42.869	-7.2	111	0.00	6.53- 6.73
10		alpha-Chlordane	40.000	42.566	-6.4	111	0.00	6.59- 6.79
11		Endosulfan I	40.000	42.463	-6.2	110	0.00	6.64- 6.84
12		4,4'-DDE	40.000	42.323	-5.8	106	0.00	6.72- 6.92
13		Dieldrin	40.000	42.294	-5.7	108	0.00	6.89- 7.09
14		Endrin	40.000	48.904	-22.3#	130	0.00	7.15- 7.35
15		4,4'-DDD	40.000	43.402	-8.5	113	0.00	7.23- 7.43
16		Endosulfan II	40.000	40.872	-2.2	105	0.00	7.41- 7.61
17		Endrin Aldehyde	40.000	39.260	1.9	106	0.00	7.57- 7.77
18		4,4'-DDT	40.000	38.811	3.0	106	0.00	7.49- 7.69
19		Endosulfan Sulfate	40.000	38.421	3.9	101	0.00	7.79- 7.99
20		Methoxychlor	40.000	34.847	12.9	96	0.00	8.00- 8.20
21		Endrin Ketone	40.000	38.490	3.8	102	0.00	8.29- 8.49
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	40.000	36.387	9.0	94	0.00	9.47- 9.67

(#) = Out of Range SPCC's out = 0 CCC's out = 0
ST80247.D 8081A.M Thu Apr 16 10:34:40 2009

5.7 5

Continuing Calibration Summary

Job Number: F64511
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GST2028-ECC2024
Lab FileID: ST80411.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\0415PEST\ST80411.D\ECD1A.CH Vial: 28
Signal #2 : C:\HPCHEM\1\DATA\0415PEST\ST80411.D\ECD2B.CH
Acq On : 15 Apr 2009 10:11 pm Operator: fouads
Sample : ecc2024-20 Inst : ECD 3
Misc : op28657,gst2028,1040,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\HPCHEM\1\METHODS\8081A.M (Chemstation Integrator)
Title : Pesticides by 608 or 8081
Last Update : Thu Apr 16 08:46:22 2009
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene	20.000	20.852	-4.3	103	0.00	4.49- 4.69
2		alpha-BHC	20.000	20.895	-4.5	105	0.00	4.87- 5.07
3		gamma-BHC (Lindane)	20.000	21.304	-6.5	108	0.00	5.14- 5.34
4		beta-BHC	20.000	20.525	-2.6	103	0.00	5.32- 5.52
5		delta-BHC	20.000	19.503	2.5	97	0.00	5.52- 5.72
		----------	Amount	Calc.	%Drift	----------		
6		Heptachlor	20.000	23.873	-19.4#	119	0.00	5.61- 5.81
		----------	Amount	Calc.	%Drift	----------		
7		Aldrin	20.000	22.293	-11.5	109	0.00	5.90- 6.10
8		Heptachlor Epoxide	20.000	21.522	-7.6	106	0.00	6.27- 6.47
9		gamma-Chlordane	20.000	20.971	-4.9	106	0.00	6.50- 6.70
10		alpha-Chlordane	20.000	21.370	-6.9	106	0.00	6.57- 6.77
11		Endosulfan I	20.000	21.293	-6.5	106	0.00	6.61- 6.81
12		4,4'-DDE	20.000	21.212	-6.1	106	0.00	6.73- 6.93
13		Dieldrin	20.000	21.517	-7.6	109	0.00	6.86- 7.06
14		Endrin	20.000	20.671	-3.4	98	0.00	7.07- 7.27
15		4,4'-DDD	20.000	20.730	-3.7	104	0.00	7.20- 7.40
16		Endosulfan II	20.000	21.837	-9.2	108	0.00	7.28- 7.48
17		Endrin Aldehyde	20.000	20.074	-0.4	100	0.00	7.41- 7.61
18		4,4'-DDT	20.000	18.400	8.0	90	0.00	7.49- 7.69
19		Endosulfan Sulfate	20.000	19.220	3.9	95	0.00	7.62- 7.82
20		Methoxychlor	20.000	17.022	14.9	84	0.00	7.95- 8.15
21		Endrin Ketone	20.000	19.475	2.6	96	0.00	8.08- 8.28
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	20.000	17.621	11.9	92	0.00	9.40- 9.60

***** Signal #2 *****

1	S	Tetrachloro-m-xylene	20.000	22.750	-13.8	108	0.00	4.49- 4.69
2		alpha-BHC	20.000	23.297	-16.5#	111	0.00	4.93- 5.13
3		gamma-BHC (Lindane)	20.000	22.799	-14.0	108	0.00	5.22- 5.42
4		beta-BHC	20.000	21.291	-6.5	104	0.00	5.47- 5.67
5		delta-BHC	20.000	20.557	-2.8	97	0.00	5.69- 5.89

Continuing Calibration Summary

Job Number: F64511
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GST2028-ECC2024
Lab FileID: ST80411.D

			Amount	Calc.	%Drift			
6		Heptachlor	20.000	22.623	-13.1	109	0.00	5.58- 5.78

			Amount	Calc.	%Drift			
7		Aldrin	20.000	21.411	-7.1	101	0.00	5.85- 6.05
8		Heptachlor Epoxide	20.000	21.876	-9.4	105	0.00	6.29- 6.49
9		gamma-Chlordane	20.000	21.356	-6.8	102	0.00	6.53- 6.73
10		alpha-Chlordane	20.000	21.785	-8.9	103	0.00	6.59- 6.79
11		Endosulfan I	20.000	21.338	-6.7	103	0.00	6.64- 6.84
12		4,4'-DDE	20.000	20.724	-3.6	101	0.00	6.72- 6.92
13		Dieldrin	20.000	20.975	-4.9	100	0.00	6.89- 7.09
14		Endrin	20.000	25.208	-26.0#	116	0.00	7.15- 7.35
15		4,4'-DDD	20.000	21.712	-8.6	101	0.00	7.23- 7.43
16		Endosulfan II	20.000	20.098	-0.5	95	0.00	7.41- 7.61
17		Endrin Aldehyde	20.000	19.618	1.9	97	0.00	7.57- 7.77
18		4,4'-DDT	20.000	18.182	9.1	87	0.00	7.49- 7.69
19		Endosulfan Sulfate	20.000	19.106	4.5	93	0.00	7.79- 7.99
20		Methoxychlor	20.000	16.707	16.5#	79	0.00	8.00- 8.20
21		Endrin Ketone	20.000	18.650	6.8	90	0.00	8.29- 8.49
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	20.000	17.438	12.8	85	0.00	9.47- 9.67

(#) = Out of Range SPCC's out = 0 CCC's out = 0
ST80250.D 8081A.M Thu Apr 16 10:33:50 2009

5.7 5

Initial Calibration Summary

Job Number: F64511
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GTT565-ICC565
Lab FileID: TT17581.D

Response Factor Report ECD 6

Method : C:\MSDCHEM\2\METHODS\8081A.M (Chemstation Integrator)
Title : Pesticides by 608 or 8081
Last Update : Thu Apr 16 14:37:30 2009
Response via : Initial Calibration

Calibration Files
5 =TT17578.D 10 =TT17579.D 20 =TT17580.D 40 =TT17581.D
60 =TT17582.D 80 =TT17583.D c200=TT17585.D t500=TT17587.D

Compound	5	10	20	40	60	80	c200	t500	Avg	%RSD
1) Tetrachloro-	1.446	1.547	1.438	1.522	1.512	1.601			1.511 E5	4.09
2) alpha-BHC	1.670	1.823	1.733	1.877	1.855	2.087			1.841 E5	7.82
3) gamma-BHC (L	1.573	1.710	1.610	1.740	1.668	1.857			1.693 E5	5.98
4) beta-BHC	6.389	6.750	6.452	7.002	6.915	7.642			6.858 E4	6.63
5) delta-BHC	1.369	1.509	1.440	1.563	1.556	1.699			1.523 E5	7.47
6) Heptachlor	1.280	1.384	1.276	1.334	1.292	1.344			1.319 E5	3.25
7) Aldrin	1.339	1.499	1.399	1.433	1.378	1.485			1.422 E5	4.37
8) Heptachlor E	1.213	1.300	1.156	1.224	1.154	1.186			1.205 E5	4.51
9) gamma-Chlord	1.241	1.337	1.254	1.394	1.317	1.486			1.338 E5	6.86
10) alpha-Chlord	1.208	1.284	1.205	1.279	1.260	1.373			1.268 E5	4.85
11) Endosulfan	1.098	1.172	1.071	1.111	1.072	1.142			1.111 E5	3.60
12) 4,4'-DDE	1.142	1.197	1.173	1.271	1.265	1.357			1.234 E5	6.38
13) Dieldrin	1.178	1.295	1.233	1.302	1.231	1.294			1.256 E5	3.94
14) Endrin	0.979	1.009	0.933	0.986	0.978	1.034			0.987 E5	3.43
15) 4,4'-DDD	0.864	0.927	0.921	1.021	0.980	1.055			0.961 E5	7.34
16) Endosulfan I	0.985	1.051	0.978	1.024	0.990	1.067			1.016 E5	3.67
17) Endrin Aldeh	7.766	7.806	7.479	7.893	7.834	8.318			7.849 E4	3.46
18) 4,4'-DDT	0.675	0.716	0.721	0.905	0.883	1.016			0.819 E5	16.51
19) Endosulfan S	8.297	8.719	8.000	8.797	8.355	8.677			8.474 E4	3.64
20) Methoxychlor	3.738	3.574	3.390	4.025	3.887	4.231			3.807 E4	8.02
21) Endrin Keton	1.057	1.080	1.039	1.063	1.018	1.095			1.059 E5	2.62
22) Chlordane-A							4.860		4.860 E3	0.00
23) Chlordane-B							5.782		5.782 E3	0.00
24) Chlordane-C							2.832		2.832 E3	0.00
25) Chlordane-D							1.661		1.661 E4	0.00
26) Chlordane-E							1.652		1.652 E4	0.00
27) Chlordane-F							3.127		3.127 E3	0.00
28) Toxaphene								8.046	8.046 E5	0.00
29) Decachlorobi	0.923	0.942	0.875	0.959	0.968	1.033			0.950 E5	5.47

Signal #2

1) Tetrachloro-	3.517	3.523	3.140	3.134	3.054	3.128			3.249 E5	6.52
2) alpha-BHC	4.241	4.298	3.840	3.878	3.769	3.976			4.000 E5	5.50
3) gamma-BHC (L	3.733	3.929	3.472	3.603	3.463	3.615			3.636 E5	4.82
4) beta-BHC	1.652	1.659	1.450	1.532	1.471	1.552			1.553 E5	5.66
5) delta-BHC	3.346	3.437	3.185	3.278	3.103	3.292			3.274 E5	3.59
6) Heptachlor	3.200	3.153	2.749	2.748	2.534	2.552			2.823 E5	10.26
7) Aldrin	3.276	3.295	2.918	2.912	2.611	2.701			2.952 E5	9.64
8) Heptachlor E	2.799	2.869	2.485	2.371	2.202	2.280			2.501 E5	11.01
9) gamma-Chlord	2.961	2.935	2.687	2.707	2.605	2.738			2.772 E5	5.17
10) alpha-Chlord	2.807	2.811	2.503	2.588	2.441	2.668			2.636 E5	5.85

---- Linear regr., Force(0,0) ---- Coefficient = 0.9957
Response Ratio = 0.00000 + 258640.04946 *A

11) Endosulfan	2.587	2.565	2.294	2.169	2.084	2.146			2.308 E5	9.49
12) 4,4'-DDE	2.825	2.810	2.531	2.638	2.455	2.571			2.638 E5	5.73

Initial Calibration Summary

Job Number: F64511
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GTT565-ICC565
Lab FileID: TT17581.D

13) Dieldrin	2.828	2.825	2.523	2.581	2.390	2.394		2.590	E5	7.62
14) Endrin	2.236	2.141	1.882	1.876	1.813	1.857		1.968	E5	8.91
15) 4,4'-DDD	2.198	2.186	2.016	2.066	1.957	2.053		2.079	E5	4.59
16) Endosulfan I	2.344	2.371	2.042	2.019	1.887	1.979		2.107	E5	9.57
17) Endrin Aldeh	1.832	1.800	1.601	1.640	1.512	1.544		1.655	E5	8.04

---- Linear regr., Force(0,0) ---- Coefficient = 0.9986
Response Ratio = 0.00000 + 155168.49808 *A

18) 4,4'-DDT	1.794	1.788	1.613	1.872	1.811	1.944		1.804	E5	6.13
19) Endosulfan S	1.889	1.868	1.669	1.701	1.601	1.627		1.726	E5	7.14
20) Methoxychlor	9.533	8.667	7.618	8.278	7.972	8.604		8.445	E4	7.84
21) Endrin Keton	2.348	2.314	2.024	2.073	1.950	1.955		2.111	E5	8.38
22) Chlordane-A							1.061	1.061	E4	0.00
23) Chlordane-B							1.322	1.322	E4	0.00
24) Chlordane-C							5.650	5.650	E3	0.00
25) Chlordane-D							2.926	2.926	E4	0.00
26) Chlordane-E							1.922	1.922	E4	0.00
27) Chlordane-F							7.355	7.355	E3	0.00
28) Toxaphene							2.001	2.001	E6	0.00
29) Decachlorobi	2.050	2.029	1.850	1.831	1.850	1.979		1.931	E5	5.13

(#) = Out of Range ### Number of calibration levels exceeded format ###

8081A.M Fri Apr 17 09:36:35 2009

5.7 5

Initial Calibration Verification

Job Number: F64511
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GTT565-ICV565
Lab FileID: TT17588.D

Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\2\DATA\0416PEST\TT17588.D\ECD1B.CH Vial: 14
Signal #2 : C:\MSDCHEM\2\DATA\0416PEST\TT17588.D\ECD2A.CH
Acq On : 4-16-09 02:24:18 PM Operator: fouads
Sample : icv565-40 Inst : ECD 6
Misc : op28632,gtt565,100,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\2\METHODS\8081A.M (Chemstation Integrator)
Title : Pesticides by 608 or 8081
Last Update : Thu Apr 16 14:37:30 2009
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene		----------NA----------				
2		alpha-BHC	40.000	42.029	-5.1	103	0.00	4.52- 4.72
3		gamma-BHC (Lindane)	40.000	40.523	-1.3	99	0.00	4.79- 4.99
4		beta-BHC	40.000	41.160	-2.9	101	0.00	4.96- 5.16
5		delta-BHC	40.000	42.709	-6.8	104	0.00	5.16- 5.36
6		Heptachlor	40.000	40.464	-1.2	100	0.00	5.27- 5.47
7		Aldrin	40.000	40.584	-1.5	101	0.00	5.55- 5.75
8		Heptachlor Epoxide	40.000	41.118	-2.8	101	0.00	5.92- 6.12
9		gamma-Chlordane	40.000	40.732	-1.8	98	0.00	6.14- 6.34
10		alpha-Chlordane	40.000	41.558	-3.9	103	0.00	6.21- 6.41
11		Endosulfan I	40.000	41.215	-3.0	103	0.00	6.26- 6.46
12		4,4'-DDE	40.000	42.131	-5.3	102	0.00	6.38- 6.58
13		Dieldrin	40.000	40.890	-2.2	99	0.00	6.50- 6.70
14		Endrin	40.000	43.820	-9.6	110	0.00	6.71- 6.91
15		4,4'-DDD	40.000	43.911	-9.8	103	0.00	6.85- 7.05
16		Endosulfan II	40.000	39.562	1.1	98	0.00	6.91- 7.11
17		Endrin Aldehyde	40.000	34.327	14.2	85	0.00	7.03- 7.23
18		4,4'-DDT	40.000	42.221	-5.6	96	0.00	7.13- 7.33
19		Endosulfan Sulfate	40.000	41.722	-4.3	100	0.00	7.25- 7.45
20		Methoxychlor	40.000	45.975	-14.9	109	0.00	7.59- 7.79
21		Endrin Ketone	40.000	38.904	2.7	97	0.00	7.70- 7.90
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl		----------NA----------				

***** Signal #2 *****

1	S	Tetrachloro-m-xylene		----------NA----------				
2		alpha-BHC	40.000	39.909	0.2	103	0.00	4.52- 4.72
3		gamma-BHC (Lindane)	40.000	37.782	5.5	95	0.00	4.80- 5.00
4		beta-BHC	40.000	41.096	-2.7	104	0.00	5.05- 5.25
5		delta-BHC	40.000	40.334	-0.8	101	0.00	5.26- 5.46
6		Heptachlor	40.000	39.575	1.1	102	0.00	5.15- 5.35
7		Aldrin	40.000	38.034	4.9	96	0.00	5.41- 5.61
8		Heptachlor Epoxide	40.000	40.375	-0.9	106	0.00	5.83- 6.03
9		gamma-Chlordane	40.000	39.132	2.2	100	0.00	6.07- 6.27

Initial Calibration Verification

Job Number: F64511
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GTT565-ICV565
Lab FileID: TT17588.D

		Amount	Calc.	%Drift			
10	alpha-Chlordane	40.000	34.282	14.3	86	0.00	6.13- 6.33
		Amount	Calc.	%Drift			
11	Endosulfan I	40.000	35.146	12.1	93	0.00	6.18- 6.38
12	4,4'-DDE	40.000	41.229	-3.1	103	0.00	6.28- 6.48
13	Dieldrin	40.000	37.588	6.0	94	0.00	6.42- 6.62
14	Endrin	40.000	42.049	-5.1	110	0.00	6.67- 6.87
15	4,4'-DDD	40.000	41.685	-4.2	105	0.00	6.78- 6.98
16	Endosulfan II	40.000	38.750	3.1	101	0.00	6.93- 7.13
		Amount	Calc.	%Drift			
17	Endrin Aldehyde	40.000	34.753	13.1	82	0.00	7.09- 7.29
		Amount	Calc.	%Drift			
18	4,4'-DDT	40.000	43.714	-9.3	105	0.00	7.03- 7.22
19	Endosulfan Sulfate	40.000	40.831	-2.1	104	0.00	7.30- 7.50
20	Methoxychlor	40.000	43.540	-8.8	111	0.00	7.53- 7.73
21	Endrin Ketone	40.000	37.949	5.1	97	0.00	7.78- 7.98
22 L1	Chlordane-A		----------NA----------				
23 L1	Chlordane-B		----------NA----------				
24 L1	Chlordane-C		----------NA----------				
25 L1	Chlordane-D		----------NA----------				
26 L1	Chlordane-E		----------NA----------				
27 L1	Chlordane-F		----------NA----------				
28 H	Toxaphene		----------NA----------				
29 S	Decachlorobiphenyl		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
TT17581.D 8081A.M Fri Apr 17 09:37:43 2009

5.7 5

Continuing Calibration Summary

Job Number: F64511
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GTT565-CC565
Lab FileID: TT17595.D

Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\2\DATA\0416PEST\TT17595.D\ECD1B.CH Vial: 20
Signal #2 : C:\MSDCHEM\2\DATA\0416PEST\TT17595.D\ECD2A.CH
Acq On : 4-16-09 04:21:50 PM Operator: fouads
Sample : cc565-40 Inst : ECD 6
Misc : op28690,gtt565,100,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\2\METHODS\8081A.M (Chemstation Integrator)
Title : Pesticides by 608 or 8081
Last Update : Thu Apr 16 14:37:30 2009
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene	40.000	38.478	3.8	95	0.00	4.15- 4.35
2		alpha-BHC	40.000	39.172	2.1	96	0.00	4.52- 4.72
3		gamma-BHC (Lindane)	40.000	38.598	3.5	94	0.00	4.79- 4.99
4		beta-BHC	40.000	37.425	6.4	92	0.00	4.96- 5.16
5		delta-BHC	40.000	38.492	3.8	94	0.00	5.16- 5.36
6		Heptachlor	40.000	36.921	7.7	91	0.00	5.27- 5.47
7		Aldrin	40.000	37.776	5.6	94	0.00	5.55- 5.75
8		Heptachlor Epoxide	40.000	38.551	3.6	95	0.00	5.92- 6.12
9		gamma-Chlordane	40.000	37.649	5.9	90	0.00	6.14- 6.34
10		alpha-Chlordane	40.000	37.019	7.5	92	0.00	6.21- 6.41
11		Endosulfan I	40.000	37.266	6.8	93	0.00	6.26- 6.46
12		4,4'-DDE	40.000	38.560	3.6	94	0.00	6.38- 6.58
13		Dieldrin	40.000	37.618	6.0	91	0.00	6.50- 6.70
14		Endrin	40.000	37.891	5.3	95	0.00	6.71- 6.91
15		4,4'-DDD	40.000	46.764	-16.9#	110	0.00	6.85- 7.05
16		Endosulfan II	40.000	36.435	8.9	90	0.00	6.91- 7.11
17		Endrin Aldehyde	40.000	35.727	10.7	89	0.00	7.03- 7.23
18		4,4'-DDT	40.000	19.570	51.1#	44	0.00	7.13- 7.33
19		Endosulfan Sulfate	40.000	38.064	4.8	92	0.00	7.25- 7.45
20		Methoxychlor	40.000	24.090	39.8#	57	0.00	7.59- 7.79
21		Endrin Ketone	40.000	36.449	8.9	91	0.00	7.70- 7.90
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	40.000	37.952	5.1	94	0.00	8.97- 9.17

***** Signal #2 *****

1	S	Tetrachloro-m-xylene	40.000	36.483	8.8	95	0.00	4.09- 4.29
2		alpha-BHC	40.000	37.263	6.8	96	0.00	4.52- 4.72
3		gamma-BHC (Lindane)	40.000	37.192	7.0	94	0.00	4.80- 5.00
4		beta-BHC	40.000	36.503	8.7	92	0.00	5.05- 5.25
5		delta-BHC	40.000	37.517	6.2	94	0.00	5.26- 5.46
6		Heptachlor	40.000	34.462	13.8	88	0.00	5.15- 5.35
7		Aldrin	40.000	35.947	10.1	91	0.00	5.41- 5.61
8		Heptachlor Epoxide	40.000	37.125	7.2	98	0.00	5.83- 6.03
9		gamma-Chlordane	40.000	36.113	9.7	92	0.00	6.07- 6.27

Continuing Calibration Summary

Job Number: F64511
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GTT565-CC565
Lab FileID: TT17595.D

			Amount	Calc.	%Drift			
10		alpha-Chlordane	40.000	37.174	7.1	93	0.00	6.13- 6.33
			Amount	Calc.	%Drift			
11		Endosulfan I	40.000	35.243	11.9	94	0.00	6.18- 6.38
12		4,4'-DDE	40.000	36.466	8.8	91	0.00	6.28- 6.48
13		Dieldrin	40.000	35.605	11.0	89	0.00	6.42- 6.62
14		Endrin	40.000	36.736	8.2	96	0.00	6.67- 6.87
15		4,4'-DDD	40.000	44.222	-10.6	111	0.00	6.78- 6.98
16		Endosulfan II	40.000	35.695	10.8	93	0.00	6.93- 7.13
			Amount	Calc.	%Drift			
17		Endrin Aldehyde	40.000	34.495	13.8	82	0.00	7.09- 7.29
			Amount	Calc.	%Drift			
18		4,4'-DDT	40.000	19.308	51.7#	47	0.00	7.03- 7.22
19		Endosulfan Sulfate	40.000	36.509	8.7	93	0.00	7.30- 7.50
20		Methoxychlor	40.000	23.350	41.6#	60	0.00	7.53- 7.73
21		Endrin Ketone	40.000	33.711	15.7#	86	0.00	7.78- 7.98
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	40.000	37.845	5.4	100	0.00	8.88- 9.08

(#) = Out of Range SPCC's out = 0 CCC's out = 0
TT17581.D 8081A.M Fri Apr 17 09:37:44 2009

5.7 5

Continuing Calibration Summary

Job Number: F64511
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GTT565-CC565
Lab FileID: TT17604.D

Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\2\DATA\0416PEST\TT17604.D\ECD1B.CH Vial: 29
Signal #2 : C:\MSDCHEM\2\DATA\0416PEST\TT17604.D\ECD2A.CH
Acq On : 4-16-09 06:41:58 PM Operator: fouads
Sample : cc565-40 Inst : ECD 6
Misc : op28688,gtt565,1040,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\2\METHODS\8081A.M (Chemstation Integrator)
Title : Pesticides by 608 or 8081
Last Update : Thu Apr 16 14:37:30 2009
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene	40.000	39.256	1.9	97	0.00	4.15- 4.35
2		alpha-BHC	40.000	39.719	0.7	97	0.00	4.52- 4.72
3		gamma-BHC (Lindane)	40.000	39.827	0.4	97	0.00	4.79- 4.99
4		beta-BHC	40.000	39.345	1.6	96	0.00	4.96- 5.16
5		delta-BHC	40.000	39.527	1.2	96	0.00	5.16- 5.36
6		Heptachlor	40.000	37.316	6.7	92	0.00	5.27- 5.47
7		Aldrin	40.000	40.021	-0.1	99	0.00	5.55- 5.75
8		Heptachlor Epoxide	40.000	38.911	2.7	96	0.00	5.92- 6.12
9		gamma-Chlordane	40.000	39.218	2.0	94	0.00	6.14- 6.34
10		alpha-Chlordane	40.000	39.573	1.1	98	0.00	6.21- 6.41
11		Endosulfan I	40.000	40.426	-1.1	101	0.00	6.26- 6.46
12		4,4'-DDE	40.000	41.111	-2.8	100	0.00	6.38- 6.58
13		Dieldrin	40.000	40.373	-0.9	97	0.00	6.50- 6.70
14		Endrin	40.000	38.139	4.7	95	0.00	6.71- 6.91
15		4,4'-DDD	40.000	49.761	-24.4#	117	0.00	6.85- 7.05
16		Endosulfan II	40.000	39.252	1.9	97	0.00	6.91- 7.11
17		Endrin Aldehyde	40.000	41.033	-2.6	102	0.00	7.03- 7.23
18		4,4'-DDT	40.000	28.618	28.5#	65	0.00	7.13- 7.33
19		Endosulfan Sulfate	40.000	40.516	-1.3	98	0.00	7.25- 7.45
20		Methoxychlor	40.000	32.316	19.2#	76	0.00	7.59- 7.79
21		Endrin Ketone	40.000	40.591	-1.5	101	0.00	7.70- 7.90
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	40.000	41.662	-4.2	103	0.00	8.97- 9.17

***** Signal #2 *****

1	S	Tetrachloro-m-xylene	40.000	37.398	6.5	97	0.00	4.09- 4.29
2		alpha-BHC	40.000	37.910	5.2	98	0.00	4.52- 4.72
3		gamma-BHC (Lindane)	40.000	38.729	3.2	98	0.00	4.80- 5.00
4		beta-BHC	40.000	38.659	3.4	98	0.00	5.05- 5.25
5		delta-BHC	40.000	38.784	3.0	97	0.00	5.26- 5.46
6		Heptachlor	40.000	36.319	9.2	93	0.00	5.15- 5.35
7		Aldrin	40.000	38.167	4.6	97	0.00	5.41- 5.61
8		Heptachlor Epoxide	40.000	37.885	5.3	100	0.00	5.83- 6.03
9		gamma-Chlordane	40.000	37.493	6.3	96	0.00	6.07- 6.27

Continuing Calibration Summary

Job Number: F64511
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GTT565-CC565
Lab FileID: TT17604.D

			Amount	Calc.	%Drift			
10		alpha-Chlordane	40.000	38.542	3.6	96	0.00	6.13- 6.33
			Amount	Calc.	%Drift			
11		Endosulfan I	40.000	37.283	6.8	99	0.00	6.18- 6.38
12		4,4'-DDE	40.000	39.897	0.3	100	0.00	6.28- 6.48
13		Dieldrin	40.000	38.311	4.2	96	0.00	6.42- 6.62
14		Endrin	40.000	36.294	9.3	95	0.00	6.67- 6.87
15		4,4'-DDD	40.000	45.046	-12.6	113	0.00	6.78- 6.98
16		Endosulfan II	40.000	38.998	2.5	102	0.00	6.93- 7.13
			Amount	Calc.	%Drift			
17		Endrin Aldehyde	40.000	42.163	-5.4	100	0.00	7.09- 7.29
			Amount	Calc.	%Drift			
18		4,4'-DDT	40.000	28.402	29.0#	68	0.00	7.03- 7.22
19		Endosulfan Sulfate	40.000	39.098	2.3	99	0.00	7.30- 7.50
20		Methoxychlor	40.000	30.877	22.8#	79	0.00	7.53- 7.73
21		Endrin Ketone	40.000	38.613	3.5	98	0.00	7.78- 7.98
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	40.000	39.936	0.2	105	0.00	8.88- 9.08

(#) = Out of Range SPCC's out = 0 CCC's out = 0
TT17581.D 8081A.M Fri Apr 17 09:37:45 2009

5.7 5

Continuing Calibration Summary

Job Number: F64511
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GTT565-ECC565
Lab FileID: TT17607.D

Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\2\DATA\0416PEST\TT17607.D\ECD1B.CH Vial: 29
Signal #2 : C:\MSDCHEM\2\DATA\0416PEST\TT17607.D\ECD2A.CH
Acq On : 4-16-09 07:28:30 PM Operator: fouads
Sample : ecc565-40 Inst : ECD 6
Misc : op28657,gtt565,1020,,,10,4,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\2\METHODS\8081A.M (Chemstation Integrator)
Title : Pesticides by 608 or 8081
Last Update : Thu Apr 16 14:37:30 2009
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene	40.000	40.245	-0.6	100	0.00	4.15- 4.35
2		alpha-BHC	40.000	40.257	-0.6	99	0.00	4.52- 4.72
3		gamma-BHC (Lindane)	40.000	40.171	-0.4	98	0.00	4.79- 4.99
4		beta-BHC	40.000	39.492	1.3	97	0.00	4.96- 5.16
5		delta-BHC	40.000	40.377	-0.9	98	0.00	5.16- 5.36
6		Heptachlor	40.000	38.104	4.7	94	0.00	5.27- 5.47
7		Aldrin	40.000	39.362	1.6	98	0.00	5.55- 5.75
8		Heptachlor Epoxide	40.000	39.021	2.4	96	0.00	5.92- 6.12
9		gamma-Chlordane	40.000	39.285	1.8	94	0.00	6.14- 6.34
10		alpha-Chlordane	40.000	39.448	1.4	98	0.00	6.21- 6.41
11		Endosulfan I	40.000	38.923	2.7	97	0.00	6.26- 6.46
12		4,4'-DDE	40.000	40.468	-1.2	98	0.00	6.38- 6.58
13		Dieldrin	40.000	40.397	-1.0	97	0.00	6.50- 6.70
14		Endrin	40.000	37.965	5.1	95	0.00	6.71- 6.91
15		4,4'-DDD	40.000	48.164	-20.4#	113	0.00	6.85- 7.05
16		Endosulfan II	40.000	39.436	1.4	98	0.00	6.91- 7.11
17		Endrin Aldehyde	40.000	41.612	-4.0	103	0.00	7.03- 7.23
18		4,4'-DDT	40.000	30.083	24.8#	68	0.00	7.13- 7.33
19		Endosulfan Sulfate	40.000	39.872	0.3	96	0.00	7.25- 7.45
20		Methoxychlor	40.000	33.460	16.3#	79	0.00	7.59- 7.79
21		Endrin Ketone	40.000	39.847	0.4	99	0.00	7.70- 7.90
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	40.000	40.655	-1.6	101	0.00	8.97- 9.17

***** Signal #2 *****

1	S	Tetrachloro-m-xylene	40.000	38.007	5.0	99	0.00	4.09- 4.29
2		alpha-BHC	40.000	38.924	2.7	100	0.00	4.52- 4.72
3		gamma-BHC (Lindane)	40.000	39.248	1.9	99	0.00	4.80- 5.00
4		beta-BHC	40.000	38.439	3.9	97	0.00	5.05- 5.25
5		delta-BHC	40.000	39.388	1.5	98	0.00	5.26- 5.46
6		Heptachlor	40.000	36.736	8.2	94	0.00	5.15- 5.35
7		Aldrin	40.000	38.149	4.6	97	0.00	5.41- 5.61
8		Heptachlor Epoxide	40.000	37.987	5.0	100	0.00	5.83- 6.03
9		gamma-Chlordane	40.000	37.096	7.3	95	0.00	6.07- 6.27

Continuing Calibration Summary

Job Number: F64511
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GTT565-ECC565
Lab FileID: TT17607.D

		Amount	Calc.	%Drift			
10	alpha-Chlordane	40.000	38.672	3.3	97	0.00	6.13- 6.33
		Amount	Calc.	%Drift			
11	Endosulfan I	40.000	37.148	7.1	99	0.00	6.18- 6.38
12	4,4'-DDE	40.000	38.358	4.1	96	0.00	6.28- 6.48
13	Dieldrin	40.000	37.425	6.4	94	0.00	6.42- 6.62
14	Endrin	40.000	37.652	5.9	99	0.00	6.67- 6.87
15	4,4'-DDD	40.000	44.851	-12.1	113	0.00	6.78- 6.98
16	Endosulfan II	40.000	37.273	6.8	97	0.00	6.93- 7.13
		Amount	Calc.	%Drift			
17	Endrin Aldehyde	40.000	40.960	-2.4	97	0.00	7.09- 7.29
		Amount	Calc.	%Drift			
18	4,4'-DDT	40.000	28.333	29.2#	68	0.00	7.03- 7.22
19	Endosulfan Sulfate	40.000	39.586	1.0	100	0.00	7.30- 7.50
20	Methoxychlor	40.000	31.089	22.3#	79	0.00	7.53- 7.73
21	Endrin Ketone	40.000	38.698	3.3	98	0.00	7.78- 7.98
22 L1	Chlordane-A		----------NA----------				
23 L1	Chlordane-B		----------NA----------				
24 L1	Chlordane-C		----------NA----------				
25 L1	Chlordane-D		----------NA----------				
26 L1	Chlordane-E		----------NA----------				
27 L1	Chlordane-F		----------NA----------				
28 H	Toxaphene		----------NA----------				
29 S	Decachlorobiphenyl	40.000	41.337	-3.3	109	0.00	8.88- 9.08

(#) = Out of Range SPCC's out = 0 CCC's out = 0
TT17581.D 8081A.M Fri Apr 17 09:37:46 2009

5.7 5

Continuing Calibration Summary

Job Number: F64511
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GTT566-CC565
Lab FileID: TT17622.D

Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\2\DATA\0417PEST\TT17622.D\ECD1B.CH Vial: 15
Signal #2 : C:\MSDCHEM\2\DATA\0417PEST\TT17622.D\ECD2A.CH
Acq On : 4-17-09 01:20:17 PM Operator: marke
Sample : cc565-40 Inst : ECD 6
Misc : op28688,gtt566,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\2\METHODS\8081A.M (Chemstation Integrator)
Title : Pesticides by 608 or 8081
Last Update : Mon Apr 20 15:02:40 2009
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene	40.000	42.074	-5.2	131	0.00	4.14- 4.34
2		alpha-BHC	40.000	42.898	-7.2	105	0.00	4.51- 4.71
3		gamma-BHC (Lindane)	40.000	42.930	-7.3	107	0.00	4.78- 4.98
4		beta-BHC	40.000	43.177	-7.9	109	0.00	4.95- 5.15
5		delta-BHC	40.000	43.054	-7.6	101	0.00	5.15- 5.35
6		Heptachlor	40.000	42.805	-7.0	110	0.00	5.25- 5.45
7		Aldrin	40.000	42.506	-6.3	106	0.00	5.54- 5.74
8		Heptachlor Epoxide	40.000	42.965	-7.4	111	0.00	5.91- 6.11
9		gamma-Chlordane	40.000	44.223	-10.6	112	0.00	6.13- 6.33
10		alpha-Chlordane	40.000	43.812	-9.5	106	0.00	6.20- 6.40
11		Endosulfan I	40.000	43.053	-7.6	109	0.00	6.24- 6.44
12		4,4'-DDE	40.000	45.887	-14.7	109	0.00	6.36- 6.56
13		Dieldrin	40.000	44.191	-10.5	107	0.00	6.49- 6.69
14		Endrin	40.000	42.549	-6.4	107	0.00	6.69- 6.89
15		4,4'-DDD	40.000	44.862	-12.2	101	0.00	6.83- 7.03
16		Endosulfan II	40.000	42.810	-7.0	105	0.00	6.90- 7.10
		----------	Amount	Calc.	%Drift	----------		
17		Endrin Aldehyde	40.000	45.282	-13.2	111	0.00	7.02- 7.22
		----------	Amount	Calc.	%Drift	----------		
18		4,4'-DDT	40.000	52.415	-31.0#	114	0.00	7.12- 7.32
19		Endosulfan Sulfate	40.000	43.692	-9.2	107	0.00	7.24- 7.44
20		Methoxychlor	40.000	49.878	-24.7#	116	0.00	7.57- 7.77
21		Endrin Ketone	40.000	42.554	-6.4	104	0.00	7.68- 7.88
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	40.000	42.742	-6.9	138	0.01	8.96- 9.16

***** Signal #2 *****

1	S	Tetrachloro-m-xylene	40.000	39.504	1.2	122	0.00	4.08- 4.28
2		alpha-BHC	40.000	39.367	1.6	102	0.00	4.51- 4.71
3		gamma-BHC (Lindane)	40.000	40.457	-1.1	105	0.00	4.79- 4.99
4		beta-BHC	40.000	40.552	-1.4	101	0.00	5.03- 5.23
5		delta-BHC	40.000	40.998	-2.5	103	0.00	5.25- 5.45

Continuing Calibration Summary

Job Number: F64511
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GTT566-CC565
Lab FileID: TT17622.D

6		Heptachlor	40.000	40.000	0.0	107	0.00	5.14- 5.34
7		Aldrin	40.000	39.807	0.5	103	0.00	5.40- 5.60
8		Heptachlor Epoxide	40.000	40.860	-2.1	106	0.00	5.82- 6.02
9		gamma-Chlordane	40.000	42.667	-6.7	109	0.00	6.06- 6.26
10		alpha-Chlordane	40.000	42.009	-5.0	107	0.00	6.11- 6.31
11		Endosulfan I	40.000	40.653	-1.6	106	0.00	6.17- 6.37
12		4,4'-DDE	40.000	41.389	-3.5	105	0.00	6.26- 6.46
13		Dieldrin	40.000	40.666	-1.7	108	0.00	6.41- 6.61
14		Endrin	40.000	39.365	1.6	101	0.00	6.65- 6.85
15		4,4'-DDD	40.000	41.033	-2.6	105	0.00	6.76- 6.96
16		Endosulfan II	40.000	40.205	-0.5	104	0.00	6.92- 7.12
		----------	Amount	Calc.	%Drift	----------		
17		Endrin Aldehyde	40.000	43.903	-9.8	107	0.00	7.07- 7.27
		----------	Amount	Calc.	%Drift	----------		
18		4,4'-DDT	40.000	47.178	-17.9#	113	0.00	7.01- 7.21
19		Endosulfan Sulfate	40.000	40.932	-2.3	105	0.00	7.29- 7.49
20		Methoxychlor	40.000	44.728	-11.8	109	0.00	7.52- 7.72
21		Endrin Ketone	40.000	41.061	-2.7	105	0.00	7.77- 7.97
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	40.000	40.499	-1.2	138	0.00	8.87- 9.07

(#) = Out of Range SPCC's out = 0 CCC's out = 0
TT17645.D 8081A.M Mon Apr 20 15:32:13 2009

5.7 5

Continuing Calibration Summary

Job Number: F64511
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GTT566-CC565
Lab FileID: TT17625.D

Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\2\DATA\0417PEST\TT17625.D\ECD1B.CH Vial: 18
Signal #2 : C:\MSDCHEM\2\DATA\0417PEST\TT17625.D\ECD2A.CH
Acq On : 4-17-09 02:26:38 PM Operator: marke
Sample : cc656-40 Inst : ECD 6
Misc : op28688,gtt566,1000,,,10,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\2\METHODS\8081A.M (Chemstation Integrator)
Title : Pesticides by 608 or 8081
Last Update : Mon Apr 20 15:02:40 2009
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene	40.000	42.894	-7.2	134	0.00	4.14- 4.34
2		alpha-BHC	40.000	41.914	-4.8	103	0.00	4.51- 4.71
3		gamma-BHC (Lindane)	40.000	42.240	-5.6	105	0.00	4.78- 4.98
4		beta-BHC	40.000	43.732	-9.3	111	0.00	4.95- 5.15
5		delta-BHC	40.000	43.329	-8.3	101	0.00	5.15- 5.35
6		Heptachlor	40.000	42.032	-5.1	108	0.00	5.25- 5.45
7		Aldrin	40.000	42.746	-6.9	107	0.00	5.54- 5.74
8		Heptachlor Epoxide	40.000	43.014	-7.5	111	0.00	5.91- 6.11
9		gamma-Chlordane	40.000	43.320	-8.3	109	0.00	6.13- 6.33
10		alpha-Chlordane	40.000	45.064	-12.7	109	0.00	6.20- 6.40
11		Endosulfan I	40.000	43.309	-8.3	109	0.00	6.24- 6.44
12		4,4'-DDE	40.000	45.325	-13.3	107	0.00	6.36- 6.56
13		Dieldrin	40.000	43.353	-8.4	105	0.00	6.49- 6.69
14		Endrin	40.000	41.031	-2.6	104	0.00	6.69- 6.89
15		4,4'-DDD	40.000	45.160	-12.9	102	0.00	6.83- 7.03
16		Endosulfan II	40.000	43.312	-8.3	106	0.00	6.90- 7.10
		----------	Amount	Calc.	%Drift	----------		
17		Endrin Aldehyde	40.000	45.623	-14.1	111	0.00	7.02- 7.22
		----------	Amount	Calc.	%Drift	----------		
18		4,4'-DDT	40.000	50.360	-25.9#	110	0.00	7.12- 7.32
19		Endosulfan Sulfate	40.000	42.792	-7.0	105	0.00	7.24- 7.44
20		Methoxychlor	40.000	49.083	-22.7#	114	0.00	7.57- 7.77
21		Endrin Ketone	40.000	41.227	-3.1	100	0.00	7.68- 7.88
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	40.000	42.310	-5.8	137	0.00	8.96- 9.16

***** Signal #2 *****

1	S	Tetrachloro-m-xylene	40.000	40.018	-0.0	123	0.00	4.08- 4.28
2		alpha-BHC	40.000	40.392	-1.0	104	0.00	4.51- 4.71
3		gamma-BHC (Lindane)	40.000	40.310	-0.8	105	0.00	4.79- 4.99
4		beta-BHC	40.000	40.962	-2.4	102	0.00	5.03- 5.23
5		delta-BHC	40.000	40.676	-1.7	102	0.00	5.25- 5.45

Continuing Calibration Summary

Job Number: F64511
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GTT566-CC565
Lab FileID: TT17625.D

6	Heptachlor	40.000	39.390	1.5	105	0.00	5.14- 5.34
7	Aldrin	40.000	40.759	-1.9	106	0.00	5.40- 5.60
8	Heptachlor Epoxide	40.000	41.727	-4.3	108	0.00	5.82- 6.02
9	gamma-Chlordane	40.000	41.686	-4.2	106	0.00	6.06- 6.26
10	alpha-Chlordane	40.000	42.450	-6.1	109	0.00	6.11- 6.31
11	Endosulfan I	40.000	40.613	-1.5	106	0.00	6.17- 6.37
12	4,4'-DDE	40.000	41.655	-4.1	106	0.00	6.26- 6.46
13	Dieldrin	40.000	41.412	-3.5	110	0.00	6.41- 6.61
14	Endrin	40.000	38.319	4.2	99	0.00	6.65- 6.85
15	4,4'-DDD	40.000	43.143	-7.9	110	0.00	6.76- 6.96
16	Endosulfan II	40.000	40.625	-1.6	105	0.00	6.92- 7.12
	----------	Amount	Calc.	%Drift	----------		
17	Endrin Aldehyde	40.000	45.101	-12.8	109	0.00	7.07- 7.27
	----------	Amount	Calc.	%Drift	----------		
18	4,4'-DDT	40.000	47.462	-18.7#	113	0.00	7.01- 7.21
19	Endosulfan Sulfate	40.000	39.849	0.4	102	0.00	7.29- 7.49
20	Methoxychlor	40.000	44.044	-10.1	108	0.00	7.52- 7.72
21	Endrin Ketone	40.000	39.739	0.7	102	0.00	7.77- 7.97
22 L1	Chlordane-A		----------NA----------				
23 L1	Chlordane-B		----------NA----------				
24 L1	Chlordane-C		----------NA----------				
25 L1	Chlordane-D		----------NA----------				
26 L1	Chlordane-E		----------NA----------				
27 L1	Chlordane-F		----------NA----------				
28 H	Toxaphene		----------NA----------				
29 S	Decachlorobiphenyl	40.000	41.437	-3.6	142	0.00	8.87- 9.07

(#) = Out of Range SPCC's out = 0 CCC's out = 0
TT17645.D 8081A.M Mon Apr 20 15:32:14 2009

5.7 5

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries
- Instrument Runlogs/QC

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F64511
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Solids, Total Dissolved	GN34639	100	0.0	mg/l				
Solids, Total Dissolved	GN34682	100	0.0	mg/l				

Associated Samples:
Batch GN34639: F64511-1, F64511-3, F64511-4, F64511-5
Batch GN34682: F64511-2
(*) Outside of QC limits

6.1
6

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F64511
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Solids, Total Dissolved	GN34639	F64511-3	mg/l	5760	5800	0.7	0-5%

Associated Samples:
Batch GN34639: F64511-1, F64511-3, F64511-4, F64511-5
(*) Outside of QC limits

6.2 6

Southeast ACCUTEST Laboratories

IT'S ALL IN THE CHEMISTRY

07/28/09

Technical Report for

Tetra Tech, Inc

Holloman AFB; Alamogordo, NM

100-TEN-T93002

Accutest Job Number: F66500

Sampling Date: 07/06/09

Report to:

Tetra Tech
800 Oak Ridge Tpk. Suite A600
Oak Ridge, TN 37830
Virginia.Mullins@tetratech.com

ATTN: Ginger Mullins

Total number of pages in report: **48**

ACCUTEST LABORATORIES 50 YEARS 1956-2006

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Harry Behzadi, Ph.D.
Laboratory Director

Client Service contact: Sue Bell 407-425-6700

Certifications: FL (DOH E83510), NC (573), NJ (FL002), MA (FL946), IA (366), LA (03051), KS (E-10327), SC, AK

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Test results relate only to samples analyzed.

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Table of Contents

-1-

Section 1: Sample Summary **3**
Section 2: Case Narrative/Conformance Summary **4**
Section 3: Sample Results **5**
3.1: F66500-1: MW16-04-070609 6
3.2: F66500-2: MW16-03-070609 8
3.3: F66500-3: MW16-02-070609 10
3.4: F66500-4: MW16-01-070609 12
3.5: F66500-5: MW16-DUP01-070609 14
Section 4: Misc. Forms **16**
4.1: Chain of Custody 17
Section 5: GC Semi-volatiles - QC Data Summaries **19**
5.1: Method Blank Summary 20
5.2: Blank Spike Summary 22
5.3: Matrix Spike/Matrix Spike Duplicate Summary 24
5.4: DDT/Endrin Breakdown Checks 25
5.5: Surrogate Recovery Summaries 29
5.6: GC Surrogate Retention Time Summaries 30
5.7: Initial and Continuing Calibration Summaries 32
Section 6: General Chemistry - QC Data Summaries **46**
6.1: Method Blank and Spike Results Summary 47
6.2: Duplicate Results Summary 48

Accutest Laboratories

Sample Summary

Tetra Tech, Inc

Job No: F66500

Holloman AFB; Alamogordo, NM
Project No: 100-TEN-T93002

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
F66500-1	07/06/09	15:23 AM	07/08/09	AQ	Ground Water	MW16-04-070609
F66500-2	07/06/09	15:43 AM	07/08/09	AQ	Ground Water	MW16-03-070609
F66500-2D	07/06/09	15:43 AM	07/08/09	AQ	Water Dup/MSD	MW16-03-070609
F66500-2S	07/06/09	15:43 AM	07/08/09	AQ	Water Matrix Spike	MW16-03-070609
F66500-3	07/06/09	16:20 AM	07/08/09	AQ	Ground Water	MW16-02-070609
F66500-4	07/06/09	16:45 AM	07/08/09	AQ	Ground Water	MW16-01-070609
F66500-5	07/06/09	00:00 AM	07/08/09	AQ	Ground Water	MW16-DUP01-070609

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Tetra Tech, Inc **Job No:** F66500

Site: Holloman AFB; Alamogordo, NM **Report Date:** 7/27/2009 4:52:30 PM

5 Samples were collected on 07/06/2009 and were received at Accutest SE on 07/08/2009 properly preserved, at 3.2 Deg. C and intact. These Samples received an Accutest job number of F66500. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Extractables by GC by Method SW846 8081A

Matrix: AQ **Batch ID:** OP29556

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Samples F66500-2MS, F66500-2MSD were used as the QC samples indicated.

Wet Chemistry by Method SM19 2540C

Matrix: AQ **Batch ID:** GN35825

All method blanks for this batch meet method specific criteria.

Sample F66500-2DUP was used as the QC sample for Solids, Total Dissolved.

The following samples were run outside of holding time for method SM19 2540C: F66500-1, F66500-2, F66500-4, F66500-5, F66500-3

F66500-1, F66500-2, F66500-3, F66500-4, F66500-5 for Solids, Total Dissolved: Originally prepped 7/10/09. Results confirmed by re-analysis out if hold time.

Accutest Laboratories Southeast (ALSE) certifies that this report meets the project requirements for analytical data produced for the samples as received at ALSE and as stated on the COC. ALSE certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the ALSE Quality Manual except as noted above. This report is to be used in its entirety. ALSE is not responsible for any assumptions of data quality if partial data packages are used.

Narrative prepared by:

_____ Date: July 27, 2009

Ellen Pampel, Inorganic QA (signature on file)

Monday, July 27, 2009

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MW16-04-070609		
Lab Sample ID:	F66500-1	**Date Sampled:**	07/06/09
Matrix:	AQ - Ground Water	**Date Received:**	07/08/09
Method:	SW846 8081A SW846 3510C	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	KK33216.D	1	07/17/09	FS	07/09/09	OP29556	GKK1135
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	10.0 ml
Run #2		

Pesticide Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
319-84-6	alpha-BHC	ND	0.050	0.010	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.050	0.010	ug/l	
60-57-1	Dieldrin	ND	0.050	0.010	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	99%		42-127%
2051-24-3	Decachlorobiphenyl	90%		27-127%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW16-04-070609		
Lab Sample ID:	F66500-1	**Date Sampled:**	07/06/09
Matrix:	AQ - Ground Water	**Date Received:**	07/08/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved [a]	6120	100	10	mg/l	1	07/15/09	LE	SM19 2540C

(a) Originally prepped 7/10/09. Results confirmed by re-analysis.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW16-03-070609		
Lab Sample ID:	F66500-2	**Date Sampled:**	07/06/09
Matrix:	AQ - Ground Water	**Date Received:**	07/08/09
Method:	SW846 8081A SW846 3510C	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	KK33217.D	1	07/17/09	FS	07/09/09	OP29556	GKK1135
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	10.0 ml
Run #2		

Pesticide Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
319-84-6	alpha-BHC	ND	0.050	0.010	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.050	0.010	ug/l	
60-57-1	Dieldrin	ND	0.050	0.010	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	84%		42-127%
2051-24-3	Decachlorobiphenyl	86%		27-127%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW16-03-070609		
Lab Sample ID:	F66500-2	**Date Sampled:**	07/06/09
Matrix:	AQ - Ground Water	**Date Received:**	07/08/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved [a]	6170	100	10	mg/l	1	07/15/09	LE	SM19 2540C

(a) Originally prepped 7/10/09. Results confirmed by re-analysis.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW16-02-070609		
Lab Sample ID:	F66500-3	**Date Sampled:**	07/06/09
Matrix:	AQ - Ground Water	**Date Received:**	07/08/09
Method:	SW846 8081A SW846 3510C	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	KK33220.D	1	07/17/09	FS	07/09/09	OP29556	GKK1135
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	10.0 ml
Run #2		

Pesticide Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
319-84-6	alpha-BHC	ND	0.050	0.010	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.050	0.010	ug/l	
60-57-1	Dieldrin	ND	0.050	0.010	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	79%		42-127%
2051-24-3	Decachlorobiphenyl	95%		27-127%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW16-02-070609		
Lab Sample ID:	F66500-3	**Date Sampled:**	07/06/09
Matrix:	AQ - Ground Water	**Date Received:**	07/08/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved [a]	6470	100	10	mg/l	1	07/15/09	LE	SM19 2540C

(a) Originally prepped 7/10/09. Results confirmed by re-analysis.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW16-01-070609		
Lab Sample ID:	F66500-4	**Date Sampled:**	07/06/09
Matrix:	AQ - Ground Water	**Date Received:**	07/08/09
Method:	SW846 8081A SW846 3510C	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	KK33221.D	1	07/17/09	FS	07/09/09	OP29556	GKK1135
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	10.0 ml
Run #2		

Pesticide Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
319-84-6	alpha-BHC	ND	0.050	0.010	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.050	0.010	ug/l	
60-57-1	Dieldrin	ND	0.050	0.010	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	81%		42-127%
2051-24-3	Decachlorobiphenyl	100%		27-127%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW16-01-070609		
Lab Sample ID:	F66500-4	**Date Sampled:**	07/06/09
Matrix:	AQ - Ground Water	**Date Received:**	07/08/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved [a]	2340	100	10	mg/l	1	07/15/09	LE	SM19 2540C

(a) Originally prepped 7/10/09. Results confirmed by re-analysis.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW16-DUP01-070609		
Lab Sample ID:	F66500-5	**Date Sampled:**	07/06/09
Matrix:	AQ - Ground Water	**Date Received:**	07/08/09
Method:	SW846 8081A SW846 3510C	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	KK33222.D	1	07/17/09	FS	07/09/09	OP29556	GKK1135
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	10.0 ml
Run #2		

Pesticide Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
319-84-6	alpha-BHC	ND	0.050	0.010	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.050	0.010	ug/l	
60-57-1	Dieldrin	ND	0.050	0.010	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	81%		42-127%
2051-24-3	Decachlorobiphenyl	94%		27-127%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW16-DUP01-070609		
Lab Sample ID:	F66500-5	**Date Sampled:**	07/06/09
Matrix:	AQ - Ground Water	**Date Received:**	07/08/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved [a]	5400	100	10	mg/l	1	07/15/09	LE	SM19 2540C

(a) Originally prepped 7/10/09. Results confirmed by re-analysis.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Certification Exceptions
- Chain of Custody

Accutest Laboratories Southeast
Chain of Custody

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL. 407-425-6700 • FAX: 407-425-0707
www.accutest.com

Accutest JOB # F66500 COC-012 PAGE 1 OF 1

Accutest Quote # | SKIFF#

Client / Reporting Information

Company Name: TETRA TECH
Address: 800 OAK RIDGE TURNPIKE A-600
City: OAK RIDGE State: TN Zip: 37830
Project Contact: GINGER MULLINS E-mail: TETRATECH.COM
Phone#: 865-599-2349
Sampler(s) Name(s) (Printed): A. MORENO, J. BENNETT

Project Information

Project Name: HOLLOMAN AFB
Street:
City: ALAMOGORDO State: NM
Project #: T93002
Fax #:
Client Purchase Order #:

Accutest Sample #	Field ID / Point of Collection	DATE	TIME	SAMPLED BY:	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NaOH+ZnAc	DI WATER	MEOH	GAMMA - BHC	ALPHA - BHC	DIELDRIN	TDS								LAB USE ONLY
1	MW16-04-070609	7/6/09	1533		GW	3		X								X	X	X	X								
2	MW16-03-070609	7/6/09	1543		GW	3		X								X	X	X	X								
2	MW16-03-MS-070609	7/6/09	1543		GW	3		X								X	X	X	X								
2	MW16-03-MSD-070609	7/6/09	1543		GW	3		X								X	X	X	X								
3	MW16-02-070609	7/6/09	1620		GW	3		X								X	X	X	X								
4	MW16-01-070609	7/6/09	1645		GW	3		X								X	X	X	X								
5	MW16-DUP01-070609	7/6/09	—		GW	3		X								X	X	X	X								

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe

TURNAROUND TIME (Business Days)

Approved By: / Rush Code
- [X] 10 Days Standard
- [ ] 7 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] OTHER

Emergency or Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information
- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [X] REDT1 (EPA LEVEL 3) ERPIMS
- [ ] FULT1 (EPA LEVEL 4)
- [X] EDD'S

Comments / Remarks

FEDEX 869649110290
869649110315

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished by :	Date Time:	Received By:
	7/6/09 1700	2	3		4
Relinquished by:	**Date Time:**	**Received By:**	**Relinquished by:**	**Date Time:**	**Received By:**
	7/7/09 1500	6 FED EX	7 FX	7/8/09 9:00	8 Accutest 7/8/09 9:00

Lab Use Only: Custody Seal in Place: Y N Temp Blank Provided: Y N Preserved where Applicable: Y N Total # of Coolers: 2 Cooler Temperature (s) Celsius: 3.0 3.2

4.1 4

F66500: Chain of Custody
Page 1 of 2

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: F66500 CLIENT: TetraTech PROJECT: Hollowman AFB

DATE/TIME RECEIVED: 7/8/09 9:00 # OF COOLERS RECEIVED: 2 COOLER TEMPS: 3.0 3.2

METHOD OF DELIVERY: (FEDEX) UPS ACCUTEST COURIER GREYHOUND DELIVERY OTHER

AIRBILL NUMBERS: 8696 4411 0315

COOLER INFORMATION

- [ ] CUSTODY SEAL NOT PRESENT OR NOT INTACT
- [ ] CHAIN OF CUSTODY NOT RECEIVED (COC)
- [ ] ANALYSIS REQUESTED IS UNCLEAR OR MISSING
- [ ] SAMPLE DATES OR TIMES UNCLEAR OR MISSING
- [ ] TEMPERATURE CRITERIA NOT MET
- [ ] WET ICE RECEIVED IN COOLER

TRIP BLANK INFORMATION

- [ ] TRIP BLANK PROVIDED
- [x] TRIP BLANK NOT PROVIDED
- [x] TRIP BLANK NOT ON COC
- [ ] TRIP BLANK INTACT
- [ ] TRIP BLANK NOT INTACT
- [ ] RECEIVED WATER TRIP BLANK
- [ ] RECEIVED SOIL TRIP BLANK

SAMPLE INFORMATION

- [ ] SAMPLE LABELS NOT PRESENT ON ALL BOTTLES
- [ ] CORRECT NUMBER OF CONTAINERS USED
- [ ] SAMPLE RECEIVED IMPROPERLY PRESERVED
- [ ] INSUFFICIENT VOLUME FOR ANALYSIS
- [ ] TIMES ON COC DOES NOT MATCH LABEL(S)
- [ ] ID'S ON COC DOES NOT MATCH LABEL(S)
- [ ] VOC VIALS HAVE HEADSPACE (MACRO BUBBLES)
- [ ] BOTTLES RECEIVED BUT ANALYSIS NOT REQUESTED
- [ ] NO BOTTLES RECEIVED FOR ANALYSIS REQUESTED
- [ ] UNCLEAR FILTERING INSTRUCTIONS
- [ ] UNCLEAR COMPOSITING INSTRUCTIONS
- [ ] SAMPLE CONTAINER(S) RECEIVED BROKEN
- [ ] % SOLIDS JAR NOT RECEIVED
- [ ] 5035 FIELD KIT NOT FROZEN WITHIN 48 HOUR'S
- [ ] RESIDUAL CHLORINE PRESENT

(APPLICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS)

MISC. INFORMATION

NUMBER OF ENCORES ? Ø

NUMBER OF 5035 FIELD KITS ? Ø

NUMBER OF LAB FILTERED METALS ? Ø

SUMMARY OF COMMENTS:

TECHNICIAN SIGNATURE/DATE CLR 7/8/09 TECHNICIAN SIGNATURE/DATE JC 7.8.09

ASBD 12/17/07

F66500: Chain of Custody

Page 2 of 2

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- DDT/Endrin Breakdown Checks
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: F66500
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP29556-MB	ST83224.D	1	07/14/09	ME	07/09/09	OP29556	GST2082

The QC reported here applies to the following samples: **Method:** SW846 8081A

F66500-1, F66500-2, F66500-3, F66500-4, F66500-5

CAS No.	Compound	Result	RL	MDL	Units	Q
319-84-6	alpha-BHC	ND	0.050	0.010	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.050	0.010	ug/l	
60-57-1	Dieldrin	ND	0.050	0.010	ug/l	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	93%	42-127%
2051-24-3	Decachlorobiphenyl	93%	27-127%

Method Blank Summary

Job Number: F66500
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP29556-MB	KK33215.D	1	07/17/09	FS	07/09/09	OP29556	GKK1135

The QC reported here applies to the following samples: **Method:** SW846 8081A

F66500-1, F66500-2, F66500-3, F66500-4, F66500-5

CAS No.	Compound	Result	RL	MDL	Units	Q
319-84-6	alpha-BHC	ND	0.050	0.010	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.050	0.010	ug/l	
60-57-1	Dieldrin	ND	0.050	0.010	ug/l	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	85%	42-127%
2051-24-3	Decachlorobiphenyl	109%	27-127%

Blank Spike Summary

Job Number: F66500
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP29556-BS	ST83223.D	1	07/14/09	ME	07/09/09	OP29556	GST2082

The QC reported here applies to the following samples: **Method:** SW846 8081A

F66500-1, F66500-2, F66500-3, F66500-4, F66500-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
319-84-6	alpha-BHC	0.5	0.46	92	77-132
58-89-9	gamma-BHC (Lindane)	0.5	0.45	90	80-136
60-57-1	Dieldrin	0.5	0.45	90	80-136

CAS No.	Surrogate Recoveries	BSP	Limits
877-09-8	Tetrachloro-m-xylene	79%	42-127%
2051-24-3	Decachlorobiphenyl	84%	27-127%

Blank Spike Summary

Job Number: F66500
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP29556-BS	KK33214.D	1	07/17/09	FS	07/09/09	OP29556	GKK1135

The QC reported here applies to the following samples: **Method:** SW846 8081A

F66500-1, F66500-2, F66500-3, F66500-4, F66500-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
319-84-6	alpha-BHC	0.5	0.59	118	77-132
58-89-9	gamma-BHC (Lindane)	0.5	0.59	118	80-136
60-57-1	Dieldrin	0.5	0.58	116	80-136

CAS No.	Surrogate Recoveries	BSP	Limits
877-09-8	Tetrachloro-m-xylene	103%	42-127%
2051-24-3	Decachlorobiphenyl	125%	27-127%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F66500
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP29556-MS	KK33218.D	1	07/17/09	FS	07/09/09	OP29556	GKK1135
OP29556-MSD	KK33219.D	1	07/17/09	FS	07/09/09	OP29556	GKK1135
F66500-2	KK33217.D	1	07/17/09	FS	07/09/09	OP29556	GKK1135

The QC reported here applies to the following samples: **Method:** SW846 8081A

F66500-1, F66500-2, F66500-3, F66500-4, F66500-5

CAS No.	Compound	F66500-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
319-84-6	alpha-BHC	ND		0.962	0.92	96	0.98	102	6	77-132/16
58-89-9	gamma-BHC (Lindane)	ND		0.962	0.92	96	0.98	102	6	80-136/17
60-57-1	Dieldrin	ND		0.962	0.90	94	0.95	99	5	80-136/16

CAS No.	Surrogate Recoveries	MS	MSD	F66500-2	Limits
877-09-8	Tetrachloro-m-xylene	83%	92%	84%	42-127%
2051-24-3	Decachlorobiphenyl	104%	111%	86%	27-127%

DDT/Endrin Breakdown Check

Job Number: F66500
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GKK1134-DDT
Lab File ID: KK33153.D
Instrument ID: GCKK
Injection Date: 07/15/09
Injection Time: 11:16

Compound	Response Signal 1	Response Signal 2
4,4'-DDD	550968	84441
4,4'-DDE	165034	28992
4,4'-DDT	10863998	1857781
DDT Breakdown [a]	6.2 %	5.8 %
Endrin aldehyde	178652	24995
Endrin ketone	429438	70484
Endrin	13422367	2123538
Endrin Breakdown [b]	4.3 %	4.3 %

(a) Calculated as: (DDD + DDE) / (DDD + DDE + DDT) x 100
(b) Calculated as: (Endrin Aldehyde + Endrin Ketone) / (Endrin Aldehyde + Endrin Ketone + Endrin) x 100

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
GKK1134-IC1134	KK33156.D	07/15/09	12:16	01:00	Initial cal 5
GKK1134-IC1134	KK33157.D	07/15/09	12:32	01:16	Initial cal 10
GKK1134-IC1134	KK33158.D	07/15/09	12:47	01:31	Initial cal 20
GKK1134-ICC1134	KK33159.D	07/15/09	13:03	01:47	Initial cal 40
GKK1134-IC1134	KK33160.D	07/15/09	13:19	02:03	Initial cal 60
GKK1134-IC1134	KK33161.D	07/15/09	13:34	02:19	Initial cal 80
GKK1134-IC1134	KK33162.D	07/15/09	13:50	02:34	Initial cal 500
GKK1134-IC1134	KK33163.D	07/15/09	14:06	02:50	Initial cal 200
GKK1134-ICV1134	KK33164.D	07/15/09	14:21	03:06	Initial cal verification 40
OP29566-MB	KK33165.D	07/15/09	14:50	03:35	Method Blank
ZZZZZZ	KK33166.D	07/15/09	15:06	03:50	(unrelated sample)
F66515-19	KK33167.D	07/15/09	15:21	04:06	(used for QC only; not part of job F66500)
ZZZZZZ	KK33168.D	07/15/09	15:37	04:21	(unrelated sample)
ZZZZZZ	KK33169.D	07/15/09	15:52	04:37	(unrelated sample)
GKK1134-CC1134	KK33171.D	07/15/09	16:26	05:10	Continuing cal 40
GKK1134-ECC1134	KK33177.D	07/15/09	18:00	06:44	Ending cal 40

DDT/Endrin Breakdown Check

Job Number: F66500
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GKK1135-DDT
Lab File ID: KK33182.D
Instrument ID: GCKK
Injection Date: 07/17/09
Injection Time: 10:41

Compound	Response Signal 1	Response Signal 2
4,4'-DDD	357589	49630
4,4'-DDE	127556	17672
4,4'-DDT	5536579	925609
DDT Breakdown [a]	8.1 %	6.8 %
Endrin aldehyde	199513	26433
Endrin ketone	267886	40934
Endrin	6850179	1116000
Endrin Breakdown [b]	6.4 %	5.7 %

(a) Calculated as: (DDD + DDE) / (DDD + DDE + DDT) x 100
(b) Calculated as: (Endrin Aldehyde + Endrin Ketone) / (Endrin Aldehyde + Endrin Ketone + Endrin) x 100

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
GKK1135-CC1134	KK33183.D	07/17/09	11:06	00:25	Continuing cal 40
GKK1135-CC1134	KK33184.D	07/17/09	11:39	00:58	Continuing cal 500
GKK1135-CC1134	KK33185.D	07/17/09	11:55	01:14	Continuing cal 200
OP29613-BS	KK33187.D	07/17/09	12:54	02:13	Blank Spike
OP29613-MB	KK33188.D	07/17/09	13:09	02:29	Method Blank
ZZZZZZ	KK33189.D	07/17/09	13:25	02:45	(unrelated sample)
ZZZZZZ	KK33191.D	07/17/09	13:56	03:16	(unrelated sample)
ZZZZZZ	KK33192.D	07/17/09	14:12	03:32	(unrelated sample)
ZZZZZZ	KK33193.D	07/17/09	14:28	03:47	(unrelated sample)
F66615-3	KK33194.D	07/17/09	14:43	04:03	(used for QC only; not part of job F66500)
OP29613-MS	KK33195.D	07/17/09	14:59	04:18	Matrix Spike
OP29613-MSD	KK33196.D	07/17/09	15:15	04:34	Matrix Spike Duplicate
GKK1135-CC1134	KK33197.D	07/17/09	15:30	04:50	Continuing cal 40
ZZZZZZ	KK33199.D	07/17/09	16:02	05:21	(unrelated sample)
ZZZZZZ	KK33200.D	07/17/09	16:17	05:37	(unrelated sample)
ZZZZZZ	KK33201.D	07/17/09	16:33	05:52	(unrelated sample)
GKK1135-CC1134	KK33202.D	07/17/09	16:49	06:08	Continuing cal 40
ZZZZZZ	KK33204.D	07/17/09	17:20	06:39	(unrelated sample)
ZZZZZZ	KK33205.D	07/17/09	17:35	06:55	(unrelated sample)
ZZZZZZ	KK33206.D	07/17/09	17:51	07:11	(unrelated sample)
ZZZZZZ	KK33207.D	07/17/09	18:07	07:26	(unrelated sample)
ZZZZZZ	KK33208.D	07/17/09	18:22	07:42	(unrelated sample)
ZZZZZZ	KK33210.D	07/17/09	18:54	08:13	(unrelated sample)
ZZZZZZ	KK33211.D	07/17/09	19:09	08:29	(unrelated sample)

DDT/Endrin Breakdown Check

Job Number: F66500
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GKK1135-DDT
Lab File ID: KK33182.D
Instrument ID: GCKK
Injection Date: 07/17/09
Injection Time: 10:41

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
GKK1135-CC1134	KK33213.D	07/17/09	19:40	09:00	Continuing cal 40
OP29556-BS	KK33214.D	07/17/09	19:56	09:16	Blank Spike
OP29556-MB	KK33215.D	07/17/09	20:12	09:31	Method Blank
F66500-1	KK33216.D	07/17/09	20:27	09:47	MW16-04-070609
F66500-2	KK33217.D	07/17/09	20:43	10:02	MW16-03-070609
OP29556-MS	KK33218.D	07/17/09	20:59	10:18	Matrix Spike
OP29556-MSD	KK33219.D	07/17/09	21:14	10:34	Matrix Spike Duplicate
F66500-3	KK33220.D	07/17/09	21:30	10:49	MW16-02-070609
F66500-4	KK33221.D	07/17/09	21:45	11:05	MW16-01-070609
F66500-5	KK33222.D	07/17/09	22:01	11:20	MW16-DUP01-070609
GKK1135-ECC1134	KK33223.D	07/17/09	22:17	11:36	Ending cal 20

DDT/Endrin Breakdown Check

Job Number: F66500
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GST2082-DDT
Lab File ID: ST83213.D
Instrument ID: GCST
Injection Date: 07/14/09
Injection Time: 10:49

Compound	Response Signal 1	Response Signal 2
4,4'-DDD	364718	43296
4,4'-DDE	166653	21342
4,4'-DDT	12936630	2383818
DDT Breakdown [a]	3.9 %	2.6 %
Endrin aldehyde	176358	22481
Endrin ketone	328574	47704
Endrin	14769289	2136248
Endrin Breakdown [b]	3.3 %	3.2 %

(a) Calculated as: (DDD + DDE) / (DDD + DDE + DDT) x 100
(b) Calculated as: (Endrin Aldehyde + Endrin Ketone) / (Endrin Aldehyde + Endrin Ketone + Endrin) x 100

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
GST2082-IC2082	ST83214.D	07/14/09	11:07	00:18	Initial cal 5
GST2082-IC2082	ST83215.D	07/14/09	11:23	00:34	Initial cal 10
GST2082-IC2082	ST83216.D	07/14/09	11:39	00:50	Initial cal 20
GST2082-ICC2082	ST83217.D	07/14/09	11:54	01:05	Initial cal 40
GST2082-IC2082	ST83218.D	07/14/09	12:10	01:21	Initial cal 60
GST2082-IC2082	ST83219.D	07/14/09	12:26	01:37	Initial cal 80
GST2082-IC2082	ST83220.D	07/14/09	12:42	01:53	Initial cal 200
GST2082-IC2082	ST83221.D	07/14/09	12:57	02:08	Initial cal 500
GST2082-ICV2082	ST83222.D	07/14/09	13:13	02:24	Initial cal verification 40
OP29556-BS	ST83223.D	07/14/09	13:29	02:40	Blank Spike
OP29556-MB	ST83224.D	07/14/09	13:45	02:56	Method Blank
ZZZZZZ	ST83225.D	07/14/09	14:00	03:11	(unrelated sample)
GST2082-CC2082	ST83226.D	07/14/09	14:16	03:27	Continuing cal 40
OP29589-BS	ST83227.D	07/14/09	14:32	03:43	Blank Spike
OP29589-MB	ST83228.D	07/14/09	14:48	03:59	Method Blank
GST2082-CC2082	ST83235.D	07/14/09	16:38	05:49	Continuing cal 40
GST2082-CC2082	ST83243.D	07/14/09	18:44	07:55	Continuing cal 40
ZZZZZZ	ST83245.D	07/14/09	19:16	08:27	(unrelated sample)
GST2082-ECC2082	ST83255.D	07/14/09	21:53	11:04	Ending cal 40

Semivolatile Surrogate Recovery Summary

Job Number: F66500
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Method: SW846 8081A **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S2 [a]
F66500-1	KK33216.D	99.0	90.0
F66500-2	KK33217.D	84.0	86.0
F66500-3	KK33220.D	79.0	95.0
F66500-4	KK33221.D	81.0	100.0
F66500-5	KK33222.D	81.0	94.0
OP29556-BS	ST83223.D	79.0	84.0
OP29556-BS	KK33214.D	103.0	
OP29556-MB	ST83224.D	93.0	93.0
OP29556-MB	KK33215.D	85.0	109.0
OP29556-MS	KK33218.D	83.0	104.0
OP29556-MSD	KK33219.D	92.0	111.0

Surrogate Compounds	Recovery Limits
S1 = Tetrachloro-m-xylene	42-127%
S2 = Decachlorobiphenyl	27-127%

(a) Recovery from GC signal #1

GC Surrogate Retention Time Summary

Job Number: F66500
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Check Std:	GKK1135-CC1134	**Injection Date:**	07/17/09
Lab File ID:	KK33213.D	**Injection Time:**	19:40
Instrument ID:	GCKK	**Method:**	SW846 8081A

	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
Check Std	4.16	4.01	8.95	8.78

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
OP29556-BS	KK33214.D	07/17/09	19:56	4.16			8.77
OP29556-MB	KK33215.D	07/17/09	20:12	4.16		8.95	
F66500-1	KK33216.D	07/17/09	20:27	4.16		8.95	
F66500-2	KK33217.D	07/17/09	20:43	4.16		8.95	
OP29556-MS	KK33218.D	07/17/09	20:59	4.16		8.95	
OP29556-MSD	KK33219.D	07/17/09	21:14	4.16		8.95	
F66500-3	KK33220.D	07/17/09	21:30	4.16		8.95	
F66500-4	KK33221.D	07/17/09	21:45	4.16		8.95	
F66500-5	KK33222.D	07/17/09	22:01	4.16		8.95	
GKK1135-ECC1134	KK33223.D	07/17/09	22:17	4.16	4.01	8.95	8.77

Surrogate Compounds

S1 = Tetrachloro-m-xylene
S2 = Decachlorobiphenyl

(a) Retention time from GC signal #1
(b) Retention time from GC signal #2

GC Surrogate Retention Time Summary

Job Number: F66500
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Check Std:	GST2082-ICC2082	**Injection Date:**	07/14/09
Lab File ID:	ST83217.D	**Injection Time:**	11:54
Instrument ID:	GCST	**Method:**	SW846 8081A

	S1 [a] RT	S2 [a] RT
Check Std	4.42	9.22

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S2 [a] RT
OP29556-BS	ST83223.D	07/14/09	13:29	4.42	9.22
OP29556-MB	ST83224.D	07/14/09	13:45	4.42	9.22
ZZZZZZ	ST83225.D	07/14/09	14:00	4.42	9.22

Surrogate Compounds

S1 = Tetrachloro-m-xylene
S2 = Decachlorobiphenyl

(a) Retention time from GC signal #1

Initial Calibration Summary

Job Number: F66500
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GKK1134-ICC1134
Lab FileID: KK33159.D

Response Factor Report ECD 5

Method : C:\MSDCHEM\1\METHODS\8081A.M (Chemstation Integrator)
Title : Pesticides by 608 or 8081
Last Update : Fri Jul 17 13:34:14 2009
Response via : Initial Calibration

Calibration Files
5 =KK33156.D 10 =KK33157.D 20 =KK33158.D 40 =KK33159.D
60 =KK33160.D 80 =KK33161.D c200=KK33163.D t500=KK33162.D

Compound	5	10	20	40	60	80	c200	t500	Avg	%RSD
1) Tetrachloro-	3.400	3.381	3.339	3.320	3.049	3.021			3.252 E5	5.24
2) alpha-BHC	4.593	4.729	4.756	4.853	4.547	4.577			4.676 E5	2.60
3) gamma-BHC (L	4.260	4.287	4.199	4.418	4.084	4.229			4.246 E5	2.58
4) beta-BHC	1.774	1.783	1.712	1.791	1.618	1.719			1.733 E5	3.78
5) delta-BHC	3.701	3.885	3.817	3.976	3.740	3.855			3.829 E5	2.61
6) Heptachlor	3.624	3.604	3.347	3.334	3.020	2.986			3.319 E5	8.26
7) Aldrin	3.614	3.579	3.410	3.421	3.111	3.030			3.361 E5	7.17
8) Heptachlor E	3.236	3.182	2.918	2.946	2.625	2.545			2.909 E5	9.68
9) gamma-Chlord	3.307	3.214	3.111	3.220	2.943	3.055			3.142 E5	4.19
10) alpha-Chlord	3.167	3.088	2.898	3.068	2.835	2.890			2.991 E5	4.47
11) Endosulfan	2.936	2.867	2.659	2.690	2.360	2.388			2.650 E5	8.97
12) 4,4'-DDE	2.899	2.941	2.750	2.963	2.682	2.678			2.819 E5	4.64
13) Dieldrin	3.235	3.249	3.009	3.040	2.709	2.750			2.999 E5	7.69
14) Endrin	2.669	2.598	2.492	2.490	2.221	2.205			2.446 E5	7.88
15) 4,4'-DDD	2.615	2.511	2.349	2.471	2.210	2.256			2.402 E5	6.52
16) Endosulfan I	2.663	2.645	2.441	2.562	2.224	2.248			2.464 E5	7.84
17) Endrin Aldeh	1.982	2.020	1.857	1.924	1.720	1.799			1.884 E5	6.04

---- Linear regr., Force(0,0) ---- Coefficient = 0.9969
Response Ratio = 0.00000 + 179593.51036 *A

18) 4,4'-DDT	1.672	1.844	1.834	2.196	1.941	2.046			1.922 E5	9.52
19) Endosulfan S	2.389	2.405	2.135	2.327	2.066	2.059			2.230 E5	7.24
20) Methoxychlor	0.930	1.024	0.918	1.011	0.887	0.897			0.945 E5	6.21
21) Endrin Keton	2.799	2.753	2.464	2.642	2.237	2.283			2.530 E5	9.45

---- Linear regr., Force(0,0) ---- Coefficient = 0.9929
Response Ratio = 0.00000 + 232761.69936 *A

22) Chlordane-A						1.287			1.287 E4	0.00
23) Chlordane-B						1.624			1.624 E4	0.00
24) Chlordane-C						7.599			7.599 E3	0.00
25) Chlordane-D						4.014			4.014 E4	0.00
26) Chlordane-E						3.866			3.866 E4	0.00
27) Chlordane-F						8.280			8.280 E3	0.00
28) Toxaphene							2.093		2.093 E6	0.00
29) Decachlorobi	2.230	2.132	1.846	2.155	2.012	2.106			2.080 E5	6.48

Signal #2

1) Tetrachloro-	4.962	5.200	5.143	5.178	4.738	4.605			4.971 E4	5.03
2) alpha-BHC	6.917	7.490	7.524	7.415	7.140	6.856			7.224 E4	4.08
3) gamma-BHC (L	6.315	6.764	6.828	6.765	6.365	6.268			6.551 E4	3.97
4) beta-BHC	2.649	2.677	2.688	2.845	2.677	2.774			2.718 E4	2.77
5) delta-BHC	5.483	5.917	6.092	6.307	5.869	5.808			5.913 E4	4.70
6) Heptachlor	5.358	5.556	5.455	5.346	4.778	4.616			5.185 E4	7.50
7) Aldrin	5.337	5.725	5.461	5.535	4.910	4.845			5.302 E4	6.65
8) Heptachlor E	4.886	4.979	4.692	4.738	4.215	4.073			4.597 E4	8.01
9) gamma-Chlord	4.918	5.270	4.911	5.269	4.803	4.879			5.008 E4	4.12

Initial Calibration Summary

Job Number: F66500 **Sample:** GKK1134-ICC1134
Account: TETTNOAK Tetra Tech, Inc **Lab FileID:** KK33159.D
Project: Holloman AFB; Alamogordo, NM

```
10) alpha-Chlord 4.628 4.903 4.520 4.944 4.618 4.630            4.707 E4   3.68
11) Endosulfan   4.359 4.495 4.233 4.271 3.892 3.734            4.164 E4   6.98
12) 4,4'-DDE     4.621 4.809 4.593 5.030 4.337 4.467            4.643 E4   5.32
13) Dieldrin     4.886 5.067 4.709 5.049 4.401 4.376            4.748 E4   6.47
14) Endrin       3.904 3.981 3.847 4.016 3.552 3.502            3.800 E4   5.80
15) 4,4'-DDD     3.924 4.122 3.806 4.146 3.742 3.684            3.904 E4   5.01
16) Endosulfan I 3.996 4.227 3.854 4.109 3.530 3.608            3.887 E4   7.12
17) Endrin Aldeh 2.940 3.104 2.824 3.070 2.781 2.785            2.917 E4   4.93
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9971
              Response Ratio = 0.00000 + 28256.34603 *A

18) 4,4'-DDT     2.585 3.133 3.183 3.658 3.333 3.290            3.197 E4  11.00
19) Endosulfan S 3.435 3.441 3.169 3.479 3.125 3.141            3.298 E4   5.14
20) Methoxychlor 1.531 1.713 1.529 1.690 1.472 1.580            1.586 E4   6.07
21) Endrin Keton 4.531 4.684 4.000 4.343 3.869 3.732            4.193 E4   9.13
22) Chlordane-A                                        1.977    1.977 E3   0.00
23) Chlordane-B                                        2.377    2.377 E3   0.00
24) Chlordane-C                                        1.319    1.319 E3   0.00
25) Chlordane-D                                        5.152    5.152 E3   0.00
26) Chlordane-E                                        4.412    4.412 E3   0.00
27) Chlordane-F                                        1.364    1.364 E3   0.00
28) Toxaphene                                               3.100 3.100 E5   0.00
29) Decachlorobi 3.538 3.418 2.914 3.493 2.990 3.216            3.261 E4   8.13
--------------------------------------------------------------------------------
(#) = Out of Range  ###  Number of calibration levels exceeded format  ###

          8081A.M           Fri Jul 17 13:36:06 2009
```

Initial Calibration Verification

Job Number: F66500
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GKK1134-ICV1134
Lab FileID: KK33164.D

Evaluate Continuing Calibration Report

```
Signal #1 : C:\MSDCHEM\1\DATA\0715PEST\KK33164.D\ECD1A.CH Vial: 12
Signal #2 : C:\MSDCHEM\1\DATA\0715PEST\KK33164.D\ECD2B.CH
Acq On    : 7-15-09 02:21:33 PM                       Operator: fouads
Sample    : icv1134-40                                Inst    : ECD 5
Misc      : op29566,gkk1134,29.9,,,10,10,soil         Multiplr: 1.00
IntFile Signal #1: EVENTS.E     IntFile Signal #2: EVENTS2.E

Method       : C:\MSDCHEM\1\METHODS\8081A.M (Chemstation Integrator)
Title        : Pesticides by 608 or 8081
Last Update  : Thu Jul 16 09:51:33 2009
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.10min
Max. RRF Dev :  15%     Max. Rel. Area : 150%
```

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene		----------NA----------				
2		alpha-BHC	40.000	40.447	-1.1	97	0.00	4.46- 4.66
3		gamma-BHC (Lindane)	40.000	38.235	4.4	92	0.00	4.73- 4.93
4		beta-BHC	40.000	38.424	3.9	93	0.00	4.90- 5.10
5		delta-BHC	40.000	37.944	5.1	91	0.00	5.09- 5.29
6		Heptachlor	40.000	37.124	7.2	92	0.00	5.20- 5.40
7		Aldrin	40.000	36.614	8.5	90	0.00	5.48- 5.68
8		Heptachlor Epoxide	40.000	36.415	9.0	90	0.00	5.84- 6.04
9		gamma-Chlordane	40.000	36.329	9.2	89	0.00	6.07- 6.27
10		alpha-Chlordane	40.000	36.448	8.9	89	0.00	6.13- 6.33
11		Endosulfan I	40.000	35.756	10.6	88	0.00	6.17- 6.37
12		4,4'-DDE	40.000	36.132	9.7	86	0.00	6.30- 6.50
13		Dieldrin	40.000	34.934	12.7	86	0.00	6.42- 6.62
14		Endrin	40.000	34.965	12.6	86	0.00	6.62- 6.82
15		4,4'-DDD	40.000	34.637	13.4	84	0.00	6.77- 6.97
16		Endosulfan II	40.000	34.486	13.8	83	0.00	6.83- 7.03
		----------	Amount	Calc.	%Drift	----------		
17		Endrin Aldehyde	40.000	35.262	11.8	82	0.00	6.95- 7.15
		----------	Amount	Calc.	%Drift	----------		
18		4,4'-DDT	40.000	37.504	6.2	82	0.00	7.05- 7.25
19		Endosulfan Sulfate	40.000	35.484	11.3	85	0.00	7.17- 7.37
20		Methoxychlor	40.000	35.707	10.7	83	0.00	7.51- 7.71
		----------	Amount	Calc.	%Drift	----------		
21		Endrin Ketone	40.000	36.623	8.4	81	0.00	7.61- 7.81
		----------	Amount	Calc.	%Drift	----------		
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl		----------NA----------				

***** Signal #2 *****

1	S	Tetrachloro-m-xylene		----------NA----------				

Initial Calibration Verification

Job Number: F66500
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GKK1134-ICV1134
Lab FileID: KK33164.D

2		alpha-BHC	40.000	40.787	-2.0	99	0.00	4.39- 4.59
3		gamma-BHC (Lindane)	40.000	39.818	0.5	96	0.00	4.68- 4.88
4		beta-BHC	40.000	39.672	0.8	95	0.00	4.93- 5.13
5		delta-BHC	40.000	38.701	3.2	91	0.00	5.14- 5.34
6		Heptachlor	40.000	38.183	4.5	93	0.00	4.98- 5.18
7		Aldrin	40.000	37.293	6.8	89	0.00	5.24- 5.44
8		Heptachlor Epoxide	40.000	37.339	6.7	91	0.00	5.68- 5.88
9		gamma-Chlordane	40.000	37.624	5.9	89	0.00	5.90- 6.10
10		alpha-Chlordane	40.000	37.759	5.6	90	0.00	5.97- 6.17
11		Endosulfan I	40.000	36.352	9.1	89	0.00	6.02- 6.22
12		4,4'-DDE	40.000	36.206	9.5	84	0.00	6.12- 6.32
13		Dieldrin	40.000	36.429	8.9	86	0.00	6.27- 6.47
14		Endrin	40.000	35.793	10.5	85	0.00	6.53- 6.73
15		4,4'-DDD	40.000	35.680	10.8	84	0.00	6.64- 6.84
16		Endosulfan II	40.000	35.426	11.4	84	0.00	6.80- 7.00
		----------	Amount	Calc.	%Drift	----------		
17		Endrin Aldehyde	40.000	34.909	12.7	80	0.00	6.97- 7.17
		----------	Amount	Calc.	%Drift	----------		
18		4,4'-DDT	40.000	37.449	6.4	82	0.00	6.88- 7.08
19		Endosulfan Sulfate	40.000	34.713	13.2	82	0.00	7.18- 7.38
20		Methoxychlor	40.000	35.885	10.3	84	0.00	7.43- 7.63
21		Endrin Ketone	40.000	34.562	13.6	83	0.00	7.68- 7.88
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
KK33159.D 8081A.M Thu Jul 16 09:56:41 2009

Continuing Calibration Summary

Job Number: F66500
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GKK1135-CC1134
Lab FileID: KK33213.D

Evaluate Continuing Calibration Report

```
Signal #1 : C:\MSDCHEM\1\DATA\0717PEST\KK33213.D\ECD1A.CH Vial: 33
Signal #2 : C:\MSDCHEM\1\DATA\0717PEST\KK33213.D\ECD2B.CH
Acq On    : 7-17-09 07:40:56 PM                      Operator: fouads
Sample    : cc1134-40                                Inst    : ECD 5
Misc      : op29613,gkk1135,1050,,,10,1,water        Multiplr: 1.00
IntFile Signal #1: EVENTS.E     IntFile Signal #2: EVENTS2.E

Method       : C:\MSDCHEM\1\METHODS\8081A.M (Chemstation Integrator)
Title        : Pesticides by 608 or 8081
Last Update  : Fri Jul 17 13:34:14 2009
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.10min
Max. RRF Dev :  15%     Max. Rel. Area : 150%
```

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene	40.000	38.736	3.2	95	-0.01	4.07- 4.27
2		alpha-BHC	40.000	41.292	-3.2	99	0.00	4.44- 4.64
3		gamma-BHC (Lindane)	40.000	40.638	-1.6	98	0.00	4.70- 4.90
4		beta-BHC	40.000	39.941	0.1	97	0.00	4.88- 5.08
5		delta-BHC	40.000	41.359	-3.4	100	0.00	5.07- 5.27
6		Heptachlor	40.000	39.455	1.4	98	0.00	5.17- 5.37
7		Aldrin	40.000	40.663	-1.7	100	0.00	5.45- 5.65
8		Heptachlor Epoxide	40.000	41.020	-2.6	101	0.00	5.82- 6.02
9		gamma-Chlordane	40.000	41.412	-3.5	101	0.00	6.04- 6.24
10		alpha-Chlordane	40.000	41.951	-4.9	102	0.00	6.11- 6.31
11		Endosulfan I	40.000	40.410	-1.0	100	0.00	6.15- 6.35
12		4,4'-DDE	40.000	42.573	-6.4	101	0.00	6.27- 6.47
13		Dieldrin	40.000	40.477	-1.2	100	0.00	6.39- 6.59
14		Endrin	40.000	39.524	1.2	97	0.00	6.59- 6.79
15		4,4'-DDD	40.000	43.752	-9.4	106	0.00	6.74- 6.94
16		Endosulfan II	40.000	42.058	-5.1	101	0.00	6.80- 7.00
		----------	Amount	Calc.	%Drift	----------		
17		Endrin Aldehyde	40.000	46.301	-15.8#	108	0.00	6.92- 7.12
		----------	Amount	Calc.	%Drift	----------		
18		4,4'-DDT	40.000	40.832	-2.1	89	0.00	7.03- 7.23
19		Endosulfan Sulfate	40.000	41.708	-4.3	100	0.00	7.14- 7.34
20		Methoxychlor	40.000	40.650	-1.6	95	0.00	7.48- 7.68
		----------	Amount	Calc.	%Drift	----------		
21		Endrin Ketone	40.000	45.890	-14.7	101	0.00	7.58- 7.78
		----------	Amount	Calc.	%Drift	----------		
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	40.000	45.101	-12.8	109	-0.01	8.86- 9.06
*****		Signal #2 *****						
1	S	Tetrachloro-m-xylene	40.000	39.656	0.9	95	0.00	3.92- 4.12

Continuing Calibration Summary

Job Number: F66500
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GKK1135-CC1134
Lab FileID: KK33213.D

2		alpha-BHC	40.000	40.837	-2.1	99	0.00	4.37- 4.57
3		gamma-BHC (Lindane)	40.000	41.071	-2.7	99	0.00	4.65- 4.85
4		beta-BHC	40.000	40.920	-2.3	98	0.00	4.90- 5.10
5		delta-BHC	40.000	42.459	-6.1	100	0.00	5.11- 5.31
6		Heptachlor	40.000	39.493	1.3	96	0.00	4.95- 5.15
7		Aldrin	40.000	40.333	-0.8	97	0.00	5.21- 5.41
8		Heptachlor Epoxide	40.000	40.867	-2.2	99	0.00	5.65- 5.85
9		gamma-Chlordane	40.000	42.502	-6.3	101	0.00	5.87- 6.07
10		alpha-Chlordane	40.000	41.209	-3.0	98	0.00	5.94- 6.14
11		Endosulfan I	40.000	40.696	-1.7	99	0.00	5.99- 6.19
12		4,4'-DDE	40.000	42.271	-5.7	98	0.00	6.09- 6.29
13		Dieldrin	40.000	41.365	-3.4	97	0.00	6.24- 6.44
14		Endrin	40.000	39.764	0.6	94	0.00	6.50- 6.70
15		4,4'-DDD	40.000	43.517	-8.8	102	0.00	6.61- 6.81
16		Endosulfan II	40.000	42.541	-6.4	101	0.00	6.77- 6.97
		----------	Amount	Calc.	%Drift	----------		
17		Endrin Aldehyde	40.000	46.349	-15.9#	107	0.00	6.94- 7.14
		----------	Amount	Calc.	%Drift	----------		
18		4,4'-DDT	40.000	40.603	-1.5	89	0.00	6.85- 7.05
19		Endosulfan Sulfate	40.000	43.196	-8.0	102	0.00	7.14- 7.34
20		Methoxychlor	40.000	39.834	0.4	93	0.00	7.40- 7.60
21		Endrin Ketone	40.000	41.783	-4.5	101	0.00	7.64- 7.84
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	40.000	46.705	-16.8#	109	0.00	8.68- 8.88

(#) = Out of Range SPCC's out = 0 CCC's out = 0
KK33159.D 8081A.M Mon Jul 20 10:38:30 2009

5.7.3

5

Continuing Calibration Summary

Job Number: F66500
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GKK1135-ECC1134
Lab FileID: KK33223.D

Evaluate Continuing Calibration Report

```
Signal #1 : C:\MSDCHEM\1\DATA\0717PEST\KK33223.D\ECD1A.CH Vial: 43
Signal #2 : C:\MSDCHEM\1\DATA\0717PEST\KK33223.D\ECD2B.CH
Acq On    : 17 Jul 2009  10:17 pm                    Operator: fouads
Sample    : ecc1134-20                               Inst    : ECD 5
Misc      : op29556gkk1135,1000,,,10,1,water         Multiplr: 1.00
IntFile Signal #1: EVENTS.E     IntFile Signal #2: EVENTS2.E

Method       : C:\MSDCHEM\1\METHODS\8081A.M (Chemstation Integrator)
Title        : Pesticides by 608 or 8081
Last Update  : Fri Jul 17 13:34:14 2009
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.10min
Max. RRF Dev :  15%     Max. Rel. Area : 150%
```

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene	20.000	19.351	3.2	94	-0.01	4.07- 4.27
2		alpha-BHC	20.000	19.861	0.7	98	0.00	4.44- 4.64
3		gamma-BHC (Lindane)	20.000	19.746	1.3	100	0.00	4.70- 4.90
4		beta-BHC	20.000	20.312	-1.6	103	0.00	4.88- 5.08
5		delta-BHC	20.000	19.653	1.7	99	0.00	5.07- 5.27
6		Heptachlor	20.000	20.255	-1.3	100	0.00	5.17- 5.37
7		Aldrin	20.000	20.474	-2.4	101	0.00	5.45- 5.65
8		Heptachlor Epoxide	20.000	21.640	-8.2	108	0.00	5.82- 6.02
9		gamma-Chlordane	20.000	20.770	-3.8	105	0.00	6.04- 6.24
10		alpha-Chlordane	20.000	20.980	-4.9	108	0.00	6.11- 6.31
11		Endosulfan I	20.000	21.219	-6.1	106	0.00	6.15- 6.35
12		4,4'-DDE	20.000	21.307	-6.5	109	0.00	6.27- 6.47
13		Dieldrin	20.000	21.499	-7.5	107	0.00	6.39- 6.59
14		Endrin	20.000	21.016	-5.1	103	0.00	6.59- 6.79
15		4,4'-DDD	20.000	22.598	-13.0	116	0.00	6.74- 6.94
16		Endosulfan II	20.000	21.803	-9.0	110	0.00	6.80- 7.00
		----------	Amount	Calc.	%Drift	----------		
17		Endrin Aldehyde	20.000	23.775	-18.9#	115	0.00	6.92- 7.12
		----------	Amount	Calc.	%Drift	----------		
18		4,4'-DDT	20.000	18.878	5.6	99	0.00	7.03- 7.23
19		Endosulfan Sulfate	20.000	21.874	-9.4	114	0.00	7.14- 7.34
20		Methoxychlor	20.000	20.008	-0.0	103	0.00	7.48- 7.68
		----------	Amount	Calc.	%Drift	----------		
21		Endrin Ketone	20.000	24.595	-23.0#	116	0.00	7.58- 7.78
		----------	Amount	Calc.	%Drift	----------		
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	20.000	23.301	-16.5#	131	-0.01	8.86- 9.06
*****		Signal #2 *****						
1	S	Tetrachloro-m-xylene	20.000	19.905	0.5	96	0.00	3.92- 4.12

Continuing Calibration Summary

Job Number: F66500 **Sample:** GKK1135-ECC1134
Account: TETTNOAK Tetra Tech, Inc **Lab FileID:** KK33223.D
Project: Holloman AFB; Alamogordo, NM

2		alpha-BHC	20.000	20.530	-2.7	99	0.00	4.37- 4.57
3		gamma-BHC (Lindane)	20.000	20.635	-3.2	99	0.00	4.65- 4.85
4		beta-BHC	20.000	20.510	-2.6	104	0.00	4.90- 5.10
5		delta-BHC	20.000	20.169	-0.8	98	0.00	5.11- 5.31
6		Heptachlor	20.000	20.709	-3.5	98	0.00	4.95- 5.15
7		Aldrin	20.000	21.669	-8.3	105	0.00	5.21- 5.41
8		Heptachlor Epoxide	20.000	21.784	-8.9	107	0.00	5.65- 5.85
9		gamma-Chlordane	20.000	21.825	-9.1	111	0.00	5.87- 6.07
10		alpha-Chlordane	20.000	21.345	-6.7	111	0.00	5.94- 6.14
11		Endosulfan I	20.000	21.878	-9.4	108	0.00	5.99- 6.19
12		4,4'-DDE	20.000	21.782	-8.9	110	0.00	6.09- 6.29
13		Dieldrin	20.000	22.161	-10.8	112	0.00	6.24- 6.44
14		Endrin	20.000	21.272	-6.4	105	0.00	6.50- 6.70
15		4,4'-DDD	20.000	23.122	-15.6#	119	0.00	6.61- 6.81
16		Endosulfan II	20.000	21.805	-9.0	110	0.00	6.77- 6.97
		----------	Amount	Calc.	%Drift	----------		
17		Endrin Aldehyde	20.000	23.280	-16.4#	116	0.00	6.94- 7.14
		----------	Amount	Calc.	%Drift	----------		
18		4,4'-DDT	20.000	18.079	9.6	91	0.00	6.85- 7.05
19		Endosulfan Sulfate	20.000	21.397	-7.0	111	0.00	7.14- 7.34
20		Methoxychlor	20.000	20.011	-0.1	104	0.00	7.40- 7.60
21		Endrin Ketone	20.000	21.440	-7.2	112	0.00	7.64- 7.84
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	20.000	23.288	-16.4#	130	0.00	8.68- 8.88

(#) = Out of Range SPCC's out = 0 CCC's out = 0
KK33158.D 8081A.M Mon Jul 20 11:11:34 2009

Initial Calibration Summary

Job Number: F66500
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GST2082-ICC2082
Lab FileID: ST83217.D

Response Factor Report ECD 3

Method : C:\HPCHEM\1\METHODS\8081A.M (Chemstation Integrator)
Title : Pesticides by 608 or 8081
Last Update : Tue Jul 14 13:13:28 2009
Response via : Initial Calibration

Calibration Files
5 =ST83214.D 10 =ST83215.D 20 =ST83216.D 40 =ST83217.D
60 =ST83218.D 80 =ST83219.D c200=ST83220.D t500=ST83221.D

Compound	5	10	20	40	60	80	c200	t500	Avg	%RSD
1) Tetrachloro-	3.323	3.390	3.296	3.424	3.388	3.544			3.394 E5	2.57
2) alpha-BHC	4.805	5.041	5.089	5.184	5.213	5.482			5.136 E5	4.34
3) gamma-BHC (L	4.585	4.723	4.684	4.924	4.821	5.078			4.803 E5	3.71
4) beta-BHC	2.011	1.993	1.907	1.984	1.944	2.033			1.979 E5	2.32
5) delta-BHC	4.264	4.293	4.335	4.523	4.552	4.671			4.440 E5	3.71
6) Heptachlor	3.776	3.870	3.823	3.908	3.892	3.849			3.853 E5	1.26
7) Aldrin	3.957	4.057	4.042	3.986	3.942	3.939			3.987 E5	1.28
8) Heptachlor E	3.533	3.564	3.433	3.385	3.337	3.350			3.433 E5	2.79
9) gamma-Chlord	3.591	3.571	3.555	3.593	3.578	3.641			3.588 E5	0.82
10) alpha-Chlord	3.313	3.361	3.313	3.433	3.315	3.419			3.359 E5	1.64
11) Endosulfan	3.172	3.252	3.010	3.155	3.049	3.101			3.123 E5	2.82
12) 4,4'-DDE	3.452	3.323	3.430	3.479	3.496	3.394			3.429 E5	1.84
13) Dieldrin	3.407	3.518	3.460	3.481	3.385	3.338			3.431 E5	1.95
14) Endrin	2.971	3.019	2.834	2.951	2.891	2.799			2.911 E5	2.90
15) 4,4'-DDD	2.760	2.743	2.718	2.782	2.812	2.796			2.768 E5	1.27
16) Endosulfan I	2.908	2.873	2.746	2.755	2.757	2.752			2.799 E5	2.59
17) Endrin Aldeh	2.360	2.384	2.260	2.297	2.231	2.270			2.300 E5	2.60
18) 4,4'-DDT	2.590	2.687	2.628	2.676	2.656	2.692			2.655 E5	1.49
19) Endosulfan S	2.687	2.719	2.619	2.700	2.719	2.652			2.683 E5	1.49
20) Methoxychlor	1.292	1.324	1.251	1.212	1.215	1.192			1.248 E5	4.13
21) Endrin Keton	2.797	2.765	2.719	2.802	2.705	2.727			2.752 E5	1.51
22) Chlordane-A							1.476		1.476 E4	0.00
23) Chlordane-B							1.824		1.824 E4	0.00
24) Chlordane-C							9.878		9.878 E3	0.00
25) Chlordane-D							4.737		4.737 E4	0.00
26) Chlordane-E							5.384		5.384 E4	0.00
27) Chlordane-F							1.030		1.030 E4	0.00
28) Toxaphene								2.319	2.319 E6	0.00
29) Decachlorobi	1.964	1.981	1.933	1.923	1.998	1.996			1.966 E5	1.63

Signal #2

1) Tetrachloro-	4.576	4.860	4.933	5.042	4.886	5.138			4.906 E4	3.92
2) alpha-BHC	6.505	7.365	7.548	7.738	7.432	7.492			7.347 E4	5.87
3) gamma-BHC (L	6.311	6.961	7.042	7.168	6.991	6.969			6.907 E4	4.37
4) beta-BHC	2.842	3.072	3.007	3.120	3.007	3.141			3.032 E4	3.58
5) delta-BHC	5.830	6.469	6.646	6.721	6.666	6.572			6.484 E4	5.12
6) Heptachlor	6.131	6.425	6.374	6.546	6.447	6.280			6.367 E4	2.28
7) Aldrin	5.899	6.664	6.513	6.705	6.452	6.485			6.453 E4	4.49
8) Heptachlor E	5.377	5.825	5.931	5.852	5.691	5.581			5.709 E4	3.59
9) gamma-Chlord	5.567	5.907	5.959	6.262	6.115	5.948			5.960 E4	3.92
10) alpha-Chlord	5.268	5.904	5.841	6.047	5.943	5.633			5.773 E4	4.90
11) Endosulfan	4.918	5.290	5.427	5.486	5.535	5.365			5.337 E4	4.17
12) 4,4'-DDE	5.549	5.776	6.084	6.249	5.914	5.867			5.907 E4	4.11
13) Dieldrin	5.516	5.812	6.008	6.096	5.935	5.829			5.866 E4	3.45
14) Endrin	4.245	4.474	4.613	4.830	4.569	4.208			4.490 E4	5.24
15) 4,4'-DDD	4.261	4.801	4.951	5.048	5.083	4.975			4.853 E4	6.31

Initial Calibration Summary

Job Number: F66500
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GST2082-ICC2082
Lab FileID: ST83217.D

16)	Endosulfan I	4.613	4.921	5.183	5.083	5.014	4.990			4.967	E4	3.93
17)	Endrin Aldeh	3.775	3.975	4.090	4.221	4.191	4.101			4.059	E4	4.04
18)	4,4'-DDT	4.314	4.766	4.866	5.049	4.999	5.023			4.836	E4	5.74
19)	Endosulfan S	4.103	4.411	4.470	4.581	4.432	4.436			4.405	E4	3.63
20)	Methoxychlor	2.223	2.437	2.441	2.399	2.373	2.262			2.356	E4	3.91
21)	Endrin Keton	4.721	5.063	5.151	5.135	5.204	5.132			5.068	E4	3.47
22)	Chlordane-A							2.375		2.375	E3	0.00
23)	Chlordane-B							3.067		3.067	E3	0.00
24)	Chlordane-C							1.516		1.516	E3	0.00
25)	Chlordane-D							7.386		7.386	E3	0.00
26)	Chlordane-E							5.990		5.990	E3	0.00
27)	Chlordane-F							1.887		1.887	E3	0.00
28)	Toxaphene								3.936	3.936	E5	0.00
29)	Decachlorobi	4.223	4.596	4.200	4.282	4.262	4.208			4.295	E4	3.51

(#) = Out of Range ### Number of calibration levels exceeded format ###

8081A.M Wed Jul 15 16:07:13 2009

Initial Calibration Verification

Job Number: F66500
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GST2082-ICV2082
Lab FileID: ST83222.D

Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\0714PEST\ST83222.D\ECD1A.CH Vial: 11
Signal #2 : C:\HPCHEM\1\DATA\0714PEST\ST83222.D\ECD2B.CH
Acq On : 14 Jul 2009 1:13 pm Operator: marke
Sample : icv2082-40 Inst : ECD 3
Misc : op29556,gst2082,30.1,,,10,1,soil Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\HPCHEM\1\METHODS\8081A.M (Chemstation Integrator)
Title : Pesticides by 608 or 8081
Last Update : Tue Jul 14 13:13:28 2009
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene		----------NA----------				
2		alpha-BHC	40.000	42.730	-6.8	106	0.00	4.70- 4.90
3		gamma-BHC (Lindane)	40.000	41.650	-4.1	102	0.00	4.97- 5.17
4		beta-BHC	40.000	42.326	-5.8	106	0.00	5.16- 5.36
5		delta-BHC	40.000	41.982	-5.0	103	0.00	5.36- 5.56
6		Heptachlor	40.000	40.751	-1.9	100	0.00	5.42- 5.62
7		Aldrin	40.000	40.685	-1.7	102	0.00	5.70- 5.90
8		Heptachlor Epoxide	40.000	40.695	-1.7	103	0.00	6.08- 6.28
9		gamma-Chlordane	40.000	42.511	-6.3	106	0.00	6.30- 6.50
10		alpha-Chlordane	40.000	42.444	-6.1	104	0.00	6.36- 6.56
11		Endosulfan I	40.000	41.570	-3.9	103	0.00	6.41- 6.61
12		4,4'-DDE	40.000	41.051	-2.6	101	0.00	6.53- 6.73
13		Dieldrin	40.000	41.266	-3.2	102	0.00	6.66- 6.86
14		Endrin	40.000	39.519	1.2	97	0.00	6.86- 7.06
15		4,4'-DDD	40.000	41.309	-3.3	103	0.00	7.00- 7.20
16		Endosulfan II	40.000	40.890	-2.2	104	0.00	7.08- 7.28
17		Endrin Aldehyde	40.000	38.854	2.9	97	0.00	7.20- 7.40
18		4,4'-DDT	40.000	40.405	-1.0	100	0.00	7.28- 7.48
19		Endosulfan Sulfate	40.000	42.457	-6.1	105	0.00	7.42- 7.62
20		Methoxychlor	40.000	40.372	-0.9	104	0.00	7.74- 7.94
21		Endrin Ketone	40.000	39.804	0.5	98	0.00	7.87- 8.07
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl		----------NA----------				

***** Signal #2 *****

1	S	Tetrachloro-m-xylene		----------NA----------				
2		alpha-BHC	40.000	43.645	-9.1	104	0.00	4.78- 4.98
3		gamma-BHC (Lindane)	40.000	41.962	-4.9	101	0.00	5.08- 5.28
4		beta-BHC	40.000	42.382	-6.0	103	0.00	5.32- 5.52
5		delta-BHC	40.000	42.674	-6.7	103	0.00	5.53- 5.73
6		Heptachlor	40.000	41.989	-5.0	102	0.00	5.42- 5.62
7		Aldrin	40.000	41.442	-3.6	100	0.00	5.69- 5.89
8		Heptachlor Epoxide	40.000	43.443	-8.6	106	0.00	6.12- 6.32
9		gamma-Chlordane	40.000	43.323	-8.3	103	0.00	6.35- 6.55

Initial Calibration Verification

Job Number: F66500
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GST2082-ICV2082
Lab FileID: ST83222.D

10		alpha-Chlordane	40.000	42.427	-6.1	101	0.00	6.41- 6.61
11		Endosulfan I	40.000	43.049	-7.6	105	0.00	6.46- 6.66
12		4,4'-DDE	40.000	43.926	-9.8	104	0.00	6.55- 6.75
13		Dieldrin	40.000	42.109	-5.3	101	0.00	6.71- 6.91
14		Endrin	40.000	44.477	-11.2	103	0.00	6.96- 7.16
15		4,4'-DDD	40.000	44.435	-11.1	107	0.00	7.05- 7.25
16		Endosulfan II	40.000	42.443	-6.1	104	0.00	7.22- 7.42
17		Endrin Aldehyde	40.000	39.637	0.9	95	0.00	7.38- 7.58
18		4,4'-DDT	40.000	41.241	-3.1	99	0.00	7.30- 7.50
19		Endosulfan Sulfate	40.000	43.716	-9.3	105	0.00	7.60- 7.80
20		Methoxychlor	40.000	41.124	-2.8	101	0.00	7.81- 8.01
21		Endrin Ketone	40.000	41.579	-3.9	103	0.00	8.09- 8.29
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
ST83217.D 8081A.M Wed Jul 15 16:07:49 2009

Continuing Calibration Summary

Job Number: F66500
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GST2082-CC2082
Lab FileID: ST83226.D

Evaluate Continuing Calibration Report

```
Signal #1 : C:\HPCHEM\1\DATA\0714PEST\ST83226.D\ECD1A.CH Vial: 15
Signal #2 : C:\HPCHEM\1\DATA\0714PEST\ST83226.D\ECD2B.CH
Acq On    : 14 Jul 2009   2:16 pm                    Operator: marke
Sample    : cc2082-40                                Inst    : ECD 3
Misc      : op29556,gst2082,1000,,,10,1,water        Multiplr: 1.00
IntFile Signal #1: EVENTS.E     IntFile Signal #2: EVENTS2.E

Method       : C:\HPCHEM\1\METHODS\8081A.M (Chemstation Integrator)
Title        : Pesticides by 608 or 8081
Last Update  : Tue Jul 14 13:13:28 2009
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.10min
Max. RRF Dev :  15%     Max. Rel. Area : 150%
```

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene	40.000	43.185	-8.0	107	0.00	4.32- 4.52
2		alpha-BHC	40.000	42.710	-6.8	106	0.00	4.70- 4.90
3		gamma-BHC (Lindane)	40.000	41.736	-4.3	102	0.00	4.97- 5.17
4		beta-BHC	40.000	41.084	-2.7	102	0.00	5.16- 5.36
5		delta-BHC	40.000	43.199	-8.0	106	0.00	5.36- 5.56
6		Heptachlor	40.000	41.206	-3.0	102	0.00	5.42- 5.62
7		Aldrin	40.000	41.066	-2.7	103	0.00	5.70- 5.90
8		Heptachlor Epoxide	40.000	40.824	-2.1	104	0.00	6.08- 6.28
9		gamma-Chlordane	40.000	40.837	-2.1	102	0.00	6.30- 6.50
10		alpha-Chlordane	40.000	41.575	-3.9	102	0.00	6.36- 6.56
11		Endosulfan I	40.000	41.746	-4.4	103	0.00	6.41- 6.61
12		4,4'-DDE	40.000	41.780	-4.5	103	0.00	6.53- 6.73
13		Dieldrin	40.000	42.052	-5.1	104	0.00	6.66- 6.86
14		Endrin	40.000	39.117	2.2	96	0.00	6.86- 7.06
15		4,4'-DDD	40.000	42.148	-5.4	105	0.00	7.00- 7.20
16		Endosulfan II	40.000	41.285	-3.2	105	0.00	7.08- 7.28
17		Endrin Aldehyde	40.000	41.785	-4.5	105	0.00	7.20- 7.40
18		4,4'-DDT	40.000	38.489	3.8	95	0.00	7.28- 7.48
19		Endosulfan Sulfate	40.000	40.595	-1.5	101	0.00	7.42- 7.62
20		Methoxychlor	40.000	37.889	5.3	98	0.00	7.74- 7.94
21		Endrin Ketone	40.000	40.278	-0.7	99	0.00	7.87- 8.07
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	40.000	39.307	1.7	100	0.00	9.12- 9.32

***** Signal #2 *****

1	S	Tetrachloro-m-xylene	40.000	44.187	-10.5	107	0.00	4.35- 4.55
2		alpha-BHC	40.000	43.924	-9.8	104	0.00	4.78- 4.98
3		gamma-BHC (Lindane)	40.000	42.738	-6.8	103	0.00	5.08- 5.28
4		beta-BHC	40.000	42.484	-6.2	103	0.00	5.32- 5.52
5		delta-BHC	40.000	42.378	-5.9	102	0.00	5.53- 5.73
6		Heptachlor	40.000	41.351	-3.4	101	0.00	5.42- 5.62
7		Aldrin	40.000	43.015	-7.5	103	0.00	5.69- 5.89
8		Heptachlor Epoxide	40.000	42.620	-6.5	104	0.00	6.12- 6.32
9		gamma-Chlordane	40.000	43.308	-8.3	103	0.00	6.35- 6.55

Continuing Calibration Summary

Job Number: F66500
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GST2082-CC2082
Lab FileID: ST83226.D

10		alpha-Chlordane	40.000	43.800	-9.5	105	0.00	6.41- 6.61
11		Endosulfan I	40.000	42.933	-7.3	104	0.00	6.46- 6.66
12		4,4'-DDE	40.000	44.033	-10.1	104	0.00	6.55- 6.75
13		Dieldrin	40.000	42.590	-6.5	102	0.00	6.71- 6.91
14		Endrin	40.000	42.407	-6.0	99	0.00	6.96- 7.16
15		4,4'-DDD	40.000	43.951	-9.9	106	0.00	7.05- 7.25
16		Endosulfan II	40.000	43.567	-8.9	106	0.00	7.22- 7.42
17		Endrin Aldehyde	40.000	43.758	-9.4	105	0.00	7.38- 7.58
18		4,4'-DDT	40.000	42.325	-5.8	101	0.00	7.30- 7.50
19		Endosulfan Sulfate	40.000	42.762	-6.9	103	0.00	7.60- 7.80
20		Methoxychlor	40.000	40.557	-1.4	100	0.00	7.81- 8.01
21		Endrin Ketone	40.000	43.055	-7.6	106	0.00	8.09- 8.29
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	40.000	42.167	-5.4	106	0.00	9.22- 9.42

(#) = Out of Range SPCC's out = 0 CCC's out = 0
ST83217.D 8081A.M Wed Jul 15 16:07:50 2009

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries
- Instrument Runlogs/QC

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F66500
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Solids, Total Dissolved	GN35825	100	0.0	mg/l				

Associated Samples:
Batch GN35825: F66500-1, F66500-2, F66500-3, F66500-4, F66500-5
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F66500
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Solids, Total Dissolved	GN35825	F66500-2	mg/l	6170	6480	4.9	0-5%

Associated Samples:
Batch GN35825: F66500-1, F66500-2, F66500-3, F66500-4, F66500-5
(*) Outside of QC limits

Southeast ACCUTEST Laboratories

IT'S ALL IN THE CHEMISTRY

07/30/09

Technical Report for

Tetra Tech, Inc

Holloman AFB; Alamogordo, NM

100-TEN-T93002

Accutest Job Number: F66523

Sampling Date: 07/08/09

Report to:

Tetra Tech
800 Oak Ridge Tpk. Suite A600
Oak Ridge, TN 37830
Virginia.Mullins@tetratech.com

ATTN: Ginger Mullins

Total number of pages in report: **157**

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Harry Behzadi, Ph.D.
Laboratory Director

Client Service contact: Sue Bell 407-425-6700

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Certifications: FL (DOH E83510), NC (573), NJ (FL002), MA (FL946), IA (366), LA (03051), KS (E-10327), SC, AK

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Test results relate only to samples analyzed.

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Table of Contents

-1-

Section 1: Sample Summary **3**
Section 2: Case Narrative/Conformance Summary **4**
Section 3: Sample Results **6**
3.1: F66523-1: MW30&33-03-070809 7
3.2: F66523-1A: MW30&33-03-070809 12
3.3: F66523-2: MW30&33-02-070809 13
3.4: F66523-2A: MW30&33-02-070809 18
3.5: F66523-3: MW30&33-04-070809 19
3.6: F66523-3A: MW30&33-04-070809 24
3.7: F66523-4: MW30&33-01-070809 25
3.8: F66523-4A: MW30&33-01-070809 30
3.9: F66523-5: MW30&33-DUP01-070809 31
3.10: F66523-5A: MW30&33-DUP01-070809 36
3.11: F66523-6: TB02-070809 37
Section 4: Misc. Forms **40**
4.1: Certification Exceptions 41
4.2: Chain of Custody 42
Section 5: GC/MS Volatiles - QC Data Summaries **44**
5.1: Method Blank Summary 45
5.2: Blank Spike Summary 51
5.3: Matrix Spike/Matrix Spike Duplicate Summary 58
5.4: Instrument Performance Checks (BFB) 64
5.5: Internal Standard Area Summaries 67
5.6: Surrogate Recovery Summaries 69
5.7: Initial and Continuing Calibration Summaries 70
Section 6: Metals Analysis - QC Data Summaries **84**
6.1: Inst QC MA7355: Hg 85
6.2: Inst QC MA7359: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn 96
6.3: Inst QC MA7367: Na 116
6.4: Prep QC MP16658: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn 140
6.5: Prep QC MP16671: Hg 145
6.6: Prep QC MP16672: Hg 150
Section 7: General Chemistry - QC Data Summaries **155**
7.1: Method Blank and Spike Results Summary 156
7.2: Duplicate Results Summary 157

Accutest Laboratories

Sample Summary

Tetra Tech, Inc

Job No: F66523

Holloman AFB; Alamogordo, NM
Project No: 100-TEN-T93002

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
F66523-1	07/08/09	15:10 AM		07/09/09	AQ	Ground Water	MW30&33-03-070809
F66523-1A	07/08/09	15:10 AM		07/09/09	AQ	Groundwater Filtered	MW30&33-03-070809
F66523-2	07/08/09	16:24 AM		07/09/09	AQ	Ground Water	MW30&33-02-070809
F66523-2A	07/08/09	16:24 AM		07/09/09	AQ	Groundwater Filtered	MW30&33-02-070809
F66523-3	07/08/09	16:25 AM		07/09/09	AQ	Ground Water	MW30&33-04-070809
F66523-3A	07/08/09	16:25 AM		07/09/09	AQ	Groundwater Filtered	MW30&33-04-070809
F66523-4	07/08/09	15:00 AM		07/09/09	AQ	Ground Water	MW30&33-01-070809
F66523-4A	07/08/09	15:00 AM		07/09/09	AQ	Groundwater Filtered	MW30&33-01-070809
F66523-5	07/08/09	00:00 AM		07/09/09	AQ	Ground Water	MW30&33-DUP01-070809
F66523-5A	07/08/09	00:00 AM		07/09/09	AQ	Groundwater Filtered	MW30&33-DUP01-070809
F66523-6	07/08/09	00:00 AM		07/09/09	AQ	Trip Blank Water	TB02-070809

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Tetra Tech, Inc **Job No:** F66523

Site: Holloman AFB; Alamogordo, NM **Report Date:** 7/29/2009 12:10:18

5 Samples and 1 Trip Blank were collected on 07/08/2009 and were received at Accutest SE on 07/09/2009 properly preserved, at 2 Deg. C and intact. These Samples received an Accutest job number of F66523. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GCMS by Method SW846 8260B

Matrix: AQ **Batch ID:** VJ2895

All samples were analyzed within the recommended method holding time.

Samples F66519-10MS, F66519-10MSD were used as the QC samples indicated.

All method blanks for this batch meet method specific criteria.

Matrix Spike Recoverys for 2-Chloroethyl vinyl ether, 2-Hexanone, 4-Methyl-2-pentanone, Acrylonitrile, Ethyl methacrylate, Methyl methacrylate are outside control limits. Probable cause: due to matrix interference.

Matrix Spike Duplicate Recoverys for 2-Chloroethyl vinyl ether, 2-Hexanone, 4-Methyl-2-pentanone, Acrylonitrile, Methyl methacrylate are outside control limits. Probable cause: due to matrix interference.

Matrix: AQ **Batch ID:** VJ2896

All samples were analyzed within the recommended method holding time.

Samples F66523-4MS, F66523-4MSD were used as the QC samples indicated.

All method blanks for this batch meet method specific criteria.

Matrix Spike and Matrix Spike Duplicate Recoverys for 2-Chloroethyl vinyl ether, 2-Hexanone, 4-Methyl-2-pentanone, Methyl methacrylate are outside control limits. Probable cause: due to matrix interference.

Metals by Method SW846 6010B

Matrix: AQ **Batch ID:** MP16658

All samples were digested within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Samples F66519-10DUP, F66519-10MS, F66519-10MSD, F66519-10SDL were used as the QC samples for metals.

Matrix Spike Recoverys for Calcium, Magnesium, Potassium, Sodium are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

RPDs for Duplicate for Selenium, Thallium, Vanadium are outside control limits for sample MP16658-D1. RPD acceptable due to low duplicate and sample concentrations.

RPDs for Serial Dilution for Selenium, Thallium, Vanadium, Potassium are outside control limits for sample MP16658-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

MP16658-SD1 for Potassium: Serial dilution indicates possible matrix interference.

F66523-1, F66523-1A, F66523-2, F66523-2A, F66523-3, F66523-3A, F66523-4, F66523-4A, F66523-5, F66523-5A for Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Nickel, Potassium, Selenium, Silver, Thallium, Vanadium, Zinc: Elevated reporting limits due to matrix interference.

Wednesday, July 29, 2009

Metals by Method SW846 7470A

Matrix: AQ **Batch ID:** MP16671

All samples were digested within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Samples F66519-10ADUP, F66519-10AMS, F66519-10AMSD, F66519-10ASDL were used as the QC samples for metals.

Matrix: AQ **Batch ID:** MP16672

All samples were digested within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Samples F66523-5DUP, F66523-5MS, F66523-5MSD, F66523-5SDL were used as the QC samples for metals.

Wet Chemistry by Method SM19 2540C

Matrix: AQ **Batch ID:** GN35824

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample F66576-1DUP was used as the QC sample for Solids, Total Dissolved.

RPD for Duplicate for Solids, Total Dissolved is outside control limits for sample GN35824-D1. RPD acceptable due to low duplicate and sample concentrations.

Matrix: AQ **Batch ID:** GN35825

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample F66500-2DUP was used as the QC sample for Solids, Total Dissolved.

Accutest Laboratories Southeast (ALSE) certifies that this report meets the project requirements for analytical data produced for the samples as received at ALSE and as stated on the COC. ALSE certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the ALSE Quality Manual except as noted above. This report is to be used in its entirety. ALSE is not responsible for any assumptions of data quality if partial data packages are used.

Narrative prepared by:

_____ Date: July 29, 2009

Ellen Pampel, Inorganic QA (signature on file)

Wednesday, July 29, 2009

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MW30&33-03-070809		
Lab Sample ID:	F66523-1	**Date Sampled:**	07/08/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J048432.D	1	07/13/09	KW	n/a	n/a	VJ2895
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
75-05-8	Acetonitrile	ND	20	5.0	ug/l	
107-02-8	Acrolein	ND	20	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	2.0	ug/l	
107-05-1	Allyl chloride	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-44-7	Benzyl Chloride	ND	2.0	0.36	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.23	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.33	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.32	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.22	ug/l	
75-00-3	Chloroethane	ND	2.0	0.48	ug/l	
67-66-3	Chloroform	0.51	1.0	0.28	ug/l	J
544-10-5	1-Chlorohexane	ND	2.0	0.27	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.25	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.40	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
75-34-3	1,1-Dichloroethane	1.3	1.0	0.24	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.54	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.32	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.34	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.26	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.28	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW30&33-03-070809		
Lab Sample ID:	F66523-1	**Date Sampled:**	07/08/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
1476-11-5	cis-1,4-Dichloro-2-Butene	ND	10	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.45	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.43	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	1.0	ug/l	
76-13-1	Freon 113	ND	1.0	0.34	ug/l	
591-78-6	2-Hexanone	ND	10	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.69	ug/l	
110-54-3	Hexane	ND	2.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.32	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
126-98-7	Methacrylonitrile	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.78	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.61	ug/l	
74-88-4	Methyl iodide	ND	5.0	1.0	ug/l	
80-62-6	Methyl methacrylate	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.30	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
76-01-7	Pentachloroethane	ND	10	2.0	ug/l	
107-12-0	Propionitrile	ND	20	10	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.25	ug/l	
100-42-5	Styrene	ND	1.0	0.36	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.33	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.26	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.34	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW30&33-03-070809		
Lab Sample ID:	F66523-1	**Date Sampled:**	07/08/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.35	ug/l	
79-01-6	Trichloroethylene	6.9	1.0	0.32	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
108-05-4	Vinyl Acetate	ND	10	3.6	ug/l	
	m,p-Xylene	ND	2.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.37	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		87-116%
17060-07-0	1,2-Dichloroethane-D4	99%		76-127%
2037-26-5	Toluene-D8	101%		86-112%
460-00-4	4-Bromofluorobenzene	106%		84-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW30&33-03-070809		
Lab Sample ID:	F66523-1	**Date Sampled:**	07/08/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum [a]	55 U	1000	55	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Antimony [a]	23 U	30	23	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Arsenic [a]	27 U	50	27	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Barium [a]	25 U	1000	25	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Beryllium [a]	5.0 U	20	5.0	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Cadmium [a]	5.0 U	25	5.0	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Calcium [a]	866000	5000	500	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Chromium [a]	10 U	50	10	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Cobalt [a]	5.0 U	250	5.0	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Copper [a]	25 U	130	25	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Iron [a]	120 U	1500	120	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Lead [a]	10 U	25	10	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Magnesium [a]	1790000	25000	500	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Manganese [a]	5.0 U	75	5.0	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Mercury	0.15 U	1.0	0.15	ug/l	1	07/14/09	07/14/09	LM	SW846 7470A [1]	SW846 7470A [5]
Nickel [a]	12 U	200	12	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Potassium [a]	13000 B	50000	500	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Selenium [a]	50.2	50	17	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Silver [a]	7.0 U	50	7.0	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Sodium	6990000	2000000	100000	ug/l	200	07/10/09	07/16/09	RS	SW846 6010B [3]	SW846 3010A [4]
Thallium [a]	18 U	50	18	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Vanadium [a]	24.0 B	250	4.5	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Zinc [a]	37 U	100	37	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA7355
(2) Instrument QC Batch: MA7359
(3) Instrument QC Batch: MA7367
(4) Prep QC Batch: MP16658
(5) Prep QC Batch: MP16671

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW30&33-03-070809		
Lab Sample ID:	F66523-1	**Date Sampled:**	07/08/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	39500	100	10	mg/l	1	07/15/09	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW30&33-03-070809		
Lab Sample ID:	F66523-1A	**Date Sampled:**	07/08/09
Matrix:	AQ - Groundwater Filtered	**Date Received:**	07/09/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum [a]	55 U	1000	55	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Antimony [a]	23 U	30	23	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Arsenic [a]	27 U	50	27	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Barium [a]	25 U	1000	25	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Beryllium [a]	5.0 U	20	5.0	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Cadmium [a]	5.0 U	25	5.0	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Calcium [a]	831000	5000	500	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Chromium [a]	10 U	50	10	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Cobalt [a]	5.0 U	250	5.0	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Copper [a]	25 U	130	25	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Iron [a]	120 U	1500	120	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Lead [a]	10 U	25	10	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Magnesium [a]	1720000	25000	500	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Manganese [a]	5.0 U	75	5.0	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Mercury	0.15 U	1.0	0.15	ug/l	1	07/14/09	07/14/09	LM	SW846 7470A [1]	SW846 7470A [5]
Nickel [a]	12 U	200	12	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Potassium [a]	12500 B	50000	500	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Selenium [a]	46.2 B	50	17	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Silver [a]	7.0 U	50	7.0	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Sodium	7010000	2000000	100000	ug/l	200	07/10/09	07/16/09	RS	SW846 6010B [3]	SW846 3010A [4]
Thallium [a]	18 U	50	18	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Vanadium [a]	22.8 B	250	4.5	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Zinc [a]	37 U	100	37	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA7355
(2) Instrument QC Batch: MA7359
(3) Instrument QC Batch: MA7367
(4) Prep QC Batch: MP16658
(5) Prep QC Batch: MP16672

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW30&33-02-070809		
Lab Sample ID:	F66523-2	**Date Sampled:**	07/08/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J048433.D	1	07/13/09	KW	n/a	n/a	VJ2895
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
75-05-8	Acetonitrile	ND	20	5.0	ug/l	
107-02-8	Acrolein	ND	20	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	2.0	ug/l	
107-05-1	Allyl chloride	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-44-7	Benzyl Chloride	ND	2.0	0.36	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.23	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.33	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.32	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.22	ug/l	
75-00-3	Chloroethane	ND	2.0	0.48	ug/l	
67-66-3	Chloroform	0.71	1.0	0.28	ug/l	J
544-10-5	1-Chlorohexane	ND	2.0	0.27	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.25	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.40	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
75-34-3	1,1-Dichloroethane	1.8	1.0	0.24	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.54	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.32	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.34	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.26	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.28	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW30&33-02-070809		
Lab Sample ID:	F66523-2	**Date Sampled:**	07/08/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
1476-11-5	cis-1,4-Dichloro-2-Butene	ND	10	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.45	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.43	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	1.0	ug/l	
76-13-1	Freon 113	ND	1.0	0.34	ug/l	
591-78-6	2-Hexanone	ND	10	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.69	ug/l	
110-54-3	Hexane	ND	2.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.32	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
126-98-7	Methacrylonitrile	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.78	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.61	ug/l	
74-88-4	Methyl iodide	ND	5.0	1.0	ug/l	
80-62-6	Methyl methacrylate	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.30	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
76-01-7	Pentachloroethane	ND	10	2.0	ug/l	
107-12-0	Propionitrile	ND	20	10	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.25	ug/l	
100-42-5	Styrene	ND	1.0	0.36	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.33	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.26	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.34	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW30&33-02-070809		
Lab Sample ID:	F66523-2	**Date Sampled:**	07/08/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.35	ug/l	
79-01-6	Trichloroethylene	7.7	1.0	0.32	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
108-05-4	Vinyl Acetate	ND	10	3.6	ug/l	
	m,p-Xylene	ND	2.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.37	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		87-116%
17060-07-0	1,2-Dichloroethane-D4	99%		76-127%
2037-26-5	Toluene-D8	102%		86-112%
460-00-4	4-Bromofluorobenzene	101%		84-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW30&33-02-070809		
Lab Sample ID:	F66523-2	**Date Sampled:**	07/08/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum [a]	55 U	1000	55	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Antimony [a]	23 U	30	23	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Arsenic [a]	27 U	50	27	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Barium [a]	25 U	1000	25	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Beryllium [a]	5.0 U	20	5.0	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Cadmium [a]	5.0 U	25	5.0	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Calcium [a]	919000	5000	500	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Chromium [a]	10 U	50	10	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Cobalt [a]	5.0 U	250	5.0	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Copper [a]	52.1 B	130	25	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Iron [a]	120 U	1500	120	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Lead [a]	10 U	25	10	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Magnesium [a]	1830000	25000	500	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Manganese [a]	5.0 U	75	5.0	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Mercury	0.15 U	1.0	0.15	ug/l	1	07/14/09	07/14/09	LM	SW846 7470A [1]	SW846 7470A [5]
Nickel [a]	12 U	200	12	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Potassium [a]	23200 B	50000	500	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Selenium [a]	40.1 B	50	17	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Silver [a]	7.0 U	50	7.0	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Sodium	7180000	2000000	100000	ug/l	200	07/10/09	07/16/09	RS	SW846 6010B [3]	SW846 3010A [4]
Thallium [a]	18 U	50	18	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Vanadium [a]	29.6 B	250	4.5	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Zinc [a]	44.6 B	100	37	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA7355
(2) Instrument QC Batch: MA7359
(3) Instrument QC Batch: MA7367
(4) Prep QC Batch: MP16658
(5) Prep QC Batch: MP16671

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW30&33-02-070809		
Lab Sample ID:	F66523-2	**Date Sampled:**	07/08/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	38700	100	10	mg/l	1	07/15/09	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW30&33-02-070809		
Lab Sample ID:	F66523-2A	**Date Sampled:**	07/08/09
Matrix:	AQ - Groundwater Filtered	**Date Received:**	07/09/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum [a]	55 U	1000	55	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Antimony [a]	23 U	30	23	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Arsenic [a]	28.2 B	50	27	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Barium [a]	25 U	1000	25	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Beryllium [a]	5.0 U	20	5.0	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Cadmium [a]	5.0 U	25	5.0	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Calcium [a]	854000	5000	500	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Chromium [a]	10 U	50	10	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Cobalt [a]	5.0 U	250	5.0	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Copper [a]	56.0 B	130	25	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Iron [a]	120 U	1500	120	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Lead [a]	10 U	25	10	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Magnesium [a]	1680000	25000	500	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Manganese [a]	5.0 U	75	5.0	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Mercury	0.15 U	1.0	0.15	ug/l	1	07/14/09	07/14/09	LM	SW846 7470A [1]	SW846 7470A [5]
Nickel [a]	12 U	200	12	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Potassium [a]	20800 B	50000	500	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Selenium [a]	44.6 B	50	17	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Silver [a]	7.0 U	50	7.0	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Sodium	6790000	2000000	100000	ug/l	200	07/10/09	07/16/09	RS	SW846 6010B [3]	SW846 3010A [4]
Thallium [a]	18 U	50	18	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Vanadium [a]	32.6 B	250	4.5	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Zinc [a]	45.1 B	100	37	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA7355
(2) Instrument QC Batch: MA7359
(3) Instrument QC Batch: MA7367
(4) Prep QC Batch: MP16658
(5) Prep QC Batch: MP16672

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW30&33-04-070809		
Lab Sample ID:	F66523-3	**Date Sampled:**	07/08/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J048434.D	1	07/13/09	KW	n/a	n/a	VJ2895
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
75-05-8	Acetonitrile	ND	20	5.0	ug/l	
107-02-8	Acrolein	ND	20	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	2.0	ug/l	
107-05-1	Allyl chloride	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-44-7	Benzyl Chloride	ND	2.0	0.36	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.23	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.33	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.32	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.22	ug/l	
75-00-3	Chloroethane	ND	2.0	0.48	ug/l	
67-66-3	Chloroform	0.47	1.0	0.28	ug/l	J
544-10-5	1-Chlorohexane	ND	2.0	0.27	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.25	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.40	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
75-34-3	1,1-Dichloroethane	1.1	1.0	0.24	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.54	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.32	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.34	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.26	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.28	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW30&33-04-070809		
Lab Sample ID:	F66523-3	**Date Sampled:**	07/08/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
1476-11-5	cis-1,4-Dichloro-2-Butene	ND	10	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.45	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.43	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	1.0	ug/l	
76-13-1	Freon 113	ND	1.0	0.34	ug/l	
591-78-6	2-Hexanone	ND	10	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.69	ug/l	
110-54-3	Hexane	ND	2.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.32	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
126-98-7	Methacrylonitrile	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.78	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.61	ug/l	
74-88-4	Methyl iodide	ND	5.0	1.0	ug/l	
80-62-6	Methyl methacrylate	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.30	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
76-01-7	Pentachloroethane	ND	10	2.0	ug/l	
107-12-0	Propionitrile	ND	20	10	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.25	ug/l	
100-42-5	Styrene	ND	1.0	0.36	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.33	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.26	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.34	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW30&33-04-070809		
Lab Sample ID:	F66523-3	**Date Sampled:**	07/08/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.35	ug/l	
79-01-6	Trichloroethylene	4.4	1.0	0.32	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
108-05-4	Vinyl Acetate	ND	10	3.6	ug/l	
	m,p-Xylene	ND	2.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.37	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		87-116%
17060-07-0	1,2-Dichloroethane-D4	99%		76-127%
2037-26-5	Toluene-D8	100%		86-112%
460-00-4	4-Bromofluorobenzene	102%		84-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW30&33-04-070809		
Lab Sample ID:	F66523-3	**Date Sampled:**	07/08/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum [a]	55 U	1000	55	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Antimony [a]	23 U	30	23	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Arsenic [a]	27 U	50	27	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Barium [a]	25 U	1000	25	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Beryllium [a]	5.0 U	20	5.0	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Cadmium [a]	5.0 U	25	5.0	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Calcium [a]	761000	5000	500	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Chromium [a]	10 U	50	10	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Cobalt [a]	5.0 U	250	5.0	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Copper [a]	25 U	130	25	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Iron [a]	120 U	1500	120	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Lead [a]	10 U	25	10	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Magnesium [a]	1640000	25000	500	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Manganese [a]	5.0 U	75	5.0	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Mercury	0.15 U	1.0	0.15	ug/l	1	07/14/09	07/14/09	LM	SW846 7470A [1]	SW846 7470A [5]
Nickel [a]	12 U	200	12	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Potassium [a]	7410 B	50000	500	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Selenium [a]	17.2 B	50	17	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Silver [a]	7.0 U	50	7.0	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Sodium	5930000	2000000	100000	ug/l	200	07/10/09	07/16/09	RS	SW846 6010B [3]	SW846 3010A [4]
Thallium [a]	18 U	50	18	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Vanadium [a]	37.9 B	250	4.5	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Zinc [a]	37 U	100	37	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA7355
(2) Instrument QC Batch: MA7359
(3) Instrument QC Batch: MA7367
(4) Prep QC Batch: MP16658
(5) Prep QC Batch: MP16671

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW30&33-04-070809		
Lab Sample ID:	F66523-3	**Date Sampled:**	07/08/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	35500	100	10	mg/l	1	07/15/09	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW30&33-04-070809		
Lab Sample ID:	F66523-3A	**Date Sampled:**	07/08/09
Matrix:	AQ - Groundwater Filtered	**Date Received:**	07/09/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum [a]	55 U	1000	55	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Antimony [a]	23 U	30	23	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Arsenic [a]	27 U	50	27	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Barium [a]	25 U	1000	25	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Beryllium [a]	5.0 U	20	5.0	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Cadmium [a]	5.0 U	25	5.0	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Calcium [a]	725000	5000	500	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Chromium [a]	10 U	50	10	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Cobalt [a]	5.0 U	250	5.0	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Copper [a]	25 U	130	25	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Iron [a]	120 U	1500	120	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Lead [a]	10 U	25	10	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Magnesium [a]	1560000	25000	500	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Manganese [a]	5.0 U	75	5.0	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Mercury	0.15 U	1.0	0.15	ug/l	1	07/14/09	07/14/09	LM	SW846 7470A [1]	SW846 7470A [5]
Nickel [a]	12 U	200	12	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Potassium [a]	7150 B	50000	500	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Selenium [a]	17 U	50	17	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Silver [a]	7.0 U	50	7.0	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Sodium	5980000	2000000	100000	ug/l	200	07/10/09	07/16/09	RS	SW846 6010B [3]	SW846 3010A [4]
Thallium [a]	18 U	50	18	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Vanadium [a]	38.1 B	250	4.5	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Zinc [a]	37 U	100	37	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA7355
(2) Instrument QC Batch: MA7359
(3) Instrument QC Batch: MA7367
(4) Prep QC Batch: MP16658
(5) Prep QC Batch: MP16672

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW30&33-01-070809		
Lab Sample ID:	F66523-4	**Date Sampled:**	07/08/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J048460.D	1	07/14/09	KW	n/a	n/a	VJ2896
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
75-05-8	Acetonitrile	ND	20	5.0	ug/l	
107-02-8	Acrolein	ND	20	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	2.0	ug/l	
107-05-1	Allyl chloride	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-44-7	Benzyl Chloride	ND	2.0	0.36	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.23	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.33	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.32	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.22	ug/l	
75-00-3	Chloroethane	ND	2.0	0.48	ug/l	
67-66-3	Chloroform	ND	1.0	0.28	ug/l	
544-10-5	1-Chlorohexane	ND	2.0	0.27	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.25	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.40	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.24	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.54	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.32	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.34	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.26	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.28	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW30&33-01-070809		
Lab Sample ID:	F66523-4	**Date Sampled:**	07/08/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
1476-11-5	cis-1,4-Dichloro-2-Butene	ND	10	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.45	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.43	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	1.0	ug/l	
76-13-1	Freon 113	ND	1.0	0.34	ug/l	
591-78-6	2-Hexanone	ND	10	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.69	ug/l	
110-54-3	Hexane	ND	2.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.32	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
126-98-7	Methacrylonitrile	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.78	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.61	ug/l	
74-88-4	Methyl iodide	ND	5.0	1.0	ug/l	
80-62-6	Methyl methacrylate	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.30	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
76-01-7	Pentachloroethane	ND	10	2.0	ug/l	
107-12-0	Propionitrile	ND	20	10	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.25	ug/l	
100-42-5	Styrene	ND	1.0	0.36	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.33	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.26	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.34	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW30&33-01-070809		
Lab Sample ID:	F66523-4	**Date Sampled:**	07/08/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.35	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.32	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
108-05-4	Vinyl Acetate	ND	10	3.6	ug/l	
	m,p-Xylene	ND	2.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.37	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		87-116%
17060-07-0	1,2-Dichloroethane-D4	102%		76-127%
2037-26-5	Toluene-D8	101%		86-112%
460-00-4	4-Bromofluorobenzene	103%		84-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW30&33-01-070809		
Lab Sample ID:	F66523-4	**Date Sampled:**	07/08/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum [a]	44 U	800	44	ug/l	4	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Antimony [a]	18 U	24	18	ug/l	4	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Arsenic [a]	28.9 B	40	22	ug/l	4	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Barium [a]	20 U	800	20	ug/l	4	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Beryllium [a]	4.0 U	16	4.0	ug/l	4	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Cadmium [a]	4.0 U	20	4.0	ug/l	4	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Calcium [a]	670000	4000	400	ug/l	4	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Chromium [a]	8.0 U	40	8.0	ug/l	4	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Cobalt [a]	4.0 U	200	4.0	ug/l	4	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Copper [a]	20 U	100	20	ug/l	4	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Iron [a]	92 U	1200	92	ug/l	4	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Lead [a]	8.0 U	20	8.0	ug/l	4	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Magnesium [a]	1190000	20000	400	ug/l	4	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Manganese [a]	4.0 U	60	4.0	ug/l	4	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Mercury	0.15 U	1.0	0.15	ug/l	1	07/14/09	07/14/09	LM	SW846 7470A [1]	SW846 7470A [5]
Nickel [a]	9.2 U	160	9.2	ug/l	4	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Potassium [a]	14300 B	40000	400	ug/l	4	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Selenium [a]	20.5 B	40	14	ug/l	4	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Silver [a]	5.6 U	40	5.6	ug/l	4	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Sodium	5290000	2000000	100000	ug/l	200	07/10/09	07/16/09	RS	SW846 6010B [3]	SW846 3010A [4]
Thallium [a]	14 U	40	14	ug/l	4	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Vanadium [a]	41.9 B	200	3.6	ug/l	4	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Zinc [a]	30 U	80	30	ug/l	4	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA7355
(2) Instrument QC Batch: MA7359
(3) Instrument QC Batch: MA7367
(4) Prep QC Batch: MP16658
(5) Prep QC Batch: MP16671

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW30&33-01-070809		
Lab Sample ID:	F66523-4	**Date Sampled:**	07/08/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	34300	100	10	mg/l	1	07/15/09	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW30&33-01-070809		
Lab Sample ID:	F66523-4A	**Date Sampled:**	07/08/09
Matrix:	AQ - Groundwater Filtered	**Date Received:**	07/09/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum [a]	46.9 B	800	44	ug/l	4	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Antimony [a]	18 U	24	18	ug/l	4	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Arsenic [a]	26.5 B	40	22	ug/l	4	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Barium [a]	20 U	800	20	ug/l	4	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Beryllium [a]	4.0 U	16	4.0	ug/l	4	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Cadmium [a]	4.0 U	20	4.0	ug/l	4	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Calcium [a]	741000	4000	400	ug/l	4	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Chromium [a]	8.0 U	40	8.0	ug/l	4	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Cobalt [a]	4.0 U	200	4.0	ug/l	4	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Copper [a]	27.9 B	100	20	ug/l	4	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Iron [a]	92 U	1200	92	ug/l	4	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Lead [a]	8.0 U	20	8.0	ug/l	4	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Magnesium [a]	1320000	20000	400	ug/l	4	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Manganese [a]	4.0 U	60	4.0	ug/l	4	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Mercury	0.15 U	1.0	0.15	ug/l	1	07/14/09	07/14/09	LM	SW846 7470A [1]	SW846 7470A [5]
Nickel [a]	9.4 B	160	9.2	ug/l	4	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Potassium [a]	15700 B	40000	400	ug/l	4	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Selenium [a]	23.6 B	40	14	ug/l	4	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Silver [a]	7.6 B	40	5.6	ug/l	4	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Sodium	5260000	2000000	100000	ug/l	200	07/10/09	07/16/09	RS	SW846 6010B [3]	SW846 3010A [4]
Thallium [a]	14 U	40	14	ug/l	4	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Vanadium [a]	48.5 B	200	3.6	ug/l	4	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Zinc [a]	35.4 B	80	30	ug/l	4	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA7355
(2) Instrument QC Batch: MA7359
(3) Instrument QC Batch: MA7367
(4) Prep QC Batch: MP16658
(5) Prep QC Batch: MP16672

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW30&33-DUP01-070809		
Lab Sample ID:	F66523-5	**Date Sampled:**	07/08/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J048435.D	1	07/13/09	KW	n/a	n/a	VJ2895
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
75-05-8	Acetonitrile	ND	20	5.0	ug/l	
107-02-8	Acrolein	ND	20	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	2.0	ug/l	
107-05-1	Allyl chloride	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-44-7	Benzyl Chloride	ND	2.0	0.36	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.23	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.33	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.32	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.22	ug/l	
75-00-3	Chloroethane	ND	2.0	0.48	ug/l	
67-66-3	Chloroform	0.48	1.0	0.28	ug/l	J
544-10-5	1-Chlorohexane	ND	2.0	0.27	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.25	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.40	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
75-34-3	1,1-Dichloroethane	1.0	1.0	0.24	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.54	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.32	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.34	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.26	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.28	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW30&33-DUP01-070809		
Lab Sample ID:	F66523-5	**Date Sampled:**	07/08/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
1476-11-5	cis-1,4-Dichloro-2-Butene	ND	10	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.45	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.43	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	1.0	ug/l	
76-13-1	Freon 113	ND	1.0	0.34	ug/l	
591-78-6	2-Hexanone	ND	10	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.69	ug/l	
110-54-3	Hexane	ND	2.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.32	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
126-98-7	Methacrylonitrile	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.78	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.61	ug/l	
74-88-4	Methyl iodide	ND	5.0	1.0	ug/l	
80-62-6	Methyl methacrylate	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.30	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
76-01-7	Pentachloroethane	ND	10	2.0	ug/l	
107-12-0	Propionitrile	ND	20	10	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.25	ug/l	
100-42-5	Styrene	ND	1.0	0.36	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.33	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.26	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.34	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW30&33-DUP01-070809		
Lab Sample ID:	F66523-5	**Date Sampled:**	07/08/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.35	ug/l	
79-01-6	Trichloroethylene	4.5	1.0	0.32	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
108-05-4	Vinyl Acetate	ND	10	3.6	ug/l	
	m,p-Xylene	ND	2.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.37	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		87-116%
17060-07-0	1,2-Dichloroethane-D4	100%		76-127%
2037-26-5	Toluene-D8	101%		86-112%
460-00-4	4-Bromofluorobenzene	101%		84-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW30&33-DUP01-070809		
Lab Sample ID:	F66523-5	**Date Sampled:**	07/08/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum [a]	55 U	1000	55	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Antimony [a]	23 U	30	23	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Arsenic [a]	27 U	50	27	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Barium [a]	25 U	1000	25	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Beryllium [a]	5.0 U	20	5.0	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Cadmium [a]	5.0 U	25	5.0	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Calcium [a]	743000	5000	500	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Chromium [a]	10 U	50	10	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Cobalt [a]	5.0 U	250	5.0	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Copper [a]	25 U	130	25	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Iron [a]	120 U	1500	120	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Lead [a]	10 U	25	10	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Magnesium [a]	1590000	25000	500	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Manganese [a]	5.0 U	75	5.0	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Mercury	0.15 U	1.0	0.15	ug/l	1	07/14/09	07/14/09	LM	SW846 7470A [1]	SW846 7470A [5]
Nickel [a]	12 U	200	12	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Potassium [a]	7480 B	50000	500	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Selenium [a]	19.9 B	50	17	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Silver [a]	7.0 U	50	7.0	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Sodium	6070000	2000000	100000	ug/l	200	07/10/09	07/16/09	RS	SW846 6010B [3]	SW846 3010A [4]
Thallium [a]	18 U	50	18	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Vanadium [a]	39.2 B	250	4.5	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Zinc [a]	37 U	100	37	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA7355
(2) Instrument QC Batch: MA7359
(3) Instrument QC Batch: MA7367
(4) Prep QC Batch: MP16658
(5) Prep QC Batch: MP16672

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW30&33-DUP01-070809		
Lab Sample ID:	F66523-5	**Date Sampled:**	07/08/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	31100	10000	1000	mg/l	100	07/13/09	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW30&33-DUP01-070809		
Lab Sample ID:	F66523-5A	**Date Sampled:**	07/08/09
Matrix:	AQ - Groundwater Filtered	**Date Received:**	07/09/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum [a]	55 U	1000	55	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Antimony [a]	23 U	30	23	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Arsenic [a]	31.6 B	50	27	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Barium [a]	25 U	1000	25	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Beryllium [a]	5.0 U	20	5.0	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Cadmium [a]	5.0 U	25	5.0	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Calcium [a]	778000	5000	500	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Chromium [a]	10 U	50	10	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Cobalt [a]	5.0 U	250	5.0	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Copper [a]	25 U	130	25	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Iron [a]	120 U	1500	120	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Lead [a]	10 U	25	10	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Magnesium [a]	1670000	25000	500	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Manganese [a]	5.0 U	75	5.0	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Mercury	0.15 U	1.0	0.15	ug/l	1	07/14/09	07/14/09	LM	SW846 7470A [1]	SW846 7470A [5]
Nickel [a]	12 U	200	12	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Potassium [a]	7650 B	50000	500	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Selenium [a]	26.3 B	50	17	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Silver [a]	7.0 U	50	7.0	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Sodium	6040000	2000000	100000	ug/l	200	07/10/09	07/16/09	RS	SW846 6010B [3]	SW846 3010A [4]
Thallium [a]	18 U	50	18	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Vanadium [a]	39.0 B	250	4.5	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]
Zinc [a]	37 U	100	37	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA7355
(2) Instrument QC Batch: MA7359
(3) Instrument QC Batch: MA7367
(4) Prep QC Batch: MP16658
(5) Prep QC Batch: MP16672

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	TB02-070809		
Lab Sample ID:	F66523-6	**Date Sampled:**	07/08/09
Matrix:	AQ - Trip Blank Water	**Date Received:**	07/09/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J048463.D	1	07/14/09	KW	n/a	n/a	VJ2896
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
75-05-8	Acetonitrile	ND	20	5.0	ug/l	
107-02-8	Acrolein	ND	20	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	2.0	ug/l	
107-05-1	Allyl chloride	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-44-7	Benzyl Chloride	ND	2.0	0.36	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.23	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.33	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.32	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.22	ug/l	
75-00-3	Chloroethane	ND	2.0	0.48	ug/l	
67-66-3	Chloroform	ND	1.0	0.28	ug/l	
544-10-5	1-Chlorohexane	ND	2.0	0.27	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.25	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.40	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.24	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.54	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.32	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.34	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.26	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.28	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB02-070809		
Lab Sample ID:	F66523-6	**Date Sampled:**	07/08/09
Matrix:	AQ - Trip Blank Water	**Date Received:**	07/09/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
1476-11-5	cis-1,4-Dichloro-2-Butene	ND	10	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.45	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.43	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	1.0	ug/l	
76-13-1	Freon 113	ND	1.0	0.34	ug/l	
591-78-6	2-Hexanone	ND	10	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.69	ug/l	
110-54-3	Hexane	ND	2.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.32	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
126-98-7	Methacrylonitrile	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.78	ug/l	
74-87-3	Methyl chloride	1.0	2.0	0.61	ug/l	J
74-88-4	Methyl iodide	ND	5.0	1.0	ug/l	
80-62-6	Methyl methacrylate	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.30	ug/l	
75-09-2	Methylene chloride	1.0	5.0	1.0	ug/l	J
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
76-01-7	Pentachloroethane	ND	10	2.0	ug/l	
107-12-0	Propionitrile	ND	20	10	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.25	ug/l	
100-42-5	Styrene	ND	1.0	0.36	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.33	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.26	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.34	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB02-070809		
Lab Sample ID:	F66523-6	**Date Sampled:**	07/08/09
Matrix:	AQ - Trip Blank Water	**Date Received:**	07/09/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.35	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.32	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
108-05-4	Vinyl Acetate	ND	10	3.6	ug/l	
	m,p-Xylene	ND	2.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.37	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		87-116%
17060-07-0	1,2-Dichloroethane-D4	101%		76-127%
2037-26-5	Toluene-D8	100%		86-112%
460-00-4	4-Bromofluorobenzene	101%		84-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Certification Exceptions
- Chain of Custody

Parameter Certification Exceptions

Job Number: F66523
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

The following parameters included in this report are exceptions to NELAC certification.
The certification status of each is indicated below.

Parameter	CAS#	Method	Mat	Certification Status
Freon 113	76-13-1	**SW846 8260B**	AQ	Certified by SOP MS005

COC-014

Accutest Laboratories Southeast
Chain of Custody

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL. 407-425-6700 • FAX: 407-425-0707
www.accutest.com

Accutest JOB # F66523 PAGE 1 OF 1
Accutest Quote # SKID #

Client / Reporting Information

Company Name: TETRA TECH
Address: 800 OAK RIDGE TURNPIKE A-600
City: OAK RIDGE State: TN Zip: 37830
Project Contact: DANNA R. MULLINS E-mail: DANNA.MULLINS@TETRATECH.COM
Phone#: 865-599-2349
Sampler(s) Name(s) (Printed): A. MORENO / J. BENNETT

Project Information

Project Name: HOLLOMAN AFB
Street:
City: ALAMOGORDO State: NM
Project #: TS3002
Fax #:
Client Purchase Order #: 1041533

Analytical Information

Accutest Sample #	Field ID / Point of Collection	Date	Time	Sampled By	Matrix	Total # of Bottles	Other	None	HCl	NaOH	HNO3	H2SO4	NaOH+ZnAc	DI Water	MeOH	VOCs 8260	TAL Metals Total	TAL Metals Diss	TDS
	~~MW30&33-05-070809~~	~~7/8/09~~		~~AH/JB~~	~~GW~~	~~6~~			~~X~~	~~X~~						~~X~~	~~X~~	~~X~~	~~X~~
1	MW30&33-03-070809	7/8/09	1510	AH/JB	GW	6			X	X						X	X	X	X
2	MW30&33-02-070809	7/8/09	1620	AH/JB	GW	6			X	X						X	X	X	X
3	MW30&33-04-070809	7/8/09	1625	AH/JB	GW	6			X	X						X	X	X	X
7	MW30&33-01-070809	7/8/09	1500	AH/JB	GW	6			X	X						X	X	X	X
8A	MW30&33-01-MS-070809	7/8/09	1500	AH/JB	GW	6			X	X						X	X	X	X
4	MW30&33-01-MSD-070809	7/8/09	1500	AH/JB	GW	6			X	X						X	X	X	X
5	MW30&33-DUP01-070809	7/8/09	—	—	GW	6			X	X						X	X	X	X
6	TB02-070809	7/8/09	—	—	W	2			X							X			

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe

LAB USE ONLY

TURNAROUND TIME (Business Days) — Approved By: / Rush Code

- [X] 10 Days Standard
- [ ] 7 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] OTHER

Emergency or Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [X] REDT1 (EPA LEVEL 3) ERPIMS
- [ ] FULT1 (EPA LEVEL 4)
- [X] EDD'S

Comments / Remarks

LAB FILTERED METALS
FEDEX 869649110267
869649110289

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
1	7/8/09 1715	2	3	7/8/09 1920	4 FEDEX
Relinquished by: FX 5	Date Time:	Received By: 6 Accutest 7.9.09 0930	Relinquished by: 7	Date Time:	Received By: 8

Lab Use Only: Custody Seal in Place: Y N Temp Blank Provided: Y N Preserved where Applicable: Y N Total # of Coolers: Cooler Temperature (s) Celsius: 2.0 2.8

4.2 4

F66523: Chain of Custody
Page 1 of 2

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: F66523 CLIENT: Tetra Tech PROJECT: Holloman AFB

DATE/TIME RECEIVED: 7-9-09 09:00 # OF COOLERS RECEIVED: 2 COOLER TEMPS: 2.0 2.8

METHOD OF DELIVERY: (FEDEX) UPS ACCUTEST COURIER GREYHOUND DELIVERY OTHER

AIRBILL NUMBERS: 8696 4911 0889

COOLER INFORMATION

- [ ] CUSTODY SEAL NOT PRESENT OR NOT INTACT
- [ ] CHAIN OF CUSTODY NOT RECEIVED (COC)
- [ ] ANALYSIS REQUESTED IS UNCLEAR OR MISSING
- [ ] SAMPLE DATES OR TIMES UNCLEAR OR MISSING
- [ ] TEMPERATURE CRITERIA NOT MET
- [ ] WET ICE RECEIVED IN COOLER

TRIP BLANK INFORMATION

- [x] TRIP BLANK PROVIDED
- [ ] TRIP BLANK NOT PROVIDED
- [ ] TRIP BLANK NOT ON COC
- [x] TRIP BLANK INTACT
- [ ] TRIP BLANK NOT INTACT
- [x] RECEIVED WATER TRIP BLANK
- [ ] RECEIVED SOIL TRIP BLANK

SAMPLE INFORMATION

- [ ] SAMPLE LABELS NOT PRESENT ON ALL BOTTLES
- [ ] CORRECT NUMBER OF CONTAINERS USED
- [ ] SAMPLE RECEIVED IMPROPERLY PRESERVED
- [ ] INSUFFICIENT VOLUME FOR ANALYSIS
- [ ] TIMES ON COC DOES NOT MATCH LABEL(S)
- [ ] ID'S ON COC DOES NOT MATCH LABEL(S)
- [ ] VOC VIALS HAVE HEADSPACE (MACRO BUBBLES)
- [ ] BOTTLES RECEIVED BUT ANALYSIS NOT REQUESTED
- [ ] NO BOTTLES RECEIVED FOR ANALYSIS REQUESTED
- [ ] UNCLEAR FILTERING INSTRUCTIONS
- [ ] UNCLEAR COMPOSITING INSTRUCTIONS
- [ ] SAMPLE CONTAINER(S) RECEIVED BROKEN
- [ ] % SOLIDS JAR NOT RECEIVED
- [ ] 5035 FIELD KIT NOT FROZEN WITHIN 48 HOUR'S
- [ ] RESIDUAL CHLORINE PRESENT

(APPLICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS)

MISC. INFORMATION

NUMBER OF ENCORES ? Ø

NUMBER OF 5035 FIELD KITS ? Ø

NUMBER OF LAB FILTERED METALS ? 7

SUMMARY OF COMMENTS:

TECHNICIAN SIGNATURE/DATE E.T. 7-9-09 TECHNICIAN SIGNATURE/DATE CLR 7/9/09

ASBD 12/17/07

4.2

4

F66523: Chain of Custody

Page 2 of 2

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: F66523
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ2895-MB	J048413.D	1	07/13/09	KW	n/a	n/a	VJ2895

The QC reported here applies to the following samples: **Method:** SW846 8260B

F66523-1, F66523-2, F66523-3, F66523-5

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
75-05-8	Acetonitrile	ND	20	5.0	ug/l	
107-02-8	Acrolein	ND	20	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	2.0	ug/l	
107-05-1	Allyl chloride	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-44-7	Benzyl Chloride	ND	2.0	0.36	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.23	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.33	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.32	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.22	ug/l	
75-00-3	Chloroethane	ND	2.0	0.48	ug/l	
67-66-3	Chloroform	ND	1.0	0.28	ug/l	
544-10-5	1-Chlorohexane	ND	2.0	0.27	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.25	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.40	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.24	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.54	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.32	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.34	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.26	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.28	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	

Method Blank Summary

Job Number: F66523
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ2895-MB	J048413.D	1	07/13/09	KW	n/a	n/a	VJ2895

The QC reported here applies to the following samples: **Method:** SW846 8260B

F66523-1, F66523-2, F66523-3, F66523-5

CAS No.	Compound	Result	RL	MDL	Units	Q
1476-11-5	cis-1,4-Dichloro-2-Butene	ND	10	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.45	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.43	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	1.0	ug/l	
76-13-1	Freon 113	ND	1.0	0.34	ug/l	
591-78-6	2-Hexanone	ND	10	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.69	ug/l	
110-54-3	Hexane	ND	2.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.32	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
126-98-7	Methacrylonitrile	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.78	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.61	ug/l	
74-88-4	Methyl iodide	ND	5.0	1.0	ug/l	
80-62-6	Methyl methacrylate	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.30	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
76-01-7	Pentachloroethane	ND	10	2.0	ug/l	
107-12-0	Propionitrile	ND	20	10	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.25	ug/l	
100-42-5	Styrene	ND	1.0	0.36	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.33	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.26	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.75	1.0	0.50	ug/l	J
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.34	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	

Method Blank Summary

Job Number: F66523
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ2895-MB	J048413.D	1	07/13/09	KW	n/a	n/a	VJ2895

The QC reported here applies to the following samples: **Method:** SW846 8260B

F66523-1, F66523-2, F66523-3, F66523-5

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.35	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.32	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
108-05-4	Vinyl Acetate	ND	10	3.6	ug/l	
	m,p-Xylene	ND	2.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.37	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	102%	87-116%
17060-07-0	1,2-Dichloroethane-D4	100%	76-127%
2037-26-5	Toluene-D8	99%	86-112%
460-00-4	4-Bromofluorobenzene	103%	84-120%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Method Blank Summary

Job Number: F66523
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ2896-MB	J048451.D	1	07/14/09	KW	n/a	n/a	VJ2896

The QC reported here applies to the following samples: **Method:** SW846 8260B

F66523-4, F66523-6

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
107-02-8	Acrolein	ND	20	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-44-7	Benzyl Chloride	ND	2.0	0.36	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.23	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.33	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.32	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.22	ug/l	
75-00-3	Chloroethane	ND	2.0	0.48	ug/l	
67-66-3	Chloroform	0.36	1.0	0.28	ug/l	J
544-10-5	1-Chlorohexane	ND	2.0	0.27	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.25	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.40	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.24	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.54	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.32	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.34	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.26	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.28	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	

Method Blank Summary

Job Number: F66523
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ2896-MB	J048451.D	1	07/14/09	KW	n/a	n/a	VJ2896

The QC reported here applies to the following samples: **Method:** SW846 8260B

F66523-4, F66523-6

CAS No.	Compound	Result	RL	MDL	Units	Q
106-46-7	p-Dichlorobenzene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.45	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.43	ug/l	
76-13-1	Freon 113	ND	1.0	0.34	ug/l	
591-78-6	2-Hexanone	ND	10	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.69	ug/l	
110-54-3	Hexane	ND	2.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.32	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.78	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.61	ug/l	
74-88-4	Methyl iodide	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.30	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.25	ug/l	
100-42-5	Styrene	ND	1.0	0.36	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.33	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.26	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.34	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.35	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.32	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	

Method Blank Summary

Job Number: F66523
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ2896-MB	J048451.D	1	07/14/09	KW	n/a	n/a	VJ2896

The QC reported here applies to the following samples: **Method:** SW846 8260B

F66523-4, F66523-6

CAS No.	Compound	Result	RL	MDL	Units	Q
108-05-4	Vinyl Acetate	ND	10	3.6	ug/l	
	m,p-Xylene	ND	2.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.37	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	101%	87-116%
17060-07-0	1,2-Dichloroethane-D4	99%	76-127%
2037-26-5	Toluene-D8	100%	86-112%
460-00-4	4-Bromofluorobenzene	102%	84-120%

Blank Spike Summary

Job Number: F66523
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ2895-BS	J048412.D	1	07/13/09	KW	n/a	n/a	VJ2895

The QC reported here applies to the following samples: **Method:** SW846 8260B

F66523-1, F66523-2, F66523-3, F66523-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	87.0	70	59-134
75-05-8	Acetonitrile	250	257	103	57-123
107-02-8	Acrolein	125	73.8	59	33-157
107-13-1	Acrylonitrile	125	135	108	62-124
107-05-1	Allyl chloride	25	27.9	112	48-136
71-43-2	Benzene	25	27.3	109	83-124
100-44-7	Benzyl Chloride	25	26.4	106	61-118
108-86-1	Bromobenzene	25	26.4	106	83-115
74-97-5	Bromochloromethane	25	25.2	101	78-112
75-27-4	Bromodichloromethane	25	23.9	96	76-116
75-25-2	Bromoform	25	25.3	101	68-128
104-51-8	n-Butylbenzene	25	28.8	115	84-124
135-98-8	sec-Butylbenzene	25	28.4	114	86-127
98-06-6	tert-Butylbenzene	25	28.4	114	83-126
108-90-7	Chlorobenzene	25	26.4	106	87-115
75-00-3	Chloroethane	25	26.4	106	54-166
67-66-3	Chloroform	25	27.0	108	85-123
544-10-5	1-Chlorohexane	25	29.3	117	87-128
95-49-8	o-Chlorotoluene	25	27.1	108	84-121
106-43-4	p-Chlorotoluene	25	27.1	108	84-120
110-75-8	2-Chloroethyl vinyl ether	125	130	104	63-125
75-15-0	Carbon disulfide	25	26.2	105	67-147
56-23-5	Carbon tetrachloride	25	30.6	122	74-139
75-34-3	1,1-Dichloroethane	25	27.7	111	82-127
75-35-4	1,1-Dichloroethylene	25	26.6	106	75-133
563-58-6	1,1-Dichloropropene	25	28.7	115	87-127
96-12-8	1,2-Dibromo-3-chloropropane	25	24.2	97	61-118
106-93-4	1,2-Dibromoethane	25	23.2	93	80-115
107-06-2	1,2-Dichloroethane	25	24.0	96	76-122
78-87-5	1,2-Dichloropropane	25	25.6	102	81-120
142-28-9	1,3-Dichloropropane	25	24.6	98	81-113
594-20-7	2,2-Dichloropropane	25	28.4	114	77-138
124-48-1	Dibromochloromethane	25	22.9	92	74-116
75-71-8	Dichlorodifluoromethane	25	27.9	112	34-158
156-59-2	cis-1,2-Dichloroethylene	25	25.5	102	81-114
10061-01-5	cis-1,3-Dichloropropene	25	25.5	102	83-119

Blank Spike Summary

Job Number: F66523
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ2895-BS	J048412.D	1	07/13/09	KW	n/a	n/a	VJ2895

The QC reported here applies to the following samples: **Method:** SW846 8260B

F66523-1, F66523-2, F66523-3, F66523-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1476-11-5	cis-1,4-Dichloro-2-Butene	25	25.4	102	41-130
541-73-1	m-Dichlorobenzene	25	26.2	105	86-115
95-50-1	o-Dichlorobenzene	25	26.2	105	85-115
106-46-7	p-Dichlorobenzene	25	26.1	104	87-113
156-60-5	trans-1,2-Dichloroethylene	25	27.5	110	82-126
10061-02-6	trans-1,3-Dichloropropene	25	26.3	105	87-123
100-41-4	Ethylbenzene	25	27.0	108	87-118
97-63-2	Ethyl methacrylate	25	22.3	89	68-110
76-13-1	Freon 113	25	28.1	112	74-139
591-78-6	2-Hexanone	125	117	94	58-125
87-68-3	Hexachlorobutadiene	25	29.4	118	71-133
110-54-3	Hexane	25	27.2	109	71-134
98-82-8	Isopropylbenzene	25	29.1	116	87-131
99-87-6	p-Isopropyltoluene	25	28.7	115	83-125
108-10-1	4-Methyl-2-pentanone	125	125	100	62-125
126-98-7	Methacrylonitrile	250	240	96	62-133
74-83-9	Methyl bromide	25	25.8	103	55-151
74-87-3	Methyl chloride	25	27.9	112	55-173
74-88-4	Methyl iodide	25	27.6	110	72-125
80-62-6	Methyl methacrylate	25	24.9	100	63-115
74-95-3	Methylene bromide	25	25.6	102	81-116
75-09-2	Methylene chloride	25	25.0	100	69-125
78-93-3	Methyl ethyl ketone	125	102	82	61-127
1634-04-4	Methyl Tert Butyl Ether	25	27.1	108	75-116
91-20-3	Naphthalene	25	24.0	96	59-125
76-01-7	Pentachloroethane	25	24.9	100	82-111
107-12-0	Propionitrile	250	242	97	69-119
103-65-1	n-Propylbenzene	25	28.0	112	86-125
100-42-5	Styrene	25	27.5	110	78-118
630-20-6	1,1,1,2-Tetrachloroethane	25	24.3	97	81-119
71-55-6	1,1,1-Trichloroethane	25	27.4	110	79-133
79-34-5	1,1,2,2-Tetrachloroethane	25	23.6	94	71-120
79-00-5	1,1,2-Trichloroethane	25	24.7	99	80-114
87-61-6	1,2,3-Trichlorobenzene	25	24.0	96	64-126
96-18-4	1,2,3-Trichloropropane	25	22.2	89	77-115
120-82-1	1,2,4-Trichlorobenzene	25	24.8	99	68-123

Blank Spike Summary

Job Number: F66523
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ2895-BS	J048412.D	1	07/13/09	KW	n/a	n/a	VJ2895

The QC reported here applies to the following samples: **Method:** SW846 8260B

F66523-1, F66523-2, F66523-3, F66523-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
95-63-6	1,2,4-Trimethylbenzene	25	27.1	108	82-120
108-67-8	1,3,5-Trimethylbenzene	25	28.1	112	83-123
127-18-4	Tetrachloroethylene	25	29.1	116	80-131
108-88-3	Toluene	25	26.7	107	86-116
79-01-6	Trichloroethylene	25	26.9	108	85-124
75-69-4	Trichlorofluoromethane	25	28.1	112	66-156
110-57-6	Trans-1,4-Dichloro-2-Butene	25	24.2	97	51-137
75-01-4	Vinyl chloride	25	30.1	120	57-153
108-05-4	Vinyl Acetate	125	164	131	38-159
	m,p-Xylene	50	56.4	113	86-121
95-47-6	o-Xylene	25	27.6	110	83-121

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	102%	87-116%
17060-07-0	1,2-Dichloroethane-D4	103%	76-127%
2037-26-5	Toluene-D8	99%	86-112%
460-00-4	4-Bromofluorobenzene	101%	84-120%

Blank Spike Summary

Job Number: F66523
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ2896-BS	J048449.D	1	07/14/09	KW	n/a	n/a	VJ2896

The QC reported here applies to the following samples: **Method:** SW846 8260B

F66523-4, F66523-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	113	90	59-134
75-05-8	Acetonitrile	250	299	120	57-123
107-02-8	Acrolein	125	65.1	52	33-157
107-13-1	Acrylonitrile	125	152	122	62-124
107-05-1	Allyl chloride	25	29.8	119	48-136
71-43-2	Benzene	25	28.5	114	83-124
100-44-7	Benzyl Chloride	25	27.3	109	61-118
108-86-1	Bromobenzene	25	24.7	99	83-115
74-97-5	Bromochloromethane	25	23.5	94	78-112
75-27-4	Bromodichloromethane	25	24.2	97	76-116
75-25-2	Bromoform	25	24.4	98	68-128
104-51-8	n-Butylbenzene	25	28.3	113	84-124
135-98-8	sec-Butylbenzene	25	28.2	113	86-127
98-06-6	tert-Butylbenzene	25	27.1	108	83-126
108-90-7	Chlorobenzene	25	25.9	104	87-115
75-00-3	Chloroethane	25	30.4	122	54-166
67-66-3	Chloroform	25	26.2	105	85-123
544-10-5	1-Chlorohexane	25	28.0	112	87-128
95-49-8	o-Chlorotoluene	25	26.3	105	84-121
106-43-4	p-Chlorotoluene	25	26.4	106	84-120
110-75-8	2-Chloroethyl vinyl ether	125	141	113	63-125
75-15-0	Carbon disulfide	25	28.4	114	67-147
56-23-5	Carbon tetrachloride	25	29.1	116	74-139
75-34-3	1,1-Dichloroethane	25	28.4	114	82-127
75-35-4	1,1-Dichloroethylene	25	28.1	112	75-133
563-58-6	1,1-Dichloropropene	25	27.9	112	87-127
96-12-8	1,2-Dibromo-3-chloropropane	25	23.7	95	61-118
106-93-4	1,2-Dibromoethane	25	22.5	90	80-115
107-06-2	1,2-Dichloroethane	25	24.2	97	76-122
78-87-5	1,2-Dichloropropane	25	27.2	109	81-120
142-28-9	1,3-Dichloropropane	25	24.5	98	81-113
594-20-7	2,2-Dichloropropane	25	27.5	110	77-138
124-48-1	Dibromochloromethane	25	21.5	86	74-116
75-71-8	Dichlorodifluoromethane	25	23.3	93	34-158
156-59-2	cis-1,2-Dichloroethylene	25	25.3	101	81-114
10061-01-5	cis-1,3-Dichloropropene	25	26.0	104	83-119

Blank Spike Summary

Job Number: F66523
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ2896-BS	J048449.D	1	07/14/09	KW	n/a	n/a	VJ2896

The QC reported here applies to the following samples: **Method:** SW846 8260B

F66523-4, F66523-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1476-11-5	cis-1,4-Dichloro-2-Butene	25	26.6	106	41-130
541-73-1	m-Dichlorobenzene	25	25.6	102	86-115
95-50-1	o-Dichlorobenzene	25	25.9	104	85-115
106-46-7	p-Dichlorobenzene	25	25.8	103	87-113
156-60-5	trans-1,2-Dichloroethylene	25	27.5	110	82-126
10061-02-6	trans-1,3-Dichloropropene	25	25.5	102	87-123
100-41-4	Ethylbenzene	25	26.9	108	87-118
97-63-2	Ethyl methacrylate	25	22.2	89	68-110
76-13-1	Freon 113	25	29.1	116	74-139
591-78-6	2-Hexanone	125	132	106	58-125
87-68-3	Hexachlorobutadiene	25	26.7	107	71-133
110-54-3	Hexane	25	28.3	113	71-134
98-82-8	Isopropylbenzene	25	28.2	113	87-131
99-87-6	p-Isopropyltoluene	25	27.7	111	83-125
108-10-1	4-Methyl-2-pentanone	125	136	109	62-125
126-98-7	Methacrylonitrile	250	279	112	62-133
74-83-9	Methyl bromide	25	28.5	114	55-151
74-87-3	Methyl chloride	25	28.7	115	55-173
74-88-4	Methyl iodide	25	27.0	108	72-125
80-62-6	Methyl methacrylate	25	27.6	110	63-115
74-95-3	Methylene bromide	25	26.3	105	81-116
75-09-2	Methylene chloride	25	27.4	110	69-125
78-93-3	Methyl ethyl ketone	125	109	87	61-127
1634-04-4	Methyl Tert Butyl Ether	25	25.4	102	75-116
91-20-3	Naphthalene	25	24.5	98	59-125
76-01-7	Pentachloroethane	25	25.2	101	82-111
107-12-0	Propionitrile	250	270	108	69-119
103-65-1	n-Propylbenzene	25	27.6	110	86-125
100-42-5	Styrene	25	26.9	108	78-118
630-20-6	1,1,1,2-Tetrachloroethane	25	23.2	93	81-119
71-55-6	1,1,1-Trichloroethane	25	26.4	106	79-133
79-34-5	1,1,2,2-Tetrachloroethane	25	25.3	101	71-120
79-00-5	1,1,2-Trichloroethane	25	24.9	100	80-114
87-61-6	1,2,3-Trichlorobenzene	25	23.1	92	64-126
96-18-4	1,2,3-Trichloropropane	25	21.9	88	77-115
120-82-1	1,2,4-Trichlorobenzene	25	23.3	93	68-123

Blank Spike Summary

Job Number: F66523
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ2896-BS	J048449.D	1	07/14/09	KW	n/a	n/a	VJ2896

The QC reported here applies to the following samples: **Method:** SW846 8260B

F66523-4, F66523-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
95-63-6	1,2,4-Trimethylbenzene	25	26.3	105	82-120
108-67-8	1,3,5-Trimethylbenzene	25	27.1	108	83-123
127-18-4	Tetrachloroethylene	25	26.3	105	80-131
108-88-3	Toluene	25	26.3	105	86-116
79-01-6	Trichloroethylene	25	26.8	107	85-124
75-69-4	Trichlorofluoromethane	25	29.8	119	66-156
110-57-6	Trans-1,4-Dichloro-2-Butene	25	25.6	102	51-137
75-01-4	Vinyl chloride	25	29.7	119	57-153
108-05-4	Vinyl Acetate	125	171	137	38-159
	m,p-Xylene	50	56.3	113	86-121
95-47-6	o-Xylene	25	26.8	107	83-121

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	96%	87-116%
17060-07-0	1,2-Dichloroethane-D4	103%	76-127%
2037-26-5	Toluene-D8	96%	86-112%
460-00-4	4-Bromofluorobenzene	97%	84-120%

Blank Spike Summary

Job Number: F66523
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ2896-BS	J048450.D	1	07/14/09	KW	n/a	n/a	VJ2896

The QC reported here applies to the following samples: **Method:** SW846 8260B

F66523-4, F66523-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	99%	87-116%
17060-07-0	1,2-Dichloroethane-D4	99%	76-127%
2037-26-5	Toluene-D8	98%	86-112%
460-00-4	4-Bromofluorobenzene	102%	84-120%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F66523
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F66519-10MS	J048416.D	1	07/13/09	KW	n/a	n/a	VJ2895
F66519-10MSD	J048417.D	1	07/13/09	KW	n/a	n/a	VJ2895
F66519-10	J048415.D	1	07/13/09	KW	n/a	n/a	VJ2895

The QC reported here applies to the following samples: **Method:** SW846 8260B

F66523-1, F66523-2, F66523-3, F66523-5

CAS No.	Compound	F66519-10 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		125	86.3	69	87.0	70	1	59-134/14
75-05-8	Acetonitrile	ND		250	248	99	250	100	1	57-123/15
107-02-8	Acrolein	ND		125	53.4	43	49.3	39	8	33-157/21
107-13-1	Acrylonitrile	ND		125	164	131*	157	126*	4	62-124/13
107-05-1	Allyl chloride	ND		25	27.8	111	26.5	106	5	48-136/13
71-43-2	Benzene	ND		25	25.6	102	24.3	97	5	83-124/11
100-44-7	Benzyl Chloride	ND		25	29.5	118	28.2	113	5	61-118/12
108-86-1	Bromobenzene	ND		25	24.4	98	23.0	92	6	83-115/10
74-97-5	Bromochloromethane	ND		25	23.6	94	22.5	90	5	78-112/10
75-27-4	Bromodichloromethane	ND		25	22.0	88	21.0	84	5	76-116/10
75-25-2	Bromoform	ND		25	25.5	102	25.4	102	0	68-128/11
104-51-8	n-Butylbenzene	ND		25	25.4	102	23.4	94	8	84-124/10
135-98-8	sec-Butylbenzene	ND		25	25.4	102	23.7	95	7	86-127/10
98-06-6	tert-Butylbenzene	ND		25	25.4	102	23.5	94	8	83-126/10
108-90-7	Chlorobenzene	ND		25	25.2	101	23.7	95	6	87-115/9
75-00-3	Chloroethane	ND		25	26.5	106	25.7	103	3	54-166/20
67-66-3	Chloroform	ND		25	24.8	99	23.2	93	7	85-123/10
544-10-5	1-Chlorohexane	ND		25	27.1	108	25.7	103	5	87-128/10
95-49-8	o-Chlorotoluene	ND		25	25.1	100	23.5	94	7	84-121/10
106-43-4	p-Chlorotoluene	ND		25	25.1	100	23.5	94	7	84-120/10
110-75-8	2-Chloroethyl vinyl ether	ND		125	ND	0*	ND	0*	nc	63-125/24
75-15-0	Carbon disulfide	ND		25	24.4	98	23.9	96	2	67-147/12
56-23-5	Carbon tetrachloride	ND		25	27.4	110	27.2	109	1	74-139/13
75-34-3	1,1-Dichloroethane	ND		25	26.2	105	24.8	99	5	82-127/10
75-35-4	1,1-Dichloroethylene	ND		25	25.2	101	25.0	100	1	75-133/13
563-58-6	1,1-Dichloropropene	ND		25	26.6	106	25.1	100	6	87-127/10
96-12-8	1,2-Dibromo-3-chloropropane	ND		25	29.5	118	29.1	116	1	61-118/15
106-93-4	1,2-Dibromoethane	ND		25	24.4	98	23.0	92	6	80-115/10
107-06-2	1,2-Dichloroethane	ND		25	23.0	92	22.1	88	4	76-122/11
78-87-5	1,2-Dichloropropane	ND		25	24.6	98	23.0	92	7	81-120/11
142-28-9	1,3-Dichloropropane	ND		25	25.0	100	23.9	96	4	81-113/11
594-20-7	2,2-Dichloropropane	ND		25	25.3	101	23.7	95	7	77-138/12
124-48-1	Dibromochloromethane	ND		25	21.8	87	20.8	83	5	74-116/11
75-71-8	Dichlorodifluoromethane	ND		25	23.7	95	25.3	101	7	34-158/22
156-59-2	cis-1,2-Dichloroethylene	ND		25	23.8	95	22.6	90	5	81-114/10
10061-01-5	cis-1,3-Dichloropropene	ND		25	23.5	94	22.2	89	6	83-119/10

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F66523
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F66519-10MS	J048416.D	1	07/13/09	KW	n/a	n/a	VJ2895
F66519-10MSD	J048417.D	1	07/13/09	KW	n/a	n/a	VJ2895
F66519-10	J048415.D	1	07/13/09	KW	n/a	n/a	VJ2895

The QC reported here applies to the following samples: **Method:** SW846 8260B

F66523-1, F66523-2, F66523-3, F66523-5

CAS No.	Compound	F66519-10 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1476-11-5	cis-1,4-Dichloro-2-Butene	ND		25	30.9	124	30.3	121	2	41-130/33
541-73-1	m-Dichlorobenzene	ND		25	24.5	98	22.8	91	7	86-115/9
95-50-1	o-Dichlorobenzene	ND		25	25.0	100	23.1	92	8	85-115/9
106-46-7	p-Dichlorobenzene	ND		25	24.6	98	23.1	92	6	87-113/10
156-60-5	trans-1,2-Dichloroethylene	ND		25	25.4	102	24.1	96	5	82-126/10
10061-02-6	trans-1,3-Dichloropropene	ND		25	26.0	104	24.1	96	8	87-123/10
100-41-4	Ethylbenzene	ND		25	25.9	104	24.3	97	6	87-118/10
97-63-2	Ethyl methacrylate	ND		25	27.8	111*	26.4	106	5	68-110/11
76-13-1	Freon 113	ND		25	24.4	98	25.8	103	6	74-139/13
591-78-6	2-Hexanone	ND		125	194	155*	188	150*	3	58-125/14
87-68-3	Hexachlorobutadiene	ND		25	24.1	96	22.3	89	8	71-133/12
110-54-3	Hexane	ND		25	25.6	102	25.5	102	0	71-134/11
98-82-8	Isopropylbenzene	ND		25	27.5	110	25.5	102	8	87-131/10
99-87-6	p-Isopropyltoluene	ND		25	25.4	102	23.4	94	8	83-125/9
108-10-1	4-Methyl-2-pentanone	ND		125	197	158*	191	153*	3	62-125/13
126-98-7	Methacrylonitrile	ND		250	312	125	295	118	6	62-133/17
74-83-9	Methyl bromide	ND		25	26.4	106	25.3	101	4	55-151/21
74-87-3	Methyl chloride	ND		25	27.5	110	27.5	110	0	55-173/22
74-88-4	Methyl iodide	ND		25	25.2	101	24.1	96	4	72-125/11
80-62-6	Methyl methacrylate	ND		25	32.4	130*	31.3	125*	3	63-115/10
74-95-3	Methylene bromide	ND		25	25.3	101	24.3	97	4	81-116/10
75-09-2	Methylene chloride	ND		25	23.2	93	22.1	88	5	69-125/11
78-93-3	Methyl ethyl ketone	ND		125	123	98	122	98	1	61-127/13
1634-04-4	Methyl Tert Butyl Ether	ND		25	26.5	106	25.2	101	5	75-116/10
91-20-3	Naphthalene	ND		25	28.9	116	27.5	110	5	59-125/15
76-01-7	Pentachloroethane	ND		25	24.4	98	23.0	92	6	82-111/8
107-12-0	Propionitrile	ND		250	286	114	286	114	0	69-119/12
103-65-1	n-Propylbenzene	ND		25	25.8	103	24.2	97	6	86-125/10
100-42-5	Styrene	ND		25	26.6	106	24.3	97	9	78-118/11
630-20-6	1,1,1,2-Tetrachloroethane	ND		25	22.7	91	21.7	87	5	81-119/10
71-55-6	1,1,1-Trichloroethane	ND		25	24.9	100	23.8	95	5	79-133/11
79-34-5	1,1,2,2-Tetrachloroethane	ND		25	28.0	112	26.6	106	5	71-120/11
79-00-5	1,1,2-Trichloroethane	ND		25	25.8	103	24.4	98	6	80-114/11
87-61-6	1,2,3-Trichlorobenzene	ND		25	23.2	93	21.3	85	9	64-126/16
96-18-4	1,2,3-Trichloropropane	ND		25	25.1	100	24.2	97	4	77-115/12
120-82-1	1,2,4-Trichlorobenzene	ND		25	22.1	88	20.5	82	8	68-123/11

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F66523
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F66519-10MS	J048416.D	1	07/13/09	KW	n/a	n/a	VJ2895
F66519-10MSD	J048417.D	1	07/13/09	KW	n/a	n/a	VJ2895
F66519-10	J048415.D	1	07/13/09	KW	n/a	n/a	VJ2895

The QC reported here applies to the following samples: **Method:** SW846 8260B

F66523-1, F66523-2, F66523-3, F66523-5

CAS No.	Compound	F66519-10 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
95-63-6	1,2,4-Trimethylbenzene	ND		25	24.9	100	23.2	93	7	82-120/10
108-67-8	1,3,5-Trimethylbenzene	ND		25	25.6	102	24.0	96	6	83-123/10
127-18-4	Tetrachloroethylene	ND		25	26.0	104	25.1	100	4	80-131/12
108-88-3	Toluene	ND		25	26.0	104	24.5	98	6	86-116/10
79-01-6	Trichloroethylene	1.4		25	26.5	100	25.3	96	5	85-124/10
75-69-4	Trichlorofluoromethane	ND		25	27.6	110	27.4	110	1	66-156/15
110-57-6	Trans-1,4-Dichloro-2-Butene	ND		25	30.6	122	29.2	117	5	51-137/24
75-01-4	Vinyl chloride	ND		25	27.9	112	28.1	112	1	57-153/22
108-05-4	Vinyl Acetate	ND		125	195	156	186	149	5	38-159/11
	m,p-Xylene	ND		50	54.0	108	50.5	101	7	86-121/10
95-47-6	o-Xylene	ND		25	26.2	105	24.4	98	7	83-121/10

CAS No.	Surrogate Recoveries	MS	MSD	F66519-10	Limits
1868-53-7	Dibromofluoromethane	98%	99%	100%	87-116%
17060-07-0	1,2-Dichloroethane-D4	103%	103%	99%	76-127%
2037-26-5	Toluene-D8	100%	100%	100%	86-112%
460-00-4	4-Bromofluorobenzene	98%	98%	104%	84-120%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F66523
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F66523-4MS	J048461.D	1	07/14/09	KW	n/a	n/a	VJ2896
F66523-4MSD	J048462.D	1	07/14/09	KW	n/a	n/a	VJ2896
F66523-4	J048460.D	1	07/14/09	KW	n/a	n/a	VJ2896

The QC reported here applies to the following samples: **Method:** SW846 8260B

F66523-4, F66523-6

CAS No.	Compound	F66523-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		125	89.3	71	94.8	76	6	59-134/14
75-05-8	Acetonitrile	ND		250	297	119	296	118	0	57-123/15
107-02-8	Acrolein	ND		125	55.7	45	54.3	43	3	33-157/21
107-13-1	Acrylonitrile	ND		125	144	115	148	118	3	62-124/13
107-05-1	Allyl chloride	ND		25	29.7	119	28.5	114	4	48-136/13
71-43-2	Benzene	ND		25	27.9	112	27.0	108	3	83-124/11
100-44-7	Benzyl Chloride	ND		25	24.1	96	24.0	96	0	61-118/12
108-86-1	Bromobenzene	ND		25	23.5	94	24.1	96	3	83-115/10
74-97-5	Bromochloromethane	ND		25	23.7	95	23.8	95	0	78-112/10
75-27-4	Bromodichloromethane	ND		25	23.7	95	23.4	94	1	76-116/10
75-25-2	Bromoform	ND		25	24.9	100	25.2	101	1	68-128/11
104-51-8	n-Butylbenzene	ND		25	25.7	103	25.0	100	3	84-124/10
135-98-8	sec-Butylbenzene	ND		25	26.0	104	25.4	102	2	86-127/10
98-06-6	tert-Butylbenzene	ND		25	25.2	101	25.1	100	0	83-126/10
108-90-7	Chlorobenzene	ND		25	25.5	102	25.5	102	0	87-115/9
75-00-3	Chloroethane	ND		25	28.9	116	29.5	118	2	54-166/20
67-66-3	Chloroform	ND		25	26.0	104	25.3	101	3	85-123/10
544-10-5	1-Chlorohexane	ND		25	26.9	108	25.9	104	4	87-128/10
95-49-8	o-Chlorotoluene	ND		25	24.9	100	25.2	101	1	84-121/10
106-43-4	p-Chlorotoluene	ND		25	24.3	97	24.4	98	0	84-120/10
110-75-8	2-Chloroethyl vinyl ether	ND		125	ND	0*	ND	0*	nc	63-125/24
75-15-0	Carbon disulfide	ND		25	27.5	110	26.5	106	4	67-147/12
56-23-5	Carbon tetrachloride	ND		25	31.8	127	30.1	120	5	74-139/13
75-34-3	1,1-Dichloroethane	ND		25	28.2	113	27.4	110	3	82-127/10
75-35-4	1,1-Dichloroethylene	ND		25	28.3	113	27.5	110	3	75-133/13
563-58-6	1,1-Dichloropropene	ND		25	26.9	108	26.1	104	3	87-127/10
96-12-8	1,2-Dibromo-3-chloropropane	ND		25	26.1	104	27.8	111	6	61-118/15
106-93-4	1,2-Dibromoethane	ND		25	22.7	91	23.2	93	2	80-115/10
107-06-2	1,2-Dichloroethane	ND		25	24.5	98	24.4	98	0	76-122/11
78-87-5	1,2-Dichloropropane	ND		25	26.7	107	26.2	105	2	81-120/11
142-28-9	1,3-Dichloropropane	ND		25	24.6	98	24.7	99	0	81-113/11
594-20-7	2,2-Dichloropropane	ND		25	24.6	98	23.8	95	3	77-138/12
124-48-1	Dibromochloromethane	ND		25	21.3	85	22.1	88	4	74-116/11
75-71-8	Dichlorodifluoromethane	ND		25	22.9	92	24.4	98	6	34-158/22
156-59-2	cis-1,2-Dichloroethylene	ND		25	24.5	98	24.7	99	1	81-114/10
10061-01-5	cis-1,3-Dichloropropene	ND		25	24.9	100	24.4	98	2	83-119/10

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F66523
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F66523-4MS	J048461.D	1	07/14/09	KW	n/a	n/a	VJ2896
F66523-4MSD	J048462.D	1	07/14/09	KW	n/a	n/a	VJ2896
F66523-4	J048460.D	1	07/14/09	KW	n/a	n/a	VJ2896

The QC reported here applies to the following samples: **Method:** SW846 8260B

F66523-4, F66523-6

CAS No.	Compound	F66523-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1476-11-5	cis-1,4-Dichloro-2-Butene	ND		25	26.6	106	28.1	112	5	41-130/33
541-73-1	m-Dichlorobenzene	ND		25	24.0	96	24.3	97	1	86-115/9
95-50-1	o-Dichlorobenzene	ND		25	24.6	98	24.7	99	0	85-115/9
106-46-7	p-Dichlorobenzene	ND		25	24.3	97	24.4	98	0	87-113/10
156-60-5	trans-1,2-Dichloroethylene	ND		25	27.0	108	26.9	108	0	82-126/10
10061-02-6	trans-1,3-Dichloropropene	ND		25	26.0	104	25.9	104	0	87-123/10
100-41-4	Ethylbenzene	ND		25	26.3	105	25.8	103	2	87-118/10
97-63-2	Ethyl methacrylate	ND		25	25.4	102	25.9	104	2	68-110/11
76-13-1	Freon 113	ND		25	28.4	114	27.1	108	5	74-139/13
591-78-6	2-Hexanone	ND		125	162	130*	164	131*	1	58-125/14
87-68-3	Hexachlorobutadiene	ND		25	23.0	92	23.6	94	3	71-133/12
110-54-3	Hexane	ND		25	26.7	107	25.3	101	5	71-134/11
98-82-8	Isopropylbenzene	ND		25	26.9	108	26.5	106	1	87-131/10
99-87-6	p-Isopropyltoluene	ND		25	25.4	102	25.0	100	2	83-125/9
108-10-1	4-Methyl-2-pentanone	ND		125	169	135*	172	138*	2	62-125/13
126-98-7	Methacrylonitrile	ND		250	305	122	300	120	2	62-133/17
74-83-9	Methyl bromide	ND		25	27.1	108	28.5	114	5	55-151/21
74-87-3	Methyl chloride	ND		25	29.0	116	31.5	126	8	55-173/22
74-88-4	Methyl iodide	ND		25	26.7	107	26.8	107	0	72-125/11
80-62-6	Methyl methacrylate	ND		25	30.5	122*	31.3	125*	3	63-115/10
74-95-3	Methylene bromide	ND		25	26.3	105	25.9	104	2	81-116/10
75-09-2	Methylene chloride	ND		25	25.6	102	25.2	101	2	69-125/11
78-93-3	Methyl ethyl ketone	ND		125	119	95	121	97	2	61-127/13
1634-04-4	Methyl Tert Butyl Ether	ND		25	26.9	108	27.2	109	1	75-116/10
91-20-3	Naphthalene	ND		25	26.4	106	28.0	112	6	59-125/15
76-01-7	Pentachloroethane	ND		25	24.7	99	25.3	101	2	82-111/8
107-12-0	Propionitrile	ND		250	288	115	292	117	1	69-119/12
103-65-1	n-Propylbenzene	ND		25	25.6	102	25.5	102	0	86-125/10
100-42-5	Styrene	ND		25	25.7	103	25.2	101	2	78-118/11
630-20-6	1,1,1,2-Tetrachloroethane	ND		25	22.8	91	23.0	92	1	81-119/10
71-55-6	1,1,1-Trichloroethane	ND		25	26.0	104	25.5	102	2	79-133/11
79-34-5	1,1,2,2-Tetrachloroethane	ND		25	25.7	103	26.8	107	4	71-120/11
79-00-5	1,1,2-Trichloroethane	ND		25	24.9	100	25.4	102	2	80-114/11
87-61-6	1,2,3-Trichlorobenzene	ND		25	22.5	90	23.2	93	3	64-126/16
96-18-4	1,2,3-Trichloropropane	ND		25	22.0	88	23.2	93	5	77-115/12
120-82-1	1,2,4-Trichlorobenzene	ND		25	21.9	88	22.5	90	3	68-123/11

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F66523
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F66523-4MS	J048461.D	1	07/14/09	KW	n/a	n/a	VJ2896
F66523-4MSD	J048462.D	1	07/14/09	KW	n/a	n/a	VJ2896
F66523-4	J048460.D	1	07/14/09	KW	n/a	n/a	VJ2896

The QC reported here applies to the following samples: **Method:** SW846 8260B

F66523-4, F66523-6

CAS No.	Compound	F66523-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
95-63-6	1,2,4-Trimethylbenzene	ND		25	24.8	99	24.5	98	1	82-120/10
108-67-8	1,3,5-Trimethylbenzene	ND		25	25.4	102	25.5	102	0	83-123/10
127-18-4	Tetrachloroethylene	ND		25	25.2	101	24.2	97	4	80-131/12
108-88-3	Toluene	ND		25	26.0	104	25.5	102	2	86-116/10
79-01-6	Trichloroethylene	ND		25	26.8	107	26.1	104	3	85-124/10
75-69-4	Trichlorofluoromethane	ND		25	29.3	117	28.9	116	1	66-156/15
110-57-6	Trans-1,4-Dichloro-2-Butene	ND		25	27.2	109	27.5	110	1	51-137/24
75-01-4	Vinyl chloride	ND		25	29.5	118	31.1	124	5	57-153/22
108-05-4	Vinyl Acetate	ND		125	187	150	186	149	1	38-159/11
	m,p-Xylene	ND		50	54.1	108	53.8	108	1	86-121/10
95-47-6	o-Xylene	ND		25	26.1	104	26.2	105	0	83-121/10

CAS No.	Surrogate Recoveries	MS	MSD	F66523-4	Limits
1868-53-7	Dibromofluoromethane	98%	98%	102%	87-116%
17060-07-0	1,2-Dichloroethane-D4	104%	103%	102%	76-127%
2037-26-5	Toluene-D8	96%	96%	101%	86-112%
460-00-4	4-Bromofluorobenzene	96%	97%	103%	84-120%

Instrument Performance Check (BFB)

Job Number: F66523
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ2895-BFB
Lab File ID: J048402.D
Instrument ID: GCMSJ
Injection Date: 07/13/09
Injection Time: 10:00

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	53448	24.4		Pass
75	30.0 - 60.0% of mass 95	98741	45.0		Pass
95	Base peak, 100% relative abundance	219392	100.0		Pass
96	5.0 - 9.0% of mass 95	14471	6.6		Pass
173	Less than 2.0% of mass 174	967	0.44	(0.6) [a]	Pass
174	50.0 - 100.0% of mass 95	162368	74.0		Pass
175	5.0 - 9.0% of mass 174	10782	4.9	(6.6) [a]	Pass
176	95.0 - 101.0% of mass 174	160512	73.2	(98.9) [a]	Pass
177	5.0 - 9.0% of mass 176	9850	4.5	(6.1) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VJ2895-IC2895	J048403.D	07/13/09	11:00	01:00	Initial cal 1
VJ2895-IC2895	J048404.D	07/13/09	11:24	01:24	Initial cal 2
VJ2895-IC2895	J048405.D	07/13/09	11:47	01:47	Initial cal 3
VJ2895-ICC2895	J048406.D	07/13/09	12:11	02:11	Initial cal 4
VJ2895-IC2895	J048407.D	07/13/09	12:35	02:35	Initial cal 5
VJ2895-IC2895	J048408.D	07/13/09	13:06	03:06	Initial cal 6
VJ2895-ICV2895	J048409.D	07/13/09	13:29	03:29	Initial cal verification 4

Instrument Performance Check (BFB)

Job Number: F66523
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ2895-BFB
Lab File ID: J048410.D
Instrument ID: GCMSJ
Injection Date: 07/13/09
Injection Time: 13:49

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	54525	23.5		Pass
75	30.0 - 60.0% of mass 95	108040	46.5		Pass
95	Base peak, 100% relative abundance	232341	100.0		Pass
96	5.0 - 9.0% of mass 95	16736	7.2		Pass
173	Less than 2.0% of mass 174	1014	0.44	(0.63) [a]	Pass
174	50.0 - 100.0% of mass 95	160904	69.3		Pass
175	5.0 - 9.0% of mass 174	11255	4.8	(7.0) [a]	Pass
176	95.0 - 101.0% of mass 174	156181	67.2	(97.1) [a]	Pass
177	5.0 - 9.0% of mass 176	10994	4.7	(7.0) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VJ2895-CC2895	J048411.D	07/13/09	14:08	00:19	Continuing cal 4
VJ2895-BS	J048412.D	07/13/09	14:33	00:44	Blank Spike
VJ2895-MB	J048413.D	07/13/09	14:57	01:08	Method Blank
ZZZZZZ	J048414.D	07/13/09	15:20	01:31	(unrelated sample)
F66519-10	J048415.D	07/13/09	15:44	01:55	(used for QC only; not part of job F66523)
F66519-10MS	J048416.D	07/13/09	16:07	02:18	Matrix Spike
F66519-10MSD	J048417.D	07/13/09	16:31	02:42	Matrix Spike Duplicate
ZZZZZZ	J048418.D	07/13/09	16:55	03:06	(unrelated sample)
ZZZZZZ	J048419.D	07/13/09	17:18	03:29	(unrelated sample)
ZZZZZZ	J048420.D	07/13/09	17:42	03:53	(unrelated sample)
ZZZZZZ	J048421.D	07/13/09	18:06	04:17	(unrelated sample)
ZZZZZZ	J048422.D	07/13/09	18:29	04:40	(unrelated sample)
ZZZZZZ	J048423.D	07/13/09	18:53	05:04	(unrelated sample)
ZZZZZZ	J048424.D	07/13/09	19:16	05:27	(unrelated sample)
ZZZZZZ	J048425.D	07/13/09	19:40	05:51	(unrelated sample)
ZZZZZZ	J048426.D	07/13/09	20:04	06:15	(unrelated sample)
ZZZZZZ	J048429.D	07/13/09	21:14	07:25	(unrelated sample)
ZZZZZZ	J048430.D	07/13/09	21:38	07:49	(unrelated sample)
ZZZZZZ	J048431.D	07/13/09	22:02	08:13	(unrelated sample)
F66523-1	J048432.D	07/13/09	22:25	08:36	MW30&33-03-070809
F66523-2	J048433.D	07/13/09	22:49	09:00	MW30&33-02-070809
F66523-3	J048434.D	07/13/09	23:12	09:23	MW30&33-04-070809
F66523-5	J048435.D	07/13/09	23:36	09:47	MW30&33-DUP01-070809

Instrument Performance Check (BFB)

Job Number: F66523
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ2896-BFB
Lab File ID: J048438.D
Instrument ID: GCMSJ
Injection Date: 07/14/09
Injection Time: 09:20

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	34077	27.1		Pass
75	30.0 - 60.0% of mass 95	60298	48.0		Pass
95	Base peak, 100% relative abundance	125658	100.0		Pass
96	5.0 - 9.0% of mass 95	8166	6.5		Pass
173	Less than 2.0% of mass 174	91	0.07	(0.1) [a]	Pass
174	50.0 - 100.0% of mass 95	93901	74.7		Pass
175	5.0 - 9.0% of mass 174	6933	5.5	(7.4) [a]	Pass
176	95.0 - 101.0% of mass 174	91666	72.9	(97.6) [a]	Pass
177	5.0 - 9.0% of mass 176	6026	4.8	(6.6) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VJ2896-CC2895	J048440.D	07/14/09	10:10	00:50	Continuing cal 4
VJ2896-IC2896	J048441.D	07/14/09	10:34	01:14	Initial cal 1
VJ2896-IC2896	J048442.D	07/14/09	10:58	01:38	Initial cal 2
VJ2896-IC2896	J048443.D	07/14/09	11:21	02:01	Initial cal 3
VJ2896-ICC2896	J048444.D	07/14/09	11:45	02:25	Initial cal 4
VJ2896-IC2896	J048445.D	07/14/09	12:08	02:48	Initial cal 5
VJ2896-IC2896	J048446.D	07/14/09	12:32	03:12	Initial cal 6
VJ2896-ICV2896	J048448.D	07/14/09	13:32	04:12	Initial cal verification 4
VJ2896-BS	J048449.D	07/14/09	13:57	04:37	Blank Spike
VJ2896-BS	J048450.D	07/14/09	14:21	05:01	Blank Spike
VJ2896-MB	J048451.D	07/14/09	14:59	05:39	Method Blank
ZZZZZZ	J048452.D	07/14/09	15:22	06:02	(unrelated sample)
ZZZZZZ	J048453.D	07/14/09	15:46	06:26	(unrelated sample)
ZZZZZZ	J048454.D	07/14/09	16:09	06:49	(unrelated sample)
ZZZZZZ	J048455.D	07/14/09	16:33	07:13	(unrelated sample)
ZZZZZZ	J048456.D	07/14/09	16:57	07:37	(unrelated sample)
ZZZZZZ	J048457.D	07/14/09	17:20	08:00	(unrelated sample)
ZZZZZZ	J048458.D	07/14/09	17:44	08:24	(unrelated sample)
F66523-4	J048460.D	07/14/09	18:31	09:11	MW30&33-01-070809
F66523-4MS	J048461.D	07/14/09	18:55	09:35	Matrix Spike
F66523-4MSD	J048462.D	07/14/09	19:18	09:58	Matrix Spike Duplicate
F66523-6	J048463.D	07/14/09	19:42	10:22	TB02-070809
ZZZZZZ	J048464.D	07/14/09	20:06	10:46	(unrelated sample)
ZZZZZZ	J048465.D	07/14/09	20:29	11:09	(unrelated sample)

Volatile Internal Standard Area Summary

Job Number: F66523
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Check Std:	VJ2895-CC2895	**Injection Date:**	07/13/09
Lab File ID:	J048411.D	**Injection Time:**	14:08
Instrument ID:	GCMSJ	**Method:**	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
Check Std	1974605	7.55	1611395	10.62	777737	12.98	277242	5.24
Upper Limit [a]	3949210	8.05	3222790	11.12	1555474	13.48	554484	5.74
Lower Limit [b]	987303	7.05	805698	10.12	388869	12.48	138621	4.74

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
VJ2895-BS	1957732	7.54	1609063	10.61	767137	12.98	270804	5.19
VJ2895-MB	1790079	7.54	1466448	10.61	657867	12.98	227220	5.24
ZZZZZZ	1642182	7.54	1338251	10.61	599384	12.98	237027	5.27
F66519-10	1527656	7.54	1236167	10.61	544063	12.98	296155	5.25
F66519-10MS	1594171	7.54	1288742	10.61	633847	12.98	300643	5.25
F66519-10MSD	1624161	7.54	1308790	10.61	641576	12.98	329706	5.21
ZZZZZZ	1631273	7.55	1366350	10.61	660810	12.98	202581	5.24
ZZZZZZ	1856282	7.54	1536726	10.61	721072	12.98	241049	5.25
ZZZZZZ	1852669	7.54	1507432	10.61	705215	12.98	248217	5.24
ZZZZZZ	1780506	7.55	1457990	10.61	683334	12.98	261349	5.22
ZZZZZZ	1709322	7.55	1408465	10.61	634998	12.98	623382*	5.25
ZZZZZZ	1576618	7.55	1317543	10.62	603802	12.98	658517*	5.24
ZZZZZZ	1528339	7.55	1247309	10.62	569487	12.98	651771*	5.19
ZZZZZZ	1461364	7.55	1217028	10.61	550924	12.98	477126	5.19
ZZZZZZ	1464388	7.55	1207598	10.61	534319	12.98	227846	5.21
ZZZZZZ	1322987	7.55	1088023	10.62	456202	12.98	241512	5.19
ZZZZZZ	1291534	7.55	1061014	10.62	453410	12.98	396434	5.19
ZZZZZZ	1250709	7.55	1038350	10.61	452771	12.98	182426	5.22
F66523-1	1247188	7.55	1033133	10.62	433569	12.98	271119	5.19
F66523-2	1226581	7.55	1005014	10.62	443630	12.98	260881	5.20
F66523-3	1198558	7.55	992162	10.61	436985	12.98	245844	5.23
F66523-5	1195237	7.55	980066	10.61	429311	12.98	241399	5.19

IS 1 = Fluorobenzene
IS 2 = Chlorobenzene-D5
IS 3 = 1,4-Dichlorobenzene-d4
IS 4 = Tert Butyl Alcohol-D10

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Internal Standard Area Summary

Job Number: F66523
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Check Std:	VJ2896-ICC2896	**Injection Date:**	07/14/09
Lab File ID:	J048444.D	**Injection Time:**	11:45
Instrument ID:	GCMSJ	**Method:**	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
Check Std	1210901	7.55	1054380	10.62	453003	12.98	164240	5.24
Upper Limit [a]	2421802	8.05	2108760	11.12	906006	13.48	328480	5.74
Lower Limit [b]	605451	7.05	527190	10.12	226502	12.48	82120	4.74

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
VJ2896-BS	1272264	7.55	1113677	10.62	539673	12.98	182837	5.20
VJ2896-BS	1243601	7.54	1040850	10.61	444896	12.98	165970	5.24
VJ2896-MB	1176032	7.55	982104	10.62	429421	12.98	163979	5.24
ZZZZZZ	1176936	7.55	998326	10.61	455395	12.98	157294	5.23
ZZZZZZ	1162472	7.55	980169	10.61	454083	12.98	161426	5.19
ZZZZZZ	1274609	7.54	1083991	10.62	568662	12.98	183772	5.21
ZZZZZZ	1652480	7.54	1404895	10.61	651476	12.98	238935	5.19
ZZZZZZ	1648617	7.54	1394071	10.61	633533	12.98	242900	5.21
ZZZZZZ	1515263	7.54	1254937	10.61	558215	12.98	197942	5.23
ZZZZZZ	1340047	7.55	1143786	10.61	507176	12.98	195208	5.24
F66523-4	1226489	7.55	1023260	10.61	455776	12.98	255310	5.20
F66523-4MS	1293032	7.55	1126184	10.61	557276	12.98	238368	5.23
F66523-4MSD	1349198	7.55	1160588	10.61	563061	12.98	262445	5.22
F66523-6	1281854	7.54	1070631	10.61	475584	12.98	175437	5.21
ZZZZZZ	1203600	7.55	1012506	10.61	448089	12.98	202341	5.21
ZZZZZZ	1142578	7.54	983004	10.61	474936	12.98	155755	5.22

IS 1 = Fluorobenzene
IS 2 = Chlorobenzene-D5
IS 3 = 1,4-Dichlorobenzene-d4
IS 4 = Tert Butyl Alcohol-D10

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Surrogate Recovery Summary

Job Number: F66523
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Method: SW846 8260B **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
F66523-1	J048432.D	100.0	99.0	101.0	106.0
F66523-2	J048433.D	98.0	99.0	102.0	101.0
F66523-3	J048434.D	98.0	99.0	100.0	102.0
F66523-4	J048460.D	102.0	102.0	101.0	103.0
F66523-5	J048435.D	98.0	100.0	101.0	101.0
F66523-6	J048463.D	103.0	101.0	100.0	101.0
F66519-10MS	J048416.D	98.0	103.0	100.0	98.0
F66519-10MSD	J048417.D	99.0	103.0	100.0	98.0
F66523-4MS	J048461.D	98.0	104.0	96.0	96.0
F66523-4MSD	J048462.D	98.0	103.0	96.0	97.0
VJ2895-BS	J048412.D	102.0	103.0	99.0	101.0
VJ2895-MB	J048413.D	102.0	100.0	99.0	103.0
VJ2896-BS	J048449.D	96.0	103.0	96.0	97.0
VJ2896-BS	J048450.D	99.0	99.0	98.0	102.0
VJ2896-MB	J048451.D	101.0	99.0	100.0	102.0

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	87-116%
S2 = 1,2-Dichloroethane-D4	76-127%
S3 = Toluene-D8	86-112%
S4 = 4-Bromofluorobenzene	84-120%

Initial Calibration Summary

Job Number: F66523
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ2895-ICC2895
Lab FileID: J048406.D

Response Factor Report MSVOA6

Method : C:\MSDCHEM\1\METHODS\8260-JAPP9.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Mon Jul 13 13:54:21 2009
Response via : Initial Calibration

Calibration Files
1 =J048403.D 2 =J048404.D 3 =J048405.D 4 =J048406.D
5 =J048407.D 6 =J048408.D

	Compound	1	2	3	4	5	6	Avg	%RSD
1) I	Fluorobenzene	----------ISTD----------							
2)	Dichlorodifluoromet	0.196	0.261	0.241	0.242	0.241	0.249	0.238	9.27
3) P	Chloromethane	0.637	0.628	0.583	0.595	0.567	0.544	0.593	5.98
4) C	Vinyl Chloride	0.420	0.544	0.490	0.507	0.464	0.455	0.480	9.07
5)	Bromomethane	0.370	0.313	0.272	0.265	0.254	0.248	0.287	16.27
	---- Linear regr., Force(0,0) ---- Coefficient = 0.9994								
	Response Ratio = 0.00000 + 0.25219 *A								
6)	Chloroethane	0.252	0.297	0.267	0.262	0.233	0.225	0.256	10.03
7)	Trichlorofluorometh	0.374	0.464	0.424	0.420	0.388	0.365	0.406	9.19
8)	Ethyl Ether	0.389	0.371	0.403	0.402	0.393	0.381	0.390	3.13
9)	1,2-Dichlorotrifluo	0.354	0.418	0.439	0.417	0.386	0.363	0.396	8.52
10) C	1,1-Dichloroethene	0.491	0.633	0.654	0.634	0.601	0.579	0.599	9.88
11)	Freon 113	0.215	0.294	0.297	0.278	0.266	0.256	0.268	11.33
12)	Carbon Disulfide	0.939	1.129	1.130	1.101	0.995	0.921	1.036	9.26
13)	Iodomethane	0.428	0.489	0.505	0.507	0.481	0.476	0.481	5.96
14)	Allyl chloride	0.566	0.694	0.731	0.760	0.756	0.756	0.711	10.55
15)	Methylene Chloride	1.333	0.816	0.686	0.678	0.638	0.639	0.798	33.84
	---- Linear regr., Force(0,0) ---- Coefficient = 0.9996								
	Response Ratio = 0.00000 + 0.64359 *A								
16)	Acetone	0.057	0.060	0.059	0.059	0.059	0.054	0.058	3.42
17)	Methyl acetate	0.047	0.051	0.059	0.059	0.059	0.062	0.056	10.49
18)	trans-1,2-Dichloroe	0.557	0.601	0.631	0.628	0.609	0.614	0.607	4.43
19)	Hexane	0.358	0.405	0.408	0.379	0.367	0.376	0.382	5.30
20)	Methyl Tert Butyl E	0.810	0.858	0.912	0.942	0.920	0.961	0.900	6.28
21)	Acetonitrile	0.024	0.026	0.028	0.027	0.025	0.025	0.026	5.52
22)	Di-isopropyl ether	1.456	1.545	1.629	1.656	1.596	1.593	1.579	4.50
23)	Chloroprene	0.497	0.580	0.657	0.708	0.755	0.701	0.650	14.64
24) P	1,1-Dichloroethane	0.610	0.732	0.780	0.776	0.741	0.745	0.731	8.49
25)	Acrylonitrile	0.169	0.187	0.147	0.138	0.158	0.156	0.159	10.83
26)	ETBE	0.904	1.061	1.179	1.245	1.226	1.258	1.146	12.08
27)	Vinyl acetate	0.442	0.604	0.556	0.555	0.585	0.583	0.554	10.50
28)	cis-1,2-Dichloroeth	0.340	0.374	0.399	0.407	0.392	0.393	0.384	6.27
29)	2,2-Dichloropropane	0.211	0.343	0.396	0.427	0.430	0.444	0.375	23.49
	---- Linear regr., Force(0,0) ---- Coefficient = 0.9995								
	Response Ratio = 0.00000 + 0.43742 *A								
30)	Bromochloromethane	0.144	0.179	0.190	0.195	0.187	0.191	0.181	10.52
31)	Cyclohexane	0.481	0.643	0.676	0.644	0.639	0.649	0.622	11.28
32) C	Chloroform	0.590	0.605	0.623	0.620	0.590	0.594	0.604	2.43
33)	Ethyl acetate	0.259	0.312	0.441	0.453	0.415	0.399	0.380	20.34
	---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9994								
	Response Ratio = 0.00000 + 0.46607 *A + -0.00673 *A^2								
34)	Tetrahydrofuran	0.274	0.110	0.107	0.099	0.104	0.110	0.134	51.34

Initial Calibration Summary

Job Number: F66523
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ2895-ICC2895
Lab FileID: J048406.D

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              ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9994
                Response Ratio = 0.00000 + 0.09464 *A + 0.00728 *A^2

35) S   Dibromofluoromethan 0.268 0.267 0.265 0.264 0.263 0.263 0.265   0.88
36)     Carbon Tetrachlorid 0.177 0.255 0.289 0.326 0.349 0.367 0.294  23.85
              ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9998
                Response Ratio = 0.00000 + 0.29275 *A + 0.03790 *A^2

37)     1,1,1-Trichloroetha 0.294 0.388 0.455 0.460 0.454 0.468 0.420  16.28
              ---- Linear regr., Force(0,0) ----  Coefficient =  0.9997
                Response Ratio = 0.00000 + 0.46282 *A

38)     2-Butanone          0.238 0.244 0.266 0.269 0.268 0.252 0.256   5.26
39)     1,1-Dichloropropene 0.374 0.465 0.507 0.498 0.480 0.483 0.468  10.33
40)     Propionitrile       0.060 0.057 0.063 0.062 0.062 0.063 0.061   4.13
41)     Methacrylonitrile   0.290 0.290 0.290 0.279 0.269 0.251 0.278   5.72
42)     Benzene             1.263 1.433 1.463 1.421 1.345 1.278 1.367   6.17
43)     TAME                0.687 0.777 0.881 0.914 0.882 0.905 0.841  10.69
44) S   1,2-Dichloroethane- 0.331 0.325 0.338 0.349 0.371 0.316 0.338   5.82
45)     1,2-Dichloroethane  0.616 0.569 0.579 0.583 0.565 0.573 0.581   3.14
46)     Trichloroethene     0.310 0.363 0.368 0.372 0.355 0.359 0.354   6.33
47)     Methylcyclohexane   0.382 0.515 0.546 0.521 0.507 0.519 0.498  11.73
48)     Dibromomethane      0.184 0.195 0.223 0.226 0.221 0.227 0.213   8.59
49) C   1,2-Dichloropropane 0.362 0.434 0.463 0.472 0.462 0.452 0.441   9.20
50)     Bromodichloromethan 0.315 0.370 0.430 0.472 0.460 0.467 0.419  15.20
              ---- Linear regr., Force(0,0) ----  Coefficient =  0.9997
                Response Ratio = 0.00000 + 0.46455 *A

51)     Methyl methacrylate 0.272 0.296 0.377 0.407 0.409 0.407 0.361  17.01
              ---- Linear regr., Force(0,0) ----  Coefficient =  0.9998
                Response Ratio = 0.00000 + 0.40657 *A

52)     2-Chloroethyl vinyl 0.215 0.261 0.298 0.306 0.288 0.277 0.274  12.02
53)     cis-1,3-Dichloropro 0.374 0.467 0.569 0.610 0.597 0.596 0.536  17.68
              ---- Linear regr., Force(0,0) ----  Coefficient =  0.9997
                Response Ratio = 0.00000 + 0.59690 *A


54) I   Chlorobenzene-d5      ----------------ISTD---------------------
55) S   Toluene-d8          1.250 1.261 1.245 1.238 1.253 1.253 1.250   0.62
56) C   Toluene             1.535 1.739 1.785 1.730 1.647 1.569 1.667   6.03
57)     2-Nitropropane      0.048 0.054 0.077 0.094 0.102 0.108 0.081  31.37
              ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9994
                Response Ratio = 0.00000 + 0.08204 *A + 0.00266 *A^2

58)     4-Methyl-2-pentanon 0.460 0.491 0.551 0.546 0.503 0.475 0.504   7.32
59)     trans-1,3-Dichlorop 0.330 0.447 0.573 0.613 0.618 0.613 0.532  22.28
              ---- Linear regr., Force(0,0) ----  Coefficient =  0.9998
                Response Ratio = 0.00000 + 0.61307 *A

60)     Tetrachloroethene   0.296 0.371 0.391 0.396 0.383 0.383 0.370   9.99
61)     Ethyl methacrylate  0.272 0.385 0.531 0.542 0.567 0.575 0.479  25.60
              ---- Linear regr., Force(0,0) ----  Coefficient =  0.9997
                Response Ratio = 0.00000 + 0.56799 *A

62)     1,1,2-Trichloroetha 0.283 0.316 0.345 0.349 0.335 0.335 0.327   7.46
63)     Dibromochloromethan 0.208 0.268 0.352 0.404 0.407 0.423 0.344  25.35
              ---- Linear regr., Force(0,0) ----  Coefficient =  0.9991
                Response Ratio = 0.00000 + 0.41455 *A
```

Initial Calibration Summary

Job Number: F66523 **Sample:** VJ2895-ICC2895
Account: TETTNOAK Tetra Tech, Inc **Lab FileID:** J048406.D
Project: Holloman AFB; Alamogordo, NM

```
 64)      1,3-Dichloropropane 0.588 0.650 0.709 0.727 0.694 0.699 0.678   7.52
 65)      1,2-Dibromoethane   0.256 0.330 0.392 0.403 0.395 0.403 0.363  16.33
              ---- Linear regr., Force(0,0) ----  Coefficient =  0.9998
                Response Ratio = 0.00000 + 0.40038 *A

 66)      2-hexanone          0.271 0.364 0.415 0.422 0.402 0.365 0.373  14.91
 67)      1-Chlorohexane      0.376 0.519 0.578 0.567 0.556 0.549 0.524  14.39
 68)  C   Ethylbenzene        1.718 1.821 1.875 1.837 1.696 1.572 1.753   6.45
 69)  P   Chlorobenzene       0.947 1.039 1.105 1.112 1.055 1.005 1.044   5.97
 70)      1,1,1,2-Tetrachloro 0.183 0.261 0.339 0.384 0.378 0.382 0.321  25.67
              ---- Linear regr., Force(0,0) ----  Coefficient =  0.9996
                Response Ratio = 0.00000 + 0.38004 *A

 71)      m,p-Xylene          1.130 1.361 1.405 1.372 1.233 1.106 1.268  10.26
 72)      o-Xylene            1.087 1.349 1.471 1.482 1.390 1.328 1.351  10.62
 73)      Styrene             0.766 1.007 1.142 1.167 1.110 1.074 1.044  14.11
 74)  P   Bromoform           0.107 0.126 0.194 0.237 0.244 0.263 0.195  33.32
              ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9992
                Response Ratio = 0.00000 + 0.20271 *A + 0.03001 *A^2

 75)      Isopropylbenzene    1.032 1.376 1.517 1.507 1.410 1.365 1.368  12.93

 76)  I   1,4-Dichlorobenzene-d ----------------ISTD--------------------
 77)  S   4-Bromofluorobenzen 1.112 1.066 1.050 1.051 1.060 1.052 1.065   2.22
 78)      cis-1,4-Dichloro-2- 0.304 0.281 0.363 0.391 0.401 0.398 0.356  14.55
 79)      n-Propylbenzene     3.781 4.290 4.378 4.275 3.861 3.468 4.009   9.01
 80)      Bromobenzene        0.761 0.840 0.889 0.899 0.862 0.822 0.846   5.94
 81)  P   1,1,2,2-Tetrachloro 0.887 0.968 1.010 1.040 0.959 0.953 0.970   5.39
 82)      1,3,5-Trimethylbenz 2.148 2.626 2.762 2.727 2.536 2.346 2.524   9.40
 83)      2-Chlorotoluene     2.467 2.862 2.869 2.857 2.628 2.421 2.684   7.73
 84)      trans-1,4-Dichloro- 0.229 0.263 0.325 0.357 0.342 0.357 0.312  17.14
              ---- Linear regr., Force(0,0) ----  Coefficient =  0.9991
                Response Ratio = 0.00000 + 0.35180 *A

 85)      1,2,3-Trichloroprop 0.244 0.254 0.271 0.276 0.260 0.261 0.261   4.41
 86)      Cyclohexanone       0.029 0.032 0.027 0.026 0.028 0.029 0.029   7.76
 87)      4-Chlorotoluene     2.193 2.570 2.644 2.656 2.463 2.330 2.476   7.47
 88)      tert-Butylbenzene   1.209 1.516 1.603 1.590 1.531 1.459 1.484   9.76
 89)      1,2,4-Trimethylbenz 2.251 2.723 2.874 2.814 2.640 2.474 2.630   8.85
 90)      Pentachloroethane   0.179 0.280 0.404 0.451 0.482 0.489 0.381  32.81
              ---- Linear regr., Force(0,0) ----  Coefficient =  0.9964
                Response Ratio = 0.00000 + 0.46764 *A

 91)      sec-Butylbenzene    2.559 3.377 3.527 3.389 3.173 2.973 3.166  11.22
 92)      4-Isopropyltoluene  2.015 2.546 2.773 2.719 2.569 2.454 2.512  10.76
 93)      1,3-Dichlorobenzene 1.352 1.540 1.595 1.619 1.509 1.459 1.512   6.45
 94)      1,4-Dichlorobenzene 1.412 1.552 1.631 1.619 1.504 1.459 1.530   5.70
 95)      n-Butylbenzene      1.157 1.476 1.698 1.707 1.628 1.556 1.537  13.38
 96)      Benzyl Chloride     0.110 0.175 0.282 0.343 0.349 0.359 0.270  38.67
              ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9990
                Response Ratio = 0.00000 + 0.31125 *A + 0.02468 *A^2

 97)      1,2-Dichlorobenzene 1.263 1.380 1.537 1.574 1.466 1.419 1.440   7.82
 98)      1,2-Dibromo-3-Chlor 0.068 0.098 0.140 0.153 0.155 0.166 0.130  29.72
              ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9996
                Response Ratio = 0.00000 + 0.13667 *A + 0.01467 *A^2

 99)      Hexachlorobutadiene 0.229 0.277 0.303 0.317 0.323 0.316 0.294  12.19
100)      1,2,4-Trichlorobenz 0.399 0.556 0.770 0.860 0.847 0.841 0.712  26.80
              ---- Linear regr., Force(0,0) ----  Coefficient =  0.9995
```

Initial Calibration Summary

Job Number: F66523
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Project: Holloman AFB; Alamogordo, NM

Sample: VJ2895-ICC2895
Lab FileID: J048406.D

```
                Response Ratio = 0.00000 + 0.84245 *A

101)     Naphthalene         0.793 1.159 1.792 1.985 1.921 1.911 1.594  31.12
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9993
                Response Ratio = 0.00000 + 1.91722 *A

102)     1,2,3-Trichlorobenz 0.284 0.418 0.609 0.685 0.681 0.683 0.560  30.32
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9996
                Response Ratio = 0.00000 + 0.68057 *A


103) I   Tert Butyl Alcohol-d1 ----------------ISTD---------------------
104)     Ethanol             1.393 0.378 0.235 0.224 0.245 0.225 0.450  103.46
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9952
                Response Ratio = 0.00000 + 0.23143 *A

105)     acrolein            3.608 2.231 1.588 1.604 1.650 1.605 2.048  39.25
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9994
                Response Ratio = 0.00000 + 1.61881 *A

106)     Tert Butyl Alcohol  0.959 1.065 1.072 1.181 1.132 1.178 1.098   7.68
107)     tert Amyl alcohol   0.631 0.896 1.078 1.225 1.130 1.171 1.022  21.75
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9986
                Response Ratio = 0.00000 + 1.16145 *A

108)     Isobutyl alcohol    0.425 0.372 0.492 0.569 0.569 0.544 0.495  16.54
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9982
                Response Ratio = 0.00000 + 0.55215 *A

109)     1,4-Dioxane         0.117 0.121 0.118 0.131 0.119 0.119 0.121   4.28
 ------------------------------------------------------------------------------
 (#) = Out of Range

           8260-JAPP9.M        Tue Jul 14 09:13:05 2009
```

Initial Calibration Verification

Job Number: F66523
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ2895-ICV2895
Lab FileID: J048409.D

Evaluate Continuing Calibration Report

```
Data File : C:\MSDCHEM\1\DATA\071309\J048409.D          Vial: 7
Acq On    : 13 Jul 2009   1:29 pm                   Operator: karenw
Sample    : ICV2895-4                               Inst    : MSVOA6
Misc      : ms12389,vj2895,,,,,                     Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\MSDCHEM\1\METHODS\8260-JAPP9.M (RTE Integrator)
Title        : SW-846 Method 5030B/8260B & EPA 624
Last Update  : Mon Jul 13 13:54:21 2009
Response via : Multiple Level Calibration

Min. RRF     :   0.001  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	118	0.00	7.55
2		Dichlorodifluoromethane	0.238	0.245	-2.9	120	-0.01	2.83
3	P	Chloromethane	0.593	0.636	-7.3	126	0.00	3.01
4	C	Vinyl Chloride	0.480	0.521	-8.5	121	0.00	3.14
		----------	Amount	Calc.	%Drift		----------	
5		Bromomethane	40.000	41.870	-4.7	118	0.00	3.51
		----------	AvgRF	CCRF	%Dev		----------	
6		Chloroethane	0.256	0.254	0.8	115	0.00	3.64
7		Trichlorofluoromethane	0.406	0.423	-4.2	119	0.00	3.87
8		Ethyl Ether	0.390	0.395	-1.3	116	0.00	4.08
9		1,2-Dichlorotrifluoroetha	0.396	0.403	-1.8	114	0.00	4.32
10	C	1,1-Dichloroethene	0.599	0.581	3.0	108	-0.01	4.35
11		Freon 113	0.268	0.269	-0.4	115	0.00	4.42
12		Carbon Disulfide	1.036	0.947	8.6	102	0.00	4.43
13		Iodomethane	0.481	0.516	-7.3	120	0.00	4.54
14		Allyl chloride	0.711	0.808	-13.6	125	0.00	4.83
		----------	Amount	Calc.	%Drift		----------	
15		Methylene Chloride	40.000	39.455	1.4	111	0.00	4.96
		----------	AvgRF	CCRF	%Dev		----------	
16		Acetone	0.058	0.041	29.3#	82	0.02	4.99
17		Methyl acetate	0.056	0.061	-8.9	122	0.00	5.08
18		trans-1,2-Dichloroethene	0.607	0.640	-5.4	121	0.00	5.12
19		Hexane	0.382	0.392	-2.6	122	0.00	5.17
20		Methyl Tert Butyl Ether	0.900	0.998	-10.9	125	0.00	5.23
21		Acetonitrile	0.026	0.027	-3.8	119	0.02	5.50
22		Di-isopropyl ether	1.579	1.702	-7.8	121	0.00	5.59
23		Chloroprene	0.650	0.714	-9.8	119	0.00	5.72
24	P	1,1-Dichloroethane	0.731	0.785	-7.4	120	0.00	5.75
25		Acrylonitrile	0.159	0.151	5.0	130	0.00	5.78
26		ETBE	1.146	1.386	-20.9#	132	0.00	5.97
27		Vinyl acetate	0.554	0.638	-15.2	136	0.00	5.95
28		cis-1,2-Dichloroethene	0.384	0.388	-1.0	113	0.00	6.29
		----------	Amount	Calc.	%Drift		----------	
29		2,2-Dichloropropane	40.000	42.551	-6.4	129	0.00	6.43
		----------	AvgRF	CCRF	%Dev		----------	
30		Bromochloromethane	0.181	0.186	-2.8	113	0.00	6.49

Initial Calibration Verification

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Lab FileID: J048409.D

31		Cyclohexane	0.622	0.758	-21.9#	139	0.00	6.55
32	C	Chloroform	0.604	0.634	-5.0	121	0.00	6.55
		----------	Amount	Calc.	%Drift		----------	
33		Ethyl acetate	200.000	300.542	-50.3#	167	0.00	6.63
34		Tetrahydrofuran	40.000	43.263	-8.2	131	0.00	6.73
		----------	AvgRF	CCRF	%Dev		----------	
35	S	Dibromofluoromethane	0.265	0.271	-2.3	121	0.00	6.73
		----------	Amount	Calc.	%Drift		----------	
36		Carbon Tetrachloride	40.000	44.783	-12.0	133	0.00	6.74
37		1,1,1-Trichloroethane	40.000	41.511	-3.8	123	0.00	6.81
		----------	AvgRF	CCRF	%Dev		----------	
38		2-Butanone	0.256	0.215	16.0	95	0.00	6.84
39		1,1-Dichloropropene	0.468	0.490	-4.7	116	0.00	6.90
40		Propionitrile	0.061	0.062	-1.6	118	0.00	7.15
41		Methacrylonitrile	0.278	0.282	-1.4	120	0.00	7.16
42		Benzene	1.367	1.422	-4.0	118	0.00	7.15
43		TAME	0.841	0.996	-18.4	129	0.00	7.24
44	S	1,2-Dichloroethane-d4	0.338	0.353	-4.4	119	0.00	7.27
45		1,2-Dichloroethane	0.581	0.563	3.1	114	0.00	7.34
46		Trichloroethene	0.354	0.360	-1.7	115	0.00	7.72
47		Methylcyclohexane	0.498	0.546	-9.6	124	0.00	7.75
48		Dibromomethane	0.213	0.226	-6.1	118	0.00	8.14
49	C	1,2-Dichloropropane	0.441	0.454	-2.9	114	0.00	8.23
		----------	Amount	Calc.	%Drift		----------	
50		Bromodichloromethane	40.000	38.564	3.6	112	0.00	8.27
51		Methyl methacrylate	40.000	42.264	-5.7	125	0.00	8.38
		----------	AvgRF	CCRF	%Dev		----------	
52		2-Chloroethyl vinyl ether	0.274	0.295	-7.7	114	0.00	8.79
		----------	Amount	Calc.	%Drift		----------	
53		cis-1,3-Dichloropropene	40.000	41.464	-3.7	120	0.00	8.89
		----------	AvgRF	CCRF	%Dev		----------	
54	I	Chlorobenzene-d5	1.000	1.000	0.0	117	0.00	10.62
55	S	Toluene-d8	1.250	1.249	0.1	118	0.00	9.08
56	C	Toluene	1.667	1.739	-4.3	117	0.00	9.13
		----------	Amount	Calc.	%Drift		----------	
57		2-Nitropropane	200.000	187.260	6.4	107	0.00	9.34
		----------	AvgRF	CCRF	%Dev		----------	
58		4-Methyl-2-pentanone	0.504	0.515	-2.2	110	0.00	9.46
		----------	Amount	Calc.	%Drift		----------	
59		trans-1,3-Dichloropropene	40.000	44.246	-10.6	129	0.00	9.51
		----------	AvgRF	CCRF	%Dev		----------	
60		Tetrachloroethene	0.370	0.397	-7.3	117	0.00	9.52
		----------	Amount	Calc.	%Drift		----------	
61		Ethyl methacrylate	40.000	38.002	5.0	116	0.00	9.63
		----------	AvgRF	CCRF	%Dev		----------	

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62		1,1,2-Trichloroethane	0.327	0.335	-2.4	112	0.00	9.68
		----------	Amount	Calc.	%Drift	----------		
63		Dibromochloromethane	40.000	38.913	2.7	116	0.00	9.87
		----------	AvgRF	CCRF	%Dev	----------		
64		1,3-Dichloropropane	0.678	0.689	-1.6	111	0.00	9.96
		----------	Amount	Calc.	%Drift	----------		
65		1,2-Dibromoethane	40.000	39.070	2.3	113	0.00	10.13
		----------	AvgRF	CCRF	%Dev	----------		
66		2-hexanone	0.373	0.362	2.9	100	0.00	10.27
67		1-Chlorohexane	0.524	0.579	-10.5	119	0.00	10.58
68	C	Ethylbenzene	1.753	1.789	-2.1	114	0.00	10.64
69	P	Chlorobenzene	1.044	1.093	-4.7	115	0.00	10.64
		----------	Amount	Calc.	%Drift	----------		
70		1,1,1,2-Tetrachloroethane	40.000	39.493	1.3	114	0.00	10.69
		----------	AvgRF	CCRF	%Dev	----------		
71		m,p-Xylene	1.268	1.325	-4.5	113	0.00	10.78
72		o-Xylene	1.351	1.450	-7.3	114	0.00	11.22
73		Styrene	1.044	1.144	-9.6	115	0.00	11.26
		----------	Amount	Calc.	%Drift	----------		
74	P	Bromoform	40.000	41.254	-3.1	116	0.00	11.32
		----------	AvgRF	CCRF	%Dev	----------		
75		Isopropylbenzene	1.368	1.506	-10.1	117	0.00	11.53
76	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	116	0.00	12.98
77	S	4-Bromofluorobenzene	1.065	1.079	-1.3	119	0.00	11.83
78		cis-1,4-Dichloro-2-butene	0.356	0.376	-5.6	111	0.00	11.87
79		n-Propylbenzene	4.009	4.090	-2.0	111	0.00	11.95
80		Bromobenzene	0.846	0.878	-3.8	113	0.00	11.95
81	P	1,1,2,2-Tetrachloroethane	0.970	0.962	0.8	107	0.00	12.00
82		1,3,5-Trimethylbenzene	2.524	2.683	-6.3	114	0.00	12.13
83		2-Chlorotoluene	2.684	2.771	-3.2	112	0.00	12.13
		----------	Amount	Calc.	%Drift	----------		
84		trans-1,4-Dichloro-2-Bute	40.000	41.518	-3.8	118	0.00	12.18
		----------	AvgRF	CCRF	%Dev	----------		
85		1,2,3-Trichloropropane	0.261	0.236	9.6	99	0.00	12.16
86		Cyclohexanone	0.029	0.026	10.3	114	0.00	12.22
87		4-Chlorotoluene	2.476	2.585	-4.4	113	0.00	12.29
88		tert-Butylbenzene	1.484	1.574	-6.1	114	0.00	12.48
89		1,2,4-Trimethylbenzene	2.630	2.741	-4.2	113	0.00	12.54
		----------	Amount	Calc.	%Drift	----------		
90		Pentachloroethane	40.000	42.688	-6.7	128	0.00	12.51
		----------	AvgRF	CCRF	%Dev	----------		
91		sec-Butylbenzene	3.166	3.328	-5.1	114	0.00	12.66
92		4-Isopropyltoluene	2.512	2.698	-7.4	115	0.00	12.79
93		1,3-Dichlorobenzene	1.512	1.569	-3.8	112	0.00	12.91
94		1,4-Dichlorobenzene	1.530	1.595	-4.2	114	0.00	13.00
95		n-Butylbenzene	1.537	1.663	-8.2	113	0.00	13.23

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		Amount	Calc.	%Drift			
96	Benzyl Chloride	40.000	43.361	-8.4	121	0.00	13.24
		AvgRF	CCRF	%Dev			
97	1,2-Dichlorobenzene	1.440	1.529	-6.2	112	0.00	13.43
		Amount	Calc.	%Drift			
98	1,2-Dibromo-3-Chloropropa	40.000	40.854	-2.1	114	0.00	14.18
		AvgRF	CCRF	%Dev			
99	Hexachlorobutadiene	0.294	0.330	-12.2	120	0.00	14.74
		Amount	Calc.	%Drift			
100	1,2,4-Trichlorobenzene	40.000	41.194	-3.0	117	0.00	14.79
101	Naphthalene	40.000	41.182	-3.0	115	0.00	15.07
102	1,2,3-Trichlorobenzene	40.000	40.737	-1.8	117	0.00	15.23
		AvgRF	CCRF	%Dev			
103 I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	134	0.04	5.24
		Amount	Calc.	%Drift			
104	Ethanol	800.000	759.594	5.1	132	0.32	4.55
105	acrolein	200.000	101.151	49.4#	68	0.00	4.69
		AvgRF	CCRF	%Dev			
106	Tert Butyl Alcohol	1.098	1.193	-8.7	136	0.04	5.32
		Amount	Calc.	%Drift			
107	tert Amyl alcohol	400.000	380.758	4.8	121	0.02	7.40
108	Isobutyl alcohol	800.000	754.384	5.7	123	0.02	7.28
		AvgRF	CCRF	%Dev			
109	1,4-Dioxane	0.121	0.119	1.7	121	0.04	8.50

(#) = Out of Range SPCC's out = 0 CCC's out = 0
J048406.D 8260-JAPP9.M Tue Jul 14 09:12:36 2009

Continuing Calibration Summary

Job Number: F66523
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ2895-CC2895
Lab FileID: J048411.D

Evaluate Continuing Calibration Report

```
Data File : C:\MSDCHEM\1\DATA\071309\J048411.D          Vial: 1
Acq On    : 13 Jul 2009   2:08 pm                   Operator: karenw
Sample    : CC2895-4                                Inst    : MSVOA6
Misc      : ms12389,vj2895,,,,,                     Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\MSDCHEM\1\METHODS\8260-JAPP9.M (RTE Integrator)
Title        : SW-846 Method 5030B/8260B & EPA 624
Last Update  : Mon Jul 13 13:54:21 2009
Response via : Multiple Level Calibration

Min. RRF     :   0.001  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	117	0.00	7.55
2		Dichlorodifluoromethane	0.238	0.260	-9.2	126	0.00	2.84
3	P	Chloromethane	0.593	0.592	0.2	116	-0.01	3.00
4	C	Vinyl Chloride	0.480	0.479	0.2	111	0.00	3.14
		----------	Amount	Calc.	%Drift		----------	
5		Bromomethane	40.000	41.399	-3.5	115	0.00	3.51
		----------	AvgRF	CCRF	%Dev		----------	
6		Chloroethane	0.256	0.242	5.5	108	0.00	3.64
7		Trichlorofluoromethane	0.406	0.410	-1.0	114	0.00	3.87
8		Ethyl Ether	0.390	0.401	-2.8	117	0.00	4.09
9		1,2-Dichlorotrifluoroetha	0.396	0.397	-0.3	111	0.00	4.32
10	C	1,1-Dichloroethene	0.599	0.620	-3.5	114	0.00	4.36
11		Freon 113	0.268	0.276	-3.0	116	0.00	4.42
12		Carbon Disulfide	1.036	1.027	0.9	109	0.00	4.44
13		Iodomethane	0.481	0.509	-5.8	117	0.00	4.54
14		Allyl chloride	0.711	0.774	-8.9	119	0.00	4.84
		----------	Amount	Calc.	%Drift		----------	
15		Methylene Chloride	40.000	41.526	-3.8	115	0.00	4.96
		----------	AvgRF	CCRF	%Dev		----------	
16		Acetone	0.058	0.066	-13.8	131	0.02	4.99
17		Methyl acetate	0.056	0.063	-12.5	125	0.00	5.09
18		trans-1,2-Dichloroethene	0.607	0.647	-6.6	121	0.00	5.12
19		Hexane	0.382	0.394	-3.1	121	0.00	5.17
20		Methyl Tert Butyl Ether	0.900	1.007	-11.9	125	0.00	5.23
21		Acetonitrile	0.026	0.029	-11.5	124	0.01	5.50
22		Di-isopropyl ether	1.579	1.650	-4.5	117	0.00	5.59
23		Chloroprene	0.650	0.691	-6.3	114	0.00	5.72
24	P	1,1-Dichloroethane	0.731	0.784	-7.3	118	0.00	5.75
25		Acrylonitrile	0.159	0.159	0.0	135	0.00	5.78
26		ETBE	1.146	1.306	-14.0	123	0.00	5.97
27		Vinyl acetate	0.554	0.595	-7.4	125	0.00	5.95
28		cis-1,2-Dichloroethene	0.384	0.410	-6.8	118	0.00	6.30
		----------	Amount	Calc.	%Drift		----------	
29		2,2-Dichloropropane	40.000	42.294	-5.7	127	0.00	6.43
		----------	AvgRF	CCRF	%Dev		----------	
30		Bromochloromethane	0.181	0.195	-7.7	117	0.00	6.50

Continuing Calibration Summary

Job Number: F66523 **Sample:** VJ2895-CC2895
Account: TETTNOAK Tetra Tech, Inc **Lab FileID:** J048411.D
Project: Holloman AFB; Alamogordo, NM

31		Cyclohexane	0.622	0.671	-7.9	122	0.00	6.55
32	C	Chloroform	0.604	0.629	-4.1	119	0.00	6.55
		----------	Amount	Calc.	%Drift	----------		
33		Ethyl acetate	200.000	197.217	1.4	112	0.00	6.63
34		Tetrahydrofuran	40.000	44.155	-10.4	132	0.00	6.73
		----------	AvgRF	CCRF	%Dev	----------		
35	S	Dibromofluoromethane	0.265	0.268	-1.1	119	0.00	6.74
		----------	Amount	Calc.	%Drift	----------		
36		Carbon Tetrachloride	40.000	46.125	-15.3	136	0.00	6.74
37		1,1,1-Trichloroethane	40.000	41.973	-4.9	124	0.00	6.81
		----------	AvgRF	CCRF	%Dev	----------		
38		2-Butanone	0.256	0.281	-9.8	122	0.01	6.84
39		1,1-Dichloropropene	0.468	0.505	-7.9	119	0.00	6.91
40		Propionitrile	0.061	0.066	-8.2	123	0.01	7.15
41		Methacrylonitrile	0.278	0.284	-2.2	119	0.00	7.17
42		Benzene	1.367	1.421	-4.0	117	0.00	7.16
43		TAME	0.841	0.943	-12.1	121	0.00	7.24
44	S	1,2-Dichloroethane-d4	0.338	0.352	-4.1	118	0.00	7.28
45		1,2-Dichloroethane	0.581	0.587	-1.0	118	0.00	7.35
46		Trichloroethene	0.354	0.370	-4.5	116	0.00	7.72
47		Methylcyclohexane	0.498	0.540	-8.4	121	0.00	7.74
48		Dibromomethane	0.213	0.231	-8.5	119	0.00	8.14
49	C	1,2-Dichloropropane	0.441	0.468	-6.1	116	0.00	8.23
		----------	Amount	Calc.	%Drift	----------		
50		Bromodichloromethane	40.000	41.374	-3.4	119	0.00	8.28
51		Methyl methacrylate	40.000	40.395	-1.0	118	0.00	8.39
		----------	AvgRF	CCRF	%Dev	----------		
52		2-Chloroethyl vinyl ether	0.274	0.303	-10.6	116	0.00	8.79
		----------	Amount	Calc.	%Drift	----------		
53		cis-1,3-Dichloropropene	40.000	41.226	-3.1	118	0.00	8.89
		----------	AvgRF	CCRF	%Dev	----------		
54	I	Chlorobenzene-d5	1.000	1.000	0.0	116	0.00	10.62
55	S	Toluene-d8	1.250	1.242	0.6	116	0.00	9.08
56	C	Toluene	1.667	1.734	-4.0	116	0.00	9.14
		----------	Amount	Calc.	%Drift	----------		
57		2-Nitropropane	200.000	193.600	3.2	110	0.00	9.34
		----------	AvgRF	CCRF	%Dev	----------		
58		4-Methyl-2-pentanone	0.504	0.530	-5.2	112	0.00	9.46
		----------	Amount	Calc.	%Drift	----------		
59		trans-1,3-Dichloropropene	40.000	41.155	-2.9	119	0.00	9.51
		----------	AvgRF	CCRF	%Dev	----------		
60		Tetrachloroethene	0.370	0.398	-7.6	117	0.00	9.53
		----------	Amount	Calc.	%Drift	----------		
61		Ethyl methacrylate	40.000	40.923	-2.3	124	0.00	9.63
		----------	AvgRF	CCRF	%Dev	----------		

Continuing Calibration Summary

Job Number: F66523
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ2895-CC2895
Lab FileID: J048411.D

62		1,1,2-Trichloroethane	0.327	0.345	-5.5	114	0.00	9.68
		----------	Amount	Calc.	%Drift	----------		
63		Dibromochloromethane	40.000	40.007	-0.0	119	0.00	9.87
		----------	AvgRF	CCRF	%Dev	----------		
64		1,3-Dichloropropane	0.678	0.718	-5.9	114	0.00	9.96
		----------	Amount	Calc.	%Drift	----------		
65		1,2-Dibromoethane	40.000	40.527	-1.3	116	0.00	10.13
		----------	AvgRF	CCRF	%Dev	----------		
66		2-hexanone	0.373	0.419	-12.3	115	0.00	10.28
67		1-Chlorohexane	0.524	0.574	-9.5	117	0.00	10.58
68	C	Ethylbenzene	1.753	1.792	-2.2	113	0.00	10.64
69	P	Chlorobenzene	1.044	1.094	-4.8	114	0.00	10.64
		----------	Amount	Calc.	%Drift	----------		
70		1,1,1,2-Tetrachloroethane	40.000	40.249	-0.6	115	0.00	10.69
		----------	AvgRF	CCRF	%Dev	----------		
71		m,p-Xylene	1.268	1.337	-5.4	113	0.00	10.78
72		o-Xylene	1.351	1.455	-7.7	114	0.00	11.22
73		Styrene	1.044	1.132	-8.4	112	0.00	11.26
		----------	Amount	Calc.	%Drift	----------		
74	P	Bromoform	40.000	43.101	-7.8	120	0.00	11.32
		----------	AvgRF	CCRF	%Dev	----------		
75		Isopropylbenzene	1.368	1.485	-8.6	114	0.00	11.53
76	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	115	0.00	12.98
77	S	4-Bromofluorobenzene	1.065	1.074	-0.8	117	0.00	11.83
78		cis-1,4-Dichloro-2-butene	0.356	0.408	-14.6	120	0.00	11.87
79		n-Propylbenzene	4.009	4.208	-5.0	113	0.00	11.95
80		Bromobenzene	0.846	0.898	-6.1	115	0.00	11.95
81	P	1,1,2,2-Tetrachloroethane	0.970	1.011	-4.2	112	0.00	12.00
82		1,3,5-Trimethylbenzene	2.524	2.711	-7.4	114	0.00	12.13
83		2-Chlorotoluene	2.684	2.819	-5.0	113	0.00	12.13
		----------	Amount	Calc.	%Drift	----------		
84		trans-1,4-Dichloro-2-Bute	40.000	40.312	-0.8	114	0.00	12.18
		----------	AvgRF	CCRF	%Dev	----------		
85		1,2,3-Trichloropropane	0.261	0.277	-6.1	115	0.00	12.16
86		Cyclohexanone	0.029	0.029	0.0	127	0.00	12.22
87		4-Chlorotoluene	2.476	2.655	-7.2	115	0.00	12.29
88		tert-Butylbenzene	1.484	1.626	-9.6	117	0.00	12.48
89		1,2,4-Trimethylbenzene	2.630	2.815	-7.0	115	0.00	12.54
		----------	Amount	Calc.	%Drift	----------		
90		Pentachloroethane	40.000	42.669	-6.7	127	0.00	12.51
		----------	AvgRF	CCRF	%Dev	----------		
91		sec-Butylbenzene	3.166	3.393	-7.2	115	0.00	12.66
92		4-Isopropyltoluene	2.512	2.734	-8.8	115	0.00	12.79
93		1,3-Dichlorobenzene	1.512	1.590	-5.2	113	0.00	12.91
94		1,4-Dichlorobenzene	1.530	1.586	-3.7	112	0.00	13.00
95		n-Butylbenzene	1.537	1.697	-10.4	114	0.00	13.23

Continuing Calibration Summary

Job Number: F66523
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ2895-CC2895
Lab FileID: J048411.D

		Amount	Calc.	%Drift			
96	Benzyl Chloride	40.000	42.330	-5.8	117	0.00	13.24
		AvgRF	CCRF	%Dev			
97	1,2-Dichlorobenzene	1.440	1.518	-5.4	111	0.00	13.43
		Amount	Calc.	%Drift			
98	1,2-Dibromo-3-Chloropropa	40.000	43.305	-8.3	121	0.00	14.18
		AvgRF	CCRF	%Dev			
99	Hexachlorobutadiene	0.294	0.337	-14.6	122	0.00	14.75
		Amount	Calc.	%Drift			
100	1,2,4-Trichlorobenzene	40.000	41.684	-4.2	117	0.00	14.79
101	Naphthalene	40.000	41.936	-4.8	116	0.00	15.07
102	1,2,3-Trichlorobenzene	40.000	42.003	-5.0	120	0.00	15.23
		AvgRF	CCRF	%Dev			
103 I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	144	0.03	5.24
		Amount	Calc.	%Drift			
104	Ethanol	800.000	782.931	2.1	146	0.15	4.38
105	acrolein	200.000	178.617	10.7	130	0.00	4.69
		AvgRF	CCRF	%Dev			
106	Tert Butyl Alcohol	1.098	1.167	-6.3	142	0.04	5.31
		Amount	Calc.	%Drift			
107	tert Amyl alcohol	400.000	377.880	5.5	129	0.02	7.40
108	Isobutyl alcohol	800.000	758.701	5.2	132	0.02	7.29
		AvgRF	CCRF	%Dev			
109	1,4-Dioxane	0.121	0.117	3.3	128	0.04	8.50

(#) = Out of Range SPCC's out = 0 CCC's out = 0
J048406.D 8260-JAPP9.M Tue Jul 14 09:12:38 2009

Initial Calibration Summary

Job Number: F66523
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ2896-ICC2896
Lab FileID: J048444.D


```
                         Response Factor Report  MSVOA6

 Method       : C:\MSDCHEM\1\METHODS\SCOXYJ.M (RTE Integrator)
 Title        : EPA 624 & SWA 5030B/8260B
 Last Update  : Tue Jul 14 12:52:11 2009
 Response via : Initial Calibration

 Calibration Files
 1   =J048441.D   2   =J048442.D   3   =J048443.D   4   =J048444.D
 5      =J048445.D    6      =J048446.D

       Compound              1     2     3     4     5     6     Avg    %RSD
 ---------------------------------------------------------------------------

 1) I   Fluorobenzene         ----------------ISTD--------------------
 2)     tert-Butyl Formate  0.291 0.337 0.350 0.347 0.358 0.341 0.337   7.07
 3) S   Dibromofluoromethan 0.266 0.264 0.268 0.267 0.262 0.261 0.264   1.08
 4) S   1,2-Dichloroethane- 0.328 0.333 0.336 0.341 0.335 0.338 0.335   1.30

 5) I   Chlorobenzene-d5      ----------------ISTD--------------------
 6) S   Toluene-d8          1.236 1.240 1.227 1.197 1.216 1.195 1.218   1.58

 7) I   1,4-Dichlorobenzene-d ----------------ISTD--------------------
 8) S   4-Bromofluorobenzen 1.106 1.079 1.082 1.093 1.082 1.085 1.088   0.95

 9) I   Tert Butyl alcohol-d1 ----------------ISTD--------------------
10)     Ethanol             0.351 0.173 0.184 0.189 0.189 0.189 0.213  32.03
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9998
              Response Ratio = 0.00000 + 0.18910 *A

11)     Ethyl tert-butyl al 0.649 0.840 0.954 1.133 1.154 1.243 0.996  22.52
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9970
              Response Ratio = 0.00000 + 1.19929 *A

 ---------------------------------------------------------------------------
 (#) = Out of Range

          SCOXYJ.M          Wed Jul 15 16:44:35 2009
```

Initial Calibration Verification

Job Number: F66523
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ2896-ICV2896
Lab FileID: J048448.D

Evaluate Continuing Calibration Report

```
Data File : C:\MSDCHEM\1\DATA\071409\J048448.D          Vial: 10
Acq On    : 14 Jul 2009   1:32 pm                   Operator: karenw
Sample    : ICV2896-4                               Inst    : MSVOA6
Misc      : ms12402,vj2896,,,,,                     Multiplr: 1.00
MS Integration Params: small.p

Method       : C:\MSDCHEM\1\METHODS\SCOXYJ.M (RTE Integrator)
Title        : EPA 624 & SWA 5030B/8260B
Last Update  : Tue Jul 14 12:52:11 2009
Response via : Multiple Level Calibration

Min. RRF     :   0.001  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	99	0.00	7.55
2		tert-Butyl Formate	0.337	0.376	-11.6	107	0.00	7.00
3	S	Dibromofluoromethane	0.264	0.265	-0.4	98	0.00	6.73
4	S	1,2-Dichloroethane-d4	0.335	0.339	-1.2	98	0.00	7.27
5	I	Chlorobenzene-d5	1.000	1.000	0.0	98	0.00	10.62
6	S	Toluene-d8	1.218	1.220	-0.2	99	0.00	9.08
7	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	97	0.00	12.98
8	S	4-Bromofluorobenzene	1.088	1.092	-0.4	97	0.00	11.83
9	I	Tert Butyl alcohol-d10	1.000	1.000	0.0	103	-0.03	5.21
			Amount	Calc.	%Drift			
10		Ethanol	4000.000	3280.377	18.0	85	-0.06	4.32
11		Ethyl tert-butyl alcohol	2000.000	1789.823	10.5	98	0.00	10.23

(#) = Out of Range SPCC's out = 0 CCC's out = 0
J048444.D SCOXYJ.M Wed Jul 15 16:49:08 2009

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Instrument Runlogs
- Initial and Continuing Calibration Blanks
- Initial and Continuing Calibration Checks
- High and Low Check Standards
- Interfering Element Check Standards
- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20714W2.PRN Date Analyzed: 07/14/09 Methods: SW846 7470A
Analyst: LM Run ID: MA7355
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:35	MA7355-STD1	1		STD01REP1
11:37	MA7355-STD2	1		STD02REP1
11:39	MA7355-STD3	1		STD03REP1
11:41	MA7355-STD4	1		STD04REP1
11:43	MA7355-STD5	1		STD05REP1
11:44	MA7355-STD6	1		STD06REP1
11:51	MA7355-HSTD1	1		
11:53	MA7355-ICV1	1		
11:54	MA7355-ICB1	1		
11:56	MA7355-CRI1	1		
11:58	MA7355-CCV1	1		
12:00	MA7355-CCB1	1		
12:01	MP16670-MB1	1		
12:03	MP16670-B1	1		
12:05	F66519-10	1		(sample used for QC only; not part of login F66523)
12:07	MP16670-D1	1		
12:09	MP16670-SD1	5		
12:11	MP16670-S1	1		
12:13	MP16670-S2	1		
12:15	ZZZZZZ	1		
12:17	ZZZZZZ	1		
12:19	ZZZZZZ	1		
12:20	MA7355-CCV2	1		
12:22	MA7355-CCB2	1		
12:24	ZZZZZZ	1		
12:26	ZZZZZZ	1		
12:27	ZZZZZZ	1		
12:29	ZZZZZZ	1		
12:31	ZZZZZZ	1		
12:33	ZZZZZZ	1		
12:34	ZZZZZZ	1		
12:36	ZZZZZZ	1		
12:38	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20714W2.PRN Date Analyzed: 07/14/09 Methods: SW846 7470A
Analyst: LM Run ID: MA7355
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
12:39	ZZZZZZ	1		
12:41	MA7355-CCV3	1		
12:43	MA7355-CCB3	1		
12:45	ZZZZZZ	1		
12:46	ZZZZZZ	1		
12:48	ZZZZZZ	1		
12:50	ZZZZZZ	1		
12:52	ZZZZZZ	1		
12:54	ZZZZZZ	1		
12:56	MP16672-MB1	1		
12:58	MP16672-B1	1		
13:00	F66523-5	1		
13:01	MP16672-D1	1		
13:03	MA7355-CCV4	1		
13:05	MA7355-CCB4	1		
13:06	MP16672-SD1	5		
13:08	MP16672-S1	1		
13:10	MP16672-S2	1		
13:11	F66523-1A	1		
13:13	F66523-2A	1		
13:15	F66523-3A	1		
13:17	F66523-4A	1		
13:19	F66523-5A	1		
13:21	ZZZZZZ	1		
13:23	ZZZZZZ	1		
13:25	MA7355-CCV5	1		
13:27	MA7355-CCB5	1		
13:29	ZZZZZZ	1		
13:31	ZZZZZZ	1		
13:34	MP16671-MB1	1		
13:36	MP16671-B1	1		
13:38	F66519-10A	1		(sample used for QC only; not part of login F66523)
13:40	MP16671-D1	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20714W2.PRN Date Analyzed: 07/14/09 Methods: SW846 7470A
Analyst: LM Run ID: MA7355
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:42	MP16671-SD1	5		
13:44	MP16671-S1	1		
13:46	MP16671-S2	1		
13:49	ZZZZZZ	1		
13:51	MA7355-CCV6	1		
13:53	MA7355-CCB6	1		
13:55	ZZZZZZ	1		
13:56	ZZZZZZ	1		
13:58	ZZZZZZ	1		
14:00	ZZZZZZ	1		
14:02	ZZZZZZ	1		
14:04	ZZZZZZ	1		
14:06	ZZZZZZ	1		
14:08	ZZZZZZ	1		
14:10	ZZZZZZ	1		
14:12	ZZZZZZ	1		
14:14	MA7355-CCV7	1		
14:15	MA7355-CCB7	1		
14:17	ZZZZZZ	1		
14:20	ZZZZZZ	1		
14:22	ZZZZZZ	1		
14:23	ZZZZZZ	1		
14:25	F66523-1	1		
14:27	F66523-2	1		
14:29	F66523-3	1		
14:31	F66523-4	1		
---------->	Last reportable sample/prep for job F66523			
14:33	MA7355-CRI2	1		
14:35	MA7355-CCV8	1		
14:36	MA7355-CCB8	1		
---------->	Last reportable CCB for job F66523			

Refer to raw data for calibration curve and standards.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20714W2.PRN Date Analyzed: 07/14/09 Methods: SW846 7470A
QC Limits: result < RL Run ID: MA7355 Units: ug/l

Time:			11:54		12:00		12:22		12:43	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	1.0	.14	-0.11	<1.0	-0.11	<1.0	-0.077	<1.0	-0.034	<1.0

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20714W2.PRN Date Analyzed: 07/14/09 Methods: SW846 7470A
QC Limits: result < RL Run ID: MA7355 Units: ug/l

Time:			13:05		13:27		13:53		14:15	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	1.0	.14	-0.072	<1.0	-0.018	<1.0	-0.11	<1.0	-0.071	<1.0

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20714W2.PRN Date Analyzed: 07/14/09 Methods: SW846 7470A
QC Limits: result < RL Run ID: MA7355 Units: ug/l

Time:			14:36	
Sample ID:			CCB8	
Metal	RL	IDL	raw	final
Mercury	1.0	.14	-0.039	<1.0

(*) Outside of QC limits
(anr) Analyte not requested

6.1.1
6

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20714W2.PRN Date Analyzed: 07/14/09 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA7355 Units: ug/l

Time:		11:53			11:58			12:20	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3.0	3.0	100.0	3.0	3.0	100.0	3.0	3.0	100.0

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20714W2.PRN Date Analyzed: 07/14/09 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA7355 Units: ug/l

Time:		12:41			13:03			13:25	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3.0	3.0	100.0	3.0	3.0	100.0	3	3.3	110.0

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20714W2.PRN Date Analyzed: 07/14/09 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA7355 Units: ug/l

Time:		13:51			14:14			14:35	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3	3.1	103.3	3.0	3.0	100.0	3	2.9	96.7

(*) Outside of QC limits
(anr) Analyte not requested

6.1.2
6

HIGH STANDARD CHECK SUMMARY

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20714W2.PRN Date Analyzed: 07/14/09 Methods: SW846 7470A
QC Limits: 95 to 105 % Recovery Run ID: MA7355 Units: ug/l

Time:		11:51	
Sample ID:	HSTD	HSTD1	
Metal	True	Results	% Rec
Mercury	6	6.2	103.3

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20714W2.PRN Date Analyzed: 07/14/09 Methods: SW846 7470A
QC Limits: 80 to 120 % Recovery Run ID: MA7355 Units: ug/l

Time:			11:56		14:33	
Sample ID:	CRI	CRIA	CRI1		CRI2	
Metal	True	True	Results	% Rec	Results	% Rec
Mercury	0.20		0.17	85.0	0.15	75.0*(a)

(*) Outside of QC limits
(anr) Analyte not requested
(a) Possible instrument baseline drift.

6.1.4

6

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071409.ASC Date Analyzed: 07/14/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7359
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:25	MA7359-HSTD1	1		
09:28	MA7359-ICV1	1		
09:34	MA7359-ICB1	1		
09:37	MA7359-CRIA1	1		
09:47	MA7359-ICSA1	1		
09:49	MA7359-ICSAB1	1		
09:55	MA7359-CCV1	1		
09:59	MA7359-CCB1	1		
16:17	MA7359-CCV2	1		
16:22	MA7359-CCB2	1		
16:25	ZZZZZZ	2		
16:29	ZZZZZZ	1		
16:32	ZZZZZZ	1		
16:35	ZZZZZZ	10		
16:39	ZZZZZZ	10		
16:42	ZZZZZZ	10		
16:46	ZZZZZZ	10		
16:49	ZZZZZZ	10		
16:52	ZZZZZZ	10		
16:56	ZZZZZZ	2		
16:59	MA7359-CCV3	1		
17:04	MA7359-CCB3	1		
17:07	F66555-1	10		(sample used for QC only; not part of login F66523)
17:11	MP16661-D1	10		
17:14	MP16661-SD1	50		
17:17	MP16661-S1	10		
17:21	MP16661-S2	10		
17:24	ZZZZZZ	10		
17:28	ZZZZZZ	10		
17:31	ZZZZZZ	4		
17:34	ZZZZZZ	5		
17:38	ZZZZZZ	10		
17:41	MA7359-CCV4	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071409.ASC Date Analyzed: 07/14/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7359
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
17:46	MA7359-CCB4	1		
17:49	ZZZZZZ	4		
17:52	ZZZZZZ	2		
17:56	ZZZZZZ	10		
17:59	ZZZZZZ	4		
18:03	ZZZZZZ	4		
18:06	ZZZZZZ	10		
18:09	ZZZZZZ	10		
18:13	ZZZZZZ	4		
18:16	ZZZZZZ	2		
18:20	ZZZZZZ	10		
18:23	MA7359-CCV5	1		
18:27	MA7359-CCB5	1		
18:31	ZZZZZZ	10		
18:34	F66532-1	2		(sample used for QC only; not part of login F66523)
18:38	MP16662-D1	2		
18:41	MP16662-SD1	10		
18:45	MP16662-S1	2		
18:48	MP16662-S2	2		
18:51	ZZZZZZ	5		
18:58	ZZZZZZ	2		
19:02	ZZZZZZ	2		
19:05	MA7359-CCV6	1		
19:09	MA7359-CCB6	1		
19:13	ZZZZZZ	2		
19:16	ZZZZZZ	2		
19:20	ZZZZZZ	4		
19:23	ZZZZZZ	2		
19:26	ZZZZZZ	2		
19:30	ZZZZZZ	4		
19:33	ZZZZZZ	4		
19:37	MP16668-S1	4		
19:40	MP16668-S2	4		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071409.ASC Date Analyzed: 07/14/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7359
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
19:48	MA7359-CCV7	1		
19:52	MA7359-CCB7	1		
20:24	MP16673-MB1	1		
20:27	MP16673-B1	1		
20:31	MA7359-CCV8	1		
20:35	MA7359-CCB8	1		
20:39	F66507-5	1		(sample used for QC only; not part of login F66523)
20:42	MP16673-D1	1		
20:45	MP16673-SD1	5		
20:49	MP16673-PS1	1		
20:52	MP16673-S1	1		
20:56	ZZZZZZ	1		
20:59	ZZZZZZ	1		
21:03	ZZZZZZ	1		
21:06	ZZZZZZ	1		
21:14	MA7359-CCV9	1		
21:18	MA7359-CCB9	1		
21:43	MP16658-MB1	1		
21:47	MP16658-B1	1		
21:50	F66519-10	10		(sample used for QC only; not part of login F66523)
21:53	MP16658-D1	10		
21:57	MA7359-CCV10	1		
22:01	MA7359-CCB10	1		
22:05	MP16658-SD1	50		
22:08	MP16658-S1	10		
22:11	MP16658-S2	10		
22:15	ZZZZZZ	20		
22:18	ZZZZZZ	20		
22:22	ZZZZZZ	20		
22:25	ZZZZZZ	20		
22:29	ZZZZZZ	5		
22:32	ZZZZZZ	20		
22:35	ZZZZZZ	20		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071409.ASC Date Analyzed: 07/14/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7359
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
22:39	MA7359-CCV11	1		
22:43	MA7359-CCB11	1		
22:47	ZZZZZZ	4		
22:50	ZZZZZZ	20		
22:53	F66523-1	5		
22:57	F66523-2	5		
23:00	F66523-3	5		
23:04	F66523-4	4		
23:07	F66523-5	5		
23:11	F66523-1A	5		
23:14	F66523-2A	5		
23:17	F66523-3A	5		
23:21	MA7359-CCV12	1		
23:25	MA7359-CCB12	1		
23:29	F66523-4A	4		
23:32	F66523-5A	5		
23:37	MP16658-MB2A	1		
---------->	Last reportable sample/prep for job F66523			
23:40	MA7359-CRIA2	1		
23:43	MA7359-ICSA2	1		
23:47	MA7359-ICSAB2	1		
23:50	MA7359-CCV13	1		
23:55	MA7359-CCB13	1		
---------->	Last reportable CCB for job F66523			

Refer to raw data for calibration curve and standards.

INTERNAL STANDARD SUMMARY

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071409.ASC Date Analyzed: 07/14/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7359
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1
09:25	MA7359-HSTD1	7620
09:28	MA7359-ICV1	7920
09:34	MA7359-ICB1	8206 R
09:37	MA7359-CRIA1	8061
09:47	MA7359-ICSA1	7104
09:49	MA7359-ICSAB1	7088
09:55	MA7359-CCV1	7779
09:59	MA7359-CCB1	8009
16:17	MA7359-CCV2	7860
16:22	MA7359-CCB2	8255
16:25	ZZZZZZ	7990
16:29	ZZZZZZ	7645
16:32	ZZZZZZ	7896
16:35	ZZZZZZ	7834
16:39	ZZZZZZ	7707
16:42	ZZZZZZ	7813
16:46	ZZZZZZ	7698
16:49	ZZZZZZ	7772
16:52	ZZZZZZ	7709
16:56	ZZZZZZ	7728
16:59	MA7359-CCV3	7811
17:04	MA7359-CCB3	8087
17:07	F66555-1	7896
17:11	MP16661-D1	7705
17:14	MP16661-SD1	7957
17:17	MP16661-S1	7699
17:21	MP16661-S2	7708
17:24	ZZZZZZ	7790
17:28	ZZZZZZ	7660
17:31	ZZZZZZ	7998
17:34	ZZZZZZ	7776
17:38	ZZZZZZ	7633
17:41	MA7359-CCV4	7892

INTERNAL STANDARD SUMMARY

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071409.ASC Date Analyzed: 07/14/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7359
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1
17:46	MA7359-CCB4	8167
17:49	ZZZZZZ	7828
17:52	ZZZZZZ	7927
17:56	ZZZZZZ	7846
17:59	ZZZZZZ	7857
18:03	ZZZZZZ	7787
18:06	ZZZZZZ	7761
18:09	ZZZZZZ	7856
18:13	ZZZZZZ	7778
18:16	ZZZZZZ	8155
18:20	ZZZZZZ	7890
18:23	MA7359-CCV5	7936
18:27	MA7359-CCB5	8020
18:31	ZZZZZZ	7771
18:34	F66532-1	8034
18:38	MP16662-D1	7862
18:41	MP16662-SD1	8129
18:45	MP16662-S1	8007
18:48	MP16662-S2	7956
18:51	ZZZZZZ	8529
18:58	ZZZZZZ	8259
19:02	ZZZZZZ	8648
19:05	MA7359-CCV6	8021
19:09	MA7359-CCB6	8338
19:13	ZZZZZZ	8481
19:16	ZZZZZZ	7774
19:20	ZZZZZZ	8174
19:23	ZZZZZZ	7623
19:26	ZZZZZZ	7685
19:30	ZZZZZZ	8322
19:33	ZZZZZZ	8406
19:37	MP16668-S1	7922
19:40	MP16668-S2	8026

INTERNAL STANDARD SUMMARY

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071409.ASC Date Analyzed: 07/14/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7359
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1
19:48	MA7359-CCV7	7995
19:52	MA7359-CCB7	8205
20:24	MP16673-MB1	8314
20:27	MP16673-B1	7795
20:31	MA7359-CCV8	7846
20:35	MA7359-CCB8	8165
20:39	F66507-5	7751
20:42	MP16673-D1	7731
20:45	MP16673-SD1	8044
20:49	MP16673-PS1	7688
20:52	MP16673-S1	7479
20:56	ZZZZZZ	7595
20:59	ZZZZZZ	7828
21:03	ZZZZZZ	7502
21:06	ZZZZZZ	8159
21:14	MA7359-CCV9	7977
21:18	MA7359-CCB9	8558
21:43	MP16658-MB1	8218
21:47	MP16658-B1	7938
21:50	F66519-10	6961
21:53	MP16658-D1	6935
21:57	MA7359-CCV10	7913
22:01	MA7359-CCB10	8244
22:05	MP16658-SD1	7614
22:08	MP16658-S1	7015
22:11	MP16658-S2	7006
22:15	ZZZZZZ	6866
22:18	ZZZZZZ	6920
22:22	ZZZZZZ	6763
22:25	ZZZZZZ	6979
22:29	ZZZZZZ	6874
22:32	ZZZZZZ	6873
22:35	ZZZZZZ	6963

INTERNAL STANDARD SUMMARY

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071409.ASC Date Analyzed: 07/14/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7359
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1
22:39	MA7359-CCV11	7876
22:43	MA7359-CCB11	8095
22:47	ZZZZZZ	7029
22:50	ZZZZZZ	7166
22:53	F66523-1	6857
22:57	F66523-2	6744
23:00	F66523-3	6924
23:04	F66523-4	6920
23:07	F66523-5	6962
23:11	F66523-1A	6914
23:14	F66523-2A	6818
23:17	F66523-3A	6931
23:21	MA7359-CCV12	7866
23:25	MA7359-CCB12	8125
23:29	F66523-4A	6563
23:32	F66523-5A	6869
23:37	MP16658-MB2A	8201
23:40	MA7359-CRIA2	8110
23:43	MA7359-ICSA2	7090
23:47	MA7359-ICSAB2	7161
23:50	MA7359-CCV13	7868
23:55	MA7359-CCB13	8129

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium	60-125 %

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071409.ASC Date Analyzed: 07/14/09 Methods: SW846 6010B
QC Limits: result < RL Run ID: MA7359 Units: ug/l

Time:			09:34		09:59		16:22		17:04	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	11	0.31	<200	5.3	<200	6.6	<200	8.5	<200
Antimony	6.0	4.5	2.2	<6.0	-1.9	<6.0	-1.4	<6.0	1.3	<6.0
Arsenic	10	3.6	1.6	<10	2.1	<10	2.5	<10	2.1	<10
Barium	200	5	-0.060	<200	0.10	<200	0.52	<200	0.57	<200
Beryllium	4.0	1	0.060	<4.0	0.030	<4.0	0.52	<4.0	0.47	<4.0
Cadmium	5.0	1	0.11	<5.0	0.33	<5.0	0.59	<5.0	0.42	<5.0
Calcium	1000	100	-2.6	<1000	4.6	<1000	14.8	<1000	17.2	<1000
Chromium	10	1.6	-0.30	<10	0.15	<10	0.64	<10	0.17	<10
Cobalt	50	.83	0.15	<50	0.58	<50	0.49	<50	0.11	<50
Copper	25	2.1	-0.45	<25	-0.050	<25	-0.010	<25	0.050	<25
Iron	300	23	-7.0	<300	2.6	<300	13.6	<300	12.6	<300
Lead	5.0	2	2.6	<5.0	1.2	<5.0	1.6	<5.0	2.1	<5.0
Magnesium	5000	100	0.10	<5000	5.5	<5000	10.8	<5000	8.2	<5000
Manganese	15	.5	-0.030	<15	0.050	<15	0.54	<15	0.52	<15
Molybdenum	50	2.8								
Nickel	40	2.3	0.15	<40	-0.15	<40	0.80	<40	0.37	<40
Potassium	10000	100	229	<10000	243	<10000	237	<10000	229	<10000
Selenium	10	3.1	-0.64	<10	1.8	<10	2.8	<10	1.9	<10
Silver	10	1.2	-0.19	<10	0.29	<10	-0.66	<10	-0.43	<10
Sodium	10000	500	-100	<10000	-35	<10000	-150	<10000	-120	<10000
Thallium	10	3.4	0.34	<10	-0.89	<10	0.20	<10	0.29	<10
Tin	50	2.8								
Vanadium	50	.66	0.020	<50	0.28	<50	0.61	<50	0.42	<50
Zinc	20	3.8	0.19	<20	0.22	<20	0.44	<20	0.27	<20

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071409.ASC Date Analyzed: 07/14/09 Methods: SW846 6010B
QC Limits: result < RL Run ID: MA7359 Units: ug/l

Time:			17:46		18:27		19:09		19:52	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	11	9.1	<200	15.2	<200	14.0	<200	24.8	<200
Antimony	6.0	4.5	-3.8	<6.0	-0.16	<6.0	-2.2	<6.0	0.22	<6.0
Arsenic	10	3.6	0.22	<10	1.7	<10	1.4	<10	2.4	<10
Barium	200	5	0.60	<200	0.75	<200	0.75	<200	1.0	<200
Beryllium	4.0	1	0.63	<4.0	0.68	<4.0	0.94	<4.0	0.93	<4.0
Cadmium	5.0	1	0.56	<5.0	0.74	<5.0	0.82	<5.0	1.1	<5.0
Calcium	1000	100	29.5	<1000	55.1	<1000	71.2	<1000	86.1	<1000
Chromium	10	1.6	0.27	<10	0.63	<10	0.37	<10	1.1	<10
Cobalt	50	.83	0.87	<50	0.80	<50	0.83	<50	0.96	<50
Copper	25	2.1	-0.040	<25	0.11	<25	-0.14	<25	0.99	<25
Iron	300	23	15.0	<300	19.0	<300	23.9	<300	47.3	<300
Lead	5.0	2	1.7	<5.0	2.1	<5.0	2.4	<5.0	1.6	<5.0
Magnesium	5000	100	12.4	<5000	15.9	<5000	18.2	<5000	22.2	<5000
Manganese	15	.5	0.58	<15	0.76	<15	1.1	<15	2.0	<15
Molybdenum	50	2.8								
Nickel	40	2.3	0.75	<40	0.39	<40	0.59	<40	0.85	<40
Potassium	10000	100	233	<10000	228	<10000	235	<10000	245	<10000
Selenium	10	3.1	2.8	<10	3.3	<10	4.0	<10	1.8	<10
Silver	10	1.2	0.0	<10	0.11	<10	-0.38	<10	0.10	<10
Sodium	10000	500	-130	<10000	-220	<10000	-140	<10000	3.8	<10000
Thallium	10	3.4	1.1	<10	3.9	<10	1.6	<10	1.5	<10
Tin	50	2.8								
Vanadium	50	.66	0.38	<50	0.82	<50	0.81	<50	1.1	<50
Zinc	20	3.8	0.52	<20	0.73	<20	1.1	<20	1.1	<20

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071409.ASC Date Analyzed: 07/14/09 Methods: SW846 6010B
QC Limits: result < RL Run ID: MA7359 Units: ug/l

Time:			20:35		21:18		22:01		22:43	
Sample ID:			CCB8		CCB9		CCB10		CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	11	-7.4	<200	-7.1	<200	-0.63	<200	4.2	<200
Antimony	6.0	4.5	-2.3	<6.0	-0.90	<6.0	0.10	<6.0	-0.70	<6.0
Arsenic	10	3.6	3.8	<10	2.0	<10	3.2	<10	3.7	<10
Barium	200	5	0.080	<200	0.22	<200	0.32	<200	0.47	<200
Beryllium	4.0	1	0.15	<4.0	0.42	<4.0	0.39	<4.0	0.45	<4.0
Cadmium	5.0	1	0.21	<5.0	0.24	<5.0	0.42	<5.0	0.62	<5.0
Calcium	1000	100	4.8	<1000	7.4	<1000	10.8	<1000	17.7	<1000
Chromium	10	1.6	-0.040	<10	0.040	<10	0.070	<10	0.63	<10
Cobalt	50	.83	0.15	<50	0.47	<50	0.43	<50	0.62	<50
Copper	25	2.1	-0.050	<25	-0.27	<25	-0.10	<25	0.54	<25
Iron	300	23	-5.6	<300	2.5	<300	3.2	<300	7.1	<300
Lead	5.0	2	2.0	<5.0	1.1	<5.0	2.7	<5.0	0.88	<5.0
Magnesium	5000	100	1.3	<5000	3.7	<5000	6.5	<5000	26.6	<5000
Manganese	15	.5	0.070	<15	0.17	<15	0.33	<15	0.48	<15
Molybdenum	50	2.8								
Nickel	40	2.3	-0.050	<40	0.26	<40	-0.26	<40	0.53	<40
Potassium	10000	100	232	<10000	235	<10000	249	<10000	252	<10000
Selenium	10	3.1	2.6	<10	1.5	<10	1.8	<10	1.4	<10
Silver	10	1.2	-0.43	<10	0.14	<10	-0.11	<10	-0.20	<10
Sodium	10000	500	-29	<10000	-80	<10000	-79	<10000	49.9	<10000
Thallium	10	3.4	0.93	<10	2.1	<10	1.5	<10	2.3	<10
Tin	50	2.8								
Vanadium	50	.66	0.20	<50	0.36	<50	0.35	<50	0.85	<50
Zinc	20	3.8	0.14	<20	0.090	<20	0.37	<20	0.51	<20

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071409.ASC Date Analyzed: 07/14/09 Methods: SW846 6010B
QC Limits: result < RL Run ID: MA7359 Units: ug/l

Time:			23:25		23:55	
Sample ID:			CCB12		CCB13	
Metal	RL	IDL	raw	final	raw	final
Aluminum	200	11	2.3	<200	24.9	<200
Antimony	6.0	4.5	-1.4	<6.0	-0.27	<6.0
Arsenic	10	3.6	1.2	<10	0.83	<10
Barium	200	5	0.53	<200	1.1	<200
Beryllium	4.0	1	0.54	<4.0	0.96	<4.0
Cadmium	5.0	1	0.61	<5.0	1.0	<5.0
Calcium	1000	100	26.4	<1000	94.1	<1000
Chromium	10	1.6	0.26	<10	0.84	<10
Cobalt	50	.83	0.35	<50	1.3	<50
Copper	25	2.1	0.090	<25	0.79	<25
Iron	300	23	4.8	<300	44.9	<300
Lead	5.0	2	1.6	<5.0	2.2	<5.0
Magnesium	5000	100	53.3	<5000	22.6	<5000
Manganese	15	.5	0.58	<15	1.9	<15
Molybdenum	50	2.8				
Nickel	40	2.3	0.47	<40	0.96	<40
Potassium	10000	100	232	<10000	249	<10000
Selenium	10	3.1	3.5	<10	4.6	<10
Silver	10	1.2	-0.56	<10	-0.16	<10
Sodium	10000	500	-7.0	<10000	-33	<10000
Thallium	10	3.4	0.79	<10	2.2	<10
Tin	50	2.8				
Vanadium	50	.66	0.49	<50	1.0	<50
Zinc	20	3.8	0.37	<20	0.85	<20

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071409.ASC Date Analyzed: 07/14/09 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7359 Units: ug/l

Time:		09:28			09:55			16:17	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	40300	100.8	40000	40500	101.3	40000	40100	100.3
Antimony	2000	2070	103.5	2000	2070	103.5	2000	2030	101.5
Arsenic	2000	1960	98.0	2000	1950	97.5	2000	1930	96.5
Barium	2000	2060	103.0	2000	2080	104.0	2000	2020	101.0
Beryllium	2000	2040	102.0	2000	2050	102.5	2000	2010	100.5
Cadmium	2000	2060	103.0	2000	2060	103.0	2000	2030	101.5
Calcium	40000	40600	101.5	40000	40600	101.5	40000	39900	99.8
Chromium	2000	2030	101.5	2000	2040	102.0	2000	2010	100.5
Cobalt	2000	2050	102.5	2000	2060	103.0	2000	2030	101.5
Copper	2000	2020	101.0	2000	2040	102.0	2000	1980	99.0
Iron	40000	39900	99.8	40000	39900	99.8	40000	39600	99.0
Lead	2000	2050	102.5	2000	2050	102.5	2000	2030	101.5
Magnesium	40000	39600	99.0	40000	39500	98.8	40000	38900	97.3
Manganese	2000	2060	103.0	2000	2070	103.5	2000	2030	101.5
Molybdenum									
Nickel	2000	2060	103.0	2000	2060	103.0	2000	2030	101.5
Potassium	40000	40200	100.5	40000	40600	101.5	40000	40300	100.8
Selenium	2000	2040	102.0	2000	2040	102.0	2000	2010	100.5
Silver	250	245	98.0	250	245	98.0	250	243	97.2
Sodium	40000	39500	98.8	40000	39800	99.5	40000	39500	98.8
Thallium	2000	2090	104.5	2000	2090	104.5	2000	2060	103.0
Tin									
Vanadium	2000	1970	98.5	2000	1980	99.0	2000	1950	97.5
Zinc	2000	2070	103.5	2000	2060	103.0	2000	2030	101.5

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071409.ASC Date Analyzed: 07/14/09 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7359 Units: ug/l

Time:		16:59			17:41			18:23	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	40800	102.0	40000	40400	101.0	40000	40300	100.8
Antimony	2000	2070	103.5	2000	2050	102.5	2000	2060	103.0
Arsenic	2000	1970	98.5	2000	1960	98.0	2000	1960	98.0
Barium	2000	2050	102.5	2000	2030	101.5	2000	2030	101.5
Beryllium	2000	2060	103.0	2000	2050	102.5	2000	2050	102.5
Cadmium	2000	2080	104.0	2000	2080	104.0	2000	2070	103.5
Calcium	40000	40800	102.0	40000	40700	101.8	40000	40800	102.0
Chromium	2000	2050	102.5	2000	2040	102.0	2000	2040	102.0
Cobalt	2000	2080	104.0	2000	2070	103.5	2000	2060	103.0
Copper	2000	2020	101.0	2000	2000	100.0	2000	1990	99.5
Iron	40000	40300	100.8	40000	40100	100.3	40000	40100	100.3
Lead	2000	2080	104.0	2000	2070	103.5	2000	2070	103.5
Magnesium	40000	39800	99.5	40000	39700	99.3	40000	39600	99.0
Manganese	2000	2070	103.5	2000	2060	103.0	2000	2060	103.0
Molybdenum									
Nickel	2000	2070	103.5	2000	2070	103.5	2000	2060	103.0
Potassium	40000	40900	102.3	40000	40400	101.0	40000	40300	100.8
Selenium	2000	2050	102.5	2000	2040	102.0	2000	2040	102.0
Silver	250	248	99.2	250	245	98.0	250	244	97.6
Sodium	40000	40100	100.3	40000	39700	99.3	40000	39700	99.3
Thallium	2000	2110	105.5	2000	2100	105.0	2000	2090	104.5
Tin									
Vanadium	2000	1980	99.0	2000	1970	98.5	2000	1970	98.5
Zinc	2000	2080	104.0	2000	2080	104.0	2000	2080	104.0

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071409.ASC Date Analyzed: 07/14/09 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7359 Units: ug/l

Time:		19:05			19:48			20:31	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39900	99.8	40000	39800	99.5	40000	40600	101.5
Antimony	2000	2020	101.0	2000	2020	101.0	2000	2040	102.0
Arsenic	2000	1930	96.5	2000	1920	96.0	2000	1940	97.0
Barium	2000	1990	99.5	2000	1960	98.0	2000	1980	99.0
Beryllium	2000	2020	101.0	2000	2010	100.5	2000	2030	101.5
Cadmium	2000	2040	102.0	2000	2040	102.0	2000	2050	102.5
Calcium	40000	40100	100.3	40000	39800	99.5	40000	39800	99.5
Chromium	2000	2010	100.5	2000	2000	100.0	2000	2020	101.0
Cobalt	2000	2040	102.0	2000	2030	101.5	2000	2050	102.5
Copper	2000	1960	98.0	2000	1940	97.0	2000	1970	98.5
Iron	40000	39700	99.3	40000	39500	98.8	40000	40000	100.0
Lead	2000	2050	102.5	2000	2040	102.0	2000	2070	103.5
Magnesium	40000	39100	97.8	40000	38800	97.0	40000	39100	97.8
Manganese	2000	2030	101.5	2000	2020	101.0	2000	2040	102.0
Molybdenum									
Nickel	2000	2030	101.5	2000	2020	101.0	2000	2020	101.0
Potassium	40000	40000	100.0	40000	40000	100.0	40000	40700	101.8
Selenium	2000	2010	100.5	2000	2000	100.0	2000	2020	101.0
Silver	250	242	96.8	250	243	97.2	250	248	99.2
Sodium	40000	39300	98.3	40000	39300	98.3	40000	40100	100.3
Thallium	2000	2060	103.0	2000	2050	102.5	2000	2080	104.0
Tin									
Vanadium	2000	1940	97.0	2000	1930	96.5	2000	1950	97.5
Zinc	2000	2050	102.5	2000	2040	102.0	2000	2040	102.0

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071409.ASC Date Analyzed: 07/14/09 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7359 Units: ug/l

Time:		21:14			21:57			22:39	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	40000	100.0	40000	40700	101.8	40000	40700	101.8
Antimony	2000	2000	100.0	2000	2060	103.0	2000	2060	103.0
Arsenic	2000	1920	96.0	2000	1970	98.5	2000	1970	98.5
Barium	2000	1950	97.5	2000	1990	99.5	2000	1990	99.5
Beryllium	2000	2000	100.0	2000	2050	102.5	2000	2050	102.5
Cadmium	2000	2030	101.5	2000	2080	104.0	2000	2080	104.0
Calcium	40000	39300	98.3	40000	40400	101.0	40000	40300	100.8
Chromium	2000	2000	100.0	2000	2050	102.5	2000	2050	102.5
Cobalt	2000	2030	101.5	2000	2080	104.0	2000	2080	104.0
Copper	2000	1930	96.5	2000	1980	99.0	2000	1980	99.0
Iron	40000	39600	99.0	40000	40400	101.0	40000	40500	101.3
Lead	2000	2050	102.5	2000	2090	104.5	2000	2090	104.5
Magnesium	40000	38700	96.8	40000	39700	99.3	40000	39600	99.0
Manganese	2000	2010	100.5	2000	2060	103.0	2000	2060	103.0
Molybdenum									
Nickel	2000	2010	100.5	2000	2060	103.0	2000	2050	102.5
Potassium	40000	40100	100.3	40000	40600	101.5	40000	40700	101.8
Selenium	2000	2010	100.5	2000	2050	102.5	2000	2050	102.5
Silver	250	245	98.0	250	248	99.2	250	249	99.6
Sodium	40000	39400	98.5	40000	39900	99.8	40000	40000	100.0
Thallium	2000	2060	103.0	2000	2110	105.5	2000	2110	105.5
Tin									
Vanadium	2000	1920	96.0	2000	1970	98.5	2000	1970	98.5
Zinc	2000	2040	102.0	2000	2090	104.5	2000	2100	105.0

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071409.ASC Date Analyzed: 07/14/09 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7359 Units: ug/l

Time:		23:21			23:50	
Sample ID:	CCV	CCV12		CCV	CCV13	
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	40800	102.0	40000	40800	102.0
Antimony	2000	2060	103.0	2000	2060	103.0
Arsenic	2000	1960	98.0	2000	1970	98.5
Barium	2000	1990	99.5	2000	1990	99.5
Beryllium	2000	2050	102.5	2000	2050	102.5
Cadmium	2000	2080	104.0	2000	2080	104.0
Calcium	40000	40200	100.5	40000	40400	101.0
Chromium	2000	2040	102.0	2000	2040	102.0
Cobalt	2000	2070	103.5	2000	2080	104.0
Copper	2000	1970	98.5	2000	1970	98.5
Iron	40000	40400	101.0	40000	40500	101.3
Lead	2000	2090	104.5	2000	2090	104.5
Magnesium	40000	39500	98.8	40000	39400	98.5
Manganese	2000	2060	103.0	2000	2060	103.0
Molybdenum						
Nickel	2000	2050	102.5	2000	2050	102.5
Potassium	40000	40800	102.0	40000	40600	101.5
Selenium	2000	2040	102.0	2000	2050	102.5
Silver	250	249	99.6	250	248	99.2
Sodium	40000	40300	100.8	40000	39800	99.5
Thallium	2000	2110	105.5	2000	2110	105.5
Tin						
Vanadium	2000	1970	98.5	2000	1960	98.0
Zinc	2000	2090	104.5	2000	2100	105.0

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071409.ASC Date Analyzed: 07/14/09 Methods: SW846 6010B
QC Limits: 95 to 105 % Recovery Run ID: MA7359 Units: ug/l

Time:		09:25	
Sample ID:	HSTD	HSTD1	
Metal	True	Results	% Rec
Aluminum	80000	81300	101.6
Antimony	4000	4050	101.3
Arsenic	4000	4040	101.0
Barium	4000	4010	100.3
Beryllium	4000	4010	100.3
Cadmium	4000	4000	100.0
Calcium	80000	80200	100.3
Chromium	4000	4010	100.3
Cobalt	4000	4010	100.3
Copper	4000	4040	101.0
Iron	80000	80500	100.6
Lead	4000	4010	100.3
Magnesium	80000	80800	101.0
Manganese	4000	4000	100.0
Molybdenum			
Nickel	4000	4010	100.3
Potassium	80000	76800	96.0
Selenium	4000	4040	101.0
Silver	500	504	100.8
Sodium	80000	77800	97.3
Thallium	4000	4020	100.5
Tin			
Vanadium	4000	4020	100.5
Zinc	4000	4000	100.0

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071409.ASC Date Analyzed: 07/14/09 Methods: SW846 6010B
QC Limits: CRI 70-130% CRIA 70-130% Run ID: MA7359 Units: ug/l

Time:			09:37		23:40	
Sample ID:	CRI	CRIA	CRIA1		CRIA2	
Metal	True	True	Results	% Rec	Results	% Rec
Aluminum	400	200	203	101.5	206	103.0
Antimony	10	5.0	4.6	92.0	2.1U	42.0*(a)
Arsenic	20	10	10.9	109.0	10.7	107.0
Barium	400	200	213	106.5	199	99.5
Beryllium	10	5.0	5.4	108.0	5.3	106.0
Cadmium	10	5.0	5.6	112.0	5.4	108.0
Calcium	2000	1000	1050	105.0	1030	103.0
Chromium	20	10	10.6	106.0	10.4	104.0
Cobalt	100	50	54.8	109.6	53.0	106.0
Copper	50	25	27.6	110.4	26.9	107.6
Iron	600	300	273	91.0	273	91.0
Lead	10	5.0	6.1	122.0	6.6	132.0*(a
Magnesium	10000	5000	5110	102.2	4950	99.0
Manganese	30	15	16.7	111.3	16.3	108.7
Molybdenum	100	50				
Nickel	80	40	44.7	111.8	42.8	107.0
Potassium	20000	10000	9280	92.8	9180	91.8
Selenium	20	10	12.2	122.0	10.7	107.0
Silver	20	10	9.5	95.0	9.3	93.0
Sodium	20000	10000	9400	94.0	9270	92.7
Thallium	20	10	12.1	121.0	9.4	94.0
Tin	100	50				
Vanadium	100	50	52.0	104.0	50.1	100.2
Zinc	40	20	23.1	115.5	22.1	110.5

(*) Outside of QC limits
(anr) Analyte not requested
(a) Possible instrument baseline drift.

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071409.ASC Date Analyzed: 07/14/09 Methods: SW846 6010B
QC Limits: 80 to 120 % Recovery Run ID: MA7359 Units: ug/l

Time:			09:47		09:49		23:43		23:47	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	500000	500000	493000	98.6	497000	99.4	489000	97.8	494000	98.8
Antimony		1000	1.9		1060	106.0	-2.1		1030	103.0
Arsenic		1000	0.040		1030	103.0	1.5		1020	102.0
Barium		500	0.80		559	111.8	0.93		526	105.2
Beryllium		500	0.080		528	105.6	0.11		514	102.8
Cadmium		1000	0.090		1030	103.0	1.7		1010	101.0
Calcium	500000	500000	455000	91.0	452000	90.4	429000	85.8	433000	86.6
Chromium		500	0.60		498	99.6	0.79		485	97.0
Cobalt		500	0.66		530	106.0	0.86		517	103.4
Copper		500	-5.3		549	109.8	-4.4		522	104.4
Iron	200000	200000	186000	93.0	191000	95.5	181000	90.5	188000	94.0
Lead		1000	1.4		1020	102.0	2.6		1000	100.0
Magnesium	500000	500000	504000	100.8	497000	99.4	480000	96.0	480000	96.0
Manganese		500	0.59		521	104.2	0.58		505	101.0
Molybdenum		1000	0.52		996	99.6	0.22		969	96.9
Nickel		1000	0.73		977	97.7	0.72		944	94.4
Potassium			245		-160		252		-130	
Selenium		1000	1.3		1030	103.0	0.030		1000	100.0
Silver		1000	0.70		1060	106.0	-0.060		1050	105.0
Sodium			-110		203		-30		374	
Thallium		1000	-0.040		991	99.1	-1.3		970	97.0
Tin		1000	-2.6		913	91.3	0.20		880	88.0
Vanadium		500	1.5		519	103.8	1.3		504	100.8
Zinc		1000	0.38		995	99.5	0.25		970	97.0

(*) Outside of QC limits
(anr) Analyte not requested

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071609.ASC Date Analyzed: 07/16/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7367
Parameters: Na

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:52	MA7367-HSTD1	1		
09:55	MA7367-ICV1	1		
10:00	MA7367-ICB1	1		
10:04	MA7367-CRIA1	1		
10:10	MA7367-CRI1	1		
10:16	MA7367-ICSA1	1		
10:19	MA7367-ICSAB1	1		
10:24	MA7367-CCV1	1		
10:28	MA7367-CCB1	1		
10:42	MA7367-CCV2	1		
10:46	MA7367-CCB2	1		
10:52	F66576-1	2		(sample used for QC only; not part of login F66523)
10:55	MP16681-D1	2		
10:59	MP16681-SD1	10		
11:02	MP16681-S1	2		
11:06	ZZZZZZ	20		
11:09	ZZZZZZ	50		
11:12	ZZZZZZ	20		
11:16	MA7367-CCV3	1		
11:20	MA7367-CCB3	1		
11:26	F66528-1	5		(sample used for QC only; not part of login F66523)
11:29	MP16657-D1	5		
11:32	MP16657-SD1	25		
11:36	MP16657-S1	5		
11:39	MP16657-S2	5		
11:43	ZZZZZZ	5		
11:46	ZZZZZZ	5		
11:49	MA7367-CCV4	1		
11:54	MA7367-CCB4	1		
11:59	F66519-10	200		(sample used for QC only; not part of login F66523)
12:03	MP16658-D1	200		
12:06	MP16658-SD1	1000		
12:09	MP16658-S1	200		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071609.ASC Date Analyzed: 07/16/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7367
Parameters: Na

	Time	Sample Description	Dilution Factor	PS Recov	Comments
	12:13	MP16658-S2	200		
	12:16	F66523-1	200		
	12:20	F66523-2	200		
	12:23	F66523-3	200		
	12:26	F66523-4	200		
	12:30	F66523-5	200		
	12:33	MA7367-CCV5	1		
	12:38	MA7367-CCB5	1		
	12:41	F66523-1A	200		
	12:44	F66523-2A	200		
	12:48	F66523-3A	200		
	12:51	F66523-4A	200		
	12:55	F66523-5A	200		
---------->	Last reportable sample/prep for job F66523				
	12:58	MA7367-CCV6	1		
	13:03	MA7367-CCB6	1		
	13:12	MA7367-CCV7	1		
	13:16	MA7367-CCB7	1		
	13:20	ZZZZZZ	1		
	13:23	F66564-4	5		(sample used for QC only; not part of login F66523)
	13:27	MP16679-D1	5		
	13:30	MP16679-SD1	25		
	13:33	MP16679-S1	5		
	13:37	MP16679-S2	5		
	13:40	MP16679-S1	2		
	13:44	MP16679-S2	2		
	13:47	ZZZZZZ	10		
	13:50	ZZZZZZ	4		
	13:54	MA7367-CCV8	1		
	13:58	MA7367-CCB8	1		
	14:02	ZZZZZZ	10		
	14:05	ZZZZZZ	10		
	14:09	ZZZZZZ	10		
	14:23	ZZZZZZ	10		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071609.ASC Date Analyzed: 07/16/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7367
Parameters: Na

Time	Sample Description	Dilution Factor	PS Recov	Comments
14:27	ZZZZZZ	10		
14:34	MA7367-CCV9	1		
14:38	MA7367-CCB9	1		
15:34	MA7367-CCV10	1		
15:38	MA7367-CCB10	1		
15:42	ZZZZZZ	4		
15:45	ZZZZZZ	4		
15:49	ZZZZZZ	4		
15:52	ZZZZZZ	4		
15:55	ZZZZZZ	4		
15:59	ZZZZZZ	4		
16:02	MA7367-CCV11	1		
16:07	MA7367-CCB11	1		
16:14	MP16688-MB1	1		
16:18	MP16688-B1	1		
16:21	F66630-1	1		(sample used for QC only; not part of login F66523)
16:25	MP16688-D1	1		
16:28	MP16688-SD1	5		
16:31	MP16688-PS1	1		
16:35	MP16688-S1	1		
16:38	MP16688-S2	1		
16:42	ZZZZZZ	1		
16:45	ZZZZZZ	1		
16:48	MA7367-CCV12	1		
16:53	MA7367-CCB12	1		
16:56	ZZZZZZ	1		
17:00	ZZZZZZ	1		
17:03	ZZZZZZ	1		
17:07	ZZZZZZ	1		
17:10	ZZZZZZ	1		
17:13	ZZZZZZ	1		
17:17	ZZZZZZ	1		
17:20	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071609.ASC Date Analyzed: 07/16/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7367
Parameters: Na

Time	Sample Description	Dilution Factor	PS Recov	Comments
17:24	ZZZZZZ	1		
17:27	ZZZZZZ	1		
17:30	MA7367-CCV13	1		
17:35	MA7367-CCB13	1		
17:38	ZZZZZZ	1		
17:42	ZZZZZZ	1		
17:45	ZZZZZZ	1		
17:48	ZZZZZZ	1		
17:52	ZZZZZZ	1		
17:55	ZZZZZZ	1		
17:59	ZZZZZZ	1		
18:03	MP16687-MB1	1		
18:06	MP16687-B1	1		
18:13	MA7367-CCV14	1		
18:18	MA7367-CCB14	1		
18:28	MP16687-PS1	1		
18:42	ZZZZZZ	1		
18:45	ZZZZZZ	1		
18:48	ZZZZZZ	1		
18:52	ZZZZZZ	1		
18:55	MA7367-CCV15	1		
19:00	MA7367-CCB15	1		
19:03	ZZZZZZ	1		
19:06	ZZZZZZ	1		
19:10	ZZZZZZ	1		
19:13	ZZZZZZ	1		
19:23	ZZZZZZ	1		
19:27	ZZZZZZ	1		
19:30	ZZZZZZ	1		
19:34	ZZZZZZ	1		
19:37	MA7367-CCV16	1		
19:42	MA7367-CCB16	1		
19:45	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071609.ASC Date Analyzed: 07/16/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7367
Parameters: Na

Time	Sample Description	Dilution Factor	PS Recov	Comments
19:48	ZZZZZZ	1		
19:52	ZZZZZZ	1		
19:55	ZZZZZZ	1		
20:00	MA7367-CRIA2	1		
20:03	MA7367-CRI2	1		
20:06	MA7367-ICSA2	1		
20:10	MA7367-ICSAB2	1		
20:13	MA7367-CCV17	1		
20:18	MA7367-CCB17	1		

----------> Last reportable CCB for job F66523
Refer to raw data for calibration curve and standards.

INTERNAL STANDARD SUMMARY

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071609.ASC Date Analyzed: 07/16/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7367
Parameters: Na

Time	Sample Description	Istd#1
09:52	MA7367-HSTD1	6049
09:55	MA7367-ICV1	6232
10:00	MA7367-ICB1	6458 R
10:04	MA7367-CRIA1	6348
10:10	MA7367-CRI1	6366
10:16	MA7367-ICSA1	5680
10:19	MA7367-ICSAB1	5651
10:24	MA7367-CCV1	6121
10:28	MA7367-CCB1	6384
10:42	MA7367-CCV2	6226
10:46	MA7367-CCB2	6353
10:52	F66576-1	6056
10:55	MP16681-D1	6076
10:59	MP16681-SD1	6301
11:02	MP16681-S1	6031
11:06	ZZZZZZ	6295
11:09	ZZZZZZ	6223
11:12	ZZZZZZ	6287
11:16	MA7367-CCV3	6165
11:20	MA7367-CCB3	6442
11:26	F66528-1	6198
11:29	MP16657-D1	6222
11:32	MP16657-SD1	6405
11:36	MP16657-S1	6129
11:39	MP16657-S2	6227
11:43	ZZZZZZ	6170
11:46	ZZZZZZ	6089
11:49	MA7367-CCV4	6231
11:54	MA7367-CCB4	6356
11:59	F66519-10	6333
12:03	MP16658-D1	6241
12:06	MP16658-SD1	6450
12:09	MP16658-S1	6341

INTERNAL STANDARD SUMMARY

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071609.ASC Date Analyzed: 07/16/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7367
Parameters: Na

Time	Sample Description	Istd#1
12:13	MP16658-S2	6343
12:16	F66523-1	6331
12:20	F66523-2	6374
12:23	F66523-3	6539
12:26	F66523-4	6323
12:30	F66523-5	6429
12:33	MA7367-CCV5	6246
12:38	MA7367-CCB5	6464
12:41	F66523-1A	6403
12:44	F66523-2A	6404
12:48	F66523-3A	6321
12:51	F66523-4A	6316
12:55	F66523-5A	6321
12:58	MA7367-CCV6	6168
13:03	MA7367-CCB6	6479
13:12	MA7367-CCV7	6193
13:16	MA7367-CCB7	6390
13:20	ZZZZZZ	6281
13:23	F66564-4	6045
13:27	MP16679-D1	6117
13:30	MP16679-SD1	6265
13:33	MP16679-S1	6103
13:37	MP16679-S2	6058
13:40	MP16679-S1	5957
13:44	MP16679-S2	5889
13:47	ZZZZZZ	6113
13:50	ZZZZZZ	6056
13:54	MA7367-CCV8	6186
13:58	MA7367-CCB8	6498
14:02	ZZZZZZ	6123
14:05	ZZZZZZ	6130
14:09	ZZZZZZ	6070
14:23	ZZZZZZ	6076

INTERNAL STANDARD SUMMARY

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071609.ASC Date Analyzed: 07/16/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7367
Parameters: Na

Time	Sample Description	Istd#1
14:27	ZZZZZZ	6206
14:34	MA7367-CCV9	6182
14:38	MA7367-CCB9	6623
15:34	MA7367-CCV10	6172
15:38	MA7367-CCB10	6411
15:42	ZZZZZZ	5925
15:45	ZZZZZZ	5896
15:49	ZZZZZZ	5993
15:52	ZZZZZZ	5911
15:55	ZZZZZZ	6082
15:59	ZZZZZZ	6041
16:02	MA7367-CCV11	6224
16:07	MA7367-CCB11	6335
16:14	MP16688-MB1	6474
16:18	MP16688-B1	6274
16:21	F66630-1	5935
16:25	MP16688-D1	5925
16:28	MP16688-SD1	6320
16:31	MP16688-PS1	5886
16:35	MP16688-S1	5803
16:38	MP16688-S2	5931
16:42	ZZZZZZ	6170
16:45	ZZZZZZ	6067
16:48	MA7367-CCV12	6223
16:53	MA7367-CCB12	6439
16:56	ZZZZZZ	6392
17:00	ZZZZZZ	4908
17:03	ZZZZZZ	5896
17:07	ZZZZZZ	6463
17:10	ZZZZZZ	4961
17:13	ZZZZZZ	5928
17:17	ZZZZZZ	6223
17:20	ZZZZZZ	6200

INTERNAL STANDARD SUMMARY

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071609.ASC Date Analyzed: 07/16/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7367
Parameters: Na

Time	Sample Description	Istd#1
17:24	ZZZZZZ	6297
17:27	ZZZZZZ	5800
17:30	MA7367-CCV13	6311
17:35	MA7367-CCB13	6459
17:38	ZZZZZZ	6424
17:42	ZZZZZZ	6329
17:45	ZZZZZZ	6209
17:48	ZZZZZZ	6533
17:52	ZZZZZZ	6606
17:55	ZZZZZZ	6471
17:59	ZZZZZZ	6538
18:03	MP16687-MB1	6480
18:06	MP16687-B1	6295
18:13	MA7367-CCV14	6361
18:18	MA7367-CCB14	6475
18:28	MP16687-PS1	7070
18:42	ZZZZZZ	6637
18:45	ZZZZZZ	6850
18:48	ZZZZZZ	6755
18:52	ZZZZZZ	6650
18:55	MA7367-CCV15	6311
19:00	MA7367-CCB15	6591
19:03	ZZZZZZ	6588
19:06	ZZZZZZ	8891 !
19:10	ZZZZZZ	7422
19:13	ZZZZZZ	7241
19:23	ZZZZZZ	6766
19:27	ZZZZZZ	6972
19:30	ZZZZZZ	7387
19:34	ZZZZZZ	6953
19:37	MA7367-CCV16	6489
19:42	MA7367-CCB16	6698
19:45	ZZZZZZ	7113

INTERNAL STANDARD SUMMARY

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071609.ASC Date Analyzed: 07/16/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7367
Parameters: Na

Time	Sample Description	Istd#1
19:48	ZZZZZZ	7537
19:52	ZZZZZZ	7734
19:55	ZZZZZZ	7623
20:00	MA7367-CRIA2	6625
20:03	MA7367-CRI2	6519
20:06	MA7367-ICSA2	5760
20:10	MA7367-ICSAB2	5724
20:13	MA7367-CCV17	6393
20:18	MA7367-CCB17	6655

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium	60-125 %

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071609.ASC Date Analyzed: 07/16/09 Methods: SW846 6010B
QC Limits: result < RL Run ID: MA7367 Units: ug/l

Time:			10:00		10:28		10:46		11:20	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	11	anr							
Antimony	6.0	4.5	anr							
Arsenic	10	3.6	anr							
Barium	200	5	anr							
Beryllium	4.0	1	anr							
Cadmium	5.0	1	anr							
Calcium	1000	100	anr							
Chromium	10	1.6	anr							
Cobalt	50	.83	anr							
Copper	25	2.1	anr							
Iron	300	23	anr							
Lead	5.0	2	anr							
Magnesium	5000	100	anr							
Manganese	15	.5	anr							
Molybdenum	50	2.8								
Nickel	40	2.3	anr							
Potassium	10000	100	anr							
Selenium	10	3.1	anr							
Silver	10	1.2	anr							
Sodium	10000	500	62.5	<10000	79.3	<10000	96.7	<10000	15.9	<10000
Thallium	10	3.4	anr							
Tin	50	2.8								
Vanadium	50	.66	anr							
Zinc	20	3.8	anr							

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071609.ASC Date Analyzed: 07/16/09 Methods: SW846 6010B
QC Limits: result < RL Run ID: MA7367 Units: ug/l

Time:			11:54		12:38		13:03		13:16	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	11	anr							
Antimony	6.0	4.5	anr							
Arsenic	10	3.6	anr							
Barium	200	5	anr							
Beryllium	4.0	1	anr							
Cadmium	5.0	1	anr							
Calcium	1000	100	anr							
Chromium	10	1.6	anr							
Cobalt	50	.83	anr							
Copper	25	2.1	anr							
Iron	300	23	anr							
Lead	5.0	2	anr							
Magnesium	5000	100	anr							
Manganese	15	.5	anr							
Molybdenum	50	2.8								
Nickel	40	2.3	anr							
Potassium	10000	100	anr							
Selenium	10	3.1	anr							
Silver	10	1.2	anr							
Sodium	10000	500	18.7	<10000	-0.32	<10000	40.2	<10000	3.6	<10000
Thallium	10	3.4	anr							
Tin	50	2.8								
Vanadium	50	.66	anr							
Zinc	20	3.8	anr							

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071609.ASC Date Analyzed: 07/16/09 Methods: SW846 6010B
QC Limits: result < RL Run ID: MA7367 Units: ug/l

Time:			13:58		14:38		15:38		16:07	
Sample ID:			CCB8		CCB9		CCB10		CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	11	anr							
Antimony	6.0	4.5	anr							
Arsenic	10	3.6	anr							
Barium	200	5	anr							
Beryllium	4.0	1	anr							
Cadmium	5.0	1	anr							
Calcium	1000	100	anr							
Chromium	10	1.6	anr							
Cobalt	50	.83	anr							
Copper	25	2.1	anr							
Iron	300	23	anr							
Lead	5.0	2	anr							
Magnesium	5000	100	anr							
Manganese	15	.5	anr							
Molybdenum	50	2.8								
Nickel	40	2.3	anr							
Potassium	10000	100	anr							
Selenium	10	3.1	anr							
Silver	10	1.2	anr							
Sodium	10000	500	77.7	<10000	74.0	<10000	173	<10000	73.0	<10000
Thallium	10	3.4	anr							
Tin	50	2.8								
Vanadium	50	.66	anr							
Zinc	20	3.8	anr							

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071609.ASC Date Analyzed: 07/16/09 Methods: SW846 6010B
QC Limits: result < RL Run ID: MA7367 Units: ug/l

Time:			16:53		17:35		18:18		19:00	
Sample ID:			CCB12		CCB13		CCB14		CCB15	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	11	anr							
Antimony	6.0	4.5	anr							
Arsenic	10	3.6	anr							
Barium	200	5	anr							
Beryllium	4.0	1	anr							
Cadmium	5.0	1	anr							
Calcium	1000	100	anr							
Chromium	10	1.6	anr							
Cobalt	50	.83	anr							
Copper	25	2.1	anr							
Iron	300	23	anr							
Lead	5.0	2	anr							
Magnesium	5000	100	anr							
Manganese	15	.5	anr							
Molybdenum	50	2.8								
Nickel	40	2.3	anr							
Potassium	10000	100	anr							
Selenium	10	3.1	anr							
Silver	10	1.2	anr							
Sodium	10000	500	-18	<10000	-110	<10000	138	<10000	69.7	<10000
Thallium	10	3.4	anr							
Tin	50	2.8								
Vanadium	50	.66	anr							
Zinc	20	3.8	anr							

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071609.ASC Date Analyzed: 07/16/09 Methods: SW846 6010B
QC Limits: result < RL Run ID: MA7367 Units: ug/l

Time:			19:42		20:18	
Sample ID:			CCB16		CCB17	
Metal	RL	IDL	raw	final	raw	final
Aluminum	200	11	anr			
Antimony	6.0	4.5	anr			
Arsenic	10	3.6	anr			
Barium	200	5	anr			
Beryllium	4.0	1	anr			
Cadmium	5.0	1	anr			
Calcium	1000	100	anr			
Chromium	10	1.6	anr			
Cobalt	50	.83	anr			
Copper	25	2.1	anr			
Iron	300	23	anr			
Lead	5.0	2	anr			
Magnesium	5000	100	anr			
Manganese	15	.5	anr			
Molybdenum	50	2.8				
Nickel	40	2.3	anr			
Potassium	10000	100	anr			
Selenium	10	3.1	anr			
Silver	10	1.2	anr			
Sodium	10000	500	92.3	<10000	73.1	<10000
Thallium	10	3.4	anr			
Tin	50	2.8				
Vanadium	50	.66	anr			
Zinc	20	3.8	anr			

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071609.ASC Date Analyzed: 07/16/09 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7367 Units: ug/l

Time:		09:55			10:24			10:42	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Potassium	anr								
Selenium	anr								
Silver	anr								
Sodium	40000	40500	101.3	40000	40600	101.5	40000	40500	101.3
Thallium	anr								
Tin									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071609.ASC Date Analyzed: 07/16/09 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7367 Units: ug/l

Time:		11:16			11:49			12:33	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Potassium	anr								
Selenium	anr								
Silver	anr								
Sodium	40000	40500	101.3	40000	40300	100.8	40000	40300	100.8
Thallium	anr								
Tin									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071609.ASC Date Analyzed: 07/16/09 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7367 Units: ug/l

Time:		12:58			13:12			13:54	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Potassium	anr								
Selenium	anr								
Silver	anr								
Sodium	40000	40400	101.0	40000	40400	101.0	40000	40500	101.3
Thallium	anr								
Tin									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071609.ASC Date Analyzed: 07/16/09 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7367 Units: ug/l

Time:		14:34			15:34			16:02	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Potassium	anr								
Selenium	anr								
Silver	anr								
Sodium	40000	40400	101.0	40000	40600	101.5	40000	40600	101.5
Thallium	anr								
Tin									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071609.ASC Date Analyzed: 07/16/09 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7367 Units: ug/l

Time:		16:48			17:30			18:13	
Sample ID:	CCV	CCV12		CCV	CCV13		CCV	CCV14	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Potassium	anr								
Selenium	anr								
Silver	anr								
Sodium	40000	40200	100.5	40000	40400	101.0	40000	40300	100.8
Thallium	anr								
Tin									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071609.ASC Date Analyzed: 07/16/09 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7367 Units: ug/l

Time:		18:55			19:37			20:13	
Sample ID:	CCV	CCV15		CCV	CCV16		CCV	CCV17	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Potassium	anr								
Selenium	anr								
Silver	anr								
Sodium	40000	40500	101.3	40000	39800	99.5	40000	39900	99.8
Thallium	anr								
Tin									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071609.ASC Date Analyzed: 07/16/09 Methods: SW846 6010B
QC Limits: 95 to 105 % Recovery Run ID: MA7367 Units: ug/l

Time:		09:52	
Sample ID:	HSTD	HSTD1	
Metal	True	Results	% Rec
Aluminum	anr		
Antimony	anr		
Arsenic	anr		
Barium	anr		
Beryllium	anr		
Cadmium	anr		
Calcium	anr		
Chromium	anr		
Cobalt	anr		
Copper	anr		
Iron	anr		
Lead	anr		
Magnesium	anr		
Manganese	anr		
Molybdenum			
Nickel	anr		
Potassium	anr		
Selenium	anr		
Silver	anr		
Sodium	80000	78900	98.6
Thallium	anr		
Tin			
Vanadium	anr		
Zinc	anr		

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071609.ASC Date Analyzed: 07/16/09 Methods: SW846 6010B
QC Limits: CRI 70-130% CRIA 70-130% Run ID: MA7367 Units: ug/l

Time:			10:04		10:10		20:00		20:03	
Sample ID:	CRI	CRIA	CRIA1		CRI1		CRIA2		CRI2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	400	200	anr							
Antimony	10	5.0	anr							
Arsenic	20	10	anr							
Barium	400	200	anr							
Beryllium	10	5.0	anr							
Cadmium	10	5.0	anr							
Calcium	2000	1000	anr							
Chromium	20	10	anr							
Cobalt	100	50	anr							
Copper	50	25	anr							
Iron	600	300	anr							
Lead	10	5.0								
Magnesium	10000	5000	anr							
Manganese	30	15	anr							
Molybdenum	100	50								
Nickel	80	40	anr							
Potassium	20000	10000	anr							
Selenium	20	10	anr							
Silver	20	10	anr							
Sodium	20000	10000	9240	92.4			9110	91.1		
Thallium	20	10	anr							
Tin	100	50								
Vanadium	100	50	anr							
Zinc	40	20	anr							

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071609.ASC Date Analyzed: 07/16/09 Methods: SW846 6010B
QC Limits: 80 to 120 % Recovery Run ID: MA7367 Units: ug/l

Time:			10:16		10:19		20:06		20:10	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	500000	500000	488000	97.6	485000	97.0	483000	96.6	477000	95.4
Antimony		1000	-1.4		1080	108.0	1.5		1060	106.0
Arsenic		1000	-0.050		1050	105.0	4.6		1030	103.0
Barium		500	0.84		555	111.0	0.96		547	109.4
Beryllium		500	-0.16		522	104.4	-0.050		511	102.2
Cadmium		1000	-0.020		1020	102.0	0.45		995	99.5
Calcium	500000	500000	441000	88.2	443000	88.6	432000	86.4	427000	85.4
Chromium		500	0.39		492	98.4	1.0		480	96.0
Cobalt		500	1.3		527	105.4	0.85		512	102.4
Copper		500	-3.8		553	110.6	-3.7		540	108.0
Iron	200000	200000	183000	91.5	191000	95.5	182000	91.0	188000	94.0
Lead		1000	0.070		1010	101.0	-1.2		991	99.1
Magnesium	500000	500000	494000	98.8	498000	99.6	483000	96.6	483000	96.6
Manganese		500	0.61		516	103.2	0.61		498	99.6
Molybdenum		1000	-0.56		1000	100.0	-0.87		974	97.4
Nickel		1000	0.040		967	96.7	0.36		949	94.9
Potassium			242		-140		285		-120	
Selenium		1000	1.6		1050	105.0	3.8		1030	103.0
Silver		1000	0.44		1050	105.0	0.61		1050	105.0
Sodium			-140		242		121		370	
Thallium		1000	-2.2		995	99.5	4.5		972	97.2
Tin		1000	-0.36		922	92.2	-2.7		877	87.7
Vanadium		500	-1.7		509	101.8	-1.1		496	99.2
Zinc		1000	0.68		990	99.0	1.3		951	95.1

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP16658
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date:				07/10/09		07/10/09	
Metal	RL	IDL	MDL	MB raw	final	MB raw	final
Aluminum	200	11	11	-6.3	<200	-8.9	<200
Antimony	6.0	4.5	4.5	-2.9	<6.0	-2.5	<6.0
Arsenic	10	3.6	5.4	2.1	<10	0.44	<10
Barium	200	5	5	0.050	<200	0.34	<200
Beryllium	4.0	1	1	0.090	<4.0	0.11	<4.0
Cadmium	5.0	1	1	0.14	<5.0	0.080	<5.0
Calcium	1000	100	100	28.5	<1000	96.2	<1000
Chromium	10	1.6	2	0.0	<10	-0.27	<10
Cobalt	50	.83	1	0.080	<50	0.10	<50
Copper	25	2.1	5	-0.18	<25	-0.69	<25
Iron	300	23	23	-3.1	<300	-15	<300
Lead	5.0	2	2	1.1	<5.0	1.7	<5.0
Magnesium	5000	100	100	7.8	<5000	79.0	<5000
Manganese	15	.5	1	0.10	<15	0.50	<15
Molybdenum	50	2.8	5				
Nickel	40	2.3	2.3	0.35	<40	0.12	<40
Potassium	10000	100	100	231	<10000	257	<10000
Selenium	10	3.1	3.4	2.3	<10	0.0	<10
Silver	10	1.2	1.4	-0.61	<10	-0.64	<10
Sodium	10000	500	500	6.6	<10000	272	<10000
Thallium	10	3.4	3.6	-1.9	<10	-1.9	<10
Tin	50	2.8	2.8				
Vanadium	50	.66	.9	0.020	<50	-0.050	<50
Zinc	20	3.8	7.4	2.1	<20	3.0	<20

Associated samples MP16658: F66523-1, F66523-2, F66523-3, F66523-4, F66523-5, F66523-1A, F66523-2A, F66523-3A, F66523-4A, F66523-5A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP16658
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date:			07/10/09					07/10/09	
Metal	F66519-10 Original	DUP	RPD	QC Limits	F66519-10 Original	MS	Spikelot MPFLICP1	% Rec	QC Limits
Aluminum	0.00	0.00	NC	0-20	0.00	29100	27000	107.8	80-120
Antimony	0.0	0.0	NC	0-20	0.0	543	500	108.6	80-120
Arsenic	0.00	0.00	NC	0-20	0.00	2280	2000	114.0	80-120
Barium	0.00	0.00	NC	0-20	0.00	2060	2000	103.0	80-120
Beryllium	0.0	0.0	NC	0-20	0.0	48.8	50	97.6	80-120
Cadmium	0.0	0.0	NC	0-20	0.0	55.1	50	110.2	80-120
Calcium	892000	883000	1.0	0-20	892000	892000	25000	0.0 (b)	80-120
Chromium	0.0	0.0	NC	0-20	0.0	215	200	107.5	80-120
Cobalt	0.0	0.0	NC	0-20	0.0	542	500	108.4	80-120
Copper	0.00	0.00	NC	0-20	0.00	292	250	116.8	80-120
Iron	0.0	0.0	NC	0-20	0.0	23000	26000	88.5	80-120
Lead	0.00	0.0	NC	0-20	0.00	540	500	108.0	80-120
Magnesium	3050000	3020000	1.0	0-20	3050000	2990000	25000	-240.0(b	80-120
Manganese	1920	1910	0.5	0-20	1920	2410	500	98.0	80-120
Molybdenum									
Nickel	0.0	0.00	NC	0-20	0.0	547	500	109.4	80-120
Potassium	199000	200000	0.5	0-20	199000	248000	25000	196.0(b)	80-120
Selenium	60.0	0.00	200.0(a)	0-20	60.0	2300	2000	112.0	80-120
Silver	0.0	0.0	NC	0-20	0.0	51.8	50	103.6	80-120
Sodium	11200000	11200000	0.0	0-20	11200000	11200000	25000	0.0 (b)	80-120
Thallium	77.8	0.00	200.0(a)	0-20	77.8	2100	2000	101.1	80-120
Tin									
Vanadium	43.8	56.0	24.4 (a)	0-20	43.8	581	500	107.4	80-120
Zinc	0.00	0.00	NC	0-20	0.00	555	500	111.0	80-120

Associated samples MP16658: F66523-1, F66523-2, F66523-3, F66523-4, F66523-5, F66523-1A, F66523-2A, F66523-3A, F66523-4A, F66523-5A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) RPD acceptable due to low duplicate and sample concentrations.
(b) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP16658
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 07/10/09

Metal	F66519-10 Original	MSD	Spikelot MPFLICP1	% Rec	MSD RPD	QC Limit
Aluminum	0.00	30000	27000	111.1	3.0	20
Antimony	0.0	568	500	113.6	4.5	20
Arsenic	0.00	2340	2000	117.0	2.6	20
Barium	0.00	2100	2000	105.0	1.9	20
Beryllium	0.0	50.1	50	100.2	2.6	20
Cadmium	0.0	55.9	50	111.8	1.4	20
Calcium	892000	913000	25000	84.0	2.3	20
Chromium	0.0	220	200	110.0	2.3	20
Cobalt	0.0	554	500	110.8	2.2	20
Copper	0.00	298	250	119.2	2.0	20
Iron	0.0	23800	26000	91.5	3.4	20
Lead	0.00	554	500	110.8	2.6	20
Magnesium	3050000	3070000	25000	80.0	2.6	20
Manganese	1920	2470	500	110.0	2.5	20
Molybdenum						
Nickel	0.0	558	500	111.6	2.0	20
Potassium	199000	254000	25000	220.0(a)	2.4	20
Selenium	60.0	2390	2000	116.5	3.8	20
Silver	0.0	51.7	50	103.4	0.2	20
Sodium	11200000	11600000	25000	1600.0(a	3.5	20
Thallium	77.8	2140	2000	103.1	1.9	20
Tin						
Vanadium	43.8	595	500	110.2	2.4	20
Zinc	0.00	574	500	114.8	3.4	20

Associated samples MP16658: F66523-1, F66523-2, F66523-3, F66523-4, F66523-5, F66523-1A, F66523-2A, F66523-3A, F66523-4A, F66523-5A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP16658
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 07/10/09

Metal	BSP Result	Spikelot MPFLICP1	% Rec	QC Limits
Aluminum	26300	27000	97.4	80-120
Antimony	514	500	102.8	80-120
Arsenic	1970	2000	98.5	80-120
Barium	2010	2000	100.5	80-120
Beryllium	53.4	50	106.8	80-120
Cadmium	53.0	50	106.0	80-120
Calcium	24300	25000	97.2	80-120
Chromium	211	200	105.5	80-120
Cobalt	528	500	105.6	80-120
Copper	260	250	104.0	80-120
Iron	25400	26000	97.7	80-120
Lead	535	500	107.0	80-120
Magnesium	23700	25000	94.8	80-120
Manganese	530	500	106.0	80-120
Molybdenum				
Nickel	529	500	105.8	80-120
Potassium	25000	25000	100.0	80-120
Selenium	2020	2000	101.0	80-120
Silver	48.0	50	96.0	80-120
Sodium	24200	25000	96.8	80-120
Thallium	2090	2000	104.5	80-120
Tin				
Vanadium	505	500	101.0	80-120
Zinc	527	500	105.4	80-120

Associated samples MP16658: F66523-1, F66523-2, F66523-3, F66523-4, F66523-5, F66523-1A, F66523-2A, F66523-3A, F66523-4A, F66523-5A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP16658
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 07/10/09

Metal	F66519-10 Original	SDL 10:50%DIF		QC Limits
Aluminum	0.00	0.00	NC	0-10
Antimony	0.00	0.00	NC	0-10
Arsenic	0.00	0.00	NC	0-10
Barium	0.00	0.00	NC	0-10
Beryllium	0.00	0.00	NC	0-10
Cadmium	0.00	0.00	NC	0-10
Calcium	892000	951000	6.7	0-10
Chromium	0.00	0.00	NC	0-10
Cobalt	0.00	0.00	NC	0-10
Copper	0.00	0.00	NC	0-10
Iron	0.00	0.00	NC	0-10
Lead	0.00	0.00	NC	0-10
Magnesium	3050000	3100000	1.5	0-10
Manganese	1920	2020	5.2	0-10
Molybdenum				
Nickel	0.00	0.00	NC	0-10
Potassium	199000	168000	15.6*(a)	0-10
Selenium	60.0	0.00	100.0(b)	0-10
Silver	0.00	0.00	NC	0-10
Sodium	11200000	10800000	2.7	0-10
Thallium	77.8	0.00	100.0(b)	0-10
Tin				
Vanadium	43.8	73.7	68.3 (b)	0-10
Zinc	0.00	0.00	NC	0-10

Associated samples MP16658: F66523-1, F66523-2, F66523-3, F66523-4, F66523-5, F66523-1A, F66523-2A, F66523-3A, F66523-4A, F66523-5A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Serial dilution indicates possible matrix interference.
(b) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP16671 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 07/14/09

Metal	RL	IDL	MDL	MB raw	final
Mercury	1.0	.14	.15	-0.043	<1.0

Associated samples MP16671: F66523-1, F66523-2, F66523-3, F66523-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP16671
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 07/14/09 07/14/09

Metal	F66519-10A Original	DUP	RPD	QC Limits	F66519-10A Original	MS	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.0	0.0	NC	0-20	0.0	3.0	3	100.0	80-120

Associated samples MP16671: F66523-1, F66523-2, F66523-3, F66523-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP16671 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 07/14/09

Metal	F66519-10A Original	MSD	Spikelot HGFLWS1	% Rec	MSD RPD	QC Limit
Mercury	0.0	3.0	3	100.0	0.0	20

Associated samples MP16671: F66523-1, F66523-2, F66523-3, F66523-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP16671
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 07/14/09

Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	3.0	3	100.0	80-120

Associated samples MP16671: F66523-1, F66523-2, F66523-3, F66523-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP16671
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 07/14/09

Metal	F66519-10A Original	SDL 1:5	%DIF	QC Limits
Mercury	0.00	0.00	NC	0-10

Associated samples MP16671: F66523-1, F66523-2, F66523-3, F66523-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP16672 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 07/14/09

Metal	RL	IDL	MDL	MB raw	final
Mercury	1.0	.14	.15	-0.049	<1.0

Associated samples MP16672: F66523-5, F66523-1A, F66523-2A, F66523-3A, F66523-4A, F66523-5A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP16672 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 07/14/09 07/14/09

Metal	F66523-5 Original	DUP	RPD	QC Limits	F66523-5 Original	MS	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.0	0.0	NC	0-20	0.0	2.9	3	96.7	80-120

Associated samples MP16672: F66523-5, F66523-1A, F66523-2A, F66523-3A, F66523-4A, F66523-5A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP16672 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 07/14/09

Metal	F66523-5 Original	MSD	Spikelot HGFLWS1	% Rec	MSD RPD	QC Limit
Mercury	0.0	3.0	3	100.0	3.4	20

Associated samples MP16672: F66523-5, F66523-1A, F66523-2A, F66523-3A, F66523-4A, F66523-5A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP16672
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 07/14/09

Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	3.0	3	100.0	80-120

Associated samples MP16672: F66523-5, F66523-1A, F66523-2A, F66523-3A, F66523-4A, F66523-5A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP16672
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 07/14/09

Metal	F66523-5 Original	SDL 1:5	%DIF	QC Limits
Mercury	0.00	0.00	NC	0-10

Associated samples MP16672: F66523-5, F66523-1A, F66523-2A, F66523-3A, F66523-4A, F66523-5A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries
- Instrument Runlogs/QC

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Solids, Total Dissolved	GN35824	100	0.0	mg/l				
Solids, Total Dissolved	GN35825	100	0.0	mg/l				

Associated Samples:
Batch GN35824: F66523-5
Batch GN35825: F66523-1, F66523-2, F66523-3, F66523-4
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F66523
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Solids, Total Dissolved	GN35824	F66576-1	mg/l	5600	3900	35.8(a)	0-5%
Solids, Total Dissolved	GN35825	F66500-2	mg/l	6170	6480	4.9	0-5%

Associated Samples:
Batch GN35824: F66523-5
Batch GN35825: F66523-1, F66523-2, F66523-3, F66523-4
(*) Outside of QC limits
(a) RPD acceptable due to low duplicate and sample concentrations.

Lot # D9G090307

Report Cover Page 1
Case Narrative 2
Executive Summary - Detection Highlights..... 5
Methods Summary 6
Method / Analyst Summary 7
Sample Summary 8
QC Data Association Summary 9
GC/MS Semivolatiles Forms..... 10
Chain of Custody 50
Sample Receipt Documents 51

Supporting Documentation 53
IC/MS/MS Raw Data 53

Total Number of Pages in this Package 101

Close Report

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

Holloman Air Force Base

Lot # D9G090307

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TestAmerica Laboratories, Inc.

Lisa B. Uriell
Project Manager

August 4, 2009

Case Narrative
Lot # D9G090307

With exceptions noted as flags or footnotes, standard analytical protocols were followed in the analyses of the samples and no problems were encountered or anomalies observed. All laboratory quality control samples analyzed in conjunction with the samples in this project were within established control limits, with any exceptions noted.

The test results shown in this report meet all requirements of the AFCEE 4.0 QAPP and the approved laboratory variances. Any exceptions are noted below. This report shall not be reproduced except in full, without the written approval of the laboratory.

Sample Receiving
Ten samples were received under chain-of-custody on July 9, 2009. The samples were received in good condition at a temperature of 4.1°C.

No anomalies were observed.

Perchlorate, SW 846 6860
Each sample is analyzed to achieve the lowest possible reporting limits within the constraints of the method. Due to analytes present above the linear calibration curve, samples MW39-10-070709 (D9G090307-001), MW39-11-070709 (002), MW39-09-070709 (003), MW39-08-070709 (004), MW39-06-070709 (005), MW39-06D-070709 (006), MW39-DUP01-070709 (007), MW39-02-070809 (008), MW39-05-070809 (009) and MW39-07-070809 (010) had to be analyzed at dilutions. The reporting limits have been adjusted relative to the dilutions required.

MS/MSD were performed on sample MW39-07-070809 (D9G090307-010), as requested. The MS/MSD exhibited percent recoveries outside the QC control limits for Perchlorate. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary. The associated data in the parent sample is flagged "M" per the AFCEE QAPP.

Quality Control Definitions of Terms

Term	Definition
Batch	A set of up to 20 field samples plus associated laboratory QC samples that are similar in composition (matrix) and that are processed within the same time period with the same reagent and standard lots.
Laboratory Control Sample and Laboratory Control Sample Duplicate (LCS/LCSD)	A volume of reagent water for aqueous samples or a contaminant-free solid matrix (Ottawa sand) for soil and sediment samples which are spiked with known amounts of representative target analytes and required surrogates. A LCS is carried through the entire analytical process and is used to monitor the accuracy of the analytical process independent of potential matrix effects. An LCSD is a second Laboratory Control Sample.
Matrix Spike and Matrix Spike Duplicate (MS/MSD)	A field sample fortified with known quantities of target analytes that are also added to the LCS. Matrix spike duplicate is a second matrix spike sample. MSs/MSDs are carried throughout he entire analytical process and are used to determine sample matrix effect on accuracy of the measurement system. The accuracy and precision estimated using MS/MSD is only representative of the precision of the sample that was spiked.
Method Blank	A sample composed of all the reagents (in the same quantities) in reagent water carried through the entire analytical process. The method blank is used to monitor the level of contamination introduced during sample preparation steps.
Surrogate	Organic constituents not expected to be detected in environmental media and are added to every sample and QC at a known concentration. Surrogates are used to determine the efficiency of the sample preparation and the analytical process.
Sample Duplicate	A second aliquot of an environmental sample, taken form the same sample container when possible, that is processed independently with the first sample aliquot. The results are used to assess the effect of the sample matrix on the precision of the analytical process. The precision estimated using this sample is not necessarily representative to the precision for other samples in the batch.
Method Detection Limit "MDL"	The method detection limit is defined as the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from replicate analyses of low level standards in a typical representative matrix.
Reporting Limit "RL"	The STL reporting limit is normally the lowest level at which measurements become quantitatively meaningful, i.e., the quantitation limit, which is approximately three times the MDL. Some projects require RLs that are less than the quantitation limit to achieve particular maximum contaminant levels (MCLs) or relevant and appropriate requirements (ARARs), but RLs cannot be less than the statistically determined MDL.

Quality Control Definitions of Qualifiers

Qualifier	Definition
J	The analyte was positively identified; the quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
U	The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.
F	The analyte was positively identified but the associated numerical value is above the MDL and below the RL.
Q	The data are rejected due to deficiencies in the ability to analyze the sample and meet QC criteria.
B	The analyte was found in an associated blank, as well as in the sample.
M	A matrix effect was present.
NC, MSB	The recovery and RPD were not calculated because the sample amount was greater than four times the spike amount.
NC, DIL	The recovery was not calculated because the sample was diluted four times or greater.
N	Inorganics: Spiked analyte recovery is outside stated control limits.
a	Organics: Spiked analyte recovery is outside stated control limits.
*	Surrogate or LCS is outside control limits.
UJ	The analyte was not detected; however, the result is estimated due to discrepancies in meeting certain analyte specific quality control criteria.

Table of Contents

EXECUTIVE SUMMARY - Detection Highlights

D9G090307

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
MW39-10-070709 07/07/09 10:36 001				
Perchlorate	170	25	ug/L	SW846 6860
MW39-11-070709 07/07/09 11:35 002				
Perchlorate	110	25	ug/L	SW846 6860
MW39-09-070709 07/07/09 13:58 003				
Perchlorate	190	25	ug/L	SW846 6860
MW39-08-070709 07/07/09 15:12 004				
Perchlorate	74	25	ug/L	SW846 6860
MW39-06-070709 07/07/09 15:36 005				
Perchlorate	28	5.0	ug/L	SW846 6860
MW39-06D-070709 07/07/09 16:35 006				
Perchlorate	28	5.0	ug/L	SW846 6860
MW39-DUP01-070709 07/07/09 007				
Perchlorate	26	5.0	ug/L	SW846 6860
MW39-02-070809 07/08/09 11:10 008				
Perchlorate	15	5.0	ug/L	SW846 6860
MW39-05-070809 07/08/09 11:25 009				
Perchlorate	24	5.0	ug/L	SW846 6860
MW39-07-070809 07/08/09 12:30 010				
Perchlorate	59 M	5.0	ug/L	SW846 6860

METHODS SUMMARY

D9G090307

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
SW846 6860 Perchlorate	SW846 6860	SW846 6860

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

METHOD / ANALYST SUMMARY

D9G090307

ANALYTICAL METHOD	ANALYST	ANALYST ID
SW846 6860	Tim O'Donnell	000443

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

Table of Contents

SAMPLE SUMMARY

D9G090307

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
LF9KT	001	MW39-10-070709	07/07/09	10:36
LF9K9	002	MW39-11-070709	07/07/09	11:35
LF9LA	003	MW39-09-070709	07/07/09	13:58
LF9LC	004	MW39-08-070709	07/07/09	15:12
LF9LF	005	MW39-06-070709	07/07/09	15:36
LF9LG	006	MW39-06D-070709	07/07/09	16:35
LF9LJ	007	MW39-DUP01-070709	07/07/09	
LF9LK	008	MW39-02-070809	07/08/09	11:10
LF9LN	009	MW39-05-070809	07/08/09	11:25
LF9LP	010	MW39-07-070809	07/08/09	12:30

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

QC DATA ASSOCIATION SUMMARY

D9G090307

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	WG	SW846 6860		9205354	9205206
002	WG	SW846 6860		9205354	9205206
003	WG	SW846 6860		9205354	9205206
004	WG	SW846 6860		9205354	9205206
005	WG	SW846 6860		9205354	9205206
006	WG	SW846 6860		9205354	9205206
007	WG	SW846 6860		9205354	9205206
008	WG	SW846 6860		9205354	9205206
009	WG	SW846 6860		9205354	9205206
010	WG	SW846 6860		9205354	9205206

TestAmerica

Semivolatile GC/MS

CLP-Like Forms

Lot ID: D9G090307

Client: Tetra Tech Inc. – Holloman AFB

Method: SW846 6860

Associated Samples: 001 through 010

Batch: 9205354

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Tetra Tech NUS, Inc

Holloman AFB

Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	MW39-10-070709
Lot/SDG Number:	D9G090307	**Lab Sample ID:**	D9G090307-001
Matrix:	WATER	**Lab WorkOrder:**	LF9KT1AA
% Moisture:	N/A	**Date/Time Collected:**	07/07/09 10:36
Basis:	Wet	**Date/Time Received:**	07/09/09 08:30
Analysis Method:	6860	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/24/09 11:54
QC Batch ID:	9205354	**Date/Time Analyzed:**	07/31/09 22:04
Sample Aliquot:	5 mL	**Instrument ID:**	LCMS2
Dilution Factor:	500	**Extraction Method:**	6860

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
14797-73-0	Perchlorate	Tim O'Donnell	TO	**170**	4.4	25	

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Tetra Tech NUS, Inc

Holloman AFB

Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	MW39-11-070709
Lot/SDG Number:	D9G090307	**Lab Sample ID:**	D9G090307-002
Matrix:	WATER	**Lab WorkOrder:**	LF9K91AA
% Moisture:	N/A	**Date/Time Collected:**	07/07/09 11:35
Basis:	Wet	**Date/Time Received:**	07/09/09 08:30
Analysis Method:	6860	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/24/09 11:54
QC Batch ID:	9205354	**Date/Time Analyzed:**	07/31/09 22:34
Sample Aliquot:	5 mL	**Instrument ID:**	LCMS2
Dilution Factor:	500	**Extraction Method:**	6860

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
14797-73-0	Perchlorate	Tim O'Donnell	TO	**110**	4.4	25	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Tetra Tech NUS, Inc

Holloman AFB

Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	MW39-09-070709
Lot/SDG Number:	D9G090307	**Lab Sample ID:**	D9G090307-003
Matrix:	WATER	**Lab WorkOrder:**	LF9LA1AA
% Moisture:	N/A	**Date/Time Collected:**	07/07/09 13:58
Basis:	Wet	**Date/Time Received:**	07/09/09 08:30
Analysis Method:	6860	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/24/09 11:54
QC Batch ID:	9205354	**Date/Time Analyzed:**	07/31/09 23:03
Sample Aliquot:	5 mL	**Instrument ID:**	LCMS2
Dilution Factor:	500	**Extraction Method:**	6860

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
14797-73-0	Perchlorate	Tim O'Donnell	TO	**190**	4.4	25	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Tetra Tech NUS, Inc

Holloman AFB

Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	MW39-08-070709
Lot/SDG Number:	D9G090307	**Lab Sample ID:**	D9G090307-004
Matrix:	WATER	**Lab WorkOrder:**	LF9LC1AA
% Moisture:	N/A	**Date/Time Collected:**	07/07/09 15:12
Basis:	Wet	**Date/Time Received:**	07/09/09 08:30
Analysis Method:	6860	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/24/09 11:54
QC Batch ID:	9205354	**Date/Time Analyzed:**	07/31/09 23:32
Sample Aliquot:	5 mL	**Instrument ID:**	LCMS2
Dilution Factor:	500	**Extraction Method:**	6860

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
14797-73-0	Perchlorate	Tim O'Donnell	TO	**74**	4.4	25	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Tetra Tech NUS, Inc
Holloman AFB
Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	MW39-06-070709
Lot/SDG Number:	D9G090307	**Lab Sample ID:**	D9G090307-005
Matrix:	WATER	**Lab WorkOrder:**	LF9LF1AA
% Moisture:	N/A	**Date/Time Collected:**	07/07/09 15:36
Basis:	Wet	**Date/Time Received:**	07/09/09 08:30
Analysis Method:	6860	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/24/09 11:54
QC Batch ID:	9205354	**Date/Time Analyzed:**	08/01/09 01:29
Sample Aliquot:	5 mL	**Instrument ID:**	LCMS2
Dilution Factor:	100	**Extraction Method:**	6860

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
14797-73-0	Perchlorate	Tim O'Donnell	TO	**28**	0.88	5.0	

Form 1 Analysis Data Sheet Equivalent

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Tetra Tech NUS, Inc

Holloman AFB

Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	MW39-06D-070709
Lot/SDG Number:	D9G090307	**Lab Sample ID:**	D9G090307-006
Matrix:	WATER	**Lab WorkOrder:**	LF9LG1AA
% Moisture:	N/A	**Date/Time Collected:**	07/07/09 16:35
Basis:	Wet	**Date/Time Received:**	07/09/09 08:30
Analysis Method:	6860	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/24/09 11:54
QC Batch ID:	9205354	**Date/Time Analyzed:**	08/01/09 01:59
Sample Aliquot:	5 mL	**Instrument ID:**	LCMS2
Dilution Factor:	100	**Extraction Method:**	6860

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
14797-73-0	Perchlorate	Tim O'Donnell	TO	**28**	0.88	5.0	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Tetra Tech NUS, Inc
Holloman AFB
Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	MW39-DUP01-070709
Lot/SDG Number:	D9G090307	**Lab Sample ID:**	D9G090307-007
Matrix:	WATER	**Lab WorkOrder:**	LF9LJ1AA
% Moisture:	N/A	**Date/Time Collected:**	07/07/09 00:00
Basis:	Wet	**Date/Time Received:**	07/09/09 08:30
Analysis Method:	6860	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/24/09 11:54
QC Batch ID:	9205354	**Date/Time Analyzed:**	08/01/09 02:28
Sample Aliquot:	5 mL	**Instrument ID:**	LCMS2
Dilution Factor:	100	**Extraction Method:**	6860

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
14797-73-0	Perchlorate	Tim O'Donnell	TO	**26**	0.88	5.0	

Form 1 Analysis Data Sheet Equivalent

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Tetra Tech NUS, Inc

Holloman AFB

Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	MW39-02-070809
Lot/SDG Number:	D9G090307	**Lab Sample ID:**	D9G090307-008
Matrix:	WATER	**Lab WorkOrder:**	LF9LK1AA
% Moisture:	N/A	**Date/Time Collected:**	07/08/09 11:10
Basis:	Wet	**Date/Time Received:**	07/09/09 08:30
Analysis Method:	6860	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/24/09 11:54
QC Batch ID:	9205354	**Date/Time Analyzed:**	08/01/09 02:57
Sample Aliquot:	5 mL	**Instrument ID:**	LCMS2
Dilution Factor:	100	**Extraction Method:**	6860

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
14797-73-0	Perchlorate	Tim O'Donnell	TO	**15**	0.88	5.0	

Form 1 Analysis Data Sheet Equivalent

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Tetra Tech NUS, Inc

Holloman AFB

Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	MW39-05-070809
Lot/SDG Number:	D9G090307	**Lab Sample ID:**	D9G090307-009
Matrix:	WATER	**Lab WorkOrder:**	LF9LN1AA
% Moisture:	N/A	**Date/Time Collected:**	07/08/09 11:25
Basis:	Wet	**Date/Time Received:**	07/09/09 08:30
Analysis Method:	6860	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/24/09 11:54
QC Batch ID:	9205354	**Date/Time Analyzed:**	08/01/09 03:27
Sample Aliquot:	5 mL	**Instrument ID:**	LCMS2
Dilution Factor:	100	**Extraction Method:**	6860

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
14797-73-0	Perchlorate	Tim O'Donnell	TO	**24**	0.88	5.0	

Form 1 Analysis Data Sheet Equivalent

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Tetra Tech NUS, Inc

Holloman AFB

Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	MW39-07-070809
Lot/SDG Number:	D9G090307	**Lab Sample ID:**	D9G090307-010
Matrix:	WATER	**Lab WorkOrder:**	LF9LP1AA
% Moisture:	N/A	**Date/Time Collected:**	07/08/09 12:30
Basis:	Wet	**Date/Time Received:**	07/09/09 08:30
Analysis Method:	6860	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/24/09 11:54
QC Batch ID:	9205354	**Date/Time Analyzed:**	08/01/09 03:56
Sample Aliquot:	5 mL	**Instrument ID:**	LCMS2
Dilution Factor:	100	**Extraction Method:**	6860

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
14797-73-0	Perchlorate	Tim O'Donnell	TO	**59**	0.88	5.0	M

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THE LEADER IN ENVIRONMENTAL TESTING

Tetra Tech NUS, Inc

Holloman AFB

Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	D9G090307	**Lab Sample ID:**	R9G240000-354B
Matrix:	WATER	**Lab WorkOrder:**	LG2CF1AA
% Moisture:		**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	6860	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/24/09 11:54
QC Batch ID:	9205354	**Date/Time Analyzed:**	07/31/09 20:33
Sample Aliquot:	5 mL	**Instrument ID:**	LCMS2
Dilution Factor:	1	**Extraction Method:**	6860

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
14797-73-0	Perchlorate	Tim O'Donnell	TO	0.0088	0.0088	0.050	U

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THE LEADER IN ENVIRONMENTAL TESTING

Tetra Tech NUS, Inc

Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	D9G090307	**Lab Sample ID:**	R9G240000-354C
Matrix:	WATER	**Lab WorkOrder:**	LG2CF1AC
% Moisture:	N/A	**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	6860	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/24/09 11:54
QC Batch ID:	9205354	**Date/Time Analyzed:**	07/31/09 21:06
Sample Aliquot:	5 mL	**Instrument ID:**	LCMS2
Dilution Factor:	1		

Analyte	True	Found	%Rec	Q	Limits
Perchlorate	0.0500	0.0568	114		80 - 120

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Tetra Tech NUS, Inc

Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	MW39-07-MS070809
Lot/SDG Number:	D9G090307	**MS Lab Sample ID:**	D9G090307-010S
Matrix:	WATER	**MS Lab WorkOrder:**	LF9LP1AC
% Moisture:	N/A	**Date/Time Collected:**	07/08/09 12:30
Basis:	Wet	**Date/Time Received:**	07/09/09 08:30
Analysis Method:	6860	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/24/09 11:54
QC Batch ID:	9205354	**Date/Time Analyzed:**	08/01/09 04:25
MS Sample Aliquot:	5 mL	**Instrument ID:**	LCMS2
MS Dilution Factor:	100		

Analyte	Spike Amount	Sample Result	C	MS Result	C	% Rec	Q	QC Limit
Perchlorate	5.00	59	M	70.2		216	a	80 - 120

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Tetra Tech NUS, Inc

Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	MW39-07-MS070809
Lot/SDG Number:	D9G090307	**MSD Lab Sample ID:**	D9G090307-010D
Matrix:	WATER	**MSD Lab WorkOrder:**	LF9LP1AD
% Moisture:	N/A	**Date/Time Collected:**	07/08/09 12:30
Basis:	Wet	**Date/Time Received:**	07/09/09 08:30
Analysis Method:	6860	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/24/09 11:54
QC Batch ID:	9205354	**Date/Time Analyzed:**	08/01/09 04:55
MSD Sample Aliquot:	5 mL	**Instrument ID:**	LCMS2
MSD Dilution Factor:	100		

Analyte	Spike Amount	Sample Result	C	MSD Result	C	% Rec	Q	RPD	Q	QC Limits	
										% Rec	RPD
Perchlorate	5.00	59	M	63.1		74	a	11		80 - 120	15

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Tetra Tech NUS, Inc

Method Blank Summary

Lab Name:	TESTAMERICA DENVER	**Lab File ID:**	IC29G3127
Lot/SDG Number:	D9G090307	**Lab Sample ID:**	R9G240000-354B
Matrix:	WATER	**Lab Work Order:**	LG2CF1AA
Analysis Method:	6860	**Date/Time Extracted:**	07/24/09 11:54
Extraction Method:	I88ZUA4	**Date/Time Analyzed:**	07/31/09 20:33
QC Batch ID:	9205354	**Instrument ID:**	LCMS2

Client ID	Sample Work Order #	Lab File ID	Date Analyzed	Time Analyzed
MW39-11-070709	LF9K91AA	IC29G3127	07/31/09	22:34
MW39-10-070709	LF9KT1AA	IC29G3126	07/31/09	22:04
MW39-09-070709	LF9LA1AA	IC29G3128	07/31/09	23:03
MW39-08-070709	LF9LC1AA	IC29G3129	07/31/09	23:32
MW39-06-070709	LF9LF1AA	IC29G3133	08/01/09	01:29
MW39-06D-070709	LF9LG1AA	IC29G3134	08/01/09	01:59
MW39-DUP01-070709	LF9LJ1AA	IC29G3135	08/01/09	02:28
MW39-02-070809	LF9LK1AA	IC29G3136	08/01/09	02:57
MW39-05-070809	LF9LN1AA	IC29G3137	08/01/09	03:27
MW39-07-070809	LF9LP1AA	IC29G3138	08/01/09	03:56
MW39-07-MS070809 MS	LF9LP1AC S	IC29G3139	08/01/09	04:25
MW39-07-MSD070809 MSD	LF9LP1AD D	IC29G3140	08/01/09	04:55
CHECK SAMPLE	LG2CF1AC C	IC29G3124	07/31/09	21:06

Form 4 Method Blank Summary Equivalent

Sample List Report **MassLynx 4.1 SCN627**

Sample List: C:\MassLynx\ICPerchlorate.PRO\SampleDB\ic29G31(02).SPL
Last Modified: Monday, August 03, 2009 14:29:50 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:34:15 Mountain Daylight Time

	File Name	Sample ID	File Text	Sample Type	Analyte ng/L	Dilution	Vial	Vf mL
1	ic29G3001b	LCMS1317	LRB1	Blank	0	1	1	5.00
2	ic29G3002b	LCMS1319	20ng/L1	Standard	20	1	1	1.00
3	ic29G3003b	LCMS1321	50ng/L	Standard	50	1	1	1.00
4	ic29G3004b	LCMS1322	100ng/L	Standard	100	1	1	1.00
5	ic29G3005b	LCMS1323	200ng/L	Standard	200	1	1	1.00
6	ic29G3006b	LCMS1325	500ng/L	Standard	500	1	1	1.00
7	ic29G3007b	LCMS1226	1000ng/L	Standard	1000	1	1	1.00
8	ic29G3008b	LCMS1317	LRB2	Blank	0	1	1	5.00
9	ic29G3009b	LCMS1327	200 ng/L ICV	QC	200	1	1	5.00
10	ic29G3010b	LCMS1321	50ng/L RLV	QC	50	1	1	1.00
11	ic29G3120	LCMS1323	200 ng/L CCV 3	QC	200	1	1	1.00
12	ic29G3121	LCMS1319	20 ng/L LODV 1	QC	20	1	1	1.00
13	ic29G3122	LCMS1318	LRB2	Blank	0	1	1	5.00
14	ic29G3123	LG2CF1AA	R9G240000-354 MB	Blank	0	1	1	5.00
15	ic29G3124	LG2CF1AC	R9G240000-354 LCS	QC	50	1	1	5.00
16	ic29G3125	LCMS1328	ICS2	QC	50	1	1	5.00
17	ic29G3126	LF9KT1AA	D9G090307-001 500X	Analyte	0	500	1	5.00
18	ic29G3127	LF9F91AA	D9G090307-002 500X	Analyte	0	500	1	5.00
19	ic29G3128	LF9LA1AA	D9G090307-003 500X	Analyte	0	500	1	5.00
20	ic29G3129	LF9LC1AA	D9G090307-004 500X	Analyte	0	500	1	5.00
21	ic29G3130	LCMS1324	200 ng/L CCV 1	QC	200	1	1	1.00
22	ic29G3131	LCMS1319	20 ng/L LODV 2	QC	20	1	1	1.00
23	ic29G3132	LCMS1318	LRB3	Blank	0	1	1	5.00
24	ic29G3133	LF9LF1AA	D9G090307-005 100X	Analyte	0	100	1	5.00
25	ic29G3134	LF9LG1AA	D9G090307-006 100X	Analyte	0	100	1	5.00
26	ic29G3135	LF9LJ1AA	D9G090307-007 100X	Analyte	0	100	1	5.00
27	ic29G3136	LF9LK1AA	D9G090307-008 100X	Analyte	0	100	1	5.00
28	ic29G3137	LF9LN1AA	D9G090307-009 100X	Analyte	0	100	1	5.00
29	ic29G3138	LF9LP1AA	D9G090307-010 100X	Analyte	0	100	1	5.00
30	ic29G3139	LF9LP1AC	D9G090307-010 MS 100X	QC	50	100	1	5.00
31	ic29G3140	LF9LP1AD	D9G090307-010 MSD 100X	QC	50	100	1	5.00
32	ic29G3141	LCMS1324	200 ng/L CCV 2	QC	200	1	1	1.00
33	ic29G3142	LCMS1319	20 ng/L LODV 3	QC	20	1	1	1.00
34	ic29G3143	LCMS1340	LRB1	Blank	0	1	1	5.00

Sample List Report **MassLynx 4.1 SCN627**

Sample List: C:\MassLynx\ICPerchlorate.PRO\SampleDB\ic29G31(02).SPL
Last Modified: Monday, August 03, 2009 14:29:50 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:34:15 Mountain Daylight Time

Page Position (2, 1)

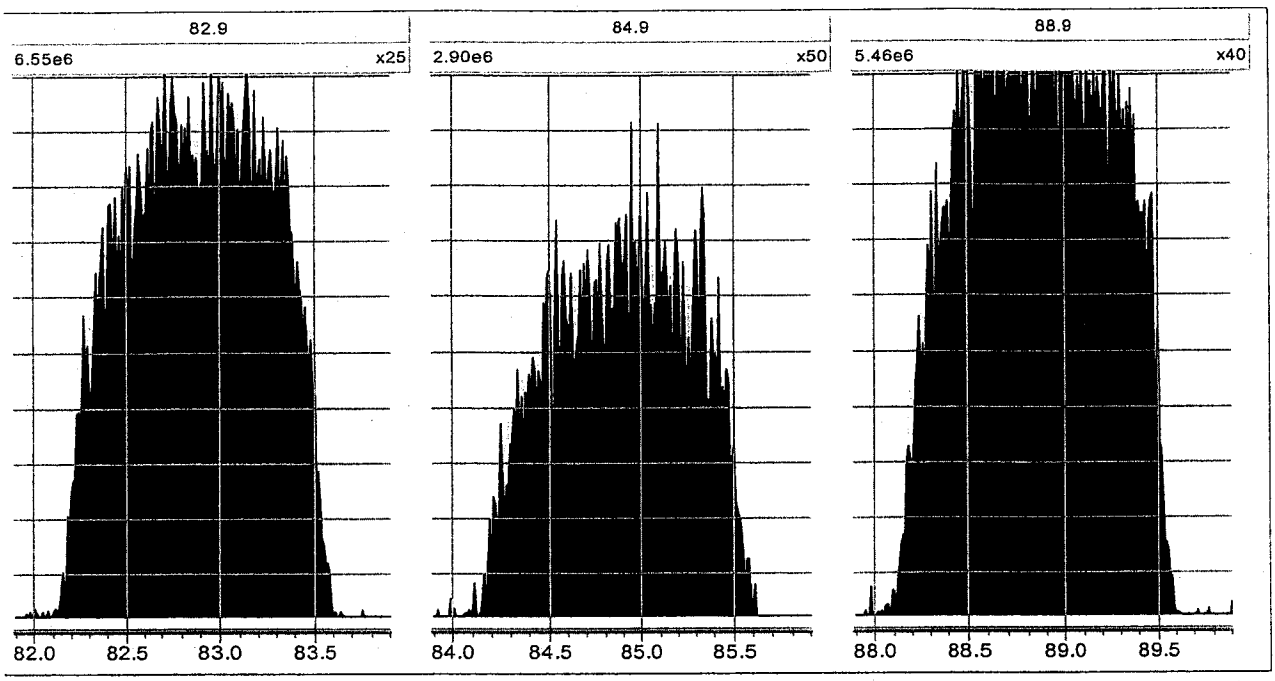
Sample mL or g	Inject Volume	MS File	Inlet File	MS Tune File
5.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
1.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
1.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
1.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
1.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
1.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
1.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
5.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
5.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
1.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
1.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
1.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
5.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
5.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
5.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
5.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
5.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
5.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
5.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
5.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
5.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
1.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
1.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
5.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
5.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
5.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
5.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
5.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
5.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
5.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
5.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
5.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
1.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
1.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
5.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate

Tune Parameters - MassLynx 4.1 SCN627

File: C:\MassLynx\ICPerchlorate.PRO\ACQUDB\ICPerchlorate.IPR

Instrument: QUATTROULTIMA

Printed: Thursday, July 30, 2009 12:33:54 Mountain Daylight Time



Type	Start Mass	End Mass	Set Mass
Daughter Scan	81.90	83.90	99.00
Daughter Scan	83.90	85.90	101.00
Daughter Scan	87.90	89.90	107.00

Source (ES-)	Settings	Readbacks
Capillary (kV)	0.50	-0.45
Cone (V)	60	-62
Hex 1 (V)	1.0	
Aperture (V)	0.2	
Hex 2 (V)	1.0	
Source Temperature (°C)	120	119
Desolvation Temperature (°C)	500	495
Cone Gas Flow (L/Hr)	119	
Desolvation Gas Flow (L/Hr)	454	

Analyser	Settings	Readbacks
LM 1 Resolution	12.5	
HM 1 Resolution	12.5	
Ion Energy 1	1.0	
Entrance	-5	20
Collision	25	24
Exit	1	26
LM 2 Resolution	12.5	
HM 2 Resolution	12.5	
Ion Energy 2	1.0	
Multiplier (V)	650	-656

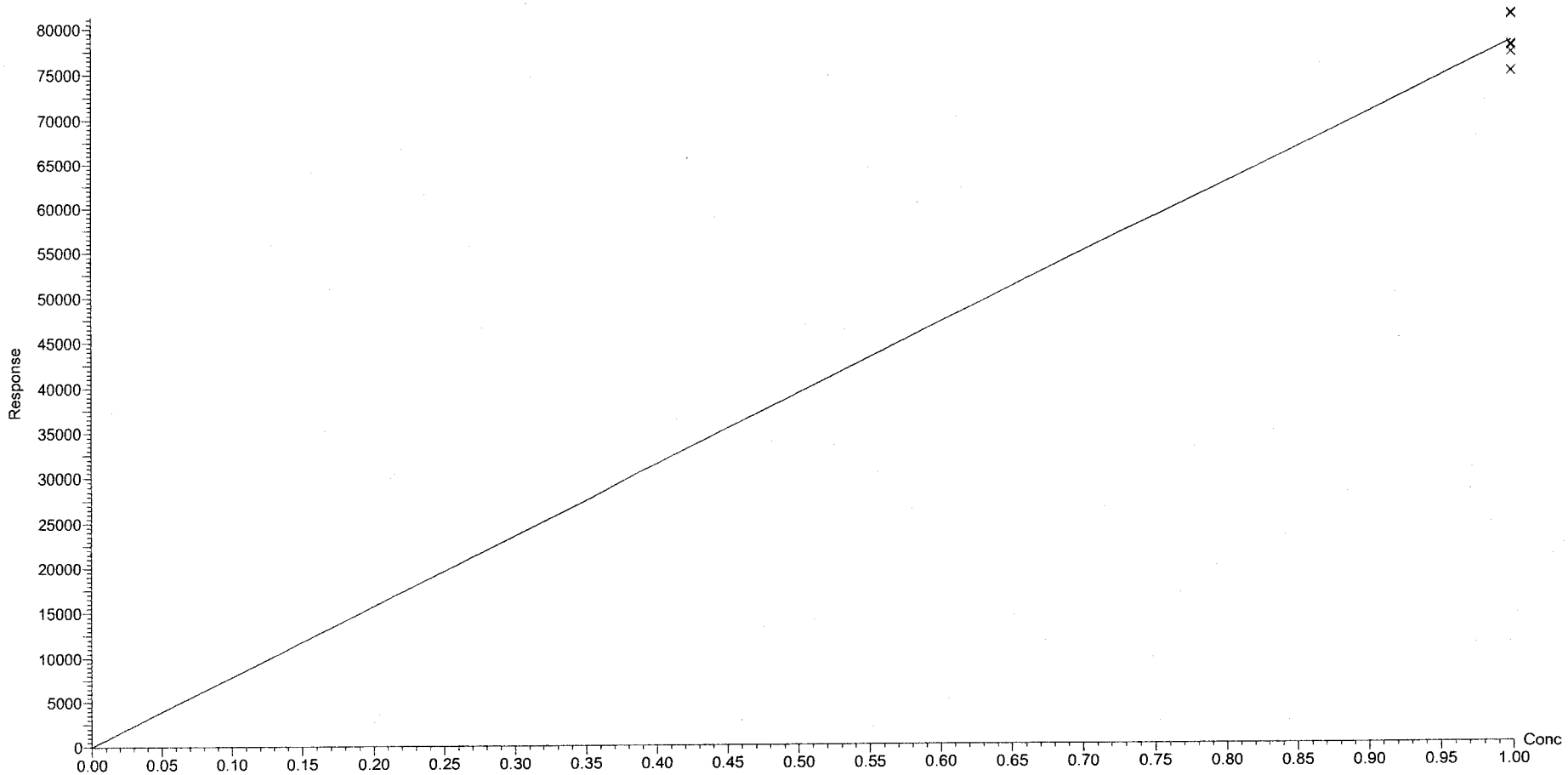
Pressure Gauges	
Collision Cell Pressure(mbar)	1.11e-3
Analyser Pressure (mbar)	OFF

Quantify Calibration Report **MassLynx 4.1 SCN627**

IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

Method: C:\MassLynx\ICPerchlorate.PRO\MethDB\ic29G30.mdb 31 Jul 2009 12:59:10
Calibration: C:\MassLynx\ICPerchlorate.PRO\CurveDB\ic29G30cr.cdb 31 Jul 2009 12:59:41

Compound name: 18O Perchlorate
Response Factor: 78328.9
RRF SD: 2473.84, % Relative SD: 3.15827
Response type: External Std, Area
Curve type: RF

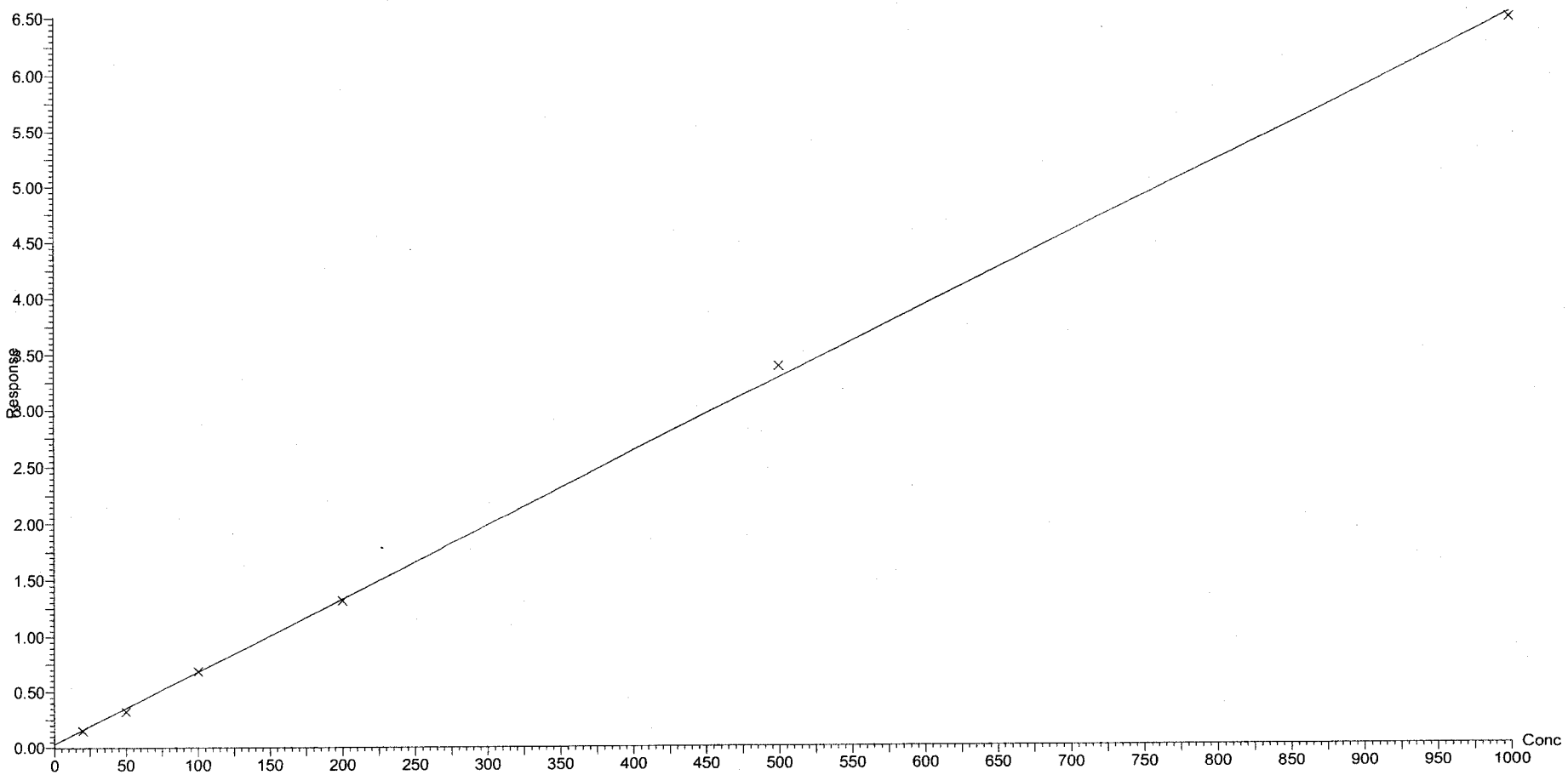


analyst: Tim O'Donnell

Quantify Calibration Report **MassLynx 4.1 SCN627**

IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

Compound name: Perchlorate
Correlation coefficient: r = 0.999767, r^2 = 0.999534
Calibration curve: 0.00648016 * x + 0.0309832
Response type: Internal Std (Ref 1), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: Null, Axis trans: None



analyst: Tim O'Donnell

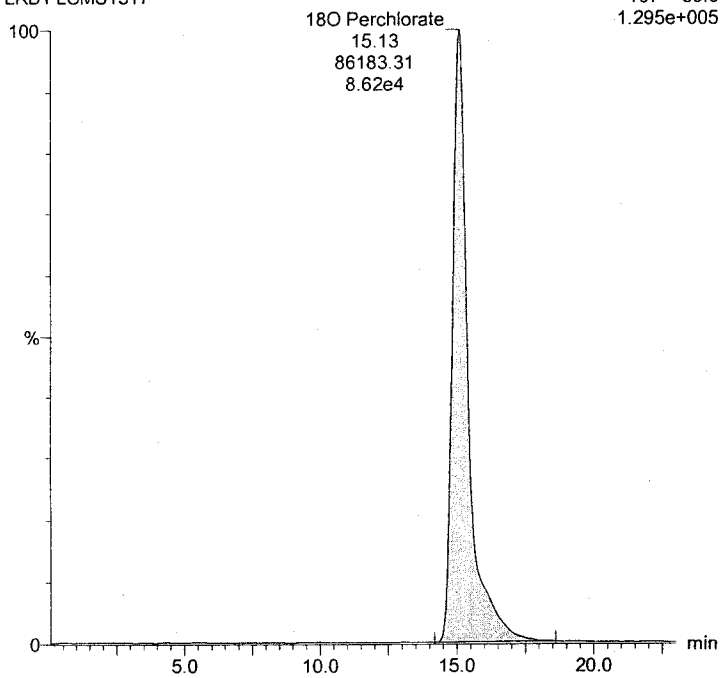
Quantify Sample Report **MassLynx 4.1 SCN627**

IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

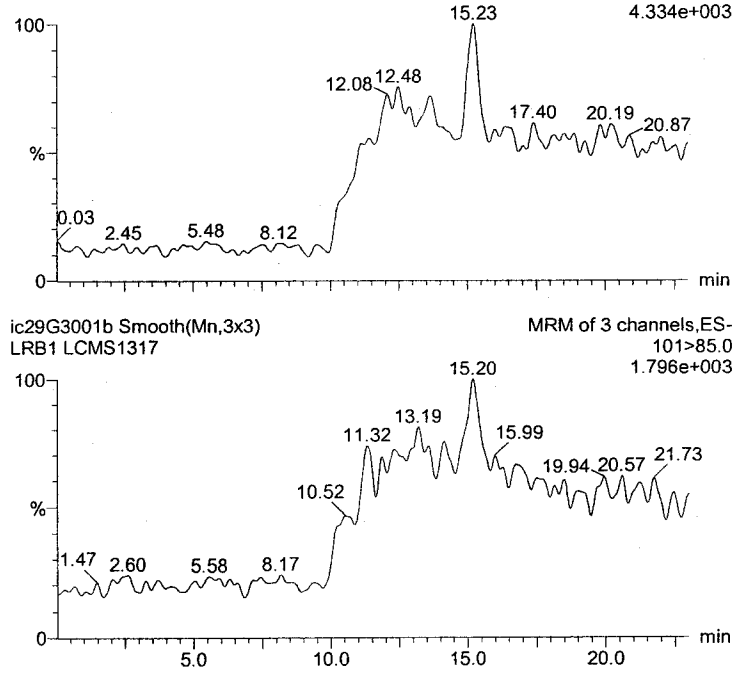
Method: C:\MassLynx\ICPerchlorate.PRO\MethDB\ic29G30.mdb 31 Jul 2009 12:59:10
Calibration: C:\MassLynx\ICPerchlorate.PRO\CurveDB\ic29G30cr.cdb 31 Jul 2009 12:59:41

Name: ic29G3001b, Date: 30-Jul-2009, Time: 18:52:15, ID: LCMS1317, Description: LRB1

18O Perchlorate



Perchlorate



ID	Sample Text	# Name	Trace	RT	Quant Area	Comfirmation Area	Ratio	IS Area	Conc.	%Rec	Flags	Acq.Date	Acq.Time
LCMS...	LRB1	1 18O Perchlorate	107 > 89.0	15.13	86183.313				1.100	110.0	bb	30-Jul-09	18:52:15
LCMS...	LRB1	2 Perchlorate	99 > 83.0					86183.313				30-Jul-09	18:52:15

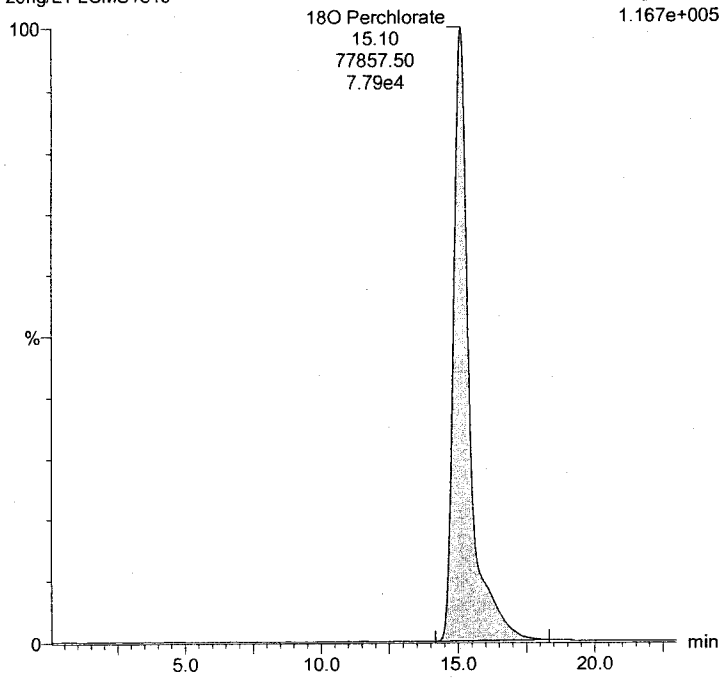
analyst: Tim O'Donnell

Quantify Sample Report **MassLynx 4.1 SCN627**

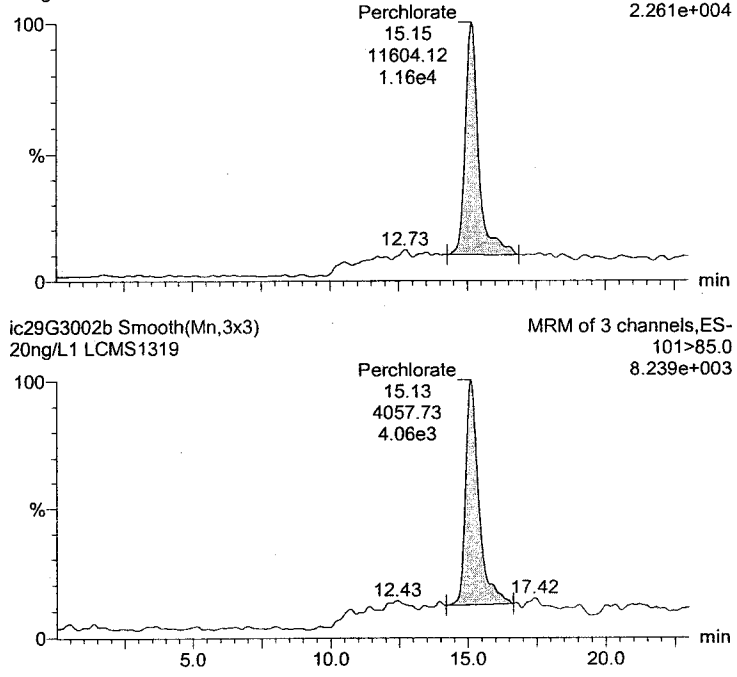
IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

Name: ic29G3002b, Date: 30-Jul-2009, Time: 19:24:10, ID: LCMS1319, Description: 20ng/L1

18O Perchlorate



Perchlorate



ID	Sample Text	# Name	Trace	RT	Quant Area	Comfirmation Area	Ratio	IS Area	Conc.	%Rec	Flags	Acq.Date	Acq.Time
LCMS...	20ng/L1	1 18O Perchlorate	107 > 89.0	15.10	77857.500				0.994	99.4	bb	30-Jul-09	19:24:10
LCMS...	20ng/L1	2 Perchlorate	99 > 83.0	15.15	11604.122	4057.727	2.860	77857.500	18.219	91.1	bb	30-Jul-09	19:24:10

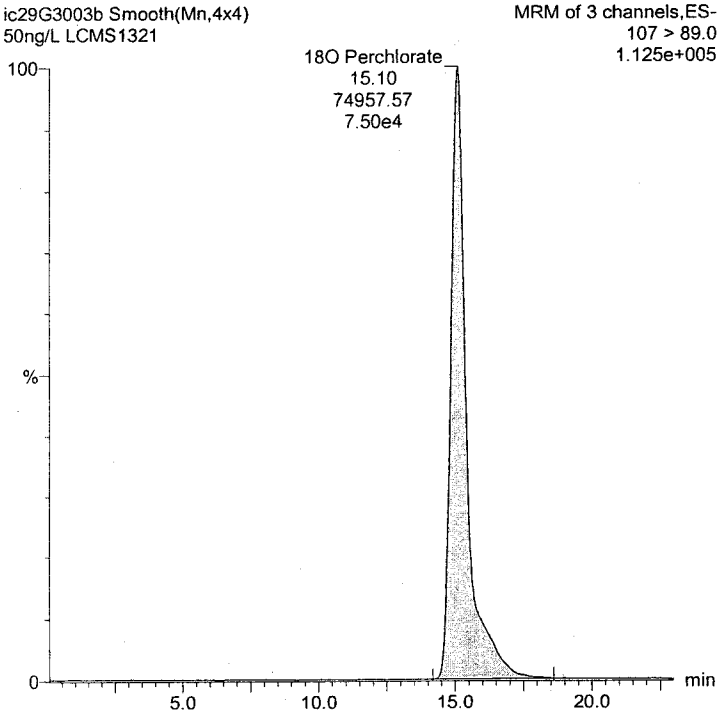
analyst: Tim O'Donnell

Quantify Sample Report **MassLynx 4.1 SCN627**

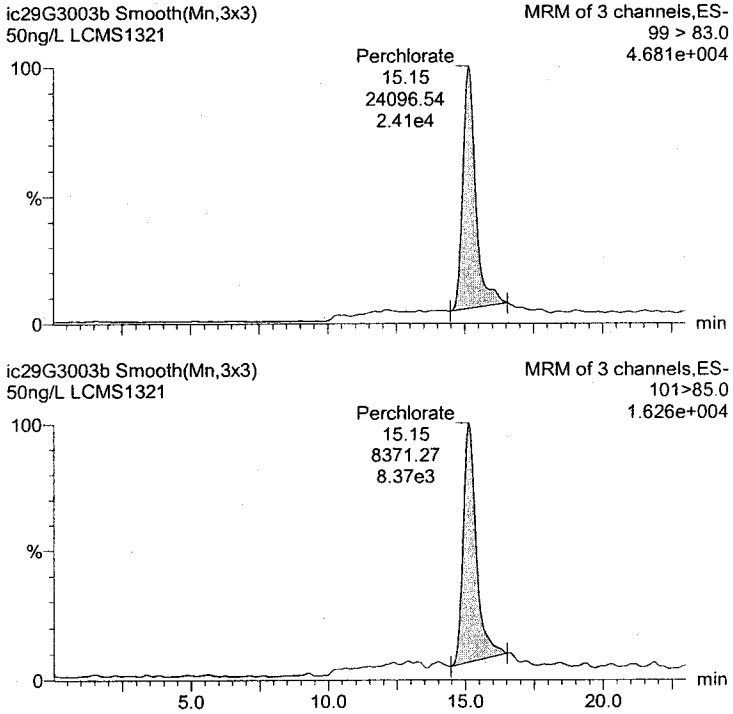
IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

Name: ic29G3003b, Date: 30-Jul-2009, Time: 20:06:41, ID: LCMS1321, Description: 50ng/L

18O Perchlorate



Perchlorate



ID	Sample Text	# Name	Trace	RT	Quant Area	Comfirmation Area	Ratio	IS Area	Conc.	%Rec	Flags	Acq.Date	Acq.Time
LCMS...	50ng/L	1 18O Perchlorate	107 > 89.0	15.10	74957.570				0.957	95.7	bb	30-Jul-09	20:06:41
LCMS...	50ng/L	2 Perchlorate	99 > 83.0	15.15	24096.537	8371.275	2.878	74957.570	44.827	89.7	bb	30-Jul-09	20:06:41

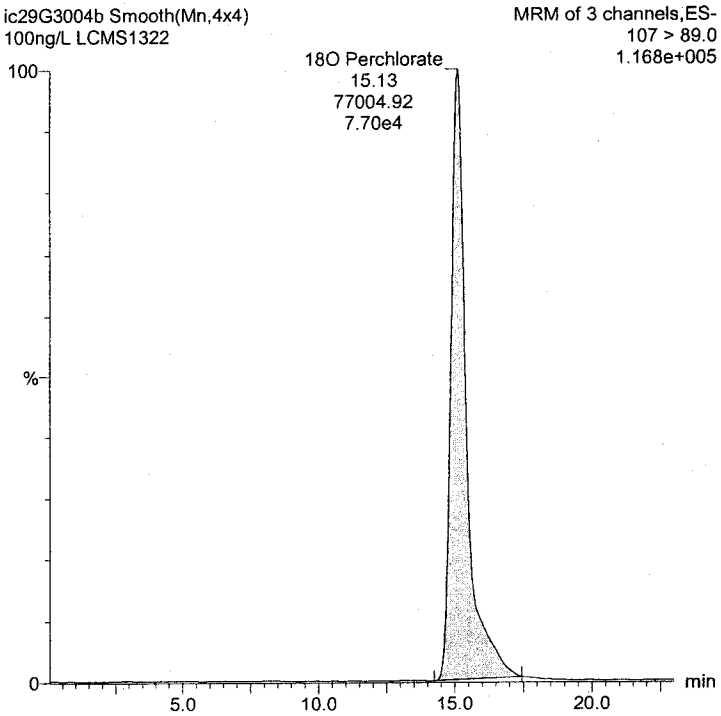
analyst: Tim O'Donnell

Quantify Sample Report **MassLynx 4.1 SCN627**

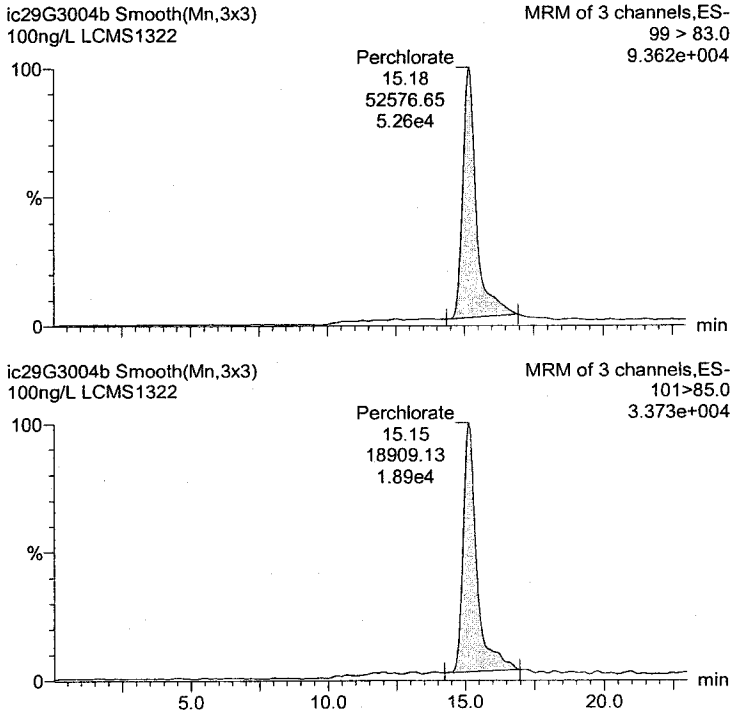
IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

Name: ic29G3004b, Date: 30-Jul-2009, Time: 20:37:57, ID: LCMS1322, Description: 100ng/L

18O Perchlorate



Perchlorate



ID	Sample Text	#	Name	Trace	RT	Quant Area	Comfirmation Area	Ratio	IS Area	Conc.	%Rec	Flags	Acq.Date	Acq.Time
LCMS...	100ng/L	1	18O Perchlorate	107 > 89.0	15.13	77004.922				0.983	98.3	bb	30-Jul-09	20:37:57
LCMS...	100ng/L	2	Perchlorate	99 > 83.0	15.18	52576.652	18909.129	2.780	77004.922	100.582	100.6	bb	30-Jul-09	20:37:57

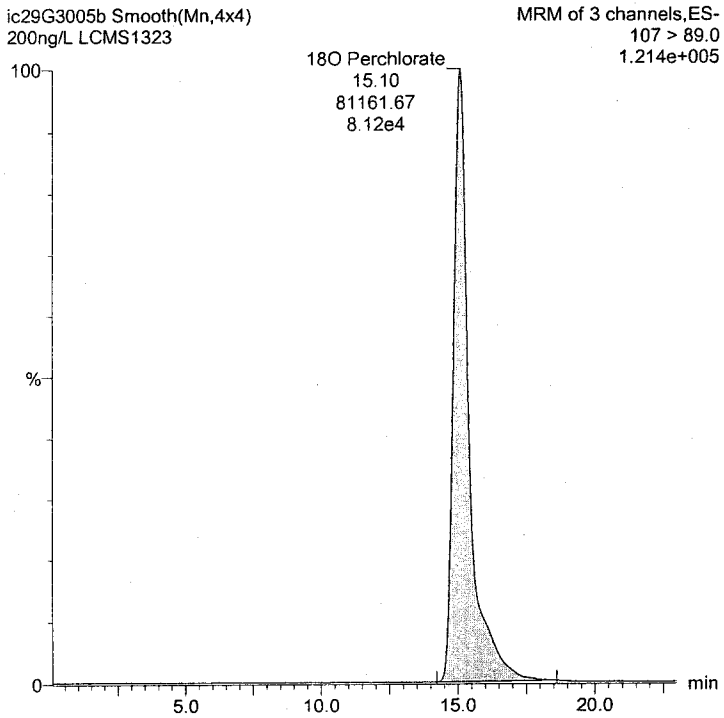
analyst: Tim O'Donnell

Quantify Sample Report **MassLynx 4.1 SCN627**

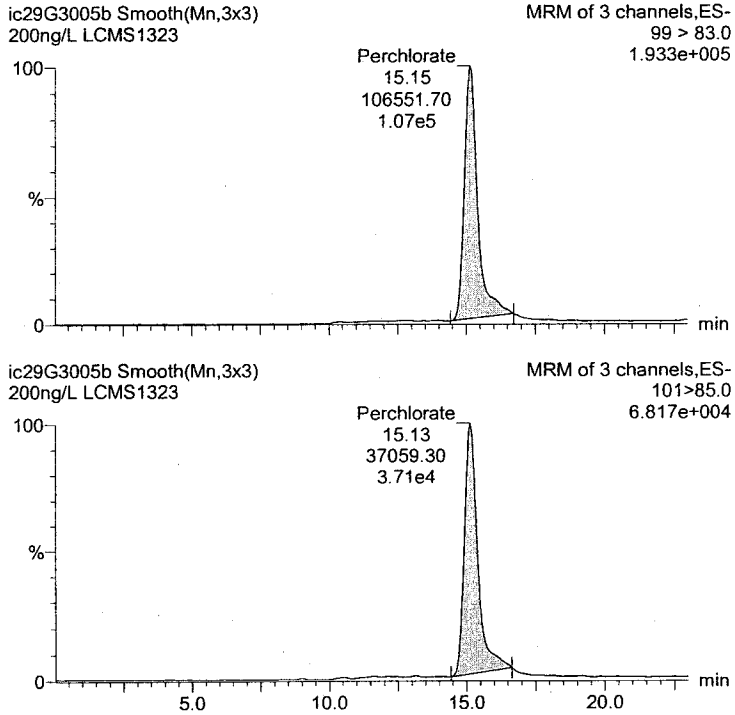
IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

Name: ic29G3005b, Date: 30-Jul-2009, Time: 21:07:14, ID: LCMS1323, Description: 200ng/L

18O Perchlorate



Perchlorate



ID	Sample Text	# Name	Trace	RT	Quant Area	Comfirmation Area	Ratio	IS Area	Conc.	%Rec	Flags	Acq.Date	Acq.Time
LCMS...	200ng/L	1 18O Perchlorate	107 > 89.0	15.10	81161.672				1.036	103.6	bb	30-Jul-09	21:07:14
LCMS...	200ng/L	2 Perchlorate	99 > 83.0	15.15	106551.703	37059.301	2.875	81161.672	197.812	98.9	bb	30-Jul-09	21:07:14

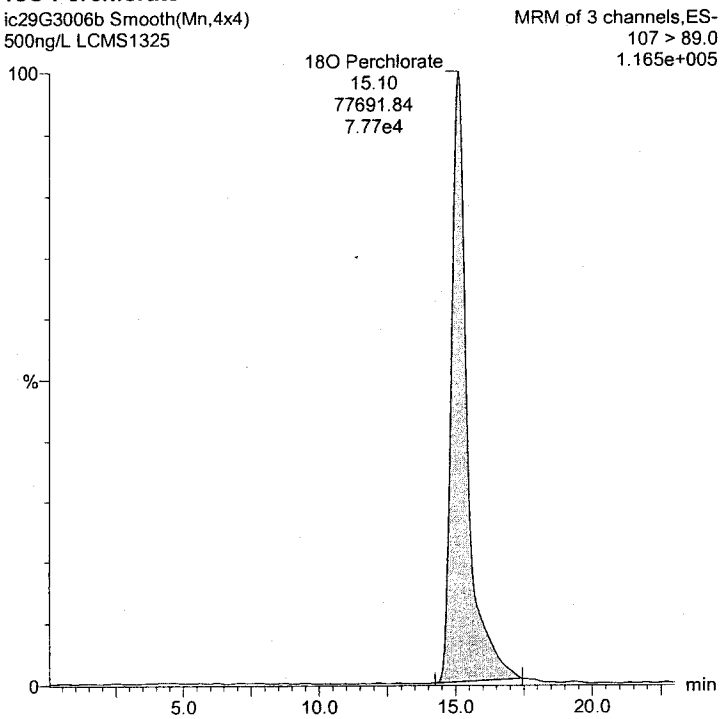
analyst: Tim O'Donnell

Quantify Sample Report **MassLynx 4.1 SCN627**

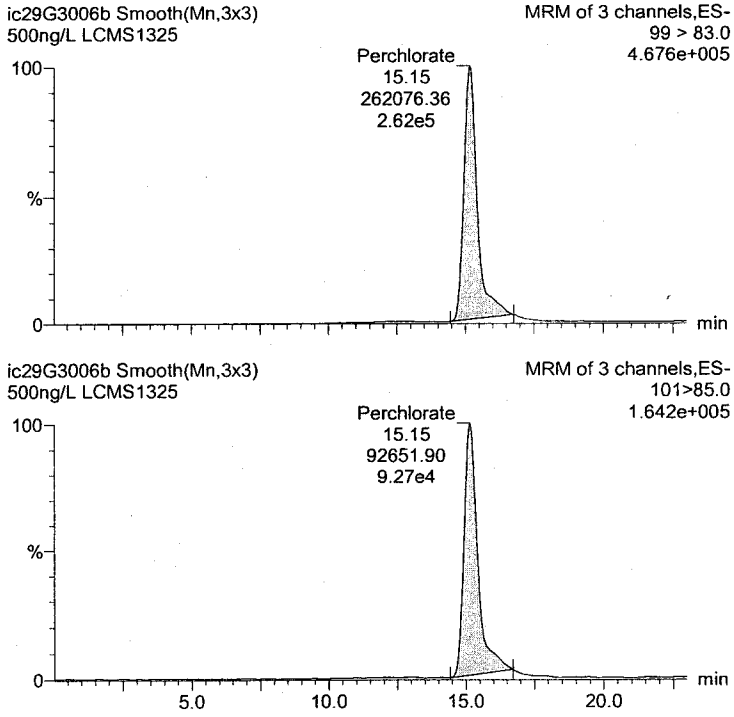
IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

Name: ic29G3006b, Date: 30-Jul-2009, Time: 21:36:33, ID: LCMS1325, Description: 500ng/L

18O Perchlorate



Perchlorate



ID	Sample Text	#	Name	Trace	RT	Quant Area	Comfirmation Area	Ratio	IS Area	Conc.	%Rec	Flags	Acq.Date	Acq.Time
LCMS...	500ng/L	1	18O Perchlorate	107 > 89.0	15.10	77691.844				0.992	99.2	bb	30-Jul-09	21:36:33
LCMS...	500ng/L	2	Perchlorate	99 > 83.0	15.15	262076.359	92651.898	2.829	77691.844	515.774	103.2	bb	30-Jul-09	21:36:33

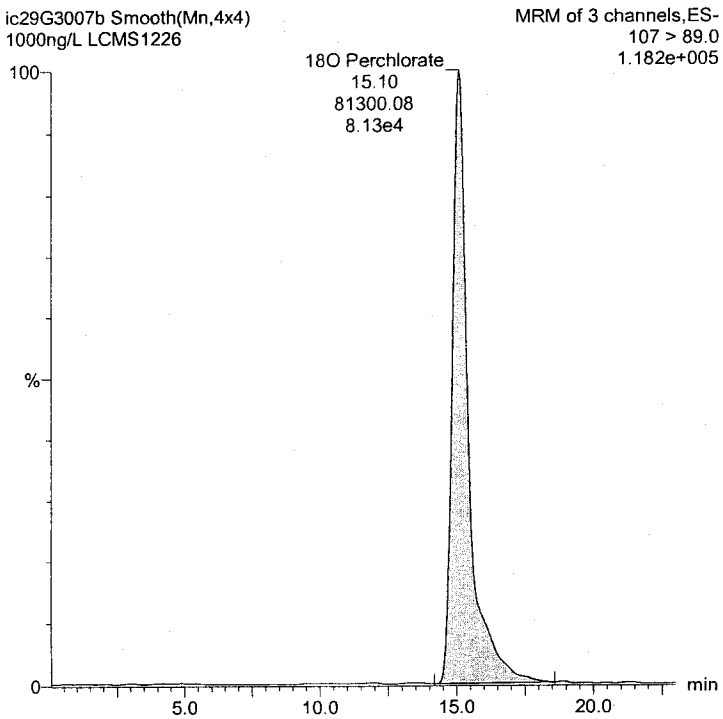
analyst: Tim O'Donnell

Quantify Sample Report **MassLynx 4.1 SCN627**

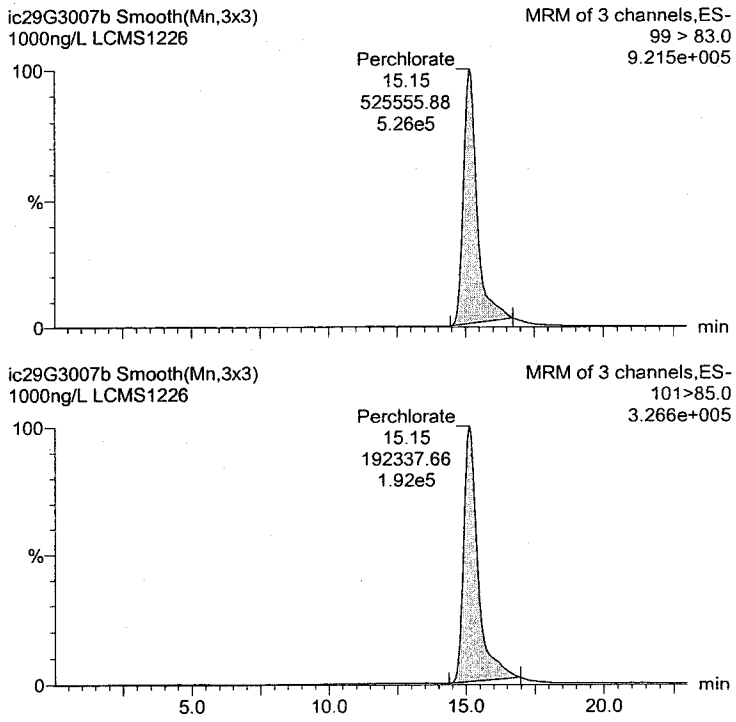
IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

Name: ic29G3007b, Date: 30-Jul-2009, Time: 22:05:51, ID: LCMS1226, Description: 1000ng/L

18O Perchlorate



Perchlorate



ID	Sample Text	# Name	Trace	RT	Quant Area	Comfirmation Area	Ratio	IS Area	Conc.	%Rec	Flags	Acq.Date	Acq.Time
LCMS...	1000ng/L	1 18O Perchlorate	107 > 89.0	15.10	81300.078				1.038	103.8	bb	30-Jul-09	22:05:51
LCMS...	1000ng/L	2 Perchlorate	99 > 83.0	15.15	525555.875	192337.656	2.732	81300.078	992.787	99.3	bb	30-Jul-09	22:05:51

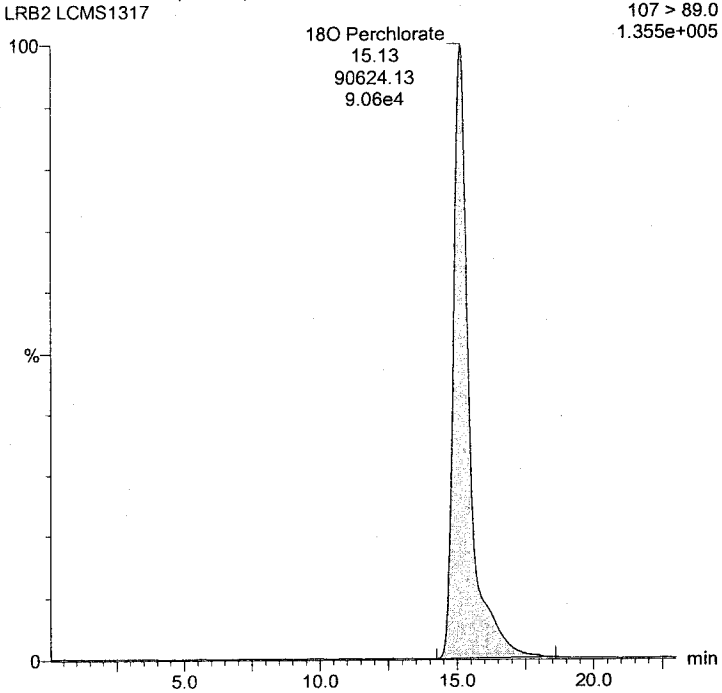
analyst: Tim O'Donnell

Quantify Sample Report **MassLynx 4.1 SCN627**

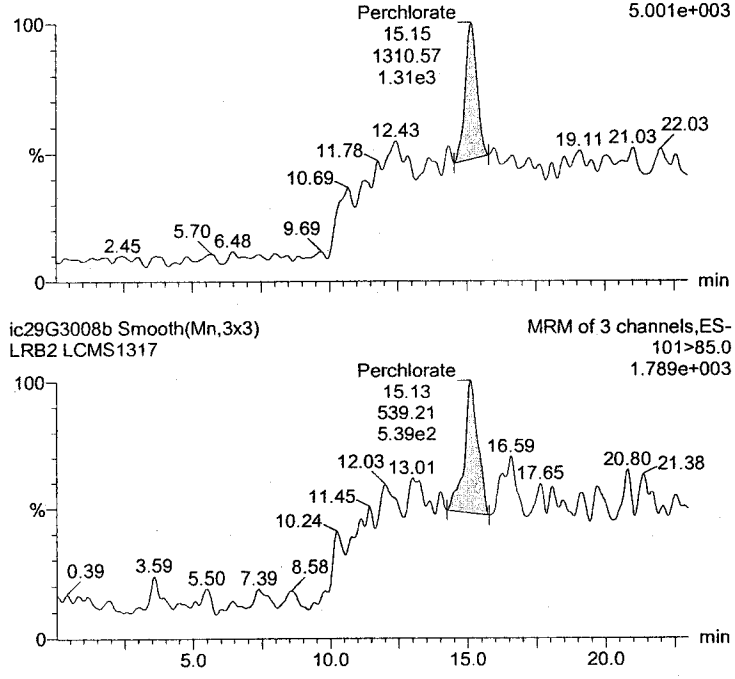
IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

Name: ic29G3008b, Date: 30-Jul-2009, Time: 22:35:10, ID: LCMS1317, Description: LRB2

18O Perchlorate



Perchlorate



ID	Sample Text	# Name	Trace	RT	Quant Area	Comfirmation Area	Ratio	IS Area	Conc.	%Rec	Flags	Acq.Date	Acq.Time
LCMS...	LRB2	1 18O Perchlorate	107 > 89.0	15.13	90624.125				1.157	115.7	bb	30-Jul-09	22:35:10
LCMS...	LRB2	2 Perchlorate	99 > 83.0	15.15	1310.569	539.207	2.431	90624.125			bbl	30-Jul-09	22:35:10

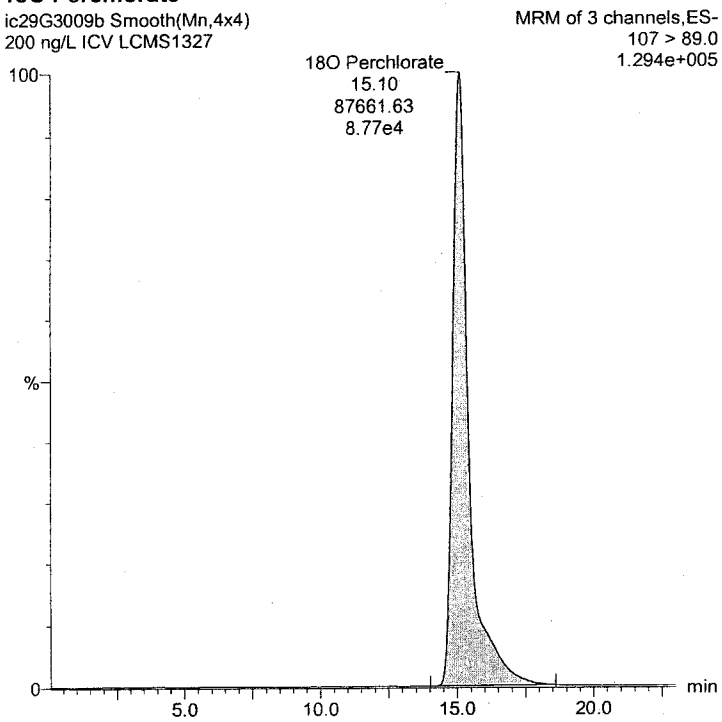
analyst: Tim O'Donnell

Quantify Sample Report **MassLynx 4.1 SCN627**

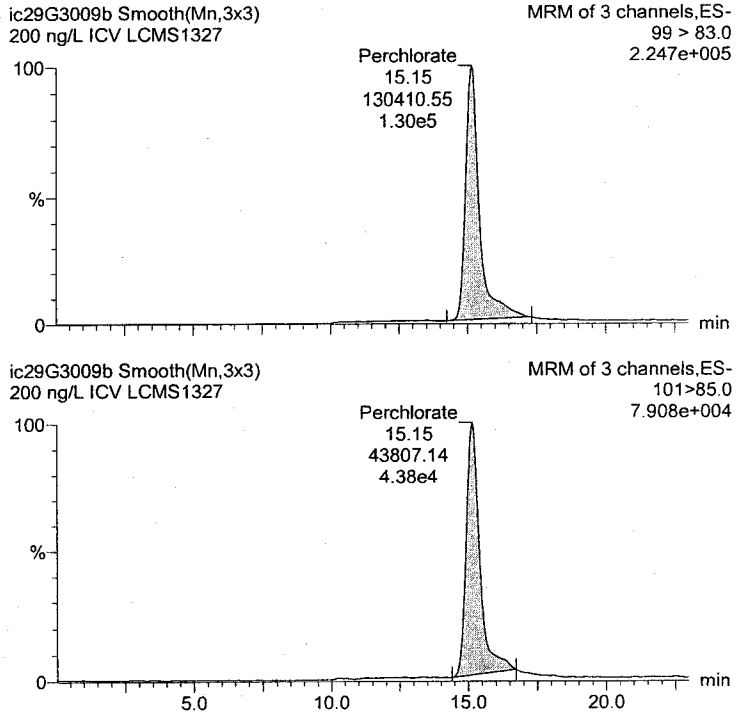
IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

Name: ic29G3009b, Date: 30-Jul-2009, Time: 23:04:27, ID: LCMS1327, Description: 200 ng/L ICV

18O Perchlorate



Perchlorate



ID	Sample Text	# Name	Trace	RT	Quant Area	Comfirmation Area	Ratio	IS Area	Conc.	%Rec	Flags	Acq.Date	Acq.Time
LCMS...	200 ng/L ICV	1 18O Perchlorate	107 > 89.0	15.10	87661.633				1.119	111.9	bb	30-Jul-09	23:04:27
LCMS...	200 ng/L ICV	2 Perchlorate	99 > 83.0	15.15	130410.547	43807.137	2.977	87661.633	224.790	112.4	bb	30-Jul-09	23:04:27

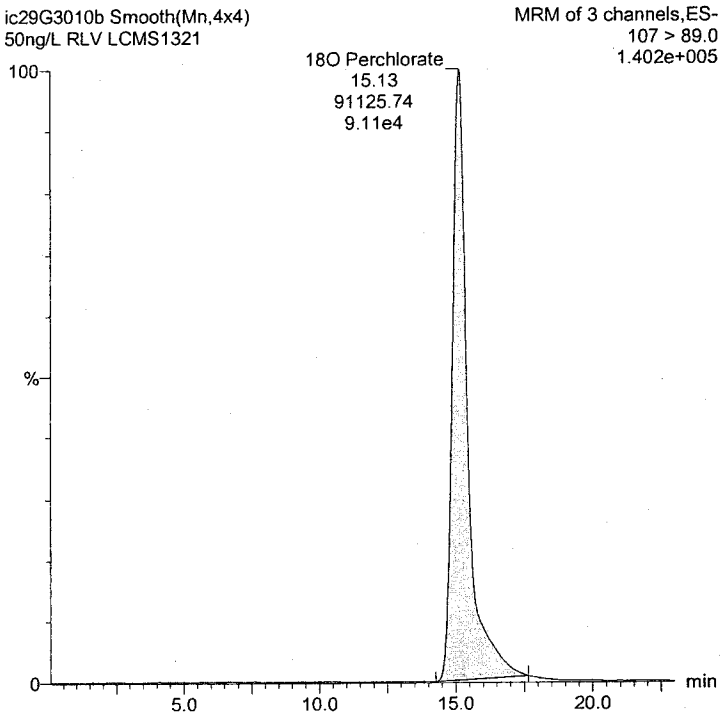
analyst: Tim O'Donnell

Quantify Sample Report **MassLynx 4.1 SCN627**

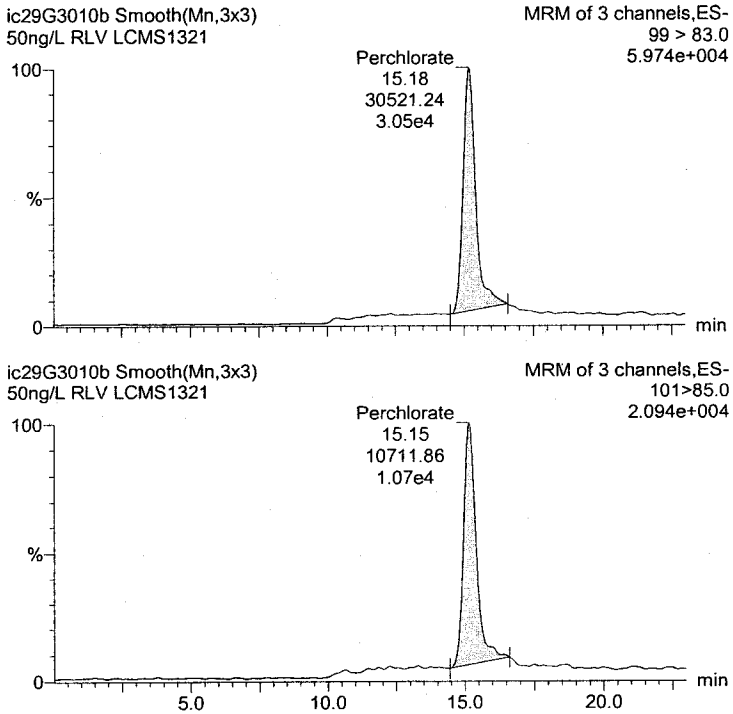
IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

Name: ic29G3010b, Date: 30-Jul-2009, Time: 23:33:46, ID: LCMS1321, Description: 50ng/L RLV

18O Perchlorate



Perchlorate



ID	Sample Text	# Name	Trace	RT	Quant Area	Comfirmation Area	Ratio	IS Area	Conc.	%Rec	Flags	Acq.Date	Acq.Time
LCMS...	50ng/L RLV	1 18O Perchlorate	107 > 89.0	15.13	91125.742				1.163	116.3	bb	30-Jul-09	23:33:46
LCMS...	50ng/L RLV	2 Perchlorate	99 > 83.0	15.18	30521.242	10711.858	2.849	91125.742	46.905	93.8	bb	30-Jul-09	23:33:46

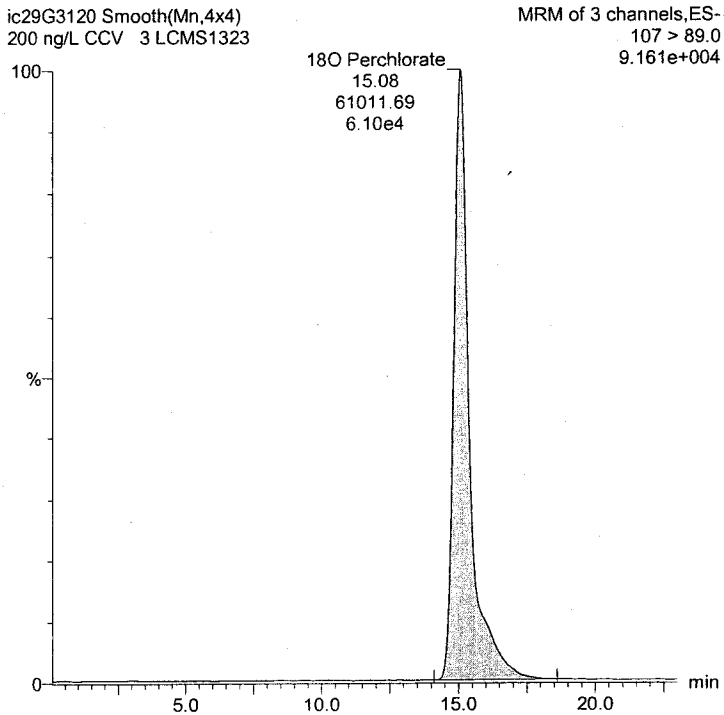
analyst: Tim O'Donnell

Quantify Sample Report **MassLynx 4.1 SCN627**

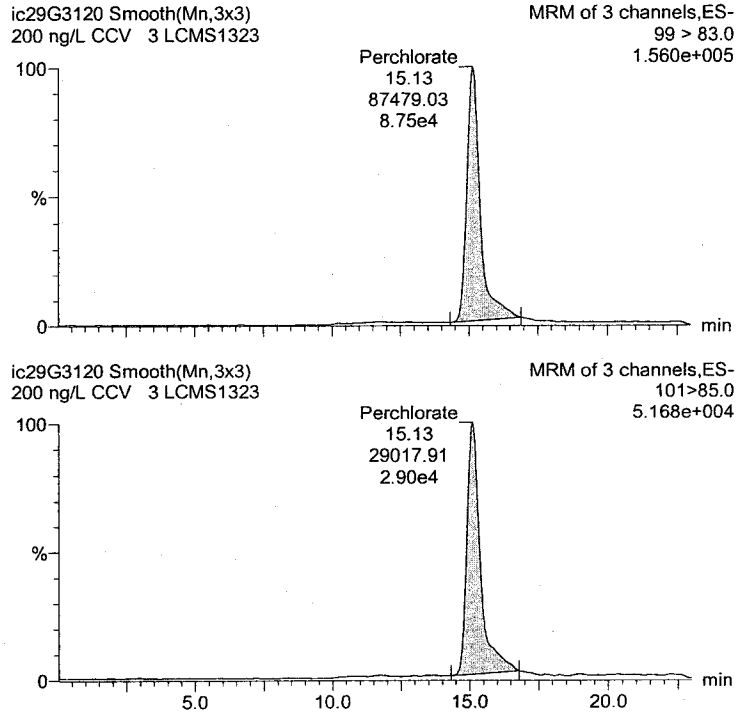
IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

Name: ic29G3120, Date: 31-Jul-2009, Time: 19:05:45, ID: LCMS1323, Description: 200 ng/L CCV 3

18O Perchlorate



Perchlorate



ID	Sample Text	#	Name	Trace	RT	Quant Area	Comfirmation Area	Ratio	IS Area	Conc.	%Rec	Flags	Acq.Date	Acq.Time
LCMS...	200 ng/L CCV	3	1 18O Perchlorate	107 > 89.0	15.08	61011.691				0.779	77.9	bb	31-Jul-09	19:05:45
LCMS...	200 ng/L CCV	3	2 Perchlorate	99 > 83.0	15.13	87479.031	29017.906	3.015	61011.691	216.480	108.2	bb	31-Jul-09	19:05:45

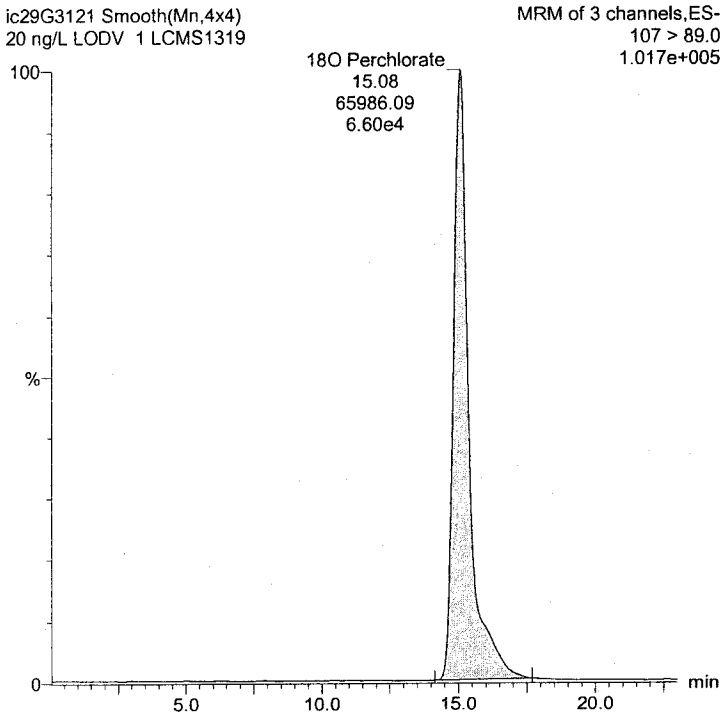
analyst: Tim O'Donnell

Quantify Sample Report **MassLynx 4.1 SCN627**

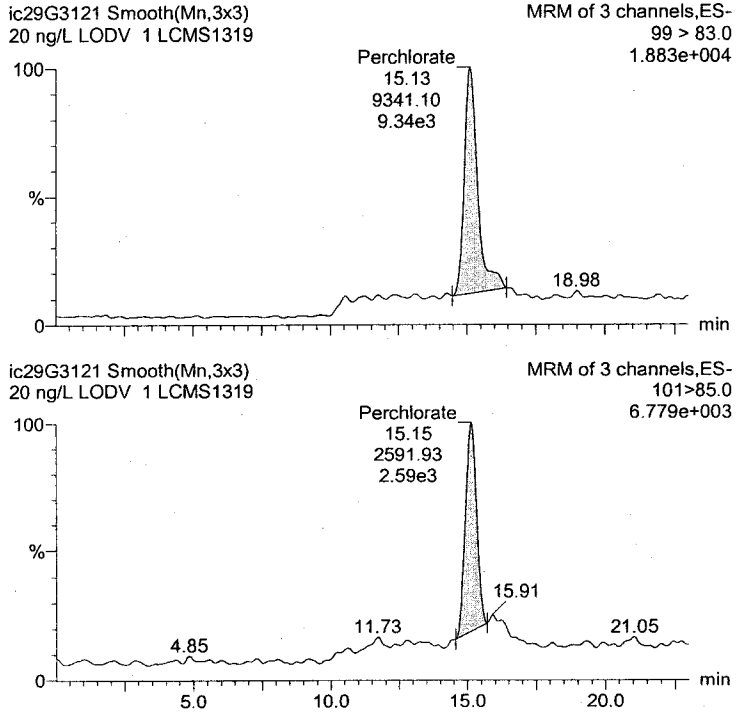
IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

Name: ic29G3121, Date: 31-Jul-2009, Time: 19:38:37, ID: LCMS1319, Description: 20 ng/L LODV 1

18O Perchlorate



Perchlorate



ID	Sample Text	#	Name	Trace	RT	Quant Area	Comfirmation Area	Ratio	IS Area	Conc.	%Rec	Flags	Acq.Date	Acq.Time
LCMS...	20 ng/L LODV 1	1	18O Perchlorate	107 > 89.0	15.08	65986.094				0.842	84.2	bb	31-Jul-09	19:38:37
LCMS...	20 ng/L LODV 1	2	Perchlorate	99 > 83.0	15.13	9341.104	2591.929	3.604	65986.094	17.064	85.3	bb	31-Jul-09	19:38:37

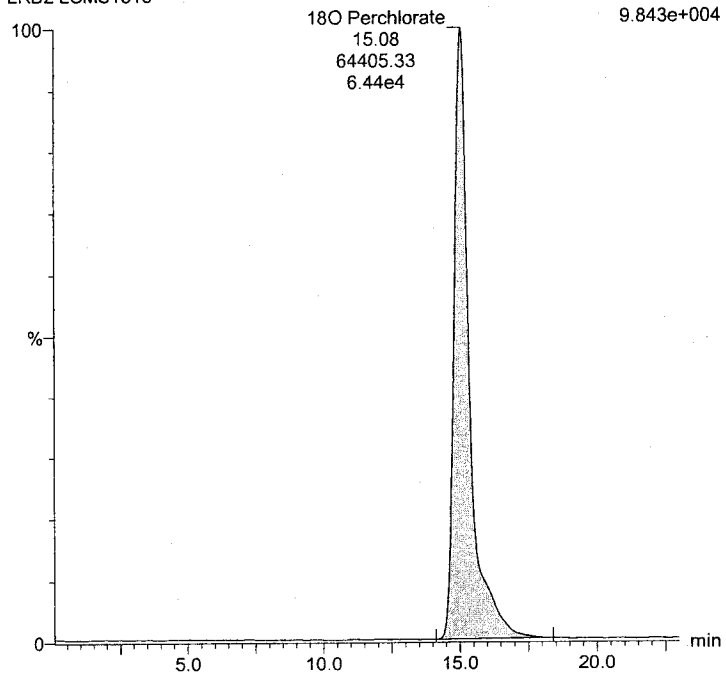
analyst: Tim O'Donnell

Quantify Sample Report **MassLynx 4.1 SCN627**

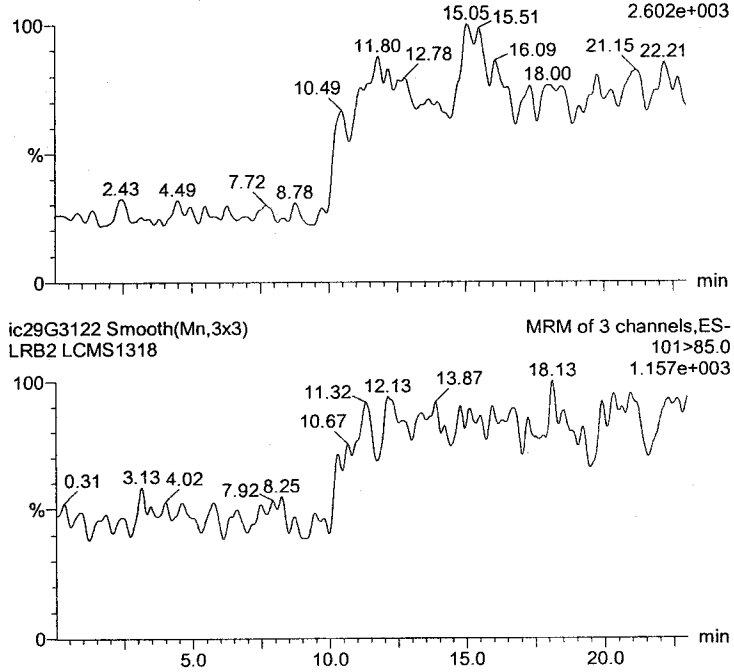
IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

Name: ic29G3122, Date: 31-Jul-2009, Time: 20:04:20, ID: LCMS1318, Description: LRB2

18O Perchlorate



Perchlorate



ID	Sample Text	# Name	Trace	RT	Quant Area	Comfirmation Area	Ratio	IS Area	Conc.	%Rec	Flags	Acq.Date	Acq.Time
LCMS...	LRB2	1 18O Perchlorate	107 > 89.0	15.08	64405.328				0.822	82.2	bb	31-Jul-09	20:04:20
LCMS...	LRB2	2 Perchlorate	99 > 83.0					64405.328				31-Jul-09	20:04:20

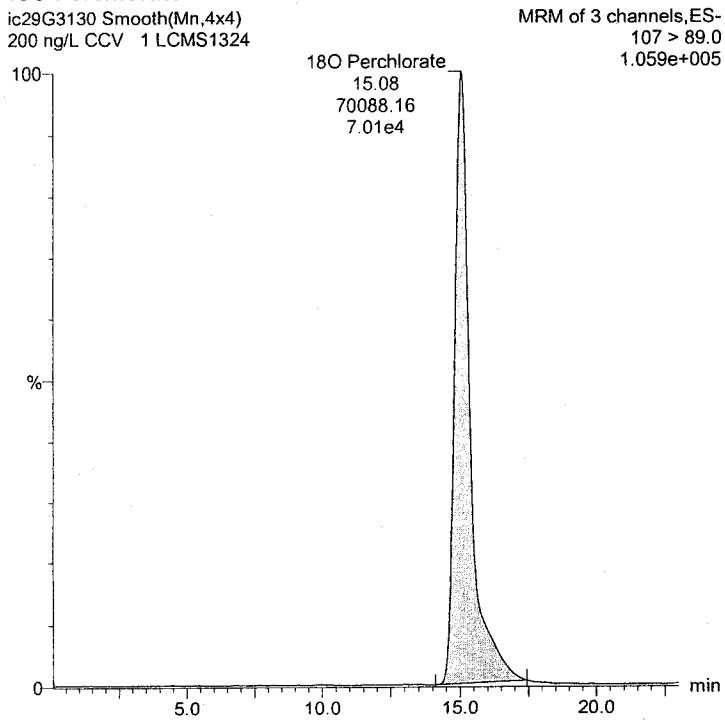
analyst: Tim O'Donnell

Quantify Sample Report **MassLynx 4.1 SCN627**

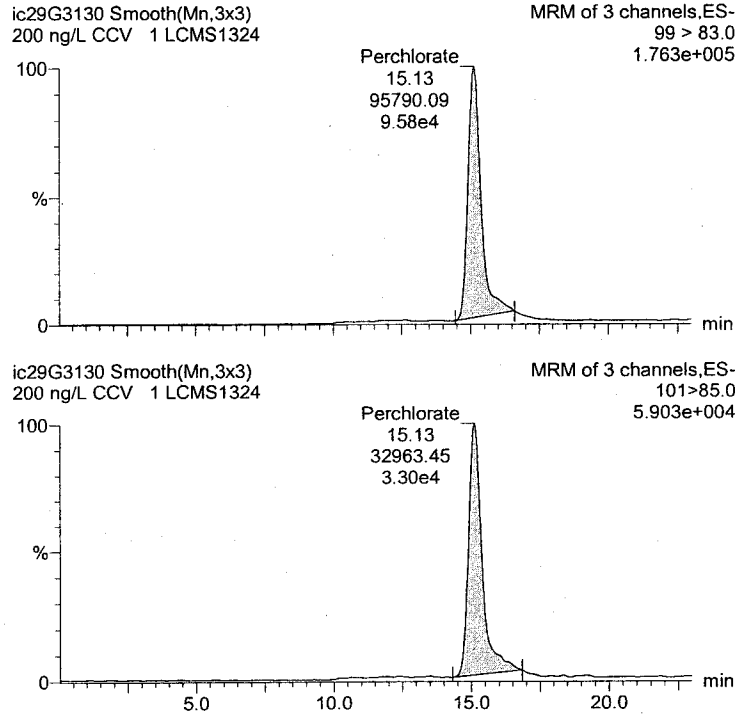
IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

Name: ic29G3130, Date: 01-Aug-2009, Time: 00:02:05, ID: LCMS1324, Description: 200 ng/L CCV 1

18O Perchlorate



Perchlorate



ID	Sample Text	#	Name	Trace	RT	Quant Area	Comfirmation Area	Ratio	IS Area	Conc.	%Rec	Flags	Acq.Date	Acq.Time
LCMS...	200 ng/L CCV	1	1 18O Perchlorate	107 > 89.0	15.08	70088.156				0.895	89.5	bb	01-Aug-09	00:02:05
LCMS...	200 ng/L CCV	1	2 Perchlorate	99 > 83.0	15.13	95790.094	32963.453	2.906	70088.156	206.126	103.1	bb	01-Aug-09	00:02:05

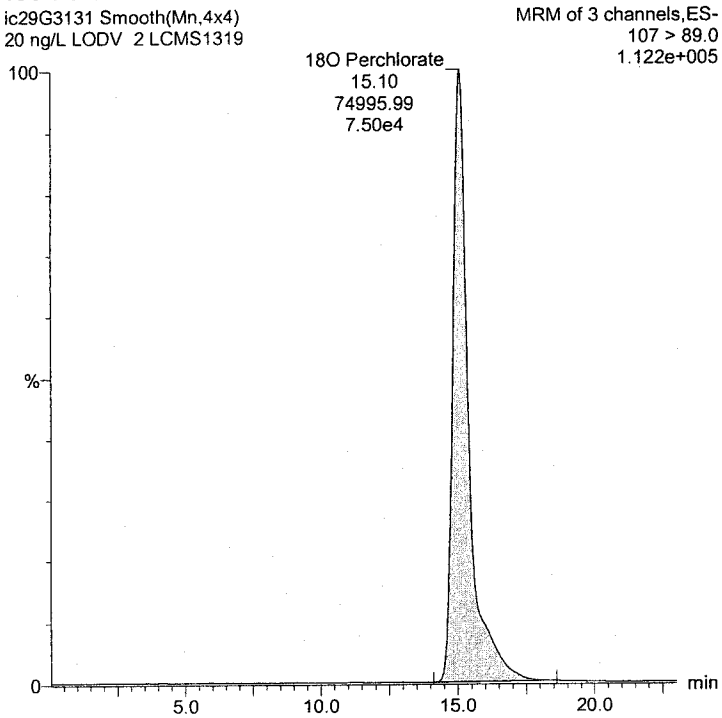
analyst: Tim O'Donnell

Quantify Sample Report **MassLynx 4.1 SCN627**

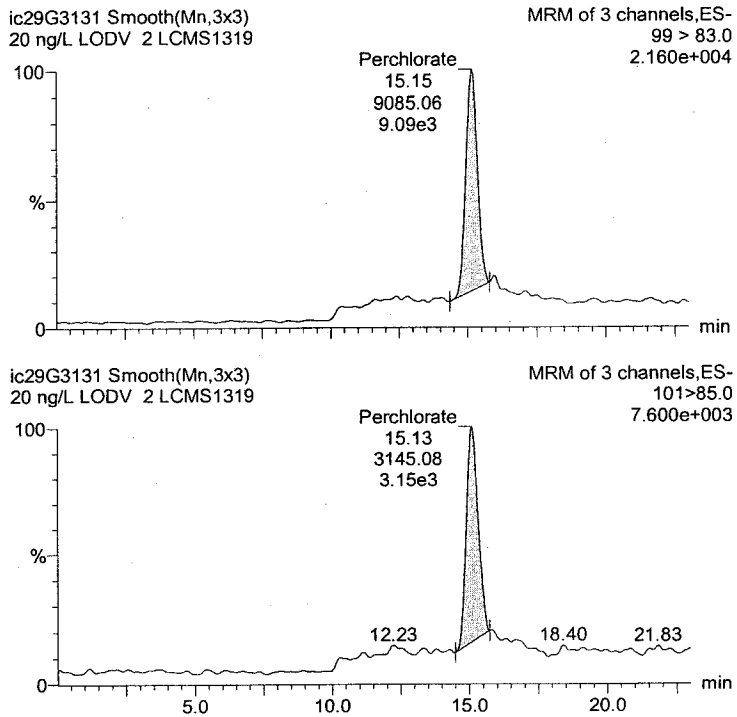
IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

Name: ic29G3131, Date: 01-Aug-2009, Time: 00:31:22, ID: LCMS1319, Description: 20 ng/L LODV 2

18O Perchlorate



Perchlorate



ID	Sample Text	#	Name	Trace	RT	Quant Area	Comfirmation Area	Ratio	IS Area	Conc.	%Rec	Flags	Acq.Date	Acq.Time
LCMS...	20 ng/L LODV 2	1	18O Perchlorate	107 > 89.0	15.10	74995.992				0.957	95.7	bb	01-Aug-09	00:31:22
LCMS...	20 ng/L LODV 2	2	Perchlorate	99 > 83.0	15.15	9085.063	3145.082	2.889	74995.992	13.913	69.6	bb	01-Aug-09	00:31:22

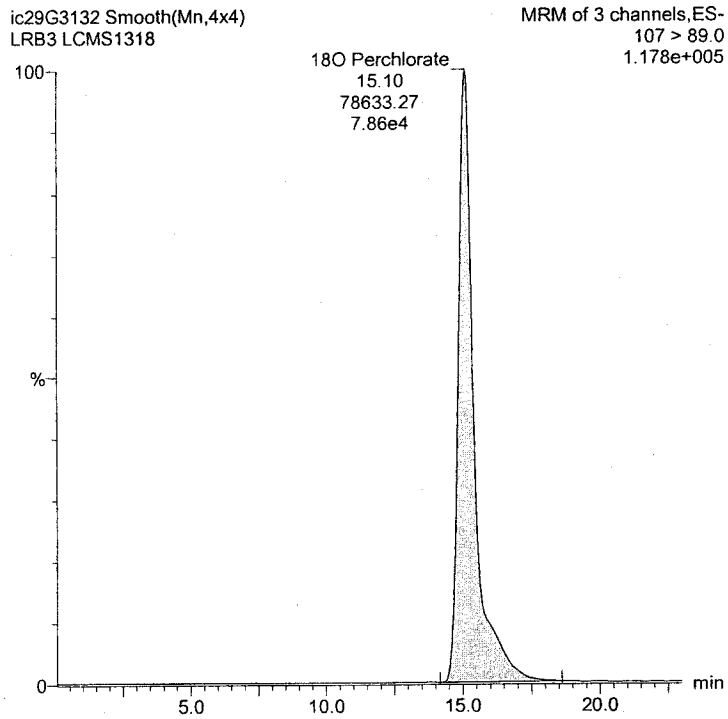
analyst: Tim O'Donnell

Quantify Sample Report **MassLynx 4.1 SCN627**

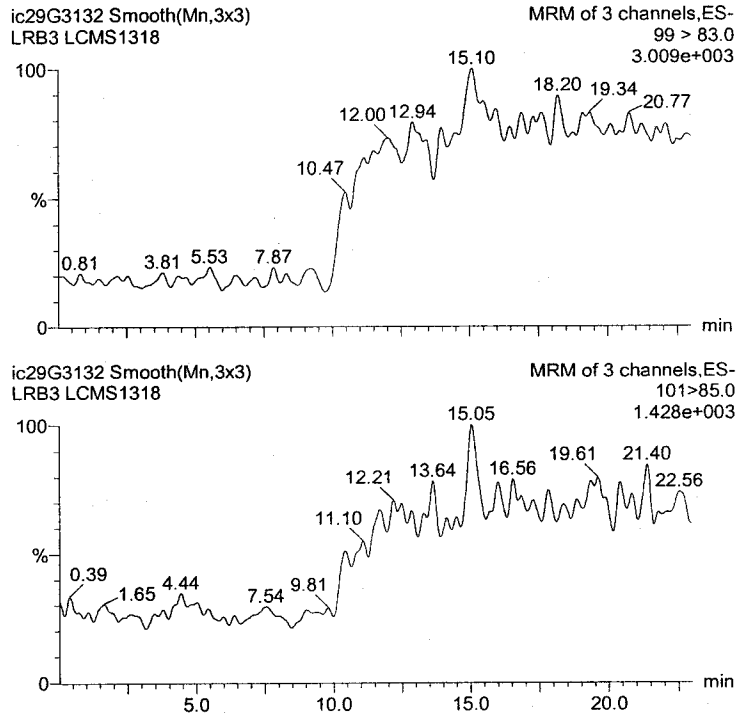
IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

Name: ic29G3132, Date: 01-Aug-2009, Time: 01:00:39, ID: LCMS1318, Description: LRB3

18O Perchlorate



Perchlorate



ID	Sample Text	#	Name	Trace	RT	Quant Area	Comfirmation Area	Ratio	IS Area	Conc.	%Rec	Flags	Acq.Date	Acq.Time
LCMS...	LRB3	1	18O Perchlorate	107 > 89.0	15.10	78633.266				1.004	100.4	bb	01-Aug-09	01:00:39
LCMS...	LRB3	2	Perchlorate	99 > 83.0					78633.266				01-Aug-09	01:00:39

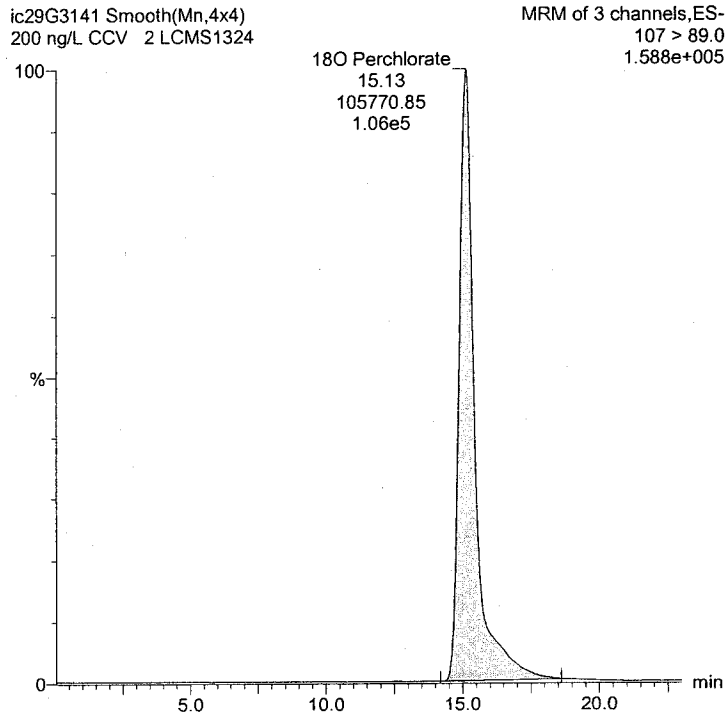
analyst: Tim O'Donnell

Quantify Sample Report **MassLynx 4.1 SCN627**

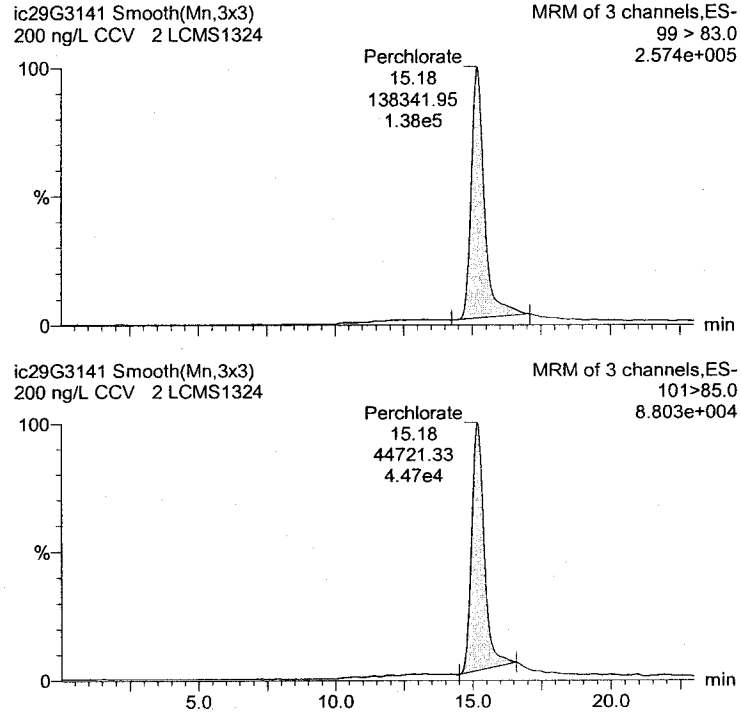
IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

Name: ic29G3141, Date: 01-Aug-2009, Time: 05:24:19, ID: LCMS1324, Description: 200 ng/L CCV 2

18O Perchlorate



Perchlorate



ID	Sample Text	#	Name	Trace	RT	Quant Area	Comfirmation Area	Ratio	IS Area	Conc.	%Rec	Flags	Acq.Date	Acq.Time
LCMS...	200 ng/L CCV	2	1 18O Perchlorate	107 > 89.0	15.13	105770.852				1.350	135.0	bb	01-Aug-09	05:24:19
LCMS...	200 ng/L CCV	2	2 Perchlorate	99 > 83.0	15.18	138341.953	44721.328	3.093	105770.852	197.057	98.5	bb	01-Aug-09	05:24:19

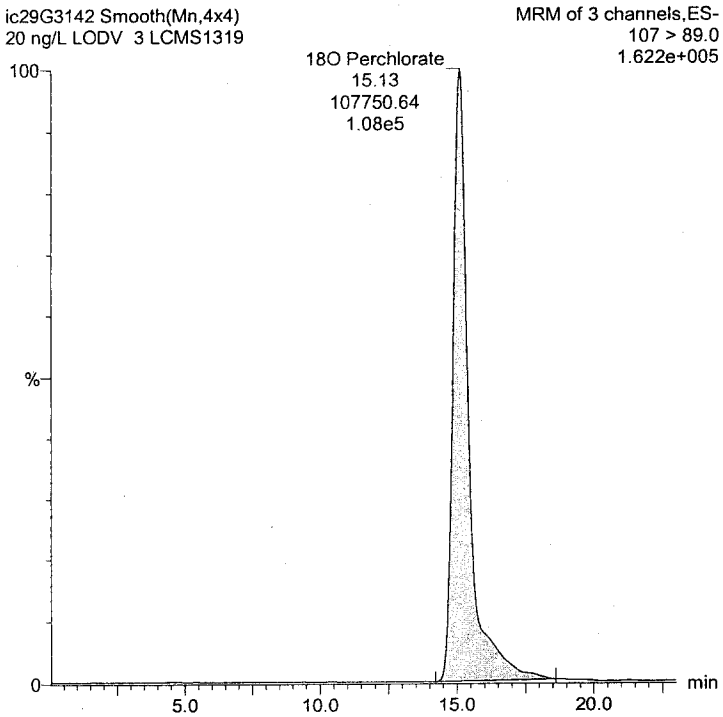
analyst: Tim O'Donnell

Quantify Sample Report **MassLynx 4.1 SCN627**

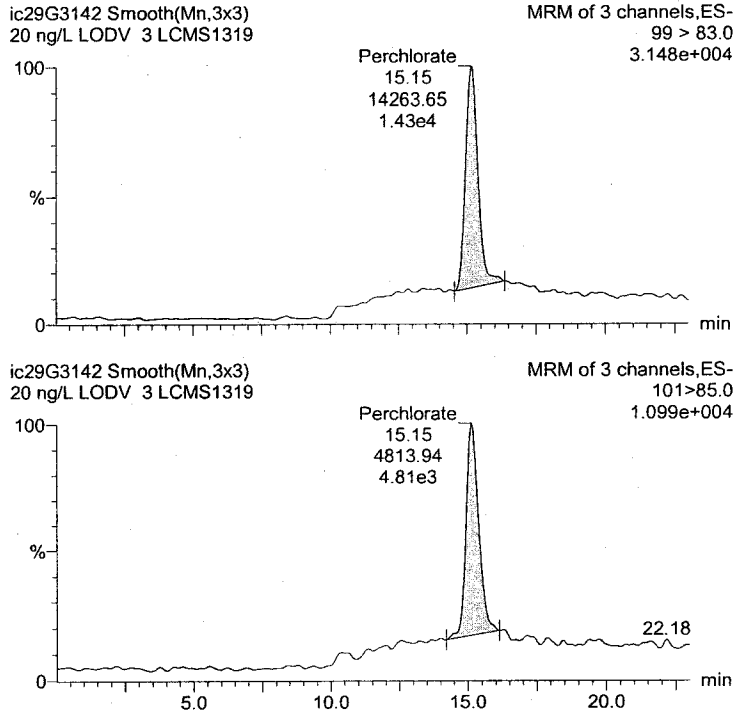
IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

Name: ic29G3142, Date: 01-Aug-2009, Time: 05:53:36, ID: LCMS1319, Description: 20 ng/L LODV 3

18O Perchlorate



Perchlorate



ID	Sample Text	# Name	Trace	RT	Quant Area	Comfirmation Area	Ratio	IS Area	Conc.	%Rec	Flags	Acq.Date	Acq.Time
LCMS...	20 ng/L LODV 3	1 18O Perchlorate	107 > 89.0	15.13	107750.641				1.376	137.6	bb	01-Aug-09	05:53:36
LCMS...	20 ng/L LODV 3	2 Perchlorate	99 > 83.0	15.15	14263.653	4813.936	2.963	107750.641	15.647	78.2	bb	01-Aug-09	05:53:36

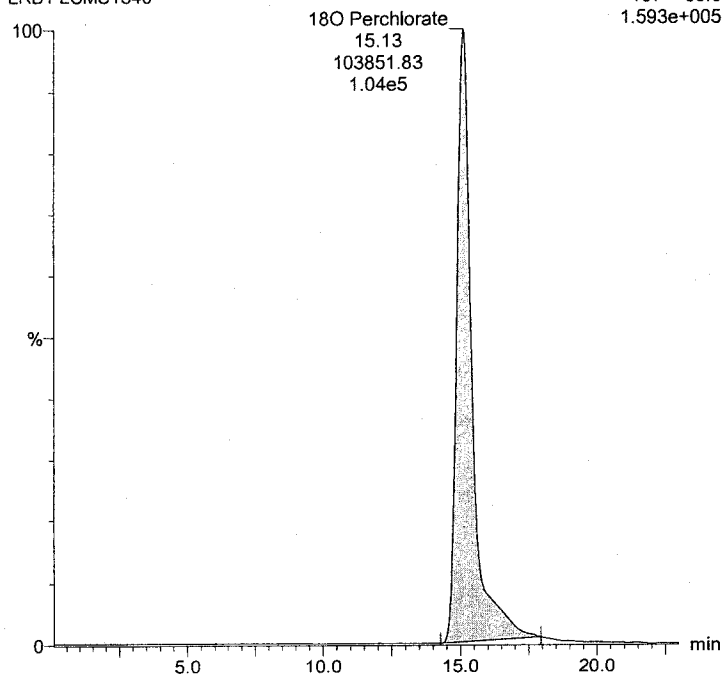
analyst: Tim O'Donnell

Quantify Sample Report **MassLynx 4.1 SCN627**

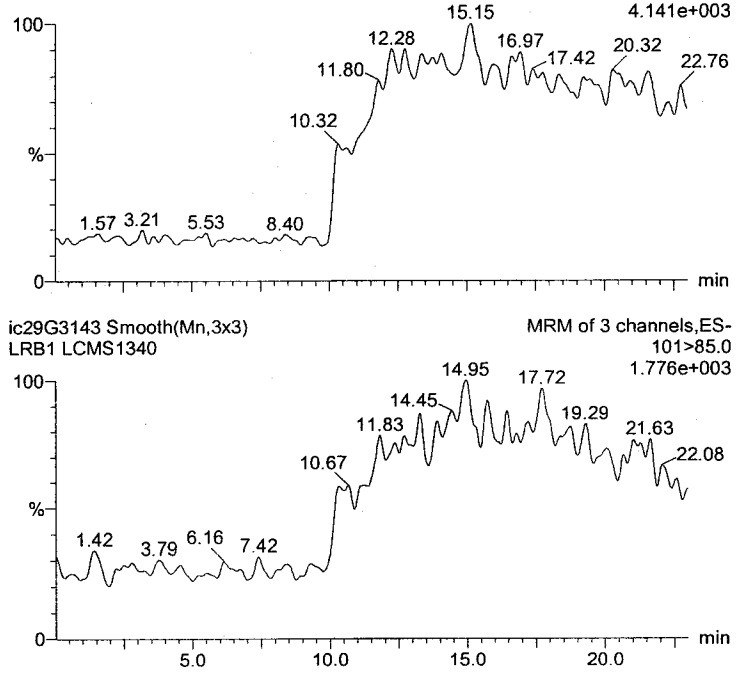
IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

Name: ic29G3143, Date: 01-Aug-2009, Time: 06:22:53, ID: LCMS1340, Description: LRB1

18O Perchlorate



Perchlorate



ID	Sample Text	# Name	Trace	RT	Quant Area	Comfirmation Area	Ratio	IS Area	Conc.	%Rec	Flags	Acq.Date	Acq.Time
LCMS...	LRB1	1 18O Perchlorate	107 > 89.0	15.13	103851.828				1.326	132.6	bb	01-Aug-09	06:22:53
LCMS...	LRB1	2 Perchlorate	99 > 83.0					103851.828				01-Aug-09	06:22:53

analyst: Tim O'Donnell

Chain of Custody Record

Sampler ID _____

Temperature on Receipt 4.1°C IR1 AB 7/9/09

Drinking Water? Yes ☐ No ☐

TestAmerica ~~TA-COC-004~~ TA-COC-005

THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124-280 (0508)

Client	Project Manager	Date	Chain of Custody Number
TETRA TECH INC	GINGER.MULLINS@TETRATECH.COM	7/8/09	114609
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page ____ of ____**
800 OAK RIDGE TURNPIKE A-600	865-599-2349		
City / State / Zip Code	**Site Contact / Lab Contact**		
OAK RIDGE / TN / 37830	G. MULLINS		
Project Name and Location (State)	**Carrier/Waybill Number**		
HOLLOMAN AFB, NM	865458802397		
Contract/Purchase Order/Quote No.			
80188 LISA DRIELL			

Analysis (Attach list if more space is needed): PERCHLORATE ~~8260~~

Special Instructions/ Conditions of Receipt

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Perchlorate
MW39-10-070709	7/7/09	1036		X			X						X
MW39-11-070709	7/7/09	1135		X			X						X
MW39-09-070709	7/7/09	1358		X			X						X
MW39-08-070709	7/7/09	1512		X			X						X
MW39-06-070709	7/7/09	1536		X			X						X
MW39-06D-070709	7/7/09	1635		X			X						X
MW39-DUP01-070709	7/7/09	—		X			X						X
MW39-02-070809	7/8/09	1110		X			X						X
MW39-05-070809	7/8/09	1125		X			X						X
MW39-07-070809	7/8/09	1230		X			X						X
MW39-07-MS-070809	7/8/09	1230		X			X						X
MW39-07-MSD-070809	7/8/09	1230		X			X						X

Possible Hazard Identification

☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal

☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

(A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☒ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	7/8/09	1300	1. Received By	7/8/09	1300
2. Relinquished By	7/8/09	1500	2. Received By FEDEX		
3. Relinquished By			3. Received By Corine Kim	7.9.09	0830

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Table of Contents

TestAmerica

TestAmerica Denver

Sample Receiving Checklist

Lot #: D9G090307 Date/Time Received: 7.9.09 / 0930

Company Name & Sampling Site: TetraTech Hollomon AFB

PM to Complete This Section: *Yes* *No* *Yes* *No*

Residual chlorine check required: ☐ ☒ Quarantined : ☐ ☒

Quote #: 80188 A

Special Instructions:

Time Zone:

• EDT/EST • CDT/CST • MDT/MST • PDT/PST • OTHER

Unpacking Checks:

Cooler #(s): _____ _____ _____ _____ _____ _____ _____ _____

Temperatures (°C): 4.1°C _____ _____ _____ _____ _____ _____ _____

N/A	*Yes*	*No*		*Initials*
☐	☒	☐	1. Cooler seals intact? (N/A if hand delivered) If no, document on CUR.	XC
	☒	☐	2. Coolers scanned for radiation. Is the reading ≤ to background levels? Yes: ✓ No:____	
	☒	☐	3. Chain of custody present? If no, document on CUR.	
	☐	☒	4. Bottles broken and/or are leaking? If yes, document on CUR.	
	☐	☒	5. Multiphasic samples obvious? If yes, document on CUR.	
	☒	☐	6. Proper container & preservatives used? (ref. Attachment D of SOP# DV-QA-0003) If no, document on CUR.	
☒	☐	☐	7. pH of all samples checked and meet requirements? If no, document on CUR.	
	☒	☐	8. Sufficient volume provided for all analysis requested? (ref. Attachment D of SOP# DV-QA-0003) If no, document on CUR, and contact PM before proceeding.	
	☒	☐	9. Did chain of custody agree with labels ID and samples received? If no, document on CUR.	
☒	☐	☐	10. Were VOA samples without headspace? If no, document on CUR.	
☒	☐	☐	11. Were VOA vials preserved? Preservative ☐HCl ☐4±2°C ☐Sodium Thiosulfate ☐ Ascorbic Acid	
	☐	☒	12. Did samples require preservation with sodium thiosulfate?	
☒	☐	☐	13. If yes to #11, did the samples contain residual chlorine? If yes, document on CUR.	
☒	☐	☐	14. Sediment present in dissolved/filtered bottles? If yes, document on CUR.	
☐	☒	☐	15. Is sufficient volume provided for client requested MS, MSD or matrix duplicates? If no, document on CUR, and contact PM before proceeding.	
	☐	☒	16. Receipt date(s) > 48 hours past the collection date(s)? If yes, notify PA/PM.	
	☐	☒	17. Are analyses with short holding times requested?	
	☐	☒	18. Was a quick Turn Around (TAT) requested?	

\QA\Edit\FORMS\Sample Receiving\Sample Receiving Checklist 9-2-08

TestAmerica Denver

Sample Receiving Checklist

Lot # D9G090307

Login Checks:

Initials CtK

N/A	Yes	No		
	☑	☐	19.	Sufficient volume provided for all analysis requested? (ref. Attachment D of SOP# DV-QA-0003) If no, document on CUR, and contact PM before proceeding.
☐	☑	☐	20.	Is sufficient volume provided for client requested MS, MSD or matrix duplicates? If no, document on CUR, and contact PM before proceeding.
	☑	☐	21.	Did the chain of custody includes "received by" and "relinquished" by signatures, dates, and times?
☐	☑	☐	22.	Were special log in instructions read and followed?
☑	☐	☐	23.	Were AFCEE metals logged for refrigerated storage?
	☑	☐	24.	Were tests logged checked against the COC? Which samples were confirmed? All
☑	☐	☐	25.	Was a Rush form completed for quick TAT?
☑	☐	☐	26.	Was a Short Hold form completed for any short holds?
	☐	☑	27.	Were special archiving instructions indicated in the General Comments? If so, what were they?

_____

Labeling and Storage Checks:

Initials LC

☑	☐	☐	28.	Was the subcontract COC signed and sent with samples to bottle prep?
	☑	☐	29.	Were sample labels double-checked by a second person?
☑	☐	☐	30.	Were sample bottles and COC double checked for dissolved/filtered metals by a second person?
	☑	☐	31.	Did the sample ID, Date, and Time from label match what was logged?
☑	☐	☐	32.	Were stickers for special archiving instructions affixed to each box? See #27
☑	☐	☐	33.	Were AFCEE metals stored refrigerated?

Document any problems or discrepancies and the actions taken to resolve them on a Condition Upon Receipt Anomaly Report (CUR).

IC/MS/MS

Supporting Documentation

Sample Sequence, Chromatograms/Mass Spectra

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Lot ID: D9G090307

Client: Tetra Tech

Method: 6860

Associated Samples: 1-10

Batch #(s): 9205354

I certify that, to the best of my knowledge, the attached package represents a complete and accurate copy of the original data.

Signature/Date: [illegible] 8/4/09

IC/MS/MS SEMIVOLATILE ORGANIC EXTRACTION LOG SHEETS

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

RQC058

TestAmerica Laboratories, Inc.
EXTRACTION BENCH WORKSHEET

Run Date: 7/24/09
Time: 12:02:17

LEV 1	LEV 2		LEV 1	LEV 2	
		Blank			Weights/Volumes
_	_	Check	_	_	Spike & Surrogate Worksheet
_	_	MS/MSD	_	_	Vial contains correct volume
			_	_	Labels, greenbars, worksheets
			_	_	computer batch: correct & all match
			_	_	Anomalies to Extraction Method

_ Expanded Deliverable
_ COC Completed
_ Bench Sheet Copied
_ Package Submitted to AnalyticalGroup
_ Bench Sheet Copied per COC

Extractionist: 000443 Tim O'Donnell

Concentrationist: _____

Reviewer/Date: ODONNETA / 7/24/09

QC BATCH: 9205354

PREP DATE: 7/24/09 11:54
COMP DATE: 7/24/09 12:54

SW846 6860 Perchlorate
NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJ1	ADJ2	SOLVENTS EXTRACTION	VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
10,000x 0/00/00 COMMENTS:	5x 7/28/09	D9G090307-001 LF9KT-1-AA	9205206 D	88	ZU	WATER	5.0mL 5.00mL	NA	NA	NA	100x	.0		.0	
0/00/00 COMMENTS:	5x 7/28/09	D9G090307-002 LF9K9-1-AA	9205206 D	88	ZU	WATER	5.0mL 5.00mL	NA	NA	NA	100x	.0		.0	
0/00/00 COMMENTS:	1x 7/28/09	D9G090307-003 LF9LA-1-AA	9205206 D	88	ZU	WATER	5.0mL 5.00mL	NA	NA	NA		.0		.0	
0/00/00 COMMENTS:	7/28/09	D9G090307-004 LF9LC-1-AA	9205206 D	88	ZU	WATER	5.0mL 5.00mL	NA	NA	NA		.0		.0	
~~100x~~ 0/00/00 COMMENTS:	7/28/09	D9G090307-005 LF9LF-1-AA	9205206 D	88	ZU	WATER	5.0mL 5.00mL	NA	NA	NA		.0		.0	
0/00/00 COMMENTS:	7/28/09	D9G090307-006 LF9LG-1-AA	9205206 D	88	ZU	WATER	5.0mL 5.00mL	NA	NA	NA		.0		.0	
0/00/00 COMMENTS:	7/28/09	D9G090307-007 LF9LJ-1-AA	9205206 D	88	ZU	WATER	5.0mL 5.00mL	NA	NA	NA		.0		.0	

Table of Contents

RQC058

TestAmerica Laboratories, Inc.
EXTRACTION BENCH WORKSHEET

Run Date: 7/24/09
Time: 12:02:17

QC BATCH: 9205354

PREP DATE: 7/24/09 11:54
COMP DATE: 7/24/09 12:54

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJ1	ADJ2	SOLVENTS EXTRACTION	VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
100x 0/00/00 COMMENTS:	7/28/09	D9G090307-008 **LF9LK-1-AA**	9205206 D	88	ZU	WATER	**5.0mL** 5.00mL	NA	NA	NA	100x	.0		.0	
0/00/00 COMMENTS:	7/28/09	D9G090307-009 **LF9LN-1-AA**	9205206 D	88	ZU	WATER	**5.0mL** 5.00mL	NA	NA	NA		.0		.0	
0,000x 0/00/00 COMMENTS:	7/28/09	D9G090307-010 **LF9LP-1-AA**	9205206 D	88	ZU	WATER	**5.0mL** 5.00mL	NA	NA	NA		.0		.0	
0/00/00 COMMENTS:	7/28/09	D9G090307-010 **LF9LP-1-ACS**	9205206 D	88	ZU	WATER	**5.0mL** 5.00mL	NA	NA	NA		.0		.0	50UL LCMS0104-09
0/00/00 COMMENTS:	7/28/09	D9G090307-010 **LF9LP-1-ADD**	9205206 D	88	ZU	WATER	**5.0mL** 5.00mL	NA	NA	NA		.0		.0	50UL LCMS0104-09
0/00/00 COMMENTS:	0/00/00	R9G240000-354 **LG2CF-1-AA**B		88	ZU	WATER	**5.0mL** 5.00mL	NA	NA	NA		.0		.0	
0/00/00 COMMENTS:	0/00/00	R9G240000-354 **LG2CF-1-AC**C		88	ZU	WATER	**5.0mL** 5.00mL	NA	NA	NA		.0		.0	50UL LCMS0104-09

50UL IS LCMS1120-09

R = RUSH C = CLP
E = EPA 600 D = EXP.DEL)
M = CLIENT REQ MS/MSD

NUMBER OF WORK ORDERS IN BATCH: 14

Table of Contents

IC/MS/MS SEMIVOLATILE STANDARD DATA

TestAmerica

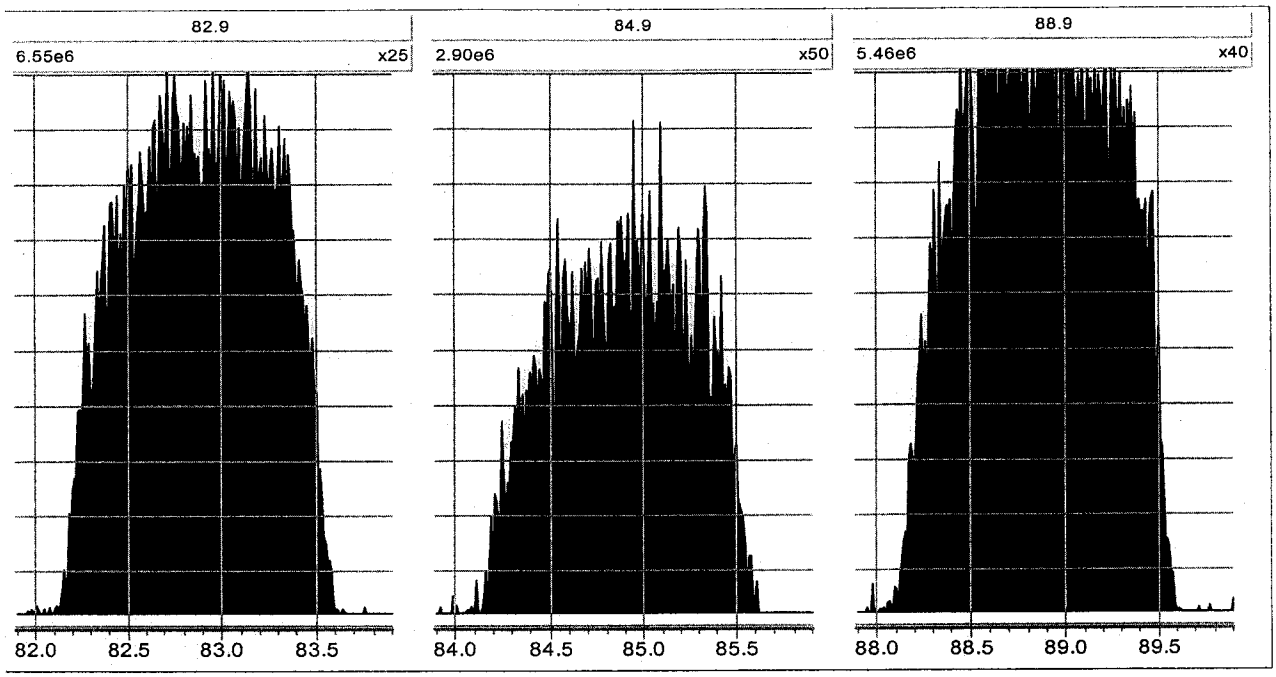
THE LEADER IN ENVIRONMENTAL TESTING

Tune Parameters - MassLynx 4.1 SCN627

File: C:\MassLynx\ICPerchlorate.PRO\ACQUDB\ICPerchlorate.IPR

Instrument: QUATTROULTIMA

Printed: Thursday, July 30, 2009 12:33:54 Mountain Daylight Time



Type	Start Mass	End Mass	Set Mass
Daughter Scan	81.90	83.90	99.00
Daughter Scan	83.90	85.90	101.00
Daughter Scan	87.90	89.90	107.00

Source (ES-)	Settings	Readbacks
Capillary (kV)	0.50	-0.45
Cone (V)	60	-62
Hex 1 (V)	1.0	
Aperture (V)	0.2	
Hex 2 (V)	1.0	
Source Temperature (°C)	120	119
Desolvation Temperature (°C)	500	495
Cone Gas Flow (L/Hr)	119	
Desolvation Gas Flow (L/Hr)	454	

Analyser	Settings	Readbacks
LM 1 Resolution	12.5	
HM 1 Resolution	12.5	
Ion Energy 1	1.0	
Entrance	-5	20
Collision	25	24
Exit	1	26
LM 2 Resolution	12.5	
HM 2 Resolution	12.5	
Ion Energy 2	1.0	
Multiplier (V)	650	-656

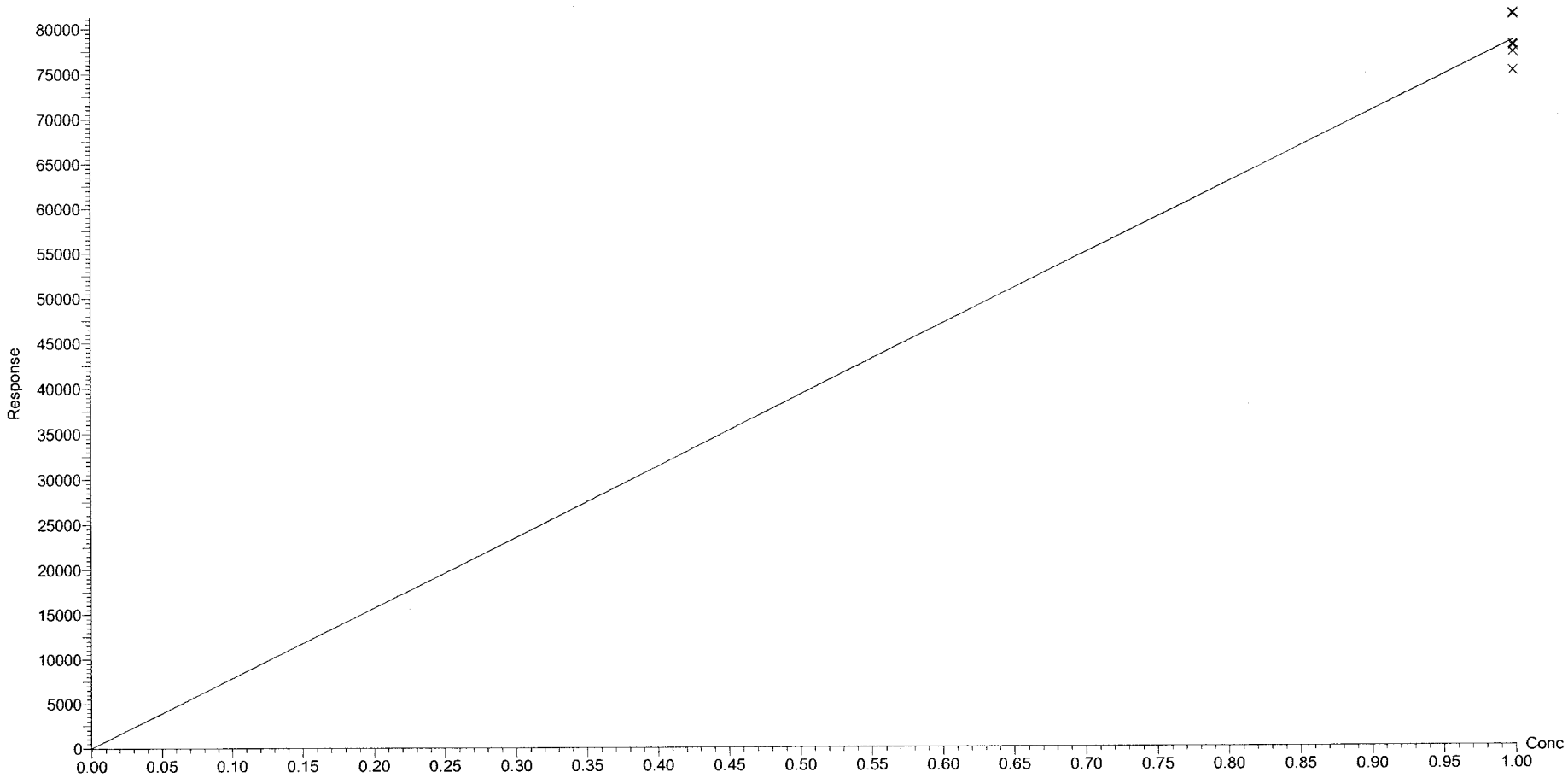
Pressure Gauges	
Collision Cell Pressure(mbar)	1.11e-3
Analyser Pressure (mbar)	OFF

Quantify Calibration Report **MassLynx 4.1 SCN627**

IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

Method: C:\MassLynx\ICPerchlorate.PRO\MethDB\ic29G30.mdb 31 Jul 2009 12:59:10
Calibration: C:\MassLynx\ICPerchlorate.PRO\CurveDB\ic29G30cr.cdb 31 Jul 2009 12:59:41

Compound name: 18O Perchlorate
Response Factor: 78328.9
RRF SD: 2473.84, % Relative SD: 3.15827
Response type: External Std, Area
Curve type: RF

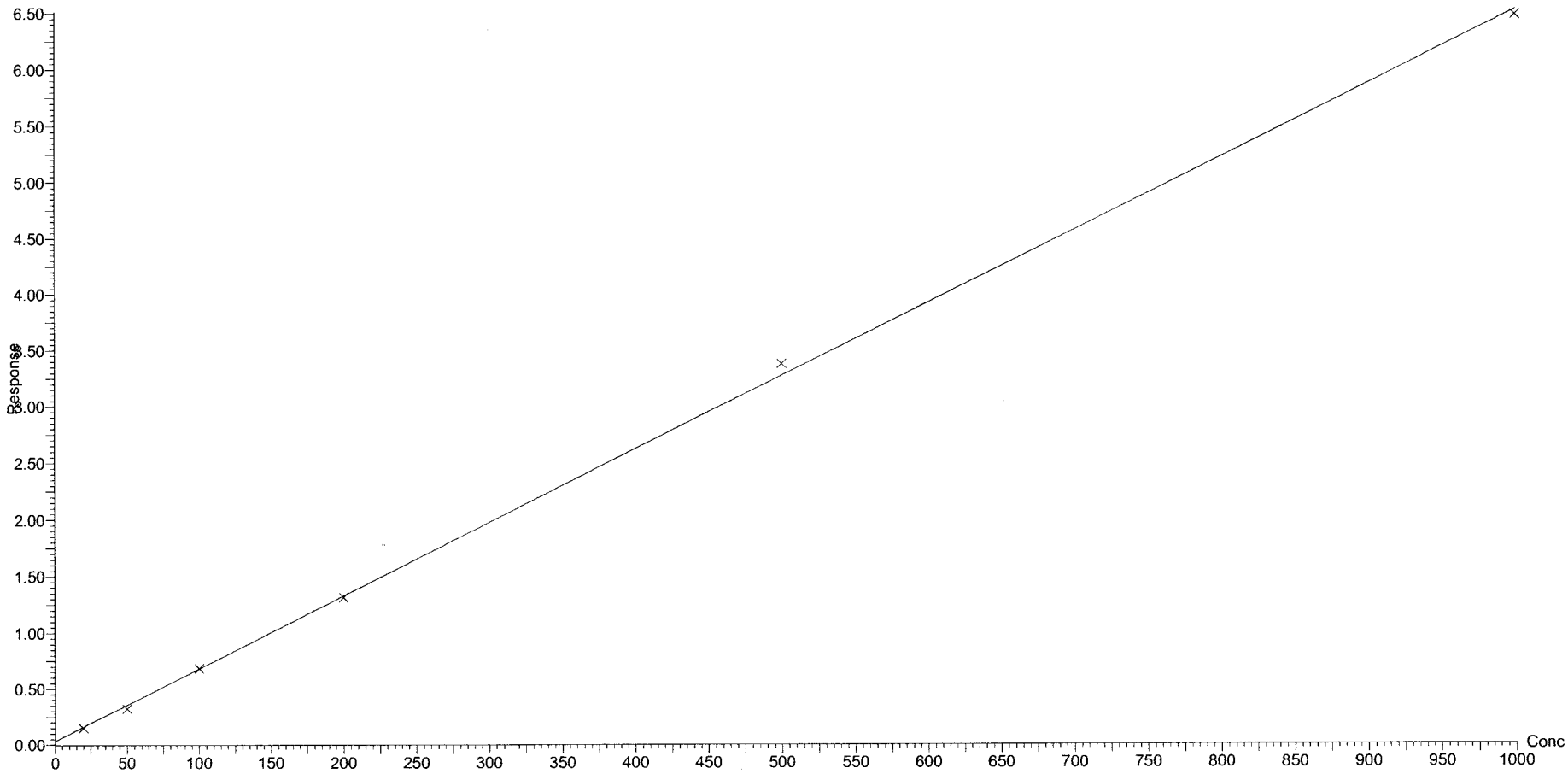


analyst: Tim O'Donnell

Quantify Calibration Report **MassLynx 4.1 SCN627**

IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

Compound name: Perchlorate
Correlation coefficient: r = 0.999767, r^2 = 0.999534
Calibration curve: 0.00648016 * x + 0.0309832
Response type: Internal Std (Ref 1), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: Null, Axis trans: None



analyst: Tim O'Donnell

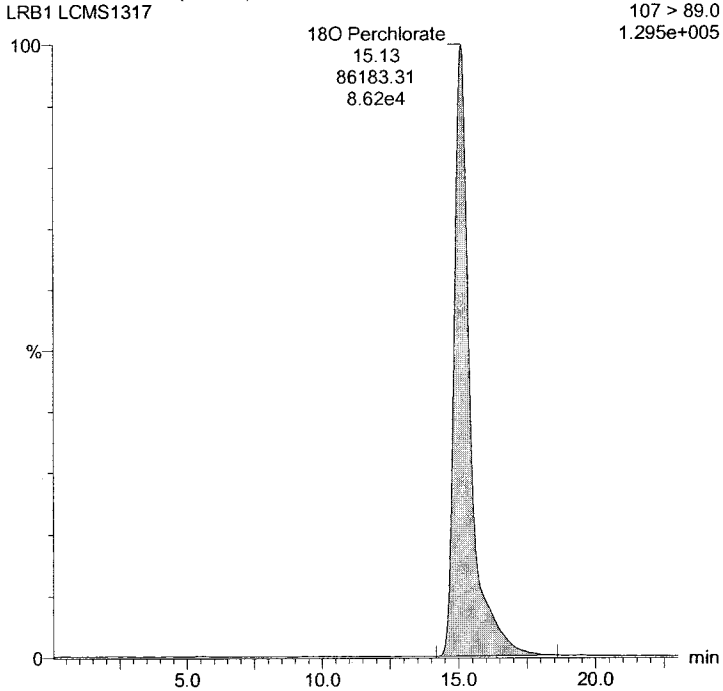
Quantify Sample Report **MassLynx 4.1 SCN627**

IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

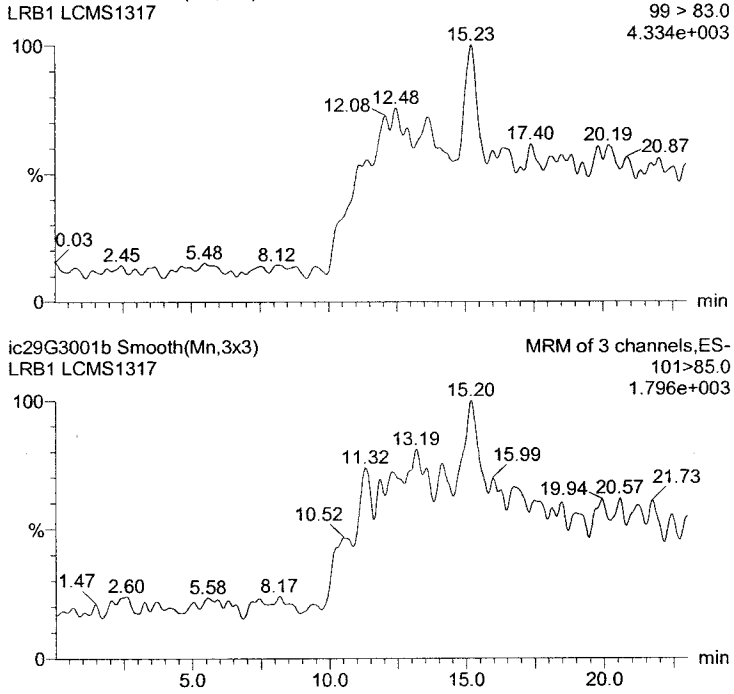
Method: C:\MassLynx\ICPerchlorate.PRO\MethDB\ic29G30.mdb 31 Jul 2009 12:59:10
Calibration: C:\MassLynx\ICPerchlorate.PRO\CurveDB\ic29G30cr.cdb 31 Jul 2009 12:59:41

Name: ic29G3001b, Date: 30-Jul-2009, Time: 18:52:15, ID: LCMS1317, Description: LRB1

18O Perchlorate



Perchlorate



ID	Sample Text	# Name	Trace	RT	Quant Area	Comfirmation Area	Ratio	IS Area	Conc.	%Rec	Flags	Acq.Date	Acq.Time
LCMS...	LRB1	1 18O Perchlorate	107 > 89.0	15.13	86183.313				1.100	110.0	bb	30-Jul-09	18:52:15
LCMS...	LRB1	2 Perchlorate	99 > 83.0					86183.313				30-Jul-09	18:52:15

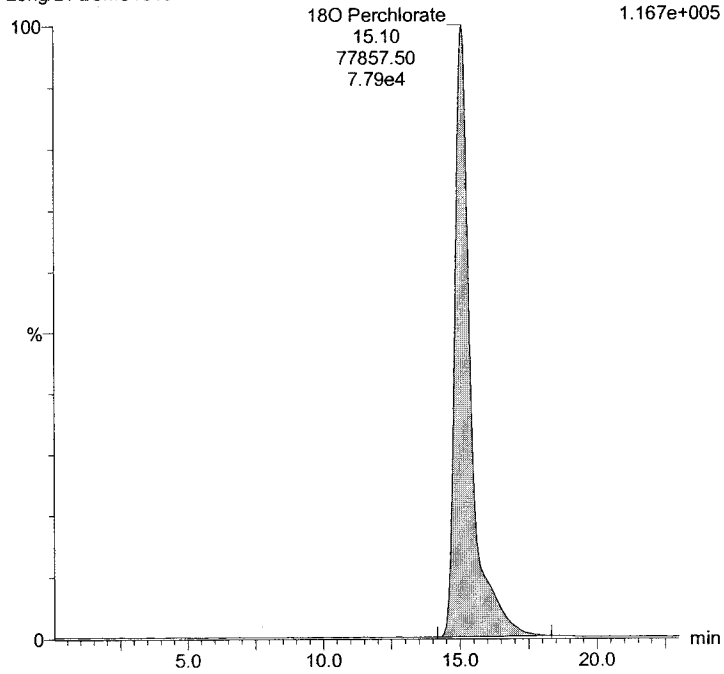
analyst: Tim O'Donnell

Quantify Sample Report **MassLynx 4.1 SCN627**

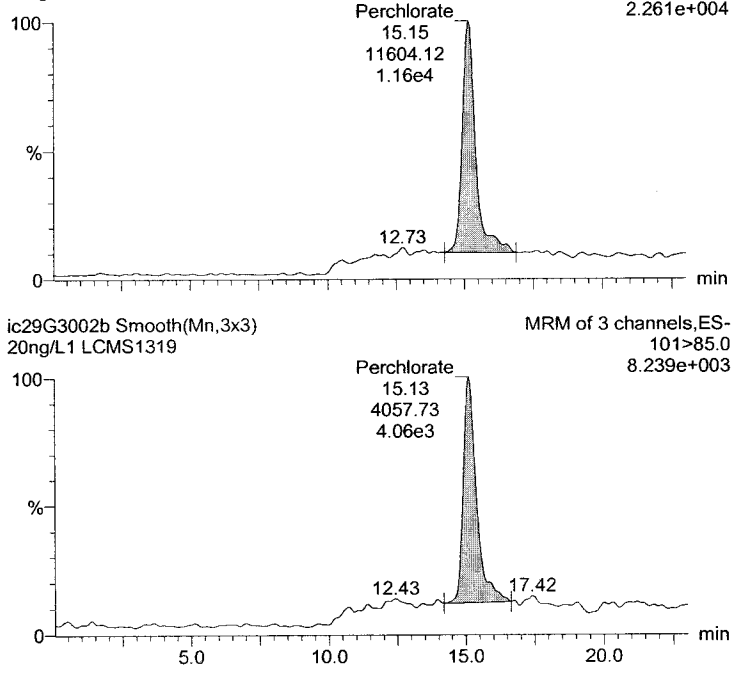
IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

Name: ic29G3002b, Date: 30-Jul-2009, Time: 19:24:10, ID: LCMS1319, Description: 20ng/L1

18O Perchlorate



Perchlorate



ID	Sample Text	# Name	Trace	RT	Quant Area	Comfirmation Area	Ratio	IS Area	Conc.	%Rec	Flags	Acq.Date	Acq.Time
LCMS...	20ng/L1	1 18O Perchlorate	107 > 89.0	15.10	77857.500				0.994	99.4	bb	30-Jul-09	19:24:10
LCMS...	20ng/L1	2 Perchlorate	99 > 83.0	15.15	11604.122	4057.727	2.860	77857.500	18.219	91.1	bb	30-Jul-09	19:24:10

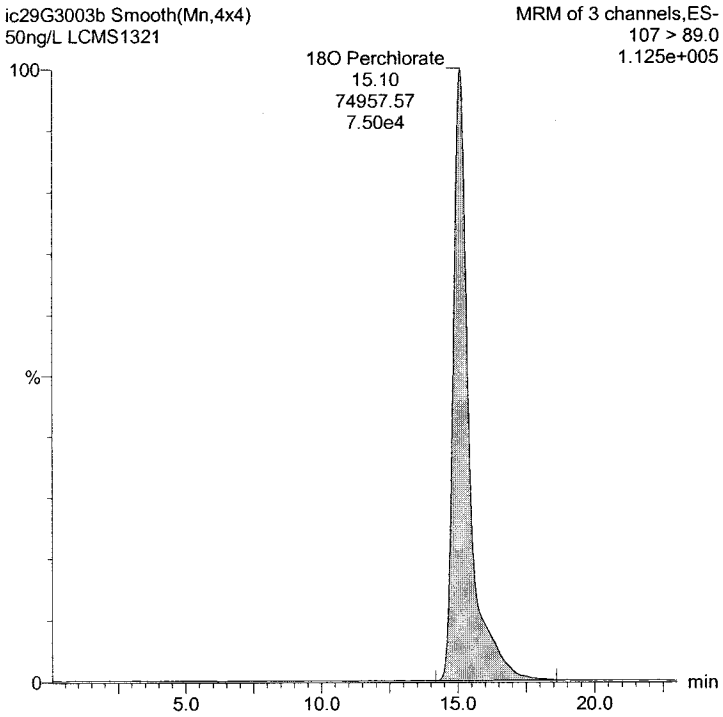
analyst: Tim O'Donnell

Quantify Sample Report **MassLynx 4.1 SCN627**

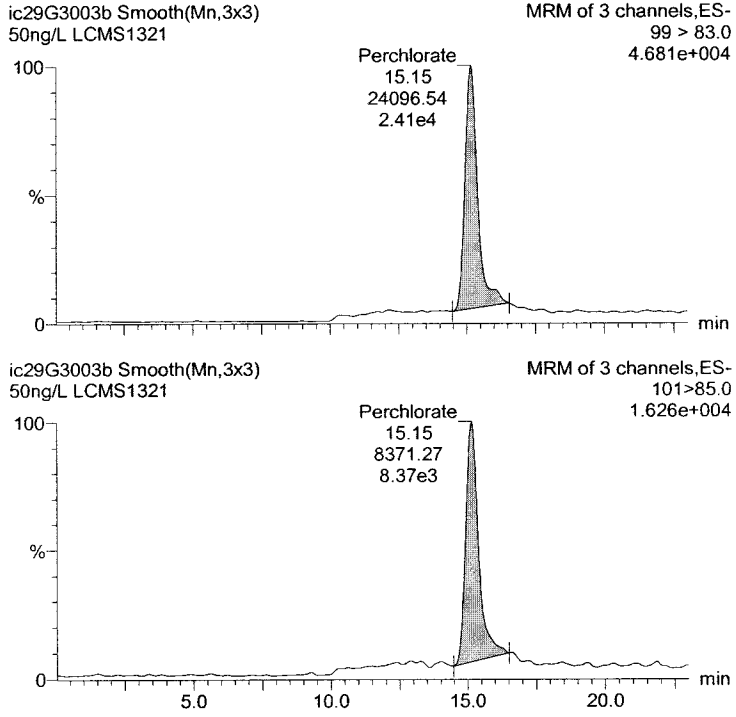
IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

Name: ic29G3003b, Date: 30-Jul-2009, Time: 20:06:41, ID: LCMS1321, Description: 50ng/L

18O Perchlorate



Perchlorate



ID	Sample Text	# Name	Trace	RT	Quant Area	Comfirmation Area	Ratio	IS Area	Conc.	%Rec	Flags	Acq.Date	Acq.Time
LCMS...	50ng/L	1 18O Perchlorate	107 > 89.0	15.10	74957.570				0.957	95.7	bb	30-Jul-09	20:06:41
LCMS...	50ng/L	2 Perchlorate	99 > 83.0	15.15	24096.537	8371.275	2.878	74957.570	44.827	89.7	bb	30-Jul-09	20:06:41

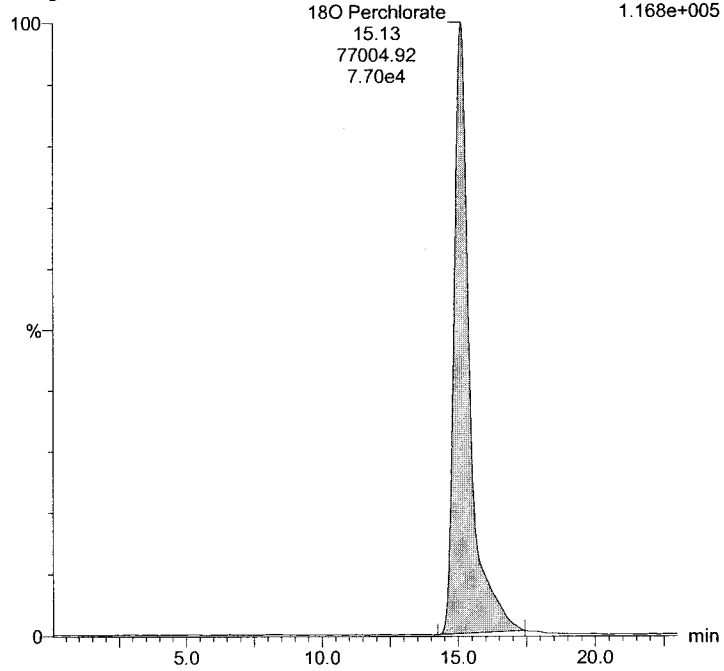
analyst: Tim O'Donnell

Quantify Sample Report **MassLynx 4.1 SCN627**

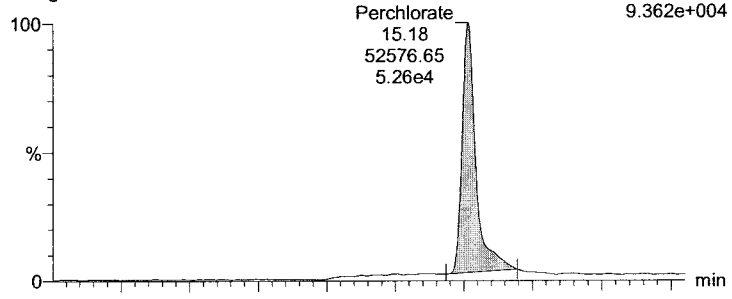
IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

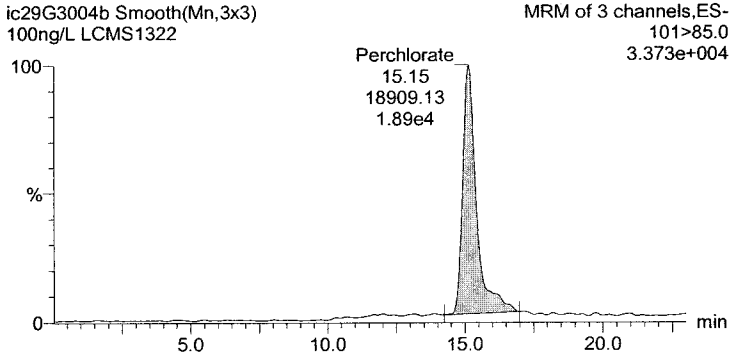
Name: ic29G3004b, Date: 30-Jul-2009, Time: 20:37:57, ID: LCMS1322, Description: 100ng/L

18O Perchlorate



Perchlorate





ID	Sample Text	# Name	Trace	RT	Quant Area	Comfirmation Area	Ratio	IS Area	Conc.	%Rec	Flags	Acq.Date	Acq.Time
LCMS...	100ng/L	1 18O Perchlorate	107 > 89.0	15.13	77004.922				0.983	98.3	bb	30-Jul-09	20:37:57
LCMS...	100ng/L	2 Perchlorate	99 > 83.0	15.18	52576.652	18909.129	2.780	77004.922	100.582	100.6	bb	30-Jul-09	20:37:57

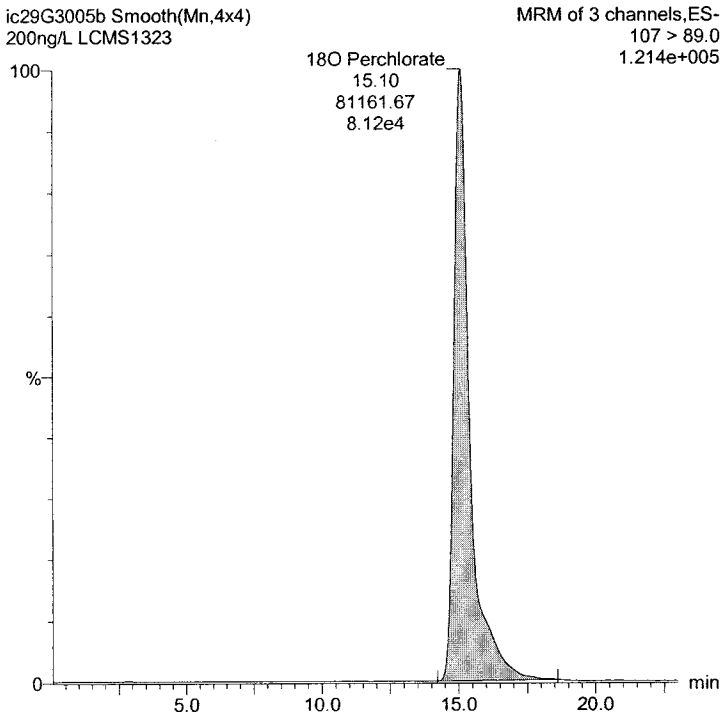
analyst: Tim O'Donnell

Quantify Sample Report **MassLynx 4.1 SCN627**

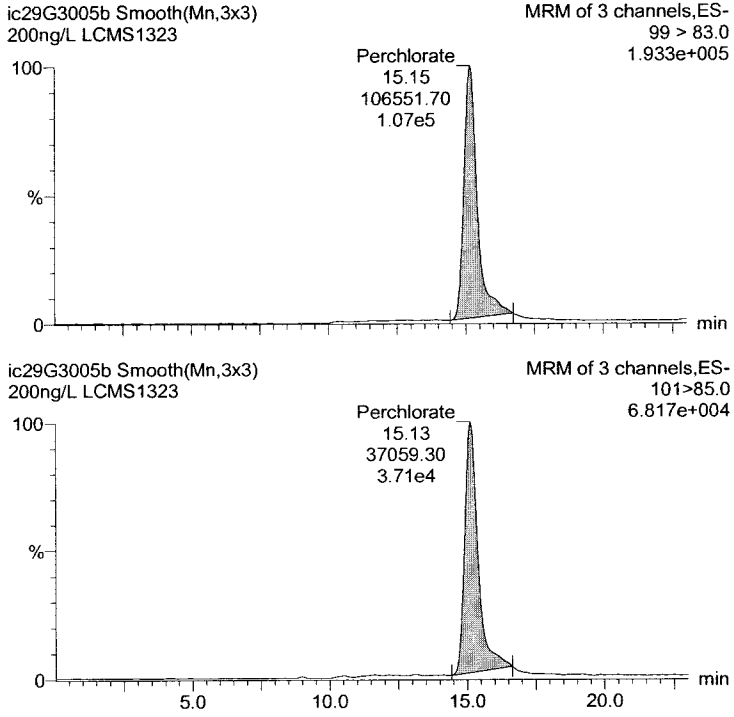
IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

Name: ic29G3005b, Date: 30-Jul-2009, Time: 21:07:14, ID: LCMS1323, Description: 200ng/L

18O Perchlorate



Perchlorate



ID	Sample Text	# Name	Trace	RT	Quant Area	Comfirmation Area	Ratio	IS Area	Conc.	%Rec	Flags	Acq.Date	Acq.Time
LCMS...	200ng/L	1 18O Perchlorate	107 > 89.0	15.10	81161.672				1.036	103.6	bb	30-Jul-09	21:07:14
LCMS...	200ng/L	2 Perchlorate	99 > 83.0	15.15	106551.703	37059.301	2.875	81161.672	197.812	98.9	bb	30-Jul-09	21:07:14

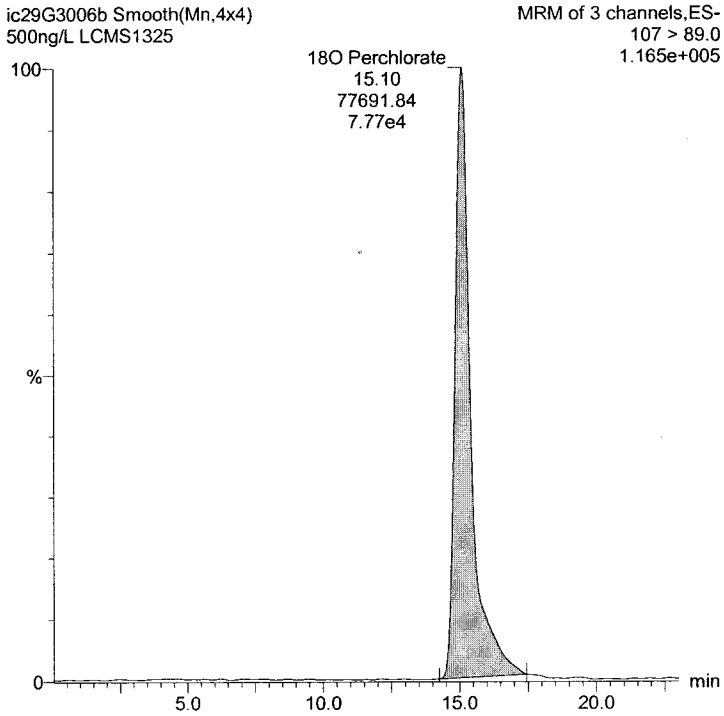
analyst: Tim O'Donnell

Quantify Sample Report **MassLynx 4.1 SCN627**

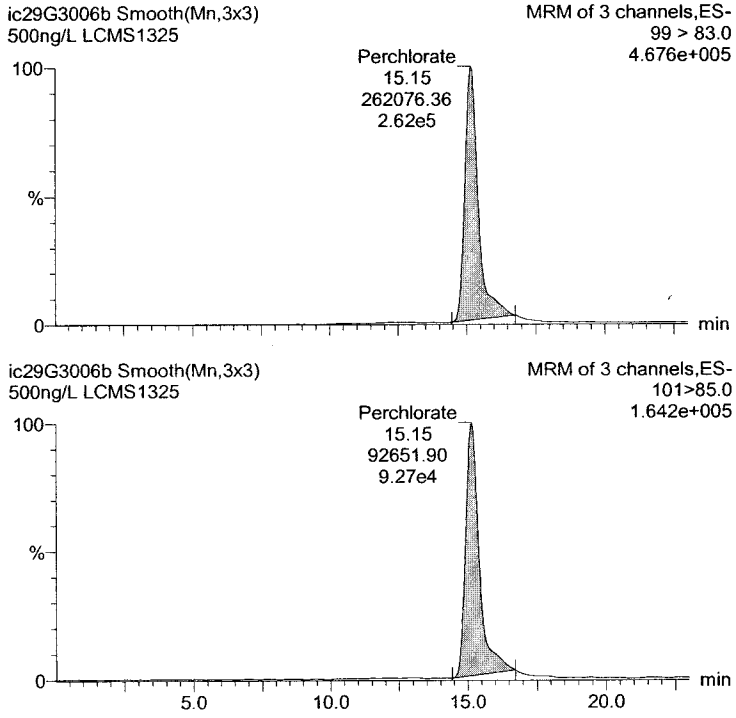
IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

Name: ic29G3006b, Date: 30-Jul-2009, Time: 21:36:33, ID: LCMS1325, Description: 500ng/L

18O Perchlorate



Perchlorate



ID	Sample Text	# Name	Trace	RT	Quant Area	Comfirmation Area	Ratio	IS Area	Conc.	%Rec	Flags	Acq.Date	Acq.Time
LCMS...	500ng/L	1 18O Perchlorate	107 > 89.0	15.10	77691.844				0.992	99.2	bb	30-Jul-09	21:36:33
LCMS...	500ng/L	2 Perchlorate	99 > 83.0	15.15	262076.359	92651.898	2.829	77691.844	515.774	103.2	bb	30-Jul-09	21:36:33

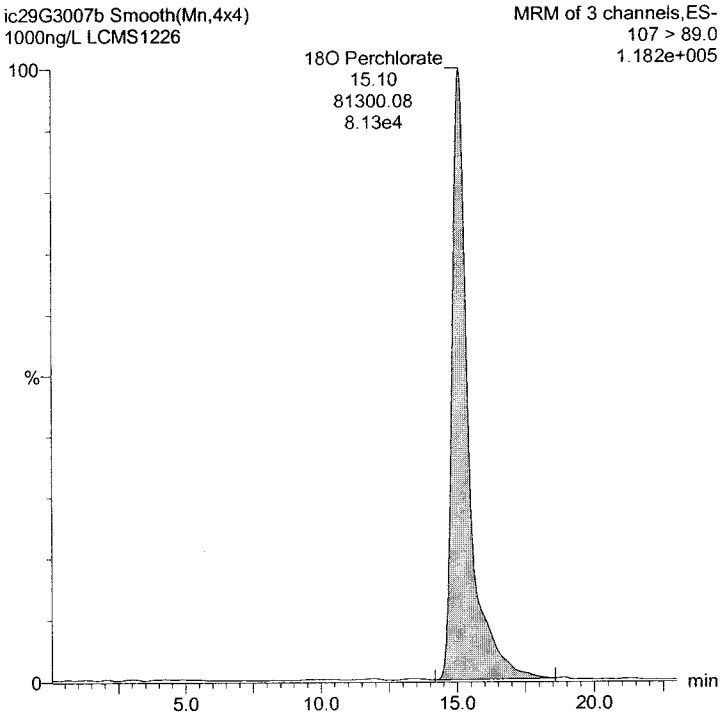
analyst: Tim O'Donnell

Quantify Sample Report **MassLynx 4.1 SCN627**

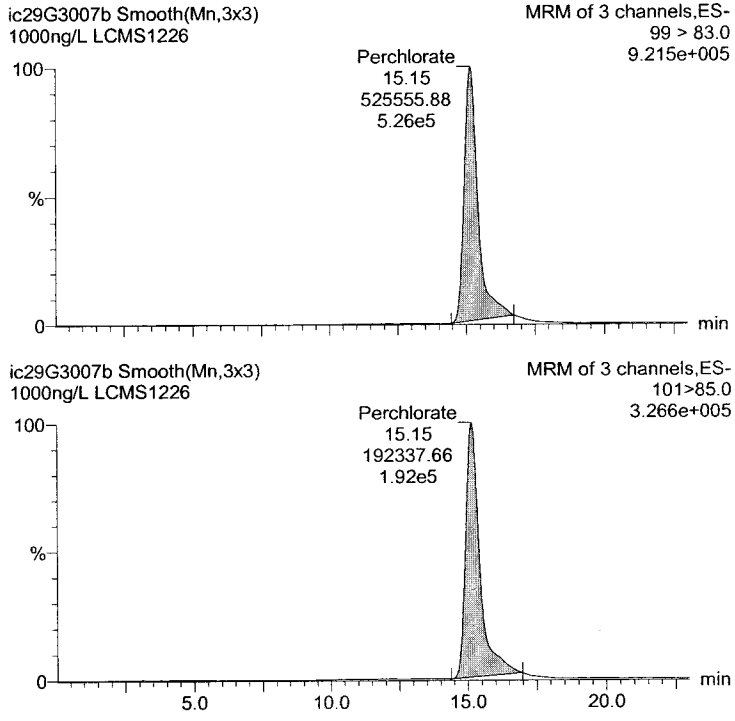
IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

Name: ic29G3007b, Date: 30-Jul-2009, Time: 22:05:51, ID: LCMS1226, Description: 1000ng/L

18O Perchlorate



Perchlorate



ID	Sample Text	# Name	Trace	RT	Quant Area	Comfirmation Area	Ratio	IS Area	Conc.	%Rec	Flags	Acq.Date	Acq.Time
LCMS...	1000ng/L	1 18O Perchlorate	107 > 89.0	15.10	81300.078				1.038	103.8	bb	30-Jul-09	22:05:51
LCMS...	1000ng/L	2 Perchlorate	99 > 83.0	15.15	525555.875	192337.656	2.732	81300.078	992.787	99.3	bb	30-Jul-09	22:05:51

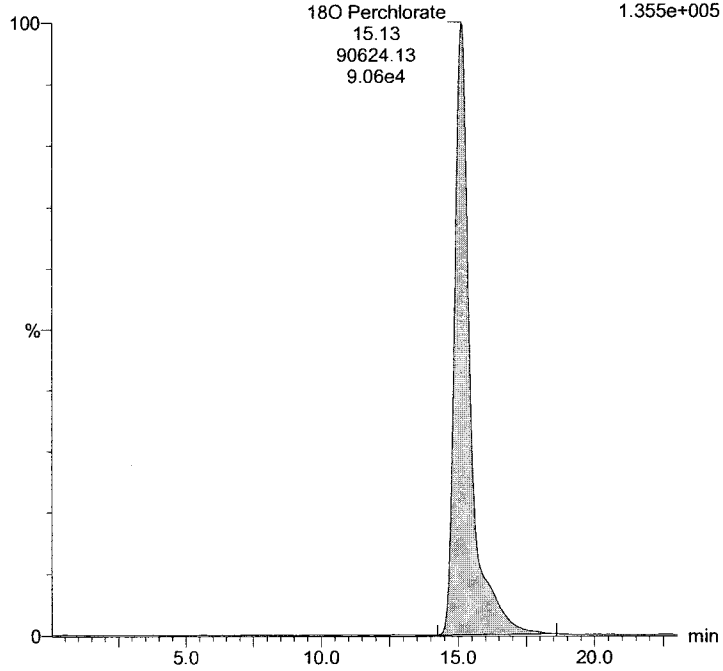
analyst: Tim O'Donnell

Quantify Sample Report **MassLynx 4.1 SCN627**

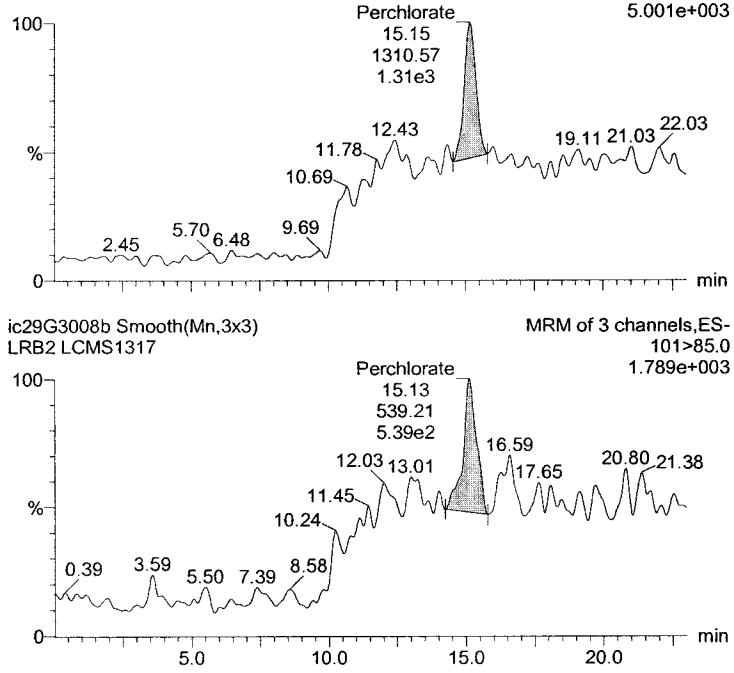
IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

Name: ic29G3008b, Date: 30-Jul-2009, Time: 22:35:10, ID: LCMS1317, Description: LRB2

18O Perchlorate



Perchlorate



ID	Sample Text	# Name	Trace	RT	Quant Area	Comfirmation Area	Ratio	IS Area	Conc.	%Rec	Flags	Acq.Date	Acq.Time
LCMS...	LRB2	1 18O Perchlorate	107 > 89.0	15.13	90624.125				1.157	115.7	bb	30-Jul-09	22:35:10
LCMS...	LRB2	2 Perchlorate	99 > 83.0	15.15	1310.569	539.207	2.431	90624.125			bbl	30-Jul-09	22:35:10

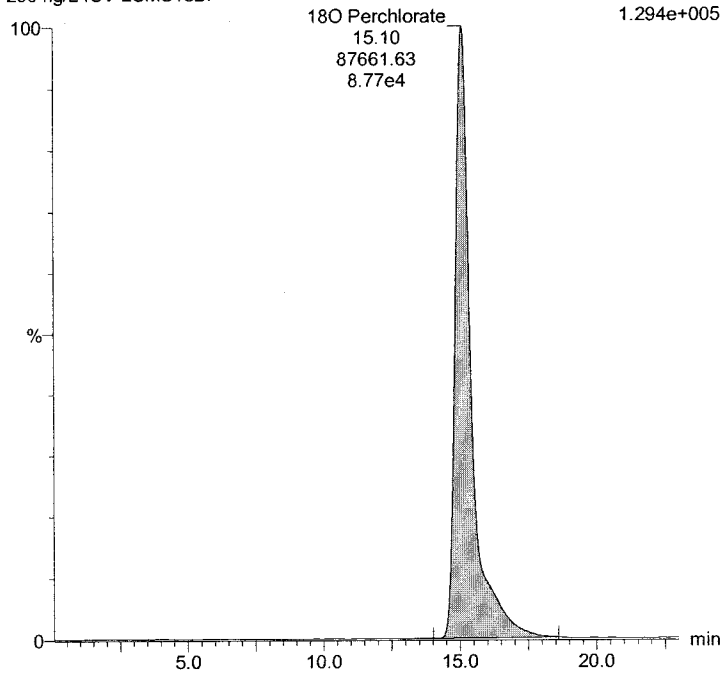
analyst: Tim O'Donnell

Quantify Sample Report **MassLynx 4.1 SCN627**

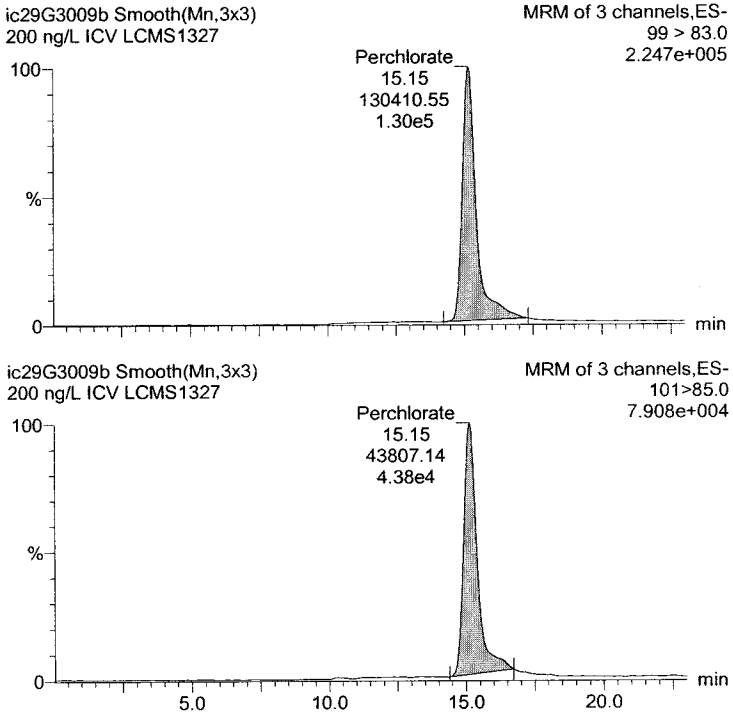
IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

Name: ic29G3009b, Date: 30-Jul-2009, Time: 23:04:27, ID: LCMS1327, Description: 200 ng/L ICV

18O Perchlorate



Perchlorate



ID	Sample Text	#	Name	Trace	RT	Quant Area	Comfirmation Area	Ratio	IS Area	Conc.	%Rec	Flags	Acq.Date	Acq.Time
LCMS...	200 ng/L ICV	1	18O Perchlorate	107 > 89.0	15.10	87661.633				1.119	111.9	bb	30-Jul-09	23:04:27
LCMS...	200 ng/L ICV	2	Perchlorate	99 > 83.0	15.15	130410.547	43807.137	2.977	87661.633	224.790	112.4	bb	30-Jul-09	23:04:27

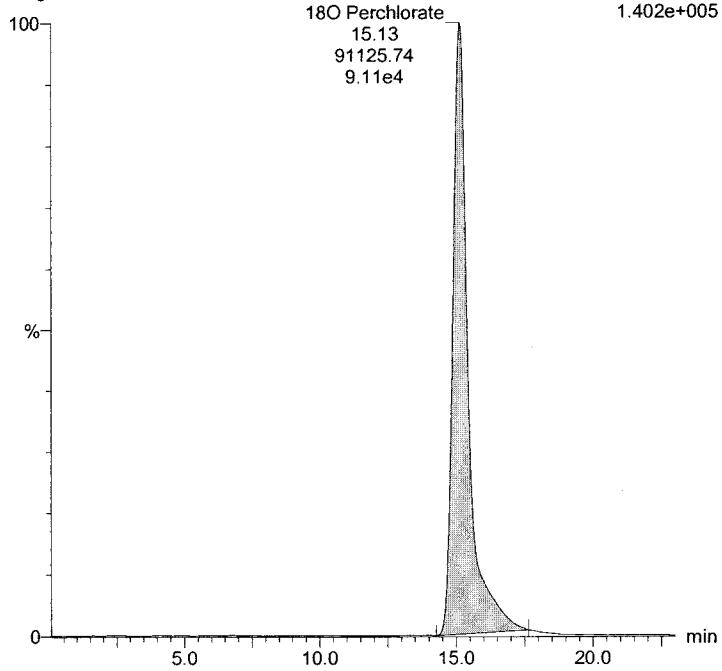
analyst: Tim O'Donnell

Quantify Sample Report **MassLynx 4.1 SCN627**

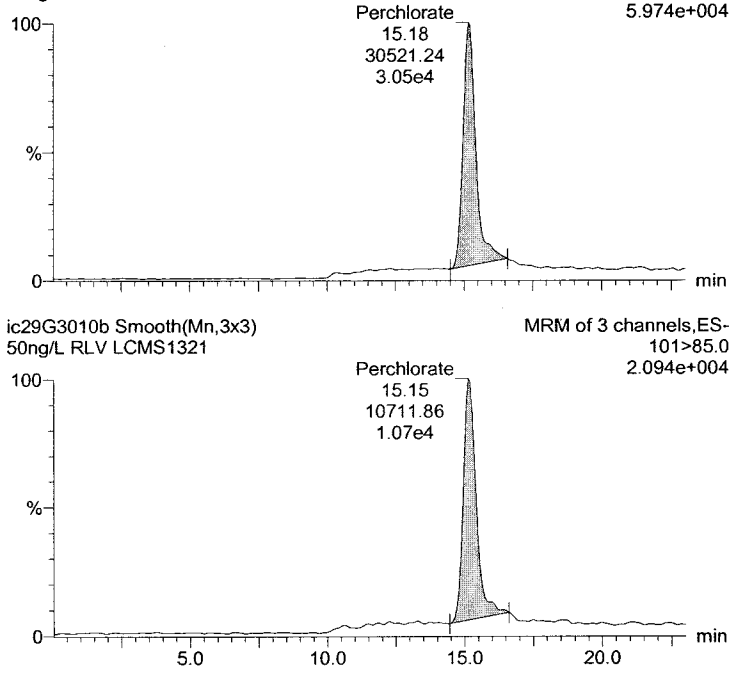
IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

Name: ic29G3010b, Date: 30-Jul-2009, Time: 23:33:46, ID: LCMS1321, Description: 50ng/L RLV

18O Perchlorate



Perchlorate



ID	Sample Text	# Name	Trace	RT	Quant Area	Comfirmation Area	Ratio	IS Area	Conc.	%Rec	Flags	Acq.Date	Acq.Time
LCMS...	50ng/L RLV	1 18O Perchlorate	107 > 89.0	15.13	91125.742				1.163	116.3	bb	30-Jul-09	23:33:46
LCMS...	50ng/L RLV	2 Perchlorate	99 > 83.0	15.18	30521.242	10711.858	2.849	91125.742	46.905	93.8	bb	30-Jul-09	23:33:46

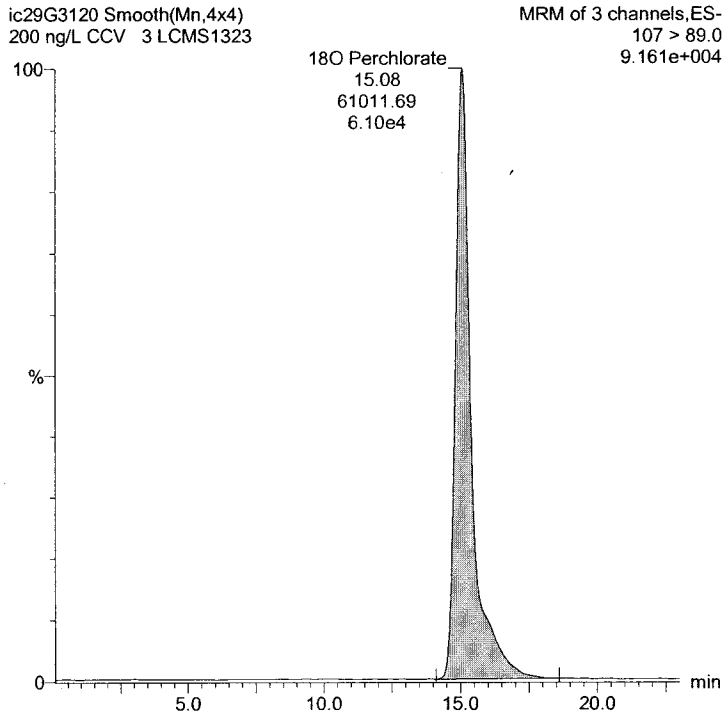
analyst: Tim O'Donnell

Quantify Sample Report **MassLynx 4.1 SCN627**

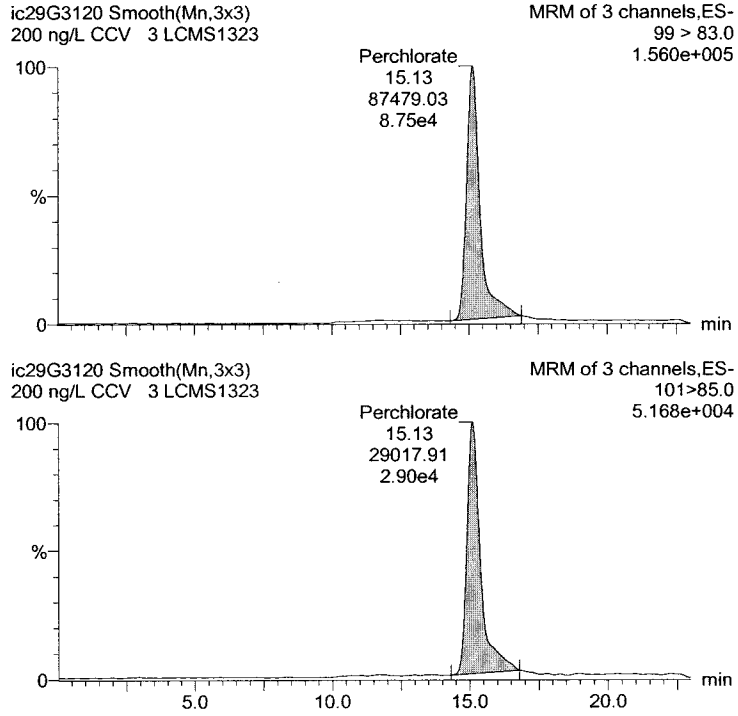
IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

Name: ic29G3120, Date: 31-Jul-2009, Time: 19:05:45, ID: LCMS1323, Description: 200 ng/L CCV 3

18O Perchlorate



Perchlorate



ID	Sample Text	#	Name	Trace	RT	Quant Area	Comfirmation Area	Ratio	IS Area	Conc.	%Rec	Flags	Acq Date	Acq Time
LCMS...	200 ng/L CCV	3	1 18O Perchlorate	107 > 89.0	15.08	61011.691				0.779	77.9	bb	31-Jul-09	19:05:45
LCMS...	200 ng/L CCV	3	2 Perchlorate	99 > 83.0	15.13	87479.031	29017.906	3.015	61011.691	216.480	108.2	bb	31-Jul-09	19:05:45

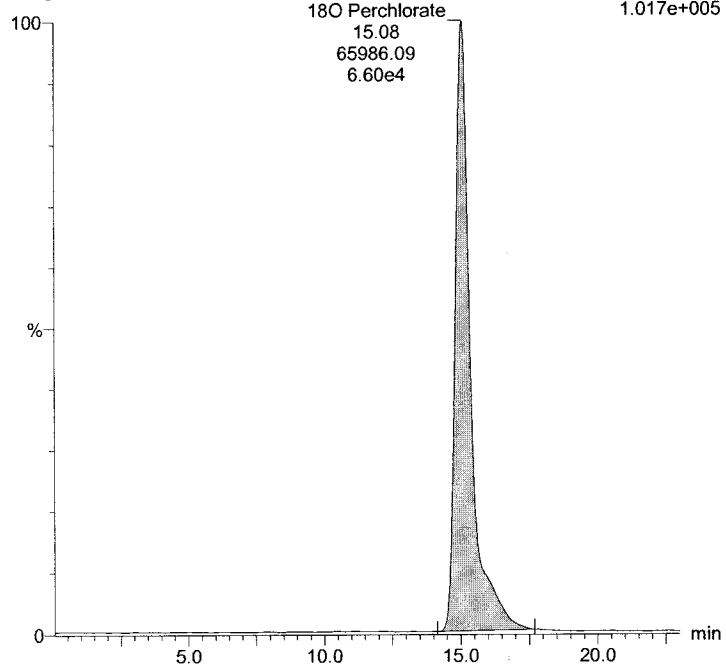
analyst: Tim O'Donnell

Quantify Sample Report **MassLynx 4.1 SCN627**

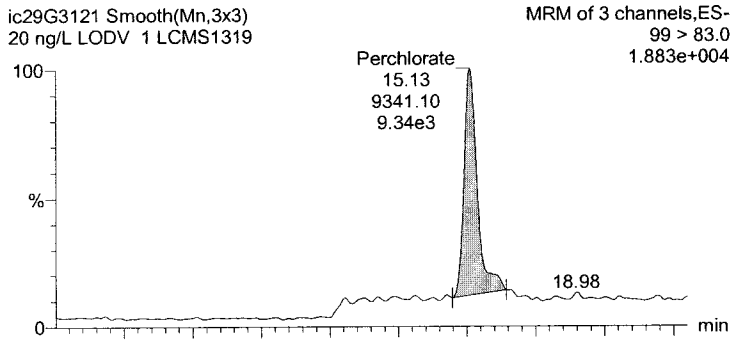
IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

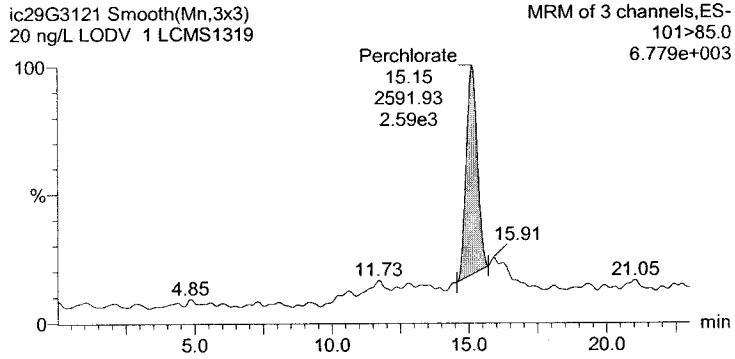
Name: ic29G3121, Date: 31-Jul-2009, Time: 19:38:37, ID: LCMS1319, Description: 20 ng/L LODV 1

18O Perchlorate



Perchlorate





ID	Sample Text	#	Name	Trace	RT	Quant Area	Comfirmation Area	Ratio	IS Area	Conc.	%Rec	Flags	Acq.Date	Acq.Time
LCMS...	20 ng/L LODV 1	1	18O Perchlorate	107 > 89.0	15.08	65986.094				0.842	84.2	bb	31-Jul-09	19:38:37
LCMS...	20 ng/L LODV 1	2	Perchlorate	99 > 83.0	15.13	9341.104	2591.929	3.604	65986.094	17.064	85.3	bb	31-Jul-09	19:38:37

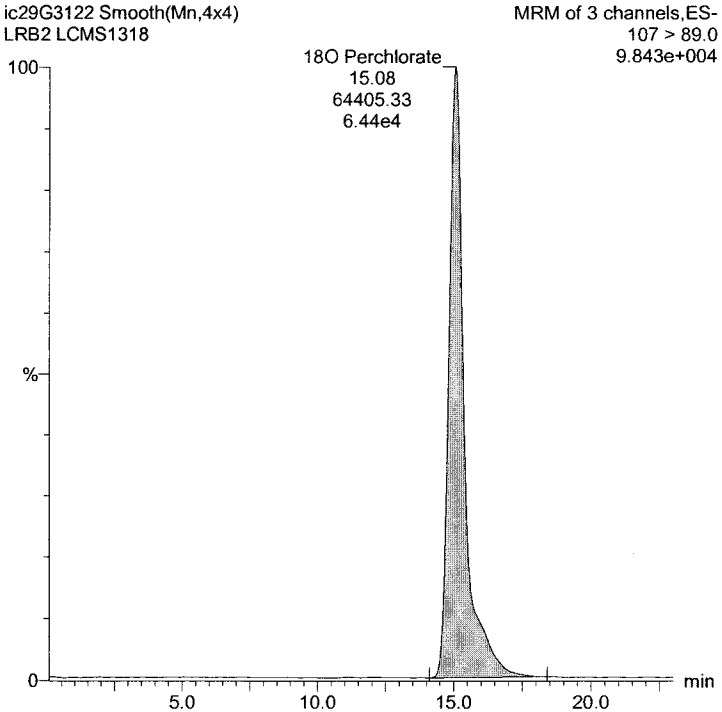
analyst: Tim O'Donnell

Quantify Sample Report **MassLynx 4.1 SCN627**

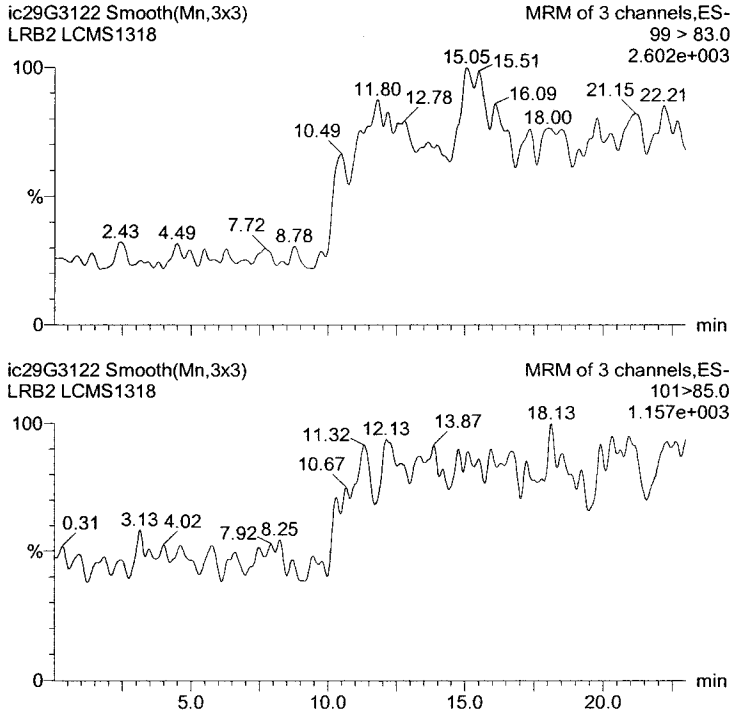
IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

Name: ic29G3122, Date: 31-Jul-2009, Time: 20:04:20, ID: LCMS1318, Description: LRB2

18O Perchlorate



Perchlorate



ID	Sample Text	# Name	Trace	RT	Quant Area	Comfirmation Area	Ratio	IS Area	Conc.	%Rec	Flags	Acq.Date	Acq.Time
LCMS...	LRB2	1 18O Perchlorate	107 > 89.0	15.08	64405.328				0.822	82.2	bb	31-Jul-09	20:04:20
LCMS...	LRB2	2 Perchlorate	99 > 83.0					64405.328				31-Jul-09	20:04:20

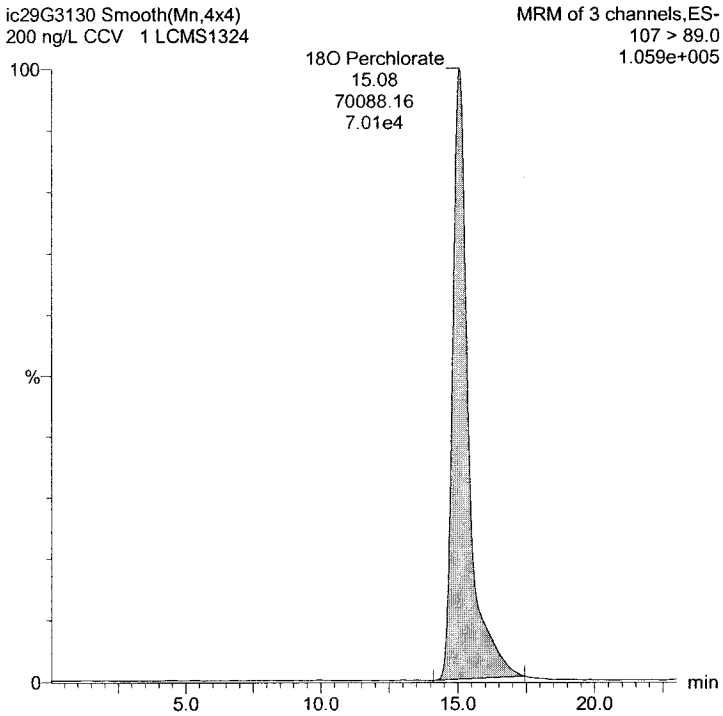
analyst: Tim O'Donnell

Quantify Sample Report **MassLynx 4.1 SCN627**

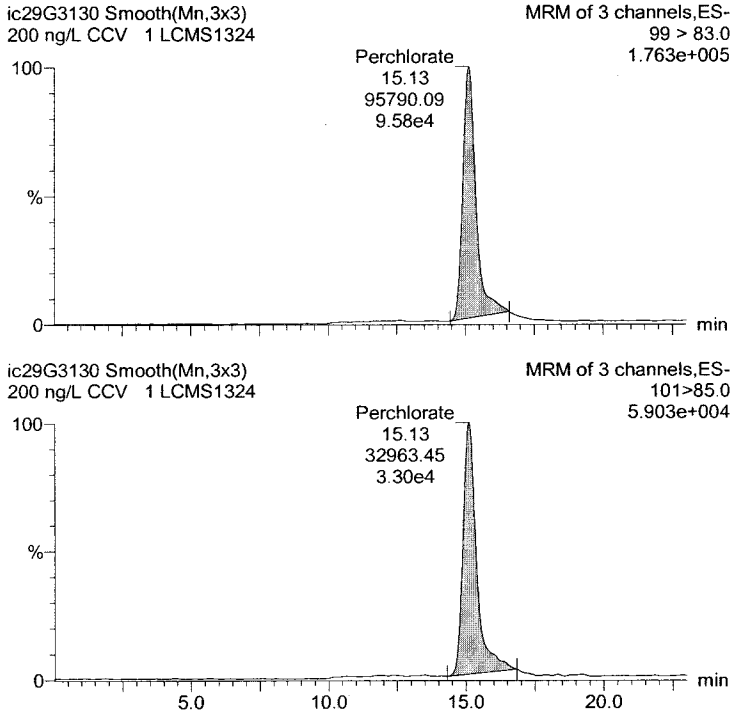
IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

Name: ic29G3130, Date: 01-Aug-2009, Time: 00:02:05, ID: LCMS1324, Description: 200 ng/L CCV 1

18O Perchlorate



Perchlorate



ID	Sample Text	#	Name	Trace	RT	Quant Area	Confirmation Area	Ratio	IS Area	Conc.	%Rec	Flags	Acq.Date	Acq.Time
LCMS...	200 ng/L CCV 1	1	18O Perchlorate	107 > 89.0	15.08	70088.156				0.895	89.5	bb	01-Aug-09	00:02:05
LCMS...	200 ng/L CCV 1	2	Perchlorate	99 > 83.0	15.13	95790.094	32963.453	2.906	70088.156	206.126	103.1	bb	01-Aug-09	00:02:05

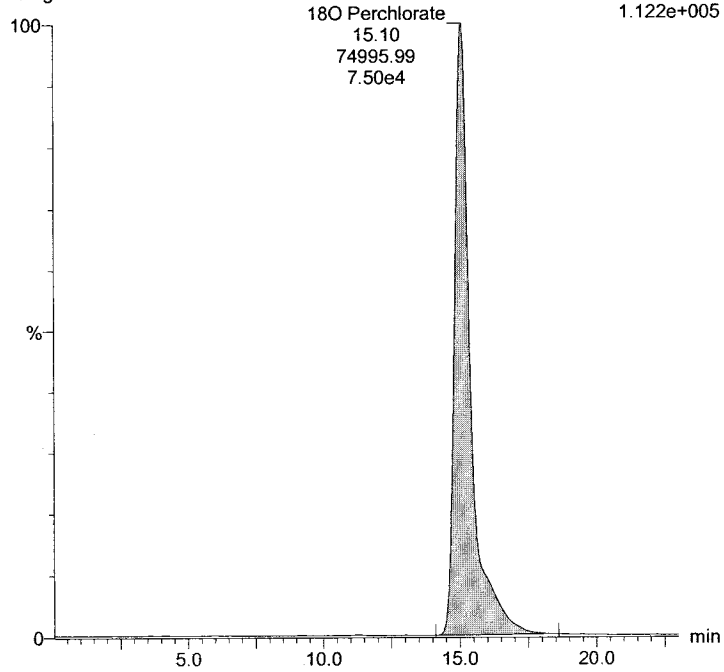
analyst: Tim O'Donnell

Quantify Sample Report **MassLynx 4.1 SCN627**

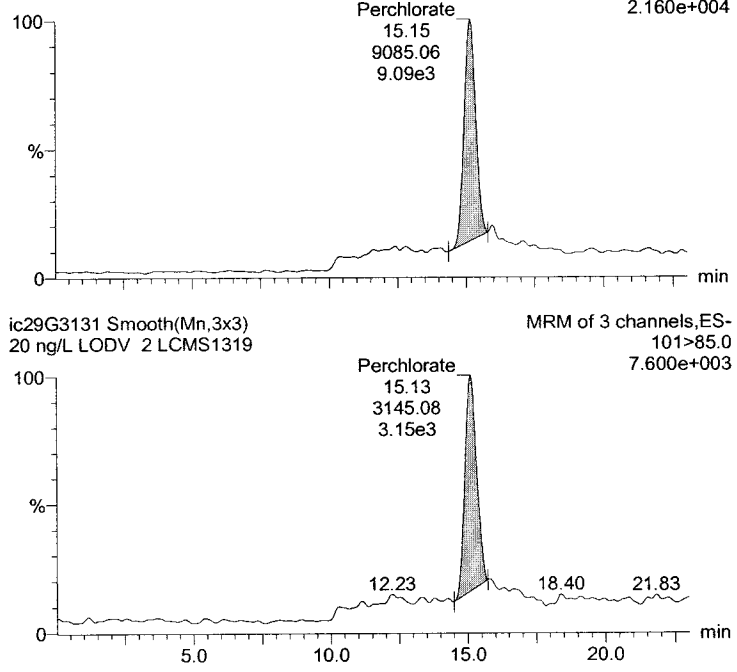
IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

Name: ic29G3131, Date: 01-Aug-2009, Time: 00:31:22, ID: LCMS1319, Description: 20 ng/L LODV 2

18O Perchlorate



Perchlorate



ID	Sample Text	# Name	Trace	RT	Quant Area	Comfirmation Area	Ratio	IS Area	Conc.	%Rec	Flags	Acq.Date	Acq.Time
LCMS...	20 ng/L LODV 2	1 18O Perchlorate	107 > 89.0	15.10	74995.992				0.957	95.7	bb	01-Aug-09	00:31:22
LCMS...	20 ng/L LODV 2	2 Perchlorate	99 > 83.0	15.15	9085.063	3145.082	2.889	74995.992	13.913	69.6	bb	01-Aug-09	00:31:22

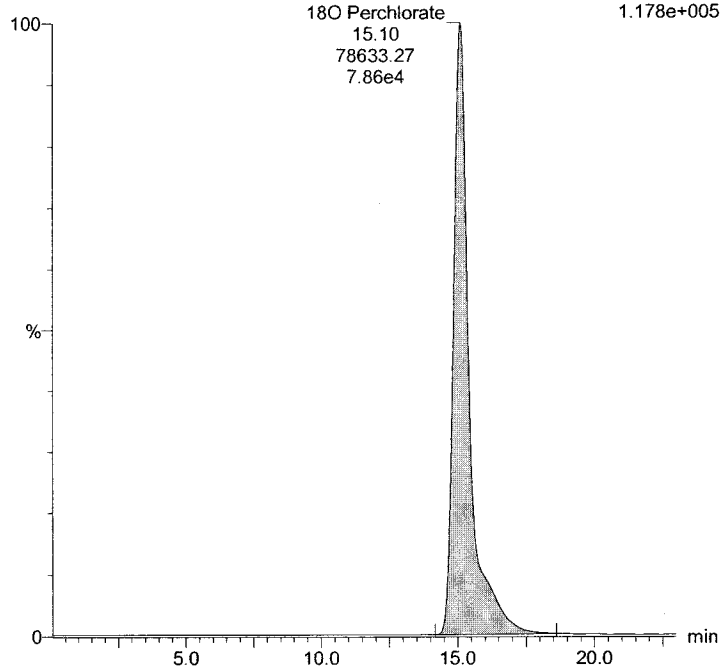
analyst: Tim O'Donnell

Quantify Sample Report **MassLynx 4.1 SCN627**

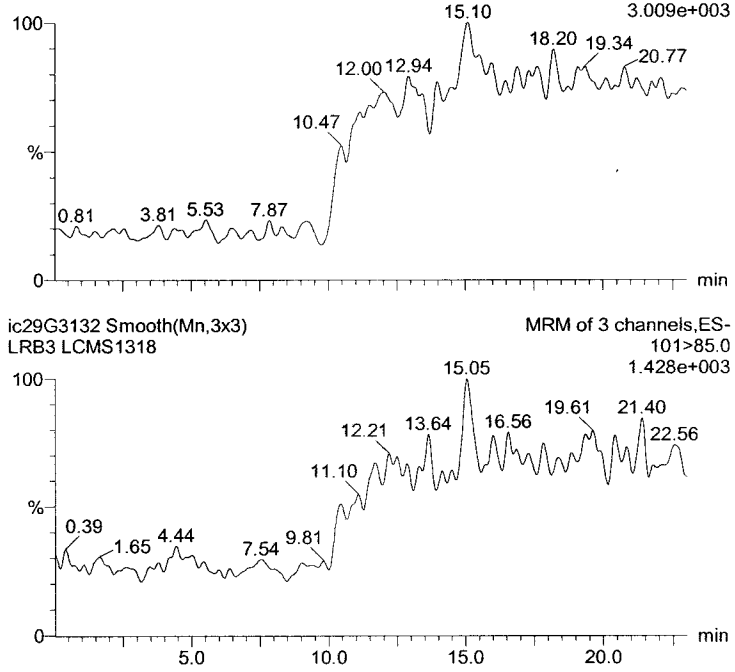
IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

Name: ic29G3132, Date: 01-Aug-2009, Time: 01:00:39, ID: LCMS1318, Description: LRB3

18O Perchlorate



Perchlorate



ID	Sample Text	# Name	Trace	RT	Quant Area	Comfirmation Area	Ratio	IS Area	Conc.	%Rec	Flags	Acq.Date	Acq.Time
LCMS...	LRB3	1 18O Perchlorate	107 > 89.0	15.10	78633.266				1.004	100.4	bb	01-Aug-09	01:00:39
LCMS...	LRB3	2 Perchlorate	99 > 83.0					78633.266				01-Aug-09	01:00:39

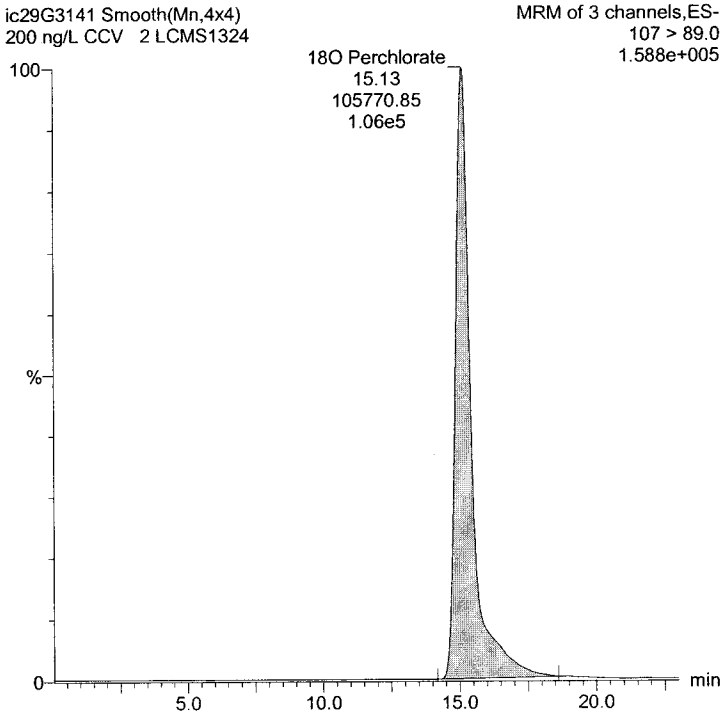
analyst: Tim O'Donnell

Quantify Sample Report **MassLynx 4.1 SCN627**

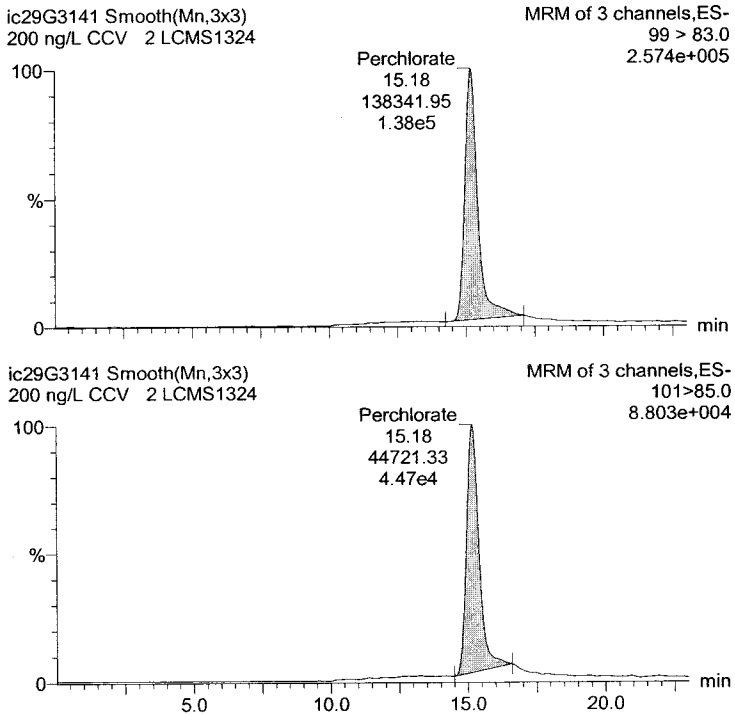
IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

Name: ic29G3141, Date: 01-Aug-2009, Time: 05:24:19, ID: LCMS1324, Description: 200 ng/L CCV 2

18O Perchlorate



Perchlorate



ID	Sample Text	#	Name	Trace	RT	Quant Area	Comfirmation Area	Ratio	IS Area	Conc.	%Rec	Flags	Acq.Date	Acq.Time
LCMS...	200 ng/L CCV 2	1	18O Perchlorate	107 > 89.0	15.13	105770.852				1.350	135.0	bb	01-Aug-09	05:24:19
LCMS...	200 ng/L CCV 2	2	Perchlorate	99 > 83.0	15.18	138341.953	44721.328	3.093	105770.852	197.057	98.5	bb	01-Aug-09	05:24:19

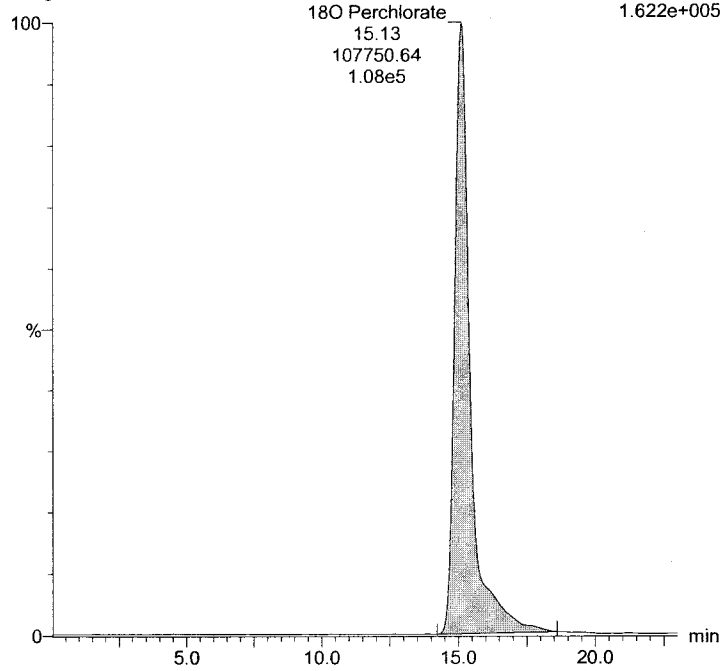
analyst: Tim O'Donnell

Quantify Sample Report **MassLynx 4.1 SCN627**

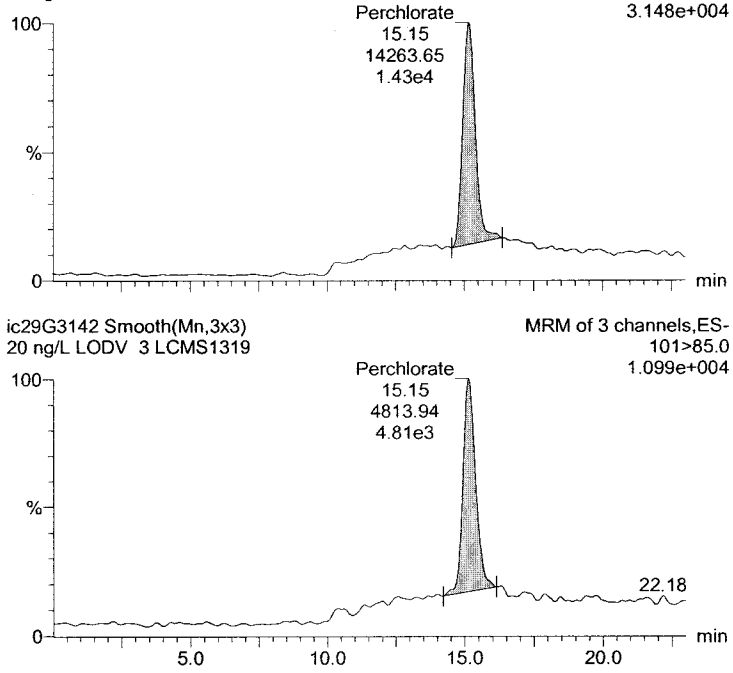
IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

Name: ic29G3142, Date: 01-Aug-2009, Time: 05:53:36, ID: LCMS1319, Description: 20 ng/L LODV 3

18O Perchlorate



Perchlorate



ID	Sample Text	# Name	Trace	RT	Quant Area	Comfirmation Area	Ratio	IS Area	Conc.	%Rec	Flags	Acq.Date	Acq.Time
LCMS...	20 ng/L LODV 3	1 18O Perchlorate	107 > 89.0	15.13	107750.641				1.376	137.6	bb	01-Aug-09	05:53:36
LCMS...	20 ng/L LODV 3	2 Perchlorate	99 > 83.0	15.15	14263.653	4813.936	2.963	107750.641	15.647	78.2	bb	01-Aug-09	05:53:36

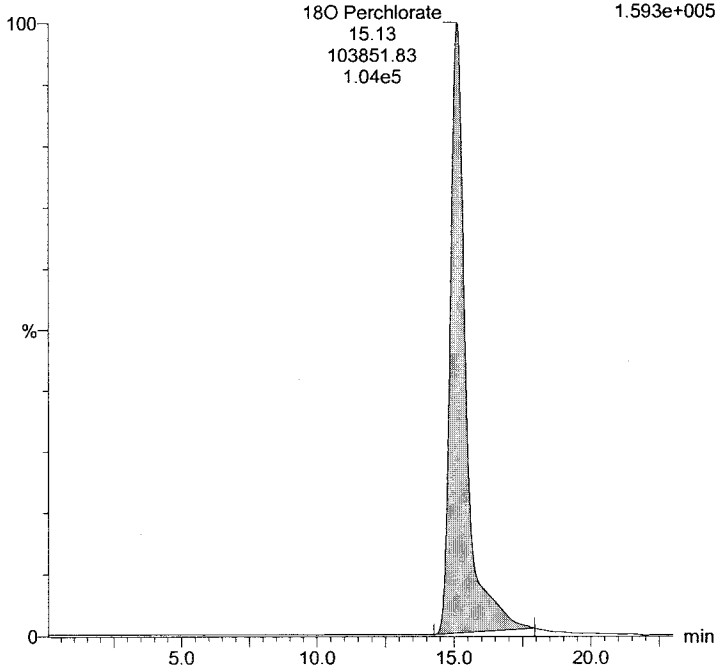
analyst: Tim O'Donnell

Quantify Sample Report **MassLynx 4.1 SCN627**

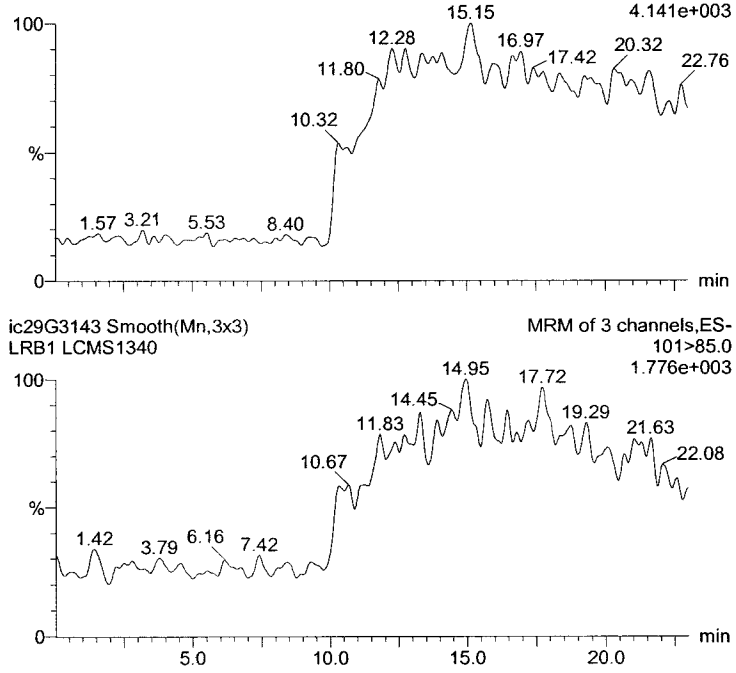
IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

Name: ic29G3143, Date: 01-Aug-2009, Time: 06:22:53, ID: LCMS1340, Description: LRB1

18O Perchlorate



Perchlorate



ID	Sample Text	# Name	Trace	RT	Quant Area	Comfirmation Area	Ratio	IS Area	Conc.	%Rec	Flags	Acq.Date	Acq.Time
LCMS...	LRB1	1 18O Perchlorate	107 > 89.0	15.13	103851.828				1.326	132.6	bb	01-Aug-09	06:22:53
LCMS...	LRB1	2 Perchlorate	99 > 83.0					103851.828				01-Aug-09	06:22:53

analyst: Tim O'Donnell

IC/MS/MS SEMIVOLATILE SAMPLE DATA

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Sample List Report **MassLynx 4.1 SCN627**

Sample List: C:\MassLynx\ICPerchlorate.PRO\SampleDB\ic29G31(02).SPL
Last Modified: Monday, August 03, 2009 14:29:50 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:34:15 Mountain Daylight Time

	File Name	Sample ID	File Text	Sample Type	Analyte ng/L	Dilution	Vial	Vf mL
1	ic29G3001b	LCMS1317	LRB1	Blank	0	1	1	5.00
2	ic29G3002b	LCMS1319	20ng/L1	Standard	20	1	1	1.00
3	ic29G3003b	LCMS1321	50ng/L	Standard	50	1	1	1.00
4	ic29G3004b	LCMS1322	100ng/L	Standard	100	1	1	1.00
5	ic29G3005b	LCMS1323	200ng/L	Standard	200	1	1	1.00
6	ic29G3006b	LCMS1325	500ng/L	Standard	500	1	1	1.00
7	ic29G3007b	LCMS1226	1000ng/L	Standard	1000	1	1	1.00
8	ic29G3008b	LCMS1317	LRB2	Blank	0	1	1	5.00
9	ic29G3009b	LCMS1327	200 ng/L ICV	QC	200	1	1	5.00
10	ic29G3010b	LCMS1321	50ng/L RLV	QC	50	1	1	1.00
11	ic29G3120	LCMS1323	200 ng/L CCV 3	QC	200	1	1	1.00
12	ic29G3121	LCMS1319	20 ng/L LODV 1	QC	20	1	1	1.00
13	ic29G3122	LCMS1318	LRB2	Blank	0	1	1	5.00
14	ic29G3123	LG2CF1AA	R9G240000-354 MB	Blank	0	1	1	5.00
15	ic29G3124	LG2CF1AC	R9G240000-354 LCS	QC	50	1	1	5.00
16	ic29G3125	LCMS1328	ICS2	QC	50	1	1	5.00
17	ic29G3126	LF9KT1AA	D9G090307-001 500X	Analyte	0	500	1	5.00
18	ic29G3127	LF9F91AA	D9G090307-002 500X	Analyte	0	500	1	5.00
19	ic29G3128	LF9LA1AA	D9G090307-003 500X	Analyte	0	500	1	5.00
20	ic29G3129	LF9LC1AA	D9G090307-004 500X	Analyte	0	500	1	5.00
21	ic29G3130	LCMS1324	200 ng/L CCV 1	QC	200	1	1	1.00
22	ic29G3131	LCMS1319	20 ng/L LODV 2	QC	20	1	1	1.00
23	ic29G3132	LCMS1318	LRB3	Blank	0	1	1	5.00
24	ic29G3133	LF9LF1AA	D9G090307-005 100X	Analyte	0	100	1	5.00
25	ic29G3134	LF9LG1AA	D9G090307-006 100X	Analyte	0	100	1	5.00
26	ic29G3135	LF9LJ1AA	D9G090307-007 100X	Analyte	0	100	1	5.00
27	ic29G3136	LF9LK1AA	D9G090307-008 100X	Analyte	0	100	1	5.00
28	ic29G3137	LF9LN1AA	D9G090307-009 100X	Analyte	0	100	1	5.00
29	ic29G3138	LF9LP1AA	D9G090307-010 100X	Analyte	0	100	1	5.00
30	ic29G3139	LF9LP1AC	D9G090307-010 MS 100X	QC	50	100	1	5.00
31	ic29G3140	LF9LP1AD	D9G090307-010 MSD 100X	QC	50	100	1	5.00
32	ic29G3141	LCMS1324	200 ng/L CCV 2	QC	200	1	1	1.00
33	ic29G3142	LCMS1319	20 ng/L LODV 3	QC	20	1	1	1.00
34	ic29G3143	LCMS1340	LRB1	Blank	0	1	1	5.00

Sample List Report **MassLynx 4.1 SCN627**

Sample List: C:\MassLynx\ICPerchlorate.PRO\SampleDB\ic29G31(02).SPL
Last Modified: Monday, August 03, 2009 14:29:50 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:34:15 Mountain Daylight Time

Page Position (2, 1)

Sample mL or g	Inject Volume	MS File	Inlet File	MS Tune File
5.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
1.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
1.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
1.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
1.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
1.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
1.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
5.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
5.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
1.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
1.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
1.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
5.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
5.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
5.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
5.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
5.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
5.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
5.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
5.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
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1.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
5.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
5.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
5.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
5.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
5.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
5.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
5.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
5.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
5.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
1.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
1.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate
5.000	250.000	ICPerchlorate	ICPerchlorate	ICPerchlorate

Quantify Compound Summary Report **MassLynx 4.1 SCN627**

IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

Method: C:\MassLynx\ICPerchlorate.PRO\MethDB\ic29G30.mdb 31 Jul 2009 12:59:10
Calibration: C:\MassLynx\ICPerchlorate.PRO\CurveDB\ic29G30cr.cdb 31 Jul 2009 12:59:41

Compound name: 18O Perchlorate
Response Factor: 78328.9
RRF SD: 2473.84, Relative SD: 3.15827
Response type: External Std, Area
Curve type: RF

#	Name	ID	Sample Text	Type	Std. Conc	Dilution	RT	Area	IS Area	Conc.	%Rec	Flags	Ratio
1	ic29G3001b	LCMS1317	LRB1	Blank	1.000	1.0	15.13	86183.313		1.100	110.0	bb	
2	ic29G3002b	LCMS1319	20ng/L1	Standard	1.000	1.0	15.10	77857.500		0.994	99.4	bb	
3	ic29G3003b	LCMS1321	50ng/L	Standard	1.000	1.0	15.10	74957.570		0.957	95.7	bb	
4	ic29G3004b	LCMS1322	100ng/L	Standard	1.000	1.0	15.13	77004.922		0.983	98.3	bb	
5	ic29G3005b	LCMS1323	200ng/L	Standard	1.000	1.0	15.10	81161.672		1.036	103.6	bb	
6	ic29G3006b	LCMS1325	500ng/L	Standard	1.000	1.0	15.10	77691.844		0.992	99.2	bb	
7	ic29G3007b	LCMS1226	1000ng/L	Standard	1.000	1.0	15.10	81300.078		1.038	103.8	bb	
8	ic29G3008b	LCMS1317	LRB2	Blank	1.000	1.0	15.13	90624.125		1.157	115.7	bb	
9	ic29G3009b	LCMS1327	200 ng/L ICV	QC	1.000	1.0	15.10	87661.633		1.119	111.9	bb	
10	ic29G3010b	LCMS1321	50ng/L RLV	QC	1.000	1.0	15.13	91125.742		1.163	116.3	bb	
11	ic29G3120	LCMS1323	200 ng/L CCV 3	QC	1.000	1.0	15.08	61011.691		0.779	77.9	bb	
12	ic29G3121	LCMS1319	20 ng/L LODV 1	QC	1.000	1.0	15.08	65986.094		0.842	84.2	bb	
13	ic29G3122	LCMS1318	LRB2	Blank	1.000	1.0	15.08	64405.328		0.822	82.2	bb	
14	ic29G3123	LG2CF1AA	R9G240000-354 MB	Blank	1.000	1.0	15.08	62528.953		0.798	79.8	bb	
15	ic29G3124	LG2CF1AC	R9G240000-354 LCS	QC	1.000	1.0	15.10	65364.176		0.834	83.4	bb	
16	ic29G3125	LCMS1328	ICS2	QC	1.000	1.0	15.05	66908.383		0.854	85.4	bb	
17	ic29G3126	LF9KT1AA	D9G090307-001 500X	Analyte	1.000	1.0	15.10	63626.285		0.812	81.2	bb	
18	ic29G3127	LF9F91AA	D9G090307-002 500X	Analyte	1.000	1.0	15.10	61743.629		0.788	78.8	bb	
19	ic29G3128	LF9LA1AA	D9G090307-003 500X	Analyte	1.000	1.0	15.10	63847.434		0.815	81.5	bb	
20	ic29G3129	LF9LC1AA	D9G090307-004 500X	Analyte	1.000	1.0	15.10	65403.023		0.835	83.5	bb	
21	ic29G3130	LCMS1324	200 ng/L CCV 1	QC	1.000	1.0	15.08	70088.156		0.895	89.5	bb	
22	ic29G3131	LCMS1319	20 ng/L LODV 2	QC	1.000	1.0	15.10	74995.992		0.957	95.7	bb	
23	ic29G3132	LCMS1318	LRB3	Blank	1.000	1.0	15.10	78633.266		1.004	100.4	bb	
24	ic29G3133	LF9LF1AA	D9G090307-005 100X	Analyte	1.000	1.0	15.10	73199.969		0.935	93.5	bb	
25	ic29G3134	LF9LG1AA	D9G090307-006 100X	Analyte	1.000	1.0	15.13	72764.922		0.929	92.9	bb	
26	ic29G3135	LF9LJ1AA	D9G090307-007 100X	Analyte	1.000	1.0	15.15	74243.469		0.948	94.8	bb	
27	ic29G3136	LF9LK1AA	D9G090307-008 100X	Analyte	1.000	1.0	15.13	86927.883		1.110	111.0	bb	
28	ic29G3137	LF9LN1AA	D9G090307-009 100X	Analyte	1.000	1.0	15.15	83283.891		1.063	106.3	bb	

analyst: Tim O'Donnell

Quantify Compound Summary Report **MassLynx 4.1 SCN627**

IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

Compound name: 18O Perchlorate

#	Name	ID	Sample Text	Type	Std. Conc	Dilution	RT	Area	IS Area	Conc.	%Rec	Flags	Ratio
29	ic29G3138	LF9LP1AA	D9G090307-010 100X	Analyte	1.000	1.0	15.15	85872.320		1.096	109.6	bb	
30	ic29G3139	LF9LP1AC	D9G090307-010 MS 100X	QC	1.000	1.0	15.13	87696.227		1.120	112.0	bb	
31	ic29G3140	LF9LP1AD	D9G090307-010 MSD 1...	QC	1.000	1.0	15.15	83841.055		1.070	107.0	bb	
32	ic29G3141	LCMS1324	200 ng/L CCV 2	QC	1.000	1.0	15.13	105770.852		1.350	135.0	bb	
33	ic29G3142	LCMS1319	20 ng/L LODV 3	QC	1.000	1.0	15.13	107750.641		1.376	137.6	bb	
34	ic29G3143	LCMS1340	LRB1	Blank	1.000	1.0	15.13	103851.828		1.326	132.6	bb	

analyst: Tim O'Donnell

Quantify Compound Summary Report **MassLynx 4.1 SCN627**

IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

Compound name: Perchlorate
Correlation coefficient: r = 0.999767, r^2 = 0.999534
Calibration curve: 0.00648016 * x + 0.0309832
Response type: Internal Std (Ref 1), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: Null, Axis trans: None

#	Name	ID	Sample Text	Type	Std. Conc	Dilution	RT	Area	IS Area	Conc.	%Rec	Flags	Ratio
1	ic29G3001b	LCMS1317	LRB1	Blank		1.0			86183.313				
2	ic29G3002b	LCMS1319	20ng/L1	Standard	20.000	1.0	15.15	11604.122	77857.500	18.219	91.1	bb	2.860
3	ic29G3003b	LCMS1321	50ng/L	Standard	50.000	1.0	15.15	24096.537	74957.570	44.827	89.7	bb	2.878
4	ic29G3004b	LCMS1322	100ng/L	Standard	100.000	1.0	15.18	52576.652	77004.922	100.582	100.6	bb	2.780
5	ic29G3005b	LCMS1323	200ng/L	Standard	200.000	1.0	15.15	106551.703	81161.672	197.812	98.9	bb	2.875
6	ic29G3006b	LCMS1325	500ng/L	Standard	500.000	1.0	15.15	262076.359	77691.844	515.774	103.2	bb	2.829
7	ic29G3007b	LCMS1226	1000ng/L	Standard	1000.000	1.0	15.15	525555.875	81300.078	992.787	99.3	bb	2.732
8	ic29G3008b	LCMS1317	LRB2	Blank		1.0	15.15	1310.569	90624.125			bbl	2.431
9	ic29G3009b	LCMS1327	200 ng/L ICV	QC	200.000	1.0	15.15	130410.547	87661.633	224.790	112.4	bb	2.977
10	ic29G3010b	LCMS1321	50ng/L RLV	QC	50.000	1.0	15.18	30521.242	91125.742	46.905	93.8	bb	2.849
11	ic29G3120	LCMS1323	200 ng/L CCV 3	QC	200.000	1.0	15.13	87479.031	61011.691	216.480	108.2	bb	3.015
12	ic29G3121	LCMS1319	20 ng/L LODV 1	QC	20.000	1.0	15.13	9341.104	65986.094	17.064	85.3	bb	3.604
13	ic29G3122	LCMS1318	LRB2	Blank		1.0			64405.328				
14	ic29G3123	LG2CF1AA	R9G240000-354 MB	Blank		1.0			62528.953				
15	ic29G3124	LG2CF1AC	R9G240000-354 LCS	QC	50.000	1.0	15.15	26100.578	65364.176	56.839	113.7	bb	3.139
16	ic29G3125	LCMS1328	ICS2	QC	50.000	1.0	15.10	26106.137	66908.383	55.430	110.9	bb	3.180
17	ic29G3126	LF9KT1AA	D9G090307-001 500X	Analyte		500.0	15.15	141166.234	63626.285	168799....		bb	3.357
18	ic29G3127	LF9F91AA	D9G090307-002 500X	Analyte		500.0	15.15	89727.070	61743.629	109737....		bb	3.080
19	ic29G3128	LF9LA1AA	D9G090307-003 500X	Analyte		500.0	15.15	156279.203	63847.434	186470....		bb	3.043
20	ic29G3129	LF9LC1AA	D9G090307-004 500X	Analyte		500.0	15.15	64518.406	65403.023	73724.395		bb	2.959
21	ic29G3130	LCMS1324	200 ng/L CCV 1	QC	200.000	1.0	15.13	95790.094	70088.156	206.126	103.1	bb	2.906
22	ic29G3131	LCMS1319	20 ng/L LODV 2	QC	20.000	1.0	15.15	9085.063	74995.992	13.913	69.6	bb	2.889
23	ic29G3132	LCMS1318	LRB3	Blank		1.0			78633.266				
24	ic29G3133	LF9LF1AA	D9G090307-005 100X	Analyte		100.0	15.18	134887.984	73199.969	27958.426		bb	2.838
25	ic29G3134	LF9LG1AA	D9G090307-006 100X	Analyte		100.0	15.18	134722.766	72764.922	28093.404		bb	2.340
26	ic29G3135	LF9LJ1AA	D9G090307-007 100X	Analyte		100.0	15.20	128540.141	74243.469	26239.329		bb	2.255
27	ic29G3136	LF9LK1AA	D9G090307-008 100X	Analyte		100.0	15.18	84706.047	86927.883	14559.175		bb	2.947
28	ic29G3137	LF9LN1AA	D9G090307-009 100X	Analyte		100.0	15.20	132739.875	83283.891	24117.335		bb	2.713
29	ic29G3138	LF9LP1AA	D9G090307-010 100X	Analyte		100.0	15.18	333068.219	85872.320	59376.064		bb	2.879
30	ic29G3139	LF9LP1AC	D9G090307-010 MS 100X	QC	50.000	100.0	15.18	401646.969	87696.227	70198.880	1404.0	bb	2.829
31	ic29G3140	LF9LP1AD	D9G090307-010 MSD 1...	QC	50.000	100.0	15.20	345269.719	83841.055	63071.985	1261.4	bb	2.806
32	ic29G3141	LCMS1324	200 ng/L CCV 2	QC	200.000	1.0	15.18	138341.953	105770.852	197.057	98.5	bb	3.093

analyst: Tim O'Donnell

Quantify Compound Summary Report **MassLynx 4.1 SCN627**

IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

Compound name: Perchlorate

#	Name	ID	Sample Text	Type	Std. Conc	Dilution	RT	Area	IS Area	Conc.	%Rec	Flags	Ratio
33	ic29G3142	LCMS1319	20 ng/L LODV 3	QC	20.000	1.0	15.15	14263.653	107750.641	15.647	78.2	bb	2.963
34	ic29G3143	LCMS1340	LRB1	Blank		1.0			103851.828				

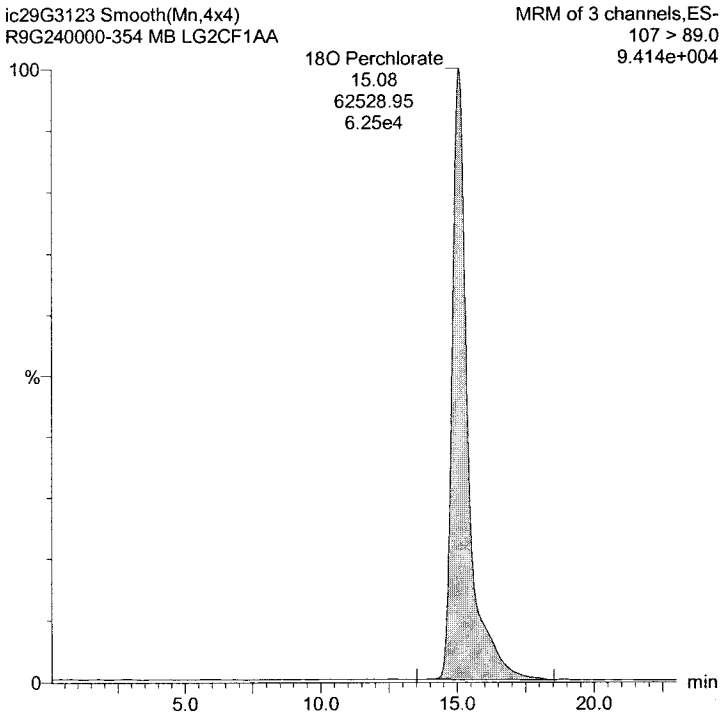
analyst: Tim O'Donnell

Quantify Sample Report **MassLynx 4.1 SCN627**

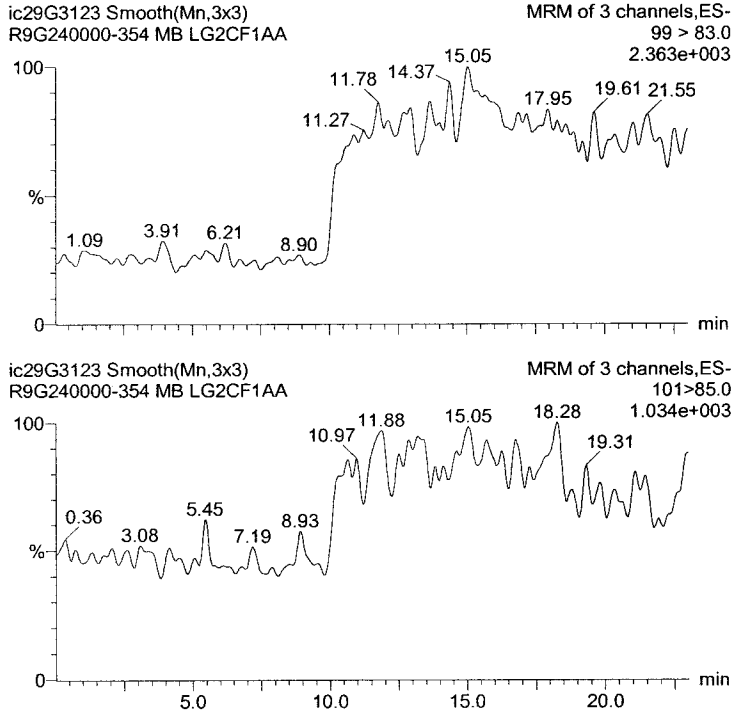
IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

Name: ic29G3123, Date: 31-Jul-2009, Time: 20:33:38, ID: LG2CF1AA, Description: R9G240000-354 MB

18O Perchlorate



Perchlorate



ID	Sample Text	# Name	Trace	RT	Quant Area	Comfirmation Area	Ratio	IS Area	Conc.	%Rec	Flags	Acq.Date	Acq.Time
LG2C...	R9G240000-354...	1 18O Perchlorate	107 > 89.0	15.08	62528.953				0.798	79.8	bb	31-Jul-09	20:33:38
LG2C...	R9G240000-354...	2 Perchlorate	99 > 83.0					62528.953				31-Jul-09	20:33:38

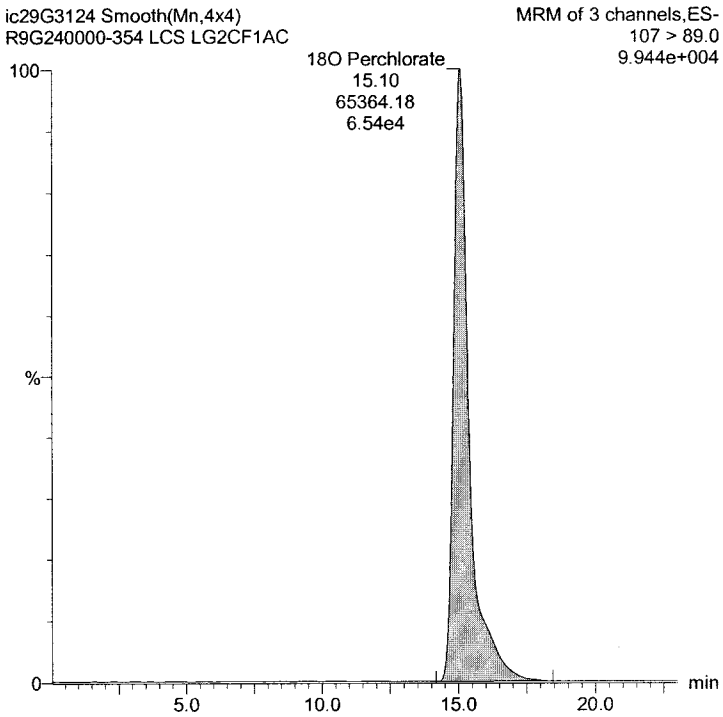
analyst: Tim O'Donnell

Quantify Sample Report **MassLynx 4.1 SCN627**

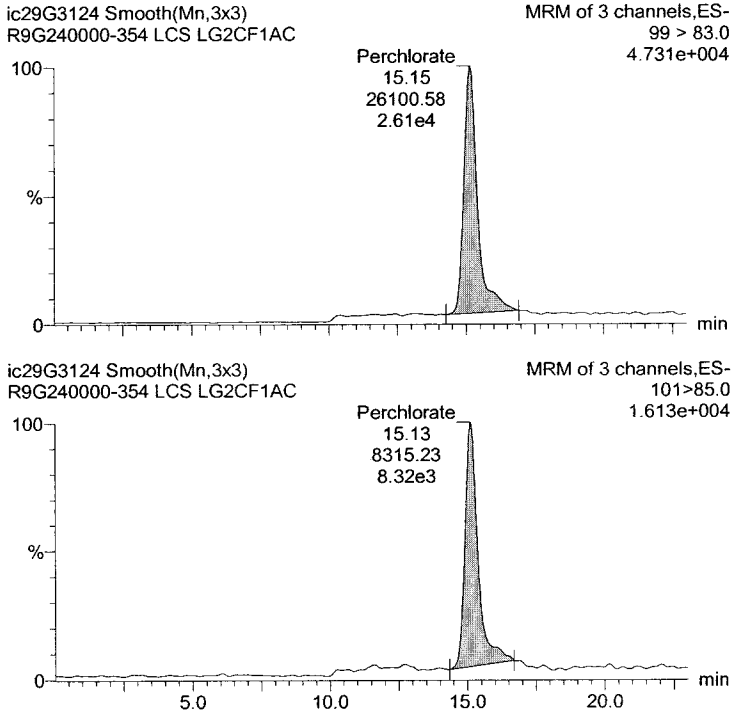
IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

Name: ic29G3124, Date: 31-Jul-2009, Time: 21:06:21, ID: LG2CF1AC, Description: R9G240000-354 LCS

18O Perchlorate



Perchlorate



ID	Sample Text	# Name	Trace	RT	Quant Area	Comfirmation Area	Ratio	IS Area	Conc.	%Rec	Flags	Acq.Date	Acq.Time
LG2C...	R9G240000-354...	1 18O Perchlorate	107 > 89.0	15.10	65364.176				0.834	83.4	bb	31-Jul-09	21:06:21
LG2C...	R9G240000-354...	2 Perchlorate	99 > 83.0	15.15	26100.578	8315.234	3.139	65364.176	56.839	113.7	bb	31-Jul-09	21:06:21

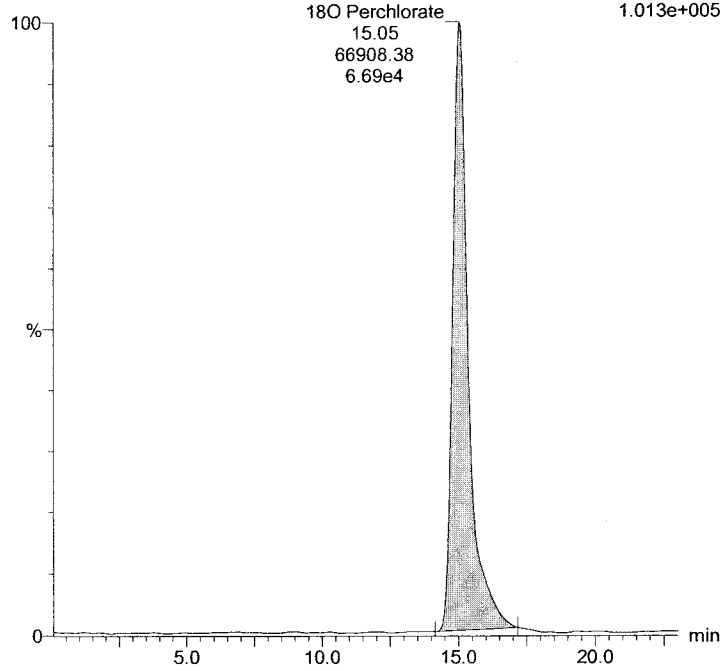
analyst: Tim O'Donnell

Quantify Sample Report **MassLynx 4.1 SCN627**

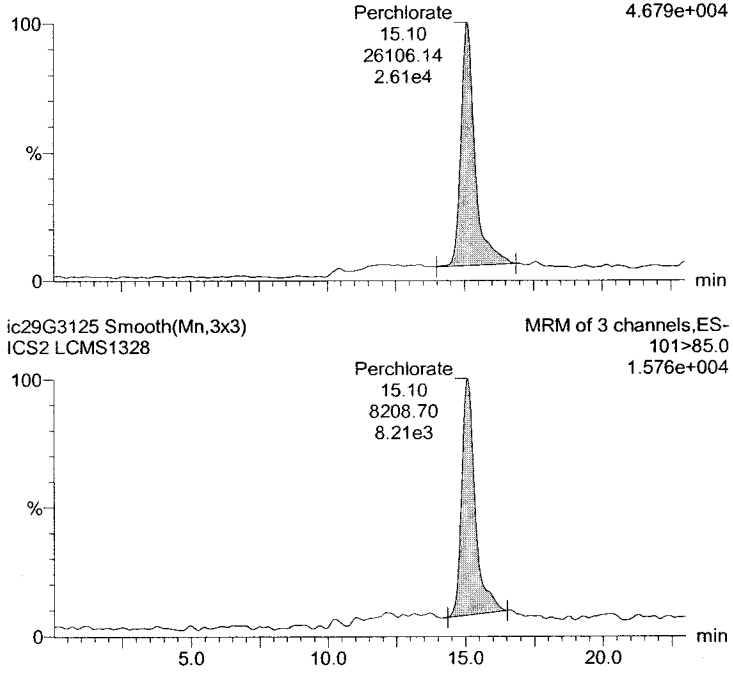
IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

Name: ic29G3125, Date: 31-Jul-2009, Time: 21:35:38, ID: LCMS1328, Description: ICS2

18O Perchlorate



Perchlorate



ID	Sample Text	# Name	Trace	RT	Quant Area	Comfirmation Area	Ratio	IS Area	Conc.	%Rec	Flags	Acq.Date	Acq.Time
LCMS...	ICS2	1 18O Perchlorate	107 > 89.0	15.05	66908.383				0.854	85.4	bb	31-Jul-09	21:35:38
LCMS...	ICS2	2 Perchlorate	99 > 83.0	15.10	26106.137	8208.698	3.180	66908.383	55.430	110.9	bb	31-Jul-09	21:35:38

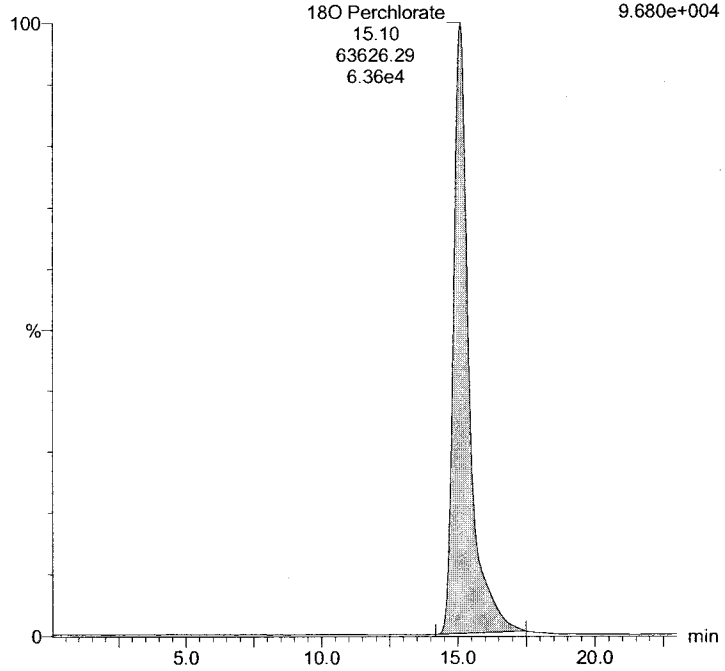
analyst: Tim O'Donnell

Quantify Sample Report **MassLynx 4.1 SCN627**

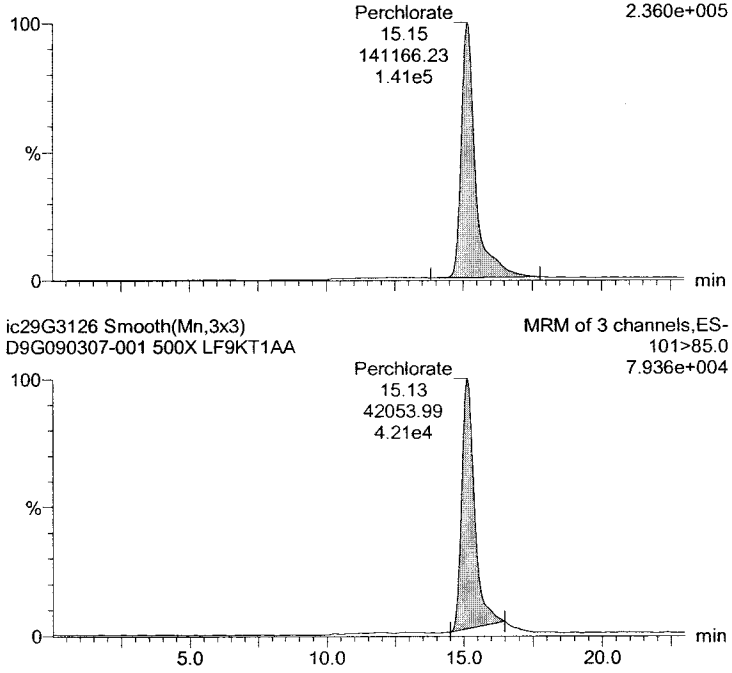
IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

Name: ic29G3126, Date: 31-Jul-2009, Time: 22:04:55, ID: LF9KT1AA, Description: D9G090307-001 500X

18O Perchlorate



Perchlorate



ID	Sample Text	# Name	Trace	RT	Quant Area	Comfirmation Area	Ratio	IS Area	Conc.	%Rec	Flags	Acq.Date	Acq.Time
LF9KT...	D9G090307-001...	1 18O Perchlorate	107 > 89.0	15.10	63626.285				0.812	81.2	bb	31-Jul-09	22:04:55
LF9KT...	D9G090307-001...	2 Perchlorate	99 > 83.0	15.15	141166.234	42053.992	3.357	63626.285	168799.543		bb	31-Jul-09	22:04:55

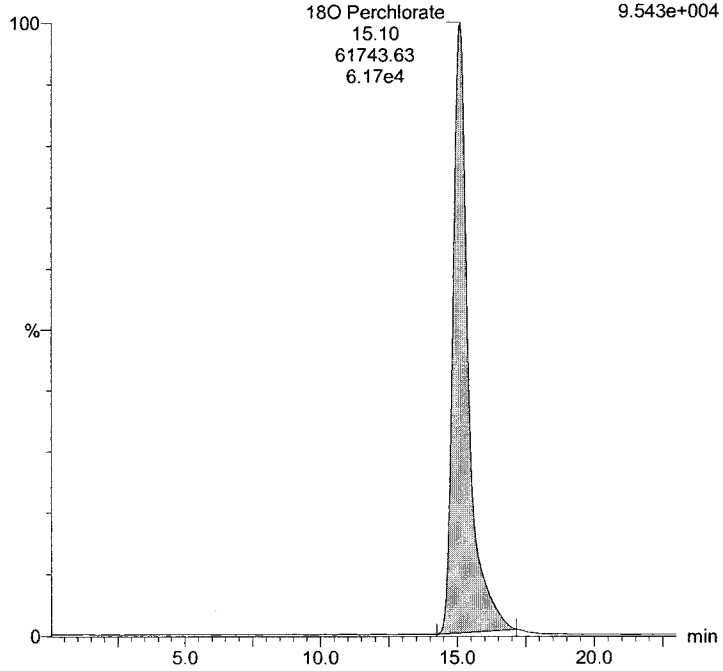
analyst: Tim O'Donnell

Quantify Sample Report **MassLynx 4.1 SCN627**

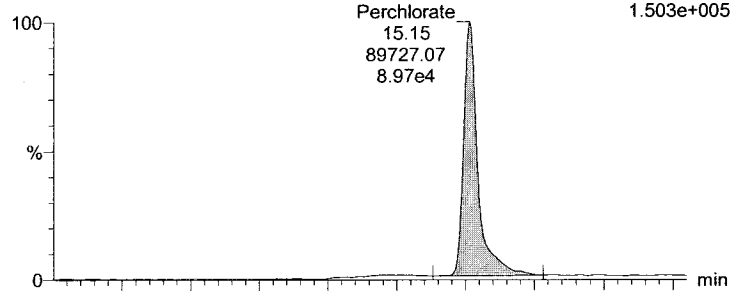
IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

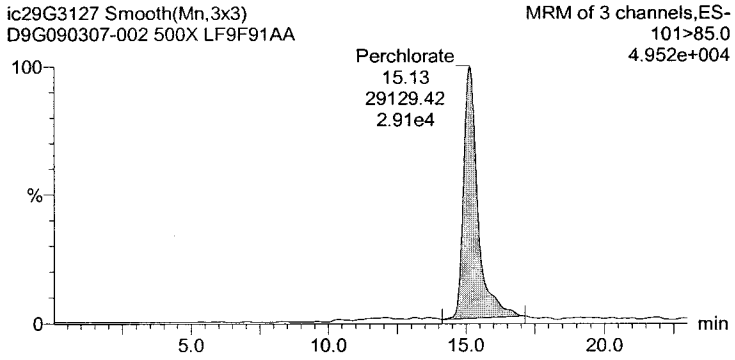
Name: ic29G3127, Date: 31-Jul-2009, Time: 22:34:13, ID: LF9F91AA, Description: D9G090307-002 500X

18O Perchlorate



Perchlorate





ID	Sample Text	# Name	Trace	RT	Quant Area	Comfirmation Area	Ratio	IS Area	Conc.	%Rec	Flags	Acq.Date	Acq.Time
LF9F9...	D9G090307-002...	1 18O Perchlorate	107 > 89.0	15.10	61743.629				0.788	78.8	bb	31-Jul-09	22:34:13
LF9F9...	D9G090307-002...	2 Perchlorate	99 > 83.0	15.15	89727.070	29129.424	3.080	61743.629	109737.844		bb	31-Jul-09	22:34:13

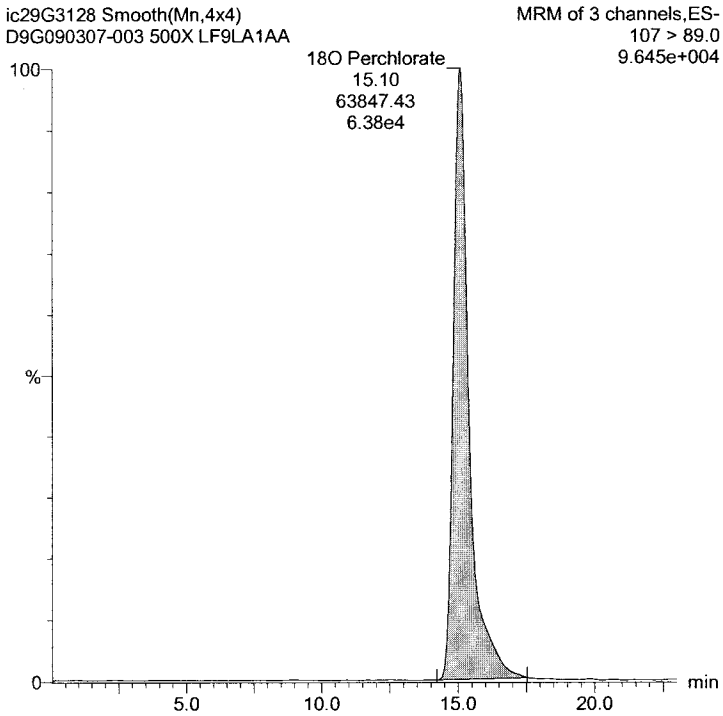
analyst: Tim O'Donnell

Quantify Sample Report **MassLynx 4.1 SCN627**

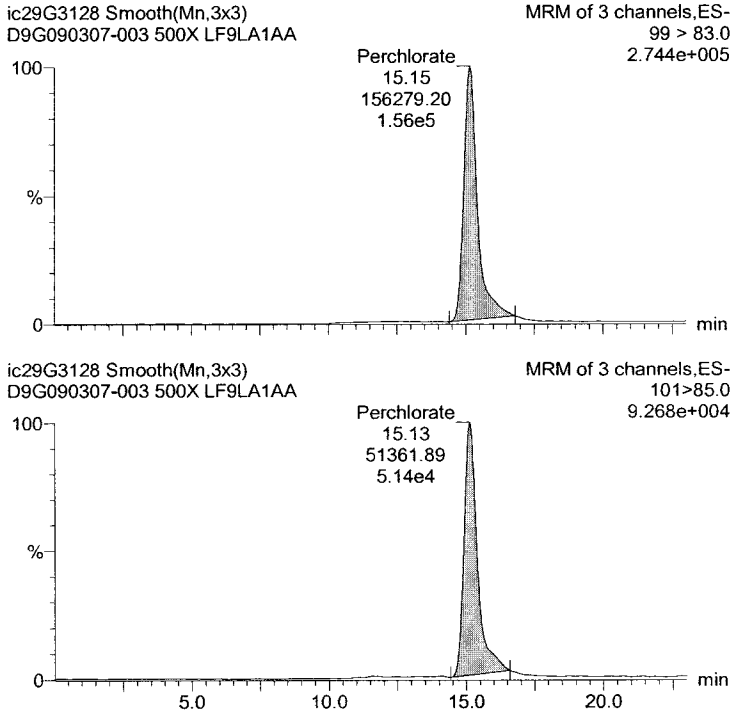
IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

Name: ic29G3128, Date: 31-Jul-2009, Time: 23:03:30, ID: LF9LA1AA, Description: D9G090307-003 500X

18O Perchlorate



Perchlorate



ID	Sample Text	# Name	Trace	RT	Quant Area	Comfirmation Area	Ratio	IS Area	Conc.	%Rec	Flags	Acq.Date	Acq.Time
LF9LA...	D9G090307-003...	1 18O Perchlorate	107 > 89.0	15.10	63847.434				0.815	81.5	bb	31-Jul-09	23:03:30
LF9LA...	D9G090307-003...	2 Perchlorate	99 > 83.0	15.15	156279.203	51361.895	3.043	63847.434	186470.380		bb	31-Jul-09	23:03:30

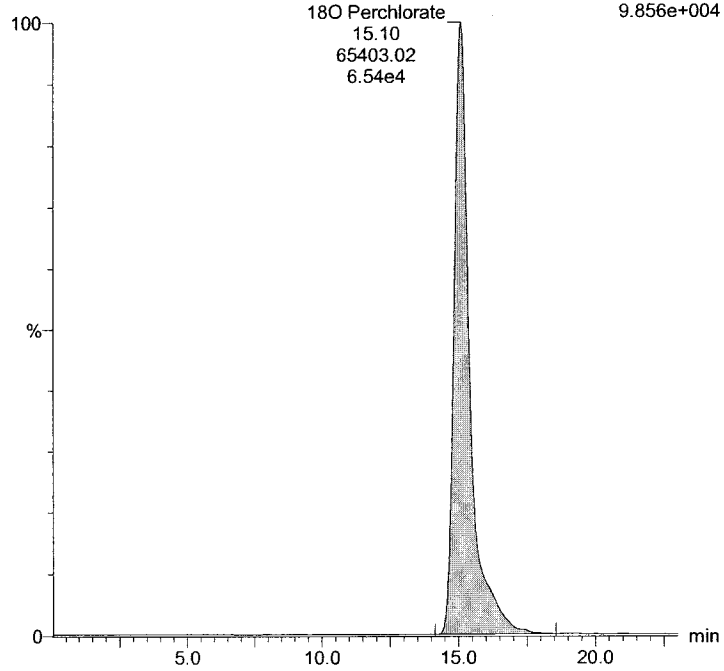
analyst: Tim O'Donnell

Quantify Sample Report **MassLynx 4.1 SCN627**

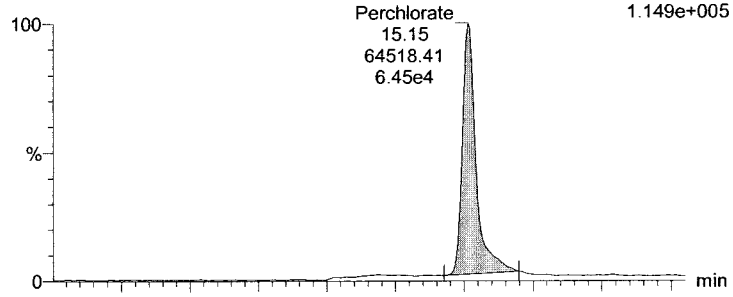
IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

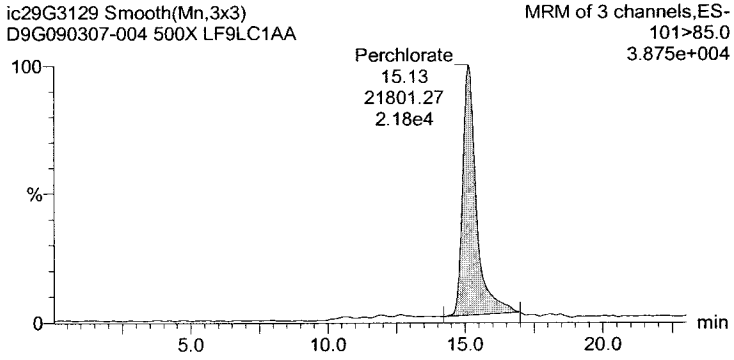
Name: ic29G3129, Date: 31-Jul-2009, Time: 23:32:48, ID: LF9LC1AA, Description: D9G090307-004 500X

18O Perchlorate



Perchlorate





ID	Sample Text	#	Name	Trace	RT	Quant Area	Comfirmation Area	Ratio	IS Area	Conc.	%Rec	Flags	Acq.Date	Acq.Time
LF9LC...	D9G090307-004...	1	18O Perchlorate	107 > 89.0	15.10	65403.023				0.835	83.5	bb	31-Jul-09	23:32:48
LF9LC...	D9G090307-004...	2	Perchlorate	99 > 83.0	15.15	64518.406	21801.266	2.959	65403.023	73724.395		bb	31-Jul-09	23:32:48

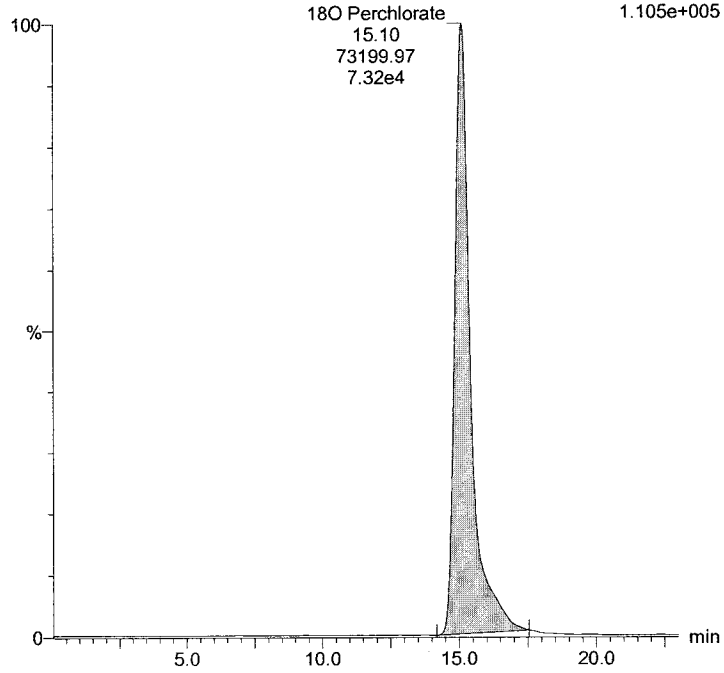
analyst: Tim O'Donnell

Quantify Sample Report **MassLynx 4.1 SCN627**

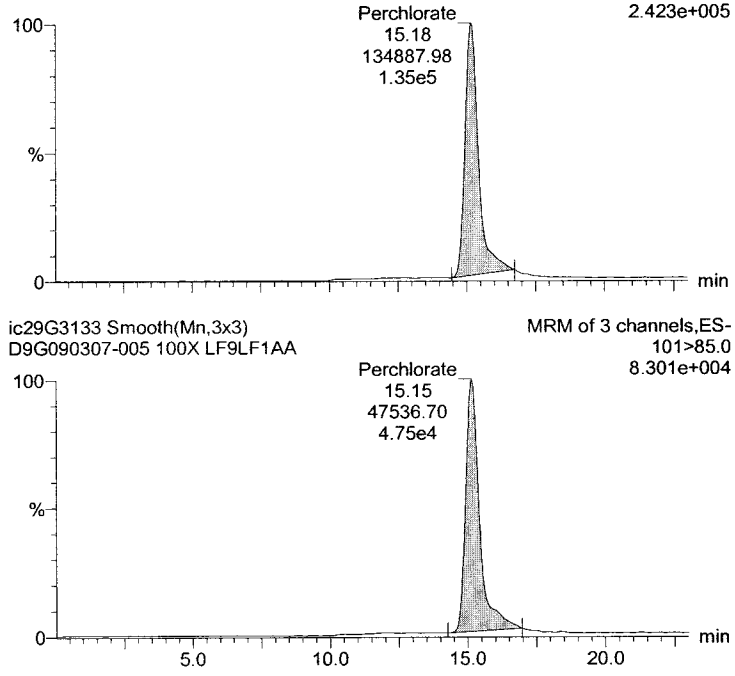
IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

Name: ic29G3133, Date: 01-Aug-2009, Time: 01:29:56, ID: LF9LF1AA, Description: D9G090307-005 100X

18O Perchlorate



Perchlorate



ID	Sample Text	# Name	Trace	RT	Quant Area	Comfirmation Area	Ratio	IS Area	Conc.	%Rec	Flags	Acq.Date	Acq.Time
LF9LF...	D9G090307-005...	1 18O Perchlorate	107 > 89.0	15.10	73199.969				0.935	93.5	bb	01-Aug-09	01:29:56
LF9LF...	D9G090307-005...	2 Perchlorate	99 > 83.0	15.18	134887.984	47536.703	2.838	73199.969	27958.426		bb	01-Aug-09	01:29:56

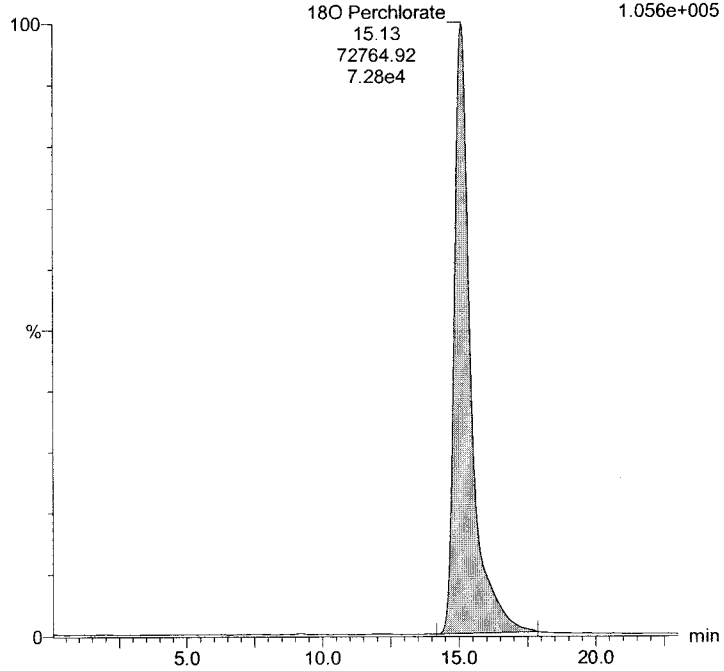
analyst: Tim O'Donnell

Quantify Sample Report **MassLynx 4.1 SCN627**

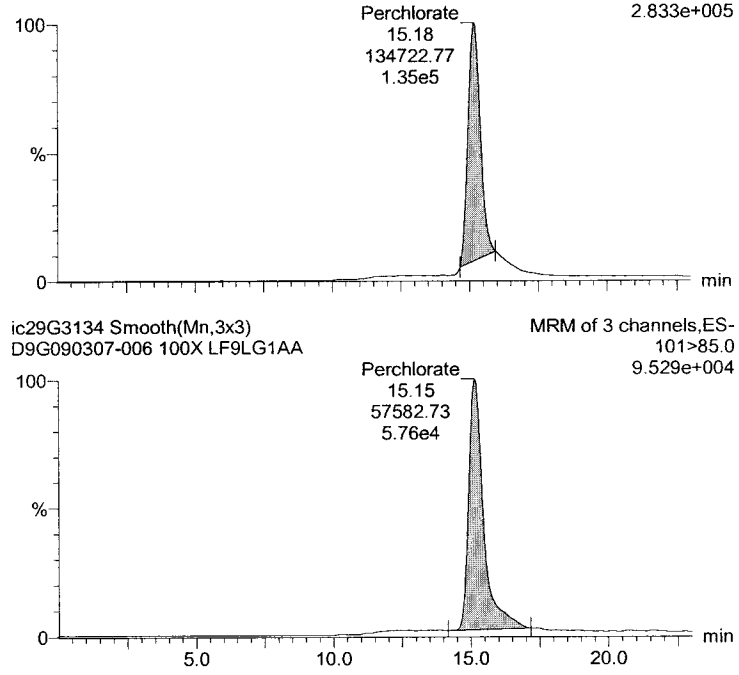
IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

Name: ic29G3134, Date: 01-Aug-2009, Time: 01:59:13, ID: LF9LG1AA, Description: D9G090307-006 100X

18O Perchlorate



Perchlorate



ID	Sample Text	# Name	Trace	RT	Quant Area	Comfirmation Area	Ratio	IS Area	Conc	%Rec	Flags	Acq.Date	Acq.Time
LF9LG...	D9G090307-006...	1 18O Perchlorate	107 > 89.0	15.13	72764.922				0.929	92.9	bb	01-Aug-09	01:59:13
LF9LG...	D9G090307-006...	2 Perchlorate	99 > 83.0	15.18	134722.766	57582.734	2.340	72764.922	28093.404		bb	01-Aug-09	01:59:13

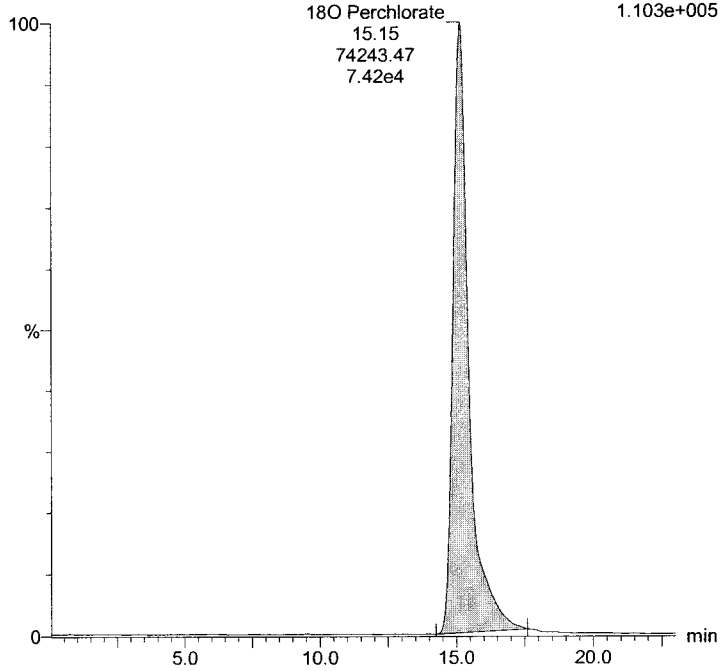
analyst: Tim O'Donnell

Quantify Sample Report **MassLynx 4.1 SCN627**

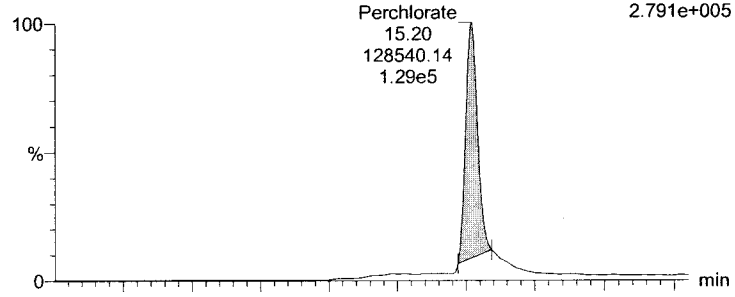
IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

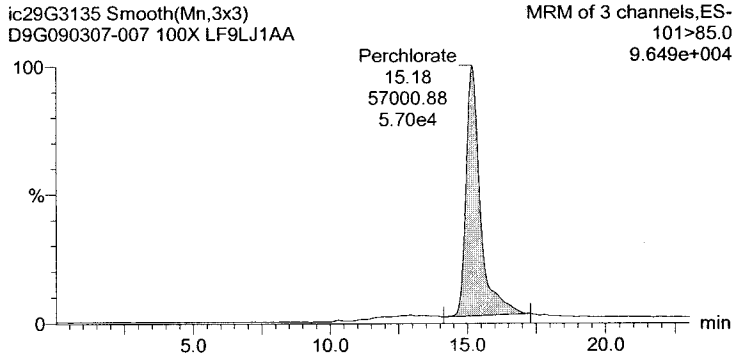
Name: ic29G3135, Date: 01-Aug-2009, Time: 02:28:31, ID: LF9LJ1AA, Description: D9G090307-007 100X

18O Perchlorate



Perchlorate





ID	Sample Text	# Name	Trace	RT	Quant Area	Comfirmation Area	Ratio	IS Area	Conc.	%Rec	Flags	Acq.Date	Acq.Time
LF9LJ...	D9G090307-007...	1 18O Perchlorate	107 > 89.0	15.15	74243.469				0.948	94.8	bb	01-Aug-09	02:28:31
LF9LJ...	D9G090307-007...	2 Perchlorate	99 > 83.0	15.20	128540.141	57000.875	2.255	74243.469	26239.329		bb	01-Aug-09	02:28:31

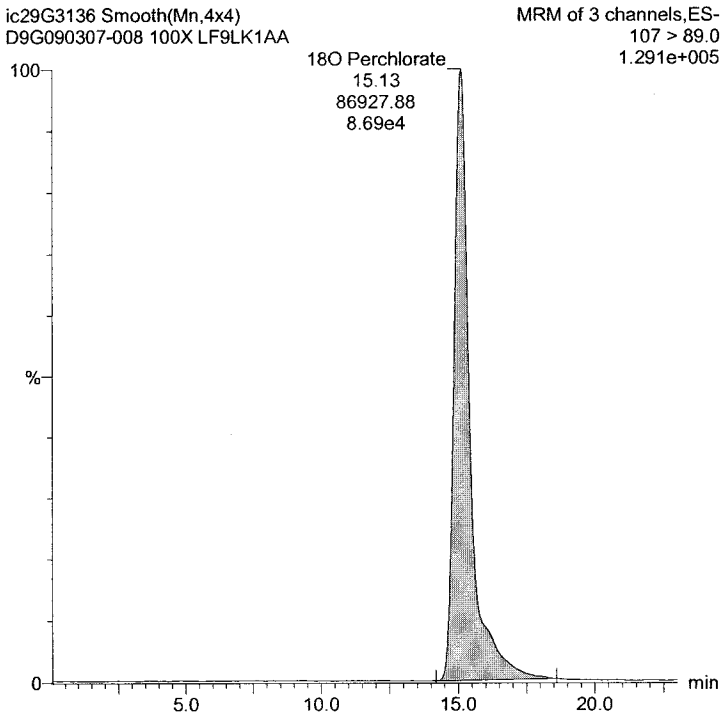
analyst: Tim O'Donnell

Quantify Sample Report **MassLynx 4.1 SCN627**

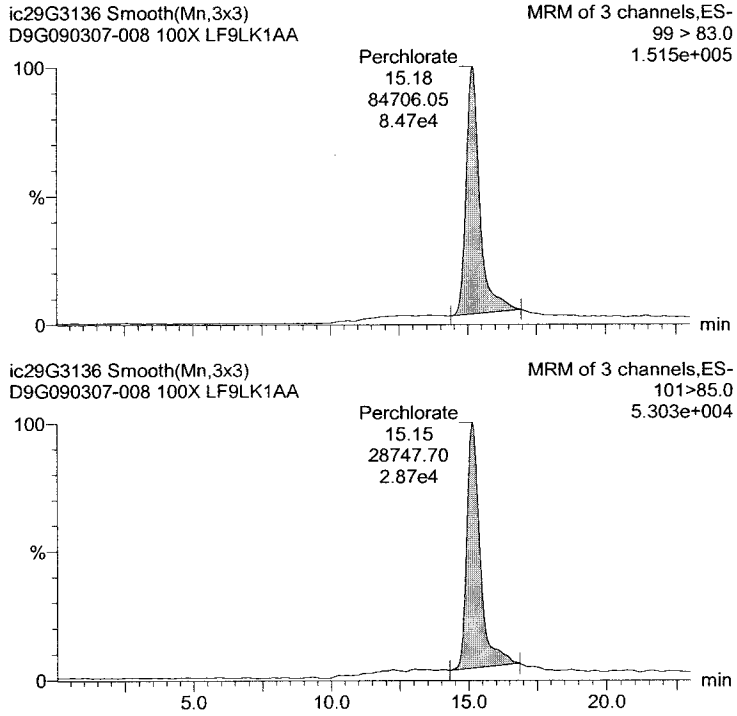
IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

Name: ic29G3136, Date: 01-Aug-2009, Time: 02:57:50, ID: LF9LK1AA, Description: D9G090307-008 100X

18O Perchlorate



Perchlorate



ID	Sample Text	#	Name	Trace	RT	Quant Area	Comfirmation Area	Ratio	IS Area	Conc.	%Rec	Flags	Acq.Date	Acq.Time
LF9LK...	D9G090307-008...	1	18O Perchlorate	107 > 89.0	15.13	86927.883				1.110	111.0	bb	01-Aug-09	02:57:50
LF9LK...	D9G090307-008...	2	Perchlorate	99 > 83.0	15.18	84706.047	28747.703	2.947	86927.883	14559.175		bb	01-Aug-09	02:57:50

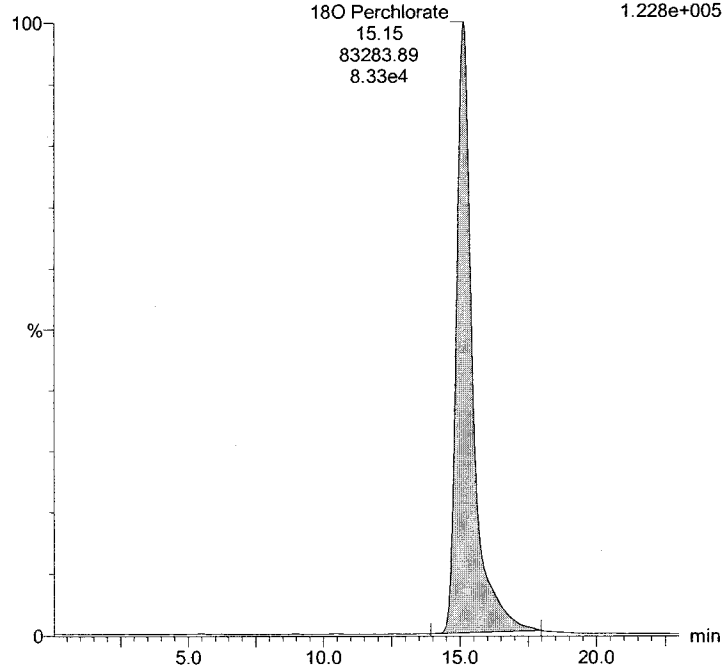
analyst: Tim O'Donnell

Quantify Sample Report **MassLynx 4.1 SCN627**

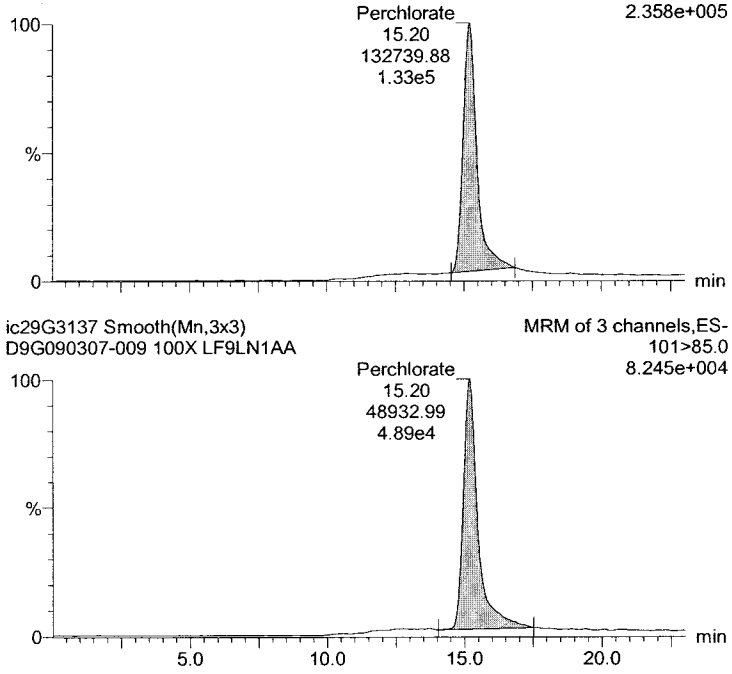
IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

Name: ic29G3137, Date: 01-Aug-2009, Time: 03:27:07, ID: LF9LN1AA, Description: D9G090307-009 100X

18O Perchlorate



Perchlorate



ID	Sample Text	# Name	Trace	RT	Quant Area	Comfirmation Area	Ratio	IS Area	Conc.	%Rec	Flags	Acq.Date	Acq.Time
LF9LN...	D9G090307-009...	1 18O Perchlorate	107 > 89.0	15.15	83283.891				1.063	106.3	bb	01-Aug-09	03:27:07
LF9LN...	D9G090307-009...	2 Perchlorate	99 > 83.0	15.20	132739.875	48932.992	2.713	83283.891	24117.335		bb	01-Aug-09	03:27:07

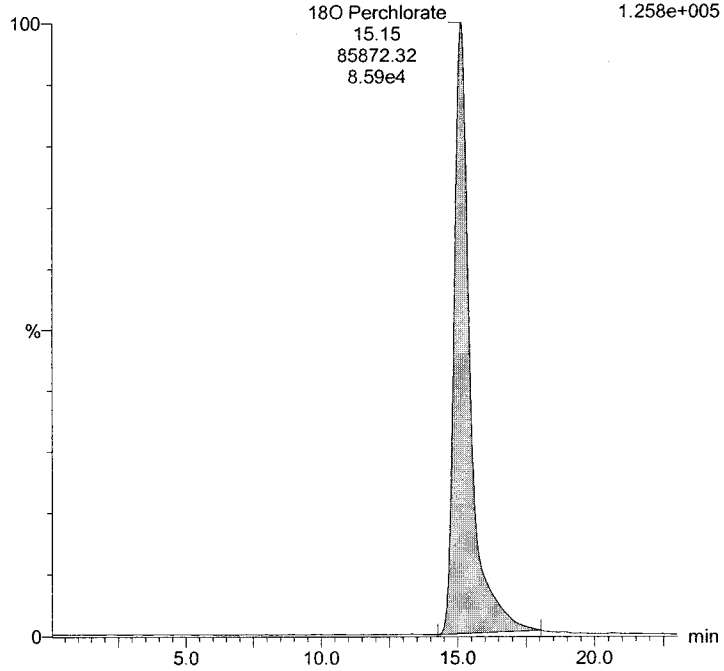
analyst: Tim O'Donnell

Quantify Sample Report **MassLynx 4.1 SCN627**

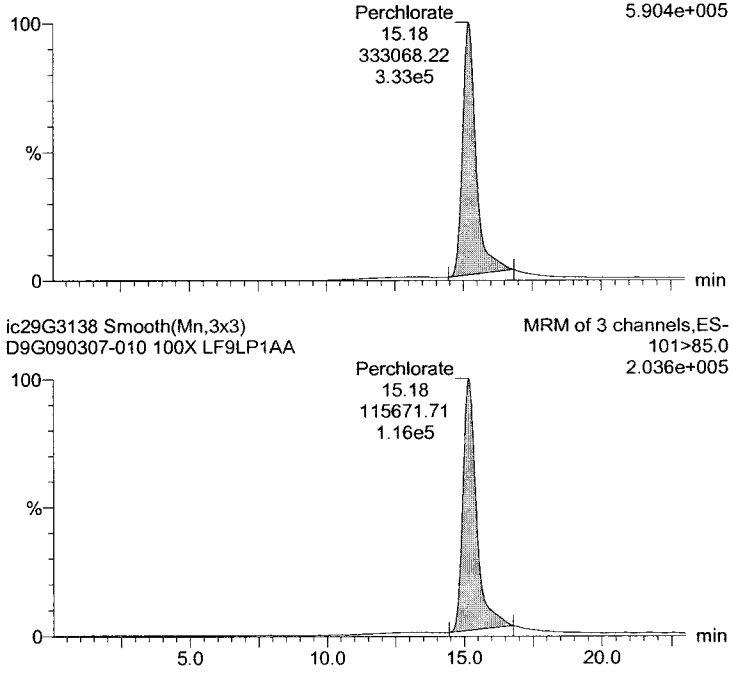
IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

Name: ic29G3138, Date: 01-Aug-2009, Time: 03:56:26, ID: LF9LP1AA, Description: D9G090307-010 100X

18O Perchlorate



Perchlorate



ID	Sample Text	# Name	Trace	RT	Quant Area	Comfirmation Area	Ratio	IS Area	Conc.	%Rec	Flags	Acq.Date	Acq.Time
LF9LP...	D9G090307-010...	1 18O Perchlorate	107 > 89.0	15.15	85872.320				1.096	109.6	bb	01-Aug-09	03:56:26
LF9LP...	D9G090307-010...	2 Perchlorate	99 > 83.0	15.18	333068.219	115671.711	2.879	85872.320	59376.064		bb	01-Aug-09	03:56:26

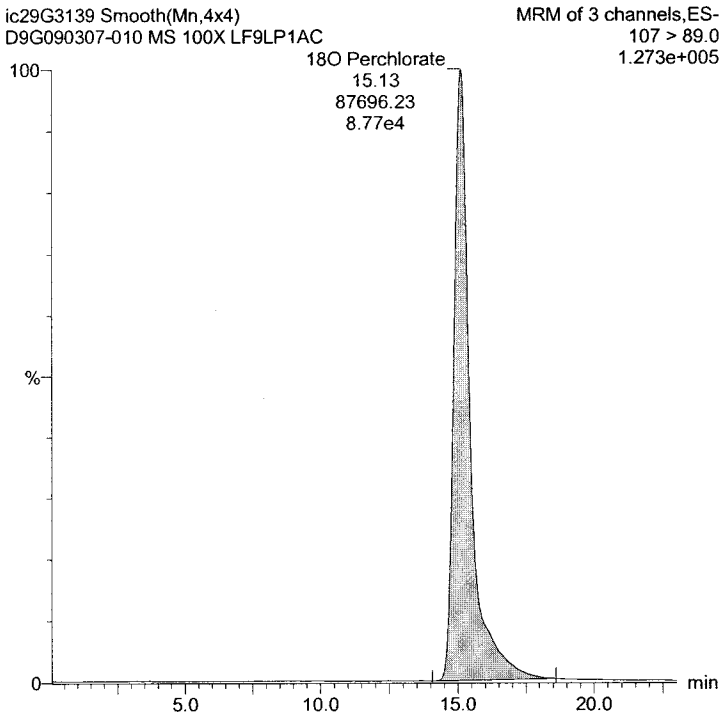
analyst: Tim O'Donnell

Quantify Sample Report **MassLynx 4.1 SCN627**

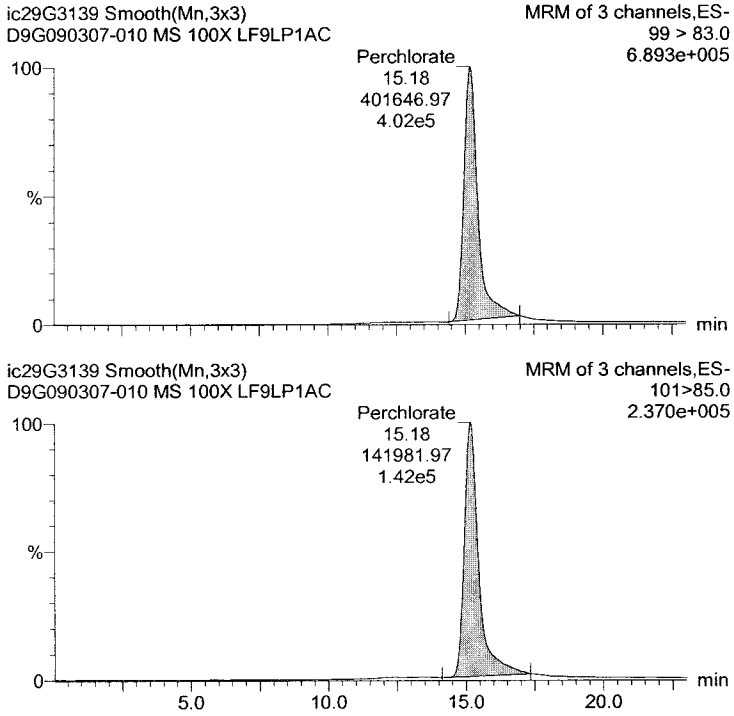
IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

Name: ic29G3139, Date: 01-Aug-2009, Time: 04:25:45, ID: LF9LP1AC, Description: D9G090307-010 MS 100X

18O Perchlorate



Perchlorate



ID	Sample Text	# Name	Trace	RT	Quant Area	Comfirmation Area	Ratio	IS Area	Conc.	%Rec	Flags	Acq.Date	Acq.Time
LF9LP...	D9G090307-010...	1 18O Perchlorate	107 > 89.0	15.13	87696.227				1.120	112.0	bb	01-Aug-09	04:25:45
LF9LP...	D9G090307-010...	2 Perchlorate	99 > 83.0	15.18	401646.969	141981.969	2.829	87696.227	70198.880	1404.0	bb	01-Aug-09	04:25:45

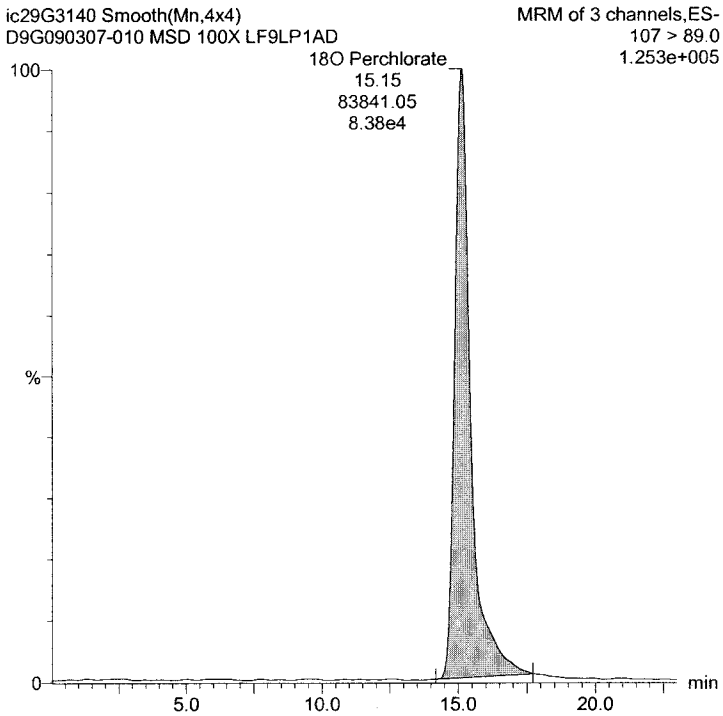
analyst: Tim O'Donnell

Quantify Sample Report **MassLynx 4.1 SCN627**

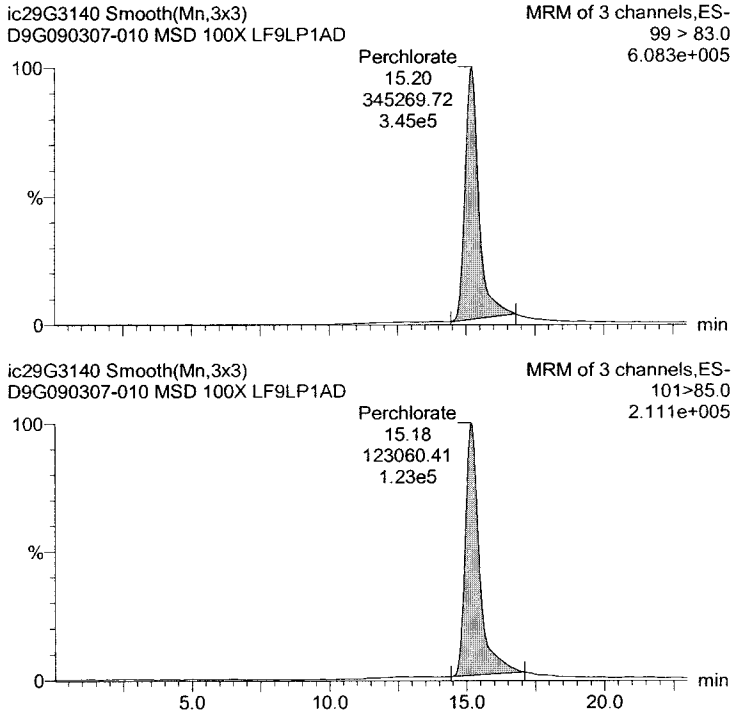
IC Perchlorate LCMS 2
Dataset: C:\MassLynx\ICPerchlorate.PRO\ic29g3102.qld
Last Altered: Monday, August 03, 2009 14:30:05 Mountain Daylight Time
Printed: Monday, August 03, 2009 14:35:20 Mountain Daylight Time

Name: ic29G3140, Date: 01-Aug-2009, Time: 04:55:02, ID: LF9LP1AD, Description: D9G090307-010 MSD 100X

18O Perchlorate



Perchlorate



ID	Sample Text	#	Name	Trace	RT	Quant Area	Comfirmation Area	Ratio	IS Area	Conc.	%Rec	Flags	Acq.Date	Acq.Time
LF9LP...	D9G090307-010...	1	18O Perchlorate	107 > 89.0	15.15	83841.055				1.070	107.0	bb	01-Aug-09	04:55:02
LF9LP...	D9G090307-010...	2	Perchlorate	99 > 83.0	15.20	345269.719	123060.414	2.806	83841.055	63071.985	1261.4	bb	01-Aug-09	04:55:02

analyst: Tim O'Donnell

Southeast ACCUTEST Laboratories

IT'S ALL IN THE CHEMISTRY

11/03/09

Technical Report for

Tetra Tech, Inc

Holloman AFB; Alamogordo, NM

100-TEN-T93002

Accutest Job Number: F68616

Sampling Date: 10/06/09

Report to:

Tetra Tech
800 Oak Ridge Tpk. Suite A600
Oak Ridge, TN 37830
Virginia.Mullins@tetratech.com

ATTN: Ginger Mullins

Total number of pages in report: **155**

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Harry Behzadi, Ph.D.
Laboratory Director

Client Service contact: Sue Bell 407-425-6700

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Certifications: FL (DOH E83510), NC (573), NJ (FL002), MA (FL946), IA (366), LA (03051), KS (E-10327), SC, AK

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Table of Contents

-1-

Section 1: Sample Summary **3**
Section 2: Case Narrative/Conformance Summary **4**
Section 3: Sample Results **6**
- **3.1:** F68616-1: MW39-12-100609 7
- **3.2:** F68616-1A: MW39-12-100609 12
- **3.3:** F68616-2: MW30&33-05R-100609 13
- **3.4:** F68616-2A: MW30&33-05R-100609 18
- **3.5:** F68616-3: TB01-100609 19

Section 4: Misc. Forms **22**
- **4.1:** Certification Exceptions 23
- **4.2:** Chain of Custody 24

Section 5: GC/MS Volatiles - QC Data Summaries **26**
- **5.1:** Method Blank Summary 27
- **5.2:** Blank Spike Summary 30
- **5.3:** Matrix Spike/Matrix Spike Duplicate Summary 33
- **5.4:** Instrument Performance Checks (BFB) 36
- **5.5:** Internal Standard Area Summaries 39
- **5.6:** Surrogate Recovery Summaries 41
- **5.7:** Initial and Continuing Calibration Summaries 42

Section 6: Metals Analysis - QC Data Summaries **61**
- **6.1:** Inst QC MA7589: Hg 62
- **6.2:** Inst QC MA7594: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn 72
- **6.3:** Inst QC MA7598: Al,Sb,As,Ba,Cd,Ca,Cr,Fe,Pb,Mg,K,Se,Ag 97
- **6.4:** Inst QC MA7601: Na 121
- **6.5:** Prep QC MP17176: Hg 143
- **6.6:** Prep QC MP17190: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn 148

Section 7: General Chemistry - QC Data Summaries **153**
- **7.1:** Method Blank and Spike Results Summary 154
- **7.2:** Duplicate Results Summary 155

Accutest Laboratories

Sample Summary

Tetra Tech, Inc

Job No: F68616

Holloman AFB; Alamogordo, NM
Project No: 100-TEN-T93002

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
F68616-1	10/06/09	10:35	JB	10/08/09	AQ	Ground Water	MW39-12-100609
F68616-1A	10/06/09	10:35	JB	10/08/09	AQ	Groundwater Filtered	MW39-12-100609
F68616-2	10/06/09	14:10	JB	10/08/09	AQ	Ground Water	MW30&33-05R-100609
F68616-2A	10/06/09	14:10	JB	10/08/09	AQ	Groundwater Filtered	MW30&33-05R-100609
F68616-3	10/06/09	00:00	JB	10/08/09	AQ	Trip Blank Water	TB01-100609

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Tetra Tech, Inc **Job No:** F68616

Site: Holloman AFB; Alamogordo, NM **Report Date:** 11/2/2009 5:49:04 PM

2 Samples and 1 Trip Blank were collected on 10/06/2009 and were received at Accutest SE on 10/08/2009 properly preserved, at 3.8 Deg. C and intact. These Samples received an Accutest job number of F68616. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GCMS by Method SW846 8260B

Matrix: AQ **Batch ID:** VF1041

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Samples F68787-5MS, F68787-5MSD were used as the QC samples indicated.

Blank Spike Recovery for Dichlorodifluoromethane is outside control limits.

Matrix Spike Recoverys for 1-Chlorohexane, 2-Chloroethyl vinyl ether, Acetonitrile, cis-1,3-Dichloropropene, Dichlorodifluoromethane, Methyl Tert Butyl Ether, Vinyl Acetate are outside control limits. Probable cause: due to matrix interference.

Matrix Spike Duplicate Recoverys for 1,1,2-Trichloroethane, 1,1-Dichloropropene, 1,2-Dichloropropane, 1,3-Dichloropropane, 1-Chlorohexane, 2-Chloroethyl vinyl ether, Acetonitrile, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dichlorodifluoromethane, Ethyl methacrylate, Ethylbenzene, Methyl Tert Butyl Ether, Toluene, Vinyl Acetate are outside control limits. Probable cause: due to matrix interference.

F68616-1: Sample was treated with an anti-foaming agent.

Matrix: AQ **Batch ID:** VF1042

F68616-1: Sample was treated with an anti-foaming agent. Confirmation run.

Metals by Method SW846 6010B

Matrix: AQ **Batch ID:** MP17190

All samples were digested within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Samples F68600-2DUP, F68600-2MS, F68600-2MSD, F68600-2SDL were used as the QC samples for metals.

Matrix Spike and Matrix Spike Duplicate Recoverys for Sodium are outside control limits. Spike recovery indicates possible matrix interference.

Matrix Spike Recovery for Potassium is outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

RPDs for Duplicate for Chromium, Lead, Zinc are outside control limits for sample MP17190-D1. RPD acceptable due to low duplicate and sample concentrations.

RPDs for Serial Dilution for Aluminum, Barium, Chromium, Lead, Vanadium, Calcium, Manganese are outside control limits for sample MP17190-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

MP17190-SD1 for Calcium, Manganese: Serial dilution indicates possible matrix interference.

F68616-1, F68616-1A for Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver: Elevated reporting limits due to matrix interference.

F68616-2, F68616-2A for Aluminum, Antimony, Arsenic, Iron, Lead, Selenium: Elevated reporting limits due to matrix interference.

Monday, November 02, 2009

Metals by Method SW846 7470A

Matrix: AQ **Batch ID:** MP17176

All samples were digested within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Samples F68600-17DUP, F68600-17MS, F68600-17MSD, F68600-17SDL were used as the QC samples for metals.

Wet Chemistry by Method SM19 2540C

Matrix: AQ **Batch ID:** GN36945

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample F68624-1DUP was used as the QC sample for Solids, Total Dissolved.

RPD for Duplicate for Solids, Total Dissolved is outside control limits for sample GN36945-D1. RPD acceptable due to low duplicate and sample concentrations.

Accutest Laboratories Southeast (ALSE) certifies that this report meets the project requirements for analytical data produced for the samples as received at ALSE and as stated on the COC. ALSE certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the ALSE Quality Manual except as noted above. This report is to be used in its entirety. ALSE is not responsible for any assumptions of data quality if partial data packages are used.

Narrative prepared by:

_____ Date: November 2, 2009

Ellen Pampel, Inorganic QA (signature on file)

Monday, November 02, 2009

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MW39-12-100609		
Lab Sample ID:	F68616-1	**Date Sampled:**	10/06/09
Matrix:	AQ - Ground Water	**Date Received:**	10/08/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	F038309.D	1	10/19/09	LD	n/a	n/a	VF1041
Run #2 [b]	F038342.D	1	10/20/09	LD	n/a	n/a	VF1042

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
75-05-8	Acetonitrile	ND	20	5.0	ug/l	
107-02-8	Acrolein	ND	20	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	2.0	ug/l	
107-05-1	Allyl chloride	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-44-7	Benzyl Chloride	ND	2.0	0.36	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.23	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.33	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.32	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.22	ug/l	
75-00-3	Chloroethane	ND	2.0	0.48	ug/l	
67-66-3	Chloroform	ND	1.0	0.28	ug/l	
544-10-5	1-Chlorohexane	ND	2.0	0.27	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.25	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.40	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.24	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.54	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.32	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.34	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.26	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.28	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-12-100609		
Lab Sample ID:	F68616-1	**Date Sampled:**	10/06/09
Matrix:	AQ - Ground Water	**Date Received:**	10/08/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
1476-11-5	cis-1,4-Dichloro-2-Butene	ND	10	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.45	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.43	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	1.0	ug/l	
76-13-1	Freon 113	ND	1.0	0.34	ug/l	
591-78-6	2-Hexanone	ND	10	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.69	ug/l	
110-54-3	Hexane	ND	2.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.32	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
126-98-7	Methacrylonitrile	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.78	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.61	ug/l	
74-88-4	Methyl iodide	ND	5.0	1.0	ug/l	
80-62-6	Methyl methacrylate	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.30	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
76-01-7	Pentachloroethane	ND	10	2.0	ug/l	
107-12-0	Propionitrile	ND	20	10	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.25	ug/l	
100-42-5	Styrene	ND	1.0	0.36	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.33	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.26	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.34	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-12-100609		
Lab Sample ID:	F68616-1	**Date Sampled:**	10/06/09
Matrix:	AQ - Ground Water	**Date Received:**	10/08/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.35	ug/l	
79-01-6	Trichloroethylene	1.3	1.0	0.32	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
108-05-4	Vinyl Acetate	ND	10	3.6	ug/l	
	m,p-Xylene	ND	2.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.37	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%	101%	87-116%
17060-07-0	1,2-Dichloroethane-D4	108%	104%	76-127%
2037-26-5	Toluene-D8	99%	99%	86-112%
460-00-4	4-Bromofluorobenzene	100%	101%	84-120%

(a) Sample was treated with an anti-foaming agent.
(b) Sample was treated with an anti-foaming agent. Confirmation run.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-12-100609		
Lab Sample ID:	F68616-1	**Date Sampled:**	10/06/09
Matrix:	AQ - Ground Water	**Date Received:**	10/08/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic [a]	22.1	20	11	ug/l	2	10/14/09	10/15/09	RS	SW846 6010B [2]	SW846 3010A [4]
Barium [a]	47.0 B	400	10	ug/l	2	10/14/09	10/15/09	RS	SW846 6010B [2]	SW846 3010A [4]
Cadmium [a]	2.0 U	10	2.0	ug/l	2	10/14/09	10/15/09	RS	SW846 6010B [2]	SW846 3010A [4]
Chromium [a]	4.0 U	20	4.0	ug/l	2	10/14/09	10/15/09	RS	SW846 6010B [2]	SW846 3010A [4]
Lead [a]	40 U	100	40	ug/l	20	10/14/09	10/15/09	RS	SW846 6010B [2]	SW846 3010A [4]
Mercury	0.15 U	1.0	0.15	ug/l	1	10/13/09	10/13/09	LM	SW846 7470A [1]	SW846 7470A [3]
Selenium [a]	95.4	20	6.8	ug/l	2	10/14/09	10/15/09	RS	SW846 6010B [2]	SW846 3010A [4]
Silver [a]	2.8 U	20	2.8	ug/l	2	10/14/09	10/15/09	RS	SW846 6010B [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA7589
(2) Instrument QC Batch: MA7598
(3) Prep QC Batch: MP17176
(4) Prep QC Batch: MP17190

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-12-100609		
Lab Sample ID:	F68616-1	**Date Sampled:**	10/06/09
Matrix:	AQ - Ground Water	**Date Received:**	10/08/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	128000	10000	1000	mg/l	100	10/09/09 10:20	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-12-100609		
Lab Sample ID:	F68616-1A	**Date Sampled:**	10/06/09
Matrix:	AQ - Groundwater Filtered	**Date Received:**	10/08/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic [a]	15.5 B	20	11	ug/l	2	10/14/09	10/15/09	RS	SW846 6010B [2]	SW846 3010A [4]
Barium [a]	49.4 B	400	10	ug/l	2	10/14/09	10/15/09	RS	SW846 6010B [2]	SW846 3010A [4]
Cadmium [a]	2.0 U	10	2.0	ug/l	2	10/14/09	10/15/09	RS	SW846 6010B [2]	SW846 3010A [4]
Chromium [a]	4.0 U	20	4.0	ug/l	2	10/14/09	10/15/09	RS	SW846 6010B [2]	SW846 3010A [4]
Lead [a]	40 U	100	40	ug/l	20	10/14/09	10/15/09	RS	SW846 6010B [2]	SW846 3010A [4]
Mercury	0.15 U	1.0	0.15	ug/l	1	10/13/09	10/13/09	LM	SW846 7470A [1]	SW846 7470A [3]
Selenium [a]	98.8	20	6.8	ug/l	2	10/14/09	10/15/09	RS	SW846 6010B [2]	SW846 3010A [4]
Silver [a]	2.8 U	20	2.8	ug/l	2	10/14/09	10/15/09	RS	SW846 6010B [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA7589
(2) Instrument QC Batch: MA7598
(3) Prep QC Batch: MP17176
(4) Prep QC Batch: MP17190

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW30&33-05R-100609		
Lab Sample ID:	F68616-2	**Date Sampled:**	10/06/09
Matrix:	AQ - Ground Water	**Date Received:**	10/08/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F038310.D	1	10/19/09	LD	n/a	n/a	VF1041
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
75-05-8	Acetonitrile	ND	20	5.0	ug/l	
107-02-8	Acrolein	ND	20	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	2.0	ug/l	
107-05-1	Allyl chloride	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-44-7	Benzyl Chloride	ND	2.0	0.36	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.23	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.33	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.32	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.22	ug/l	
75-00-3	Chloroethane	ND	2.0	0.48	ug/l	
67-66-3	Chloroform	ND	1.0	0.28	ug/l	
544-10-5	1-Chlorohexane	ND	2.0	0.27	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.25	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.40	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
75-34-3	1,1-Dichloroethane	6.0	1.0	0.24	ug/l	
75-35-4	1,1-Dichloroethylene	0.86	1.0	0.54	ug/l	J
563-58-6	1,1-Dichloropropene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.32	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.34	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.26	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.28	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW30&33-05R-100609		
Lab Sample ID:	F68616-2	**Date Sampled:**	10/06/09
Matrix:	AQ - Ground Water	**Date Received:**	10/08/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	9.7	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
1476-11-5	cis-1,4-Dichloro-2-Butene	ND	10	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.45	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.43	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	1.0	ug/l	
76-13-1	Freon 113	ND	1.0	0.34	ug/l	
591-78-6	2-Hexanone	ND	10	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.69	ug/l	
110-54-3	Hexane	ND	2.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.32	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
126-98-7	Methacrylonitrile	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.78	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.61	ug/l	
74-88-4	Methyl iodide	ND	5.0	1.0	ug/l	
80-62-6	Methyl methacrylate	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.30	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
76-01-7	Pentachloroethane	ND	10	2.0	ug/l	
107-12-0	Propionitrile	ND	20	10	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.25	ug/l	
100-42-5	Styrene	ND	1.0	0.36	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.33	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.26	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.34	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW30&33-05R-100609		
Lab Sample ID:	F68616-2	**Date Sampled:**	10/06/09
Matrix:	AQ - Ground Water	**Date Received:**	10/08/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.35	ug/l	
79-01-6	Trichloroethylene	21.0	1.0	0.32	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
108-05-4	Vinyl Acetate	ND	10	3.6	ug/l	
	m,p-Xylene	ND	2.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.37	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		87-116%
17060-07-0	1,2-Dichloroethane-D4	102%		76-127%
2037-26-5	Toluene-D8	99%		86-112%
460-00-4	4-Bromofluorobenzene	99%		84-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW30&33-05R-100609		
Lab Sample ID:	F68616-2	**Date Sampled:**	10/06/09
Matrix:	AQ - Ground Water	**Date Received:**	10/08/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum [a]	108 B	800	44	ug/l	4	10/14/09	10/15/09	RS	SW846 6010B [3]	SW846 3010A [6]
Antimony [a]	9.0 U	12	9.0	ug/l	2	10/14/09	10/15/09	RS	SW846 6010B [3]	SW846 3010A [6]
Arsenic [a]	15.3 B	20	11	ug/l	2	10/14/09	10/15/09	RS	SW846 6010B [3]	SW846 3010A [6]
Barium	34.3 B	200	5.0	ug/l	1	10/14/09	10/14/09	RS	SW846 6010B [2]	SW846 3010A [6]
Beryllium	1.0 U	4.0	1.0	ug/l	1	10/14/09	10/14/09	RS	SW846 6010B [2]	SW846 3010A [6]
Cadmium	1.0 U	5.0	1.0	ug/l	1	10/14/09	10/14/09	RS	SW846 6010B [2]	SW846 3010A [6]
Calcium	713000	2000	200	ug/l	2	10/14/09	10/15/09	RS	SW846 6010B [3]	SW846 3010A [6]
Chromium	2.0 U	10	2.0	ug/l	1	10/14/09	10/14/09	RS	SW846 6010B [2]	SW846 3010A [6]
Cobalt	1.5 B	50	1.0	ug/l	1	10/14/09	10/14/09	RS	SW846 6010B [2]	SW846 3010A [6]
Copper	5.0 U	25	5.0	ug/l	1	10/14/09	10/14/09	RS	SW846 6010B [2]	SW846 3010A [6]
Iron [a]	92 U	1200	92	ug/l	4	10/14/09	10/15/09	RS	SW846 6010B [3]	SW846 3010A [6]
Lead [a]	8.0 U	20	8.0	ug/l	4	10/14/09	10/15/09	RS	SW846 6010B [3]	SW846 3010A [6]
Magnesium	1220000	20000	400	ug/l	4	10/14/09	10/15/09	RS	SW846 6010B [3]	SW846 3010A [6]
Manganese	672	15	1.0	ug/l	1	10/14/09	10/14/09	RS	SW846 6010B [2]	SW846 3010A [6]
Mercury	0.15 U	1.0	0.15	ug/l	1	10/13/09	10/13/09	LM	SW846 7470A [1]	SW846 7470A [5]
Nickel	10.1 B	40	2.3	ug/l	1	10/14/09	10/14/09	RS	SW846 6010B [2]	SW846 3010A [6]
Potassium	20200	10000	100	ug/l	1	10/14/09	10/14/09	RS	SW846 6010B [2]	SW846 3010A [6]
Selenium [a]	22.0	20	6.8	ug/l	2	10/14/09	10/15/09	RS	SW846 6010B [3]	SW846 3010A [6]
Silver	1.4 U	10	1.4	ug/l	1	10/14/09	10/14/09	RS	SW846 6010B [2]	SW846 3010A [6]
Sodium	4660000	1000000	50000	ug/l	100	10/14/09	10/16/09	RS	SW846 6010B [4]	SW846 3010A [6]
Thallium	3.6 U	10	3.6	ug/l	1	10/14/09	10/14/09	RS	SW846 6010B [2]	SW846 3010A [6]
Vanadium	35.9 B	50	0.90	ug/l	1	10/14/09	10/14/09	RS	SW846 6010B [2]	SW846 3010A [6]
Zinc	7.4 U	20	7.4	ug/l	1	10/14/09	10/14/09	RS	SW846 6010B [2]	SW846 3010A [6]

(1) Instrument QC Batch: MA7589
(2) Instrument QC Batch: MA7594
(3) Instrument QC Batch: MA7598
(4) Instrument QC Batch: MA7601
(5) Prep QC Batch: MP17176
(6) Prep QC Batch: MP17190

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW30&33-05R-100609		
Lab Sample ID:	F68616-2	**Date Sampled:**	10/06/09
Matrix:	AQ - Ground Water	**Date Received:**	10/08/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	25300	10000	1000	mg/l	100	10/09/09 10:20	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW30&33-05R-100609		
Lab Sample ID:	F68616-2A	**Date Sampled:**	10/06/09
Matrix:	AQ - Groundwater Filtered	**Date Received:**	10/08/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum [a]	120 B	800	44	ug/l	4	10/14/09	10/15/09	RS	SW846 6010B [3]	SW846 3010A [6]
Antimony [a]	9.1 B	12	9.0	ug/l	2	10/14/09	10/15/09	RS	SW846 6010B [3]	SW846 3010A [6]
Arsenic [a]	15.4 B	20	11	ug/l	2	10/14/09	10/15/09	RS	SW846 6010B [3]	SW846 3010A [6]
Barium	34.3 B	200	5.0	ug/l	1	10/14/09	10/14/09	RS	SW846 6010B [2]	SW846 3010A [6]
Beryllium	1.0 U	4.0	1.0	ug/l	1	10/14/09	10/14/09	RS	SW846 6010B [2]	SW846 3010A [6]
Cadmium	1.0 U	5.0	1.0	ug/l	1	10/14/09	10/14/09	RS	SW846 6010B [2]	SW846 3010A [6]
Calcium	709000	2000	200	ug/l	2	10/14/09	10/15/09	RS	SW846 6010B [3]	SW846 3010A [6]
Chromium	2.0 U	10	2.0	ug/l	1	10/14/09	10/14/09	RS	SW846 6010B [2]	SW846 3010A [6]
Cobalt	1.9 B	50	1.0	ug/l	1	10/14/09	10/14/09	RS	SW846 6010B [2]	SW846 3010A [6]
Copper	5.0 U	25	5.0	ug/l	1	10/14/09	10/14/09	RS	SW846 6010B [2]	SW846 3010A [6]
Iron [a]	92 U	1200	92	ug/l	4	10/14/09	10/15/09	RS	SW846 6010B [3]	SW846 3010A [6]
Lead [a]	8.0 U	20	8.0	ug/l	4	10/14/09	10/15/09	RS	SW846 6010B [3]	SW846 3010A [6]
Magnesium	1280000	20000	400	ug/l	4	10/14/09	10/15/09	RS	SW846 6010B [3]	SW846 3010A [6]
Manganese	661	15	1.0	ug/l	1	10/14/09	10/14/09	RS	SW846 6010B [2]	SW846 3010A [6]
Mercury	0.15 U	1.0	0.15	ug/l	1	10/13/09	10/13/09	LM	SW846 7470A [1]	SW846 7470A [5]
Nickel	8.7 B	40	2.3	ug/l	1	10/14/09	10/14/09	RS	SW846 6010B [2]	SW846 3010A [6]
Potassium	19400	10000	100	ug/l	1	10/14/09	10/14/09	RS	SW846 6010B [2]	SW846 3010A [6]
Selenium [a]	20.0	20	6.8	ug/l	2	10/14/09	10/15/09	RS	SW846 6010B [3]	SW846 3010A [6]
Silver	1.4 U	10	1.4	ug/l	1	10/14/09	10/14/09	RS	SW846 6010B [2]	SW846 3010A [6]
Sodium	4590000	1000000	50000	ug/l	100	10/14/09	10/16/09	RS	SW846 6010B [4]	SW846 3010A [6]
Thallium	3.6 U	10	3.6	ug/l	1	10/14/09	10/14/09	RS	SW846 6010B [2]	SW846 3010A [6]
Vanadium	34.3 B	50	0.90	ug/l	1	10/14/09	10/14/09	RS	SW846 6010B [2]	SW846 3010A [6]
Zinc	7.4 U	20	7.4	ug/l	1	10/14/09	10/14/09	RS	SW846 6010B [2]	SW846 3010A [6]

(1) Instrument QC Batch: MA7589
(2) Instrument QC Batch: MA7594
(3) Instrument QC Batch: MA7598
(4) Instrument QC Batch: MA7601
(5) Prep QC Batch: MP17176
(6) Prep QC Batch: MP17190

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	TB01-100609		
Lab Sample ID:	F68616-3	**Date Sampled:**	10/06/09
Matrix:	AQ - Trip Blank Water	**Date Received:**	10/08/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F038311.D	1	10/19/09	LD	n/a	n/a	VF1041
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
75-05-8	Acetonitrile	ND	20	5.0	ug/l	
107-02-8	Acrolein	ND	20	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	2.0	ug/l	
107-05-1	Allyl chloride	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-44-7	Benzyl Chloride	ND	2.0	0.36	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.23	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.33	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.32	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.22	ug/l	
75-00-3	Chloroethane	ND	2.0	0.48	ug/l	
67-66-3	Chloroform	ND	1.0	0.28	ug/l	
544-10-5	1-Chlorohexane	ND	2.0	0.27	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.25	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.40	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.24	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.54	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.32	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.34	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.26	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.28	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB01-100609		
Lab Sample ID:	F68616-3	**Date Sampled:**	10/06/09
Matrix:	AQ - Trip Blank Water	**Date Received:**	10/08/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
1476-11-5	cis-1,4-Dichloro-2-Butene	ND	10	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.45	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.43	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	1.0	ug/l	
76-13-1	Freon 113	ND	1.0	0.34	ug/l	
591-78-6	2-Hexanone	ND	10	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.69	ug/l	
110-54-3	Hexane	ND	2.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.32	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
126-98-7	Methacrylonitrile	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.78	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.61	ug/l	
74-88-4	Methyl iodide	ND	5.0	1.0	ug/l	
80-62-6	Methyl methacrylate	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.30	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
76-01-7	Pentachloroethane	ND	10	2.0	ug/l	
107-12-0	Propionitrile	ND	20	10	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.25	ug/l	
100-42-5	Styrene	ND	1.0	0.36	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.33	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.26	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.34	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB01-100609		
Lab Sample ID:	F68616-3	**Date Sampled:**	10/06/09
Matrix:	AQ - Trip Blank Water	**Date Received:**	10/08/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.35	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.32	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
108-05-4	Vinyl Acetate	ND	10	3.6	ug/l	
	m,p-Xylene	ND	2.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.37	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		87-116%
17060-07-0	1,2-Dichloroethane-D4	102%		76-127%
2037-26-5	Toluene-D8	100%		86-112%
460-00-4	4-Bromofluorobenzene	99%		84-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Certification Exceptions
- Chain of Custody

Parameter Certification Exceptions

Job Number: F68616
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

The following parameters included in this report are exceptions to NELAC certification.
The certification status of each is indicated below.

Parameter	CAS#	Method	Mat	Certification Status
Freon 113	76-13-1	**SW846 8260B**	AQ	Certified by SOP MS005

Accutest Laboratories Southeast
Chain of Custody

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
28851 TEL. 407-425-6700 • FAX: 407-425-0707
www.accutest.com

ACCUTEST

F68616 — Accutest JOB #

COC-~~015~~ 015

PAGE 1 OF 1

Accutest Quote #

SKIFF#

Client / Reporting Information

Company Name: TETRA TECH
Address: 8000 OAK RIDGE TURNPIKE A-600
City: OAK RIDGE State: TN Zip: 37830
Project Contact: GINGER HULLINS E-mail: GINGER.HULLINS@TETRATECH.COM
Phone#: 865-599-2349
Sampler(s) Name(s) (Printed):

Project Information

Project Name: HOLLOMAN AFB
Street:
City: ALAMOGORDO State: NM
Project #: TS3002
Fax #:
Client Purchase Order #:

Analytical Information / **Matrix Codes**

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe

Accutest Sample #	Field ID / Point of Collection	Date	Time	Sampled By	Matrix	Total # of Bottles	Other	None	HCl	NaOH	HNO3	H2SO4	NaOH+ZNAC	DI WATER	MEOH	VOCs 8260	TDS	METALS 8 RCRA - TOTAL	METALS 8 RCRA - DISS	METALS TAL - TOTAL	METALS TAL - DISS					
1	MW39-12-100609	10/6/09	1035	JB	GW	6			X		X					X	X	X	X							
2	MW30833-05R-100609	10/6/09	1410	JB	GW	6			X		X					X	X			X	X					
3	TB01-100609	10/6/09	—	—	GW	2			X							X										

TURNAROUND TIME (Business Days) — Approved By: / Rush Code

- [X] 10 Days Standard
- [ ] 7 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] OTHER

Emergency or Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [X] REDT1 (EPA LEVEL 3) ERPIMS
- [ ] FULT1 (EPA LEVEL 4)
- [X] EDD'S

Comments / Remarks

LAB FILTERED METALS
FEDEX 8696 4911 0245

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
1	10/6/09	2	3	10/7/09 1100	4 FEDEX
Relinquished by: 5	Date Time: 10/8/09 9:00	Received By: 6 Accutest 10/8/09 9:00	Relinquished by: 7	Date Time:	Received By: 8

Lab Use Only: Custody Seal in Place: Y N Temp Blank Provided: Y N Preserved where Applicable: Y N Total # of Coolers: 1 Cooler Temperature (s) Celsius: 3.8

4.2 4

F68616: Chain of Custody
Page 1 of 2

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: F68616 CLIENT: TetraTech PROJECT: Hollaman AFB

DATE/TIME RECEIVED: 10/8/09 9:00 # OF COOLERS RECEIVED: 1 COOLER TEMPS: 3.8

METHOD OF DELIVERY: (FEDEX) UPS ACCUTEST COURIER GREYHOUND DELIVERY OTHER

AIRBILL NUMBERS: 8696 4911 0245

COOLER INFORMATION

- [ ] CUSTODY SEAL NOT PRESENT OR NOT INTACT
- [ ] CHAIN OF CUSTODY NOT RECEIVED (COC)
- [ ] ANALYSIS REQUESTED IS UNCLEAR OR MISSING
- [ ] SAMPLE DATES OR TIMES UNCLEAR OR MISSING
- [ ] TEMPERATURE CRITERIA NOT MET
- [ ] WET ICE RECEIVED IN COOLER

TRIP BLANK INFORMATION

- [x] TRIP BLANK PROVIDED
- [ ] TRIP BLANK NOT PROVIDED
- [ ] TRIP BLANK NOT ON COC
- [x] TRIP BLANK INTACT
- [ ] TRIP BLANK NOT INTACT
- [x] RECEIVED WATER TRIP BLANK
- [ ] RECEIVED SOIL TRIP BLANK

SAMPLE INFORMATION

- [ ] SAMPLE LABELS NOT PRESENT ON ALL BOTTLES
- [ ] CORRECT NUMBER OF CONTAINERS USED
- [ ] SAMPLE RECEIVED IMPROPERLY PRESERVED
- [ ] INSUFFICIENT VOLUME FOR ANALYSIS
- [ ] TIMES ON COC DOES NOT MATCH LABEL(S)
- [ ] ID'S ON COC DOES NOT MATCH LABEL(S)
- [ ] VOC VIALS HAVE HEADSPACE (MACRO BUBBLES)
- [ ] BOTTLES RECEIVED BUT ANALYSIS NOT REQUESTED
- [ ] NO BOTTLES RECEIVED FOR ANALYSIS REQUESTED
- [ ] UNCLEAR FILTERING INSTRUCTIONS
- [ ] UNCLEAR COMPOSITING INSTRUCTIONS
- [ ] SAMPLE CONTAINER(S) RECEIVED BROKEN
- [ ] % SOLIDS JAR NOT RECEIVED
- [ ] 5035 FIELD KIT NOT FROZEN WITHIN 48 HOUR'S
- [ ] RESIDUAL CHLORINE PRESENT

(APPLICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS)

MISC. INFORMATION

NUMBER OF ENCORES ? 0

NUMBER OF 5035 FIELD KITS ? 0

NUMBER OF LAB FILTERED METALS ? 2

SUMMARY OF COMMENTS:

TECHNICIAN SIGNATURE/DATE [signature] 10/8/09 TECHNICIAN SIGNATURE/DATE [signature] 10-8-09

ASBD 12/17/07

F68616: Chain of Custody
Page 2 of 2

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: F68616
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VF1041-MB	F038305.D	1	10/19/09	LD	n/a	n/a	VF1041

The QC reported here applies to the following samples: **Method:** SW846 8260B

F68616-1, F68616-2, F68616-3

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
75-05-8	Acetonitrile	ND	20	5.0	ug/l	
107-02-8	Acrolein	ND	20	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	2.0	ug/l	
107-05-1	Allyl chloride	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-44-7	Benzyl Chloride	ND	2.0	0.36	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.23	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.33	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.32	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.22	ug/l	
75-00-3	Chloroethane	ND	2.0	0.48	ug/l	
67-66-3	Chloroform	ND	1.0	0.28	ug/l	
544-10-5	1-Chlorohexane	ND	2.0	0.27	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.25	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.40	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.24	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.54	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.32	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.34	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.26	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.28	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	

Method Blank Summary

Job Number: F68616
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VF1041-MB	F038305.D	1	10/19/09	LD	n/a	n/a	VF1041

The QC reported here applies to the following samples: **Method:** SW846 8260B

F68616-1, F68616-2, F68616-3

CAS No.	Compound	Result	RL	MDL	Units	Q
1476-11-5	cis-1,4-Dichloro-2-Butene	ND	10	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.45	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.43	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	1.0	ug/l	
76-13-1	Freon 113	ND	1.0	0.34	ug/l	
591-78-6	2-Hexanone	ND	10	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.69	ug/l	
110-54-3	Hexane	ND	2.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.32	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
126-98-7	Methacrylonitrile	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.78	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.61	ug/l	
74-88-4	Methyl iodide	ND	5.0	1.0	ug/l	
80-62-6	Methyl methacrylate	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.30	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
76-01-7	Pentachloroethane	ND	10	2.0	ug/l	
107-12-0	Propionitrile	ND	20	10	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.25	ug/l	
100-42-5	Styrene	ND	1.0	0.36	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.33	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.26	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.34	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	

Method Blank Summary

Job Number: F68616
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VF1041-MB	F038305.D	1	10/19/09	LD	n/a	n/a	VF1041

The QC reported here applies to the following samples: **Method:** SW846 8260B

F68616-1, F68616-2, F68616-3

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.35	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.32	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
108-05-4	Vinyl Acetate	ND	10	3.6	ug/l	
	m,p-Xylene	ND	2.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.37	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	105%	87-116%
17060-07-0	1,2-Dichloroethane-D4	100%	76-127%
2037-26-5	Toluene-D8	101%	86-112%
460-00-4	4-Bromofluorobenzene	99%	84-120%

Blank Spike Summary

Job Number: F68616
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VF1041-BS	F038304.D	1	10/19/09	LD	n/a	n/a	VF1041

The QC reported here applies to the following samples: **Method:** SW846 8260B

F68616-1, F68616-2, F68616-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	94.7	76	59-134
75-05-8	Acetonitrile	250	215	86	57-123
107-02-8	Acrolein	125	133	106	33-157
107-13-1	Acrylonitrile	125	105	84	62-124
107-05-1	Allyl chloride	25	30.6	122	48-136
71-43-2	Benzene	25	22.8	91	83-124
100-44-7	Benzyl Chloride	25	22.0	88	61-118
108-86-1	Bromobenzene	25	23.9	96	83-115
74-97-5	Bromochloromethane	25	22.4	90	78-112
75-27-4	Bromodichloromethane	25	21.2	85	76-116
75-25-2	Bromoform	25	19.8	79	68-128
104-51-8	n-Butylbenzene	25	24.5	98	84-124
135-98-8	sec-Butylbenzene	25	25.7	103	86-127
98-06-6	tert-Butylbenzene	25	24.8	99	83-126
108-90-7	Chlorobenzene	25	23.7	95	87-115
75-00-3	Chloroethane	25	33.1	132	54-166
67-66-3	Chloroform	25	22.8	91	85-123
544-10-5	1-Chlorohexane	25	23.1	92	87-128
95-49-8	o-Chlorotoluene	25	24.3	97	84-121
106-43-4	p-Chlorotoluene	25	24.1	96	84-120
110-75-8	2-Chloroethyl vinyl ether	125	97.2	78	63-125
75-15-0	Carbon disulfide	25	24.5	98	67-147
56-23-5	Carbon tetrachloride	25	24.7	99	74-139
75-34-3	1,1-Dichloroethane	25	22.7	91	82-127
75-35-4	1,1-Dichloroethylene	25	29.3	117	75-133
563-58-6	1,1-Dichloropropene	25	22.8	91	87-127
96-12-8	1,2-Dibromo-3-chloropropane	25	18.3	73	61-118
106-93-4	1,2-Dibromoethane	25	20.9	84	80-115
107-06-2	1,2-Dichloroethane	25	21.8	87	76-122
78-87-5	1,2-Dichloropropane	25	21.1	84	81-120
142-28-9	1,3-Dichloropropane	25	20.8	83	81-113
594-20-7	2,2-Dichloropropane	25	22.2	89	77-138
124-48-1	Dibromochloromethane	25	23.7	95	74-116
75-71-8	Dichlorodifluoromethane	25	40.7	163*	34-158
156-59-2	cis-1,2-Dichloroethylene	25	21.3	85	81-114
10061-01-5	cis-1,3-Dichloropropene	25	21.2	85	83-119

Blank Spike Summary

Job Number: F68616
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VF1041-BS	F038304.D	1	10/19/09	LD	n/a	n/a	VF1041

The QC reported here applies to the following samples: **Method:** SW846 8260B

F68616-1, F68616-2, F68616-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1476-11-5	cis-1,4-Dichloro-2-Butene	25	28.7	115	41-130
541-73-1	m-Dichlorobenzene	25	24.4	98	86-115
95-50-1	o-Dichlorobenzene	25	23.9	96	85-115
106-46-7	p-Dichlorobenzene	25	24.5	98	87-113
156-60-5	trans-1,2-Dichloroethylene	25	23.9	96	82-126
10061-02-6	trans-1,3-Dichloropropene	25	23.4	94	87-123
100-41-4	Ethylbenzene	25	23.5	94	87-118
97-63-2	Ethyl methacrylate	25	18.0	72	68-110
76-13-1	Freon 113	25	20.5	82	74-139
591-78-6	2-Hexanone	125	95.1	76	58-125
87-68-3	Hexachlorobutadiene	25	24.8	99	71-133
110-54-3	Hexane	25	25.7	103	71-134
98-82-8	Isopropylbenzene	25	24.5	98	87-131
99-87-6	p-Isopropyltoluene	25	25.2	101	83-125
108-10-1	4-Methyl-2-pentanone	125	102	82	62-125
126-98-7	Methacrylonitrile	250	222	89	62-133
74-83-9	Methyl bromide	25	36.6	146	55-151
74-87-3	Methyl chloride	25	32.7	131	55-173
74-88-4	Methyl iodide	25	25.6	102	72-125
80-62-6	Methyl methacrylate	25	20.5	82	63-115
74-95-3	Methylene bromide	25	20.7	83	81-116
75-09-2	Methylene chloride	25	22.3	89	69-125
78-93-3	Methyl ethyl ketone	125	93.2	75	61-127
1634-04-4	Methyl Tert Butyl Ether	25	18.9	76	75-116
91-20-3	Naphthalene	25	20.3	81	59-125
76-01-7	Pentachloroethane	25	27.8	111	82-111
107-12-0	Propionitrile	250	182	73	69-119
103-65-1	n-Propylbenzene	25	25.1	100	86-125
100-42-5	Styrene	25	21.6	86	78-118
630-20-6	1,1,1,2-Tetrachloroethane	25	24.5	98	81-119
71-55-6	1,1,1-Trichloroethane	25	24.0	96	79-133
79-34-5	1,1,2,2-Tetrachloroethane	25	21.1	84	71-120
79-00-5	1,1,2-Trichloroethane	25	20.6	82	80-114
87-61-6	1,2,3-Trichlorobenzene	25	21.8	87	64-126
96-18-4	1,2,3-Trichloropropane	25	19.9	80	77-115
120-82-1	1,2,4-Trichlorobenzene	25	22.9	92	68-123

Blank Spike Summary

Job Number: F68616
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VF1041-BS	F038304.D	1	10/19/09	LD	n/a	n/a	VF1041

The QC reported here applies to the following samples: **Method:** SW846 8260B

F68616-1, F68616-2, F68616-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
95-63-6	1,2,4-Trimethylbenzene	25	24.2	97	82-120
108-67-8	1,3,5-Trimethylbenzene	25	24.4	98	83-123
127-18-4	Tetrachloroethylene	25	22.6	90	80-131
108-88-3	Toluene	25	23.0	92	86-116
79-01-6	Trichloroethylene	25	22.4	90	85-124
75-69-4	Trichlorofluoromethane	25	36.7	147	66-156
110-57-6	Trans-1,4-Dichloro-2-Butene	25	31.2	125	51-137
75-01-4	Vinyl chloride	25	32.2	129	57-153
108-05-4	Vinyl Acetate	125	198	158	38-159
	m,p-Xylene	50	47.4	95	86-121
95-47-6	o-Xylene	25	22.8	91	83-121

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	105%	87-116%
17060-07-0	1,2-Dichloroethane-D4	104%	76-127%
2037-26-5	Toluene-D8	100%	86-112%
460-00-4	4-Bromofluorobenzene	101%	84-120%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F68616
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F68787-5MS	F038317.D	1	10/19/09	LD	n/a	n/a	VF1041
F68787-5MSD	F038318.D	1	10/19/09	LD	n/a	n/a	VF1041
F68787-5	F038313.D	1	10/19/09	LD	n/a	n/a	VF1041

The QC reported here applies to the following samples: **Method:** SW846 8260B

F68616-1, F68616-2, F68616-3

CAS No.	Compound	F68787-5 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		125	97.2	78	100	80	3	59-134/14
75-05-8	Acetonitrile	ND		250	351	140*	343	137*	2	57-123/15
107-02-8	Acrolein	ND		125	125	100	118	94	6	33-157/21
107-13-1	Acrylonitrile	ND		125	109	87	109	87	0	62-124/13
107-05-1	Allyl chloride	ND		25	29.0	116	27.1	108	7	48-136/13
71-43-2	Benzene	ND		25	23.3	93	21.6	86	8	83-124/11
100-44-7	Benzyl Chloride	ND		25	22.1	88	21.6	86	2	61-118/12
108-86-1	Bromobenzene	ND		25	24.4	98	22.6	90	8	83-115/10
74-97-5	Bromochloromethane	ND		25	23.4	94	21.6	86	8	78-112/10
75-27-4	Bromodichloromethane	ND		25	21.6	86	19.9	80	8	76-116/10
75-25-2	Bromoform	ND		25	19.5	78	19.1	76	2	68-128/11
104-51-8	n-Butylbenzene	ND		25	23.1	92	21.8	87	6	84-124/10
135-98-8	sec-Butylbenzene	ND		25	25.0	100	23.6	94	6	86-127/10
98-06-6	tert-Butylbenzene	ND		25	24.2	97	22.6	90	7	83-126/10
108-90-7	Chlorobenzene	ND		25	23.8	95	22.1	88	7	87-115/9
75-00-3	Chloroethane	ND		25	32.9	132	30.2	121	9	54-166/20
67-66-3	Chloroform	ND		25	23.7	95	21.6	86	9	85-123/10
544-10-5	1-Chlorohexane	ND		25	21.6	86*	21.1	84*	2	87-128/10
95-49-8	o-Chlorotoluene	ND		25	24.0	96	22.1	88	8	84-121/10
106-43-4	p-Chlorotoluene	ND		25	24.0	96	22.2	89	8	84-120/10
110-75-8	2-Chloroethyl vinyl ether	ND		125	ND	0*	ND	0*	nc	63-125/24
75-15-0	Carbon disulfide	ND		25	25.2	101	24.9	100	1	67-147/12
56-23-5	Carbon tetrachloride	ND		25	25.2	101	23.6	94	7	74-139/13
75-34-3	1,1-Dichloroethane	ND		25	23.0	92	21.4	86	7	82-127/10
75-35-4	1,1-Dichloroethylene	ND		25	30.1	120	28.7	115	5	75-133/13
563-58-6	1,1-Dichloropropene	ND		25	22.7	91	21.5	86*	5	87-127/10
96-12-8	1,2-Dibromo-3-chloropropane	ND		25	18.9	76	19.0	76	1	61-118/15
106-93-4	1,2-Dibromoethane	ND		25	20.9	84	20.3	81	3	80-115/10
107-06-2	1,2-Dichloroethane	ND		25	22.6	90	20.7	83	9	76-122/11
78-87-5	1,2-Dichloropropane	ND		25	20.8	83	19.2	77*	8	81-120/11
142-28-9	1,3-Dichloropropane	ND		25	20.6	82	19.6	78*	5	81-113/11
594-20-7	2,2-Dichloropropane	ND		25	22.5	90	20.7	83	8	77-138/12
124-48-1	Dibromochloromethane	ND		25	23.3	93	22.3	89	4	74-116/11
75-71-8	Dichlorodifluoromethane	ND		25	40.4	162*	40.9	164*	1	34-158/22
156-59-2	cis-1,2-Dichloroethylene	ND		25	21.3	85	19.9	80*	7	81-114/10
10061-01-5	cis-1,3-Dichloropropene	ND		25	20.6	82*	19.1	76*	8	83-119/10

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F68616
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F68787-5MS	F038317.D	1	10/19/09	LD	n/a	n/a	VF1041
F68787-5MSD	F038318.D	1	10/19/09	LD	n/a	n/a	VF1041
F68787-5	F038313.D	1	10/19/09	LD	n/a	n/a	VF1041

The QC reported here applies to the following samples: **Method:** SW846 8260B

F68616-1, F68616-2, F68616-3

CAS No.	Compound	F68787-5 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1476-11-5	cis-1,4-Dichloro-2-Butene	ND		25	18.7	75	18.7	75	0	41-130/33
541-73-1	m-Dichlorobenzene	ND		25	24.3	97	22.7	91	7	86-115/9
95-50-1	o-Dichlorobenzene	ND		25	23.8	95	22.0	88	8	85-115/9
106-46-7	p-Dichlorobenzene	ND		25	24.9	100	22.9	92	8	87-113/10
156-60-5	trans-1,2-Dichloroethylene	ND		25	23.8	95	22.2	89	7	82-126/10
10061-02-6	trans-1,3-Dichloropropene	ND		25	22.9	92	21.7	87	5	87-123/10
100-41-4	Ethylbenzene	ND		25	23.2	93	21.6	86*	7	87-118/10
97-63-2	Ethyl methacrylate	ND		25	17.3	69	16.8	67*	3	68-110/11
76-13-1	Freon 113	ND		25	22.4	90	23.6	94	5	74-139/13
591-78-6	2-Hexanone	ND		125	104	83	107	86	3	58-125/14
87-68-3	Hexachlorobutadiene	ND		25	19.7	79	18.6	74	6	71-133/12
110-54-3	Hexane	ND		25	25.1	100	24.9	100	1	71-134/11
98-82-8	Isopropylbenzene	ND		25	23.8	95	22.3	89	7	87-131/10
99-87-6	p-Isopropyltoluene	ND		25	24.7	99	23.1	92	7	83-125/9
108-10-1	4-Methyl-2-pentanone	ND		125	110	88	112	90	2	62-125/13
126-98-7	Methacrylonitrile	ND		250	230	92	229	92	0	62-133/17
74-83-9	Methyl bromide	ND		25	37.1	148	33.5	134	10	55-151/21
74-87-3	Methyl chloride	ND		25	31.0	124	29.5	118	5	55-173/22
74-88-4	Methyl iodide	ND		25	26.4	106	24.3	97	8	72-125/11
80-62-6	Methyl methacrylate	ND		25	20.3	81	20.0	80	1	63-115/10
74-95-3	Methylene bromide	ND		25	21.5	86	20.4	82	5	81-116/10
75-09-2	Methylene chloride	ND		25	22.6	90	21.0	84	7	69-125/11
78-93-3	Methyl ethyl ketone	ND		125	97.0	78	97.8	78	1	61-127/13
1634-04-4	Methyl Tert Butyl Ether	ND		25	18.3	73*	17.8	71*	3	75-116/10
91-20-3	Naphthalene	ND		25	20.0	80	19.9	80	1	59-125/15
76-01-7	Pentachloroethane	ND		25	27.3	109	25.6	102	6	82-111/8
107-12-0	Propionitrile	ND		250	184	74	187	75	2	69-119/12
103-65-1	n-Propylbenzene	ND		25	24.8	99	23.1	92	7	86-125/10
100-42-5	Styrene	ND		25	21.4	86	19.8	79	8	78-118/11
630-20-6	1,1,1,2-Tetrachloroethane	ND		25	24.7	99	23.0	92	7	81-119/10
71-55-6	1,1,1-Trichloroethane	ND		25	24.8	99	23.1	92	7	79-133/11
79-34-5	1,1,2,2-Tetrachloroethane	ND		25	22.1	88	21.6	86	2	71-120/11
79-00-5	1,1,2-Trichloroethane	ND		25	20.5	82	19.6	78*	4	80-114/11
87-61-6	1,2,3-Trichlorobenzene	ND		25	20.7	83	19.5	78	6	64-126/16
96-18-4	1,2,3-Trichloropropane	ND		25	20.3	81	20.3	81	0	77-115/12
120-82-1	1,2,4-Trichlorobenzene	ND		25	21.6	86	20.3	81	6	68-123/11

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F68616
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F68787-5MS	F038317.D	1	10/19/09	LD	n/a	n/a	VF1041
F68787-5MSD	F038318.D	1	10/19/09	LD	n/a	n/a	VF1041
F68787-5	F038313.D	1	10/19/09	LD	n/a	n/a	VF1041

The QC reported here applies to the following samples: **Method:** SW846 8260B

F68616-1, F68616-2, F68616-3

CAS No.	Compound	F68787-5 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
95-63-6	1,2,4-Trimethylbenzene	ND		25	23.8	95	22.2	89	7	82-120/10
108-67-8	1,3,5-Trimethylbenzene	ND		25	24.0	96	22.2	89	8	83-123/10
127-18-4	Tetrachloroethylene	ND		25	22.4	90	21.0	84	6	80-131/12
108-88-3	Toluene	ND		25	22.7	91	21.2	85*	7	86-116/10
79-01-6	Trichloroethylene	ND		25	23.3	93	21.7	87	7	85-124/10
75-69-4	Trichlorofluoromethane	ND		25	39.1	156	38.2	153	2	66-156/15
110-57-6	Trans-1,4-Dichloro-2-Butene	ND		25	23.8	95	23.6	94	1	51-137/24
75-01-4	Vinyl chloride	ND		25	31.8	127	30.7	123	4	57-153/22
108-05-4	Vinyl Acetate	ND		125	211	169*	205	164*	3	38-159/11
	m,p-Xylene	ND		50	46.8	94	44.2	88	6	86-121/10
95-47-6	o-Xylene	ND		25	22.2	89	20.9	84	6	83-121/10

CAS No.	Surrogate Recoveries	MS	MSD	F68787-5	Limits
1868-53-7	Dibromofluoromethane	111%	109%	108%	87-116%
17060-07-0	1,2-Dichloroethane-D4	107%	108%	103%	76-127%
2037-26-5	Toluene-D8	98%	99%	99%	86-112%
460-00-4	4-Bromofluorobenzene	97%	98%	99%	84-120%

Instrument Performance Check (BFB)

Job Number: F68616
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VF1034-BFB
Lab File ID: F038103.D
Instrument ID: GCMSF
Injection Date: 10/08/09
Injection Time: 09:54

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	14917	21.0		Pass
75	30.0 - 60.0% of mass 95	35088	49.4		Pass
95	Base peak, 100% relative abundance	71037	100.0		Pass
96	5.0 - 9.0% of mass 95	4766	6.7		Pass
173	Less than 2.0% of mass 174	115	0.16	(0.23) [a]	Pass
174	50.0 - 100.0% of mass 95	51080	71.9		Pass
175	5.0 - 9.0% of mass 174	3669	5.2	(7.2) [a]	Pass
176	95.0 - 101.0% of mass 174	48960	68.9	(95.8) [a]	Pass
177	5.0 - 9.0% of mass 176	3151	4.4	(6.4) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VF1034-IC1034	F038104.D	10/08/09	10:27	00:33	Initial cal 1
VF1034-IC1034	F038105.D	10/08/09	10:51	00:57	Initial cal 2
VF1034-IC1034	F038106.D	10/08/09	11:17	01:23	Initial cal 3
VF1034-ICC1034	F038107.D	10/08/09	11:41	01:47	Initial cal 4
VF1034-IC1034	F038108.D	10/08/09	12:06	02:12	Initial cal 5
VF1034-IC1034	F038109.D	10/08/09	12:31	02:37	Initial cal 6
VF1034-ICV1034	F038110.D	10/08/09	12:55	03:01	Initial cal verification 4

Instrument Performance Check (BFB)

Job Number: F68616
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VF1041-BFB
Lab File ID: F038301.D
Instrument ID: GCMSF
Injection Date: 10/19/09
Injection Time: 09:00

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	12091	22.7		Pass
75	30.0 - 60.0% of mass 95	26880	50.4		Pass
95	Base peak, 100% relative abundance	53344	100.0		Pass
96	5.0 - 9.0% of mass 95	3912	7.3		Pass
173	Less than 2.0% of mass 174	0	0.0	(0.0) [a]	Pass
174	50.0 - 100.0% of mass 95	37440	70.2		Pass
175	5.0 - 9.0% of mass 174	2800	5.2	(7.5) [a]	Pass
176	95.0 - 101.0% of mass 174	37312	69.9	(99.7) [a]	Pass
177	5.0 - 9.0% of mass 176	2610	4.9	(7.0) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VF1041-CC1034	F038303.D	10/19/09	10:10	01:10	Continuing cal 4
VF1041-BS	F038304.D	10/19/09	10:51	01:51	Blank Spike
VF1041-MB	F038305.D	10/19/09	11:16	02:16	Method Blank
ZZZZZZ	F038306.D	10/19/09	11:40	02:40	(unrelated sample)
ZZZZZZ	F038307.D	10/19/09	12:05	03:05	(unrelated sample)
ZZZZZZ	F038308.D	10/19/09	12:29	03:29	(unrelated sample)
F68616-1	F038309.D	10/19/09	12:54	03:54	MW39-12-100609
F68616-2	F038310.D	10/19/09	13:19	04:19	MW30&33-05R-100609
F68616-3	F038311.D	10/19/09	13:43	04:43	TB01-100609
ZZZZZZ	F038312.D	10/19/09	14:08	05:08	(unrelated sample)
F68787-5	F038313.D	10/19/09	14:32	05:32	(used for QC only; not part of job F68616)
ZZZZZZ	F038314.D	10/19/09	14:57	05:57	(unrelated sample)
ZZZZZZ	F038315.D	10/19/09	15:22	06:22	(unrelated sample)
ZZZZZZ	F038316.D	10/19/09	15:46	06:46	(unrelated sample)
F68787-5MS	F038317.D	10/19/09	16:11	07:11	Matrix Spike
F68787-5MSD	F038318.D	10/19/09	16:35	07:35	Matrix Spike Duplicate
ZZZZZZ	F038319.D	10/19/09	17:00	08:00	(unrelated sample)
ZZZZZZ	F038320.D	10/19/09	17:25	08:25	(unrelated sample)
ZZZZZZ	F038321.D	10/19/09	17:50	08:50	(unrelated sample)
ZZZZZZ	F038322.D	10/19/09	18:14	09:14	(unrelated sample)
ZZZZZZ	F038323.D	10/19/09	18:39	09:39	(unrelated sample)
ZZZZZZ	F038324.D	10/19/09	19:03	10:03	(unrelated sample)
ZZZZZZ	F038325.D	10/19/09	19:28	10:28	(unrelated sample)
ZZZZZZ	F038326.D	10/19/09	19:53	10:53	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: F68616
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VF1042-BFB
Lab File ID: F038331.D
Instrument ID: GCMSF
Injection Date: 10/20/09
Injection Time: 10:45

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	11149	22.5		Pass
75	30.0 - 60.0% of mass 95	24746	49.9		Pass
95	Base peak, 100% relative abundance	49632	100.0		Pass
96	5.0 - 9.0% of mass 95	3462	7.0		Pass
173	Less than 2.0% of mass 174	0	0.0	(0.0) [a]	Pass
174	50.0 - 100.0% of mass 95	35936	72.4		Pass
175	5.0 - 9.0% of mass 174	2594	5.2	(7.2) [a]	Pass
176	95.0 - 101.0% of mass 174	34386	69.3	(95.7) [a]	Pass
177	5.0 - 9.0% of mass 176	2411	4.9	(7.0) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VF1042-IC1042	F038332.D	10/20/09	11:21	00:36	Initial cal 1
VF1042-IC1042	F038333.D	10/20/09	11:46	01:01	Initial cal 2
VF1042-IC1042	F038334.D	10/20/09	12:10	01:25	Initial cal 3
VF1042-ICC1042	F038335.D	10/20/09	12:34	01:49	Initial cal 4
VF1042-IC1042	F038336.D	10/20/09	12:59	02:14	Initial cal 5
VF1042-IC1042	F038337.D	10/20/09	13:23	02:38	Initial cal 6
VF1042-ICV1042	F038338.D	10/20/09	13:48	03:03	Initial cal verification 4
VF1042-BS	F038339.D	10/20/09	14:13	03:28	Blank Spike
VF1042-MB	F038340.D	10/20/09	14:37	03:52	Method Blank
F68787-4	F038341.D	10/20/09	15:12	04:27	(used for QC only; not part of job F68616)
F68616-1	F038342.D	10/20/09	15:37	04:52	MW39-12-100609
F68787-4MS	F038343.D	10/20/09	16:01	05:16	Matrix Spike
F68787-4MSD	F038344.D	10/20/09	16:26	05:41	Matrix Spike Duplicate
ZZZZZZ	F038345.D	10/20/09	16:50	06:05	(unrelated sample)
ZZZZZZ	F038346.D	10/20/09	17:15	06:30	(unrelated sample)
ZZZZZZ	F038347.D	10/20/09	17:40	06:55	(unrelated sample)
ZZZZZZ	F038348.D	10/20/09	18:05	07:20	(unrelated sample)
ZZZZZZ	F038349.D	10/20/09	18:30	07:45	(unrelated sample)
ZZZZZZ	F038350.D	10/20/09	18:54	08:09	(unrelated sample)
ZZZZZZ	F038352.D	10/20/09	19:43	08:58	(unrelated sample)
ZZZZZZ	F038353.D	10/20/09	20:08	09:23	(unrelated sample)
ZZZZZZ	F038354.D	10/20/09	20:32	09:47	(unrelated sample)
ZZZZZZ	F038355.D	10/20/09	20:57	10:12	(unrelated sample)
ZZZZZZ	F038356.D	10/20/09	21:22	10:37	(unrelated sample)

Volatile Internal Standard Area Summary

Job Number: F68616
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Check Std:	VF1041-CC1034	**Injection Date:**	10/19/09
Lab File ID:	F038303.D	**Injection Time:**	10:10
Instrument ID:	GCMSF	**Method:**	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
Check Std	633340	10.34	468838	13.73	266024	16.23	68847	7.55
Upper Limit [a]	1266680	10.84	937676	14.23	532048	16.73	137694	8.05
Lower Limit [b]	316670	9.84	234419	13.23	133012	15.73	34424	7.05

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
VF1041-BS	644613	10.34	475987	13.73	263705	16.23	67834	7.54
VF1041-MB	618607	10.34	450346	13.73	242242	16.23	65836	7.54
ZZZZZZ	603550	10.34	443101	13.73	238084	16.23	64259	7.54
ZZZZZZ	596454	10.34	437081	13.73	236036	16.23	61992	7.55
ZZZZZZ	583623	10.34	435095	13.73	231779	16.23	64106	7.54
F68616-1 [c]	573043	10.34	422305	13.73	230907	16.23	185751*	7.54
F68616-2	585862	10.34	431907	13.73	230149	16.23	86899	7.54
F68616-3	577847	10.34	425037	13.73	224564	16.23	62370	7.54
ZZZZZZ	561049	10.34	417941	13.73	222197	16.23	56232	7.54
F68787-5	549335	10.34	409058	13.73	215323	16.23	55950	7.54
ZZZZZZ	551451	10.34	414102	13.73	215830	16.23	56781	7.54
ZZZZZZ	543797	10.34	403912	13.73	212109	16.23	56141	7.54
ZZZZZZ	533410	10.34	400648	13.73	211794	16.23	56255	7.54
F68787-5MS	544583	10.34	412034	13.73	227046	16.23	60227	7.55
F68787-5MSD	553569	10.34	412191	13.73	228917	16.23	67337	7.54
ZZZZZZ	555252	10.34	408742	13.73	215475	16.23	60071	7.55
ZZZZZZ	544704	10.34	405909	13.73	208913	16.23	57139	7.55
ZZZZZZ	535577	10.34	403308	13.73	210212	16.23	55518	7.54
ZZZZZZ	524921	10.34	391445	13.73	205490	16.23	53899	7.54
ZZZZZZ	527585	10.34	397127	13.73	205550	16.23	53152	7.54
ZZZZZZ	524729	10.34	394369	13.73	203010	16.23	53477	7.55
ZZZZZZ	517705	10.34	385506	13.73	200151	16.23	52795	7.55
ZZZZZZ	515778	10.34	393580	13.73	207487	16.23	54996	7.55

IS 1 = Fluorobenzene
IS 2 = Chlorobenzene-D5
IS 3 = 1,4-Dichlorobenzene-d4
IS 4 = Tert Butyl Alcohol-D10

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.
(c) Sample was treated with an anti-foaming agent.

Volatile Internal Standard Area Summary

Job Number: F68616
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Check Std:	VF1042-ICC1042	**Injection Date:**	10/20/09
Lab File ID:	F038335.D	**Injection Time:**	12:34
Instrument ID:	GCMSF	**Method:**	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
Check Std	581462	10.34	425954	13.73	239060	16.23	62428	7.54
Upper Limit [a]	1162924	10.84	851908	14.23	478120	16.73	124856	8.04
Lower Limit [b]	290731	9.84	212977	13.23	119530	15.73	31214	7.04

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
VF1042-BS	608226	10.34	446483	13.73	243371	16.23	68734	7.55
VF1042-MB	582143	10.34	426607	13.73	228708	16.23	66647	7.54
F68787-4	565393	10.34	423712	13.73	227979	16.23	69026	7.55
F68616-1 [c]	559553	10.34	415101	13.73	223599	16.23	190872*	7.54
F68787-4MS	591596	10.34	433390	13.73	237869	16.23	65489	7.54
F68787-4MSD	590536	10.34	433434	13.73	236596	16.23	65065	7.54
ZZZZZZ	572522	10.34	427940	13.73	229046	16.23	62690	7.54
ZZZZZZ	581081	10.34	428661	13.73	227875	16.23	67055	7.54
ZZZZZZ	550357	10.34	406633	13.73	216047	16.23	60968	7.55
ZZZZZZ	537606	10.34	396590	13.73	210494	16.23	58759	7.55
ZZZZZZ	532029	10.34	399927	13.73	207191	16.23	56731	7.55
ZZZZZZ	474625	10.34	356166	13.73	185088	16.23	52159	7.54
ZZZZZZ	533773	10.34	400649	13.73	207719	16.23	62515	7.55
ZZZZZZ	508043	10.34	381313	13.73	196473	16.23	55755	7.54
ZZZZZZ	510046	10.34	381649	13.73	199199	16.23	51182	7.53
ZZZZZZ	516193	10.34	385350	13.73	198603	16.23	55810	7.55
ZZZZZZ	502589	10.34	377903	13.73	193485	16.23	51628	7.54

IS 1 = Fluorobenzene
IS 2 = Chlorobenzene-D5
IS 3 = 1,4-Dichlorobenzene-d4
IS 4 = Tert Butyl Alcohol-D10

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.
(c) Sample was treated with an anti-foaming agent. Confirmation run.

Volatile Surrogate Recovery Summary

Job Number: F68616
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Method: SW846 8260B **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
F68616-1	F038342.D	101.0	104.0	99.0	101.0
F68616-1	F038309.D	107.0	108.0	99.0	100.0
F68616-2	F038310.D	105.0	102.0	99.0	99.0
F68616-3	F038311.D	106.0	102.0	100.0	99.0
F68787-5MS	F038317.D	111.0	107.0	98.0	97.0
F68787-5MSD	F038318.D	109.0	108.0	99.0	98.0
VF1041-BS	F038304.D	105.0	104.0	100.0	101.0
VF1041-MB	F038305.D	105.0	100.0	101.0	99.0

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	87-116%
S2 = 1,2-Dichloroethane-D4	76-127%
S3 = Toluene-D8	86-112%
S4 = 4-Bromofluorobenzene	84-120%

Initial Calibration Summary

Job Number: F68616
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VF1034-ICC1034
Lab FileID: F038107.D

Response Factor Report MSVOA9

```
Method       : C:\MSDCHEM\1\METHODS\8260FW.M (RTE Integrator)
Title        : SW-846 Method 5035A/8260B
Last Update  : Thu Oct 08 13:22:57 2009
Response via : Initial Calibration

Calibration Files
1   =F038104.D   2   =F038105.D   3   =F038106.D   4   =F038110.D
5      =F038108.D    6      =F038109.D

      Compound              1     2     3     4     5     6     Avg    %RSD
-------------------------------------------------------------------------------

1) I   Fluorobenzene         ----------------ISTD---------------------
2)     Dichlorodifluoromet 0.169 0.199 0.228 0.228 0.207 0.209 0.207  10.61
3) P   Chloromethane       0.515 0.497 0.480 0.483 0.454 0.463 0.482   4.55
4) C   Vinyl Chloride      0.348 0.386 0.375 0.377 0.362 0.367 0.369   3.64
5)     Bromomethane        0.269 0.201 0.153 0.129 0.098 0.082 0.155  44.92
           ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9959
             Response Ratio = 0.00000 + 0.15607 *A + -0.03765 *A^2

6)     Chloroethane        0.217 0.213 0.193 0.180 0.161 0.138 0.184  16.67
           ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9999
             Response Ratio = 0.00000 + 0.20943 *A + -0.03555 *A^2

7)     Trichlorofluorometh 0.274 0.320 0.344 0.348 0.319 0.316 0.320   8.19
8)     Ethyl Ether         0.284 0.294 0.281 0.284 0.272 0.266 0.280   3.63
9)     1,2-Dichlorotrifluo 0.285 0.424 0.351 0.353 0.329 0.326 0.345  13.37
           ---- Linear regr., Force(0,0) ----  Coefficient =  0.9990
             Response Ratio = 0.00000 + 0.33052 *A

10) C  1,1-Dichloroethene  0.419 0.510 0.494 0.503 0.520 0.484 0.488   7.41
11)    Freon 113           0.191 0.294 0.276 0.272 0.289 0.271 0.265  14.18
           ---- Linear regr., Force(0,0) ----  Coefficient =  0.9981
             Response Ratio = 0.00000 + 0.27623 *A

12)    Carbon Disulfide    1.046 1.314 1.222 1.244 1.216 1.213 1.209   7.32
13)    Iodomethane         0.468 0.570 0.558 0.561 0.539 0.539 0.539   6.84
14)    Allyl chloride      0.518 0.598 0.574 0.568 0.555 0.545 0.560   4.90
15)    Methylene Chloride  0.804 0.717 0.694 0.678 0.640 0.626 0.693   9.20
16)    Acetone             0.140 0.130 0.127 0.129 0.126 0.124 0.129   4.37
17)    Methyl acetate      0.322 0.332 0.321 0.320 0.310 0.302 0.318   3.30
18)    trans-1,2-Dichloroe 0.585 0.677 0.655 0.656 0.626 0.622 0.637   5.15
19)    Hexane              0.562 0.415 0.401 0.396 0.362 0.358 0.416  18.03
           ---- Linear regr., Force(0,0) ----  Coefficient =  0.9984
             Response Ratio = 0.00000 + 0.36406 *A

20)    Methyl Tert Butyl E 1.296 1.359 1.294 1.302 1.263 1.260 1.296   2.76
21)    Acetonitrile        0.057 0.059 0.053 0.056 0.054 0.050 0.055   5.92
22)    Di-isopropyl ether  1.636 1.716 1.653 1.638 1.568 1.553 1.627   3.64
23)    Chloroprene         0.845 0.821 0.741 0.788 0.757 0.757 0.785   5.20
24) P  1,1-Dichloroethane  0.722 0.834 0.809 0.812 0.783 0.774 0.789   4.97
25)    Acrylonitrile       0.169 0.164 0.148 0.158 0.151 0.151 0.157   5.20
26)    ETBE                1.455 1.622 1.575 1.569 1.519 1.502 1.540   3.89
27)    Vinyl acetate       0.402 0.431 0.394 0.405 0.382 0.370 0.397   5.24
28)    cis-1,2-Dichloroeth 0.385 0.435 0.421 0.426 0.409 0.412 0.415   4.17
29)    2,2-Dichloropropane 0.572 0.633 0.618 0.620 0.587 0.577 0.601   4.26
30)    Bromochloromethane  0.171 0.186 0.181 0.183 0.178 0.177 0.179   2.84
31)    Cyclohexane         0.816 0.860 0.861 0.855 0.774 0.774 0.823   5.07
```

Initial Calibration Summary

Job Number: F68616
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VF1034-ICC1034
Lab FileID: F038107.D

32)	C	Chloroform	0.654	0.726	0.710	0.711	0.687	0.677	0.694	3.82
33)		Ethyl acetate	0.415	0.428	0.459	0.451	0.433	0.411	0.433	4.45
34)		Tetrahydrofuran	0.232	0.173	0.142	0.144	0.141	0.137	0.161	22.84

---- Linear regr., Force(0,0) ---- Coefficient = 0.9996
Response Ratio = 0.00000 + 0.13872 *A

35)	S	Dibromofluoromethan	0.240	0.234	0.235	0.235	0.233	0.232	0.235	1.28
36)		Carbon Tetrachlorid	0.377	0.521	0.534	0.547	0.527	0.533	0.506	12.63

---- Linear regr., Force(0,0) ---- Coefficient = 0.9998
Response Ratio = 0.00000 + 0.53244 *A

37)		1,1,1-Trichloroetha	0.513	0.599	0.594	0.603	0.575	0.580	0.577	5.81
38)		2-Butanone	0.203	0.206	0.209	0.208	0.202	0.199	0.204	1.83
39)		1,1-Dichloropropene	0.484	0.560	0.555	0.561	0.539	0.540	0.540	5.34
40)		Propionitrile	0.073	0.072	0.066	0.066	0.063	0.060	0.067	7.59
41)		Methacrylonitrile	0.314	0.327	0.302	0.288	0.266	0.243	0.290	10.83
42)		Benzene	1.474	1.673	1.596	1.561	1.450	1.387	1.523	6.91
43)		TAME	1.300	1.388	1.347	1.337	1.286	1.268	1.321	3.36
44)	S	1,2-Dichloroethane-	0.354	0.334	0.344	0.332	0.334	0.332	0.338	2.60
45)		1,2-Dichloroethane	0.565	0.603	0.585	0.585	0.569	0.568	0.579	2.54
46)		Trichloroethene	0.373	0.399	0.382	0.392	0.377	0.373	0.383	2.74
47)		Methylcyclohexane	0.591	0.694	0.700	0.717	0.652	0.651	0.668	6.86
48)		Dibromomethane	0.245	0.256	0.250	0.253	0.249	0.247	0.250	1.63
49)	C	1,2-Dichloropropane	0.431	0.483	0.474	0.476	0.461	0.456	0.463	4.05
50)		Bromodichloromethan	0.486	0.522	0.526	0.538	0.533	0.532	0.523	3.61
51)		Methyl methacrylate	0.390	0.404	0.378	0.382	0.377	0.371	0.384	3.15
52)		2-Chloroethyl vinyl	0.299	0.323	0.316	0.312	0.294	0.282	0.304	5.07
53)		cis-1,3-Dichloropro	0.648	0.692	0.700	0.708	0.691	0.687	0.688	3.00
54)	I	Chlorobenzene-d5	----------ISTD----------							
55)	S	Toluene-d8	1.267	1.301	1.317	1.348	1.373	1.413	1.337	3.95
56)	C	Toluene	1.876	2.131	2.098	2.173	2.115	2.135	2.088	5.11
57)		2-Nitropropane	0.101	0.117	0.128	0.140	0.144	0.149	0.130	14.11

---- Linear regr., Force(0,0) ---- Coefficient = 0.9991
Response Ratio = 0.00000 + 0.14594 *A

58)		4-Methyl-2-pentanon	0.563	0.606	0.584	0.589	0.565	0.554	0.577	3.37
59)		trans-1,3-Dichlorop	0.717	0.772	0.772	0.804	0.799	0.822	0.781	4.72
60)		Tetrachloroethene	0.410	0.502	0.476	0.511	0.510	0.536	0.491	9.00
61)		Ethyl methacrylate	0.665	0.749	0.700	0.725	0.736	0.747	0.720	4.50
62)		1,1,2-Trichloroetha	0.414	0.413	0.398	0.418	0.414	0.427	0.414	2.24
63)		Dibromochloromethan	0.340	0.393	0.421	0.454	0.462	0.482	0.425	12.37
64)		1,3-Dichloropropane	0.796	0.854	0.836	0.868	0.861	0.880	0.849	3.52
65)		1,2-Dibromoethane	0.433	0.464	0.457	0.478	0.476	0.490	0.466	4.27
66)		2-hexanone	0.401	0.440	0.422	0.431	0.416	0.410	0.420	3.36
67)		1-Chlorohexane	0.653	0.751	0.742	0.767	0.745	0.759	0.736	5.65
68)	C	Ethylbenzene	2.252	2.474	2.407	2.449	2.372	2.379	2.389	3.26
69)	P	Chlorobenzene	1.169	1.349	1.320	1.347	1.312	1.325	1.303	5.20
70)		1,1,1,2-Tetrachloro	0.359	0.423	0.419	0.446	0.443	0.460	0.425	8.34
71)		m,p-Xylene	1.701	1.949	1.889	1.901	1.802	1.773	1.836	5.05
72)		o-Xylene	1.819	2.039	1.990	2.052	1.989	2.025	1.986	4.32
73)		Styrene	1.366	1.570	1.567	1.619	1.581	1.608	1.552	6.03
74)	P	Bromoform	0.216	0.252	0.273	0.304	0.318	0.342	0.284	16.28

---- Linear regr., Force(0,0) ---- Coefficient = 0.9969
Response Ratio = 0.00000 + 0.32962 *A

75)		Isopropylbenzene	1.744	2.121	2.085	2.163	2.090	2.132	2.056	7.56
76)	I	1,4-Dichlorobenzene-d	----------ISTD----------							
77)	S	4-Bromofluorobenzen	1.019	1.010	1.023	1.034	1.041	1.033	1.027	1.10

Initial Calibration Summary

Job Number: F68616
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VF1034-ICC1034
Lab FileID: F038107.D

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 78)     cis-1,4-Dichloro-2- 0.401 0.191 0.258 0.254 0.268 0.279 0.275  25.05
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9985
               Response Ratio = 0.00000 + 0.27277 *A

 79)     n-Propylbenzene     4.430 5.163 5.069 5.134 4.834 4.688 4.886   5.94
 80)     Bromobenzene        0.878 1.000 0.971 0.985 0.953 0.937 0.954   4.56
 81) P   1,1,2,2-Tetrachloro 1.104 1.176 1.133 1.153 1.119 1.091 1.129   2.77
 82)     1,3,5-Trimethylbenz 3.091 3.567 3.555 3.582 3.390 3.327 3.419   5.61
 83)     2-Chlorotoluene     2.970 3.237 3.143 3.189 3.051 3.011 3.100   3.40
 84)     trans-1,4-Dichloro- 0.332 0.187 0.251 0.246 0.250 0.257 0.254  18.21
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9994
               Response Ratio = 0.00000 + 0.25385 *A

 85)     1,2,3-Trichloroprop 0.270 0.310 0.297 0.311 0.303 0.298 0.298   5.06
 86)     Cyclohexanone       0.058 0.050 0.041 0.044 0.042 0.042 0.046  13.83
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9996
               Response Ratio = 0.00000 + 0.04253 *A

 87)     4-Chlorotoluene     2.976 3.275 3.158 3.226 3.100 3.049 3.131   3.57
 88)     tert-Butylbenzene   1.895 2.123 2.064 2.101 2.008 1.984 2.029   4.17
 89)     1,2,4-Trimethylbenz 3.371 3.766 3.654 3.668 3.458 3.345 3.544   4.94
 90)     Pentachloroethane   0.488 0.508 0.536 0.517 0.498 0.461 0.502   5.13
 91)     sec-Butylbenzene    3.742 4.546 4.468 4.548 4.304 4.190 4.300   7.16
 92)     4-Isopropyltoluene  2.895 3.417 3.394 3.454 3.275 3.195 3.272   6.38
 93)     1,3-Dichlorobenzene 1.621 1.849 1.832 1.864 1.806 1.768 1.790   5.01
 94)     1,4-Dichlorobenzene 1.748 1.886 1.851 1.902 1.816 1.798 1.834   3.14
 95)     n-Butylbenzene      1.971 2.316 2.295 2.360 2.277 2.236 2.243   6.20
 96)     Benzyl Chloride     0.346 0.406 0.439 0.460 0.460 0.452 0.427  10.44
 97)     1,2-Dichlorobenzene 1.672 1.853 1.820 1.837 1.780 1.744 1.784   3.82
 98)     1,2-Dibromo-3-Chlor 0.323 0.256 0.231 0.241 0.247 0.245 0.257  12.98
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9997
               Response Ratio = 0.00000 + 0.24462 *A

 99)     Hexachlorobutadiene 0.515 0.569 0.556 0.571 0.551 0.538 0.550   3.82
100)     1,2,4-Trichlorobenz 1.290 1.320 1.346 1.364 1.335 1.303 1.326   2.06
101)     Naphthalene         3.324 3.289 3.325 3.376 3.286 3.196 3.299   1.83
102)     1,2,3-Trichlorobenz 1.270 1.235 1.241 1.258 1.230 1.207 1.240   1.79

103) I   Tert Butyl Alcohol-d1 ----------------ISTD---------------------
104)     Ethanol             0.276 0.313 0.292 0.300 0.281 0.270 0.289   5.58
105)     Acrolein            1.899 1.306 1.092 1.188 1.162 1.163 1.302  23.10
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9996
               Response Ratio = 0.00000 + 1.16359 *A

106)     Tert butyl alcohol  1.577 1.588 1.508 1.529 1.531 1.525 1.543   2.06
107)     Isobutyl alcohol    0.402 0.717 0.633 0.606 0.587 0.548 0.582  17.99
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9969
               Response Ratio = 0.00000 + 0.56679 *A

108)     Tert Amyl Alcohol   1.216 1.248 1.208 1.252 1.248 1.236 1.235   1.51
109)     1,4-Dioxane         0.110 0.123 0.133 0.137 0.138 0.140 0.130   8.83
 ---------------------------------------------------------------------------
 (#) = Out of Range

           8260FW.M          Thu Oct 08 15:29:27 2009
```

Initial Calibration Verification

Job Number: F68616
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VF1034-ICV1034
Lab FileID: F038110.D

Evaluate Continuing Calibration Report

```
Data File : C:\MSDCHEM\1\DATA\100809\F038110.D          Vial: 7
Acq On    :  8 Oct 2009  12:55 pm                   Operator: StevenH
Sample    : icv1034-4                               Inst    : MSVOA9
Misc      : ms12574,vf1034,,,,,                     Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\MSDCHEM\1\METHODS\8260FW.M (RTE Integrator)
Title        : SW-846 Method 5035A/8260B
Last Update  : Thu Oct 08 13:22:57 2009
Response via : Multiple Level Calibration

Min. RRF     :   0.001  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	99	0.00	10.34
2		Dichlorodifluoromethane	0.207	0.331	-59.9#	143	0.02	4.29
3	P	Chloromethane	0.482	0.607	-25.9#	124	0.00	4.60
4	C	Vinyl Chloride	0.369	0.432	-17.1	113	0.00	4.79
		----------	Amount	Calc.	%Drift		----------	
5		Bromomethane	40.000	39.339	1.7	95	0.00	5.35
6		Chloroethane	40.000	41.959	-4.9	103	0.00	5.55
		----------	AvgRF	CCRF	%Dev		----------	
7		Trichlorofluoromethane	0.320	0.377	-17.8	107	0.00	5.76
8		Ethyl Ether	0.280	0.275	1.8	95	0.00	6.18
		----------	Amount	Calc.	%Drift		----------	
9		1,2-Dichlorotrifluoroetha	40.000	46.075	-15.2	106	0.00	6.44
		----------	AvgRF	CCRF	%Dev		----------	
10	C	1,1-Dichloroethene	0.488	0.522	-7.0	102	0.00	6.53
		----------	Amount	Calc.	%Drift		----------	
11		Freon 113	40.000	42.027	-5.1	105	0.00	6.59
		----------	AvgRF	CCRF	%Dev		----------	
12		Carbon Disulfide	1.209	1.322	-9.3	105	0.00	6.63
13		Iodomethane	0.539	0.574	-6.5	101	0.00	6.77
14		Allyl chloride	0.560	0.698	-24.6#	121	0.00	7.15
15		Methylene Chloride	0.693	0.640	7.6	93	0.00	7.29
16		Acetone	0.129	0.132	-2.3	101	0.00	7.33
17		Methyl acetate	0.318	0.318	0.0	98	0.00	7.46
18		trans-1,2-Dichloroethene	0.637	0.647	-1.6	97	0.00	7.51
		----------	Amount	Calc.	%Drift		----------	
19		Hexane	40.000	42.176	-5.4	96	0.00	7.56
		----------	AvgRF	CCRF	%Dev		----------	
20		Methyl Tert Butyl Ether	1.296	1.283	1.0	97	0.00	7.61
21		Acetonitrile	0.055	0.058	-5.5	103	0.00	7.94
22		Di-isopropyl ether	1.627	1.607	1.2	97	0.00	8.03
23		Chloroprene	0.785	0.842	-7.3	105	0.00	8.32
24	P	1,1-Dichloroethane	0.789	0.792	-0.4	96	0.00	8.27
25		Acrylonitrile	0.157	0.168	-7.0	105	0.00	8.32
26		ETBE	1.540	1.520	1.3	96	0.00	8.47

Initial Calibration Verification

Job Number: F68616
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VF1034-ICV1034
Lab FileID: F038110.D

27		Vinyl acetate	0.397	0.699	-76.1#	171	0.00	8.48
28		cis-1,2-Dichloroethene	0.415	0.404	2.7	94	0.00	8.91
29		2,2-Dichloropropane	0.601	0.570	5.2	91	0.00	9.07
30		Bromochloromethane	0.179	0.184	-2.8	99	0.00	9.16
31		Cyclohexane	0.823	0.817	0.7	94	0.00	9.20
32	C	Chloroform	0.694	0.699	-0.7	97	0.00	9.20
33		Ethyl acetate	0.433	0.571	-31.9#	125	0.00	9.25
		----------	Amount	Calc.	%Drift	----------		
34		Tetrahydrofuran	40.000	48.492	-21.2#	115	0.00	9.41
		----------	AvgRF	CCRF	%Dev	----------		
35	S	Dibromofluoromethane	0.235	0.236	-0.4	99	0.00	9.41
		----------	Amount	Calc.	%Drift	----------		
36		Carbon Tetrachloride	40.000	39.405	1.5	95	0.00	9.42
		----------	AvgRF	CCRF	%Dev	----------		
37		1,1,1-Trichloroethane	0.577	0.578	-0.2	95	0.00	9.50
38		2-Butanone	0.204	0.212	-3.9	100	0.00	9.52
39		1,1-Dichloropropene	0.540	0.537	0.6	94	0.00	9.61
40		Propionitrile	0.067	0.067	0.0	101	0.00	9.89
41		Methacrylonitrile	0.290	0.298	-2.8	102	0.00	9.92
42		Benzene	1.523	1.524	-0.1	96	0.00	9.90
43		TAME	1.321	1.335	-1.1	99	0.00	9.95
44	S	1,2-Dichloroethane-d4	0.338	0.355	-5.0	105	0.00	10.04
45		1,2-Dichloroethane	0.579	0.572	1.2	96	0.00	10.12
46		Trichloroethene	0.383	0.382	0.3	96	0.00	10.53
47		Methylcyclohexane	0.668	0.680	-1.8	94	0.00	10.56
48		Dibromomethane	0.250	0.248	0.8	97	0.00	11.02
49	C	1,2-Dichloropropane	0.463	0.458	1.1	95	0.00	11.12
50		Bromodichloromethane	0.523	0.502	4.0	92	0.00	11.15
51		Methyl methacrylate	0.384	0.426	-10.9	110	0.00	11.23
52		2-Chloroethyl vinyl ether	0.304	0.303	0.3	96	0.00	11.69
53		cis-1,3-Dichloropropene	0.688	0.691	-0.4	96	0.00	11.83
54	I	Chlorobenzene-d5	1.000	1.000	0.0	99	0.00	13.73
55	S	Toluene-d8	1.337	1.345	-0.6	99	0.00	12.04
56	C	Toluene	2.088	2.122	-1.6	97	0.00	12.09
		----------	Amount	Calc.	%Drift	----------		
57		2-Nitropropane	200.000	187.698	6.2	98	0.00	12.34
		----------	AvgRF	CCRF	%Dev	----------		
58		4-Methyl-2-pentanone	0.577	0.590	-2.3	100	0.00	12.43
59		trans-1,3-Dichloropropene	0.781	0.832	-6.5	103	0.00	12.51
60		Tetrachloroethene	0.491	0.542	-10.4	105	0.00	12.54
61		Ethyl methacrylate	0.720	0.708	1.7	97	0.00	12.59
62		1,1,2-Trichloroethane	0.414	0.405	2.2	96	0.00	12.70
63		Dibromochloromethane	0.425	0.445	-4.7	98	0.00	12.92
64		1,3-Dichloropropane	0.849	0.842	0.8	97	0.00	13.01
65		1,2-Dibromoethane	0.466	0.466	0.0	97	0.00	13.22
66		2-hexanone	0.420	0.434	-3.3	100	0.00	13.32
67		1-Chlorohexane	0.736	0.720	2.2	93	0.00	13.65
68	C	Ethylbenzene	2.389	2.400	-0.5	98	0.00	13.73
69	P	Chlorobenzene	1.303	1.336	-2.5	99	0.00	13.75
70		1,1,1,2-Tetrachloroethane	0.425	0.443	-4.2	99	0.00	13.80
71		m,p-Xylene	1.836	1.862	-1.4	97	0.00	13.87
72		o-Xylene	1.986	2.033	-2.4	99	0.00	14.35
73		Styrene	1.552	1.583	-2.0	97	0.00	14.40

Initial Calibration Verification

Job Number: F68616
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VF1034-ICV1034
Lab FileID: F038110.D

			Amount	Calc.	%Drift			
74	P	Bromoform	40.000	36.879	7.8	99	0.00	14.49
			AvgRF	CCRF	%Dev			
75		Isopropylbenzene	2.056	2.194	-6.7	101	0.00	14.67
76	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	100	0.00	16.23
77	S	4-Bromofluorobenzene	1.027	1.031	-0.4	99	0.00	15.02
			Amount	Calc.	%Drift			
78		cis-1,4-Dichloro-2-butene	40.000	36.667	8.3	98	0.00	15.04
			AvgRF	CCRF	%Dev			
79		n-Propylbenzene	4.886	5.027	-2.9	98	0.00	15.11
80		Bromobenzene	0.954	0.969	-1.6	98	0.00	15.17
81	P	1,1,2,2-Tetrachloroethane	1.129	1.145	-1.4	99	0.00	15.18
82		1,3,5-Trimethylbenzene	3.419	3.489	-2.0	97	0.00	15.29
83		2-Chlorotoluene	3.100	3.153	-1.7	99	0.00	15.34
			Amount	Calc.	%Drift			
84		trans-1,4-Dichloro-2-Bute	40.000	44.290	-10.7	114	0.00	15.37
			AvgRF	CCRF	%Dev			
85		1,2,3-Trichloropropane	0.298	0.278	6.7	89	0.00	15.36
			Amount	Calc.	%Drift			
86		Cyclohexanone	200.000	193.703	3.1	93	0.00	15.46
			AvgRF	CCRF	%Dev			
87		4-Chlorotoluene	3.131	3.185	-1.7	98	0.00	15.51
88		tert-Butylbenzene	2.029	2.083	-2.7	99	0.00	15.66
89		1,2,4-Trimethylbenzene	3.544	3.571	-0.8	97	0.00	15.73
90		Pentachloroethane	0.502	0.486	3.2	94	0.00	15.74
91		sec-Butylbenzene	4.300	4.493	-4.5	99	0.00	15.85
92		4-Isopropyltoluene	3.272	3.412	-4.3	99	0.00	15.98
93		1,3-Dichlorobenzene	1.790	1.861	-4.0	100	0.00	16.16
94		1,4-Dichlorobenzene	1.834	1.902	-3.7	100	0.00	16.25
95		n-Butylbenzene	2.243	2.290	-2.1	97	0.00	16.45
96		Benzyl Chloride	0.427	0.443	-3.7	96	0.00	16.49
97		1,2-Dichlorobenzene	1.784	1.853	-3.9	101	0.00	16.72
			Amount	Calc.	%Drift			
98		1,2-Dibromo-3-Chloropropa	40.000	40.246	-0.6	102	0.00	17.55
			AvgRF	CCRF	%Dev			
99		Hexachlorobutadiene	0.550	0.578	-5.1	101	0.00	18.21
100		1,2,4-Trichlorobenzene	1.326	1.376	-3.8	101	0.00	18.29
101		Naphthalene	3.299	3.437	-4.2	102	0.00	18.68
102		1,2,3-Trichlorobenzene	1.240	1.254	-1.1	99	0.00	18.90
103	I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	99	0.00	7.55
104		Ethanol	0.289	0.283	2.1	94	0.00	6.18
			Amount	Calc.	%Drift			
105		Acrolein	200.000	226.604	-13.3	110	0.00	6.97
			AvgRF	CCRF	%Dev			
106		Tert butyl alcohol	1.543	1.494	3.2	97	0.00	7.65

Initial Calibration Verification

Job Number: F68616
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VF1034-ICV1034
Lab FileID: F038110.D

		Amount	Calc.	%Drift			
107	Isobutyl alcohol	800.000	852.504	-6.6	99	0.00	9.95

		AvgRF	CCRF	%Dev			
108	Tert Amyl Alcohol	1.235	1.270	-2.8	101	0.00	10.10
109	1,4-Dioxane	0.130	0.144	-10.8	104	0.00	11.35

(#) = Out of Range SPCC's out = 0 CCC's out = 0
F038110.D 8260FW.M Thu Oct 08 15:28:46 2009

Continuing Calibration Summary

Job Number: F68616
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VF1041-CC1034
Lab FileID: F038303.D

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\101909\F038303.D Vial: 2
Acq On : 19 Oct 2009 10:10 am Operator: LoganD
Sample : cc1034-4 Inst : MSVOA9
Misc : ms12574,vf1041,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\8260FW.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Thu Oct 08 13:22:57 2009
Response via : Multiple Level Calibration

Min. RRF : 0.001 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	116	0.00	10.34
2		Dichlorodifluoromethane	0.207	0.268	-29.5#	136	0.05	4.32
3	P	Chloromethane	0.482	0.468	2.9	112	0.00	4.60
4	C	Vinyl Chloride	0.369	0.357	3.3	110	0.00	4.77
			Amount	Calc.	%Drift			
5		Bromomethane	40.000	46.886	-17.2	126	0.00	5.35
6		Chloroethane	40.000	41.074	-2.7	119	0.00	5.55
			AvgRF	CCRF	%Dev			
7		Trichlorofluoromethane	0.320	0.327	-2.2	109	0.01	5.77
8		Ethyl Ether	0.280	0.333	-18.9	135	0.00	6.18
			Amount	Calc.	%Drift			
9		1,2-Dichlorotrifluoroetha	40.000	47.368	-18.4	128	0.00	6.44
			AvgRF	CCRF	%Dev			
10	C	1,1-Dichloroethene	0.488	0.582	-19.3	134	0.00	6.53
			Amount	Calc.	%Drift			
11		Freon 113	40.000	31.098	22.3#	91	-0.02	6.56
			AvgRF	CCRF	%Dev			
12		Carbon Disulfide	1.209	1.043	13.7	97	0.00	6.63
13		Iodomethane	0.539	0.539	0.0	111	0.00	6.77
14		Allyl chloride	0.560	0.555	0.9	113	0.00	7.15
15		Methylene Chloride	0.693	0.683	1.4	116	0.00	7.29
16		Acetone	0.129	0.112	13.2	100	0.00	7.33
17		Methyl acetate	0.318	0.285	10.4	103	0.00	7.45
18		trans-1,2-Dichloroethene	0.637	0.623	2.2	110	0.00	7.51
			Amount	Calc.	%Drift			
19		Hexane	40.000	39.066	2.3	104	0.00	7.57
			AvgRF	CCRF	%Dev			
20		Methyl Tert Butyl Ether	1.296	1.105	14.7	98	0.00	7.61
21		Acetonitrile	0.055	0.047	14.5	96	0.00	7.94
22		Di-isopropyl ether	1.627	1.626	0.1	115	0.00	8.03
23		Chloroprene	0.785	0.518	34.0#	76	0.00	8.31
24	P	1,1-Dichloroethane	0.789	0.782	0.9	111	0.00	8.27
25		Acrylonitrile	0.157	0.104	33.8#	76	0.00	8.31
26		ETBE	1.540	1.420	7.8	105	0.00	8.47

Continuing Calibration Summary

Job Number: F68616
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VF1041-CC1034
Lab FileID: F038303.D

27		Vinyl acetate	0.397	0.260	34.5#	74	0.00	8.48
28		cis-1,2-Dichloroethene	0.415	0.401	3.4	109	0.00	8.91
29		2,2-Dichloropropane	0.601	0.567	5.7	106	0.00	9.07
30		Bromochloromethane	0.179	0.181	-1.1	115	0.00	9.16
31		Cyclohexane	0.823	0.711	13.6	96	0.00	9.20
32	C	Chloroform	0.694	0.701	-1.0	114	0.00	9.20
33		Ethyl acetate	0.433	0.306	29.3#	78	0.00	9.25
		----------	Amount	Calc.	%Drift	----------		
34		Tetrahydrofuran	40.000	33.753	15.6	94	0.00	9.42
		----------	AvgRF	CCRF	%Dev	----------		
35	S	Dibromofluoromethane	0.235	0.248	-5.5	122	0.00	9.41
		----------	Amount	Calc.	%Drift	----------		
36		Carbon Tetrachloride	40.000	41.805	-4.5	118	0.00	9.43
		----------	AvgRF	CCRF	%Dev	----------		
37		1,1,1-Trichloroethane	0.577	0.588	-1.9	113	0.00	9.50
38		2-Butanone	0.204	0.174	14.7	96	0.00	9.52
39		1,1-Dichloropropene	0.540	0.523	3.1	108	0.00	9.62
40		Propionitrile	0.067	0.051	23.9#	90	0.00	9.89
41		Methacrylonitrile	0.290	0.260	10.3	104	0.00	9.92
42		Benzene	1.523	1.494	1.9	111	0.00	9.90
43		TAME	1.321	1.207	8.6	104	0.00	9.95
44	S	1,2-Dichloroethane-d4	0.338	0.359	-6.2	125	0.00	10.05
45		1,2-Dichloroethane	0.579	0.578	0.2	114	0.00	10.12
46		Trichloroethene	0.383	0.372	2.9	110	0.00	10.53
47		Methylcyclohexane	0.668	0.614	8.1	99	0.00	10.56
48		Dibromomethane	0.250	0.239	4.4	109	0.00	11.02
49	C	1,2-Dichloropropane	0.463	0.438	5.4	106	0.00	11.12
50		Bromodichloromethane	0.523	0.533	-1.9	115	0.00	11.15
51		Methyl methacrylate	0.384	0.294	23.4#	89	0.00	11.22
52		2-Chloroethyl vinyl ether	0.304	0.261	14.1	97	0.00	11.69
53		cis-1,3-Dichloropropene	0.688	0.668	2.9	109	0.00	11.83
54	I	Chlorobenzene-d5	1.000	1.000	0.0	113	0.00	13.73
55	S	Toluene-d8	1.337	1.341	-0.3	112	0.00	12.04
56	C	Toluene	2.088	2.089	-0.0	108	0.00	12.09
		----------	Amount	Calc.	%Drift	----------		
57		2-Nitropropane	200.000	169.416	15.3	100	0.00	12.34
		----------	AvgRF	CCRF	%Dev	----------		
58		4-Methyl-2-pentanone	0.577	0.535	7.3	102	0.00	12.43
59		trans-1,3-Dichloropropene	0.781	0.786	-0.6	110	0.00	12.51
60		Tetrachloroethene	0.491	0.470	4.3	103	0.00	12.54
61		Ethyl methacrylate	0.720	0.553	23.2#	86	0.00	12.59
62		1,1,2-Trichloroethane	0.414	0.394	4.8	106	0.00	12.70
63		Dibromochloromethane	0.425	0.478	-12.5	118	0.00	12.92
64		1,3-Dichloropropane	0.849	0.810	4.6	105	0.00	13.01
65		1,2-Dibromoethane	0.466	0.450	3.4	106	0.00	13.22
66		2-hexanone	0.420	0.365	13.1	95	0.00	13.32
67		1-Chlorohexane	0.736	0.706	4.1	103	0.00	13.65
68	C	Ethylbenzene	2.389	2.434	-1.9	112	0.00	13.73
69	P	Chlorobenzene	1.303	1.352	-3.8	113	0.00	13.75
70		1,1,1,2-Tetrachloroethane	0.425	0.477	-12.2	120	0.00	13.80
71		m,p-Xylene	1.836	1.876	-2.2	111	0.00	13.87
72		o-Xylene	1.986	1.976	0.5	108	0.00	14.35
73		Styrene	1.552	1.528	1.5	106	0.00	14.40

Continuing Calibration Summary

Job Number: F68616
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VF1041-CC1034
Lab FileID: F038303.D

			Amount	Calc.	%Drift			
74	P	Bromoform	40.000	38.452	3.9	117	0.00	14.49
			AvgRF	CCRF	%Dev			
75		Isopropylbenzene	2.056	2.097	-2.0	109	0.00	14.67
76	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	109	0.00	16.23
77	S	4-Bromofluorobenzene	1.027	1.019	0.8	108	0.00	15.02
			Amount	Calc.	%Drift			
78		cis-1,4-Dichloro-2-butene	40.000	46.178	-15.4	136	0.00	15.04
			AvgRF	CCRF	%Dev			
79		n-Propylbenzene	4.886	5.138	-5.2	109	0.00	15.11
80		Bromobenzene	0.954	1.019	-6.8	113	0.00	15.17
81	P	1,1,2,2-Tetrachloroethane	1.129	1.095	3.0	104	0.00	15.18
82		1,3,5-Trimethylbenzene	3.419	3.578	-4.7	109	0.00	15.29
83		2-Chlorotoluene	3.100	3.230	-4.2	111	0.00	15.34
			Amount	Calc.	%Drift			
84		trans-1,4-Dichloro-2-Bute	40.000	47.361	-18.4	134	0.00	15.37
			AvgRF	CCRF	%Dev			
85		1,2,3-Trichloropropane	0.298	0.293	1.7	103	0.00	15.37
			Amount	Calc.	%Drift			
86		Cyclohexanone	200.000	132.389	33.8#	70	0.00	15.46
			AvgRF	CCRF	%Dev			
87		4-Chlorotoluene	3.131	3.245	-3.6	110	0.00	15.51
88		tert-Butylbenzene	2.029	2.128	-4.9	111	0.00	15.67
89		1,2,4-Trimethylbenzene	3.544	3.768	-6.3	112	0.00	15.73
90		Pentachloroethane	0.502	0.552	-10.0	116	0.00	15.74
91		sec-Butylbenzene	4.300	4.557	-6.0	109	0.00	15.86
92		4-Isopropyltoluene	3.272	3.515	-7.4	111	0.00	15.98
93		1,3-Dichlorobenzene	1.790	1.904	-6.4	112	0.00	16.16
94		1,4-Dichlorobenzene	1.834	1.945	-6.1	112	0.00	16.25
95		n-Butylbenzene	2.243	2.360	-5.2	109	0.00	16.45
96		Benzyl Chloride	0.427	0.440	-3.0	104	0.00	16.49
97		1,2-Dichlorobenzene	1.784	1.856	-4.0	110	0.00	16.72
			Amount	Calc.	%Drift			
98		1,2-Dibromo-3-Chloropropa	40.000	34.748	13.1	96	0.00	17.55
			AvgRF	CCRF	%Dev			
99		Hexachlorobutadiene	0.550	0.553	-0.5	106	0.00	18.20
100		1,2,4-Trichlorobenzene	1.326	1.364	-2.9	109	0.00	18.29
101		Naphthalene	3.299	3.037	7.9	98	0.00	18.68
102		1,2,3-Trichlorobenzene	1.240	1.223	1.4	106	0.00	18.90
103	I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	74	0.00	7.55
104		Ethanol	0.289	0.619	-114.2#	153	0.00	6.18
			Amount	Calc.	%Drift			
105		Acrolein	200.000	179.863	10.1	66	0.00	6.97
			AvgRF	CCRF	%Dev			
106		Tert butyl alcohol	1.543	1.665	-7.9	81	0.00	7.64

Continuing Calibration Summary

Job Number: F68616
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VF1041-CC1034
Lab FileID: F038303.D

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            ----------------------- Amount  Calc.    %Drift   -------------
107     Isobutyl alcohol          800.000 1088.301    -36.0#  95   0.00    9.95

            ----------------------- AvgRF   CCRF      %Dev   --------------
108     Tert Amyl Alcohol           1.235   1.317     -6.6   78   0.00   10.10
109     1,4-Dioxane                 0.130   0.151    -16.2   82   0.00   11.35
 ---------------------------------------------------------------------------
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    (#) = Out of Range               SPCC's out = 0  CCC's out = 0
     F038110.D  8260FW.M         Tue Oct 20 08:48:58 2009
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5.7.3

5

Initial Calibration Summary

Job Number: F68616
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VF1042-ICC1042
Lab FileID: F038335.D

Response Factor Report MSVOA9

Method : C:\MSDCHEM\1\METHODS\8260FW.M (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Oct 20 13:56:41 2009
Response via : Initial Calibration

Calibration Files
1 =F038332.D 2 =F038333.D 3 =F038334.D 4 =F038335.D
5 =F038336.D 6 =F038337.D

		Compound	1	2	3	4	5	6	Avg	%RSD
1)	I	Fluorobenzene	----------ISTD----------							
2)		Dichlorodifluoromet	0.258	0.250	0.394	0.379	0.354	0.356	0.332	18.75
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9984								
		Response Ratio = 0.00000 + 0.35838 *A								
3)	P	Chloromethane	0.538	0.503	0.697	0.676	0.653	0.649	0.619	12.81
4)	C	Vinyl Chloride	0.476	0.373	0.497	0.493	0.478	0.473	0.465	9.89
5)		Bromomethane	0.209	0.214	0.230	0.193	0.156	0.124	0.188	21.27
		---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9992								
		Response Ratio = 0.00000 + 0.24071 *A + -0.05864 *A^2								
6)		Chloroethane	0.157	0.205	0.265	0.254	0.241	0.221	0.224	17.61
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9940								
		Response Ratio = 0.00000 + 0.23081 *A								
7)		Trichlorofluorometh	0.281	0.323	0.456	0.445	0.413	0.406	0.387	18.11
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9978								
		Response Ratio = 0.00000 + 0.41257 *A								
8)		Ethyl Ether	0.271	0.287	0.303	0.305	0.291	0.291	0.291	4.22
9)		1,2-Dichlorotrifluo	0.278	0.238	0.377	0.352	0.330	0.330	0.318	15.99
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9981								
		Response Ratio = 0.00000 + 0.33294 *A								
10)	C	1,1-Dichloroethene	0.482	0.406	0.548	0.530	0.508	0.498	0.495	9.97
11)		Freon 113	0.168	0.148	0.213	0.194	0.177	0.185	0.181	12.27
12)		Carbon Disulfide	0.988	0.754	1.039	0.945	0.963	0.950	0.940	10.34
13)		Iodomethane	0.437	0.455	0.549	0.528	0.528	0.519	0.502	9.01
14)		Allyl chloride	0.529	0.435	0.541	0.547	0.545	0.546	0.524	8.40
15)		Methylene Chloride	3.145	1.349	0.743	0.685	0.646	0.633	1.200	82.55
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9997								
		Response Ratio = 0.00000 + 0.64536 *A								
16)		Acetone	0.138	0.109	0.105	0.106	0.103	0.106	0.111	11.85
17)		Methyl acetate	0.252	0.257	0.268	0.270	0.259	0.261	0.261	2.68
18)		trans-1,2-Dichloroe	0.545	0.461	0.582	0.568	0.566	0.572	0.549	8.17
19)		Hexane	0.327	0.257	0.326	0.317	0.299	0.304	0.305	8.50
20)		Methyl Tert Butyl E	0.895	0.929	0.992	1.000	0.987	1.003	0.968	4.61
21)		Acetonitrile	0.067	0.049	0.050	0.049	0.048	0.049	0.052	14.02
22)		Di-isopropyl ether	1.202	1.273	1.492	1.496	1.494	1.494	1.408	9.54
23)		Chloroprene	0.706	0.713	0.773	0.757	0.741	0.761	0.742	3.67
24)	P	1,1-Dichloroethane	0.621	0.605	0.732	0.723	0.717	0.715	0.686	8.30
25)		Acrylonitrile	0.141	0.143	0.155	0.151	0.148	0.152	0.148	3.67
26)		ETBE	1.024	1.137	1.298	1.311	1.304	1.308	1.230	9.89
27)		Vinyl acetate	0.470	0.524	0.584	0.564	0.538	0.525	0.534	7.35
28)		cis-1,2-Dichloroeth	0.315	0.314	0.374	0.374	0.373	0.368	0.353	8.51

Initial Calibration Summary

Job Number: F68616
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VF1042-ICC1042
Lab FileID: F038335.D

29)		2,2-Dichloropropane	0.457	0.416	0.535	0.524	0.508	0.494	0.489	9.22
30)		Bromochloromethane	0.146	0.152	0.171	0.170	0.166	0.163	0.161	6.26
31)		Cyclohexane	0.458	0.434	0.648	0.639	0.611	0.627	0.570	16.99

---- Linear regr., Force(0,0) ---- Coefficient = 0.9992
Response Ratio = 0.00000 + 0.62401 *A

32)	C	Chloroform	0.581	0.567	0.663	0.655	0.645	0.638	0.625	6.48
33)		Ethyl acetate	0.265	0.273	0.304	0.322	0.307	0.312	0.297	7.68
34)		Tetrahydrofuran	0.115	0.108	0.103	0.108	0.104	0.108	0.108	3.77
35)	S	Dibromofluoromethan	0.251	0.253	0.254	0.252	0.247	0.246	0.251	1.38
36)		Carbon Tetrachlorid	0.388	0.383	0.528	0.513	0.504	0.508	0.471	14.10
37)		1,1,1-Trichloroetha	0.473	0.426	0.563	0.548	0.541	0.540	0.515	10.42
38)		2-Butanone	0.157	0.147	0.161	0.165	0.160	0.165	0.159	4.23
39)		1,1-Dichloropropene	0.416	0.342	0.479	0.476	0.470	0.475	0.443	12.44
40)		Propionitrile	0.049	0.049	0.052	0.053	0.050	0.052	0.051	2.77
41)		Methacrylonitrile	0.245	0.251	0.272	0.271	0.251	0.241	0.255	5.15
42)		Benzene	1.244	1.170	1.417	1.389	1.355	1.319	1.315	7.10
43)		TAME	0.935	0.998	1.112	1.114	1.108	1.109	1.062	7.27
44)	S	1,2-Dichloroethane-	0.344	0.346	0.357	0.364	0.377	0.341	0.355	3.89
45)		1,2-Dichloroethane	0.496	0.503	0.547	0.542	0.536	0.533	0.526	4.08
46)		Trichloroethene	0.315	0.281	0.358	0.345	0.342	0.342	0.330	8.49
47)		Methylcyclohexane	0.465	0.377	0.557	0.545	0.529	0.542	0.503	13.85
48)		Dibromomethane	0.192	0.206	0.225	0.224	0.222	0.222	0.215	6.28
49)	C	1,2-Dichloropropane	0.357	0.346	0.406	0.404	0.408	0.410	0.389	7.46
50)		Bromodichloromethan	0.389	0.424	0.497	0.497	0.500	0.499	0.468	10.37
51)		Methyl methacrylate	0.234	0.248	0.287	0.302	0.305	0.314	0.282	11.63
52)		2-Chloroethyl vinyl	0.172	0.205	0.238	0.243	0.237	0.237	0.222	12.58
53)		cis-1,3-Dichloropro	0.498	0.512	0.606	0.614	0.614	0.610	0.576	9.54
54)	I	Chlorobenzene-d5	----------ISTD----------							
55)	S	Toluene-d8	1.334	1.283	1.310	1.332	1.364	1.383	1.334	2.71
56)	C	Toluene	1.733	1.542	1.916	1.952	1.941	1.958	1.840	9.17
57)		2-Nitropropane	0.086	0.090	0.110	0.124	0.126	0.132	0.111	17.60

---- Linear regr., Force(0,0) ---- Coefficient = 0.9988
Response Ratio = 0.00000 + 0.12886 *A

58)		4-Methyl-2-pentanon	0.414	0.446	0.492	0.510	0.495	0.502	0.477	8.01
59)		trans-1,3-Dichlorop	0.588	0.594	0.705	0.728	0.743	0.755	0.686	10.94
60)		Tetrachloroethene	0.429	0.354	0.468	0.471	0.481	0.497	0.450	11.59
61)		Ethyl methacrylate	0.342	0.417	0.521	0.572	0.578	0.612	0.507	20.85

---- Linear regr., Force(0,0) ---- Coefficient = 0.9985
Response Ratio = 0.00000 + 0.59579 *A

62)		1,1,2-Trichloroetha	0.332	0.330	0.358	0.373	0.370	0.378	0.357	5.84
63)		Dibromochloromethan	0.351	0.359	0.423	0.451	0.455	0.462	0.417	11.94
64)		1,3-Dichloropropane	0.657	0.660	0.742	0.775	0.771	0.780	0.731	7.85
65)		1,2-Dibromoethane	0.348	0.364	0.414	0.429	0.429	0.437	0.403	9.36
66)		2-hexanone	0.265	0.292	0.335	0.353	0.344	0.354	0.324	11.38
67)		1-Chlorohexane	0.528	0.428	0.636	0.651	0.645	0.667	0.592	16.01

---- Linear regr., Force(0,0) ---- Coefficient = 0.9995
Response Ratio = 0.00000 + 0.65792 *A

68)	C	Ethylbenzene	2.160	1.781	2.250	2.283	2.268	2.267	2.168	8.98
69)	P	Chlorobenzene	1.226	1.063	1.255	1.277	1.264	1.269	1.226	6.65
70)		1,1,1,2-Tetrachloro	0.364	0.358	0.435	0.447	0.449	0.454	0.418	10.64
71)		m,p-Xylene	1.511	1.360	1.735	1.767	1.723	1.687	1.630	9.83
72)		o-Xylene	1.459	1.395	1.790	1.856	1.866	1.875	1.707	12.89
73)		Styrene	0.954	1.008	1.352	1.430	1.457	1.476	1.279	18.41

---- Linear regr., Force(0,0) ---- Coefficient = 0.9998
Response Ratio = 0.00000 + 1.46223 *A

Initial Calibration Summary

Job Number: F68616
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VF1042-ICC1042
Lab FileID: F038335.D

```
 74) P   Bromoform           0.195 0.221 0.272 0.299 0.306 0.319 0.269  18.72
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9990
               Response Ratio = 0.00000 + 0.31208 *A

 75)     Isopropylbenzene    1.592 1.352 1.887 1.948 1.947 1.965 1.782  14.21

 76) I   1,4-Dichlorobenzene-d ----------------ISTD--------------------
 77) S   4-Bromofluorobenzen 1.022 1.016 1.018 1.008 1.038 1.034 1.023   1.11
 78)     cis-1,4-Dichloro-2- 0.290 0.135 0.189 0.227 0.250 0.279 0.228  25.70
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9918
               Response Ratio = 0.00000 + 0.26359 *A

 79)     n-Propylbenzene     4.613 3.839 4.927 4.865 4.830 4.779 4.642   8.78
 80)     Bromobenzene        0.931 0.898 1.000 0.969 0.962 0.943 0.951   3.71
 81) P   1,1,2,2-Tetrachloro 1.017 0.981 1.039 1.040 1.044 1.055 1.029   2.61
 82)     1,3,5-Trimethylbenz 2.899 2.622 3.412 3.390 3.396 3.388 3.184  10.68
 83)     2-Chlorotoluene     2.790 2.546 3.085 3.058 3.061 3.068 2.935   7.52
 84)     trans-1,4-Dichloro- 0.229 0.127 0.184 0.222 0.233 0.257 0.209  22.37
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9943
               Response Ratio = 0.00000 + 0.24493 *A

 85)     1,2,3-Trichloroprop 0.293 0.260 0.288 0.284 0.278 0.282 0.281   4.00
 86)     Cyclohexanone       0.039 0.024 0.028 0.028 0.029 0.032 0.030  16.73
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9957
               Response Ratio = 0.00000 + 0.03046 *A

 87)     4-Chlorotoluene     2.756 2.539 3.072 3.077 3.116 3.104 2.944   8.16
 88)     tert-Butylbenzene   1.841 1.485 1.983 1.982 2.011 2.026 1.888  11.02
 89)     1,2,4-Trimethylbenz 3.114 2.851 3.592 3.594 3.554 3.518 3.371   9.29
 90)     Pentachloroethane   0.468 0.466 0.520 0.511 0.489 0.477 0.489   4.60
 91)     sec-Butylbenzene    4.207 3.178 4.327 4.265 4.222 4.205 4.067  10.77
 92)     4-Isopropyltoluene  3.101 2.452 3.344 3.305 3.261 3.242 3.117  10.79
 93)     1,3-Dichlorobenzene 1.838 1.571 1.810 1.806 1.804 1.786 1.769   5.56
 94)     1,4-Dichlorobenzene 2.041 1.696 1.901 1.848 1.822 1.815 1.854   6.13
 95)     n-Butylbenzene      2.202 1.597 2.186 2.209 2.216 2.242 2.109  11.92
 96)     Benzyl Chloride     0.332 0.306 0.393 0.410 0.406 0.411 0.376  12.20
 97)     1,2-Dichlorobenzene 1.830 1.577 1.792 1.783 1.757 1.742 1.747   5.07
 98)     1,2-Dibromo-3-Chlor 0.229 0.175 0.194 0.198 0.201 0.210 0.201   8.93
 99)     Hexachlorobutadiene 0.919 0.400 0.510 0.499 0.498 0.502 0.555  32.98
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9997
               Response Ratio = 0.00000 + 0.50094 *A

100)     1,2,4-Trichlorobenz 1.708 1.069 1.230 1.277 1.266 1.253 1.301  16.42
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9998
               Response Ratio = 0.00000 + 1.25848 *A

101)     Naphthalene         4.426 2.432 2.765 2.845 2.816 2.832 3.020  23.40
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9999
               Response Ratio = 0.00000 + 2.82675 *A

102)     1,2,3-Trichlorobenz 1.889 0.963 1.131 1.133 1.147 1.130 1.232  26.71
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9998
               Response Ratio = 0.00000 + 1.13503 *A


103) I   Tert Butyl Alcohol-d1 ----------------ISTD--------------------
104)     Ethanol             0.626 0.624 0.612 0.576 0.553 0.482 0.579   9.60
105)     Acrolein            0.353 0.441 0.453 0.437 0.462 0.441 0.431   9.12
106)     Tert butyl alcohol  1.926 1.595 1.580 1.558 1.587 1.530 1.629   9.04
```

Initial Calibration Summary

Job Number: F68616
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VF1042-ICC1042
Lab FileID: F038335.D

```
107)     Isobutyl alcohol    0.777 0.761 0.813 0.796 0.779 0.709 0.773   4.65
108)     Tert Amyl Alcohol   1.017 1.026 1.203 1.226 1.228 1.216 1.153   8.84
109)     1,4-Dioxane         0.256 0.115 0.127 0.136 0.135 0.131 0.150  34.86
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9991
               Response Ratio = 0.00000 + 0.13252 *A

 ---------------------------------------------------------------------------
 (#) = Out of Range

          8260FW.M          Wed Oct 21 08:28:59 2009
```

5.7.4

5

Initial Calibration Verification

Job Number: F68616
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VF1042-ICV1042
Lab FileID: F038338.D

Evaluate Continuing Calibration Report

```
Data File : C:\MSDCHEM\1\DATA\102009\F038338.D          Vial: 7
Acq On    : 20 Oct 2009   1:48 pm                   Operator: LoganD
Sample    : icv1042-4                               Inst    : MSVOA9
Misc      : ms12574,vf1042,,,,,                     Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\MSDCHEM\1\METHODS\8260FW.M (RTE Integrator)
Title        : SW-846 Method 5035A/8260B
Last Update  : Tue Oct 20 13:56:41 2009
Response via : Multiple Level Calibration

Min. RRF     :   0.001  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Fluorobenzene	1.000	1.000	0.0	103	0.00	10.34
	----------	Amount	Calc.	%Drift	----------		
2	Dichlorodifluoromethane	40.000	34.944	12.6	85	0.03	4.28
	----------	AvgRF	CCRF	%Dev	----------		
3 P	Chloromethane	0.619	0.620	-0.2	94	0.00	4.61
4 C	Vinyl Chloride	0.465	0.456	1.9	95	0.02	4.78
	----------	Amount	Calc.	%Drift	----------		
5	Bromomethane	40.000	30.879	22.8#	84	0.00	5.36
6	Chloroethane	40.000	39.148	2.1	91	0.00	5.55
7	Trichlorofluoromethane	40.000	40.984	-2.5	97	0.01	5.77
	----------	AvgRF	CCRF	%Dev	----------		
8	Ethyl Ether	0.291	0.300	-3.1	101	0.00	6.18
	----------	Amount	Calc.	%Drift	----------		
9	1,2-Dichlorotrifluoroetha	40.000	46.800	-17.0	113	0.00	6.44
	----------	AvgRF	CCRF	%Dev	----------		
10 C	1,1-Dichloroethene	0.495	0.591	-19.4	114	0.00	6.53
11	Freon 113	0.181	0.226	-24.9#	119	0.01	6.57
12	Carbon Disulfide	0.940	1.277	-35.9#	139	0.00	6.63
13	Iodomethane	0.502	0.571	-13.7	111	0.00	6.76
14	Allyl chloride	0.524	0.694	-32.4#	130	0.00	7.15
	----------	Amount	Calc.	%Drift	----------		
15	Methylene Chloride	40.000	43.094	-7.7	104	0.00	7.29
	----------	AvgRF	CCRF	%Dev	----------		
16	Acetone	0.111	0.121	-9.0	117	0.00	7.33
17	Methyl acetate	0.261	0.291	-11.5	110	0.00	7.45
18	trans-1,2-Dichloroethene	0.549	0.624	-13.7	113	0.00	7.50
19	Hexane	0.305	0.341	-11.8	110	0.00	7.56
20	Methyl Tert Butyl Ether	0.968	1.071	-10.6	110	0.00	7.61
21	Acetonitrile	0.052	0.056	-7.7	117	0.01	7.94
22	Di-isopropyl ether	1.408	1.609	-14.3	110	0.00	8.03
23	Chloroprene	0.742	0.717	3.4	97	0.00	8.31
24 P	1,1-Dichloroethane	0.686	0.758	-10.5	107	0.00	8.27
25	Acrylonitrile	0.148	0.143	3.4	97	0.00	8.31
26	ETBE	1.230	1.387	-12.8	108	0.00	8.47

Initial Calibration Verification

Job Number: F68616
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VF1042-ICV1042
Lab FileID: F038338.D

27		Vinyl acetate	0.534	0.629	-17.8	114	0.00	8.48
28		cis-1,2-Dichloroethene	0.353	0.377	-6.8	103	0.00	8.91
29		2,2-Dichloropropane	0.489	0.528	-8.0	103	0.00	9.06
30		Bromochloromethane	0.161	0.175	-8.7	105	0.00	9.16
		----------	Amount	Calc.	%Drift	----------		
31		Cyclohexane	40.000	44.575	-11.4	112	0.00	9.20
		----------	AvgRF	CCRF	%Dev	----------		
32	C	Chloroform	0.625	0.671	-7.4	105	0.00	9.20
33		Ethyl acetate	0.297	0.499	-68.0#	159	0.00	9.25
34		Tetrahydrofuran	0.108	0.128	-18.5	122	0.00	9.41
35	S	Dibromofluoromethane	0.251	0.248	1.2	101	0.00	9.41
36		Carbon Tetrachloride	0.471	0.523	-11.0	104	0.00	9.42
37		1,1,1-Trichloroethane	0.515	0.564	-9.5	105	0.00	9.50
38		2-Butanone	0.159	0.181	-13.8	113	0.00	9.52
39		1,1-Dichloropropene	0.443	0.494	-11.5	106	0.00	9.62
40		Propionitrile	0.051	0.057	-11.8	110	0.00	9.89
41		Methacrylonitrile	0.255	0.284	-11.4	107	0.00	9.91
42		Benzene	1.315	1.453	-10.5	107	0.00	9.90
43		TAME	1.062	1.195	-12.5	110	0.00	9.95
44	S	1,2-Dichloroethane-d4	0.355	0.364	-2.5	103	0.00	10.04
45		1,2-Dichloroethane	0.526	0.553	-5.1	105	0.00	10.11
46		Trichloroethene	0.330	0.356	-7.9	106	0.00	10.53
47		Methylcyclohexane	0.503	0.594	-18.1	112	0.00	10.56
48		Dibromomethane	0.215	0.229	-6.5	105	0.00	11.02
49	C	1,2-Dichloropropane	0.389	0.420	-8.0	106	0.00	11.12
50		Bromodichloromethane	0.468	0.484	-3.4	100	0.00	11.15
51		Methyl methacrylate	0.282	0.370	-31.2#	126	0.00	11.23
52		2-Chloroethyl vinyl ether	0.222	0.268	-20.7#	113	0.00	11.69
53		cis-1,3-Dichloropropene	0.576	0.635	-10.2	106	0.00	11.83
54	I	Chlorobenzene-d5	1.000	1.000	0.0	102	0.00	13.73
55	S	Toluene-d8	1.334	1.360	-1.9	104	0.00	12.03
56	C	Toluene	1.840	2.050	-11.4	107	0.00	12.09
		----------	Amount	Calc.	%Drift	----------		
57		2-Nitropropane	200.000	200.852	-0.4	107	0.00	12.34
		----------	AvgRF	CCRF	%Dev	----------		
58		4-Methyl-2-pentanone	0.477	0.543	-13.8	109	0.00	12.43
59		trans-1,3-Dichloropropene	0.686	0.808	-17.8	113	0.00	12.51
60		Tetrachloroethene	0.450	0.534	-18.7	116	0.00	12.54
		----------	Amount	Calc.	%Drift	----------		
61		Ethyl methacrylate	40.000	40.894	-2.2	109	0.00	12.59
		----------	AvgRF	CCRF	%Dev	----------		
62		1,1,2-Trichloroethane	0.357	0.378	-5.9	104	0.00	12.69
63		Dibromochloromethane	0.417	0.455	-9.1	103	0.00	12.92
64		1,3-Dichloropropane	0.731	0.789	-7.9	104	0.00	13.01
65		1,2-Dibromoethane	0.403	0.441	-9.4	105	0.00	13.22
66		2-hexanone	0.324	0.385	-18.8	111	0.00	13.32
		----------	Amount	Calc.	%Drift	----------		
67		1-Chlorohexane	40.000	41.089	-2.7	106	0.00	13.65
		----------	AvgRF	CCRF	%Dev	----------		
68	C	Ethylbenzene	2.168	2.376	-9.6	106	0.00	13.73
69	P	Chlorobenzene	1.226	1.324	-8.0	106	0.00	13.75

Initial Calibration Verification

Job Number: F68616
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VF1042-ICV1042
Lab FileID: F038338.D

70		1,1,1,2-Tetrachloroethane	0.418	0.453	-8.4	104	0.00	13.80
71		m,p-Xylene	1.630	1.846	-13.3	107	0.00	13.87
72		o-Xylene	1.707	1.966	-15.2	108	0.00	14.35
		----------	Amount	Calc.	%Drift	----------		
73		Styrene	40.000	40.891	-2.2	107	0.00	14.40
74	P	Bromoform	40.000	38.509	3.7	103	0.00	14.49
		----------	AvgRF	CCRF	%Dev	----------		
75		Isopropylbenzene	1.782	2.094	-17.5	110	0.00	14.66
76	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	99	0.00	16.23
77	S	4-Bromofluorobenzene	1.023	1.042	-1.9	103	0.00	15.02
		----------	Amount	Calc.	%Drift	----------		
78		cis-1,4-Dichloro-2-butene	40.000	39.721	0.7	114	0.00	15.04
		----------	AvgRF	CCRF	%Dev	----------		
79		n-Propylbenzene	4.642	5.194	-11.9	106	0.00	15.11
80		Bromobenzene	0.951	1.001	-5.3	102	0.00	15.17
81	P	1,1,2,2-Tetrachloroethane	1.029	1.109	-7.8	106	0.00	15.18
82		1,3,5-Trimethylbenzene	3.184	3.604	-13.2	105	0.00	15.29
83		2-Chlorotoluene	2.935	3.291	-12.1	107	0.00	15.33
		----------	Amount	Calc.	%Drift	----------		
84		trans-1,4-Dichloro-2-Bute	40.000	46.973	-17.4	129	0.00	15.37
		----------	AvgRF	CCRF	%Dev	----------		
85		1,2,3-Trichloropropane	0.281	0.276	1.8	97	0.00	15.36
		----------	Amount	Calc.	%Drift	----------		
86		Cyclohexanone	200.000	197.051	1.5	105	0.00	15.46
		----------	AvgRF	CCRF	%Dev	----------		
87		4-Chlorotoluene	2.944	3.304	-12.2	107	0.00	15.51
88		tert-Butylbenzene	1.888	2.145	-13.6	107	0.00	15.66
89		1,2,4-Trimethylbenzene	3.371	3.714	-10.2	103	0.00	15.73
90		Pentachloroethane	0.489	0.502	-2.7	98	0.00	15.74
91		sec-Butylbenzene	4.067	4.595	-13.0	107	0.00	15.85
92		4-Isopropyltoluene	3.117	3.490	-12.0	105	0.00	15.98
93		1,3-Dichlorobenzene	1.769	1.916	-8.3	105	0.00	16.16
94		1,4-Dichlorobenzene	1.854	1.953	-5.3	105	0.00	16.25
95		n-Butylbenzene	2.109	2.299	-9.0	103	0.00	16.45
96		Benzyl Chloride	0.376	0.415	-10.4	100	0.00	16.49
97		1,2-Dichlorobenzene	1.747	1.876	-7.4	104	0.00	16.72
98		1,2-Dibromo-3-Chloropropa	0.201	0.215	-7.0	108	0.00	17.55
		----------	Amount	Calc.	%Drift	----------		
99		Hexachlorobutadiene	40.000	44.090	-10.2	110	0.00	18.20
100		1,2,4-Trichlorobenzene	40.000	42.926	-7.3	105	0.00	18.29
101		Naphthalene	40.000	44.079	-10.2	109	0.00	18.67
102		1,2,3-Trichlorobenzene	40.000	43.356	-8.4	108	0.00	18.90
		----------	AvgRF	CCRF	%Dev	----------		
103	I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	111	0.00	7.55
104		Ethanol	0.579	0.491	15.2	94	0.00	6.18
105		Acrolein	0.431	1.227	-184.7#	311#	0.00	6.97
106		Tert butyl alcohol	1.629	1.596	2.0	113	0.00	7.64
107		Isobutyl alcohol	0.773	0.762	1.4	106	0.00	9.95

Initial Calibration Verification

Job Number: F68616
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VF1042-ICV1042
Lab FileID: F038338.D

```
108     Tert Amyl Alcohol           1.153   1.280    -11.0  115   0.00   10.09

            ----------------------- Amount  Calc.    %Drift   -------------
109     1,4-Dioxane                800.000 882.231    -10.3  119   0.00   11.34
 ---------------------------------------------------------------------------
 ---------------------------------------------------------------------------

    (#) = Out of Range               SPCC's out = 0  CCC's out = 0
     F038335.D  8260FW.M         Wed Oct 21 08:28:47 2009
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5.7.5

5

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Instrument Runlogs
- Initial and Continuing Calibration Blanks
- Initial and Continuing Calibration Checks
- High and Low Check Standards
- Interfering Element Check Standards
- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H31013W2.PRN Date Analyzed: 10/13/09 Methods: SW846 7470A
Analyst: LM Run ID: MA7589
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:07	MA7589-STD1	1		STD01REP1
11:09	MA7589-STD2	1		STD02REP1
11:11	MA7589-STD3	1		STD03REP1
11:13	MA7589-STD4	1		STD04REP1
11:16	MA7589-STD5	1		STD05REP1
11:18	MA7589-STD6	1		STD06REP1
11:21	MA7589-HSTD1	1		
11:23	MA7589-ICV1	1		
11:26	MA7589-ICB1	1		
11:28	MA7589-CRI1	1		
11:30	MA7589-CCV1	1		
11:32	MA7589-CCB1	1		
11:35	MP17175-MB1	1		
11:38	MP17175-B1	1		
11:40	F68585-1	1		(sample used for QC only; not part of login F68616)
11:43	MP17175-D1	1		
11:45	MP17175-SD1	5		
11:48	MP17175-S1	1		
11:50	MP17175-S2	1		
11:52	ZZZZZZ	1		
11:55	ZZZZZZ	1		
11:57	ZZZZZZ	1		
12:00	MA7589-CCV2	1		
12:02	MA7589-CCB2	1		
12:04	ZZZZZZ	1		
12:07	ZZZZZZ	1		
12:09	ZZZZZZ	1		
12:11	ZZZZZZ	1		
12:13	ZZZZZZ	1		
12:16	ZZZZZZ	1		
12:18	ZZZZZZ	1		
12:21	ZZZZZZ	1		
12:23	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H31013W2.PRN Date Analyzed: 10/13/09 Methods: SW846 7470A
Analyst: LM Run ID: MA7589
Parameters: Hg

	Time	Sample Description	Dilution Factor	PS Recov	Comments
	12:25	ZZZZZZ	1		
	12:27	MA7589-CCV3	1		
	12:29	MA7589-CCB3	1		
	12:32	ZZZZZZ	1		
	12:34	ZZZZZZ	1		
	12:36	ZZZZZZ	1		
	12:38	ZZZZZZ	1		
	12:41	ZZZZZZ	1		
	12:43	ZZZZZZ	1		
	12:45	MP17176-MB1	1		
	12:47	MP17176-B1	1		
	12:50	F68600-17	1		(sample used for QC only; not part of login F68616)
	12:52	MP17176-D1	1		
	12:54	MA7589-CCV4	1		
	12:56	MA7589-CCB4	1		
	12:59	MP17176-SD1	5		
	13:01	MP17176-S1	1		
	13:05	MP17176-S2	1		
	13:08	ZZZZZZ	1		
	13:10	ZZZZZZ	1		
	13:12	ZZZZZZ	1		
	13:15	ZZZZZZ	1		
	13:17	F68616-1	1		
	13:19	F68616-2	1		
	13:22	F68616-1A	1		
	13:24	MA7589-CCV5	1		
	13:26	MA7589-CCB5	1		
	13:28	F68616-2A	1		
---------->	Last reportable sample/prep for job F68616				
	13:31	ZZZZZZ	1		
	13:33	ZZZZZZ	1		
	13:35	ZZZZZZ	1		
	13:38	ZZZZZZ	1		
	13:40	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H31013W2.PRN Date Analyzed: 10/13/09 Methods: SW846 7470A
Analyst: LM Run ID: MA7589
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:42	ZZZZZZ	1		
13:44	ZZZZZZ	1		
13:46	ZZZZZZ	1		
13:49	ZZZZZZ	1		
13:51	MA7589-CCV6	1		
13:53	MA7589-CCB6	1		
13:55	ZZZZZZ	1		
13:58	ZZZZZZ	1		
14:02	MA7589-CRI2	1		
14:04	MA7589-CCV7	1		
14:06	MA7589-CCB7	1		

----------> Last reportable CCB for job F68616
Refer to raw data for calibration curve and standards.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H31013W2.PRN Date Analyzed: 10/13/09 Methods: SW846 7470A
QC Limits: result < RL Run ID: MA7589 Units: ug/l

Time:			11:26		11:32		12:02		12:29	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	1.0	.14	0.043	<1.0	-0.0040	<1.0	-0.0080	<1.0	0.016	<1.0

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H31013W2.PRN Date Analyzed: 10/13/09 Methods: SW846 7470A
QC Limits: result < RL Run ID: MA7589 Units: ug/l

Time:			12:56		13:26		13:53		14:06	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	1.0	.14	0.0090	<1.0	-0.019	<1.0	-0.0040	<1.0	-0.023	<1.0

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H31013W2.PRN Date Analyzed: 10/13/09 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA7589 Units: ug/l

Time:		11:23			11:30			12:00	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3.0	3.0	100.0	3.0	3.0	100.0	3.0	3.0	100.0

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H31013W2.PRN Date Analyzed: 10/13/09 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA7589 Units: ug/l

Time:		12:27			12:54			13:24	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3.0	3.0	100.0	3	3.1	103.3	3	2.9	96.7

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H31013W2.PRN Date Analyzed: 10/13/09 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA7589 Units: ug/l

Time:		13:51			14:04	
Sample ID:	CCV	CCV6		CCV	CCV7	
Metal	True	Results	% Rec	True	Results	% Rec
Mercury	3.0	3.0	100.0	3.0	3.0	100.0

(*) Outside of QC limits
(anr) Analyte not requested

6.1.2
6

HIGH STANDARD CHECK SUMMARY

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H31013W2.PRN Date Analyzed: 10/13/09 Methods: SW846 7470A
QC Limits: 95 to 105 % Recovery Run ID: MA7589 Units: ug/l

Time:		11:21	
Sample ID:	HSTD	HSTD1	
Metal	True	Results	% Rec
Mercury	6.0	6.0	100.0

(*) Outside of QC limits
(anr) Analyte not requested

6.1.3
6

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H31013W2.PRN Date Analyzed: 10/13/09 Methods: SW846 7470A
QC Limits: 80 to 120 % Recovery Run ID: MA7589 Units: ug/l

Time:			11:28		14:02	
Sample ID:	CRI	CRIA	CRI1		CRI2	
Metal	True	True	Results	% Rec	Results	% Rec
Mercury	0.20		0.24	120.0	0.22	110.0

(*) Outside of QC limits
(anr) Analyte not requested

6.1.4

6

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101409.ASC Date Analyzed: 10/14/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7594
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:58	MA7594-HSTD1	1		
10:01	MA7594-ICV1	1		
10:09	MA7594-ICB1	1		
10:13	MA7594-CRIA1	1		
10:21	MA7594-CRIA2	1		
10:25	MA7594-CRI1	1		
10:56	MA7594-ICSA1	1		
10:57	MA7594-ICSAB1	1		
11:03	MA7594-CCV1	1		
11:08	MA7594-CCB1	1		
11:11	ZZZZZZ	2		
11:14	F68660-2	2		(sample used for QC only; not part of login F68616)
11:18	ZZZZZZ	2		
11:21	MP17180-D2	2		
11:25	ZZZZZZ	4		
11:45	MA7594-CCV2	1		
11:50	MA7594-CCB2	1		
12:27	MA7594-CCV3	1		
12:31	MA7594-CCB3	1		
12:46	ZZZZZZ	1		
12:50	MP17181-S1	2		
12:54	MP17181-S2	2		
12:57	MA7594-CCV4	1		
13:02	MA7594-CCB4	1		
13:08	MP17186-MB1	1		
13:11	MP17186-B1	1		
13:15	F68561-3	1		(sample used for QC only; not part of login F68616)
13:18	MP17186-D1	1		
13:22	MP17186-SD1	5		
13:25	MP17186-PS1	1		
13:28	MP17186-S1	1		
13:32	MP17186-S2	1		
13:35	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101409.ASC Date Analyzed: 10/14/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7594
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:39	ZZZZZZ	1		
13:42	MA7594-CCV5	1		
13:46	MA7594-CCB5	1		
13:50	ZZZZZZ	1		
13:53	ZZZZZZ	1		
13:57	ZZZZZZ	1		
14:00	ZZZZZZ	1		
14:03	ZZZZZZ	1		
14:07	ZZZZZZ	1		
14:14	ZZZZZZ	1		
14:17	ZZZZZZ	1		
14:20	ZZZZZZ	1		
14:24	MA7594-CCV6	1		
14:28	MA7594-CCB6	1		
14:32	ZZZZZZ	1		
14:35	ZZZZZZ	1		
14:39	ZZZZZZ	1		
14:42	ZZZZZZ	1		
14:45	ZZZZZZ	1		
14:49	ZZZZZZ	1		
14:52	ZZZZZZ	1		
14:56	MA7594-CCV7	1		
15:00	MA7594-CCB7	1		
16:32	MA7594-CCV8	1		
16:37	MA7594-CCB8	1		
16:54	MP17188-MB1	1		
16:57	MP17188-B1	1		
17:02	F68636-13	1		(sample used for QC only; not part of login F68616)
17:05	MP17188-D1	1		
17:08	MP17188-SD1	5		
17:12	MP17188-PS1	1		
17:15	MA7594-CCV9	1		
17:20	MA7594-CCB9	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101409.ASC Date Analyzed: 10/14/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7594
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
17:23	MP17188-S1	1		
17:27	MP17188-S2	1		
17:31	ZZZZZZ	1		
17:34	ZZZZZZ	1		
17:38	ZZZZZZ	1		
17:41	ZZZZZZ	1		
17:45	ZZZZZZ	1		
17:48	ZZZZZZ	1		
17:51	ZZZZZZ	1		
17:55	ZZZZZZ	1		
17:58	MA7594-CCV10	1		
18:03	MA7594-CCB10	1		
18:06	ZZZZZZ	1		
18:09	ZZZZZZ	1		
18:13	ZZZZZZ	1		
18:16	ZZZZZZ	1		
18:20	ZZZZZZ	1		
18:23	ZZZZZZ	1		
18:30	ZZZZZZ	1		
18:37	ZZZZZZ	1		
18:40	MA7594-CCV11	1		
18:45	MA7594-CCB11	1		
18:48	ZZZZZZ	1		
18:51	MP17189-MB1	1		
18:55	MP17189-B1	1		
18:59	F68596-1	1		(sample used for QC only; not part of login F68616)
19:03	MP17189-D1	1		
19:06	MP17189-SD1	5		
19:09	MP17189-PS1	1		
19:13	MP17189-S1	1		
19:16	MP17189-S2	1		
19:21	ZZZZZZ	1		
19:24	MA7594-CCV12	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101409.ASC Date Analyzed: 10/14/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7594
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
19:29	MA7594-CCB12	1		
19:32	ZZZZZZ	1		
19:35	ZZZZZZ	1		
19:39	ZZZZZZ	1		
19:42	ZZZZZZ	1		
19:46	ZZZZZZ	1		
19:49	ZZZZZZ	1		
19:52	ZZZZZZ	1		
19:56	ZZZZZZ	1		
19:59	ZZZZZZ	1		
20:03	ZZZZZZ	1		
20:06	MA7594-CCV13	1		
20:10	MA7594-CCB13	1		
20:14	ZZZZZZ	1		
20:17	ZZZZZZ	1		
20:21	ZZZZZZ	1		
20:24	ZZZZZZ	1		
20:28	ZZZZZZ	1		
20:31	ZZZZZZ	1		
20:34	ZZZZZZ	1		
20:38	ZZZZZZ	1		
20:41	MP17190-MB1	1		
20:45	MP17190-B1	1		
20:49	MA7594-CCV14	1		
20:53	MA7594-CCB14	1		
20:57	F68600-2	1		(sample used for QC only; not part of login F68616)
21:00	MP17190-D1	1		
21:04	MP17190-SD1	5		
21:07	MP17190-PS1	1		
21:11	MP17190-S1	1		
21:14	MP17190-S2	1		
21:18	ZZZZZZ	1		
21:22	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101409.ASC Date Analyzed: 10/14/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7594
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
21:25	ZZZZZZ	1		
21:29	ZZZZZZ	1		
21:32	MA7594-CCV15	1		
21:36	MA7594-CCB15	1		
21:40	ZZZZZZ	1		
21:43	ZZZZZZ	1		
21:47	ZZZZZZ	1		
21:50	ZZZZZZ	1		
21:54	ZZZZZZ	1		
21:57	ZZZZZZ	1		
22:00	ZZZZZZ	1		
22:04	ZZZZZZ	1		
22:07	ZZZZZZ	1		
22:11	F68616-1	1		
22:14	MA7594-CCV16	1		
22:19	MA7594-CCB16	1		
22:22	F68616-2	1		
22:25	F68616-1A	1		
22:29	F68616-2A	1		
22:32	ZZZZZZ	1		
22:36	MP17190-MB2A	1		
---------->	Last reportable sample/prep for job F68616			
22:39	MA7594-CRIA3	1		
22:43	MA7594-CRI2	1		
22:46	MA7594-ICSA2	1		
22:49	MA7594-ICSAB2	1		
22:53	MA7594-CCV17	1		
22:57	MA7594-CCB17	1		
---------->	Last reportable CCB for job F68616			

Refer to raw data for calibration curve and standards.

INTERNAL STANDARD SUMMARY

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101409.ASC Date Analyzed: 10/14/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7594
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1
09:58	MA7594-HSTD1	4384
10:01	MA7594-ICV1	4426
10:09	MA7594-ICB1	4546 R
10:13	MA7594-CRIA1	4558
10:21	MA7594-CRIA2	4498
10:25	MA7594-CRI1	4506
10:56	MA7594-ICSA1	4140
10:57	MA7594-ICSAB1	4200
11:03	MA7594-CCV1	4501
11:08	MA7594-CCB1	4649
11:11	ZZZZZZ	4300
11:14	F68660-2	4275
11:18	ZZZZZZ	4277
11:21	MP17180-D2	4368
11:25	ZZZZZZ	4708
11:45	MA7594-CCV2	4553
11:50	MA7594-CCB2	4657
12:27	MA7594-CCV3	4621
12:31	MA7594-CCB3	4680
12:46	ZZZZZZ	4583
12:50	MP17181-S1	4559
12:54	MP17181-S2	4513
12:57	MA7594-CCV4	4558
13:02	MA7594-CCB4	4694
13:08	MP17186-MB1	4493
13:11	MP17186-B1	4551
13:15	F68561-3	4726
13:18	MP17186-D1	4722
13:22	MP17186-SD1	4750
13:25	MP17186-PS1	4719
13:28	MP17186-S1	4635
13:32	MP17186-S2	4659
13:35	ZZZZZZ	4701

INTERNAL STANDARD SUMMARY

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101409.ASC Date Analyzed: 10/14/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7594
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1
13:39	ZZZZZZ	4778
13:42	MA7594-CCV5	4619
13:46	MA7594-CCB5	4704
13:50	ZZZZZZ	4600
13:53	ZZZZZZ	4695
13:57	ZZZZZZ	4641
14:00	ZZZZZZ	4514
14:03	ZZZZZZ	4567
14:07	ZZZZZZ	4699
14:14	ZZZZZZ	4556
14:17	ZZZZZZ	4685
14:20	ZZZZZZ	4678
14:24	MA7594-CCV6	4654
14:28	MA7594-CCB6	4712
14:32	ZZZZZZ	4881
14:35	ZZZZZZ	4889
14:39	ZZZZZZ	5137
14:42	ZZZZZZ	5375
14:45	ZZZZZZ	5364
14:49	ZZZZZZ	5106
14:52	ZZZZZZ	4789
14:56	MA7594-CCV7	4706
15:00	MA7594-CCB7	4727
16:32	MA7594-CCV8	4723
16:37	MA7594-CCB8	4740
16:54	MP17188-MB1	4641
16:57	MP17188-B1	4552
17:02	F68636-13	4799
17:05	MP17188-D1	4719
17:08	MP17188-SD1	4755
17:12	MP17188-PS1	4771
17:15	MA7594-CCV9	4670
17:20	MA7594-CCB9	4768

INTERNAL STANDARD SUMMARY

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101409.ASC Date Analyzed: 10/14/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7594
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1
17:23	MP17188-S1	4708
17:27	MP17188-S2	4732
17:31	ZZZZZZ	4605
17:34	ZZZZZZ	5409
17:38	ZZZZZZ	5807 !
17:41	ZZZZZZ	5687 !
17:45	ZZZZZZ	5693 !
17:48	ZZZZZZ	5644
17:51	ZZZZZZ	4752
17:55	ZZZZZZ	5150
17:58	MA7594-CCV10	4744
18:03	MA7594-CCB10	4772
18:06	ZZZZZZ	5059
18:09	ZZZZZZ	5513
18:13	ZZZZZZ	4884
18:16	ZZZZZZ	4968
18:20	ZZZZZZ	4944
18:23	ZZZZZZ	4927
18:30	ZZZZZZ	5389
18:37	ZZZZZZ	5093
18:40	MA7594-CCV11	4653
18:45	MA7594-CCB11	4797
18:48	ZZZZZZ	5360
18:51	MP17189-MB1	4660
18:55	MP17189-B1	4661
18:59	F68596-1	4650
19:03	MP17189-D1	4606
19:06	MP17189-SD1	4783
19:09	MP17189-PS1	4590
19:13	MP17189-S1	4497
19:16	MP17189-S2	4586
19:21	ZZZZZZ	4558
19:24	MA7594-CCV12	4629

INTERNAL STANDARD SUMMARY

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101409.ASC Date Analyzed: 10/14/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7594
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1
19:29	MA7594-CCB12	4724
19:32	ZZZZZZ	4546
19:35	ZZZZZZ	4616
19:39	ZZZZZZ	4694
19:42	ZZZZZZ	4649
19:46	ZZZZZZ	4625
19:49	ZZZZZZ	4674
19:52	ZZZZZZ	4656
19:56	ZZZZZZ	4717
19:59	ZZZZZZ	4667
20:03	ZZZZZZ	4875
20:06	MA7594-CCV13	4624
20:10	MA7594-CCB13	4772
20:14	ZZZZZZ	4578
20:17	ZZZZZZ	4578
20:21	ZZZZZZ	4537
20:24	ZZZZZZ	4574
20:28	ZZZZZZ	4767
20:31	ZZZZZZ	4600
20:34	ZZZZZZ	4718
20:38	ZZZZZZ	4658
20:41	MP17190-MB1	4854
20:45	MP17190-B1	4626
20:49	MA7594-CCV14	4676
20:53	MA7594-CCB14	4738
20:57	F68600-2	4500
21:00	MP17190-D1	4455
21:04	MP17190-SD1	4716
21:07	MP17190-PS1	4540
21:11	MP17190-S1	4420
21:14	MP17190-S2	4443
21:18	ZZZZZZ	4561
21:22	ZZZZZZ	4430

INTERNAL STANDARD SUMMARY

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101409.ASC Date Analyzed: 10/14/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7594
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1
21:25	ZZZZZZ	4403
21:29	ZZZZZZ	4644
21:32	MA7594-CCV15	4645
21:36	MA7594-CCB15	4724
21:40	ZZZZZZ	4652
21:43	ZZZZZZ	4609
21:47	ZZZZZZ	4632
21:50	ZZZZZZ	4543
21:54	ZZZZZZ	4684
21:57	ZZZZZZ	4807
22:00	ZZZZZZ	4506
22:04	ZZZZZZ	4667
22:07	ZZZZZZ	4273
22:11	F68616-1	2367 !
22:14	MA7594-CCV16	4701
22:19	MA7594-CCB16	4743
22:22	F68616-2	3802
22:25	F68616-1A	2419 !
22:29	F68616-2A	3878
22:32	ZZZZZZ	4743
22:36	MP17190-MB2A	4725
22:39	MA7594-CRIA3	4799
22:43	MA7594-CRI2	4797
22:46	MA7594-ICSA2	4297
22:49	MA7594-ICSAB2	4362
22:53	MA7594-CCV17	4642
22:57	MA7594-CCB17	4764

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium	60-125 %

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101409.ASC Date Analyzed: 10/14/09 Methods: SW846 6010B
QC Limits: result < RL Run ID: MA7594 Units: ug/l

Time:			10:09		11:08		11:50		12:31	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	11	-10	<200	-11	<200	-14	<200	-16	<200
Antimony	6.0	4.5	1.6	<6.0	-0.92	<6.0	-1.5	<6.0	0.19	<6.0
Arsenic	10	3.6	-2.0	<10	3.0	<10	-2.8	<10	-0.10	<10
Barium	200	5	-0.13	<200	-0.060	<200	-0.020	<200	0.080	<200
Beryllium	4.0	1	0.21	<4.0	0.50	<4.0	0.52	<4.0	0.56	<4.0
Cadmium	5.0	1	0.0	<5.0	-0.050	<5.0	-0.17	<5.0	0.020	<5.0
Calcium	1000	100	-1.9	<1000	0.66	<1000	0.21	<1000	0.76	<1000
Chromium	10	1.6	0.0	<10	-0.27	<10	0.0	<10	0.49	<10
Cobalt	50	.83	-0.48	<50	-0.54	<50	-0.42	<50	0.37	<50
Copper	25	2.1	0.090	<25	-0.19	<25	0.040	<25	0.060	<25
Iron	300	23	-2.8	<300	9.8	<300	8.5	<300	9.7	<300
Lead	5.0	2	2.5	<10	3.2	<10	1.2	<10	1.7	<10
Magnesium	5000	100	0.14	<5000	0.99	<5000	4.1	<5000	6.0	<5000
Manganese	15	.5	-0.19	<15	-0.080	<15	-0.10	<15	-0.030	<15
Molybdenum	50	2.8	anr							
Nickel	40	2.3	0.40	<40	1.0	<40	0.70	<40	1.4	<40
Potassium	10000	100	231	<10000	255	<10000	257	<10000	271	<10000
Selenium	10	3.1	0.86	<10	2.0	<10	0.95	<10	2.3	<10
Silver	10	1.2	-0.15	<10	-0.12	<10	-0.12	<10	-0.65	<10
Sodium	10000	500	94.4	<10000	171	<10000	178	<10000	212	<10000
Thallium	10	3.4	-0.61	<10	4.0	<10	2.6	<10	1.4	<10
Tin	50	2.8								
Vanadium	50	.66	-0.62	<50	-0.30	<50	-0.34	<50	0.10	<50
Zinc	20	3.8	-1.8	<20	-1.9	<20	-3.2	<20	-2.8	<20

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101409.ASC Date Analyzed: 10/14/09 Methods: SW846 6010B
QC Limits: result < RL Run ID: MA7594 Units: ug/l

Time: / Sample ID:			13:02 CCB4		13:46 CCB5		14:28 CCB6		15:00 CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	11	-10	<200	-6.0	<200	-2.1	<200	8.1	<200
Antimony	6.0	4.5	-0.61	<6.0	-2.6	<6.0	-1.3	<6.0	-0.68	<6.0
Arsenic	10	3.6	-2.8	<10	0.44	<10	0.73	<10	-1.4	<10
Barium	200	5	0.0	<200	-0.040	<200	0.0	<200	0.0	<200
Beryllium	4.0	1	0.56	<4.0	0.73	<4.0	0.72	<4.0	0.78	<4.0
Cadmium	5.0	1	-0.050	<5.0	-0.080	<5.0	-0.050	<5.0	-0.020	<5.0
Calcium	1000	100	-2.3	<1000	-3.9	<1000	-4.0	<1000	34.2	<1000
Chromium	10	1.6	0.18	<10	0.10	<10	0.020	<10	0.50	<10
Cobalt	50	.83	-0.56	<50	-0.51	<50	-0.27	<50	-0.010	<50
Copper	25	2.1	-0.36	<25	-0.78	<25	-1.5	<25	-1.6	<25
Iron	300	23	4.6	<300	2.3	<300	-8.6	<300	1.5	<300
Lead	5.0	2	3.0	<10	2.5	<10	1.9	<10	3.2	<10
Magnesium	5000	100	1.4	<5000	0.49	<5000	4.2	<5000	6.4	<5000
Manganese	15	.5	-0.16	<15	-0.12	<15	-0.14	<15	0.020	<15
Molybdenum	50	2.8	anr							
Nickel	40	2.3	0.19	<40	0.32	<40	0.060	<40	0.55	<40
Potassium	10000	100	227	<10000	238	<10000	235	<10000	218	<10000
Selenium	10	3.1	0.56	<10	1.7	<10	-0.090	<10	-1.1	<10
Silver	10	1.2	-0.060	<10	0.14	<10	-1.1	<10	0.15	<10
Sodium	10000	500	49.7	<10000	-4.7	<10000	104	<10000	-5.2	<10000
Thallium	10	3.4	3.1	<10	2.0	<10	1.1	<10	-2.4	<10
Tin	50	2.8								
Vanadium	50	.66	-0.27	<50	-0.44	<50	-0.28	<50	-0.070	<50
Zinc	20	3.8	-2.7	<20	-3.5	<20	-3.8	<20	0.58	<20

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101409.ASC Date Analyzed: 10/14/09 Methods: SW846 6010B
QC Limits: result < RL Run ID: MA7594 Units: ug/l

Time:			16:37		17:20		18:03		18:45	
Sample ID:			CCB8		CCB9		CCB10		CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	11	3.3	<200	4.6	<200	3.9	<200	-2.6	<200
Antimony	6.0	4.5	-2.1	<6.0	-1.3	<6.0	0.86	<6.0	-0.81	<6.0
Arsenic	10	3.6	-0.38	<10	-0.29	<10	-1.7	<10	-2.1	<10
Barium	200	5	0.020	<200	0.020	<200	-0.040	<200	0.030	<200
Beryllium	4.0	1	0.87	<4.0	1.0	<4.0	1.2	<4.0	1.2	<4.0
Cadmium	5.0	1	-0.16	<5.0	-0.060	<5.0	-0.040	<5.0	-0.29	<5.0
Calcium	1000	100	33.2	<1000	34.1	<1000	33.5	<1000	34.3	<1000
Chromium	10	1.6	-0.040	<10	0.22	<10	-0.090	<10	0.17	<10
Cobalt	50	.83	-0.75	<50	-0.60	<50	-0.080	<50	-0.34	<50
Copper	25	2.1	-1.5	<25	-1.9	<25	-2.0	<25	-2.1	<25
Iron	300	23	-1.0	<300	7.3	<300	7.8	<300	6.7	<300
Lead	5.0	2	3.3	<10	3.1	<10	3.4	<10	4.4	<10
Magnesium	5000	100	3.3	<5000	11.5	<5000	6.4	<5000	2.5	<5000
Manganese	15	.5	-0.080	<15	-0.020	<15	0.040	<15	0.030	<15
Molybdenum	50	2.8	anr							
Nickel	40	2.3	0.23	<40	1.1	<40	0.68	<40	0.26	<40
Potassium	10000	100	231	<10000	215	<10000	250	<10000	248	<10000
Selenium	10	3.1	1.6	<10	-1.3	<10	-0.71	<10	1.9	<10
Silver	10	1.2	-0.41	<10	-0.080	<10	0.27	<10	-0.10	<10
Sodium	10000	500	60.8	<10000	-51	<10000	20.2	<10000	105	<10000
Thallium	10	3.4	2.5	<10	1.9	<10	3.3	<10	4.3	<10
Tin	50	2.8								
Vanadium	50	.66	-0.24	<50	-0.11	<50	-0.34	<50	-0.28	<50
Zinc	20	3.8	0.81	<20	0.42	<20	0.51	<20	0.32	<20

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101409.ASC Date Analyzed: 10/14/09 Methods: SW846 6010B
QC Limits: result < RL Run ID: MA7594 Units: ug/l

Time:			19:29		20:10		20:53		21:36	
Sample ID:			CCB12		CCB13		CCB14		CCB15	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	11	1.2	<200	-6.3	<200	-7.5	<200	-9.3	<200
Antimony	6.0	4.5	0.12	<6.0	0.43	<6.0	-1.7	<6.0	-0.56	<6.0
Arsenic	10	3.6	0.41	<10	-0.63	<10	-0.98	<10	0.030	<10
Barium	200	5	-0.030	<200	0.0	<200	-0.040	<200	-0.050	<200
Beryllium	4.0	1	0.79	<4.0	0.92	<4.0	0.70	<4.0	0.71	<4.0
Cadmium	5.0	1	-0.26	<5.0	0.030	<5.0	-0.11	<5.0	-0.16	<5.0
Calcium	1000	100	-4.6	<1000	-3.8	<1000	-3.0	<1000	-3.4	<1000
Chromium	10	1.6	0.020	<10	0.30	<10	0.43	<10	-0.020	<10
Cobalt	50	.83	-0.61	<50	-0.030	<50	-0.65	<50	-0.70	<50
Copper	25	2.1	-1.1	<25	-1.6	<25	-1.0	<25	-0.89	<25
Iron	300	23	3.8	<300	12.9	<300	8.6	<300	1.2	<300
Lead	5.0	2	3.1	<10	3.0	<10	4.0	<10	3.1	<10
Magnesium	5000	100	3.6	<5000	0.34	<5000	3.9	<5000	3.0	<5000
Manganese	15	.5	-0.060	<15	0.010	<15	-0.10	<15	0.020	<15
Molybdenum	50	2.8	anr							
Nickel	40	2.3	0.78	<40	0.63	<40	0.85	<40	0.74	<40
Potassium	10000	100	225	<10000	233	<10000	236	<10000	238	<10000
Selenium	10	3.1	1.7	<10	2.2	<10	0.69	<10	0.16	<10
Silver	10	1.2	-0.10	<10	0.030	<10	0.13	<10	-0.83	<10
Sodium	10000	500	14.4	<10000	109	<10000	-2.1	<10000	52.8	<10000
Thallium	10	3.4	-0.55	<10	1.7	<10	2.5	<10	-1.5	<10
Tin	50	2.8								
Vanadium	50	.66	-0.10	<50	-0.17	<50	-0.61	<50	-0.38	<50
Zinc	20	3.8	-4.2	<20	-4.0	<20	-4.1	<20	-3.6	<20

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101409.ASC Date Analyzed: 10/14/09 Methods: SW846 6010B
QC Limits: result < RL Run ID: MA7594 Units: ug/l

Time:			22:19		22:57	
Sample ID:			CCB16		CCB17	
Metal	RL	IDL	raw	final	raw	final
Aluminum	200	11	-3.9	<200	-5.6	<200
Antimony	6.0	4.5	-1.7	<6.0	0.17	<6.0
Arsenic	10	3.6	0.40	<10	-1.2	<10
Barium	200	5	-0.010	<200	-0.020	<200
Beryllium	4.0	1	0.87	<4.0	0.81	<4.0
Cadmium	5.0	1	-0.050	<5.0	-0.17	<5.0
Calcium	1000	100	-2.0	<1000	37.0	<1000
Chromium	10	1.6	0.40	<10	0.20	<10
Cobalt	50	.83	-0.22	<50	-0.20	<50
Copper	25	2.1	-1.4	<25	-0.91	<25
Iron	300	23	16.5	<300	8.5	<300
Lead	5.0	2	4.1	<10	3.3	<10
Magnesium	5000	100	18.6	<5000	4.9	<5000
Manganese	15	.5	0.10	<15	0.0	<15
Molybdenum	50	2.8	anr			
Nickel	40	2.3	0.45	<40	0.56	<40
Potassium	10000	100	274	<10000	237	<10000
Selenium	10	3.1	0.040	<10	-1.2	<10
Silver	10	1.2	0.17	<10	0.070	<10
Sodium	10000	500	157	<10000	89.0	<10000
Thallium	10	3.4	-2.1	<10	2.6	<10
Tin	50	2.8				
Vanadium	50	.66	-0.070	<50	-0.41	<50
Zinc	20	3.8	-3.2	<20	-0.31	<20

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101409.ASC Date Analyzed: 10/14/09 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7594 Units: ug/l

Time:		10:01			11:03			11:45	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	40800	102.0	40000	39100	97.8	40000	39300	98.3
Antimony	2000	2090	104.5	2000	2000	100.0	2000	2020	101.0
Arsenic	2000	2000	100.0	2000	1900	95.0	2000	1920	96.0
Barium	2000	2030	101.5	2000	1950	97.5	2000	1950	97.5
Beryllium	2000	2060	103.0	2000	1970	98.5	2000	2000	100.0
Cadmium	2000	2070	103.5	2000	1980	99.0	2000	2020	101.0
Calcium	40000	40900	102.3	40000	38900	97.3	40000	39700	99.3
Chromium	2000	2040	102.0	2000	1950	97.5	2000	1990	99.5
Cobalt	2000	2050	102.5	2000	1970	98.5	2000	2000	100.0
Copper	2000	2010	100.5	2000	1930	96.5	2000	1930	96.5
Iron	40000	40300	100.8	40000	38600	96.5	40000	39300	98.3
Lead	2000	2060	103.0	2000	1970	98.5	2000	1990	99.5
Magnesium	40000	40400	101.0	40000	38500	96.3	40000	38900	97.3
Manganese	2000	2060	103.0	2000	1980	99.0	2000	2000	100.0
Molybdenum	anr								
Nickel	2000	2070	103.5	2000	1980	99.0	2000	2010	100.5
Potassium	40000	40400	101.0	40000	39000	97.5	40000	38900	97.3
Selenium	2000	2050	102.5	2000	1960	98.0	2000	1980	99.0
Silver	250	247	98.8	250	240	96.0	250	241	96.4
Sodium	40000	40500	101.3	40000	39000	97.5	40000	39300	98.3
Thallium	2000	2080	104.0	2000	2000	100.0	2000	2040	102.0
Tin									
Vanadium	2000	2030	101.5	2000	1950	97.5	2000	1970	98.5
Zinc	2000	2060	103.0	2000	1960	98.0	2000	2030	101.5

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101409.ASC Date Analyzed: 10/14/09 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7594 Units: ug/l

Time:		12:27			12:57			13:42	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39000	97.5	40000	39300	98.3	40000	39000	97.5
Antimony	2000	1990	99.5	2000	2010	100.5	2000	2030	101.5
Arsenic	2000	1900	95.0	2000	1900	95.0	2000	1940	97.0
Barium	2000	1930	96.5	2000	1960	98.0	2000	1950	97.5
Beryllium	2000	1970	98.5	2000	1970	98.5	2000	2020	101.0
Cadmium	2000	1990	99.5	2000	1990	99.5	2000	2050	102.5
Calcium	40000	38900	97.3	40000	39200	98.0	40000	40700	101.8
Chromium	2000	1960	98.0	2000	1960	98.0	2000	2010	100.5
Cobalt	2000	1970	98.5	2000	1980	99.0	2000	2030	101.5
Copper	2000	1910	95.5	2000	1950	97.5	2000	1930	96.5
Iron	40000	38700	96.8	40000	38600	96.5	40000	39300	98.3
Lead	2000	1970	98.5	2000	1970	98.5	2000	2020	101.0
Magnesium	40000	38500	96.3	40000	38700	96.8	40000	39300	98.3
Manganese	2000	1970	98.5	2000	1980	99.0	2000	2030	101.5
Molybdenum	anr								
Nickel	2000	1980	99.0	2000	1980	99.0	2000	2050	102.5
Potassium	40000	38800	97.0	40000	39200	98.0	40000	38400	96.0
Selenium	2000	1960	98.0	2000	1990	99.5	2000	2000	100.0
Silver	250	238	95.2	250	239	95.6	250	239	95.6
Sodium	40000	39000	97.5	40000	39400	98.5	40000	39100	97.8
Thallium	2000	2010	100.5	2000	2020	101.0	2000	2050	102.5
Tin									
Vanadium	2000	1940	97.0	2000	1960	98.0	2000	1990	99.5
Zinc	2000	1980	99.0	2000	1960	98.0	2000	2050	102.5

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101409.ASC Date Analyzed: 10/14/09 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7594 Units: ug/l

Time:		14:24			14:56			16:32	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39200	98.0	40000	39300	98.3	40000	39000	97.5
Antimony	2000	2040	102.0	2000	2050	102.5	2000	2030	101.5
Arsenic	2000	1930	96.5	2000	1950	97.5	2000	1940	97.0
Barium	2000	1970	98.5	2000	1970	98.5	2000	1950	97.5
Beryllium	2000	2020	101.0	2000	2030	101.5	2000	2000	100.0
Cadmium	2000	2040	102.0	2000	2050	102.5	2000	2010	100.5
Calcium	40000	40700	101.8	40000	41400	103.5	40000	40600	101.5
Chromium	2000	2010	100.5	2000	2030	101.5	2000	1990	99.5
Cobalt	2000	2030	101.5	2000	2050	102.5	2000	2010	100.5
Copper	2000	1970	98.5	2000	1990	99.5	2000	1970	98.5
Iron	40000	39100	97.8	40000	39200	98.0	40000	38700	96.8
Lead	2000	2000	100.0	2000	2010	100.5	2000	1990	99.5
Magnesium	40000	39500	98.8	40000	39800	99.5	40000	39200	98.0
Manganese	2000	2030	101.5	2000	2050	102.5	2000	2010	100.5
Molybdenum	anr								
Nickel	2000	2050	102.5	2000	2080	104.0	2000	2040	102.0
Potassium	40000	38900	97.3	40000	38800	97.0	40000	38600	96.5
Selenium	2000	1990	99.5	2000	2000	100.0	2000	1980	99.0
Silver	250	239	95.6	250	237	94.8	250	235	94.0
Sodium	40000	39100	97.8	40000	39300	98.3	40000	39100	97.8
Thallium	2000	2050	102.5	2000	2050	102.5	2000	2050	102.5
Tin									
Vanadium	2000	1990	99.5	2000	2010	100.5	2000	1980	99.0
Zinc	2000	2030	101.5	2000	2060	103.0	2000	2010	100.5

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101409.ASC Date Analyzed: 10/14/09 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7594 Units: ug/l

Time:		17:15			17:58			18:40	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39300	98.3	40000	38800	97.0	40000	39800	99.5
Antimony	2000	2060	103.0	2000	2040	102.0	2000	2080	104.0
Arsenic	2000	1960	98.0	2000	1940	97.0	2000	1990	99.5
Barium	2000	1990	99.5	2000	1950	97.5	2000	2000	100.0
Beryllium	2000	2030	101.5	2000	2000	100.0	2000	2060	103.0
Cadmium	2000	2050	102.5	2000	2030	101.5	2000	2080	104.0
Calcium	40000	41300	103.3	40000	41000	102.5	40000	41800	104.5
Chromium	2000	2020	101.0	2000	2000	100.0	2000	2050	102.5
Cobalt	2000	2050	102.5	2000	2020	101.0	2000	2070	103.5
Copper	2000	2000	100.0	2000	1970	98.5	2000	2010	100.5
Iron	40000	39100	97.8	40000	38700	96.8	40000	39700	99.3
Lead	2000	2010	100.5	2000	1990	99.5	2000	2040	102.0
Magnesium	40000	39700	99.3	40000	39200	98.0	40000	40100	100.3
Manganese	2000	2040	102.0	2000	2010	100.5	2000	2060	103.0
Molybdenum	anr								
Nickel	2000	2080	104.0	2000	2050	102.5	2000	2100	105.0
Potassium	40000	39100	97.8	40000	38400	96.0	40000	39300	98.3
Selenium	2000	2010	100.5	2000	1980	99.0	2000	2040	102.0
Silver	250	238	95.2	250	234	93.6	250	241	96.4
Sodium	40000	39400	98.5	40000	38800	97.0	40000	39800	99.5
Thallium	2000	2070	103.5	2000	2040	102.0	2000	2090	104.5
Tin									
Vanadium	2000	2010	100.5	2000	1990	99.5	2000	2030	101.5
Zinc	2000	2030	101.5	2000	2020	101.0	2000	2060	103.0

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101409.ASC Date Analyzed: 10/14/09 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7594 Units: ug/l

Time:		19:24			20:06			20:49	
Sample ID:	CCV	CCV12		CCV	CCV13		CCV	CCV14	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39300	98.3	40000	39300	98.3	40000	38900	97.3
Antimony	2000	2060	103.0	2000	2040	102.0	2000	2040	102.0
Arsenic	2000	1950	97.5	2000	1950	97.5	2000	1950	97.5
Barium	2000	1990	99.5	2000	1970	98.5	2000	1960	98.0
Beryllium	2000	2010	100.5	2000	2010	100.5	2000	2010	100.5
Cadmium	2000	2030	101.5	2000	2020	101.0	2000	2030	101.5
Calcium	40000	40700	101.8	40000	40500	101.3	40000	40300	100.8
Chromium	2000	2000	100.0	2000	2000	100.0	2000	2000	100.0
Cobalt	2000	2020	101.0	2000	2020	101.0	2000	2010	100.5
Copper	2000	1990	99.5	2000	1970	98.5	2000	1960	98.0
Iron	40000	38900	97.3	40000	38800	97.0	40000	38900	97.3
Lead	2000	2000	100.0	2000	2000	100.0	2000	2000	100.0
Magnesium	40000	39400	98.5	40000	39300	98.3	40000	39200	98.0
Manganese	2000	2020	101.0	2000	2010	100.5	2000	2000	100.0
Molybdenum	anr								
Nickel	2000	2050	102.5	2000	2050	102.5	2000	2020	101.0
Potassium	40000	39000	97.5	40000	38800	97.0	40000	38400	96.0
Selenium	2000	2010	100.5	2000	2010	100.5	2000	2010	100.5
Silver	250	240	96.0	250	240	96.0	250	238	95.2
Sodium	40000	39500	98.8	40000	39400	98.5	40000	38900	97.3
Thallium	2000	2060	103.0	2000	2060	103.0	2000	2060	103.0
Tin									
Vanadium	2000	2000	100.0	2000	1990	99.5	2000	1980	99.0
Zinc	2000	2000	100.0	2000	2010	100.5	2000	2020	101.0

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101409.ASC Date Analyzed: 10/14/09 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7594 Units: ug/l

Time:		21:32			22:14			22:53	
Sample ID:	CCV	CCV15		CCV	CCV16		CCV	CCV17	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39200	98.0	40000	39300	98.3	40000	38800	97.0
Antimony	2000	2040	102.0	2000	2060	103.0	2000	2030	101.5
Arsenic	2000	1950	97.5	2000	1970	98.5	2000	1950	97.5
Barium	2000	1970	98.5	2000	1980	99.0	2000	1940	97.0
Beryllium	2000	2010	100.5	2000	2020	101.0	2000	1990	99.5
Cadmium	2000	2030	101.5	2000	2030	101.5	2000	2020	101.0
Calcium	40000	40300	100.8	40000	40700	101.8	40000	39900	99.8
Chromium	2000	2000	100.0	2000	2010	100.5	2000	1980	99.0
Cobalt	2000	2020	101.0	2000	2030	101.5	2000	2000	100.0
Copper	2000	1960	98.0	2000	1980	99.0	2000	1940	97.0
Iron	40000	38800	97.0	40000	39000	97.5	40000	38500	96.3
Lead	2000	2000	100.0	2000	2010	100.5	2000	1990	99.5
Magnesium	40000	39200	98.0	40000	39700	99.3	40000	38600	96.5
Manganese	2000	2000	100.0	2000	2020	101.0	2000	1980	99.0
Molybdenum	anr								
Nickel	2000	2030	101.5	2000	2040	102.0	2000	2000	100.0
Potassium	40000	38400	96.0	40000	38600	96.5	40000	38200	95.5
Selenium	2000	2020	101.0	2000	2020	101.0	2000	2010	100.5
Silver	250	240	96.0	250	240	96.0	250	238	95.2
Sodium	40000	38900	97.3	40000	39900	99.8	40000	38500	96.3
Thallium	2000	2050	102.5	2000	2080	104.0	2000	2050	102.5
Tin									
Vanadium	2000	1980	99.0	2000	1990	99.5	2000	1960	98.0
Zinc	2000	2020	101.0	2000	2030	101.5	2000	2020	101.0

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101409.ASC Date Analyzed: 10/14/09 Methods: SW846 6010B
QC Limits: 95 to 105 % Recovery Run ID: MA7594 Units: ug/l

Time:		09:58	
Sample ID:	HSTD	HSTD1	
Metal	True	Results	% Rec
Aluminum	80000	81200	101.5
Antimony	4000	3970	99.3
Arsenic	4000	3960	99.0
Barium	4000	3960	99.0
Beryllium	4000	3930	98.3
Cadmium	4000	3940	98.5
Calcium	80000	79800	99.8
Chromium	4000	3960	99.0
Cobalt	4000	3950	98.8
Copper	4000	4010	100.3
Iron	80000	80300	100.4
Lead	4000	3980	99.5
Magnesium	80000	81300	101.6
Manganese	4000	3950	98.8
Molybdenum	anr		
Nickel	4000	3960	99.0
Potassium	80000	75700	94.6
Selenium	4000	3990	99.8
Silver	500	501	100.2
Sodium	80000	80300	100.4
Thallium	4000	4000	100.0
Tin			
Vanadium	4000	4000	100.0
Zinc	4000	3940	98.5

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101409.ASC Date Analyzed: 10/14/09 Methods: SW846 6010B
QC Limits: CRI 70-130% CRIA 70-130% Run ID: MA7594 Units: ug/l

Time:			10:13		10:21		10:25		22:39	
Sample ID:	CRI	CRIA	CRIA1		CRIA2		CRI1		CRIA3	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	400	200	170	85.0					172	86.0
Antimony	10	5.0			5.0	100.0			1.9	38.0*(a)
Arsenic	20	10	11.6	116.0					8.6	86.0
Barium	400	200	201	100.5					195	97.5
Beryllium	10	5.0	5.5	110.0					6.0	120.0
Cadmium	10	5.0	5.2	104.0					5.1	102.0
Calcium	2000	1000	1030	103.0					1030	103.0
Chromium	20	10	10.4	104.0					9.9	99.0
Cobalt	100	50	49.6	99.2					48.9	97.8
Copper	50	25	25.2	100.8					23.6	94.4
Iron	600	300	283	94.3					294	98.0
Lead	10	5.0					12.1	121.0		
Magnesium	10000	5000	4810	96.2					4680	93.6
Manganese	30	15	15.4	102.7					15.1	100.7
Molybdenum	100	50	anr							
Nickel	80	40	42.6	106.5					42.5	106.3
Potassium	20000	10000	8950	89.5					8720	87.2
Selenium	20	10	10.2	102.0					12.5	125.0
Silver	20	10	8.8	88.0					9.3	93.0
Sodium	20000	10000	8680	86.8					8610	86.1
Thallium	20	10	9.5	95.0					7.3	73.0
Tin	100	50								
Vanadium	100	50	50.4	100.8					49.2	98.4
Zinc	40	20	21.0	105.0					18.3	91.5

(*) Outside of QC limits
(anr) Analyte not requested
(a) Possible instrument baseline drift.

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101409.ASC Date Analyzed: 10/14/09 Methods: SW846 6010B
QC Limits: CRI 70-130% CRIA 70-130% Run ID: MA7594 Units: ug/l

Time:			22:43	
Sample ID:	CRI	CRIA	CRI2	
Metal	True	True	Results	% Rec
Aluminum	400	200		
Antimony	10	5.0		
Arsenic	20	10		
Barium	400	200		
Beryllium	10	5.0		
Cadmium	10	5.0		
Calcium	2000	1000		
Chromium	20	10		
Cobalt	100	50		
Copper	50	25		
Iron	600	300		
Lead	10	5.0	11.9	119.0
Magnesium	10000	5000		
Manganese	30	15		
Molybdenum	100	50		
Nickel	80	40		
Potassium	20000	10000		
Selenium	20	10		
Silver	20	10		
Sodium	20000	10000		
Thallium	20	10		
Tin	100	50		
Vanadium	100	50		
Zinc	40	20		

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101409.ASC Date Analyzed: 10/14/09 Methods: SW846 6010B
QC Limits: 80 to 120 % Recovery Run ID: MA7594 Units: ug/l

Time:			10:56		10:57		22:46		22:49	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	500000	500000	468000	93.6	474000	94.8	457000	91.4	464000	92.8
Antimony		1000	0.010		1010	101.0	-11		1020	102.0
Arsenic		1000	0.0		972	97.2	-4.2		1000	100.0
Barium		500	0.59		516	103.2	0.59		508	101.6
Beryllium		500	-0.67		491	98.2	-0.23		493	98.6
Cadmium		1000	0.050		973	97.3	-1.3		984	98.4
Calcium	500000	500000	425000	85.0	429000	85.8	431000	86.2	438000	87.6
Chromium		500	0.54		469	93.8	-0.12		474	94.8
Cobalt		500	0.55		512	102.4	0.69		515	103.0
Copper		500	-1.4		530	106.0	-3.9		526	105.2
Iron	200000	200000	191000	95.5	190000	95.0	188000	94.0	188000	94.0
Lead		1000	-0.66		984	98.4	-1.2		988	98.8
Magnesium	500000	500000	498000	99.6	501000	100.2	495000	99.0	500000	100.0
Manganese		500	-0.12		491	98.2	-0.29		489	97.8
Molybdenum		1000	-0.33		972	97.2	-1.5		990	99.0
Nickel		1000	0.88		937	93.7	0.28		957	95.7
Potassium			221		-140		202		-140	
Selenium		1000	1.9		994	99.4	2.6		1010	101.0
Silver		1000	0.77		1040	104.0	-3.1		1030	103.0
Sodium			-61		546		-220		499	
Thallium		1000	2.5		966	96.6	2.4		981	98.1
Tin		1000	-1.9		902	90.2	-5.2		933	93.3
Vanadium		500	-11		488	97.6	-13		487	97.4
Zinc		1000	6.3		969	96.9	2.5		984	98.4

(*) Outside of QC limits
(anr) Analyte not requested

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101509.ASC Date Analyzed: 10/15/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7598
Parameters: Al,Sb,As,Ba,Cd,Ca,Cr,Fe,Pb,Mg,K,Se,Ag

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:44	MA7598-HSTD1	1		
09:47	MA7598-ICV1	1		
09:52	MA7598-ICB1	1		
09:57	MA7598-CRIA1	1		
10:05	MA7598-CRI1	1		
10:11	MA7598-ICSA1	1		
10:13	MA7598-ICSAB1	1		
10:23	MA7598-CCV1	1		
10:27	MA7598-CCB1	1		
11:40	MA7598-CCV2	1		
11:44	MA7598-CCB2	1		
11:52	ZZZZZZ	2		
11:56	ZZZZZZ	5		
11:59	ZZZZZZ	10		
12:03	ZZZZZZ	4		
12:06	ZZZZZZ	4		
12:09	ZZZZZZ	4		
12:13	ZZZZZZ	20		
12:16	F68616-1	20		
12:20	F68616-1	2		
12:26	MA7598-CCV3	1		
12:31	MA7598-CCB3	1		
12:34	F68616-2	4		
12:38	F68616-2	2		
12:42	F68616-1A	20		
12:45	F68616-1A	2		
12:52	F68616-2A	4		
12:56	F68616-2A	2		
13:00	ZZZZZZ	2		
13:04	ZZZZZZ	2		
13:07	ZZZZZZ	2		
13:10	MA7598-CCV4	1		
13:15	MA7598-CCB4	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101509.ASC Date Analyzed: 10/15/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7598
Parameters: Al,Sb,As,Ba,Cd,Ca,Cr,Fe,Pb,Mg,K,Se,Ag

Time	Sample Description	Dilution Factor	PS Recov	Comments
15:06	MA7598-CCV5	1		
15:10	MA7598-CCB5	1		
15:23	F68600-2	20		(sample used for QC only; not part of login F68616)
15:27	MP17190-D1	20		
15:30	MP17190-SD1	100		
15:33	MP17190-PS1	20		
15:37	MP17190-S1	20		
15:40	MP17190-S2	20		
---------->	Last reportable sample/prep for job F68616			
15:44	MA7598-CCV6	1		
15:48	MA7598-CCB6	1		
17:27	MA7598-CCV7	1		
17:32	MA7598-CCB7	1		
17:43	MP17197-MB1	1		
17:46	MP17197-B1	1		
17:50	F68612-1	1		(sample used for QC only; not part of login F68616)
17:53	MP17197-D1	1		
17:57	MP17197-SD1	5		
18:00	MP17197-PS1	1		
18:03	MP17197-S1	1		
18:07	MP17197-S2	1		
18:10	MA7598-CCV8	1		
18:15	MA7598-CCB8	1		
18:18	ZZZZZZ	1		
18:22	ZZZZZZ	1		
18:25	ZZZZZZ	1		
18:28	ZZZZZZ	1		
18:32	ZZZZZZ	1		
18:35	ZZZZZZ	1		
18:39	ZZZZZZ	1		
18:42	ZZZZZZ	1		
18:45	ZZZZZZ	1		
18:49	ZZZZZZ	1		
18:52	MA7598-CCV9	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101509.ASC Date Analyzed: 10/15/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7598
Parameters: Al,Sb,As,Ba,Cd,Ca,Cr,Fe,Pb,Mg,K,Se,Ag

Time	Sample Description	Dilution Factor	PS Recov	Comments
18:57	MA7598-CCB9	1		
19:00	ZZZZZZ	1		
19:03	ZZZZZZ	1		
19:07	ZZZZZZ	1		
19:10	ZZZZZZ	1		
19:14	ZZZZZZ	1		
19:17	ZZZZZZ	1		
19:20	ZZZZZZ	1		
19:25	MP17199-MB1	1		
19:28	MP17199-B1	1		
19:32	F68770-2	1		(sample used for QC only; not part of login F68616)
19:35	MA7598-CCV10	1		
19:40	MA7598-CCB10	1		
19:43	MP17199-D1	1		
19:46	MP17199-SD1	5		
19:50	MP17199-PS1	1		
19:53	MP17199-S1	1		
19:57	ZZZZZZ	1		
20:18	MA7598-CCV11	1		
20:23	MA7598-CCB11	1		
20:44	MP17200-MB1	1		
20:47	MP17200-B1	1		
20:51	F68672-1	1		(sample used for QC only; not part of login F68616)
20:54	MP17200-D1	1		
20:58	MP17200-SD1	5		
21:01	MA7598-CCV12	1		
21:05	MA7598-CCB12	1		
21:09	MP17200-S1	1		
21:13	MP17200-MB2	1		
21:17	MP17200-B2	1		
21:21	MP17194-MB1	1		
21:25	MP17194-B1	1		
21:28	F68695-10	1		(sample used for QC only; not part of login F68616)

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101509.ASC Date Analyzed: 10/15/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7598
Parameters: Al,Sb,As,Ba,Cd,Ca,Cr,Fe,Pb,Mg,K,Se,Ag

Time	Sample Description	Dilution Factor	PS Recov	Comments
21:31	MP17194-D1	1		
21:35	MP17194-SD1	5		
21:38	MP17194-PS1	1		
21:42	MP17194-S1	1		
21:45	MA7598-CCV13	1		
21:49	MA7598-CCB13	1		
21:53	MP17194-S2	1		
21:56	ZZZZZZ	1		
22:00	ZZZZZZ	1		
22:03	ZZZZZZ	1		
22:07	ZZZZZZ	1		
22:10	ZZZZZZ	1		
22:13	ZZZZZZ	1		
22:17	ZZZZZZ	1		
22:20	ZZZZZZ	1		
22:24	ZZZZZZ	1		
22:27	MA7598-CCV14	1		
22:31	MA7598-CCB14	1		
22:35	ZZZZZZ	1		
22:38	ZZZZZZ	1		
22:42	ZZZZZZ	1		
22:45	ZZZZZZ	1		
22:49	ZZZZZZ	1		
22:52	ZZZZZZ	1		
22:55	ZZZZZZ	1		
22:59	ZZZZZZ	1		
23:02	MA7598-CCV15	1		
23:07	MA7598-CCB15	1		
23:10	MA7598-CRIA2	1		
23:14	MA7598-CRI2	1		
23:17	MA7598-ICSA2	1		
23:20	MA7598-ICSAB2	1		
23:24	MA7598-CCV16	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101509.ASC Date Analyzed: 10/15/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7598
Parameters: Al,Sb,As,Ba,Cd,Ca,Cr,Fe,Pb,Mg,K,Se,Ag

Time	Sample Description	Dilution Factor	PS Recov	Comments
23:28	MA7598-CCB16	1		

----------> Last reportable CCB for job F68616
Refer to raw data for calibration curve and standards.

INTERNAL STANDARD SUMMARY

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101509.ASC Date Analyzed: 10/15/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7598
Parameters: Al,Sb,As,Ba,Cd,Ca,Cr,Fe,Pb,Mg,K,Se,Ag

Time	Sample Description	Istd#1
09:44	MA7598-HSTD1	4284
09:47	MA7598-ICV1	4338
09:52	MA7598-ICB1	4415 R
09:57	MA7598-CRIA1	4422
10:05	MA7598-CRI1	4443
10:11	MA7598-ICSA1	4055
10:13	MA7598-ICSAB1	4024
10:23	MA7598-CCV1	4353
10:27	MA7598-CCB1	4410
11:40	MA7598-CCV2	4410
11:44	MA7598-CCB2	4420
11:52	ZZZZZZ	4455
11:56	ZZZZZZ	4512
11:59	ZZZZZZ	4487
12:03	ZZZZZZ	4480
12:06	ZZZZZZ	4355
12:09	ZZZZZZ	4294
12:13	ZZZZZZ	4416
12:16	F68616-1	4101
12:20	F68616-1	2931
12:26	MA7598-CCV3	4292
12:31	MA7598-CCB3	4425
12:34	F68616-2	4124
12:38	F68616-2	3892
12:42	F68616-1A	4090
12:45	F68616-1A	2891
12:52	F68616-2A	4027
12:56	F68616-2A	3908
13:00	ZZZZZZ	4999
13:04	ZZZZZZ	4908
13:07	ZZZZZZ	4869
13:10	MA7598-CCV4	4300
13:15	MA7598-CCB4	4433

INTERNAL STANDARD SUMMARY

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101509.ASC Date Analyzed: 10/15/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7598
Parameters: Al,Sb,As,Ba,Cd,Ca,Cr,Fe,Pb,Mg,K,Se,Ag

Time	Sample Description	Istd#1
15:06	MA7598-CCV5	4439
15:10	MA7598-CCB5	4444
15:23	F68600-2	4429
15:27	MP17190-D1	4414
15:30	MP17190-SD1	4438
15:33	MP17190-PS1	4426
15:37	MP17190-S1	4438
15:40	MP17190-S2	4407
15:44	MA7598-CCV6	4389
15:48	MA7598-CCB6	4458
17:27	MA7598-CCV7	4401
17:32	MA7598-CCB7	4467
17:43	MP17197-MB1	4400
17:46	MP17197-B1	4418
17:50	F68612-1	4378
17:53	MP17197-D1	4385
17:57	MP17197-SD1	4502
18:00	MP17197-PS1	4304
18:03	MP17197-S1	4247
18:07	MP17197-S2	4340
18:10	MA7598-CCV8	4306
18:15	MA7598-CCB8	4386
18:18	ZZZZZZ	4354
18:22	ZZZZZZ	4332
18:25	ZZZZZZ	4362
18:28	ZZZZZZ	4188
18:32	ZZZZZZ	4265
18:35	ZZZZZZ	4331
18:39	ZZZZZZ	4356
18:42	ZZZZZZ	4274
18:45	ZZZZZZ	4274
18:49	ZZZZZZ	4249
18:52	MA7598-CCV9	4286

INTERNAL STANDARD SUMMARY

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101509.ASC Date Analyzed: 10/15/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7598
Parameters: Al,Sb,As,Ba,Cd,Ca,Cr,Fe,Pb,Mg,K,Se,Ag

Time	Sample Description	Istd#1
18:57	MA7598-CCB9	4346
19:00	ZZZZZZ	4329
19:03	ZZZZZZ	4258
19:07	ZZZZZZ	4276
19:10	ZZZZZZ	4351
19:14	ZZZZZZ	4332
19:17	ZZZZZZ	4284
19:20	ZZZZZZ	4291
19:25	MP17199-MB1	4306
19:28	MP17199-B1	4317
19:32	F68770-2	4337
19:35	MA7598-CCV10	4162
19:40	MA7598-CCB10	4295
19:43	MP17199-D1	4324
19:46	MP17199-SD1	4321
19:50	MP17199-PS1	4349
19:53	MP17199-S1	4362
19:57	ZZZZZZ	4283
20:18	MA7598-CCV11	4188
20:23	MA7598-CCB11	4279
20:44	MP17200-MB1	4201
20:47	MP17200-B1	4176
20:51	F68672-1	4057
20:54	MP17200-D1	4150
20:58	MP17200-SD1	4209
21:01	MA7598-CCV12	4214
21:05	MA7598-CCB12	4253
21:09	MP17200-S1	4033
21:13	MP17200-MB2	4054
21:17	MP17200-B2	4044
21:21	MP17194-MB1	4276
21:25	MP17194-B1	4134
21:28	F68695-10	4468

INTERNAL STANDARD SUMMARY

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101509.ASC Date Analyzed: 10/15/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7598
Parameters: Al,Sb,As,Ba,Cd,Ca,Cr,Fe,Pb,Mg,K,Se,Ag

Time	Sample Description	Istd#1
21:31	MP17194-D1	4442
21:35	MP17194-SD1	4278
21:38	MP17194-PS1	4408
21:42	MP17194-S1	4362
21:45	MA7598-CCV13	4229
21:49	MA7598-CCB13	4170
21:53	MP17194-S2	4404
21:56	ZZZZZZ	4585
22:00	ZZZZZZ	4698
22:03	ZZZZZZ	4682
22:07	ZZZZZZ	4628
22:10	ZZZZZZ	4567
22:13	ZZZZZZ	4478
22:17	ZZZZZZ	4416
22:20	ZZZZZZ	4616
22:24	ZZZZZZ	4570
22:27	MA7598-CCV14	4170
22:31	MA7598-CCB14	4181
22:35	ZZZZZZ	4760
22:38	ZZZZZZ	4925
22:42	ZZZZZZ	4644
22:45	ZZZZZZ	5680 !
22:49	ZZZZZZ	4912
22:52	ZZZZZZ	4424
22:55	ZZZZZZ	4544
22:59	ZZZZZZ	4670
23:02	MA7598-CCV15	4121
23:07	MA7598-CCB15	4212
23:10	MA7598-CRIA2	4158
23:14	MA7598-CRI2	4213
23:17	MA7598-ICSA2	3857
23:20	MA7598-ICSAB2	3883
23:24	MA7598-CCV16	4099

INTERNAL STANDARD SUMMARY

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101509.ASC Date Analyzed: 10/15/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7598
Parameters: Al,Sb,As,Ba,Cd,Ca,Cr,Fe,Pb,Mg,K,Se,Ag

Time	Sample Description	Istd#1
23:28	MA7598-CCB16	4176

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium	60-125 %

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101509.ASC Date Analyzed: 10/15/09 Methods: SW846 6010B
QC Limits: result < RL Run ID: MA7598 Units: ug/l

Time:			09:52		10:27		11:44		12:31	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	11	1.6	<200	7.7	<200	24.2	<200	18.8	<200
Antimony	6.0	4.5	1.6	<6.0	2.2	<6.0	1.5	<6.0	0.57	<6.0
Arsenic	10	3.6	0.61	<10	-0.75	<10	0.20	<10	0.90	<10
Barium	200	5	-0.49	<200	-0.52	<200	-0.37	<200	-0.50	<200
Beryllium	4.0	1	anr							
Cadmium	5.0	1	-0.070	<5.0	0.090	<5.0	0.010	<5.0	0.020	<5.0
Calcium	1000	100	-0.16	<1000	12.9	<1000	13.2	<1000	5.1	<1000
Chromium	10	1.6	-0.29	<10	-0.030	<10	0.22	<10	-0.27	<10
Cobalt	50	.83	anr							
Copper	25	2.1	anr							
Iron	300	23	1.3	<300	-6.5	<300	7.9	<300	3.1	<300
Lead	5.0	2	2.0	<10	1.8	<10	3.2	<10	1.3	<10
Magnesium	5000	100	2.1	<5000	3.7	<5000	8.2	<5000	4.4	<5000
Manganese	15	.5	anr							
Molybdenum	50	2.8	anr							
Nickel	40	2.3	anr							
Potassium	10000	100	240	<10000	210	<10000	273	<10000	230	<10000
Selenium	10	3.1	2.2	<20	3.8	<20	5.8	<20	4.3	<20
Silver	10	1.2	-0.21	<10	-0.14	<10	0.75	<10	0.65	<10
Sodium	10000	500	anr							
Thallium	10	3.4	anr							
Tin	50	2.8								
Vanadium	50	.66	anr							
Zinc	20	3.8	anr							

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101509.ASC Date Analyzed: 10/15/09 Methods: SW846 6010B
QC Limits: result < RL Run ID: MA7598 Units: ug/l

Time:			13:15		15:10		15:48		17:32	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	11	24.3	<200	39.1	<200	26.4	<200	-13	<200
Antimony	6.0	4.5	1.3	<6.0	0.35	<6.0	2.5	<6.0	2.5	<6.0
Arsenic	10	3.6	1.3	<10	-0.010	<10	1.8	<10	2.9	<10
Barium	200	5	-0.40	<200	-0.41	<200	-0.42	<200	-0.54	<200
Beryllium	4.0	1	anr							
Cadmium	5.0	1	-0.070	<5.0	-0.31	<5.0	-0.20	<5.0	-0.21	<5.0
Calcium	1000	100	4.6	<1000	3.0	<1000	1.9	<1000	0.57	<1000
Chromium	10	1.6	0.090	<10	-0.090	<10	-0.080	<10	-0.53	<10
Cobalt	50	.83	anr							
Copper	25	2.1	anr							
Iron	300	23	-1.4	<300	8.2	<300	-0.15	<300	5.7	<300
Lead	5.0	2	2.4	<10	2.1	<10	0.92	<10	2.2	<10
Magnesium	5000	100	5.1	<5000	3.4	<5000	9.5	<5000	2.5	<5000
Manganese	15	.5	anr							
Molybdenum	50	2.8	anr							
Nickel	40	2.3	anr							
Potassium	10000	100	222	<10000	230	<10000	237	<10000	192	<10000
Selenium	10	3.1	3.6	<20	2.9	<20	0.28	<20	2.8	<20
Silver	10	1.2	0.69	<10	1.0	<10	-0.020	<10	0.22	<10
Sodium	10000	500	anr							
Thallium	10	3.4	anr							
Tin	50	2.8								
Vanadium	50	.66	anr							
Zinc	20	3.8	anr							

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101509.ASC Date Analyzed: 10/15/09 Methods: SW846 6010B
QC Limits: result < RL Run ID: MA7598 Units: ug/l

Time:			18:15		18:57		19:40		20:23	
Sample ID:			CCB8		CCB9		CCB10		CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	11	-15	<200	-15	<200	-21	<200	-20	<200
Antimony	6.0	4.5	3.2	<6.0	1.1	<6.0	1.4	<6.0	0.35	<6.0
Arsenic	10	3.6	0.49	<10	-0.93	<10	-0.41	<10	1.5	<10
Barium	200	5	-0.44	<200	-0.47	<200	-0.54	<200	-0.53	<200
Beryllium	4.0	1	anr							
Cadmium	5.0	1	-0.020	<5.0	0.060	<5.0	-0.23	<5.0	-0.060	<5.0
Calcium	1000	100	3.7	<1000	1.7	<1000	2.4	<1000	-0.13	<1000
Chromium	10	1.6	-0.14	<10	-0.11	<10	-0.43	<10	-0.54	<10
Cobalt	50	.83	anr							
Copper	25	2.1	anr							
Iron	300	23	4.7	<300	0.85	<300	3.1	<300	1.8	<300
Lead	5.0	2	0.65	<10	2.5	<10	1.5	<10	3.5	<10
Magnesium	5000	100	4.6	<5000	6.2	<5000	2.5	<5000	6.5	<5000
Manganese	15	.5	anr							
Molybdenum	50	2.8	anr							
Nickel	40	2.3	anr							
Potassium	10000	100	221	<10000	234	<10000	207	<10000	220	<10000
Selenium	10	3.1	1.9	<20	3.0	<20	2.9	<20	3.5	<20
Silver	10	1.2	-0.31	<10	-0.39	<10	-1.2	<10	-1.2	<10
Sodium	10000	500	anr							
Thallium	10	3.4	anr							
Tin	50	2.8								
Vanadium	50	.66	anr							
Zinc	20	3.8	anr							

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101509.ASC Date Analyzed: 10/15/09 Methods: SW846 6010B
QC Limits: result < RL Run ID: MA7598 Units: ug/l

Time:			21:05		21:49		22:31		23:07	
Sample ID:			CCB12		CCB13		CCB14		CCB15	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	11	-20	<200	-20	<200	-22	<200	-26	<200
Antimony	6.0	4.5	-0.13	<6.0	1.8	<6.0	-0.67	<6.0	2.8	<6.0
Arsenic	10	3.6	-1.7	<10	0.62	<10	0.55	<10	1.8	<10
Barium	200	5	-0.47	<200	-0.51	<200	-0.45	<200	-0.49	<200
Beryllium	4.0	1	anr							
Cadmium	5.0	1	0.0	<5.0	0.22	<5.0	-0.020	<5.0	0.19	<5.0
Calcium	1000	100	2.3	<1000	2.6	<1000	3.1	<1000	2.6	<1000
Chromium	10	1.6	-0.40	<10	-0.73	<10	-0.44	<10	-0.68	<10
Cobalt	50	.83	anr							
Copper	25	2.1	anr							
Iron	300	23	4.0	<300	16.7	<300	15.8	<300	12.5	<300
Lead	5.0	2	4.3	<10	2.0	<10	2.9	<10	2.9	<10
Magnesium	5000	100	5.1	<5000	4.0	<5000	7.0	<5000	5.0	<5000
Manganese	15	.5	anr							
Molybdenum	50	2.8	anr							
Nickel	40	2.3	anr							
Potassium	10000	100	251	<10000	230	<10000	245	<10000	231	<10000
Selenium	10	3.1	4.2	<20	2.9	<20	3.6	<20	3.4	<20
Silver	10	1.2	-1.1	<10	-0.69	<10	-0.68	<10	-0.98	<10
Sodium	10000	500	anr							
Thallium	10	3.4	anr							
Tin	50	2.8								
Vanadium	50	.66	anr							
Zinc	20	3.8	anr							

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101509.ASC Date Analyzed: 10/15/09 Methods: SW846 6010B
QC Limits: result < RL Run ID: MA7598 Units: ug/l

Time:			23:28	
Sample ID:			CCB16	
Metal	RL	IDL	raw	final
Aluminum	200	11	-20	<200
Antimony	6.0	4.5	-0.45	<6.0
Arsenic	10	3.6	0.080	<10
Barium	200	5	-0.48	<200
Beryllium	4.0	1	anr	
Cadmium	5.0	1	0.46	<5.0
Calcium	1000	100	4.3	<1000
Chromium	10	1.6	-0.19	<10
Cobalt	50	.83	anr	
Copper	25	2.1	anr	
Iron	300	23	13.7	<300
Lead	5.0	2	2.9	<10
Magnesium	5000	100	7.7	<5000
Manganese	15	.5	anr	
Molybdenum	50	2.8	anr	
Nickel	40	2.3	anr	
Potassium	10000	100	245	<10000
Selenium	10	3.1	4.3	<20
Silver	10	1.2	-1.0	<10
Sodium	10000	500	anr	
Thallium	10	3.4	anr	
Tin	50	2.8		
Vanadium	50	.66	anr	
Zinc	20	3.8	anr	

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101509.ASC Date Analyzed: 10/15/09 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7598 Units: ug/l

Time:		09:47			10:23			11:40	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	40400	101.0	40000	40500	101.3	40000	40700	101.8
Antimony	2000	2090	104.5	2000	2080	104.0	2000	2110	105.5
Arsenic	2000	1960	98.0	2000	1970	98.5	2000	2000	100.0
Barium	2000	2010	100.5	2000	2010	100.5	2000	2040	102.0
Beryllium	anr								
Cadmium	2000	2050	102.5	2000	2070	103.5	2000	2080	104.0
Calcium	40000	40600	101.5	40000	41000	102.5	40000	42000	105.0
Chromium	2000	2020	101.0	2000	2030	101.5	2000	2060	103.0
Cobalt	anr								
Copper	anr								
Iron	40000	40100	100.3	40000	40300	100.8	40000	40400	101.0
Lead	2000	2030	101.5	2000	2050	102.5	2000	2050	102.5
Magnesium	40000	40100	100.3	40000	40200	100.5	40000	40700	101.8
Manganese	anr								
Molybdenum	anr								
Nickel	anr								
Potassium	40000	40200	100.5	40000	40100	100.3	40000	40500	101.3
Selenium	2000	2030	101.5	2000	2040	102.0	2000	2040	102.0
Silver	250	246	98.4	250	245	98.0	250	243	97.2
Sodium	anr								
Thallium	anr								
Tin									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101509.ASC Date Analyzed: 10/15/09 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7598 Units: ug/l

Time:		12:26			13:10			15:06	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	41300	103.3	40000	40700	101.8	40000	40800	102.0
Antimony	2000	2140	107.0	2000	2110	105.5	2000	2140	107.0
Arsenic	2000	2030	101.5	2000	1990	99.5	2000	2040	102.0
Barium	2000	2070	103.5	2000	2040	102.0	2000	2060	103.0
Beryllium	anr								
Cadmium	2000	2140	107.0	2000	2080	104.0	2000	2120	106.0
Calcium	40000	42900	107.3	40000	42000	105.0	40000	43400	108.5
Chromium	2000	2100	105.0	2000	2060	103.0	2000	2090	104.5
Cobalt	anr								
Copper	anr								
Iron	40000	41300	103.3	40000	40400	101.0	40000	40700	101.8
Lead	2000	2100	105.0	2000	2060	103.0	2000	2070	103.5
Magnesium	40000	41500	103.8	40000	40600	101.5	40000	41300	103.3
Manganese	anr								
Molybdenum	anr								
Nickel	anr								
Potassium	40000	40800	102.0	40000	40300	100.8	40000	40500	101.3
Selenium	2000	2090	104.5	2000	2060	103.0	2000	2060	103.0
Silver	250	250	100.0	250	246	98.4	250	244	97.6
Sodium	anr								
Thallium	anr								
Tin									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101509.ASC Date Analyzed: 10/15/09 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7598 Units: ug/l

Time:		15:44			17:27			18:10	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	40600	101.5	40000	40200	100.5	40000	39700	99.3
Antimony	2000	2130	106.5	2000	2080	104.0	2000	2040	102.0
Arsenic	2000	2030	101.5	2000	1980	99.0	2000	1930	96.5
Barium	2000	2050	102.5	2000	2000	100.0	2000	1970	98.5
Beryllium	anr								
Cadmium	2000	2120	106.0	2000	2080	104.0	2000	2070	103.5
Calcium	40000	42900	107.3	40000	40700	101.8	40000	40500	101.3
Chromium	2000	2080	104.0	2000	2010	100.5	2000	2010	100.5
Cobalt	anr								
Copper	anr								
Iron	40000	40500	101.3	40000	40200	100.5	40000	40000	100.0
Lead	2000	2070	103.5	2000	2040	102.0	2000	2050	102.5
Magnesium	40000	41000	102.5	40000	39500	98.8	40000	39000	97.5
Manganese	anr								
Molybdenum	anr								
Nickel	anr								
Potassium	40000	40400	101.0	40000	39500	98.8	40000	38600	96.5
Selenium	2000	2070	103.5	2000	2030	101.5	2000	1950	97.5
Silver	250	243	97.2	250	247	98.8	250	243	97.2
Sodium	anr								
Thallium	anr								
Tin									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101509.ASC Date Analyzed: 10/15/09 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7598 Units: ug/l

Time:		18:52			19:35			20:18	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39700	99.3	40000	39400	98.5	40000	39600	99.0
Antimony	2000	2060	103.0	2000	2020	101.0	2000	2040	102.0
Arsenic	2000	1960	98.0	2000	1910	95.5	2000	1930	96.5
Barium	2000	1970	98.5	2000	1960	98.0	2000	1970	98.5
Beryllium	anr								
Cadmium	2000	2130	106.5	2000	2060	103.0	2000	2100	105.0
Calcium	40000	41500	103.8	40000	40200	100.5	40000	41300	103.3
Chromium	2000	2050	102.5	2000	2000	100.0	2000	2040	102.0
Cobalt	anr								
Copper	anr								
Iron	40000	40600	101.5	40000	39800	99.5	40000	40500	101.3
Lead	2000	2070	103.5	2000	2030	101.5	2000	2070	103.5
Magnesium	40000	39600	99.0	40000	38700	96.8	40000	39300	98.3
Manganese	anr								
Molybdenum	anr								
Nickel	anr								
Potassium	40000	38400	96.0	40000	38300	95.8	40000	38300	95.8
Selenium	2000	1950	97.5	2000	1900	95.0	2000	1910	95.5
Silver	250	245	98.0	250	244	97.6	250	246	98.4
Sodium	anr								
Thallium	anr								
Tin									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101509.ASC Date Analyzed: 10/15/09 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7598 Units: ug/l

Time:		21:01			21:45			22:27	
Sample ID:	CCV	CCV12		CCV	CCV13		CCV	CCV14	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39400	98.5	40000	39300	98.3	40000	39300	98.3
Antimony	2000	2020	101.0	2000	2010	100.5	2000	2010	100.5
Arsenic	2000	1930	96.5	2000	1910	95.5	2000	1910	95.5
Barium	2000	1950	97.5	2000	1940	97.0	2000	1930	96.5
Beryllium	anr								
Cadmium	2000	2100	105.0	2000	2110	105.5	2000	2120	106.0
Calcium	40000	41200	103.0	40000	41500	103.8	40000	41800	104.5
Chromium	2000	2040	102.0	2000	2050	102.5	2000	2060	103.0
Cobalt	anr								
Copper	anr								
Iron	40000	40400	101.0	40000	40600	101.5	40000	41000	102.5
Lead	2000	2060	103.0	2000	2070	103.5	2000	2090	104.5
Magnesium	40000	39200	98.0	40000	39200	98.0	40000	39300	98.3
Manganese	anr								
Molybdenum	anr								
Nickel	anr								
Potassium	40000	37900	94.8	40000	37500	93.8	40000	37300	93.3
Selenium	2000	1880	94.0	2000	1860	93.0	2000	1840	92.0
Silver	250	245	98.0	250	242	96.8	250	244	97.6
Sodium	anr								
Thallium	anr								
Tin									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101509.ASC Date Analyzed: 10/15/09 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7598 Units: ug/l

Time:		23:02			23:24	
Sample ID:	CCV	CCV15		CCV	CCV16	
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39200	98.0	40000	38900	97.3
Antimony	2000	1990	99.5	2000	1990	99.5
Arsenic	2000	1880	94.0	2000	1890	94.5
Barium	2000	1930	96.5	2000	1910	95.5
Beryllium	anr					
Cadmium	2000	2110	105.5	2000	2110	105.5
Calcium	40000	41500	103.8	40000	41600	104.0
Chromium	2000	2050	102.5	2000	2050	102.5
Cobalt	anr					
Copper	anr					
Iron	40000	40700	101.8	40000	40700	101.8
Lead	2000	2070	103.5	2000	2070	103.5
Magnesium	40000	39000	97.5	40000	38900	97.3
Manganese	anr					
Molybdenum	anr					
Nickel	anr					
Potassium	40000	37100	92.8	40000	36800	92.0
Selenium	2000	1810	90.5	2000	1810	90.5
Silver	250	245	98.0	250	242	96.8
Sodium	anr					
Thallium	anr					
Tin						
Vanadium	anr					
Zinc	anr					

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101509.ASC Date Analyzed: 10/15/09 Methods: SW846 6010B
QC Limits: 95 to 105 % Recovery Run ID: MA7598 Units: ug/l

Time:		09:44	
Sample ID:	HSTD	HSTD1	
Metal	True	Results	% Rec
Aluminum	80000	80800	101.0
Antimony	4000	3960	99.0
Arsenic	4000	3910	97.8
Barium	4000	3930	98.3
Beryllium	anr		
Cadmium	4000	3920	98.0
Calcium	80000	79700	99.6
Chromium	4000	3940	98.5
Cobalt	anr		
Copper	anr		
Iron	80000	80100	100.1
Lead	4000	3960	99.0
Magnesium	80000	81100	101.4
Manganese	anr		
Molybdenum	anr		
Nickel	anr		
Potassium	80000	75600	94.5
Selenium	4000	3960	99.0
Silver	500	498	99.6
Sodium	anr		
Thallium	anr		
Tin			
Vanadium	anr		
Zinc	anr		

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101509.ASC Date Analyzed: 10/15/09 Methods: SW846 6010B
QC Limits: CRI 70-130% CRIA 70-130% Run ID: MA7598 Units: ug/l

Time:			09:57		10:05		23:10		23:14	
Sample ID:	CRI	CRIA	CRIA1		CRI1		CRIA2		CRI2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	400	200	181	90.5			154	77.0		
Antimony	10	5.0	5.6	112.0			5.7	114.0		
Arsenic	20	10	9.6	96.0			11.0	110.0		
Barium	400	200	199	99.5			191	95.5		
Beryllium	10	5.0	anr							
Cadmium	10	5.0	5.0	100.0			5.4	108.0		
Calcium	2000	1000	994	99.4			1040	104.0		
Chromium	20	10	9.7	97.0			10.3	103.0		
Cobalt	100	50	anr							
Copper	50	25	anr							
Iron	600	300	265	88.3			273	91.0		
Lead	10	5.0			11.3	113.0			11.4	114.0
Magnesium	10000	5000	4710	94.2			4670	93.4		
Manganese	30	15	anr							
Molybdenum	100	50	anr							
Nickel	80	40	anr							
Potassium	20000	10000	8890	88.9			8240	82.4		
Selenium	20	10			20.8	104.0			21.4	107.0
Silver	20	10	9.4	94.0			8.5	85.0		
Sodium	20000	10000	anr							
Thallium	20	10	anr							
Tin	100	50								
Vanadium	100	50	anr							
Zinc	40	20	anr							

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101509.ASC Date Analyzed: 10/15/09 Methods: SW846 6010B
QC Limits: 80 to 120 % Recovery Run ID: MA7598 Units: ug/l

Time:			10:11		10:13		23:17		23:20	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	500000	500000	483000	96.6	491000	98.2	469000	93.8	476000	95.2
Antimony		1000	1.4		1040	104.0	-4.9		1010	101.0
Arsenic		1000	-1.1		998	99.8	-6.1		970	97.0
Barium		500	0.15		531	106.2	0.34		504	100.8
Beryllium		500	-0.60		500	100.0	0.080		503	100.6
Cadmium		1000	-1.4		990	99.0	-1.6		1020	102.0
Calcium	500000	500000	443000	88.6	438000	87.6	454000	90.8	451000	90.2
Chromium		500	0.81		479	95.8	0.91		483	96.6
Cobalt		500	0.83		525	105.0	1.2		521	104.2
Copper		500	-2.9		549	109.8	-3.0		509	101.8
Iron	200000	200000	197000	98.5	195000	97.5	199000	99.5	197000	98.5
Lead		1000	2.0		1010	101.0	0.79		1020	102.0
Magnesium	500000	500000	520000	104.0	520000	104.0	507000	101.4	509000	101.8
Manganese		500	-0.12		502	100.4	-0.030		497	99.4
Molybdenum		1000	0.010		997	99.7	-0.34		1010	101.0
Nickel		1000	-0.010		965	96.5	0.58		978	97.8
Potassium			194		-180		247		-180	
Selenium		1000	1.8		1010	101.0	2.5		921	92.1
Silver		1000	0.73		1060	106.0	0.19		1050	105.0
Sodium			-220		444		692		1090	
Thallium		1000	1.6		981	98.1	-12		959	95.9
Tin		1000	-6.3		923	92.3	-9.1		928	92.8
Vanadium		500	-11		501	100.2	-8.6		498	99.6
Zinc		1000	6.0		980	98.0	7.3		1030	103.0

(*) Outside of QC limits
(anr) Analyte not requested

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101609.ASC Date Analyzed: 10/16/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7601
Parameters: Na

Time	Sample Description	Dilution Factor	PS Recov	Comments
05:28	MA7601-HSTD1	1		
05:30	MA7601-ICV1	1		
05:36	MA7601-ICB1	1		
05:40	MA7601-CRIA1	1		
05:46	MA7601-CRIA2	1		
05:49	MA7601-CRI1	1		
05:55	MA7601-ICSA1	1		
05:56	MA7601-ICSAB1	1		
05:58	MA7601-CCV1	1		
06:03	MA7601-CCB1	1		
09:02	MA7601-CCV2	1		
09:06	MA7601-CCB2	1		
09:10	ZZZZZZ	2		
09:13	ZZZZZZ	5		
09:16	ZZZZZZ	2		
09:20	F68616-2	100		
09:23	F68616-2A	100		
---------->	Last reportable sample/prep for job F68616			
09:27	MA7601-CCV3	1		
09:31	MA7601-CCB3	1		
12:16	MA7601-CCV4	1		
12:20	MA7601-CCB4	1		
12:24	MP17204-MB1	1		
12:27	MP17204-B1	1		
12:30	F68738-2	1		(sample used for QC only; not part of login F68616)
12:34	MP17204-D1	1		
12:37	MP17204-SD1	5		
12:41	MP17204-PS1	1		
12:44	MP17204-S1	1		
12:47	MP17204-S2	1		
12:58	MA7601-CCV5	1		
13:02	MA7601-CCB5	1		
13:05	ZZZZZZ	1		
13:09	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101609.ASC Date Analyzed: 10/16/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7601
Parameters: Na

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:12	ZZZZZZ	1		
13:16	ZZZZZZ	1		
13:19	ZZZZZZ	1		
13:22	ZZZZZZ	1		
13:26	ZZZZZZ	1		
13:29	ZZZZZZ	1		
13:33	ZZZZZZ	1		
13:36	ZZZZZZ	1		
13:40	MA7601-CCV6	1		
13:44	MA7601-CCB6	1		
13:47	ZZZZZZ	1		
13:51	ZZZZZZ	1		
13:54	ZZZZZZ	1		
13:58	ZZZZZZ	1		
14:01	ZZZZZZ	1		
14:04	ZZZZZZ	1		
14:08	MA7601-CCV7	1		
14:12	MA7601-CCB7	1		
15:49	MA7601-CCV8	1		
15:54	MA7601-CCB8	1		
16:15	MP17206-MB1	1		
16:18	MP17206-B1	1		
16:22	F68678-1	1		(sample used for QC only; not part of login F68616)
16:25	MP17206-D1	1		
16:29	MP17206-SD1	5		
16:32	MA7601-CCV9	1		
16:37	MA7601-CCB9	1		
16:40	MP17206-PS1	1		
16:43	MP17206-S1	1		
16:47	MP17206-S2	1		
16:50	ZZZZZZ	1		
16:54	ZZZZZZ	1		
16:57	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101609.ASC Date Analyzed: 10/16/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7601
Parameters: Na

Time	Sample Description	Dilution Factor	PS Recov	Comments
17:00	ZZZZZZ	1		
17:04	ZZZZZZ	1		
17:07	ZZZZZZ	1		
17:11	ZZZZZZ	1		
17:14	MA7601-CCV10	1		
17:18	MA7601-CCB10	1		
17:22	ZZZZZZ	1		
17:25	ZZZZZZ	1		
17:29	ZZZZZZ	1		
17:32	ZZZZZZ	1		
17:35	ZZZZZZ	1		
17:39	ZZZZZZ	1		
17:42	ZZZZZZ	1		
17:46	ZZZZZZ	1		
17:49	ZZZZZZ	1		
17:53	ZZZZZZ	1		
17:56	MA7601-CCV11	1		
18:00	MA7601-CCB11	1		
18:04	ZZZZZZ	1		
18:07	ZZZZZZ	1		
18:12	MP17207-MB1	1		
18:15	MP17207-B1	1		
18:18	F68716-4	1		(sample used for QC only; not part of login F68616)
18:22	MP17207-D1	1		
18:25	MP17207-SD1	5		
18:29	MP17207-PS1	1		
18:32	MP17207-S1	1		
18:35	MP17207-S2	1		
18:39	MA7601-CCV12	1		
18:43	MA7601-CCB12	1		
18:47	ZZZZZZ	1		
18:50	ZZZZZZ	1		
18:54	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101609.ASC Date Analyzed: 10/16/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7601
Parameters: Na

Time	Sample Description	Dilution Factor	PS Recov	Comments
18:57	ZZZZZZ	1		
19:00	ZZZZZZ	1		
19:04	ZZZZZZ	1		
19:07	ZZZZZZ	1		
19:11	ZZZZZZ	1		
19:14	ZZZZZZ	1		
19:17	ZZZZZZ	1		
19:21	MA7601-CCV13	1		
19:25	MA7601-CCB13	1		
19:29	ZZZZZZ	1		
19:32	ZZZZZZ	1		
19:36	ZZZZZZ	1		
19:39	ZZZZZZ	1		
19:42	ZZZZZZ	1		
19:46	ZZZZZZ	1		
19:49	ZZZZZZ	1		
19:53	ZZZZZZ	1		
19:56	ZZZZZZ	1		
19:59	MA7601-CCV14	1		
20:04	MA7601-CCB14	1		
20:07	MA7601-CRIA3	1		
20:11	MA7601-CRI2	1		
20:14	MA7601-ICSA2	1		
20:18	MA7601-ICSAB2	1		
20:21	MA7601-CCV15	1		
20:25	MA7601-CCB15	1		

----------> Last reportable CCB for job F68616
Refer to raw data for calibration curve and standards.

INTERNAL STANDARD SUMMARY

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101609.ASC Date Analyzed: 10/16/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7601
Parameters: Na

Time	Sample Description	Istd#1
05:28	MA7601-HSTD1	5632
05:30	MA7601-ICV1	5760
05:36	MA7601-ICB1	6007 R
05:40	MA7601-CRIA1	5967
05:46	MA7601-CRIA2	5909
05:49	MA7601-CRI1	5853
05:55	MA7601-ICSA1	5196
05:56	MA7601-ICSAB1	5253
05:58	MA7601-CCV1	5786
06:03	MA7601-CCB1	5966
09:02	MA7601-CCV2	5660
09:06	MA7601-CCB2	5980
09:10	ZZZZZZ	5888
09:13	ZZZZZZ	6036
09:16	ZZZZZZ	5851
09:20	F68616-2	5939
09:23	F68616-2A	5850
09:27	MA7601-CCV3	5798
09:31	MA7601-CCB3	5944
12:16	MA7601-CCV4	5795
12:20	MA7601-CCB4	6002
12:24	MP17204-MB1	5926
12:27	MP17204-B1	5700
12:30	F68738-2	7055
12:34	MP17204-D1	6951
12:37	MP17204-SD1	6262
12:41	MP17204-PS1	7070
12:44	MP17204-S1	6821
12:47	MP17204-S2	6943
12:58	MA7601-CCV5	5925
13:02	MA7601-CCB5	6109
13:05	ZZZZZZ	6221
13:09	ZZZZZZ	6146

INTERNAL STANDARD SUMMARY

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101609.ASC Date Analyzed: 10/16/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7601
Parameters: Na

Time	Sample Description	Istd#1
13:12	ZZZZZZ	6350
13:16	ZZZZZZ	6468
13:19	ZZZZZZ	6225
13:22	ZZZZZZ	6410
13:26	ZZZZZZ	7259
13:29	ZZZZZZ	6289
13:33	ZZZZZZ	6275
13:36	ZZZZZZ	6398
13:40	MA7601-CCV6	5862
13:44	MA7601-CCB6	6083
13:47	ZZZZZZ	6533
13:51	ZZZZZZ	6874
13:54	ZZZZZZ	6614
13:58	ZZZZZZ	6145
14:01	ZZZZZZ	7418
14:04	ZZZZZZ	6072
14:08	MA7601-CCV7	5916
14:12	MA7601-CCB7	6147
15:49	MA7601-CCV8	5788
15:54	MA7601-CCB8	6028
16:15	MP17206-MB1	5990
16:18	MP17206-B1	5828
16:22	F68678-1	5760
16:25	MP17206-D1	5792
16:29	MP17206-SD1	5964
16:32	MA7601-CCV9	5706
16:37	MA7601-CCB9	5945
16:40	MP17206-PS1	5790
16:43	MP17206-S1	5617
16:47	MP17206-S2	5694
16:50	ZZZZZZ	5287
16:54	ZZZZZZ	5684
16:57	ZZZZZZ	5615

INTERNAL STANDARD SUMMARY

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101609.ASC Date Analyzed: 10/16/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7601
Parameters: Na

Time	Sample Description	Istd#1
17:00	ZZZZZZ	5935
17:04	ZZZZZZ	5881
17:07	ZZZZZZ	6028
17:11	ZZZZZZ	6046
17:14	MA7601-CCV10	5721
17:18	MA7601-CCB10	5948
17:22	ZZZZZZ	5998
17:25	ZZZZZZ	6006
17:29	ZZZZZZ	6037
17:32	ZZZZZZ	5663
17:35	ZZZZZZ	5785
17:39	ZZZZZZ	5540
17:42	ZZZZZZ	5780
17:46	ZZZZZZ	5715
17:49	ZZZZZZ	5640
17:53	ZZZZZZ	5661
17:56	MA7601-CCV11	5687
18:00	MA7601-CCB11	5972
18:04	ZZZZZZ	5648
18:07	ZZZZZZ	5641
18:12	MP17207-MB1	6017
18:15	MP17207-B1	5768
18:18	F68716-4	6055
18:22	MP17207-D1	5985
18:25	MP17207-SD1	6049
18:29	MP17207-PS1	6022
18:32	MP17207-S1	5788
18:35	MP17207-S2	5797
18:39	MA7601-CCV12	5757
18:43	MA7601-CCB12	5990
18:47	ZZZZZZ	5951
18:50	ZZZZZZ	6028
18:54	ZZZZZZ	6033

INTERNAL STANDARD SUMMARY

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101609.ASC Date Analyzed: 10/16/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7601
Parameters: Na

Time	Sample Description	Istd#1
18:57	ZZZZZZ	5750
19:00	ZZZZZZ	5621
19:04	ZZZZZZ	5710
19:07	ZZZZZZ	5990
19:11	ZZZZZZ	5982
19:14	ZZZZZZ	6200
19:17	ZZZZZZ	5766
19:21	MA7601-CCV13	5743
19:25	MA7601-CCB13	5995
19:29	ZZZZZZ	5567
19:32	ZZZZZZ	5630
19:36	ZZZZZZ	5613
19:39	ZZZZZZ	5759
19:42	ZZZZZZ	5934
19:46	ZZZZZZ	5843
19:49	ZZZZZZ	5719
19:53	ZZZZZZ	5636
19:56	ZZZZZZ	5614
19:59	MA7601-CCV14	5697
20:04	MA7601-CCB14	5999
20:07	MA7601-CRIA3	5997
20:11	MA7601-CRI2	5947
20:14	MA7601-ICSA2	5296
20:18	MA7601-ICSAB2	5192
20:21	MA7601-CCV15	5694
20:25	MA7601-CCB15	6109

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium	60-125 %

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101609.ASC Date Analyzed: 10/16/09 Methods: SW846 6010B
QC Limits: result < RL Run ID: MA7601 Units: ug/l

Time:			05:36		06:03		09:06		09:31	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	11	anr							
Antimony	6.0	4.5	anr							
Arsenic	10	3.6	anr							
Barium	200	5	anr							
Beryllium	4.0	1	anr							
Cadmium	5.0	1	anr							
Calcium	1000	100	anr							
Chromium	10	1.6	anr							
Cobalt	50	.83	anr							
Copper	25	2.1	anr							
Iron	300	23	anr							
Lead	5.0	2	anr							
Magnesium	5000	100	anr							
Manganese	15	.5	anr							
Molybdenum	50	2.8	anr							
Nickel	40	2.3	anr							
Potassium	10000	100	anr							
Selenium	10	3.1	anr							
Silver	10	1.2	anr							
Sodium	10000	500	-37	<10000	120	<10000	-2.1	<10000	-56	<10000
Thallium	10	3.4	anr							
Tin	50	2.8	anr							
Vanadium	50	.66	anr							
Zinc	20	3.8	anr							

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101609.ASC Date Analyzed: 10/16/09 Methods: SW846 6010B
QC Limits: result < RL Run ID: MA7601 Units: ug/l

Time:			12:20		13:02		13:44		14:12	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	11	anr							
Antimony	6.0	4.5	anr							
Arsenic	10	3.6	anr							
Barium	200	5	anr							
Beryllium	4.0	1	anr							
Cadmium	5.0	1	anr							
Calcium	1000	100								
Chromium	10	1.6	anr							
Cobalt	50	.83	anr							
Copper	25	2.1	anr							
Iron	300	23	anr							
Lead	5.0	2	anr							
Magnesium	5000	100								
Manganese	15	.5	anr							
Molybdenum	50	2.8	anr							
Nickel	40	2.3	anr							
Potassium	10000	100	anr							
Selenium	10	3.1	anr							
Silver	10	1.2	anr							
Sodium	10000	500	-37	<10000	-65	<10000	-26	<10000	-38	<10000
Thallium	10	3.4	anr							
Tin	50	2.8								
Vanadium	50	.66	anr							
Zinc	20	3.8	anr							

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101609.ASC Date Analyzed: 10/16/09 Methods: SW846 6010B
QC Limits: result < RL Run ID: MA7601 Units: ug/l

Time:			15:54		16:37		17:18		18:00	
Sample ID:			CCB8		CCB9		CCB10		CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	11	anr							
Antimony	6.0	4.5	anr							
Arsenic	10	3.6	anr							
Barium	200	5	anr							
Beryllium	4.0	1	anr							
Cadmium	5.0	1	anr							
Calcium	1000	100								
Chromium	10	1.6	anr							
Cobalt	50	.83	anr							
Copper	25	2.1	anr							
Iron	300	23	anr							
Lead	5.0	2	anr							
Magnesium	5000	100								
Manganese	15	.5	anr							
Molybdenum	50	2.8	anr							
Nickel	40	2.3	anr							
Potassium	10000	100	anr							
Selenium	10	3.1	anr							
Silver	10	1.2	anr							
Sodium	10000	500	73.8	<10000	1.6	<10000	-29	<10000	89.5	<10000
Thallium	10	3.4	anr							
Tin	50	2.8								
Vanadium	50	.66	anr							
Zinc	20	3.8	anr							

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101609.ASC Date Analyzed: 10/16/09 Methods: SW846 6010B
QC Limits: result < RL Run ID: MA7601 Units: ug/l

Time:			18:43		19:25		20:04		20:25	
Sample ID:			CCB12		CCB13		CCB14		CCB15	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	11	anr							
Antimony	6.0	4.5	anr							
Arsenic	10	3.6	anr							
Barium	200	5	anr							
Beryllium	4.0	1	anr							
Cadmium	5.0	1	anr							
Calcium	1000	100								
Chromium	10	1.6	anr							
Cobalt	50	.83	anr							
Copper	25	2.1	anr							
Iron	300	23	anr							
Lead	5.0	2	anr							
Magnesium	5000	100								
Manganese	15	.5	anr							
Molybdenum	50	2.8	anr							
Nickel	40	2.3	anr							
Potassium	10000	100	anr							
Selenium	10	3.1	anr							
Silver	10	1.2	anr							
Sodium	10000	500	18.2	<10000	-0.24	<10000	41.3	<10000	-14	<10000
Thallium	10	3.4	anr							
Tin	50	2.8								
Vanadium	50	.66	anr							
Zinc	20	3.8	anr							

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101609.ASC Date Analyzed: 10/16/09 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7601 Units: ug/l

Time:		05:30			05:58			09:02	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Magnesium	anr								
Manganese	anr								
Molybdenum	anr								
Nickel	anr								
Potassium	anr								
Selenium	anr								
Silver	anr								
Sodium	40000	40000	100.0	40000	39700	99.3	40000	40000	100.0
Thallium	anr								
Tin	anr								
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101609.ASC Date Analyzed: 10/16/09 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7601 Units: ug/l

Time:		09:27			12:16			12:58	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum									
Antimony									
Arsenic									
Barium									
Beryllium									
Cadmium									
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead	anr								
Magnesium									
Manganese									
Molybdenum									
Nickel									
Potassium									
Selenium									
Silver									
Sodium	40000	39500	98.8	40000	39600	99.0	40000	39100	97.8
Thallium									
Tin									
Vanadium									
Zinc									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101609.ASC Date Analyzed: 10/16/09 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7601 Units: ug/l

Time:		13:40			14:08			15:49	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Cadmium	anr								
Calcium									
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Magnesium									
Manganese	anr								
Molybdenum	anr								
Nickel	anr								
Potassium	anr								
Selenium	anr								
Silver	anr								
Sodium	40000	40000	100.0	40000	39700	99.3	40000	39700	99.3
Thallium	anr								
Tin									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101609.ASC Date Analyzed: 10/16/09 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7601 Units: ug/l

Time:		16:32			17:14			17:56	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Cadmium	anr								
Calcium									
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Magnesium									
Manganese	anr								
Molybdenum	anr								
Nickel	anr								
Potassium	anr								
Selenium	anr								
Silver	anr								
Sodium	40000	39900	99.8	40000	39600	99.0	40000	39900	99.8
Thallium	anr								
Tin									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101609.ASC Date Analyzed: 10/16/09 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7601 Units: ug/l

Time:		18:39			19:21			19:59	
Sample ID:	CCV	CCV12		CCV	CCV13		CCV	CCV14	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Cadmium	anr								
Calcium									
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Magnesium									
Manganese	anr								
Molybdenum	anr								
Nickel	anr								
Potassium	anr								
Selenium	anr								
Silver	anr								
Sodium	40000	39800	99.5	40000	39800	99.5	40000	40000	100.0
Thallium	anr								
Tin									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101609.ASC Date Analyzed: 10/16/09 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7601 Units: ug/l

Time:		20:21	
Sample ID:	CCV	CCV15	
Metal	True	Results	% Rec
Aluminum	anr		
Antimony	anr		
Arsenic	anr		
Barium	anr		
Beryllium	anr		
Cadmium	anr		
Calcium			
Chromium	anr		
Cobalt	anr		
Copper	anr		
Iron	anr		
Lead	anr		
Magnesium			
Manganese	anr		
Molybdenum	anr		
Nickel	anr		
Potassium	anr		
Selenium	anr		
Silver	anr		
Sodium	40000	40000	100.0
Thallium	anr		
Tin			
Vanadium	anr		
Zinc	anr		

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101609.ASC Date Analyzed: 10/16/09 Methods: SW846 6010B
QC Limits: 95 to 105 % Recovery Run ID: MA7601 Units: ug/l

Time:		05:28	
Sample ID:	HSTD	HSTD1	
Metal	True	Results	% Rec
Aluminum	anr		
Antimony	anr		
Arsenic	anr		
Barium	anr		
Beryllium	anr		
Cadmium	anr		
Calcium	anr		
Chromium	anr		
Cobalt	anr		
Copper	anr		
Iron	anr		
Lead	anr		
Magnesium	anr		
Manganese	anr		
Molybdenum	anr		
Nickel	anr		
Potassium	anr		
Selenium	anr		
Silver	anr		
Sodium	80000	79700	99.6
Thallium	anr		
Tin	anr		
Vanadium	anr		
Zinc	anr		

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101609.ASC Date Analyzed: 10/16/09 Methods: SW846 6010B
QC Limits: CRI 70-130% CRIA 70-130% Run ID: MA7601 Units: ug/l

Time:			05:40		05:46		05:49		20:07	
Sample ID:	CRI	CRIA	CRIA1		CRIA2		CRI1		CRIA3	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	400	200	anr							
Antimony	10	5.0	anr							
Arsenic	20	10								
Barium	400	200	anr							
Beryllium	10	5.0	anr							
Cadmium	10	5.0	anr							
Calcium	2000	1000	anr							
Chromium	20	10	anr							
Cobalt	100	50	anr							
Copper	50	25	anr							
Iron	600	300	anr							
Lead	10	5.0								
Magnesium	10000	5000	anr							
Manganese	30	15	anr							
Molybdenum	100	50	anr							
Nickel	80	40	anr							
Potassium	20000	10000	anr							
Selenium	20	10	anr							
Silver	20	10	anr							
Sodium	20000	10000	8520	85.2					8680	86.8
Thallium	20	10	anr							
Tin	100	50	anr							
Vanadium	100	50	anr							
Zinc	40	20	anr							

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101609.ASC Date Analyzed: 10/16/09 Methods: SW846 6010B
QC Limits: CRI 70-130% CRIA 70-130% Run ID: MA7601 Units: ug/l

Time:			20:11	
Sample ID:	CRI	CRIA	CRI2	
Metal	True	True	Results	% Rec
Aluminum	400	200		
Antimony	10	5.0		
Arsenic	20	10		
Barium	400	200		
Beryllium	10	5.0		
Cadmium	10	5.0		
Calcium	2000	1000		
Chromium	20	10		
Cobalt	100	50		
Copper	50	25		
Iron	600	300		
Lead	10	5.0	anr	
Magnesium	10000	5000		
Manganese	30	15		
Molybdenum	100	50		
Nickel	80	40		
Potassium	20000	10000		
Selenium	20	10		
Silver	20	10		
Sodium	20000	10000		
Thallium	20	10		
Tin	100	50		
Vanadium	100	50		
Zinc	40	20		

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR101609.ASC Date Analyzed: 10/16/09 Methods: SW846 6010B
QC Limits: 80 to 120 % Recovery Run ID: MA7601 Units: ug/l

Time:			05:55		05:56		20:14		20:18	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	500000	500000	483000	96.6	490000	98.0	471000	94.2	489000	97.8
Antimony		1000	0.020		1030	103.0	2.6		1000	100.0
Arsenic		1000	-0.050		996	99.6	3.8		969	96.9
Barium		500	0.64		531	106.2	0.63		527	105.4
Beryllium		500	-0.56		506	101.2	-0.15		494	98.8
Cadmium		1000	-0.080		995	99.5	0.31		967	96.7
Calcium	500000	500000	437000	87.4	440000	88.0	417000	83.4	423000	84.6
Chromium		500	0.58		481	96.2	0.61		467	93.4
Cobalt		500	0.86		512	102.4	1.4		498	99.6
Copper		500	-2.8		534	106.8	-2.9		530	106.0
Iron	200000	200000	192000	96.0	192000	96.0	185000	92.5	187000	93.5
Lead		1000	2.0		985	98.5	-0.61		964	96.4
Magnesium	500000	500000	496000	99.2	500000	100.0	471000	94.2	483000	96.6
Manganese		500	-0.23		500	100.0	-0.17		484	96.8
Molybdenum		1000	-1.3		998	99.8	-0.54		971	97.1
Nickel		1000	0.67		943	94.3	0.19		912	91.2
Potassium			232		-150		227		-140	
Selenium		1000	0.61		1010	101.0	-0.10		971	97.1
Silver		1000	0.73		1060	106.0	0.22		1060	106.0
Sodium			-110		247		-51		367	
Thallium		1000	-0.38		953	95.3	-0.51		934	93.4
Tin		1000	-3.1		914	91.4	-5.0		887	88.7
Vanadium		500	-6.8		504	100.8	-6.5		489	97.8
Zinc		1000	5.8		981	98.1	6.0		948	94.8

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17176 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 10/13/09

Metal	RL	IDL	MDL	MB raw	final
Mercury	1.0	.14	.15	0.023	<1.0

Associated samples MP17176: F68616-1, F68616-2, F68616-1A, F68616-2A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17176
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 10/13/09 10/13/09

Metal	F68600-17 Original	DUP	RPD	QC Limits	F68600-17 Original	MS	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.0	0.0	NC	0-20	0.0	3.0	3	100.0	80-120

Associated samples MP17176: F68616-1, F68616-2, F68616-1A, F68616-2A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17176
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 10/13/09

Metal	F68600-17 Original	MSD	Spikelot HGFLWS1	% Rec	MSD RPD	QC Limit
Mercury	0.0	3.1	3	103.3	3.3	20

Associated samples MP17176: F68616-1, F68616-2, F68616-1A, F68616-2A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17176
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 10/13/09

Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	3.1	3	103.3	80-120

Associated samples MP17176: F68616-1, F68616-2, F68616-1A, F68616-2A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17176
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 10/13/09

Metal	F68600-17 Original	SDL 1:5	%DIF	QC Limits
Mercury	0.00	0.00	NC	0-10

Associated samples MP17176: F68616-1, F68616-2, F68616-1A, F68616-2A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17190
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date:					10/14/09		10/14/09
Metal	RL	IDL	MDL	MB raw	final	MB raw	final
Aluminum	200	11	11	-9.6	<200	-6.4	<200
Antimony	6.0	4.5	4.5	-4.7	<6.0	-1.5	<6.0
Arsenic	10	3.6	5.4	-0.22	<10	-4.1	<10
Barium	200	5	5	0.060	<200	0.050	<200
Beryllium	4.0	1	1	1.2	<4.0	0.53	<4.0
Cadmium	5.0	1	1	-0.32	<5.0	-0.13	<5.0
Calcium	1000	100	100	50.6	<1000	48.6	<1000
Chromium	10	1.6	2	-0.55	<10	0.050	<10
Cobalt	50	.83	1	-0.77	<50	0.030	<50
Copper	25	2.1	5	-2.3	<25	-0.78	<25
Iron	300	23	23	19.5	<300	7.1	<300
Lead	10	2	2	2.7	<10	2.6	<10
Magnesium	5000	100	100	6.1	<5000	23.9	<5000
Manganese	15	.5	1	0.080	<15	0.44	<15
Molybdenum	50	2.8	5				
Nickel	40	2.3	2.3	0.16	<40	2.0	<40
Potassium	10000	100	100	264	<10000	272	<10000
Selenium	10	3.1	3.4	2.1	<10	1.7	<10
Silver	10	1.2	1.4	0.12	<10	0.060	<10
Sodium	10000	500	500	281	<10000	324	<10000
Thallium	10	3.4	3.6	-4.8	<10	-3.9	<10
Tin	50	2.8	2.8				
Vanadium	50	.66	.9	-0.91	<50	0.13	<50
Zinc	20	3.8	7.4	-1.3	<20	-2.4	<20

Associated samples MP17190: F68616-1, F68616-2, F68616-1A, F68616-2A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17190
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date:			10/14/09					10/14/09	
Metal	F68600-2 Original	DUP	RPD	QC Limits	F68600-2 Original	MS	Spikelot MPFLICP1	% Rec	QC Limits
Aluminum	257	273	6.0	0-20	257	29200	27000	107.2	80-120
Antimony	0.0	0.0	NC	0-20	0.0	505	500	101.0	80-120
Arsenic	0.0	0.0	NC	0-20	0.0	1980	2000	99.0	80-120
Barium	34.0	35.7	4.9	0-20	34.0	1920	2000	94.3	80-120
Beryllium	0.0	0.0	NC	0-20	0.0	48.5	50	97.0	80-120
Cadmium	0.0	0.0	NC	0-20	0.0	47.7	50	95.4	80-120
Calcium	70500	73800	4.6	0-20	70500	95500	25000	100.0	80-120
Chromium	2.9	3.7	24.2 (a)	0-20	2.9	194	200	95.6	80-120
Cobalt	0.0	0.0	NC	0-20	0.0	490	500	98.0	80-120
Copper	0.0	0.0	NC	0-20	0.0	262	250	104.8	80-120
Iron	2320	2440	5.0	0-20	2320	27600	26000	97.2	80-120
Lead	2.7	2.0	29.8 (a)	0-20	2.7	495	500	98.5	80-120
Magnesium	76200	79800	4.6	0-20	76200	103000	25000	107.2	80-120
Manganese	2280	2380	4.3	0-20	2280	2790	500	102.0	80-120
Molybdenum									
Nickel	0.0	0.0	NC	0-20	0.0	488	500	97.6	80-120
Potassium	447000	1100000	3.7	0-20	447000	1110000	25000	200.0(b)	80-120
Selenium	0.0	0.0	NC	0-20	0.0	2020	2000	101.0	80-120
Silver	0.0	0.0	NC	0-20	0.0	50.0	50	100.0	80-120
Sodium	36800	38600	4.8	0-20	36800	67400	25000	122.4N(c	80-120
Thallium	0.0	0.0	NC	0-20	0.0	1990	2000	99.5	80-120
Tin									
Vanadium	6.6	6.8	3.0	0-20	6.6	487	500	96.1	80-120
Zinc	0.0	3.8	200.0(a)	0-20	0.0	496	500	99.2	80-120

Associated samples MP17190: F68616-1, F68616-2, F68616-1A, F68616-2A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) RPD acceptable due to low duplicate and sample concentrations.
(b) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
(c) Spike recovery indicates possible matrix interference.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17190
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 10/14/09

Metal	F68600-2 Original	MSD	Spikelot MPFLICP1	% Rec	MSD RPD	QC Limit
Aluminum	257	29600	27000	108.7	1.4	20
Antimony	0.0	515	500	103.0	2.0	20
Arsenic	0.0	2020	2000	101.0	2.0	20
Barium	34.0	1940	2000	95.3	1.0	20
Beryllium	0.0	49.9	50	99.8	2.8	20
Cadmium	0.0	49.4	50	98.8	3.5	20
Calcium	70500	99400	25000	115.6	4.0	20
Chromium	2.9	199	200	98.1	2.5	20
Cobalt	0.0	505	500	101.0	3.0	20
Copper	0.0	267	250	106.8	1.9	20
Iron	2320	28300	26000	99.9	2.5	20
Lead	2.7	507	500	100.9	2.4	20
Magnesium	76200	107000	25000	123.2N(a	3.8	20
Manganese	2280	2890	500	122.0(b)	3.5	20
Molybdenum						
Nickel	0.0	506	500	101.2	3.6	20
Potassium	447000	1130000	25000	280.0(b)	1.8	20
Selenium	0.0	2070	2000	103.5	2.4	20
Silver	0.0	50.7	50	101.4	1.4	20
Sodium	36800	68500	25000	126.8N(a	1.6	20
Thallium	0.0	2030	2000	101.5	2.0	20
Tin						
Vanadium	6.6	500	500	98.7	2.6	20
Zinc	0.0	517	500	103.4	4.1	20

Associated samples MP17190: F68616-1, F68616-2, F68616-1A, F68616-2A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike recovery indicates possible matrix interference.
(b) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17190
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 10/14/09

Metal	BSP Result	Spikelot MPFLICP1	% Rec	QC Limits
Aluminum	26200	27000	97.0	80-120
Antimony	489	500	97.8	80-120
Arsenic	1900	2000	95.0	80-120
Barium	1950	2000	97.5	80-120
Beryllium	51.6	50	103.2	80-120
Cadmium	49.3	50	98.6	80-120
Calcium	25900	25000	103.6	80-120
Chromium	200	200	100.0	80-120
Cobalt	494	500	98.8	80-120
Copper	247	250	98.8	80-120
Iron	25900	26000	99.6	80-120
Lead	494	500	98.8	80-120
Magnesium	24600	25000	98.4	80-120
Manganese	497	500	99.4	80-120
Molybdenum				
Nickel	505	500	101.0	80-120
Potassium	24900	25000	99.6	80-120
Selenium	1880	2000	94.0	80-120
Silver	46.9	50	93.8	80-120
Sodium	24800	25000	99.2	80-120
Thallium	1950	2000	97.5	80-120
Tin				
Vanadium	491	500	98.2	80-120
Zinc	495	500	99.0	80-120

Associated samples MP17190: F68616-1, F68616-2, F68616-1A, F68616-2A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17190
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 10/14/09

Metal	F68600-2 Original	SDL 1:5	%DIF	QC Limits
Aluminum	257	289	12.5 (a)	0-10
Antimony	0.00	0.00	NC	0-10
Arsenic	0.00	0.00	NC	0-10
Barium	34.0	37.6	10.3 (a)	0-10
Beryllium	0.00	0.00	NC	0-10
Cadmium	0.00	0.00	NC	0-10
Calcium	70500	79600	12.8*(b)	0-10
Chromium	2.92	0.00	100.0(a)	0-10
Cobalt	0.00	0.00	NC	0-10
Copper	0.00	0.00	NC	0-10
Iron	2320	2380	2.4	0-10
Lead	2.73	15.5	469.2(a)	0-10
Magnesium	76200	82800	8.7	0-10
Manganese	2280	2560	12.4*(b)	0-10
Molybdenum				
Nickel	0.00	0.00	NC	0-10
Potassium	447000	1130000	6.6	0-10
Selenium	0.00	0.00	NC	0-10
Silver	0.00	0.00	NC	0-10
Sodium	36800	34800	5.3	0-10
Thallium	0.00	0.00	NC	0-10
Tin				
Vanadium	6.64	5.26	20.8 (a)	0-10
Zinc	0.00	0.00	NC	0-10

Associated samples MP17190: F68616-1, F68616-2, F68616-1A, F68616-2A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
(b) Serial dilution indicates possible matrix interference.

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries
- Instrument Runlogs/QC

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Solids, Total Dissolved	GN36945	100	0.0	mg/l				

Associated Samples:
Batch GN36945: F68616-1, F68616-2
(*) Outside of QC limits

7.1

7

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F68616
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Solids, Total Dissolved	GN36945	F68624-1	mg/l	4690	4420	5.9(a)	0-5%

Associated Samples:
Batch GN36945: F68616-1, F68616-2
(*) Outside of QC limits
(a) RPD acceptable due to low duplicate and sample concentrations.

Southeast ACCUTEST Laboratories

IT'S ALL IN THE CHEMISTRY

07/30/09

Technical Report for

Tetra Tech, Inc

Holloman AFB; Alamogordo, NM

100-TEN-T93002

Accutest Job Number: F66519

Sampling Dates: 07/07/09 - 07/08/09

Report to:

Tetra Tech
800 Oak Ridge Tpk. Suite A600
Oak Ridge, TN 37830
Virginia.Mullins@tetratech.com

ATTN: Ginger Mullins

Total number of pages in report: **193**

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Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Harry Behzadi, Ph.D.
Laboratory Director

Client Service contact: Sue Bell 407-425-6700

Certifications: FL (DOH E83510), NC (573), NJ (FL002), MA (FL946), IA (366), LA (03051), KS (E-10327), SC, AK

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Table of Contents

-1-

Section 1: Sample Summary 4
Section 2: Case Narrative/Conformance Summary 6
Section 3: Sample Results 8
3.1: F66519-1: MW39-10-070709 9
3.2: F66519-1A: MW39-10-070709 14
3.3: F66519-2: MW39-11-070709 15
3.4: F66519-2A: MW39-11-070709 20
3.5: F66519-3: MW39-09-070709 21
3.6: F66519-3A: MW39-09-070709 26
3.7: F66519-4: MW39-08-070709 27
3.8: F66519-4A: MW39-08-070709 32
3.9: F66519-5: MW39-06-070709 33
3.10: F66519-5A: MW39-06-070709 38
3.11: F66519-6: MW39-06D-070709 39
3.12: F66519-6A: MW39-06D-070709 44
3.13: F66519-7: MW39-DUP01-070709 45
3.14: F66519-7A: MW39-DUP01-070709 50
3.15: F66519-8: MW39-02-070809 51
3.16: F66519-8A: MW39-02-070809 56
3.17: F66519-9: MW39-05-070809 57
3.18: F66519-9A: MW39-05-070809 62
3.19: F66519-10: MW39-07-070809 63
3.20: F66519-10A: MW39-07-070809 68
3.21: F66519-11: TB01-070809 69
Section 4: Misc. Forms 72
4.1: Certification Exceptions 73
4.2: Chain of Custody 74
Section 5: GC/MS Volatiles - QC Data Summaries 77
5.1: Method Blank Summary 78
5.2: Blank Spike Summary 84
5.3: Matrix Spike/Matrix Spike Duplicate Summary 90
5.4: Instrument Performance Checks (BFB) 96
5.5: Internal Standard Area Summaries 101
5.6: Surrogate Recovery Summaries 103
5.7: Initial and Continuing Calibration Summaries 104
Section 6: Metals Analysis - QC Data Summaries 125
6.1: Inst QC MA7355: Hg 126
6.2: Inst QC MA7359: As,Ba,Cd,Cr,Pb,Se,Ag 137
6.3: Inst QC MA7361: As,Ba,Cd,Cr,Pb,Se,Ag 157
6.4: Prep QC MP16658: As,Ba,Cd,Cr,Pb,Se,Ag 171
6.5: Prep QC MP16669: As,Ba,Cd,Cr,Pb,Se,Ag 176
6.6: Prep QC MP16670: Hg 181

Table of Contents

6.7: Prep QC MP16671: Hg 186
Section 7: General Chemistry - QC Data Summaries 191
7.1: Method Blank and Spike Results Summary 192
7.2: Duplicate Results Summary 193

Accutest Laboratories

Sample Summary

Tetra Tech, Inc

Job No: F66519

Holloman AFB; Alamogordo, NM
Project No: 100-TEN-T93002

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
F66519-1	07/07/09	10:36 AM		07/09/09	AQ	Ground Water	MW39-10-070709
F66519-1A	07/07/09	10:36 AM		07/09/09	AQ	Groundwater Filtered	MW39-10-070709
F66519-2	07/07/09	11:35 AM		07/09/09	AQ	Ground Water	MW39-11-070709
F66519-2A	07/07/09	11:35 AM		07/09/09	AQ	Groundwater Filtered	MW39-11-070709
F66519-3	07/07/09	13:58 AM		07/09/09	AQ	Ground Water	MW39-09-070709
F66519-3A	07/07/09	13:58 AM		07/09/09	AQ	Groundwater Filtered	MW39-09-070709
F66519-4	07/07/09	15:12 AM		07/09/09	AQ	Ground Water	MW39-08-070709
F66519-4A	07/07/09	15:12 AM		07/09/09	AQ	Groundwater Filtered	MW39-08-070709
F66519-5	07/07/09	15:56 AM		07/09/09	AQ	Ground Water	MW39-06-070709
F66519-5A	07/07/09	15:56 AM		07/09/09	AQ	Groundwater Filtered	MW39-06-070709
F66519-6	07/07/09	16:35 AM		07/09/09	AQ	Ground Water	MW39-06D-070709
F66519-6A	07/07/09	16:35 AM		07/09/09	AQ	Groundwater Filtered	MW39-06D-070709
F66519-7	07/07/09	00:00 AM		07/09/09	AQ	Ground Water	MW39-DUP01-070709

Accutest Laboratories

Sample Summary
(continued)

Tetra Tech, Inc

Job No: F66519

Holloman AFB; Alamogordo, NM
Project No: 100-TEN-T93002

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
F66519-7A	07/07/09	00:00 AM	07/09/09	AQ	Groundwater Filtered	MW39-DUP01-070709
F66519-8	07/08/09	11:10 AM	07/09/09	AQ	Ground Water	MW39-02-070809
F66519-8A	07/08/09	11:10 AM	07/09/09	AQ	Groundwater Filtered	MW39-02-070809
F66519-9	07/08/09	11:25 AM	07/09/09	AQ	Ground Water	MW39-05-070809
F66519-9A	07/08/09	11:25 AM	07/09/09	AQ	Groundwater Filtered	MW39-05-070809
F66519-10	07/08/09	12:30 AM	07/09/09	AQ	Ground Water	MW39-07-070809
F66519-10A	07/08/09	12:30 AM	07/09/09	AQ	Groundwater Filtered	MW39-07-070809
F66519-10AD	07/08/09	12:30 AM	07/09/09	AQ	Groundwater Filtered	MW39-07-070809
F66519-10AS	07/08/09	12:30 AM	07/09/09	AQ	Groundwater Filtered	MW39-07-070809
F66519-10D	07/08/09	12:30 AM	07/09/09	AQ	Water Dup/MSD	MW39-07-070809
F66519-10S	07/08/09	12:30 AM	07/09/09	AQ	Water Matrix Spike	MW39-07-070809
F66519-11	07/08/09	00:00 AM	07/09/09	AQ	Ground Water	TB01-070809

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Tetra Tech, Inc **Job No:** F66519

Site: Holloman AFB; Alamogordo, NM **Report Date:** 7/29/2009 11:59:59

11 Samples were collected on 07/07/2009 and 07/08/2009 and were received at Accutest SE on 07/09/2009 properly preserved, at 4 Deg. C and intact. These Samples received an Accutest job number of F66519. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GCMS by Method SW846 8260B

Matrix: AQ **Batch ID:** VJ2895

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Samples F66519-10MS, F66519-10MSD were used as the QC samples indicated.

Matrix Spike Recoverys for 2-Chloroethyl vinyl ether, 2-Hexanone, 4-Methyl-2-pentanone, Acrylonitrile, Ethyl methacrylate, Methyl methacrylate are outside control limits. Probable cause: due to matrix interference.

Matrix Spike Duplicate Recoverys for 2-Chloroethyl vinyl ether, 2-Hexanone, 4-Methyl-2-pentanone, Acrylonitrile, Methyl methacrylate are outside control limits. Probable cause: due to matrix interference.

Matrix: AQ **Batch ID:** VJ2899

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Samples F66640-1MS, F66640-1MSD were used as the QC samples indicated.

Matrix Spike and Matrix Spike Duplicate Recoverys for 2-Chloroethyl vinyl ether are outside control limits. Probable cause: due to matrix interference.

Matrix Spike Recovery for cis-1,2-Dichloroethylene is outside control limits. Outside control limits due to high level in sample relative to spike amount.

F66519-1, F66519-2, F66519-3: Confirmation run for internal standard areas.

F66519-6, F66519-7 for Methylene chloride: Suspected laboratory contaminant.

Metals by Method SW846 6010B

Matrix: AQ **Batch ID:** MP16658

All samples were digested within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Samples F66519-10DUP, F66519-10MS, F66519-10MSD, F66519-10SDL were used as the QC samples for metals.

RPD for Duplicate for Selenium is outside control limits for sample MP16658-D1. RPD acceptable due to low duplicate and sample concentrations.

RPD for Serial Dilution for Selenium is outside control limits for sample MP16658-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

F66519-1, F66519-2, F66519-3, F66519-4, F66519-5, F66519-6, F66519-7, F66519-8, F66519-9, F66519-10 for Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver: Elevated reporting limits due to matrix interference.

Matrix: AQ **Batch ID:** MP16669

All samples were digested within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Samples F66519-10ADUP, F66519-10AMS, F66519-10AMSD, F66519-10ASDL were used as the QC samples for metals.

Matrix Spike Recoverys for Arsenic, Selenium are outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

Metals by Method SW846 6010B

Matrix: AQ **Batch ID:** MP16669

RPDs for Duplicate for Arsenic, Selenium are outside control limits for sample MP16669-D1. RPD acceptable due to low duplicate and sample concentrations.

RPD for Serial Dilution for Selenium is outside control limits for sample MP16669-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

F66519-1A, F66519-2A, F66519-3A, F66519-4A, F66519-5A, F66519-6A, F66519-7A, F66519-8A, F66519-9A, F66519-10A for Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver: Elevated reporting limits due to matrix interference.

Metals by Method SW846 7470A

Matrix: AQ **Batch ID:** MP16670

All samples were digested within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Samples F66519-10DUP, F66519-10MS, F66519-10MSD, F66519-10SDL were used as the QC samples for metals.

Matrix: AQ **Batch ID:** MP16671

All samples were digested within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Samples F66519-10ADUP, F66519-10AMS, F66519-10AMSD, F66519-10ASDL were used as the QC samples for metals.

Wet Chemistry by Method SM19 2540C

Matrix: AQ **Batch ID:** GN35824

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample F66576-1DUP was used as the QC sample for Solids, Total Dissolved.

RPD for Duplicate for Solids, Total Dissolved is outside control limits for sample GN35824-D1. RPD acceptable due to low duplicate and sample concentrations.

Accutest Laboratories Southeast (ALSE) certifies that this report meets the project requirements for analytical data produced for the samples as received at ALSE and as stated on the COC. ALSE certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the ALSE Quality Manual except as noted above. This report is to be used in its entirety. ALSE is not responsible for any assumptions of data quality if partial data packages are used.

Narrative prepared by:

_____ Date: July 29, 2009

Ellen Pampel, Inorganic QA (signature on file)

Wednesday, July 29, 2009

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MW39-10-070709		
Lab Sample ID:	F66519-1	**Date Sampled:**	07/07/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J048422.D	1	07/13/09	KW	n/a	n/a	VJ2895
Run #2 [a]	J048533.D	1	07/17/09	KW	n/a	n/a	VJ2899

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
75-05-8	Acetonitrile	ND	20	5.0	ug/l	
107-02-8	Acrolein	ND	20	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	2.0	ug/l	
107-05-1	Allyl chloride	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-44-7	Benzyl Chloride	ND	2.0	0.36	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.23	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.33	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.32	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.22	ug/l	
75-00-3	Chloroethane	ND	2.0	0.48	ug/l	
67-66-3	Chloroform	ND	1.0	0.28	ug/l	
544-10-5	1-Chlorohexane	ND	2.0	0.27	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.25	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.40	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.24	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.54	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.32	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.34	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.26	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.28	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-10-070709		
Lab Sample ID:	F66519-1	**Date Sampled:**	07/07/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
1476-11-5	cis-1,4-Dichloro-2-Butene	ND	10	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.45	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.43	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	1.0	ug/l	
76-13-1	Freon 113	ND	1.0	0.34	ug/l	
591-78-6	2-Hexanone	ND	10	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.69	ug/l	
110-54-3	Hexane	ND	2.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.32	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
126-98-7	Methacrylonitrile	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.78	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.61	ug/l	
74-88-4	Methyl iodide	ND	5.0	1.0	ug/l	
80-62-6	Methyl methacrylate	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.30	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
76-01-7	Pentachloroethane	ND	10	2.0	ug/l	
107-12-0	Propionitrile	ND	20	10	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.25	ug/l	
100-42-5	Styrene	ND	1.0	0.36	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.33	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.26	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.34	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-10-070709		
Lab Sample ID:	F66519-1	**Date Sampled:**	07/07/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.35	ug/l	
79-01-6	Trichloroethylene	0.37	1.0	0.32	ug/l	J
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
108-05-4	Vinyl Acetate	ND	10	3.6	ug/l	
	m,p-Xylene	ND	2.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.37	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%	101%	87-116%
17060-07-0	1,2-Dichloroethane-D4	106%	98%	76-127%
2037-26-5	Toluene-D8	99%	101%	86-112%
460-00-4	4-Bromofluorobenzene	102%	103%	84-120%

(a) Confirmation run for internal standard areas.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-10-070709		
Lab Sample ID:	F66519-1	**Date Sampled:**	07/07/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic [a]	110 U	200	110	ug/l	20	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Barium [a]	100 U	4000	100	ug/l	20	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Cadmium [a]	20 U	100	20	ug/l	20	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Chromium [a]	40 U	200	40	ug/l	20	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Lead [a]	40 U	100	40	ug/l	20	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Mercury	0.15 U	1.0	0.15	ug/l	1	07/14/09	07/14/09	LM	SW846 7470A [1]	SW846 7470A [4]
Selenium [a]	111 B	200	68	ug/l	20	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Silver [a]	28 U	200	28	ug/l	20	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA7355
(2) Instrument QC Batch: MA7359
(3) Prep QC Batch: MP16658
(4) Prep QC Batch: MP16670

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-10-070709		
Lab Sample ID:	F66519-1	**Date Sampled:**	07/07/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	110000	10000	1000	mg/l	100	07/13/09	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-10-070709		
Lab Sample ID:	F66519-1A	**Date Sampled:**	07/07/09
Matrix:	AQ - Groundwater Filtered	**Date Received:**	07/09/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic [a]	110 U	200	110	ug/l	20	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Barium [a]	100 U	4000	100	ug/l	20	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Cadmium [a]	20 U	100	20	ug/l	20	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Chromium [a]	40 U	200	40	ug/l	20	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Lead [a]	40 U	100	40	ug/l	20	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Mercury	0.15 U	1.0	0.15	ug/l	1	07/14/09	07/14/09	LM	SW846 7470A [1]	SW846 7470A [4]
Selenium [a]	68 U	200	68	ug/l	20	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Silver [a]	28 U	200	28	ug/l	20	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA7355
(2) Instrument QC Batch: MA7361
(3) Prep QC Batch: MP16669
(4) Prep QC Batch: MP16671

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-11-070709		
Lab Sample ID:	F66519-2	**Date Sampled:**	07/07/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J048423.D	1	07/13/09	KW	n/a	n/a	VJ2895
Run #2 [a]	J048534.D	1	07/17/09	KW	n/a	n/a	VJ2899

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
75-05-8	Acetonitrile	ND	20	5.0	ug/l	
107-02-8	Acrolein	ND	20	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	2.0	ug/l	
107-05-1	Allyl chloride	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-44-7	Benzyl Chloride	ND	2.0	0.36	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.23	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.33	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.32	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.22	ug/l	
75-00-3	Chloroethane	ND	2.0	0.48	ug/l	
67-66-3	Chloroform	ND	1.0	0.28	ug/l	
544-10-5	1-Chlorohexane	ND	2.0	0.27	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.25	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.40	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.24	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.54	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.32	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.34	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.26	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.28	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-11-070709		
Lab Sample ID:	F66519-2	**Date Sampled:**	07/07/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.21	1.0	0.20	ug/l	J
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
1476-11-5	cis-1,4-Dichloro-2-Butene	ND	10	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.45	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.43	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	1.0	ug/l	
76-13-1	Freon 113	ND	1.0	0.34	ug/l	
591-78-6	2-Hexanone	13.6	10	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.69	ug/l	
110-54-3	Hexane	ND	2.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.32	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
126-98-7	Methacrylonitrile	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.78	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.61	ug/l	
74-88-4	Methyl iodide	ND	5.0	1.0	ug/l	
80-62-6	Methyl methacrylate	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.30	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
76-01-7	Pentachloroethane	ND	10	2.0	ug/l	
107-12-0	Propionitrile	ND	20	10	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.25	ug/l	
100-42-5	Styrene	ND	1.0	0.36	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.33	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.26	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.34	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-11-070709		
Lab Sample ID:	F66519-2	**Date Sampled:**	07/07/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.35	ug/l	
79-01-6	Trichloroethylene	47.3	1.0	0.32	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
108-05-4	Vinyl Acetate	ND	10	3.6	ug/l	
	m,p-Xylene	ND	2.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.37	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%	103%	87-116%
17060-07-0	1,2-Dichloroethane-D4	105%	98%	76-127%
2037-26-5	Toluene-D8	99%	98%	86-112%
460-00-4	4-Bromofluorobenzene	101%	101%	84-120%

(a) Confirmation run for internal standard areas.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-11-070709		
Lab Sample ID:	F66519-2	**Date Sampled:**	07/07/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic [a]	110 U	200	110	ug/l	20	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Barium [a]	100 U	4000	100	ug/l	20	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Cadmium [a]	20 U	100	20	ug/l	20	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Chromium [a]	40 U	200	40	ug/l	20	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Lead [a]	40 U	100	40	ug/l	20	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Mercury	0.15 U	1.0	0.15	ug/l	1	07/14/09	07/14/09	LM	SW846 7470A [1]	SW846 7470A [4]
Selenium [a]	104 B	200	68	ug/l	20	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Silver [a]	28 U	200	28	ug/l	20	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA7355
(2) Instrument QC Batch: MA7359
(3) Prep QC Batch: MP16658
(4) Prep QC Batch: MP16670

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-11-070709		
Lab Sample ID:	F66519-2	**Date Sampled:**	07/07/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	134000	10000	1000	mg/l	100	07/13/09	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-11-070709		
Lab Sample ID:	F66519-2A	**Date Sampled:**	07/07/09
Matrix:	AQ - Groundwater Filtered	**Date Received:**	07/09/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic [a]	110 U	200	110	ug/l	20	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Barium [a]	100 U	4000	100	ug/l	20	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Cadmium [a]	20 U	100	20	ug/l	20	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Chromium [a]	40 U	200	40	ug/l	20	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Lead [a]	40 U	100	40	ug/l	20	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Mercury	0.15 U	1.0	0.15	ug/l	1	07/14/09	07/14/09	LM	SW846 7470A [1]	SW846 7470A [4]
Selenium [a]	125 B	200	68	ug/l	20	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Silver [a]	28 U	200	28	ug/l	20	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA7355
(2) Instrument QC Batch: MA7361
(3) Prep QC Batch: MP16669
(4) Prep QC Batch: MP16671

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-09-070709		
Lab Sample ID:	F66519-3	**Date Sampled:**	07/07/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J048424.D	1	07/13/09	KW	n/a	n/a	VJ2895
Run #2 [a]	J048535.D	1	07/17/09	KW	n/a	n/a	VJ2899

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
75-05-8	Acetonitrile	ND	20	5.0	ug/l	
107-02-8	Acrolein	ND	20	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	2.0	ug/l	
107-05-1	Allyl chloride	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-44-7	Benzyl Chloride	ND	2.0	0.36	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.23	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.33	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.32	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.22	ug/l	
75-00-3	Chloroethane	ND	2.0	0.48	ug/l	
67-66-3	Chloroform	ND	1.0	0.28	ug/l	
544-10-5	1-Chlorohexane	ND	2.0	0.27	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.25	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.40	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.24	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.54	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.32	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.34	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.26	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.28	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-09-070709		
Lab Sample ID:	F66519-3	**Date Sampled:**	07/07/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
1476-11-5	cis-1,4-Dichloro-2-Butene	ND	10	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.45	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.43	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	1.0	ug/l	
76-13-1	Freon 113	ND	1.0	0.34	ug/l	
591-78-6	2-Hexanone	ND	10	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.69	ug/l	
110-54-3	Hexane	ND	2.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.32	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
126-98-7	Methacrylonitrile	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.78	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.61	ug/l	
74-88-4	Methyl iodide	ND	5.0	1.0	ug/l	
80-62-6	Methyl methacrylate	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.30	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
76-01-7	Pentachloroethane	ND	10	2.0	ug/l	
107-12-0	Propionitrile	ND	20	10	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.25	ug/l	
100-42-5	Styrene	ND	1.0	0.36	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.33	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.26	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.34	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-09-070709		
Lab Sample ID:	F66519-3	**Date Sampled:**	07/07/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.35	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.32	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
108-05-4	Vinyl Acetate	ND	10	3.6	ug/l	
	m,p-Xylene	ND	2.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.37	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%	101%	87-116%
17060-07-0	1,2-Dichloroethane-D4	104%	97%	76-127%
2037-26-5	Toluene-D8	100%	99%	86-112%
460-00-4	4-Bromofluorobenzene	103%	100%	84-120%

(a) Confirmation run for internal standard areas.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-09-070709		
Lab Sample ID:	F66519-3	**Date Sampled:**	07/07/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic [a]	110 U	200	110	ug/l	20	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Barium [a]	100 U	4000	100	ug/l	20	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Cadmium [a]	20 U	100	20	ug/l	20	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Chromium [a]	40 U	200	40	ug/l	20	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Lead [a]	40 U	100	40	ug/l	20	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Mercury	0.15 U	1.0	0.15	ug/l	1	07/14/09	07/14/09	LM	SW846 7470A [1]	SW846 7470A [4]
Selenium [a]	91.3 B	200	68	ug/l	20	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Silver [a]	28 U	200	28	ug/l	20	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA7355
(2) Instrument QC Batch: MA7359
(3) Prep QC Batch: MP16658
(4) Prep QC Batch: MP16670

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-09-070709		
Lab Sample ID:	F66519-3	**Date Sampled:**	07/07/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	122000	10000	1000	mg/l	100	07/13/09	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-09-070709		
Lab Sample ID:	F66519-3A	**Date Sampled:**	07/07/09
Matrix:	AQ - Groundwater Filtered	**Date Received:**	07/09/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic [a]	110 U	200	110	ug/l	20	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Barium [a]	100 U	4000	100	ug/l	20	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Cadmium [a]	20 U	100	20	ug/l	20	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Chromium [a]	40 U	200	40	ug/l	20	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Lead [a]	40 U	100	40	ug/l	20	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Mercury	0.15 U	1.0	0.15	ug/l	1	07/14/09	07/14/09	LM	SW846 7470A [1]	SW846 7470A [4]
Selenium [a]	68 U	200	68	ug/l	20	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Silver [a]	28 U	200	28	ug/l	20	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA7355
(2) Instrument QC Batch: MA7361
(3) Prep QC Batch: MP16669
(4) Prep QC Batch: MP16671

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-08-070709		
Lab Sample ID:	F66519-4	**Date Sampled:**	07/07/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J048425.D	1	07/13/09	KW	n/a	n/a	VJ2895
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
75-05-8	Acetonitrile	ND	20	5.0	ug/l	
107-02-8	Acrolein	ND	20	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	2.0	ug/l	
107-05-1	Allyl chloride	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-44-7	Benzyl Chloride	ND	2.0	0.36	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.23	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.33	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.32	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.22	ug/l	
75-00-3	Chloroethane	ND	2.0	0.48	ug/l	
67-66-3	Chloroform	ND	1.0	0.28	ug/l	
544-10-5	1-Chlorohexane	ND	2.0	0.27	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.25	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.40	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.24	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.54	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.32	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.34	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.26	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.28	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-08-070709		
Lab Sample ID:	F66519-4	**Date Sampled:**	07/07/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.71	1.0	0.20	ug/l	J
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
1476-11-5	cis-1,4-Dichloro-2-Butene	ND	10	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.45	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.43	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	1.0	ug/l	
76-13-1	Freon 113	ND	1.0	0.34	ug/l	
591-78-6	2-Hexanone	ND	10	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.69	ug/l	
110-54-3	Hexane	ND	2.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.32	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
126-98-7	Methacrylonitrile	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.78	ug/l	
74-87-3	Methyl chloride	0.67	2.0	0.61	ug/l	J
74-88-4	Methyl iodide	ND	5.0	1.0	ug/l	
80-62-6	Methyl methacrylate	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.30	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
76-01-7	Pentachloroethane	ND	10	2.0	ug/l	
107-12-0	Propionitrile	ND	20	10	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.25	ug/l	
100-42-5	Styrene	ND	1.0	0.36	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.33	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.26	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.34	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-08-070709		
Lab Sample ID:	F66519-4	**Date Sampled:**	07/07/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.35	ug/l	
79-01-6	Trichloroethylene	10.3	1.0	0.32	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
108-05-4	Vinyl Acetate	ND	10	3.6	ug/l	
	m,p-Xylene	ND	2.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.37	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		87-116%
17060-07-0	1,2-Dichloroethane-D4	102%		76-127%
2037-26-5	Toluene-D8	99%		86-112%
460-00-4	4-Bromofluorobenzene	102%		84-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-08-070709		
Lab Sample ID:	F66519-4	**Date Sampled:**	07/07/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic [a]	110 U	200	110	ug/l	20	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Barium [a]	100 U	4000	100	ug/l	20	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Cadmium [a]	20 U	100	20	ug/l	20	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Chromium [a]	40 U	200	40	ug/l	20	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Lead [a]	41.2 B	100	40	ug/l	20	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Mercury	0.15 U	1.0	0.15	ug/l	1	07/14/09	07/14/09	LM	SW846 7470A [1]	SW846 7470A [4]
Selenium [a]	68 U	200	68	ug/l	20	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Silver [a]	28 U	200	28	ug/l	20	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA7355
(2) Instrument QC Batch: MA7359
(3) Prep QC Batch: MP16658
(4) Prep QC Batch: MP16670

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-08-070709		
Lab Sample ID:	F66519-4	**Date Sampled:**	07/07/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	88800	10000	1000	mg/l	100	07/13/09	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-08-070709		
Lab Sample ID:	F66519-4A	**Date Sampled:**	07/07/09
Matrix:	AQ - Groundwater Filtered	**Date Received:**	07/09/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic [a]	110 U	200	110	ug/l	20	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Barium [a]	100 U	4000	100	ug/l	20	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Cadmium [a]	20 U	100	20	ug/l	20	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Chromium [a]	40 U	200	40	ug/l	20	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Lead [a]	40 U	100	40	ug/l	20	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Mercury	0.15 U	1.0	0.15	ug/l	1	07/14/09	07/14/09	LM	SW846 7470A [1]	SW846 7470A [4]
Selenium [a]	68 U	200	68	ug/l	20	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Silver [a]	28 U	200	28	ug/l	20	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA7355
(2) Instrument QC Batch: MA7361
(3) Prep QC Batch: MP16669
(4) Prep QC Batch: MP16671

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-06-070709		
Lab Sample ID:	F66519-5	**Date Sampled:**	07/07/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J048536.D	1	07/17/09	KW	n/a	n/a	VJ2899
Run #2	J048426.D	5	07/13/09	KW	n/a	n/a	VJ2895

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
75-05-8	Acetonitrile	ND	20	5.0	ug/l	
107-02-8	Acrolein	ND	20	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	2.0	ug/l	
107-05-1	Allyl chloride	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-44-7	Benzyl Chloride	ND	2.0	0.36	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.23	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.33	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.32	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.22	ug/l	
75-00-3	Chloroethane	ND	2.0	0.48	ug/l	
67-66-3	Chloroform	2.3	1.0	0.28	ug/l	
544-10-5	1-Chlorohexane	ND	2.0	0.27	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.25	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.40	ug/l	
56-23-5	Carbon tetrachloride	2.2	1.0	0.22	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.24	ug/l	
75-35-4	1,1-Dichloroethylene	1.2	1.0	0.54	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.32	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.34	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.26	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.28	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-06-070709		
Lab Sample ID:	F66519-5	**Date Sampled:**	07/07/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
1476-11-5	cis-1,4-Dichloro-2-Butene	ND	10	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.45	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.43	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	1.0	ug/l	
76-13-1	Freon 113	ND	1.0	0.34	ug/l	
591-78-6	2-Hexanone	ND	10	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.69	ug/l	
110-54-3	Hexane	ND	2.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.32	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
126-98-7	Methacrylonitrile	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.78	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.61	ug/l	
74-88-4	Methyl iodide	ND	5.0	1.0	ug/l	
80-62-6	Methyl methacrylate	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.30	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
76-01-7	Pentachloroethane	ND	10	2.0	ug/l	
107-12-0	Propionitrile	ND	20	10	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.25	ug/l	
100-42-5	Styrene	ND	1.0	0.36	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.33	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.26	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.34	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-06-070709		
Lab Sample ID:	F66519-5	**Date Sampled:**	07/07/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	0.33	1.0	0.22	ug/l	J
108-88-3	Toluene	ND	1.0	0.35	ug/l	
79-01-6	Trichloroethylene	108 [a]	5.0	1.6	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
108-05-4	Vinyl Acetate	ND	10	3.6	ug/l	
	m,p-Xylene	ND	2.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.37	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%	102%	87-116%
17060-07-0	1,2-Dichloroethane-D4	96%	100%	76-127%
2037-26-5	Toluene-D8	99%	100%	86-112%
460-00-4	4-Bromofluorobenzene	100%	103%	84-120%

(a) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-06-070709		
Lab Sample ID:	F66519-5	**Date Sampled:**	07/07/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic [a]	27 U	50	27	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Barium [a]	25 U	1000	25	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Cadmium [a]	5.0 U	25	5.0	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Chromium [a]	10 U	50	10	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Lead [a]	10 U	25	10	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Mercury	0.15 U	1.0	0.15	ug/l	1	07/14/09	07/14/09	LM	SW846 7470A [1]	SW846 7470A [4]
Selenium [a]	32.6 B	50	17	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Silver [a]	7.0 U	50	7.0	ug/l	5	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA7355
(2) Instrument QC Batch: MA7359
(3) Prep QC Batch: MP16658
(4) Prep QC Batch: MP16671

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-06-070709		
Lab Sample ID:	F66519-5	**Date Sampled:**	07/07/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	33200	10000	1000	mg/l	100	07/13/09	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-06-070709		
Lab Sample ID:	F66519-5A	**Date Sampled:**	07/07/09
Matrix:	AQ - Groundwater Filtered	**Date Received:**	07/09/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic [a]	27 U	50	27	ug/l	5	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Barium [a]	25 U	1000	25	ug/l	5	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Cadmium [a]	5.0 U	25	5.0	ug/l	5	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Chromium [a]	10 U	50	10	ug/l	5	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Lead [a]	10 U	25	10	ug/l	5	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Mercury	0.15 U	1.0	0.15	ug/l	1	07/14/09	07/14/09	LM	SW846 7470A [1]	SW846 7470A [4]
Selenium [a]	38.3 B	50	17	ug/l	5	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Silver [a]	7.0 U	50	7.0	ug/l	5	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA7355
(2) Instrument QC Batch: MA7361
(3) Prep QC Batch: MP16669
(4) Prep QC Batch: MP16671

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-06D-070709		
Lab Sample ID:	F66519-6	**Date Sampled:**	07/07/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J048537.D	5	07/17/09	KW	n/a	n/a	VJ2899
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	130	50	ug/l	
75-05-8	Acetonitrile	ND	100	25	ug/l	
107-02-8	Acrolein	ND	100	25	ug/l	
107-13-1	Acrylonitrile	ND	50	10	ug/l	
107-05-1	Allyl chloride	ND	50	10	ug/l	
71-43-2	Benzene	ND	5.0	2.0	ug/l	
100-44-7	Benzyl Chloride	ND	10	1.8	ug/l	
108-86-1	Bromobenzene	ND	5.0	1.3	ug/l	
74-97-5	Bromochloromethane	ND	5.0	1.2	ug/l	
75-27-4	Bromodichloromethane	ND	5.0	1.0	ug/l	
75-25-2	Bromoform	ND	5.0	1.7	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.4	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	1.3	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	1.6	ug/l	
108-90-7	Chlorobenzene	ND	5.0	1.1	ug/l	
75-00-3	Chloroethane	ND	10	2.4	ug/l	
67-66-3	Chloroform	ND	5.0	1.4	ug/l	
544-10-5	1-Chlorohexane	ND	10	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	1.3	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	1.1	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	25	5.0	ug/l	
75-15-0	Carbon disulfide	ND	10	2.0	ug/l	
56-23-5	Carbon tetrachloride	ND	5.0	1.1	ug/l	
75-34-3	1,1-Dichloroethane	ND	5.0	1.2	ug/l	
75-35-4	1,1-Dichloroethylene	ND	5.0	2.7	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	1.2	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	10	1.6	ug/l	
106-93-4	1,2-Dibromoethane	ND	5.0	1.4	ug/l	
107-06-2	1,2-Dichloroethane	ND	5.0	1.7	ug/l	
78-87-5	1,2-Dichloropropane	ND	5.0	1.1	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	1.3	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.4	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-06D-070709		
Lab Sample ID:	F66519-6	**Date Sampled:**	07/07/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
124-48-1	Dibromochloromethane	ND	5.0	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	10	5.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.1	ug/l	
1476-11-5	cis-1,4-Dichloro-2-Butene	ND	50	5.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	5.0	1.2	ug/l	
95-50-1	o-Dichlorobenzene	ND	5.0	1.0	ug/l	
106-46-7	p-Dichlorobenzene	ND	5.0	1.1	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	2.3	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	1.1	ug/l	
100-41-4	Ethylbenzene	ND	5.0	2.2	ug/l	
97-63-2	Ethyl methacrylate	ND	25	5.0	ug/l	
76-13-1	Freon 113	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	50	25	ug/l	
87-68-3	Hexachlorobutadiene	ND	10	3.5	ug/l	
110-54-3	Hexane	ND	10	2.5	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	1.6	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	25	10	ug/l	
126-98-7	Methacrylonitrile	ND	100	25	ug/l	
74-83-9	Methyl bromide	ND	10	3.9	ug/l	
74-87-3	Methyl chloride	ND	10	3.1	ug/l	
74-88-4	Methyl iodide	ND	25	5.0	ug/l	
80-62-6	Methyl methacrylate	ND	25	5.0	ug/l	
74-95-3	Methylene bromide	ND	10	1.5	ug/l	
75-09-2	Methylene chloride [a]	6.2	25	5.0	ug/l	J
78-93-3	Methyl ethyl ketone	ND	25	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	1.3	ug/l	
91-20-3	Naphthalene	ND	25	5.0	ug/l	
76-01-7	Pentachloroethane	ND	50	10	ug/l	
107-12-0	Propionitrile	ND	100	50	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	1.3	ug/l	
100-42-5	Styrene	ND	5.0	1.8	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	5.0	1.7	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	1.1	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	5.0	1.3	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	2.5	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	10	1.7	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	2.5	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-06D-070709		
Lab Sample ID:	F66519-6	**Date Sampled:**	07/07/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	10	1.1	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	10	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	5.0	1.1	ug/l	
108-88-3	Toluene	ND	5.0	1.8	ug/l	
79-01-6	Trichloroethylene	336	5.0	1.6	ug/l	
75-69-4	Trichlorofluoromethane	ND	10	2.5	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	50	10	ug/l	
75-01-4	Vinyl chloride	ND	5.0	1.5	ug/l	
108-05-4	Vinyl Acetate	ND	50	18	ug/l	
	m,p-Xylene	ND	10	3.9	ug/l	
95-47-6	o-Xylene	ND	5.0	1.9	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		87-116%
17060-07-0	1,2-Dichloroethane-D4	95%		76-127%
2037-26-5	Toluene-D8	99%		86-112%
460-00-4	4-Bromofluorobenzene	98%		84-120%

(a) Suspected laboratory contaminant.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-06D-070709		
Lab Sample ID:	F66519-6	**Date Sampled:**	07/07/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic [a]	110 U	200	110	ug/l	20	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Barium [a]	100 U	4000	100	ug/l	20	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Cadmium [a]	20 U	100	20	ug/l	20	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Chromium [a]	40 U	200	40	ug/l	20	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Lead [a]	40 U	100	40	ug/l	20	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Mercury	0.15 U	1.0	0.15	ug/l	1	07/14/09	07/14/09	LM	SW846 7470A [1]	SW846 7470A [4]
Selenium [a]	92.2 B	200	68	ug/l	20	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Silver [a]	28 U	200	28	ug/l	20	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA7355
(2) Instrument QC Batch: MA7359
(3) Prep QC Batch: MP16658
(4) Prep QC Batch: MP16671

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-06D-070709		
Lab Sample ID:	F66519-6	**Date Sampled:**	07/07/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	98600	10000	1000	mg/l	100	07/13/09	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-06D-070709		
Lab Sample ID:	F66519-6A	**Date Sampled:**	07/07/09
Matrix:	AQ - Groundwater Filtered	**Date Received:**	07/09/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic [a]	110 U	200	110	ug/l	20	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Barium [a]	100 U	4000	100	ug/l	20	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Cadmium [a]	20 U	100	20	ug/l	20	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Chromium [a]	40 U	200	40	ug/l	20	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Lead [a]	40 U	100	40	ug/l	20	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Mercury	0.15 U	1.0	0.15	ug/l	1	07/14/09	07/14/09	LM	SW846 7470A [1]	SW846 7470A [4]
Selenium [a]	111 B	200	68	ug/l	20	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Silver [a]	28 U	200	28	ug/l	20	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA7355
(2) Instrument QC Batch: MA7361
(3) Prep QC Batch: MP16669
(4) Prep QC Batch: MP16671

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-DUP01-070709		
Lab Sample ID:	F66519-7	**Date Sampled:**	07/07/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J048538.D	5	07/17/09	KW	n/a	n/a	VJ2899
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	130	50	ug/l	
75-05-8	Acetonitrile	ND	100	25	ug/l	
107-02-8	Acrolein	ND	100	25	ug/l	
107-13-1	Acrylonitrile	ND	50	10	ug/l	
107-05-1	Allyl chloride	ND	50	10	ug/l	
71-43-2	Benzene	ND	5.0	2.0	ug/l	
100-44-7	Benzyl Chloride	ND	10	1.8	ug/l	
108-86-1	Bromobenzene	ND	5.0	1.3	ug/l	
74-97-5	Bromochloromethane	ND	5.0	1.2	ug/l	
75-27-4	Bromodichloromethane	ND	5.0	1.0	ug/l	
75-25-2	Bromoform	ND	5.0	1.7	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.4	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	1.3	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	1.6	ug/l	
108-90-7	Chlorobenzene	ND	5.0	1.1	ug/l	
75-00-3	Chloroethane	ND	10	2.4	ug/l	
67-66-3	Chloroform	ND	5.0	1.4	ug/l	
544-10-5	1-Chlorohexane	ND	10	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	1.3	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	1.1	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	25	5.0	ug/l	
75-15-0	Carbon disulfide	ND	10	2.0	ug/l	
56-23-5	Carbon tetrachloride	ND	5.0	1.1	ug/l	
75-34-3	1,1-Dichloroethane	ND	5.0	1.2	ug/l	
75-35-4	1,1-Dichloroethylene	ND	5.0	2.7	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	1.2	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	10	1.6	ug/l	
106-93-4	1,2-Dibromoethane	ND	5.0	1.4	ug/l	
107-06-2	1,2-Dichloroethane	ND	5.0	1.7	ug/l	
78-87-5	1,2-Dichloropropane	ND	5.0	1.1	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	1.3	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.4	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-DUP01-070709		
Lab Sample ID:	F66519-7	**Date Sampled:**	07/07/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
124-48-1	Dibromochloromethane	ND	5.0	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	10	5.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.1	ug/l	
1476-11-5	cis-1,4-Dichloro-2-Butene	ND	50	5.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	5.0	1.2	ug/l	
95-50-1	o-Dichlorobenzene	ND	5.0	1.0	ug/l	
106-46-7	p-Dichlorobenzene	ND	5.0	1.1	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	2.3	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	1.1	ug/l	
100-41-4	Ethylbenzene	ND	5.0	2.2	ug/l	
97-63-2	Ethyl methacrylate	ND	25	5.0	ug/l	
76-13-1	Freon 113	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	50	25	ug/l	
87-68-3	Hexachlorobutadiene	ND	10	3.5	ug/l	
110-54-3	Hexane	ND	10	2.5	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	1.6	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	25	10	ug/l	
126-98-7	Methacrylonitrile	ND	100	25	ug/l	
74-83-9	Methyl bromide	ND	10	3.9	ug/l	
74-87-3	Methyl chloride	ND	10	3.1	ug/l	
74-88-4	Methyl iodide	ND	25	5.0	ug/l	
80-62-6	Methyl methacrylate	ND	25	5.0	ug/l	
74-95-3	Methylene bromide	ND	10	1.5	ug/l	
75-09-2	Methylene chloride [a]	5.5	25	5.0	ug/l	J
78-93-3	Methyl ethyl ketone	ND	25	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	1.3	ug/l	
91-20-3	Naphthalene	ND	25	5.0	ug/l	
76-01-7	Pentachloroethane	ND	50	10	ug/l	
107-12-0	Propionitrile	ND	100	50	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	1.3	ug/l	
100-42-5	Styrene	ND	5.0	1.8	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	5.0	1.7	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	1.1	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	5.0	1.3	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	2.5	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	10	1.7	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	2.5	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-DUP01-070709		
Lab Sample ID:	F66519-7	**Date Sampled:**	07/07/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	10	1.1	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	10	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	5.0	1.1	ug/l	
108-88-3	Toluene	ND	5.0	1.8	ug/l	
79-01-6	Trichloroethylene	342	5.0	1.6	ug/l	
75-69-4	Trichlorofluoromethane	ND	10	2.5	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	50	10	ug/l	
75-01-4	Vinyl chloride	ND	5.0	1.5	ug/l	
108-05-4	Vinyl Acetate	ND	50	18	ug/l	
	m,p-Xylene	ND	10	3.9	ug/l	
95-47-6	o-Xylene	ND	5.0	1.9	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		87-116%
17060-07-0	1,2-Dichloroethane-D4	96%		76-127%
2037-26-5	Toluene-D8	98%		86-112%
460-00-4	4-Bromofluorobenzene	99%		84-120%

(a) Suspected laboratory contaminant.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-DUP01-070709		
Lab Sample ID:	F66519-7	**Date Sampled:**	07/07/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic [a]	110 U	200	110	ug/l	20	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Barium [a]	100 U	4000	100	ug/l	20	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Cadmium [a]	20 U	100	20	ug/l	20	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Chromium [a]	40 U	200	40	ug/l	20	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Lead [a]	40 U	100	40	ug/l	20	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Mercury	0.15 U	1.0	0.15	ug/l	1	07/14/09	07/14/09	LM	SW846 7470A [1]	SW846 7470A [4]
Selenium [a]	86.4 B	200	68	ug/l	20	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Silver [a]	28 U	200	28	ug/l	20	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA7355
(2) Instrument QC Batch: MA7359
(3) Prep QC Batch: MP16658
(4) Prep QC Batch: MP16671

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-DUP01-070709		
Lab Sample ID:	F66519-7	**Date Sampled:**	07/07/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	78900	10000	1000	mg/l	100	07/13/09	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-DUP01-070709		
Lab Sample ID:	F66519-7A	**Date Sampled:**	07/07/09
Matrix:	AQ - Groundwater Filtered	**Date Received:**	07/09/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic [a]	110 U	200	110	ug/l	20	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Barium [a]	100 U	4000	100	ug/l	20	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Cadmium [a]	20 U	100	20	ug/l	20	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Chromium [a]	40 U	200	40	ug/l	20	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Lead [a]	40 U	100	40	ug/l	20	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Mercury	0.15 U	1.0	0.15	ug/l	1	07/14/09	07/14/09	LM	SW846 7470A [1]	SW846 7470A [4]
Selenium [a]	68 U	200	68	ug/l	20	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Silver [a]	28 U	200	28	ug/l	20	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA7355
(2) Instrument QC Batch: MA7361
(3) Prep QC Batch: MP16669
(4) Prep QC Batch: MP16671

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-02-070809		
Lab Sample ID:	F66519-8	**Date Sampled:**	07/08/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J048429.D	1	07/13/09	KW	n/a	n/a	VJ2895
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
75-05-8	Acetonitrile	ND	20	5.0	ug/l	
107-02-8	Acrolein	ND	20	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	2.0	ug/l	
107-05-1	Allyl chloride	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-44-7	Benzyl Chloride	ND	2.0	0.36	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.23	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.33	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.32	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.22	ug/l	
75-00-3	Chloroethane	ND	2.0	0.48	ug/l	
67-66-3	Chloroform	1.7	1.0	0.28	ug/l	
544-10-5	1-Chlorohexane	ND	2.0	0.27	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.25	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.40	ug/l	
56-23-5	Carbon tetrachloride	3.0	1.0	0.22	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.24	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.54	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.32	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.34	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.26	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.28	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-02-070809		
Lab Sample ID:	F66519-8	**Date Sampled:**	07/08/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
1476-11-5	cis-1,4-Dichloro-2-Butene	ND	10	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.45	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.43	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	1.0	ug/l	
76-13-1	Freon 113	ND	1.0	0.34	ug/l	
591-78-6	2-Hexanone	ND	10	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.69	ug/l	
110-54-3	Hexane	ND	2.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.32	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
126-98-7	Methacrylonitrile	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.78	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.61	ug/l	
74-88-4	Methyl iodide	ND	5.0	1.0	ug/l	
80-62-6	Methyl methacrylate	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.30	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
76-01-7	Pentachloroethane	ND	10	2.0	ug/l	
107-12-0	Propionitrile	ND	20	10	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.25	ug/l	
100-42-5	Styrene	ND	1.0	0.36	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.33	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.26	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.34	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-02-070809		
Lab Sample ID:	F66519-8	**Date Sampled:**	07/08/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.35	ug/l	
79-01-6	Trichloroethylene	17.7	1.0	0.32	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
108-05-4	Vinyl Acetate	ND	10	3.6	ug/l	
	m,p-Xylene	ND	2.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.37	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		87-116%
17060-07-0	1,2-Dichloroethane-D4	99%		76-127%
2037-26-5	Toluene-D8	101%		86-112%
460-00-4	4-Bromofluorobenzene	105%		84-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-02-070809		
Lab Sample ID:	F66519-8	**Date Sampled:**	07/08/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic [a]	22 U	40	22	ug/l	4	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Barium [a]	20 U	800	20	ug/l	4	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Cadmium [a]	4.0 U	20	4.0	ug/l	4	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Chromium [a]	8.0 U	40	8.0	ug/l	4	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Lead [a]	8.0 U	20	8.0	ug/l	4	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Mercury	0.15 U	1.0	0.15	ug/l	1	07/14/09	07/14/09	LM	SW846 7470A [1]	SW846 7470A [4]
Selenium [a]	38.5 B	40	14	ug/l	4	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Silver [a]	5.6 U	40	5.6	ug/l	4	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA7355
(2) Instrument QC Batch: MA7359
(3) Prep QC Batch: MP16658
(4) Prep QC Batch: MP16671

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-02-070809		
Lab Sample ID:	F66519-8	**Date Sampled:**	07/08/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	12200	10000	1000	mg/l	100	07/13/09	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-02-070809		
Lab Sample ID:	F66519-8A	**Date Sampled:**	07/08/09
Matrix:	AQ - Groundwater Filtered	**Date Received:**	07/09/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic [a]	23.2 B	40	22	ug/l	4	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Barium [a]	20 U	800	20	ug/l	4	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Cadmium [a]	4.0 U	20	4.0	ug/l	4	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Chromium [a]	8.0 U	40	8.0	ug/l	4	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Lead [a]	8.0 U	20	8.0	ug/l	4	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Mercury	0.15 U	1.0	0.15	ug/l	1	07/14/09	07/14/09	LM	SW846 7470A [1]	SW846 7470A [4]
Selenium [a]	37.1 B	40	14	ug/l	4	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Silver [a]	6.6 B	40	5.6	ug/l	4	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA7355
(2) Instrument QC Batch: MA7361
(3) Prep QC Batch: MP16669
(4) Prep QC Batch: MP16671

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-05-070809		
Lab Sample ID:	F66519-9	**Date Sampled:**	07/08/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J048430.D	1	07/13/09	KW	n/a	n/a	VJ2895
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
75-05-8	Acetonitrile	ND	20	5.0	ug/l	
107-02-8	Acrolein	ND	20	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	2.0	ug/l	
107-05-1	Allyl chloride	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-44-7	Benzyl Chloride	ND	2.0	0.36	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.23	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.33	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.32	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.22	ug/l	
75-00-3	Chloroethane	ND	2.0	0.48	ug/l	
67-66-3	Chloroform	ND	1.0	0.28	ug/l	
544-10-5	1-Chlorohexane	ND	2.0	0.27	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.25	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.40	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.24	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.54	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.32	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.34	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.26	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.28	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-05-070809		
Lab Sample ID:	F66519-9	**Date Sampled:**	07/08/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
1476-11-5	cis-1,4-Dichloro-2-Butene	ND	10	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.45	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.43	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	1.0	ug/l	
76-13-1	Freon 113	ND	1.0	0.34	ug/l	
591-78-6	2-Hexanone	ND	10	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.69	ug/l	
110-54-3	Hexane	ND	2.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.32	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
126-98-7	Methacrylonitrile	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.78	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.61	ug/l	
74-88-4	Methyl iodide	ND	5.0	1.0	ug/l	
80-62-6	Methyl methacrylate	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.30	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
76-01-7	Pentachloroethane	ND	10	2.0	ug/l	
107-12-0	Propionitrile	ND	20	10	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.25	ug/l	
100-42-5	Styrene	ND	1.0	0.36	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.33	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.26	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.34	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-05-070809		
Lab Sample ID:	F66519-9	**Date Sampled:**	07/08/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.35	ug/l	
79-01-6	Trichloroethylene	14.0	1.0	0.32	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
108-05-4	Vinyl Acetate	ND	10	3.6	ug/l	
	m,p-Xylene	ND	2.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.37	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		87-116%
17060-07-0	1,2-Dichloroethane-D4	102%		76-127%
2037-26-5	Toluene-D8	101%		86-112%
460-00-4	4-Bromofluorobenzene	105%		84-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-05-070809		
Lab Sample ID:	F66519-9	**Date Sampled:**	07/08/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic [a]	110 U	200	110	ug/l	20	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Barium [a]	100 U	4000	100	ug/l	20	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Cadmium [a]	20 U	100	20	ug/l	20	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Chromium [a]	40 U	200	40	ug/l	20	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Lead [a]	40 U	100	40	ug/l	20	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Mercury	0.15 U	1.0	0.15	ug/l	1	07/14/09	07/14/09	LM	SW846 7470A [1]	SW846 7470A [4]
Selenium [a]	109 B	200	68	ug/l	20	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Silver [a]	28 U	200	28	ug/l	20	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA7355
(2) Instrument QC Batch: MA7359
(3) Prep QC Batch: MP16658
(4) Prep QC Batch: MP16671

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-05-070809		
Lab Sample ID:	F66519-9	**Date Sampled:**	07/08/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	85500	10000	1000	mg/l	100	07/13/09	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-05-070809		
Lab Sample ID:	F66519-9A	**Date Sampled:**	07/08/09
Matrix:	AQ - Groundwater Filtered	**Date Received:**	07/09/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic [a]	110 U	200	110	ug/l	20	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Barium [a]	100 U	4000	100	ug/l	20	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Cadmium [a]	20 U	100	20	ug/l	20	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Chromium [a]	40 U	200	40	ug/l	20	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Lead [a]	40 U	100	40	ug/l	20	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Mercury	0.15 U	1.0	0.15	ug/l	1	07/14/09	07/14/09	LM	SW846 7470A [1]	SW846 7470A [4]
Selenium [a]	87.5 B	200	68	ug/l	20	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Silver [a]	28 U	200	28	ug/l	20	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA7355
(2) Instrument QC Batch: MA7361
(3) Prep QC Batch: MP16669
(4) Prep QC Batch: MP16671

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-07-070809		
Lab Sample ID:	F66519-10	**Date Sampled:**	07/08/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J048415.D	1	07/13/09	KW	n/a	n/a	VJ2895
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
75-05-8	Acetonitrile	ND	20	5.0	ug/l	
107-02-8	Acrolein	ND	20	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	2.0	ug/l	
107-05-1	Allyl chloride	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-44-7	Benzyl Chloride	ND	2.0	0.36	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.23	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.33	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.32	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.22	ug/l	
75-00-3	Chloroethane	ND	2.0	0.48	ug/l	
67-66-3	Chloroform	ND	1.0	0.28	ug/l	
544-10-5	1-Chlorohexane	ND	2.0	0.27	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.25	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.40	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.24	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.54	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.32	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.34	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.26	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.28	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-07-070809		
Lab Sample ID:	F66519-10	**Date Sampled:**	07/08/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
1476-11-5	cis-1,4-Dichloro-2-Butene	ND	10	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.45	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.43	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	1.0	ug/l	
76-13-1	Freon 113	ND	1.0	0.34	ug/l	
591-78-6	2-Hexanone	ND	10	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.69	ug/l	
110-54-3	Hexane	ND	2.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.32	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
126-98-7	Methacrylonitrile	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.78	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.61	ug/l	
74-88-4	Methyl iodide	ND	5.0	1.0	ug/l	
80-62-6	Methyl methacrylate	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.30	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
76-01-7	Pentachloroethane	ND	10	2.0	ug/l	
107-12-0	Propionitrile	ND	20	10	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.25	ug/l	
100-42-5	Styrene	ND	1.0	0.36	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.33	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.26	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.34	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-07-070809		
Lab Sample ID:	F66519-10	**Date Sampled:**	07/08/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.35	ug/l	
79-01-6	Trichloroethylene	1.4	1.0	0.32	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
108-05-4	Vinyl Acetate	ND	10	3.6	ug/l	
	m,p-Xylene	ND	2.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.37	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		87-116%
17060-07-0	1,2-Dichloroethane-D4	99%		76-127%
2037-26-5	Toluene-D8	100%		86-112%
460-00-4	4-Bromofluorobenzene	104%		84-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-07-070809		
Lab Sample ID:	F66519-10	**Date Sampled:**	07/08/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic [a]	54 U	100	54	ug/l	10	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Barium [a]	50 U	2000	50	ug/l	10	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Cadmium [a]	10 U	50	10	ug/l	10	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Chromium [a]	20 U	100	20	ug/l	10	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Lead [a]	20 U	50	20	ug/l	10	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Mercury	0.15 U	1.0	0.15	ug/l	1	07/14/09	07/14/09	LM	SW846 7470A [1]	SW846 7470A [4]
Selenium [a]	60.0 B	100	34	ug/l	10	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]
Silver [a]	14 U	100	14	ug/l	10	07/10/09	07/14/09	RS	SW846 6010B [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA7355
(2) Instrument QC Batch: MA7359
(3) Prep QC Batch: MP16658
(4) Prep QC Batch: MP16670

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-07-070809		
Lab Sample ID:	F66519-10	**Date Sampled:**	07/08/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	23000	10000	1000	mg/l	100	07/13/09	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-07-070809		
Lab Sample ID:	F66519-10A	**Date Sampled:**	07/08/09
Matrix:	AQ - Groundwater Filtered	**Date Received:**	07/09/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic [a]	54 U	100	54	ug/l	10	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Barium [a]	50 U	2000	50	ug/l	10	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Cadmium [a]	10 U	50	10	ug/l	10	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Chromium [a]	20 U	100	20	ug/l	10	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Lead [a]	20 U	50	20	ug/l	10	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Mercury	0.15 U	1.0	0.15	ug/l	1	07/14/09	07/14/09	LM	SW846 7470A [1]	SW846 7470A [4]
Selenium [a]	36.4 B	100	34	ug/l	10	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]
Silver [a]	14 U	100	14	ug/l	10	07/13/09	07/15/09	RS	SW846 6010B [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA7355
(2) Instrument QC Batch: MA7361
(3) Prep QC Batch: MP16669
(4) Prep QC Batch: MP16671

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	TB01-070809		
Lab Sample ID:	F66519-11	**Date Sampled:**	07/08/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J048431.D	1	07/13/09	KW	n/a	n/a	VJ2895
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
75-05-8	Acetonitrile	ND	20	5.0	ug/l	
107-02-8	Acrolein	ND	20	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	2.0	ug/l	
107-05-1	Allyl chloride	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-44-7	Benzyl Chloride	ND	2.0	0.36	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.23	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.33	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.32	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.22	ug/l	
75-00-3	Chloroethane	ND	2.0	0.48	ug/l	
67-66-3	Chloroform	ND	1.0	0.28	ug/l	
544-10-5	1-Chlorohexane	ND	2.0	0.27	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.25	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.40	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.24	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.54	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.32	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.34	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.26	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.28	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB01-070809		
Lab Sample ID:	F66519-11	**Date Sampled:**	07/08/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
1476-11-5	cis-1,4-Dichloro-2-Butene	ND	10	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.45	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.43	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	1.0	ug/l	
76-13-1	Freon 113	ND	1.0	0.34	ug/l	
591-78-6	2-Hexanone	ND	10	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.69	ug/l	
110-54-3	Hexane	ND	2.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.32	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
126-98-7	Methacrylonitrile	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.78	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.61	ug/l	
74-88-4	Methyl iodide	ND	5.0	1.0	ug/l	
80-62-6	Methyl methacrylate	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.30	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
76-01-7	Pentachloroethane	ND	10	2.0	ug/l	
107-12-0	Propionitrile	ND	20	10	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.25	ug/l	
100-42-5	Styrene	ND	1.0	0.36	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.33	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.26	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.34	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB01-070809		
Lab Sample ID:	F66519-11	**Date Sampled:**	07/08/09
Matrix:	AQ - Ground Water	**Date Received:**	07/09/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.35	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.32	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
108-05-4	Vinyl Acetate	ND	10	3.6	ug/l	
	m,p-Xylene	ND	2.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.37	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		87-116%
17060-07-0	1,2-Dichloroethane-D4	98%		76-127%
2037-26-5	Toluene-D8	101%		86-112%
460-00-4	4-Bromofluorobenzene	102%		84-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Certification Exceptions
- Chain of Custody

Parameter Certification Exceptions

Job Number: F66519
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

The following parameters included in this report are exceptions to NELAC certification.
The certification status of each is indicated below.

Parameter	CAS#	Method	Mat	Certification Status
Freon 113	76-13-1	**SW846 8260B**	AQ	Certified by SOP MS005

Accutest Laboratories Southeast
Chain of Custody

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL. 407-425-6700 • FAX: 407-425-0707
www.accutest.com

ACCUTEST

COC-013

Accutest Job # F66519 PAGE 1 OF 2

Accutest Quote # SRFF#

Client / Reporting Information

Company Name: TETRA TECH
Address: 800 OAK RIDGE TURN PIKE A-600
City: OAK RIDGE State: TN Zip: 37830
Project Contact: GINGER HULLINS E-mail: GINGER.HULLINS@TETRATECH.COM
Phone#: 865-599-2349
Sampler(s) Name(s) (Printed): A. LORENZO J. BENNETT

Project Information

Project Name: HOLLOMAN AFB
Street:
City: ALAMOGORDO State: NM
Project #: T93002
Fax #:
Client Purchase Order #: 1041533

Analytical Information

Accutest Sample #	Field ID / Point of Collection	Collection Date	Time	Sampled By	Matrix	Total # of Bottles	Other	None	HCl	NaOH	HNO3	H2SO4	NaOH+ZnAc	DI WATER	MEOH	VOCs 8260	TDS	METALS TOTAL 6 RCRA	METALS DISS 6 RCRA									
1	MW39-10-070709	7/7/09	1036	AM/JB	GW	6			X		X					X	X	X	X									
2	MW39-11-070709	7/7/09	1135	AM/JB	GW	6			X		X					X	X	X	X									
3	MW39-09-070709	7/7/09	1352	AM/JB	GW	6			X		X					X	X	X	X									
4	MW39-08-070709	7/7/09	1512	AM/JB	GW	6			X		X					X	X	X	X									
5	MW39-06-070709	7/7/09	1556	AM/JB	GW	6			X		X					X	X	X	X									
6	MW39-06D-070709	7/7/09	1635	AM/JB	GW	6			X		X					X	X	X	X									
7	MW39-DUP01-070709	7/7/09	—	AM/JB	GW	6			X		X					X	X	X	X									
8	MW39-02-070809	7/8/09	1110	AM/JB	GW	6			X		X					X	X	X	X									
9	MW39-05-070809	7/8/09	1125	AM/JB	GW	6			X		X					X	X	X	X									
10	MW39-07-070809	7/8/09	1230	AM/JB	GW	6			X		X					X	X	X	X									
10	MW39-07-MS-070809	7/8/09	1230	AM/JB	GW	6			X		X					X	X	X	X									
10	MW39-07-MSD-070809	7/8/09	1230	AM/JB	GW	6			X		X					X	X	X	X									

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe

LAB USE ONLY

TURNAROUND TIME (Business Days)

Approved By: / Rush Code

- [x] 10 Days Standard
- [ ] 7 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] OTHER

Emergency or Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [x] REDT1 (EPA LEVEL 3) ERPIMS
- [ ] FULT1 (EPA LEVEL 4)
- [x] EDD'S

Comments / Remarks

LAB FILTERED METALS
FEDEX 869649110278
869649110304

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
1	7/8/09 1330	2	3	7/9/09 1500	4 FEDEX
Relinquished by: 5	Date Time: 7/8/09 9:30	Received By: 6 Accutest	Relinquished by: 7	Date Time:	Received By: 8
		7/8/09			

Lab Use Only: Custody Seal in Place: Y N Temp Blank Provided: Y N Preserved where Applicable: Y N Total # of Coolers: 2 Cooler Temperature (s) Celsius: 4.0 3.6

4.2 4

F66519: Chain of Custody
Page 1 of 3

Accutest Laboratories Southeast
Chain of Custody

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL. 407-425-6700 • FAX: 407-425-0707
www.accutest.com

COC-013

Accutest JOB# F66519 PAGE 2 OF 2

Accutest Quote # SKIFF#

Client / Reporting Information

Company Name: TETRA TECH
Address: 800 OAK RIDGE TURNPIKE A-600
City: OAK RIDGE State: TN Zip: 37830
Project Contact: GINGER.MULLINS@TETRATECH.COM E-mail:
Phone#: 865-599-2349
Sampler(s) Name(s) (Printed):

Project Information

Project Name: HOLLOMAN AFB
Street:
City: ALAMOGORDO State: NM
Project #: 193002
Fax #:
Client Purchase Order #:

Analytical Information

VOCs 8260

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe

Accutest Sample #	Field ID / Point of Collection	COLLECTION DATE	TIME	SAMPLED BY:	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NaOH+ZnAc	DI WATER	MEOH	VOCs 8260	LAB USE ONLY
11	TB01-070809	7/8/09	—	—	W	2			X								

TURNAROUND TIME (Business Days)

Approved By: / Rush Code

- [X] 10 Days Standard
- [ ] 7 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] OTHER

Emergency or Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [X] REDT1 (EPA LEVEL 3) ERPIMS
- [ ] FULT1 (EPA LEVEL 4)
- [X] EDD'S

Comments / Remarks

LAB FILTERED METALS
FEDEX 8696 4911 0278
8696 4911 0301

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
1	7/8/09 1330	2 9:00	3	7/8/09 1800	4 FEDEX
Relinquished by: 5	Date Time: 7/8/09 9:00	Received By: 6 Accutest 7/8/09	Relinquished By: 7	Date Time:	Received By: 8

Lab Use Only: Custody Seal in Place: Y N Temp Blank Provided: Y N Preserved where Applicable: Y N Total # of Coolers: 2 Cooler Temperature (s) Celsius: 4.0 3.6

4.2 4

F66519: Chain of Custody
Page 2 of 3

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: F66519 CLIENT: Tetra Tech PROJECT: Hollowman AFB

DATE/TIME RECEIVED: 7/9/09 9:00 # OF COOLERS RECEIVED: 2 COOLER TEMPS: 4.0 3.6

METHOD OF DELIVERY: (FEDEX) UPS ACCUTEST COURIER GREYHOUND DELIVERY OTHER

AIRBILL NUMBERS: 8696 4911 0304

COOLER INFORMATION

- [ ] CUSTODY SEAL NOT PRESENT OR NOT INTACT
- [ ] CHAIN OF CUSTODY NOT RECEIVED (COC)
- [ ] ANALYSIS REQUESTED IS UNCLEAR OR MISSING
- [ ] SAMPLE DATES OR TIMES UNCLEAR OR MISSING
- [ ] TEMPERATURE CRITERIA NOT MET
- [ ] WET ICE RECEIVED IN COOLER

TRIP BLANK INFORMATION

- [x] TRIP BLANK PROVIDED
- [ ] TRIP BLANK NOT PROVIDED
- [ ] TRIP BLANK NOT ON COC
- [x] TRIP BLANK INTACT
- [ ] TRIP BLANK NOT INTACT
- [x] RECEIVED WATER TRIP BLANK
- [ ] RECEIVED SOIL TRIP BLANK

SAMPLE INFORMATION

- [ ] SAMPLE LABELS NOT PRESENT ON ALL BOTTLES
- [ ] CORRECT NUMBER OF CONTAINERS USED
- [ ] SAMPLE RECEIVED IMPROPERLY PRESERVED
- [ ] INSUFFICIENT VOLUME FOR ANALYSIS
- [ ] TIMES ON COC DOES NOT MATCH LABEL(S)
- [ ] ID'S ON COC DOES NOT MATCH LABEL(S)
- [ ] VOC VIALS HAVE HEADSPACE (MACRO BUBBLES)
- [ ] BOTTLES RECEIVED BUT ANALYSIS NOT REQUESTED
- [ ] NO BOTTLES RECEIVED FOR ANALYSIS REQUESTED
- [ ] UNCLEAR FILTERING INSTRUCTIONS
- [ ] UNCLEAR COMPOSITING INSTRUCTIONS
- [ ] SAMPLE CONTAINER(S) RECEIVED BROKEN
- [ ] % SOLIDS JAR NOT RECEIVED
- [ ] 5035 FIELD KIT NOT FROZEN WITHIN 48 HOUR'S
- [ ] RESIDUAL CHLORINE PRESENT

(APPLICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS)

MISC. INFORMATION

NUMBER OF ENCORES ? 8

NUMBER OF 5035 FIELD KITS ? 8

NUMBER OF LAB FILTERED METALS ? 18

SUMMARY OF COMMENTS:

TECHNICIAN SIGNATURE/DATE [signature] 7/9/09 TECHNICIAN SIGNATURE/DATE [signature] 7-9-09

ASBD 12/17/07

4.2

4

F66519: Chain of Custody

Page 3 of 3

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: F66519
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ2895-MB	J048413.D	1	07/13/09	KW	n/a	n/a	VJ2895

The QC reported here applies to the following samples: **Method:** SW846 8260B

F66519-1, F66519-2, F66519-3, F66519-4, F66519-5, F66519-8, F66519-9, F66519-10, F66519-11

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
75-05-8	Acetonitrile	ND	20	5.0	ug/l	
107-02-8	Acrolein	ND	20	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	2.0	ug/l	
107-05-1	Allyl chloride	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-44-7	Benzyl Chloride	ND	2.0	0.36	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.23	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.33	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.32	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.22	ug/l	
75-00-3	Chloroethane	ND	2.0	0.48	ug/l	
67-66-3	Chloroform	ND	1.0	0.28	ug/l	
544-10-5	1-Chlorohexane	ND	2.0	0.27	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.25	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.40	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.24	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.54	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.32	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.34	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.26	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.28	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	

Method Blank Summary

Job Number: F66519
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ2895-MB	J048413.D	1	07/13/09	KW	n/a	n/a	VJ2895

The QC reported here applies to the following samples: **Method:** SW846 8260B

F66519-1, F66519-2, F66519-3, F66519-4, F66519-5, F66519-8, F66519-9, F66519-10, F66519-11

CAS No.	Compound	Result	RL	MDL	Units	Q
1476-11-5	cis-1,4-Dichloro-2-Butene	ND	10	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.45	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.43	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	1.0	ug/l	
76-13-1	Freon 113	ND	1.0	0.34	ug/l	
591-78-6	2-Hexanone	ND	10	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.69	ug/l	
110-54-3	Hexane	ND	2.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.32	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
126-98-7	Methacrylonitrile	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.78	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.61	ug/l	
74-88-4	Methyl iodide	ND	5.0	1.0	ug/l	
80-62-6	Methyl methacrylate	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.30	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
76-01-7	Pentachloroethane	ND	10	2.0	ug/l	
107-12-0	Propionitrile	ND	20	10	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.25	ug/l	
100-42-5	Styrene	ND	1.0	0.36	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.33	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.26	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.75	1.0	0.50	ug/l	J
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.34	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	

Method Blank Summary

Job Number: F66519
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ2895-MB	J048413.D	1	07/13/09	KW	n/a	n/a	VJ2895

The QC reported here applies to the following samples: **Method:** SW846 8260B

F66519-1, F66519-2, F66519-3, F66519-4, F66519-5, F66519-8, F66519-9, F66519-10, F66519-11

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.35	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.32	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
108-05-4	Vinyl Acetate	ND	10	3.6	ug/l	
	m,p-Xylene	ND	2.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.37	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	102%	87-116%
17060-07-0	1,2-Dichloroethane-D4	100%	76-127%
2037-26-5	Toluene-D8	99%	86-112%
460-00-4	4-Bromofluorobenzene	103%	84-120%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Method Blank Summary

Job Number: F66519
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ2899-MB	J048532.D	1	07/17/09	KW	n/a	n/a	VJ2899

The QC reported here applies to the following samples: **Method:** SW846 8260B

F66519-5, F66519-6, F66519-7

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
75-05-8	Acetonitrile	ND	20	5.0	ug/l	
107-02-8	Acrolein	ND	20	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	2.0	ug/l	
107-05-1	Allyl chloride	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-44-7	Benzyl Chloride	ND	2.0	0.36	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.23	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.33	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.32	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.22	ug/l	
75-00-3	Chloroethane	ND	2.0	0.48	ug/l	
67-66-3	Chloroform	ND	1.0	0.28	ug/l	
544-10-5	1-Chlorohexane	ND	2.0	0.27	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.25	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.40	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.24	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.54	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.32	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.34	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.26	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.28	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	

Method Blank Summary

Job Number: F66519
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ2899-MB	J048532.D	1	07/17/09	KW	n/a	n/a	VJ2899

The QC reported here applies to the following samples: **Method:** SW846 8260B

F66519-5, F66519-6, F66519-7

CAS No.	Compound	Result	RL	MDL	Units	Q
1476-11-5	cis-1,4-Dichloro-2-Butene	ND	10	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.45	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.43	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	1.0	ug/l	
76-13-1	Freon 113	ND	1.0	0.34	ug/l	
591-78-6	2-Hexanone	ND	10	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.69	ug/l	
110-54-3	Hexane	ND	2.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.32	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
126-98-7	Methacrylonitrile	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.78	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.61	ug/l	
74-88-4	Methyl iodide	ND	5.0	1.0	ug/l	
80-62-6	Methyl methacrylate	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.30	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
76-01-7	Pentachloroethane	ND	10	2.0	ug/l	
107-12-0	Propionitrile	ND	20	10	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.25	ug/l	
100-42-5	Styrene	ND	1.0	0.36	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.33	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.26	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.58	1.0	0.50	ug/l	J
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.34	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	

Method Blank Summary

Job Number: F66519
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ2899-MB	J048532.D	1	07/17/09	KW	n/a	n/a	VJ2899

The QC reported here applies to the following samples: **Method:** SW846 8260B

F66519-5, F66519-6, F66519-7

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.35	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.32	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
108-05-4	Vinyl Acetate	ND	10	3.6	ug/l	
	m,p-Xylene	ND	2.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.37	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	105%	87-116%
17060-07-0	1,2-Dichloroethane-D4	94%	76-127%
2037-26-5	Toluene-D8	100%	86-112%
460-00-4	4-Bromofluorobenzene	103%	84-120%

Blank Spike Summary

Job Number: F66519
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ2895-BS	J048412.D	1	07/13/09	KW	n/a	n/a	VJ2895

The QC reported here applies to the following samples: **Method:** SW846 8260B

F66519-1, F66519-2, F66519-3, F66519-4, F66519-5, F66519-8, F66519-9, F66519-10, F66519-11

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	87.0	70	59-134
75-05-8	Acetonitrile	250	257	103	57-123
107-02-8	Acrolein	125	73.8	59	33-157
107-13-1	Acrylonitrile	125	135	108	62-124
107-05-1	Allyl chloride	25	27.9	112	48-136
71-43-2	Benzene	25	27.3	109	83-124
100-44-7	Benzyl Chloride	25	26.4	106	61-118
108-86-1	Bromobenzene	25	26.4	106	83-115
74-97-5	Bromochloromethane	25	25.2	101	78-112
75-27-4	Bromodichloromethane	25	23.9	96	76-116
75-25-2	Bromoform	25	25.3	101	68-128
104-51-8	n-Butylbenzene	25	28.8	115	84-124
135-98-8	sec-Butylbenzene	25	28.4	114	86-127
98-06-6	tert-Butylbenzene	25	28.4	114	83-126
108-90-7	Chlorobenzene	25	26.4	106	87-115
75-00-3	Chloroethane	25	26.4	106	54-166
67-66-3	Chloroform	25	27.0	108	85-123
544-10-5	1-Chlorohexane	25	29.3	117	87-128
95-49-8	o-Chlorotoluene	25	27.1	108	84-121
106-43-4	p-Chlorotoluene	25	27.1	108	84-120
110-75-8	2-Chloroethyl vinyl ether	125	130	104	63-125
75-15-0	Carbon disulfide	25	26.2	105	67-147
56-23-5	Carbon tetrachloride	25	30.6	122	74-139
75-34-3	1,1-Dichloroethane	25	27.7	111	82-127
75-35-4	1,1-Dichloroethylene	25	26.6	106	75-133
563-58-6	1,1-Dichloropropene	25	28.7	115	87-127
96-12-8	1,2-Dibromo-3-chloropropane	25	24.2	97	61-118
106-93-4	1,2-Dibromoethane	25	23.2	93	80-115
107-06-2	1,2-Dichloroethane	25	24.0	96	76-122
78-87-5	1,2-Dichloropropane	25	25.6	102	81-120
142-28-9	1,3-Dichloropropane	25	24.6	98	81-113
594-20-7	2,2-Dichloropropane	25	28.4	114	77-138
124-48-1	Dibromochloromethane	25	22.9	92	74-116
75-71-8	Dichlorodifluoromethane	25	27.9	112	34-158
156-59-2	cis-1,2-Dichloroethylene	25	25.5	102	81-114
10061-01-5	cis-1,3-Dichloropropene	25	25.5	102	83-119

Blank Spike Summary

Job Number: F66519
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ2895-BS	J048412.D	1	07/13/09	KW	n/a	n/a	VJ2895

The QC reported here applies to the following samples: **Method:** SW846 8260B

F66519-1, F66519-2, F66519-3, F66519-4, F66519-5, F66519-8, F66519-9, F66519-10, F66519-11

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1476-11-5	cis-1,4-Dichloro-2-Butene	25	25.4	102	41-130
541-73-1	m-Dichlorobenzene	25	26.2	105	86-115
95-50-1	o-Dichlorobenzene	25	26.2	105	85-115
106-46-7	p-Dichlorobenzene	25	26.1	104	87-113
156-60-5	trans-1,2-Dichloroethylene	25	27.5	110	82-126
10061-02-6	trans-1,3-Dichloropropene	25	26.3	105	87-123
100-41-4	Ethylbenzene	25	27.0	108	87-118
97-63-2	Ethyl methacrylate	25	22.3	89	68-110
76-13-1	Freon 113	25	28.1	112	74-139
591-78-6	2-Hexanone	125	117	94	58-125
87-68-3	Hexachlorobutadiene	25	29.4	118	71-133
110-54-3	Hexane	25	27.2	109	71-134
98-82-8	Isopropylbenzene	25	29.1	116	87-131
99-87-6	p-Isopropyltoluene	25	28.7	115	83-125
108-10-1	4-Methyl-2-pentanone	125	125	100	62-125
126-98-7	Methacrylonitrile	250	240	96	62-133
74-83-9	Methyl bromide	25	25.8	103	55-151
74-87-3	Methyl chloride	25	27.9	112	55-173
74-88-4	Methyl iodide	25	27.6	110	72-125
80-62-6	Methyl methacrylate	25	24.9	100	63-115
74-95-3	Methylene bromide	25	25.6	102	81-116
75-09-2	Methylene chloride	25	25.0	100	69-125
78-93-3	Methyl ethyl ketone	125	102	82	61-127
1634-04-4	Methyl Tert Butyl Ether	25	27.1	108	75-116
91-20-3	Naphthalene	25	24.0	96	59-125
76-01-7	Pentachloroethane	25	24.9	100	82-111
107-12-0	Propionitrile	250	242	97	69-119
103-65-1	n-Propylbenzene	25	28.0	112	86-125
100-42-5	Styrene	25	27.5	110	78-118
630-20-6	1,1,1,2-Tetrachloroethane	25	24.3	97	81-119
71-55-6	1,1,1-Trichloroethane	25	27.4	110	79-133
79-34-5	1,1,2,2-Tetrachloroethane	25	23.6	94	71-120
79-00-5	1,1,2-Trichloroethane	25	24.7	99	80-114
87-61-6	1,2,3-Trichlorobenzene	25	24.0	96	64-126
96-18-4	1,2,3-Trichloropropane	25	22.2	89	77-115
120-82-1	1,2,4-Trichlorobenzene	25	24.8	99	68-123

Blank Spike Summary

Job Number: F66519
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ2895-BS	J048412.D	1	07/13/09	KW	n/a	n/a	VJ2895

The QC reported here applies to the following samples: **Method:** SW846 8260B

F66519-1, F66519-2, F66519-3, F66519-4, F66519-5, F66519-8, F66519-9, F66519-10, F66519-11

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
95-63-6	1,2,4-Trimethylbenzene	25	27.1	108	82-120
108-67-8	1,3,5-Trimethylbenzene	25	28.1	112	83-123
127-18-4	Tetrachloroethylene	25	29.1	116	80-131
108-88-3	Toluene	25	26.7	107	86-116
79-01-6	Trichloroethylene	25	26.9	108	85-124
75-69-4	Trichlorofluoromethane	25	28.1	112	66-156
110-57-6	Trans-1,4-Dichloro-2-Butene	25	24.2	97	51-137
75-01-4	Vinyl chloride	25	30.1	120	57-153
108-05-4	Vinyl Acetate	125	164	131	38-159
	m,p-Xylene	50	56.4	113	86-121
95-47-6	o-Xylene	25	27.6	110	83-121

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	102%	87-116%
17060-07-0	1,2-Dichloroethane-D4	103%	76-127%
2037-26-5	Toluene-D8	99%	86-112%
460-00-4	4-Bromofluorobenzene	101%	84-120%

Blank Spike Summary

Job Number: F66519
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ2899-BS	J048531.D	1	07/17/09	KW	n/a	n/a	VJ2899

The QC reported here applies to the following samples: **Method:** SW846 8260B

F66519-5, F66519-6, F66519-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	91.4	73	59-134
75-05-8	Acetonitrile	250	282	113	57-123
107-02-8	Acrolein	125	67.1	54	33-157
107-13-1	Acrylonitrile	125	136	109	62-124
107-05-1	Allyl chloride	25	28.1	112	48-136
71-43-2	Benzene	25	28.3	113	83-124
100-44-7	Benzyl Chloride	25	23.6	94	61-118
108-86-1	Bromobenzene	25	25.6	102	83-115
74-97-5	Bromochloromethane	25	25.5	102	78-112
75-27-4	Bromodichloromethane	25	25.9	104	76-116
75-25-2	Bromoform	25	21.3	85	68-128
104-51-8	n-Butylbenzene	25	28.6	114	84-124
135-98-8	sec-Butylbenzene	25	28.3	113	86-127
98-06-6	tert-Butylbenzene	25	27.9	112	83-126
108-90-7	Chlorobenzene	25	26.3	105	87-115
75-00-3	Chloroethane	25	30.5	122	54-166
67-66-3	Chloroform	25	27.6	110	85-123
544-10-5	1-Chlorohexane	25	29.2	117	87-128
95-49-8	o-Chlorotoluene	25	26.8	107	84-121
106-43-4	p-Chlorotoluene	25	26.6	106	84-120
110-75-8	2-Chloroethyl vinyl ether	125	133	106	63-125
75-15-0	Carbon disulfide	25	29.3	117	67-147
56-23-5	Carbon tetrachloride	25	28.6	114	74-139
75-34-3	1,1-Dichloroethane	25	28.4	114	82-127
75-35-4	1,1-Dichloroethylene	25	29.7	119	75-133
563-58-6	1,1-Dichloropropene	25	28.1	112	87-127
96-12-8	1,2-Dibromo-3-chloropropane	25	22.7	91	61-118
106-93-4	1,2-Dibromoethane	25	24.2	97	80-115
107-06-2	1,2-Dichloroethane	25	24.7	99	76-122
78-87-5	1,2-Dichloropropane	25	26.4	106	81-120
142-28-9	1,3-Dichloropropane	25	24.2	97	81-113
594-20-7	2,2-Dichloropropane	25	29.4	118	77-138
124-48-1	Dibromochloromethane	25	24.6	98	74-116
75-71-8	Dichlorodifluoromethane	25	26.4	106	34-158
156-59-2	cis-1,2-Dichloroethylene	25	26.3	105	81-114
10061-01-5	cis-1,3-Dichloropropene	25	27.3	109	83-119

Blank Spike Summary

Job Number: F66519
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ2899-BS	J048531.D	1	07/17/09	KW	n/a	n/a	VJ2899

The QC reported here applies to the following samples: **Method:** SW846 8260B

F66519-5, F66519-6, F66519-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1476-11-5	cis-1,4-Dichloro-2-Butene	25	21.3	85	41-130
541-73-1	m-Dichlorobenzene	25	26.0	104	86-115
95-50-1	o-Dichlorobenzene	25	25.8	103	85-115
106-46-7	p-Dichlorobenzene	25	25.5	102	87-113
156-60-5	trans-1,2-Dichloroethylene	25	28.3	113	82-126
10061-02-6	trans-1,3-Dichloropropene	25	28.3	113	87-123
100-41-4	Ethylbenzene	25	27.5	110	87-118
97-63-2	Ethyl methacrylate	25	21.1	84	68-110
76-13-1	Freon 113	25	30.5	122	74-139
591-78-6	2-Hexanone	125	116	93	58-125
87-68-3	Hexachlorobutadiene	25	27.1	108	71-133
110-54-3	Hexane	25	29.6	118	71-134
98-82-8	Isopropylbenzene	25	29.2	117	87-131
99-87-6	p-Isopropyltoluene	25	28.7	115	83-125
108-10-1	4-Methyl-2-pentanone	125	125	100	62-125
126-98-7	Methacrylonitrile	250	266	106	62-133
74-83-9	Methyl bromide	25	27.9	112	55-151
74-87-3	Methyl chloride	25	30.5	122	55-173
74-88-4	Methyl iodide	25	29.8	119	72-125
80-62-6	Methyl methacrylate	25	26.8	107	63-115
74-95-3	Methylene bromide	25	26.4	106	81-116
75-09-2	Methylene chloride	25	26.5	106	69-125
78-93-3	Methyl ethyl ketone	125	101	81	61-127
1634-04-4	Methyl Tert Butyl Ether	25	25.9	104	75-116
91-20-3	Naphthalene	25	25.2	101	59-125
76-01-7	Pentachloroethane	25	25.3	101	82-111
107-12-0	Propionitrile	250	242	97	69-119
103-65-1	n-Propylbenzene	25	27.7	111	86-125
100-42-5	Styrene	25	27.0	108	78-118
630-20-6	1,1,1,2-Tetrachloroethane	25	25.8	103	81-119
71-55-6	1,1,1-Trichloroethane	25	28.9	116	79-133
79-34-5	1,1,2,2-Tetrachloroethane	25	24.3	97	71-120
79-00-5	1,1,2-Trichloroethane	25	24.4	98	80-114
87-61-6	1,2,3-Trichlorobenzene	25	24.8	99	64-126
96-18-4	1,2,3-Trichloropropane	25	21.0	84	77-115
120-82-1	1,2,4-Trichlorobenzene	25	25.8	103	68-123

Blank Spike Summary

Job Number: F66519
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ2899-BS	J048531.D	1	07/17/09	KW	n/a	n/a	VJ2899

The QC reported here applies to the following samples: **Method:** SW846 8260B

F66519-5, F66519-6, F66519-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
95-63-6	1,2,4-Trimethylbenzene	25	26.8	107	82-120
108-67-8	1,3,5-Trimethylbenzene	25	27.5	110	83-123
127-18-4	Tetrachloroethylene	25	26.8	107	80-131
108-88-3	Toluene	25	27.2	109	86-116
79-01-6	Trichloroethylene	25	27.4	110	85-124
75-69-4	Trichlorofluoromethane	25	34.7	139	66-156
110-57-6	Trans-1,4-Dichloro-2-Butene	25	24.5	98	51-137
75-01-4	Vinyl chloride	25	32.4	130	57-153
108-05-4	Vinyl Acetate	125	138	110	38-159
	m,p-Xylene	50	56.8	114	86-121
95-47-6	o-Xylene	25	27.8	111	83-121

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	100%	87-116%
17060-07-0	1,2-Dichloroethane-D4	97%	76-127%
2037-26-5	Toluene-D8	98%	86-112%
460-00-4	4-Bromofluorobenzene	98%	84-120%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F66519
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F66519-10MS	J048416.D	1	07/13/09	KW	n/a	n/a	VJ2895
F66519-10MSD	J048417.D	1	07/13/09	KW	n/a	n/a	VJ2895
F66519-10	J048415.D	1	07/13/09	KW	n/a	n/a	VJ2895

The QC reported here applies to the following samples: **Method:** SW846 8260B

F66519-1, F66519-2, F66519-3, F66519-4, F66519-5, F66519-8, F66519-9, F66519-10, F66519-11

CAS No.	Compound	F66519-10 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		125	86.3	69	87.0	70	1	59-134/14
75-05-8	Acetonitrile	ND		250	248	99	250	100	1	57-123/15
107-02-8	Acrolein	ND		125	53.4	43	49.3	39	8	33-157/21
107-13-1	Acrylonitrile	ND		125	164	131*	157	126*	4	62-124/13
107-05-1	Allyl chloride	ND		25	27.8	111	26.5	106	5	48-136/13
71-43-2	Benzene	ND		25	25.6	102	24.3	97	5	83-124/11
100-44-7	Benzyl Chloride	ND		25	29.5	118	28.2	113	5	61-118/12
108-86-1	Bromobenzene	ND		25	24.4	98	23.0	92	6	83-115/10
74-97-5	Bromochloromethane	ND		25	23.6	94	22.5	90	5	78-112/10
75-27-4	Bromodichloromethane	ND		25	22.0	88	21.0	84	5	76-116/10
75-25-2	Bromoform	ND		25	25.5	102	25.4	102	0	68-128/11
104-51-8	n-Butylbenzene	ND		25	25.4	102	23.4	94	8	84-124/10
135-98-8	sec-Butylbenzene	ND		25	25.4	102	23.7	95	7	86-127/10
98-06-6	tert-Butylbenzene	ND		25	25.4	102	23.5	94	8	83-126/10
108-90-7	Chlorobenzene	ND		25	25.2	101	23.7	95	6	87-115/9
75-00-3	Chloroethane	ND		25	26.5	106	25.7	103	3	54-166/20
67-66-3	Chloroform	ND		25	24.8	99	23.2	93	7	85-123/10
544-10-5	1-Chlorohexane	ND		25	27.1	108	25.7	103	5	87-128/10
95-49-8	o-Chlorotoluene	ND		25	25.1	100	23.5	94	7	84-121/10
106-43-4	p-Chlorotoluene	ND		25	25.1	100	23.5	94	7	84-120/10
110-75-8	2-Chloroethyl vinyl ether	ND		125	ND	0*	ND	0*	nc	63-125/24
75-15-0	Carbon disulfide	ND		25	24.4	98	23.9	96	2	67-147/12
56-23-5	Carbon tetrachloride	ND		25	27.4	110	27.2	109	1	74-139/13
75-34-3	1,1-Dichloroethane	ND		25	26.2	105	24.8	99	5	82-127/10
75-35-4	1,1-Dichloroethylene	ND		25	25.2	101	25.0	100	1	75-133/13
563-58-6	1,1-Dichloropropene	ND		25	26.6	106	25.1	100	6	87-127/10
96-12-8	1,2-Dibromo-3-chloropropane	ND		25	29.5	118	29.1	116	1	61-118/15
106-93-4	1,2-Dibromoethane	ND		25	24.4	98	23.0	92	6	80-115/10
107-06-2	1,2-Dichloroethane	ND		25	23.0	92	22.1	88	4	76-122/11
78-87-5	1,2-Dichloropropane	ND		25	24.6	98	23.0	92	7	81-120/11
142-28-9	1,3-Dichloropropane	ND		25	25.0	100	23.9	96	4	81-113/11
594-20-7	2,2-Dichloropropane	ND		25	25.3	101	23.7	95	7	77-138/12
124-48-1	Dibromochloromethane	ND		25	21.8	87	20.8	83	5	74-116/11
75-71-8	Dichlorodifluoromethane	ND		25	23.7	95	25.3	101	7	34-158/22
156-59-2	cis-1,2-Dichloroethylene	ND		25	23.8	95	22.6	90	5	81-114/10
10061-01-5	cis-1,3-Dichloropropene	ND		25	23.5	94	22.2	89	6	83-119/10

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F66519
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F66519-10MS	J048416.D	1	07/13/09	KW	n/a	n/a	VJ2895
F66519-10MSD	J048417.D	1	07/13/09	KW	n/a	n/a	VJ2895
F66519-10	J048415.D	1	07/13/09	KW	n/a	n/a	VJ2895

The QC reported here applies to the following samples: **Method:** SW846 8260B

F66519-1, F66519-2, F66519-3, F66519-4, F66519-5, F66519-8, F66519-9, F66519-10, F66519-11

CAS No.	Compound	F66519-10 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1476-11-5	cis-1,4-Dichloro-2-Butene	ND		25	30.9	124	30.3	121	2	41-130/33
541-73-1	m-Dichlorobenzene	ND		25	24.5	98	22.8	91	7	86-115/9
95-50-1	o-Dichlorobenzene	ND		25	25.0	100	23.1	92	8	85-115/9
106-46-7	p-Dichlorobenzene	ND		25	24.6	98	23.1	92	6	87-113/10
156-60-5	trans-1,2-Dichloroethylene	ND		25	25.4	102	24.1	96	5	82-126/10
10061-02-6	trans-1,3-Dichloropropene	ND		25	26.0	104	24.1	96	8	87-123/10
100-41-4	Ethylbenzene	ND		25	25.9	104	24.3	97	6	87-118/10
97-63-2	Ethyl methacrylate	ND		25	27.8	111*	26.4	106	5	68-110/11
76-13-1	Freon 113	ND		25	24.4	98	25.8	103	6	74-139/13
591-78-6	2-Hexanone	ND		125	194	155*	188	150*	3	58-125/14
87-68-3	Hexachlorobutadiene	ND		25	24.1	96	22.3	89	8	71-133/12
110-54-3	Hexane	ND		25	25.6	102	25.5	102	0	71-134/11
98-82-8	Isopropylbenzene	ND		25	27.5	110	25.5	102	8	87-131/10
99-87-6	p-Isopropyltoluene	ND		25	25.4	102	23.4	94	8	83-125/9
108-10-1	4-Methyl-2-pentanone	ND		125	197	158*	191	153*	3	62-125/13
126-98-7	Methacrylonitrile	ND		250	312	125	295	118	6	62-133/17
74-83-9	Methyl bromide	ND		25	26.4	106	25.3	101	4	55-151/21
74-87-3	Methyl chloride	ND		25	27.5	110	27.5	110	0	55-173/22
74-88-4	Methyl iodide	ND		25	25.2	101	24.1	96	4	72-125/11
80-62-6	Methyl methacrylate	ND		25	32.4	130*	31.3	125*	3	63-115/10
74-95-3	Methylene bromide	ND		25	25.3	101	24.3	97	4	81-116/10
75-09-2	Methylene chloride	ND		25	23.2	93	22.1	88	5	69-125/11
78-93-3	Methyl ethyl ketone	ND		125	123	98	122	98	1	61-127/13
1634-04-4	Methyl Tert Butyl Ether	ND		25	26.5	106	25.2	101	5	75-116/10
91-20-3	Naphthalene	ND		25	28.9	116	27.5	110	5	59-125/15
76-01-7	Pentachloroethane	ND		25	24.4	98	23.0	92	6	82-111/8
107-12-0	Propionitrile	ND		250	286	114	286	114	0	69-119/12
103-65-1	n-Propylbenzene	ND		25	25.8	103	24.2	97	6	86-125/10
100-42-5	Styrene	ND		25	26.6	106	24.3	97	9	78-118/11
630-20-6	1,1,1,2-Tetrachloroethane	ND		25	22.7	91	21.7	87	5	81-119/10
71-55-6	1,1,1-Trichloroethane	ND		25	24.9	100	23.8	95	5	79-133/11
79-34-5	1,1,2,2-Tetrachloroethane	ND		25	28.0	112	26.6	106	5	71-120/11
79-00-5	1,1,2-Trichloroethane	ND		25	25.8	103	24.4	98	6	80-114/11
87-61-6	1,2,3-Trichlorobenzene	ND		25	23.2	93	21.3	85	9	64-126/16
96-18-4	1,2,3-Trichloropropane	ND		25	25.1	100	24.2	97	4	77-115/12
120-82-1	1,2,4-Trichlorobenzene	ND		25	22.1	88	20.5	82	8	68-123/11

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F66519
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F66519-10MS	J048416.D	1	07/13/09	KW	n/a	n/a	VJ2895
F66519-10MSD	J048417.D	1	07/13/09	KW	n/a	n/a	VJ2895
F66519-10	J048415.D	1	07/13/09	KW	n/a	n/a	VJ2895

The QC reported here applies to the following samples: **Method:** SW846 8260B

F66519-1, F66519-2, F66519-3, F66519-4, F66519-5, F66519-8, F66519-9, F66519-10, F66519-11

CAS No.	Compound	F66519-10 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
95-63-6	1,2,4-Trimethylbenzene	ND		25	24.9	100	23.2	93	7	82-120/10
108-67-8	1,3,5-Trimethylbenzene	ND		25	25.6	102	24.0	96	6	83-123/10
127-18-4	Tetrachloroethylene	ND		25	26.0	104	25.1	100	4	80-131/12
108-88-3	Toluene	ND		25	26.0	104	24.5	98	6	86-116/10
79-01-6	Trichloroethylene	1.4		25	26.5	100	25.3	96	5	85-124/10
75-69-4	Trichlorofluoromethane	ND		25	27.6	110	27.4	110	1	66-156/15
110-57-6	Trans-1,4-Dichloro-2-Butene	ND		25	30.6	122	29.2	117	5	51-137/24
75-01-4	Vinyl chloride	ND		25	27.9	112	28.1	112	1	57-153/22
108-05-4	Vinyl Acetate	ND		125	195	156	186	149	5	38-159/11
	m,p-Xylene	ND		50	54.0	108	50.5	101	7	86-121/10
95-47-6	o-Xylene	ND		25	26.2	105	24.4	98	7	83-121/10

CAS No.	Surrogate Recoveries	MS	MSD	F66519-10	Limits
1868-53-7	Dibromofluoromethane	98%	99%	100%	87-116%
17060-07-0	1,2-Dichloroethane-D4	103%	103%	99%	76-127%
2037-26-5	Toluene-D8	100%	100%	100%	86-112%
460-00-4	4-Bromofluorobenzene	98%	98%	104%	84-120%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F66519
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F66640-1MS	J048543.D	2	07/17/09	KW	n/a	n/a	VJ2899
F66640-1MSD	J048544.D	2	07/17/09	KW	n/a	n/a	VJ2899
F66640-1	J048542.D	2	07/17/09	KW	n/a	n/a	VJ2899

The QC reported here applies to the following samples: **Method:** SW846 8260B

F66519-5, F66519-6, F66519-7

CAS No.	Compound	F66640-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	50 U		250	162	65	159	64	2	59-134/14
75-05-8	Acetonitrile	40 U		500	566	113	568	114	0	57-123/15
107-02-8	Acrolein	40 U		250	107	43	101	40	6	33-157/21
107-13-1	Acrylonitrile	20 U		250	264	106	260	104	2	62-124/13
107-05-1	Allyl chloride	20 U		50	54.0	108	50.0	100	8	48-136/13
71-43-2	Benzene	2.0 U		50	55.4	111	51.6	103	7	83-124/11
100-44-7	Benzyl Chloride	4.0 U		50	42.0	84	40.2	80	4	61-118/12
108-86-1	Bromobenzene	2.0 U		50	48.2	96	44.6	89	8	83-115/10
74-97-5	Bromochloromethane	2.0 U		50	49.2	98	46.0	92	7	78-112/10
75-27-4	Bromodichloromethane	2.0 U		50	48.6	97	45.6	91	6	76-116/10
75-25-2	Bromoform	2.0 U		50	42.5	85	39.4	79	8	68-128/11
104-51-8	n-Butylbenzene	2.0 U		50	51.8	104	47.9	96	8	84-124/10
135-98-8	sec-Butylbenzene	2.0 U		50	52.5	105	49.7	99	5	86-127/10
98-06-6	tert-Butylbenzene	2.0 U		50	50.4	101	49.0	98	3	83-126/10
108-90-7	Chlorobenzene	2.0 U		50	50.8	102	46.7	93	8	87-115/9
75-00-3	Chloroethane	4.0 U		50	57.6	115	54.9	110	5	54-166/20
67-66-3	Chloroform	2.0 U		50	52.8	106	49.4	99	7	85-123/10
544-10-5	1-Chlorohexane	4.0 U		50	53.9	108	52.5	105	3	87-128/10
95-49-8	o-Chlorotoluene	2.0 U		50	49.8	100	47.5	95	5	84-121/10
106-43-4	p-Chlorotoluene	2.0 U		50	49.5	99	46.6	93	6	84-120/10
110-75-8	2-Chloroethyl vinyl ether	10 U		250	ND	0*	ND	0*	nc	63-125/24
75-15-0	Carbon disulfide	4.0 U		50	55.0	110	53.4	107	3	67-147/12
56-23-5	Carbon tetrachloride	2.0 U		50	53.7	107	53.5	107	0	74-139/13
75-34-3	1,1-Dichloroethane	2.0 U		50	55.2	110	52.0	104	6	82-127/10
75-35-4	1,1-Dichloroethylene	2.0 U		50	55.6	111	55.4	111	0	75-133/13
563-58-6	1,1-Dichloropropene	2.0 U		50	53.8	108	52.7	105	2	87-127/10
96-12-8	1,2-Dibromo-3-chloropropane	4.0 U		50	44.6	89	44.3	89	1	61-118/15
106-93-4	1,2-Dibromoethane	2.0 U		50	47.3	95	45.1	90	5	80-115/10
107-06-2	1,2-Dichloroethane	2.0 U		50	48.4	97	45.2	90	7	76-122/11
78-87-5	1,2-Dichloropropane	2.0 U		50	51.8	104	47.5	95	9	81-120/11
142-28-9	1,3-Dichloropropane	2.0 U		50	47.2	94	44.4	89	6	81-113/11
594-20-7	2,2-Dichloropropane	2.0 U		50	52.2	104	50.7	101	3	77-138/12
124-48-1	Dibromochloromethane	2.0 U		50	46.8	94	44.4	89	5	74-116/11
75-71-8	Dichlorodifluoromethane	4.0 U		50	43.0	86	47.7	95	10	34-158/22
156-59-2	cis-1,2-Dichloroethylene	203	E	50	233	60* [a]	217	28* [a]	7	81-114/10
10061-01-5	cis-1,3-Dichloropropene	2.0 U		50	50.4	101	47.6	95	6	83-119/10

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F66519
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F66640-1MS	J048543.D	2	07/17/09	KW	n/a	n/a	VJ2899
F66640-1MSD	J048544.D	2	07/17/09	KW	n/a	n/a	VJ2899
F66640-1	J048542.D	2	07/17/09	KW	n/a	n/a	VJ2899

The QC reported here applies to the following samples: **Method:** SW846 8260B

F66519-5, F66519-6, F66519-7

CAS No.	Compound	F66640-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1476-11-5	cis-1,4-Dichloro-2-Butene	20 U		50	32.0	64	37.4	75	16	41-130/33
541-73-1	m-Dichlorobenzene	2.0 U		50	48.4	97	45.3	91	7	86-115/9
95-50-1	o-Dichlorobenzene	2.0 U		50	48.1	96	45.4	91	6	85-115/9
106-46-7	p-Dichlorobenzene	2.0 U		50	47.5	95	44.8	90	6	87-113/10
156-60-5	trans-1,2-Dichloroethylene	6.5		50	59.5	106	56.3	100	6	82-126/10
10061-02-6	trans-1,3-Dichloropropene	2.0 U		50	52.9	106	49.2	98	7	87-123/10
100-41-4	Ethylbenzene	2.0 U		50	52.3	105	49.1	98	6	87-118/10
97-63-2	Ethyl methacrylate	10 U		50	42.3	85	39.8	80	6	68-110/11
76-13-1	Freon 113	2.0 U		50	55.8	112	56.2	112	1	74-139/13
591-78-6	2-Hexanone	20 U		250	245	98	233	93	5	58-125/14
87-68-3	Hexachlorobutadiene	4.0 U		50	48.1	96	43.8	88	9	71-133/12
110-54-3	Hexane	4.0 U		50	54.6	109	56.5	113	3	71-134/11
98-82-8	Isopropylbenzene	2.0 U		50	55.8	112	51.0	102	9	87-131/10
99-87-6	p-Isopropyltoluene	2.0 U		50	51.6	103	49.4	99	4	83-125/9
108-10-1	4-Methyl-2-pentanone	10 U		250	277	111	264	106	5	62-125/13
126-98-7	Methacrylonitrile	40 U		500	558	112	537	107	4	62-133/17
74-83-9	Methyl bromide	4.0 U		50	51.1	102	49.3	99	4	55-151/21
74-87-3	Methyl chloride	4.0 U		50	56.0	112	56.6	113	1	55-173/22
74-88-4	Methyl iodide	10 U		50	54.0	108	53.2	106	1	72-125/11
80-62-6	Methyl methacrylate	10 U		50	54.7	109	51.9	104	5	63-115/10
74-95-3	Methylene bromide	4.0 U		50	52.0	104	49.7	99	5	81-116/10
75-09-2	Methylene chloride	2.5	J	50	52.0	99	48.6	92	7	69-125/11
78-93-3	Methyl ethyl ketone	10 U		250	205	82	199	80	3	61-127/13
1634-04-4	Methyl Tert Butyl Ether	2.0 U		50	50.7	101	49.7	99	2	75-116/10
91-20-3	Naphthalene	10 U		50	48.7	97	47.3	95	3	59-125/15
76-01-7	Pentachloroethane	20 U		50	46.3	93	44.1	88	5	82-111/8
107-12-0	Propionitrile	40 U		500	494	99	485	97	2	69-119/12
103-65-1	n-Propylbenzene	2.0 U		50	51.4	103	48.6	97	6	86-125/10
100-42-5	Styrene	2.0 U		50	51.9	104	47.5	95	9	78-118/11
630-20-6	1,1,1,2-Tetrachloroethane	2.0 U		50	49.0	98	45.8	92	7	81-119/10
71-55-6	1,1,1-Trichloroethane	2.0 U		50	54.5	109	52.9	106	3	79-133/11
79-34-5	1,1,2,2-Tetrachloroethane	2.0 U		50	47.3	95	46.3	93	2	71-120/11
79-00-5	1,1,2-Trichloroethane	2.0 U		50	46.6	93	44.3	89	5	80-114/11
87-61-6	1,2,3-Trichlorobenzene	2.0 U		50	46.2	92	43.9	88	5	64-126/16
96-18-4	1,2,3-Trichloropropane	4.0 U		50	39.8	80	40.0	80	1	77-115/12
120-82-1	1,2,4-Trichlorobenzene	2.0 U		50	46.9	94	43.9	88	7	68-123/11

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F66519
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F66640-1MS	J048543.D	2	07/17/09	KW	n/a	n/a	VJ2899
F66640-1MSD	J048544.D	2	07/17/09	KW	n/a	n/a	VJ2899
F66640-1	J048542.D	2	07/17/09	KW	n/a	n/a	VJ2899

The QC reported here applies to the following samples: **Method:** SW846 8260B

F66519-5, F66519-6, F66519-7

CAS No.	Compound	F66640-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
95-63-6	1,2,4-Trimethylbenzene	4.0 U		50	49.7	99	46.8	94	6	82-120/10
108-67-8	1,3,5-Trimethylbenzene	4.0 U		50	50.9	102	48.0	96	6	83-123/10
127-18-4	Tetrachloroethylene	2.0 U		50	51.1	102	48.2	96	6	80-131/12
108-88-3	Toluene	2.0 U		50	52.1	104	48.4	97	7	86-116/10
79-01-6	Trichloroethylene	6.6		50	59.4	106	55.1	97	8	85-124/10
75-69-4	Trichlorofluoromethane	4.0 U		50	60.4	121	67.0	134	10	66-156/15
110-57-6	Trans-1,4-Dichloro-2-Butene	20 U		50	40.5	81	45.0	90	11	51-137/24
75-01-4	Vinyl chloride	9.4		50	65.2	112	67.4	116	3	57-153/22
108-05-4	Vinyl Acetate	20 U		250	275	110	260	104	6	38-159/11
	m,p-Xylene	4.0 U		100	110	110	101	101	9	86-121/10
95-47-6	o-Xylene	2.0 U		50	53.2	106	49.0	98	8	83-121/10

CAS No.	Surrogate Recoveries	MS	MSD	F66640-1	Limits
1868-53-7	Dibromofluoromethane	100%	101%	106%	87-116%
17060-07-0	1,2-Dichloroethane-D4	100%	99%	97%	76-127%
2037-26-5	Toluene-D8	98%	97%	97%	86-112%
460-00-4	4-Bromofluorobenzene	97%	98%	101%	84-120%

(a) Outside control limits due to high level in sample relative to spike amount.

Instrument Performance Check (BFB)

Job Number: F66519
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ2895-BFB
Lab File ID: J048402.D
Instrument ID: GCMSJ
Injection Date: 07/13/09
Injection Time: 10:00

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	53448	24.4		Pass
75	30.0 - 60.0% of mass 95	98741	45.0		Pass
95	Base peak, 100% relative abundance	219392	100.0		Pass
96	5.0 - 9.0% of mass 95	14471	6.6		Pass
173	Less than 2.0% of mass 174	967	0.44	(0.6) [a]	Pass
174	50.0 - 100.0% of mass 95	162368	74.0		Pass
175	5.0 - 9.0% of mass 174	10782	4.9	(6.6) [a]	Pass
176	95.0 - 101.0% of mass 174	160512	73.2	(98.9) [a]	Pass
177	5.0 - 9.0% of mass 176	9850	4.5	(6.1) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VJ2895-IC2895	J048403.D	07/13/09	11:00	01:00	Initial cal 1
VJ2895-IC2895	J048404.D	07/13/09	11:24	01:24	Initial cal 2
VJ2895-IC2895	J048405.D	07/13/09	11:47	01:47	Initial cal 3
VJ2895-ICC2895	J048406.D	07/13/09	12:11	02:11	Initial cal 4
VJ2895-IC2895	J048407.D	07/13/09	12:35	02:35	Initial cal 5
VJ2895-IC2895	J048408.D	07/13/09	13:06	03:06	Initial cal 6
VJ2895-ICV2895	J048409.D	07/13/09	13:29	03:29	Initial cal verification 4

Instrument Performance Check (BFB)

Job Number: F66519
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ2895-BFB
Lab File ID: J048410.D
Instrument ID: GCMSJ
Injection Date: 07/13/09
Injection Time: 13:49

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	54525	23.5		Pass
75	30.0 - 60.0% of mass 95	108040	46.5		Pass
95	Base peak, 100% relative abundance	232341	100.0		Pass
96	5.0 - 9.0% of mass 95	16736	7.2		Pass
173	Less than 2.0% of mass 174	1014	0.44	(0.63) [a]	Pass
174	50.0 - 100.0% of mass 95	160904	69.3		Pass
175	5.0 - 9.0% of mass 174	11255	4.8	(7.0) [a]	Pass
176	95.0 - 101.0% of mass 174	156181	67.2	(97.1) [a]	Pass
177	5.0 - 9.0% of mass 176	10994	4.7	(7.0) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VJ2895-CC2895	J048411.D	07/13/09	14:08	00:19	Continuing cal 4
VJ2895-BS	J048412.D	07/13/09	14:33	00:44	Blank Spike
VJ2895-MB	J048413.D	07/13/09	14:57	01:08	Method Blank
ZZZZZZ	J048414.D	07/13/09	15:20	01:31	(unrelated sample)
F66519-10	J048415.D	07/13/09	15:44	01:55	MW39-07-070809
F66519-10MS	J048416.D	07/13/09	16:07	02:18	Matrix Spike
F66519-10MSD	J048417.D	07/13/09	16:31	02:42	Matrix Spike Duplicate
ZZZZZZ	J048418.D	07/13/09	16:55	03:06	(unrelated sample)
ZZZZZZ	J048419.D	07/13/09	17:18	03:29	(unrelated sample)
ZZZZZZ	J048420.D	07/13/09	17:42	03:53	(unrelated sample)
ZZZZZZ	J048421.D	07/13/09	18:06	04:17	(unrelated sample)
F66519-1	J048422.D	07/13/09	18:29	04:40	MW39-10-070709
F66519-2	J048423.D	07/13/09	18:53	05:04	MW39-11-070709
F66519-3	J048424.D	07/13/09	19:16	05:27	MW39-09-070709
F66519-4	J048425.D	07/13/09	19:40	05:51	MW39-08-070709
F66519-5	J048426.D	07/13/09	20:04	06:15	MW39-06-070709
F66519-8	J048429.D	07/13/09	21:14	07:25	MW39-02-070809
F66519-9	J048430.D	07/13/09	21:38	07:49	MW39-05-070809
F66519-11	J048431.D	07/13/09	22:02	08:13	TB01-070809
ZZZZZZ	J048432.D	07/13/09	22:25	08:36	(unrelated sample)
ZZZZZZ	J048433.D	07/13/09	22:49	09:00	(unrelated sample)
ZZZZZZ	J048434.D	07/13/09	23:12	09:23	(unrelated sample)
ZZZZZZ	J048435.D	07/13/09	23:36	09:47	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: F66519
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ2898-BFB
Lab File ID: J048498.D
Instrument ID: GCMSJ
Injection Date: 07/16/09
Injection Time: 10:51

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	42957	27.3		Pass
75	30.0 - 60.0% of mass 95	75413	47.8		Pass
95	Base peak, 100% relative abundance	157632	100.0		Pass
96	5.0 - 9.0% of mass 95	11211	7.1		Pass
173	Less than 2.0% of mass 174	505	0.32	(0.43) [a]	Pass
174	50.0 - 100.0% of mass 95	118080	74.9		Pass
175	5.0 - 9.0% of mass 174	8471	5.4	(7.2) [a]	Pass
176	95.0 - 101.0% of mass 174	112802	71.6	(95.5) [a]	Pass
177	5.0 - 9.0% of mass 176	7674	4.9	(6.8) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VJ2898-IC2898	J048499.D	07/16/09	11:22	00:31	Initial cal 1
VJ2898-IC2898	J048500.D	07/16/09	11:46	00:55	Initial cal 2
VJ2898-IC2898	J048501.D	07/16/09	12:09	01:18	Initial cal 3
VJ2898-ICC2898	J048502.D	07/16/09	12:46	01:55	Initial cal 4
VJ2898-IC2898	J048503.D	07/16/09	13:11	02:20	Initial cal 5
VJ2898-IC2898	J048504.D	07/16/09	13:36	02:45	Initial cal 6
VJ2898-ICV2898	J048505.D	07/16/09	13:59	03:08	Initial cal verification 4
VJ2898-BS	J048506.D	07/16/09	14:28	03:37	Blank Spike
VJ2898-MB	J048507.D	07/16/09	14:51	04:00	Method Blank
ZZZZZZ	J048508.D	07/16/09	15:15	04:24	(unrelated sample)
ZZZZZZ	J048509.D	07/16/09	15:38	04:47	(unrelated sample)
ZZZZZZ	J048510.D	07/16/09	16:02	05:11	(unrelated sample)
F66615-3	J048511.D	07/16/09	16:26	05:35	(used for QC only; not part of job F66519)
F66615-3MS	J048512.D	07/16/09	16:49	05:58	Matrix Spike
F66615-3MSD	J048513.D	07/16/09	17:13	06:22	Matrix Spike Duplicate
ZZZZZZ	J048514.D	07/16/09	17:37	06:46	(unrelated sample)
ZZZZZZ	J048515.D	07/16/09	18:00	07:09	(unrelated sample)
ZZZZZZ	J048516.D	07/16/09	18:24	07:33	(unrelated sample)
ZZZZZZ	J048517.D	07/16/09	18:47	07:56	(unrelated sample)
ZZZZZZ	J048518.D	07/16/09	19:11	08:20	(unrelated sample)
ZZZZZZ	J048519.D	07/16/09	19:35	08:44	(unrelated sample)
ZZZZZZ	J048520.D	07/16/09	19:58	09:07	(unrelated sample)
ZZZZZZ	J048521.D	07/16/09	20:22	09:31	(unrelated sample)
ZZZZZZ	J048522.D	07/16/09	20:46	09:55	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: F66519
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ2898-BFB
Lab File ID: J048498.D
Instrument ID: GCMSJ
Injection Date: 07/16/09
Injection Time: 10:51

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	J048524.D	07/16/09	21:33	10:42	(unrelated sample)
ZZZZZZ	J048525.D	07/16/09	21:56	11:05	(unrelated sample)
ZZZZZZ	J048526.D	07/16/09	22:20	11:29	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: F66519
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ2899-BFB
Lab File ID: J048529.D
Instrument ID: GCMSJ
Injection Date: 07/17/09
Injection Time: 09:34

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	42325	28.7		Pass
75	30.0 - 60.0% of mass 95	73832	50.0		Pass
95	Base peak, 100% relative abundance	147629	100.0		Pass
96	5.0 - 9.0% of mass 95	10084	6.8		Pass
173	Less than 2.0% of mass 174	514	0.35	(0.47) [a]	Pass
174	50.0 - 100.0% of mass 95	108888	73.8		Pass
175	5.0 - 9.0% of mass 174	7526	5.1	(6.9) [a]	Pass
176	95.0 - 101.0% of mass 174	106133	71.9	(97.5) [a]	Pass
177	5.0 - 9.0% of mass 176	7398	5.0	(7.0) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VJ2899-CC2898	J048530.D	07/17/09	09:51	00:17	Continuing cal 4
VJ2899-BS	J048531.D	07/17/09	10:17	00:43	Blank Spike
VJ2899-MB	J048532.D	07/17/09	10:41	01:07	Method Blank
F66519-1	J048533.D	07/17/09	11:04	01:30	MW39-10-070709
F66519-2	J048534.D	07/17/09	11:28	01:54	MW39-11-070709
F66519-3	J048535.D	07/17/09	11:52	02:18	MW39-09-070709
F66519-5	J048536.D	07/17/09	12:15	02:41	MW39-06-070709
F66519-6	J048537.D	07/17/09	12:39	03:05	MW39-06D-070709
F66519-7	J048538.D	07/17/09	13:02	03:28	MW39-DUP01-070709
ZZZZZZ	J048539.D	07/17/09	13:26	03:52	(unrelated sample)
ZZZZZZ	J048540.D	07/17/09	13:50	04:16	(unrelated sample)
ZZZZZZ	J048541.D	07/17/09	14:13	04:39	(unrelated sample)
F66640-1	J048542.D	07/17/09	14:37	05:03	(used for QC only; not part of job F66519)
F66640-1MS	J048543.D	07/17/09	15:01	05:27	Matrix Spike
F66640-1MSD	J048544.D	07/17/09	15:24	05:50	Matrix Spike Duplicate
ZZZZZZ	J048545.D	07/17/09	15:48	06:14	(unrelated sample)
ZZZZZZ	J048547.D	07/17/09	16:35	07:01	(unrelated sample)
ZZZZZZ	J048548.D	07/17/09	16:59	07:25	(unrelated sample)
ZZZZZZ	J048549.D	07/17/09	17:22	07:48	(unrelated sample)
ZZZZZZ	J048550.D	07/17/09	17:46	08:12	(unrelated sample)
ZZZZZZ	J048551.D	07/17/09	18:09	08:35	(unrelated sample)

Volatile Internal Standard Area Summary

Job Number: F66519
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Check Std:	VJ2895-CC2895	**Injection Date:**	07/13/09
Lab File ID:	J048411.D	**Injection Time:**	14:08
Instrument ID:	GCMSJ	**Method:**	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
Check Std	1974605	7.55	1611395	10.62	777737	12.98	277242	5.24
Upper Limit [a]	3949210	8.05	3222790	11.12	1555474	13.48	554484	5.74
Lower Limit [b]	987303	7.05	805698	10.12	388869	12.48	138621	4.74

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
VJ2895-BS	1957732	7.54	1609063	10.61	767137	12.98	270804	5.19
VJ2895-MB	1790079	7.54	1466448	10.61	657867	12.98	227220	5.24
ZZZZZZ	1642182	7.54	1338251	10.61	599384	12.98	237027	5.27
F66519-10	1527656	7.54	1236167	10.61	544063	12.98	296155	5.25
F66519-10MS	1594171	7.54	1288742	10.61	633847	12.98	300643	5.25
F66519-10MSD	1624161	7.54	1308790	10.61	641576	12.98	329706	5.21
ZZZZZZ	1631273	7.55	1366350	10.61	660810	12.98	202581	5.24
ZZZZZZ	1856282	7.54	1536726	10.61	721072	12.98	241049	5.25
ZZZZZZ	1852669	7.54	1507432	10.61	705215	12.98	248217	5.24
ZZZZZZ	1780506	7.55	1457990	10.61	683334	12.98	261349	5.22
F66519-1	1709322	7.55	1408465	10.61	634998	12.98	623382*	5.25
F66519-2	1576618	7.55	1317543	10.62	603802	12.98	658517*	5.24
F66519-3	1528339	7.55	1247309	10.62	569487	12.98	651771*	5.19
F66519-4	1461364	7.55	1217028	10.61	550924	12.98	477126	5.19
F66519-5	1464388	7.55	1207598	10.61	534319	12.98	227846	5.21
F66519-8	1322987	7.55	1088023	10.62	456202	12.98	241512	5.19
F66519-9	1291534	7.55	1061014	10.62	453410	12.98	396434	5.19
F66519-11	1250709	7.55	1038350	10.61	452771	12.98	182426	5.22
ZZZZZZ	1247188	7.55	1033133	10.62	433569	12.98	271119	5.19
ZZZZZZ	1226581	7.55	1005014	10.62	443630	12.98	260881	5.20
ZZZZZZ	1198558	7.55	992162	10.61	436985	12.98	245844	5.23
ZZZZZZ	1195237	7.55	980066	10.61	429311	12.98	241399	5.19

IS 1 = Fluorobenzene
IS 2 = Chlorobenzene-D5
IS 3 = 1,4-Dichlorobenzene-d4
IS 4 = Tert Butyl Alcohol-D10

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Internal Standard Area Summary

Job Number: F66519
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Check Std:	VJ2899-CC2898	**Injection Date:**	07/17/09
Lab File ID:	J048530.D	**Injection Time:**	09:51
Instrument ID:	GCMSJ	**Method:**	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
Check Std	1271645	7.55	1222804	10.61	610792	12.98	222653	5.24
Upper Limit [a]	2543290	8.05	2445608	11.11	1221584	13.48	445306	5.74
Lower Limit [b]	635823	7.05	611402	10.11	305396	12.48	111327	4.74

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
VJ2899-BS	1286664	7.54	1222475	10.61	607551	12.98	206598	5.24
VJ2899-MB	1212393	7.54	1115603	10.61	503154	12.98	206818	5.23
F66519-1 [c]	1121296	7.54	1028481	10.61	460252	12.98	497730*	5.25
F66519-2 [c]	1068221	7.55	1003209	10.61	462886	12.98	521085*	5.24
F66519-3 [c]	1062718	7.55	980586	10.61	450866	12.98	497611*	5.24
F66519-5	1055534	7.55	978952	10.61	434402	12.98	261423	5.21
F66519-6	1028198	7.55	953308	10.61	430120	12.98	199068	5.25
F66519-7	1034809	7.55	971258	10.61	441719	12.98	194695	5.24
ZZZZZZ	997895	7.55	931606	10.61	447240	12.98	153991	5.20
ZZZZZZ	997443	7.55	934553	10.62	452903	12.98	158782	5.25
ZZZZZZ	1063700	7.54	1007802	10.61	505548	12.98	185582	5.20
F66640-1	1106726	7.55	1054292	10.61	472719	12.98	199453	5.25
F66640-1MS	1142064	7.55	1083408	10.61	555907	12.98	197680	5.24
F66640-1MSD	1203462	7.55	1148869	10.61	574993	12.98	223578	5.25
ZZZZZZ	1127757	7.55	1059800	10.62	466543	12.98	244533	5.20
ZZZZZZ	1000963	7.55	940566	10.62	425548	12.98	162658	5.25
ZZZZZZ	987146	7.55	915761	10.61	414896	12.98	187815	5.21
ZZZZZZ	986192	7.54	932879	10.61	425310	12.98	196484	5.25
ZZZZZZ	962459	7.55	907464	10.61	409999	12.98	155667	5.25
ZZZZZZ	940205	7.55	895436	10.61	406198	12.98	160591	5.23

IS 1 = Fluorobenzene
IS 2 = Chlorobenzene-D5
IS 3 = 1,4-Dichlorobenzene-d4
IS 4 = Tert Butyl Alcohol-D10

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.
(c) Confirmation run for internal standard areas.

Volatile Surrogate Recovery Summary

Job Number: F66519
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Method: SW846 8260B **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
F66519-1	J048533.D	101.0	98.0	101.0	103.0
F66519-1	J048422.D	103.0	106.0	99.0	102.0
F66519-2	J048534.D	103.0	98.0	98.0	101.0
F66519-2	J048423.D	102.0	105.0	99.0	101.0
F66519-3	J048535.D	101.0	97.0	99.0	100.0
F66519-3	J048424.D	102.0	104.0	100.0	103.0
F66519-4	J048425.D	100.0	102.0	99.0	102.0
F66519-5	J048426.D	102.0	100.0	100.0	103.0
F66519-5	J048536.D	102.0	96.0	99.0	100.0
F66519-6	J048537.D	103.0	95.0	99.0	98.0
F66519-7	J048538.D	104.0	96.0	98.0	99.0
F66519-8	J048429.D	101.0	99.0	101.0	105.0
F66519-9	J048430.D	101.0	102.0	101.0	105.0
F66519-10	J048415.D	100.0	99.0	100.0	104.0
F66519-11	J048431.D	101.0	98.0	101.0	102.0
F66519-10MS	J048416.D	98.0	103.0	100.0	98.0
F66519-10MSD	J048417.D	99.0	103.0	100.0	98.0
F66640-1MS	J048543.D	100.0	100.0	98.0	97.0
F66640-1MSD	J048544.D	101.0	99.0	97.0	98.0
VJ2895-BS	J048412.D	102.0	103.0	99.0	101.0
VJ2895-MB	J048413.D	102.0	100.0	99.0	103.0
VJ2899-BS	J048531.D	100.0	97.0	98.0	98.0
VJ2899-MB	J048532.D	105.0	94.0	100.0	103.0

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	87-116%
S2 = 1,2-Dichloroethane-D4	76-127%
S3 = Toluene-D8	86-112%
S4 = 4-Bromofluorobenzene	84-120%

Initial Calibration Summary

Job Number: F66519
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ2895-ICC2895
Lab FileID: J048406.D

Response Factor Report MSVOA6

Method : C:\MSDCHEM\1\METHODS\8260-JAPP9.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Mon Jul 13 13:54:21 2009
Response via : Initial Calibration

Calibration Files
1 =J048403.D 2 =J048404.D 3 =J048405.D 4 =J048406.D
5 =J048407.D 6 =J048408.D

	Compound	1	2	3	4	5	6	Avg	%RSD
1) I	Fluorobenzene	----------ISTD----------							
2)	Dichlorodifluoromet	0.196	0.261	0.241	0.242	0.241	0.249	0.238	9.27
3) P	Chloromethane	0.637	0.628	0.583	0.595	0.567	0.544	0.593	5.98
4) C	Vinyl Chloride	0.420	0.544	0.490	0.507	0.464	0.455	0.480	9.07
5)	Bromomethane	0.370	0.313	0.272	0.265	0.254	0.248	0.287	16.27
	---- Linear regr., Force(0,0) ---- Coefficient = 0.9994								
	Response Ratio = 0.00000 + 0.25219 *A								
6)	Chloroethane	0.252	0.297	0.267	0.262	0.233	0.225	0.256	10.03
7)	Trichlorofluorometh	0.374	0.464	0.424	0.420	0.388	0.365	0.406	9.19
8)	Ethyl Ether	0.389	0.371	0.403	0.402	0.393	0.381	0.390	3.13
9)	1,2-Dichlorotrifluo	0.354	0.418	0.439	0.417	0.386	0.363	0.396	8.52
10) C	1,1-Dichloroethene	0.491	0.633	0.654	0.634	0.601	0.579	0.599	9.88
11)	Freon 113	0.215	0.294	0.297	0.278	0.266	0.256	0.268	11.33
12)	Carbon Disulfide	0.939	1.129	1.130	1.101	0.995	0.921	1.036	9.26
13)	Iodomethane	0.428	0.489	0.505	0.507	0.481	0.476	0.481	5.96
14)	Allyl chloride	0.566	0.694	0.731	0.760	0.756	0.756	0.711	10.55
15)	Methylene Chloride	1.333	0.816	0.686	0.678	0.638	0.639	0.798	33.84
	---- Linear regr., Force(0,0) ---- Coefficient = 0.9996								
	Response Ratio = 0.00000 + 0.64359 *A								
16)	Acetone	0.057	0.060	0.059	0.059	0.059	0.054	0.058	3.42
17)	Methyl acetate	0.047	0.051	0.059	0.059	0.059	0.062	0.056	10.49
18)	trans-1,2-Dichloroe	0.557	0.601	0.631	0.628	0.609	0.614	0.607	4.43
19)	Hexane	0.358	0.405	0.408	0.379	0.367	0.376	0.382	5.30
20)	Methyl Tert Butyl E	0.810	0.858	0.912	0.942	0.920	0.961	0.900	6.28
21)	Acetonitrile	0.024	0.026	0.028	0.027	0.025	0.025	0.026	5.52
22)	Di-isopropyl ether	1.456	1.545	1.629	1.656	1.596	1.593	1.579	4.50
23)	Chloroprene	0.497	0.580	0.657	0.708	0.755	0.701	0.650	14.64
24) P	1,1-Dichloroethane	0.610	0.732	0.780	0.776	0.741	0.745	0.731	8.49
25)	Acrylonitrile	0.169	0.187	0.147	0.138	0.158	0.156	0.159	10.83
26)	ETBE	0.904	1.061	1.179	1.245	1.226	1.258	1.146	12.08
27)	Vinyl acetate	0.442	0.604	0.556	0.555	0.585	0.583	0.554	10.50
28)	cis-1,2-Dichloroeth	0.340	0.374	0.399	0.407	0.392	0.393	0.384	6.27
29)	2,2-Dichloropropane	0.211	0.343	0.396	0.427	0.430	0.444	0.375	23.49
	---- Linear regr., Force(0,0) ---- Coefficient = 0.9995								
	Response Ratio = 0.00000 + 0.43742 *A								
30)	Bromochloromethane	0.144	0.179	0.190	0.195	0.187	0.191	0.181	10.52
31)	Cyclohexane	0.481	0.643	0.676	0.644	0.639	0.649	0.622	11.28
32) C	Chloroform	0.590	0.605	0.623	0.620	0.590	0.594	0.604	2.43
33)	Ethyl acetate	0.259	0.312	0.441	0.453	0.415	0.399	0.380	20.34
	---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9994								
	Response Ratio = 0.00000 + 0.46607 *A + -0.00673 *A^2								
34)	Tetrahydrofuran	0.274	0.110	0.107	0.099	0.104	0.110	0.134	51.34

Initial Calibration Summary

Job Number: F66519 **Sample:** VJ2895-ICC2895
Account: TETTNOAK Tetra Tech, Inc **Lab FileID:** J048406.D
Project: Holloman AFB; Alamogordo, NM

```
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9994
              Response Ratio = 0.00000 + 0.09464 *A + 0.00728 *A^2

35) S   Dibromofluoromethan 0.268 0.267 0.265 0.264 0.263 0.263 0.265   0.88
36)     Carbon Tetrachlorid 0.177 0.255 0.289 0.326 0.349 0.367 0.294  23.85
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9998
              Response Ratio = 0.00000 + 0.29275 *A + 0.03790 *A^2

37)     1,1,1-Trichloroetha 0.294 0.388 0.455 0.460 0.454 0.468 0.420  16.28
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9997
              Response Ratio = 0.00000 + 0.46282 *A

38)     2-Butanone          0.238 0.244 0.266 0.269 0.268 0.252 0.256   5.26
39)     1,1-Dichloropropene 0.374 0.465 0.507 0.498 0.480 0.483 0.468  10.33
40)     Propionitrile       0.060 0.057 0.063 0.062 0.062 0.063 0.061   4.13
41)     Methacrylonitrile   0.290 0.290 0.290 0.279 0.269 0.251 0.278   5.72
42)     Benzene             1.263 1.433 1.463 1.421 1.345 1.278 1.367   6.17
43)     TAME                0.687 0.777 0.881 0.914 0.882 0.905 0.841  10.69
44) S   1,2-Dichloroethane- 0.331 0.325 0.338 0.349 0.371 0.316 0.338   5.82
45)     1,2-Dichloroethane  0.616 0.569 0.579 0.583 0.565 0.573 0.581   3.14
46)     Trichloroethene     0.310 0.363 0.368 0.372 0.355 0.359 0.354   6.33
47)     Methylcyclohexane   0.382 0.515 0.546 0.521 0.507 0.519 0.498  11.73
48)     Dibromomethane      0.184 0.195 0.223 0.226 0.221 0.227 0.213   8.59
49) C   1,2-Dichloropropane 0.362 0.434 0.463 0.472 0.462 0.452 0.441   9.20
50)     Bromodichloromethan 0.315 0.370 0.430 0.472 0.460 0.467 0.419  15.20
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9997
              Response Ratio = 0.00000 + 0.46455 *A

51)     Methyl methacrylate 0.272 0.296 0.377 0.407 0.409 0.407 0.361  17.01
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9998
              Response Ratio = 0.00000 + 0.40657 *A

52)     2-Chloroethyl vinyl 0.215 0.261 0.298 0.306 0.288 0.277 0.274  12.02
53)     cis-1,3-Dichloropro 0.374 0.467 0.569 0.610 0.597 0.596 0.536  17.68
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9997
              Response Ratio = 0.00000 + 0.59690 *A


54) I   Chlorobenzene-d5      ----------------ISTD---------------------
55) S   Toluene-d8          1.250 1.261 1.245 1.238 1.253 1.253 1.250   0.62
56) C   Toluene             1.535 1.739 1.785 1.730 1.647 1.569 1.667   6.03
57)     2-Nitropropane      0.048 0.054 0.077 0.094 0.102 0.108 0.081  31.37
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9994
              Response Ratio = 0.00000 + 0.08204 *A + 0.00266 *A^2

58)     4-Methyl-2-pentanon 0.460 0.491 0.551 0.546 0.503 0.475 0.504   7.32
59)     trans-1,3-Dichlorop 0.330 0.447 0.573 0.613 0.618 0.613 0.532  22.28
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9998
              Response Ratio = 0.00000 + 0.61307 *A

60)     Tetrachloroethene   0.296 0.371 0.391 0.396 0.383 0.383 0.370   9.99
61)     Ethyl methacrylate  0.272 0.385 0.531 0.542 0.567 0.575 0.479  25.60
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9997
              Response Ratio = 0.00000 + 0.56799 *A

62)     1,1,2-Trichloroetha 0.283 0.316 0.345 0.349 0.335 0.335 0.327   7.46
63)     Dibromochloromethan 0.208 0.268 0.352 0.404 0.407 0.423 0.344  25.35
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9991
              Response Ratio = 0.00000 + 0.41455 *A
```

Initial Calibration Summary

Job Number: F66519 **Sample:** VJ2895-ICC2895
Account: TETTNOAK Tetra Tech, Inc **Lab FileID:** J048406.D
Project: Holloman AFB; Alamogordo, NM

```
 64)      1,3-Dichloropropane 0.588 0.650 0.709 0.727 0.694 0.699 0.678   7.52
 65)      1,2-Dibromoethane   0.256 0.330 0.392 0.403 0.395 0.403 0.363  16.33
              ---- Linear regr., Force(0,0) ----  Coefficient =  0.9998
                Response Ratio = 0.00000 + 0.40038 *A

 66)      2-hexanone          0.271 0.364 0.415 0.422 0.402 0.365 0.373  14.91
 67)      1-Chlorohexane      0.376 0.519 0.578 0.567 0.556 0.549 0.524  14.39
 68)  C   Ethylbenzene        1.718 1.821 1.875 1.837 1.696 1.572 1.753   6.45
 69)  P   Chlorobenzene       0.947 1.039 1.105 1.112 1.055 1.005 1.044   5.97
 70)      1,1,1,2-Tetrachloro 0.183 0.261 0.339 0.384 0.378 0.382 0.321  25.67
              ---- Linear regr., Force(0,0) ----  Coefficient =  0.9996
                Response Ratio = 0.00000 + 0.38004 *A

 71)      m,p-Xylene          1.130 1.361 1.405 1.372 1.233 1.106 1.268  10.26
 72)      o-Xylene            1.087 1.349 1.471 1.482 1.390 1.328 1.351  10.62
 73)      Styrene             0.766 1.007 1.142 1.167 1.110 1.074 1.044  14.11
 74)  P   Bromoform           0.107 0.126 0.194 0.237 0.244 0.263 0.195  33.32
              ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9992
                Response Ratio = 0.00000 + 0.20271 *A + 0.03001 *A^2

 75)      Isopropylbenzene    1.032 1.376 1.517 1.507 1.410 1.365 1.368  12.93

 76)  I   1,4-Dichlorobenzene-d ----------------ISTD--------------------
 77)  S   4-Bromofluorobenzen 1.112 1.066 1.050 1.051 1.060 1.052 1.065   2.22
 78)      cis-1,4-Dichloro-2- 0.304 0.281 0.363 0.391 0.401 0.398 0.356  14.55
 79)      n-Propylbenzene     3.781 4.290 4.378 4.275 3.861 3.468 4.009   9.01
 80)      Bromobenzene        0.761 0.840 0.889 0.899 0.862 0.822 0.846   5.94
 81)  P   1,1,2,2-Tetrachloro 0.887 0.968 1.010 1.040 0.959 0.953 0.970   5.39
 82)      1,3,5-Trimethylbenz 2.148 2.626 2.762 2.727 2.536 2.346 2.524   9.40
 83)      2-Chlorotoluene     2.467 2.862 2.869 2.857 2.628 2.421 2.684   7.73
 84)      trans-1,4-Dichloro- 0.229 0.263 0.325 0.357 0.342 0.357 0.312  17.14
              ---- Linear regr., Force(0,0) ----  Coefficient =  0.9991
                Response Ratio = 0.00000 + 0.35180 *A

 85)      1,2,3-Trichloroprop 0.244 0.254 0.271 0.276 0.260 0.261 0.261   4.41
 86)      Cyclohexanone       0.029 0.032 0.027 0.026 0.028 0.029 0.029   7.76
 87)      4-Chlorotoluene     2.193 2.570 2.644 2.656 2.463 2.330 2.476   7.47
 88)      tert-Butylbenzene   1.209 1.516 1.603 1.590 1.531 1.459 1.484   9.76
 89)      1,2,4-Trimethylbenz 2.251 2.723 2.874 2.814 2.640 2.474 2.630   8.85
 90)      Pentachloroethane   0.179 0.280 0.404 0.451 0.482 0.489 0.381  32.81
              ---- Linear regr., Force(0,0) ----  Coefficient =  0.9964
                Response Ratio = 0.00000 + 0.46764 *A

 91)      sec-Butylbenzene    2.559 3.377 3.527 3.389 3.173 2.973 3.166  11.22
 92)      4-Isopropyltoluene  2.015 2.546 2.773 2.719 2.569 2.454 2.512  10.76
 93)      1,3-Dichlorobenzene 1.352 1.540 1.595 1.619 1.509 1.459 1.512   6.45
 94)      1,4-Dichlorobenzene 1.412 1.552 1.631 1.619 1.504 1.459 1.530   5.70
 95)      n-Butylbenzene      1.157 1.476 1.698 1.707 1.628 1.556 1.537  13.38
 96)      Benzyl Chloride     0.110 0.175 0.282 0.343 0.349 0.359 0.270  38.67
              ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9990
                Response Ratio = 0.00000 + 0.31125 *A + 0.02468 *A^2

 97)      1,2-Dichlorobenzene 1.263 1.380 1.537 1.574 1.466 1.419 1.440   7.82
 98)      1,2-Dibromo-3-Chlor 0.068 0.098 0.140 0.153 0.155 0.166 0.130  29.72
              ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9996
                Response Ratio = 0.00000 + 0.13667 *A + 0.01467 *A^2

 99)      Hexachlorobutadiene 0.229 0.277 0.303 0.317 0.323 0.316 0.294  12.19
100)      1,2,4-Trichlorobenz 0.399 0.556 0.770 0.860 0.847 0.841 0.712  26.80
              ---- Linear regr., Force(0,0) ----  Coefficient =  0.9995
```

Initial Calibration Summary

Job Number: F66519
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ2895-ICC2895
Lab FileID: J048406.D

```
                Response Ratio = 0.00000 + 0.84245 *A

101)     Naphthalene         0.793 1.159 1.792 1.985 1.921 1.911 1.594  31.12
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9993
                Response Ratio = 0.00000 + 1.91722 *A

102)     1,2,3-Trichlorobenz 0.284 0.418 0.609 0.685 0.681 0.683 0.560  30.32
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9996
                Response Ratio = 0.00000 + 0.68057 *A


103) I   Tert Butyl Alcohol-d1 ----------------ISTD---------------------
104)     Ethanol             1.393 0.378 0.235 0.224 0.245 0.225 0.450  103.46
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9952
                Response Ratio = 0.00000 + 0.23143 *A

105)     acrolein            3.608 2.231 1.588 1.604 1.650 1.605 2.048  39.25
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9994
                Response Ratio = 0.00000 + 1.61881 *A

106)     Tert Butyl Alcohol  0.959 1.065 1.072 1.181 1.132 1.178 1.098   7.68
107)     tert Amyl alcohol   0.631 0.896 1.078 1.225 1.130 1.171 1.022  21.75
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9986
                Response Ratio = 0.00000 + 1.16145 *A

108)     Isobutyl alcohol    0.425 0.372 0.492 0.569 0.569 0.544 0.495  16.54
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9982
                Response Ratio = 0.00000 + 0.55215 *A

109)     1,4-Dioxane         0.117 0.121 0.118 0.131 0.119 0.119 0.121   4.28
 ------------------------------------------------------------------------------
 (#) = Out of Range

           8260-JAPP9.M        Tue Jul 14 09:13:05 2009
```

Initial Calibration Verification

Job Number: F66519
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ2895-ICV2895
Lab FileID: J048409.D

Evaluate Continuing Calibration Report

```
Data File : C:\MSDCHEM\1\DATA\071309\J048409.D          Vial: 7
Acq On    : 13 Jul 2009   1:29 pm                   Operator: karenw
Sample    : ICV2895-4                               Inst    : MSVOA6
Misc      : ms12389,vj2895,,,,,                     Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\MSDCHEM\1\METHODS\8260-JAPP9.M (RTE Integrator)
Title        : SW-846 Method 5030B/8260B & EPA 624
Last Update  : Mon Jul 13 13:54:21 2009
Response via : Multiple Level Calibration

Min. RRF     :   0.001  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	118	0.00	7.55
2		Dichlorodifluoromethane	0.238	0.245	-2.9	120	-0.01	2.83
3	P	Chloromethane	0.593	0.636	-7.3	126	0.00	3.01
4	C	Vinyl Chloride	0.480	0.521	-8.5	121	0.00	3.14
		----------	Amount	Calc.	%Drift		----------	
5		Bromomethane	40.000	41.870	-4.7	118	0.00	3.51
		----------	AvgRF	CCRF	%Dev		----------	
6		Chloroethane	0.256	0.254	0.8	115	0.00	3.64
7		Trichlorofluoromethane	0.406	0.423	-4.2	119	0.00	3.87
8		Ethyl Ether	0.390	0.395	-1.3	116	0.00	4.08
9		1,2-Dichlorotrifluoroetha	0.396	0.403	-1.8	114	0.00	4.32
10	C	1,1-Dichloroethene	0.599	0.581	3.0	108	-0.01	4.35
11		Freon 113	0.268	0.269	-0.4	115	0.00	4.42
12		Carbon Disulfide	1.036	0.947	8.6	102	0.00	4.43
13		Iodomethane	0.481	0.516	-7.3	120	0.00	4.54
14		Allyl chloride	0.711	0.808	-13.6	125	0.00	4.83
		----------	Amount	Calc.	%Drift		----------	
15		Methylene Chloride	40.000	39.455	1.4	111	0.00	4.96
		----------	AvgRF	CCRF	%Dev		----------	
16		Acetone	0.058	0.041	29.3#	82	0.02	4.99
17		Methyl acetate	0.056	0.061	-8.9	122	0.00	5.08
18		trans-1,2-Dichloroethene	0.607	0.640	-5.4	121	0.00	5.12
19		Hexane	0.382	0.392	-2.6	122	0.00	5.17
20		Methyl Tert Butyl Ether	0.900	0.998	-10.9	125	0.00	5.23
21		Acetonitrile	0.026	0.027	-3.8	119	0.02	5.50
22		Di-isopropyl ether	1.579	1.702	-7.8	121	0.00	5.59
23		Chloroprene	0.650	0.714	-9.8	119	0.00	5.72
24	P	1,1-Dichloroethane	0.731	0.785	-7.4	120	0.00	5.75
25		Acrylonitrile	0.159	0.151	5.0	130	0.00	5.78
26		ETBE	1.146	1.386	-20.9#	132	0.00	5.97
27		Vinyl acetate	0.554	0.638	-15.2	136	0.00	5.95
28		cis-1,2-Dichloroethene	0.384	0.388	-1.0	113	0.00	6.29
		----------	Amount	Calc.	%Drift		----------	
29		2,2-Dichloropropane	40.000	42.551	-6.4	129	0.00	6.43
		----------	AvgRF	CCRF	%Dev		----------	
30		Bromochloromethane	0.181	0.186	-2.8	113	0.00	6.49

Initial Calibration Verification

Job Number: F66519
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ2895-ICV2895
Lab FileID: J048409.D

31		Cyclohexane	0.622	0.758	-21.9#	139	0.00	6.55
32	C	Chloroform	0.604	0.634	-5.0	121	0.00	6.55
		----------	Amount	Calc.	%Drift		----------	
33		Ethyl acetate	200.000	300.542	-50.3#	167	0.00	6.63
34		Tetrahydrofuran	40.000	43.263	-8.2	131	0.00	6.73
		----------	AvgRF	CCRF	%Dev		----------	
35	S	Dibromofluoromethane	0.265	0.271	-2.3	121	0.00	6.73
		----------	Amount	Calc.	%Drift		----------	
36		Carbon Tetrachloride	40.000	44.783	-12.0	133	0.00	6.74
37		1,1,1-Trichloroethane	40.000	41.511	-3.8	123	0.00	6.81
		----------	AvgRF	CCRF	%Dev		----------	
38		2-Butanone	0.256	0.215	16.0	95	0.00	6.84
39		1,1-Dichloropropene	0.468	0.490	-4.7	116	0.00	6.90
40		Propionitrile	0.061	0.062	-1.6	118	0.00	7.15
41		Methacrylonitrile	0.278	0.282	-1.4	120	0.00	7.16
42		Benzene	1.367	1.422	-4.0	118	0.00	7.15
43		TAME	0.841	0.996	-18.4	129	0.00	7.24
44	S	1,2-Dichloroethane-d4	0.338	0.353	-4.4	119	0.00	7.27
45		1,2-Dichloroethane	0.581	0.563	3.1	114	0.00	7.34
46		Trichloroethene	0.354	0.360	-1.7	115	0.00	7.72
47		Methylcyclohexane	0.498	0.546	-9.6	124	0.00	7.75
48		Dibromomethane	0.213	0.226	-6.1	118	0.00	8.14
49	C	1,2-Dichloropropane	0.441	0.454	-2.9	114	0.00	8.23
		----------	Amount	Calc.	%Drift		----------	
50		Bromodichloromethane	40.000	38.564	3.6	112	0.00	8.27
51		Methyl methacrylate	40.000	42.264	-5.7	125	0.00	8.38
		----------	AvgRF	CCRF	%Dev		----------	
52		2-Chloroethyl vinyl ether	0.274	0.295	-7.7	114	0.00	8.79
		----------	Amount	Calc.	%Drift		----------	
53		cis-1,3-Dichloropropene	40.000	41.464	-3.7	120	0.00	8.89
		----------	AvgRF	CCRF	%Dev		----------	
54	I	Chlorobenzene-d5	1.000	1.000	0.0	117	0.00	10.62
55	S	Toluene-d8	1.250	1.249	0.1	118	0.00	9.08
56	C	Toluene	1.667	1.739	-4.3	117	0.00	9.13
		----------	Amount	Calc.	%Drift		----------	
57		2-Nitropropane	200.000	187.260	6.4	107	0.00	9.34
		----------	AvgRF	CCRF	%Dev		----------	
58		4-Methyl-2-pentanone	0.504	0.515	-2.2	110	0.00	9.46
		----------	Amount	Calc.	%Drift		----------	
59		trans-1,3-Dichloropropene	40.000	44.246	-10.6	129	0.00	9.51
		----------	AvgRF	CCRF	%Dev		----------	
60		Tetrachloroethene	0.370	0.397	-7.3	117	0.00	9.52
		----------	Amount	Calc.	%Drift		----------	
61		Ethyl methacrylate	40.000	38.002	5.0	116	0.00	9.63
		----------	AvgRF	CCRF	%Dev		----------	

Initial Calibration Verification

Job Number: F66519
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ2895-ICV2895
Lab FileID: J048409.D

62		1,1,2-Trichloroethane	0.327	0.335	-2.4	112	0.00	9.68
		----------	Amount	Calc.	%Drift	----------		
63		Dibromochloromethane	40.000	38.913	2.7	116	0.00	9.87
		----------	AvgRF	CCRF	%Dev	----------		
64		1,3-Dichloropropane	0.678	0.689	-1.6	111	0.00	9.96
		----------	Amount	Calc.	%Drift	----------		
65		1,2-Dibromoethane	40.000	39.070	2.3	113	0.00	10.13
		----------	AvgRF	CCRF	%Dev	----------		
66		2-hexanone	0.373	0.362	2.9	100	0.00	10.27
67		1-Chlorohexane	0.524	0.579	-10.5	119	0.00	10.58
68	C	Ethylbenzene	1.753	1.789	-2.1	114	0.00	10.64
69	P	Chlorobenzene	1.044	1.093	-4.7	115	0.00	10.64
		----------	Amount	Calc.	%Drift	----------		
70		1,1,1,2-Tetrachloroethane	40.000	39.493	1.3	114	0.00	10.69
		----------	AvgRF	CCRF	%Dev	----------		
71		m,p-Xylene	1.268	1.325	-4.5	113	0.00	10.78
72		o-Xylene	1.351	1.450	-7.3	114	0.00	11.22
73		Styrene	1.044	1.144	-9.6	115	0.00	11.26
		----------	Amount	Calc.	%Drift	----------		
74	P	Bromoform	40.000	41.254	-3.1	116	0.00	11.32
		----------	AvgRF	CCRF	%Dev	----------		
75		Isopropylbenzene	1.368	1.506	-10.1	117	0.00	11.53
76	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	116	0.00	12.98
77	S	4-Bromofluorobenzene	1.065	1.079	-1.3	119	0.00	11.83
78		cis-1,4-Dichloro-2-butene	0.356	0.376	-5.6	111	0.00	11.87
79		n-Propylbenzene	4.009	4.090	-2.0	111	0.00	11.95
80		Bromobenzene	0.846	0.878	-3.8	113	0.00	11.95
81	P	1,1,2,2-Tetrachloroethane	0.970	0.962	0.8	107	0.00	12.00
82		1,3,5-Trimethylbenzene	2.524	2.683	-6.3	114	0.00	12.13
83		2-Chlorotoluene	2.684	2.771	-3.2	112	0.00	12.13
		----------	Amount	Calc.	%Drift	----------		
84		trans-1,4-Dichloro-2-Bute	40.000	41.518	-3.8	118	0.00	12.18
		----------	AvgRF	CCRF	%Dev	----------		
85		1,2,3-Trichloropropane	0.261	0.236	9.6	99	0.00	12.16
86		Cyclohexanone	0.029	0.026	10.3	114	0.00	12.22
87		4-Chlorotoluene	2.476	2.585	-4.4	113	0.00	12.29
88		tert-Butylbenzene	1.484	1.574	-6.1	114	0.00	12.48
89		1,2,4-Trimethylbenzene	2.630	2.741	-4.2	113	0.00	12.54
		----------	Amount	Calc.	%Drift	----------		
90		Pentachloroethane	40.000	42.688	-6.7	128	0.00	12.51
		----------	AvgRF	CCRF	%Dev	----------		
91		sec-Butylbenzene	3.166	3.328	-5.1	114	0.00	12.66
92		4-Isopropyltoluene	2.512	2.698	-7.4	115	0.00	12.79
93		1,3-Dichlorobenzene	1.512	1.569	-3.8	112	0.00	12.91
94		1,4-Dichlorobenzene	1.530	1.595	-4.2	114	0.00	13.00
95		n-Butylbenzene	1.537	1.663	-8.2	113	0.00	13.23

Initial Calibration Verification

Job Number: F66519
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ2895-ICV2895
Lab FileID: J048409.D

		Amount	Calc.	%Drift			
96	Benzyl Chloride	40.000	43.361	-8.4	121	0.00	13.24
		AvgRF	CCRF	%Dev			
97	1,2-Dichlorobenzene	1.440	1.529	-6.2	112	0.00	13.43
		Amount	Calc.	%Drift			
98	1,2-Dibromo-3-Chloropropa	40.000	40.854	-2.1	114	0.00	14.18
		AvgRF	CCRF	%Dev			
99	Hexachlorobutadiene	0.294	0.330	-12.2	120	0.00	14.74
		Amount	Calc.	%Drift			
100	1,2,4-Trichlorobenzene	40.000	41.194	-3.0	117	0.00	14.79
101	Naphthalene	40.000	41.182	-3.0	115	0.00	15.07
102	1,2,3-Trichlorobenzene	40.000	40.737	-1.8	117	0.00	15.23
		AvgRF	CCRF	%Dev			
103 I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	134	0.04	5.24
		Amount	Calc.	%Drift			
104	Ethanol	800.000	759.594	5.1	132	0.32	4.55
105	acrolein	200.000	101.151	49.4#	68	0.00	4.69
		AvgRF	CCRF	%Dev			
106	Tert Butyl Alcohol	1.098	1.193	-8.7	136	0.04	5.32
		Amount	Calc.	%Drift			
107	tert Amyl alcohol	400.000	380.758	4.8	121	0.02	7.40
108	Isobutyl alcohol	800.000	754.384	5.7	123	0.02	7.28
		AvgRF	CCRF	%Dev			
109	1,4-Dioxane	0.121	0.119	1.7	121	0.04	8.50

(#) = Out of Range SPCC's out = 0 CCC's out = 0
J048406.D 8260-JAPP9.M Tue Jul 14 09:12:36 2009

Continuing Calibration Summary

Job Number: F66519
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ2895-CC2895
Lab FileID: J048411.D

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\071309\J048411.D Vial: 1
Acq On : 13 Jul 2009 2:08 pm Operator: karenw
Sample : CC2895-4 Inst : MSVOA6
Misc : ms12389,vj2895,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\8260-JAPP9.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Mon Jul 13 13:54:21 2009
Response via : Multiple Level Calibration

Min. RRF : 0.001 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	117	0.00	7.55
2		Dichlorodifluoromethane	0.238	0.260	-9.2	126	0.00	2.84
3	P	Chloromethane	0.593	0.592	0.2	116	-0.01	3.00
4	C	Vinyl Chloride	0.480	0.479	0.2	111	0.00	3.14
			Amount	Calc.	%Drift			
5		Bromomethane	40.000	41.399	-3.5	115	0.00	3.51
			AvgRF	CCRF	%Dev			
6		Chloroethane	0.256	0.242	5.5	108	0.00	3.64
7		Trichlorofluoromethane	0.406	0.410	-1.0	114	0.00	3.87
8		Ethyl Ether	0.390	0.401	-2.8	117	0.00	4.09
9		1,2-Dichlorotrifluoroetha	0.396	0.397	-0.3	111	0.00	4.32
10	C	1,1-Dichloroethene	0.599	0.620	-3.5	114	0.00	4.36
11		Freon 113	0.268	0.276	-3.0	116	0.00	4.42
12		Carbon Disulfide	1.036	1.027	0.9	109	0.00	4.44
13		Iodomethane	0.481	0.509	-5.8	117	0.00	4.54
14		Allyl chloride	0.711	0.774	-8.9	119	0.00	4.84
			Amount	Calc.	%Drift			
15		Methylene Chloride	40.000	41.526	-3.8	115	0.00	4.96
			AvgRF	CCRF	%Dev			
16		Acetone	0.058	0.066	-13.8	131	0.02	4.99
17		Methyl acetate	0.056	0.063	-12.5	125	0.00	5.09
18		trans-1,2-Dichloroethene	0.607	0.647	-6.6	121	0.00	5.12
19		Hexane	0.382	0.394	-3.1	121	0.00	5.17
20		Methyl Tert Butyl Ether	0.900	1.007	-11.9	125	0.00	5.23
21		Acetonitrile	0.026	0.029	-11.5	124	0.01	5.50
22		Di-isopropyl ether	1.579	1.650	-4.5	117	0.00	5.59
23		Chloroprene	0.650	0.691	-6.3	114	0.00	5.72
24	P	1,1-Dichloroethane	0.731	0.784	-7.3	118	0.00	5.75
25		Acrylonitrile	0.159	0.159	0.0	135	0.00	5.78
26		ETBE	1.146	1.306	-14.0	123	0.00	5.97
27		Vinyl acetate	0.554	0.595	-7.4	125	0.00	5.95
28		cis-1,2-Dichloroethene	0.384	0.410	-6.8	118	0.00	6.30
			Amount	Calc.	%Drift			
29		2,2-Dichloropropane	40.000	42.294	-5.7	127	0.00	6.43
			AvgRF	CCRF	%Dev			
30		Bromochloromethane	0.181	0.195	-7.7	117	0.00	6.50

Continuing Calibration Summary

Job Number: F66519 **Sample:** VJ2895-CC2895
Account: TETTNOAK Tetra Tech, Inc **Lab FileID:** J048411.D
Project: Holloman AFB; Alamogordo, NM

31		Cyclohexane	0.622	0.671	-7.9	122	0.00	6.55
32	C	Chloroform	0.604	0.629	-4.1	119	0.00	6.55
		----------	Amount	Calc.	%Drift		----------	
33		Ethyl acetate	200.000	197.217	1.4	112	0.00	6.63
34		Tetrahydrofuran	40.000	44.155	-10.4	132	0.00	6.73
		----------	AvgRF	CCRF	%Dev		----------	
35	S	Dibromofluoromethane	0.265	0.268	-1.1	119	0.00	6.74
		----------	Amount	Calc.	%Drift		----------	
36		Carbon Tetrachloride	40.000	46.125	-15.3	136	0.00	6.74
37		1,1,1-Trichloroethane	40.000	41.973	-4.9	124	0.00	6.81
		----------	AvgRF	CCRF	%Dev		----------	
38		2-Butanone	0.256	0.281	-9.8	122	0.01	6.84
39		1,1-Dichloropropene	0.468	0.505	-7.9	119	0.00	6.91
40		Propionitrile	0.061	0.066	-8.2	123	0.01	7.15
41		Methacrylonitrile	0.278	0.284	-2.2	119	0.00	7.17
42		Benzene	1.367	1.421	-4.0	117	0.00	7.16
43		TAME	0.841	0.943	-12.1	121	0.00	7.24
44	S	1,2-Dichloroethane-d4	0.338	0.352	-4.1	118	0.00	7.28
45		1,2-Dichloroethane	0.581	0.587	-1.0	118	0.00	7.35
46		Trichloroethene	0.354	0.370	-4.5	116	0.00	7.72
47		Methylcyclohexane	0.498	0.540	-8.4	121	0.00	7.74
48		Dibromomethane	0.213	0.231	-8.5	119	0.00	8.14
49	C	1,2-Dichloropropane	0.441	0.468	-6.1	116	0.00	8.23
		----------	Amount	Calc.	%Drift		----------	
50		Bromodichloromethane	40.000	41.374	-3.4	119	0.00	8.28
51		Methyl methacrylate	40.000	40.395	-1.0	118	0.00	8.39
		----------	AvgRF	CCRF	%Dev		----------	
52		2-Chloroethyl vinyl ether	0.274	0.303	-10.6	116	0.00	8.79
		----------	Amount	Calc.	%Drift		----------	
53		cis-1,3-Dichloropropene	40.000	41.226	-3.1	118	0.00	8.89
		----------	AvgRF	CCRF	%Dev		----------	
54	I	Chlorobenzene-d5	1.000	1.000	0.0	116	0.00	10.62
55	S	Toluene-d8	1.250	1.242	0.6	116	0.00	9.08
56	C	Toluene	1.667	1.734	-4.0	116	0.00	9.14
		----------	Amount	Calc.	%Drift		----------	
57		2-Nitropropane	200.000	193.600	3.2	110	0.00	9.34
		----------	AvgRF	CCRF	%Dev		----------	
58		4-Methyl-2-pentanone	0.504	0.530	-5.2	112	0.00	9.46
		----------	Amount	Calc.	%Drift		----------	
59		trans-1,3-Dichloropropene	40.000	41.155	-2.9	119	0.00	9.51
		----------	AvgRF	CCRF	%Dev		----------	
60		Tetrachloroethene	0.370	0.398	-7.6	117	0.00	9.53
		----------	Amount	Calc.	%Drift		----------	
61		Ethyl methacrylate	40.000	40.923	-2.3	124	0.00	9.63
		----------	AvgRF	CCRF	%Dev		----------	

Continuing Calibration Summary

Job Number: F66519
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ2895-CC2895
Lab FileID: J048411.D

62		1,1,2-Trichloroethane	0.327	0.345	-5.5	114	0.00	9.68
		----------	Amount	Calc.	%Drift	----------		
63		Dibromochloromethane	40.000	40.007	-0.0	119	0.00	9.87
		----------	AvgRF	CCRF	%Dev	----------		
64		1,3-Dichloropropane	0.678	0.718	-5.9	114	0.00	9.96
		----------	Amount	Calc.	%Drift	----------		
65		1,2-Dibromoethane	40.000	40.527	-1.3	116	0.00	10.13
		----------	AvgRF	CCRF	%Dev	----------		
66		2-hexanone	0.373	0.419	-12.3	115	0.00	10.28
67		1-Chlorohexane	0.524	0.574	-9.5	117	0.00	10.58
68	C	Ethylbenzene	1.753	1.792	-2.2	113	0.00	10.64
69	P	Chlorobenzene	1.044	1.094	-4.8	114	0.00	10.64
		----------	Amount	Calc.	%Drift	----------		
70		1,1,1,2-Tetrachloroethane	40.000	40.249	-0.6	115	0.00	10.69
		----------	AvgRF	CCRF	%Dev	----------		
71		m,p-Xylene	1.268	1.337	-5.4	113	0.00	10.78
72		o-Xylene	1.351	1.455	-7.7	114	0.00	11.22
73		Styrene	1.044	1.132	-8.4	112	0.00	11.26
		----------	Amount	Calc.	%Drift	----------		
74	P	Bromoform	40.000	43.101	-7.8	120	0.00	11.32
		----------	AvgRF	CCRF	%Dev	----------		
75		Isopropylbenzene	1.368	1.485	-8.6	114	0.00	11.53
76	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	115	0.00	12.98
77	S	4-Bromofluorobenzene	1.065	1.074	-0.8	117	0.00	11.83
78		cis-1,4-Dichloro-2-butene	0.356	0.408	-14.6	120	0.00	11.87
79		n-Propylbenzene	4.009	4.208	-5.0	113	0.00	11.95
80		Bromobenzene	0.846	0.898	-6.1	115	0.00	11.95
81	P	1,1,2,2-Tetrachloroethane	0.970	1.011	-4.2	112	0.00	12.00
82		1,3,5-Trimethylbenzene	2.524	2.711	-7.4	114	0.00	12.13
83		2-Chlorotoluene	2.684	2.819	-5.0	113	0.00	12.13
		----------	Amount	Calc.	%Drift	----------		
84		trans-1,4-Dichloro-2-Bute	40.000	40.312	-0.8	114	0.00	12.18
		----------	AvgRF	CCRF	%Dev	----------		
85		1,2,3-Trichloropropane	0.261	0.277	-6.1	115	0.00	12.16
86		Cyclohexanone	0.029	0.029	0.0	127	0.00	12.22
87		4-Chlorotoluene	2.476	2.655	-7.2	115	0.00	12.29
88		tert-Butylbenzene	1.484	1.626	-9.6	117	0.00	12.48
89		1,2,4-Trimethylbenzene	2.630	2.815	-7.0	115	0.00	12.54
		----------	Amount	Calc.	%Drift	----------		
90		Pentachloroethane	40.000	42.669	-6.7	127	0.00	12.51
		----------	AvgRF	CCRF	%Dev	----------		
91		sec-Butylbenzene	3.166	3.393	-7.2	115	0.00	12.66
92		4-Isopropyltoluene	2.512	2.734	-8.8	115	0.00	12.79
93		1,3-Dichlorobenzene	1.512	1.590	-5.2	113	0.00	12.91
94		1,4-Dichlorobenzene	1.530	1.586	-3.7	112	0.00	13.00
95		n-Butylbenzene	1.537	1.697	-10.4	114	0.00	13.23

Continuing Calibration Summary

Job Number: F66519
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ2895-CC2895
Lab FileID: J048411.D

		Amount	Calc.	%Drift			
96	Benzyl Chloride	40.000	42.330	-5.8	117	0.00	13.24
		AvgRF	CCRF	%Dev			
97	1,2-Dichlorobenzene	1.440	1.518	-5.4	111	0.00	13.43
		Amount	Calc.	%Drift			
98	1,2-Dibromo-3-Chloropropa	40.000	43.305	-8.3	121	0.00	14.18
		AvgRF	CCRF	%Dev			
99	Hexachlorobutadiene	0.294	0.337	-14.6	122	0.00	14.75
		Amount	Calc.	%Drift			
100	1,2,4-Trichlorobenzene	40.000	41.684	-4.2	117	0.00	14.79
101	Naphthalene	40.000	41.936	-4.8	116	0.00	15.07
102	1,2,3-Trichlorobenzene	40.000	42.003	-5.0	120	0.00	15.23
		AvgRF	CCRF	%Dev			
103 I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	144	0.03	5.24
		Amount	Calc.	%Drift			
104	Ethanol	800.000	782.931	2.1	146	0.15	4.38
105	acrolein	200.000	178.617	10.7	130	0.00	4.69
		AvgRF	CCRF	%Dev			
106	Tert Butyl Alcohol	1.098	1.167	-6.3	142	0.04	5.31
		Amount	Calc.	%Drift			
107	tert Amyl alcohol	400.000	377.880	5.5	129	0.02	7.40
108	Isobutyl alcohol	800.000	758.701	5.2	132	0.02	7.29
		AvgRF	CCRF	%Dev			
109	1,4-Dioxane	0.121	0.117	3.3	128	0.04	8.50

(#) = Out of Range SPCC's out = 0 CCC's out = 0
J048406.D 8260-JAPP9.M Tue Jul 14 09:12:38 2009

Initial Calibration Summary

Job Number: F66519
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ2898-ICC2898
Lab FileID: J048502.D

Response Factor Report MSVOA6

Method : C:\MSDCHEM\1\METHODS\8260-JAPP9.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Thu Jul 16 14:49:57 2009
Response via : Initial Calibration

Calibration Files
1 =J048499.D 2 =J048500.D 3 =J048501.D 4 =J048502.D
5 =J048503.D 6 =J048504.D

		Compound	1	2	3	4	5	6	Avg	%RSD
1)	I	Fluorobenzene	----------ISTD----------							
2)		Dichlorodifluoromet	0.248	0.300	0.312	0.346	0.319	0.319	0.307	10.69
3)	P	Chloromethane	0.780	0.792	0.762	0.823	0.740	0.693	0.765	5.88
4)	C	Vinyl Chloride	0.480	0.603	0.613	0.645	0.590	0.560	0.582	9.81
5)		Bromomethane	0.348	0.331	0.334	0.334	0.305	0.296	0.325	6.16
6)		Chloroethane	0.293	0.326	0.337	0.322	0.292	0.272	0.307	8.17
7)		Trichlorofluorometh	0.380	0.448	0.467	0.486	0.459	0.438	0.446	8.15
8)		Ethyl Ether	0.412	0.442	0.468	0.481	0.461	0.457	0.454	5.29
9)		1,2-Dichlorotrifluo	0.407	0.502	0.487	0.468	0.450	0.442	0.459	7.43
10)	C	1,1-Dichloroethene	0.579	0.697	0.711	0.708	0.694	0.684	0.679	7.38
11)		Freon 113	0.259	0.303	0.315	0.305	0.287	0.289	0.293	6.72
12)		Carbon Disulfide	1.125	1.200	1.245	1.194	1.113	1.088	1.161	5.23
13)		Iodomethane	0.441	0.513	0.552	0.547	0.530	0.542	0.521	7.98
14)		Allyl chloride	0.540	0.682	0.827	0.819	0.803	0.832	0.750	15.66
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9995								
		Response Ratio = 0.00000 + 0.82188 *A								
15)		Methylene Chloride	1.124	0.798	0.775	0.745	0.705	0.721	0.811	19.31
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9994								
		Response Ratio = 0.00000 + 0.72031 *A								
16)		Acetone	0.090	0.074	0.079	0.072	0.069	0.064	0.075	11.98
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9961								
		Response Ratio = 0.00000 + 0.06658 *A								
17)		Methyl acetate	0.057	0.055	0.067	0.067	0.065	0.066	0.063	8.47
18)		trans-1,2-Dichloroe	0.616	0.649	0.708	0.682	0.669	0.685	0.668	4.85
19)		Hexane	0.419	0.418	0.421	0.396	0.392	0.406	0.409	3.10
20)		Methyl Tert Butyl E	0.850	0.896	1.033	1.021	1.013	1.043	0.976	8.37
21)		Acetonitrile	0.099	0.045	0.033	0.030	0.030	0.029	0.044	62.17
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9994								
		Response Ratio = 0.00000 + 0.02932 *A								
22)		Di-isopropyl ether	1.461	1.684	1.863	1.814	1.774	1.791	1.731	8.37
23)		Chloroprene	0.507	0.593	0.801	0.764	0.677	0.770	0.685	16.89
		---- Linear regr., Force(0,0) ---- Coefficient = 0.9928								
		Response Ratio = 0.00000 + 0.74327 *A								
24)	P	1,1-Dichloroethane	0.707	0.813	0.885	0.858	0.835	0.840	0.823	7.51
25)		Acrylonitrile	0.184	0.194	0.173	0.162	0.184	0.185	0.180	6.11
26)		ETBE	1.130	1.292	1.452	1.445	1.408	1.440	1.361	9.41
27)		Vinyl acetate	0.739	0.690	0.738	0.716	0.727	0.702	0.719	2.74
28)		cis-1,2-Dichloroeth	0.353	0.396	0.425	0.435	0.427	0.440	0.413	8.01
29)		2,2-Dichloropropane	0.383	0.469	0.491	0.489	0.491	0.518	0.474	9.90
30)		Bromochloromethane	0.154	0.185	0.208	0.207	0.202	0.208	0.194	11.05
31)		Cyclohexane	0.560	0.661	0.688	0.689	0.692	0.714	0.667	8.26

Initial Calibration Summary

Job Number: F66519 **Sample:** VJ2898-ICC2898
Account: TETTNOAK Tetra Tech, Inc **Lab FileID:** J048502.D
Project: Holloman AFB; Alamogordo, NM

32)	C	Chloroform	0.599	0.644	0.679	0.670	0.646	0.659	0.650	4.36
33)		Ethyl acetate	0.432	0.528	0.521	0.531	0.458	0.471	0.490	8.55
34)		Tetrahydrofuran	0.226	0.131	0.109	0.115	0.115	0.107	0.134	34.10

---- Linear regr., Force(0,0) ---- Coefficient = 0.9977
Response Ratio = 0.00000 + 0.11064 *A

35)	S	Dibromofluoromethan	0.270	0.265	0.266	0.263	0.272	0.272	0.268	1.37
36)		Carbon Tetrachlorid	0.294	0.371	0.370	0.392	0.411	0.416	0.376	11.81
37)		1,1,1-Trichloroetha	0.387	0.457	0.504	0.500	0.501	0.515	0.477	10.14
38)		2-Butanone	0.302	0.279	0.321	0.309	0.296	0.283	0.298	5.37
39)		1,1-Dichloropropene	0.418	0.487	0.536	0.533	0.529	0.542	0.508	9.43
40)		Propionitrile	0.065	0.069	0.074	0.075	0.074	0.074	0.072	5.92
41)		Methacrylonitrile	0.280	0.317	0.336	0.344	0.318	0.296	0.315	7.53
42)		Benzene	1.338	1.548	1.652	1.591	1.517	1.516	1.527	6.93
43)		TAME	0.831	0.910	1.036	1.046	1.006	1.012	0.974	8.71
44)	S	1,2-Dichloroethane-	0.340	0.337	0.349	0.358	0.378	0.400	0.360	6.82
45)		1,2-Dichloroethane	0.650	0.606	0.655	0.640	0.628	0.644	0.637	2.81
46)		Trichloroethene	0.340	0.375	0.413	0.406	0.393	0.400	0.388	6.86
47)		Methylcyclohexane	0.444	0.501	0.552	0.561	0.547	0.559	0.527	8.79
48)		Dibromomethane	0.180	0.217	0.246	0.250	0.251	0.250	0.232	12.37
49)	C	1,2-Dichloropropane	0.417	0.490	0.541	0.538	0.524	0.521	0.505	9.23
50)		Bromodichloromethan	0.392	0.460	0.528	0.540	0.527	0.538	0.498	12.02
51)		Methyl methacrylate	0.369	0.401	0.439	0.475	0.466	0.461	0.435	9.58
52)		2-Chloroethyl vinyl	0.248	0.290	0.345	0.350	0.335	0.323	0.315	12.52
53)		cis-1,3-Dichloropro	0.527	0.571	0.684	0.694	0.678	0.682	0.639	11.19
54)	I	Chlorobenzene-d5	----------ISTD----------							
55)	S	Toluene-d8	1.213	1.218	1.186	1.173	1.176	1.180	1.191	1.64
56)	C	Toluene	1.537	1.713	1.766	1.706	1.622	1.609	1.659	5.08
57)		2-Nitropropane	0.090	0.095	0.121	0.129	0.129	0.129	0.116	15.74

---- Linear regr., Force(0,0) ---- Coefficient = 0.9998
Response Ratio = 0.00000 + 0.12887 *A

58)		4-Methyl-2-pentanon	0.476	0.510	0.569	0.561	0.508	0.475	0.516	7.82
59)		trans-1,3-Dichlorop	0.440	0.551	0.619	0.636	0.617	0.631	0.582	13.06
60)		Tetrachloroethene	0.333	0.359	0.374	0.367	0.365	0.377	0.362	4.38
61)		Ethyl methacrylate	0.354	0.475	0.561	0.604	0.582	0.588	0.527	18.28

---- Linear regr., Force(0,0) ---- Coefficient = 0.9997
Response Ratio = 0.00000 + 0.58681 *A

62)		1,1,2-Trichloroetha	0.301	0.329	0.361	0.351	0.334	0.337	0.335	6.10
63)		Dibromochloromethan	0.318	0.325	0.387	0.403	0.405	0.420	0.376	11.61
64)		1,3-Dichloropropane	0.604	0.650	0.722	0.723	0.693	0.694	0.681	6.77
65)		1,2-Dibromoethane	0.311	0.329	0.384	0.399	0.389	0.389	0.367	10.06
66)		2-hexanone	0.323	0.375	0.445	0.434	0.399	0.364	0.390	11.78
67)		1-Chlorohexane	0.420	0.478	0.547	0.550	0.549	0.551	0.516	10.65
68)	C	Ethylbenzene	1.671	1.809	1.870	1.800	1.691	1.637	1.746	5.31
69)	P	Chlorobenzene	0.924	1.052	1.105	1.078	1.050	1.047	1.042	5.97
70)		1,1,1,2-Tetrachloro	0.287	0.333	0.371	0.378	0.372	0.381	0.354	10.47
71)		m,p-Xylene	1.082	1.310	1.418	1.330	1.236	1.147	1.254	9.90
72)		o-Xylene	1.004	1.252	1.448	1.420	1.358	1.326	1.301	12.41
73)		Styrene	0.780	0.955	1.133	1.117	1.087	1.071	1.024	13.19
74)	P	Bromoform	0.152	0.170	0.232	0.244	0.248	0.253	0.216	20.15

---- Linear regr., Force(0,0) ---- Coefficient = 0.9997
Response Ratio = 0.00000 + 0.24981 *A

75)		Isopropylbenzene	1.015	1.284	1.449	1.420	1.372	1.355	1.316	12.02
76)	I	1,4-Dichlorobenzene-d	----------ISTD----------							
77)	S	4-Bromofluorobenzen	1.072	1.024	1.022	1.021	1.032	1.024	1.032	1.90

Initial Calibration Summary

Job Number: F66519 **Sample:** VJ2898-ICC2898
Account: TETTNOAK Tetra Tech, Inc **Lab FileID:** J048502.D
Project: Holloman AFB; Alamogordo, NM

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 78)     cis-1,4-Dichloro-2- 0.325 0.327 0.382 0.410 0.405 0.397 0.374  10.24
 79)     n-Propylbenzene     3.577 3.991 4.231 4.093 3.813 3.501 3.868   7.49
 80)     Bromobenzene        0.707 0.734 0.844 0.836 0.819 0.811 0.792   7.20
 81) P   1,1,2,2-Tetrachloro 0.852 0.916 1.015 0.998 0.935 0.899 0.936   6.58
 82)     1,3,5-Trimethylbenz 2.091 2.403 2.618 2.565 2.484 2.373 2.423   7.72
 83)     2-Chlorotoluene     2.386 2.538 2.771 2.684 2.578 2.456 2.569   5.54
 84)     trans-1,4-Dichloro- 0.262 0.301 0.343 0.357 0.347 0.336 0.324  11.07
 85)     1,2,3-Trichloroprop 0.265 0.222 0.261 0.254 0.251 0.242 0.249   6.26
 86)     Cyclohexanone       0.033 0.025 0.029 0.029 0.031 0.031 0.030   9.40
 87)     4-Chlorotoluene     2.021 2.248 2.569 2.515 2.371 2.290 2.336   8.50
 88)     tert-Butylbenzene   1.123 1.331 1.540 1.499 1.464 1.447 1.401  10.93
 89)     1,2,4-Trimethylbenz 2.159 2.408 2.795 2.697 2.529 2.465 2.509   8.95
 90)     Pentachloroethane   0.360 0.402 0.472 0.502 0.498 0.512 0.458  13.63
 91)     sec-Butylbenzene    2.568 3.008 3.332 3.260 3.059 2.920 3.024   9.01
 92)     4-Isopropyltoluene  1.889 2.253 2.589 2.592 2.471 2.418 2.369  11.24
 93)     1,3-Dichlorobenzene 1.288 1.360 1.531 1.524 1.452 1.438 1.432   6.60
 94)     1,4-Dichlorobenzene 1.486 1.478 1.570 1.559 1.470 1.456 1.503   3.23
 95)     n-Butylbenzene      1.164 1.429 1.626 1.681 1.600 1.563 1.510  12.57
 96)     Benzyl Chloride     0.218 0.246 0.335 0.367 0.365 0.356 0.315  20.83
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9993
               Response Ratio = 0.00000 + 0.35907 *A

 97)     1,2-Dichlorobenzene 1.240 1.283 1.477 1.495 1.416 1.394 1.384   7.44
 98)     1,2-Dibromo-3-Chlor 0.123 0.117 0.144 0.156 0.153 0.153 0.141  11.78
 99)     Hexachlorobutadiene 0.303 0.256 0.274 0.298 0.301 0.303 0.289   6.80
100)     1,2,4-Trichlorobenz 0.656 0.670 0.761 0.831 0.835 0.824 0.763  10.72
101)     Naphthalene         1.656 1.423 1.811 1.962 1.940 1.835 1.771  11.45
102)     1,2,3-Trichlorobenz 0.620 0.505 0.619 0.687 0.690 0.671 0.632  11.08

103) I   Tert Butyl Alcohol-d1 ----------------ISTD---------------------
104)     Ethanol             0.374 0.373 0.258 0.259 0.251 0.227 0.290  22.52
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9949
               Response Ratio = 0.00000 + 0.23771 *A

105)     acrolein            1.798 1.555 1.521 1.614 1.674 1.682 1.641   6.09
106)     Tert Butyl Alcohol  1.065 0.973 1.080 1.125 1.108 1.117 1.078   5.19
107)     tert Amyl alcohol   0.748 0.805 1.038 1.127 1.090 1.124 0.989  17.03
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9995
               Response Ratio = 0.00000 + 1.11184 *A

108)     Isobutyl alcohol    0.484 0.507 0.510 0.587 0.564 0.561 0.535   7.54
109)     1,4-Dioxane         0.040 0.072 0.103 0.113 0.110 0.111 0.091  32.43
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9995
               Response Ratio = 0.00000 + 0.11042 *A

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 (#) = Out of Range

           8260-JAPP9.M        Fri Jul 17 09:27:45 2009
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Initial Calibration Verification

Job Number: F66519
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ2898-ICV2898
Lab FileID: J048505.D

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\071609\J048505.D Vial: 7
Acq On : 16 Jul 2009 1:59 pm Operator: karenw
Sample : ICV2898-4 Inst : MSVOA6
Misc : ms12402,vj2898,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\8260-JAPP9.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Thu Jul 16 14:49:57 2009
Response via : Multiple Level Calibration

Min. RRF : 0.001 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	124	0.00	7.54
2		Dichlorodifluoromethane	0.307	0.305	0.7	109	0.00	2.84
3	P	Chloromethane	0.765	0.796	-4.1	120	0.01	3.02
4	C	Vinyl Chloride	0.582	0.647	-11.2	124	0.00	3.15
5		Bromomethane	0.325	0.329	-1.2	122	0.00	3.52
6		Chloroethane	0.307	0.313	-2.0	120	0.00	3.65
7		Trichlorofluoromethane	0.446	0.497	-11.4	127	0.00	3.87
8		Ethyl Ether	0.454	0.467	-2.9	120	0.00	4.09
9		1,2-Dichlorotrifluoroetha	0.459	0.472	-2.8	125	0.00	4.32
10	C	1,1-Dichloroethene	0.679	0.682	-0.4	119	0.00	4.37
11		Freon 113	0.293	0.309	-5.5	126	0.00	4.42
12		Carbon Disulfide	1.161	1.108	4.6	115	0.01	4.44
13		Iodomethane	0.521	0.578	-10.9	131	0.01	4.55
		----------	Amount	Calc.	%Drift		----------	
14		Allyl chloride	40.000	43.888	-9.7	137	0.00	4.84
15		Methylene Chloride	40.000	39.324	1.7	118	0.00	4.96
16		Acetone	200.000	155.283	22.4#	89	0.00	5.00
		----------	AvgRF	CCRF	%Dev		----------	
17		Methyl acetate	0.063	0.068	-7.9	126	0.00	5.08
18		trans-1,2-Dichloroethene	0.668	0.707	-5.8	129	0.00	5.12
19		Hexane	0.409	0.430	-5.1	135	0.00	5.17
20		Methyl Tert Butyl Ether	0.976	1.098	-12.5	133	0.00	5.23
		----------	Amount	Calc.	%Drift		----------	
21		Acetonitrile	400.000	419.850	-5.0	127	0.02	5.52
		----------	AvgRF	CCRF	%Dev		----------	
22		Di-isopropyl ether	1.731	1.883	-8.8	129	0.00	5.59
		----------	Amount	Calc.	%Drift		----------	
23		Chloroprene	40.000	42.869	-7.2	129	0.00	5.72
		----------	AvgRF	CCRF	%Dev		----------	
24	P	1,1-Dichloroethane	0.823	0.878	-6.7	127	0.00	5.75
25		Acrylonitrile	0.180	0.175	2.8	134	0.00	5.78
26		ETBE	1.361	1.585	-16.5	136	0.00	5.97
27		Vinyl acetate	0.719	0.747	-3.9	129	0.00	5.95
28		cis-1,2-Dichloroethene	0.413	0.429	-3.9	122	0.00	6.30
29		2,2-Dichloropropane	0.474	0.529	-11.6	134	0.00	6.43
30		Bromochloromethane	0.194	0.204	-5.2	122	0.00	6.50

Initial Calibration Verification

Job Number: F66519
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ2898-ICV2898
Lab FileID: J048505.D

31		Cyclohexane	0.667	0.832	-24.7#	150	0.00	6.55
32	C	Chloroform	0.650	0.701	-7.8	130	0.00	6.55
33		Ethyl acetate	0.490	0.705	-43.9#	165	0.00	6.62
		----------	Amount	Calc.	%Drift	----------		
34		Tetrahydrofuran	40.000	47.911	-19.8	142	0.00	6.73
		----------	AvgRF	CCRF	%Dev	----------		
35	S	Dibromofluoromethane	0.268	0.275	-2.6	130	0.00	6.73
36		Carbon Tetrachloride	0.376	0.415	-10.4	131	0.00	6.74
37		1,1,1-Trichloroethane	0.477	0.539	-13.0	134	0.00	6.81
38		2-Butanone	0.298	0.251	15.8	101	0.00	6.84
39		1,1-Dichloropropene	0.508	0.546	-7.5	127	0.00	6.90
40		Propionitrile	0.072	0.073	-1.4	121	0.00	7.15
41		Methacrylonitrile	0.315	0.329	-4.4	119	0.00	7.16
42		Benzene	1.527	1.614	-5.7	126	0.00	7.15
43		TAME	0.974	1.115	-14.5	132	0.00	7.24
44	S	1,2-Dichloroethane-d4	0.360	0.366	-1.7	127	0.00	7.27
45		1,2-Dichloroethane	0.637	0.640	-0.5	124	0.00	7.33
46		Trichloroethene	0.388	0.407	-4.9	124	0.00	7.72
47		Methylcyclohexane	0.527	0.592	-12.3	131	0.00	7.74
48		Dibromomethane	0.232	0.250	-7.8	124	0.00	8.14
49	C	1,2-Dichloropropane	0.505	0.516	-2.2	119	0.00	8.23
50		Bromodichloromethane	0.498	0.515	-3.4	118	0.00	8.27
51		Methyl methacrylate	0.435	0.500	-14.9	131	0.00	8.38
52		2-Chloroethyl vinyl ether	0.315	0.342	-8.6	121	0.00	8.79
53		cis-1,3-Dichloropropene	0.639	0.699	-9.4	125	0.00	8.89
54	I	Chlorobenzene-d5	1.000	1.000	0.0	124	0.00	10.61
55	S	Toluene-d8	1.191	1.169	1.8	123	0.00	9.07
56	C	Toluene	1.659	1.737	-4.7	126	0.00	9.13
		----------	Amount	Calc.	%Drift	----------		
57		2-Nitropropane	200.000	196.704	1.6	121	0.00	9.33
		----------	AvgRF	CCRF	%Dev	----------		
58		4-Methyl-2-pentanone	0.516	0.538	-4.3	119	0.00	9.46
59		trans-1,3-Dichloropropene	0.582	0.689	-18.4	134	0.00	9.51
60		Tetrachloroethene	0.362	0.390	-7.7	131	0.00	9.52
		----------	Amount	Calc.	%Drift	----------		
61		Ethyl methacrylate	40.000	37.692	5.8	113	0.00	9.63
		----------	AvgRF	CCRF	%Dev	----------		
62		1,1,2-Trichloroethane	0.335	0.337	-0.6	119	0.00	9.68
63		Dibromochloromethane	0.376	0.413	-9.8	127	0.00	9.87
64		1,3-Dichloropropane	0.681	0.693	-1.8	119	0.00	9.96
65		1,2-Dibromoethane	0.367	0.395	-7.6	122	0.00	10.13
66		2-hexanone	0.390	0.375	3.8	107	0.00	10.27
67		1-Chlorohexane	0.516	0.579	-12.2	130	0.00	10.58
68	C	Ethylbenzene	1.746	1.812	-3.8	125	0.00	10.64
69	P	Chlorobenzene	1.042	1.096	-5.2	126	0.00	10.63
70		1,1,1,2-Tetrachloroethane	0.354	0.380	-7.3	124	0.00	10.69
71		m,p-Xylene	1.254	1.356	-8.1	126	0.00	10.78
72		o-Xylene	1.301	1.444	-11.0	126	0.00	11.22
73		Styrene	1.024	1.134	-10.7	126	0.00	11.26
		----------	Amount	Calc.	%Drift	----------		
74	P	Bromoform	40.000	39.346	1.6	125	0.00	11.31

Initial Calibration Verification

Job Number: F66519
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ2898-ICV2898
Lab FileID: J048505.D

			AvgRF	CCRF	%Dev			
75		Isopropylbenzene	1.316	1.485	-12.8	129	0.00	11.53
76	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	125	0.00	12.98
77	S	4-Bromofluorobenzene	1.032	1.036	-0.4	127	0.00	11.82
78		cis-1,4-Dichloro-2-butene	0.374	0.363	2.9	111	0.00	11.87
79		n-Propylbenzene	3.868	3.986	-3.1	122	0.00	11.95
80		Bromobenzene	0.792	0.845	-6.7	127	0.00	11.95
81	P	1,1,2,2-Tetrachloroethane	0.936	0.950	-1.5	119	0.00	11.99
82		1,3,5-Trimethylbenzene	2.423	2.607	-7.6	127	0.00	12.13
83		2-Chlorotoluene	2.569	2.700	-5.1	126	0.00	12.13
84		trans-1,4-Dichloro-2-Bute	0.324	0.362	-11.7	127	0.00	12.18
85		1,2,3-Trichloropropane	0.249	0.230	7.6	114	0.00	12.16
86		Cyclohexanone	0.030	0.026	13.3	111	0.00	12.22
87		4-Chlorotoluene	2.336	2.488	-6.5	124	0.00	12.29
88		tert-Butylbenzene	1.401	1.522	-8.6	127	0.00	12.47
89		1,2,4-Trimethylbenzene	2.509	2.629	-4.8	122	0.00	12.54
90		Pentachloroethane	0.458	0.507	-10.7	127	0.00	12.51
91		sec-Butylbenzene	3.024	3.212	-6.2	124	0.00	12.66
92		4-Isopropyltoluene	2.369	2.616	-10.4	127	0.00	12.79
93		1,3-Dichlorobenzene	1.432	1.522	-6.3	125	0.00	12.91
94		1,4-Dichlorobenzene	1.503	1.553	-3.3	125	0.00	12.99
95		n-Butylbenzene	1.510	1.643	-8.8	123	0.00	13.23
			Amount	Calc.	%Drift			
96		Benzyl Chloride	40.000	42.708	-6.8	131	0.00	13.24
			AvgRF	CCRF	%Dev			
97		1,2-Dichlorobenzene	1.384	1.456	-5.2	122	0.00	13.42
98		1,2-Dibromo-3-Chloropropa	0.141	0.149	-5.7	120	0.00	14.18
99		Hexachlorobutadiene	0.289	0.314	-8.7	132	0.00	14.74
100		1,2,4-Trichlorobenzene	0.763	0.864	-13.2	130	0.00	14.78
101		Naphthalene	1.771	2.079	-17.4	133	0.00	15.06
102		1,2,3-Trichlorobenzene	0.632	0.720	-13.9	131	0.00	15.22
103	I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	134	0.00	5.24
			Amount	Calc.	%Drift			
104		Ethanol	800.000	752.663	5.9	116	0.15	4.54
			AvgRF	CCRF	%Dev			
105		acrolein	1.641	0.739	55.0#	61	0.00	4.70
106		Tert Butyl Alcohol	1.078	1.128	-4.6	135	0.00	5.33
			Amount	Calc.	%Drift			
107		tert Amyl alcohol	400.000	393.738	1.6	130	0.00	7.40
			AvgRF	CCRF	%Dev			
108		Isobutyl alcohol	0.535	0.490	8.4	112	0.00	7.28
			Amount	Calc.	%Drift			
109		1,4-Dioxane	800.000	758.714	5.2	124	0.00	8.49

(#) = Out of Range SPCC's out = 0 CCC's out = 0
J048502.D 8260-JAPP9.M Fri Jul 17 09:27:27 2009

Continuing Calibration Summary

Job Number: F66519
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ2899-CC2898
Lab FileID: J048530.D

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\071709\J048530.D Vial: 1
Acq On : 17 Jul 2009 9:51 am Operator: karenw
Sample : CC2898-4 Inst : MSVOA6
Misc : ms12402,vj2899,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\8260-JAPP9.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Thu Jul 16 14:49:57 2009
Response via : Multiple Level Calibration

Min. RRF : 0.001 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	89	0.00	7.55
2		Dichlorodifluoromethane	0.307	0.304	1.0	78	0.01	2.84
3	P	Chloromethane	0.765	0.772	-0.9	83	0.01	3.02
4	C	Vinyl Chloride	0.582	0.601	-3.3	83	0.00	3.15
5		Bromomethane	0.325	0.329	-1.2	88	0.00	3.52
6		Chloroethane	0.307	0.321	-4.6	89	-0.01	3.64
7		Trichlorofluoromethane	0.446	0.357	20.0	65	0.00	3.87
8		Ethyl Ether	0.454	0.484	-6.6	89	0.00	4.09
9		1,2-Dichlorotrifluoroetha	0.459	0.472	-2.8	90	0.00	4.32
10	C	1,1-Dichloroethene	0.679	0.721	-6.2	90	0.00	4.36
11		Freon 113	0.293	0.301	-2.7	88	0.01	4.43
12		Carbon Disulfide	1.161	1.231	-6.0	92	0.01	4.44
13		Iodomethane	0.521	0.558	-7.1	91	0.00	4.54
		----------	Amount	Calc.	%Drift		----------	
14		Allyl chloride	40.000	40.159	-0.4	90	0.00	4.83
15		Methylene Chloride	40.000	44.307	-10.8	95	0.00	4.95
16		Acetone	200.000	158.007	21.0#	65	0.00	4.99
		----------	AvgRF	CCRF	%Dev		----------	
17		Methyl acetate	0.063	0.070	-11.1	93	0.00	5.09
18		trans-1,2-Dichloroethene	0.668	0.712	-6.6	93	0.00	5.11
19		Hexane	0.409	0.411	-0.5	92	0.01	5.17
20		Methyl Tert Butyl Ether	0.976	1.064	-9.0	93	0.00	5.23
		----------	Amount	Calc.	%Drift		----------	
21		Acetonitrile	400.000	503.971	-26.0#	109	0.00	5.50
		----------	AvgRF	CCRF	%Dev		----------	
22		Di-isopropyl ether	1.731	1.905	-10.1	93	0.00	5.59
		----------	Amount	Calc.	%Drift		----------	
23		Chloroprene	40.000	38.224	4.4	83	-0.01	5.72
		----------	AvgRF	CCRF	%Dev		----------	
24	P	1,1-Dichloroethane	0.823	0.893	-8.5	93	0.00	5.75
25		Acrylonitrile	0.180	0.219	-21.7#	120	0.00	5.79
26		ETBE	1.361	1.511	-11.0	93	0.00	5.97
27		Vinyl acetate	0.719	0.811	-12.8	101	0.00	5.95
28		cis-1,2-Dichloroethene	0.413	0.450	-9.0	92	0.00	6.29
29		2,2-Dichloropropane	0.474	0.501	-5.7	91	0.00	6.43
30		Bromochloromethane	0.194	0.211	-8.8	91	0.00	6.50

Continuing Calibration Summary

Job Number: F66519 **Sample:** VJ2899-CC2898
Account: TETTNOAK Tetra Tech, Inc **Lab FileID:** J048530.D
Project: Holloman AFB; Alamogordo, NM

31		Cyclohexane	0.667	0.711	-6.6	92	0.00	6.55
32	C	Chloroform	0.650	0.694	-6.8	92	0.00	6.55
33		Ethyl acetate	0.490	0.495	-1.0	83	0.00	6.63
		----------	Amount	Calc.	%Drift	----------		
34		Tetrahydrofuran	40.000	52.181	-30.5#	111	0.00	6.73
		----------	AvgRF	CCRF	%Dev	----------		
35	S	Dibromofluoromethane	0.268	0.267	0.4	90	0.00	6.74
36		Carbon Tetrachloride	0.376	0.401	-6.6	91	0.00	6.74
37		1,1,1-Trichloroethane	0.477	0.515	-8.0	91	0.00	6.81
38		2-Butanone	0.298	0.273	8.4	79	0.00	6.84
39		1,1-Dichloropropene	0.508	0.548	-7.9	91	0.00	6.90
40		Propionitrile	0.072	0.079	-9.7	94	0.00	7.15
41		Methacrylonitrile	0.315	0.354	-12.4	92	0.00	7.16
42		Benzene	1.527	1.667	-9.2	93	0.00	7.15
43		TAME	0.974	1.079	-10.8	92	0.00	7.24
44	S	1,2-Dichloroethane-d4	0.360	0.364	-1.1	90	0.00	7.27
45		1,2-Dichloroethane	0.637	0.668	-4.9	93	0.00	7.34
46		Trichloroethene	0.388	0.417	-7.5	91	0.00	7.72
47		Methylcyclohexane	0.527	0.569	-8.0	90	0.00	7.74
48		Dibromomethane	0.232	0.265	-14.2	94	0.00	8.14
49	C	1,2-Dichloropropane	0.505	0.561	-11.1	93	0.00	8.23
50		Bromodichloromethane	0.498	0.558	-12.0	92	0.00	8.27
51		Methyl methacrylate	0.435	0.486	-11.7	91	0.00	8.38
52		2-Chloroethyl vinyl ether	0.315	0.369	-17.1	94	0.00	8.79
53		cis-1,3-Dichloropropene	0.639	0.722	-13.0	92	0.00	8.89
54	I	Chlorobenzene-d5	1.000	1.000	0.0	93	0.00	10.61
55	S	Toluene-d8	1.191	1.132	5.0	90	0.00	9.08
56	C	Toluene	1.659	1.701	-2.5	93	0.00	9.13
		----------	Amount	Calc.	%Drift	----------		
57		2-Nitropropane	200.000	209.937	-5.0	98	0.00	9.33
		----------	AvgRF	CCRF	%Dev	----------		
58		4-Methyl-2-pentanone	0.516	0.572	-10.9	95	0.00	9.46
59		trans-1,3-Dichloropropene	0.582	0.633	-8.8	93	0.00	9.51
60		Tetrachloroethene	0.362	0.360	0.6	92	0.00	9.52
		----------	Amount	Calc.	%Drift	----------		
61		Ethyl methacrylate	40.000	40.679	-1.7	92	0.00	9.63
		----------	AvgRF	CCRF	%Dev	----------		
62		1,1,2-Trichloroethane	0.335	0.353	-5.4	94	0.00	9.68
63		Dibromochloromethane	0.376	0.402	-6.9	93	0.00	9.87
64		1,3-Dichloropropane	0.681	0.727	-6.8	94	0.00	9.96
65		1,2-Dibromoethane	0.367	0.394	-7.4	92	0.00	10.13
66		2-hexanone	0.390	0.394	-1.0	85	0.00	10.27
67		1-Chlorohexane	0.516	0.546	-5.8	93	0.00	10.58
68	C	Ethylbenzene	1.746	1.803	-3.3	94	0.00	10.64
69	P	Chlorobenzene	1.042	1.079	-3.6	93	0.00	10.64
70		1,1,1,2-Tetrachloroethane	0.354	0.375	-5.9	93	0.00	10.69
71		m,p-Xylene	1.254	1.347	-7.4	95	0.00	10.78
72		o-Xylene	1.301	1.418	-9.0	93	0.00	11.22
73		Styrene	1.024	1.118	-9.2	93	0.00	11.26
		----------	Amount	Calc.	%Drift	----------		
74	P	Bromoform	40.000	39.152	2.1	94	0.00	11.31

Continuing Calibration Summary

Job Number: F66519
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ2899-CC2898
Lab FileID: J048530.D

			AvgRF	CCRF	%Dev			
75		Isopropylbenzene	1.316	1.434	-9.0	94	0.00	11.53
76	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	95	0.00	12.98
77	S	4-Bromofluorobenzene	1.032	1.012	1.9	94	0.00	11.82
78		cis-1,4-Dichloro-2-butene	0.374	0.387	-3.5	90	0.00	11.87
79		n-Propylbenzene	3.868	4.062	-5.0	94	0.00	11.95
80		Bromobenzene	0.792	0.830	-4.8	94	0.00	11.95
81	P	1,1,2,2-Tetrachloroethane	0.936	0.999	-6.7	95	0.00	11.99
82		1,3,5-Trimethylbenzene	2.423	2.552	-5.3	94	0.00	12.13
83		2-Chlorotoluene	2.569	2.686	-4.6	95	0.00	12.13
84		trans-1,4-Dichloro-2-Bute	0.324	0.349	-7.7	93	0.00	12.18
85		1,2,3-Trichloropropane	0.249	0.258	-3.6	96	0.00	12.16
86		Cyclohexanone	0.030	0.033	-10.0	107	0.00	12.22
87		4-Chlorotoluene	2.336	2.480	-6.2	93	0.00	12.29
88		tert-Butylbenzene	1.401	1.493	-6.6	94	0.00	12.47
89		1,2,4-Trimethylbenzene	2.509	2.660	-6.0	93	0.00	12.54
90		Pentachloroethane	0.458	0.502	-9.6	95	0.00	12.51
91		sec-Butylbenzene	3.024	3.215	-6.3	93	0.00	12.66
92		4-Isopropyltoluene	2.369	2.574	-8.7	94	0.00	12.79
93		1,3-Dichlorobenzene	1.432	1.515	-5.8	94	0.00	12.91
94		1,4-Dichlorobenzene	1.503	1.526	-1.5	93	0.00	13.00
95		n-Butylbenzene	1.510	1.651	-9.3	93	0.00	13.23
			Amount	Calc.	%Drift			
96		Benzyl Chloride	40.000	40.477	-1.2	94	0.00	13.24
			AvgRF	CCRF	%Dev			
97		1,2-Dichlorobenzene	1.384	1.457	-5.3	92	0.00	13.43
98		1,2-Dibromo-3-Chloropropa	0.141	0.154	-9.2	94	0.00	14.18
99		Hexachlorobutadiene	0.289	0.284	1.7	90	0.00	14.74
100		1,2,4-Trichlorobenzene	0.763	0.796	-4.3	91	0.00	14.78
101		Naphthalene	1.771	1.920	-8.4	93	0.00	15.06
102		1,2,3-Trichlorobenzene	0.632	0.662	-4.7	91	0.00	15.22
103	I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	104	0.00	5.24
			Amount	Calc.	%Drift			
104		Ethanol	800.000	823.604	-3.0	98	0.01	4.41
			AvgRF	CCRF	%Dev			
105		acrolein	1.641	1.644	-0.2	106	0.00	4.69
106		Tert Butyl Alcohol	1.078	1.113	-3.2	103	0.00	5.31
			Amount	Calc.	%Drift			
107		tert Amyl alcohol	400.000	382.152	4.5	98	0.00	7.40
			AvgRF	CCRF	%Dev			
108		Isobutyl alcohol	0.535	0.513	4.1	91	0.00	7.28
			Amount	Calc.	%Drift			
109		1,4-Dioxane	800.000	807.600	-1.0	102	0.00	8.48

(#) = Out of Range SPCC's out = 0 CCC's out = 0
J048502.D 8260-JAPP9.M Mon Jul 20 08:55:56 2009

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Instrument Runlogs
- Initial and Continuing Calibration Blanks
- Initial and Continuing Calibration Checks
- High and Low Check Standards
- Interfering Element Check Standards
- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20714W2.PRN Date Analyzed: 07/14/09 Methods: SW846 7470A
Analyst: LM Run ID: MA7355
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:35	MA7355-STD1	1		STD01REP1
11:37	MA7355-STD2	1		STD02REP1
11:39	MA7355-STD3	1		STD03REP1
11:41	MA7355-STD4	1		STD04REP1
11:43	MA7355-STD5	1		STD05REP1
11:44	MA7355-STD6	1		STD06REP1
11:51	MA7355-HSTD1	1		
11:53	MA7355-ICV1	1		
11:54	MA7355-ICB1	1		
11:56	MA7355-CRI1	1		
11:58	MA7355-CCV1	1		
12:00	MA7355-CCB1	1		
12:01	MP16670-MB1	1		
12:03	MP16670-B1	1		
12:05	F66519-10	1		
12:07	MP16670-D1	1		
12:09	MP16670-SD1	5		
12:11	MP16670-S1	1		
12:13	MP16670-S2	1		
12:15	ZZZZZZ	1		
12:17	ZZZZZZ	1		
12:19	ZZZZZZ	1		
12:20	MA7355-CCV2	1		
12:22	MA7355-CCB2	1		
12:24	ZZZZZZ	1		
12:26	ZZZZZZ	1		
12:27	ZZZZZZ	1		
12:29	ZZZZZZ	1		
12:31	ZZZZZZ	1		
12:33	ZZZZZZ	1		
12:34	ZZZZZZ	1		
12:36	ZZZZZZ	1		
12:38	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20714W2.PRN Date Analyzed: 07/14/09 Methods: SW846 7470A
Analyst: LM Run ID: MA7355
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
12:39	ZZZZZZ	1		
12:41	MA7355-CCV3	1		
12:43	MA7355-CCB3	1		
12:45	ZZZZZZ	1		
12:46	ZZZZZZ	1		
12:48	F66519-1	1		
12:50	F66519-2	1		
12:52	F66519-3	1		
12:54	F66519-4	1		
12:56	MP16672-MB1	1		
12:58	MP16672-B1	1		
13:00	F66523-5	1		(sample used for QC only; not part of login F66519)
13:01	MP16672-D1	1		
13:03	MA7355-CCV4	1		
13:05	MA7355-CCB4	1		
13:06	MP16672-SD1	5		
13:08	MP16672-S1	1		
13:10	MP16672-S2	1		
13:11	ZZZZZZ	1		
13:13	ZZZZZZ	1		
13:15	ZZZZZZ	1		
13:17	ZZZZZZ	1		
13:19	ZZZZZZ	1		
13:21	ZZZZZZ	1		
13:23	ZZZZZZ	1		
13:25	MA7355-CCV5	1		
13:27	MA7355-CCB5	1		
13:29	ZZZZZZ	1		
13:31	ZZZZZZ	1		
13:34	MP16671-MB1	1		
13:36	MP16671-B1	1		
13:38	F66519-10A	1		
13:40	MP16671-D1	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20714W2.PRN Date Analyzed: 07/14/09 Methods: SW846 7470A
Analyst: LM Run ID: MA7355
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:42	MP16671-SD1	5		
13:44	MP16671-S1	1		
13:46	MP16671-S2	1		
13:49	ZZZZZZ	1		
13:51	MA7355-CCV6	1		
13:53	MA7355-CCB6	1		
13:55	F66519-5	1		
13:56	F66519-6	1		
13:58	F66519-7	1		
14:00	F66519-8	1		
14:02	F66519-9	1		
14:04	F66519-1A	1		
14:06	F66519-2A	1		
14:08	F66519-3A	1		
14:10	F66519-4A	1		
14:12	F66519-5A	1		
14:14	MA7355-CCV7	1		
14:15	MA7355-CCB7	1		
14:17	F66519-6A	1		
14:20	F66519-7A	1		
14:22	F66519-8A	1		
14:23	F66519-9A	1		
----------> Last reportable sample/prep for job F66519				
14:25	ZZZZZZ	1		
14:27	ZZZZZZ	1		
14:29	ZZZZZZ	1		
14:31	ZZZZZZ	1		
14:33	MA7355-CRI2	1		
14:35	MA7355-CCV8	1		
14:36	MA7355-CCB8	1		
----------> Last reportable CCB for job F66519				

Refer to raw data for calibration curve and standards.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20714W2.PRN Date Analyzed: 07/14/09 Methods: SW846 7470A
QC Limits: result < RL Run ID: MA7355 Units: ug/l

Time:			11:54		12:00		12:22		12:43	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	1.0	.14	-0.11	<1.0	-0.11	<1.0	-0.077	<1.0	-0.034	<1.0

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20714W2.PRN Date Analyzed: 07/14/09 Methods: SW846 7470A
QC Limits: result < RL Run ID: MA7355 Units: ug/l

Time:			13:05		13:27		13:53		14:15	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	1.0	.14	-0.072	<1.0	-0.018	<1.0	-0.11	<1.0	-0.071	<1.0

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20714W2.PRN Date Analyzed: 07/14/09 Methods: SW846 7470A
QC Limits: result < RL Run ID: MA7355 Units: ug/l

Time:			14:36	
Sample ID:			CCB8	
Metal	RL	IDL	raw	final
Mercury	1.0	.14	-0.039	<1.0

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20714W2.PRN Date Analyzed: 07/14/09 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA7355 Units: ug/l

Time:		11:53			11:58			12:20	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3.0	3.0	100.0	3.0	3.0	100.0	3.0	3.0	100.0

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20714W2.PRN Date Analyzed: 07/14/09 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA7355 Units: ug/l

Time:		12:41			13:03			13:25	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3.0	3.0	100.0	3.0	3.0	100.0	3	3.3	110.0

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20714W2.PRN Date Analyzed: 07/14/09 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA7355 Units: ug/l

Time:		13:51			14:14			14:35	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3	3.1	103.3	3.0	3.0	100.0	3	2.9	96.7

(*) Outside of QC limits
(anr) Analyte not requested

6.1.2
6

HIGH STANDARD CHECK SUMMARY

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20714W2.PRN Date Analyzed: 07/14/09 Methods: SW846 7470A
QC Limits: 95 to 105 % Recovery Run ID: MA7355 Units: ug/l

Time:		11:51	
Sample ID:	HSTD	HSTD1	
Metal	True	Results	% Rec
Mercury	6	6.2	103.3

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20714W2.PRN Date Analyzed: 07/14/09 Methods: SW846 7470A
QC Limits: 80 to 120 % Recovery Run ID: MA7355 Units: ug/l

Time:			11:56		14:33	
Sample ID:	CRI	CRIA	CRI1		CRI2	
Metal	True	True	Results	% Rec	Results	% Rec
Mercury	0.20		0.17	85.0	0.15	75.0*(a)

(*) Outside of QC limits
(anr) Analyte not requested
(a) Possible instrument baseline drift.

6.1.4

6

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071409.ASC Date Analyzed: 07/14/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7359
Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:25	MA7359-HSTD1	1		
09:28	MA7359-ICV1	1		
09:34	MA7359-ICB1	1		
09:37	MA7359-CRIA1	1		
09:47	MA7359-ICSA1	1		
09:49	MA7359-ICSAB1	1		
09:55	MA7359-CCV1	1		
09:59	MA7359-CCB1	1		
16:17	MA7359-CCV2	1		
16:22	MA7359-CCB2	1		
16:25	ZZZZZZ	2		
16:29	ZZZZZZ	1		
16:32	ZZZZZZ	1		
16:35	ZZZZZZ	10		
16:39	ZZZZZZ	10		
16:42	ZZZZZZ	10		
16:46	ZZZZZZ	10		
16:49	ZZZZZZ	10		
16:52	ZZZZZZ	10		
16:56	ZZZZZZ	2		
16:59	MA7359-CCV3	1		
17:04	MA7359-CCB3	1		
17:07	F66555-1	10		(sample used for QC only; not part of login F66519)
17:11	MP16661-D1	10		
17:14	MP16661-SD1	50		
17:17	MP16661-S1	10		
17:21	MP16661-S2	10		
17:24	ZZZZZZ	10		
17:28	ZZZZZZ	10		
17:31	ZZZZZZ	4		
17:34	ZZZZZZ	5		
17:38	ZZZZZZ	10		
17:41	MA7359-CCV4	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071409.ASC Date Analyzed: 07/14/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7359
Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Dilution Factor	PS Recov	Comments
17:46	MA7359-CCB4	1		
17:49	ZZZZZZ	4		
17:52	ZZZZZZ	2		
17:56	ZZZZZZ	10		
17:59	ZZZZZZ	4		
18:03	ZZZZZZ	4		
18:06	ZZZZZZ	10		
18:09	ZZZZZZ	10		
18:13	ZZZZZZ	4		
18:16	ZZZZZZ	2		
18:20	ZZZZZZ	10		
18:23	MA7359-CCV5	1		
18:27	MA7359-CCB5	1		
18:31	ZZZZZZ	10		
18:34	F66532-1	2		(sample used for QC only; not part of login F66519)
18:38	MP16662-D1	2		
18:41	MP16662-SD1	10		
18:45	MP16662-S1	2		
18:48	MP16662-S2	2		
18:51	ZZZZZZ	5		
18:58	ZZZZZZ	2		
19:02	ZZZZZZ	2		
19:05	MA7359-CCV6	1		
19:09	MA7359-CCB6	1		
19:13	ZZZZZZ	2		
19:16	ZZZZZZ	2		
19:20	ZZZZZZ	4		
19:23	ZZZZZZ	2		
19:26	ZZZZZZ	2		
19:30	ZZZZZZ	4		
19:33	ZZZZZZ	4		
19:37	MP16668-S1	4		
19:40	MP16668-S2	4		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071409.ASC Date Analyzed: 07/14/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7359
Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Dilution Factor	PS Recov	Comments
19:48	MA7359-CCV7	1		
19:52	MA7359-CCB7	1		
20:24	MP16673-MB1	1		
20:27	MP16673-B1	1		
20:31	MA7359-CCV8	1		
20:35	MA7359-CCB8	1		
20:39	F66507-5	1		(sample used for QC only; not part of login F66519)
20:42	MP16673-D1	1		
20:45	MP16673-SD1	5		
20:49	MP16673-PS1	1		
20:52	MP16673-S1	1		
20:56	ZZZZZZ	1		
20:59	ZZZZZZ	1		
21:03	ZZZZZZ	1		
21:06	ZZZZZZ	1		
21:14	MA7359-CCV9	1		
21:18	MA7359-CCB9	1		
21:43	MP16658-MB1	1		
21:47	MP16658-B1	1		
21:50	F66519-10	10		
21:53	MP16658-D1	10		
21:57	MA7359-CCV10	1		
22:01	MA7359-CCB10	1		
22:05	MP16658-SD1	50		
22:08	MP16658-S1	10		
22:11	MP16658-S2	10		
22:15	F66519-1	20		
22:18	F66519-2	20		
22:22	F66519-3	20		
22:25	F66519-4	20		
22:29	F66519-5	5		
22:32	F66519-6	20		
22:35	F66519-7	20		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071409.ASC Date Analyzed: 07/14/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7359
Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Dilution Factor	PS Recov	Comments
22:39	MA7359-CCV11	1		
22:43	MA7359-CCB11	1		
22:47	F66519-8	4		
22:50	F66519-9	20		
22:53	ZZZZZZ	5		
22:57	ZZZZZZ	5		
23:00	ZZZZZZ	5		
23:04	ZZZZZZ	4		
23:07	ZZZZZZ	5		
23:11	ZZZZZZ	5		
23:14	ZZZZZZ	5		
23:17	ZZZZZZ	5		
23:21	MA7359-CCV12	1		
23:25	MA7359-CCB12	1		
23:29	ZZZZZZ	4		
23:32	ZZZZZZ	5		
23:37	MP16658-MB2A	1		
---------->	Last reportable sample/prep for job F66519			
23:40	MA7359-CRIA2	1		
23:43	MA7359-ICSA2	1		
23:47	MA7359-ICSAB2	1		
23:50	MA7359-CCV13	1		
23:55	MA7359-CCB13	1		
---------->	Last reportable CCB for job F66519			

Refer to raw data for calibration curve and standards.

INTERNAL STANDARD SUMMARY

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071409.ASC Date Analyzed: 07/14/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7359
Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Istd#1
09:25	MA7359-HSTD1	7620
09:28	MA7359-ICV1	7920
09:34	MA7359-ICB1	8206 R
09:37	MA7359-CRIA1	8061
09:47	MA7359-ICSA1	7104
09:49	MA7359-ICSAB1	7088
09:55	MA7359-CCV1	7779
09:59	MA7359-CCB1	8009
16:17	MA7359-CCV2	7860
16:22	MA7359-CCB2	8255
16:25	ZZZZZZ	7990
16:29	ZZZZZZ	7645
16:32	ZZZZZZ	7896
16:35	ZZZZZZ	7834
16:39	ZZZZZZ	7707
16:42	ZZZZZZ	7813
16:46	ZZZZZZ	7698
16:49	ZZZZZZ	7772
16:52	ZZZZZZ	7709
16:56	ZZZZZZ	7728
16:59	MA7359-CCV3	7811
17:04	MA7359-CCB3	8087
17:07	F66555-1	7896
17:11	MP16661-D1	7705
17:14	MP16661-SD1	7957
17:17	MP16661-S1	7699
17:21	MP16661-S2	7708
17:24	ZZZZZZ	7790
17:28	ZZZZZZ	7660
17:31	ZZZZZZ	7998
17:34	ZZZZZZ	7776
17:38	ZZZZZZ	7633
17:41	MA7359-CCV4	7892

INTERNAL STANDARD SUMMARY

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071409.ASC Date Analyzed: 07/14/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7359
Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Istd#1
17:46	MA7359-CCB4	8167
17:49	ZZZZZZ	7828
17:52	ZZZZZZ	7927
17:56	ZZZZZZ	7846
17:59	ZZZZZZ	7857
18:03	ZZZZZZ	7787
18:06	ZZZZZZ	7761
18:09	ZZZZZZ	7856
18:13	ZZZZZZ	7778
18:16	ZZZZZZ	8155
18:20	ZZZZZZ	7890
18:23	MA7359-CCV5	7936
18:27	MA7359-CCB5	8020
18:31	ZZZZZZ	7771
18:34	F66532-1	8034
18:38	MP16662-D1	7862
18:41	MP16662-SD1	8129
18:45	MP16662-S1	8007
18:48	MP16662-S2	7956
18:51	ZZZZZZ	8529
18:58	ZZZZZZ	8259
19:02	ZZZZZZ	8648
19:05	MA7359-CCV6	8021
19:09	MA7359-CCB6	8338
19:13	ZZZZZZ	8481
19:16	ZZZZZZ	7774
19:20	ZZZZZZ	8174
19:23	ZZZZZZ	7623
19:26	ZZZZZZ	7685
19:30	ZZZZZZ	8322
19:33	ZZZZZZ	8406
19:37	MP16668-S1	7922
19:40	MP16668-S2	8026

INTERNAL STANDARD SUMMARY

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071409.ASC Date Analyzed: 07/14/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7359
Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Istd#1
19:48	MA7359-CCV7	7995
19:52	MA7359-CCB7	8205
20:24	MP16673-MB1	8314
20:27	MP16673-B1	7795
20:31	MA7359-CCV8	7846
20:35	MA7359-CCB8	8165
20:39	F66507-5	7751
20:42	MP16673-D1	7731
20:45	MP16673-SD1	8044
20:49	MP16673-PS1	7688
20:52	MP16673-S1	7479
20:56	ZZZZZZ	7595
20:59	ZZZZZZ	7828
21:03	ZZZZZZ	7502
21:06	ZZZZZZ	8159
21:14	MA7359-CCV9	7977
21:18	MA7359-CCB9	8558
21:43	MP16658-MB1	8218
21:47	MP16658-B1	7938
21:50	F66519-10	6961
21:53	MP16658-D1	6935
21:57	MA7359-CCV10	7913
22:01	MA7359-CCB10	8244
22:05	MP16658-SD1	7614
22:08	MP16658-S1	7015
22:11	MP16658-S2	7006
22:15	F66519-1	6866
22:18	F66519-2	6920
22:22	F66519-3	6763
22:25	F66519-4	6979
22:29	F66519-5	6874
22:32	F66519-6	6873
22:35	F66519-7	6963

INTERNAL STANDARD SUMMARY

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071409.ASC Date Analyzed: 07/14/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7359
Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Istd#1
22:39	MA7359-CCV11	7876
22:43	MA7359-CCB11	8095
22:47	F66519-8	7029
22:50	F66519-9	7166
22:53	ZZZZZZ	6857
22:57	ZZZZZZ	6744
23:00	ZZZZZZ	6924
23:04	ZZZZZZ	6920
23:07	ZZZZZZ	6962
23:11	ZZZZZZ	6914
23:14	ZZZZZZ	6818
23:17	ZZZZZZ	6931
23:21	MA7359-CCV12	7866
23:25	MA7359-CCB12	8125
23:29	ZZZZZZ	6563
23:32	ZZZZZZ	6869
23:37	MP16658-MB2A	8201
23:40	MA7359-CRIA2	8110
23:43	MA7359-ICSA2	7090
23:47	MA7359-ICSAB2	7161
23:50	MA7359-CCV13	7868
23:55	MA7359-CCB13	8129

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium	60-125 %

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071409.ASC Date Analyzed: 07/14/09 Methods: SW846 6010B
QC Limits: result < RL Run ID: MA7359 Units: ug/l

Time:			09:34		09:59		16:22		17:04	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	11	anr							
Antimony	6.0	4.5	anr							
Arsenic	10	3.6	1.6	<10	2.1	<10	2.5	<10	2.1	<10
Barium	200	5	-0.060	<200	0.10	<200	0.52	<200	0.57	<200
Beryllium	4.0	1	anr							
Cadmium	5.0	1	0.11	<5.0	0.33	<5.0	0.59	<5.0	0.42	<5.0
Calcium	1000	100	anr							
Chromium	10	1.6	-0.30	<10	0.15	<10	0.64	<10	0.17	<10
Cobalt	50	.83	anr							
Copper	25	2.1	anr							
Iron	300	23	anr							
Lead	5.0	2	2.6	<5.0	1.2	<5.0	1.6	<5.0	2.1	<5.0
Magnesium	5000	100	anr							
Manganese	15	.5	anr							
Molybdenum	50	2.8								
Nickel	40	2.3	anr							
Potassium	10000	100	anr							
Selenium	10	3.1	-0.64	<10	1.8	<10	2.8	<10	1.9	<10
Silver	10	1.2	-0.19	<10	0.29	<10	-0.66	<10	-0.43	<10
Sodium	10000	500	anr							
Thallium	10	3.4	anr							
Tin	50	2.8								
Vanadium	50	.66	anr							
Zinc	20	3.8	anr							

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071409.ASC Date Analyzed: 07/14/09 Methods: SW846 6010B
QC Limits: result < RL Run ID: MA7359 Units: ug/l

Time:			17:46		18:27		19:09		19:52	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	11	anr							
Antimony	6.0	4.5	anr							
Arsenic	10	3.6	0.22	<10	1.7	<10	1.4	<10	2.4	<10
Barium	200	5	0.60	<200	0.75	<200	0.75	<200	1.0	<200
Beryllium	4.0	1	anr							
Cadmium	5.0	1	0.56	<5.0	0.74	<5.0	0.82	<5.0	1.1	<5.0
Calcium	1000	100	anr							
Chromium	10	1.6	0.27	<10	0.63	<10	0.37	<10	1.1	<10
Cobalt	50	.83	anr							
Copper	25	2.1	anr							
Iron	300	23	anr							
Lead	5.0	2	1.7	<5.0	2.1	<5.0	2.4	<5.0	1.6	<5.0
Magnesium	5000	100	anr							
Manganese	15	.5	anr							
Molybdenum	50	2.8								
Nickel	40	2.3	anr							
Potassium	10000	100	anr							
Selenium	10	3.1	2.8	<10	3.3	<10	4.0	<10	1.8	<10
Silver	10	1.2	0.0	<10	0.11	<10	-0.38	<10	0.10	<10
Sodium	10000	500	anr							
Thallium	10	3.4	anr							
Tin	50	2.8								
Vanadium	50	.66	anr							
Zinc	20	3.8	anr							

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071409.ASC Date Analyzed: 07/14/09 Methods: SW846 6010B
QC Limits: result < RL Run ID: MA7359 Units: ug/l

Time:			20:35		21:18		22:01		22:43	
Sample ID:			CCB8		CCB9		CCB10		CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	11	anr							
Antimony	6.0	4.5	anr							
Arsenic	10	3.6	3.8	<10	2.0	<10	3.2	<10	3.7	<10
Barium	200	5	0.080	<200	0.22	<200	0.32	<200	0.47	<200
Beryllium	4.0	1	anr							
Cadmium	5.0	1	0.21	<5.0	0.24	<5.0	0.42	<5.0	0.62	<5.0
Calcium	1000	100	anr							
Chromium	10	1.6	-0.040	<10	0.040	<10	0.070	<10	0.63	<10
Cobalt	50	.83	anr							
Copper	25	2.1	anr							
Iron	300	23	anr							
Lead	5.0	2	2.0	<5.0	1.1	<5.0	2.7	<5.0	0.88	<5.0
Magnesium	5000	100	anr							
Manganese	15	.5	anr							
Molybdenum	50	2.8								
Nickel	40	2.3	anr							
Potassium	10000	100	anr							
Selenium	10	3.1	2.6	<10	1.5	<10	1.8	<10	1.4	<10
Silver	10	1.2	-0.43	<10	0.14	<10	-0.11	<10	-0.20	<10
Sodium	10000	500	anr							
Thallium	10	3.4	anr							
Tin	50	2.8								
Vanadium	50	.66	anr							
Zinc	20	3.8	anr							

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071409.ASC Date Analyzed: 07/14/09 Methods: SW846 6010B
QC Limits: result < RL Run ID: MA7359 Units: ug/l

Time:			23:25		23:55	
Sample ID:			CCB12		CCB13	
Metal	RL	IDL	raw	final	raw	final
Aluminum	200	11	anr			
Antimony	6.0	4.5	anr			
Arsenic	10	3.6	1.2	<10	0.83	<10
Barium	200	5	0.53	<200	1.1	<200
Beryllium	4.0	1	anr			
Cadmium	5.0	1	0.61	<5.0	1.0	<5.0
Calcium	1000	100	anr			
Chromium	10	1.6	0.26	<10	0.84	<10
Cobalt	50	.83	anr			
Copper	25	2.1	anr			
Iron	300	23	anr			
Lead	5.0	2	1.6	<5.0	2.2	<5.0
Magnesium	5000	100	anr			
Manganese	15	.5	anr			
Molybdenum	50	2.8				
Nickel	40	2.3	anr			
Potassium	10000	100	anr			
Selenium	10	3.1	3.5	<10	4.6	<10
Silver	10	1.2	-0.56	<10	-0.16	<10
Sodium	10000	500	anr			
Thallium	10	3.4	anr			
Tin	50	2.8				
Vanadium	50	.66	anr			
Zinc	20	3.8	anr			

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071409.ASC Date Analyzed: 07/14/09 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7359 Units: ug/l

Time:		09:28			09:55			16:17	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	2000	1960	98.0	2000	1950	97.5	2000	1930	96.5
Barium	2000	2060	103.0	2000	2080	104.0	2000	2020	101.0
Beryllium	anr								
Cadmium	2000	2060	103.0	2000	2060	103.0	2000	2030	101.5
Calcium	anr								
Chromium	2000	2030	101.5	2000	2040	102.0	2000	2010	100.5
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	2000	2050	102.5	2000	2050	102.5	2000	2030	101.5
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Potassium	anr								
Selenium	2000	2040	102.0	2000	2040	102.0	2000	2010	100.5
Silver	250	245	98.0	250	245	98.0	250	243	97.2
Sodium	anr								
Thallium	anr								
Tin									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071409.ASC Date Analyzed: 07/14/09 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7359 Units: ug/l

Time:		16:59			17:41			18:23	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	2000	1970	98.5	2000	1960	98.0	2000	1960	98.0
Barium	2000	2050	102.5	2000	2030	101.5	2000	2030	101.5
Beryllium	anr								
Cadmium	2000	2080	104.0	2000	2080	104.0	2000	2070	103.5
Calcium	anr								
Chromium	2000	2050	102.5	2000	2040	102.0	2000	2040	102.0
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	2000	2080	104.0	2000	2070	103.5	2000	2070	103.5
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Potassium	anr								
Selenium	2000	2050	102.5	2000	2040	102.0	2000	2040	102.0
Silver	250	248	99.2	250	245	98.0	250	244	97.6
Sodium	anr								
Thallium	anr								
Tin									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071409.ASC Date Analyzed: 07/14/09 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7359 Units: ug/l

Time:		19:05			19:48			20:31	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	2000	1930	96.5	2000	1920	96.0	2000	1940	97.0
Barium	2000	1990	99.5	2000	1960	98.0	2000	1980	99.0
Beryllium	anr								
Cadmium	2000	2040	102.0	2000	2040	102.0	2000	2050	102.5
Calcium	anr								
Chromium	2000	2010	100.5	2000	2000	100.0	2000	2020	101.0
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	2000	2050	102.5	2000	2040	102.0	2000	2070	103.5
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Potassium	anr								
Selenium	2000	2010	100.5	2000	2000	100.0	2000	2020	101.0
Silver	250	242	96.8	250	243	97.2	250	248	99.2
Sodium	anr								
Thallium	anr								
Tin									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071409.ASC Date Analyzed: 07/14/09 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7359 Units: ug/l

Time:		21:14			21:57			22:39	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	2000	1920	96.0	2000	1970	98.5	2000	1970	98.5
Barium	2000	1950	97.5	2000	1990	99.5	2000	1990	99.5
Beryllium	anr								
Cadmium	2000	2030	101.5	2000	2080	104.0	2000	2080	104.0
Calcium	anr								
Chromium	2000	2000	100.0	2000	2050	102.5	2000	2050	102.5
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	2000	2050	102.5	2000	2090	104.5	2000	2090	104.5
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Potassium	anr								
Selenium	2000	2010	100.5	2000	2050	102.5	2000	2050	102.5
Silver	250	245	98.0	250	248	99.2	250	249	99.6
Sodium	anr								
Thallium	anr								
Tin									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071409.ASC Date Analyzed: 07/14/09 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7359 Units: ug/l

Time:		23:21			23:50	
Sample ID:	CCV	CCV12		CCV	CCV13	
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum	anr					
Antimony	anr					
Arsenic	2000	1960	98.0	2000	1970	98.5
Barium	2000	1990	99.5	2000	1990	99.5
Beryllium	anr					
Cadmium	2000	2080	104.0	2000	2080	104.0
Calcium	anr					
Chromium	2000	2040	102.0	2000	2040	102.0
Cobalt	anr					
Copper	anr					
Iron	anr					
Lead	2000	2090	104.5	2000	2090	104.5
Magnesium	anr					
Manganese	anr					
Molybdenum						
Nickel	anr					
Potassium	anr					
Selenium	2000	2040	102.0	2000	2050	102.5
Silver	250	249	99.6	250	248	99.2
Sodium	anr					
Thallium	anr					
Tin						
Vanadium	anr					
Zinc	anr					

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071409.ASC Date Analyzed: 07/14/09 Methods: SW846 6010B
QC Limits: 95 to 105 % Recovery Run ID: MA7359 Units: ug/l

Time:		09:25	
Sample ID:	HSTD	HSTD1	
Metal	True	Results	% Rec
Aluminum	anr		
Antimony	anr		
Arsenic	4000	4040	101.0
Barium	4000	4010	100.3
Beryllium	anr		
Cadmium	4000	4000	100.0
Calcium	anr		
Chromium	4000	4010	100.3
Cobalt	anr		
Copper	anr		
Iron	anr		
Lead	4000	4010	100.3
Magnesium	anr		
Manganese	anr		
Molybdenum			
Nickel	anr		
Potassium	anr		
Selenium	4000	4040	101.0
Silver	500	504	100.8
Sodium	anr		
Thallium	anr		
Tin			
Vanadium	anr		
Zinc	anr		

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071409.ASC Date Analyzed: 07/14/09 Methods: SW846 6010B
QC Limits: CRI 70-130% CRIA 70-130% Run ID: MA7359 Units: ug/l

Time:			09:37		23:40	
Sample ID:	CRI	CRIA	CRIA1		CRIA2	
Metal	True	True	Results	% Rec	Results	% Rec
Aluminum	400	200	anr			
Antimony	10	5.0	anr			
Arsenic	20	10	10.9	109.0	10.7	107.0
Barium	400	200	213	106.5	199	99.5
Beryllium	10	5.0	anr			
Cadmium	10	5.0	5.6	112.0	5.4	108.0
Calcium	2000	1000	anr			
Chromium	20	10	10.6	106.0	10.4	104.0
Cobalt	100	50	anr			
Copper	50	25	anr			
Iron	600	300	anr			
Lead	10	5.0	6.1	122.0	6.6	132.0*(a
Magnesium	10000	5000	anr			
Manganese	30	15	anr			
Molybdenum	100	50				
Nickel	80	40	anr			
Potassium	20000	10000	anr			
Selenium	20	10	12.2	122.0	10.7	107.0
Silver	20	10	9.5	95.0	9.3	93.0
Sodium	20000	10000	anr			
Thallium	20	10	anr			
Tin	100	50				
Vanadium	100	50	anr			
Zinc	40	20	anr			

(*) Outside of QC limits
(anr) Analyte not requested
(a) Possible instrument baseline drift.

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071409.ASC Date Analyzed: 07/14/09 Methods: SW846 6010B
QC Limits: 80 to 120 % Recovery Run ID: MA7359 Units: ug/l

Time:			09:47		09:49		23:43		23:47	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	500000	500000	493000	98.6	497000	99.4	489000	97.8	494000	98.8
Antimony		1000	1.9		1060	106.0	-2.1		1030	103.0
Arsenic		1000	0.040		1030	103.0	1.5		1020	102.0
Barium		500	0.80		559	111.8	0.93		526	105.2
Beryllium		500	0.080		528	105.6	0.11		514	102.8
Cadmium		1000	0.090		1030	103.0	1.7		1010	101.0
Calcium	500000	500000	455000	91.0	452000	90.4	429000	85.8	433000	86.6
Chromium		500	0.60		498	99.6	0.79		485	97.0
Cobalt		500	0.66		530	106.0	0.86		517	103.4
Copper		500	-5.3		549	109.8	-4.4		522	104.4
Iron	200000	200000	186000	93.0	191000	95.5	181000	90.5	188000	94.0
Lead		1000	1.4		1020	102.0	2.6		1000	100.0
Magnesium	500000	500000	504000	100.8	497000	99.4	480000	96.0	480000	96.0
Manganese		500	0.59		521	104.2	0.58		505	101.0
Molybdenum		1000	0.52		996	99.6	0.22		969	96.9
Nickel		1000	0.73		977	97.7	0.72		944	94.4
Potassium			245		-160		252		-130	
Selenium		1000	1.3		1030	103.0	0.030		1000	100.0
Silver		1000	0.70		1060	106.0	-0.060		1050	105.0
Sodium			-110		203		-30		374	
Thallium		1000	-0.040		991	99.1	-1.3		970	97.0
Tin		1000	-2.6		913	91.3	0.20		880	88.0
Vanadium		500	1.5		519	103.8	1.3		504	100.8
Zinc		1000	0.38		995	99.5	0.25		970	97.0

(*) Outside of QC limits
(anr) Analyte not requested

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071509.ASC Date Analyzed: 07/15/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7361
Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:33	MA7361-HSTD1	1		
09:36	MA7361-ICV1	1		
09:44	MA7361-ICB1	1		
09:48	MA7361-CRIA1	1		
09:54	MA7361-CRI1	1		
10:00	MA7361-ICSA1	1		
10:02	MA7361-ICSAB1	1		
10:09	MA7361-CCV1	1		
10:18	MA7361-CCB1	1		
14:22	MA7361-CCV2	1		
14:27	MA7361-CCB2	1		
14:32	F66479-1	20		(sample used for QC only; not part of login F66519)
14:35	MP16675-D1	20		
14:38	MP16675-SD1	100		
14:42	MP16675-S1	20		
14:45	MA7361-CCV3	1		
14:50	MA7361-CCB3	1		
15:00	ZZZZZZ	10		
15:05	MP16669-MB1	1		
15:08	MP16669-B1	1		
15:11	F66519-10A	10		
15:15	MP16669-D1	10		
15:18	MP16669-SD1	50		
15:22	MP16669-S1	10		
15:25	MP16669-S2	10		
15:28	F66519-1A	20		
15:32	F66519-2A	20		
15:35	MA7361-CCV4	1		
15:40	MA7361-CCB4	1		
15:43	F66519-3A	20		
15:46	F66519-4A	20		
15:50	F66519-5A	5		
15:53	F66519-6A	20		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071509.ASC Date Analyzed: 07/15/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7361
Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

	Time	Sample Description	Dilution Factor	PS Recov	Comments
	15:57	F66519-8A	4		
	16:00	F66519-7A	20		
	16:03	F66519-9A	20		
	16:07	ZZZZZZ	1		
	16:10	ZZZZZZ	1		
	16:14	ZZZZZZ	1		
	16:17	MA7361-CCV5	1		
	16:21	MA7361-CCB5	1		
	16:25	ZZZZZZ	1		
	16:28	ZZZZZZ	1		
	16:32	ZZZZZZ	1		
	16:35	ZZZZZZ	1		
	16:38	ZZZZZZ	1		
	16:42	ZZZZZZ	1		
	16:45	ZZZZZZ	1		
	16:50	MP16669-MB2A	1		
---------->	Last reportable sample/prep for job F66519				
	16:53	MP16681-MB1	1		
	16:57	MP16681-B1	1		
	17:00	MA7361-CCV6	1		
	17:04	MA7361-CCB6	1		
---------->	Last reportable CCB for job F66519				
	17:08	F66576-1	1		(sample used for QC only; not part of login F66519)
	17:11	MP16681-D1	1		
	17:15	MP16681-SD1	5		
	17:18	MP16681-PS1	1		
	17:29	MP16681-S1	1		
	17:33	ZZZZZZ	1		
	17:36	ZZZZZZ	1		
	17:40	ZZZZZZ	1		
	17:43	ZZZZZZ	1		
	17:46	ZZZZZZ	1		
	17:50	MA7361-CCV7	1		
	17:54	MA7361-CCB7	1		
	17:58	MP16679-MB1	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071509.ASC Date Analyzed: 07/15/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7361
Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Dilution Factor	PS Recov	Comments
18:01	MP16679-B1	1		
18:05	F66564-4	1		(sample used for QC only; not part of login F66519)
18:08	MP16679-D1	1		
18:11	MP16679-SD1	5		
18:15	MP16679-PS1	1		
18:18	MP16679-S1	1		
18:22	MP16679-S2	1		
18:25	ZZZZZZ	1		
18:28	ZZZZZZ	1		
18:32	MA7361-CCV8	1		
18:36	MA7361-CCB8	1		

Refer to raw data for calibration curve and standards.

INTERNAL STANDARD SUMMARY

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071509.ASC Date Analyzed: 07/15/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7361
Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Istd#1
09:33	MA7361-HSTD1	6662
09:36	MA7361-ICV1	6813
09:44	MA7361-ICB1	7238 R
09:48	MA7361-CRIA1	7217
09:54	MA7361-CRI1	7059
10:00	MA7361-ICSA1	6282
10:02	MA7361-ICSAB1	6262
10:09	MA7361-CCV1	6850
10:18	MA7361-CCB1	7184
14:22	MA7361-CCV2	6948
14:27	MA7361-CCB2	7260
14:32	F66479-1	7140
14:35	MP16675-D1	7110
14:38	MP16675-SD1	7175
14:42	MP16675-S1	7081
14:45	MA7361-CCV3	7270
14:50	MA7361-CCB3	7254
15:00	ZZZZZZ	6996
15:05	MP16669-MB1	7276
15:08	MP16669-B1	7011
15:11	F66519-10A	6191
15:15	MP16669-D1	6110
15:18	MP16669-SD1	6759
15:22	MP16669-S1	6094
15:25	MP16669-S2	6109
15:28	F66519-1A	6009
15:32	F66519-2A	5924
15:35	MA7361-CCV4	6876
15:40	MA7361-CCB4	7206
15:43	F66519-3A	6034
15:46	F66519-4A	6225
15:50	F66519-5A	6043
15:53	F66519-6A	6068

INTERNAL STANDARD SUMMARY

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071509.ASC Date Analyzed: 07/15/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7361
Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Istd#1
15:57	F66519-8A	6141
16:00	F66519-7A	6065
16:03	F66519-9A	6265
16:07	ZZZZZZ	7073
16:10	ZZZZZZ	7119
16:14	ZZZZZZ	7053
16:17	MA7361-CCV5	6913
16:21	MA7361-CCB5	7134
16:25	ZZZZZZ	6991
16:28	ZZZZZZ	7102
16:32	ZZZZZZ	7111
16:35	ZZZZZZ	7214
16:38	ZZZZZZ	7237
16:42	ZZZZZZ	6793
16:45	ZZZZZZ	6880
16:50	MP16669-MB2A	7217
16:53	MP16681-MB1	7310
16:57	MP16681-B1	7009
17:00	MA7361-CCV6	6900
17:04	MA7361-CCB6	7242
17:08	F66576-1	6573
17:11	MP16681-D1	6535
17:15	MP16681-SD1	6998
17:18	MP16681-PS1	6543
17:29	MP16681-S1	6631
17:33	ZZZZZZ	6550
17:36	ZZZZZZ	7224
17:40	ZZZZZZ	6019
17:43	ZZZZZZ	5403
17:46	ZZZZZZ	5941
17:50	MA7361-CCV7	6942
17:54	MA7361-CCB7	7194
17:58	MP16679-MB1	7154

INTERNAL STANDARD SUMMARY

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071509.ASC Date Analyzed: 07/15/09 Methods: SW846 6010B
Analyst: RS Run ID: MA7361
Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Istd#1
18:01	MP16679-B1	6934
18:05	F66564-4	6160
18:08	MP16679-D1	6309
18:11	MP16679-SD1	6747
18:15	MP16679-PS1	6288
18:18	MP16679-S1	6375
18:22	MP16679-S2	6088
18:25	ZZZZZZ	6022
18:28	ZZZZZZ	6789
18:32	MA7361-CCV8	7160
18:36	MA7361-CCB8	7448

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium	60-125 %

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071509.ASC Date Analyzed: 07/15/09 Methods: SW846 6010B
QC Limits: result < RL Run ID: MA7361 Units: ug/l

Time:			09:44		10:18		14:27		14:50	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	11	anr							
Antimony	6.0	4.5	anr							
Arsenic	10	3.6	2.3	<10	-0.36	<10	2.7	<10	3.1	<10
Barium	200	5	-0.35	<200	0.0	<200	-0.17	<200	-0.18	<200
Beryllium	4.0	1	anr							
Cadmium	5.0	1	-0.020	<5.0	0.40	<5.0	0.24	<5.0	0.29	<5.0
Calcium	1000	100	anr							
Chromium	10	1.6	0.20	<10	0.61	<10	0.26	<10	0.29	<10
Cobalt	50	.83	anr							
Copper	25	2.1	anr							
Iron	300	23	anr							
Lead	5.0	2	1.5	<5.0	0.62	<5.0	1.2	<5.0	0.42	<5.0
Magnesium	5000	100	anr							
Manganese	15	.5	anr							
Molybdenum	50	2.8	anr							
Nickel	40	2.3	anr							
Potassium	10000	100	anr							
Selenium	20	3.1	2.4	<20	0.71	<20	0.66	<20	0.77	<20
Silver	10	1.2	0.83	<10	0.87	<10	1.1	<10	0.53	<10
Sodium	10000	500	anr							
Thallium	10	3.4	anr							
Tin	50	2.8								
Vanadium	50	.66	anr							
Zinc	20	3.8	anr							

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071509.ASC Date Analyzed: 07/15/09 Methods: SW846 6010B
QC Limits: result < RL Run ID: MA7361 Units: ug/l

Time:			15:40		16:21		17:04	
Sample ID:			CCB4		CCB5		CCB6	
Metal	RL	IDL	raw	final	raw	final	raw	final
Aluminum	200	11	anr					
Antimony	6.0	4.5	anr					
Arsenic	10	3.6	3.4	<10	2.2	<10	2.5	<10
Barium	200	5	-0.22	<200	-0.21	<200	-0.29	<200
Beryllium	4.0	1	anr					
Cadmium	5.0	1	0.17	<5.0	0.20	<5.0	0.070	<5.0
Calcium	1000	100	anr					
Chromium	10	1.6	0.12	<10	0.17	<10	0.37	<10
Cobalt	50	.83	anr					
Copper	25	2.1	anr					
Iron	300	23	anr					
Lead	5.0	2	0.74	<5.0	1.1	<5.0	1.1	<5.0
Magnesium	5000	100	anr					
Manganese	15	.5	anr					
Molybdenum	50	2.8	anr					
Nickel	40	2.3	anr					
Potassium	10000	100	anr					
Selenium	20	3.1	-0.31	<20	-1.0	<20	2.0	<20
Silver	10	1.2	0.69	<10	1.3	<10	0.64	<10
Sodium	10000	500	anr					
Thallium	10	3.4	anr					
Tin	50	2.8						
Vanadium	50	.66	anr					
Zinc	20	3.8	anr					

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071509.ASC Date Analyzed: 07/15/09 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7361 Units: ug/l

Time:		09:36			10:09			14:22	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	2000	2000	100.0	2000	1980	99.0	2000	2010	100.5
Barium	2000	2070	103.5	2000	2080	104.0	2000	2090	104.5
Beryllium	anr								
Cadmium	2000	2100	105.0	2000	2070	103.5	2000	2120	106.0
Calcium	anr								
Chromium	2000	2060	103.0	2000	2040	102.0	2000	2090	104.5
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	2000	2090	104.5	2000	2050	102.5	2000	2100	105.0
Magnesium	anr								
Manganese	anr								
Molybdenum	anr								
Nickel	anr								
Potassium	anr								
Selenium	2000	2070	103.5	2000	2050	102.5	2000	2090	104.5
Silver	250	249	99.6	250	245	98.0	250	244	97.6
Sodium	anr								
Thallium	anr								
Tin									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071509.ASC Date Analyzed: 07/15/09 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7361 Units: ug/l

Time:		14:45			15:35			16:17	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	2000	1930	96.5	2000	2000	100.0	2000	2020	101.0
Barium	2000	2010	100.5	2000	2110	105.5	2000	2130	106.5
Beryllium	anr								
Cadmium	2000	2030	101.5	2000	2080	104.0	2000	2110	105.5
Calcium	anr								
Chromium	2000	1990	99.5	2000	2060	103.0	2000	2090	104.5
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	2000	2010	100.5	2000	2060	103.0	2000	2080	104.0
Magnesium	anr								
Manganese	anr								
Molybdenum	anr								
Nickel	anr								
Potassium	anr								
Selenium	2000	2000	100.0	2000	2060	103.0	2000	2070	103.5
Silver	250	235	94.0	250	243	97.2	250	244	97.6
Sodium	anr								
Thallium	anr								
Tin									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071509.ASC Date Analyzed: 07/15/09 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7361 Units: ug/l

Time:		17:00	
Sample ID:	CCV	CCV6	
Metal	True	Results	% Rec
Aluminum	anr		
Antimony	anr		
Arsenic	2000	2020	101.0
Barium	2000	2130	106.5
Beryllium	anr		
Cadmium	2000	2120	106.0
Calcium	anr		
Chromium	2000	2090	104.5
Cobalt	anr		
Copper	anr		
Iron	anr		
Lead	2000	2090	104.5
Magnesium	anr		
Manganese	anr		
Molybdenum	anr		
Nickel	anr		
Potassium	anr		
Selenium	2000	2080	104.0
Silver	250	246	98.4
Sodium	anr		
Thallium	anr		
Tin			
Vanadium	anr		
Zinc	anr		

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071509.ASC Date Analyzed: 07/15/09 Methods: SW846 6010B
QC Limits: 95 to 105 % Recovery Run ID: MA7361 Units: ug/l

Time:		09:33	
Sample ID:	HSTD	HSTD1	
Metal	True	Results	% Rec
Aluminum	anr		
Antimony	anr		
Arsenic	4000	4010	100.3
Barium	4000	4000	100.0
Beryllium	anr		
Cadmium	4000	3970	99.3
Calcium	anr		
Chromium	4000	3990	99.8
Cobalt	anr		
Copper	anr		
Iron	anr		
Lead	4000	3980	99.5
Magnesium	anr		
Manganese	anr		
Molybdenum	anr		
Nickel	anr		
Potassium	anr		
Selenium	4000	4020	100.5
Silver	500	501	100.2
Sodium	anr		
Thallium	anr		
Tin			
Vanadium	anr		
Zinc	anr		

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071509.ASC Date Analyzed: 07/15/09 Methods: SW846 6010B
QC Limits: CRI 70-130% CRIA 70-130% Run ID: MA7361 Units: ug/l

Time:			09:48		09:54	
Sample ID:	CRI	CRIA	CRIA1		CRI1	
Metal	True	True	Results	% Rec	Results	% Rec
Aluminum	400	200	anr			
Antimony	10	5.0	anr			
Arsenic	20	10	12.4	124.0		
Barium	400	200	209	104.5		
Beryllium	10	5.0	anr			
Cadmium	10	5.0	5.5	110.0		
Calcium	2000	1000	anr			
Chromium	20	10	10.8	108.0		
Cobalt	100	50	anr			
Copper	50	25	anr			
Iron	600	300	anr			
Lead	10	5.0	5.3	106.0		
Magnesium	10000	5000	anr			
Manganese	30	15	anr			
Molybdenum	100	50	anr			
Nickel	80	40	anr			
Potassium	20000	10000	anr			
Selenium	20	10			21.2	106.0
Silver	20	10	10.7	107.0		
Sodium	20000	10000	anr			
Thallium	20	10	anr			
Tin	100	50				
Vanadium	100	50	anr			
Zinc	40	20	anr			

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR071509.ASC Date Analyzed: 07/15/09 Methods: SW846 6010B
QC Limits: 80 to 120 % Recovery Run ID: MA7361 Units: ug/l

Time:			10:00		10:02	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1	
Metal	True	True	Results	% Rec	Results	% Rec
Aluminum	500000	500000	488000	97.6	493000	98.6
Antimony		1000	1.0		1070	107.0
Arsenic		1000	-0.010		1060	106.0
Barium		500	0.49		555	111.0
Beryllium		500	-0.20		530	106.0
Cadmium		1000	0.070		1030	103.0
Calcium	500000	500000	453000	90.6	452000	90.4
Chromium		500	1.1		501	100.2
Cobalt		500	1.2		533	106.6
Copper		500	-3.9		552	110.4
Iron	200000	200000	186000	93.0	192000	96.0
Lead		1000	1.3		1020	102.0
Magnesium	500000	500000	501000	100.2	495000	99.0
Manganese		500	0.56		521	104.2
Molybdenum		1000	-0.10		997	99.7
Nickel		1000	0.47		983	98.3
Potassium			250		-140	
Selenium		1000	-5.0		1020	102.0
Silver		1000	0.88		1060	106.0
Sodium			34.6		335	
Thallium		1000	-0.020		976	97.6
Tin		1000	-2.5		927	92.7
Vanadium		500	-0.74		516	103.2
Zinc		1000	-0.24		1010	101.0

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP16658
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date:					07/10/09		07/10/09
Metal	RL	IDL	MDL	MB raw	final	MB raw	final
Aluminum	200	11	11				
Antimony	6.0	4.5	4.5				
Arsenic	10	3.6	5.4	2.1	<10	0.44	<10
Barium	200	5	5	0.050	<200	0.34	<200
Beryllium	4.0	1	1				
Cadmium	5.0	1	1	0.14	<5.0	0.080	<5.0
Calcium	1000	100	100				
Chromium	10	1.6	2	0.0	<10	-0.27	<10
Cobalt	50	.83	1				
Copper	25	2.1	5				
Iron	300	23	23				
Lead	5.0	2	2	1.1	<5.0	1.7	<5.0
Magnesium	5000	100	100				
Manganese	15	.5	1				
Molybdenum	50	2.8	5				
Nickel	40	2.3	2.3				
Potassium	10000	100	100				
Selenium	10	3.1	3.4	2.3	<10	0.0	<10
Silver	10	1.2	1.4	-0.61	<10	-0.64	<10
Sodium	10000	500	500				
Thallium	10	3.4	3.6				
Tin	50	2.8	2.8				
Vanadium	50	.66	.9				
Zinc	20	3.8	7.4				

Associated samples MP16658: F66519-1, F66519-2, F66519-3, F66519-4, F66519-5, F66519-6, F66519-7, F66519-8, F66519-9, F66519-10

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP16658
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date:	07/10/09						07/10/09		
Metal	F66519-10 Original	DUP	RPD	QC Limits	F66519-10 Original	MS	Spikelot MPFLICP1	% Rec	QC Limits
Aluminum	anr								
Antimony	anr								
Arsenic	0.00	0.00	NC	0-20	0.00	2280	2000	114.0	80-120
Barium	0.00	0.00	NC	0-20	0.00	2060	2000	103.0	80-120
Beryllium	anr								
Cadmium	0.0	0.0	NC	0-20	0.0	55.1	50	110.2	80-120
Calcium	anr								
Chromium	0.0	0.0	NC	0-20	0.0	215	200	107.5	80-120
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	0.00	0.0	NC	0-20	0.00	540	500	108.0	80-120
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Potassium	anr								
Selenium	60.0	0.00	200.0(a)	0-20	60.0	2300	2000	112.0	80-120
Silver	0.0	0.0	NC	0-20	0.0	51.8	50	103.6	80-120
Sodium	anr								
Thallium	anr								
Tin									
Vanadium	anr								
Zinc	anr								

Associated samples MP16658: F66519-1, F66519-2, F66519-3, F66519-4, F66519-5, F66519-6, F66519-7, F66519-8, F66519-9, F66519-10

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) RPD acceptable due to low duplicate and sample concentrations.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP16658
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 07/10/09

Metal	F66519-10 Original	MSD	Spikelot MPFLICP1	% Rec	MSD RPD	QC Limit
Aluminum	anr					
Antimony	anr					
Arsenic	0.00	2340	2000	117.0	2.6	20
Barium	0.00	2100	2000	105.0	1.9	20
Beryllium	anr					
Cadmium	0.0	55.9	50	111.8	1.4	20
Calcium	anr					
Chromium	0.0	220	200	110.0	2.3	20
Cobalt	anr					
Copper	anr					
Iron	anr					
Lead	0.00	554	500	110.8	2.6	20
Magnesium	anr					
Manganese	anr					
Molybdenum						
Nickel	anr					
Potassium	anr					
Selenium	60.0	2390	2000	116.5	3.8	20
Silver	0.0	51.7	50	103.4	0.2	20
Sodium	anr					
Thallium	anr					
Tin						
Vanadium	anr					
Zinc	anr					

Associated samples MP16658: F66519-1, F66519-2, F66519-3, F66519-4, F66519-5, F66519-6, F66519-7, F66519-8, F66519-9, F66519-10

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP16658
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 07/10/09

Metal	BSP Result	Spikelot MPFLICP1	% Rec	QC Limits
Aluminum	anr			
Antimony	anr			
Arsenic	1970	2000	98.5	80-120
Barium	2010	2000	100.5	80-120
Beryllium	anr			
Cadmium	53.0	50	106.0	80-120
Calcium	anr			
Chromium	211	200	105.5	80-120
Cobalt	anr			
Copper	anr			
Iron	anr			
Lead	535	500	107.0	80-120
Magnesium	anr			
Manganese	anr			
Molybdenum				
Nickel	anr			
Potassium	anr			
Selenium	2020	2000	101.0	80-120
Silver	48.0	50	96.0	80-120
Sodium	anr			
Thallium	anr			
Tin				
Vanadium	anr			
Zinc	anr			

Associated samples MP16658: F66519-1, F66519-2, F66519-3, F66519-4, F66519-5, F66519-6, F66519-7, F66519-8, F66519-9, F66519-10

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP16658
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 07/10/09

Metal	F66519-10 Original	SDL 10:50%DIF		QC Limits
Aluminum	anr			
Antimony	anr			
Arsenic	0.00	0.00	NC	0-10
Barium	0.00	0.00	NC	0-10
Beryllium	anr			
Cadmium	0.00	0.00	NC	0-10
Calcium	anr			
Chromium	0.00	0.00	NC	0-10
Cobalt	anr			
Copper	anr			
Iron	anr			
Lead	0.00	0.00	NC	0-10
Magnesium	anr			
Manganese	anr			
Molybdenum				
Nickel	anr			
Potassium	anr			
Selenium	60.0	0.00	100.0(a)	0-10
Silver	0.00	0.00	NC	0-10
Sodium	anr			
Thallium	anr			
Tin				
Vanadium	anr			
Zinc	anr			

Associated samples MP16658: F66519-1, F66519-2, F66519-3, F66519-4, F66519-5, F66519-6, F66519-7, F66519-8, F66519-9, F66519-10

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP16669
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date:					07/13/09		07/13/09
Metal	RL	IDL	MDL	MB raw	final	MB raw	final
Aluminum	200	11	11				
Antimony	6.0	4.5	4.5				
Arsenic	10	3.6	5.4	2.5	<10	1.5	<10
Barium	200	5	5	-0.22	<200	0.050	<200
Beryllium	4.0	1	1				
Cadmium	5.0	1	1	-0.070	<5.0	0.030	<5.0
Calcium	1000	100	100				
Chromium	10	1.6	2	0.44	<10	0.49	<10
Cobalt	50	.83	1				
Copper	25	2.1	5				
Iron	300	23	23				
Lead	5.0	2	2	1.2	<5.0	0.63	<5.0
Magnesium	5000	100	100				
Manganese	15	.5	1				
Molybdenum	50	2.8	5				
Nickel	40	2.3	2.3				
Potassium	10000	100	100				
Selenium	20	3.1	3.4	0.65	<20	-0.070	<20
Silver	10	1.2	1.4	0.60	<10	0.030	<10
Sodium	10000	500	500				
Thallium	10	3.4	3.6				
Tin	50	2.8	2.8				
Vanadium	50	.66	.9				
Zinc	20	3.8	7.4				

Associated samples MP16669: F66519-1A, F66519-2A, F66519-3A, F66519-4A, F66519-5A, F66519-6A, F66519-7A, F66519-8A, F66519-9A, F66519-10A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP16669
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date:	07/13/09						07/13/09		
Metal	F66519-10A Original	DUP	RPD	QC Limits	F66519-10A Original	MS	Spikelot MPFLICP1	% Rec	QC Limits
Aluminum	anr								
Antimony	anr								
Arsenic	0.00	64.8 (a)	200.0(b)	0-20	0.00	2490 (a)	2000	124.5N(c	80-120
Barium	0.00	0.00 (a)	NC	0-20	0.00	2320 (a)	2000	116.0	80-120
Beryllium	anr								
Cadmium	0.0	0.0 (a)	NC	0-20	0.0	57.1 (a)	50	114.2	80-120
Calcium	anr								
Chromium	0.0	0.0 (a)	NC	0-20	0.0	230 (a)	200	115.0	80-120
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	0.0	0.0 (a)	NC	0-20	0.0	552 (a)	500	110.4	80-120
Magnesium	anr								
Manganese	anr								
Molybdenum	anr								
Nickel	anr								
Potassium	anr								
Selenium	36.4	46.6 (a)	24.6 (b)	0-20	36.4	2490 (a)	2000	122.7N(c	80-120
Silver	0.0	0.0 (a)	NC	0-20	0.0	58.6 (a)	50	117.2	80-120
Sodium	anr								
Thallium	anr								
Tin									
Vanadium	anr								
Zinc	anr								

Associated samples MP16669: F66519-1A, F66519-2A, F66519-3A, F66519-4A, F66519-5A, F66519-6A, F66519-7A, F66519-8A, F66519-9A, F66519-10A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Elevated reporting limit(s) due to matrix interference.
(b) RPD acceptable due to low duplicate and sample concentrations.
(c) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP16669
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 07/13/09

Metal	F66519-10A Original	MSD	Spikelot MPFLICP1	% Rec	MSD RPD	QC Limit
Aluminum	anr					
Antimony	anr					
Arsenic	0.00	2350 (a)	2000	117.5	5.8	20
Barium	0.00	2210 (a)	2000	110.5	4.9	20
Beryllium	anr					
Cadmium	0.0	54.0 (a)	50	108.0	5.6	20
Calcium	anr					
Chromium	0.0	217 (a)	200	108.5	5.8	20
Cobalt	anr					
Copper	anr					
Iron	anr					
Lead	0.0	518 (a)	500	103.6	6.4	20
Magnesium	anr					
Manganese	anr					
Molybdenum	anr					
Nickel	anr					
Potassium	anr					
Selenium	36.4	2360 (a)	2000	116.2	5.4	20
Silver	0.0	56.4 (a)	50	112.8	3.8	20
Sodium	anr					
Thallium	anr					
Tin						
Vanadium	anr					
Zinc	anr					

Associated samples MP16669: F66519-1A, F66519-2A, F66519-3A, F66519-4A, F66519-5A, F66519-6A, F66519-7A, F66519-8A, F66519-9A, F66519-10A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Elevated reporting limit(s) due to matrix interference.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP16669
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 07/13/09

Metal	BSP Result	Spikelot MPFLICP1	% Rec	QC Limits
Aluminum	anr			
Antimony	anr			
Arsenic	2070	2000	103.5	80-120
Barium	2160	2000	108.0	80-120
Beryllium	anr			
Cadmium	55.2	50	110.4	80-120
Calcium	anr			
Chromium	221	200	110.5	80-120
Cobalt	anr			
Copper	anr			
Iron	anr			
Lead	547	500	109.4	80-120
Magnesium	anr			
Manganese	anr			
Molybdenum	anr			
Nickel	anr			
Potassium	anr			
Selenium	2090	2000	104.5	80-120
Silver	46.1	50	92.2	80-120
Sodium	anr			
Thallium	anr			
Tin				
Vanadium	anr			
Zinc	anr			

Associated samples MP16669: F66519-1A, F66519-2A, F66519-3A, F66519-4A, F66519-5A, F66519-6A, F66519-7A, F66519-8A, F66519-9A, F66519-10A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP16669
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 07/13/09

Metal	F66519-10A Original	SDL 10:50%	DIF	QC Limits
Aluminum	anr			
Antimony	anr			
Arsenic	0.00	204		0-10
Barium	0.00	0.00	NC	0-10
Beryllium	anr			
Cadmium	0.00	0.00	NC	0-10
Calcium	anr			
Chromium	0.00	0.00	NC	0-10
Cobalt	anr			
Copper	anr			
Iron	anr			
Lead	0.00	0.00	NC	0-10
Magnesium	anr			
Manganese	anr			
Molybdenum	anr			
Nickel	anr			
Potassium	anr			
Selenium	36.4	0.00	100.0(a)	0-10
Silver	0.00	0.00	NC	0-10
Sodium	anr			
Thallium	anr			
Tin				
Vanadium	anr			
Zinc	anr			

Associated samples MP16669: F66519-1A, F66519-2A, F66519-3A, F66519-4A, F66519-5A, F66519-6A, F66519-7A, F66519-8A, F66519-9A, F66519-10A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP16670 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 07/14/09

Metal	RL	IDL	MDL	MB raw	final
Mercury	1.0	.14	.15	-0.040	<1.0

Associated samples MP16670: F66519-1, F66519-2, F66519-3, F66519-4, F66519-10

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP16670
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 07/14/09 07/14/09

Metal	F66519-10 Original	DUP	RPD	QC Limits	F66519-10 Original	MS	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.0	0.0	NC	0-20	0.0	3.0	3	100.0	80-120

Associated samples MP16670: F66519-1, F66519-2, F66519-3, F66519-4, F66519-10

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP16670 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 07/14/09

Metal	F66519-10 Original	MSD	Spikelot HGFLWS1	% Rec	MSD RPD	QC Limit
Mercury	0.0	3.2	3	106.7	6.5	20

Associated samples MP16670: F66519-1, F66519-2, F66519-3, F66519-4, F66519-10

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP16670
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 07/14/09

Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	2.9	3	96.7	80-120

Associated samples MP16670: F66519-1, F66519-2, F66519-3, F66519-4, F66519-10

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP16670
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 07/14/09

Metal	F66519-10 Original	SDL 1:5	%DIF	QC Limits
Mercury	0.00	0.00	NC	0-10

Associated samples MP16670: F66519-1, F66519-2, F66519-3, F66519-4, F66519-10

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP16671
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 07/14/09

Metal	RL	IDL	MDL	MB raw	final
Mercury	1.0	.14	.15	-0.043	<1.0

Associated samples MP16671: F66519-5, F66519-6, F66519-7, F66519-8, F66519-9, F66519-1A, F66519-2A, F66519-3A, F66519-4A, F66519-5A, F66519-6A, F66519-7A, F66519-8A, F66519-9A, F66519-10A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP16671
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 07/14/09 07/14/09

Metal	F66519-10A Original	DUP	RPD	QC Limits	F66519-10A Original	MS	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.0	0.0	NC	0-20	0.0	3.0	3	100.0	80-120

Associated samples MP16671: F66519-5, F66519-6, F66519-7, F66519-8, F66519-9, F66519-1A, F66519-2A, F66519-3A, F66519-4A, F66519-5A, F66519-6A, F66519-7A, F66519-8A, F66519-9A, F66519-10A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP16671
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 07/14/09

Metal	F66519-10A Original	MSD	Spikelot HGFLWS1	% Rec	MSD RPD	QC Limit
Mercury	0.0	3.0	3	100.0	0.0	20

Associated samples MP16671: F66519-5, F66519-6, F66519-7, F66519-8, F66519-9, F66519-1A, F66519-2A, F66519-3A, F66519-4A, F66519-5A, F66519-6A, F66519-7A, F66519-8A, F66519-9A, F66519-10A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP16671
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 07/14/09

Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	3.0	3	100.0	80-120

Associated samples MP16671: F66519-5, F66519-6, F66519-7, F66519-8, F66519-9, F66519-1A, F66519-2A, F66519-3A, F66519-4A, F66519-5A, F66519-6A, F66519-7A, F66519-8A, F66519-9A, F66519-10A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP16671
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 07/14/09

Metal	F66519-10A Original	SDL 1:5	%DIF	QC Limits
Mercury	0.00	0.00	NC	0-10

Associated samples MP16671: F66519-5, F66519-6, F66519-7, F66519-8, F66519-9, F66519-1A, F66519-2A, F66519-3A, F66519-4A, F66519-5A, F66519-6A, F66519-7A, F66519-8A, F66519-9A, F66519-10A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries
- Instrument Runlogs/QC

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Solids, Total Dissolved	GN35824	100	0.0	mg/l				

Associated Samples:
Batch GN35824: F66519-1, F66519-10, F66519-2, F66519-3, F66519-4, F66519-5, F66519-6, F66519-7, F66519-8, F66519-9
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F66519
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Solids, Total Dissolved	GN35824	F66576-1	mg/l	5600	3900	35.8(a)	0-5%

Associated Samples:
Batch GN35824: F66519-1, F66519-10, F66519-2, F66519-3, F66519-4, F66519-5, F66519-6, F66519-7, F66519-8, F66519-9
(*) Outside of QC limits
(a) RPD acceptable due to low duplicate and sample concentrations.

Southeast ACCUTEST Laboratories

IT'S ALL IN THE CHEMISTRY

11/03/09

Technical Report for

Tetra Tech, Inc

Holloman AFB; Alamogordo, NM

100-TEN-T93002

Accutest Job Number: F68624

Sampling Date: 10/06/09

Report to:

Tetra Tech
800 Oak Ridge Tpk. Suite A600
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ATTN: Ginger Mullins

Total number of pages in report: **44**

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Harry Behzadi, Ph.D.
Laboratory Director

Client Service contact: Sue Bell 407-425-6700

ACCUTEST LABORATORIES 50 YEARS 1956-2006

Certifications: FL (DOH E83510), NC (573), NJ (FL002), MA (FL946), IA (366), LA (03051), KS (E-10327), SC, AK

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Table of Contents

-1-

Section 1: Sample Summary **3**
Section 2: Case Narrative/Conformance Summary **4**
Section 3: Sample Results **5**
3.1: F68624-1: MW16-03-100609 6
3.2: F68624-2: MW16-04-100609 8
3.3: F68624-3: MW16-02-100609 10
3.4: F68624-4: MW16-01-100609 12
3.5: F68624-5: MW16-DUP01-100609 14
Section 4: Misc. Forms **16**
4.1: Chain of Custody 17
Section 5: GC Semi-volatiles - QC Data Summaries **19**
5.1: Method Blank Summary 20
5.2: Blank Spike Summary 22
5.3: Matrix Spike/Matrix Spike Duplicate Summary 23
5.4: DDT/Endrin Breakdown Checks 24
5.5: Surrogate Recovery Summaries 27
5.6: GC Surrogate Retention Time Summaries 28
5.7: Initial and Continuing Calibration Summaries 30
Section 6: General Chemistry - QC Data Summaries **42**
6.1: Method Blank and Spike Results Summary 43
6.2: Duplicate Results Summary 44

Accutest Laboratories

Sample Summary

Tetra Tech, Inc

Job No: F68624

Holloman AFB; Alamogordo, NM
Project No: 100-TEN-T93002

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
F68624-1	10/06/09	15:40	JB	10/08/09	AQ	Ground Water	MW16-03-100609
F68624-1D	10/06/09	15:40	JB	10/08/09	AQ	Water Dup/MSD	MW16-03-100609
F68624-1S	10/06/09	15:40	JB	10/08/09	AQ	Water Matrix Spike	MW16-03-100609
F68624-2	10/06/09	16:00	JB	10/08/09	AQ	Ground Water	MW16-04-100609
F68624-3	10/06/09	16:30	JB	10/08/09	AQ	Ground Water	MW16-02-100609
F68624-4	10/06/09	17:00	JB	10/08/09	AQ	Ground Water	MW16-01-100609
F68624-5	10/06/09	00:00	JB	10/08/09	AQ	Ground Water	MW16-DUP01-100609

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Tetra Tech, Inc **Job No:** F68624

Site: Holloman AFB; Alamogordo, NM **Report Date:** 11/3/2009 9:38:27 AM

5 Samples were collected on 10/06/2009 and were received at Accutest SE on 10/08/2009 properly preserved, at 4.8 Deg. C and intact. These Samples received an Accutest job number of F68624. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Extractables by GC by Method SW846 8081A

Matrix: AQ **Batch ID:** OP30575

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Samples F68624-1MS, F68624-1MSD were used as the QC samples indicated.

F68624-4, F68624-5: All hits confirmed by dual column analysis.

Wet Chemistry by Method SM19 2540C

Matrix: AQ **Batch ID:** GN36945

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample F68624-1DUP was used as the QC sample for Solids, Total Dissolved.

RPD for Duplicate for Solids, Total Dissolved is outside control limits for sample GN36945-D1. RPD acceptable due to low duplicate and sample concentrations.

Accutest Laboratories Southeast (ALSE) certifies that this report meets the project requirements for analytical data produced for the samples as received at ALSE and as stated on the COC. ALSE certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the ALSE Quality Manual except as noted above. This report is to be used in its entirety. ALSE is not responsible for any assumptions of data quality if partial data packages are used.

Narrative prepared by:

Date: November 3, 2009

Ellen Pampel, Inorganic QA (signature on file)

Tuesday, November 03, 2009

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MW16-03-100609		
Lab Sample ID:	F68624-1	**Date Sampled:**	10/06/09
Matrix:	AQ - Ground Water	**Date Received:**	10/08/09
Method:	SW846 8081A SW846 3510C	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	KK34426.D	1	10/14/09	FS	10/13/09	OP30575	GKK1173
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	10.0 ml
Run #2		

Pesticide Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
319-84-6	alpha-BHC	ND	0.050	0.010	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.050	0.010	ug/l	
60-57-1	Dieldrin	ND	0.050	0.010	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	91%		42-127%
2051-24-3	Decachlorobiphenyl	66%		27-127%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW16-03-100609		
Lab Sample ID:	F68624-1	**Date Sampled:**	10/06/09
Matrix:	AQ - Ground Water	**Date Received:**	10/08/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	4690	1000	100	mg/l	10	10/09/09 10:20	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW16-04-100609		
Lab Sample ID:	F68624-2	**Date Sampled:**	10/06/09
Matrix:	AQ - Ground Water	**Date Received:**	10/08/09
Method:	SW846 8081A SW846 3510C	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	KK34429.D	1	10/14/09	FS	10/13/09	OP30575	GKK1173
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	10.0 ml
Run #2		

Pesticide Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
319-84-6	alpha-BHC	ND	0.050	0.010	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.050	0.010	ug/l	
60-57-1	Dieldrin	ND	0.050	0.010	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	107%		42-127%
2051-24-3	Decachlorobiphenyl	92%		27-127%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW16-04-100609		
Lab Sample ID:	F68624-2	**Date Sampled:**	10/06/09
Matrix:	AQ - Ground Water	**Date Received:**	10/08/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	5590	1000	100	mg/l	10	10/09/09 10:20	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW16-02-100609		
Lab Sample ID:	F68624-3	**Date Sampled:**	10/06/09
Matrix:	AQ - Ground Water	**Date Received:**	10/08/09
Method:	SW846 8081A SW846 3510C	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	KK34430.D	1	10/14/09	FS	10/13/09	OP30575	GKK1173
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	10.0 ml
Run #2		

Pesticide Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
319-84-6	alpha-BHC	ND	0.050	0.010	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.050	0.010	ug/l	
60-57-1	Dieldrin	ND	0.050	0.010	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	93%		42-127%
2051-24-3	Decachlorobiphenyl	68%		27-127%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW16-02-100609		
Lab Sample ID:	F68624-3	**Date Sampled:**	10/06/09
Matrix:	AQ - Ground Water	**Date Received:**	10/08/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	5120	1000	100	mg/l	10	10/09/09 10:20	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW16-01-100609		
Lab Sample ID:	F68624-4	**Date Sampled:**	10/06/09
Matrix:	AQ - Ground Water	**Date Received:**	10/08/09
Method:	SW846 8081A SW846 3510C	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	KK34495.D	1	10/16/09	FS	10/13/09	OP30575	GKK1175
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	10.0 ml
Run #2		

Pesticide Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
319-84-6	alpha-BHC	ND	0.050	0.010	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.050	0.010	ug/l	
60-57-1	Dieldrin	0.020	0.050	0.010	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	104%		42-127%
2051-24-3	Decachlorobiphenyl	71%		27-127%

(a) All hits confirmed by dual column analysis.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW16-01-100609		
Lab Sample ID:	F68624-4	**Date Sampled:**	10/06/09
Matrix:	AQ - Ground Water	**Date Received:**	10/08/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	3020	1000	100	mg/l	10	10/09/09 10:20	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW16-DUP01-100609		
Lab Sample ID:	F68624-5	**Date Sampled:**	10/06/09
Matrix:	AQ - Ground Water	**Date Received:**	10/08/09
Method:	SW846 8081A SW846 3510C	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	KK34432.D	1	10/14/09	FS	10/13/09	OP30575	GKK1173
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	10.0 ml
Run #2		

Pesticide Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
319-84-6	alpha-BHC	ND	0.050	0.010	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.050	0.010	ug/l	
60-57-1	Dieldrin	0.015	0.050	0.010	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	100%		42-127%
2051-24-3	Decachlorobiphenyl	68%		27-127%

(a) All hits confirmed by dual column analysis.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW16-DUP01-100609		
Lab Sample ID:	F68624-5	**Date Sampled:**	10/06/09
Matrix:	AQ - Ground Water	**Date Received:**	10/08/09
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	3100	1000	100	mg/l	10	10/09/09 10:20	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Certification Exceptions
- Chain of Custody

Accutest Laboratories Southeast
Chain of Custody

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TEL. 407-425-6700 • FAX: 407-425-0707
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Accutest JOB # F68624 COC-016

PAGE 1 OF 1

Accutest Quote #

SKIFF#

Client / Reporting Information

Company Name: TETRA TECH
Address: 800 OAK RIDGE TURNPIKE A-600
City: OAK RIDGE State: TN Zip: 37830
Project Contact: GUNTER. HULLINGER@TETRATECH.COM
Phone#: 865-599-2349
Sampler(s) Name(s) (Printed)

Project Information

Project Name: HOLLOMAN AFB
Street
City: ALAMOGORDO State: NM
Project #: T93002
Fax #
Client Purchase Order #

Analytical Information

Accutest Sample #	Field ID / Point of Collection	Collection Date	Time	Sampled By	Matrix	Total # of Bottles	Other	None	HCl	HNO3	H2SO4	NaOH+ZnAc	DI Water	MeOH	Gamma BHC	Alpha BHC	Dieldrin	TDS
1	MW16-03-100609	10/6/09	1540	JB	GW	3		X							X	X	X	X
1	MW16-03-MS-100609	10/6/09	1540	JB	GW	3		X							X	X	X	X
1	MW16-03-MSD-100609	10/6/09	1540	JB	GW	3		X							X	X	X	X
2	MW16-04-100609	10/6/09	1600	JB	GW	3		X							X	X	X	X
3	MW16-02-100609	10/6/09	1630	JB	GW	3		X							X	X	X	X
4	MW16-01-100609	10/6/09	1700	JB	GW	3		X							X	X	X	X
5	MW16-DUP01-100609	10/6/09	—	JB	GW	3		X							X	X	X	X

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe

LAB USE ONLY

TURNAROUND TIME (Business Days)

Approved By: / Rush Code

- [x] 10 Days Standard
- [ ] 7 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] OTHER

Emergency or Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [x] REDT1 (EPA LEVEL 3) ERPIMS
- [ ] FULT1 (EPA LEVEL 4)
- [x] EDD'S

Comments / Remarks

FED EX 8696 4911 0256
8692 9697 2158

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
1	10/6/09 1730	2	3	10/7/09 1100	4 FED EX
Relinquished by: 5 FX	Date Time: 10/8/09 9:00	Received By: 6 Accutest	Relinquished by: 7	Date Time:	Received By: 8

Lab Use Only: Custody Seal in Place: Y N Temp Blank Provided: Y N Preserved where Applicable: Y N Total # of Coolers: 2 Cooler Temperature (s) Celsius: 4.0 4.8

F68624: Chain of Custody
Page 1 of 2

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: F68624 CLIENT: TETRATECH PROJECT: Holloman AFB

DATE/TIME RECEIVED: 10/8/09 9:00 # OF COOLERS RECEIVED: 2 COOLER TEMPS: 4.0 4.8

METHOD OF DELIVERY: (FEDEX) UPS ACCUTEST COURIER GREYHOUND DELIVERY OTHER

AIRBILL NUMBERS: 8696 4911 0256

COOLER INFORMATION

- [ ] CUSTODY SEAL NOT PRESENT OR NOT INTACT
- [ ] CHAIN OF CUSTODY NOT RECEIVED (COC)
- [ ] ANALYSIS REQUESTED IS UNCLEAR OR MISSING
- [ ] SAMPLE DATES OR TIMES UNCLEAR OR MISSING
- [ ] TEMPERATURE CRITERIA NOT MET
- [ ] WET ICE RECEIVED IN COOLER

TRIP BLANK INFORMATION

- [ ] TRIP BLANK PROVIDED
- [x] TRIP BLANK NOT PROVIDED
- [x] TRIP BLANK NOT ON COC
- [ ] TRIP BLANK INTACT
- [ ] TRIP BLANK NOT INTACT
- [ ] RECEIVED WATER TRIP BLANK
- [ ] RECEIVED SOIL TRIP BLANK

SAMPLE INFORMATION

- [ ] SAMPLE LABELS NOT PRESENT ON ALL BOTTLES
- [ ] CORRECT NUMBER OF CONTAINERS USED
- [ ] SAMPLE RECEIVED IMPROPERLY PRESERVED
- [ ] INSUFFICIENT VOLUME FOR ANALYSIS
- [ ] TIMES ON COC DOES NOT MATCH LABEL(S)
- [ ] ID'S ON COC DOES NOT MATCH LABEL(S)
- [ ] VOC VIALS HAVE HEADSPACE (MACRO BUBBLES)
- [ ] BOTTLES RECEIVED BUT ANALYSIS NOT REQUESTED
- [ ] NO BOTTLES RECEIVED FOR ANALYSIS REQUESTED
- [ ] UNCLEAR FILTERING INSTRUCTIONS
- [ ] UNCLEAR COMPOSITING INSTRUCTIONS
- [ ] SAMPLE CONTAINER(S) RECEIVED BROKEN
- [ ] % SOLIDS JAR NOT RECEIVED
- [ ] 5035 FIELD KIT NOT FROZEN WITHIN 48 HOUR'S
- [ ] RESIDUAL CHLORINE PRESENT

(APPLICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS)

MISC. INFORMATION

NUMBER OF ENCORES ? 0

NUMBER OF 5035 FIELD KITS ? 0

NUMBER OF LAB FILTERED METALS ? 0

SUMMARY OF COMMENTS:

TECHNICIAN SIGNATURE/DATE CLR 10/8/09 TECHNICIAN SIGNATURE/DATE JC 10-8-09

ASBD 12/17/07

4.1

4

F68624: Chain of Custody

Page 2 of 2

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- DDT/Endrin Breakdown Checks
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: F68624
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP30575-MB	KK34425.D	1	10/14/09	FS	10/13/09	OP30575	GKK1173

The QC reported here applies to the following samples: **Method:** SW846 8081A

F68624-1, F68624-2, F68624-3, F68624-4, F68624-5

CAS No.	Compound	Result	RL	MDL	Units	Q
319-84-6	alpha-BHC	ND	0.050	0.010	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.050	0.010	ug/l	
60-57-1	Dieldrin	ND	0.050	0.010	ug/l	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	98%	42-127%
2051-24-3	Decachlorobiphenyl	94%	27-127%

Method Blank Summary

Job Number: F68624
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP30575-MB	KK34494.D	1	10/16/09	FS	10/13/09	OP30575	GKK1175

The QC reported here applies to the following samples: **Method:** SW846 8081A

F68624-1, F68624-2, F68624-3, F68624-4, F68624-5

CAS No.	Compound	Result	RL	MDL	Units	Q
319-84-6	alpha-BHC	ND	0.050	0.010	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.050	0.010	ug/l	
60-57-1	Dieldrin	ND	0.050	0.010	ug/l	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	108%	42-127%
2051-24-3	Decachlorobiphenyl	94%	27-127%

Blank Spike Summary

Job Number: F68624
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP30575-BS	KK34424.D	1	10/14/09	FS	10/13/09	OP30575	GKK1173

The QC reported here applies to the following samples: **Method:** SW846 8081A

F68624-1, F68624-2, F68624-3, F68624-4, F68624-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
319-84-6	alpha-BHC	0.5	0.47	94	77-132
58-89-9	gamma-BHC (Lindane)	0.5	0.48	96	80-136
60-57-1	Dieldrin	0.5	0.49	98	80-136

CAS No.	Surrogate Recoveries	BSP	Limits
877-09-8	Tetrachloro-m-xylene	98%	42-127%
2051-24-3	Decachlorobiphenyl	97%	27-127%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F68624
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP30575-MS	KK34427.D	1	10/14/09	FS	10/13/09	OP30575	GKK1173
OP30575-MSD	KK34428.D	1	10/14/09	FS	10/13/09	OP30575	GKK1173
F68624-1	KK34426.D	1	10/14/09	FS	10/13/09	OP30575	GKK1173

The QC reported here applies to the following samples: **Method:** SW846 8081A

F68624-1, F68624-2, F68624-3, F68624-4, F68624-5

CAS No.	Compound	F68624-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
319-84-6	alpha-BHC	ND		1	0.93	93	0.96	96	3	77-132/16
58-89-9	gamma-BHC (Lindane)	ND		1	0.93	93	0.97	97	4	80-136/17
60-57-1	Dieldrin	ND		1	0.94	94	1.0	100	6	80-136/16

CAS No.	Surrogate Recoveries	MS	MSD	F68624-1	Limits
877-09-8	Tetrachloro-m-xylene	101%	105%	91%	42-127%
2051-24-3	Decachlorobiphenyl	70%	50%	66%	27-127%

DDT/Endrin Breakdown Check

Job Number: F68624
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample:	GKK1172-DDT	**Injection Date:**	10/13/09
Lab File ID:	KK34402.D	**Injection Time:**	12:45
Instrument ID:	GCKK		

Compound	Response Signal 1	Response Signal 2
4,4'-DDD	0	0
4,4'-DDE	66323	7943
4,4'-DDT	5818832	1042570
DDT Breakdown [a]	1.1 %	0.8 %
Endrin aldehyde	194173	45177
Endrin ketone	375246	72543
Endrin	5873617	999236
Endrin Breakdown [b]	8.8 %	10.5 %

(a) Calculated as: (DDD + DDE) / (DDD + DDE + DDT) x 100
(b) Calculated as: (Endrin Aldehyde + Endrin Ketone) / (Endrin Aldehyde + Endrin Ketone + Endrin) x 100

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
GKK1172-IC1172	KK34403.D	10/13/09	13:28	00:44	Initial cal 5
GKK1172-IC1172	KK34404.D	10/13/09	13:46	01:02	Initial cal 10
GKK1172-IC1172	KK34405.D	10/13/09	14:05	01:20	Initial cal 20
GKK1172-ICC1172	KK34406.D	10/13/09	14:23	01:39	Initial cal 40
GKK1172-IC1172	KK34407.D	10/13/09	14:41	01:57	Initial cal 60
GKK1172-IC1172	KK34408.D	10/13/09	15:00	02:15	Initial cal 80
GKK1172-IC1172	KK34409.D	10/13/09	15:18	02:34	Initial cal 500
GKK1172-IC1172	KK34410.D	10/13/09	15:36	02:52	Initial cal 200
GKK1172-ICV1172	KK34411.D	10/13/09	15:57	03:12	Initial cal verification 40

DDT/Endrin Breakdown Check

Job Number: F68624
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GKK1173-DDT
Lab File ID: KK34414.D
Instrument ID: GCKK
Injection Date: 10/14/09
Injection Time: 09:58

Compound	Response Signal 1	Response Signal 2
4,4'-DDD	200370	16891
4,4'-DDE	72623	9823
4,4'-DDT	6218935	1114466
DDT Breakdown [a]	4.2 %	2.3 %
Endrin aldehyde	195148	41440
Endrin ketone	339241	85596
Endrin	6471957	1075700
Endrin Breakdown [b]	7.6 %	10.6 %

(a) Calculated as: (DDD + DDE) / (DDD + DDE + DDT) x 100
(b) Calculated as: (Endrin Aldehyde + Endrin Ketone) / (Endrin Aldehyde + Endrin Ketone + Endrin) x 100

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
GKK1173-CC1172	KK34415.D	10/14/09	10:22	00:23	Continuing cal 40
GKK1173-CC1172	KK34416.D	10/14/09	10:57	00:58	Continuing cal 500
GKK1173-CC1172	KK34417.D	10/14/09	11:15	01:16	Continuing cal 200
OP30567-BS	KK34418.D	10/14/09	11:59	02:00	Blank Spike
OP30567-MB	KK34419.D	10/14/09	12:17	02:18	Method Blank
OP30567-MS	KK34421.D	10/14/09	12:54	02:55	Matrix Spike
OP30567-MSD	KK34422.D	10/14/09	13:12	03:14	Matrix Spike Duplicate
GKK1173-CC1172	KK34423.D	10/14/09	13:30	03:32	Continuing cal 40
OP30575-BS	KK34424.D	10/14/09	14:02	04:03	Blank Spike
OP30575-MB	KK34425.D	10/14/09	14:20	04:22	Method Blank
F68624-1	KK34426.D	10/14/09	14:38	04:40	MW16-03-100609
OP30575-MS	KK34427.D	10/14/09	14:57	04:58	Matrix Spike
OP30575-MSD	KK34428.D	10/14/09	15:15	05:17	Matrix Spike Duplicate
F68624-2	KK34429.D	10/14/09	15:33	05:35	MW16-04-100609
F68624-3	KK34430.D	10/14/09	15:51	05:53	MW16-02-100609
F68624-5	KK34432.D	10/14/09	16:28	06:30	MW16-DUP01-100609
ZZZZZZ	KK34433.D	10/14/09	16:46	06:48	(unrelated sample)
GKK1173-CC1172	KK34434.D	10/14/09	17:05	07:07	Continuing cal 40
GKK1173-ECC1172	KK34439.D	10/14/09	18:36	08:38	Ending cal 20

DDT/Endrin Breakdown Check

Job Number: F68624
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample:	GKK1175-DDT	**Injection Date:**	10/16/09
Lab File ID:	KK34473.D	**Injection Time:**	10:14
Instrument ID:	GCKK		

Compound	Response Signal 1	Response Signal 2
4,4'-DDD	0	0
4,4'-DDE	45410	6411
4,4'-DDT	5495106	1009865
DDT Breakdown [a]	0.8 %	0.6 %
Endrin aldehyde	49971	11084
Endrin ketone	162865	31369
Endrin	6607655	1170725
Endrin Breakdown [b]	3.1 %	3.5 %

(a) Calculated as: (DDD + DDE) / (DDD + DDE + DDT) x 100
(b) Calculated as: (Endrin Aldehyde + Endrin Ketone) / (Endrin Aldehyde + Endrin Ketone + Endrin) x 100

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
GKK1175-CC1172	KK34474.D	10/16/09	10:34	00:20	Continuing cal 40
GKK1175-CC1172	KK34476.D	10/16/09	11:11	00:57	Continuing cal 200
GKK1175-CC1172	KK34477.D	10/16/09	11:33	01:19	Continuing cal 500
OP30580-MB	KK34478.D	10/16/09	12:14	02:00	Method Blank
ZZZZZZ	KK34479.D	10/16/09	12:32	02:18	(unrelated sample)
ZZZZZZ	KK34480.D	10/16/09	12:50	02:36	(unrelated sample)
ZZZZZZ	KK34481.D	10/16/09	13:08	02:55	(unrelated sample)
ZZZZZZ	KK34482.D	10/16/09	13:27	03:13	(unrelated sample)
GKK1175-CC1172	KK34483.D	10/16/09	13:45	03:32	Continuing cal 40
ZZZZZZ	KK34485.D	10/16/09	15:00	04:47	(unrelated sample)
ZZZZZZ	KK34486.D	10/16/09	15:19	05:05	(unrelated sample)
ZZZZZZ	KK34487.D	10/16/09	15:37	05:23	(unrelated sample)
ZZZZZZ	KK34488.D	10/16/09	15:55	05:42	(unrelated sample)
F68715-7	KK34489.D	10/16/09	16:14	06:00	(used for QC only; not part of job F68624)
OP30580-MS	KK34490.D	10/16/09	16:44	06:31	Matrix Spike
OP30580-MSD	KK34491.D	10/16/09	17:02	06:49	Matrix Spike Duplicate
GKK1175-CC1172	KK34492.D	10/16/09	17:21	07:07	Continuing cal 40
OP30575-MB	KK34494.D	10/16/09	17:57	07:44	Method Blank
F68624-4	KK34495.D	10/16/09	18:16	08:02	MW16-01-100609
GKK1175-ECC1172	KK34497.D	10/16/09	18:52	08:39	Ending cal 20

Semivolatile Surrogate Recovery Summary

Job Number: F68624
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Method: SW846 8081A **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S2 [a]
F68624-1	KK34426.D	91.0	66.0
F68624-2	KK34429.D	107.0	92.0
F68624-3	KK34430.D	93.0	68.0
F68624-4	KK34495.D	104.0	71.0
F68624-5	KK34432.D	100.0	68.0
OP30575-BS	KK34424.D	98.0	97.0
OP30575-MB	KK34425.D	98.0	94.0
OP30575-MB	KK34494.D	108.0	94.0
OP30575-MS	KK34427.D	101.0	70.0
OP30575-MSD	KK34428.D	105.0	50.0

Surrogate Compounds	Recovery Limits
S1 = Tetrachloro-m-xylene	42-127%
S2 = Decachlorobiphenyl	27-127%

(a) Recovery from GC signal #1

GC Surrogate Retention Time Summary

Job Number: F68624
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Check Std:	GKK1173-CC1172	**Injection Date:**	10/14/09
Lab File ID:	KK34423.D	**Injection Time:**	13:30
Instrument ID:	GCKK	**Method:**	SW846 8081A

	S1 [a] RT	S2 [a] RT
Check Std	5.46	11.79

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S2 [a] RT
OP30575-BS	KK34424.D	10/14/09	14:02	5.47	11.79
OP30575-MB	KK34425.D	10/14/09	14:20	5.46	11.79
F68624-1	KK34426.D	10/14/09	14:38	5.46	11.79
OP30575-MS	KK34427.D	10/14/09	14:57	5.46	11.79
OP30575-MSD	KK34428.D	10/14/09	15:15	5.47	11.79
F68624-2	KK34429.D	10/14/09	15:33	5.46	11.79
F68624-3	KK34430.D	10/14/09	15:51	5.46	11.79
F68624-5	KK34432.D	10/14/09	16:28	5.47	11.79
ZZZZZZ	KK34433.D	10/14/09	16:46	5.46	11.79

Surrogate Compounds

S1 = Tetrachloro-m-xylene
S2 = Decachlorobiphenyl

(a) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: F68624
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Check Std:	GKK1175-CC1172	**Injection Date:**	10/16/09
Lab File ID:	KK34492.D	**Injection Time:**	17:21
Instrument ID:	GCKK	**Method:**	SW846 8081A

	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
Check Std	5.45	5.37	11.77	11.77

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
OP30575-MB	KK34494.D	10/16/09	17:57	5.45		11.77	
F68624-4	KK34495.D	10/16/09	18:16	5.45		11.77	
GKK1175-ECC1172	KK34497.D	10/16/09	18:52	5.45	5.37	11.77	11.77

Surrogate Compounds

S1 = Tetrachloro-m-xylene
S2 = Decachlorobiphenyl

(a) Retention time from GC signal #1
(b) Retention time from GC signal #2

Initial Calibration Summary

Job Number: F68624
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GKK1172-ICC1172
Lab FileID: KK34406.D

Response Factor Report ECD 5

Method : C:\MSDCHEM\1\METHODS\8081A.M (Chemstation Integrator)
Title : Pesticides by 608 or 8081
Last Update : Wed Oct 14 10:47:33 2009
Response via : Initial Calibration

Calibration Files
5 =KK34403.D 10 =KK34404.D 20 =KK34405.D 40 =KK34406.D
60 =KK34407.D 80 =KK34408.D c200=KK34410.D t500=KK34409.D

Compound	5	10	20	40	60	80	c200	t500	Avg	%RSD
1) Tetrachloro-	2.341	2.313	2.208	2.068	2.021	1.995			2.158 E5	6.97
2) alpha-BHC	3.304	3.244	3.106	2.959	2.884	2.804			3.050 E5	6.58
3) gamma-BHC (L	3.075	2.952	2.760	2.578	2.556	2.495			2.736 E5	8.62
4) beta-BHC	1.458	1.311	1.178	1.064	1.017	1.013			1.174 E5	15.35
5) delta-BHC	2.974	2.851	2.635	2.427	2.359	2.310			2.593 E5	10.58
6) Heptachlor	2.398	2.343	2.198	1.984	1.906	1.833			2.110 E5	11.20
7) Aldrin	2.311	2.222	2.073	1.948	1.826	1.760			2.023 E5	10.80
8) Heptachlor E	2.056	1.960	1.796	1.611	1.554	1.488			1.744 E5	13.23
9) gamma-Chlord	2.017	1.951	1.841	1.658	1.641	1.602			1.785 E5	9.86
10) alpha-Chlord	1.869	1.852	1.731	1.593	1.534	1.458			1.673 E5	10.21
11) Endosulfan	1.822	1.735	1.619	1.436	1.370	1.330			1.552 E5	13.11
12) 4,4'-DDE	1.790	1.763	1.738	1.552	1.529	1.464			1.639 E5	8.55
13) Dieldrin	1.886	1.875	1.758	1.569	1.543	1.474			1.684 E5	10.62
14) Endrin	1.543	1.323	1.243	1.096	1.033	1.044			1.214 E5	16.33
15) 4,4'-DDD	1.493	1.487	1.346	1.202	1.215	1.163			1.318 E5	11.14
16) Endosulfan I	1.700	1.530	1.444	1.306	1.250	1.204			1.406 E5	13.44
17) Endrin Aldeh	1.196	1.141	1.055	0.937	0.947	0.905			1.030 E5	11.61
18) 4,4'-DDT	1.346	1.312	1.255	1.125	1.113	1.093			1.207 E5	9.15
19) Endosulfan S	1.400	1.297	1.212	1.128	1.084	1.032			1.192 E5	11.63
20) Methoxychlor	6.671	6.588	6.224	5.368	5.225	5.036			5.852 E4	12.42
21) Endrin Keton	1.583	1.548	1.458	1.281	1.266	1.192			1.388 E5	11.76
22) Chlordane-A							7.015		7.015 E3	0.00
23) Chlordane-B							9.532		9.532 E3	0.00
24) Chlordane-C							4.735		4.735 E3	0.00
25) Chlordane-D							2.210		2.210 E4	0.00
26) Chlordane-E							2.121		2.121 E4	0.00
27) Chlordane-F							4.369		4.369 E3	0.00
28) Toxaphene								1.444	1.444 E6	0.00
29) Decachlorobi	8.863	8.700	8.408	7.919	7.875	7.783			8.258 E4	5.60

Signal #2

1) Tetrachloro-	3.387	3.454	3.424	3.281	3.212	3.066			3.304 E4	4.47
2) alpha-BHC	4.710	4.861	4.816	4.543	4.487	4.260			4.613 E4	4.92
3) gamma-BHC (L	4.343	4.479	4.312	4.084	3.963	3.835			4.169 E4	5.96
4) beta-BHC	2.104	1.945	1.826	1.698	1.657	1.613			1.807 E4	10.48
5) delta-BHC	4.314	4.265	4.007	3.733	3.627	3.538			3.914 E4	8.46
6) Heptachlor	3.561	3.571	3.420	3.209	3.025	2.943			3.288 E4	8.23
7) Aldrin	3.352	3.328	3.329	3.123	2.956	2.884			3.162 E4	6.53
8) Heptachlor E	3.085	3.111	2.975	2.739	2.622	2.513			2.841 E4	8.85
9) gamma-Chlord	3.093	3.124	3.061	2.832	2.775	2.722			2.934 E4	6.07
10) alpha-Chlord	2.937	2.892	2.903	2.701	2.590	2.523			2.758 E4	6.44
11) Endosulfan	2.772	2.734	2.631	2.437	2.336	2.255			2.528 E4	8.53
12) 4,4'-DDE	2.849	2.911	2.876	2.683	2.634	2.557			2.752 E4	5.31
13) Dieldrin	2.944	3.046	2.934	2.768	2.638	2.545			2.813 E4	6.94
14) Endrin	2.304	2.087	2.052	1.846	1.713	1.761			1.960 E4	11.55
15) 4,4'-DDD	2.263	2.373	2.299	2.162	2.121	2.049			2.211 E4	5.47

Initial Calibration Summary

Job Number: F68624
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GKK1172-ICC1172
Lab FileID: KK34406.D

16)	Endosulfan I	2.562	2.549	2.454	2.299	2.231	2.147			2.374	E4	7.29
17)	Endrin Aldeh	1.876	1.908	1.851	1.675	1.655	1.604			1.761	E4	7.45
18)	4,4'-DDT	2.192	2.197	2.160	2.029	2.095	1.971			2.107	E4	4.39
19)	Endosulfan S	2.278	2.263	2.198	1.970	1.884	1.880			2.079	E4	9.05
20)	Methoxychlor	1.130	1.087	1.045	0.936	0.925	0.907			1.005	E4	9.41
21)	Endrin Keton	2.812	2.869	2.659	2.439	2.367	2.260			2.568	E4	9.70
22)	Chlordane-A							1.006		1.006	E3	0.00
23)	Chlordane-B							1.348		1.348	E3	0.00
24)	Chlordane-C							7.471		7.471	E2	0.00
25)	Chlordane-D							3.095		3.095	E3	0.00
26)	Chlordane-E							2.068		2.068	E3	0.00
27)	Chlordane-F							7.413		7.413	E2	0.00
28)	Toxaphene								2.350	2.350	E5	0.00
29)	Decachlorobi	1.803	1.822	1.758	1.629	1.651	1.616			1.713	E4	5.37

(#) = Out of Range ### Number of calibration levels exceeded format ###

8081A.M Wed Oct 14 10:49:32 2009

Initial Calibration Verification

Job Number: F68624
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GKK1172-ICV1172
Lab FileID: KK34411.D

Evaluate Continuing Calibration Report

```
Signal #1 : C:\MSDCHEM\1\DATA\1013PEST\KK34411.D\ECD1A.CH Vial: 11
Signal #2 : C:\MSDCHEM\1\DATA\1013PEST\KK34411.D\ECD2B.CH
Acq On    : 10-13-09 03:57:17 PM                    Operator: fouads
Sample    : icv1172-40                              Inst    : ECD 5
Misc      : op30427,gkk1172,29.5,,,10,1,soil        Multiplr: 1.00
IntFile Signal #1: EVENTS.E     IntFile Signal #2: EVENTS2.E

Method       : C:\MSDCHEM\1\METHODS\8081A.M (Chemstation Integrator)
Title        : Pesticides by 608 or 8081
Last Update  : Wed Oct 14 10:47:33 2009
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.10min
Max. RRF Dev :  15%     Max. Rel. Area : 150%
```

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene		----------NA----------				
2		alpha-BHC	40.000	37.927	5.2	98	0.00	5.86- 6.06
3		gamma-BHC (Lindane)	40.000	36.894	7.8	98	0.00	6.21- 6.41
4		beta-BHC	40.000	36.973	7.6	102	0.00	6.44- 6.64
5		delta-BHC	40.000	36.608	8.5	98	0.00	6.70- 6.90
6		Heptachlor	40.000	37.139	7.2	99	0.00	6.84- 7.04
7		Aldrin	40.000	35.865	10.3	93	0.02	7.20- 7.40
8		Heptachlor Epoxide	40.000	36.395	9.0	99	0.00	7.70- 7.90
9		gamma-Chlordane	40.000	36.991	7.5	100	0.00	8.00- 8.20
10		alpha-Chlordane	40.000	36.551	8.6	96	0.00	8.09- 8.29
11		Endosulfan I	40.000	36.138	9.7	98	0.00	8.15- 8.35
12		4,4'-DDE	40.000	37.091	7.3	98	0.00	8.32- 8.52
13		Dieldrin	40.000	36.147	9.6	97	0.00	8.47- 8.67
14		Endrin	40.000	37.836	5.4	105	0.00	8.74- 8.94
15		4,4'-DDD	40.000	36.551	8.6	100	0.00	8.93- 9.13
16		Endosulfan II	40.000	35.328	11.7	95	0.00	9.00- 9.20
17		Endrin Aldehyde	40.000	35.145	12.1	97	-0.01	9.17- 9.37
18		4,4'-DDT	40.000	36.471	8.8	98	0.00	9.31- 9.51
19		Endosulfan Sulfate	40.000	36.731	8.2	97	0.00	9.45- 9.65
20		Methoxychlor	40.000	36.256	9.4	99	0.00	9.91-10.11
21		Endrin Ketone	40.000	35.098	12.3	95	-0.02	10.03-10.23
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl		----------NA----------				

***** Signal #2 *****

1	S	Tetrachloro-m-xylene		----------NA----------				
2		alpha-BHC	40.000	39.839	0.4	101	0.00	5.90- 6.10
3		gamma-BHC (Lindane)	40.000	37.856	5.4	97	0.00	6.29- 6.49
4		beta-BHC	40.000	38.042	4.9	101	0.00	6.62- 6.82
5		delta-BHC	40.000	38.402	4.0	101	0.00	6.91- 7.11
6		Heptachlor	40.000	38.760	3.1	99	0.00	6.71- 6.91
7		Aldrin	40.000	36.200	9.5	92	0.00	7.06- 7.26
8		Heptachlor Epoxide	40.000	37.700	5.7	98	0.00	7.65- 7.85
9		gamma-Chlordane	40.000	37.403	6.5	97	0.00	7.96- 8.16

Initial Calibration Verification

Job Number: F68624
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GKK1172-ICV1172
Lab FileID: KK34411.D

10		alpha-Chlordane	40.000	37.234	6.9	95	0.01	8.03- 8.23
11		Endosulfan I	40.000	38.151	4.6	99	0.00	8.12- 8.32
12		4,4'-DDE	40.000	38.288	4.3	98	0.00	8.25- 8.45
13		Dieldrin	40.000	37.619	6.0	96	0.00	8.45- 8.65
14		Endrin	40.000	40.120	-0.3	107	0.00	8.79- 8.99
15		4,4'-DDD	40.000	38.348	4.1	98	0.00	8.94- 9.14
16		Endosulfan II	40.000	37.490	6.3	97	-0.01	9.16- 9.36
17		Endrin Aldehyde	40.000	35.325	11.7	93	-0.01	9.38- 9.58
18		4,4'-DDT	40.000	37.121	7.2	96	0.00	9.26- 9.46
19		Endosulfan Sulfate	40.000	37.665	5.8	99	0.00	9.65- 9.85
20		Methoxychlor	40.000	38.633	3.4	104	0.00	9.98-10.18
21		Endrin Ketone	40.000	34.547	13.6	91	-0.02	10.33-10.53
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
KK34406.D 8081A.M Wed Oct 14 10:49:17 2009

Continuing Calibration Summary

Job Number: F68624
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GKK1173-CC1172
Lab FileID: KK34423.D

Evaluate Continuing Calibration Report

```
Signal #1 : C:\MSDCHEM\1\DATA\1014PEST\KK34423.D\ECD1A.CH Vial: 11
Signal #2 : C:\MSDCHEM\1\DATA\1014PEST\KK34423.D\ECD2B.CH
Acq On    : 10-14-09 01:30:58 PM                    Operator: fouads
Sample    : cc1172-40                               Inst    : ECD 5
Misc      : op30567,gkk1173,29.6,,,10,1,soil        Multiplr: 1.00
IntFile Signal #1: EVENTS.E     IntFile Signal #2: EVENTS2.E

Method       : C:\MSDCHEM\1\METHODS\8081A.M (Chemstation Integrator)
Title        : Pesticides by 608 or 8081
Last Update  : Wed Oct 14 13:10:52 2009
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.10min
Max. RRF Dev :  15%     Max. Rel. Area : 150%
```

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene	40.000	38.586	3.5	101	0.00	5.37- 5.57
2		alpha-BHC	40.000	37.630	5.9	97	0.00	5.86- 6.06
3		gamma-BHC (Lindane)	40.000	37.935	5.2	101	0.00	6.21- 6.41
4		beta-BHC	40.000	35.672	10.8	98	0.00	6.44- 6.64
5		delta-BHC	40.000	36.208	9.5	97	0.00	6.70- 6.90
6		Heptachlor	40.000	36.144	9.6	96	0.00	6.84- 7.04
7		Aldrin	40.000	35.817	10.5	93	0.02	7.20- 7.40
8		Heptachlor Epoxide	40.000	36.687	8.3	99	0.00	7.70- 7.90
9		gamma-Chlordane	40.000	36.269	9.3	98	-0.01	8.00- 8.20
10		alpha-Chlordane	40.000	35.270	11.8	93	-0.01	8.09- 8.29
11		Endosulfan I	40.000	34.976	12.6	94	0.00	8.15- 8.35
12		4,4'-DDE	40.000	35.635	10.9	94	-0.01	8.32- 8.52
13		Dieldrin	40.000	33.610	16.0#	90	-0.01	8.47- 8.67
14		Endrin	40.000	37.676	5.8	104	-0.01	8.74- 8.94
15		4,4'-DDD	40.000	38.178	4.6	105	0.00	8.93- 9.13
16		Endosulfan II	40.000	36.154	9.6	97	0.00	9.00- 9.20
17		Endrin Aldehyde	40.000	36.860	7.9	101	-0.02	9.17- 9.37
18		4,4'-DDT	40.000	37.215	7.0	100	0.00	9.31- 9.51
19		Endosulfan Sulfate	40.000	36.575	8.6	97	-0.01	9.45- 9.65
20		Methoxychlor	40.000	37.156	7.1	101	-0.01	9.91-10.11
21		Endrin Ketone	40.000	36.931	7.7	100	-0.02	10.03-10.23
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	40.000	38.911	2.7	101	0.00	11.69-11.89

***** Signal #2 *****

1	S	Tetrachloro-m-xylene	40.000	40.439	-1.1	102	0.00	5.29- 5.49
2		alpha-BHC	40.000	39.502	1.2	100	0.00	5.90- 6.10
3		gamma-BHC (Lindane)	40.000	39.339	1.7	100	0.00	6.29- 6.49
4		beta-BHC	40.000	36.928	7.7	98	0.00	6.62- 6.82
5		delta-BHC	40.000	38.521	3.7	101	0.00	6.91- 7.11
6		Heptachlor	40.000	39.864	0.3	102	0.00	6.71- 6.91
7		Aldrin	40.000	39.403	1.5	100	0.00	7.06- 7.26
8		Heptachlor Epoxide	40.000	36.987	7.5	96	0.00	7.65- 7.85
9		gamma-Chlordane	40.000	38.040	4.9	99	0.00	7.96- 8.16

Continuing Calibration Summary

Job Number: F68624
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GKK1173-CC1172
Lab FileID: KK34423.D

10		alpha-Chlordane	40.000	38.300	4.3	98	0.01	8.03- 8.23
11		Endosulfan I	40.000	37.197	7.0	96	0.00	8.12- 8.32
12		4,4'-DDE	40.000	39.837	0.4	102	0.00	8.25- 8.45
13		Dieldrin	40.000	38.102	4.7	97	-0.01	8.45- 8.65
14		Endrin	40.000	40.990	-2.5	109	0.00	8.79- 8.99
15		4,4'-DDD	40.000	41.886	-4.7	107	0.00	8.94- 9.14
16		Endosulfan II	40.000	37.883	5.3	98	-0.01	9.16- 9.36
17		Endrin Aldehyde	40.000	38.943	2.6	102	-0.01	9.38- 9.58
18		4,4'-DDT	40.000	39.945	0.1	104	0.00	9.26- 9.46
19		Endosulfan Sulfate	40.000	36.935	7.7	97	0.00	9.65- 9.85
20		Methoxychlor	40.000	39.979	0.1	107	0.00	9.98-10.18
21		Endrin Ketone	40.000	38.564	3.6	102	-0.02	10.33-10.53
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	40.000	38.988	2.5	103	0.00	11.69-11.89

(#) = Out of Range SPCC's out = 0 CCC's out = 0
KK34406.D 8081A.M Thu Oct 15 13:17:18 2009

Continuing Calibration Summary

Job Number: F68624
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GKK1173-CC1172
Lab FileID: KK34434.D

Evaluate Continuing Calibration Report

```
Signal #1 : C:\MSDCHEM\1\DATA\1014PEST\KK34434.D\ECD1A.CH Vial: 22
Signal #2 : C:\MSDCHEM\1\DATA\1014PEST\KK34434.D\ECD2B.CH
Acq On    : 10-14-09 05:05:15 PM                    Operator: fouads
Sample    : cc1172-40                               Inst    : ECD 5
Misc      : op30575,gkk1173,1000,,,10,1,water       Multiplr: 1.00
IntFile Signal #1: EVENTS.E     IntFile Signal #2: EVENTS2.E

Method       : C:\MSDCHEM\1\METHODS\8081A.M (Chemstation Integrator)
Title        : Pesticides by 608 or 8081
Last Update  : Wed Oct 14 13:10:52 2009
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.10min
Max. RRF Dev :  15%     Max. Rel. Area : 150%
```

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene	40.000	38.683	3.3	101	0.00	5.37- 5.57
2		alpha-BHC	40.000	37.138	7.2	96	0.00	5.86- 6.06
3		gamma-BHC (Lindane)	40.000	36.452	8.9	97	0.00	6.21- 6.41
4		beta-BHC	40.000	35.104	12.2	97	0.00	6.44- 6.64
5		delta-BHC	40.000	35.324	11.7	94	0.00	6.70- 6.90
6		Heptachlor	40.000	37.034	7.4	98	0.00	6.84- 7.04
7		Aldrin	40.000	36.962	7.6	96	0.02	7.20- 7.40
8		Heptachlor Epoxide	40.000	35.698	10.8	97	0.00	7.70- 7.90
9		gamma-Chlordane	40.000	35.869	10.3	97	0.00	8.00- 8.20
10		alpha-Chlordane	40.000	35.435	11.4	93	0.00	8.09- 8.29
11		Endosulfan I	40.000	35.253	11.9	95	0.00	8.15- 8.35
12		4,4'-DDE	40.000	36.478	8.8	96	-0.01	8.32- 8.52
13		Dieldrin	40.000	35.158	12.1	94	0.00	8.47- 8.67
14		Endrin	40.000	38.443	3.9	106	-0.01	8.74- 8.94
15		4,4'-DDD	40.000	36.759	8.1	101	0.00	8.93- 9.13
16		Endosulfan II	40.000	34.608	13.5	93	0.00	9.00- 9.20
17		Endrin Aldehyde	40.000	36.377	9.1	100	-0.02	9.17- 9.37
18		4,4'-DDT	40.000	35.218	12.0	94	0.00	9.31- 9.51
19		Endosulfan Sulfate	40.000	35.487	11.3	94	0.00	9.45- 9.65
20		Methoxychlor	40.000	35.565	11.1	97	-0.01	9.91-10.11
21		Endrin Ketone	40.000	34.789	13.0	94	-0.02	10.03-10.23
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	40.000	39.667	0.8	103	0.00	11.69-11.89

***** Signal #2 *****

1	S	Tetrachloro-m-xylene	40.000	39.886	0.3	100	0.00	5.29- 5.49
2		alpha-BHC	40.000	39.765	0.6	101	0.00	5.90- 6.10
3		gamma-BHC (Lindane)	40.000	39.044	2.4	100	0.00	6.29- 6.49
4		beta-BHC	40.000	37.115	7.2	99	0.00	6.62- 6.82
5		delta-BHC	40.000	36.942	7.6	97	0.00	6.91- 7.11
6		Heptachlor	40.000	38.858	2.9	100	0.00	6.71- 6.91
7		Aldrin	40.000	38.968	2.6	99	0.00	7.06- 7.26
8		Heptachlor Epoxide	40.000	36.542	8.6	95	0.00	7.65- 7.85
9		gamma-Chlordane	40.000	37.632	5.9	97	0.00	7.96- 8.16

Continuing Calibration Summary

Job Number: F68624 **Sample:** GKK1173-CC1172
Account: TETTNOAK Tetra Tech, Inc **Lab FileID:** KK34434.D
Project: Holloman AFB; Alamogordo, NM

10		alpha-Chlordane	40.000	37.722	5.7	96	0.01	8.03- 8.23
11		Endosulfan I	40.000	38.052	4.9	99	0.00	8.12- 8.32
12		4,4'-DDE	40.000	39.669	0.8	102	0.00	8.25- 8.45
13		Dieldrin	40.000	37.754	5.6	96	0.00	8.45- 8.65
14		Endrin	40.000	41.134	-2.8	109	0.00	8.79- 8.99
15		4,4'-DDD	40.000	40.757	-1.9	104	0.00	8.94- 9.14
16		Endosulfan II	40.000	37.969	5.1	98	-0.01	9.16- 9.36
17		Endrin Aldehyde	40.000	38.576	3.6	101	-0.01	9.38- 9.58
18		4,4'-DDT	40.000	37.463	6.3	97	0.00	9.26- 9.46
19		Endosulfan Sulfate	40.000	37.588	6.0	99	0.00	9.65- 9.85
20		Methoxychlor	40.000	38.709	3.2	104	0.00	9.98-10.18
21		Endrin Ketone	40.000	36.645	8.4	96	-0.02	10.33-10.53
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	40.000	40.065	-0.2	105	0.00	11.69-11.89

(#) = Out of Range SPCC's out = 0 CCC's out = 0
KK34406.D 8081A.M Thu Oct 15 13:17:20 2009

Continuing Calibration Summary

Job Number: F68624
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GKK1175-CC1172
Lab FileID: KK34492.D

Evaluate Continuing Calibration Report

```
Signal #1 : C:\MSDCHEM\1\DATA\1016PEST\KK34492.D\ECD1A.CH Vial: 12
Signal #2 : C:\MSDCHEM\1\DATA\1016PEST\KK34492.D\ECD2B.CH
Acq On    : 10-16-09 05:21:03 PM                    Operator: fouads
Sample    : cc1172-40                               Inst    : ECD 5
Misc      : op30580,gkk1175,29.8,,,10,1,soil        Multiplr: 1.00
IntFile Signal #1: EVENTS.E     IntFile Signal #2: EVENTS2.E

Method       : C:\MSDCHEM\1\METHODS\8081A.M (Chemstation Integrator)
Title        : Pesticides by 608 or 8081
Last Update  : Mon Oct 19 08:38:25 2009
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.10min
Max. RRF Dev :  15%     Max. Rel. Area : 150%
```

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene	40.000	39.248	1.9	102	-0.01	5.37- 5.57
2		alpha-BHC	40.000	37.792	5.5	97	0.00	5.84- 6.04
3		gamma-BHC (Lindane)	40.000	36.668	8.3	97	0.00	6.20- 6.40
4		beta-BHC	40.000	34.671	13.3	96	0.00	6.42- 6.62
5		delta-BHC	40.000	37.047	7.4	99	0.00	6.68- 6.88
6		Heptachlor	40.000	36.821	7.9	98	0.00	6.83- 7.03
7		Aldrin	40.000	35.481	11.3	92	0.00	7.20- 7.40
8		Heptachlor Epoxide	40.000	35.972	10.1	97	0.00	7.69- 7.89
9		gamma-Chlordane	40.000	35.663	10.8	96	0.00	7.98- 8.18
10		alpha-Chlordane	40.000	35.448	11.4	93	0.00	8.07- 8.27
11		Endosulfan I	40.000	35.295	11.8	95	0.00	8.13- 8.32
12		4,4'-DDE	40.000	37.144	7.1	98	0.00	8.29- 8.49
13		Dieldrin	40.000	36.512	8.7	98	0.00	8.45- 8.65
14		Endrin	40.000	41.493	-3.7	115	0.00	8.71- 8.91
15		4,4'-DDD	40.000	40.151	-0.4	110	0.00	8.91- 9.11
16		Endosulfan II	40.000	34.676	13.3	93	0.00	8.98- 9.18
17		Endrin Aldehyde	40.000	34.909	12.7	96	-0.03	9.17- 9.37
18		4,4'-DDT	40.000	28.274	29.3#	76	0.00	9.28- 9.48
19		Endosulfan Sulfate	40.000	36.206	9.5	96	0.00	9.42- 9.62
20		Methoxychlor	40.000	28.855	27.9#	79	0.00	9.88-10.08
21		Endrin Ketone	40.000	35.123	12.2	95	0.00	10.00-10.20
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	40.000	39.554	1.1	103	-0.02	11.69-11.89

***** Signal #2 *****

1	S	Tetrachloro-m-xylene	40.000	41.219	-3.0	104	-0.01	5.29- 5.49
2		alpha-BHC	40.000	40.256	-0.6	102	0.00	5.88- 6.08
3		gamma-BHC (Lindane)	40.000	39.064	2.3	100	0.00	6.28- 6.48
4		beta-BHC	40.000	37.852	5.4	101	0.00	6.60- 6.80
5		delta-BHC	40.000	38.765	3.1	102	0.00	6.89- 7.09
6		Heptachlor	40.000	39.441	1.4	101	0.00	6.69- 6.89
7		Aldrin	40.000	38.502	3.7	97	0.00	7.04- 7.24
8		Heptachlor Epoxide	40.000	37.590	6.0	97	0.00	7.64- 7.84
9		gamma-Chlordane	40.000	37.732	5.7	98	0.00	7.94- 8.14

Continuing Calibration Summary

Job Number: F68624
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GKK1175-CC1172
Lab FileID: KK34492.D

10		alpha-Chlordane	40.000	37.469	6.3	96	0.00	8.02- 8.22
11		Endosulfan I	40.000	37.037	7.4	96	0.00	8.10- 8.30
12		4,4'-DDE	40.000	37.952	5.1	97	0.00	8.23- 8.43
13		Dieldrin	40.000	37.456	6.4	95	0.00	8.42- 8.62
14		Endrin	40.000	44.899	-12.2	119	0.00	8.77- 8.97
15		4,4'-DDD	40.000	43.833	-9.6	112	0.00	8.92- 9.12
16		Endosulfan II	40.000	37.143	7.1	96	0.00	9.13- 9.33
17		Endrin Aldehyde	40.000	37.829	5.4	99	-0.03	9.38- 9.58
18		4,4'-DDT	40.000	31.247	21.9#	81	0.00	9.24- 9.44
19		Endosulfan Sulfate	40.000	36.321	9.2	96	0.00	9.63- 9.83
20		Methoxychlor	40.000	32.892	17.8#	88	0.00	9.97-10.17
21		Endrin Ketone	40.000	35.408	11.5	93	0.00	10.30-10.50
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	40.000	40.104	-0.3	105	-0.02	11.69-11.89

(#) = Out of Range SPCC's out = 0 CCC's out = 0
KK34406.D 8081A.M Mon Oct 19 11:24:44 2009

Continuing Calibration Summary

Job Number: F68624
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GKK1175-ECC1172
Lab FileID: KK34497.D

Evaluate Continuing Calibration Report

```
Signal #1 : C:\MSDCHEM\1\DATA\1016PEST\KK34497.D\ECD1A.CH Vial: 24
Signal #2 : C:\MSDCHEM\1\DATA\1016PEST\KK34497.D\ECD2B.CH
Acq On    : 10-16-09 06:52:36 PM                    Operator: fouads
Sample    : ecc1172-20                              Inst    : ECD 5
Misc      : op30575,gkk1175,1000,,,10,1,water       Multiplr: 1.00
IntFile Signal #1: EVENTS.E     IntFile Signal #2: EVENTS2.E

Method       : C:\MSDCHEM\1\METHODS\8081A.M (Chemstation Integrator)
Title        : Pesticides by 608 or 8081
Last Update  : Mon Oct 19 08:38:25 2009
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.10min
Max. RRF Dev :  15%     Max. Rel. Area : 150%
```

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene	20.000	21.364	-6.8	104	-0.01	5.37- 5.57
2		alpha-BHC	20.000	20.129	-0.6	99	0.00	5.84- 6.04
3		gamma-BHC (Lindane)	20.000	20.186	-0.9	100	0.00	6.20- 6.40
4		beta-BHC	20.000	19.949	0.3	99	0.00	6.42- 6.62
5		delta-BHC	20.000	20.070	-0.4	99	0.00	6.68- 6.88
6		Heptachlor	20.000	20.132	-0.7	97	0.00	6.83- 7.03
7		Aldrin	20.000	20.001	-0.0	98	0.00	7.20- 7.40
8		Heptachlor Epoxide	20.000	20.690	-3.5	100	0.00	7.69- 7.89
9		gamma-Chlordane	20.000	20.109	-0.5	97	0.00	7.98- 8.18
10		alpha-Chlordane	20.000	19.978	0.1	97	0.00	8.07- 8.27
11		Endosulfan I	20.000	19.950	0.3	96	0.00	8.13- 8.32
12		4,4'-DDE	20.000	21.089	-5.4	99	0.00	8.29- 8.49
13		Dieldrin	20.000	20.654	-3.3	99	0.00	8.45- 8.65
14		Endrin	20.000	23.578	-17.9#	115	0.00	8.71- 8.91
15		4,4'-DDD	20.000	22.895	-14.5	112	0.00	8.91- 9.11
16		Endosulfan II	20.000	19.894	0.5	97	0.00	8.98- 9.18
17		Endrin Aldehyde	20.000	20.248	-1.2	99	-0.03	9.17- 9.37
18		4,4'-DDT	20.000	16.823	15.9#	81	0.00	9.28- 9.48
19		Endosulfan Sulfate	20.000	20.507	-2.5	101	0.00	9.42- 9.62
20		Methoxychlor	20.000	17.239	13.8	81	0.00	9.88-10.08
21		Endrin Ketone	20.000	19.708	1.5	94	0.00	10.00-10.20
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	20.000	20.487	-2.4	101	-0.02	11.69-11.89

***** Signal #2 *****

1	S	Tetrachloro-m-xylene	20.000	21.109	-5.5	102	-0.01	5.29- 5.49
2		alpha-BHC	20.000	20.765	-3.8	99	0.00	5.88- 6.08
3		gamma-BHC (Lindane)	20.000	20.610	-3.0	100	0.00	6.28- 6.48
4		beta-BHC	20.000	19.976	0.1	99	0.00	6.60- 6.80
5		delta-BHC	20.000	20.529	-2.6	100	0.00	6.89- 7.09
6		Heptachlor	20.000	21.260	-6.3	102	0.00	6.69- 6.89
7		Aldrin	20.000	20.668	-3.3	98	0.00	7.04- 7.24
8		Heptachlor Epoxide	20.000	20.884	-4.4	100	0.00	7.64- 7.84
9		gamma-Chlordane	20.000	20.695	-3.5	99	0.00	7.94- 8.14

Continuing Calibration Summary

Job Number: F68624
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GKK1175-ECC1172
Lab FileID: KK34497.D

10		alpha-Chlordane	20.000	20.812	-4.1	99	0.00	8.02- 8.22
11		Endosulfan I	20.000	20.488	-2.4	98	0.00	8.10- 8.30
12		4,4'-DDE	20.000	21.630	-8.1	103	0.00	8.23- 8.43
13		Dieldrin	20.000	21.485	-7.4	103	0.00	8.42- 8.62
14		Endrin	20.000	24.971	-24.9#	119	0.00	8.77- 8.97
15		4,4'-DDD	20.000	23.703	-18.5#	114	0.00	8.92- 9.12
16		Endosulfan II	20.000	20.917	-4.6	101	0.00	9.13- 9.33
17		Endrin Aldehyde	20.000	20.602	-3.0	98	-0.03	9.38- 9.58
18		4,4'-DDT	20.000	17.013	14.9	83	0.00	9.24- 9.44
19		Endosulfan Sulfate	20.000	20.995	-5.0	99	0.00	9.63- 9.83
20		Methoxychlor	20.000	18.124	9.4	87	0.00	9.97-10.17
21		Endrin Ketone	20.000	19.585	2.1	95	0.00	10.30-10.50
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	20.000	21.375	-6.9	104	-0.02	11.69-11.89

(#) = Out of Range SPCC's out = 0 CCC's out = 0
KK34405.D 8081A.M Mon Oct 19 11:26:06 2009

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries
- Instrument Runlogs/QC

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F68624
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Solids, Total Dissolved	GN36945	100	0.0	mg/l				

Associated Samples:
Batch GN36945: F68624-1, F68624-2, F68624-3, F68624-4, F68624-5
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F68624
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Solids, Total Dissolved	GN36945	F68624-1	mg/l	4690	4420	5.9(a)	0-5%

Associated Samples:
Batch GN36945: F68624-1, F68624-2, F68624-3, F68624-4, F68624-5
(*) Outside of QC limits
(a) RPD acceptable due to low duplicate and sample concentrations.

Continuing Calibration Summary

Laboratory DRAFT - Not for Release

Sample: VJ2896-CC2895
Lab FileID: J048440.D

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\071409\J048440.D Vial: 2
Acq On : 14 Jul 2009 10:10 am Operator: karenw
Sample : CC2895-4 Inst : MSVOA6
Misc : ms12402,vj2896,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\8260-JAPP9.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Mon Jul 13 13:54:21 2009
Response via : Multiple Level Calibration

Min. RRF : 0.001 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	86	0.00	7.55
2		Dichlorodifluoromethane	0.238	0.247	-3.8	88	0.00	2.84
3	P	Chloromethane	0.593	0.620	-4.6	90	0.00	3.02
4	C	Vinyl Chloride	0.480	0.532	-10.8	91	0.00	3.15
		----------	Amount	Calc.	%Drift		----------	
5		Bromomethane	40.000	43.707	-9.3	90	0.01	3.52
		----------	AvgRF	CCRF	%Dev		----------	
6		Chloroethane	0.256	0.287	-12.1	95	0.01	3.65
7		Trichlorofluoromethane	0.406	0.461	-13.5	95	0.01	3.88
8		Ethyl Ether	0.390	0.435	-11.5	94	0.00	4.09
9		1,2-Dichlorotrifluoroetha	0.396	0.460	-16.2	95	0.00	4.32
10	C	1,1-Dichloroethene	0.599	0.692	-15.5	94	0.00	4.37
11		Freon 113	0.268	0.300	-11.9	93	0.00	4.43
12		Carbon Disulfide	1.036	1.194	-15.3	94	0.00	4.44
13		Iodomethane	0.481	0.524	-8.9	89	0.00	4.54
14		Allyl chloride	0.711	0.794	-11.7	90	0.00	4.83
		----------	Amount	Calc.	%Drift		----------	
15		Methylene Chloride	40.000	43.664	-9.2	90	0.00	4.96
		----------	AvgRF	CCRF	%Dev		----------	
16		Acetone	0.058	0.063	-8.6	92	0.00	4.97
17		Methyl acetate	0.056	0.062	-10.7	91	0.00	5.08
18		trans-1,2-Dichloroethene	0.607	0.649	-6.9	89	0.00	5.12
19		Hexane	0.382	0.404	-5.8	92	0.00	5.17
20		Methyl Tert Butyl Ether	0.900	0.983	-9.2	90	0.00	5.22
21		Acetonitrile	0.026	0.030	-15.4	97	-0.01	5.47
22		Di-isopropyl ether	1.579	1.697	-7.5	89	0.00	5.58
23		Chloroprene	0.650	0.653	-0.5	80	0.00	5.72
24	P	1,1-Dichloroethane	0.731	0.800	-9.4	89	0.00	5.75
25		Acrylonitrile	0.159	0.164	-3.1	103	0.00	5.78
26		ETBE	1.146	1.335	-16.5	93	0.00	5.97
27		Vinyl acetate	0.554	0.612	-10.5	95	0.00	5.95
28		cis-1,2-Dichloroethene	0.384	0.413	-7.6	88	0.00	6.30
		----------	Amount	Calc.	%Drift		----------	
29		2,2-Dichloropropane	40.000	43.962	-9.9	97	0.00	6.43
		----------	AvgRF	CCRF	%Dev		----------	
30		Bromochloromethane	0.181	0.194	-7.2	86	0.00	6.50

Continuing Calibration Summary

Sample: VJ2896-CC2895

Laboratory DRAFT - Not for Release

Lab FileID: J048440.D

31		Cyclohexane	0.622	0.692	-11.3	93	0.00	6.54
32	C	Chloroform	0.604	0.622	-3.0	87	0.00	6.55
		----------	Amount	Calc.	%Drift		----------	
33		Ethyl acetate	200.000	216.312	-8.2	90	0.00	6.63
34		Tetrahydrofuran	40.000	47.447	-18.6	105	0.00	6.73
		----------	AvgRF	CCRF	%Dev		----------	
35	S	Dibromofluoromethane	0.265	0.261	1.5	85	0.00	6.74
		----------	Amount	Calc.	%Drift		----------	
36		Carbon Tetrachloride	40.000	45.555	-13.9	99	0.00	6.74
37		1,1,1-Trichloroethane	40.000	41.839	-4.6	91	0.00	6.81
		----------	AvgRF	CCRF	%Dev		----------	
38		2-Butanone	0.256	0.261	-2.0	84	0.00	6.84
39		1,1-Dichloropropene	0.468	0.511	-9.2	89	0.00	6.91
40		Propionitrile	0.061	0.067	-9.8	93	0.00	7.15
41		Methacrylonitrile	0.278	0.298	-7.2	92	0.00	7.16
42		Benzene	1.367	1.478	-8.1	90	0.00	7.16
43		TAME	0.841	0.969	-15.2	92	0.00	7.24
44	S	1,2-Dichloroethane-d4	0.338	0.349	-3.3	86	0.00	7.28
45		1,2-Dichloroethane	0.581	0.595	-2.4	88	0.00	7.34
46		Trichloroethene	0.354	0.378	-6.8	88	0.00	7.72
47		Methylcyclohexane	0.498	0.553	-11.0	92	0.00	7.74
48		Dibromomethane	0.213	0.234	-9.9	89	0.00	8.14
49	C	1,2-Dichloropropane	0.441	0.488	-10.7	89	0.00	8.23
		----------	Amount	Calc.	%Drift		----------	
50		Bromodichloromethane	40.000	42.677	-6.7	91	0.00	8.27
51		Methyl methacrylate	40.000	41.845	-4.6	90	0.00	8.38
		----------	AvgRF	CCRF	%Dev		----------	
52		2-Chloroethyl vinyl ether	0.274	0.318	-16.1	90	0.00	8.79
		----------	Amount	Calc.	%Drift		----------	
53		cis-1,3-Dichloropropene	40.000	42.764	-6.9	90	0.00	8.89
		----------	AvgRF	CCRF	%Dev		----------	
54	I	Chlorobenzene-d5	1.000	1.000	0.0	89	0.00	10.62
55	S	Toluene-d8	1.250	1.214	2.9	87	0.00	9.08
56	C	Toluene	1.667	1.720	-3.2	89	0.00	9.13
		----------	Amount	Calc.	%Drift		----------	
57		2-Nitropropane	200.000	239.578	-19.8	107	0.00	9.33
		----------	AvgRF	CCRF	%Dev		----------	
58		4-Methyl-2-pentanone	0.504	0.559	-10.9	91	0.00	9.46
		----------	Amount	Calc.	%Drift		----------	
59		trans-1,3-Dichloropropene	40.000	40.695	-1.7	91	0.00	9.51
		----------	AvgRF	CCRF	%Dev		----------	
60		Tetrachloroethene	0.370	0.378	-2.2	85	0.00	9.52
		----------	Amount	Calc.	%Drift		----------	
61		Ethyl methacrylate	40.000	40.776	-1.9	95	0.00	9.63
		----------	AvgRF	CCRF	%Dev		----------	

Continuing Calibration Summary

Laboratory DRAFT - Not for Release

Sample: VJ2896-CC2895
Lab FileID: J048440.D

62		1,1,2-Trichloroethane	0.327	0.348	-6.4	89	0.00	9.68
		----------	Amount	Calc.	%Drift	----------		
63		Dibromochloromethane	40.000	39.281	1.8	90	0.00	9.87
		----------	AvgRF	CCRF	%Dev	----------		
64		1,3-Dichloropropane	0.678	0.718	-5.9	88	0.00	9.96
		----------	Amount	Calc.	%Drift	----------		
65		1,2-Dibromoethane	40.000	40.083	-0.2	89	0.00	10.13
		----------	AvgRF	CCRF	%Dev	----------		
66		2-hexanone	0.373	0.427	-14.5	90	0.00	10.27
67		1-Chlorohexane	0.524	0.572	-9.2	90	0.00	10.58
68	C	Ethylbenzene	1.753	1.811	-3.3	88	0.00	10.64
69	P	Chlorobenzene	1.044	1.093	-4.7	88	0.00	10.64
		----------	Amount	Calc.	%Drift	----------		
70		1,1,1,2-Tetrachloroethane	40.000	39.537	1.2	87	0.00	10.69
		----------	AvgRF	CCRF	%Dev	----------		
71		m,p-Xylene	1.268	1.353	-6.7	88	0.00	10.78
72		o-Xylene	1.351	1.439	-6.5	87	0.00	11.22
73		Styrene	1.044	1.126	-7.9	86	0.00	11.26
		----------	Amount	Calc.	%Drift	----------		
74	P	Bromoform	40.000	41.757	-4.4	90	0.00	11.32
		----------	AvgRF	CCRF	%Dev	----------		
75		Isopropylbenzene	1.368	1.456	-6.4	86	0.00	11.53
76	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	89	0.00	12.98
77	S	4-Bromofluorobenzene	1.065	1.034	2.9	87	0.00	11.83
78		cis-1,4-Dichloro-2-butene	0.356	0.405	-13.8	92	0.00	11.87
79		n-Propylbenzene	4.009	4.224	-5.4	88	0.00	11.95
80		Bromobenzene	0.846	0.861	-1.8	85	0.00	11.95
81	P	1,1,2,2-Tetrachloroethane	0.970	1.017	-4.8	87	0.00	12.00
82		1,3,5-Trimethylbenzene	2.524	2.661	-5.4	87	0.00	12.13
83		2-Chlorotoluene	2.684	2.772	-3.3	86	0.00	12.13
		----------	Amount	Calc.	%Drift	----------		
84		trans-1,4-Dichloro-2-Bute	40.000	41.592	-4.0	91	0.00	12.18
		----------	AvgRF	CCRF	%Dev	----------		
85		1,2,3-Trichloropropane	0.261	0.262	-0.4	84	0.00	12.16
86		Cyclohexanone	0.029	0.026	10.3	90	0.00	12.22
87		4-Chlorotoluene	2.476	2.599	-5.0	87	0.00	12.29
88		tert-Butylbenzene	1.484	1.565	-5.5	87	0.00	12.48
89		1,2,4-Trimethylbenzene	2.630	2.744	-4.3	86	0.00	12.54
		----------	Amount	Calc.	%Drift	----------		
90		Pentachloroethane	40.000	42.255	-5.6	97	0.00	12.51
		----------	AvgRF	CCRF	%Dev	----------		
91		sec-Butylbenzene	3.166	3.381	-6.8	88	0.00	12.66
92		4-Isopropyltoluene	2.512	2.707	-7.8	88	0.00	12.79
93		1,3-Dichlorobenzene	1.512	1.578	-4.4	86	0.00	12.91
94		1,4-Dichlorobenzene	1.530	1.569	-2.5	86	0.00	13.00
95		n-Butylbenzene	1.537	1.695	-10.3	88	0.00	13.23

Continuing Calibration Summary

Laboratory DRAFT - Not for Release

Sample: VJ2896-CC2895
Lab FileID: J048440.D

		Amount	Calc.	%Drift			
96	Benzyl Chloride	40.000	43.747	-9.4	94	0.00	13.24
		AvgRF	CCRF	%Dev			
97	1,2-Dichlorobenzene	1.440	1.506	-4.6	85	0.00	13.43
		Amount	Calc.	%Drift			
98	1,2-Dibromo-3-Chloropropa	40.000	41.707	-4.3	90	0.00	14.18
		AvgRF	CCRF	%Dev			
99	Hexachlorobutadiene	0.294	0.308	-4.8	86	0.00	14.75
		Amount	Calc.	%Drift			
100	1,2,4-Trichlorobenzene	40.000	38.451	3.9	84	0.00	14.79
101	Naphthalene	40.000	41.485	-3.7	89	0.00	15.07
102	1,2,3-Trichlorobenzene	40.000	39.373	1.6	87	0.00	15.23
		AvgRF	CCRF	%Dev			
103 I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	110	-0.02	5.19
		Amount	Calc.	%Drift			
104	Ethanol	800.000	861.286	-7.7	123	0.02	4.26
105	acrolein	200.000	174.884	12.6	97	-0.01	4.68
		AvgRF	CCRF	%Dev			
106	Tert Butyl Alcohol	1.098	1.081	1.5	101	0.00	5.27
		Amount	Calc.	%Drift			
107	tert Amyl alcohol	400.000	365.018	8.7	96	0.00	7.38
108	Isobutyl alcohol	800.000	688.962	13.9	92	0.00	7.26
		AvgRF	CCRF	%Dev			
109	1,4-Dioxane	0.121	0.105	13.2	88	0.00	8.46

(#) = Out of Range SPCC's out = 0 CCC's out = 0
J048406.D 8260-JAPP9.M Wed Jul 15 14:04:42 2009

Lot # D9G090307

Report Cover Page 1
Case Narrative 2
Executive Summary - Detection Highlights 5
Methods Summary 6
Method / Analyst Summary 7
Sample Summary 8
QC Data Association Summary 9
GC/MS Semivolatiles Forms 10
Chain of Custody 42
Sample Receipt Documents 43

Supporting Documentation 45
IC/MS/MS Raw Data 45

Total Number of Pages in this Package 84

Close Report

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

Holloman Air Force Base

Lot # D9J080289

Virginia Mullins
Tetra Tech, Inc.
800 Oak Ridge Turnpike
Suite A-500
Oak Ridge, TN 37830

TestAmerica Laboratories, Inc.

Lisa B. Uriell
Project Manager

October 14, 2009

Case Narrative
Lot # D9J090289

With exceptions noted as flags or footnotes, standard analytical protocols were followed in the analyses of the samples and no problems were encountered or anomalies observed. All laboratory quality control samples analyzed in conjunction with the samples in this project were within established control limits, with any exceptions noted.

The test results shown in this report meet all requirements of the AFCEE 4.0 QAPP and the approved laboratory variances. Any exceptions are noted below. This report shall not be reproduced except in full, without the written approval of the laboratory.

Sample Receiving
One sample was received under Chain of Custody on October 8, 2009. The sample was received in good condition at a temperature of 3.9°C.

No anomalies were observed.

Perchlorate, SW 846 6860
Each sample is analyzed to achieve the lowest possible reporting limits within the constraints of the method. Due to elevated levels of Perchlorate present above the linear calibration curve, sample MW39-12-100609 (D9J080289-001) had to be analyzed at a 1000X dilution. The reporting limit has been adjusted relative to the dilution required.

MS/MSD were performed on a sample from another client and/or lot. The MS/MSD exhibited percent recoveries outside the QC control limits for Perchlorate. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

Quality Control Definitions of Terms

Term	Definition
Batch	A set of up to 20 field samples plus associated laboratory QC samples that are similar in composition (matrix) and that are processed within the same time period with the same reagent and standard lots.
Laboratory Control Sample and Laboratory Control Sample Duplicate (LCS/LCSD)	A volume of reagent water for aqueous samples or a contaminant-free solid matrix (Ottawa sand) for soil and sediment samples which are spiked with known amounts of representative target analytes and required surrogates. A LCS is carried through the entire analytical process and is used to monitor the accuracy of the analytical process independent of potential matrix effects. An LCSD is a second Laboratory Control Sample.
Matrix Spike and Matrix Spike Duplicate (MS/MSD)	A field sample fortified with known quantities of target analytes that are also added to the LCS. Matrix spike duplicate is a second matrix spike sample. MSs/MSDs are carried throughout he entire analytical process and are used to determine sample matrix effect on accuracy of the measurement system. The accuracy and precision estimated using MS/MSD is only representative of the precision of the sample that was spiked.
Method Blank	A sample composed of all the reagents (in the same quantities) in reagent water carried through the entire analytical process. The method blank is used to monitor the level of contamination introduced during sample preparation steps.
Surrogate	Organic constituents not expected to be detected in environmental media and are added to every sample and QC at a known concentration. Surrogates are used to determine the efficiency of the sample preparation and the analytical process.
Sample Duplicate	A second aliquot of an environmental sample, taken form the same sample container when possible, that is processed independently with the first sample aliquot. The results are used to assess the effect of the sample matrix on the precision of the analytical process. The precision estimated using this sample is not necessarily representative to the precision for other samples in the batch.
Method Detection Limit "MDL"	The method detection limit is defined as the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from replicate analyses of low level standards in a typical representative matrix.
Reporting Limit "RL"	The STL reporting limit is normally the lowest level at which measurements become quantitatively meaningful, i.e., the quantitation limit, which is approximately three times the MDL. Some projects require RLs that are less than the quantitation limit to achieve particular maximum contaminant levels (MCLs) or relevant and appropriate requirements (ARARs), but RLs cannot be less than the statistically determined MDL.

Quality Control Definitions of Qualifiers

Qualifier	Definition
J	The analyte was positively identified; the quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
U	The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.
F	The analyte was positively identified but the associated numerical value is above the MDL and below the RL.
Q	The data are rejected due to deficiencies in the ability to analyze the sample and meet QC criteria.
B	The analyte was found in an associated blank, as well as in the sample.
M	A matrix effect was present.
NC, MSB	The recovery and RPD were not calculated because the sample amount was greater than four times the spike amount.
NC, DIL	The recovery was not calculated because the sample was diluted four times or greater.
N	Inorganics: Spiked analyte recovery is outside stated control limits.
a	Organics: Spiked analyte recovery is outside stated control limits.
*	Surrogate or LCS is outside control limits.
UJ	The analyte was not detected; however, the result is estimated due to discrepancies in meeting certain analyte specific quality control criteria.

EXECUTIVE SUMMARY - Detection Highlights

D9J080289

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
MW39-12-100609 10/06/09 10:35 001				
Perchlorate	76	50	ug/L	SW846 6860

METHODS SUMMARY

D9J080289

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
SW846 6860 Perchlorate	SW846 6860	SW846 6860

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

METHOD / ANALYST SUMMARY

D9J080289

ANALYTICAL METHOD	ANALYST	ANALYST ID
SW846 6860	Jacqueline Bonnett	003601

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

D9J080289

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
LL8HJ	001	MW39-12-100609	10/06/09	10:35

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

QC DATA ASSOCIATION SUMMARY

D9J080289

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	WG	SW846 6860		9283161	9283107

TestAmerica

Semivolatile GC/MS

CLP-Like Forms

Lot ID: D9J080289

Client: Tetra Tech Inc. – Holloman AFB

Method: SW846 6860

Associated Sample: 001

Batch: 9283161

Table of Contents

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Tetra Tech NUS, Inc
Holloman AFB
Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	MW39-12-100609
Lot/SDG Number:	D9J080289	**Lab Sample ID:**	D9J080289-001
Matrix:	WATER	**Lab WorkOrder:**	LL8HJ1AA
% Moisture:	N/A	**Date/Time Collected:**	10/06/09 10:35
Basis:	Wet	**Date/Time Received:**	10/08/09 09:30
Analysis Method:	6860	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	10/10/09 12:50
QC Batch ID:	9283161	**Date/Time Analyzed:**	10/11/09 06:59
Sample Aliquot:	5 mL	**Instrument ID:**	LCMS1
Dilution Factor:	1000	**Extraction Method:**	6860

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
14797-73-0	Perchlorate	Jacqueline Bonnett	JB	**76**	8.8	50	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Tetra Tech NUS, Inc
Holloman AFB
Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	D9J080289	**Lab Sample ID:**	R9J100000-161B
Matrix:	WATER	**Lab WorkOrder:**	LMDQA1AA
% Moisture:		**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	6860	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	10/10/09 12:50
QC Batch ID:	9283161	**Date/Time Analyzed:**	10/11/09 04:05
Sample Aliquot:	5 mL	**Instrument ID:**	LCMS1
Dilution Factor:	1	**Extraction Method:**	6860

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
14797-73-0	Perchlorate	Jacqueline Bonnett	JB	0.0088	0.0088	0.050	U

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Tetra Tech NUS, Inc

Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	D9J080289	**Lab Sample ID:**	R9J100000-161C
Matrix:	WATER	**Lab WorkOrder:**	LMDQA1AC
% Moisture:	N/A	**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	6860	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	10/10/09 12:50
QC Batch ID:	9283161	**Date/Time Analyzed:**	10/11/09 04:34
Sample Aliquot:	5 mL	**Instrument ID:**	LCMS1
Dilution Factor:	1		

Analyte	True	Found	%Rec	Q	Limits
Perchlorate	0.0500	0.0517	103		80 - 120

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Tetra Tech NUS, Inc

Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	LAB MS/MSD
Lot/SDG Number:	D9J080289	**MS Lab Sample ID:**	D9J020238-001S
Matrix:	WATER	**MS Lab WorkOrder:**	LLW741CM
% Moisture:	N/A	**Date/Time Collected:**	10/01/09 13:00
Basis:	Wet	**Date/Time Received:**	10/02/09 09:15
Analysis Method:	6860	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	10/10/09 12:50
QC Batch ID:	9283161	**Date/Time Analyzed:**	10/11/09 06:01
MS Sample Aliquot:	5 mL	**Instrument ID:**	LCMS1
MS Dilution Factor:	1		

Analyte	Spike Amount	Sample Result	C	MS Result	C	% Rec	Q	QC Limit
Perchlorate	0.0500	0.44	M	0.474		70	a	80 - 120

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Tetra Tech NUS, Inc

Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	LAB MS/MSD
Lot/SDG Number:	D9J080289	**MSD Lab Sample ID:**	D9J020238-001D
Matrix:	WATER	**MSD Lab WorkOrder:**	LLW741CN
% Moisture:	N/A	**Date/Time Collected:**	10/01/09 13:00
Basis:	Wet	**Date/Time Received:**	10/02/09 09:15
Analysis Method:	6860	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	10/10/09 12:50
QC Batch ID:	9283161	**Date/Time Analyzed:**	10/11/09 06:30
MSD Sample Aliquot:	5 mL	**Instrument ID:**	LCMS1
MSD Dilution Factor:	1		

Analyte	Spike Amount	Sample Result	C	MSD Result	C	% Rec	Q	RPD	Q	QC Limits	
										% Rec	RPD
Perchlorate	0.0500	0.44	M	0.466		54	a	1.7		80 - 120	15

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Tetra Tech NUS, Inc

Method Blank Summary

Lab Name:	TESTAMERICA DENVER	**Lab File ID:**	IC19J1042
Lot/SDG Number:	D9J080289	**Lab Sample ID:**	R9J100000-161B
Matrix:	WATER	**Lab Work Order:**	LMDQA1AA
Analysis Method:	6860	**Date/Time Extracted:**	10/10/09 12:50
Extraction Method:	I88ZUA4	**Date/Time Analyzed:**	10/11/09 04:05
QC Batch ID:	9283161	**Instrument ID:**	LCMS1

Client ID	Sample Work Order #	Lab File ID	Date Analyzed	Time Analyzed
MW39-12-100609	LL8HJ1AA	IC19J1042	10/11/09	06:59
LAB MS/MSD MS	LLW741CM S	IC19J1040	10/11/09	06:01
LAB MS/MSD MSD	LLW741CN D	IC19J1041	10/11/09	06:30
CHECK SAMPLE	LMDQA1AC C	IC19J1037	10/11/09	04:34

Manual Integration Summary

SW 846 6860 Perchlorate

Lot:	See below	Batch:	9283161

	Specify Paramter That has Been Manually Integrated											
Compound												
Perchlorate	--	--	--	--	--	--	--	--	--	--	--	--

Legend (Why MI needed)		Reviewed By:
1 = Baseline event	4 = Computer did NOT ID analyte	S. Castagna 10-13-09
2 = Split Peak	5 = Peak mis-ID by computer	
3 = Peak tailing	6 = other (specify)	

No MI's Performed

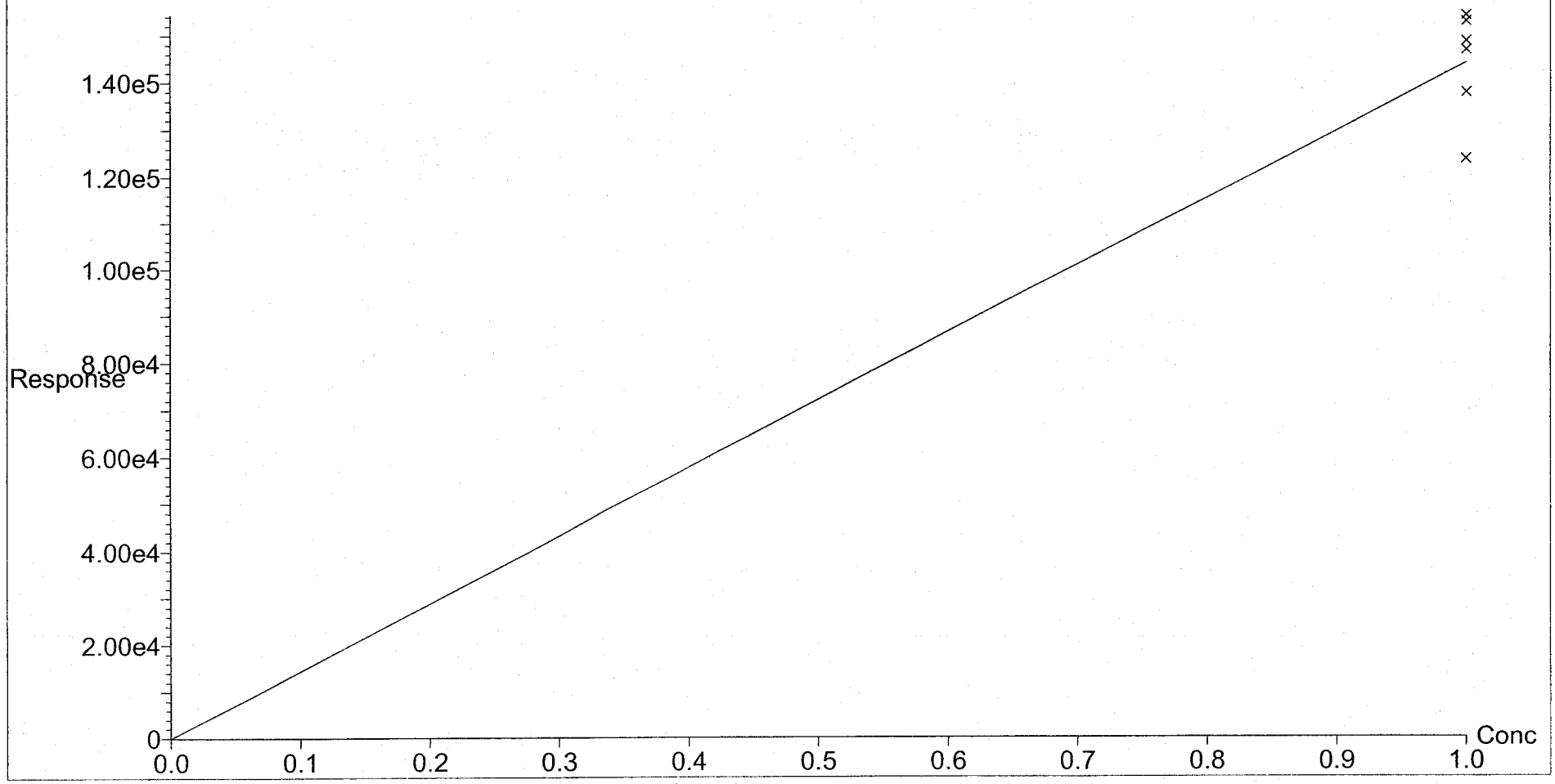
Lots covered by this form: D9J020238, D9J080289

Table of Contents

Quantify Calibration Report
IC Perchlorate Analysis

Calibration: C:\MassLynx\IC Perchlorate.PRO\CurveDB\ic19i02
Last modified: Tue Sep 29 12:38:38 2009
Printed: Sun Oct 11 17:59:29 2009

Compound 1 name: 18O Perchlorate Method File: ic19i02
Response Factor: 144128
RRF SD: 11553.8, % Relative SD: 8.01636
Response type: External Std, Area
Curve type: RF

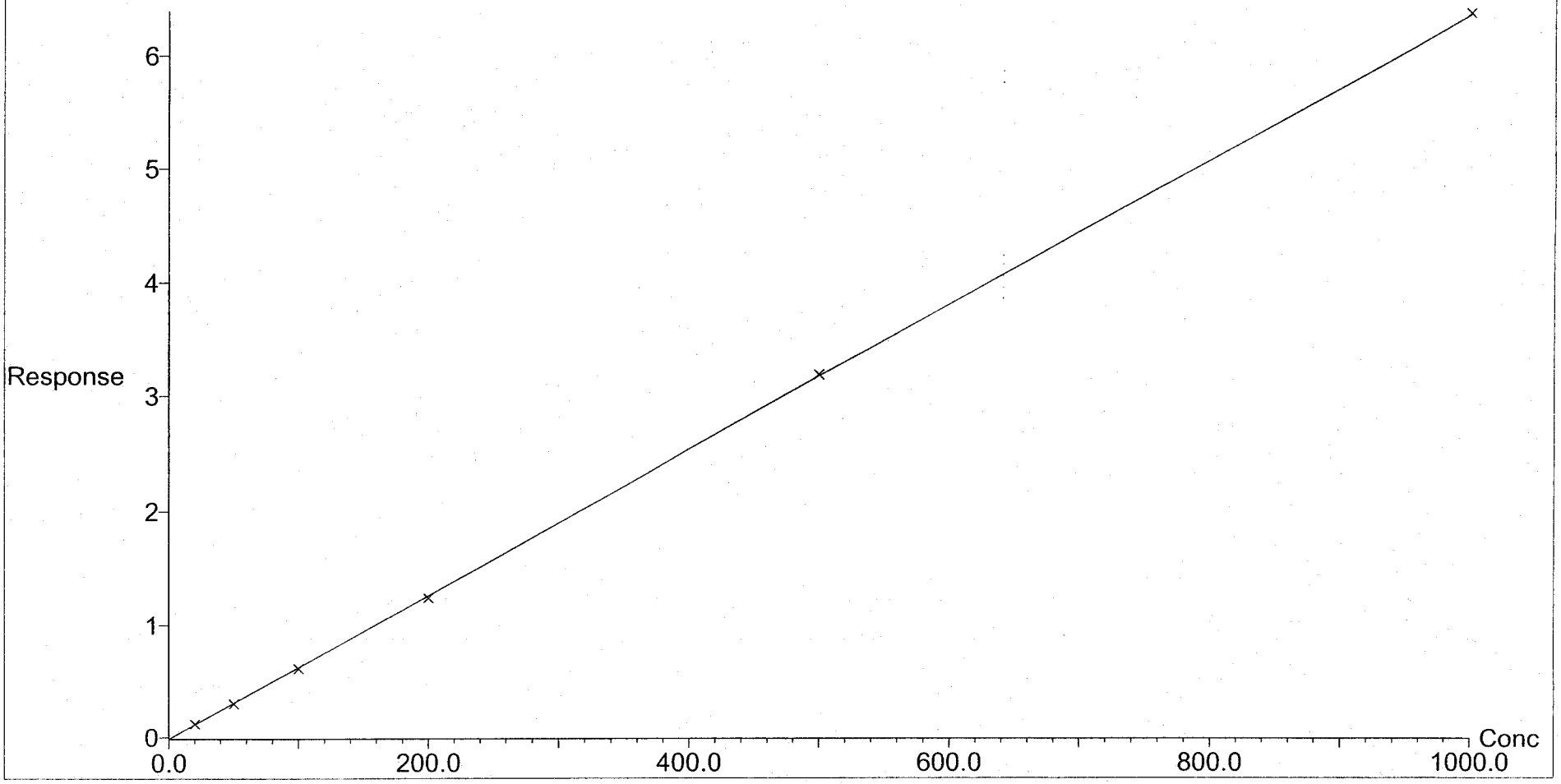


Analyst: Jacqueline Bonnett

Quantify Calibration Report
IC Perchlorate Analysis

Calibration: C:\MassLynx\IC Perchlorate.PRO\CurveDB\ic19i02
Last modified: Tue Sep 29 12:38:38 2009
Printed: Sun Oct 11 17:59:29 2009

Compound 2 name: Perchlorate Method File: ic19i02
Coefficient of Determination: 0.999899
Calibration curve: 0.00636977 * x + -0.0117402
Response type: Internal Std (Ref 1), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Analyst: Jacqueline Bonnett

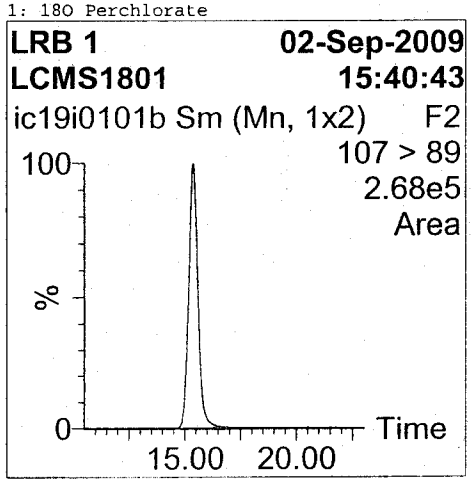
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx\IC Perchlorate.PRO\SampleDB\ic19j10(2)
Last modified: Sun Oct 11 17:57:03 2009
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19i02
Last modified: Thu Sep 03 10:05:53 2009
Job Code:

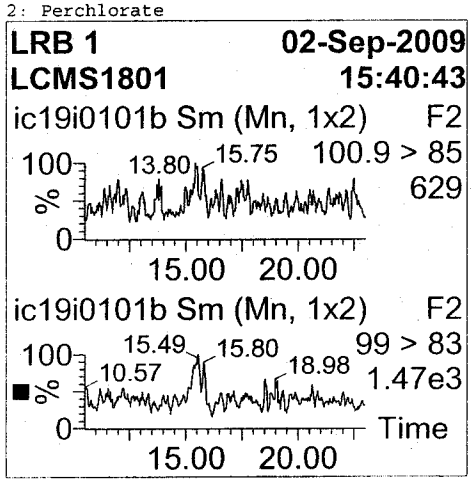
Printed: Sun Oct 11 17:59:30 2009

Name: ic19i0101b
Text: LRB 1

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.368	128437	bb	0.891	89.11	ic19i02	29/Sep/09	
2	Perchlorate						ic19i02	29/Sep/09	

Analyst: Jacqueline Bonnett

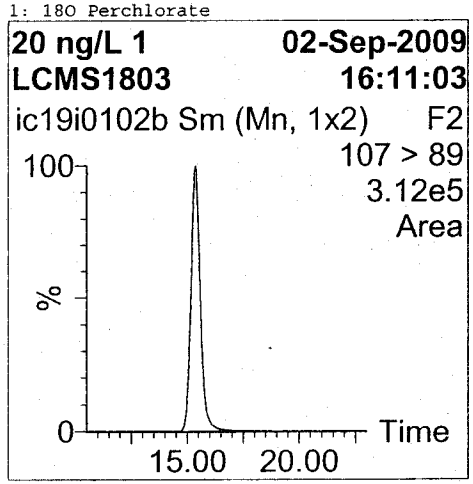
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx\IC Perchlorate.PRO\SampleDB\ic19j10(2)
Last modified: Sun Oct 11 17:57:03 2009
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19i02
Last modified: Thu Sep 03 10:05:53 2009
Job Code:

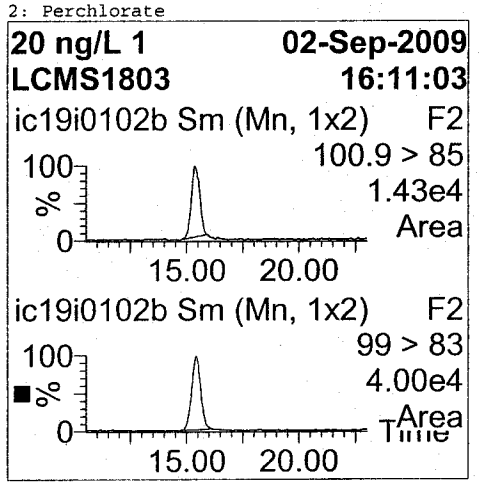
Printed: Sun Oct 11 17:59:30 2009

Name: ic19i0102b
Text: 20 ng/L 1

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.368	148847	bb	1.033	103.27	ic19i02	29/Sep/09	
2	Perchlorate	15.418	18059	bb	20.890	104.45	ic19i02	29/Sep/09	

Analyst: Jacqueline Bonnett

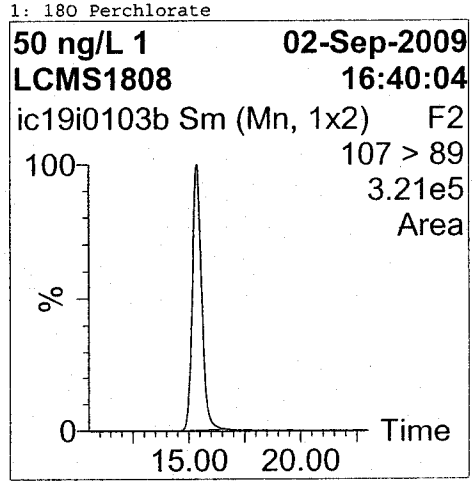
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx\IC Perchlorate.PRO\SampleDB\ic19j10(2)
Last modified: Sun Oct 11 17:57:03 2009
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19i02
Last modified: Thu Sep 03 10:05:53 2009
Job Code:

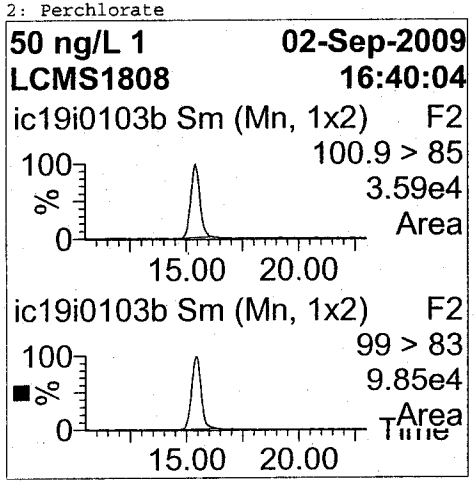
Printed: Sun Oct 11 17:59:30 2009

Name: ic19i0103b
Text: 50 ng/L 1

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.343	154319	bb	1.071	107.07	ic19i02	29/Sep/09	
2	Perchlorate	15.419	46347	bb	48.993	97.99	ic19i02	29/Sep/09	

Analyst: Jacqueline Bonnett

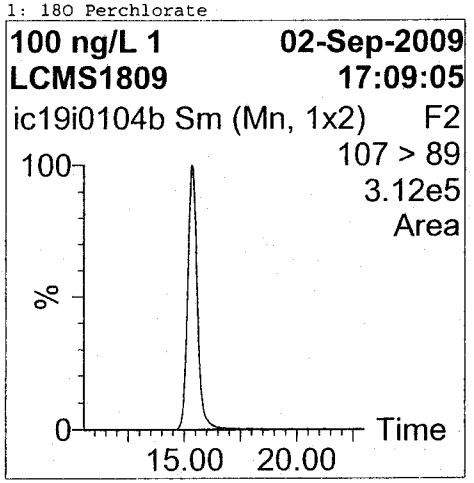
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx\IC Perchlorate.PRO\SampleDB\ic19j10(2)
Last modified: Sun Oct 11 17:57:03 2009
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19i02
Last modified: Thu Sep 03 10:05:53 2009
Job Code:

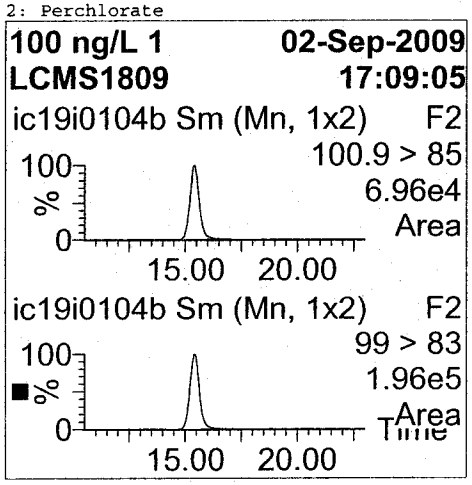
Printed: Sun Oct 11 17:59:30 2009

Name: ic19i0104b
Text: 100 ng/L 1

1: 180 Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	180 Perchlorate	15.342	153055	bb	1.062	106.19	ic19i02	29/Sep/09	
2	Perchlorate	15.393	94124	bb	98.388	98.39	ic19i02	29/Sep/09	

Analyst: Jacqueline Bonnett

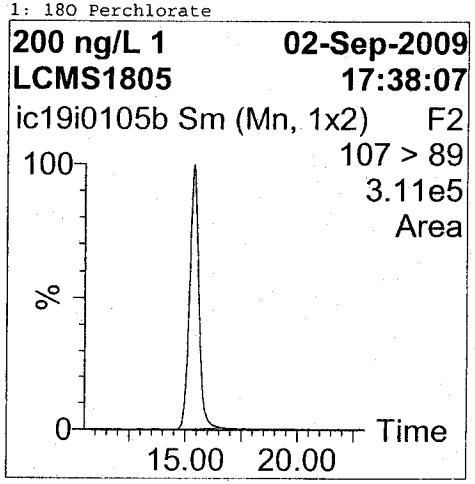
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx\IC Perchlorate.PRO\SampleDB\ic19j10(2)
Last modified: Sun Oct 11 17:57:03 2009
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19i02
Last modified: Thu Sep 03 10:05:53 2009
Job Code:

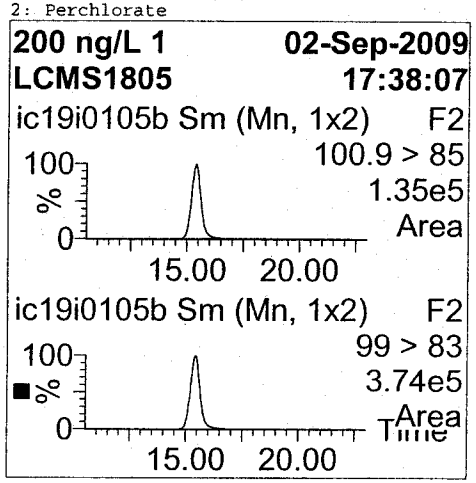
Printed: Sun Oct 11 17:59:30 2009

Name: ic19i0105b
Text: 200 ng/L 1

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.367	146932	bb	1.019	101.95	ic19i02	29/Sep/09	
2	Perchlorate	15.443	182621	bb	196.967	98.48	ic19i02	29/Sep/09	

Analyst: Jacqueline Bonnett

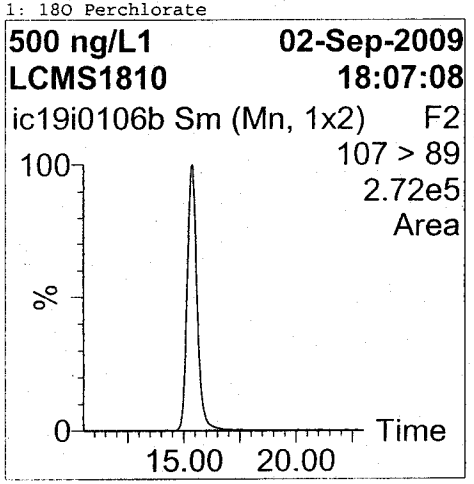
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx\IC Perchlorate.PRO\SampleDB\ic19j10(2)
Last modified: Sun Oct 11 17:57:03 2009
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19i02
Last modified: Thu Sep 03 10:05:53 2009
Job Code:

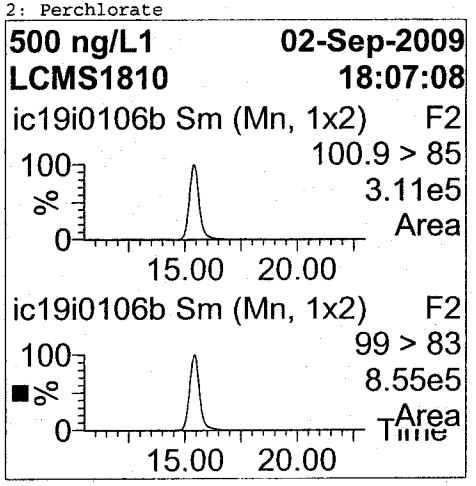
Printed: Sun Oct 11 17:59:30 2009

Name: ic19i0106b
Text: 500 ng/L1

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.368	137840	bb	0.956	95.64	ic19i02	29/Sep/09	
2	Perchlorate	15.419	439284	bb	502.161	100.43	ic19i02	29/Sep/09	

Analyst: Jacqueline Bonnett

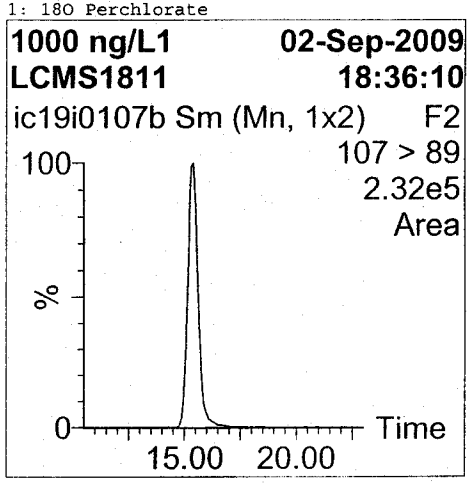
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx\IC Perchlorate.PRO\SampleDB\ic19j10(2)
Last modified: Sun Oct 11 17:57:03 2009
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19i02
Last modified: Thu Sep 03 10:05:53 2009
Job Code:

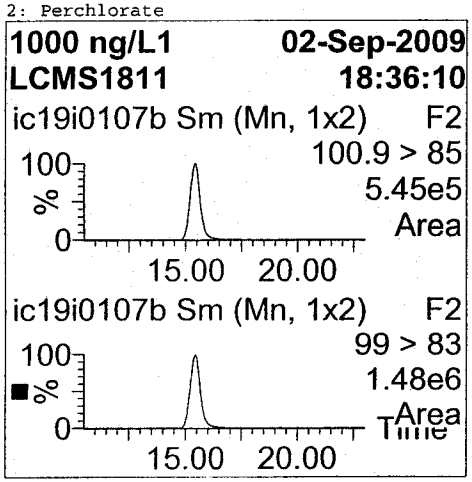
Printed: Sun Oct 11 17:59:30 2009

Name: ic19i0107b
Text: 1000 ng/L1

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.367	123775	bb	0.859	85.88	ic19i02	29/Sep/09	
2	Perchlorate	15.443	789017	bb	1002.600	100.26	ic19i02	29/Sep/09	

Analyst: Jacqueline Bonnett

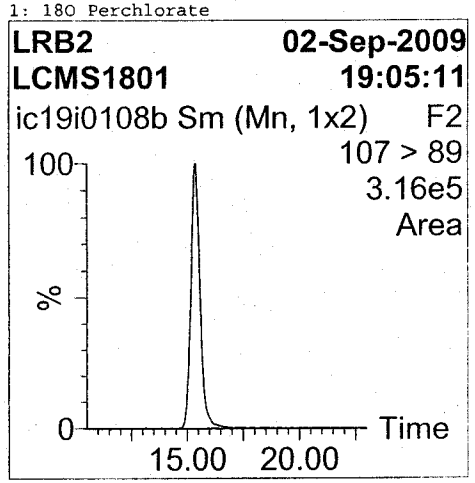
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx\IC Perchlorate.PRO\SampleDB\ic19j10(2)
Last modified: Sun Oct 11 17:57:03 2009
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19i02
Last modified: Thu Sep 03 10:05:53 2009
Job Code:

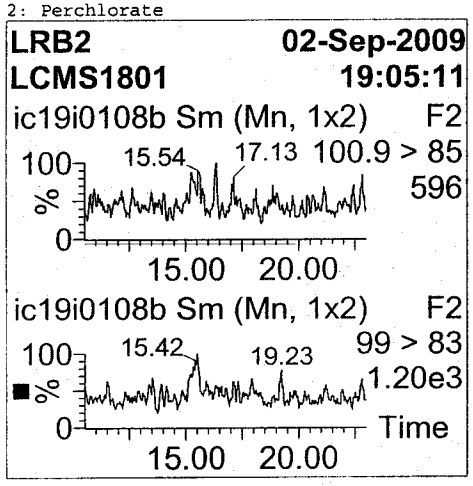
Printed: Sun Oct 11 17:59:30 2009

Name: ic19i0108b
Text: LRB2

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.367	151644	bb	1.052	105.21	ic19i02	29/Sep/09	
2	Perchlorate						ic19i02	29/Sep/09	

Analyst: Jacqueline Bonnett

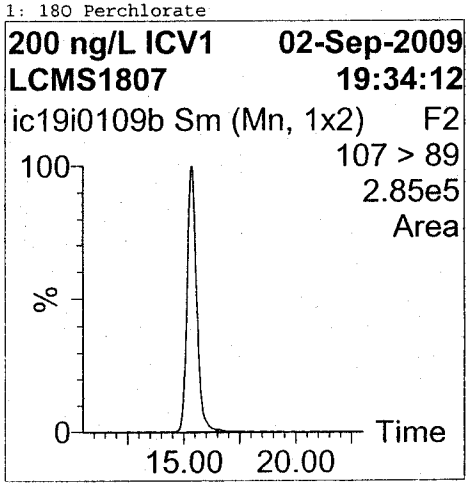
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx\IC Perchlorate.PRO\SampleDB\ic19j10(2)
Last modified: Sun Oct 11 17:57:03 2009
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19i02
Last modified: Thu Sep 03 10:05:53 2009
Job Code:

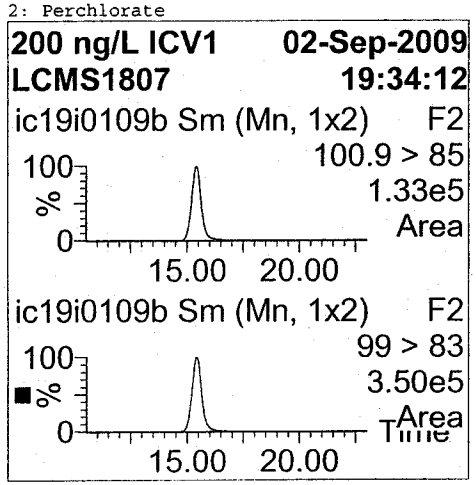
Printed: Sun Oct 11 17:59:30 2009

Name: ic19i0109b
Text: 200 ng/L ICV1

1: 180 Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	180 Perchlorate	15.343	139558	bb	0.968	96.83	ic19i02	29/Sep/09	
2	Perchlorate	15.394	174244	bb	197.854	98.93	ic19i02	29/Sep/09	

Analyst: Jacqueline Bonnett

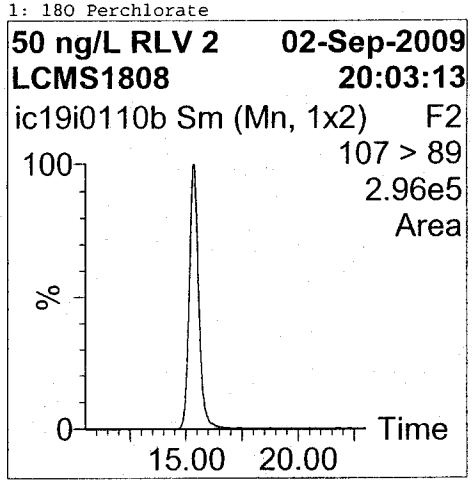
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx\IC Perchlorate.PRO\SampleDB\ic19j10(2)
Last modified: Sun Oct 11 17:57:03 2009
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19i02
Last modified: Thu Sep 03 10:05:53 2009
Job Code:

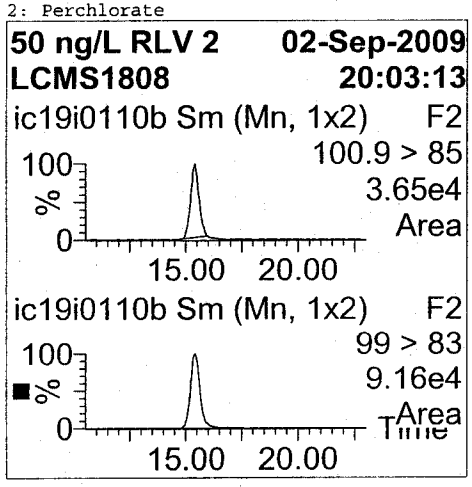
Printed: Sun Oct 11 17:59:30 2009

Name: ic19i0110b
Text: 50 ng/L RLV 2

1: 180 Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	180 Perchlorate	15.342	143166	bb	0.993	99.33	ic19i02	29/Sep/09	
2	Perchlorate	15.393	44126	bb	50.230	100.46	ic19i02	29/Sep/09	

Analyst: Jacqueline Bonnett

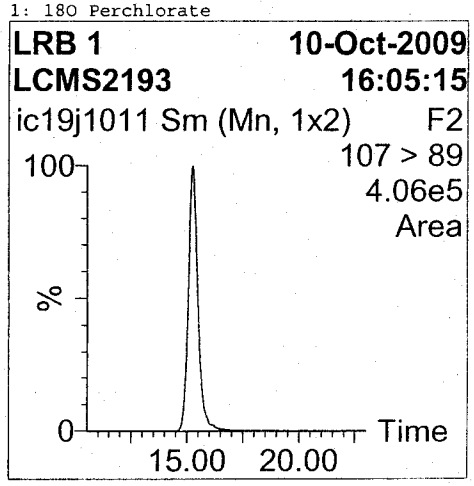
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx\IC Perchlorate.PRO\SampleDB\ic19j10(2)
Last modified: Sun Oct 11 17:57:03 2009
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19i02
Last modified: Thu Sep 03 10:05:53 2009
Job Code:

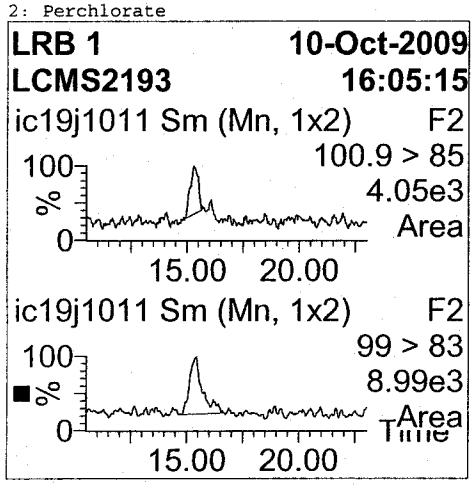
Printed: Sun Oct 11 17:59:30 2009

Name: ic19j1011
Text: LRB 1

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.242	199928	bb	1.387	138.72	ic19i02	29/Sep/09	
2	Perchlorate	15.419	4484	bb	5.364		ic19i02	29/Sep/09	

Analyst: Jacqueline Bonnett

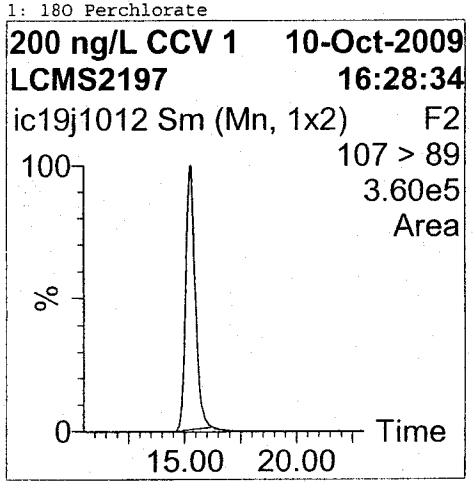
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx\IC Perchlorate.PRO\SampleDB\ic19j10(2)
Last modified: Sun Oct 11 17:57:03 2009
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19i02
Last modified: Thu Sep 03 10:05:53 2009
Job Code:

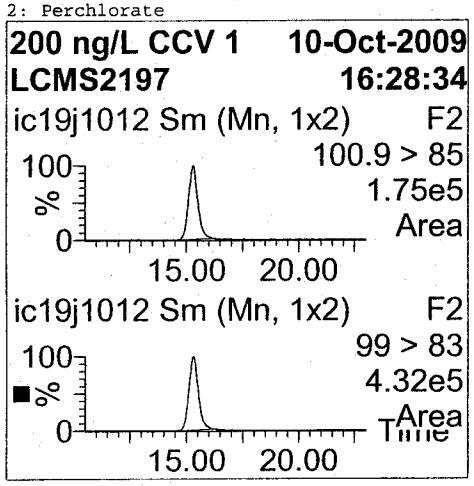
Printed: Sun Oct 11 17:59:30 2009

Name: ic19j1012
Text: 200 ng/L CCV 1

1: 180 Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	180 Perchlorate	15.267	174172	bb	1.208	120.85	ic19i02	29/Sep/09	
2	Perchlorate	15.318	205019	bb	186.639	93.32	ic19i02	29/Sep/09	

Analyst: Jacqueline Bonnett

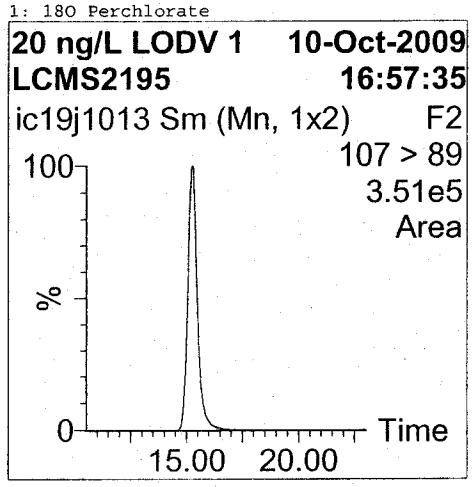
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx\IC Perchlorate.PRO\SampleDB\ic19j10(2)
Last modified: Sun Oct 11 17:57:03 2009
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19i02
Last modified: Thu Sep 03 10:05:53 2009
Job Code:

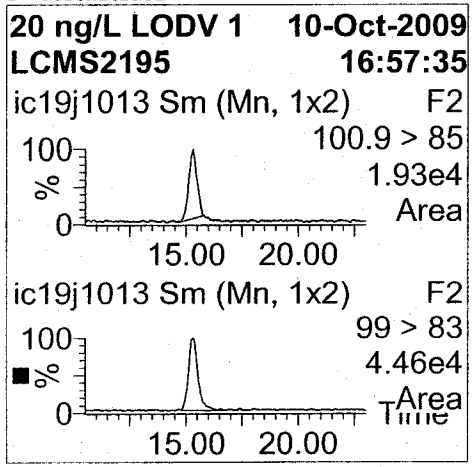
Printed: Sun Oct 11 17:59:30 2009

Name: ic19j1013
Text: 20 ng/L LODV 1

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.267	172630	bb	1.198	119.78	ic19i02	29/Sep/09	
2	Perchlorate	15.318	21417	bb	21.320	106.60	ic19i02	29/Sep/09	

Analyst: Jacqueline Bonnett

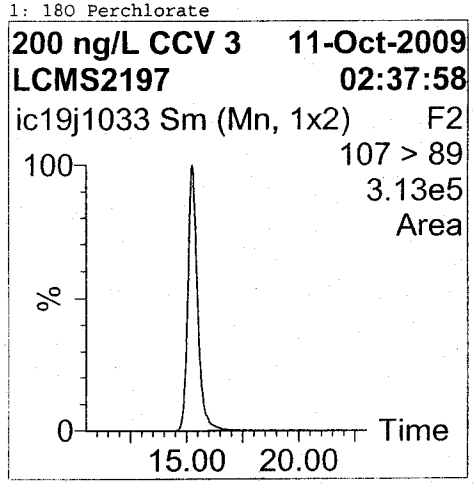
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx\IC Perchlorate.PRO\SampleDB\ic19j10(2)
Last modified: Sun Oct 11 17:57:03 2009
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19i02
Last modified: Thu Sep 03 10:05:53 2009
Job Code:

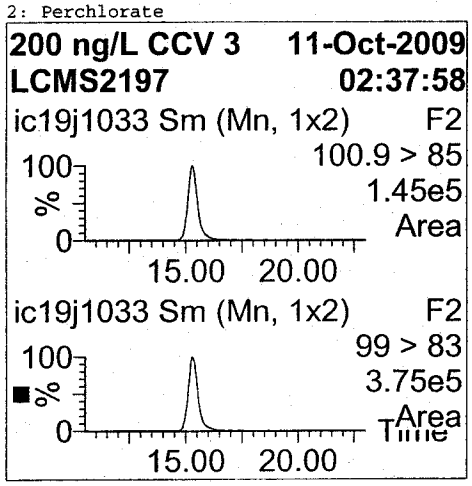
Printed: Sun Oct 11 17:59:30 2009

Name: ic19j1033
Text: 200 ng/L CCV 3

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.242	157285	bb	1.091	109.13	ic19i02	29/Sep/09	
2	Perchlorate	15.267	184618	bb	186.117	93.06	ic19i02	29/Sep/09	

Analyst: Jacqueline Bonnett

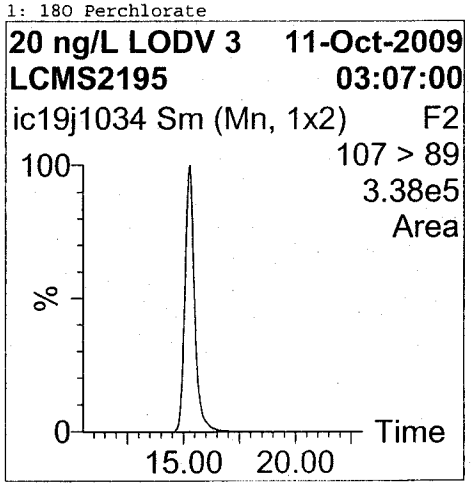
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx\IC Perchlorate.PRO\SampleDB\ic19j10(2)
Last modified: Sun Oct 11 17:57:03 2009
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19i02
Last modified: Thu Sep 03 10:05:53 2009
Job Code:

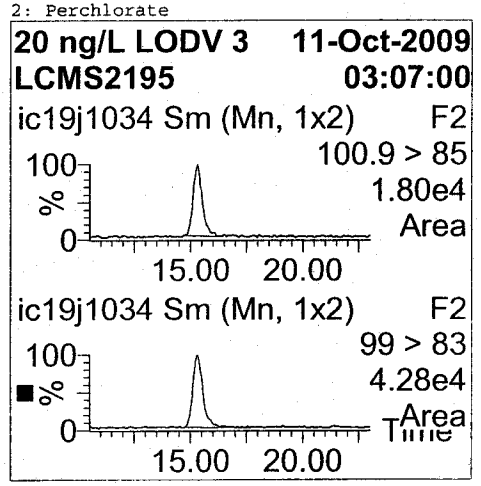
Printed: Sun Oct 11 17:59:30 2009

Name: ic19j1034
Text: 20 ng/L LODV 3

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.267	168565	bb	1.170	116.96	ic19i02	29/Sep/09	
2	Perchlorate	15.318	21930	bb	22.268	111.34	ic19i02	29/Sep/09	

Analyst: Jacqueline Bonnett

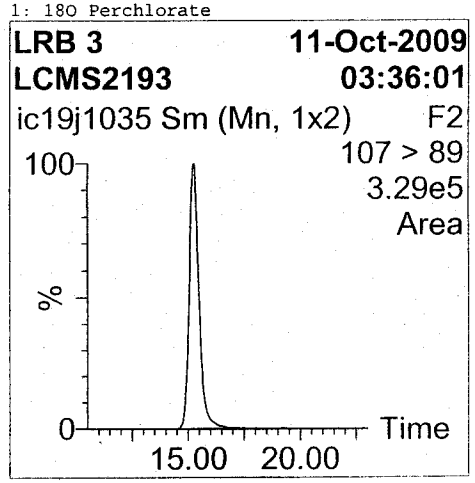
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx\IC Perchlorate.PRO\SampleDB\ic19j10(2)
Last modified: Sun Oct 11 17:57:03 2009
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19i02
Last modified: Thu Sep 03 10:05:53 2009
Job Code:

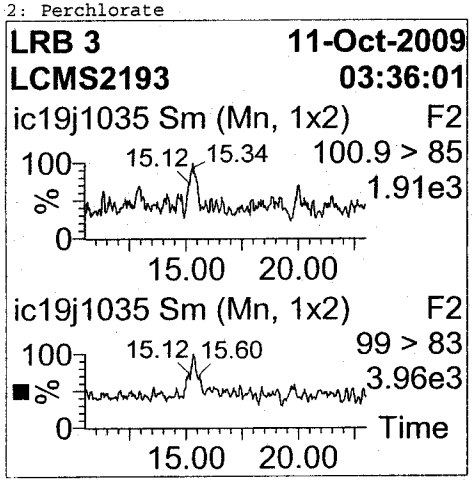
Printed: Sun Oct 11 17:59:30 2009

Name: ic19j1035
Text: LRB 3

1: 180 Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	180 Perchlorate	15.242	165770	bb	1.150	115.02	ic19i02	29/Sep/09	
2	Perchlorate						ic19i02	29/Sep/09	

Analyst: Jacqueline Bonnett

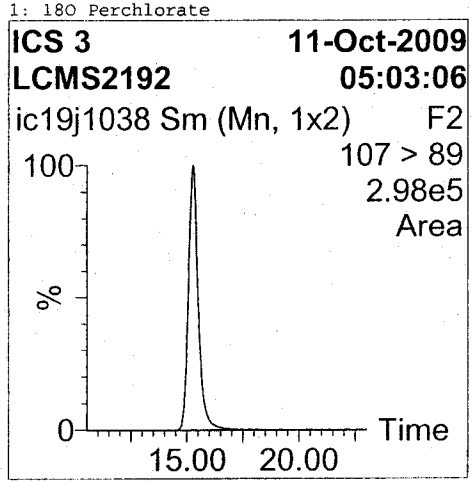
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx\IC Perchlorate.PRO\SampleDB\ic19j10(2)
Last modified: Sun Oct 11 17:57:03 2009
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19i02
Last modified: Thu Sep 03 10:05:53 2009
Job Code:

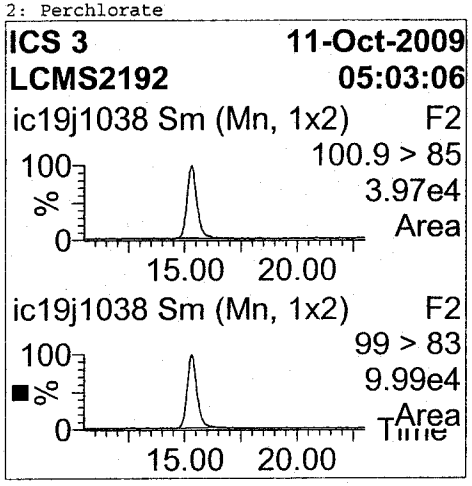
Printed: Sun Oct 11 17:59:30 2009

Name: ic19j1038
Text: ICS 3

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.267	149920	bb	1.040	104.02	ic19i02	29/Sep/09	
2	Perchlorate	15.318	48142	bb	52.256	104.51	ic19i02	29/Sep/09	

Analyst: Jacqueline Bonnett

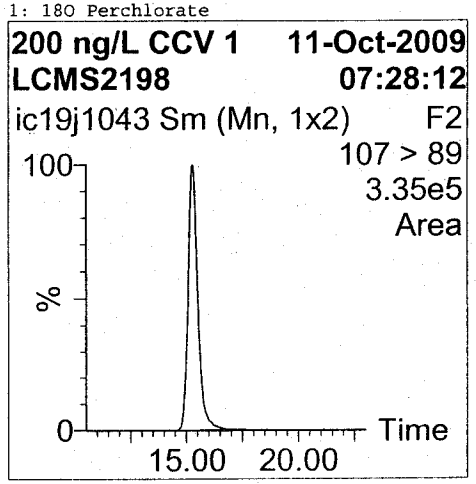
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx\IC Perchlorate.PRO\SampleDB\ic19j10(2)
Last modified: Sun Oct 11 17:57:03 2009
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19i02
Last modified: Thu Sep 03 10:05:53 2009
Job Code:

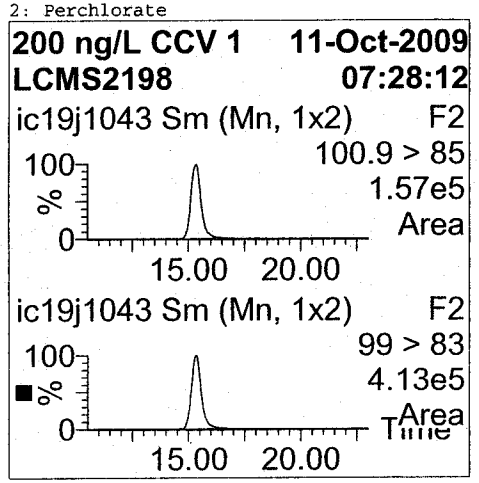
Printed: Sun Oct 11 17:59:30 2009

Name: ic19j1043
Text: 200 ng/L CCV 1

1: 180 Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	180 Perchlorate	15.267	167276	bb	1.161	116.06	ic19i02	29/Sep/09	
2	Perchlorate	15.343	206394	bb	195.547	97.77	ic19i02	29/Sep/09	

Analyst: Jacqueline Bonnett

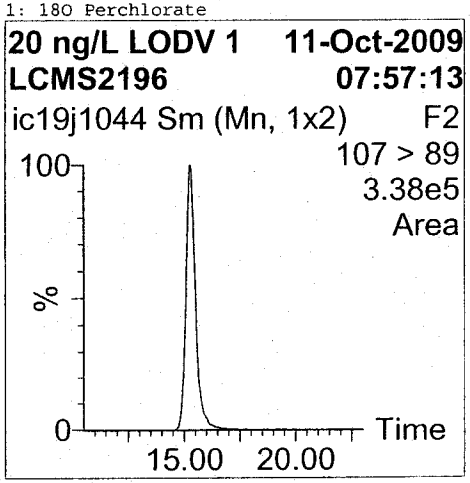
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx\IC Perchlorate.PRO\SampleDB\ic19j10(2)
Last modified: Sun Oct 11 17:57:03 2009
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19i02
Last modified: Thu Sep 03 10:05:53 2009
Job Code:

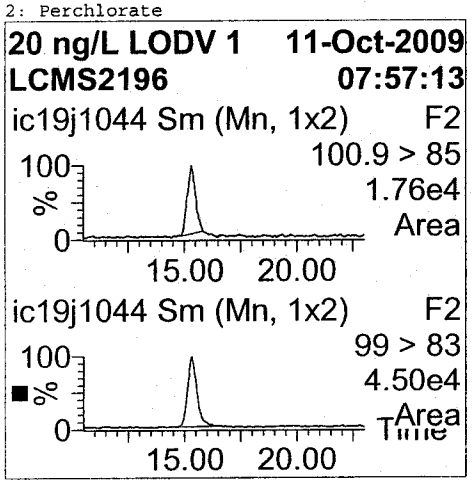
Printed: Sun Oct 11 17:59:30 2009

Name: ic19j1044
Text: 20 ng/L LODV 1

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.267	167827	bb	1.164	116.44	ic19i02	29/Sep/09	
2	Perchlorate	15.318	20317	bb	20.849	104.24	ic19i02	29/Sep/09	

Analyst: Jacqueline Bonnett

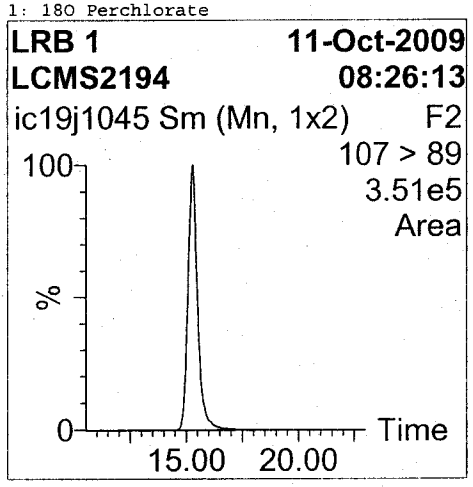
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx\IC Perchlorate.PRO\SampleDB\ic19j10(2)
Last modified: Sun Oct 11 17:57:03 2009
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19i02
Last modified: Thu Sep 03 10:05:53 2009
Job Code:

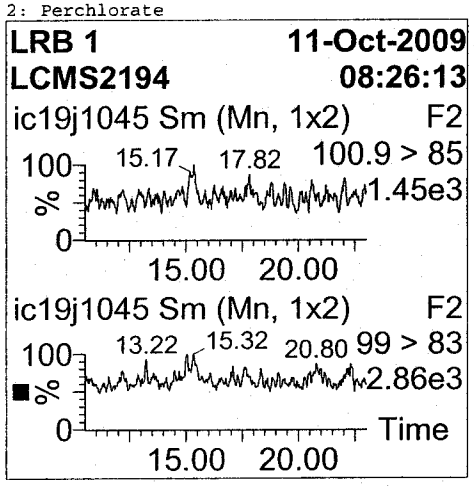
Printed: Sun Oct 11 17:59:30 2009

Name: ic19j1045
Text: LRB 1

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.293	171668	bb	1.191	119.11	ic19i02	29/Sep/09	
2	Perchlorate						ic19i02	29/Sep/09	

Analyst: Jacqueline Bonnett

Sample List Report **MassLynx 4.0 SP4**

Sample List: C:\MassLynx\IC Perchlorate.PRO\SampleDB\ic19j10(2).SPL
Last Modified: Sunday, October 11, 2009 5:57:03 PM Mountain Daylight Time
Printed: Sunday, October 11, 2009 5:57:16 PM Mountain Daylight Time

	File Name	Sample ID	File Text	Sample Type	Analyte ng/L	Vial	Extract mL	Sample mL or g
1	ic19i0101b	LCMS2195	LRB 1	Blank	0	1	1.000000	1.000000
2	ic19i0102b	LCMS1803	20 ng/L 1	Standard	20	1	1.000000	1.000000
3	ic19i0103b	LCMS1808	50 ng/L 1	Standard	50	1	1.000000	1.000000
4	ic19i0104b	LCMS1809	100 ng/L 1	Standard	100	1	1.000000	1.000000
5	ic19i0105b	LCMS1805	200 ng/L 1	Standard	200	1	1.000000	1.000000
6	ic19i0106b	LCMS1810	500 ng/L1	Standard	500	1	1.000000	1.000000
7	ic19i0107b	LCMS1811	1000 ng/L1	Standard	1000	1	1.000000	1.000000
8	ic19i0108b	LCMS1801	LRB2	Blank	0	1	5.000000	5.000000
9	ic19i0109b	LCMS1807	200 ng/L ICV1	QC	200	1	1.000000	1.000000
10	ic19i0110b	LCMS1808	50 ng/L RLV 2	QC	50	1	1.000000	1.000000
11	ic19j1011	LCMS2193	LRB 1	Blank	0	1	1.000000	1.000000
12	ic19j1012	LCMS2197	200 ng/L CCV 1	QC	200	1	1.000000	1.000000
13	ic19j1013	LCMS2195	20 ng/L LODV 1	QC	20	1	1.000000	1.000000
14	ic19j1033	LCMS2197	200 ng/L CCV 3	QC	200	1	1.000000	1.000000
15	ic19j1034	LCMS2195	20 ng/L LODV 3	QC	20	1	1.000000	1.000000
16	ic19j1035	LCMS2193	LRB 3	Blank	0	1	1.000000	1.000000
17	ic19j1036	LMDQA1AA	R9J100000-161 MB	Blank	0	1	5.000000	5.000000
18	ic19j1037	LMDQA1AC	R9J100000-161 LCS	QC	50	1	5.000000	5.000000
19	ic19j1038	LCMS2192	ICS 3	QC	50	1	1.000000	1.000000
20	ic19j1039	LLW741AD	D9J020238-001	Analyte	0	1	5.000000	5.000000
21	ic19j1040	LLW741CM	D9J020238-001 MS	QC	50	1	5.000000	5.000000
22	ic19j1041	LLW741CN	D9J020238-001 MSD	QC	50	1	5.000000	5.000000
23	ic19j1042	LL8HJ1AA	D9J080289-001 1000X	Analyte	0	1	5.000000	5.000000
24	ic19j1043	LCMS2198	200 ng/L CCV 1	QC	200	1	1.000000	1.000000
25	ic19j1044	LCMS2196	20 ng/L LODV 1	QC	20	1	1.000000	1.000000
26	ic19j1045	LCMS2194	LRB 1	Blank	0	1	1.000000	1.000000

Sample List Report **MassLynx 4.0 SP4**

Sample List: C:\MassLynx\IC Perchlorate.PRO\SampleDB\ic19j10(2).SPL
Last Modified: Sunday, October 11, 2009 5:57:03 PM Mountain Daylight Time
Printed: Sunday, October 11, 2009 5:57:16 PM Mountain Daylight Time

Dilution	Inject Volume	MS Tune File	Inlet File	MS File
1.000000	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
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1.000000	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1000.000000	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms

Chain of Custody Record

Sampler ID _____

Temperature on Receipt 3.9 IR2AB

Drinking Water? Yes ☐ No ☐

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TA-COC-06

TAL-4124-280 (0508)

Client	Project Manager	Date	Chain of Custody Number
TETRA TECH INC	GINGER.MULLINS@TETRATECH.COM	10/7/09	114610
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 1 of 1**
800 OAK RIDGE TURNPIKE A-600	865-599-2349		
City / State / Zip Code	**Site Contact**	**Lab Contact**	
OAK RIDGE / TN / 37830	G. MULLINS		
Project Name and Location (State)	**Carrier/Waybill Number**		
HOLLOMAN AFB, NM	8654 5880 2375		
Contract/Purchase Order/Quote No.			
80188 LISA DRIELL			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed.	Soil		Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH		PERCHLORATE 6860											Special Instructions/ Conditions of Receipt
MW39-12-100609	10/6/09	1035		X				X							X											

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☒ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By			1. Received By	10/6/09	1100
2. Relinquished By	~~10/6/09~~	~~1100~~	2. Received By FED EX	10/7/09	1230
3. Relinquished By	10/7/09	1230	3. Received By	10.8.09	0930

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Table of Contents

TestAmerica

TestAmerica Denver

Sample Receiving Checklist

Lot #: D9J080289 Date/Time Received: 10-8-09 / 0930

Company Name & Sampling Site: Tetra Tech Holloman

PM to Complete This Section: *Yes* *No*
Residual chlorine check required: ☐ ☒

Quarantined : *Yes* ☐ *No* ☒

Quote #: 80188

Special Instructions:

Time Zone:
• EDT/EST • CDT/CST • MDT/MST • PDT/PST • OTHER

Unpacking Checks:

Cooler #(s): 1

Temperatures (°C): 3.9

N/A	Yes	No		Initials
☐	☒	☐	1. Cooler seals intact? (N/A if hand delivered) If no, document on CUR.	
	☒	☐	2. Coolers scanned for radiation. Is the reading ≤ to background levels? Yes: ___ No: ___	
	☒	☐	3. Chain of custody present? If no, document on CUR.	
	☐	☒	4. Bottles broken and/or are leaking? If yes, document on CUR.	
	☐	☒	5. Multiphasic samples obvious? If yes, document on CUR.	
	☒	☐	6. Proper container & preservatives used? (ref. Attachment D of SOP# DV-QA-0003) If no, document on CUR.	
☒	☐	☐	7. pH of all samples checked and meet requirements? If no, document on CUR.	
	☒	☐	8. Sufficient volume provided for all analysis requested? (ref. Attachment D of SOP# DV-QA-0003) If no, document on CUR, and contact PM before proceeding.	
	☒	☐	9. Did chain of custody agree with labels ID and samples received? If no, document on CUR.	
☒	☐	☐	10. Were VOA samples without headspace? If no, document on CUR.	
☒	☐	☐	11. Were VOA vials preserved? Preservative ☐HCl ☐4±2°C ☐Sodium Thiosulfate ☐ Ascorbic Acid	
	☐	☒	12. Did samples require preservation with sodium thiosulfate?	
☒	☐	☐	13. If yes to #11, did the samples contain residual chlorine? If yes, document on CUR.	
☒	☐	☐	14. Sediment present in dissolved/filtered bottles? If yes, document on CUR.	
☒	☐	☐	15. Is sufficient volume provided for client requested MS, MSD or matrix duplicates? If no, document on CUR, and contact PM before proceeding.	
	☐	☒	16. Receipt date(s) > 48 hours past the collection date(s)? If yes, notify PA/PM.	
	☐	☒	17. Are analyses with short holding times requested?	
	☐	☒	18. Was a quick Turn Around (TAT) requested?	

TestAmerica Denver

Sample Receiving Checklist

Lot # D9J080289

Login Checks:

N/A	Yes	No		Initials
	☑	☐	19. Sufficient volume provided for all analysis requested? (ref. Attachment D of SOP# DV-QA-0003) If no, document on CUR, and contact PM before proceeding.	CAK
☑	☐	☐	20. Is sufficient volume provided for client requested MS, MSD or matrix duplicates? If no, document on CUR, and contact PM before proceeding.	
	☑	☐	21. Did the chain of custody includes "received by" and "relinquished" by signatures, dates, and times?	
☐	☑	☐	22. Were special log in instructions read and followed?	
☑	☐	☐	23. Were AFCEE metals logged for refrigerated storage?	
	☑	☐	24. Were tests logged checked against the COC? Which samples were confirmed?	
☑	☐	☐	25. Was a Rush form completed for quick TAT?	
☑	☐	☐	26. Was a Short Hold form completed for any short holds?	
	☐	☑	27. Were special archiving instructions indicated in the General Comments? If so, what were they?	

Labeling and Storage Checks:

				Initials
☑	☐	☐	28. Was the subcontract COC signed and sent with samples to bottle prep?	JM
	☑	☐	29. Were sample labels double-checked by a second person?	
☑	☐	☐	30. Were sample bottles and COC double checked for dissolved/filtered metals by a second person?	
	☑	☐	31. Did the sample ID, Date, and Time from label match what was logged?	
☑	☐	☐	32. Were stickers for special archiving instructions affixed to each box? See #27	
☑	☐	☐	33. Were AFCEE metals stored refrigerated?	

Document any problems or discrepancies and the actions taken to resolve them on a Condition Upon Receipt Anomaly Report (CUR).

IC/MS/MS

Supporting Documentation

Sample Sequence, Chromatograms/Mass Spectra

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Lot ID: D9J080289

Client: Tetra Tech

Method: 6860

Associated Samples: 1

Batch #(s): 9283161

I certify that, to the best of my knowledge, the attached package represents a complete and accurate copy of the original data.

Signature/Date: Smc 10-13-09

IC/MS/MS SEMIVOLATILE ORGANIC EXTRACTION LOG SHEETS

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

RQC058

TestAmerica Laboratories, Inc.
EXTRACTION BENCH WORKSHEET

Run Date: 10/10/0
Time: 12:58:1

LEV 1	LEV 2		LEV 1	LEV 2	
Y	Y	Blank	Y	Y	Weights/Volumes
Y	Y	Check	Y	Y	Spike & Surrogate Worksheet
Y	Y	MS/MSD	Y	Y	Vial contains correct volume
			Y	Y	Labels, greenbars, worksheets
					computer batch: correct & all match
			_	_	Anomalies to Extraction Method

_ Expanded Deliverable
_ COC Completed
_ Bench Sheet Copied
_ Package Submitted to AnalyticalGroup
_ Bench Sheet Copied per COC

Extractionist: 003601 Jacqueline Bonnett

Concentrationist: 003601 Jacqueline Bonnett

Reviewer/Date: BONNETJA / 10/10/09

QC BATCH: 9283161

PREP DATE: 10/10/09 12:50
COMP DATE: 10/10/09 13:50

SW846 6860 Perchlorate
NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJ1	ADJ2	SOLVENTS EXTRACTION	VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
0/00/00	10/12/09	D9J020238-001 9283107 **LLW74-1-AD**	R	88	ZU	WATER	5 5.00mL	NA	NA	NA		.0		.0	
COMMENTS: (85)															
0/00/00	10/12/09	D9J020238-001 9283107 **LLW74-1-CM**S M	R	88	ZU	WATER	5 5.00mL	NA	NA	NA		.0		.0	50 UL LCMS0104
COMMENTS:															
0/00/00	10/12/09	D9J020238-001 9283107 **LLW74-1-CN**D M	R	88	ZU	WATER	5 5.00mL	NA	NA	NA		.0		.0	50 UL LCMS0104
COMMENTS:															
0/00/00	10/27/09	D9J080289-001 9283107 **LL8HJ-1-AA**	D	88	ZU	WATER	5 5.00mL	NA	NA	NA		.0		.0	
COMMENTS: (132)															
0/00/00	0/00/00	R9J100000-161 **LMDQA-1-AA**B		88	ZU	WATER	5 5.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	0/00/00	R9J100000-161 **LMDQA-1-AC**C		88	ZU	WATER	5 5.00mL	NA	NA	NA		.0		.0	50 UL LCMS0104
COMMENTS:															

1x

1000x

50 UL I.S. LCMS1780

R = RUSH C = CLP
E = EPA 600 D = EXP.DEL)
M = CLIENT REQ MS/MSD

NUMBER OF WORK ORDERS IN BATCH: 6

Table of Contents

IC/MS/MS SEMIVOLATILE STANDARD DATA

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Calibration Information

LC/MS, LC/MS/MS, GC/CI/MS/MS, IC/MS/MS

(Circle which instrument type)

Denver Method: DV-LC-24

EPA Method: 6860

Instrument ID: LCMS 3

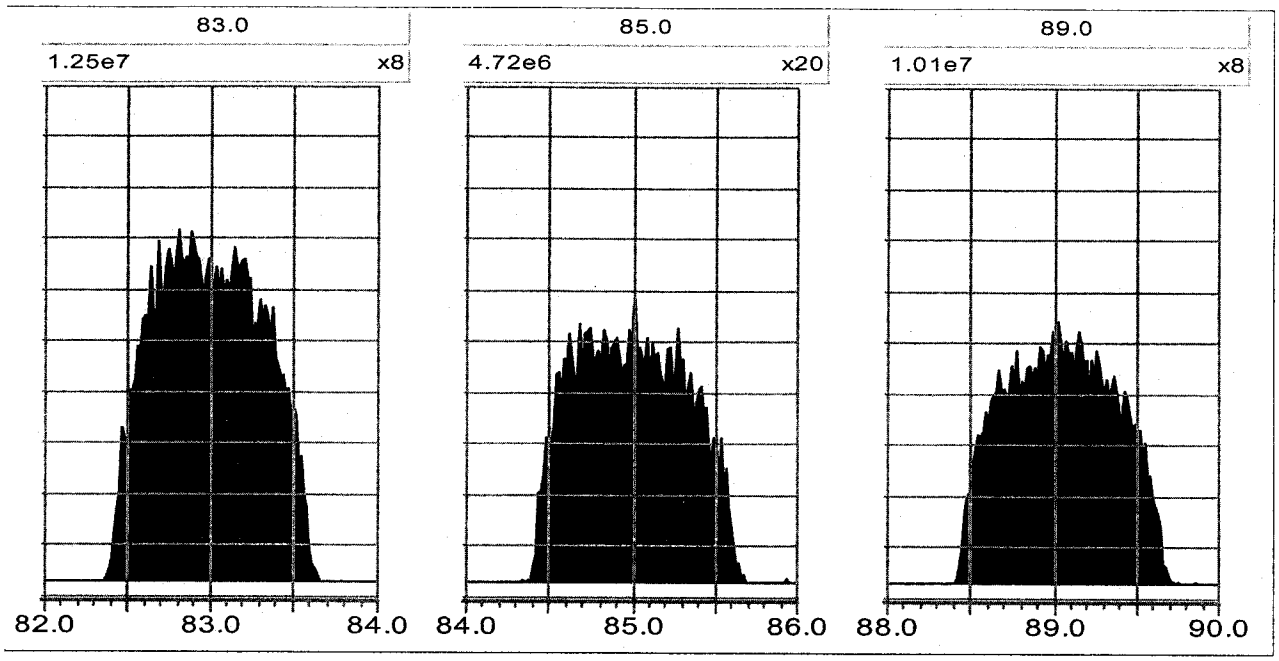
Batch Number : 9283161

Date Analyzed: 10-11-09

Tune Parameters **MassLynx 4.0 SP4** Page 1 of 1

File: C:\MassLynx\IC Perchlorate.PRO\ACQUDB\ICPerchlorate_jeff.IPR

Printed: Saturday, October 10, 2009 16:04:54 Mountain Daylight Time



Type	Start Mass	End Mass	Set Mass
Daughter Scan	82	84	99
Daughter Scan	84	86	101
Daughter Scan	88	90	107

Source (ES-)	Settings	Readbacks
Capillary (kV)	0.25	-0.21
Cone (V)	80	-82
Hex 1 (V)	0.4	
Aperture (V)	0.1	
Hex 2 (V)	1.0	
Source Temperature (°C)	120	121
Desolvation Temperature (°C)	500	498
Cone Gas Flow (L/Hr)	56	
Desolvation Gas Flow (L/Hr)	679	

Analyser	Settings	Readbacks
LM 1 Resolution	10.0	
HM 1 Resolution	8.0	
Ion Energy 1	1.0	
Entrance	-2	23
Collision	25	24
Exit	1	25
LM 2 Resolution	10.0	
HM 2 Resolution	8.0	
Ion Energy 2	1.0	
Multiplier (V)	700	-695

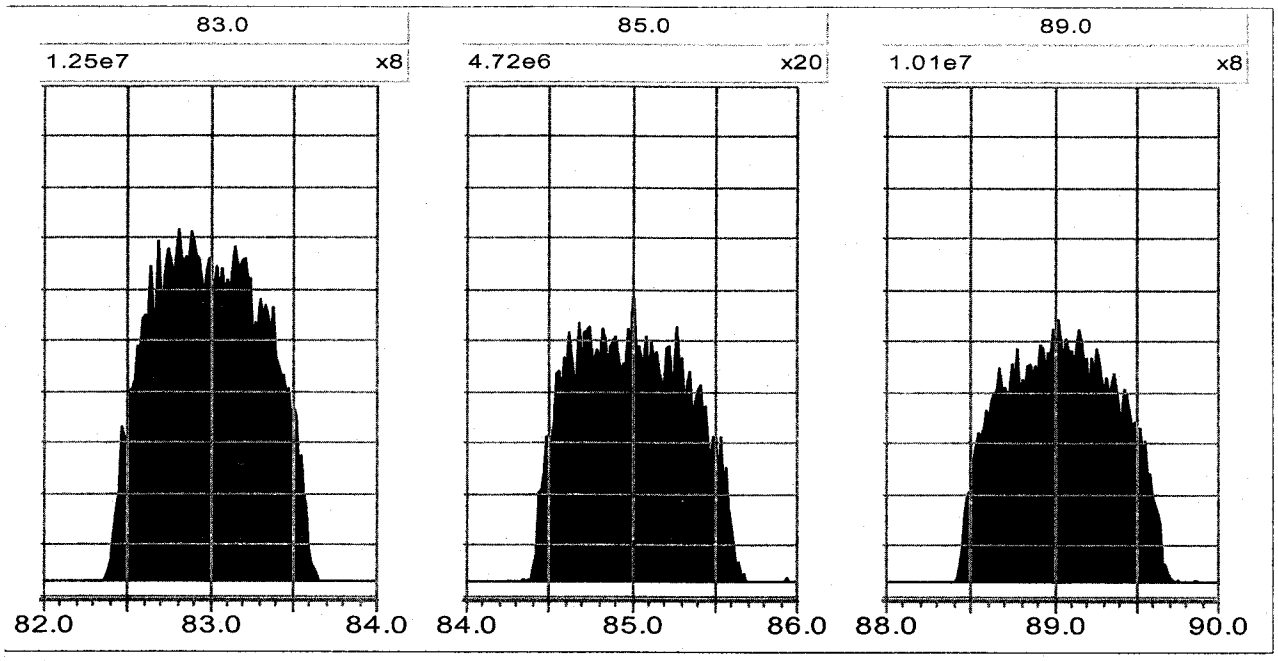
Pressure Gauges	
Collision Cell Pressure(mbar)	5.80e-3
Analyser Pressure (mbar)	OFF

MUX Configuration	
Probe	Standard

Tune Parameters **MassLynx 4.0 SP4** Page 1 of 1

File: C:\MassLynx\IC Perchlorate.PRO\ACQUDB\ICPerchlorate_jeff.IPR

Printed: Saturday, October 10, 2009 16:04:54 Mountain Daylight Time



Type	Start Mass	End Mass	Set Mass
Daughter Scan	82	84	99
Daughter Scan	84	86	101
Daughter Scan	88	90	107

Source (ES-)	Settings	Readbacks
Capillary (kV)	0.25	-0.21
Cone (V)	80	-82
Hex 1 (V)	0.4	
Aperture (V)	0.1	
Hex 2 (V)	1.0	
Source Temperature (°C)	120	121
Desolvation Temperature (°C)	500	498
Cone Gas Flow (L/Hr)	56	
Desolvation Gas Flow (L/Hr)	679	

Analyser	Settings	Readbacks
LM 1 Resolution	10.0	
HM 1 Resolution	8.0	
Ion Energy 1	1.0	
Entrance	-2	23
Collision	25	24
Exit	1	25
LM 2 Resolution	10.0	
HM 2 Resolution	8.0	
Ion Energy 2	1.0	
Multiplier (V)	700	-695

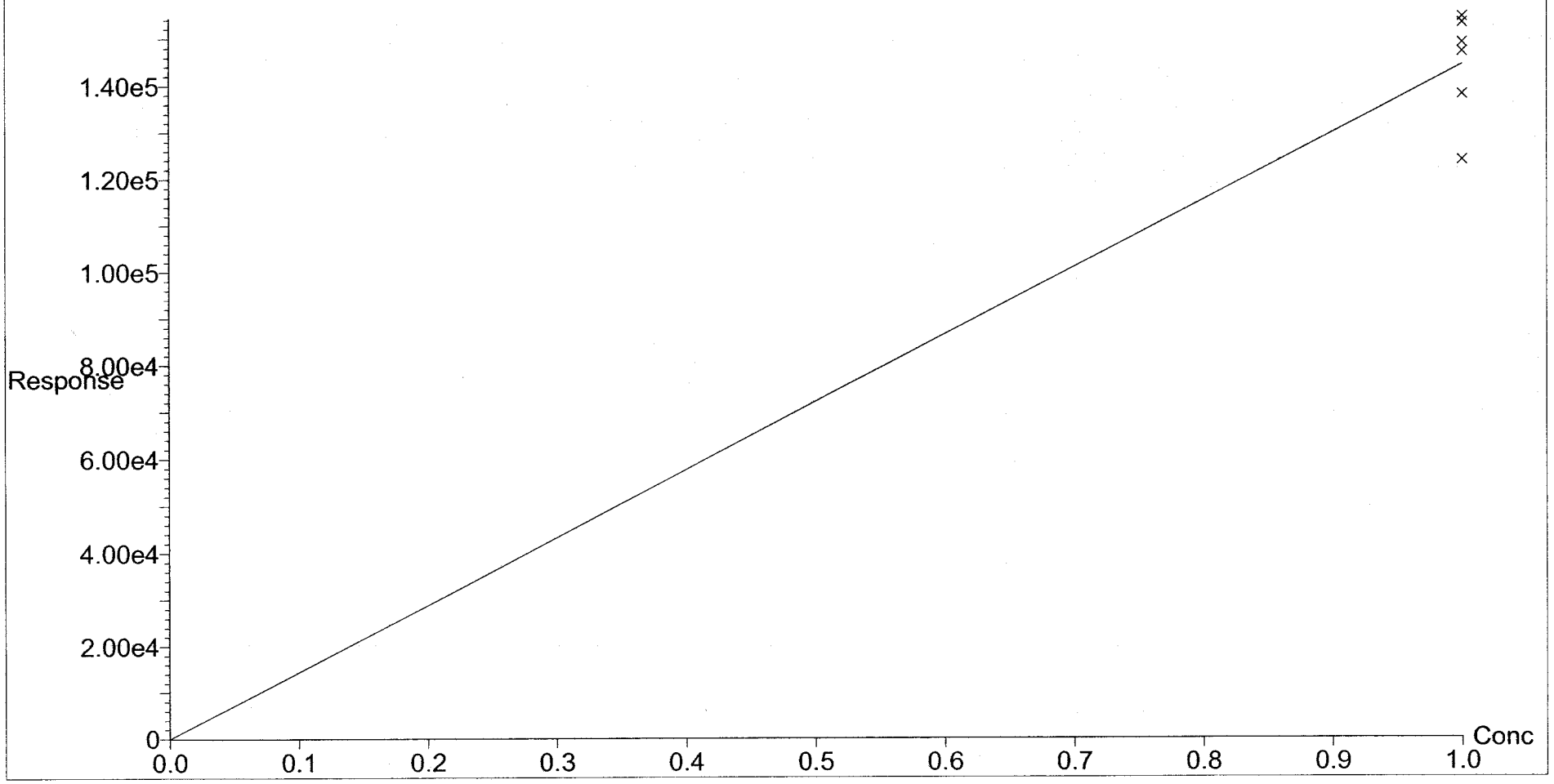
Pressure Gauges	
Collision Cell Pressure(mbar)	5.80e-3
Analyser Pressure (mbar)	OFF

MUX Configuration	
Probe	Standard

Quantify Calibration Report
IC Perchlorate Analysis

Calibration: C:\MassLynx\IC Perchlorate.PRO\CurveDB\ic19i02
Last modified: Tue Sep 29 12:38:38 2009
Printed: Sun Oct 11 17:59:29 2009

Compound 1 name: 18O Perchlorate Method File: ic19i02
Response Factor: 144128
RRF SD: 11553.8, % Relative SD: 8.01636
Response type: External Std, Area
Curve type: RF

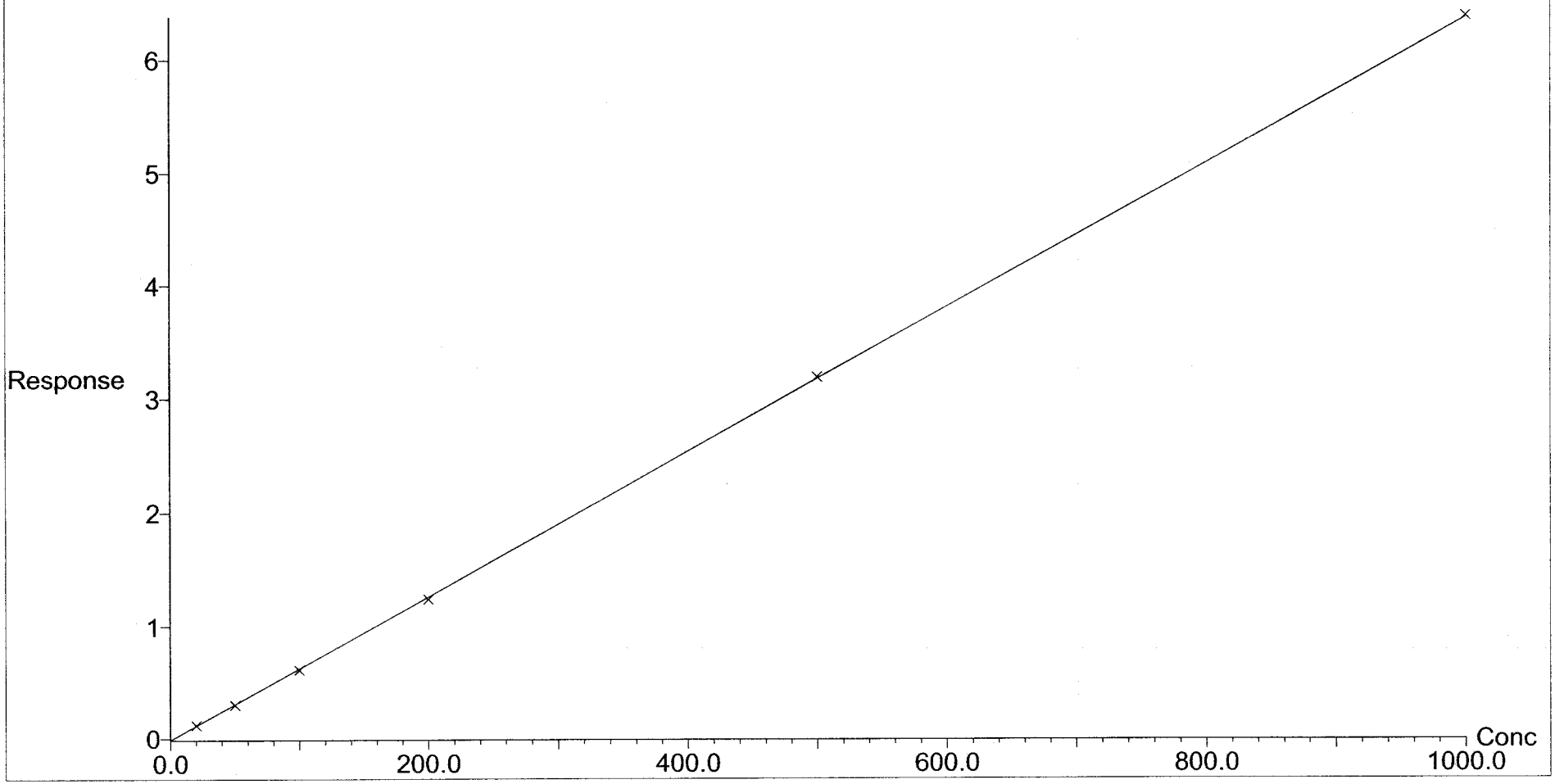


Analyst: Jacqueline Bonnett

Quantify Calibration Report
IC Perchlorate Analysis

Calibration: C:\MassLynx\IC Perchlorate.PRO\CurveDB\ic19i02
Last modified: Tue Sep 29 12:38:38 2009
Printed: Sun Oct 11 17:59:29 2009

Compound 2 name: Perchlorate Method File: ic19i02
Coefficient of Determination: 0.999899
Calibration curve: 0.00636977 * x + -0.0117402
Response type: Internal Std (Ref 1), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Analyst: Jacqueline Bonnett

Page 1

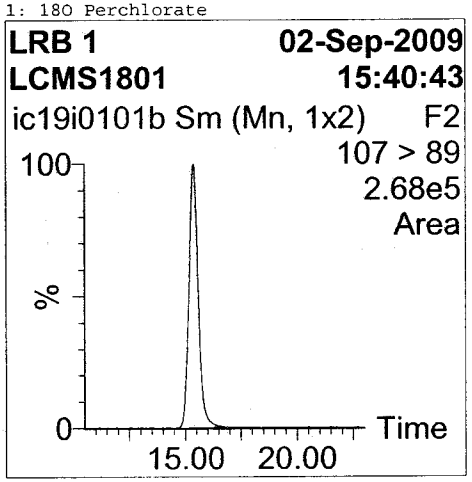
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx\IC Perchlorate.PRO\SampleDB\ic19j10(2)
Last modified: Sun Oct 11 17:57:03 2009
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19i02
Last modified: Thu Sep 03 10:05:53 2009
Job Code:

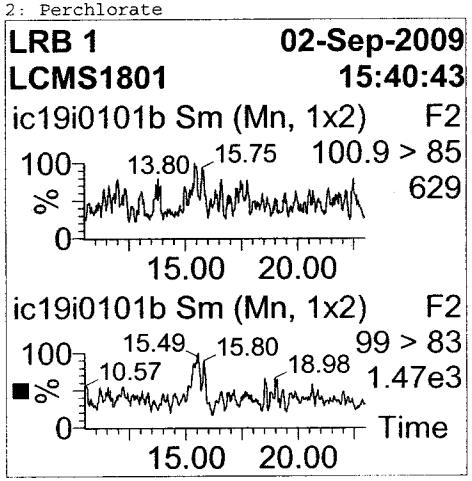
Printed: Sun Oct 11 17:59:30 2009

Name: ic19i0101b
Text: LRB 1

1: 180 Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	180 Perchlorate	15.368	128437	bb	0.891	89.11	ic19i02	29/Sep/09	
2	Perchlorate						ic19i02	29/Sep/09	

Analyst: Jacqueline Bonnett

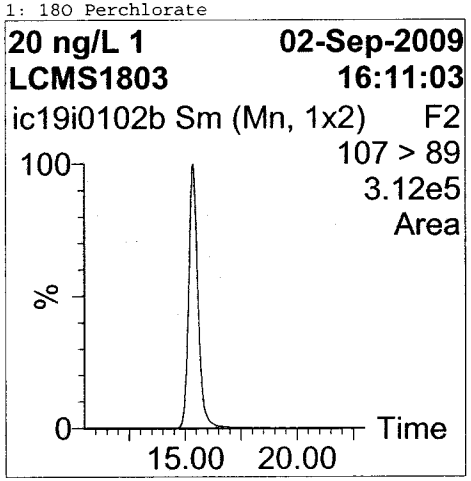
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx\IC Perchlorate.PRO\SampleDB\ic19j10(2)
Last modified: Sun Oct 11 17:57:03 2009
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19i02
Last modified: Thu Sep 03 10:05:53 2009
Job Code:

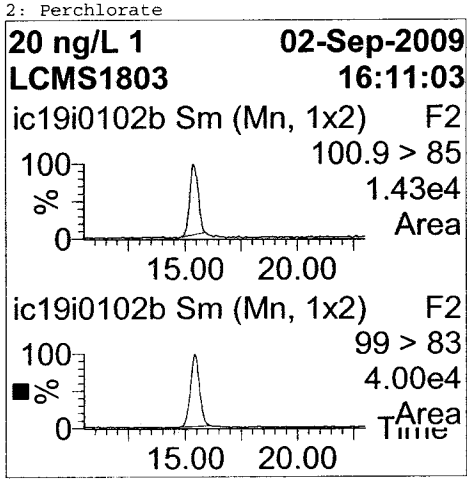
Printed: Sun Oct 11 17:59:30 2009

Name: ic19i0102b
Text: 20 ng/L 1

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.368	148847	bb	1.033	103.27	ic19i02	29/Sep/09	
2	Perchlorate	15.418	18059	bb	20.890	104.45	ic19i02	29/Sep/09	

Analyst: Jacqueline Bonnett

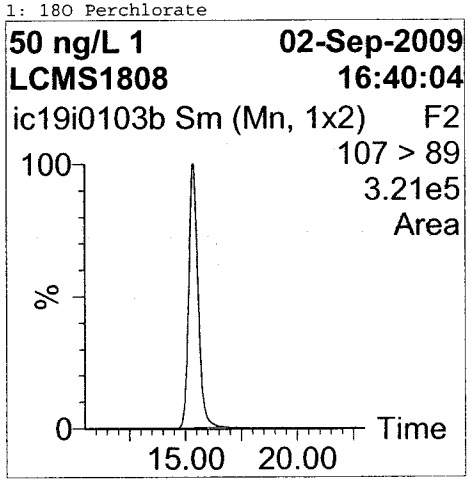
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx\IC Perchlorate.PRO\SampleDB\ic19j10(2)
Last modified: Sun Oct 11 17:57:03 2009
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19i02
Last modified: Thu Sep 03 10:05:53 2009
Job Code:

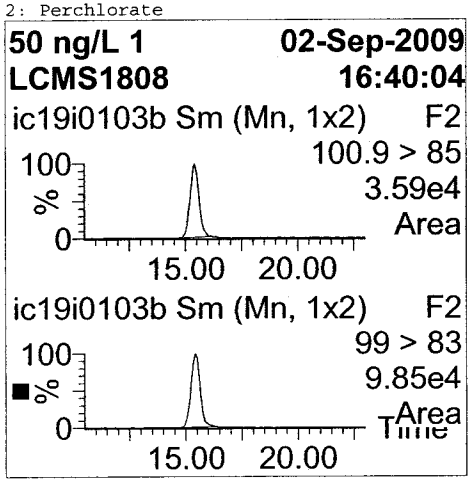
Printed: Sun Oct 11 17:59:30 2009

Name: ic19i0103b
Text: 50 ng/L 1

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.343	154319	bb	1.071	107.07	ic19i02	29/Sep/09	
2	Perchlorate	15.419	46347	bb	48.993	97.99	ic19i02	29/Sep/09	

Analyst: Jacqueline Bonnett

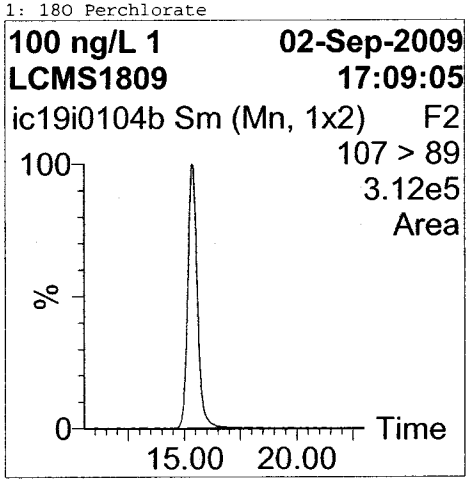
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx\IC Perchlorate.PRO\SampleDB\ic19j10(2)
Last modified: Sun Oct 11 17:57:03 2009
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19i02
Last modified: Thu Sep 03 10:05:53 2009
Job Code:

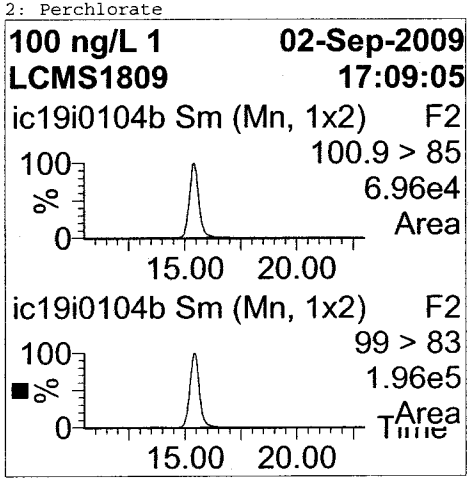
Printed: Sun Oct 11 17:59:30 2009

Name: ic19i0104b
Text: 100 ng/L 1

1: 180 Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	180 Perchlorate	15.342	153055	bb	1.062	106.19	ic19i02	29/Sep/09	
2	Perchlorate	15.393	94124	bb	98.388	98.39	ic19i02	29/Sep/09	

Analyst: Jacqueline Bonnett

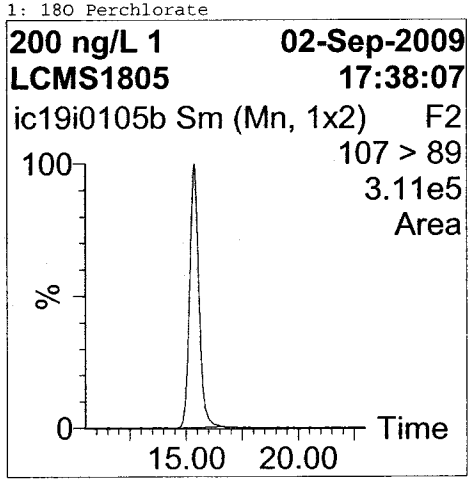
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx\IC Perchlorate.PRO\SampleDB\ic19j10(2)
Last modified: Sun Oct 11 17:57:03 2009
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19i02
Last modified: Thu Sep 03 10:05:53 2009
Job Code:

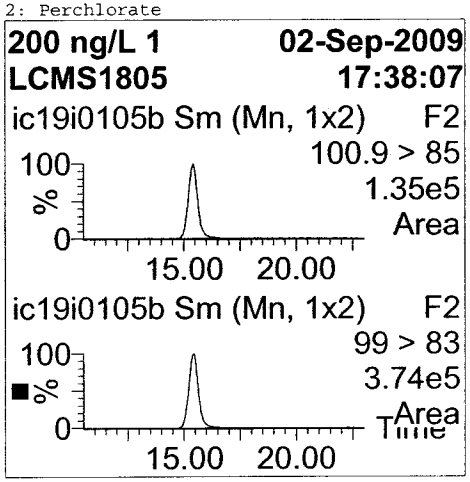
Printed: Sun Oct 11 17:59:30 2009

Name: ic19i0105b
Text: 200 ng/L 1

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.367	146932	bb	1.019	101.95	ic19i02	29/Sep/09	
2	Perchlorate	15.443	182621	bb	196.967	98.48	ic19i02	29/Sep/09	

Analyst: Jacqueline Bonnett

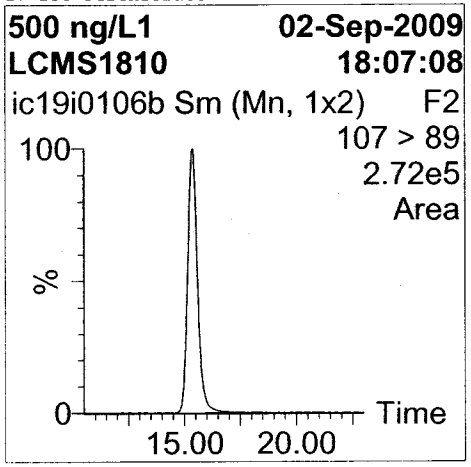
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx\IC Perchlorate.PRO\SampleDB\ic19j10(2)
Last modified: Sun Oct 11 17:57:03 2009
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19i02
Last modified: Thu Sep 03 10:05:53 2009
Job Code:

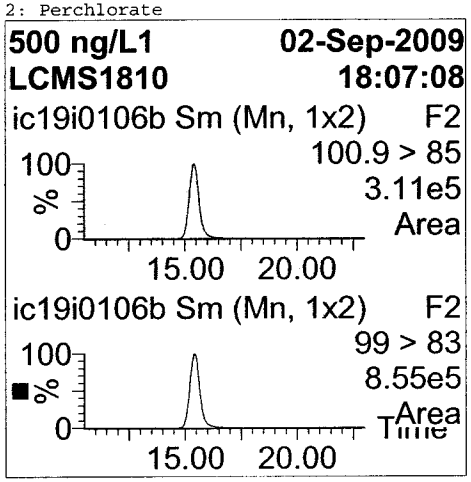
Printed: Sun Oct 11 17:59:30 2009

Name: ic19i0106b
Text: 500 ng/L1

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.368	137840	bb	0.956	95.64	ic19i02	29/Sep/09	
2	Perchlorate	15.419	439284	bb	502.161	100.43	ic19i02	29/Sep/09	

Analyst: Jacqueline Bonnett

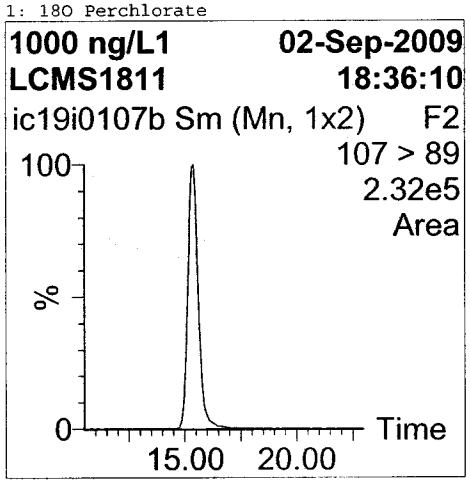
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx\IC Perchlorate.PRO\SampleDB\ic19j10(2)
Last modified: Sun Oct 11 17:57:03 2009
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19i02
Last modified: Thu Sep 03 10:05:53 2009
Job Code:

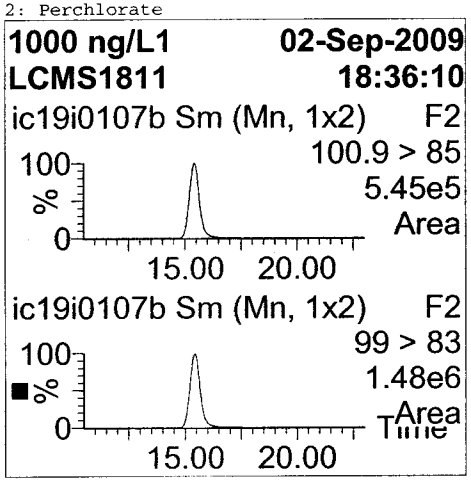
Printed: Sun Oct 11 17:59:30 2009

Name: ic19i0107b
Text: 1000 ng/L1

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.367	123775	bb	0.859	85.88	ic19i02	29/Sep/09	
2	Perchlorate	15.443	789017	bb	1002.600	100.26	ic19i02	29/Sep/09	

Analyst: Jacqueline Bonnett

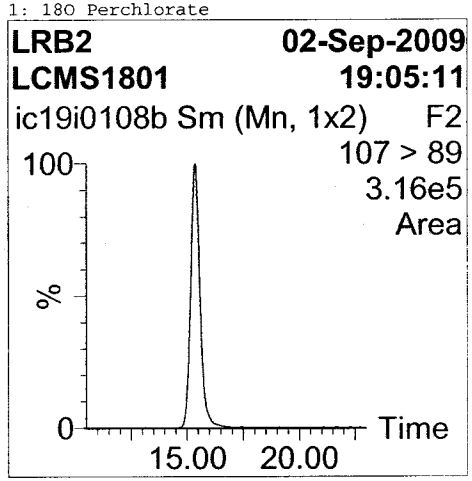
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx\IC Perchlorate.PRO\SampleDB\ic19j10(2)
Last modified: Sun Oct 11 17:57:03 2009
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19i02
Last modified: Thu Sep 03 10:05:53 2009
Job Code:

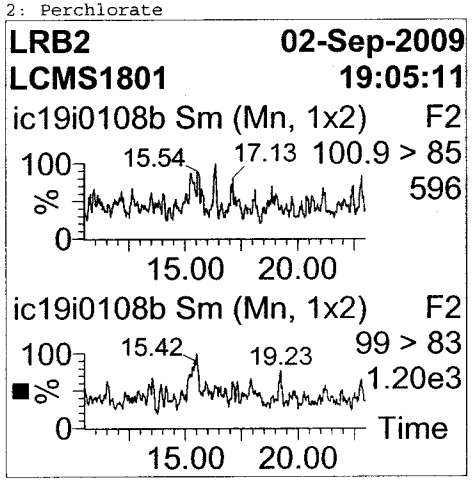
Printed: Sun Oct 11 17:59:30 2009

Name: ic19i0108b
Text: LRB2

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.367	151644	bb	1.052	105.21	ic19i02	29/Sep/09	
2	Perchlorate						ic19i02	29/Sep/09	

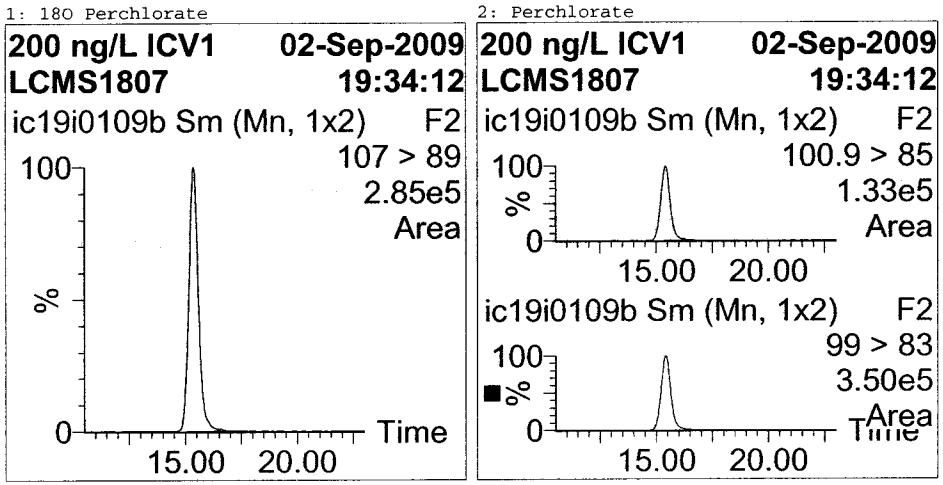
Analyst: Jacqueline Bonnett

Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx\IC Perchlorate.PRO\SampleDB\ic19j10(2)
Last modified: Sun Oct 11 17:57:03 2009
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19i02
Last modified: Thu Sep 03 10:05:53 2009
Job Code:

Printed: Sun Oct 11 17:59:30 2009

Name: ic19i0109b
Text: 200 ng/L ICV1



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.343	139558	bb	0.968	96.83	ic19i02	29/Sep/09	
2	Perchlorate	15.394	174244	bb	197.854	98.93	ic19i02	29/Sep/09	

Analyst: Jacqueline Bonnett

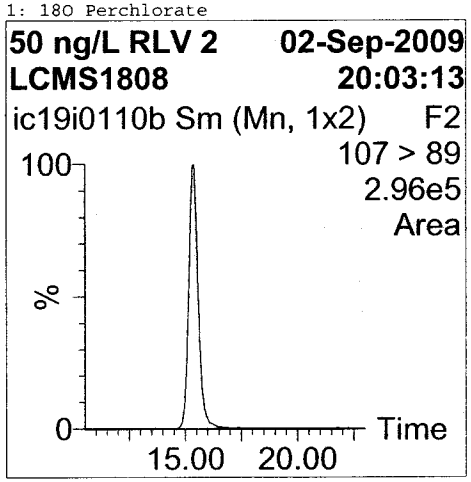
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx\IC Perchlorate.PRO\SampleDB\ic19j10(2)
Last modified: Sun Oct 11 17:57:03 2009
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19i02
Last modified: Thu Sep 03 10:05:53 2009
Job Code:

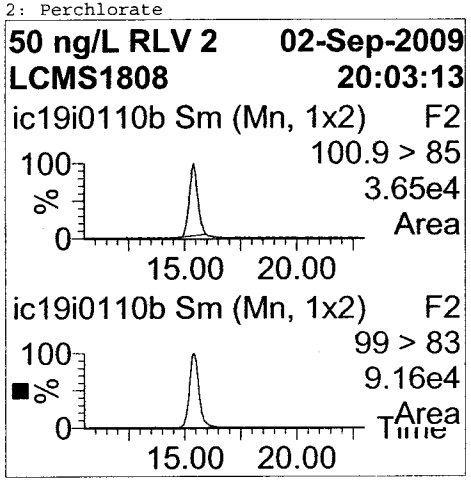
Printed: Sun Oct 11 17:59:30 2009

Name: ic19i0110b
Text: 50 ng/L RLV 2

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.342	143166	bb	0.993	99.33	ic19i02	29/Sep/09	
2	Perchlorate	15.393	44126	bb	50.230	100.46	ic19i02	29/Sep/09	

Analyst: Jacqueline Bonnett

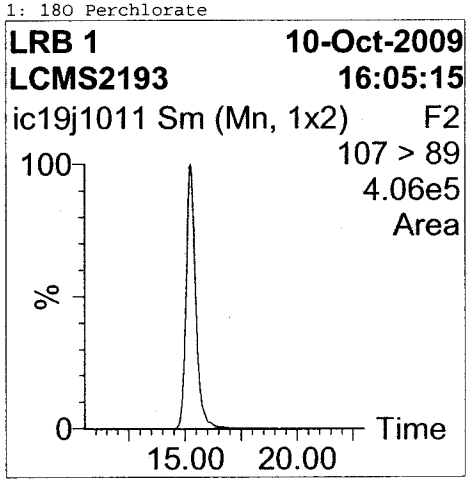
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx\IC Perchlorate.PRO\SampleDB\ic19j10(2)
Last modified: Sun Oct 11 17:57:03 2009
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19i02
Last modified: Thu Sep 03 10:05:53 2009
Job Code:

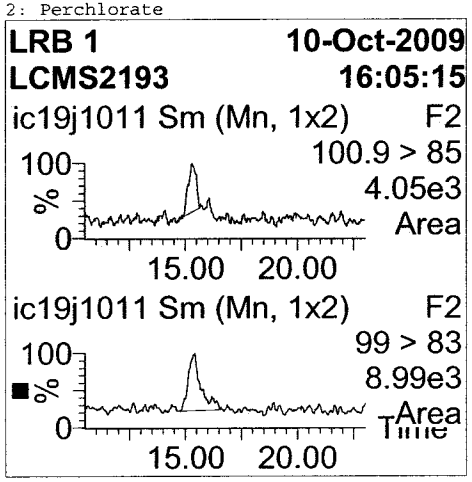
Printed: Sun Oct 11 17:59:30 2009

Name: ic19j1011
Text: LRB 1

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.242	199928	bb	1.387	138.72	ic19i02	29/Sep/09	
2	Perchlorate	15.419	4484	bb	5.364		ic19i02	29/Sep/09	

Analyst: Jacqueline Bonnett

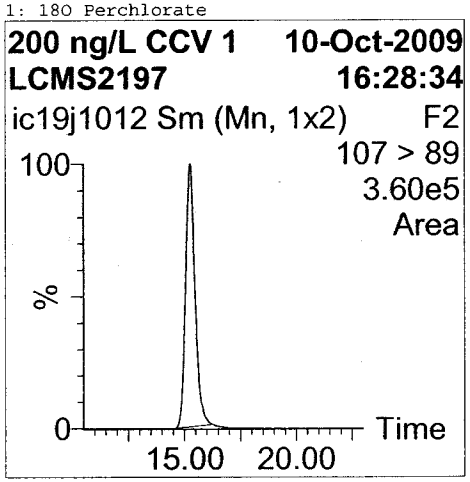
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx\IC Perchlorate.PRO\SampleDB\ic19j10(2)
Last modified: Sun Oct 11 17:57:03 2009
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19i02
Last modified: Thu Sep 03 10:05:53 2009
Job Code:

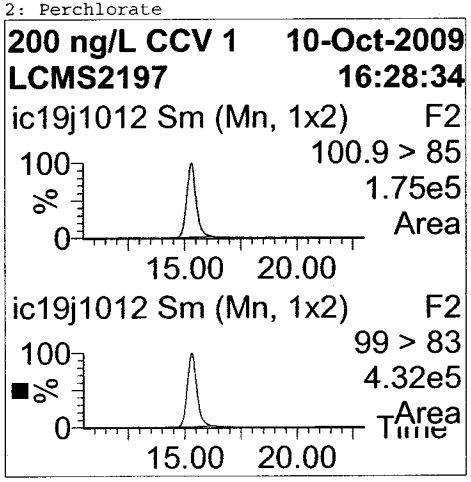
Printed: Sun Oct 11 17:59:30 2009

Name: ic19j1012
Text: 200 ng/L CCV 1

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.267	174172	bb	1.208	120.85	ic19i02	29/Sep/09	
2	Perchlorate	15.318	205019	bb	186.639	93.32	ic19i02	29/Sep/09	

Analyst: Jacqueline Bonnett

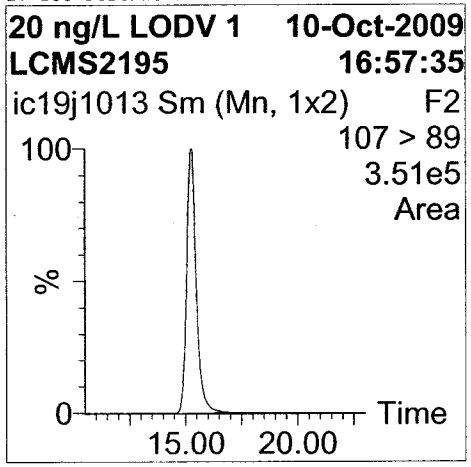
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx\IC Perchlorate.PRO\SampleDB\ic19j10(2)
Last modified: Sun Oct 11 17:57:03 2009
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19i02
Last modified: Thu Sep 03 10:05:53 2009
Job Code:

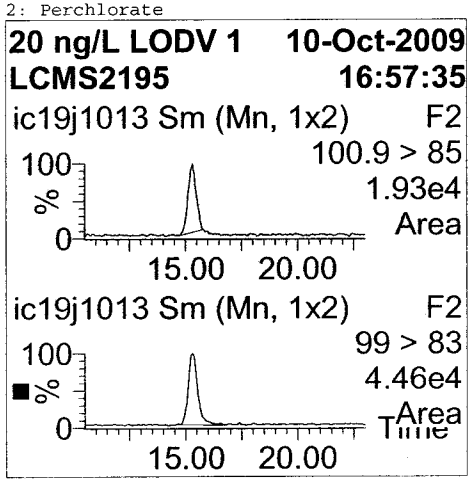
Printed: Sun Oct 11 17:59:30 2009

Name: ic19j1013
Text: 20 ng/L LODV 1

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.267	172630	bb	1.198	119.78	ic19i02	29/Sep/09	
2	Perchlorate	15.318	21417	bb	21.320	106.60	ic19i02	29/Sep/09	

Analyst: Jacqueline Bonnett

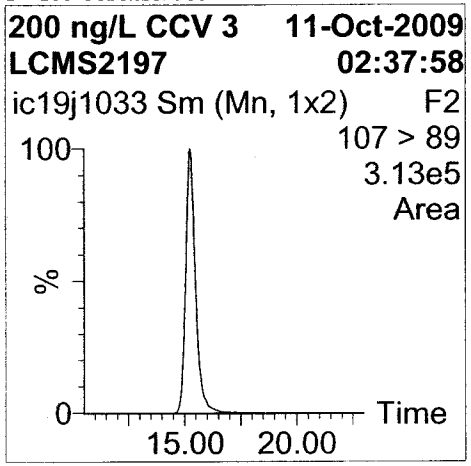
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx\IC Perchlorate.PRO\SampleDB\ic19j10(2)
Last modified: Sun Oct 11 17:57:03 2009
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19i02
Last modified: Thu Sep 03 10:05:53 2009
Job Code:

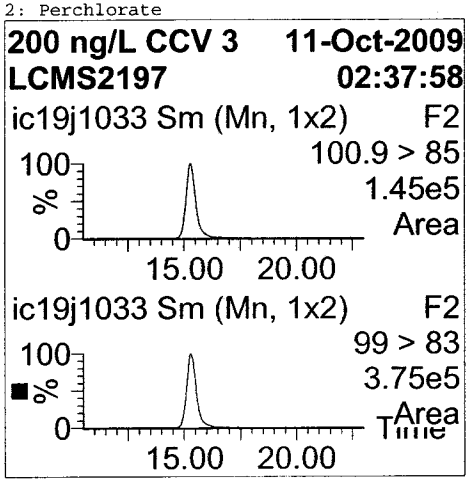
Printed: Sun Oct 11 17:59:30 2009

Name: ic19j1033
Text: 200 ng/L CCV 3

1: 180 Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	180 Perchlorate	15.242	157285	bb	1.091	109.13	ic19i02	29/Sep/09	
2	Perchlorate	15.267	184618	bb	186.117	93.06	ic19i02	29/Sep/09	

Analyst: Jacqueline Bonnett

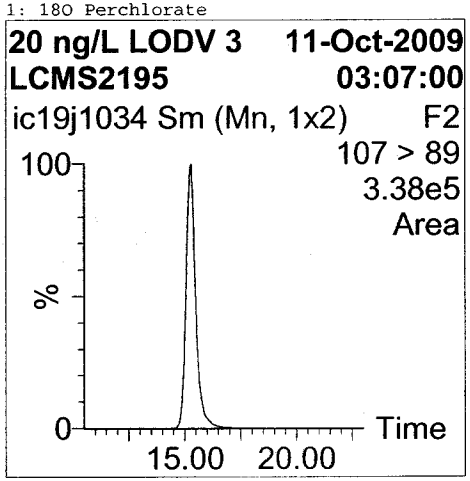
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx\IC Perchlorate.PRO\SampleDB\ic19j10(2)
Last modified: Sun Oct 11 17:57:03 2009
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19i02
Last modified: Thu Sep 03 10:05:53 2009
Job Code:

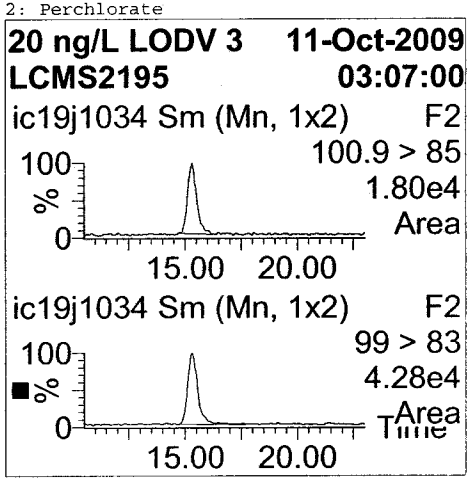
Printed: Sun Oct 11 17:59:30 2009

Name: ic19j1034
Text: 20 ng/L LODV 3

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.267	168565	bb	1.170	116.96	ic19i02	29/Sep/09	
2	Perchlorate	15.318	21930	bb	22.268	111.34	ic19i02	29/Sep/09	

Analyst: Jacqueline Bonnett

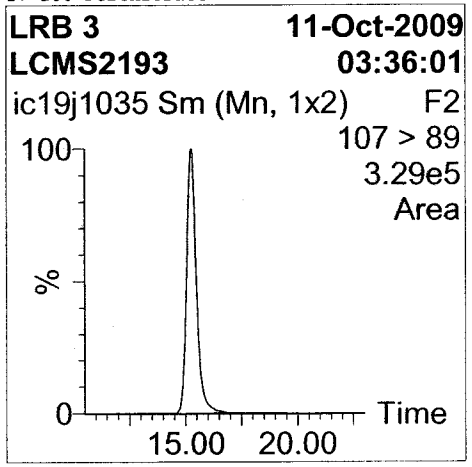
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx\IC Perchlorate.PRO\SampleDB\ic19j10(2)
Last modified: Sun Oct 11 17:57:03 2009
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19i02
Last modified: Thu Sep 03 10:05:53 2009
Job Code:

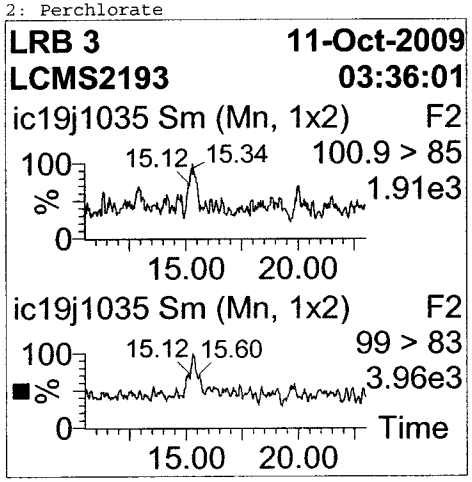
Printed: Sun Oct 11 17:59:30 2009

Name: ic19j1035
Text: LRB 3

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.242	165770	bb	1.150	115.02	ic19i02	29/Sep/09	
2	Perchlorate						ic19i02	29/Sep/09	

Analyst: Jacqueline Bonnett

Table of Contents

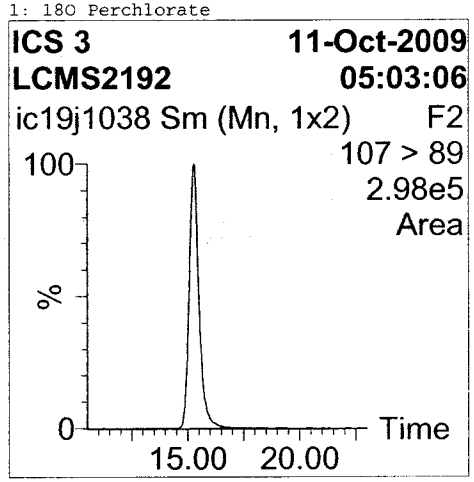
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx\IC Perchlorate.PRO\SampleDB\ic19j10(2)
Last modified: Sun Oct 11 17:57:03 2009
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19i02
Last modified: Thu Sep 03 10:05:53 2009
Job Code:

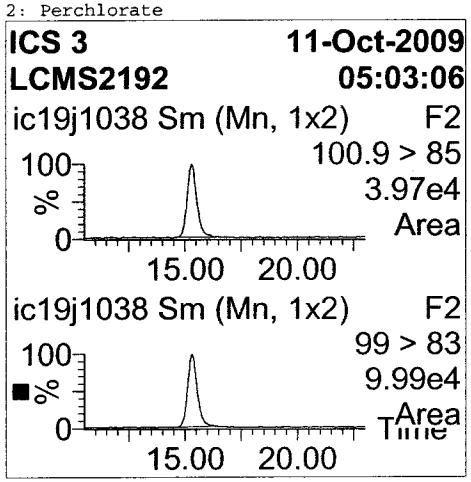
Printed: Sun Oct 11 17:59:30 2009

Name: ic19j1038
Text: ICS 3

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.267	149920	bb	1.040	104.02	ic19i02	29/Sep/09	
2	Perchlorate	15.318	48142	bb	52.256	104.51	ic19i02	29/Sep/09	

Analyst: Jacqueline Bonnett

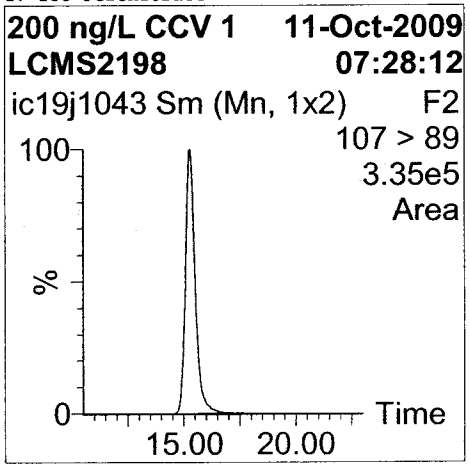
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx\IC Perchlorate.PRO\SampleDB\ic19j10(2)
Last modified: Sun Oct 11 17:57:03 2009
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19i02
Last modified: Thu Sep 03 10:05:53 2009
Job Code:

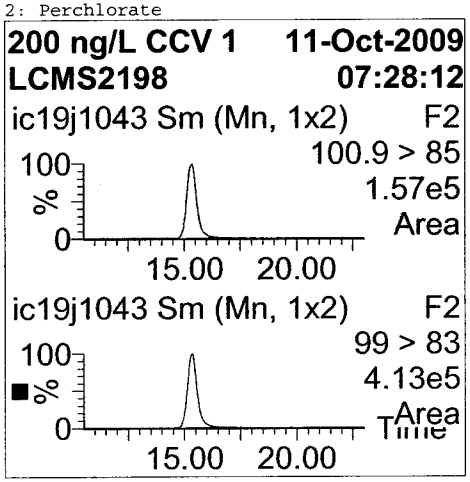
Printed: Sun Oct 11 17:59:30 2009

Name: ic19j1043
Text: 200 ng/L CCV 1

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.267	167276	bb	1.161	116.06	ic19i02	29/Sep/09	
2	Perchlorate	15.343	206394	bb	195.547	97.77	ic19i02	29/Sep/09	

Analyst: Jacqueline Bonnett

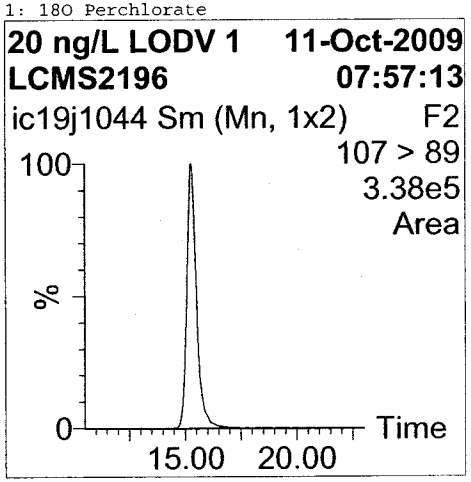
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx\IC Perchlorate.PRO\SampleDB\ic19j10(2)
Last modified: Sun Oct 11 17:57:03 2009
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19i02
Last modified: Thu Sep 03 10:05:53 2009
Job Code:

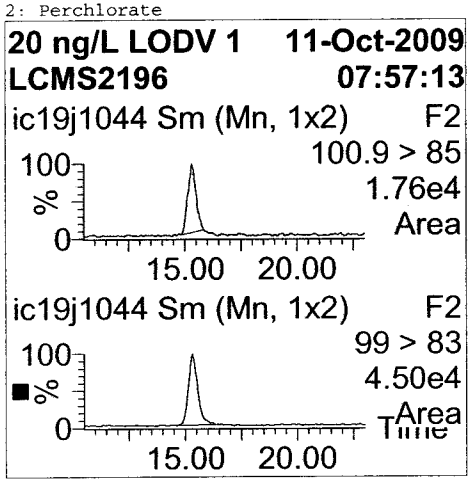
Printed: Sun Oct 11 17:59:30 2009

Name: ic19j1044
Text: 20 ng/L LODV 1

1: 180 Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	180 Perchlorate	15.267	167827	bb	1.164	116.44	ic19i02	29/Sep/09	
2	Perchlorate	15.318	20317	bb	20.849	104.24	ic19i02	29/Sep/09	

Analyst: Jacqueline Bonnett

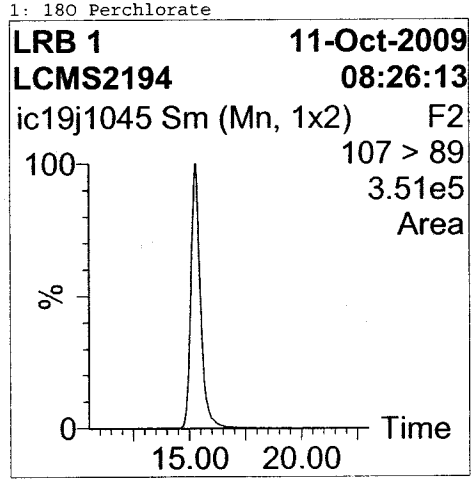
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx\IC Perchlorate.PRO\SampleDB\ic19j10(2)
Last modified: Sun Oct 11 17:57:03 2009
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19i02
Last modified: Thu Sep 03 10:05:53 2009
Job Code:

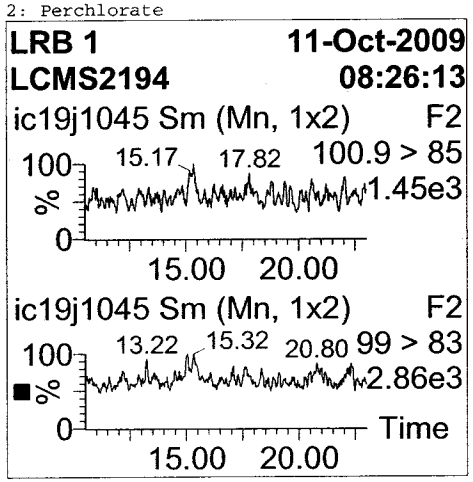
Printed: Sun Oct 11 17:59:30 2009

Name: ic19j1045
Text: LRB 1

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.293	171668	bb	1.191	119.11	ic19i02	29/Sep/09	
2	Perchlorate						ic19i02	29/Sep/09	

Analyst: Jacqueline Bonnett

Table of Contents

IC/MS/MS SEMIVOLATILE SAMPLE DATA

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Sample List Report **MassLynx 4.0 SP4**

Sample List: C:\MassLynx\IC Perchlorate.PRO\SampleDB\ic19j10(2).SPL
Last Modified: Sunday, October 11, 2009 5:57:03 PM Mountain Daylight Time
Printed: Sunday, October 11, 2009 5:57:16 PM Mountain Daylight Time

	File Name	Sample ID	File Text	Sample Type	Analyte ng/L	Vial	Extract mL	Sample mL or g
1	ic19i0101b	LCMS2195	LRB 1	Blank	0	1	1.000000	1.000000
2	ic19i0102b	LCMS1803	20 ng/L 1	Standard	20	1	1.000000	1.000000
3	ic19i0103b	LCMS1808	50 ng/L 1	Standard	50	1	1.000000	1.000000
4	ic19i0104b	LCMS1809	100 ng/L 1	Standard	100	1	1.000000	1.000000
5	ic19i0105b	LCMS1805	200 ng/L 1	Standard	200	1	1.000000	1.000000
6	ic19i0106b	LCMS1810	500 ng/L1	Standard	500	1	1.000000	1.000000
7	ic19i0107b	LCMS1811	1000 ng/L1	Standard	1000	1	1.000000	1.000000
8	ic19i0108b	LCMS1801	LRB2	Blank	0	1	5.000000	5.000000
9	ic19i0109b	LCMS1807	200 ng/L ICV1	QC	200	1	1.000000	1.000000
10	ic19i0110b	LCMS1808	50 ng/L RLV 2	QC	50	1	1.000000	1.000000
11	ic19j1011	LCMS2193	LRB 1	Blank	0	1	1.000000	1.000000
12	ic19j1012	LCMS2197	200 ng/L CCV 1	QC	200	1	1.000000	1.000000
13	ic19j1013	LCMS2195	20 ng/L LODV 1	QC	20	1	1.000000	1.000000
14	ic19j1033	LCMS2197	200 ng/L CCV 3	QC	200	1	1.000000	1.000000
15	ic19j1034	LCMS2195	20 ng/L LODV 3	QC	20	1	1.000000	1.000000
16	ic19j1035	LCMS2193	LRB 3	Blank	0	1	1.000000	1.000000
17	ic19j1036	LMDQA1AA	R9J100000-161 MB	Blank	0	1	5.000000	5.000000
18	ic19j1037	LMDQA1AC	R9J100000-161 LCS	QC	50	1	5.000000	5.000000
19	ic19j1038	LCMS2192	ICS 3	QC	50	1	1.000000	1.000000
20	ic19j1039	LLW741AD	D9J020238-001	Analyte	0	1	5.000000	5.000000
21	ic19j1040	LLW741CM	D9J020238-001 MS	QC	50	1	5.000000	5.000000
22	ic19j1041	LLW741CN	D9J020238-001 MSD	QC	50	1	5.000000	5.000000
23	ic19j1042	LL8HJ1AA	D9J080289-001 1000X	Analyte	0	1	5.000000	5.000000
24	ic19j1043	LCMS2198	200 ng/L CCV 1	QC	200	1	1.000000	1.000000
25	ic19j1044	LCMS2196	20 ng/L LODV 1	QC	20	1	1.000000	1.000000
26	ic19j1045	LCMS2194	LRB 1	Blank	0	1	1.000000	1.000000

Sample List Report **MassLynx 4.0 SP4**

Sample List: C:\MassLynx\IC Perchlorate.PRO\SampleDB\ic19j10(2).SPL
Last Modified: Sunday, October 11, 2009 5:57:03 PM Mountain Daylight Time
Printed: Sunday, October 11, 2009 5:57:16 PM Mountain Daylight Time

Dilution	Inject Volume	MS Tune File	Inlet File	MS File
1.000000	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
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1.000000	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1000.000000	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms

Quantify Compound Summary Report
IC Perchlorate Analysis

Sample List: C:\MassLynx\IC Perchlorate.PRO\SampleDB\ic19j10(2)
Last modified: Sun Oct 11 17:57:03 2009
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19i02
Last modified: Thu Sep 03 10:05:53 2009
Job Code:

Printed: Sun Oct 11 17:59:28 2009

Compound 1: 180 Perchlorate Sample List: ic19j10(2) Method File: ic19i02
Response Factor: 144128
RRF SD: 11553.8, % Relative SD: 8.01636
Response type: External Std, Area
Curve type: RF

#	Name	ID	Sample Text	Type	Std Conc	RT	RRT	Area	Flag	Ratio IS Area	Response	ng/L or kg()	%Rec	Extract mL	Sample mL or kg	Di
1	ic19i0101b	LCMS1801	LRB 1	Blank		15.37	0.000	128437	bb		128436.547	0.891	89.11	1.000	1.000	
2	ic19i0102b	LCMS1803	20 ng/L 1	Standard	1.00	15.37	0.000	148847	bb		148846.813	1.033	103.27	1.000	1.000	
3	ic19i0103b	LCMS1808	50 ng/L 1	Standard	1.00	15.34	0.000	154319	bb		154319.375	1.071	107.07	1.000	1.000	
4	ic19i0104b	LCMS1809	100 ng/L 1	Standard	1.00	15.34	0.000	153055	bb		153054.563	1.062	106.19	1.000	1.000	
5	ic19i0105b	LCMS1805	200 ng/L 1	Standard	1.00	15.37	0.000	146932	bb		146931.625	1.019	101.95	1.000	1.000	
6	ic19i0106b	LCMS1810	500 ng/L1	Standard	1.00	15.37	0.000	137840	bb		137840.016	0.956	95.64	1.000	1.000	
7	ic19i0107b	LCMS1811	1000 ng/L1	Standard	1.00	15.37	0.000	123775	bb		123775.148	0.859	85.88	1.000	1.000	
8	ic19i0108b	LCMS1801	LRB2	Blank		15.37	0.000	151644	bb		151643.625	1.052	105.21	5.000	5.000	
9	ic19i0109b	LCMS1807	200 ng/L ICV1	QC	1.00	15.34	0.000	139558	bb		139557.766	0.968	96.83	1.000	1.000	
10	ic19i0110b	LCMS1808	50 ng/L RLV 2	QC	1.00	15.34	0.000	143166	bb		143165.938	0.993	99.33	1.000	1.000	
11	ic19j1011	LCMS2193	LRB 1	Blank		15.24	0.000	199928	bb		199928.281	1.387	138.72	1.000	1.000	
12	ic19j1012	LCMS2197	200 ng/L CCV 1	QC	1.00	15.27	0.000	174172	bb		174171.703	1.208	120.85	1.000	1.000	
13	ic19j1013	LCMS2195	20 ng/L LODV 1	QC	1.00	15.27	0.000	172630	bb		172629.531	1.198	119.78	1.000	1.000	
14	ic19j1033	LCMS2197	200 ng/L CCV 3	QC	1.00	15.24	0.000	157285	bb		157284.625	1.091	109.13	1.000	1.000	
15	ic19j1034	LCMS2195	20 ng/L LODV 3	QC	1.00	15.27	0.000	168565	bb		168565.484	1.170	116.96	1.000	1.000	
16	ic19j1035	LCMS2193	LRB 3	Blank		15.24	0.000	165770	bb		165769.813	1.150	115.02	1.000	1.000	
17	ic19j1036	LMDQA1AA	R9J100000-161 MB	Blank		15.24	0.000	148893	bb		148892.875	1.033	103.31	5.000	5.000	
18	ic19j1037	LMDQA1AC	R9J100000-161 LCS	QC	1.00	15.24	0.000	158759	bb		158758.547	1.102	110.15	5.000	5.000	
19	ic19j1038	LCMS2192	ICS 3	QC	1.00	15.27	0.000	149920	bb		149919.922	1.040	104.02	1.000	1.000	
20	ic19j1039	LLW741AD	D9J020238-001	Analyte		15.34	0.000	163736	bb		163735.984	1.136	113.60	5.000	5.000	
21	ic19j1040	LLW741CM	D9J020238-001 MS	QC	1.00	15.32	0.000	173684	bb		173684.188	1.205	120.51	5.000	5.000	
22	ic19j1041	LLW741CN	D9J020238-001 MSD	QC	1.00	15.32	0.000	179240	bb		179239.844	1.244	124.36	5.000	5.000	
23	ic19j1042	LL8HJ1AA	D9J080289-001 10..	Analyte		15.32	0.000	169351	bb		169350.875	1.175	117.50	5.000	5.000	1
24	ic19j1043	LCMS2198	200 ng/L CCV 1	QC	1.00	15.27	0.000	167276	bb		167276.453	1.161	116.06	1.000	1.000	
25	ic19j1044	LCMS2196	20 ng/L LODV 1	QC	1.00	15.27	0.000	167827	bb		167826.797	1.164	116.44	1.000	1.000	
26	ic19j1045	LCMS2194	LRB 1	Blank		15.29	0.000	171668	bb		171668.203	1.191	119.11	1.000	1.000	

Analyst: Jacqueline Bonnett

Quantify Compound Summary Report
IC Perchlorate Analysis

Sample List: C:\MassLynx\IC Perchlorate.PRO\SampleDB\ic19j10(2)
Last modified: Sun Oct 11 17:57:03 2009
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19i02
Last modified: Thu Sep 03 10:05:53 2009
Job Code:

Printed: Sun Oct 11 17:59:28 2009

Compound 2: Perchlorate Sample List: ic19j10(2) Method File: ic19i02
Coefficient of Determination: 0.999899
Calibration curve: 0.00636977 * x + -0.0117402
Response type: Internal Std (Ref 1), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std Conc	RT	RRT	Area	Flag	Ratio	IS Area	Response	ng/L or kg()	%Rec	Extract mL	Sample mL or kg	Di
1	ic19i0101b	LCMS1801	LRB 1	Blank							128437				1.000	1.000	
2	ic19i0102b	LCMS1803	20 ng/L 1	Standard	20.00	15.42	1.003	18059	bb	3.094	148847	0.121	20.890	104.45	1.000	1.000	
3	ic19i0103b	LCMS1808	50 ng/L 1	Standard	50.00	15.42	1.005	46347	bb	2.879	154319	0.300	48.993	97.99	1.000	1.000	
4	ic19i0104b	LCMS1809	100 ng/L 1	Standard	100.00	15.39	1.003	94124	bb	2.852	153055	0.615	98.388	98.39	1.000	1.000	
5	ic19i0105b	LCMS1805	200 ng/L 1	Standard	200.00	15.44	1.005	182621	bb	2.837	146932	1.243	196.967	98.48	1.000	1.000	
6	ic19i0106b	LCMS1810	500 ng/L1	Standard	500.00	15.42	1.003	439284	bb	2.828	137840	3.187	502.161	100.43	1.000	1.000	
7	ic19i0107b	LCMS1811	1000 ng/L1	Standard	1000.00	15.44	1.005	789017	bb	2.756	123775	6.375	1002.600	100.26	1.000	1.000	
8	ic19i0108b	LCMS1801	LRB2	Blank							151644				5.000	5.000	
9	ic19i0109b	LCMS1807	200 ng/L ICV1	QC	200.00	15.39	1.003	174244	bb	2.726	139558	1.249	197.854	98.93	1.000	1.000	
10	ic19i0110b	LCMS1808	50 ng/L RLV 2	QC	50.00	15.39	1.003	44126	bb	2.927	143166	0.308	50.230	100.46	1.000	1.000	
11	ic19j1011	LCMS2193	LRB 1	Blank		15.42	1.012	4484	bb	4.197	199928	0.022	5.364		1.000	1.000	
12	ic19j1012	LCMS2197	200 ng/L CCV 1	QC	200.00	15.32	1.003	205019	bb	2.489	174172	1.177	186.639	93.32	1.000	1.000	
13	ic19j1013	LCMS2195	20 ng/L LODV 1	QC	20.00	15.32	1.003	21417	bb	2.831	172630	0.124	21.320	106.60	1.000	1.000	
14	ic19j1033	LCMS2197	200 ng/L CCV 3	QC	200.00	15.27	1.002	184618	bb	2.566	157285	1.174	186.117	93.06	1.000	1.000	
15	ic19j1034	LCMS2195	20 ng/L LODV 3	QC	20.00	15.32	1.003	21930	bb	2.733	168565	0.130	22.268	111.34	1.000	1.000	
16	ic19j1035	LCMS2193	LRB 3	Blank							165770				1.000	1.000	
17	ic19j1036	LMDQA1AA	R9J100000-161 MB	Blank							148893				5.000	5.000	
18	ic19j1037	LMDQA1AC	R9J100000-161 LCS	QC	50.00	15.29	1.003	50405	bb	2.556	158759	0.317	51.687	103.37	5.000	5.000	
19	ic19j1038	LCMS2192	ICS 3	QC	50.00	15.32	1.003	48142	bb	2.495	149920	0.321	52.256	104.51	1.000	1.000	
20	ic19j1039	LLW741AD	D9J020238-001	Analyte		15.39	1.003	456095	bb	2.585	163736	2.786	439.151		5.000	5.000	
21	ic19j1040	LLW741CM	D9J020238-001 MS	QC	50.00	15.39	1.005	522445	bb	2.526	173684	3.008	474.076	948.15	5.000	5.000	
22	ic19j1041	LLW741CN	D9J020238-001 MSD	QC	50.00	15.42	1.007	529897	bb	2.537	179240	2.956	465.966	931.93	5.000	5.000	
23	ic19j1042	LL8HJ1AA	D9J080289-001 10..	Analyte		15.37	1.003	80368	bb	2.612	169351	0.475	76346.175		5.000	5.000	1
24	ic19j1043	LCMS2198	200 ng/L CCV 1	QC	200.00	15.34	1.005	206394	bb	2.587	167276	1.234	195.547	97.77	1.000	1.000	
25	ic19j1044	LCMS2196	20 ng/L LODV 1	QC	20.00	15.32	1.003	20317	bb	2.998	167827	0.121	20.849	104.24	1.000	1.000	
26	ic19j1045	LCMS2194	LRB 1	Blank							171668				1.000	1.000	

Analyst: Jacqueline Bonnett

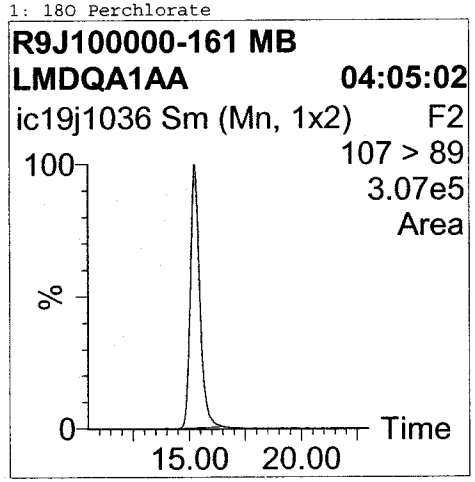
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx\IC Perchlorate.PRO\SampleDB\ic19j10(2)
Last modified: Sun Oct 11 17:57:03 2009
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19i02
Last modified: Thu Sep 03 10:05:53 2009
Job Code:

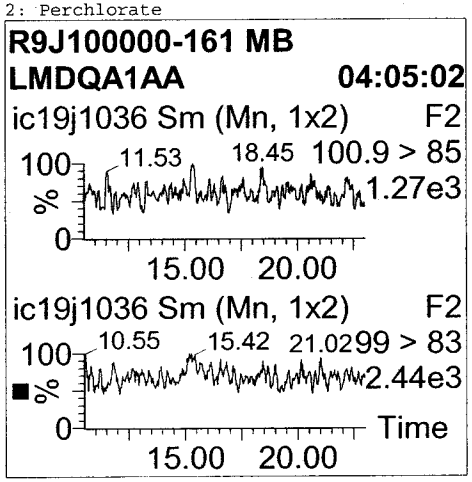
Printed: Sun Oct 11 17:59:30 2009

Name: ic19j1036
Text: R9J100000-161 MB

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.242	148893	bb	1.033	103.31	ic19i02	29/Sep/09	
2	Perchlorate						ic19i02	29/Sep/09	

Analyst: Jacqueline Bonnett

Table of Contents

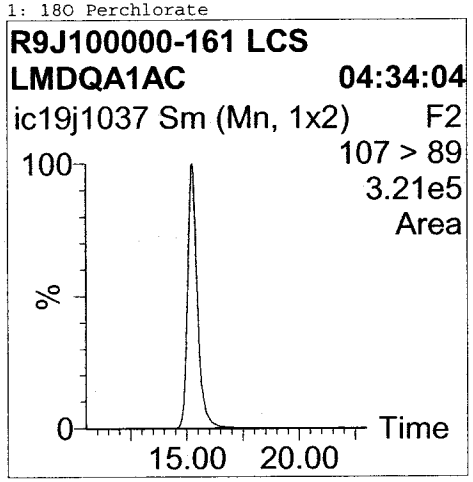
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx\IC Perchlorate.PRO\SampleDB\ic19j10(2)
Last modified: Sun Oct 11 17:57:03 2009
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19i02
Last modified: Thu Sep 03 10:05:53 2009
Job Code:

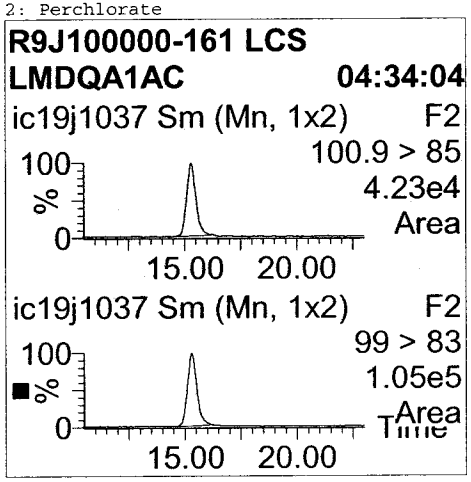
Printed: Sun Oct 11 17:59:30 2009

Name: ic19j1037
Text: R9J100000-161 LCS

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.242	158759	bb	1.102	110.15	ic19i02	29/Sep/09	
2	Perchlorate	15.293	50405	bb	51.687	103.37	ic19i02	29/Sep/09	

Analyst: Jacqueline Bonnett

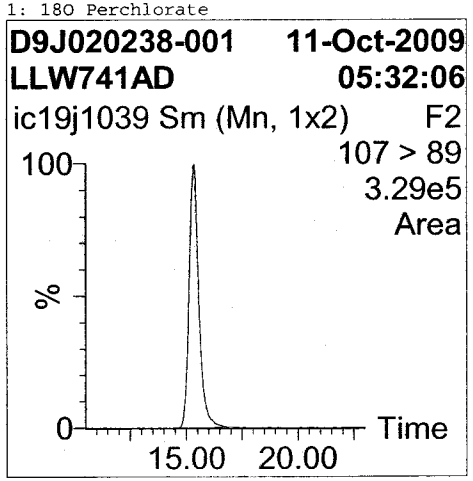
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx\IC Perchlorate.PRO\SampleDB\ic19j10(2)
Last modified: Sun Oct 11 17:57:03 2009
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19i02
Last modified: Thu Sep 03 10:05:53 2009
Job Code:

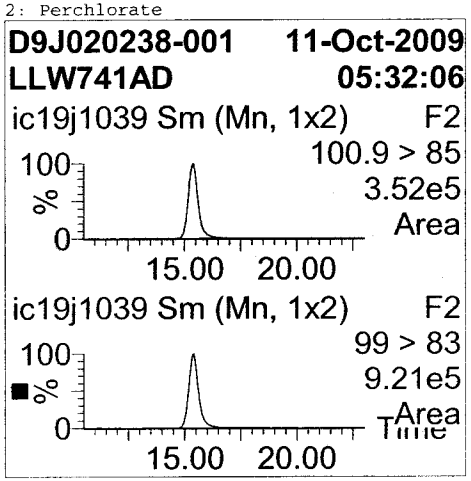
Printed: Sun Oct 11 17:59:30 2009

Name: ic19j1039
Text: D9J020238-001

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.343	163736	bb	1.136	113.60	ic19i02	29/Sep/09	
2	Perchlorate	15.394	456095	bb	439.151		ic19i02	29/Sep/09	

Analyst: Jacqueline Bonnett

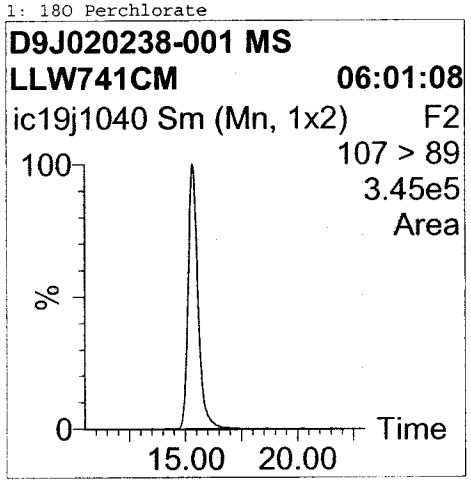
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx\IC Perchlorate.PRO\SampleDB\ic19j10(2)
Last modified: Sun Oct 11 17:57:03 2009
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19i02
Last modified: Thu Sep 03 10:05:53 2009
Job Code:

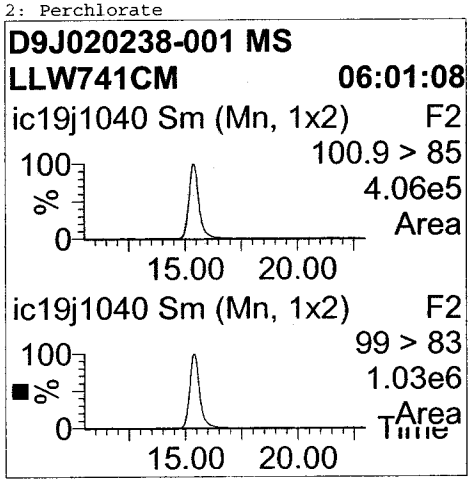
Printed: Sun Oct 11 17:59:30 2009

Name: ic19j1040
Text: D9J020238-001 MS

1: 180 Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	180 Perchlorate	15.318	173684	bb	1.205	120.51	ic19i02	29/Sep/09	
2	Perchlorate	15.394	522445	bb	474.076	948.15	ic19i02	29/Sep/09	

Analyst: Jacqueline Bonnett

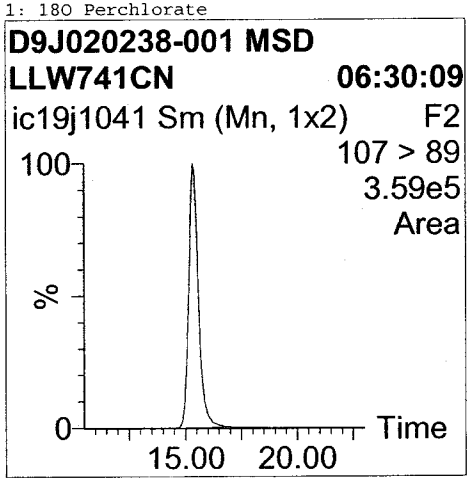
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx\IC Perchlorate.PRO\SampleDB\ic19j10(2)
Last modified: Sun Oct 11 17:57:03 2009
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19i02
Last modified: Thu Sep 03 10:05:53 2009
Job Code:

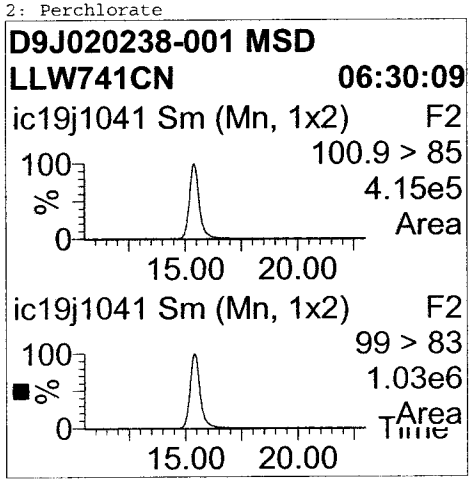
Printed: Sun Oct 11 17:59:30 2009

Name: ic19j1041
Text: D9J020238-001 MSD

1: 180 Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	180 Perchlorate	15.318	179240	bb	1.244	124.36	ic19i02	29/Sep/09	
2	Perchlorate	15.419	529897	bb	465.966	931.93	ic19i02	29/Sep/09	

Analyst: Jacqueline Bonnett

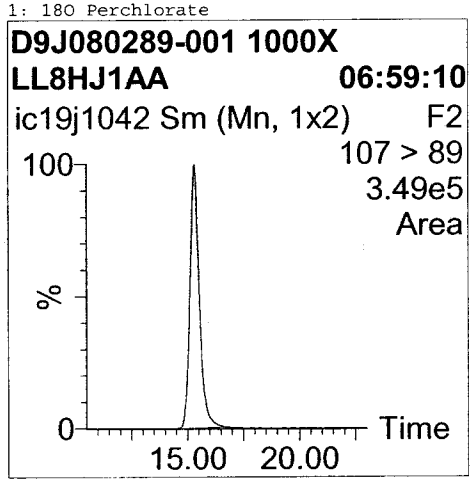
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx\IC Perchlorate.PRO\SampleDB\ic19j10(2)
Last modified: Sun Oct 11 17:57:03 2009
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19i02
Last modified: Thu Sep 03 10:05:53 2009
Job Code:

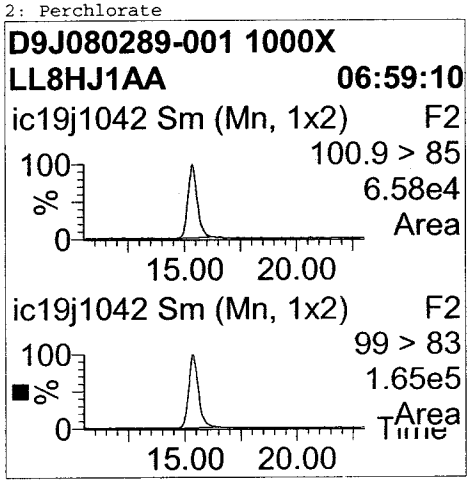
Printed: Sun Oct 11 17:59:30 2009

Name: ic19j1042
Text: D9J080289-001 1000X

1: 180 Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	180 Perchlorate	15.318	169351	bb	1.175	117.50	ic19i02	29/Sep/09	
2	Perchlorate	15.368	80368	bb	76346.175		ic19i02	29/Sep/09	

Analyst: Jacqueline Bonnett

Southeast ACCUTEST Laboratories

IT'S ALL IN THE CHEMISTRY

01/19/10

Technical Report for

Tetra Tech, Inc

Holloman AFB; Alamogordo, NM

100-TEN-T93002

Accutest Job Number: F70644

Sampling Date: 01/05/10

Report to:

Tetra Tech
800 Oak Ridge Tpk. Suite A600
Oak Ridge, TN 37830
Virginia.Mullins@tetratech.com

ATTN: Ginger Mullins

Total number of pages in report: **41**

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Harry Behzadi, Ph.D.
Laboratory Director

Client Service contact: Sue Bell 407-425-6700

ACCUTEST LABORATORIES 50 YEARS 1956-2006

Certifications: FL (DOH E83510), NC (573), NJ (FL002), MA (FL946), IA (366), LA (03051), KS (E-10327), SC, AK
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Test results relate only to samples analyzed.

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Table of Contents

-1-

Section 1: Sample Summary **3**
Section 2: Case Narrative/Conformance Summary **4**
Section 3: Sample Results **5**
3.1: F70644-1: MW16-04-010510 6
3.2: F70644-2: MW16-03-010510 8
3.3: F70644-3: MW16-02-010510 10
3.4: F70644-4: MW16-01-010510 12
3.5: F70644-5: MW16-DUP01-010510 14
Section 4: Misc. Forms **16**
4.1: Chain of Custody 17
Section 5: GC Semi-volatiles - QC Data Summaries **19**
5.1: Method Blank Summary 20
5.2: Blank Spike Summary 21
5.3: Matrix Spike/Matrix Spike Duplicate Summary 22
5.4: DDT/Endrin Breakdown Checks 23
5.5: Surrogate Recovery Summaries 27
5.6: GC Surrogate Retention Time Summaries 28
5.7: Initial and Continuing Calibration Summaries 29
Section 6: General Chemistry - QC Data Summaries **39**
6.1: Method Blank and Spike Results Summary 40
6.2: Duplicate Results Summary 41

Accutest Laboratories

Sample Summary

Tetra Tech, Inc

Job No: F70644

Holloman AFB; Alamogordo, NM
Project No: 100-TEN-T93002

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
F70644-1	01/05/10	13:50	JB	01/07/10	AQ	Ground Water	MW16-04-010510
F70644-2	01/05/10	14:06	JB	01/07/10	AQ	Ground Water	MW16-03-010510
F70644-2D	01/05/10	14:06	JB	01/07/10	AQ	Water Dup/MSD	MW16-03-010510
F70644-2S	01/05/10	14:06	JB	01/07/10	AQ	Water Matrix Spike	MW16-03-010510
F70644-3	01/05/10	14:31	JB	01/07/10	AQ	Ground Water	MW16-02-010510
F70644-4	01/05/10	14:50	JB	01/07/10	AQ	Ground Water	MW16-01-010510
F70644-5	01/05/10	00:00	JB	01/07/10	AQ	Ground Water	MW16-DUP01-010510

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Tetra Tech, Inc **Job No:** F70644

Site: Holloman AFB; Alamogordo, NM **Report Date:** 1/19/2010 2:34:19 PM

5 Samples were collected on 01/05/2010 and were received at Accutest SE on 01/07/2010 properly preserved, at 4.6 Deg. C and intact. These Samples received an Accutest job number of F70644. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Extractables by GC by Method SW846 8081A

Matrix: AQ **Batch ID:** OP31510

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Samples F70644-2MS, F70644-2MSD were used as the QC samples indicated.

F70644-3: All hits confirmed by dual column analysis.

F70644-3 for gamma-BHC (Lindane): Primary and confirmation results differ by more than 40%. Lower value reported due to possible coelution.

Wet Chemistry by Method SM19 2540C

Matrix: AQ **Batch ID:** GN38055

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample F70644-2DUP was used as the QC sample for Solids, Total Dissolved.

Accutest Laboratories Southeast (ALSE) certifies that this report meets the project requirements for analytical data produced for the samples as received at ALSE and as stated on the COC. ALSE certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the ALSE Quality Manual except as noted above. This report is to be used in its entirety. ALSE is not responsible for any assumptions of data quality if partial data packages are used.

Narrative prepared by:

_____ Date: January 19, 2010

Ellen Pampel, Inorganic QA (signature on file)

Tuesday, January 19, 2010

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MW16-04-010510		
Lab Sample ID:	F70644-1	**Date Sampled:**	01/05/10
Matrix:	AQ - Ground Water	**Date Received:**	01/07/10
Method:	SW846 8081A SW846 3510C	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TT21615.D	1	01/13/10	FS	01/12/10	OP31510	GTT678
Run #2							

	Initial Volume	Final Volume
Run #1	1030 ml	10.0 ml
Run #2		

Pesticide Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
319-84-6	alpha-BHC	ND	0.049	0.0097	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.049	0.0097	ug/l	
60-57-1	Dieldrin	ND	0.049	0.0097	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	93%		42-127%
2051-24-3	Decachlorobiphenyl	85%		27-127%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW16-04-010510		
Lab Sample ID:	F70644-1	**Date Sampled:**	01/05/10
Matrix:	AQ - Ground Water	**Date Received:**	01/07/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	4450	1000	100	mg/l	10	01/08/10 13:54	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW16-03-010510		
Lab Sample ID:	F70644-2	**Date Sampled:**	01/05/10
Matrix:	AQ - Ground Water	**Date Received:**	01/07/10
Method:	SW846 8081A SW846 3510C	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TT21616.D	1	01/13/10	FS	01/12/10	OP31510	GTT678
Run #2							

	Initial Volume	Final Volume
Run #1	1020 ml	10.0 ml
Run #2		

Pesticide Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
319-84-6	alpha-BHC	ND	0.049	0.0098	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.049	0.0098	ug/l	
60-57-1	Dieldrin	ND	0.049	0.0098	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	88%		42-127%
2051-24-3	Decachlorobiphenyl	77%		27-127%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW16-03-010510		
Lab Sample ID:	F70644-2	**Date Sampled:**	01/05/10
Matrix:	AQ - Ground Water	**Date Received:**	01/07/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	2380	1000	100	mg/l	10	01/08/10 13:54	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW16-02-010510		
Lab Sample ID:	F70644-3	**Date Sampled:**	01/05/10
Matrix:	AQ - Ground Water	**Date Received:**	01/07/10
Method:	SW846 8081A SW846 3510C	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	TT21619.D	1	01/13/10	FS	01/12/10	OP31510	GTT678
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	10.0 ml
Run #2		

Pesticide Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
319-84-6	alpha-BHC	ND	0.050	0.010	ug/l	
58-89-9	gamma-BHC (Lindane) [b]	0.097	0.050	0.010	ug/l	J
60-57-1	Dieldrin	ND	0.050	0.010	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	86%		42-127%
2051-24-3	Decachlorobiphenyl	67%		27-127%

(a) All hits confirmed by dual column analysis.
(b) Primary and confirmation results differ by more than 40%. Lower value reported due to possible coelution.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW16-02-010510		
Lab Sample ID:	F70644-3	**Date Sampled:**	01/05/10
Matrix:	AQ - Ground Water	**Date Received:**	01/07/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	4170	1000	100	mg/l	10	01/08/10 13:54	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW16-01-010510		
Lab Sample ID:	F70644-4	**Date Sampled:**	01/05/10
Matrix:	AQ - Ground Water	**Date Received:**	01/07/10
Method:	SW846 8081A SW846 3510C	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TT21620.D	1	01/13/10	FS	01/12/10	OP31510	GTT678
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	10.0 ml
Run #2		

Pesticide Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
319-84-6	alpha-BHC	ND	0.050	0.010	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.050	0.010	ug/l	
60-57-1	Dieldrin	ND	0.050	0.010	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	88%		42-127%
2051-24-3	Decachlorobiphenyl	69%		27-127%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW16-01-010510		
Lab Sample ID:	F70644-4	**Date Sampled:**	01/05/10
Matrix:	AQ - Ground Water	**Date Received:**	01/07/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	2720	1000	100	mg/l	10	01/08/10 13:54	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW16-DUP01-010510		
Lab Sample ID:	F70644-5	**Date Sampled:**	01/05/10
Matrix:	AQ - Ground Water	**Date Received:**	01/07/10
Method:	SW846 8081A SW846 3510C	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TT21621.D	1	01/13/10	FS	01/12/10	OP31510	GTT678
Run #2							

	Initial Volume	Final Volume
Run #1	1030 ml	10.0 ml
Run #2		

Pesticide Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
319-84-6	alpha-BHC	ND	0.049	0.0097	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.049	0.0097	ug/l	
60-57-1	Dieldrin	ND	0.049	0.0097	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	88%		42-127%
2051-24-3	Decachlorobiphenyl	56%		27-127%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW16-DUP01-010510		
Lab Sample ID:	F70644-5	**Date Sampled:**	01/05/10
Matrix:	AQ - Ground Water	**Date Received:**	01/07/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	2570	1000	100	mg/l	10	01/08/10 13:54	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Certification Exceptions
- Chain of Custody

COC-017

Accutest Laboratories Southeast
Chain of Custody

ACCUTEST

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL. 407-425-6700 • FAX: 407-425-0707
www.accutest.com

Accutest JOB # F70644 PAGE 1 OF 1

Accutest Quote #

SKIFF# 32506

Client / Reporting Information

Company Name: TETRA TECH
Address: 800 OAK RIDGE TURNPIKE A-600
City: OAK RIDGE State: TN Zip: 37830
Project Contact: GINGER HULLINS E-mail: GINGER.HULLINS@TETRATECH.COM
Phone#: 865-599-2349
Sampler(s) Name(s) (Printed): J. BENNETT / A. MORENO

Project Information

Project Name: HOLLOMAN AFB
Street:
City: ALAMOGORDO State: NM
Project #: T93002
Fax #:
Client Purchase Order #:

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe

Accutest Sample #	Field ID / Point of Collection	DATE	TIME	SAMPLED BY	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NaOH+ZnAc	DI WATER	MeOH	GAMMA BHC	ALPHA BHC	DIELDRIN	TDS	LAB USE ONLY
1	MW16-04-010510	1/5/10	1350	JB	GW	3		X								X	X	X	X	
2	MW16-03-010510	1/5/10	1406	JB	GW	3		X								X	X	X	X	
2	MW16-03-MS-010510	1/5/10	1406	JB	GW	3		X								X	X	X	X	
2	MW16-03-MSD-010510	1/5/10	1406	JB	GW	3		X								X	X	X	X	
3	MW16-02-010510	1/5/10	1431	JB	GW	3		X								X	X	X	X	
4	MW16-01-010510	1/5/10	1450	JM	GW	3		X								X	X	X	X	
	~~MW16-DUP01-10060~~		—																	
5	MW16-DUP01-010510	1/5/10	—	JB	GW	3		X								X	X	X	X	

TURNAROUND TIME (Business Days) — Approved By: / Rush Code

- [x] 10 Days Standard
- [ ] 7 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] OTHER

Emergency or Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [x] REDT1 (EPA LEVEL 3) RRPIMS
- [ ] FULT1 (EPA LEVEL 4)
- [x] EDD'S

Comments / Remarks

FEDEX 8702 8502 3118
8702 8502 3129

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
1	1/5/10 1400	2	3	1/6/10 1400	4 FEDEX
Relinquished by: 5 FX	Date Time:	Received By: Accutest 01.07.09 09:00	Relinquished by: 7	Date Time:	Received By: 8

Lab Use Only: Custody Seal in Place: Y N Temp Blank Provided: Y N Preserved where Applicable: Y N Total # of Coolers: Cooler Temperature (s) Celsius: 4.6 4.2

F70644: Chain of Custody
Page 1 of 2

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: F70644 CLIENT: TetraTech PROJECT: Holloman AFB

DATE/TIME RECEIVED: 01.07.10 09:00 {MM/DD/YY 24:00} NUMBER OF COOLERS RECEIVED: 2

METHOD OF DELIVERY: FEDEX UPS ACCUTEST COURIER GREYHOUND DELIVERY OTHER

AIRBILL NUMBERS: 8702 8502 3129

COOLER INFORMATION

- [ ] CUSTODY SEAL NOT PRESENT OR NOT INTACT
- [ ] CHAIN OF CUSTODY NOT RECEIVED (COC)
- [ ] ANALYSIS REQUESTED IS UNCLEAR OR MISSING
- [ ] SAMPLE DATES OR TIMES UNCLEAR OR MISSING
- [ ] TEMPERATURE CRITERIA NOT MET
- [ ] WET ICE PRESENT

TRIP BLANK INFORMATION

- [ ] TRIP BLANK PROVIDED
- [x] TRIP BLANK NOT PROVIDED
- [x] TRIP BLANK NOT ON COC
- [ ] TRIP BLANK INTACT
- [ ] TRIP BLANK NOT INTACT
- [ ] RECEIVED WATER TRIP BLANK
- [ ] RECEIVED SOIL TRIP BLANK

MISC. INFORMATION

NUMBER OF ENCORES ? Ø

NUMBER OF 5035 FIELD KITS ? Ø

NUMBER OR LAB FILTERED METALS ? Ø

TEMPERATURE INFORMATION

- [ ] IR THERM ID 2 CORR. FACTOR +.4
- [ ] OBSERVED TEMPS: 3.8 4.2
- [ ] CORRECTED TEMPS: 4.2 4.6

SAMPLE INFORMATION

- [ ] SAMPLE LABELS PRESENT ON ALL BOTTLES
- [ ] INCORRECT NUMBER OF CONTAINERS USED
- [ ] SAMPLE RECEIVED IMPROPERLY PRESERVED
- [ ] INSUFFICIENT VOLUME FOR ANALYSIS
- [ ] DATES/TIMES ON COC DO NOT MATCH SAMPLE LABEL
- [ ] ID'S ON COC DO NOT MATCH LABEL
- [ ] VOC VIALS HAVE HEADSPACE (MACRO BUBBLES)
- [ ] BOTTLES RECEIVED BUT ANALYSIS NOT REQUESTED
- [ ] NO BOTTLES RECEIVED FOR ANALYSIS REQUESTED
- [ ] UNCLEAR FILTERING OR COMPOSITING INSTRUCTIONS
- [ ] SAMPLE CONTAINER(S) RECEIVED BROKEN
- [ ] % SOLIDS JAR NOT RECEIVED
- [ ] 5035 FIELD KIT FROZEN WITHIN 48 HOUR'S
- [ ] RESIDUAL CHLORINE PRESENT

{APPICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS}

SUMMARY OF COMMENTS:

TECHNICIAN SIGNATURE/DATE E.T. 01.07.10 REVIEWER SIGNATURE/DATE 1/7/10

NF 10/09 RECEIPT CONFIRMATION 100609 (2).xls

4.1

4

F70644: Chain of Custody

Page 2 of 2

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- DDT/Endrin Breakdown Checks
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: F70644
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP31510-MB	TT21614.D	1	01/13/10	FS	01/12/10	OP31510	GTT678

The QC reported here applies to the following samples: **Method:** SW846 8081A

F70644-1, F70644-2, F70644-3, F70644-4, F70644-5

CAS No.	Compound	Result	RL	MDL	Units	Q
319-84-6	alpha-BHC	ND	0.050	0.010	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.050	0.010	ug/l	
60-57-1	Dieldrin	ND	0.050	0.010	ug/l	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	83%	42-127%
2051-24-3	Decachlorobiphenyl	87%	27-127%

Blank Spike Summary

Job Number: F70644
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP31510-BS	TT21613.D	1	01/13/10	FS	01/12/10	OP31510	GTT678

The QC reported here applies to the following samples: **Method:** SW846 8081A

F70644-1, F70644-2, F70644-3, F70644-4, F70644-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
319-84-6	alpha-BHC	0.5	0.52	104	77-132
58-89-9	gamma-BHC (Lindane)	0.5	0.50	100	80-136
60-57-1	Dieldrin	0.5	0.49	98	80-136

CAS No.	Surrogate Recoveries	BSP	Limits
877-09-8	Tetrachloro-m-xylene	89%	42-127%
2051-24-3	Decachlorobiphenyl	84%	27-127%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F70644
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP31510-MS	TT21617.D	1	01/13/10	FS	01/12/10	OP31510	GTT678
OP31510-MSD	TT21618.D	1	01/13/10	FS	01/12/10	OP31510	GTT678
F70644-2	TT21616.D	1	01/13/10	FS	01/12/10	OP31510	GTT678

The QC reported here applies to the following samples: **Method:** SW846 8081A

F70644-1, F70644-2, F70644-3, F70644-4, F70644-5

CAS No.	Compound	F70644-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
319-84-6	alpha-BHC	ND		0.962	0.94	98	0.95	99	1	77-132/16
58-89-9	gamma-BHC (Lindane)	ND		0.962	0.90	94	0.92	96	2	80-136/17
60-57-1	Dieldrin	ND		0.962	0.88	92	0.93	97	6	80-136/16

CAS No.	Surrogate Recoveries	MS	MSD	F70644-2	Limits
877-09-8	Tetrachloro-m-xylene	87%	90%	88%	42-127%
2051-24-3	Decachlorobiphenyl	67%	74%	77%	27-127%

DDT/Endrin Breakdown Check

Job Number: F70644
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GTT676-DDT
Lab File ID: TT21503.D
Instrument ID: GCTT
Injection Date: 01/06/10
Injection Time: 09:45

Compound	Response Signal 1	Response Signal 2
4,4'-DDD	267294	359157
4,4'-DDE	56340	43525
4,4'-DDT	2846591	3815092
DDT Breakdown [a]	10.2 %	9.5 %
Endrin aldehyde	47670	91730
Endrin ketone	129443	229736
Endrin	3652537	4535854
Endrin Breakdown [b]	4.6 %	6.6 %

(a) Calculated as: (DDD + DDE) / (DDD + DDE + DDT) x 100
(b) Calculated as: (Endrin Aldehyde + Endrin Ketone) / (Endrin Aldehyde + Endrin Ketone + Endrin) x 100

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
GTT676-IC676	TT21506.D	01/06/10	10:58	01:13	Initial cal 5
GTT676-IC676	TT21507.D	01/06/10	11:17	01:32	Initial cal 10
GTT676-IC676	TT21508.D	01/06/10	11:35	01:50	Initial cal 20
GTT676-ICC676	TT21509.D	01/06/10	11:53	02:08	Initial cal 40
GTT676-IC676	TT21510.D	01/06/10	12:11	02:26	Initial cal 60
GTT676-IC676	TT21511.D	01/06/10	12:29	02:44	Initial cal 80
GTT676-IC676	TT21512.D	01/06/10	12:48	03:03	Initial cal 500
GTT676-IC676	TT21513.D	01/06/10	13:06	03:21	Initial cal 200
GTT676-ICV676	TT21514.D	01/06/10	13:24	03:39	Initial cal verification 40
OP31446-LBS	TT21515.D	01/06/10	13:49	04:04	Blank Spike
OP31446-LB	TT21516.D	01/06/10	14:07	04:22	Leachate Blank
F70426-1A	TT21517.D	01/06/10	14:25	04:40	(used for QC only; not part of job F70644)
OP31446-MS	TT21518.D	01/06/10	14:43	04:58	Matrix Spike
OP31446-MSD	TT21519.D	01/06/10	15:01	05:16	Matrix Spike Duplicate
ZZZZZZ	TT21520.D	01/06/10	15:19	05:35	(unrelated sample)
ZZZZZZ	TT21521.D	01/06/10	15:38	05:53	(unrelated sample)
ZZZZZZ	TT21522.D	01/06/10	15:56	06:11	(unrelated sample)
ZZZZZZ	TT21523.D	01/06/10	16:14	06:29	(unrelated sample)
GTT676-CC676	TT21524.D	01/06/10	16:32	06:47	Continuing cal 40
ZZZZZZ	TT21526.D	01/06/10	17:09	07:24	(unrelated sample)
ZZZZZZ	TT21527.D	01/06/10	17:27	07:42	(unrelated sample)
F70441-13	TT21528.D	01/06/10	17:45	08:00	(used for QC only; not part of job F70644)
OP31446-DUP	TT21529.D	01/06/10	18:03	08:18	Duplicate
GTT676-CC676	TT21530.D	01/06/10	18:21	08:37	Continuing cal 40

DDT/Endrin Breakdown Check

Job Number: F70644
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GTT676-DDT
Lab File ID: TT21503.D
Instrument ID: GCTT
Injection Date: 01/06/10
Injection Time: 09:45

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
OP31447-BS	TT21531.D	01/06/10	18:40	08:55	Blank Spike
OP31447-MB	TT21532.D	01/06/10	18:58	09:13	Method Blank
F70438-1	TT21533.D	01/06/10	19:16	09:31	(used for QC only; not part of job F70644)
OP31447-MS	TT21534.D	01/06/10	19:34	09:49	Matrix Spike
OP31447-MSD	TT21535.D	01/06/10	19:52	10:08	Matrix Spike Duplicate
GTT676-ECC676	TT21536.D	01/06/10	20:11	10:26	Ending cal 40

DDT/Endrin Breakdown Check

Job Number: F70644
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GTT678-DDT
Lab File ID: TT21584.D
Instrument ID: GCTT
Injection Date: 01/13/10
Injection Time: 10:48

Compound	Response Signal 1	Response Signal 2
4,4'-DDD	151778	235371
4,4'-DDE	51868	36359
4,4'-DDT	3168415	4424012
DDT Breakdown [a]	6 %	5.8 %
Endrin aldehyde	72853	147677
Endrin ketone	151391	312720
Endrin	3998708	5236066
Endrin Breakdown [b]	5.3 %	8.1 %

(a) Calculated as: (DDD + DDE) / (DDD + DDE + DDT) x 100
(b) Calculated as: (Endrin Aldehyde + Endrin Ketone) / (Endrin Aldehyde + Endrin Ketone + Endrin) x 100

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
GTT678-CC676	TT21585.D	01/13/10	11:18	00:30	Continuing cal 40
GTT678-CC676	TT21586.D	01/13/10	11:36	00:48	Continuing cal 200
GTT678-CC676	TT21587.D	01/13/10	11:54	01:06	Continuing cal 500
OP31494-MB	TT21589.D	01/13/10	12:31	01:43	Method Blank
ZZZZZZ	TT21590.D	01/13/10	12:49	02:01	(unrelated sample)
ZZZZZZ	TT21591.D	01/13/10	13:07	02:20	(unrelated sample)
ZZZZZZ	TT21592.D	01/13/10	13:25	02:38	(unrelated sample)
ZZZZZZ	TT21593.D	01/13/10	13:43	02:56	(unrelated sample)
ZZZZZZ	TT21594.D	01/13/10	14:02	03:14	(unrelated sample)
ZZZZZZ	TT21595.D	01/13/10	14:20	03:32	(unrelated sample)
ZZZZZZ	TT21596.D	01/13/10	14:38	03:50	(unrelated sample)
GTT678-CC676	TT21599.D	01/13/10	15:33	04:45	Continuing cal 500
GTT678-CC676	TT21600.D	01/13/10	15:51	05:03	Continuing cal 40
OP31491-MB	TT21601.D	01/13/10	16:09	05:21	Method Blank
ZZZZZZ	TT21602.D	01/13/10	16:27	05:40	(unrelated sample)
ZZZZZZ	TT21603.D	01/13/10	16:45	05:58	(unrelated sample)
ZZZZZZ	TT21604.D	01/13/10	17:03	06:16	(unrelated sample)
ZZZZZZ	TT21605.D	01/13/10	17:22	06:34	(unrelated sample)
ZZZZZZ	TT21606.D	01/13/10	17:40	06:52	(unrelated sample)
ZZZZZZ	TT21607.D	01/13/10	17:58	07:10	(unrelated sample)
ZZZZZZ	TT21608.D	01/13/10	18:16	07:29	(unrelated sample)
GTT678-CC676	TT21611.D	01/13/10	19:11	08:23	Continuing cal 500
GTT678-CC676	TT21612.D	01/13/10	19:29	08:41	Continuing cal 40
OP31510-BS	TT21613.D	01/13/10	19:47	09:00	Blank Spike

DDT/Endrin Breakdown Check

Job Number: F70644
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GTT678-DDT
Lab File ID: TT21584.D
Instrument ID: GCTT
Injection Date: 01/13/10
Injection Time: 10:48

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
OP31510-MB	TT21614.D	01/13/10	20:05	09:18	Method Blank
F70644-1	TT21615.D	01/13/10	20:23	09:36	MW16-04-010510
F70644-2	TT21616.D	01/13/10	20:42	09:54	MW16-03-010510
OP31510-MS	TT21617.D	01/13/10	21:00	10:12	Matrix Spike
OP31510-MSD	TT21618.D	01/13/10	21:18	10:30	Matrix Spike Duplicate
F70644-3	TT21619.D	01/13/10	21:36	10:49	MW16-02-010510
F70644-4	TT21620.D	01/13/10	21:54	11:07	MW16-01-010510
F70644-5	TT21621.D	01/13/10	22:13	11:25	MW16-DUP01-010510
ZZZZZZ	TT21622.D	01/13/10	22:31	11:43	(unrelated sample)
GTT678-ECC676	TT21623.D	01/13/10	22:49	12:01	Ending cal 20

Semivolatile Surrogate Recovery Summary

Job Number: F70644
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Method: SW846 8081A **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S2 [a]
F70644-1	TT21615.D	93.0	85.0
F70644-2	TT21616.D	88.0	77.0
F70644-3	TT21619.D	86.0	67.0
F70644-4	TT21620.D	88.0	69.0
F70644-5	TT21621.D	88.0	56.0
OP31510-BS	TT21613.D	89.0	84.0
OP31510-MB	TT21614.D	83.0	87.0
OP31510-MS	TT21617.D	87.0	67.0
OP31510-MSD	TT21618.D	90.0	74.0

Surrogate Compounds	Recovery Limits
S1 = Tetrachloro-m-xylene	42-127%
S2 = Decachlorobiphenyl	27-127%

(a) Recovery from GC signal #1

GC Surrogate Retention Time Summary

Job Number: F70644
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Check Std:	GTT678-CC676	**Injection Date:**	01/13/10
Lab File ID:	TT21611.D	**Injection Time:**	19:11
Instrument ID:	GCTT	**Method:**	SW846 8081A

	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
Check Std	5.25	5.31	11.47	11.62

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
OP31510-BS	TT21613.D	01/13/10	19:47	5.25		11.47	
OP31510-MB	TT21614.D	01/13/10	20:05	5.25		11.47	
F70644-1	TT21615.D	01/13/10	20:23	5.25		11.47	
F70644-2	TT21616.D	01/13/10	20:42	5.25		11.46	
OP31510-MS	TT21617.D	01/13/10	21:00	5.25		11.47	
OP31510-MSD	TT21618.D	01/13/10	21:18	5.25		11.47	
F70644-3	TT21619.D	01/13/10	21:36	5.25		11.46	
F70644-4	TT21620.D	01/13/10	21:54	5.25		11.46	
F70644-5	TT21621.D	01/13/10	22:13	5.25		11.47	
ZZZZZZ	TT21622.D	01/13/10	22:31	5.25		11.46	
GTT678-ECC676	TT21623.D	01/13/10	22:49	5.25	5.31	11.47	11.62

Surrogate Compounds

S1 = Tetrachloro-m-xylene
S2 = Decachlorobiphenyl

(a) Retention time from GC signal #1
(b) Retention time from GC signal #2

Initial Calibration Summary

Job Number: F70644
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GTT676-ICC676
Lab FileID: TT21509.D

Response Factor Report ECD 6

Method : C:\MSDCHEM\2\METHODS\8081A.M (Chemstation Integrator)
Title : Pesticides by 608 or 8081
Last Update : Thu Jan 07 08:43:46 2010
Response via : Initial Calibration

Calibration Files
5 =TT21506.D 10 =TT21507.D 20 =TT21508.D 40 =TT21509.D
60 =TT21510.D 80 =TT21511.D c200=TT21513.D t500=TT21512.D

Compound	5	10	20	40	60	80	c200	t500	Avg	%RSD
1) Tetrachloro-	1.264	1.210	1.150	1.089	1.055	1.032			1.133 E5	8.04
2) alpha-BHC	1.531	1.502	1.492	1.431	1.391	1.391			1.456 E5	4.13
3) gamma-BHC (L	1.394	1.367	1.325	1.291	1.237	1.258			1.312 E5	4.69
4) beta-BHC	6.132	5.969	5.538	5.401	5.030	5.179			5.541 E4	7.84
5) delta-BHC	1.176	1.170	1.150	1.120	1.091	1.132			1.140 E5	2.83
6) Heptachlor	1.074	1.051	0.988	0.927	0.875	0.870			0.964 E5	9.06
7) Aldrin	1.094	1.058	1.001	0.933	0.885	0.857			0.971 E5	9.80
8) Heptachlor E	9.730	9.366	8.742	8.342	7.821	7.672			8.612 E4	9.60
9) gamma-Chlord	9.454	8.926	8.829	8.378	8.047	8.207			8.640 E4	6.10
10) alpha-Chlord	9.100	8.503	8.545	8.049	7.701	7.710			8.268 E4	6.63
11) Endosulfan	8.305	8.109	7.641	7.315	6.877	6.746			7.499 E4	8.49
12) 4,4'-DDE	8.629	8.450	8.107	7.680	7.379	7.405			7.942 E4	6.74
13) Dieldrin	8.904	8.781	8.228	8.071	7.603	7.554			8.190 E4	6.96
14) Endrin	7.287	7.010	6.518	6.218	6.059	5.929			6.504 E4	8.36
15) 4,4'-DDD	7.087	6.871	6.639	6.290	5.960	6.009			6.476 E4	7.16
16) Endosulfan I	7.040	6.912	6.474	6.238	5.991	5.886			6.424 E4	7.41
17) Endrin Aldeh	5.291	4.990	4.900	4.760	4.494	4.574			4.835 E4	6.04
18) 4,4'-DDT	5.218	5.227	5.029	5.090	4.841	4.994			5.066 E4	2.89
19) Endosulfan S	5.883	5.599	5.591	5.275	4.963	5.021			5.389 E4	6.73
20) Methoxychlor	2.938	2.776	2.620	2.579	2.414	2.475			2.634 E4	7.39
21) Endrin Keton	6.883	6.974	6.582	6.399	5.959	6.094			6.482 E4	6.34
22) Chlordane-A							3.990		3.990 E3	0.00
23) Chlordane-B							4.889		4.889 E3	0.00
24) Chlordane-C							2.613		2.613 E3	0.00
25) Chlordane-D							1.085		1.085 E4	0.00
26) Chlordane-E							1.122		1.122 E4	0.00
27) Chlordane-F							2.405		2.405 E3	0.00
28) Toxaphene								9.273	9.273 E5	0.00
29) Decachlorobi	4.480	4.416	4.263	4.107	3.941	4.134			4.224 E4	4.80

Signal #2

1) Tetrachloro-	1.459	1.453	1.427	1.394	1.339	1.352			1.404 E5	3.62
2) alpha-BHC	1.813	1.824	1.878	1.849	1.826	1.851			1.840 E5	1.29
3) gamma-BHC (L	1.642	1.697	1.682	1.631	1.621	1.637			1.652 E5	1.83
4) beta-BHC	7.045	6.808	6.638	6.598	6.380	6.412			6.647 E4	3.76
5) delta-BHC	1.327	1.389	1.389	1.403	1.372	1.440			1.387 E5	2.67
6) Heptachlor	1.291	1.282	1.257	1.187	1.128	1.122			1.211 E5	6.27
7) Aldrin	1.329	1.264	1.257	1.179	1.124	1.105			1.210 E5	7.28
8) Heptachlor E	1.155	1.146	1.103	1.060	1.017	0.999			1.080 E5	6.08
9) gamma-Chlord	1.138	1.133	1.120	1.106	1.089	1.108			1.116 E5	1.65
10) alpha-Chlord	1.098	1.069	1.059	1.036	0.991	0.985			1.040 E5	4.33
11) Endosulfan	0.984	1.001	0.971	0.918	0.870	0.857			0.934 E5	6.53
12) 4,4'-DDE	1.055	1.019	1.025	1.006	0.980	0.969			1.009 E5	3.13
13) Dieldrin	1.063	1.084	1.062	1.035	0.995	0.978			1.036 E5	4.02
14) Endrin	8.240	8.389	7.880	7.896	7.556	7.350			7.885 E4	4.99
15) 4,4'-DDD	8.673	9.030	8.613	8.286	7.942	7.845			8.398 E4	5.45

Initial Calibration Summary

Job Number: F70644
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GTT676-ICC676
Lab FileID: TT21509.D

16)	Endosulfan I	8.639	8.717	8.565	8.211	7.794	7.903			8.305	E4	4.76
17)	Endrin Aldeh	6.656	6.524	6.462	6.150	6.005	5.975			6.295	E4	4.59
18)	4,4'-DDT	6.280	6.704	6.734	6.858	6.630	6.763			6.661	E4	3.02
19)	Endosulfan S	7.517	7.470	7.099	7.184	6.889	6.907			7.178	E4	3.76
20)	Methoxychlor	3.331	3.291	3.310	3.109	3.098	2.990			3.188	E4	4.42
21)	Endrin Keton	9.226	9.069	8.913	8.511	8.210	8.057			8.664	E4	5.51
22)	Chlordane-A							4.769		4.769	E3	0.00
23)	Chlordane-B							5.882		5.882	E3	0.00
24)	Chlordane-C							3.115		3.115	E3	0.00
25)	Chlordane-D							1.196		1.196	E4	0.00
26)	Chlordane-E							7.896		7.896	E3	0.00
27)	Chlordane-F							3.103		3.103	E3	0.00
28)	Toxaphene								1.042	1.042	E6	0.00
29)	Decachlorobi	6.355	6.268	6.190	6.108	5.845	6.173			6.156	E4	2.84

(#) = Out of Range ### Number of calibration levels exceeded format ###

8081A.M Thu Jan 07 09:05:19 2010

Initial Calibration Verification

Job Number: F70644
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GTT676-ICV676
Lab FileID: TT21514.D

Evaluate Continuing Calibration Report

```
Signal #1 : C:\MSDCHEM\2\DATA\0106PEST\TT21514.D\ECD1A.CH Vial: 12
Signal #2 : C:\MSDCHEM\2\DATA\0106PEST\TT21514.D\ECD2B.CH
Acq On    : 1-6-10 01:24:31 PM                        Operator: fouads
Sample    : icv676-40                                 Inst    : ECD 6
Misc      : op31322,gtt676,1000,,,10,1,water          Multiplr: 1.00
IntFile Signal #1: EVENTS.E     IntFile Signal #2: EVENTS2.E

Method       : C:\MSDCHEM\2\METHODS\8081A.M (Chemstation Integrator)
Title        : Pesticides by 608 or 8081
Last Update  : Thu Jan 07 08:43:46 2010
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.10min
Max. RRF Dev :  15%     Max. Rel. Area : 150%
```

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene		----------NA----------				
2		alpha-BHC	40.000	43.975	-9.9	112	0.00	5.64- 5.84
3		gamma-BHC (Lindane)	40.000	43.201	-8.0	110	0.00	5.99- 6.19
4		beta-BHC	40.000	43.708	-9.3	112	0.00	6.21- 6.41
5		delta-BHC	40.000	43.542	-8.9	111	0.00	6.46- 6.66
6		Heptachlor	40.000	42.737	-6.8	111	0.00	6.61- 6.81
7		Aldrin	40.000	41.148	-2.9	107	0.00	6.97- 7.17
8		Heptachlor Epoxide	40.000	38.861	2.8	100	0.00	7.45- 7.65
9		gamma-Chlordane	40.000	42.663	-6.7	110	0.00	7.74- 7.94
10		alpha-Chlordane	40.000	43.677	-9.2	112	0.00	7.83- 8.03
11		Endosulfan I	40.000	43.578	-8.9	112	0.00	7.88- 8.08
12		4,4'-DDE	40.000	43.322	-8.3	112	0.00	8.05- 8.25
13		Dieldrin	40.000	42.121	-5.3	107	0.00	8.20- 8.40
14		Endrin	40.000	43.431	-8.6	114	0.00	8.46- 8.66
15		4,4'-DDD	40.000	42.914	-7.3	110	0.00	8.66- 8.86
16		Endosulfan II	40.000	43.116	-7.8	111	0.00	8.73- 8.93
17		Endrin Aldehyde	40.000	42.815	-7.0	109	0.00	8.88- 9.08
18		4,4'-DDT	40.000	44.688	-11.7	111	0.00	9.03- 9.23
19		Endosulfan Sulfate	40.000	44.723	-11.8	114	0.00	9.16- 9.36
20		Methoxychlor	40.000	44.594	-11.5	114	0.00	9.63- 9.83
21		Endrin Ketone	40.000	43.002	-7.5	109	0.00	9.73- 9.93
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl		----------NA----------				

***** Signal #2 *****

1	S	Tetrachloro-m-xylene		----------NA----------				
2		alpha-BHC	40.000	45.499	-13.7	113	0.00	5.83- 6.03
3		gamma-BHC (Lindane)	40.000	43.598	-9.0	110	0.00	6.21- 6.41
4		beta-BHC	40.000	44.568	-11.4	112	0.00	6.54- 6.74
5		delta-BHC	40.000	45.130	-12.8	111	0.00	6.82- 7.02
6		Heptachlor	40.000	43.840	-9.6	112	0.00	6.62- 6.82
7		Aldrin	40.000	43.082	-7.7	111	0.00	6.96- 7.16
8		Heptachlor Epoxide	40.000	39.642	0.9	101	0.00	7.55- 7.75
9		gamma-Chlordane	40.000	44.663	-11.7	113	0.00	7.85- 8.05

Initial Calibration Verification

Job Number: F70644
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GTT676-ICV676
Lab FileID: TT21514.D

10		alpha-Chlordane	40.000	45.369	-13.4	114	0.00	7.93- 8.13
11		Endosulfan I	40.000	43.641	-9.1	111	0.00	8.01- 8.21
12		4,4'-DDE	40.000	43.834	-9.6	110	0.00	8.14- 8.34
13		Dieldrin	40.000	43.034	-7.6	108	0.00	8.33- 8.53
14		Endrin	40.000	44.469	-11.2	111	0.00	8.68- 8.88
15		4,4'-DDD	40.000	44.154	-10.4	112	0.00	8.82- 9.02
16		Endosulfan II	40.000	42.331	-5.8	107	0.00	9.03- 9.23
17		Endrin Aldehyde	40.000	43.956	-9.9	112	0.00	9.25- 9.45
18		4,4'-DDT	40.000	45.833	-14.6	111	0.00	9.14- 9.34
19		Endosulfan Sulfate	40.000	44.595	-11.5	111	0.00	9.53- 9.73
20		Methoxychlor	40.000	45.652	-14.1	117	0.00	9.86-10.06
21		Endrin Ketone	40.000	44.539	-11.3	113	0.00	10.19-10.39
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
TT21509.D 8081A.M Thu Jan 07 09:04:45 2010

Continuing Calibration Summary

Job Number: F70644
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GTT678-CC676
Lab FileID: TT21611.D

Evaluate Continuing Calibration Report

```
Signal #1 : C:\MSDCHEM\2\DATA\0113PEST\TT21611.D\ECD1A.CH Vial: 29
Signal #2 : C:\MSDCHEM\2\DATA\0113PEST\TT21611.D\ECD2B.CH
Acq On    : 1-13-10 07:11:11 PM                      Operator: fouads
Sample    : cc676-500tox                             Inst    : ECD 6
Misc      : op31491,gtt678,30.0,,,10,1,soil          Multiplr: 1.00
IntFile Signal #1: EVENTS.E     IntFile Signal #2: EVENTS2.E

Method       : C:\MSDCHEM\2\METHODS\8081A.M (Chemstation Integrator)
Title        : Pesticides by 608 or 8081
Last Update  : Tue Jan 12 11:33:32 2010
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.10min
Max. RRF Dev :  15%     Max. Rel. Area : 150%
```

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene	-1.000	51.939	0.0	97	-0.01	5.16- 5.36
2		alpha-BHC		----------NA----------				
3		gamma-BHC (Lindane)		----------NA----------				
4		beta-BHC		----------NA----------				
5		delta-BHC		----------NA----------				
6		Heptachlor		----------NA----------				
7		Aldrin		----------NA----------				
8		Heptachlor Epoxide		----------NA----------				
9		gamma-Chlordane		----------NA----------				
10		alpha-Chlordane		----------NA----------				
11		Endosulfan I		----------NA----------				
12		4,4'-DDE		----------NA----------				
13		Dieldrin		----------NA----------				
14		Endrin		----------NA----------				
15		4,4'-DDD		----------NA----------				
16		Endosulfan II		----------NA----------				
17		Endrin Aldehyde		----------NA----------				
18		4,4'-DDT		----------NA----------				
19		Endosulfan Sulfate		----------NA----------				
20		Methoxychlor		----------NA----------				
21		Endrin Ketone		----------NA----------				
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene	500.000	492.590	1.5	99	0.00	6.80-10.70
29	S	Decachlorobiphenyl	-1.000	46.636	0.0	84	-0.02	11.38-11.58

***** Signal #2 *****

1	S	Tetrachloro-m-xylene	-1.000	54.412	0.0	97	-0.01	5.22- 5.42
2		alpha-BHC		----------NA----------				
3		gamma-BHC (Lindane)		----------NA----------				
4		beta-BHC		----------NA----------				
5		delta-BHC		----------NA----------				
6		Heptachlor		----------NA----------				
7		Aldrin		----------NA----------				
8		Heptachlor Epoxide		----------NA----------				
9		gamma-Chlordane		----------NA----------				

Continuing Calibration Summary

Job Number: F70644
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GTT678-CC676
Lab FileID: TT21611.D

10		alpha-Chlordane			----------NA----------			
11		Endosulfan I			----------NA----------			
12		4,4'-DDE			----------NA----------			
13		Dieldrin			----------NA----------			
14		Endrin			----------NA----------			
15		4,4'-DDD			----------NA----------			
16		Endosulfan II			----------NA----------			
17		Endrin Aldehyde			----------NA----------			
18		4,4'-DDT			----------NA----------			
19		Endosulfan Sulfate			----------NA----------			
20		Methoxychlor			----------NA----------			
21		Endrin Ketone			----------NA----------			
22	L1	Chlordane-A			----------NA----------			
23	L1	Chlordane-B			----------NA----------			
24	L1	Chlordane-C			----------NA----------			
25	L1	Chlordane-D			----------NA----------			
26	L1	Chlordane-E			----------NA----------			
27	L1	Chlordane-F			----------NA----------			
28	H	Toxaphene	500.000	517.430	-3.5	103	0.00	6.93-11.06
29	S	Decachlorobiphenyl	-1.000	52.017	0.0	93	-0.02	11.54-11.74

(#) = Out of Range SPCC's out = 0 CCC's out = 0
TT21512.D 8081A.M Thu Jan 14 14:27:49 2010

Continuing Calibration Summary

Job Number: F70644
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GTT678-CC676
Lab FileID: TT21612.D

Evaluate Continuing Calibration Report

```
Signal #1 : C:\MSDCHEM\2\DATA\0113PEST\TT21612.D\ECD1A.CH Vial: 30
Signal #2 : C:\MSDCHEM\2\DATA\0113PEST\TT21612.D\ECD2B.CH
Acq On    : 1-13-10 07:29:23 PM                      Operator: fouads
Sample    : cc676-40                                 Inst    : ECD 6
Misc      : op31491,gtt678,30.0,,,10,1,soil          Multiplr: 1.00
IntFile Signal #1: EVENTS.E     IntFile Signal #2: EVENTS2.E

Method       : C:\MSDCHEM\2\METHODS\8081A.M (Chemstation Integrator)
Title        : Pesticides by 608 or 8081
Last Update  : Tue Jan 12 11:33:32 2010
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.10min
Max. RRF Dev :  15%     Max. Rel. Area : 150%
```

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene	40.000	37.326	6.7	97	-0.01	5.16- 5.36
2		alpha-BHC	40.000	38.644	3.4	98	-0.01	5.64- 5.84
3		gamma-BHC (Lindane)	40.000	38.547	3.6	98	-0.01	5.99- 6.19
4		beta-BHC	40.000	37.509	6.2	96	-0.01	6.21- 6.41
5		delta-BHC	40.000	38.686	3.3	98	-0.01	6.46- 6.66
6		Heptachlor	40.000	38.432	3.9	100	-0.02	6.61- 6.81
7		Aldrin	40.000	37.100	7.2	97	-0.02	6.97- 7.17
8		Heptachlor Epoxide	40.000	36.919	7.7	95	-0.02	7.45- 7.65
9		gamma-Chlordane	40.000	36.760	8.1	95	-0.02	7.74- 7.94
10		alpha-Chlordane	40.000	36.904	7.7	95	-0.02	7.83- 8.03
11		Endosulfan I	40.000	37.089	7.3	95	-0.02	7.88- 8.08
12		4,4'-DDE	40.000	35.272	11.8	91	-0.02	8.05- 8.25
13		Dieldrin	40.000	37.447	6.4	95	-0.02	8.20- 8.40
14		Endrin	40.000	34.187	14.5	89	-0.02	8.46- 8.66
15		4,4'-DDD	40.000	33.483	16.3#	86	-0.02	8.66- 8.86
16		Endosulfan II	40.000	37.153	7.1	96	-0.02	8.73- 8.93
17		Endrin Aldehyde	40.000	38.803	3.0	99	-0.02	8.88- 9.08
18		4,4'-DDT	40.000	37.083	7.3	92	-0.02	9.03- 9.23
19		Endosulfan Sulfate	40.000	36.078	9.8	92	-0.02	9.16- 9.36
20		Methoxychlor	40.000	32.690	18.3#	83	-0.02	9.63- 9.83
21		Endrin Ketone	40.000	37.392	6.5	95	-0.02	9.73- 9.93
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	40.000	33.084	17.3#	85	-0.02	11.38-11.58

***** Signal #2 *****

1	S	Tetrachloro-m-xylene	40.000	38.849	2.9	98	-0.01	5.22- 5.42
2		alpha-BHC	40.000	40.186	-0.5	100	-0.01	5.83- 6.03
3		gamma-BHC (Lindane)	40.000	40.313	-0.8	102	-0.01	6.21- 6.41
4		beta-BHC	40.000	38.131	4.7	96	-0.01	6.54- 6.74
5		delta-BHC	40.000	39.711	0.7	98	-0.01	6.82- 7.02
6		Heptachlor	40.000	39.627	0.9	101	-0.02	6.62- 6.82
7		Aldrin	40.000	38.545	3.6	99	-0.02	6.96- 7.16
8		Heptachlor Epoxide	40.000	38.539	3.7	98	-0.02	7.55- 7.75
9		gamma-Chlordane	40.000	38.198	4.5	96	-0.02	7.85- 8.05

Continuing Calibration Summary

Job Number: F70644
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GTT678-CC676
Lab FileID: TT21612.D

10		alpha-Chlordane	40.000	38.302	4.2	96	-0.02	7.93- 8.13
11		Endosulfan I	40.000	37.904	5.2	96	-0.02	8.01- 8.21
12		4,4'-DDE	40.000	35.963	10.1	90	-0.02	8.14- 8.34
13		Dieldrin	40.000	39.313	1.7	98	-0.02	8.33- 8.53
14		Endrin	40.000	35.813	10.5	89	-0.02	8.68- 8.88
15		4,4'-DDD	40.000	34.566	13.6	88	-0.02	8.82- 9.02
16		Endosulfan II	40.000	38.961	2.6	99	-0.02	9.03- 9.23
17		Endrin Aldehyde	40.000	39.897	0.3	102	-0.02	9.25- 9.45
18		4,4'-DDT	40.000	39.365	1.6	96	-0.02	9.14- 9.34
19		Endosulfan Sulfate	40.000	38.873	2.8	97	-0.02	9.53- 9.73
20		Methoxychlor	40.000	34.823	12.9	89	-0.02	9.86-10.06
21		Endrin Ketone	40.000	39.838	0.4	101	-0.02	10.19-10.39
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	40.000	36.334	9.2	92	-0.02	11.54-11.74

(#) = Out of Range SPCC's out = 0 CCC's out = 0
TT21509.D 8081A.M Thu Jan 14 14:26:59 2010

5.7.4

5

Continuing Calibration Summary

Job Number: F70644
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GTT678-ECC676
Lab FileID: TT21623.D

Evaluate Continuing Calibration Report

```
Signal #1 : C:\MSDCHEM\2\DATA\0113PEST\TT21623.D\ECD1A.CH Vial: 41
Signal #2 : C:\MSDCHEM\2\DATA\0113PEST\TT21623.D\ECD2B.CH
Acq On    : 13 Jan 2010  10:49 pm                    Operator: fouads
Sample    : ecc676-20                                Inst    : ECD 6
Misc      : op31510,gtt678,1000,,,10,1,water         Multiplr: 1.00
IntFile Signal #1: EVENTS.E     IntFile Signal #2: EVENTS2.E

Method       : C:\MSDCHEM\2\METHODS\8081A.M (Chemstation Integrator)
Title        : Pesticides by 608 or 8081
Last Update  : Tue Jan 12 11:33:32 2010
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.10min
Max. RRF Dev :  15%     Max. Rel. Area : 150%
```

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene	20.000	20.489	-2.4	101	-0.01	5.16- 5.36
2		alpha-BHC	20.000	20.440	-2.2	100	-0.01	5.64- 5.84
3		gamma-BHC (Lindane)	20.000	20.657	-3.3	102	-0.01	5.99- 6.19
4		beta-BHC	20.000	20.123	-0.6	101	-0.01	6.21- 6.41
5		delta-BHC	20.000	20.561	-2.8	102	-0.01	6.46- 6.66
6		Heptachlor	20.000	20.619	-3.1	101	-0.01	6.61- 6.81
7		Aldrin	20.000	20.548	-2.7	100	-0.01	6.97- 7.17
8		Heptachlor Epoxide	20.000	19.971	0.1	98	-0.01	7.45- 7.65
9		gamma-Chlordane	20.000	19.906	0.5	97	-0.01	7.74- 7.94
10		alpha-Chlordane	20.000	19.671	1.6	95	-0.01	7.83- 8.03
11		Endosulfan I	20.000	20.351	-1.8	100	-0.01	7.88- 8.08
12		4,4'-DDE	20.000	18.846	5.8	92	-0.01	8.05- 8.25
13		Dieldrin	20.000	20.078	-0.4	100	-0.01	8.20- 8.40
14		Endrin	20.000	20.171	-0.9	101	-0.01	8.46- 8.66
15		4,4'-DDD	20.000	18.906	5.5	92	-0.01	8.66- 8.86
16		Endosulfan II	20.000	20.489	-2.4	102	-0.01	8.73- 8.93
17		Endrin Aldehyde	20.000	20.109	-0.5	99	-0.01	8.88- 9.08
18		4,4'-DDT	20.000	19.298	3.5	97	-0.01	9.03- 9.23
19		Endosulfan Sulfate	20.000	20.020	-0.1	96	-0.01	9.16- 9.36
20		Methoxychlor	20.000	18.262	8.7	92	-0.01	9.63- 9.83
21		Endrin Ketone	20.000	19.899	0.5	98	-0.01	9.73- 9.93
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	20.000	18.642	6.8	92	-0.01	11.38-11.58

***** Signal #2 *****

1	S	Tetrachloro-m-xylene	20.000	20.883	-4.4	103	-0.01	5.22- 5.42
2		alpha-BHC	20.000	20.797	-4.0	102	-0.01	5.83- 6.03
3		gamma-BHC (Lindane)	20.000	20.852	-4.3	102	-0.01	6.21- 6.41
4		beta-BHC	20.000	20.345	-1.7	102	-0.01	6.54- 6.74
5		delta-BHC	20.000	21.154	-5.8	106	-0.01	6.82- 7.02
6		Heptachlor	20.000	21.448	-7.2	103	-0.01	6.62- 6.82
7		Aldrin	20.000	20.655	-3.3	99	-0.01	6.96- 7.16
8		Heptachlor Epoxide	20.000	20.406	-2.0	100	-0.01	7.55- 7.75
9		gamma-Chlordane	20.000	20.503	-2.5	102	-0.01	7.85- 8.05

Continuing Calibration Summary

Job Number: F70644
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: GTT678-ECC676
Lab FileID: TT21623.D

10		alpha-Chlordane	20.000	20.595	-3.0	101	-0.01	7.93- 8.13
11		Endosulfan I	20.000	20.640	-3.2	99	-0.01	8.01- 8.21
12		4,4'-DDE	20.000	19.553	2.2	96	-0.01	8.14- 8.34
13		Dieldrin	20.000	20.654	-3.3	101	-0.01	8.33- 8.53
14		Endrin	20.000	21.099	-5.5	106	-0.01	8.68- 8.88
15		4,4'-DDD	20.000	19.971	0.1	97	-0.01	8.82- 9.02
16		Endosulfan II	20.000	20.648	-3.2	100	-0.01	9.03- 9.23
17		Endrin Aldehyde	20.000	21.315	-6.6	104	-0.01	9.25- 9.45
18		4,4'-DDT	20.000	20.482	-2.4	101	-0.01	9.14- 9.34
19		Endosulfan Sulfate	20.000	21.550	-7.8	109	-0.01	9.53- 9.73
20		Methoxychlor	20.000	19.728	1.4	95	-0.01	9.86-10.06
21		Endrin Ketone	20.000	21.963	-9.8	107	-0.01	10.19-10.39
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	20.000	20.510	-2.6	102	-0.02	11.54-11.74

(#) = Out of Range SPCC's out = 0 CCC's out = 0
TT21508.D 8081A.M Thu Jan 14 14:28:49 2010

5.7.5

5

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries
- Instrument Runlogs/QC

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F70644
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Solids, Total Dissolved	GN38055	100	0.0	mg/l				

Associated Samples:
Batch GN38055: F70644-1, F70644-2, F70644-3, F70644-4, F70644-5
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F70644
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Solids, Total Dissolved	GN38055	F70644-2	mg/l	2380	2470	3.7	0-5%

Associated Samples:
Batch GN38055: F70644-1, F70644-2, F70644-3, F70644-4, F70644-5
(*) Outside of QC limits

Southeast ACCUTEST Laboratories

IT'S ALL IN THE CHEMISTRY

01/21/10

Technical Report for

Tetra Tech, Inc

Holloman AFB; Alamogordo, NM

100-TEN-T93002

Accutest Job Number: F70691

Sampling Date: 01/07/10

Report to:

Tetra Tech
800 Oak Ridge Tpk. Suite A600
Oak Ridge, TN 37830
Virginia.Mullins@tetratech.com

ATTN: Ginger Mullins

Total number of pages in report: **208**

ACCUTEST LABORATORIES 50 YEARS 1956-2006

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Harry Behzadi, Ph.D.
Laboratory Director

Client Service contact: Sue Bell 407-425-6700

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Table of Contents

-1-

Section 1: Sample Summary 4
Section 2: Case Narrative/Conformance Summary 6
Section 3: Sample Results 8
3.1: F70691-1: MW30&33-01-010710 9
3.2: F70691-1F: MW30&33-01-010710 14
3.3: F70691-2: MW30&33-02-010710 15
3.4: F70691-2F: MW30&33-02-010710 20
3.5: F70691-3: MW30&33-03-010710 21
3.6: F70691-3F: MW30&33-03-010710 26
3.7: F70691-4: MW30&33-04-010710 27
3.8: F70691-4F: MW30&33-04-010710 32
3.9: F70691-5: MW30&33-05R-010710 33
3.10: F70691-5F: MW30&33-05R-010710 38
3.11: F70691-6: MW30&33-DUP01-010710 39
3.12: F70691-6F: MW30&33-DUP01-010710 44
3.13: F70691-7: TB02-010710 45
Section 4: Misc. Forms 48
4.1: Certification Exceptions 49
4.2: Chain of Custody 50
Section 5: GC/MS Volatiles - QC Data Summaries 52
5.1: Method Blank Summary 53
5.2: Blank Spike Summary 59
5.3: Matrix Spike/Matrix Spike Duplicate Summary 66
5.4: Instrument Performance Checks (BFB) 72
5.5: Internal Standard Area Summaries 77
5.6: Surrogate Recovery Summaries 79
5.7: Initial and Continuing Calibration Summaries 80
Section 6: Metals Analysis - QC Data Summaries 95
6.1: Inst QC MA7769: Hg 96
6.2: Inst QC MA7770: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn 106
6.3: Inst QC MA7773: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn 124
6.4: Inst QC MA7776: Hg 151
6.5: Inst QC MA7779: Hg 160
6.6: Inst QC MA7780: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Tl,V, Zn 168
6.7: Prep QC MP17582: Hg 184
6.8: Prep QC MP17583: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn 189
6.9: Prep QC MP17591: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn 194

Table of Contents

6.10: Prep QC MP17595: Hg 198
6.11: Prep QC MP17603: Hg 202
Section 7: General Chemistry - QC Data Summaries 206
7.1: Method Blank and Spike Results Summary 207
7.2: Duplicate Results Summary 208

Accutest Laboratories

Sample Summary

Tetra Tech, Inc

Job No: F70691

Holloman AFB; Alamogordo, NM
Project No: 100-TEN-T93002

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
F70691-1	01/07/10	14:40	AMJB	01/09/10	AQ	Ground Water	MW30&33-01-010710
F70691-1D	01/07/10	14:40	AMJB	01/09/10	AQ	Water Dup/MSD	MW30&33-01-010710
F70691-1DF	01/07/10	14:40	AMJB	01/09/10	AQ	Water Dup/MSD	MW30&33-01-010710
F70691-1F	01/07/10	14:40	AMJB	01/09/10	AQ	Ground Water	MW30&33-01-010710
F70691-1S	01/07/10	14:40	AMJB	01/09/10	AQ	Water Matrix Spike	MW30&33-01-010710
F70691-1SF	01/07/10	14:40	AMJB	01/09/10	AQ	Water Matrix Spike	MW30&33-01-010710
F70691-2	01/07/10	14:12	AMJB	01/09/10	AQ	Ground Water	MW30&33-02-010710
F70691-2F	01/07/10	14:12	AMJB	01/09/10	AQ	Groundwater Filtered	MW30&33-02-010710
F70691-3	01/07/10	15:25	AMJB	01/09/10	AQ	Ground Water	MW30&33-03-010710
F70691-3F	01/07/10	15:25	AMJB	01/09/10	AQ	Groundwater Filtered	MW30&33-03-010710
F70691-4	01/07/10	15:26	AMJB	01/09/10	AQ	Ground Water	MW30&33-04-010710
F70691-4F	01/07/10	15:26	AMJB	01/09/10	AQ	Groundwater Filtered	MW30&33-04-010710
F70691-5	01/07/10	16:05	AMJB	01/09/10	AQ	Ground Water	MW30&33-05R-010710

Sample Summary
(continued)

Tetra Tech, Inc

Job No: F70691

Holloman AFB; Alamogordo, NM
Project No: 100-TEN-T93002

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
F70691-5F	01/07/10	16:05	AMJB	01/09/10	AQ	Groundwater Filtered	MW30&33-05R-010710
F70691-6	01/07/10	00:00	AMJB	01/09/10	AQ	Ground Water	MW30&33-DUP01-010710
F70691-6F	01/07/10	00:00	AMJB	01/09/10	AQ	Groundwater Filtered	MW30&33-DUP01-010710
F70691-7	01/07/10	00:00	AMJB	01/09/10	AQ	Trip Blank Water	TB02-010710

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Tetra Tech, Inc **Job No:** F70691

Site: Holloman AFB; Alamogordo, NM **Report Date:** 1/18/2010 2:25:43 PM

6 Samples and 1 Trip Blank were collected on 01/07/2010 and were received at Accutest SE on 01/09/2010 properly preserved, at 3.6 Deg. C and intact. These Samples received an Accutest job number of F70691. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GCMS by Method SW846 8260B

Matrix: AQ **Batch ID:** VJ3081

All samples were analyzed within the recommended method holding time.

Samples F70691-1MS, F70691-1MSD were used as the QC samples indicated.

All method blanks for this batch meet method specific criteria.

Sample F70691-1 has compounds reported with a “B” qualifier, indicating analyte is found in the associated method blank.

Blank Spike Recoverys for Acetone, Acrolein, Methyl ethyl ketone are outside control limits.

Matrix Spike Recoverys for 2-Chloroethyl vinyl ether, 2-Hexanone, Acrylonitrile, cis-1,3-Dichloropropene, Methyl methacrylate are outside control limits. Probable cause due to matrix interference.

Matrix Spike Duplicate Recoverys for 2-Chloroethyl vinyl ether, 2-Hexanone, 4-Methyl-2-pentanone, cis-1,3-Dichloropropene, Methyl methacrylate, Propionitrile are outside control limits. Probable cause due to matrix interference.

RPDs for MSD for Acrylonitrile, Hexachlorobutadiene are outside control limits for sample F70691-1MSD. Probable cause due to sample non-homogeneity.

Matrix: AQ **Batch ID:** VJ3082

All samples were analyzed within the recommended method holding time.

Samples F70721-1MS, F70721-1MSD were used as the QC samples indicated.

Samples F70691-6, F70691-7 have compounds reported with a “B” qualifier, indicating analyte is found in the associated method blank.

Blank Spike Recoverys for Acetone, Acrolein, Methyl ethyl ketone are outside control limits.

Matrix Spike Recoverys for 2-Chloroethyl vinyl ether, Trans-1,4-Dichloro-2-Butene are outside control limits. Probable cause due to matrix interference.

Matrix Spike Duplicate Recoverys for 2-Chloroethyl vinyl ether, cis-1,3-Dichloropropene, cis-1,4-Dichloro-2-Butene, Trans-1,4-Dichloro-2-Butene are outside control limits. Probable cause due to matrix interference.

RPD for MSD for Hexachlorobutadiene is outside control limits for sample F70721-1MSD. Probable cause due to sample non-homogeneity.

Metals by Method SW846 6010B

Matrix: AQ **Batch ID:** MP17583

All samples were digested within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Samples F70691-1DUP, F70691-1MS, F70691-1MSD, F70691-1SDL were used as the QC samples for metals.

Matrix Spike and Matrix Spike Duplicate Recoverys for Copper, Selenium, Silver are outside control limits. Spike recovery indicates possible matrix interference.

Matrix Spike Recoverys for Calcium, Magnesium, Sodium are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

RPD for Duplicate for Manganese is outside control limits for sample MP17583-D1. RPD acceptable due to low duplicate and sample concentrations.

RPDs for Serial Dilution for Aluminum, Arsenic, Barium, Manganese, Selenium, Calcium, Potassium, Vanadium are outside control limits for sample MP17583-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Monday, January 18, 2010

Metals by Method SW846 6010B

Matrix: AQ **Batch ID:** MP17583

MP17583-SD1 for Calcium, Potassium, Vanadium: Serial dilution indicates possible matrix interference.

F70691-1, F70691-2, F70691-3, F70691-4, F70691-5, F70691-6 for Aluminum, Antimony, Arsenic, Iron, Lead, Selenium: Elevated reporting limits due to matrix interference.

Matrix: AQ **Batch ID:** MP17591

All samples were digested within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Samples F70691-1FDUP, F70691-1FMS, F70691-1FSDL were used as the QC samples for metals.

Matrix Spike Recoverys for Aluminum, Copper, Potassium, Selenium, Silver are outside control limits. Spike recovery indicates possible matrix interference.

Matrix Spike Recoverys for Calcium, Magnesium, Sodium are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

RPD for Duplicate for Silver is outside control limits for sample MP17591-D1. RPD acceptable due to low duplicate and sample concentrations.

RPDs for Serial Dilution for Arsenic, Barium, Selenium, Silver, Calcium, Potassium, Vanadium are outside control limits for sample MP17591-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

MP17591-SD1 for Calcium, Potassium, Vanadium: Serial dilution indicates possible matrix interference.

F70691-1F, F70691-2F, F70691-3F, F70691-4F, F70691-5F, F70691-6F for Aluminum, Antimony, Arsenic, Iron, Lead, Selenium: Elevated reporting limits due to matrix interference.

Metals by Method SW846 7470A

Matrix: AQ **Batch ID:** MP17582

All samples were digested within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Samples F70660-11ADUP, F70660-11AMS, F70660-11AMSD, F70660-11ASDL were used as the QC samples for metals.

Matrix: AQ **Batch ID:** MP17595

All samples were digested within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Samples F70691-1FDUP, F70691-1FMS, F70691-1FSDL were used as the QC samples for metals.

Matrix: AQ **Batch ID:** MP17603

All samples were digested within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Samples F70691-1DUP, F70691-1MS, F70691-1SDL were used as the QC samples for metals.

Wet Chemistry by Method SM19 2540C

Matrix: AQ **Batch ID:** GN38070

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample F70691-1DUP was used as the QC sample for Solids, Total Dissolved.

Accutest Laboratories Southeast (ALSE) certifies that this report meets the project requirements for analytical data produced for the samples as received at ALSE and as stated on the COC. ALSE certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the ALSE Quality Manual except as noted above. This report is to be used in its entirety. ALSE is not responsible for any assumptions of data quality if partial data packages are used.

Narrative prepared by:

_____ Date: January 18, 2010

Ellen Pampel, Inorganic QA (signature on file)

Monday, January 18, 2010

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MW30&33-01-010710		
Lab Sample ID:	F70691-1	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J052875.D	1	01/12/10	KW	n/a	n/a	VJ3081
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
75-05-8	Acetonitrile	ND	20	5.0	ug/l	
107-02-8	Acrolein	ND	20	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	2.0	ug/l	
107-05-1	Allyl chloride	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-44-7	Benzyl Chloride	ND	2.0	0.36	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.23	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.33	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.32	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.22	ug/l	
75-00-3	Chloroethane	ND	2.0	0.48	ug/l	
67-66-3	Chloroform	ND	1.0	0.28	ug/l	
544-10-5	1-Chlorohexane	ND	2.0	0.27	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.25	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.40	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.24	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.54	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.32	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.34	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.26	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.28	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW30&33-01-010710		
Lab Sample ID:	F70691-1	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
1476-11-5	cis-1,4-Dichloro-2-Butene	ND	10	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.45	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.43	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	1.0	ug/l	
76-13-1	Freon 113	ND	1.0	0.34	ug/l	
591-78-6	2-Hexanone	ND	10	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.69	ug/l	
110-54-3	Hexane	ND	2.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.32	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
126-98-7	Methacrylonitrile	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.78	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.61	ug/l	
74-88-4	Methyl iodide	ND	5.0	1.0	ug/l	
80-62-6	Methyl methacrylate	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.30	ug/l	
75-09-2	Methylene chloride	1.2	5.0	1.0	ug/l	JB
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
76-01-7	Pentachloroethane	ND	10	2.0	ug/l	
107-12-0	Propionitrile	ND	20	10	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.25	ug/l	
100-42-5	Styrene	ND	1.0	0.36	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.33	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.26	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.34	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW30&33-01-010710		
Lab Sample ID:	F70691-1	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.35	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.32	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
108-05-4	Vinyl Acetate	ND	10	3.6	ug/l	
	m,p-Xylene	ND	2.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.37	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		87-116%
17060-07-0	1,2-Dichloroethane-D4	99%		76-127%
2037-26-5	Toluene-D8	103%		86-112%
460-00-4	4-Bromofluorobenzene	103%		84-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW30&33-01-010710		
Lab Sample ID:	F70691-1	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum [a]	96.1 B	800	44	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Antimony [a]	9.0 U	12	9.0	ug/l	2	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Arsenic [a]	13.3 B	20	11	ug/l	2	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Barium	11.9 B	200	5.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [1]	SW846 3010A [4]
Beryllium	1.0 U	4.0	1.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [1]	SW846 3010A [4]
Cadmium	1.0 U	5.0	1.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [1]	SW846 3010A [4]
Calcium	683000	2000	200	ug/l	2	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Chromium	2.0 U	10	2.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [1]	SW846 3010A [4]
Cobalt	1.0 U	50	1.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [1]	SW846 3010A [4]
Copper	5.0 U	25	5.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [1]	SW846 3010A [4]
Iron [a]	92 U	1200	92	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Lead [a]	8.0 U	20	8.0	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Magnesium	1240000	20000	400	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Manganese	1.0 U	15	1.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [1]	SW846 3010A [4]
Mercury	0.15 U	1.0	0.15	ug/l	1	01/14/10	01/14/10	LM	SW846 7470A [3]	SW846 7470A [5]
Nickel	2.3 U	40	2.3	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [1]	SW846 3010A [4]
Potassium	20300	10000	100	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [1]	SW846 3010A [4]
Selenium [a]	37.6	20	6.8	ug/l	2	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Silver	1.4 U	10	1.4	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [1]	SW846 3010A [4]
Sodium	5000000	1000000	50000	ug/l	100	01/11/10	01/11/10	RS	SW846 6010B [1]	SW846 3010A [4]
Thallium	3.6 U	10	3.6	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [1]	SW846 3010A [4]
Vanadium	38.2 B	50	0.90	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [1]	SW846 3010A [4]
Zinc	7.4 U	20	7.4	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [1]	SW846 3010A [4]

(1) Instrument QC Batch: MA7770
(2) Instrument QC Batch: MA7773
(3) Instrument QC Batch: MA7779
(4) Prep QC Batch: MP17583
(5) Prep QC Batch: MP17603

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW30&33-01-010710		
Lab Sample ID:	F70691-1	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	19800	10000	1000	mg/l	100	01/11/10 10:05	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW30&33-01-010710		
Lab Sample ID:	F70691-1F	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum [a]	130 B	800	44	ug/l	4	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Antimony [a]	9.0 U	12	9.0	ug/l	2	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Arsenic [a]	11 U	20	11	ug/l	2	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Barium	12.7 B	200	5.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Beryllium	1.0 U	4.0	1.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Cadmium	1.0 U	5.0	1.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Calcium	674000	2000	200	ug/l	2	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Chromium	2.0 U	10	2.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Cobalt	1.0 U	50	1.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Copper	5.0 U	25	5.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Iron [a]	92 U	1200	92	ug/l	4	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Lead [a]	8.0 U	20	8.0	ug/l	4	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Magnesium	1240000	20000	400	ug/l	4	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Manganese	1.0 U	15	1.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Mercury	0.15 U	1.0	0.15	ug/l	1	01/13/10	01/13/10	LM	SW846 7470A [2]	SW846 7470A [5]
Nickel	2.3 U	40	2.3	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Potassium	20200	10000	100	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Selenium [a]	22.8	20	6.8	ug/l	2	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Silver	1.4 U	10	1.4	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Sodium	4970000	1000000	50000	ug/l	100	01/12/10	01/12/10	RS	SW846 6010B [1]	SW846 3010A [4]
Thallium	3.6 U	10	3.6	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Vanadium	37.9 B	50	0.90	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Zinc	7.4 U	20	7.4	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]

(1) Instrument QC Batch: MA7773
(2) Instrument QC Batch: MA7776
(3) Instrument QC Batch: MA7780
(4) Prep QC Batch: MP17591
(5) Prep QC Batch: MP17595

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW30&33-02-010710		
Lab Sample ID:	F70691-2	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J052897.D	1	01/13/10	KW	n/a	n/a	VJ3082
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
75-05-8	Acetonitrile	ND	20	5.0	ug/l	
107-02-8	Acrolein	ND	20	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	2.0	ug/l	
107-05-1	Allyl chloride	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-44-7	Benzyl Chloride	ND	2.0	0.36	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.23	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.33	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.32	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.22	ug/l	
75-00-3	Chloroethane	ND	2.0	0.48	ug/l	
67-66-3	Chloroform	0.75	1.0	0.28	ug/l	J
544-10-5	1-Chlorohexane	ND	2.0	0.27	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.25	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.40	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
75-34-3	1,1-Dichloroethane	2.2	1.0	0.24	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.54	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.32	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.34	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.26	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.28	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW30&33-02-010710		
Lab Sample ID:	F70691-2	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
1476-11-5	cis-1,4-Dichloro-2-Butene	ND	10	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.45	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.43	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	1.0	ug/l	
76-13-1	Freon 113	ND	1.0	0.34	ug/l	
591-78-6	2-Hexanone	ND	10	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.69	ug/l	
110-54-3	Hexane	ND	2.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.32	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
126-98-7	Methacrylonitrile	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.78	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.61	ug/l	
74-88-4	Methyl iodide	ND	5.0	1.0	ug/l	
80-62-6	Methyl methacrylate	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.30	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
76-01-7	Pentachloroethane	ND	10	2.0	ug/l	
107-12-0	Propionitrile	ND	20	10	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.25	ug/l	
100-42-5	Styrene	ND	1.0	0.36	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.33	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.26	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.34	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW30&33-02-010710		
Lab Sample ID:	F70691-2	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.35	ug/l	
79-01-6	Trichloroethylene	10.6	1.0	0.32	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
108-05-4	Vinyl Acetate	ND	10	3.6	ug/l	
	m,p-Xylene	ND	2.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.37	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		87-116%
17060-07-0	1,2-Dichloroethane-D4	98%		76-127%
2037-26-5	Toluene-D8	106%		86-112%
460-00-4	4-Bromofluorobenzene	106%		84-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW30&33-02-010710		
Lab Sample ID:	F70691-2	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum [a]	114 B	800	44	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Antimony [a]	10.0 B	12	9.0	ug/l	2	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Arsenic [a]	14.3 B	20	11	ug/l	2	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Barium	14.4 B	200	5.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Beryllium	1.0 U	4.0	1.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Cadmium	1.0 U	5.0	1.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Calcium	874000	2000	200	ug/l	2	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Chromium	2.0 U	10	2.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Cobalt	1.0 U	50	1.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Copper	5.0 U	25	5.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Iron [a]	169 B	1200	92	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Lead [a]	8.0 U	20	8.0	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Magnesium	1800000	20000	400	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Manganese	1.0 U	15	1.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Mercury	0.15 U	1.0	0.15	ug/l	1	01/11/10	01/11/10	LM	SW846 7470A [1]	SW846 7470A [4]
Nickel	2.3 U	40	2.3	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Potassium	30900	10000	100	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Selenium [a]	54.7	20	6.8	ug/l	2	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Silver	1.4 U	10	1.4	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Sodium	6750000	1000000	50000	ug/l	100	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Thallium	3.6 U	10	3.6	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Vanadium	27.2 B	50	0.90	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Zinc	7.4 U	20	7.4	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]

(1) Instrument QC Batch: MA7769
(2) Instrument QC Batch: MA7770
(3) Instrument QC Batch: MA7773
(4) Prep QC Batch: MP17582
(5) Prep QC Batch: MP17583

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW30&33-02-010710		
Lab Sample ID:	F70691-2	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	27200	10000	1000	mg/l	100	01/11/10 10:05	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW30&33-02-010710		
Lab Sample ID:	F70691-2F	**Date Sampled:**	01/07/10
Matrix:	AQ - Groundwater Filtered	**Date Received:**	01/09/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum [a]	149 B	800	44	ug/l	4	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Antimony [a]	9.0 U	12	9.0	ug/l	2	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Arsenic [a]	11 U	20	11	ug/l	2	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Barium	15.2 B	200	5.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Beryllium	1.0 U	4.0	1.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Cadmium	1.0 U	5.0	1.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Calcium	839000	2000	200	ug/l	2	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Chromium	2.0 U	10	2.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Cobalt	1.0 U	50	1.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Copper	5.0 U	25	5.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Iron [a]	226 B	1200	92	ug/l	4	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Lead [a]	8.0 U	20	8.0	ug/l	4	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Magnesium	1830000	20000	400	ug/l	4	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Manganese	1.0 U	15	1.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Mercury	0.15 U	1.0	0.15	ug/l	1	01/13/10	01/13/10	LM	SW846 7470A [2]	SW846 7470A [5]
Nickel	2.3 U	40	2.3	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Potassium	29700	10000	100	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Selenium [a]	32.1	20	6.8	ug/l	2	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Silver	1.4 U	10	1.4	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Sodium	6410000	1000000	50000	ug/l	100	01/12/10	01/12/10	RS	SW846 6010B [1]	SW846 3010A [4]
Thallium	3.6 U	10	3.6	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Vanadium	26.8 B	50	0.90	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Zinc	7.4 U	20	7.4	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]

(1) Instrument QC Batch: MA7773
(2) Instrument QC Batch: MA7776
(3) Instrument QC Batch: MA7780
(4) Prep QC Batch: MP17591
(5) Prep QC Batch: MP17595

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW30&33-03-010710		
Lab Sample ID:	F70691-3	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J052907.D	1	01/13/10	KW	n/a	n/a	VJ3082
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
75-05-8	Acetonitrile	ND	20	5.0	ug/l	
107-02-8	Acrolein	ND	20	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	2.0	ug/l	
107-05-1	Allyl chloride	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-44-7	Benzyl Chloride	ND	2.0	0.36	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.23	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.33	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.32	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.22	ug/l	
75-00-3	Chloroethane	ND	2.0	0.48	ug/l	
67-66-3	Chloroform	0.56	1.0	0.28	ug/l	J
544-10-5	1-Chlorohexane	ND	2.0	0.27	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.25	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.40	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
75-34-3	1,1-Dichloroethane	1.5	1.0	0.24	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.54	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.32	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.34	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.26	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.28	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW30&33-03-010710		
Lab Sample ID:	F70691-3	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
1476-11-5	cis-1,4-Dichloro-2-Butene	ND	10	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.45	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.43	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	1.0	ug/l	
76-13-1	Freon 113	ND	1.0	0.34	ug/l	
591-78-6	2-Hexanone	ND	10	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.69	ug/l	
110-54-3	Hexane	ND	2.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.32	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
126-98-7	Methacrylonitrile	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.78	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.61	ug/l	
74-88-4	Methyl iodide	ND	5.0	1.0	ug/l	
80-62-6	Methyl methacrylate	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.30	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
76-01-7	Pentachloroethane	ND	10	2.0	ug/l	
107-12-0	Propionitrile	ND	20	10	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.25	ug/l	
100-42-5	Styrene	ND	1.0	0.36	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.33	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.26	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.34	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW30&33-03-010710		
Lab Sample ID:	F70691-3	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.35	ug/l	
79-01-6	Trichloroethylene	8.2	1.0	0.32	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
108-05-4	Vinyl Acetate	ND	10	3.6	ug/l	
	m,p-Xylene	ND	2.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.37	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		87-116%
17060-07-0	1,2-Dichloroethane-D4	99%		76-127%
2037-26-5	Toluene-D8	105%		86-112%
460-00-4	4-Bromofluorobenzene	106%		84-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW30&33-03-010710		
Lab Sample ID:	F70691-3	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum [a]	110 B	800	44	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Antimony [a]	9.0 U	12	9.0	ug/l	2	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Arsenic [a]	11 U	20	11	ug/l	2	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Barium	22.1 B	200	5.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Beryllium	1.0 U	4.0	1.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Cadmium	1.0 U	5.0	1.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Calcium	803000	2000	200	ug/l	2	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Chromium	2.0 U	10	2.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Cobalt	1.0 U	50	1.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Copper	5.0 U	25	5.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Iron [a]	105 B	1200	92	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Lead [a]	8.0 U	20	8.0	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Magnesium	1690000	20000	400	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Manganese	1.0 U	15	1.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Mercury	0.15 U	1.0	0.15	ug/l	1	01/11/10	01/11/10	LM	SW846 7470A [1]	SW846 7470A [4]
Nickel	2.3 U	40	2.3	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Potassium	17100	10000	100	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Selenium [a]	49.2	20	6.8	ug/l	2	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Silver	1.4 U	10	1.4	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Sodium	6450000	1000000	50000	ug/l	100	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Thallium	3.6 U	10	3.6	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Vanadium	17.7 B	50	0.90	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Zinc	7.4 U	20	7.4	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]

(1) Instrument QC Batch: MA7769
(2) Instrument QC Batch: MA7770
(3) Instrument QC Batch: MA7773
(4) Prep QC Batch: MP17582
(5) Prep QC Batch: MP17583

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW30&33-03-010710		
Lab Sample ID:	F70691-3	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	28100	10000	1000	mg/l	100	01/11/10 10:05	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW30&33-03-010710		
Lab Sample ID:	F70691-3F	**Date Sampled:**	01/07/10
Matrix:	AQ - Groundwater Filtered	**Date Received:**	01/09/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum [a]	158 B	800	44	ug/l	4	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Antimony [a]	9.0 U	12	9.0	ug/l	2	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Arsenic [a]	11 U	20	11	ug/l	2	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Barium	22.6 B	200	5.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Beryllium	1.0 U	4.0	1.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Cadmium	1.0 U	5.0	1.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Calcium	757000	2000	200	ug/l	2	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Chromium	2.0 U	10	2.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Cobalt	1.0 U	50	1.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Copper	5.0 U	25	5.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Iron [a]	92 U	1200	92	ug/l	4	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Lead [a]	8.0 U	20	8.0	ug/l	4	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Magnesium	1620000	20000	400	ug/l	4	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Manganese	1.0 U	15	1.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Mercury	0.15 U	1.0	0.15	ug/l	1	01/13/10	01/13/10	LM	SW846 7470A [2]	SW846 7470A [5]
Nickel	2.3 U	40	2.3	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Potassium	15900	10000	100	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Selenium [a]	29.3	20	6.8	ug/l	2	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Silver	1.4 U	10	1.4	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Sodium	6200000	1000000	50000	ug/l	100	01/12/10	01/12/10	RS	SW846 6010B [1]	SW846 3010A [4]
Thallium	3.6 U	10	3.6	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Vanadium	17.1 B	50	0.90	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Zinc	7.4 U	20	7.4	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]

(1) Instrument QC Batch: MA7773
(2) Instrument QC Batch: MA7776
(3) Instrument QC Batch: MA7780
(4) Prep QC Batch: MP17591
(5) Prep QC Batch: MP17595

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW30&33-04-010710		
Lab Sample ID:	F70691-4	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J052908.D	1	01/13/10	KW	n/a	n/a	VJ3082
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
75-05-8	Acetonitrile	ND	20	5.0	ug/l	
107-02-8	Acrolein	ND	20	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	2.0	ug/l	
107-05-1	Allyl chloride	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-44-7	Benzyl Chloride	ND	2.0	0.36	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.23	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.33	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.32	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.22	ug/l	
75-00-3	Chloroethane	ND	2.0	0.48	ug/l	
67-66-3	Chloroform	0.52	1.0	0.28	ug/l	J
544-10-5	1-Chlorohexane	ND	2.0	0.27	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.25	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.40	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
75-34-3	1,1-Dichloroethane	1.2	1.0	0.24	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.54	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.32	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.34	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.26	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.28	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW30&33-04-010710		
Lab Sample ID:	F70691-4	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
1476-11-5	cis-1,4-Dichloro-2-Butene	ND	10	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.45	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.43	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	1.0	ug/l	
76-13-1	Freon 113	ND	1.0	0.34	ug/l	
591-78-6	2-Hexanone	ND	10	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.69	ug/l	
110-54-3	Hexane	ND	2.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.32	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
126-98-7	Methacrylonitrile	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.78	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.61	ug/l	
74-88-4	Methyl iodide	ND	5.0	1.0	ug/l	
80-62-6	Methyl methacrylate	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.30	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
76-01-7	Pentachloroethane	ND	10	2.0	ug/l	
107-12-0	Propionitrile	ND	20	10	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.25	ug/l	
100-42-5	Styrene	ND	1.0	0.36	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.33	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.26	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.34	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW30&33-04-010710		
Lab Sample ID:	F70691-4	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.35	ug/l	
79-01-6	Trichloroethylene	5.2	1.0	0.32	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
108-05-4	Vinyl Acetate	ND	10	3.6	ug/l	
	m,p-Xylene	ND	2.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.37	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		87-116%
17060-07-0	1,2-Dichloroethane-D4	97%		76-127%
2037-26-5	Toluene-D8	104%		86-112%
460-00-4	4-Bromofluorobenzene	102%		84-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW30&33-04-010710		
Lab Sample ID:	F70691-4	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum [a]	89.5 B	800	44	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Antimony [a]	9.0 U	12	9.0	ug/l	2	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Arsenic [a]	11 U	20	11	ug/l	2	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Barium	12.7 B	200	5.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Beryllium	1.0 U	4.0	1.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Cadmium	1.0 U	5.0	1.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Calcium	708000	2000	200	ug/l	2	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Chromium	2.0 U	10	2.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Cobalt	1.0 U	50	1.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Copper	5.0 U	25	5.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Iron [a]	92 U	1200	92	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Lead [a]	8.0 U	20	8.0	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Magnesium	1500000	20000	400	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Manganese	1.0 U	15	1.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Mercury	0.15 U	1.0	0.15	ug/l	1	01/11/10	01/11/10	LM	SW846 7470A [1]	SW846 7470A [4]
Nickel	2.3 U	40	2.3	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Potassium	8810 B	10000	100	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Selenium [a]	37.2	20	6.8	ug/l	2	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Silver	1.4 U	10	1.4	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Sodium	5570000	1000000	50000	ug/l	100	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Thallium	3.6 U	10	3.6	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Vanadium	30.7 B	50	0.90	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Zinc	7.4 U	20	7.4	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]

(1) Instrument QC Batch: MA7769
(2) Instrument QC Batch: MA7770
(3) Instrument QC Batch: MA7773
(4) Prep QC Batch: MP17582
(5) Prep QC Batch: MP17583

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW30&33-04-010710		
Lab Sample ID:	F70691-4	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	21800	10000	1000	mg/l	100	01/11/10 10:05	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW30&33-04-010710		
Lab Sample ID:	F70691-4F	**Date Sampled:**	01/07/10
Matrix:	AQ - Groundwater Filtered	**Date Received:**	01/09/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum [a]	143 B	800	44	ug/l	4	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Antimony [a]	9.0 U	12	9.0	ug/l	2	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Arsenic [a]	11 U	20	11	ug/l	2	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Barium	12.8 B	200	5.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Beryllium	1.0 U	4.0	1.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Cadmium	1.0 U	5.0	1.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Calcium	684000	2000	200	ug/l	2	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Chromium	2.0 U	10	2.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Cobalt	1.0 U	50	1.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Copper	5.0 U	25	5.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Iron [a]	92 U	1200	92	ug/l	4	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Lead [a]	8.0 U	20	8.0	ug/l	4	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Magnesium	1440000	20000	400	ug/l	4	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Manganese	1.0 U	15	1.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Mercury	0.15 U	1.0	0.15	ug/l	1	01/13/10	01/13/10	LM	SW846 7470A [2]	SW846 7470A [5]
Nickel	2.3 U	40	2.3	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Potassium	8120 B	10000	100	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Selenium [a]	20.6	20	6.8	ug/l	2	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Silver	1.4 U	10	1.4	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Sodium	5320000	1000000	50000	ug/l	100	01/12/10	01/12/10	RS	SW846 6010B [1]	SW846 3010A [4]
Thallium	3.6 U	10	3.6	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Vanadium	30.0 B	50	0.90	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Zinc	7.4 U	20	7.4	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]

(1) Instrument QC Batch: MA7773
(2) Instrument QC Batch: MA7776
(3) Instrument QC Batch: MA7780
(4) Prep QC Batch: MP17591
(5) Prep QC Batch: MP17595

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW30&33-05R-010710		
Lab Sample ID:	F70691-5	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J052909.D	1	01/13/10	KW	n/a	n/a	VJ3082
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
75-05-8	Acetonitrile	ND	20	5.0	ug/l	
107-02-8	Acrolein	ND	20	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	2.0	ug/l	
107-05-1	Allyl chloride	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-44-7	Benzyl Chloride	ND	2.0	0.36	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.23	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.33	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.32	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.22	ug/l	
75-00-3	Chloroethane	ND	2.0	0.48	ug/l	
67-66-3	Chloroform	0.33	1.0	0.28	ug/l	J
544-10-5	1-Chlorohexane	ND	2.0	0.27	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.25	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.40	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
75-34-3	1,1-Dichloroethane	8.8	1.0	0.24	ug/l	
75-35-4	1,1-Dichloroethylene	1.2	1.0	0.54	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.32	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.34	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.26	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.28	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW30&33-05R-010710		
Lab Sample ID:	F70691-5	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	14.9	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
1476-11-5	cis-1,4-Dichloro-2-Butene	ND	10	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.45	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.43	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	1.0	ug/l	
76-13-1	Freon 113	ND	1.0	0.34	ug/l	
591-78-6	2-Hexanone	ND	10	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.69	ug/l	
110-54-3	Hexane	ND	2.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.32	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
126-98-7	Methacrylonitrile	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.78	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.61	ug/l	
74-88-4	Methyl iodide	ND	5.0	1.0	ug/l	
80-62-6	Methyl methacrylate	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.30	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
76-01-7	Pentachloroethane	ND	10	2.0	ug/l	
107-12-0	Propionitrile	ND	20	10	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.25	ug/l	
100-42-5	Styrene	ND	1.0	0.36	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.33	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.26	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.34	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW30&33-05R-010710		
Lab Sample ID:	F70691-5	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.35	ug/l	
79-01-6	Trichloroethylene	30.6	1.0	0.32	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
108-05-4	Vinyl Acetate	ND	10	3.6	ug/l	
	m,p-Xylene	ND	2.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.37	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		87-116%
17060-07-0	1,2-Dichloroethane-D4	97%		76-127%
2037-26-5	Toluene-D8	104%		86-112%
460-00-4	4-Bromofluorobenzene	105%		84-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW30&33-05R-010710		
Lab Sample ID:	F70691-5	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum [a]	251 B	800	44	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Antimony [a]	9.0 U	12	9.0	ug/l	2	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Arsenic [a]	11 U	20	11	ug/l	2	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Barium	27.4 B	200	5.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Beryllium	1.0 U	4.0	1.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Cadmium	1.0 U	5.0	1.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Calcium	722000	2000	200	ug/l	2	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Chromium	2.0 U	10	2.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Cobalt	1.1 B	50	1.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Copper	5.0 U	25	5.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Iron [a]	92 U	1200	92	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Lead [a]	8.0 U	20	8.0	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Magnesium	1230000	20000	400	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Manganese	493	15	1.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Mercury	0.15 U	1.0	0.15	ug/l	1	01/11/10	01/11/10	LM	SW846 7470A [1]	SW846 7470A [4]
Nickel	6.5 B	40	2.3	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Potassium	20400	10000	100	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Selenium [a]	32.5	20	6.8	ug/l	2	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Silver	1.4 U	10	1.4	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Sodium	4600000	1000000	50000	ug/l	100	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Thallium	3.6 U	10	3.6	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Vanadium	48.4 B	50	0.90	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Zinc	7.4 U	20	7.4	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]

(1) Instrument QC Batch: MA7769
(2) Instrument QC Batch: MA7770
(3) Instrument QC Batch: MA7773
(4) Prep QC Batch: MP17582
(5) Prep QC Batch: MP17583

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW30&33-05R-010710		
Lab Sample ID:	F70691-5	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	13600	10000	1000	mg/l	100	01/11/10 10:05	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW30&33-05R-010710		
Lab Sample ID:	F70691-5F	**Date Sampled:**	01/07/10
Matrix:	AQ - Groundwater Filtered	**Date Received:**	01/09/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum [a]	153 B	800	44	ug/l	4	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Antimony [a]	9.0 U	12	9.0	ug/l	2	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Arsenic [a]	11 U	20	11	ug/l	2	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Barium	25.7 B	200	5.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Beryllium	1.0 U	4.0	1.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Cadmium	1.0 U	5.0	1.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Calcium	672000	2000	200	ug/l	2	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Chromium	2.0 U	10	2.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Cobalt	1.6 B	50	1.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Copper	5.0 U	25	5.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Iron [a]	92 U	1200	92	ug/l	4	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Lead [a]	8.0 U	20	8.0	ug/l	4	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Magnesium	1100000	20000	400	ug/l	4	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Manganese	455	15	1.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Mercury	0.15 U	1.0	0.15	ug/l	1	01/13/10	01/13/10	LM	SW846 7470A [2]	SW846 7470A [5]
Nickel	5.4 B	40	2.3	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Potassium	18000	10000	100	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Selenium [a]	14.1 B	20	6.8	ug/l	2	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Silver	1.4 U	10	1.4	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Sodium	4150000	1000000	50000	ug/l	100	01/12/10	01/12/10	RS	SW846 6010B [1]	SW846 3010A [4]
Thallium	3.6 U	10	3.6	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Vanadium	45.6 B	50	0.90	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Zinc	7.4 U	20	7.4	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]

(1) Instrument QC Batch: MA7773
(2) Instrument QC Batch: MA7776
(3) Instrument QC Batch: MA7780
(4) Prep QC Batch: MP17591
(5) Prep QC Batch: MP17595

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW30&33-DUP01-010710		
Lab Sample ID:	F70691-6	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J052910.D	1	01/13/10	KW	n/a	n/a	VJ3082
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
75-05-8	Acetonitrile	ND	20	5.0	ug/l	
107-02-8	Acrolein	ND	20	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	2.0	ug/l	
107-05-1	Allyl chloride	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-44-7	Benzyl Chloride	ND	2.0	0.36	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.23	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.33	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.32	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.22	ug/l	
75-00-3	Chloroethane	ND	2.0	0.48	ug/l	
67-66-3	Chloroform	0.36	1.0	0.28	ug/l	J
544-10-5	1-Chlorohexane	ND	2.0	0.27	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.25	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.40	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
75-34-3	1,1-Dichloroethane	8.2	1.0	0.24	ug/l	
75-35-4	1,1-Dichloroethylene	1.1	1.0	0.54	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.32	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.34	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.26	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.28	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW30&33-DUP01-010710		
Lab Sample ID:	F70691-6	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	13.9	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
1476-11-5	cis-1,4-Dichloro-2-Butene	ND	10	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.45	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.43	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	1.0	ug/l	
76-13-1	Freon 113	ND	1.0	0.34	ug/l	
591-78-6	2-Hexanone	ND	10	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.69	ug/l	
110-54-3	Hexane	ND	2.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.32	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
126-98-7	Methacrylonitrile	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.78	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.61	ug/l	
74-88-4	Methyl iodide	ND	5.0	1.0	ug/l	
80-62-6	Methyl methacrylate	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.30	ug/l	
75-09-2	Methylene chloride	1.1	5.0	1.0	ug/l	JB
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
76-01-7	Pentachloroethane	ND	10	2.0	ug/l	
107-12-0	Propionitrile	ND	20	10	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.25	ug/l	
100-42-5	Styrene	ND	1.0	0.36	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.33	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.26	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.34	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW30&33-DUP01-010710		
Lab Sample ID:	F70691-6	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.35	ug/l	
79-01-6	Trichloroethylene	29.2	1.0	0.32	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
108-05-4	Vinyl Acetate	ND	10	3.6	ug/l	
	m,p-Xylene	ND	2.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.37	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		87-116%
17060-07-0	1,2-Dichloroethane-D4	99%		76-127%
2037-26-5	Toluene-D8	104%		86-112%
460-00-4	4-Bromofluorobenzene	105%		84-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW30&33-DUP01-010710		
Lab Sample ID:	F70691-6	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum [a]	107 B	800	44	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Antimony [a]	9.0 U	12	9.0	ug/l	2	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Arsenic [a]	11 U	20	11	ug/l	2	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Barium	26.4 B	200	5.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Beryllium	1.0 U	4.0	1.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Cadmium	1.0 U	5.0	1.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Calcium	716000	2000	200	ug/l	2	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Chromium	2.0 U	10	2.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Cobalt	1.0 U	50	1.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Copper	5.0 U	25	5.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Iron [a]	92 U	1200	92	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Lead [a]	8.0 U	20	8.0	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Magnesium	1160000	20000	400	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Manganese	477	15	1.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Mercury	0.15 U	1.0	0.15	ug/l	1	01/11/10	01/11/10	LM	SW846 7470A [1]	SW846 7470A [4]
Nickel	5.6 B	40	2.3	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Potassium	20400	10000	100	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Selenium [a]	25.8	20	6.8	ug/l	2	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Silver	1.4 U	10	1.4	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Sodium	4450000	1000000	50000	ug/l	100	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Thallium	3.6 U	10	3.6	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Vanadium	47.1 B	50	0.90	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Zinc	7.4 U	20	7.4	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]

(1) Instrument QC Batch: MA7769
(2) Instrument QC Batch: MA7770
(3) Instrument QC Batch: MA7773
(4) Prep QC Batch: MP17582
(5) Prep QC Batch: MP17583

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW30&33-DUP01-010710		
Lab Sample ID:	F70691-6	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	18100	10000	1000	mg/l	100	01/11/10 10:05	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW30&33-DUP01-010710		
Lab Sample ID:	F70691-6F	**Date Sampled:**	01/07/10
Matrix:	AQ - Groundwater Filtered	**Date Received:**	01/09/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum [a]	164 B	800	44	ug/l	4	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Antimony [a]	9.0 U	12	9.0	ug/l	2	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Arsenic [a]	11 U	20	11	ug/l	2	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Barium	27.4 B	200	5.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Beryllium	1.0 U	4.0	1.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Cadmium	1.0 U	5.0	1.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Calcium	704000	2000	200	ug/l	2	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Chromium	2.0 U	10	2.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Cobalt	1.4 B	50	1.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Copper	5.0 U	25	5.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Iron [a]	92 U	1200	92	ug/l	4	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Lead [a]	8.0 U	20	8.0	ug/l	4	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Magnesium	1160000	20000	400	ug/l	4	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Manganese	452	15	1.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Mercury	0.15 U	1.0	0.15	ug/l	1	01/13/10	01/13/10	LM	SW846 7470A [2]	SW846 7470A [5]
Nickel	4.9 B	40	2.3	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Potassium	20000	10000	100	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Selenium [a]	15.5 B	20	6.8	ug/l	2	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Silver	1.4 U	10	1.4	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Sodium	4280000	1000000	50000	ug/l	100	01/12/10	01/12/10	RS	SW846 6010B [1]	SW846 3010A [4]
Thallium	3.6 U	10	3.6	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Vanadium	44.7 B	50	0.90	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Zinc	7.4 U	20	7.4	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]

(1) Instrument QC Batch: MA7773
(2) Instrument QC Batch: MA7776
(3) Instrument QC Batch: MA7780
(4) Prep QC Batch: MP17591
(5) Prep QC Batch: MP17595

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	TB02-010710		
Lab Sample ID:	F70691-7	**Date Sampled:**	01/07/10
Matrix:	AQ - Trip Blank Water	**Date Received:**	01/09/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J052911.D	1	01/13/10	KW	n/a	n/a	VJ3082
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
75-05-8	Acetonitrile	ND	20	5.0	ug/l	
107-02-8	Acrolein	ND	20	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	2.0	ug/l	
107-05-1	Allyl chloride	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-44-7	Benzyl Chloride	ND	2.0	0.36	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.23	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.33	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.32	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.22	ug/l	
75-00-3	Chloroethane	ND	2.0	0.48	ug/l	
67-66-3	Chloroform	ND	1.0	0.28	ug/l	
544-10-5	1-Chlorohexane	ND	2.0	0.27	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.25	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.40	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.24	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.54	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.32	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.34	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.26	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.28	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB02-010710		
Lab Sample ID:	F70691-7	**Date Sampled:**	01/07/10
Matrix:	AQ - Trip Blank Water	**Date Received:**	01/09/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
1476-11-5	cis-1,4-Dichloro-2-Butene	ND	10	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.45	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.43	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	1.0	ug/l	
76-13-1	Freon 113	ND	1.0	0.34	ug/l	
591-78-6	2-Hexanone	ND	10	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.69	ug/l	
110-54-3	Hexane	ND	2.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.32	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
126-98-7	Methacrylonitrile	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.78	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.61	ug/l	
74-88-4	Methyl iodide	ND	5.0	1.0	ug/l	
80-62-6	Methyl methacrylate	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.30	ug/l	
75-09-2	Methylene chloride	1.4	5.0	1.0	ug/l	JB
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
76-01-7	Pentachloroethane	ND	10	2.0	ug/l	
107-12-0	Propionitrile	ND	20	10	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.25	ug/l	
100-42-5	Styrene	ND	1.0	0.36	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.33	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.26	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.34	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB02-010710		
Lab Sample ID:	F70691-7	**Date Sampled:**	01/07/10
Matrix:	AQ - Trip Blank Water	**Date Received:**	01/09/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.35	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.32	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
108-05-4	Vinyl Acetate	ND	10	3.6	ug/l	
	m,p-Xylene	ND	2.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.37	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		87-116%
17060-07-0	1,2-Dichloroethane-D4	95%		76-127%
2037-26-5	Toluene-D8	104%		86-112%
460-00-4	4-Bromofluorobenzene	103%		84-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Certification Exceptions
- Chain of Custody

Parameter Certification Exceptions

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

The following parameters included in this report are exceptions to NELAC certification.
The certification status of each is indicated below.

Parameter	CAS#	Method	Mat	Certification Status
Freon 113	76-13-1	**SW846 8260B**	AQ	Certified by SOP MS005

Accutest Laboratories Southeast
Chain of Custody

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL. 407-425-6700 • FAX: 407-425-0707
www.accutest.com

COC-019

Accutest JOB # F70691 PAGE 1 OF 1

Accutest Quote # | SKIFF# 32505

Client / Reporting Information

Company Name: TETRA TECH
Address: 800 OAK RIDGE TURNPIKE A-600
City: OAK RIDGE State: TN Zip: 37830
Project Contact: CLAYARE.MULLINS@TETRATECH.COM E-mail:
Phone#: 865-599-2349
Sampler(s) Name(s) (Printed): J. BENNETT / A. MORENO

Project Information

Project Name: HOLLOMAN AFB
Street:
City: ALAMOGORDO State: NM
Project # T93002
Fax #:
Client Purchase Order #:

Analytical Information

Accutest Sample #	Field ID / Point of Collection	Collection Date	Time	Sampled By:	Matrix	Total # of Bottles	Other	None	HCl	NaOH	HNO3	H2SO4	NaOH+ZnAc	DI WATER	MeOH	VOCs 8260	TAL Metals Total	TAL Metals-Diss	TDS
1	MW30&33-01-010710	1/7/10	1440	AM	GW	6			X		X					X	X	X	X
1	MW30&33-01-MS-010710	1/7/10	1440	AM	GW	6			X		X					X	X	X	X
1	MW30&33-01-MSD-010710	1/7/10	1440	AM	GW	6			X		X					X	X	X	X
2	MW30&33-02-010710	1/7/10	1442	JB	GW	6			X		X					X	X	X	X
3	MW30&33-03-010710	1/7/10	1525	JB	GW	6			X		X					X	X	X	X
4	MW30&33-04-010710	1/7/10	1520	JB	GW	6			X		X					X	X	X	X
5	MW30&33-05R-010710	1/7/10	1405	AM	GW	6			X		X					X	X	X	X
6	MW30&33-DUP01-010710	1/7/10	—	—	GW	6			X		X					X	X	X	X
7	TB02-010710	1/7/10	—	—	W	2			X							X			

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; Of - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe

LAB USE ONLY

TURNAROUND TIME (Business Days)

Approved By: / Rush Code

- [x] 10 Days Standard
- [ ] 7 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] OTHER

Emergency or Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [x] REDT1 (EPA LEVEL 3) ERPIMS
- [ ] FULT1 (EPA LEVEL 4)
- [x] EDD'S

Comments / Remarks

FEDEX 8705 1620 6520
8705 1620 6689

LAB FILTERED METALS

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished by :	Date Time:	Received By:
1	1/7/10 1700	2	3	1/8/10 1000	4 FEDEX
Relinquished by: 5	Date Time: 1/9/10 11:00	Received By: 6 Accutest 1/9/10 11:00	Relinquished by: 7	Date Time:	Received By: 8

Lab Use Only: Custody Seal in Place: Y N Temp Blank Provided: Y N Preserved where Applicable: Y N Total # of Coolers: 2 Cooler Temperature (s) Celsius: 3.6 4.0

F70691: Chain of Custody
Page 1 of 2

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: F70691 CLIENT: TetraTech PROJECT: Holloman AFB

DATE/TIME RECEIVED: 1/9/10 18:00 {MM/DD/YY 24:00} NUMBER OF COOLERS RECEIVED: 2

METHOD OF DELIVERY: (FEDEX) UPS ACCUTEST COURIER GREYHOUND DELIVERY OTHER

AIRBILL NUMBERS: 8705 1620 6689

COOLER INFORMATION

- [ ] CUSTODY SEAL NOT PRESENT OR NOT INTACT
- [ ] CHAIN OF CUSTODY NOT RECEIVED (COC)
- [ ] ANALYSIS REQUESTED IS UNCLEAR OR MISSING
- [ ] SAMPLE DATES OR TIMES UNCLEAR OR MISSING
- [ ] TEMPERATURE CRITERIA NOT MET
- [ ] WET ICE PRESENT

TRIP BLANK INFORMATION

- [X] TRIP BLANK PROVIDED
- [ ] TRIP BLANK NOT PROVIDED
- [ ] TRIP BLANK NOT ON COC
- [X] TRIP BLANK INTACT
- [ ] TRIP BLANK NOT INTACT
- [X] RECEIVED WATER TRIP BLANK
- [ ] RECEIVED SOIL TRIP BLANK

MISC. INFORMATION

NUMBER OF ENCORES ? 0

NUMBER OF 5035 FIELD KITS ? 0

NUMBER OR LAB FILTERED METALS ? 0

TEMPERATURE INFORMATION

- [ ] IR THERM ID I02 CORR. FACTOR 1.4
- [ ] OBSERVED TEMPS: 3.2 3.6
- [ ] CORRECTED TEMPS: 3.6 4.0

SAMPLE INFORMATION

- [ ] SAMPLE LABELS PRESENT ON ALL BOTTLES
- [ ] INCORRECT NUMBER OF CONTAINERS USED
- [ ] SAMPLE RECEIVED IMPROPERLY PRESERVED
- [ ] INSUFFICIENT VOLUME FOR ANALYSIS
- [ ] DATES/TIMES ON COC DO NOT MATCH SAMPLE LABEL
- [ ] ID'S ON COC DO NOT MATCH LABEL
- [ ] VOC VIALS HAVE HEADSPACE (MACRO BUBBLES)
- [ ] BOTTLES RECEIVED BUT ANALYSIS NOT REQUESTED
- [ ] NO BOTTLES RECEIVED FOR ANALYSIS REQUESTED
- [ ] UNCLEAR FILTERING OR COMPOSITING INSTRUCTIONS
- [ ] SAMPLE CONTAINER(S) RECEIVED BROKEN
- [ ] % SOLIDS JAR NOT RECEIVED
- [ ] 5035 FIELD KIT FROZEN WITHIN 48 HOUR'S
- [ ] RESIDUAL CHLORINE PRESENT

{APPICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS}

SUMMARY OF COMMENTS:

TECHNICIAN SIGNATURE/DATE [signature] 1/9/10 REVIEWER SIGNATURE/DATE ET - 01.09.10

NF 10/09

RECEIPT CONFIRMATION 100609 (2).xls

4.2

4

F70691: Chain of Custody

Page 2 of 2

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ3081-MB	J052863.D	1	01/12/10	KW	n/a	n/a	VJ3081

The QC reported here applies to the following samples: **Method:** SW846 8260B

F70691-1

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
75-05-8	Acetonitrile	ND	20	5.0	ug/l	
107-02-8	Acrolein	ND	20	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	2.0	ug/l	
107-05-1	Allyl chloride	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-44-7	Benzyl Chloride	ND	2.0	0.36	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.23	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.33	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.32	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.22	ug/l	
75-00-3	Chloroethane	ND	2.0	0.48	ug/l	
67-66-3	Chloroform	ND	1.0	0.28	ug/l	
544-10-5	1-Chlorohexane	ND	2.0	0.27	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.25	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.40	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.24	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.54	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.32	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.34	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.26	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.28	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	

Method Blank Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ3081-MB	J052863.D	1	01/12/10	KW	n/a	n/a	VJ3081

The QC reported here applies to the following samples: **Method:** SW846 8260B

F70691-1

CAS No.	Compound	Result	RL	MDL	Units	Q
1476-11-5	cis-1,4-Dichloro-2-Butene	ND	10	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.45	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.43	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	1.0	ug/l	
76-13-1	Freon 113	ND	1.0	0.34	ug/l	
591-78-6	2-Hexanone	ND	10	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.69	ug/l	
110-54-3	Hexane	ND	2.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.32	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
126-98-7	Methacrylonitrile	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.78	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.61	ug/l	
74-88-4	Methyl iodide	ND	5.0	1.0	ug/l	
80-62-6	Methyl methacrylate	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.30	ug/l	
75-09-2	Methylene chloride	2.4	5.0	1.0	ug/l	J
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
76-01-7	Pentachloroethane	ND	10	2.0	ug/l	
107-12-0	Propionitrile	ND	20	10	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.25	ug/l	
100-42-5	Styrene	ND	1.0	0.36	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.33	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.26	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.34	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	

Method Blank Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ3081-MB	J052863.D	1	01/12/10	KW	n/a	n/a	VJ3081

The QC reported here applies to the following samples: **Method:** SW846 8260B

F70691-1

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.35	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.32	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
108-05-4	Vinyl Acetate	ND	10	3.6	ug/l	
	m,p-Xylene	ND	2.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.37	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	100%	87-116%
17060-07-0	1,2-Dichloroethane-D4	96%	76-127%
2037-26-5	Toluene-D8	103%	86-112%
460-00-4	4-Bromofluorobenzene	106%	84-120%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Method Blank Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ3082-MB	J052895.D	1	01/13/10	KW	n/a	n/a	VJ3082

The QC reported here applies to the following samples: **Method:** SW846 8260B

F70691-2, F70691-3, F70691-4, F70691-5, F70691-6, F70691-7

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
107-02-8	Acrolein	ND	20	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-44-7	Benzyl Chloride	ND	2.0	0.36	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.23	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.33	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.32	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.22	ug/l	
75-00-3	Chloroethane	ND	2.0	0.48	ug/l	
67-66-3	Chloroform	ND	1.0	0.28	ug/l	
544-10-5	1-Chlorohexane	ND	2.0	0.27	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.25	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.40	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.24	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.54	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.32	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.34	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.26	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.28	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	

Method Blank Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ3082-MB	J052895.D	1	01/13/10	KW	n/a	n/a	VJ3082

The QC reported here applies to the following samples: **Method:** SW846 8260B

F70691-2, F70691-3, F70691-4, F70691-5, F70691-6, F70691-7

CAS No.	Compound	Result	RL	MDL	Units	Q
106-46-7	p-Dichlorobenzene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.45	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.43	ug/l	
76-13-1	Freon 113	ND	1.0	0.34	ug/l	
591-78-6	2-Hexanone	ND	10	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.69	ug/l	
110-54-3	Hexane	ND	2.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.32	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.78	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.61	ug/l	
74-88-4	Methyl iodide	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.30	ug/l	
75-09-2	Methylene chloride	5.5	5.0	1.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.25	ug/l	
100-42-5	Styrene	ND	1.0	0.36	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.33	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.26	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.34	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.35	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.32	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	

Method Blank Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ3082-MB	J052895.D	1	01/13/10	KW	n/a	n/a	VJ3082

The QC reported here applies to the following samples: **Method:** SW846 8260B

F70691-2, F70691-3, F70691-4, F70691-5, F70691-6, F70691-7

CAS No.	Compound	Result	RL	MDL	Units	Q
108-05-4	Vinyl Acetate	ND	10	3.6	ug/l	
	m,p-Xylene	ND	2.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.37	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	98%	87-116%
17060-07-0	1,2-Dichloroethane-D4	95%	76-127%
2037-26-5	Toluene-D8	105%	86-112%
460-00-4	4-Bromofluorobenzene	104%	84-120%

Blank Spike Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ3081-BS	J052862.D	1	01/12/10	KW	n/a	n/a	VJ3081

The QC reported here applies to the following samples: **Method:** SW846 8260B

F70691-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	214	171*	59-134
75-05-8	Acetonitrile	250	253	101	57-123
107-02-8	Acrolein	125	233	186*	33-157
107-13-1	Acrylonitrile	125	150	120	62-124
107-05-1	Allyl chloride	25	26.7	107	48-136
71-43-2	Benzene	25	27.0	108	83-124
100-44-7	Benzyl Chloride	25	20.4	82	61-118
108-86-1	Bromobenzene	25	25.0	100	83-115
74-97-5	Bromochloromethane	25	26.0	104	78-112
75-27-4	Bromodichloromethane	25	24.2	97	76-116
75-25-2	Bromoform	25	20.6	82	68-128
104-51-8	n-Butylbenzene	25	22.8	91	84-124
135-98-8	sec-Butylbenzene	25	24.7	99	86-127
98-06-6	tert-Butylbenzene	25	24.1	96	83-126
108-90-7	Chlorobenzene	25	25.9	104	87-115
75-00-3	Chloroethane	25	27.2	109	54-166
67-66-3	Chloroform	25	26.9	108	85-123
544-10-5	1-Chlorohexane	25	25.3	101	87-128
95-49-8	o-Chlorotoluene	25	27.2	109	84-121
106-43-4	p-Chlorotoluene	25	24.3	97	84-120
110-75-8	2-Chloroethyl vinyl ether	125	105	84	63-125
75-15-0	Carbon disulfide	25	30.7	123	67-147
56-23-5	Carbon tetrachloride	25	27.5	110	74-139
75-34-3	1,1-Dichloroethane	25	27.4	110	82-127
75-35-4	1,1-Dichloroethylene	25	30.6	122	75-133
563-58-6	1,1-Dichloropropene	25	29.0	116	87-127
96-12-8	1,2-Dibromo-3-chloropropane	25	21.9	88	61-118
106-93-4	1,2-Dibromoethane	25	25.0	100	80-115
107-06-2	1,2-Dichloroethane	25	24.9	100	76-122
78-87-5	1,2-Dichloropropane	25	26.0	104	81-120
142-28-9	1,3-Dichloropropane	25	25.2	101	81-113
594-20-7	2,2-Dichloropropane	25	28.3	113	77-138
124-48-1	Dibromochloromethane	25	22.2	89	74-116
75-71-8	Dichlorodifluoromethane	25	28.9	116	34-158
156-59-2	cis-1,2-Dichloroethylene	25	26.6	106	81-114
10061-01-5	cis-1,3-Dichloropropene	25	23.7	95	83-119

Blank Spike Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ3081-BS	J052862.D	1	01/12/10	KW	n/a	n/a	VJ3081

The QC reported here applies to the following samples: **Method:** SW846 8260B

F70691-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1476-11-5	cis-1,4-Dichloro-2-Butene	25	25.9	104	41-130
541-73-1	m-Dichlorobenzene	25	25.6	102	86-115
95-50-1	o-Dichlorobenzene	25	25.3	101	85-115
106-46-7	p-Dichlorobenzene	25	25.3	101	87-113
156-60-5	trans-1,2-Dichloroethylene	25	28.3	113	82-126
10061-02-6	trans-1,3-Dichloropropene	25	27.0	108	87-123
100-41-4	Ethylbenzene	25	26.3	105	87-118
97-63-2	Ethyl methacrylate	25	21.6	86	68-110
76-13-1	Freon 113	25	32.8	131	74-139
591-78-6	2-Hexanone	125	128	102	58-125
87-68-3	Hexachlorobutadiene	25	24.7	99	71-133
110-54-3	Hexane	25	30.1	120	71-134
98-82-8	Isopropylbenzene	25	26.9	108	87-131
99-87-6	p-Isopropyltoluene	25	23.6	94	83-125
108-10-1	4-Methyl-2-pentanone	125	111	89	62-125
126-98-7	Methacrylonitrile	250	273	109	62-133
74-83-9	Methyl bromide	25	30.1	120	55-151
74-87-3	Methyl chloride	25	27.9	112	55-173
74-88-4	Methyl iodide	25	28.9	116	72-125
80-62-6	Methyl methacrylate	25	27.2	109	63-115
74-95-3	Methylene bromide	25	25.4	102	81-116
75-09-2	Methylene chloride	25	28.4	114	69-125
78-93-3	Methyl ethyl ketone	125	160	128*	61-127
1634-04-4	Methyl Tert Butyl Ether	25	26.2	105	75-116
91-20-3	Naphthalene	25	23.9	96	59-125
76-01-7	Pentachloroethane	25	27.6	110	82-111
107-12-0	Propionitrile	250	257	103	69-119
103-65-1	n-Propylbenzene	25	23.8	95	86-125
100-42-5	Styrene	25	23.3	93	78-118
630-20-6	1,1,1,2-Tetrachloroethane	25	23.4	94	81-119
71-55-6	1,1,1-Trichloroethane	25	28.2	113	79-133
79-34-5	1,1,2,2-Tetrachloroethane	25	25.1	100	71-120
79-00-5	1,1,2-Trichloroethane	25	24.7	99	80-114
87-61-6	1,2,3-Trichlorobenzene	25	24.4	98	64-126
96-18-4	1,2,3-Trichloropropane	25	22.3	89	77-115
120-82-1	1,2,4-Trichlorobenzene	25	21.9	88	68-123

Blank Spike Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ3081-BS	J052862.D	1	01/12/10	KW	n/a	n/a	VJ3081

The QC reported here applies to the following samples: **Method:** SW846 8260B

F70691-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
95-63-6	1,2,4-Trimethylbenzene	25	23.1	92	82-120
108-67-8	1,3,5-Trimethylbenzene	25	23.3	93	83-123
127-18-4	Tetrachloroethylene	25	27.4	110	80-131
108-88-3	Toluene	25	26.5	106	86-116
79-01-6	Trichloroethylene	25	27.1	108	85-124
75-69-4	Trichlorofluoromethane	25	33.9	136	66-156
110-57-6	Trans-1,4-Dichloro-2-Butene	25	28.3	113	51-137
75-01-4	Vinyl chloride	25	29.9	120	57-153
108-05-4	Vinyl Acetate	125	172	138	38-159
	m,p-Xylene	50	46.8	94	86-121
95-47-6	o-Xylene	25	23.8	95	83-121

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	100%	87-116%
17060-07-0	1,2-Dichloroethane-D4	100%	76-127%
2037-26-5	Toluene-D8	100%	86-112%
460-00-4	4-Bromofluorobenzene	101%	84-120%

Blank Spike Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ3082-BS	J052893.D	1	01/13/10	KW	n/a	n/a	VJ3082

The QC reported here applies to the following samples: **Method:** SW846 8260B

F70691-2, F70691-3, F70691-4, F70691-5, F70691-6, F70691-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	96%	87-116%
17060-07-0	1,2-Dichloroethane-D4	97%	76-127%
2037-26-5	Toluene-D8	100%	86-112%
460-00-4	4-Bromofluorobenzene	105%	84-120%

Blank Spike Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ3082-BS	J052894.D	1	01/13/10	KW	n/a	n/a	VJ3082

The QC reported here applies to the following samples: **Method:** SW846 8260B

F70691-2, F70691-3, F70691-4, F70691-5, F70691-6, F70691-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	223	178*	59-134
75-05-8	Acetonitrile	250	274	110	57-123
107-02-8	Acrolein	125	198	158*	33-157
107-13-1	Acrylonitrile	125	146	117	62-124
107-05-1	Allyl chloride	25	27.6	110	48-136
71-43-2	Benzene	25	29.2	117	83-124
100-44-7	Benzyl Chloride	25	21.1	84	61-118
108-86-1	Bromobenzene	25	25.6	102	83-115
74-97-5	Bromochloromethane	25	26.0	104	78-112
75-27-4	Bromodichloromethane	25	25.5	102	76-116
75-25-2	Bromoform	25	20.5	82	68-128
104-51-8	n-Butylbenzene	25	24.1	96	84-124
135-98-8	sec-Butylbenzene	25	26.0	104	86-127
98-06-6	tert-Butylbenzene	25	25.3	101	83-126
108-90-7	Chlorobenzene	25	27.2	109	87-115
75-00-3	Chloroethane	25	25.1	100	54-166
67-66-3	Chloroform	25	28.2	113	85-123
544-10-5	1-Chlorohexane	25	26.0	104	87-128
95-49-8	o-Chlorotoluene	25	28.3	113	84-121
106-43-4	p-Chlorotoluene	25	25.1	100	84-120
110-75-8	2-Chloroethyl vinyl ether	125	117	94	63-125
75-15-0	Carbon disulfide	25	31.8	127	67-147
56-23-5	Carbon tetrachloride	25	26.9	108	74-139
75-34-3	1,1-Dichloroethane	25	29.1	116	82-127
75-35-4	1,1-Dichloroethylene	25	30.9	124	75-133
563-58-6	1,1-Dichloropropene	25	30.9	124	87-127
96-12-8	1,2-Dibromo-3-chloropropane	25	21.9	88	61-118
106-93-4	1,2-Dibromoethane	25	25.7	103	80-115
107-06-2	1,2-Dichloroethane	25	26.2	105	76-122
78-87-5	1,2-Dichloropropane	25	27.1	108	81-120
142-28-9	1,3-Dichloropropane	25	25.8	103	81-113
594-20-7	2,2-Dichloropropane	25	28.8	115	77-138
124-48-1	Dibromochloromethane	25	22.4	90	74-116
75-71-8	Dichlorodifluoromethane	25	24.7	99	34-158
156-59-2	cis-1,2-Dichloroethylene	25	27.5	110	81-114
10061-01-5	cis-1,3-Dichloropropene	25	24.7	99	83-119

Blank Spike Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ3082-BS	J052894.D	1	01/13/10	KW	n/a	n/a	VJ3082

The QC reported here applies to the following samples: **Method:** SW846 8260B

F70691-2, F70691-3, F70691-4, F70691-5, F70691-6, F70691-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1476-11-5	cis-1,4-Dichloro-2-Butene	25	29.2	117	41-130
541-73-1	m-Dichlorobenzene	25	26.6	106	86-115
95-50-1	o-Dichlorobenzene	25	26.3	105	85-115
106-46-7	p-Dichlorobenzene	25	26.1	104	87-113
156-60-5	trans-1,2-Dichloroethylene	25	29.4	118	82-126
10061-02-6	trans-1,3-Dichloropropene	25	27.8	111	87-123
100-41-4	Ethylbenzene	25	27.5	110	87-118
97-63-2	Ethyl methacrylate	25	20.9	84	68-110
76-13-1	Freon 113	25	33.6	134	74-139
591-78-6	2-Hexanone	125	128	102	58-125
87-68-3	Hexachlorobutadiene	25	25.4	102	71-133
110-54-3	Hexane	25	32.9	132	71-134
98-82-8	Isopropylbenzene	25	28.6	114	87-131
99-87-6	p-Isopropyltoluene	25	25.0	100	83-125
108-10-1	4-Methyl-2-pentanone	125	119	95	62-125
126-98-7	Methacrylonitrile	250	285	114	62-133
74-83-9	Methyl bromide	25	27.2	109	55-151
74-87-3	Methyl chloride	25	26.1	104	55-173
74-88-4	Methyl iodide	25	29.5	118	72-125
80-62-6	Methyl methacrylate	25	27.8	111	63-115
74-95-3	Methylene bromide	25	26.5	106	81-116
75-09-2	Methylene chloride	25	30.7	123	69-125
78-93-3	Methyl ethyl ketone	125	179	143*	61-127
1634-04-4	Methyl Tert Butyl Ether	25	25.8	103	75-116
91-20-3	Naphthalene	25	25.2	101	59-125
76-01-7	Pentachloroethane	25	27.3	109	82-111
107-12-0	Propionitrile	250	260	104	69-119
103-65-1	n-Propylbenzene	25	24.9	100	86-125
100-42-5	Styrene	25	24.7	99	78-118
630-20-6	1,1,1,2-Tetrachloroethane	25	23.5	94	81-119
71-55-6	1,1,1-Trichloroethane	25	29.2	117	79-133
79-34-5	1,1,2,2-Tetrachloroethane	25	26.5	106	71-120
79-00-5	1,1,2-Trichloroethane	25	26.5	106	80-114
87-61-6	1,2,3-Trichlorobenzene	25	25.7	103	64-126
96-18-4	1,2,3-Trichloropropane	25	23.2	93	77-115
120-82-1	1,2,4-Trichlorobenzene	25	22.3	89	68-123

Blank Spike Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ3082-BS	J052894.D	1	01/13/10	KW	n/a	n/a	VJ3082

The QC reported here applies to the following samples: **Method:** SW846 8260B

F70691-2, F70691-3, F70691-4, F70691-5, F70691-6, F70691-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
95-63-6	1,2,4-Trimethylbenzene	25	24.1	96	82-120
108-67-8	1,3,5-Trimethylbenzene	25	24.3	97	83-123
127-18-4	Tetrachloroethylene	25	27.8	111	80-131
108-88-3	Toluene	25	27.3	109	86-116
79-01-6	Trichloroethylene	25	28.0	112	85-124
75-69-4	Trichlorofluoromethane	25	32.2	129	66-156
110-57-6	Trans-1,4-Dichloro-2-Butene	25	32.1	128	51-137
75-01-4	Vinyl chloride	25	27.8	111	57-153
108-05-4	Vinyl Acetate	125	172	138	38-159
	m,p-Xylene	50	48.7	97	86-121
95-47-6	o-Xylene	25	24.7	99	83-121

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	98%	87-116%
17060-07-0	1,2-Dichloroethane-D4	101%	76-127%
2037-26-5	Toluene-D8	99%	86-112%
460-00-4	4-Bromofluorobenzene	98%	84-120%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F70691-1MS	J052876.D	1	01/12/10	KW	n/a	n/a	VJ3081
F70691-1MSD	J052877.D	1	01/12/10	KW	n/a	n/a	VJ3081
F70691-1	J052875.D	1	01/12/10	KW	n/a	n/a	VJ3081

The QC reported here applies to the following samples: **Method:** SW846 8260B

F70691-1

CAS No.	Compound	F70691-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		125	126	101	135	108	7	59-134/14
75-05-8	Acetonitrile	ND		250	256	102	276	110	8	57-123/15
107-02-8	Acrolein	ND		125	166	133	172	138	4	33-157/21
107-13-1	Acrylonitrile	ND		125	186	149*	146	117	24*	62-124/13
107-05-1	Allyl chloride	ND		25	22.7	91	21.7	87	5	48-136/13
71-43-2	Benzene	ND		25	26.8	107	27.0	108	1	83-124/11
100-44-7	Benzyl Chloride	ND		25	21.0	84	20.4	82	3	61-118/12
108-86-1	Bromobenzene	ND		25	24.6	98	25.0	100	2	83-115/10
74-97-5	Bromochloromethane	ND		25	25.3	101	25.8	103	2	78-112/10
75-27-4	Bromodichloromethane	ND		25	23.6	94	22.6	90	4	76-116/10
75-25-2	Bromoform	ND		25	19.2	77	19.2	77	0	68-128/11
104-51-8	n-Butylbenzene	ND		25	21.8	87	22.5	90	3	84-124/10
135-98-8	sec-Butylbenzene	ND		25	23.9	96	24.4	98	2	86-127/10
98-06-6	tert-Butylbenzene	ND		25	23.5	94	24.3	97	3	83-126/10
108-90-7	Chlorobenzene	ND		25	25.8	103	26.6	106	3	87-115/9
75-00-3	Chloroethane	ND		25	23.3	93	25.2	101	8	54-166/20
67-66-3	Chloroform	ND		25	26.2	105	26.7	107	2	85-123/10
544-10-5	1-Chlorohexane	ND		25	24.3	97	24.9	100	2	87-128/10
95-49-8	o-Chlorotoluene	ND		25	26.5	106	26.9	108	1	84-121/10
106-43-4	p-Chlorotoluene	ND		25	23.9	96	24.1	96	1	84-120/10
110-75-8	2-Chloroethyl vinyl ether	ND		125	ND	0*	ND	0*	nc	63-125/24
75-15-0	Carbon disulfide	ND		25	23.5	94	22.9	92	3	67-147/12
56-23-5	Carbon tetrachloride	ND		25	26.6	106	26.7	107	0	74-139/13
75-34-3	1,1-Dichloroethane	ND		25	26.8	107	26.3	105	2	82-127/10
75-35-4	1,1-Dichloroethylene	ND		25	28.3	113	29.4	118	4	75-133/13
563-58-6	1,1-Dichloropropene	ND		25	28.7	115	28.5	114	1	87-127/10
96-12-8	1,2-Dibromo-3-chloropropane	ND		25	25.3	101	26.3	105	4	61-118/15
106-93-4	1,2-Dibromoethane	ND		25	26.1	104	27.4	110	5	80-115/10
107-06-2	1,2-Dichloroethane	ND		25	25.3	101	25.1	100	1	76-122/11
78-87-5	1,2-Dichloropropane	ND		25	25.7	103	26.1	104	2	81-120/11
142-28-9	1,3-Dichloropropane	ND		25	25.6	102	26.3	105	3	81-113/11
594-20-7	2,2-Dichloropropane	ND		25	26.1	104	26.0	104	0	77-138/12
124-48-1	Dibromochloromethane	ND		25	21.1	84	20.8	83	1	74-116/11
75-71-8	Dichlorodifluoromethane	ND		25	25.6	102	27.4	110	7	34-158/22
156-59-2	cis-1,2-Dichloroethylene	ND		25	26.0	104	26.6	106	2	81-114/10
10061-01-5	cis-1,3-Dichloropropene	ND		25	20.4	82*	20.1	80*	1	83-119/10

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F70691-1MS	J052876.D	1	01/12/10	KW	n/a	n/a	VJ3081
F70691-1MSD	J052877.D	1	01/12/10	KW	n/a	n/a	VJ3081
F70691-1	J052875.D	1	01/12/10	KW	n/a	n/a	VJ3081

The QC reported here applies to the following samples: **Method:** SW846 8260B

F70691-1

CAS No.	Compound	F70691-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1476-11-5	cis-1,4-Dichloro-2-Butene	ND		25	20.5	82	18.6	74	10	41-130/33
541-73-1	m-Dichlorobenzene	ND		25	25.0	100	25.6	102	2	86-115/9
95-50-1	o-Dichlorobenzene	ND		25	24.6	98	25.8	103	5	85-115/9
106-46-7	p-Dichlorobenzene	ND		25	24.5	98	25.4	102	4	87-113/10
156-60-5	trans-1,2-Dichloroethylene	ND		25	27.7	111	27.2	109	2	82-126/10
10061-02-6	trans-1,3-Dichloropropene	ND		25	25.0	100	24.5	98	2	87-123/10
100-41-4	Ethylbenzene	ND		25	26.1	104	26.5	106	2	87-118/10
97-63-2	Ethyl methacrylate	ND		25	25.6	102	26.2	105	2	68-110/11
76-13-1	Freon 113	ND		25	29.6	118	30.7	123	4	74-139/13
591-78-6	2-Hexanone	ND		125	158	126*	166	133*	5	58-125/14
87-68-3	Hexachlorobutadiene	ND		25	21.2	85	24.3	97	14*	71-133/12
110-54-3	Hexane	ND		25	29.4	118	29.0	116	1	71-134/11
98-82-8	Isopropylbenzene	ND		25	26.5	106	27.3	109	3	87-131/10
99-87-6	p-Isopropyltoluene	ND		25	22.9	92	23.5	94	3	83-125/9
108-10-1	4-Methyl-2-pentanone	ND		125	152	122	160	128*	5	62-125/13
126-98-7	Methacrylonitrile	ND		250	307	123	315	126	3	62-133/17
74-83-9	Methyl bromide	ND		25	25.6	102	27.3	109	6	55-151/21
74-87-3	Methyl chloride	ND		25	25.7	103	27.1	108	5	55-173/22
74-88-4	Methyl iodide	ND		25	26.7	107	27.0	108	1	72-125/11
80-62-6	Methyl methacrylate	ND		25	31.4	126*	32.5	130*	3	63-115/10
74-95-3	Methylene bromide	ND		25	25.7	103	26.2	105	2	81-116/10
75-09-2	Methylene chloride	1.2	JB	25	26.0	99	25.2	96	3	69-125/11
78-93-3	Methyl ethyl ketone	ND		125	144	115	153	122	6	61-127/13
1634-04-4	Methyl Tert Butyl Ether	ND		25	26.9	108	27.7	111	3	75-116/10
91-20-3	Naphthalene	ND		25	26.5	106	29.4	118	10	59-125/15
76-01-7	Pentachloroethane	ND		25	27.0	108	26.4	106	2	82-111/8
107-12-0	Propionitrile	ND		250	282	113	303	121*	7	69-119/12
103-65-1	n-Propylbenzene	ND		25	23.4	94	23.5	94	0	86-125/10
100-42-5	Styrene	ND		25	22.5	90	21.3	85	5	78-118/11
630-20-6	1,1,1,2-Tetrachloroethane	ND		25	22.9	92	22.6	90	1	81-119/10
71-55-6	1,1,1-Trichloroethane	ND		25	27.2	109	27.7	111	2	79-133/11
79-34-5	1,1,2,2-Tetrachloroethane	ND		25	27.7	111	28.1	112	1	71-120/11
79-00-5	1,1,2-Trichloroethane	ND		25	25.9	104	26.1	104	1	80-114/11
87-61-6	1,2,3-Trichlorobenzene	ND		25	23.5	94	26.5	106	12	64-126/16
96-18-4	1,2,3-Trichloropropane	ND		25	24.9	100	25.7	103	3	77-115/12
120-82-1	1,2,4-Trichlorobenzene	ND		25	20.0	80	22.4	90	11	68-123/11

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F70691-1MS	J052876.D	1	01/12/10	KW	n/a	n/a	VJ3081
F70691-1MSD	J052877.D	1	01/12/10	KW	n/a	n/a	VJ3081
F70691-1	J052875.D	1	01/12/10	KW	n/a	n/a	VJ3081

The QC reported here applies to the following samples: **Method:** SW846 8260B

F70691-1

CAS No.	Compound	F70691-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
95-63-6	1,2,4-Trimethylbenzene	ND		25	22.4	90	22.6	90	1	82-120/10
108-67-8	1,3,5-Trimethylbenzene	ND		25	22.7	91	23.2	93	2	83-123/10
127-18-4	Tetrachloroethylene	ND		25	26.2	105	27.3	109	4	80-131/12
108-88-3	Toluene	ND		25	25.9	104	26.7	107	3	86-116/10
79-01-6	Trichloroethylene	ND		25	27.1	108	28.3	113	4	85-124/10
75-69-4	Trichlorofluoromethane	ND		25	29.4	118	31.6	126	7	66-156/15
110-57-6	Trans-1,4-Dichloro-2-Butene	ND		25	24.3	97	23.5	94	3	51-137/24
75-01-4	Vinyl chloride	ND		25	26.0	104	27.9	112	7	57-153/22
108-05-4	Vinyl Acetate	ND		125	183	146	184	147	1	38-159/11
	m,p-Xylene	ND		50	46.7	93	46.9	94	0	86-121/10
95-47-6	o-Xylene	ND		25	23.7	95	24.0	96	1	83-121/10

CAS No.	Surrogate Recoveries	MS	MSD	F70691-1	Limits
1868-53-7	Dibromofluoromethane	99%	98%	100%	87-116%
17060-07-0	1,2-Dichloroethane-D4	103%	101%	99%	76-127%
2037-26-5	Toluene-D8	99%	100%	103%	86-112%
460-00-4	4-Bromofluorobenzene	100%	100%	103%	84-120%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F70721-1MS	J052899.D	1	01/13/10	KW	n/a	n/a	VJ3082
F70721-1MSD	J052900.D	1	01/13/10	KW	n/a	n/a	VJ3082
F70721-1	J052898.D	1	01/13/10	KW	n/a	n/a	VJ3082

The QC reported here applies to the following samples: **Method:** SW846 8260B

F70691-2, F70691-3, F70691-4, F70691-5, F70691-6, F70691-7

CAS No.	Compound	F70721-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	25 U		125	114	91	122	98	7	59-134/14
75-05-8	Acetonitrile	20 U		250	259	104	268	107	3	57-123/15
107-02-8	Acrolein	20 U		125	170	136	169	135	1	33-157/21
107-13-1	Acrylonitrile	10 U		125	108	86	121	97	11	62-124/13
107-05-1	Allyl chloride	10 U		25	23.1	92	22.1	88	4	48-136/13
71-43-2	Benzene	1.0 U		25	28.2	113	27.9	112	1	83-124/11
100-44-7	Benzyl Chloride	2.0 U		25	19.2	77	19.0	76	1	61-118/12
108-86-1	Bromobenzene	1.0 U		25	24.8	99	24.6	98	1	83-115/10
74-97-5	Bromochloromethane	1.0 U		25	25.3	101	24.9	100	2	78-112/10
75-27-4	Bromodichloromethane	1.0 U		25	24.2	97	23.0	92	5	76-116/10
75-25-2	Bromoform	1.0 U		25	17.9	72	17.7	71	1	68-128/11
104-51-8	n-Butylbenzene	1.0 U		25	22.8	91	23.0	92	1	84-124/10
135-98-8	sec-Butylbenzene	1.0 U		25	24.6	98	24.6	98	0	86-127/10
98-06-6	tert-Butylbenzene	1.0 U		25	24.4	98	24.5	98	0	83-126/10
108-90-7	Chlorobenzene	0.93	I	25	26.9	104	27.1	105	1	87-115/9
75-00-3	Chloroethane	2.0 U		25	23.4	94	25.5	102	9	54-166/20
67-66-3	Chloroform	1.0 U		25	27.3	109	27.0	108	1	85-123/10
544-10-5	1-Chlorohexane	2.0 U		25	25.0	100	24.9	100	0	87-128/10
95-49-8	o-Chlorotoluene	1.0 U		25	27.2	109	27.5	110	1	84-121/10
106-43-4	p-Chlorotoluene	1.0 U		25	24.5	98	24.3	97	1	84-120/10
110-75-8	2-Chloroethyl vinyl ether	5.0 U		125	ND	0*	ND	0*	nc	63-125/24
75-15-0	Carbon disulfide	2.0 U		25	26.9	108	26.1	104	3	67-147/12
56-23-5	Carbon tetrachloride	1.0 U		25	27.5	110	26.2	105	5	74-139/13
75-34-3	1,1-Dichloroethane	1.0 U		25	28.2	113	27.5	110	3	82-127/10
75-35-4	1,1-Dichloroethylene	1.0 U		25	29.3	117	31.1	124	6	75-133/13
563-58-6	1,1-Dichloropropene	1.0 U		25	29.6	118	29.1	116	2	87-127/10
96-12-8	1,2-Dibromo-3-chloropropane	2.0 U		25	21.6	86	21.1	84	2	61-118/15
106-93-4	1,2-Dibromoethane	1.0 U		25	25.0	100	25.3	101	1	80-115/10
107-06-2	1,2-Dichloroethane	1.0 U		25	25.3	101	25.0	100	1	76-122/11
78-87-5	1,2-Dichloropropane	1.0 U		25	26.7	107	26.1	104	2	81-120/11
142-28-9	1,3-Dichloropropane	1.0 U		25	25.3	101	25.0	100	1	81-113/11
594-20-7	2,2-Dichloropropane	1.0 U		25	27.4	110	27.3	109	0	77-138/12
124-48-1	Dibromochloromethane	1.0 U		25	20.6	82	19.7	79	4	74-116/11
75-71-8	Dichlorodifluoromethane	2.0 U		25	22.8	91	23.9	96	5	34-158/22
156-59-2	cis-1,2-Dichloroethylene	4.2		25	31.5	109	31.5	109	0	81-114/10
10061-01-5	cis-1,3-Dichloropropene	1.0 U		25	21.2	85	19.8	79*	7	83-119/10

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F70721-1MS	J052899.D	1	01/13/10	KW	n/a	n/a	VJ3082
F70721-1MSD	J052900.D	1	01/13/10	KW	n/a	n/a	VJ3082
F70721-1	J052898.D	1	01/13/10	KW	n/a	n/a	VJ3082

The QC reported here applies to the following samples: **Method:** SW846 8260B

F70691-2, F70691-3, F70691-4, F70691-5, F70691-6, F70691-7

CAS No.	Compound	F70721-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1476-11-5	cis-1,4-Dichloro-2-Butene	10 U		25	10.9	44	10.0	40*	9	41-130/33
541-73-1	m-Dichlorobenzene	1.0 U		25	25.5	102	26.0	104	2	86-115/9
95-50-1	o-Dichlorobenzene	0.24	I	25	25.3	100	26.1	103	3	85-115/9
106-46-7	p-Dichlorobenzene	1.0 U		25	25.3	101	25.7	103	2	87-113/10
156-60-5	trans-1,2-Dichloroethylene	1.0 U		25	29.2	117	28.7	115	2	82-126/10
10061-02-6	trans-1,3-Dichloropropene	1.0 U		25	25.1	100	23.6	94	6	87-123/10
100-41-4	Ethylbenzene	1.0 U		25	26.9	108	26.5	106	1	87-118/10
97-63-2	Ethyl methacrylate	5.0 U		25	20.2	81	20.6	82	2	68-110/11
76-13-1	Freon 113	1.0 U		25	31.9	128	32.6	130	2	74-139/13
591-78-6	2-Hexanone	10 U		125	113	90	118	94	4	58-125/14
87-68-3	Hexachlorobutadiene	2.0 U		25	22.2	89	25.8	103	15*	71-133/12
110-54-3	Hexane	2.0 U		25	31.7	127	30.5	122	4	71-134/11
98-82-8	Isopropylbenzene	1.0 U		25	27.0	108	27.0	108	0	87-131/10
99-87-6	p-Isopropyltoluene	1.0 U		25	23.1	92	23.8	95	3	83-125/9
108-10-1	4-Methyl-2-pentanone	5.0 U		125	114	91	116	93	2	62-125/13
126-98-7	Methacrylonitrile	20 U		250	272	109	273	109	0	62-133/17
74-83-9	Methyl bromide	2.0 U		25	24.1	96	27.4	110	13	55-151/21
74-87-3	Methyl chloride	2.0 U		25	25.7	103	28.2	113	9	55-173/22
74-88-4	Methyl iodide	5.0 U		25	27.3	109	28.6	114	5	72-125/11
80-62-6	Methyl methacrylate	5.0 U		25	26.6	106	26.1	104	2	63-115/10
74-95-3	Methylene bromide	2.0 U		25	25.4	102	25.6	102	1	81-116/10
75-09-2	Methylene chloride	1.1	IV	25	28.1	108	27.1	104	4	69-125/11
78-93-3	Methyl ethyl ketone	5.0 U		125	125	100	129	103	3	61-127/13
1634-04-4	Methyl Tert Butyl Ether	0.28	I	25	25.1	99	25.8	102	3	75-116/10
91-20-3	Naphthalene	5.0 U		25	23.2	93	25.7	103	10	59-125/15
76-01-7	Pentachloroethane	10 U		25	25.8	103	24.3	97	6	82-111/8
107-12-0	Propionitrile	20 U		250	245	98	257	103	5	69-119/12
103-65-1	n-Propylbenzene	1.0 U		25	23.9	96	23.7	95	1	86-125/10
100-42-5	Styrene	1.0 U		25	22.8	91	21.6	86	5	78-118/11
630-20-6	1,1,1,2-Tetrachloroethane	1.0 U		25	22.6	90	22.5	90	0	81-119/10
71-55-6	1,1,1-Trichloroethane	1.0 U		25	27.6	110	27.8	111	1	79-133/11
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U		25	25.8	103	26.1	104	1	71-120/11
79-00-5	1,1,2-Trichloroethane	1.0 U		25	25.0	100	25.2	101	1	80-114/11
87-61-6	1,2,3-Trichlorobenzene	1.0 U		25	23.2	93	25.8	103	11	64-126/16
96-18-4	1,2,3-Trichloropropane	2.0 U		25	22.0	88	22.2	89	1	77-115/12
120-82-1	1,2,4-Trichlorobenzene	1.0 U		25	20.5	82	22.0	88	7	68-123/11

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F70721-1MS	J052899.D	1	01/13/10	KW	n/a	n/a	VJ3082
F70721-1MSD	J052900.D	1	01/13/10	KW	n/a	n/a	VJ3082
F70721-1	J052898.D	1	01/13/10	KW	n/a	n/a	VJ3082

The QC reported here applies to the following samples: **Method:** SW846 8260B

F70691-2, F70691-3, F70691-4, F70691-5, F70691-6, F70691-7

CAS No.	Compound	F70721-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
95-63-6	1,2,4-Trimethylbenzene	2.0 U		25	22.5	90	22.4	90	0	82-120/10
108-67-8	1,3,5-Trimethylbenzene	2.0 U		25	23.0	92	22.5	90	2	83-123/10
127-18-4	Tetrachloroethylene	1.0 U		25	26.3	105	26.3	105	0	80-131/12
108-88-3	Toluene	1.0 U		25	26.7	107	26.6	106	0	86-116/10
79-01-6	Trichloroethylene	1.0 U		25	27.8	111	28.1	112	1	85-124/10
75-69-4	Trichlorofluoromethane	2.0 U		25	29.4	118	31.2	125	6	66-156/15
110-57-6	Trans-1,4-Dichloro-2-Butene	10 U		25	12.2	49*	11.6	46*	5	51-137/24
75-01-4	Vinyl chloride	4.1		25	29.6	102	31.4	109	6	57-153/22
108-05-4	Vinyl Acetate	10 U		125	135	108	133	106	1	38-159/11
	m,p-Xylene	2.0 U		50	47.2	94	46.8	94	1	86-121/10
95-47-6	o-Xylene	1.0 U		25	24.0	96	23.6	94	2	83-121/10

CAS No.	Surrogate Recoveries	MS	MSD	F70721-1	Limits
1868-53-7	Dibromofluoromethane	99%	98%	97%	87-116%
17060-07-0	1,2-Dichloroethane-D4	101%	100%	96%	76-127%
2037-26-5	Toluene-D8	98%	98%	104%	86-112%
460-00-4	4-Bromofluorobenzene	99%	99%	104%	84-120%

Instrument Performance Check (BFB)

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ3080-BFB
Lab File ID: J052827.D
Instrument ID: GCMSJ
Injection Date: 01/11/10
Injection Time: 12:13

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	18345	21.9		Pass
75	30.0 - 60.0% of mass 95	38317	45.7		Pass
95	Base peak, 100% relative abundance	83922	100.0		Pass
96	5.0 - 9.0% of mass 95	5510	6.6		Pass
173	Less than 2.0% of mass 174	422	0.5	(0.53) [a]	Pass
174	50.0 - 100.0% of mass 95	78925	94.0		Pass
175	5.0 - 9.0% of mass 174	5563	6.6	(7.0) [a]	Pass
176	95.0 - 101.0% of mass 174	78154	93.1	(99.0) [a]	Pass
177	5.0 - 9.0% of mass 176	5238	6.2	(6.7) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VJ3080-IC3080	J052828.D	01/11/10	12:34	00:21	Initial cal 1
VJ3080-IC3080	J052829.D	01/11/10	12:57	00:44	Initial cal 2
VJ3080-IC3080	J052830.D	01/11/10	13:20	01:07	Initial cal 3
VJ3080-ICC3080	J052831.D	01/11/10	13:43	01:30	Initial cal 4
VJ3080-IC3080	J052832.D	01/11/10	14:06	01:53	Initial cal 5
VJ3080-IC3080	J052833.D	01/11/10	14:29	02:16	Initial cal 6
VJ3080-ICV3080	J052834.D	01/11/10	14:52	02:39	Initial cal verification 4
VJ3080-BS	J052835.D	01/11/10	15:18	03:05	Blank Spike
VJ3080-MB	J052836.D	01/11/10	15:42	03:29	Method Blank
ZZZZZZ	J052837.D	01/11/10	16:05	03:52	(unrelated sample)
ZZZZZZ	J052838.D	01/11/10	16:28	04:15	(unrelated sample)
ZZZZZZ	J052839.D	01/11/10	16:51	04:38	(unrelated sample)
ZZZZZZ	J052840.D	01/11/10	17:14	05:01	(unrelated sample)
ZZZZZZ	J052841.D	01/11/10	17:37	05:24	(unrelated sample)
ZZZZZZ	J052842.D	01/11/10	18:00	05:47	(unrelated sample)
ZZZZZZ	J052843.D	01/11/10	18:23	06:10	(unrelated sample)
F70660-11	J052844.D	01/11/10	18:46	06:33	(used for QC only; not part of job F70691)
F70660-11MS	J052845.D	01/11/10	19:09	06:56	Matrix Spike
F70660-11MSD	J052846.D	01/11/10	19:32	07:19	Matrix Spike Duplicate
ZZZZZZ	J052848.D	01/11/10	20:18	08:05	(unrelated sample)
ZZZZZZ	J052849.D	01/11/10	20:41	08:28	(unrelated sample)
ZZZZZZ	J052850.D	01/11/10	21:04	08:51	(unrelated sample)
ZZZZZZ	J052851.D	01/11/10	21:27	09:14	(unrelated sample)
ZZZZZZ	J052852.D	01/11/10	21:51	09:38	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ3080-BFB
Lab File ID: J052827.D
Instrument ID: GCMSJ
Injection Date: 01/11/10
Injection Time: 12:13

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	J052853.D	01/11/10	22:14	10:01	(unrelated sample)
ZZZZZZ	J052854.D	01/11/10	22:37	10:24	(unrelated sample)
ZZZZZZ	J052855.D	01/11/10	23:00	10:47	(unrelated sample)
ZZZZZZ	J052856.D	01/11/10	23:24	11:11	(unrelated sample)
ZZZZZZ	J052857.D	01/11/10	23:47	11:34	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ3081-BFB
Lab File ID: J052860.D
Instrument ID: GCMSJ
Injection Date: 01/12/10
Injection Time: 09:13

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	15913	21.1		Pass
75	30.0 - 60.0% of mass 95	34693	45.9		Pass
95	Base peak, 100% relative abundance	75533	100.0		Pass
96	5.0 - 9.0% of mass 95	5370	7.1		Pass
173	Less than 2.0% of mass 174	440	0.58	(0.63) [a]	Pass
174	50.0 - 100.0% of mass 95	69301	91.7		Pass
175	5.0 - 9.0% of mass 174	4879	6.5	(7.0) [a]	Pass
176	95.0 - 101.0% of mass 174	69360	91.8	(100.1) [a]	Pass
177	5.0 - 9.0% of mass 176	4545	6.0	(6.6) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VJ3081-CC3080	J052861.D	01/12/10	09:35	00:22	Continuing cal 4
VJ3081-BS	J052862.D	01/12/10	10:12	00:59	Blank Spike
VJ3081-MB	J052863.D	01/12/10	10:34	01:21	Method Blank
ZZZZZZ	J052864.D	01/12/10	10:59	01:46	(unrelated sample)
ZZZZZZ	J052865.D	01/12/10	11:23	02:10	(unrelated sample)
ZZZZZZ	J052867.D	01/12/10	12:09	02:56	(unrelated sample)
ZZZZZZ	J052868.D	01/12/10	12:32	03:19	(unrelated sample)
ZZZZZZ	J052869.D	01/12/10	12:55	03:42	(unrelated sample)
ZZZZZZ	J052870.D	01/12/10	13:18	04:05	(unrelated sample)
ZZZZZZ	J052871.D	01/12/10	13:41	04:28	(unrelated sample)
ZZZZZZ	J052872.D	01/12/10	14:05	04:52	(unrelated sample)
ZZZZZZ	J052873.D	01/12/10	14:28	05:15	(unrelated sample)
ZZZZZZ	J052874.D	01/12/10	14:50	05:37	(unrelated sample)
F70691-1	J052875.D	01/12/10	15:22	06:09	MW30&33-01-010710
F70691-1MS	J052876.D	01/12/10	15:45	06:32	Matrix Spike
F70691-1MSD	J052877.D	01/12/10	16:08	06:55	Matrix Spike Duplicate
ZZZZZZ	J052879.D	01/12/10	16:54	07:41	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ3082-BFB
Lab File ID: J052884.D
Instrument ID: GCMSJ
Injection Date: 01/13/10
Injection Time: 09:38

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	14908	21.4		Pass
75	30.0 - 60.0% of mass 95	31898	45.7		Pass
95	Base peak, 100% relative abundance	69805	100.0		Pass
96	5.0 - 9.0% of mass 95	5058	7.2		Pass
173	Less than 2.0% of mass 174	331	0.47	(0.54) [a]	Pass
174	50.0 - 100.0% of mass 95	61709	88.4		Pass
175	5.0 - 9.0% of mass 174	4049	5.8	(6.6) [a]	Pass
176	95.0 - 101.0% of mass 174	62152	89.0	(100.7) [a]	Pass
177	5.0 - 9.0% of mass 176	4045	5.8	(6.5) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VJ3082-CC3080	J052885.D	01/13/10	10:00	00:22	Continuing cal 4
VJ3082-IC3082	J052886.D	01/13/10	10:29	00:51	Initial cal 1
VJ3082-IC3082	J052887.D	01/13/10	10:52	01:14	Initial cal 2
VJ3082-IC3082	J052888.D	01/13/10	11:15	01:37	Initial cal 3
VJ3082-ICC3082	J052889.D	01/13/10	11:38	02:00	Initial cal 4
VJ3082-IC3082	J052890.D	01/13/10	12:02	02:24	Initial cal 5
VJ3082-IC3082	J052891.D	01/13/10	12:25	02:47	Initial cal 6
VJ3082-ICV3082	J052892.D	01/13/10	12:48	03:10	Initial cal verification 4
VJ3082-BS	J052893.D	01/13/10	13:11	03:33	Blank Spike
VJ3082-BS	J052894.D	01/13/10	13:34	03:56	Blank Spike
VJ3082-MB	J052895.D	01/13/10	13:57	04:19	Method Blank
ZZZZZZ	J052896.D	01/13/10	14:20	04:42	(unrelated sample)
F70691-2	J052897.D	01/13/10	14:43	05:05	MW30&33-02-010710
F70721-1	J052898.D	01/13/10	15:07	05:29	(used for QC only; not part of job F70691)
F70721-1MS	J052899.D	01/13/10	15:30	05:52	Matrix Spike
F70721-1MSD	J052900.D	01/13/10	15:53	06:15	Matrix Spike Duplicate
ZZZZZZ	J052901.D	01/13/10	16:16	06:38	(unrelated sample)
ZZZZZZ	J052902.D	01/13/10	16:39	07:01	(unrelated sample)
ZZZZZZ	J052903.D	01/13/10	17:02	07:24	(unrelated sample)
ZZZZZZ	J052904.D	01/13/10	17:25	07:47	(unrelated sample)
ZZZZZZ	J052906.D	01/13/10	18:11	08:33	(unrelated sample)
F70691-3	J052907.D	01/13/10	18:35	08:57	MW30&33-03-010710
F70691-4	J052908.D	01/13/10	18:58	09:20	MW30&33-04-010710
F70691-5	J052909.D	01/13/10	19:21	09:43	MW30&33-05R-010710

Instrument Performance Check (BFB)

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ3082-BFB
Lab File ID: J052884.D
Instrument ID: GCMSJ
Injection Date: 01/13/10
Injection Time: 09:38

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
F70691-6	J052910.D	01/13/10	19:44	10:06	MW30&33-DUP01-010710
F70691-7	J052911.D	01/13/10	20:07	10:29	TB02-010710

Volatile Internal Standard Area Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Check Std:	VJ3081-CC3080	**Injection Date:**	01/12/10
Lab File ID:	J052861.D	**Injection Time:**	09:35
Instrument ID:	GCMSJ	**Method:**	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
Check Std	1858261	7.48	1435717	10.56	811114	12.92	180445	5.10
Upper Limit [a]	3716522	7.98	2871434	11.06	1622228	13.42	360890	5.60
Lower Limit [b]	929131	6.98	717859	10.06	405557	12.42	90223	4.60

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
VJ3081-BS	1980349	7.47	1508176	10.56	843927	12.92	195655	5.09
VJ3081-MB	1843500	7.47	1345432	10.56	720461	12.92	179219	5.10
ZZZZZZ	1650891	7.47	1195449	10.56	659924	12.92	366994*	5.10
ZZZZZZ	1581346	7.47	1141610	10.56	620931	12.92	352433	5.10
ZZZZZZ	1403229	7.47	1039932	10.56	602961	12.92	353225	5.10
ZZZZZZ	1558042	7.48	1181556	10.56	681063	12.92	392072*	5.10
ZZZZZZ	1616847	7.47	1229510	10.56	705875	12.92	418561*	5.09
ZZZZZZ	1730078	7.48	1329539	10.56	766380	12.92	420293*	5.10
ZZZZZZ	1674920	7.47	1283172	10.56	741756	12.92	407843*	5.10
ZZZZZZ	2050826	7.47	1529892	10.56	874048	12.92	265317	5.10
ZZZZZZ	1947771	7.48	1428223	10.56	785679	12.92	173720	5.09
ZZZZZZ	1798642	7.48	1332638	10.56	721597	12.92	209277	5.10
F70691-1	1762259	7.48	1282235	10.56	699928	12.92	214594	5.10
F70691-1MS	1771261	7.48	1365873	10.56	775576	12.92	227648	5.09
F70691-1MSD	1947982	7.47	1487474	10.56	843938	12.92	259784	5.10
ZZZZZZ	1740729	7.47	1260799	10.56	698922	12.92	217509	5.10

IS 1 = Fluorobenzene
IS 2 = Chlorobenzene-D5
IS 3 = 1,4-Dichlorobenzene-d4
IS 4 = Tert Butyl Alcohol-D10

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Internal Standard Area Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Check Std:	VJ3082-ICC3082	**Injection Date:**	01/13/10
Lab File ID:	J052889.D	**Injection Time:**	11:38
Instrument ID:	GCMSJ	**Method:**	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
Check Std	1492165	7.47	1120016	10.56	580499	12.92	136354	5.09
Upper Limit [a]	2984330	7.97	2240032	11.06	1160998	13.42	272708	5.59
Lower Limit [b]	746083	6.97	560008	10.06	290250	12.42	68177	4.59

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
VJ3082-BS	1392099	7.48	1050818	10.56	539027	12.92	124253	5.10
VJ3082-BS	1484626	7.47	1166628	10.56	664788	12.92	139733	5.11
VJ3082-MB	1502423	7.47	1077592	10.56	578161	12.92	135657	5.10
ZZZZZZ	1389410	7.47	1002799	10.56	527206	12.92	108573	5.10
F70691-2	1336102	7.48	965001	10.56	504663	12.92	170974	5.11
F70721-1	1353023	7.47	983990	10.56	525005	12.92	117019	5.10
F70721-1MS	1454712	7.47	1121075	10.56	636688	12.92	133682	5.10
F70721-1MSD	1633971	7.47	1257153	10.56	705118	12.92	159079	5.10
ZZZZZZ	1492592	7.47	1096759	10.56	604354	12.92	132182	5.10
ZZZZZZ	1504189	7.48	1108187	10.56	602510	12.92	133609	5.10
ZZZZZZ	1430097	7.48	1041096	10.56	570706	12.92	123829	5.10
ZZZZZZ	1402248	7.47	1016791	10.56	537560	12.92	122920	5.10
ZZZZZZ	1315821	7.47	968693	10.56	514729	12.92	114356	5.10
F70691-3	1293470	7.47	932749	10.56	493436	12.92	170364	5.09
F70691-4	1303665	7.47	962908	10.56	508398	12.92	151167	5.10
F70691-5	1279783	7.47	946137	10.56	496905	12.92	150000	5.09
F70691-6	1242688	7.48	912468	10.56	480881	12.92	148345	5.11
F70691-7	1226954	7.48	914546	10.56	490417	12.92	102939	5.11

IS 1 = Fluorobenzene
IS 2 = Chlorobenzene-D5
IS 3 = 1,4-Dichlorobenzene-d4
IS 4 = Tert Butyl Alcohol-D10

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Surrogate Recovery Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Method: SW846 8260B **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
F70691-1	J052875.D	100.0	99.0	103.0	103.0
F70691-2	J052897.D	98.0	98.0	106.0	106.0
F70691-3	J052907.D	97.0	99.0	105.0	106.0
F70691-4	J052908.D	98.0	97.0	104.0	102.0
F70691-5	J052909.D	98.0	97.0	104.0	105.0
F70691-6	J052910.D	98.0	99.0	104.0	105.0
F70691-7	J052911.D	97.0	95.0	104.0	103.0
F70691-1MS	J052876.D	99.0	103.0	99.0	100.0
F70691-1MSD	J052877.D	98.0	101.0	100.0	100.0
F70721-1MS	J052899.D	99.0	101.0	98.0	99.0
F70721-1MSD	J052900.D	98.0	100.0	98.0	99.0
VJ3081-BS	J052862.D	100.0	100.0	100.0	101.0
VJ3081-MB	J052863.D	100.0	96.0	103.0	106.0
VJ3082-BS	J052893.D	96.0	97.0	100.0	105.0
VJ3082-BS	J052894.D	98.0	101.0	99.0	98.0
VJ3082-MB	J052895.D	98.0	95.0	105.0	104.0

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	87-116%
S2 = 1,2-Dichloroethane-D4	76-127%
S3 = Toluene-D8	86-112%
S4 = 4-Bromofluorobenzene	84-120%

Initial Calibration Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ3080-ICC3080
Lab FileID: J052831.D

Response Factor Report MSVOA6

Method : C:\MSDCHEM\1\METHODS\8260-JAPP9.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Mon Jan 11 14:57:31 2010
Response via : Initial Calibration

Calibration Files
1 =J052828.D 2 =J052829.D 3 =J052830.D 4 =J052831.D
5 =J052832.D 6 =J052833.D

	Compound	1	2	3	4	5	6	Avg	%RSD
1) I	Fluorobenzene	----------ISTD----------							
2)	Dichlorodifluoromet	0.105	0.164	0.159	0.152	0.155	0.154	0.148	14.59
3) P	Chloromethane	0.434	0.398	0.364	0.332	0.329	0.297	0.359	13.99
4) C	Vinyl Chloride	0.251	0.294	0.299	0.282	0.293	0.269	0.281	6.56
5)	Bromomethane	0.268	0.219	0.209	0.187	0.174	0.152	0.201	20.14
	---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9996								
	Response Ratio = 0.00000 + 0.21701 *A + -0.03222 *A^2								
6)	Chloroethane	0.187	0.183	0.183	0.166	0.146	0.120	0.164	16.12
	---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9998								
	Response Ratio = 0.00000 + 0.19897 *A + -0.03913 *A^2								
7)	Trichlorofluorometh	0.289	0.335	0.360	0.355	0.373	0.331	0.341	8.70
8)	Ethyl Ether	0.221	0.227	0.247	0.248	0.246	0.226	0.236	5.31
9)	1,2-Dichlorotrifluo	0.214	0.252	0.262	0.266	0.259	0.232	0.248	8.17
10) C	1,1-Dichloroethene	0.279	0.318	0.339	0.351	0.339	0.310	0.323	8.06
11)	Freon 113	0.141	0.169	0.195	0.201	0.204	0.188	0.183	13.08
12)	Carbon Disulfide	0.650	0.587	0.605	0.611	0.589	0.543	0.597	5.90
13)	Iodomethane	0.331	0.372	0.396	0.398	0.409	0.397	0.384	7.49
14)	Allyl chloride	0.355	0.430	0.461	0.461	0.458	0.440	0.434	9.40
15)	Methylene Chloride	1.551	0.520	0.452	0.378	0.352	0.345	0.600	78.52
	---- Linear regr., Force(0,0) ---- Coefficient = 0.9984								
	Response Ratio = 0.00000 + 0.35289 *A								
16)	Acetone	0.023	0.018	0.021	0.020	0.020	0.019	0.020	7.11
17)	Methyl acetate	0.028	0.030	0.034	0.032	0.032	0.032	0.031	6.98
18)	trans-1,2-Dichloroe	0.299	0.315	0.336	0.332	0.328	0.325	0.323	4.20
19)	Hexane	0.212	0.227	0.240	0.237	0.228	0.222	0.228	4.46
20)	Methyl Tert Butyl E	0.472	0.490	0.559	0.543	0.546	0.553	0.527	6.96
21)	Acetonitrile	0.025	0.018	0.016	0.015	0.014	0.014	0.017	24.31
	---- Quadratic regr., Force(0,0) ---- Coefficient = 1.0000								
	Response Ratio = 0.00000 + 0.01589 *A + -0.00011 *A^2								
22)	Di-isopropyl ether	0.653	0.753	0.899	0.878	0.878	0.858	0.820	11.77
23)	Chloroprene	0.629	0.391	0.382	0.432	0.449	0.441	0.454	19.81
	---- Linear regr., Force(0,0) ---- Coefficient = 0.9990								
	Response Ratio = 0.00000 + 0.44082 *A								
24) P	1,1-Dichloroethane	0.360	0.415	0.449	0.440	0.439	0.432	0.423	7.70
25)	Acrylonitrile	0.126	0.074	0.084	0.073	0.069	0.071	0.083	26.12
	---- Linear regr., Force(0,0) ---- Coefficient = 0.9984								
	Response Ratio = 0.00000 + 0.07100 *A								
26)	ETBE	0.562	0.649	0.767	0.748	0.769	0.762	0.709	12.03
27)	Vinyl acetate	0.336	0.411	0.410	0.432	0.392	0.380	0.394	8.44
28)	cis-1,2-Dichloroeth	0.184	0.222	0.250	0.251	0.252	0.244	0.234	11.47

Initial Calibration Summary

Job Number: F70691 **Sample:** VJ3080-ICC3080
Account: TETTNOAK Tetra Tech, Inc **Lab FileID:** J052831.D
Project: Holloman AFB; Alamogordo, NM

```
29)      2,2-Dichloropropane 0.204 0.257 0.280 0.288 0.292 0.290 0.268  12.73
30)      Bromochloromethane  0.106 0.115 0.133 0.130 0.132 0.131 0.124   9.03
31)      Cyclohexane         0.243 0.344 0.398 0.412 0.406 0.401 0.367  17.91
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9998
               Response Ratio = 0.00000 + 0.40329 *A

32) C    Chloroform          0.336 0.380 0.413 0.408 0.409 0.402 0.391   7.56
33)      Ethyl acetate       0.238 0.248 0.267 0.247 0.271 0.247 0.253   5.12
34)      Tetrahydrofuran     0.258 0.081 0.068 0.060 0.063 0.060 0.098  80.13
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9989
               Response Ratio = 0.00000 + 0.06100 *A

35) S    Dibromofluoromethan 0.268 0.266 0.265 0.268 0.268 0.271 0.268   0.78
36)      Carbon Tetrachlorid 0.196 0.251 0.273 0.278 0.284 0.278 0.260  12.90
37)      1,1,1-Trichloroetha 0.217 0.283 0.310 0.310 0.308 0.308 0.289  12.80
38)      2-Butanone          0.088 0.089 0.104 0.103 0.103 0.098 0.097   7.43
39)      1,1-Dichloropropene 0.204 0.264 0.292 0.302 0.301 0.295 0.276  13.76
40)      Propionitrile       0.029 0.031 0.035 0.035 0.035 0.033 0.033   7.81
41)      Methacrylonitrile   0.122 0.141 0.156 0.156 0.152 0.131 0.143   9.97
42)      Benzene             0.683 0.832 0.903 0.904 0.915 0.862 0.850  10.28
43)      TAME                0.423 0.515 0.602 0.597 0.611 0.603 0.559  13.51
44) S    1,2-Dichloroethane- 0.288 0.286 0.299 0.303 0.321 0.302 0.300   4.24
45)      1,2-Dichloroethane  0.292 0.283 0.318 0.313 0.320 0.314 0.307   4.94
46)      Trichloroethene     0.192 0.220 0.236 0.242 0.249 0.242 0.230   9.28
47)      Methylcyclohexane   0.224 0.324 0.373 0.381 0.377 0.368 0.341  17.93
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9995
               Response Ratio = 0.00000 + 0.37178 *A

48)      Dibromomethane      0.111 0.125 0.141 0.141 0.145 0.143 0.134  10.00
49) C    1,2-Dichloropropane 0.187 0.230 0.263 0.264 0.270 0.264 0.246  13.25
50)      Bromodichloromethan 0.229 0.266 0.310 0.311 0.320 0.318 0.292  12.65
51)      Methyl methacrylate 0.121 0.150 0.198 0.207 0.211 0.203 0.182  20.43
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9991
               Response Ratio = 0.00000 + 0.20538 *A

52)      2-Chloroethyl vinyl 0.095 0.130 0.166 0.170 0.175 0.161 0.149  20.66
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9986
               Response Ratio = 0.00000 + 0.18204 *A + -0.00196 *A^2

53)      cis-1,3-Dichloropro 0.235 0.308 0.377 0.382 0.396 0.387 0.348  18.30
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9997
               Response Ratio = 0.00000 + 0.38902 *A


54) I    Chlorobenzene-d5      ----------------ISTD---------------------
55) S    Toluene-d8          1.314 1.271 1.246 1.239 1.225 1.222 1.253   2.77
56) C    Toluene             1.070 1.157 1.215 1.197 1.186 1.131 1.159   4.57
57)      2-Nitropropane      0.042 0.046 0.063 0.064 0.068 0.065 0.058  18.85
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9989
               Response Ratio = 0.00000 + 0.06565 *A

58)      4-Methyl-2-pentanon 0.196 0.239 0.300 0.288 0.282 0.254 0.260  14.87
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9992
               Response Ratio = 0.00000 + 0.32030 *A + -0.00646 *A^2

59)      trans-1,3-Dichlorop 0.304 0.353 0.427 0.428 0.446 0.436 0.399  14.35
60)      Tetrachloroethene   0.244 0.314 0.337 0.351 0.358 0.360 0.327  13.47
61)      Ethyl methacrylate  0.204 0.270 0.345 0.356 0.369 0.369 0.319  21.15
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9998
               Response Ratio = 0.00000 + 0.36692 *A
```

Initial Calibration Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ3080-ICC3080
Lab FileID: J052831.D

```
62)     1,1,2-Trichloroetha 0.188 0.220 0.240 0.232 0.233 0.228 0.223   8.36
63)     Dibromochloromethan 0.213 0.253 0.313 0.318 0.327 0.329 0.292  16.44
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9999
              Response Ratio = 0.00000 + 0.32675 *A

64)     1,3-Dichloropropane 0.370 0.412 0.457 0.449 0.454 0.443 0.431   7.92
65)     1,2-Dibromoethane   0.209 0.238 0.282 0.277 0.283 0.279 0.261  11.79
66)     2-hexanone          0.116 0.148 0.201 0.196 0.195 0.180 0.173  19.61
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9994
              Response Ratio = 0.00000 + 0.21143 *A + -0.00299 *A^2

67)     1-Chlorohexane      0.223 0.358 0.418 0.439 0.437 0.427 0.384  21.90
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9996
              Response Ratio = 0.00000 + 0.43060 *A

68) C   Ethylbenzene        1.146 1.262 1.370 1.380 1.363 1.240 1.293   7.23
69) P   Chlorobenzene       0.707 0.802 0.876 0.881 0.888 0.835 0.832   8.32
70)     1,1,1,2-Tetrachloro 0.205 0.264 0.300 0.306 0.313 0.316 0.284  15.16
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9999
              Response Ratio = 0.00000 + 0.31352 *A

71)     m,p-Xylene          0.695 0.906 1.023 1.029 0.993 0.870 0.920  13.84
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9988
              Response Ratio = 0.00000 + 1.15520 *A + -0.06896 *A^2

72)     o-Xylene            0.582 0.822 0.997 1.006 1.020 0.969 0.899  19.09
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9995
              Response Ratio = 0.00000 + 1.05150 *A + -0.03808 *A^2

73)     Styrene             0.457 0.676 0.855 0.867 0.893 0.858 0.768  22.25
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9992
              Response Ratio = 0.00000 + 0.86873 *A

74) P   Bromoform           0.135 0.155 0.207 0.214 0.227 0.231 0.195  20.59
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9993
              Response Ratio = 0.00000 + 0.22730 *A

75)     Isopropylbenzene    0.614 0.922 1.089 1.140 1.125 1.067 0.993  20.28
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9996
              Response Ratio = 0.00000 + 1.18235 *A + -0.05483 *A^2


76) I   1,4-Dichlorobenzene-d ----------------ISTD---------------------
77) S   4-Bromofluorobenzen 0.838 0.824 0.819 0.800 0.804 0.810 0.816   1.71
78)     cis-1,4-Dichloro-2- 0.061 0.060 0.100 0.111 0.125 0.140 0.100  33.31
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9999
              Response Ratio = 0.00000 + 0.09041 *A + 0.02493 *A^2

79)     n-Propylbenzene     1.798 2.419 2.773 2.754 2.675 2.377 2.466  14.92
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9991
              Response Ratio = 0.00000 + 3.06783 *A + -0.33474 *A^2

80)     Bromobenzene        0.522 0.627 0.716 0.710 0.747 0.737 0.677  12.82
81) P   1,1,2,2-Tetrachloro 0.493 0.515 0.602 0.569 0.570 0.556 0.551   7.29
82)     1,3,5-Trimethylbenz 1.106 1.556 1.890 1.902 1.923 1.773 1.692  18.78
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9991
              Response Ratio = 0.00000 + 2.04414 *A + -0.12743 *A^2

83)     2-Chlorotoluene     1.204 1.587 1.817 1.801 1.821 1.664 1.649  14.43
```

Initial Calibration Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ3080-ICC3080
Lab FileID: J052831.D

```
 84)     trans-1,4-Dichloro- 0.067 0.067 0.104 0.111 0.121 0.133 0.101  27.57
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9999
               Response Ratio = 0.00000 + 0.09482 *A + 0.01918 *A^2

 85)     1,2,3-Trichloroprop 0.134 0.147 0.167 0.165 0.167 0.166 0.158   8.99
 86)     Cyclohexanone       0.010 0.012 0.014 0.015 0.014 0.015 0.013  14.70
 87)     4-Chlorotoluene     1.083 1.401 1.677 1.610 1.630 1.547 1.491  14.85
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9996
               Response Ratio = 0.00000 + 1.70742 *A + -0.07623 *A^2

 88)     tert-Butylbenzene   0.614 0.840 1.013 1.033 1.051 1.003 0.926  18.42
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9995
               Response Ratio = 0.00000 + 1.07064 *A + -0.03046 *A^2

 89)     1,2,4-Trimethylbenz 1.117 1.626 1.951 1.916 1.924 1.800 1.722  18.58
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9995
               Response Ratio = 0.00000 + 2.04724 *A + -0.11791 *A^2

 90)     Pentachloroethane   0.288 0.332 0.381 0.398 0.410 0.426 0.373  14.04
 91)     sec-Butylbenzene    1.363 2.054 2.415 2.400 2.370 2.182 2.130  18.86
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9995
               Response Ratio = 0.00000 + 2.59289 *A + -0.19785 *A^2

 92)     4-Isopropyltoluene  1.007 1.629 2.047 2.035 2.060 1.919 1.783  23.19
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9993
               Response Ratio = 0.00000 + 2.17281 *A + -0.11922 *A^2

 93)     1,3-Dichlorobenzene 0.958 1.097 1.228 1.194 1.231 1.201 1.152   9.27
 94)     1,4-Dichlorobenzene 1.194 1.191 1.334 1.281 1.302 1.253 1.259   4.60
 95)     n-Butylbenzene      0.670 1.020 1.220 1.230 1.260 1.153 1.092  20.51
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9986
               Response Ratio = 0.00000 + 1.33142 *A + -0.08298 *A^2

 96)     Benzyl Chloride     0.174 0.187 0.258 0.268 0.289 0.284 0.243  20.60
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9992
               Response Ratio = 0.00000 + 0.28323 *A

 97)     1,2-Dichlorobenzene 0.899 0.994 1.169 1.139 1.176 1.143 1.087  10.45
 98)     1,2-Dibromo-3-Chlor 0.058 0.060 0.083 0.078 0.086 0.084 0.075  16.50
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9990
               Response Ratio = 0.00000 + 0.08383 *A

 99)     Hexachlorobutadiene 0.389 0.346 0.405 0.421 0.464 0.477 0.417  11.68
100)     1,2,4-Trichlorobenz 0.680 0.629 0.838 0.850 0.917 0.914 0.805  15.16
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9993
               Response Ratio = 0.00000 + 0.90690 *A

101)     Naphthalene         1.162 1.043 1.471 1.487 1.520 1.460 1.357  14.86
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9990
               Response Ratio = 0.00000 + 1.47941 *A

102)     1,2,3-Trichlorobenz 0.645 0.548 0.710 0.731 0.782 0.786 0.700  12.98

103) I   Tert Butyl Alcohol-d1 ----------------ISTD---------------------
104)     Ethanol             0.255 0.217 0.150 0.148 0.158       0.186  25.88
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9973
               Response Ratio = 0.00000 + 0.15515 *A

105)     acrolein            3.543 1.988 1.391 1.149 1.065 1.235 1.729  54.83
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9918
```

Initial Calibration Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ3080-ICC3080
Lab FileID: J052831.D

```
                Response Ratio = 0.00000 + 1.06629 *A + 0.06969 *A^2

106)     Tert Butyl Alcohol  0.909 0.882 0.981 0.956 1.066 0.956 0.958   6.67
107)     tert Amyl alcohol   0.500 0.663 0.823 0.851 0.939 0.854 0.772  20.86
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9956
                Response Ratio = 0.00000 + 0.87725 *A

108)     Isobutyl alcohol    0.367 0.389 0.399 0.422 0.435 0.383 0.399   6.32
109)     1,4-Dioxane         0.023 0.070 0.074 0.080 0.085 0.077 0.068  33.25
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9966
                Response Ratio = 0.00000 + 0.08710 *A + -0.00113 *A^2

 ---------------------------------------------------------------------------
 (#) = Out of Range

           8260-JAPP9.M        Tue Jan 12 09:09:28 2010
```

Initial Calibration Verification

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ3080-ICV3080
Lab FileID: J052834.D

Evaluate Continuing Calibration Report

```
Data File : C:\MSDCHEM\1\DATA\011110\J052834.D          Vial: 7
Acq On    : 11 Jan 2010   2:52 pm                   Operator: KarenW
Sample    : ICV3080-4                               Inst    : MSVOA6
Misc      : ms13557,vj3080,,,,,                     Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\MSDCHEM\1\METHODS\8260-JAPP9.M (RTE Integrator)
Title        : SW-846 Method 5030B/8260B & EPA 624
Last Update  : Mon Jan 11 14:57:31 2010
Response via : Multiple Level Calibration

Min. RRF     :   0.001  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	139	0.00	7.48
2		Dichlorodifluoromethane	0.148	0.148	0.0	136	0.00	2.73
3	P	Chloromethane	0.359	0.308	14.2	129	0.00	2.93
4	C	Vinyl Chloride	0.281	0.261	7.1	129	0.00	3.07
			Amount	Calc.	%Drift			
5		Bromomethane	40.000	35.318	11.7	128	0.00	3.43
6		Chloroethane	40.000	31.244	21.9#	115	0.00	3.56
			AvgRF	CCRF	%Dev			
7		Trichlorofluoromethane	0.341	0.358	-5.0	141	0.07	3.76
8		Ethyl Ether	0.236	0.238	-0.8	134	0.00	4.00
9		1,2-Dichlorotrifluoroetha	0.248	0.267	-7.7	140	0.00	4.22
10	C	1,1-Dichloroethene	0.323	0.330	-2.2	131	0.00	4.26
11		Freon 113	0.183	0.206	-12.6	143	0.00	4.34
12		Carbon Disulfide	0.597	0.635	-6.4	145	0.00	4.32
13		Iodomethane	0.384	0.453	-18.0	158	0.00	4.43
14		Allyl chloride	0.434	0.441	-1.6	134	0.00	4.74
			Amount	Calc.	%Drift			
15		Methylene Chloride	40.000	42.416	-6.0	138	0.00	4.86
			AvgRF	CCRF	%Dev			
16		Acetone	0.020	0.026	-30.0#	184	0.00	4.89
17		Methyl acetate	0.031	0.035	-12.9	151	0.00	5.00
18		trans-1,2-Dichloroethene	0.323	0.354	-9.6	149	0.00	5.03
19		Hexane	0.228	0.251	-10.1	147	0.00	5.09
20		Methyl Tert Butyl Ether	0.527	0.600	-13.9	154	0.00	5.14
			Amount	Calc.	%Drift			
21		Acetonitrile	400.000	388.691	2.8	136	0.00	5.37
			AvgRF	CCRF	%Dev			
22		Di-isopropyl ether	0.820	0.887	-8.2	141	0.00	5.50
			Amount	Calc.	%Drift			
23		Chloroprene	40.000	40.830	-2.1	145	0.00	5.64
			AvgRF	CCRF	%Dev			
24	P	1,1-Dichloroethane	0.423	0.451	-6.6	143	0.00	5.65
			Amount	Calc.	%Drift			

Initial Calibration Verification

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ3080-ICV3080
Lab FileID: J052834.D

25		Acrylonitrile	200.000	234.968	-17.5	160	-0.01	5.66
		----------	AvgRF	CCRF	%Dev	----------		
26		ETBE	0.709	0.781	-10.2	146	0.00	5.88
27		Vinyl acetate	0.394	0.480	-21.8#	155	0.00	5.87
28		cis-1,2-Dichloroethene	0.234	0.254	-8.5	141	0.00	6.21
29		2,2-Dichloropropane	0.268	0.306	-14.2	148	0.00	6.34
30		Bromochloromethane	0.124	0.141	-13.7	151	0.00	6.41
		----------	Amount	Calc.	%Drift	----------		
31		Cyclohexane	40.000	42.355	-5.9	144	0.00	6.46
		----------	AvgRF	CCRF	%Dev	----------		
32	C	Chloroform	0.391	0.425	-8.7	145	0.00	6.47
33		Ethyl acetate	0.253	0.194	23.3#	110	0.00	6.55
		----------	Amount	Calc.	%Drift	----------		
34		Tetrahydrofuran	40.000	38.999	2.5	137	0.00	6.64
		----------	AvgRF	CCRF	%Dev	----------		
35	S	Dibromofluoromethane	0.268	0.273	-1.9	142	0.00	6.66
36		Carbon Tetrachloride	0.260	0.294	-13.1	147	0.00	6.66
37		1,1,1-Trichloroethane	0.289	0.324	-12.1	146	0.00	6.72
38		2-Butanone	0.097	0.112	-15.5	152	0.00	6.75
39		1,1-Dichloropropene	0.276	0.313	-13.4	145	0.00	6.83
40		Propionitrile	0.033	0.034	-3.0	136	0.00	7.06
41		Methacrylonitrile	0.143	0.143	0.0	128	0.00	7.08
42		Benzene	0.850	0.918	-8.0	142	0.00	7.08
43		TAME	0.559	0.642	-14.8	150	0.00	7.17
44	S	1,2-Dichloroethane-d4	0.300	0.303	-1.0	139	0.00	7.20
45		1,2-Dichloroethane	0.307	0.320	-4.2	143	0.00	7.26
46		Trichloroethene	0.230	0.247	-7.4	142	0.00	7.65
		----------	Amount	Calc.	%Drift	----------		
47		Methylcyclohexane	40.000	42.560	-6.4	145	0.00	7.67
		----------	AvgRF	CCRF	%Dev	----------		
48		Dibromomethane	0.134	0.145	-8.2	144	0.00	8.07
49	C	1,2-Dichloropropane	0.246	0.263	-6.9	139	0.00	8.16
50		Bromodichloromethane	0.292	0.302	-3.4	135	0.00	8.20
		----------	Amount	Calc.	%Drift	----------		
51		Methyl methacrylate	40.000	42.639	-6.6	147	0.00	8.32
52		2-Chloroethyl vinyl ether	200.000	180.812	9.6	130	0.00	8.73
53		cis-1,3-Dichloropropene	40.000	39.627	0.9	141	0.00	8.82
		----------	AvgRF	CCRF	%Dev	----------		
54	I	Chlorobenzene-d5	1.000	1.000	0.0	136	0.00	10.56
55	S	Toluene-d8	1.253	1.240	1.0	136	0.00	9.02
56	C	Toluene	1.159	1.222	-5.4	139	0.00	9.07
		----------	Amount	Calc.	%Drift	----------		
57		2-Nitropropane	200.000	186.370	6.8	130	0.00	9.27
58		4-Methyl-2-pentanone	200.000	172.000	14.0	121	0.00	9.40
		----------	AvgRF	CCRF	%Dev	----------		
59		trans-1,3-Dichloropropene	0.399	0.462	-15.8	147	0.00	9.45
60		Tetrachloroethene	0.327	0.378	-15.6	147	0.00	9.47

Initial Calibration Verification

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ3080-ICV3080
Lab FileID: J052834.D

			Amount	Calc.	%Drift			
61		Ethyl methacrylate	40.000	36.958	7.6	130	0.00	9.57
			AvgRF	CCRF	%Dev			
62		1,1,2-Trichloroethane	0.223	0.232	-4.0	136	0.00	9.61
			Amount	Calc.	%Drift			
63		Dibromochloromethane	40.000	39.513	1.2	138	0.00	9.81
			AvgRF	CCRF	%Dev			
64		1,3-Dichloropropane	0.431	0.449	-4.2	136	0.00	9.89
65		1,2-Dibromoethane	0.261	0.288	-10.3	141	0.00	10.06
			Amount	Calc.	%Drift			
66		2-hexanone	200.000	182.855	8.6	128	0.00	10.22
67		1-Chlorohexane	40.000	39.383	1.5	132	0.00	10.53
			AvgRF	CCRF	%Dev			
68	C	Ethylbenzene	1.293	1.342	-3.8	132	0.00	10.59
69	P	Chlorobenzene	0.832	0.892	-7.2	138	0.00	10.57
			Amount	Calc.	%Drift			
70		1,1,1,2-Tetrachloroethane	40.000	40.081	-0.2	140	0.00	10.63
71		m,p-Xylene	80.000	76.094	4.9	132	0.00	10.73
72		o-Xylene	40.000	40.083	-0.2	138	0.00	11.16
73		Styrene	40.000	39.786	0.5	136	0.00	11.21
74	P	Bromoform	40.000	38.565	3.6	140	0.00	11.26
75		Isopropylbenzene	40.000	43.673	-9.2	148	0.00	11.47
			AvgRF	CCRF	%Dev			
76	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	135	0.00	12.92
77	S	4-Bromofluorobenzene	0.816	0.816	0.0	138	0.00	11.77
			Amount	Calc.	%Drift			
78		cis-1,4-Dichloro-2-butene	40.000	46.302	-15.8	159	0.00	11.81
79		n-Propylbenzene	40.000	36.631	8.4	127	0.00	11.89
			AvgRF	CCRF	%Dev			
80		Bromobenzene	0.677	0.734	-8.4	140	0.00	11.89
81	P	1,1,2,2-Tetrachloroethane	0.551	0.558	-1.3	132	0.00	11.94
			Amount	Calc.	%Drift			
82		1,3,5-Trimethylbenzene	40.000	37.818	5.5	131	0.00	12.08
			AvgRF	CCRF	%Dev			
83		2-Chlorotoluene	1.649	1.767	-7.2	133	0.00	12.07
			Amount	Calc.	%Drift			
84		trans-1,4-Dichloro-2-Bute	40.000	49.559	-23.9#	171	0.00	12.12
			AvgRF	CCRF	%Dev			
85		1,2,3-Trichloropropane	0.158	0.148	6.3	121	0.00	12.10
86		Cyclohexanone	0.013	0.015	-15.4	131	0.00	12.16
			Amount	Calc.	%Drift			
87		4-Chlorotoluene	40.000	39.158	2.1	135	0.00	12.23
88		tert-Butylbenzene	40.000	37.873	5.3	130	0.00	12.42
89		1,2,4-Trimethylbenzene	40.000	37.574	6.1	130	0.00	12.48

Initial Calibration Verification

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ3080-ICV3080
Lab FileID: J052834.D

			AvgRF	CCRF	%Dev			
90	Pentachloroethane		0.373	0.443	-18.8	150	0.00	12.45
			Amount	Calc.	%Drift			
91	sec-Butylbenzene		40.000	37.996	5.0	131	0.00	12.60
92	4-Isopropyltoluene		40.000	37.881	5.3	131	0.00	12.74
			AvgRF	CCRF	%Dev			
93	1,3-Dichlorobenzene		1.152	1.223	-6.2	138	0.00	12.85
94	1,4-Dichlorobenzene		1.259	1.298	-3.1	137	0.00	12.94
			Amount	Calc.	%Drift			
95	n-Butylbenzene		40.000	35.818	10.5	125	0.00	13.18
96	Benzyl Chloride		40.000	36.518	8.7	130	0.00	13.18
			AvgRF	CCRF	%Dev			
97	1,2-Dichlorobenzene		1.087	1.154	-6.2	137	0.00	13.37
			Amount	Calc.	%Drift			
98	1,2-Dibromo-3-Chloropropa		40.000	36.780	8.0	133	0.00	14.13
			AvgRF	CCRF	%Dev			
99	Hexachlorobutadiene		0.417	0.447	-7.2	143	0.00	14.70
			Amount	Calc.	%Drift			
100	1,2,4-Trichlorobenzene		40.000	38.294	4.3	138	0.00	14.74
101	Naphthalene		40.000	39.387	1.5	132	0.00	15.02
			AvgRF	CCRF	%Dev			
102	1,2,3-Trichlorobenzene		0.700	0.747	-6.7	138	0.00	15.17
103	I Tert Butyl Alcohol-d10		1.000	1.000	0.0	150	-0.01	5.10
			Amount	Calc.	%Drift			
104	Ethanol		800.000	753.325	5.8	148	0.00	4.14
105	acrolein		200.000	312.945	-56.5#	236	0.00	4.59
			AvgRF	CCRF	%Dev			
106	Tert Butyl Alcohol		0.958	0.911	4.9	143	0.00	5.18
			Amount	Calc.	%Drift			
107	tert Amyl alcohol		400.000	379.677	5.1	147	0.00	7.31
			AvgRF	CCRF	%Dev			
108	Isobutyl alcohol		0.399	0.372	6.8	132	0.00	7.19
			Amount	Calc.	%Drift			
109	1,4-Dioxane		800.000	906.997	-13.4	175	0.00	8.38

(#) = Out of Range SPCC's out = 0 CCC's out = 0
J052831.D 8260-JAPP9.M Tue Jan 12 09:09:15 2010

Continuing Calibration Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ3081-CC3080
Lab FileID: J052861.D

Evaluate Continuing Calibration Report

```
Data File : C:\MSDCHEM\1\DATA\011210\J052861.D          Vial: 1
Acq On    : 12 Jan 2010   9:35 am                   Operator: KarenW
Sample    : CC3080-4                                Inst    : MSVOA6
Misc      : ms13578,vj3081,,,,,                     Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\MSDCHEM\1\METHODS\8260-JAPP9.M (RTE Integrator)
Title        : SW-846 Method 5030B/8260B & EPA 624
Last Update  : Mon Jan 11 14:57:31 2010
Response via : Multiple Level Calibration

Min. RRF     :   0.001  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	89	0.00	7.48
2		Dichlorodifluoromethane	0.148	0.149	-0.7	87	0.00	2.74
3	P	Chloromethane	0.359	0.344	4.2	92	0.02	2.95
4	C	Vinyl Chloride	0.281	0.283	-0.7	89	0.00	3.07
			Amount	Calc.	%Drift			
5		Bromomethane	40.000	43.431	-8.6	98	0.01	3.44
6		Chloroethane	40.000	42.003	-5.0	94	0.01	3.57
			AvgRF	CCRF	%Dev			
7		Trichlorofluoromethane	0.341	0.382	-12.0	95	0.07	3.76
8		Ethyl Ether	0.236	0.252	-6.8	90	0.00	4.00
9		1,2-Dichlorotrifluoroetha	0.248	0.263	-6.0	88	0.00	4.22
10	C	1,1-Dichloroethene	0.323	0.346	-7.1	88	0.00	4.25
11		Freon 113	0.183	0.200	-9.3	89	0.00	4.34
12		Carbon Disulfide	0.597	0.608	-1.8	89	0.00	4.33
13		Iodomethane	0.384	0.404	-5.2	90	0.00	4.43
14		Allyl chloride	0.434	0.460	-6.0	89	0.00	4.74
			Amount	Calc.	%Drift			
15		Methylene Chloride	40.000	45.477	-13.7	94	0.00	4.86
			AvgRF	CCRF	%Dev			
16		Acetone	0.020	0.022	-10.0	97	0.00	4.87
17		Methyl acetate	0.031	0.035	-12.9	95	0.00	5.00
18		trans-1,2-Dichloroethene	0.323	0.335	-3.7	90	0.00	5.03
19		Hexane	0.228	0.237	-3.9	89	0.00	5.09
20		Methyl Tert Butyl Ether	0.527	0.555	-5.3	91	0.00	5.13
			Amount	Calc.	%Drift			
21		Acetonitrile	400.000	416.797	-4.2	92	0.00	5.37
			AvgRF	CCRF	%Dev			
22		Di-isopropyl ether	0.820	0.906	-10.5	92	0.00	5.50
			Amount	Calc.	%Drift			
23		Chloroprene	40.000	40.953	-2.4	93	0.00	5.65
			AvgRF	CCRF	%Dev			
24	P	1,1-Dichloroethane	0.423	0.453	-7.1	92	0.00	5.65
			Amount	Calc.	%Drift			

Continuing Calibration Summary

Job Number: F70691 **Sample:** VJ3081-CC3080
Account: TETTNOAK Tetra Tech, Inc **Lab FileID:** J052861.D
Project: Holloman AFB; Alamogordo, NM

25		Acrylonitrile	200.000	220.793	-10.4	96	0.00	5.68
		----------	AvgRF	CCRF	%Dev	----------		
26		ETBE	0.709	0.766	-8.0	91	0.00	5.88
27		Vinyl acetate	0.394	0.424	-7.6	87	0.00	5.87
28		cis-1,2-Dichloroethene	0.234	0.258	-10.3	91	0.00	6.21
29		2,2-Dichloropropane	0.268	0.293	-9.3	90	0.00	6.34
30		Bromochloromethane	0.124	0.133	-7.3	92	0.00	6.41
		----------	Amount	Calc.	%Drift	----------		
31		Cyclohexane	40.000	39.679	0.8	86	0.00	6.46
		----------	AvgRF	CCRF	%Dev	----------		
32	C	Chloroform	0.391	0.419	-7.2	91	0.00	6.47
33		Ethyl acetate	0.253	0.260	-2.8	94	0.00	6.55
		----------	Amount	Calc.	%Drift	----------		
34		Tetrahydrofuran	40.000	43.359	-8.4	97	0.00	6.64
		----------	AvgRF	CCRF	%Dev	----------		
35	S	Dibromofluoromethane	0.268	0.265	1.1	88	0.00	6.66
36		Carbon Tetrachloride	0.260	0.272	-4.6	87	0.00	6.66
37		1,1,1-Trichloroethane	0.289	0.312	-8.0	90	0.00	6.72
38		2-Butanone	0.097	0.110	-13.4	95	0.00	6.75
39		1,1-Dichloropropene	0.276	0.303	-9.8	89	0.00	6.83
40		Propionitrile	0.033	0.035	-6.1	89	0.00	7.06
41		Methacrylonitrile	0.143	0.158	-10.5	90	0.00	7.09
42		Benzene	0.850	0.911	-7.2	90	0.00	7.08
43		TAME	0.559	0.611	-9.3	91	0.00	7.17
44	S	1,2-Dichloroethane-d4	0.300	0.303	-1.0	89	0.00	7.20
45		1,2-Dichloroethane	0.307	0.324	-5.5	92	0.00	7.26
46		Trichloroethene	0.230	0.246	-7.0	90	0.00	7.65
		----------	Amount	Calc.	%Drift	----------		
47		Methylcyclohexane	40.000	39.616	1.0	86	0.00	7.67
		----------	AvgRF	CCRF	%Dev	----------		
48		Dibromomethane	0.134	0.146	-9.0	92	0.00	8.07
49	C	1,2-Dichloropropane	0.246	0.270	-9.8	91	0.00	8.16
50		Bromodichloromethane	0.292	0.324	-11.0	92	0.00	8.21
		----------	Amount	Calc.	%Drift	----------		
51		Methyl methacrylate	40.000	41.292	-3.2	91	0.00	8.32
52		2-Chloroethyl vinyl ether	200.000	201.539	-0.8	92	0.00	8.73
53		cis-1,3-Dichloropropene	40.000	40.307	-0.8	91	0.00	8.82
		----------	AvgRF	CCRF	%Dev	----------		
54	I	Chlorobenzene-d5	1.000	1.000	0.0	87	0.00	10.56
55	S	Toluene-d8	1.253	1.226	2.2	87	0.00	9.02
56	C	Toluene	1.159	1.219	-5.2	89	0.00	9.07
		----------	Amount	Calc.	%Drift	----------		
57		2-Nitropropane	200.000	219.305	-9.7	98	0.00	9.27
58		4-Methyl-2-pentanone	200.000	215.134	-7.6	96	0.00	9.40
		----------	AvgRF	CCRF	%Dev	----------		
59		trans-1,3-Dichloropropene	0.399	0.447	-12.0	91	0.00	9.45
60		Tetrachloroethene	0.327	0.348	-6.4	87	0.00	9.47

Continuing Calibration Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ3081-CC3080
Lab FileID: J052861.D

			Amount	Calc.	%Drift			
61		Ethyl methacrylate	40.000	39.979	0.1	90	0.00	9.58
			AvgRF	CCRF	%Dev			
62		1,1,2-Trichloroethane	0.223	0.245	-9.9	92	0.00	9.61
			Amount	Calc.	%Drift			
63		Dibromochloromethane	40.000	39.768	0.6	89	0.00	9.81
			AvgRF	CCRF	%Dev			
64		1,3-Dichloropropane	0.431	0.468	-8.6	91	0.00	9.89
65		1,2-Dibromoethane	0.261	0.289	-10.7	91	0.00	10.06
			Amount	Calc.	%Drift			
66		2-hexanone	200.000	217.819	-8.9	97	0.00	10.22
67		1-Chlorohexane	40.000	40.378	-0.9	87	0.00	10.53
			AvgRF	CCRF	%Dev			
68	C	Ethylbenzene	1.293	1.377	-6.5	87	0.00	10.59
69	P	Chlorobenzene	0.832	0.888	-6.7	88	0.00	10.57
			Amount	Calc.	%Drift			
70		1,1,1,2-Tetrachloroethane	40.000	39.556	1.1	89	0.00	10.63
71		m,p-Xylene	80.000	79.724	0.3	89	0.00	10.73
72		o-Xylene	40.000	40.385	-1.0	90	0.00	11.16
73		Styrene	40.000	40.953	-2.4	90	0.00	11.21
74	P	Bromoform	40.000	39.269	1.8	91	0.00	11.26
75		Isopropylbenzene	40.000	39.623	0.9	87	0.00	11.47
			AvgRF	CCRF	%Dev			
76	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	85	0.00	12.92
77	S	4-Bromofluorobenzene	0.816	0.808	1.0	86	0.00	11.77
			Amount	Calc.	%Drift			
78		cis-1,4-Dichloro-2-butene	40.000	43.514	-8.8	93	0.00	11.81
79		n-Propylbenzene	40.000	40.598	-1.5	88	0.00	11.89
			AvgRF	CCRF	%Dev			
80		Bromobenzene	0.677	0.741	-9.5	89	0.00	11.89
81	P	1,1,2,2-Tetrachloroethane	0.551	0.629	-14.2	94	0.00	11.94
			Amount	Calc.	%Drift			
82		1,3,5-Trimethylbenzene	40.000	39.832	0.4	87	0.00	12.08
			AvgRF	CCRF	%Dev			
83		2-Chlorotoluene	1.649	1.877	-13.8	89	0.00	12.07
			Amount	Calc.	%Drift			
84		trans-1,4-Dichloro-2-Bute	40.000	44.807	-12.0	96	0.00	12.13
			AvgRF	CCRF	%Dev			
85		1,2,3-Trichloropropane	0.158	0.174	-10.1	90	0.00	12.10
86		Cyclohexanone	0.013	0.017	-30.8#	95	0.00	12.16
			Amount	Calc.	%Drift			
87		4-Chlorotoluene	40.000	41.193	-3.0	90	0.00	12.23
88		tert-Butylbenzene	40.000	40.221	-0.6	87	0.00	12.42
89		1,2,4-Trimethylbenzene	40.000	40.937	-2.3	89	0.00	12.48

Continuing Calibration Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ3081-CC3080
Lab FileID: J052861.D

		AvgRF	CCRF	%Dev			
90	Pentachloroethane	0.373	0.394	-5.6	84	0.00	12.45
		Amount	Calc.	%Drift			
91	sec-Butylbenzene	40.000	40.768	-1.9	88	0.00	12.60
92	4-Isopropyltoluene	40.000	40.792	-2.0	89	0.00	12.74
		AvgRF	CCRF	%Dev			
93	1,3-Dichlorobenzene	1.152	1.273	-10.5	91	0.00	12.85
94	1,4-Dichlorobenzene	1.259	1.350	-7.2	90	0.00	12.94
		Amount	Calc.	%Drift			
95	n-Butylbenzene	40.000	40.846	-2.1	89	0.00	13.18
96	Benzyl Chloride	40.000	41.412	-3.5	93	0.00	13.18
		AvgRF	CCRF	%Dev			
97	1,2-Dichlorobenzene	1.087	1.192	-9.7	89	0.00	13.37
		Amount	Calc.	%Drift			
98	1,2-Dibromo-3-Chloropropa	40.000	41.140	-2.9	93	0.00	14.13
		AvgRF	CCRF	%Dev			
99	Hexachlorobutadiene	0.417	0.423	-1.4	85	0.00	14.70
		Amount	Calc.	%Drift			
100	1,2,4-Trichlorobenzene	40.000	39.496	1.3	90	0.00	14.74
101	Naphthalene	40.000	44.319	-10.8	94	0.00	15.02
		AvgRF	CCRF	%Dev			
102	1,2,3-Trichlorobenzene	0.700	0.775	-10.7	90	0.00	15.18
103 I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	95	-0.01	5.10
		Amount	Calc.	%Drift			
104	Ethanol	800.000	809.268	-1.2	101	-0.01	4.13
105	acrolein	200.000	237.058	-18.5	111	0.00	4.59
		AvgRF	CCRF	%Dev			
106	Tert Butyl Alcohol	0.958	0.952	0.6	95	0.01	5.19
		Amount	Calc.	%Drift			
107	tert Amyl alcohol	400.000	400.698	-0.2	98	0.00	7.31
		AvgRF	CCRF	%Dev			
108	Isobutyl alcohol	0.399	0.411	-3.0	93	0.00	7.19
		Amount	Calc.	%Drift			
109	1,4-Dioxane	800.000	831.076	-3.9	102	0.00	8.39

(#) = Out of Range SPCC's out = 0 CCC's out = 0
J052831.D 8260-JAPP9.M Wed Jan 13 10:36:20 2010

5.7.3

5

Initial Calibration Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ3082-ICC3082
Lab FileID: J052889.D


```
                         Response Factor Report  MSVOA6

 Method       : C:\MSDCHEM\1\METHODS\SCOXYJ.M (RTE Integrator)
 Title        : EPA 624 & SWA 5030B/8260B
 Last Update  : Wed Jan 13 13:02:59 2010
 Response via : Initial Calibration

 Calibration Files
 1   =J052886.D   2   =J052887.D   3   =J052888.D   4   =J052889.D
 5      =J052890.D    6      =J052891.D

       Compound              1     2     3     4     5     6     Avg    %RSD
 ---------------------------------------------------------------------------

 1) I   Fluorobenzene         ----------------ISTD---------------------
 2)     tert-Butyl Formate  0.136 0.169 0.197 0.207 0.222 0.220 0.192  17.41
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9993
              Response Ratio = 0.00000 + 0.21861 *A

 3) S   Dibromofluoromethan 0.265 0.262 0.261 0.256 0.259 0.253 0.259   1.65
 4) S   1,2-Dichloroethane- 0.286 0.285 0.285 0.293 0.294 0.287 0.288   1.32

 5) I   Chlorobenzene-d5      ----------------ISTD---------------------
 6) S   Toluene-d8          1.267 1.270 1.246 1.253 1.230 1.240 1.251   1.24

 7) I   1,4-Dichlorobenzene-d ----------------ISTD---------------------
 8) S   4-Bromofluorobenzen 0.847 0.845 0.848 0.865 0.866 0.872 0.857   1.36

 9) I   Tert Butyl alcohol-d1 ----------------ISTD---------------------
10)     Ethanol             0.109 0.111 0.145 0.142 0.143 0.140 0.132  12.71
11)     Ethyl tert-butyl al 0.426 0.639 0.964 0.982 1.109 1.150 0.878  32.49
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9995
              Response Ratio = 0.00000 + 0.91599 *A + 0.01202 *A^2

---------------------------------------------------------------------------
(#) = Out of Range

          SCOXYJ.M          Thu Jan 14 08:27:07 2010
```

Initial Calibration Verification

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ3082-ICV3082
Lab FileID: J052892.D

Evaluate Continuing Calibration Report

```
Data File : C:\MSDCHEM\1\DATA\011310\J052892.D          Vial: 8
Acq On    : 13 Jan 2010  12:48 pm                   Operator: KarenW
Sample    : ICV3082-4                               Inst    : MSVOA6
Misc      : ms13578,vj3082,,,,,                     Multiplr: 1.00
MS Integration Params: small.p

Method       : C:\MSDCHEM\1\METHODS\SCOXYJ.M (RTE Integrator)
Title        : EPA 624 & SWA 5030B/8260B
Last Update  : Wed Jan 13 13:02:59 2010
Response via : Multiple Level Calibration

Min. RRF     :   0.001  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	97	0.00	7.47
		----------	Amount	Calc.	%Drift		----------	
2		tert-Butyl Formate	400.000	332.655	16.8	85	0.00	6.92
		----------	AvgRF	CCRF	%Dev		----------	
3	S	Dibromofluoromethane	0.259	0.256	1.2	97	0.00	6.66
4	S	1,2-Dichloroethane-d4	0.288	0.292	-1.4	97	0.00	7.19
5	I	Chlorobenzene-d5	1.000	1.000	0.0	98	0.00	10.56
6	S	Toluene-d8	1.251	1.243	0.6	97	0.00	9.02
7	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	97	0.00	12.92
8	S	4-Bromofluorobenzene	0.857	0.864	-0.8	96	0.00	11.77
9	I	Tert Butyl alcohol-d10	1.000	1.000	0.0	95	0.01	5.10
10		Ethanol	0.132	0.145	-9.8	97	0.01	4.15
		----------	Amount	Calc.	%Drift		----------	
11		Ethyl tert-butyl alcohol	2000.000	2093.350	-4.7	103	0.00	10.17

(#) = Out of Range SPCC's out = 0 CCC's out = 0
J052889.D SCOXYJ.M Thu Jan 14 08:26:54 2010

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Instrument Runlogs
- Initial and Continuing Calibration Blanks
- Initial and Continuing Calibration Checks
- High and Low Check Standards
- Interfering Element Check Standards
- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20111W2.PRN Date Analyzed: 01/11/10 Methods: SW846 7470A
Analyst: LM Run ID: MA7769
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:29	MA7769-STD1	1		STD01REP1
10:31	MA7769-STD2	1		STD02REP1
10:33	MA7769-STD3	1		STD03REP1
10:36	MA7769-STD4	1		STD04REP1
10:38	MA7769-STD5	1		STD05REP1
10:41	MA7769-STD6	1		STD06REP1
10:43	MA7769-HSTD1	1		
10:46	MA7769-ICV1	1		
10:48	MA7769-ICB1	1		
10:50	MA7769-CRI1	1		
10:53	MA7769-CCV1	1		
10:55	MA7769-CCB1	1		
10:57	MP17581-MB1	1		
11:00	MP17581-B1	1		
11:02	F70660-11	1		(sample used for QC only; not part of login F70691)
11:04	MP17581-D1	1		
11:06	MP17581-SD1	5		
11:08	MP17581-S1	1		
11:11	MP17581-S2	1		
11:13	ZZZZZZ	1		
11:15	ZZZZZZ	1		
11:18	ZZZZZZ	1		
11:20	MA7769-CCV2	1		
11:22	MA7769-CCB2	1		
11:25	ZZZZZZ	1		
11:27	ZZZZZZ	1		
11:29	ZZZZZZ	1		
11:32	ZZZZZZ	1		
11:34	ZZZZZZ	1		
11:38	ZZZZZZ	1		
11:41	ZZZZZZ	1		
11:44	ZZZZZZ	1		
11:46	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20111W2.PRN Date Analyzed: 01/11/10 Methods: SW846 7470A
Analyst: LM Run ID: MA7769
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:48	ZZZZZZ	1		
11:50	MA7769-CCV3	1		
11:53	MA7769-CCB3	1		
11:55	ZZZZZZ	1		
11:57	ZZZZZZ	1		
12:00	ZZZZZZ	1		
12:03	ZZZZZZ	1		
12:05	ZZZZZZ	1		
12:07	ZZZZZZ	1		
12:09	MP17582-MB1	1		
12:12	MP17582-B1	1		
12:14	F70660-11A	1		(sample used for QC only; not part of login F70691)
12:17	MP17582-D1	1		
12:19	MA7769-CCV4	1		
12:21	MA7769-CCB4	1		
12:24	MP17582-SD1	5		
12:27	MP17582-S1	1		
12:29	MP17582-S2	1		
12:32	ZZZZZZ	1		
12:34	ZZZZZZ	1		
12:36	ZZZZZZ	1		
12:39	F70691-2	1		
12:41	F70691-3	1		
12:44	F70691-4	1		
12:46	F70691-5	1		
12:49	MA7769-CCV5	1		
12:51	MA7769-CCB5	1		
12:53	ZZZZZZ	1		
12:56	ZZZZZZ	1		
12:58	ZZZZZZ	1		
13:00	ZZZZZZ	1		
13:02	ZZZZZZ	1		
13:05	F70691-6	1		

----------> Last reportable sample/prep for job F70691

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20111W2.PRN Date Analyzed: 01/11/10 Methods: SW846 7470A
Analyst: LM Run ID: MA7769
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:07	MA7769-CRI2	1		
13:10	MA7769-CCV6	1		
13:12	MA7769-CCB6	1		

----------> Last reportable CCB for job F70691
Refer to raw data for calibration curve and standards.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20111W2.PRN Date Analyzed: 01/11/10 Methods: SW846 7470A
QC Limits: result < RL Run ID: MA7769 Units: ug/l

Time:			10:48		10:55		11:22		11:53	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	1.0	.14	-0.016	<1.0	-0.064	<1.0	-0.034	<1.0	-0.036	<1.0

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20111W2.PRN Date Analyzed: 01/11/10 Methods: SW846 7470A
QC Limits: result < RL Run ID: MA7769 Units: ug/l

Time:			12:21		12:51		13:12	
Sample ID:			CCB4		CCB5		CCB6	
Metal	RL	IDL	raw	final	raw	final	raw	final
Mercury	1.0	.14	-0.044	<1.0	-0.040	<1.0	-0.037	<1.0

(*) Outside of QC limits
(anr) Analyte not requested

6.1.1
6

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20111W2.PRN Date Analyzed: 01/11/10 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA7769 Units: ug/l

Time:		10:46			10:53			11:20	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3	2.9	96.7	3.0	3.0	100.0	3	2.9	96.7

(*) Outside of QC limits
(anr) Analyte not requested

6.1.2
6

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20111W2.PRN Date Analyzed: 01/11/10 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA7769 Units: ug/l

Time:		11:50			12:19			12:49	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3	2.9	96.7	3	2.9	96.7	3	2.9	96.7

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20111W2.PRN Date Analyzed: 01/11/10 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA7769 Units: ug/l

Time:		13:10	
Sample ID:	CCV	CCV6	
Metal	True	Results	% Rec
Mercury	3.0	3.0	100.0

(*) Outside of QC limits
(anr) Analyte not requested

6.1.2
6

HIGH STANDARD CHECK SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20111W2.PRN Date Analyzed: 01/11/10 Methods: SW846 7470A
QC Limits: 95 to 105 % Recovery Run ID: MA7769 Units: ug/l

Time:		10:43	
Sample ID:	HSTD	HSTD1	
Metal	True	Results	% Rec
Mercury	6.0	6.0	100.0

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20111W2.PRN Date Analyzed: 01/11/10 Methods: SW846 7470A
QC Limits: 80 to 120 % Recovery Run ID: MA7769 Units: ug/l

Time:			10:50		13:07	
Sample ID:	CRI	CRIA	CRI1		CRI2	
Metal	True	True	Results	% Rec	Results	% Rec
Mercury	0.20		0.16	80.0	0.19	95.0

(*) Outside of QC limits
(anr) Analyte not requested

6.1.4

6

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011110.ASC Date Analyzed: 01/11/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7770
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:35	MA7770-HSTD1	1		
09:38	MA7770-ICV1	1		
09:42	MA7770-ICB1	1		
09:46	MA7770-CRIA1	1		
09:51	MA7770-CRI1	1		
10:21	MA7770-ICSA1	1		
10:22	MA7770-ICSAB1	1		
10:31	MA7770-CCV1	1		
10:35	MA7770-CCB1	1		
11:13	MA7770-CCV2	1		
11:17	MA7770-CCB2	1		
11:28	ZZZZZZ	5		
11:32	ZZZZZZ	4		
11:35	ZZZZZZ	4		
11:39	ZZZZZZ	2		
11:42	MA7770-CCV3	1		
11:46	MA7770-CCB3	1		
12:08	MA7770-CCV4	1		
12:13	MA7770-CCB4	1		
12:16	MP17583-MB1	1		
12:19	MP17583-B1	1		
12:23	F70691-1	1		
12:26	MP17583-D1	1		
12:30	MP17583-SD1	5		
12:33	MP17583-PS1	1		
12:36	MP17583-S1	1		
12:40	MP17583-S2	1		
12:43	F70691-2	1		
12:47	F70691-3	1		
12:50	MA7770-CCV5	1		
12:55	MA7770-CCB5	1		
12:58	F70691-4	1		
13:01	F70691-5	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011110.ASC Date Analyzed: 01/11/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7770
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:05	F70691-6	1		
13:08	ZZZZZZ	1		
13:12	ZZZZZZ	1		
13:15	ZZZZZZ	1		
13:18	ZZZZZZ	1		
13:22	ZZZZZZ	1		
13:25	ZZZZZZ	1		
13:29	ZZZZZZ	1		
13:32	MA7770-CCV6	1		
13:36	MA7770-CCB6	1		
13:40	ZZZZZZ	1		
13:43	ZZZZZZ	1		
13:47	ZZZZZZ	1		
13:50	ZZZZZZ	1		
13:53	MA7770-CCV7	1		
13:58	MA7770-CCB7	1		
14:03	F70691-1	100		
14:06	MP17583-D1	100		
14:09	MP17583-SD1	500		
14:13	MP17583-S1	100		
14:16	MP17583-S2	100		
14:20	F70691-2	100		
14:23	F70691-3	100		
14:26	F70691-4	100		
14:30	F70691-5	100		
14:33	F70691-6	100		
---------->	Last reportable sample/prep for job F70691			
14:37	MA7770-CCV8	1		
14:41	MA7770-CCB8	1		
16:24	MA7770-CCV9	1		
16:29	MA7770-CCB9	1		
16:32	MP17585-MB1	1		
16:35	MP17585-B1	1		
16:39	MA7770-CCV10	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011110.ASC Date Analyzed: 01/11/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7770
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
16:43	MA7770-CCB10	1		
16:47	F70659-2	1		(sample used for QC only; not part of login F70691)
16:50	MP17585-D1	1		
16:53	MP17585-SD1	5		
16:57	MP17585-PS1	1		
17:00	MP17585-S1	1		
17:04	MP17585-S2	1		
17:07	ZZZZZZ	1		
17:10	ZZZZZZ	1		
17:14	ZZZZZZ	1		
17:17	ZZZZZZ	1		
17:21	MA7770-CCV11	1		
17:25	MA7770-CCB11	1		
17:29	ZZZZZZ	1		
17:32	ZZZZZZ	1		
17:35	ZZZZZZ	1		
17:39	ZZZZZZ	1		
18:03	MA7770-CCV12	1		
18:07	MA7770-CCB12	1		
18:17	MA7770-CCV13	1		
18:22	MA7770-CCB13	1		
18:25	MA7770-CRIA2	1		
18:28	MA7770-CRI2	1		
18:32	MA7770-ICSA2	1		
18:35	MA7770-ICSAB2	1		
18:39	MA7770-CCV14	1		
18:43	MA7770-CCB14	1		

----------> Last reportable CCB for job F70691
Refer to raw data for calibration curve and standards.

INTERNAL STANDARD SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011110.ASC Date Analyzed: 01/11/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7770
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1
09:35	MA7770-HSTD1	5542
09:38	MA7770-ICV1	5669
09:42	MA7770-ICB1	5926 R
09:46	MA7770-CRIA1	5807
09:51	MA7770-CRI1	5750
10:21	MA7770-ICSA1	5005
10:22	MA7770-ICSAB1	4933
10:31	MA7770-CCV1	5490
10:35	MA7770-CCB1	5832
11:13	MA7770-CCV2	5585
11:17	MA7770-CCB2	5811
11:28	ZZZZZZ	5360
11:32	ZZZZZZ	5462
11:35	ZZZZZZ	5527
11:39	ZZZZZZ	6698
11:42	MA7770-CCV3	5560
11:46	MA7770-CCB3	5825
12:08	MA7770-CCV4	5561
12:13	MA7770-CCB4	5767
12:16	MP17583-MB1	5870
12:19	MP17583-B1	5579
12:23	F70691-1	3994
12:26	MP17583-D1	3979
12:30	MP17583-SD1	4937
12:33	MP17583-PS1	3938
12:36	MP17583-S1	4093
12:40	MP17583-S2	4082
12:43	F70691-2	3723
12:47	F70691-3	3771
12:50	MA7770-CCV5	5596
12:55	MA7770-CCB5	5829
12:58	F70691-4	3873
13:01	F70691-5	4053

INTERNAL STANDARD SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011110.ASC Date Analyzed: 01/11/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7770
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1
13:05	F70691-6	4107
13:08	ZZZZZZ	5816
13:12	ZZZZZZ	5874
13:15	ZZZZZZ	5563
13:18	ZZZZZZ	5695
13:22	ZZZZZZ	5681
13:25	ZZZZZZ	5642
13:29	ZZZZZZ	5599
13:32	MA7770-CCV6	5638
13:36	MA7770-CCB6	5887
13:40	ZZZZZZ	4847
13:43	ZZZZZZ	5503
13:47	ZZZZZZ	6068
13:50	ZZZZZZ	5536
13:53	MA7770-CCV7	5575
13:58	MA7770-CCB7	5830
14:03	F70691-1	5713
14:06	MP17583-D1	5630
14:09	MP17583-SD1	5760
14:13	MP17583-S1	5730
14:16	MP17583-S2	5634
14:20	F70691-2	5635
14:23	F70691-3	5645
14:26	F70691-4	5704
14:30	F70691-5	5725
14:33	F70691-6	5675
14:37	MA7770-CCV8	5509
14:41	MA7770-CCB8	5789
16:24	MA7770-CCV9	5487
16:29	MA7770-CCB9	5657
16:32	MP17585-MB1	5525
16:35	MP17585-B1	5487
16:39	MA7770-CCV10	5526

INTERNAL STANDARD SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011110.ASC Date Analyzed: 01/11/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7770
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1
16:43	MA7770-CCB10	5564
16:47	F70659-2	5456
16:50	MP17585-D1	5512
16:53	MP17585-SD1	5665
16:57	MP17585-PS1	5468
17:00	MP17585-S1	5497
17:04	MP17585-S2	5468
17:07	ZZZZZZ	5431
17:10	ZZZZZZ	5624
17:14	ZZZZZZ	5642
17:17	ZZZZZZ	5676
17:21	MA7770-CCV11	5494
17:25	MA7770-CCB11	5721
17:29	ZZZZZZ	5306
17:32	ZZZZZZ	5212
17:35	ZZZZZZ	5438
17:39	ZZZZZZ	5340
18:03	MA7770-CCV12	5552
18:07	MA7770-CCB12	5673
18:17	MA7770-CCV13	5474
18:22	MA7770-CCB13	5675
18:25	MA7770-CRIA2	5679
18:28	MA7770-CRI2	5570
18:32	MA7770-ICSA2	4974
18:35	MA7770-ICSAB2	5000
18:39	MA7770-CCV14	5464
18:43	MA7770-CCB14	5711

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium	60-125 %

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011110.ASC Date Analyzed: 01/11/10 Methods: SW846 6010B
QC Limits: result < RL Run ID: MA7770 Units: ug/l

Time:			09:42		10:35		11:17		11:46	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	11	16.0	<200	32.9	<200	28.1	<200	24.4	<200
Antimony	6.0	4.5	1.4	<12	2.2	<12	1.0	<12	-0.28	<12
Arsenic	10	3.6	0.87	<10	-0.54	<10	-2.6	<10	-0.33	<10
Barium	200	5	-0.070	<200	-0.050	<200	0.020	<200	0.0	<200
Beryllium	4.0	1	0.20	<4.0	0.68	<4.0	0.49	<4.0	0.47	<4.0
Cadmium	5.0	1	-0.26	<5.0	-0.38	<5.0	-0.11	<5.0	-0.11	<5.0
Calcium	1000	100	-7.0	<1000	-6.3	<1000	-4.6	<1000	-4.7	<1000
Chromium	10	1.6	-0.43	<10	0.020	<10	0.29	<10	0.30	<10
Cobalt	50	.83	-0.57	<50	-0.35	<50	-0.46	<50	-0.19	<50
Copper	25	2.1	-0.71	<25	-1.0	<25	-0.58	<25	-0.51	<25
Iron	300	23	-2.5	<300	2.0	<300	3.8	<300	2.4	<300
Lead	5.0	2	1.4	<10	1.1	<10	1.4	<10	0.74	<10
Magnesium	5000	100	-5.6	<5000	-4.2	<5000	-0.61	<5000	-1.6	<5000
Manganese	15	.5	-0.080	<15	-0.030	<15	0.040	<15	0.010	<15
Molybdenum	50	2.8								
Nickel	40	2.3	-0.51	<40	0.090	<40	0.46	<40	-0.080	<40
Potassium	10000	100	217	<10000	236	<10000	228	<10000	235	<10000
Selenium	10	3.1	2.9	<10	1.9	<10	1.4	<10	2.3	<10
Silver	10	1.2	0.52	<10	0.30	<10	0.50	<10	0.48	<10
Sodium	10000	500	-110	<10000	-43	<10000	-87	<10000	-15	<10000
Thallium	10	3.4	-1.2	<10	-1.8	<10	0.27	<10	0.15	<10
Tin	50	2.8								
Vanadium	50	.66	-0.33	<50	-0.24	<50	-0.14	<50	-0.030	<50
Zinc	20	3.8	-0.21	<20	0.72	<20	0.77	<20	0.42	<20

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011110.ASC Date Analyzed: 01/11/10 Methods: SW846 6010B
QC Limits: result < RL Run ID: MA7770 Units: ug/l

Time:			12:13		12:55		13:36		13:58	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	11	25.2	<200	27.2	<200	26.6	<200	28.4	<200
Antimony	6.0	4.5	1.6	<12	-0.87	<12	0.21	<12	-1.5	<12
Arsenic	10	3.6	-3.0	<10	-0.48	<10	-0.030	<10	-1.6	<10
Barium	200	5	0.050	<200	0.0	<200	0.0	<200	-0.010	<200
Beryllium	4.0	1	0.35	<4.0	0.44	<4.0	0.47	<4.0	0.42	<4.0
Cadmium	5.0	1	-0.12	<5.0	-0.14	<5.0	-0.33	<5.0	-0.20	<5.0
Calcium	1000	100	-3.7	<1000	-5.3	<1000	-6.3	<1000	-6.8	<1000
Chromium	10	1.6	0.46	<10	0.10	<10	0.46	<10	-0.040	<10
Cobalt	50	.83	0.16	<50	-0.42	<50	-0.38	<50	-0.59	<50
Copper	25	2.1	-0.13	<25	-0.53	<25	-0.61	<25	-0.59	<25
Iron	300	23	2.4	<300	-1.4	<300	7.1	<300	2.2	<300
Lead	5.0	2	0.48	<10	1.4	<10	1.2	<10	-0.44	<10
Magnesium	5000	100	0.39	<5000	-2.4	<5000	-0.32	<5000	-1.7	<5000
Manganese	15	.5	0.090	<15	0.0	<15	0.0	<15	-0.050	<15
Molybdenum	50	2.8								
Nickel	40	2.3	0.14	<40	0.19	<40	-0.26	<40	-0.12	<40
Potassium	10000	100	255	<10000	229	<10000	235	<10000	235	<10000
Selenium	10	3.1	0.50	<10	5.0	<10	3.5	<10	2.9	<10
Silver	10	1.2	0.10	<10	-0.48	<10	0.71	<10	0.16	<10
Sodium	10000	500	139	<10000	-93	<10000	40.4	<10000	-69	<10000
Thallium	10	3.4	-2.5	<10	-0.32	<10	-0.31	<10	1.0	<10
Tin	50	2.8								
Vanadium	50	.66	0.040	<50	-0.16	<50	0.010	<50	-0.16	<50
Zinc	20	3.8	0.83	<20	0.47	<20	0.36	<20	0.62	<20

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011110.ASC Date Analyzed: 01/11/10 Methods: SW846 6010B
QC Limits: result < RL Run ID: MA7770 Units: ug/l

Time:			14:41		16:29		16:43		17:25	
Sample ID:			CCB8		CCB9		CCB10		CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	11	33.2	<200	2.8	<200	3.1	<200	0.28	<200
Antimony	6.0	4.5	1.0	<12	1.7	<12	0.85	<12	-0.53	<12
Arsenic	10	3.6	-2.3	<10	-2.3	<10	-1.2	<10	-2.8	<10
Barium	200	5	-0.040	<200	-0.16	<200	-0.15	<200	-0.17	<200
Beryllium	4.0	1	0.39	<4.0	-0.050	<4.0	-0.25	<4.0	0.020	<4.0
Cadmium	5.0	1	-0.050	<5.0	0.25	<5.0	0.020	<5.0	-0.050	<5.0
Calcium	1000	100	-7.3	<1000	0.31	<1000	-0.89	<1000	-0.050	<1000
Chromium	10	1.6	-0.050	<10	0.38	<10	0.16	<10	-0.090	<10
Cobalt	50	.83	-0.19	<50	0.19	<50	0.080	<50	0.030	<50
Copper	25	2.1	-1.1	<25	0.13	<25	0.23	<25	-0.13	<25
Iron	300	23	-5.6	<300	3.5	<300	-9.3	<300	-4.0	<300
Lead	5.0	2	0.90	<10	2.0	<10	1.5	<10	2.0	<10
Magnesium	5000	100	-6.1	<5000	-0.060	<5000	-2.9	<5000	-4.4	<5000
Manganese	15	.5	-0.070	<15	-0.020	<15	-0.16	<15	-0.16	<15
Molybdenum	50	2.8								
Nickel	40	2.3	-0.38	<40	-0.10	<40	-0.23	<40	-0.27	<40
Potassium	10000	100	240	<10000	239	<10000	225	<10000	221	<10000
Selenium	10	3.1	2.4	<10	0.88	<10	0.97	<10	1.2	<10
Silver	10	1.2	-0.070	<10	-0.28	<10	-0.57	<10	-0.81	<10
Sodium	10000	500	-22	<10000	-56	<10000	-150	<10000	-140	<10000
Thallium	10	3.4	0.69	<10	-1.7	<10	-2.1	<10	-1.7	<10
Tin	50	2.8								
Vanadium	50	.66	-0.38	<50	0.13	<50	0.010	<50	0.070	<50
Zinc	20	3.8	-0.050	<20	0.52	<20	0.32	<20	0.50	<20

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011110.ASC Date Analyzed: 01/11/10 Methods: SW846 6010B
QC Limits: result < RL Run ID: MA7770 Units: ug/l

Time:			18:07		18:22		18:43	
Sample ID:			CCB12		CCB13		CCB14	
Metal	RL	IDL	raw	final	raw	final	raw	final
Aluminum	200	11	-2.0	<200	-6.0	<200	-7.0	<200
Antimony	6.0	4.5	-0.55	<12	-0.76	<12	-0.42	<12
Arsenic	10	3.6	-1.6	<10	-2.2	<10	-3.9	<10
Barium	200	5	-0.13	<200	-0.14	<200	-0.15	<200
Beryllium	4.0	1	0.020	<4.0	0.18	<4.0	0.22	<4.0
Cadmium	5.0	1	0.11	<5.0	-0.12	<5.0	0.070	<5.0
Calcium	1000	100	0.96	<1000	2.3	<1000	1.9	<1000
Chromium	10	1.6	0.0	<10	0.040	<10	0.12	<10
Cobalt	50	.83	-0.18	<50	0.010	<50	-0.010	<50
Copper	25	2.1	0.010	<25	-0.22	<25	-0.32	<25
Iron	300	23	-9.7	<300	-4.8	<300	-5.3	<300
Lead	5.0	2	1.4	<10	0.85	<10	1.9	<10
Magnesium	5000	100	-2.0	<5000	0.76	<5000	-3.3	<5000
Manganese	15	.5	-0.070	<15	-0.090	<15	-0.13	<15
Molybdenum	50	2.8						
Nickel	40	2.3	0.48	<40	0.24	<40	-0.54	<40
Potassium	10000	100	234	<10000	238	<10000	231	<10000
Selenium	10	3.1	0.21	<10	-0.49	<10	1.1	<10
Silver	10	1.2	-0.68	<10	-0.50	<10	-0.68	<10
Sodium	10000	500	-100	<10000	-29	<10000	-110	<10000
Thallium	10	3.4	-1.8	<10	-2.3	<10	-2.5	<10
Tin	50	2.8						
Vanadium	50	.66	0.090	<50	0.26	<50	-0.060	<50
Zinc	20	3.8	0.050	<20	0.36	<20	0.25	<20

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011110.ASC Date Analyzed: 01/11/10 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7770 Units: ug/l

Time:		09:38			10:31			11:13	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39800	99.5	40000	39700	99.3	40000	39400	98.5
Antimony	2000	2070	103.5	2000	2130	106.5	2000	2090	104.5
Arsenic	2000	1930	96.5	2000	2020	101.0	2000	2000	100.0
Barium	2000	2060	103.0	2000	2150	107.5	2000	2070	103.5
Beryllium	2000	2030	101.5	2000	2060	103.0	2000	2050	102.5
Cadmium	2000	2050	102.5	2000	2100	105.0	2000	2100	105.0
Calcium	40000	40700	101.8	40000	41800	104.5	40000	41200	103.0
Chromium	2000	2020	101.0	2000	2070	103.5	2000	2060	103.0
Cobalt	2000	2050	102.5	2000	2090	104.5	2000	2090	104.5
Copper	2000	2010	100.5	2000	2110	105.5	2000	2050	102.5
Iron	40000	40000	100.0	40000	40200	100.5	40000	40300	100.8
Lead	2000	2040	102.0	2000	2080	104.0	2000	2080	104.0
Magnesium	40000	40600	101.5	40000	41000	102.5	40000	40600	101.5
Manganese	2000	2050	102.5	2000	2100	105.0	2000	2080	104.0
Molybdenum									
Nickel	2000	2070	103.5	2000	2150	107.5	2000	2120	106.0
Potassium	40000	39900	99.8	40000	40700	101.8	40000	39900	99.8
Selenium	2000	2020	101.0	2000	2070	103.5	2000	2070	103.5
Silver	250	244	97.6	250	239	95.6	250	240	96.0
Sodium	40000	39400	98.5	40000	39700	99.3	40000	39100	97.8
Thallium	2000	2080	104.0	2000	2130	106.5	2000	2120	106.0
Tin									
Vanadium	2000	1960	98.0	2000	2010	100.5	2000	1990	99.5
Zinc	2000	2050	102.5	2000	2080	104.0	2000	2100	105.0

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011110.ASC Date Analyzed: 01/11/10 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7770 Units: ug/l

Time:		11:42			12:08			12:50	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39500	98.8	40000	39500	98.8	40000	39500	98.8
Antimony	2000	2090	104.5	2000	2110	105.5	2000	2100	105.0
Arsenic	2000	1980	99.0	2000	2000	100.0	2000	1990	99.5
Barium	2000	2080	104.0	2000	2070	103.5	2000	2070	103.5
Beryllium	2000	2040	102.0	2000	2050	102.5	2000	2050	102.5
Cadmium	2000	2090	104.5	2000	2110	105.5	2000	2100	105.0
Calcium	40000	40700	101.8	40000	40900	102.3	40000	40900	102.3
Chromium	2000	2050	102.5	2000	2060	103.0	2000	2050	102.5
Cobalt	2000	2070	103.5	2000	2080	104.0	2000	2080	104.0
Copper	2000	2050	102.5	2000	2040	102.0	2000	2040	102.0
Iron	40000	40100	100.3	40000	40400	101.0	40000	40400	101.0
Lead	2000	2070	103.5	2000	2090	104.5	2000	2090	104.5
Magnesium	40000	40400	101.0	40000	40500	101.3	40000	40200	100.5
Manganese	2000	2070	103.5	2000	2080	104.0	2000	2080	104.0
Molybdenum									
Nickel	2000	2100	105.0	2000	2120	106.0	2000	2110	105.5
Potassium	40000	40100	100.3	40000	39800	99.5	40000	39700	99.3
Selenium	2000	2060	103.0	2000	2090	104.5	2000	2090	104.5
Silver	250	241	96.4	250	241	96.4	250	241	96.4
Sodium	40000	39400	98.5	40000	39200	98.0	40000	38900	97.3
Thallium	2000	2120	106.0	2000	2140	107.0	2000	2130	106.5
Tin									
Vanadium	2000	1990	99.5	2000	1990	99.5	2000	1990	99.5
Zinc	2000	2070	103.5	2000	2100	105.0	2000	2090	104.5

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011110.ASC Date Analyzed: 01/11/10 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7770 Units: ug/l

Time:		13:32			13:53			14:37	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39300	98.3	40000	39600	99.0	40000	39600	99.0
Antimony	2000	2110	105.5	2000	2120	106.0	2000	2120	106.0
Arsenic	2000	2010	100.5	2000	2010	100.5	2000	2020	101.0
Barium	2000	2080	104.0	2000	2090	104.5	2000	2120	106.0
Beryllium	2000	2060	103.0	2000	2060	103.0	2000	2050	102.5
Cadmium	2000	2110	105.5	2000	2110	105.5	2000	2090	104.5
Calcium	40000	41100	102.8	40000	41200	103.0	40000	41000	102.5
Chromium	2000	2060	103.0	2000	2060	103.0	2000	2050	102.5
Cobalt	2000	2090	104.5	2000	2090	104.5	2000	2080	104.0
Copper	2000	2050	102.5	2000	2060	103.0	2000	2090	104.5
Iron	40000	40400	101.0	40000	40400	101.0	40000	40100	100.3
Lead	2000	2090	104.5	2000	2090	104.5	2000	2080	104.0
Magnesium	40000	40200	100.5	40000	40200	100.5	40000	40200	100.5
Manganese	2000	2080	104.0	2000	2090	104.5	2000	2080	104.0
Molybdenum									
Nickel	2000	2130	106.5	2000	2130	106.5	2000	2130	106.5
Potassium	40000	39600	99.0	40000	39800	99.5	40000	40200	100.5
Selenium	2000	2090	104.5	2000	2100	105.0	2000	2100	105.0
Silver	250	239	95.6	250	238	95.2	250	237	94.8
Sodium	40000	38600	96.5	40000	38900	97.3	40000	39100	97.8
Thallium	2000	2140	107.0	2000	2160	108.0	2000	2150	107.5
Tin									
Vanadium	2000	2000	100.0	2000	2000	100.0	2000	2000	100.0
Zinc	2000	2100	105.0	2000	2100	105.0	2000	2070	103.5

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011110.ASC Date Analyzed: 01/11/10 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7770 Units: ug/l

Time:		16:24			16:39			17:21	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39700	99.3	40000	39900	99.8	40000	40100	100.3
Antimony	2000	2050	102.5	2000	2070	103.5	2000	2070	103.5
Arsenic	2000	1930	96.5	2000	1970	98.5	2000	1960	98.0
Barium	2000	2050	102.5	2000	2050	102.5	2000	2050	102.5
Beryllium	2000	2030	101.5	2000	2070	103.5	2000	2070	103.5
Cadmium	2000	2030	101.5	2000	2090	104.5	2000	2080	104.0
Calcium	40000	40200	100.5	40000	41500	103.8	40000	41300	103.3
Chromium	2000	2010	100.5	2000	2060	103.0	2000	2050	102.5
Cobalt	2000	2040	102.0	2000	2080	104.0	2000	2080	104.0
Copper	2000	1990	99.5	2000	1990	99.5	2000	1990	99.5
Iron	40000	40100	100.3	40000	41100	102.8	40000	41000	102.5
Lead	2000	2040	102.0	2000	2070	103.5	2000	2060	103.0
Magnesium	40000	40500	101.3	40000	41100	102.8	40000	41000	102.5
Manganese	2000	2040	102.0	2000	2080	104.0	2000	2080	104.0
Molybdenum									
Nickel	2000	2040	102.0	2000	2090	104.5	2000	2070	103.5
Potassium	40000	39400	98.5	40000	39100	97.8	40000	39400	98.5
Selenium	2000	2020	101.0	2000	2050	102.5	2000	2040	102.0
Silver	250	245	98.0	250	248	99.2	250	249	99.6
Sodium	40000	39000	97.5	40000	39300	98.3	40000	39600	99.0
Thallium	2000	2080	104.0	2000	2110	105.5	2000	2100	105.0
Tin									
Vanadium	2000	1960	98.0	2000	1980	99.0	2000	1980	99.0
Zinc	2000	2040	102.0	2000	2120	106.0	2000	2110	105.5

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011110.ASC Date Analyzed: 01/11/10 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7770 Units: ug/l

Time:		18:03			18:17			18:39	
Sample ID:	CCV	CCV12		CCV	CCV13		CCV	CCV14	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	40000	100.0	40000	39700	99.3	40000	39500	98.8
Antimony	2000	2060	103.0	2000	2040	102.0	2000	2030	101.5
Arsenic	2000	1980	99.0	2000	1930	96.5	2000	1950	97.5
Barium	2000	2020	101.0	2000	2030	101.5	2000	2000	100.0
Beryllium	2000	2080	104.0	2000	2050	102.5	2000	2060	103.0
Cadmium	2000	2090	104.5	2000	2050	102.5	2000	2060	103.0
Calcium	40000	41400	103.5	40000	40600	101.5	40000	40800	102.0
Chromium	2000	2060	103.0	2000	2030	101.5	2000	2040	102.0
Cobalt	2000	2080	104.0	2000	2050	102.5	2000	2060	103.0
Copper	2000	1960	98.0	2000	1950	97.5	2000	1930	96.5
Iron	40000	41200	103.0	40000	40700	101.8	40000	40800	102.0
Lead	2000	2090	104.5	2000	2050	102.5	2000	2050	102.5
Magnesium	40000	41000	102.5	40000	40300	100.8	40000	40300	100.8
Manganese	2000	2080	104.0	2000	2050	102.5	2000	2060	103.0
Molybdenum									
Nickel	2000	2070	103.5	2000	2040	102.0	2000	2040	102.0
Potassium	40000	39100	97.8	40000	39100	97.8	40000	38700	96.8
Selenium	2000	2050	102.5	2000	2020	101.0	2000	2020	101.0
Silver	250	249	99.6	250	248	99.2	250	247	98.8
Sodium	40000	39500	98.8	40000	39100	97.8	40000	38900	97.3
Thallium	2000	2110	105.5	2000	2080	104.0	2000	2080	104.0
Tin									
Vanadium	2000	1980	99.0	2000	1960	98.0	2000	1960	98.0
Zinc	2000	2140	107.0	2000	2080	104.0	2000	2100	105.0

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011110.ASC Date Analyzed: 01/11/10 Methods: SW846 6010B
QC Limits: 95 to 105 % Recovery Run ID: MA7770 Units: ug/l

Time:		09:35	
Sample ID:	HSTD	HSTD1	
Metal	True	Results	% Rec
Aluminum	80000	80500	100.6
Antimony	4000	4010	100.3
Arsenic	4000	3970	99.3
Barium	4000	3970	99.3
Beryllium	4000	3940	98.5
Cadmium	4000	3940	98.5
Calcium	80000	79500	99.4
Chromium	4000	3970	99.3
Cobalt	4000	3970	99.3
Copper	4000	4030	100.8
Iron	80000	77300	96.6
Lead	4000	3960	99.0
Magnesium	80000	79600	99.5
Manganese	4000	3960	99.0
Molybdenum			
Nickel	4000	3950	98.8
Potassium	80000	74400	93.0
Selenium	4000	3980	99.5
Silver	500	502	100.4
Sodium	80000	78200	97.8
Thallium	4000	3960	99.0
Tin			
Vanadium	4000	4010	100.3
Zinc	4000	3940	98.5

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011110.ASC Date Analyzed: 01/11/10 Methods: SW846 6010B
QC Limits: CRI 70-130% CRIA 70-130% Run ID: MA7770 Units: ug/l

Time:			09:46		09:51		18:25		18:28	
Sample ID:	CRI	CRIA	CRIA1		CRI1		CRIA2		CRI2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	400	200	214	107.0			178	89.0		
Antimony	10	5.0			11.0	110.0			7.8	78.0
Arsenic	20	10	10.1	101.0			8.3	83.0		
Barium	400	200	212	106.0			198	99.0		
Beryllium	10	5.0	5.6	112.0			5.5	110.0		
Cadmium	10	5.0	5.4	108.0			5.5	110.0		
Calcium	2000	1000	1060	106.0			1040	104.0		
Chromium	20	10	10.1	101.0			10.4	104.0		
Cobalt	100	50	53.0	106.0			52.6	105.2		
Copper	50	25	26.5	106.0			25.0	100.0		
Iron	600	300	301	100.3			299	99.7		
Lead	10	5.0			11.2	112.0			12.5	125.0
Magnesium	10000	5000	5010	100.2			4850	97.0		
Manganese	30	15	16.5	110.0			16.0	106.7		
Molybdenum	100	50								
Nickel	80	40	44.8	112.0			43.4	108.5		
Potassium	20000	10000	9110	91.1			8730	87.3		
Selenium	20	10	12.2	122.0			11.2	112.0		
Silver	20	10	9.8	98.0			9.3	93.0		
Sodium	20000	10000	8820	88.2			8250	82.5		
Thallium	20	10	9.8	98.0			9.4	94.0		
Tin	100	50								
Vanadium	100	50	51.3	102.6			50.0	100.0		
Zinc	40	20	23.7	118.5			23.9	119.5		

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011110.ASC Date Analyzed: 01/11/10 Methods: SW846 6010B
QC Limits: 80 to 120 % Recovery Run ID: MA7770 Units: ug/l

Time:			10:21		10:22		18:32		18:35	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	500000	500000	491000	98.2	501000	100.2	481000	96.2	489000	97.8
Antimony		1000	-0.16		1100	110.0	-6.4		1030	103.0
Arsenic		1000	0.0		1050	105.0	0.61		1000	100.0
Barium		500	0.79		570	114.0	0.49		521	104.2
Beryllium		500	0.38		511	102.2	-0.29		505	101.0
Cadmium		1000	0.060		995	99.5	7.3		977	97.7
Calcium	500000	500000	471000	94.2	473000	94.6	434000	86.8	448000	89.6
Chromium		500	-1.3		495	99.0	-0.85		481	96.2
Cobalt		500	0.58		491	98.2	0.71		475	95.0
Copper		500	-6.6		549	109.8	-4.0		492	98.4
Iron	200000	200000	183000	91.5	189000	94.5	180000	90.0	190000	95.0
Lead		1000	0.39		1010	101.0	-2.8		987	98.7
Magnesium	500000	500000	507000	101.4	503000	100.6	483000	96.6	487000	97.4
Manganese		500	1.1		512	102.4	0.81		492	98.4
Molybdenum		1000	-1.6		1020	102.0	-2.4		977	97.7
Nickel		1000	0.87		1010	101.0	0.21		942	94.2
Potassium			225		-160		233		-150	
Selenium		1000	1.4		1040	104.0	16.0		1010	101.0
Silver		1000	0.63		1030	103.0	-0.010		1070	107.0
Sodium			-170		46.3		-120		269	
Thallium		1000	0.030		997	99.7	-27* (a)		938	93.8
Tin		1000	-0.13		933	93.3	-2.7		893	89.3
Vanadium		500	-4.7		495	99.0	-5.7		473	94.6
Zinc		1000	1.7		950	95.0	5.1		953	95.3

(*) Outside of QC limits
(anr) Analyte not requested
(a) Possible instrument baseline drift.

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7773
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:16	MA7773-HSTD1	1		
09:19	MA7773-ICV1	1		
09:25	MA7773-ICB1	1		
09:29	MA7773-CRIA1	1		
09:33	MA7773-CRI1	1		
09:40	MA7773-ICSA1	1		
09:41	MA7773-ICSAB1	1		
09:44	MA7773-CCV1	1		
09:48	MA7773-CCB1	1		
09:52	F70691-1	4		
09:55	MP17583-D1	4		
09:58	MP17583-SD1	20		
10:02	MP17583-PS1	4		
10:05	MP17583-S1	4		
10:09	MP17583-S2	4		
10:12	F70691-2	4		
10:15	F70691-3	4		
10:19	F70691-4	4		
10:22	F70691-5	4		
10:26	MA7773-CCV2	1		
10:30	MA7773-CCB2	1		
10:33	F70691-6	4		
10:37	F70691-1	2		
10:40	MP17583-D1	2		
10:44	MP17583-SD1	10		
10:47	MP17583-PS1	2		
10:50	MP17583-S1	2		
10:54	MP17583-S2	2		
10:57	F70691-2	2		
11:01	F70691-3	2		
11:04	F70691-4	2		
11:08	MA7773-CCV3	1		
11:12	MA7773-CCB3	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7773
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:15	F70691-5	2		
11:19	F70691-6	2		
11:22	ZZZZZZ	2		
11:26	ZZZZZZ	2		
11:29	ZZZZZZ	2		
11:32	ZZZZZZ	4		
11:36	ZZZZZZ	4		
11:39	ZZZZZZ	2		
11:43	ZZZZZZ	2		
11:46	ZZZZZZ	2		
11:49	MA7773-CCV4	1		
11:54	MA7773-CCB4	1		
11:57	ZZZZZZ	2		
12:01	ZZZZZZ	4		
12:04	MA7773-CCV5	1		
12:08	MA7773-CCB5	1		
12:16	MA7773-CCV6	1		
12:20	MA7773-CCB6	1		
12:48	MA7773-CCV7	1		
12:52	MA7773-CCB7	1		
12:57	MP17592-MB1	1		
13:01	MP17592-B1	1		
13:04	F70708-1	1		(sample used for QC only; not part of login F70691)
13:07	MP17592-D1	1		
13:11	MP17592-SD1	5		
13:14	MP17592-PS1	1		
13:18	MP17592-S1	1		
13:21	ZZZZZZ	1		
13:24	ZZZZZZ	1		
13:28	ZZZZZZ	1		
13:31	MA7773-CCV8	1		
13:36	MA7773-CCB8	1		
13:39	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7773
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:42	ZZZZZZ	1		
13:46	ZZZZZZ	1		
13:49	ZZZZZZ	1		
13:53	MA7773-CCV9	1		
13:57	MA7773-CCB9	1		
14:02	MP17593-MB1	1		
14:05	MP17593-B1	1		
14:09	F70648-1	1		(sample used for QC only; not part of login F70691)
14:12	MP17593-D1	1		
14:16	MP17593-SD1	5		
14:19	MP17593-S1	1		
14:23	MP17593-MB2	1		
14:27	MP17593-B2	1		
14:30	MA7773-CCV10	1		
14:35	MA7773-CCB10	1		
14:49	MA7773-CCV11	1		
14:53	MA7773-CCB11	1		
14:56	MP17584-MB1	1		
15:00	MP17584-B1	1		
15:03	F70660-11	10		(sample used for QC only; not part of login F70691)
15:07	MP17584-D1	10		
15:10	MP17584-SD1	50		
15:13	MP17584-PS1	10		
15:17	MP17584-S1	10		
15:20	MP17584-S2	10		
15:24	ZZZZZZ	20		
15:27	ZZZZZZ	20		
15:30	MA7773-CCV12	1		
15:35	MA7773-CCB12	1		
15:38	ZZZZZZ	20		
15:42	ZZZZZZ	20		
15:45	ZZZZZZ	20		
15:48	ZZZZZZ	5		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7773
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
15:52	ZZZZZZ	20		
15:55	ZZZZZZ	20		
15:59	ZZZZZZ	4		
16:02	ZZZZZZ	20		
16:06	MP17586-MB1	1		
16:10	MP17586-B1	1		
16:13	MA7773-CCV13	1		
16:18	MA7773-CCB13	1		
16:21	F70660-11A	10		(sample used for QC only; not part of login F70691)
16:25	MP17586-D1	10		
16:28	MP17586-SD1	50		
16:31	MP17586-PS1	10		
16:35	MP17586-S1	10		
16:38	MP17586-S2	10		
16:42	ZZZZZZ	20		
16:45	ZZZZZZ	20		
16:48	ZZZZZZ	20		
16:52	ZZZZZZ	20		
16:55	MA7773-CCV14	1		
17:00	MA7773-CCB14	1		
17:03	ZZZZZZ	20		
17:06	ZZZZZZ	5		
17:10	ZZZZZZ	20		
17:13	ZZZZZZ	20		
17:17	ZZZZZZ	4		
17:20	ZZZZZZ	20		
17:24	MP17586-MB2A	1		
17:28	MP17588-MB1	1		
17:31	MP17588-B1	1		
17:35	F70352-7R	1		(sample used for QC only; not part of login F70691)
17:38	MA7773-CCV15	1		
17:43	MA7773-CCB15	1		
17:46	MP17588-D1	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7773
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
17:49	MP17588-SD1	5		
17:53	MP17588-PS1	1		
17:56	MP17588-S1	1		
18:00	MP17588-S2	1		
18:03	ZZZZZZ	1		
18:06	ZZZZZZ	1		
18:10	ZZZZZZ	1		
18:13	ZZZZZZ	1		
18:17	ZZZZZZ	1		
18:20	MA7773-CCV16	1		
18:24	MA7773-CCB16	1		
18:28	ZZZZZZ	1		
18:31	ZZZZZZ	1		
18:35	ZZZZZZ	1		
18:38	ZZZZZZ	1		
18:42	ZZZZZZ	1		
18:45	ZZZZZZ	1		
18:48	ZZZZZZ	1		
18:52	ZZZZZZ	1		
18:55	ZZZZZZ	1		
19:00	MP17591-MB1	1		
19:03	MA7773-CCV17	1		
19:07	MA7773-CCB17	1		
19:11	MP17591-B1	1		
19:14	F70691-1F	100		
19:18	MP17591-D1	100		
19:21	MP17591-SD1	500		
19:24	MP17591-S1	100		
19:28	F70691-2F	100		
19:31	F70691-3F	100		
19:35	F70691-4F	100		
19:38	F70691-5F	100		
19:42	F70691-6F	100		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7773
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

	Time	Sample Description	Dilution Factor	PS Recov	Comments
	19:45	MA7773-CCV18	1		
	19:49	MA7773-CCB18	1		
	19:53	MP17591-MB2A	1		
---------->	Last reportable sample/prep for job F70691				
	19:56	MA7773-CRIA2	1		
	20:00	MA7773-CRI2	1		
	20:03	MA7773-ICSA2	1		
	20:06	MA7773-ICSAB2	1		
	20:10	MA7773-CCV19	1		
	20:14	MA7773-CCB19	1		
---------->	Last reportable CCB for job F70691				

Refer to raw data for calibration curve and standards.

INTERNAL STANDARD SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7773
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1
09:16	MA7773-HSTD1	5282
09:19	MA7773-ICV1	5354
09:25	MA7773-ICB1	5681 R
09:29	MA7773-CRIA1	5618
09:33	MA7773-CRI1	5541
09:40	MA7773-ICSA1	4868
09:41	MA7773-ICSAB1	4792
09:44	MA7773-CCV1	5417
09:48	MA7773-CCB1	5630
09:52	F70691-1	4695
09:55	MP17583-D1	4752
09:58	MP17583-SD1	5352
10:02	MP17583-PS1	4765
10:05	MP17583-S1	4860
10:09	MP17583-S2	4727
10:12	F70691-2	4479
10:15	F70691-3	4502
10:19	F70691-4	4726
10:22	F70691-5	4771
10:26	MA7773-CCV2	5458
10:30	MA7773-CCB2	5635
10:33	F70691-6	4761
10:37	F70691-1	4377
10:40	MP17583-D1	4367
10:44	MP17583-SD1	5096
10:47	MP17583-PS1	4383
10:50	MP17583-S1	4431
10:54	MP17583-S2	4461
10:57	F70691-2	4175
11:01	F70691-3	4188
11:04	F70691-4	4281
11:08	MA7773-CCV3	5384
11:12	MA7773-CCB3	5712

INTERNAL STANDARD SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7773
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1
11:15	F70691-5	4421
11:19	F70691-6	4408
11:22	ZZZZZZ	5280
11:26	ZZZZZZ	5373
11:29	ZZZZZZ	5289
11:32	ZZZZZZ	5302
11:36	ZZZZZZ	5388
11:39	ZZZZZZ	5312
11:43	ZZZZZZ	5300
11:46	ZZZZZZ	5326
11:49	MA7773-CCV4	5468
11:54	MA7773-CCB4	5655
11:57	ZZZZZZ	5336
12:01	ZZZZZZ	5429
12:04	MA7773-CCV5	5444
12:08	MA7773-CCB5	5668
12:16	MA7773-CCV6	5497
12:20	MA7773-CCB6	5711
12:48	MA7773-CCV7	5510
12:52	MA7773-CCB7	5724
12:57	MP17592-MB1	5559
13:01	MP17592-B1	5451
13:04	F70708-1	5004
13:07	MP17592-D1	5006
13:11	MP17592-SD1	5261
13:14	MP17592-PS1	4962
13:18	MP17592-S1	5007
13:21	ZZZZZZ	4959
13:24	ZZZZZZ	5024
13:28	ZZZZZZ	5211
13:31	MA7773-CCV8	5540
13:36	MA7773-CCB8	5785
13:39	ZZZZZZ	5137

INTERNAL STANDARD SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7773
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1
13:42	ZZZZZZ	5061
13:46	ZZZZZZ	5316
13:49	ZZZZZZ	4951
13:53	MA7773-CCV9	5566
13:57	MA7773-CCB9	5759
14:02	MP17593-MB1	5694
14:05	MP17593-B1	5562
14:09	F70648-1	7477
14:12	MP17593-D1	7516
14:16	MP17593-SD1	5966
14:19	MP17593-S1	7510
14:23	MP17593-MB2	4998
14:27	MP17593-B2	5016
14:30	MA7773-CCV10	5481
14:35	MA7773-CCB10	5731
14:49	MA7773-CCV11	5508
14:53	MA7773-CCB11	5765
14:56	MP17584-MB1	5647
15:00	MP17584-B1	5549
15:03	F70660-11	4845
15:07	MP17584-D1	4927
15:10	MP17584-SD1	5422
15:13	MP17584-PS1	4898
15:17	MP17584-S1	4927
15:20	MP17584-S2	4961
15:24	ZZZZZZ	4741
15:27	ZZZZZZ	4858
15:30	MA7773-CCV12	5557
15:35	MA7773-CCB12	5660
15:38	ZZZZZZ	4759
15:42	ZZZZZZ	4935
15:45	ZZZZZZ	4893
15:48	ZZZZZZ	4722

INTERNAL STANDARD SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7773
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1
15:52	ZZZZZZ	4880
15:55	ZZZZZZ	4901
15:59	ZZZZZZ	4951
16:02	ZZZZZZ	4897
16:06	MP17586-MB1	5721
16:10	MP17586-B1	5567
16:13	MA7773-CCV13	5550
16:18	MA7773-CCB13	5729
16:21	F70660-11A	4930
16:25	MP17586-D1	4916
16:28	MP17586-SD1	5425
16:31	MP17586-PS1	4911
16:35	MP17586-S1	4940
16:38	MP17586-S2	4934
16:42	ZZZZZZ	4855
16:45	ZZZZZZ	4771
16:48	ZZZZZZ	4785
16:52	ZZZZZZ	5001
16:55	MA7773-CCV14	5513
17:00	MA7773-CCB14	5761
17:03	ZZZZZZ	4818
17:06	ZZZZZZ	4771
17:10	ZZZZZZ	4918
17:13	ZZZZZZ	4968
17:17	ZZZZZZ	4938
17:20	ZZZZZZ	4988
17:24	MP17586-MB2A	5670
17:28	MP17588-MB1	5613
17:31	MP17588-B1	5525
17:35	F70352-7R	5628
17:38	MA7773-CCV15	5599
17:43	MA7773-CCB15	5767
17:46	MP17588-D1	5672

INTERNAL STANDARD SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7773
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1
17:49	MP17588-SD1	5830
17:53	MP17588-PS1	5630
17:56	MP17588-S1	5544
18:00	MP17588-S2	5525
18:03	ZZZZZZ	5772
18:06	ZZZZZZ	5708
18:10	ZZZZZZ	4963
18:13	ZZZZZZ	5815
18:17	ZZZZZZ	5361
18:20	MA7773-CCV16	5620
18:24	MA7773-CCB16	5761
18:28	ZZZZZZ	5723
18:31	ZZZZZZ	5155
18:35	ZZZZZZ	5148
18:38	ZZZZZZ	5650
18:42	ZZZZZZ	5472
18:45	ZZZZZZ	5006
18:48	ZZZZZZ	5936
18:52	ZZZZZZ	5021
18:55	ZZZZZZ	6058
19:00	MP17591-MB1	5750
19:03	MA7773-CCV17	5617
19:07	MA7773-CCB17	5823
19:11	MP17591-B1	5637
19:14	F70691-1F	5654
19:18	MP17591-D1	5668
19:21	MP17591-SD1	5743
19:24	MP17591-S1	5711
19:28	F70691-2F	5567
19:31	F70691-3F	5505
19:35	F70691-4F	5708
19:38	F70691-5F	5727
19:42	F70691-6F	5717

INTERNAL STANDARD SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7773
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1
19:45	MA7773-CCV18	5578
19:49	MA7773-CCB18	5789
19:53	MP17591-MB2A	5772
19:56	MA7773-CRIA2	5653
20:00	MA7773-CRI2	5650
20:03	MA7773-ICSA2	4979
20:06	MA7773-ICSAB2	5012
20:10	MA7773-CCV19	5543
20:14	MA7773-CCB19	5703

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium	60-125 %

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
QC Limits: result < RL Run ID: MA7773 Units: ug/l

Time:			09:25		09:48		10:30		11:12	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	11	0.84	<200	7.1	<200	9.0	<200	12.1	<200
Antimony	6.0	4.5	-1.5	<6.0	2.9	<6.0	3.4	<6.0	1.6	<6.0
Arsenic	10	3.6	-0.16	<10	-0.13	<10	0.89	<10	-0.12	<10
Barium	200	5	-0.080	<200	-0.060	<200	0.0	<200	-0.050	<200
Beryllium	4.0	1	0.060	<4.0	0.030	<4.0	-0.030	<4.0	0.11	<4.0
Cadmium	5.0	1	-0.16	<5.0	-0.12	<5.0	0.050	<5.0	-0.11	<5.0
Calcium	1000	100	-3.7	<1000	-2.6	<1000	-2.8	<1000	-4.2	<1000
Chromium	10	1.6	-0.21	<10	-0.14	<10	0.30	<10	-0.29	<10
Cobalt	50	.83	-0.57	<50	-0.50	<50	-0.26	<50	-0.22	<50
Copper	25	2.1	-0.17	<25	-0.19	<25	0.070	<25	-0.27	<25
Iron	300	23	-3.0	<300	-8.5	<300	-14	<300	-7.4	<300
Lead	5.0	2	1.2	<10	0.96	<10	0.29	<10	0.26	<10
Magnesium	5000	100	-5.0	<5000	-4.0	<5000	-1.6	<5000	-2.1	<5000
Manganese	15	.5	-0.20	<15	-0.11	<15	-0.16	<15	-0.20	<15
Molybdenum	50	2.8								
Nickel	40	2.3	-0.62	<40	-0.41	<40	-0.21	<40	-0.16	<40
Potassium	10000	100	242	<10000	242	<10000	236	<10000	244	<10000
Selenium	10	3.1	0.99	<10	0.74	<10	1.9	<10	1.1	<10
Silver	10	1.2	0.38	<10	0.22	<10	0.23	<10	0.34	<10
Sodium	10000	500	66.8	<10000	69.1	<10000	16.4	<10000	34.1	<10000
Thallium	10	3.4	-1.2	<10	0.53	<10	-0.37	<10	-0.21	<10
Tin	50	2.8								
Vanadium	50	.66	-0.15	<50	-0.070	<50	-0.040	<50	-0.10	<50
Zinc	20	3.8	0.12	<20	0.74	<20	0.43	<20	0.42	<20

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
QC Limits: result < RL Run ID: MA7773 Units: ug/l

Time:			11:54		12:08		12:20		12:52	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	11	15.8	<200	17.4	<200	5.2	<200	7.7	<200
Antimony	6.0	4.5	1.9	<6.0	2.7	<6.0	1.6	<6.0	2.9	<6.0
Arsenic	10	3.6	-0.85	<10	-1.6	<10	-0.59	<10	0.76	<10
Barium	200	5	-0.040	<200	-0.040	<200	0.0	<200	-0.060	<200
Beryllium	4.0	1	0.040	<4.0	0.020	<4.0	-0.23	<4.0	-0.18	<4.0
Cadmium	5.0	1	-0.16	<5.0	-0.070	<5.0	-0.080	<5.0	-0.15	<5.0
Calcium	1000	100	-5.4	<1000	-5.5	<1000	-1.2	<1000	-3.1	<1000
Chromium	10	1.6	-0.14	<10	-0.12	<10	0.22	<10	-0.65	<10
Cobalt	50	.83	-0.67	<50	-0.67	<50	0.12	<50	-0.44	<50
Copper	25	2.1	-0.15	<25	-0.040	<25	0.62	<25	-0.050	<25
Iron	300	23	-14	<300	-13	<300	-6.5	<300	-14	<300
Lead	5.0	2	0.89	<10	1.5	<10	0.50	<10	-0.65	<10
Magnesium	5000	100	-3.5	<5000	-3.2	<5000	-1.8	<5000	-5.8	<5000
Manganese	15	.5	-0.18	<15	-0.16	<15	-0.16	<15	-0.25	<15
Molybdenum	50	2.8								
Nickel	40	2.3	-0.37	<40	-0.48	<40	0.88	<40	0.12	<40
Potassium	10000	100	255	<10000	231	<10000	252	<10000	229	<10000
Selenium	10	3.1	-0.51	<10	1.1	<10	-1.6	<10	-1.9	<10
Silver	10	1.2	0.50	<10	-0.14	<10	0.26	<10	-0.57	<10
Sodium	10000	500	113	<10000	-34	<10000	64.9	<10000	-36	<10000
Thallium	10	3.4	-1.6	<10	0.43	<10	0.49	<10	0.010	<10
Tin	50	2.8								
Vanadium	50	.66	-0.070	<50	-0.040	<50	0.11	<50	-0.21	<50
Zinc	20	3.8	0.27	<20	-0.13	<20	0.21	<20	0.21	<20

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
QC Limits: result < RL Run ID: MA7773 Units: ug/l

Time:			13:36		13:57		14:35		14:53	
Sample ID:			CCB8		CCB9		CCB10		CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	11	6.4	<200	8.0	<200	12.9	<200	4.8	<200
Antimony	6.0	4.5	2.3	<6.0	2.6	<6.0	2.6	<6.0	3.5	<6.0
Arsenic	10	3.6	-2.8	<10	0.68	<10	-0.40	<10	1.3	<10
Barium	200	5	-0.040	<200	-0.010	<200	-0.020	<200	0.0	<200
Beryllium	4.0	1	-0.10	<4.0	-0.14	<4.0	-0.15	<4.0	-0.33	<4.0
Cadmium	5.0	1	0.0	<5.0	-0.050	<5.0	-0.16	<5.0	-0.050	<5.0
Calcium	1000	100	0.81	<1000	0.36	<1000	-1.1	<1000	0.29	<1000
Chromium	10	1.6	-0.22	<10	-0.13	<10	-0.27	<10	-0.11	<10
Cobalt	50	.83	-0.20	<50	-0.34	<50	-0.55	<50	-0.47	<50
Copper	25	2.1	0.24	<25	-0.040	<25	0.11	<25	0.48	<25
Iron	300	23	-8.2	<300	-10	<300	-9.6	<300	-6.6	<300
Lead	5.0	2	1.3	<10	0.10	<10	1.6	<10	0.24	<10
Magnesium	5000	100	-0.96	<5000	-3.9	<5000	-3.4	<5000	-3.6	<5000
Manganese	15	.5	-0.13	<15	-0.13	<15	-0.13	<15	-0.13	<15
Molybdenum	50	2.8								
Nickel	40	2.3	0.090	<40	-0.10	<40	-0.24	<40	-0.11	<40
Potassium	10000	100	244	<10000	234	<10000	236	<10000	252	<10000
Selenium	10	3.1	-2.6	<10	0.59	<10	-0.020	<10	-2.3	<10
Silver	10	1.2	-0.17	<10	-0.45	<10	-0.18	<10	0.060	<10
Sodium	10000	500	63.5	<10000	41.2	<10000	-21	<10000	75.7	<10000
Thallium	10	3.4	0.92	<10	-1.5	<10	0.64	<10	0.0	<10
Tin	50	2.8								
Vanadium	50	.66	0.11	<50	0.0	<50	-0.13	<50	-0.050	<50
Zinc	20	3.8	0.40	<20	0.36	<20	0.16	<20	0.21	<20

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
QC Limits: result < RL Run ID: MA7773 Units: ug/l

Time:			15:35		16:18		17:00		17:43	
Sample ID:			CCB12		CCB13		CCB14		CCB15	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	11	8.7	<200	8.0	<200	2.7	<200	2.3	<200
Antimony	6.0	4.5	1.7	<6.0	1.7	<6.0	1.2	<6.0	0.39	<6.0
Arsenic	10	3.6	-2.2	<10	0.61	<10	-2.0	<10	0.050	<10
Barium	200	5	-0.020	<200	-0.030	<200	-0.040	<200	0.010	<200
Beryllium	4.0	1	-0.57	<4.0	-0.43	<4.0	-0.41	<4.0	-0.43	<4.0
Cadmium	5.0	1	-0.060	<5.0	-0.060	<5.0	-0.11	<5.0	-0.020	<5.0
Calcium	1000	100	0.58	<1000	0.23	<1000	0.0	<1000	2.2	<1000
Chromium	10	1.6	-0.060	<10	-0.23	<10	-0.21	<10	-0.23	<10
Cobalt	50	.83	-0.10	<50	-0.77	<50	-0.43	<50	-0.47	<50
Copper	25	2.1	0.63	<25	0.52	<25	0.65	<25	0.76	<25
Iron	300	23	-5.4	<300	-9.9	<300	-12	<300	-11	<300
Lead	5.0	2	1.1	<10	0.91	<10	0.41	<10	0.070	<10
Magnesium	5000	100	-1.0	<5000	-4.7	<5000	-5.0	<5000	-3.1	<5000
Manganese	15	.5	-0.11	<15	-0.18	<15	-0.16	<15	-0.14	<15
Molybdenum	50	2.8								
Nickel	40	2.3	-0.35	<40	0.090	<40	-0.66	<40	0.69	<40
Potassium	10000	100	253	<10000	237	<10000	249	<10000	241	<10000
Selenium	10	3.1	-0.88	<10	0.31	<10	-1.6	<10	-1.0	<10
Silver	10	1.2	0.18	<10	-0.41	<10	-0.41	<10	-0.21	<10
Sodium	10000	500	85.9	<10000	15.2	<10000	41.4	<10000	65.5	<10000
Thallium	10	3.4	-1.4	<10	0.30	<10	-1.3	<10	-0.89	<10
Tin	50	2.8								
Vanadium	50	.66	0.23	<50	-0.050	<50	-0.32	<50	0.050	<50
Zinc	20	3.8	0.22	<20	-0.13	<20	-0.080	<20	-0.030	<20

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
QC Limits: result < RL Run ID: MA7773 Units: ug/l

Time:			18:24		19:07		19:49		20:14	
Sample ID:			CCB16		CCB17		CCB18		CCB19	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	11	-2.2	<200	-12	<200	-13	<200	-12	<200
Antimony	6.0	4.5	2.5	<6.0	1.6	<6.0	2.2	<6.0	2.0	<6.0
Arsenic	10	3.6	-0.88	<10	-0.22	<10	0.82	<10	3.8	<10
Barium	200	5	-0.010	<200	-0.030	<200	-0.040	<200	-0.020	<200
Beryllium	4.0	1	-0.40	<4.0	-0.34	<4.0	-0.39	<4.0	-0.44	<4.0
Cadmium	5.0	1	-0.010	<5.0	-0.11	<5.0	-0.10	<5.0	-0.020	<5.0
Calcium	1000	100	3.7	<1000	3.6	<1000	3.9	<1000	6.6	<1000
Chromium	10	1.6	-0.34	<10	-0.32	<10	-0.32	<10	-0.17	<10
Cobalt	50	.83	-0.55	<50	-0.72	<50	-0.67	<50	-0.14	<50
Copper	25	2.1	0.95	<25	0.94	<25	0.92	<25	0.96	<25
Iron	300	23	-1.5	<300	-10	<300	-9.4	<300	-13	<300
Lead	5.0	2	1.2	<10	0.21	<10	2.4	<10	-0.020	<10
Magnesium	5000	100	-3.1	<5000	-3.8	<5000	-3.1	<5000	-3.7	<5000
Manganese	15	.5	-0.18	<15	-0.20	<15	-0.18	<15	-0.13	<15
Molybdenum	50	2.8								
Nickel	40	2.3	-0.26	<40	-0.45	<40	-0.45	<40	0.0	<40
Potassium	10000	100	254	<10000	242	<10000	233	<10000	240	<10000
Selenium	10	3.1	2.1	<10	0.32	<10	-0.80	<10	0.67	<10
Silver	10	1.2	0.20	<10	-0.43	<10	-0.43	<10	-0.57	<10
Sodium	10000	500	58.4	<10000	47.1	<10000	15.0	<10000	99.7	<10000
Thallium	10	3.4	0.88	<10	-0.13	<10	2.2	<10	-0.15	<10
Tin	50	2.8								
Vanadium	50	.66	-0.10	<50	-0.13	<50	-0.10	<50	-0.050	<50
Zinc	20	3.8	0.41	<20	0.0	<20	-0.090	<20	0.11	<20

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7773 Units: ug/l

Time:		09:19			09:44			10:26	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	40300	100.8	40000	40400	101.0	40000	40100	100.3
Antimony	2000	2070	103.5	2000	2100	105.0	2000	2090	104.5
Arsenic	2000	1950	97.5	2000	1980	99.0	2000	2000	100.0
Barium	2000	2070	103.5	2000	2080	104.0	2000	2100	105.0
Beryllium	2000	2040	102.0	2000	2070	103.5	2000	2080	104.0
Cadmium	2000	2050	102.5	2000	2100	105.0	2000	2090	104.5
Calcium	40000	40500	101.3	40000	41500	103.8	40000	41800	104.5
Chromium	2000	2020	101.0	2000	2060	103.0	2000	2060	103.0
Cobalt	2000	2040	102.0	2000	2080	104.0	2000	2080	104.0
Copper	2000	2020	101.0	2000	2020	101.0	2000	2030	101.5
Iron	40000	40300	100.8	40000	41000	102.5	40000	40800	102.0
Lead	2000	2040	102.0	2000	2070	103.5	2000	2070	103.5
Magnesium	40000	40800	102.0	40000	41100	102.8	40000	40900	102.3
Manganese	2000	2050	102.5	2000	2080	104.0	2000	2090	104.5
Molybdenum									
Nickel	2000	2050	102.5	2000	2100	105.0	2000	2120	106.0
Potassium	40000	40500	101.3	40000	40100	100.3	40000	40100	100.3
Selenium	2000	2030	101.5	2000	2070	103.5	2000	2070	103.5
Silver	250	249	99.6	250	248	99.2	250	245	98.0
Sodium	40000	39700	99.3	40000	39500	98.8	40000	39200	98.0
Thallium	2000	2100	105.0	2000	2120	106.0	2000	2110	105.5
Tin									
Vanadium	2000	1970	98.5	2000	1990	99.5	2000	1990	99.5
Zinc	2000	2040	102.0	2000	2110	105.5	2000	2110	105.5

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7773 Units: ug/l

Time:		11:08			11:49			12:04	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	40300	100.8	40000	40000	100.0	40000	40100	100.3
Antimony	2000	2110	105.5	2000	2120	106.0	2000	2120	106.0
Arsenic	2000	2000	100.0	2000	2010	100.5	2000	2010	100.5
Barium	2000	2140	107.0	2000	2140	107.0	2000	2160	108.0
Beryllium	2000	2090	104.5	2000	2110	105.5	2000	2090	104.5
Cadmium	2000	2110	105.5	2000	2130	106.5	2000	2120	106.0
Calcium	40000	42000	105.0	40000	42800	107.0	40000	42500	106.3
Chromium	2000	2070	103.5	2000	2090	104.5	2000	2070	103.5
Cobalt	2000	2090	104.5	2000	2110	105.5	2000	2090	104.5
Copper	2000	2070	103.5	2000	2060	103.0	2000	2080	104.0
Iron	40000	41000	102.5	40000	41200	103.0	40000	40900	102.3
Lead	2000	2070	103.5	2000	2090	104.5	2000	2050	102.5
Magnesium	40000	41100	102.8	40000	41200	103.0	40000	41100	102.8
Manganese	2000	2100	105.0	2000	2110	105.5	2000	2100	105.0
Molybdenum									
Nickel	2000	2130	106.5	2000	2160	108.0	2000	2160	108.0
Potassium	40000	40600	101.5	40000	40000	100.0	40000	40300	100.8
Selenium	2000	2070	103.5	2000	2090	104.5	2000	2070	103.5
Silver	250	246	98.4	250	245	98.0	250	243	97.2
Sodium	40000	39500	98.8	40000	39000	97.5	40000	39400	98.5
Thallium	2000	2130	106.5	2000	2120	106.0	2000	2130	106.5
Tin									
Vanadium	2000	2010	100.5	2000	2020	101.0	2000	2010	100.5
Zinc	2000	2100	105.0	2000	2150	107.5	2000	2100	105.0

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7773 Units: ug/l

Time:		12:16			12:48			13:31	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39900	99.8	40000	39800	99.5	40000	39900	99.8
Antimony	2000	2080	104.0	2000	2090	104.5	2000	2080	104.0
Arsenic	2000	1990	99.5	2000	1990	99.5	2000	2000	100.0
Barium	2000	2070	103.5	2000	2090	104.5	2000	2090	104.5
Beryllium	2000	2080	104.0	2000	2070	103.5	2000	2070	103.5
Cadmium	2000	2120	106.0	2000	2100	105.0	2000	2100	105.0
Calcium	40000	41200	103.0	40000	41100	102.8	40000	41100	102.8
Chromium	2000	2050	102.5	2000	2040	102.0	2000	2030	101.5
Cobalt	2000	2070	103.5	2000	2050	102.5	2000	2050	102.5
Copper	2000	1970	98.5	2000	1990	99.5	2000	1990	99.5
Iron	40000	41200	103.0	40000	40900	102.3	40000	40900	102.3
Lead	2000	2090	104.5	2000	2060	103.0	2000	2060	103.0
Magnesium	40000	40300	100.8	40000	40100	100.3	40000	40100	100.3
Manganese	2000	2060	103.0	2000	2060	103.0	2000	2050	102.5
Molybdenum									
Nickel	2000	2110	105.5	2000	2110	105.5	2000	2120	106.0
Potassium	40000	39100	97.8	40000	39300	98.3	40000	39200	98.0
Selenium	2000	2090	104.5	2000	2070	103.5	2000	2080	104.0
Silver	250	248	99.2	250	246	98.4	250	244	97.6
Sodium	40000	38800	97.0	40000	38500	96.3	40000	38700	96.8
Thallium	2000	2110	105.5	2000	2110	105.5	2000	2100	105.0
Tin									
Vanadium	2000	1970	98.5	2000	1970	98.5	2000	1970	98.5
Zinc	2000	2130	106.5	2000	2100	105.0	2000	2090	104.5

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7773 Units: ug/l

Time:		13:53			14:30			14:49	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	40000	100.0	40000	40100	100.3	40000	39800	99.5
Antimony	2000	2110	105.5	2000	2110	105.5	2000	2080	104.0
Arsenic	2000	2020	101.0	2000	2030	101.5	2000	1990	99.5
Barium	2000	2100	105.0	2000	2130	106.5	2000	2080	104.0
Beryllium	2000	2090	104.5	2000	2090	104.5	2000	2050	102.5
Cadmium	2000	2130	106.5	2000	2130	106.5	2000	2090	104.5
Calcium	40000	41800	104.5	40000	41600	104.0	40000	40100	100.3
Chromium	2000	2060	103.0	2000	2060	103.0	2000	2010	100.5
Cobalt	2000	2080	104.0	2000	2070	103.5	2000	2020	101.0
Copper	2000	2000	100.0	2000	2010	100.5	2000	1970	98.5
Iron	40000	41300	103.3	40000	41300	103.3	40000	40600	101.5
Lead	2000	2090	104.5	2000	2080	104.0	2000	2050	102.5
Magnesium	40000	40500	101.3	40000	40400	101.0	40000	39600	99.0
Manganese	2000	2080	104.0	2000	2070	103.5	2000	2020	101.0
Molybdenum									
Nickel	2000	2140	107.0	2000	2150	107.5	2000	2090	104.5
Potassium	40000	39100	97.8	40000	39300	98.3	40000	38900	97.3
Selenium	2000	2100	105.0	2000	2130	106.5	2000	2080	104.0
Silver	250	246	98.4	250	246	98.4	250	245	98.0
Sodium	40000	38900	97.3	40000	39000	97.5	40000	38400	96.0
Thallium	2000	2130	106.5	2000	2130	106.5	2000	2100	105.0
Tin									
Vanadium	2000	1990	99.5	2000	1990	99.5	2000	1950	97.5
Zinc	2000	2130	106.5	2000	2120	106.0	2000	2060	103.0

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7773 Units: ug/l

Time:		15:30			16:13			16:55	
Sample ID:	CCV	CCV12		CCV	CCV13		CCV	CCV14	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39600	99.0	40000	39700	99.3	40000	39800	99.5
Antimony	2000	2090	104.5	2000	2100	105.0	2000	2090	104.5
Arsenic	2000	1990	99.5	2000	2000	100.0	2000	1990	99.5
Barium	2000	2080	104.0	2000	2080	104.0	2000	2060	103.0
Beryllium	2000	2060	103.0	2000	2070	103.5	2000	2060	103.0
Cadmium	2000	2110	105.5	2000	2120	106.0	2000	2110	105.5
Calcium	40000	40300	100.8	40000	40700	101.8	40000	40300	100.8
Chromium	2000	2010	100.5	2000	2030	101.5	2000	2020	101.0
Cobalt	2000	2030	101.5	2000	2040	102.0	2000	2030	101.5
Copper	2000	1960	98.0	2000	1960	98.0	2000	1950	97.5
Iron	40000	40800	102.0	40000	41100	102.8	40000	41000	102.5
Lead	2000	2060	103.0	2000	2080	104.0	2000	2070	103.5
Magnesium	40000	39500	98.8	40000	39600	99.0	40000	39500	98.8
Manganese	2000	2030	101.5	2000	2040	102.0	2000	2030	101.5
Molybdenum									
Nickel	2000	2110	105.5	2000	2120	106.0	2000	2110	105.5
Potassium	40000	38600	96.5	40000	38600	96.5	40000	38700	96.8
Selenium	2000	2090	104.5	2000	2090	104.5	2000	2090	104.5
Silver	250	244	97.6	250	245	98.0	250	246	98.4
Sodium	40000	38500	96.3	40000	38400	96.0	40000	38500	96.3
Thallium	2000	2110	105.5	2000	2110	105.5	2000	2120	106.0
Tin									
Vanadium	2000	1950	97.5	2000	1960	98.0	2000	1950	97.5
Zinc	2000	2090	104.5	2000	2100	105.0	2000	2090	104.5

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7773 Units: ug/l

Time:		17:38			18:20			19:03	
Sample ID:	CCV	CCV15		CCV	CCV16		CCV	CCV17	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39700	99.3	40000	39800	99.5	40000	39800	99.5
Antimony	2000	2060	103.0	2000	2070	103.5	2000	2060	103.0
Arsenic	2000	1990	99.5	2000	1980	99.0	2000	1970	98.5
Barium	2000	2040	102.0	2000	2020	101.0	2000	1990	99.5
Beryllium	2000	2060	103.0	2000	2060	103.0	2000	2060	103.0
Cadmium	2000	2120	106.0	2000	2110	105.5	2000	2110	105.5
Calcium	40000	40200	100.5	40000	39900	99.8	40000	39600	99.0
Chromium	2000	2020	101.0	2000	2010	100.5	2000	2010	100.5
Cobalt	2000	2030	101.5	2000	2020	101.0	2000	2020	101.0
Copper	2000	1920	96.0	2000	1910	95.5	2000	1890	94.5
Iron	40000	41200	103.0	40000	41200	103.0	40000	41300	103.3
Lead	2000	2080	104.0	2000	2080	104.0	2000	2090	104.5
Magnesium	40000	39400	98.5	40000	39300	98.3	40000	39200	98.0
Manganese	2000	2030	101.5	2000	2020	101.0	2000	2010	100.5
Molybdenum									
Nickel	2000	2100	105.0	2000	2080	104.0	2000	2070	103.5
Potassium	40000	38400	96.0	40000	38500	96.3	40000	38500	96.3
Selenium	2000	2090	104.5	2000	2070	103.5	2000	2080	104.0
Silver	250	248	99.2	250	250	100.0	250	252	100.8
Sodium	40000	38500	96.3	40000	38700	96.8	40000	38600	96.5
Thallium	2000	2120	106.0	2000	2120	106.0	2000	2120	106.0
Tin									
Vanadium	2000	1950	97.5	2000	1940	97.0	2000	1940	97.0
Zinc	2000	2110	105.5	2000	2110	105.5	2000	2110	105.5

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7773 Units: ug/l

Time:		19:45			20:10	
Sample ID:	CCV	CCV18		CCV	CCV19	
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39600	99.0	40000	39800	99.5
Antimony	2000	2030	101.5	2000	2020	101.0
Arsenic	2000	1930	96.5	2000	1910	95.5
Barium	2000	1970	98.5	2000	1940	97.0
Beryllium	2000	2030	101.5	2000	2020	101.0
Cadmium	2000	2070	103.5	2000	2060	103.0
Calcium	40000	38600	96.5	40000	38300	95.8
Chromium	2000	1990	99.5	2000	1980	99.0
Cobalt	2000	1990	99.5	2000	1990	99.5
Copper	2000	1870	93.5	2000	1860	93.0
Iron	40000	40800	102.0	40000	40800	102.0
Lead	2000	2060	103.0	2000	2050	102.5
Magnesium	40000	38800	97.0	40000	38600	96.5
Manganese	2000	1990	99.5	2000	1980	99.0
Molybdenum						
Nickel	2000	2020	101.0	2000	2010	100.5
Potassium	40000	38500	96.3	40000	38600	96.5
Selenium	2000	2050	102.5	2000	2040	102.0
Silver	250	251	100.4	250	250	100.0
Sodium	40000	38500	96.3	40000	38700	96.8
Thallium	2000	2100	105.0	2000	2090	104.5
Tin						
Vanadium	2000	1910	95.5	2000	1900	95.0
Zinc	2000	2070	103.5	2000	2060	103.0

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
QC Limits: 95 to 105 % Recovery Run ID: MA7773 Units: ug/l

Time:		09:16	
Sample ID:	HSTD	HSTD1	
Metal	True	Results	% Rec
Aluminum	80000	80600	100.8
Antimony	4000	4010	100.3
Arsenic	4000	3980	99.5
Barium	4000	4000	100.0
Beryllium	4000	3930	98.3
Cadmium	4000	3930	98.3
Calcium	80000	78800	98.5
Chromium	4000	3950	98.8
Cobalt	4000	3940	98.5
Copper	4000	4030	100.8
Iron	80000	77200	96.5
Lead	4000	3950	98.8
Magnesium	80000	79300	99.1
Manganese	4000	3940	98.5
Molybdenum			
Nickel	4000	3940	98.5
Potassium	80000	74800	93.5
Selenium	4000	3980	99.5
Silver	500	504	100.8
Sodium	80000	77700	97.1
Thallium	4000	3960	99.0
Tin			
Vanadium	4000	4000	100.0
Zinc	4000	3910	97.8

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
QC Limits: CRI 70-130% CRIA 70-130% Run ID: MA7773 Units: ug/l

Time:			09:29		09:33		19:56		20:00	
Sample ID:	CRI	CRIA	CRIA1		CRI1		CRIA2		CRI2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	400	200	191	95.5			176	88.0		
Antimony	10	5.0	6.0	120.0			4.2	84.0		
Arsenic	20	10	8.7	87.0			6.2	62.0*(a)		
Barium	400	200	206	103.0			193	96.5		
Beryllium	10	5.0	5.3	106.0			4.6	92.0		
Cadmium	10	5.0	5.3	106.0			5.4	108.0		
Calcium	2000	1000	1040	104.0			967	96.7		
Chromium	20	10	10.1	101.0			9.5	95.0		
Cobalt	100	50	51.9	103.8			49.8	99.6		
Copper	50	25	26.2	104.8			25.4	101.6		
Iron	600	300	288	96.0			293	97.7		
Lead	10	5.0			12.2	122.0			10.4	104.0
Magnesium	10000	5000	4920	98.4			4620	92.4		
Manganese	30	15	15.9	106.0			15.2	101.3		
Molybdenum	100	50								
Nickel	80	40	42.7	106.8			42.0	105.0		
Potassium	20000	10000	9110	91.1			8780	87.8		
Selenium	20	10	8.7	87.0			9.8	98.0		
Silver	20	10	9.3	93.0			9.3	93.0		
Sodium	20000	10000	8640	86.4			8390	83.9		
Thallium	20	10	10.9	109.0			9.4	94.0		
Tin	100	50								
Vanadium	100	50	50.0	100.0			48.0	96.0		
Zinc	40	20	23.1	115.5			22.2	111.0		

(*) Outside of QC limits
(anr) Analyte not requested
(a) Possible instrument baseline drift.

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
QC Limits: 80 to 120 % Recovery Run ID: MA7773 Units: ug/l

Time:			09:40		09:41		20:03		20:06	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	500000	500000	492000	98.4	502000	100.4	479000	95.8	491000	98.2
Antimony		1000	0.60		1060	106.0	-0.46		1010	101.0
Arsenic		1000	0.030		1010	101.0	-4.8		971	97.1
Barium		500	0.71		546	109.2	0.61		507	101.4
Beryllium		500	-0.49		502	100.4	-0.93		488	97.6
Cadmium		1000	0.010		967	96.7	2.0		952	95.2
Calcium	500000	500000	438000	87.6	450000	90.0	398000	80.0	414000	82.8
Chromium		500	-0.78		480	96.0	-0.95		459	91.8
Cobalt		500	1.1		475	95.0	0.59		451	90.2
Copper		500	-3.7		523	104.6	-2.1		475	95.0
Iron	200000	200000	180000	90.0	188000	94.0	176000	88.0	186000	93.0
Lead		1000	-0.52		983	98.3	1.2		975	97.5
Magnesium	500000	500000	490000	98.0	493000	98.6	454000	90.8	460000	92.0
Manganese		500	0.94		494	98.8	0.60		467	93.4
Molybdenum		1000	-0.35		984	98.4	-1.3		948	94.8
Nickel		1000	-0.33		952	95.2	-0.34		909	90.9
Potassium			238		-140		218		-150	
Selenium		1000	1.5		1000	100.0	-0.35		996	99.6
Silver		1000	0.72		1070	107.0	0.070		1080	108.0
Sodium			-28		303		-92		309	
Thallium		1000	-0.080		952	95.2	-14		931	93.1
Tin		1000	-4.1		891	89.1	-3.9		845	84.5
Vanadium		500	-5.5		478	95.6	-5.6		455	91.0
Zinc		1000	3.9		921	92.1	3.8		907	90.7

(*) Outside of QC limits
(anr) Analyte not requested

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20113W3.PRN Date Analyzed: 01/13/10 Methods: SW846 7470A
Analyst: LM Run ID: MA7776
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:15	MA7776-STD1	1		STD01REP1
10:17	MA7776-STD2	1		STD02REP1
10:19	MA7776-STD3	1		STD03REP1
10:22	MA7776-STD4	1		STD04REP1
10:24	MA7776-STD5	1		STD05REP1
10:26	MA7776-STD6	1		STD06REP1
10:28	MA7776-HSTD1	1		
10:30	MA7776-ICV1	1		
10:33	MA7776-ICB1	1		
10:35	MA7776-CRI1	1		
10:38	MA7776-CCV1	1		
10:40	MA7776-CCB1	1		
11:09	MA7776-CCV2	1		
11:12	MA7776-CCB2	1		
11:15	MP17595-MB1	1		
11:18	MP17595-B1	1		
11:20	F70691-1F	1		
11:22	MP17595-D1	1		
11:24	MP17595-SD1	5		
11:27	MP17595-S1	1		
11:29	F70691-2F	1		
11:32	F70691-3F	1		
11:34	F70691-4F	1		
11:37	F70691-5F	1		
11:39	MA7776-CCV3	1		
11:42	MA7776-CCB3	1		
12:21	MA7776-CCV4	1		
12:24	MA7776-CCB4	1		
12:27	F70691-6F	1		
---------->	Last reportable sample/prep for job F70691			
12:29	ZZZZZZ	1		
12:31	ZZZZZZ	1		
12:34	ZZZZZZ	1		
12:36	MP17596-MB1	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20113W3.PRN Date Analyzed: 01/13/10 Methods: SW846 7470A
Analyst: LM Run ID: MA7776
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
12:39	MP17596-B1	1		
12:41	F70648-1	10		(sample used for QC only; not part of login F70691)
12:43	MP17596-D1	10		
12:47	MP17596-SD1	5		
12:49	MP17596-S1	10		
12:51	MA7776-CCV5	1		
12:54	MA7776-CCB5	1		
12:56	MP17596-MB2	1		
12:59	MP17596-B2	1		
13:01	MA7776-CRI2	1		
13:03	MA7776-CCV6	1		
13:06	MA7776-CCB6	1		

----------> Last reportable CCB for job F70691
Refer to raw data for calibration curve and standards.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20113W3.PRN Date Analyzed: 01/13/10 Methods: SW846 7470A
QC Limits: result < RL Run ID: MA7776 Units: ug/l

Time:			10:33		10:40		11:12		11:42	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	1.0	.14	-0.080	<1.0	-0.055	<1.0	-0.015	<1.0	-0.048	<1.0

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20113W3.PRN Date Analyzed: 01/13/10 Methods: SW846 7470A
QC Limits: result < RL Run ID: MA7776 Units: ug/l

Time:			12:24		12:54		13:06	
Sample ID:			CCB4		CCB5		CCB6	
Metal	RL	IDL	raw	final	raw	final	raw	final
Mercury	1.0	.14	-0.029	<1.0	-0.055	<1.0	-0.032	<1.0

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20113W3.PRN Date Analyzed: 01/13/10 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA7776 Units: ug/l

Time:		10:30			10:38			11:09	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3.0	3.0	100.0	3.0	3.0	100.0	3.0	3.0	100.0

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20113W3.PRN Date Analyzed: 01/13/10 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA7776 Units: ug/l

Time:		11:39			12:21			12:51	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3	3.1	103.3	3.0	3.0	100.0	3	3.1	103.3

(*) Outside of QC limits
(anr) Analyte not requested

6.4.2
6

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20113W3.PRN Date Analyzed: 01/13/10 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA7776 Units: ug/l

Time:		13:03	
Sample ID:	CCV	CCV6	
Metal	True	Results	% Rec
Mercury	3	3.1	103.3

(*) Outside of QC limits
(anr) Analyte not requested

6.4.2
6

HIGH STANDARD CHECK SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20113W3.PRN Date Analyzed: 01/13/10 Methods: SW846 7470A
QC Limits: 95 to 105 % Recovery Run ID: MA7776 Units: ug/l

Time:		10:28	
Sample ID:	HSTD	HSTD1	
Metal	True	Results	% Rec
Mercury	6	5.9	98.3

(*) Outside of QC limits
(anr) Analyte not requested

6.4.3

6

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20113W3.PRN Date Analyzed: 01/13/10 Methods: SW846 7470A
QC Limits: 80 to 120 % Recovery Run ID: MA7776 Units: ug/l

Time:			10:35		13:01	
Sample ID:	CRI	CRIA	CRI1		CRI2	
Metal	True	True	Results	% Rec	Results	% Rec
Mercury	0.20		0.16	80.0	0.16	80.0

(*) Outside of QC limits
(anr) Analyte not requested

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H30114W3.PRN Date Analyzed: 01/14/10 Methods: SW846 7470A
Analyst: LM Run ID: MA7779
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:55	MA7779-STD1	1		STD01REP1
09:58	MA7779-STD2	1		STD02REP1
10:00	MA7779-STD3	1		STD03REP1
10:02	MA7779-STD4	1		STD04REP1
10:05	MA7779-STD5	1		STD05REP1
10:07	MA7779-STD6	1		STD06REP1
10:09	MA7779-HSTD1	1		
10:11	MA7779-ICV1	1		
10:14	MA7779-ICB1	1		
10:17	MA7779-CRI1	1		
10:20	MA7779-CCV1	1		
10:22	MA7779-CCB1	1		
10:24	MP17602-MB1	1		
10:26	MP17602-B1	1		
10:29	F70605-3	1		(sample used for QC only; not part of login F70691)
10:31	MP17602-D1	1		
10:33	MP17602-SD1	5		
10:35	MP17602-S1	1		
10:38	MP17602-S2	1		
10:40	ZZZZZZ	1		
10:43	ZZZZZZ	1		
10:45	ZZZZZZ	1		
10:47	MA7779-CCV2	1		
10:49	MA7779-CCB2	1		
10:52	ZZZZZZ	1		
10:54	F70702-2	1		(sample used for QC only; not part of login F70691)
10:57	MP17602-MB2	1		
10:59	MP17602-B2	1		
11:01	MP17602-D2	1		
11:03	MP17603-MB1	1		
11:06	MP17603-B1	1		
11:09	F70691-1	1		
11:12	MP17603-D1	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H30114W3.PRN Date Analyzed: 01/14/10 Methods: SW846 7470A
Analyst: LM Run ID: MA7779
Parameters: Hg

	Time	Sample Description	Dilution Factor	PS Recov	Comments
	11:14	MP17603-SD1	5		
	11:16	MA7779-CCV3	1		
	11:18	MA7779-CCB3	1		
	11:20	MP17603-S1	1		
---------->	Last reportable sample/prep for job F70691				
	11:23	ZZZZZZ	1		
	11:25	ZZZZZZ	1		
	11:28	ZZZZZZ	1		
	11:30	MP17604-MB1	1		
	11:32	MP17604-B1	1		
	11:34	F70666-1	1		(sample used for QC only; not part of login F70691)
	11:37	MP17604-D1	1		
	11:39	MP17604-SD1	5		
	11:42	MP17604-S1	1		
	11:44	MA7779-CCV4	1		
	11:47	MA7779-CCB4	1		
	11:49	MP17604-MB2	1		
	11:51	MP17604-B2	1		
	12:00	MA7779-CRI2	1		
	12:02	MA7779-CCV5	1		
	12:04	MA7779-CCB5	1		
---------->	Last reportable CCB for job F70691				

Refer to raw data for calibration curve and standards.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H30114W3.PRN Date Analyzed: 01/14/10 Methods: SW846 7470A
QC Limits: result < RL Run ID: MA7779 Units: ug/l

Time:			10:14		10:22		10:49		11:18	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	1.0	.14	0.0010	<1.0	-0.036	<1.0	-0.012	<1.0	-0.024	<1.0

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H30114W3.PRN Date Analyzed: 01/14/10 Methods: SW846 7470A
QC Limits: result < RL Run ID: MA7779 Units: ug/l

Time:			11:47		12:04	
Sample ID:			CCB4		CCB5	
Metal	RL	IDL	raw	final	raw	final
Mercury	1.0	.14	-0.037	<1.0	-0.022	<1.0

(*) Outside of QC limits
(anr) Analyte not requested

6.5.1
6

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H30114W3.PRN Date Analyzed: 01/14/10 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA7779 Units: ug/l

Time:		10:11			10:20			10:47	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3	2.8	93.3	3	2.9	96.7	3	2.8	93.3

(*) Outside of QC limits
(anr) Analyte not requested

6.5.2
6

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H30114W3.PRN Date Analyzed: 01/14/10 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA7779 Units: ug/l

Time:		11:16			11:44			12:02	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3	2.8	93.3	3	2.8	93.3	3	2.8	93.3

(*) Outside of QC limits
(anr) Analyte not requested

6.5.2
6

HIGH STANDARD CHECK SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H30114W3.PRN Date Analyzed: 01/14/10 Methods: SW846 7470A
QC Limits: 95 to 105 % Recovery Run ID: MA7779 Units: ug/l

Time:		10:09	
Sample ID:	HSTD	HSTD1	
Metal	True	Results	% Rec
Mercury	6.0	6.0	100.0

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H30114W3.PRN Date Analyzed: 01/14/10 Methods: SW846 7470A
QC Limits: 80 to 120 % Recovery Run ID: MA7779 Units: ug/l

Time:			10:17		12:00	
Sample ID:	CRI	CRIA	CRI1		CRI2	
Metal	True	True	Results	% Rec	Results	% Rec
Mercury	0.20		0.16	80.0	0.16	80.0

(*) Outside of QC limits
(anr) Analyte not requested

6.5.4
6

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011410.ASC Date Analyzed: 01/14/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7780
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:43	MA7780-HSTD1	1		
09:46	MA7780-ICV1	1		
09:53	MA7780-ICB1	1		
09:58	MA7780-CRIA1	1		
10:04	MA7780-CRI1	1		
10:10	MA7780-ICSA1	1		
10:11	MA7780-ICSAB1	1		
10:14	MA7780-CCV1	1		
10:18	MA7780-CCB1	1		
10:25	MA7780-CCV2	1		
10:36	MA7780-CCB2	1		
10:40	F70691-1F	4		
10:43	MP17591-D1	4		
10:47	MP17591-SD1	20		
10:50	MP17591-PS1	4		
10:53	MP17591-S1	4		
10:57	F70691-2F	4		
11:00	F70691-3F	4		
11:04	F70691-4F	4		
11:07	F70691-5F	4		
11:11	F70691-6F	4		
11:14	MA7780-CCV3	1		
11:18	MA7780-CCB3	1		
11:22	F70691-1F	2		
11:25	MP17591-D1	2		
11:29	MP17591-SD1	10		
11:32	MP17591-PS1	2		
11:35	MP17591-S1	2		
11:39	F70691-2F	2		
11:42	F70691-3F	2		
11:46	F70691-4F	2		
11:49	F70691-5F	2		
11:52	F70691-6F	2		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011410.ASC Date Analyzed: 01/14/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7780
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Tl,V,Zn

	Time	Sample Description	Dilution Factor	PS Recov	Comments
	11:56	MA7780-CCV4	1		
	12:00	MA7780-CCB4	1		
	12:04	F70691-1F	1		
	12:07	MP17591-D1	1		
	12:10	MP17591-SD1	5		
	12:14	MP17591-PS1	1		
	12:17	MP17591-S1	1		
	12:21	F70691-2F	1		
	12:24	F70691-3F	1		
	12:27	F70691-4F	1		
	12:31	F70691-5F	1		
	12:34	F70691-6F	1		
---------->	Last reportable sample/prep for job F70691				
	12:38	MA7780-CCV5	1		
	12:42	MA7780-CCB5	1		
	13:02	MA7780-CCV6	1		
	13:07	MA7780-CCB6	1		
	13:10	ZZZZZZ	2		
	13:14	F70702-2	2		(sample used for QC only; not part of login F70691)
	13:17	MP17601-D2	2		
	13:44	MA7780-CCV7	1		
	13:49	MA7780-CCB7	1		
	13:55	F70717-1	100		(sample used for QC only; not part of login F70691)
	13:58	MP17598-D1	100		
	14:02	MP17598-SD1	500		
	14:05	MP17598-S1	100		
	14:09	ZZZZZZ	100		
	14:12	ZZZZZZ	100		
	14:15	MA7780-CCV8	1		
	14:20	MA7780-CCB8	1		
	14:23	F70717-1	5		(sample used for QC only; not part of login F70691)
	14:27	MP17598-D1	5		
	14:30	MP17598-SD1	25		
	14:34	MP17598-PS1	5		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011410.ASC Date Analyzed: 01/14/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7780
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
14:37	MP17598-S1	5		
14:40	ZZZZZZ	5		
14:44	ZZZZZZ	5		
14:47	MA7780-CCV9	1		
14:52	MA7780-CCB9	1		
14:55	MA7780-CRIA2	1		
14:58	MA7780-CRI2	1		
15:02	MA7780-ICSA2	1		
15:05	MA7780-ICSAB2	1		
15:09	MA7780-CCV10	1		
15:13	MA7780-CCB10	1		

----------> Last reportable CCB for job F70691
Refer to raw data for calibration curve and standards.

INTERNAL STANDARD SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011410.ASC Date Analyzed: 01/14/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7780
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Tl,V,Zn

Time	Sample Description	Istd#1
09:43	MA7780-HSTD1	5271
09:46	MA7780-ICV1	5369
09:53	MA7780-ICB1	5509 R
09:58	MA7780-CRIA1	5432
10:04	MA7780-CRI1	5498
10:10	MA7780-ICSA1	4982
10:11	MA7780-ICSAB1	4928
10:14	MA7780-CCV1	5394
10:18	MA7780-CCB1	5449
10:25	MA7780-CCV2	5383
10:36	MA7780-CCB2	5451
10:40	F70691-1F	4758
10:43	MP17591-D1	4798
10:47	MP17591-SD1	5244
10:50	MP17591-PS1	4760
10:53	MP17591-S1	4799
10:57	F70691-2F	4581
11:00	F70691-3F	4677
11:04	F70691-4F	4748
11:07	F70691-5F	4812
11:11	F70691-6F	4726
11:14	MA7780-CCV3	5331
11:18	MA7780-CCB3	5515
11:22	F70691-1F	4369
11:25	MP17591-D1	4427
11:29	MP17591-SD1	5077
11:32	MP17591-PS1	4449
11:35	MP17591-S1	4404
11:39	F70691-2F	4257
11:42	F70691-3F	4329
11:46	F70691-4F	4277
11:49	F70691-5F	4500
11:52	F70691-6F	4479

INTERNAL STANDARD SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011410.ASC Date Analyzed: 01/14/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7780
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Tl,V,Zn

Time	Sample Description	Istd#1
11:56	MA7780-CCV4	5291
12:00	MA7780-CCB4	5477
12:04	F70691-1F	3877
12:07	MP17591-D1	3949
12:10	MP17591-SD1	4805
12:14	MP17591-PS1	3934
12:17	MP17591-S1	3942
12:21	F70691-2F	3664
12:24	F70691-3F	3767
12:27	F70691-4F	3904
12:31	F70691-5F	4052
12:34	F70691-6F	4004
12:38	MA7780-CCV5	5409
12:42	MA7780-CCB5	5488
13:02	MA7780-CCV6	5398
13:07	MA7780-CCB6	5606
13:10	ZZZZZZ	5051
13:14	F70702-2	4996
13:17	MP17601-D2	4965
13:44	MA7780-CCV7	5359
13:49	MA7780-CCB7	5480
13:55	F70717-1	5467
13:58	MP17598-D1	5523
14:02	MP17598-SD1	5559
14:05	MP17598-S1	5531
14:09	ZZZZZZ	5469
14:12	ZZZZZZ	5435
14:15	MA7780-CCV8	5403
14:20	MA7780-CCB8	5530
14:23	F70717-1	4991
14:27	MP17598-D1	4999
14:30	MP17598-SD1	5375
14:34	MP17598-PS1	5104

INTERNAL STANDARD SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011410.ASC Date Analyzed: 01/14/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7780
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Tl,V,Zn

Time	Sample Description	Istd#1
14:37	MP17598-S1	4930
14:40	ZZZZZZ	4998
14:44	ZZZZZZ	4889
14:47	MA7780-CCV9	5431
14:52	MA7780-CCB9	5547
14:55	MA7780-CRIA2	5564
14:58	MA7780-CRI2	5476
15:02	MA7780-ICSA2	5020
15:05	MA7780-ICSAB2	4975
15:09	MA7780-CCV10	5429
15:13	MA7780-CCB10	5566

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium	60-125 %

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011410.ASC Date Analyzed: 01/14/10 Methods: SW846 6010B
QC Limits: result < RL Run ID: MA7780 Units: ug/l

Time:			09:53		10:18		10:36		11:18	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	11	1.9	<200	15.1	<200	14.5	<200	18.2	<200
Antimony	6.0	4.5	0.76	<6.0	-0.020	<6.0	-1.8	<6.0	-0.11	<6.0
Arsenic	10	3.6	-0.48	<10	-4.2	<10	-2.3	<10	-2.3	<10
Barium	200	5	-0.060	<200	0.050	<200	0.0	<200	0.020	<200
Beryllium	4.0	1	-0.22	<4.0	-0.40	<4.0	-0.53	<4.0	-0.52	<4.0
Cadmium	5.0	1	-0.050	<5.0	0.080	<5.0	0.090	<5.0	-0.030	<5.0
Calcium	1000	100	-3.3	<1000	0.46	<1000	-1.4	<1000	-0.56	<1000
Chromium	10	1.6	0.040	<10	0.20	<10	-0.12	<10	-0.050	<10
Cobalt	50	.83	0.26	<50	0.040	<50	0.080	<50	-0.090	<50
Copper	25	2.1	0.090	<25	0.44	<25	0.57	<25	0.63	<25
Iron	300	23	-10	<300	-2.2	<300	-11	<300	-9.0	<300
Lead	5.0	2	2.2	<10	2.3	<10	2.6	<10	1.3	<10
Magnesium	5000	100	0.31	<5000	2.4	<5000	-0.29	<5000	1.1	<5000
Manganese	15	.5	-0.11	<15	-0.020	<15	-0.080	<15	-0.010	<15
Molybdenum	50	2.8								
Nickel	40	2.3	-0.33	<40	0.14	<40	-0.55	<40	-0.31	<40
Potassium	10000	100	236	<10000	225	<10000	226	<10000	200	<10000
Selenium	10	3.1	3.7	<20	2.2	<20	3.3	<20	3.4	<20
Silver	10	1.2	0.34	<10	0.73	<10	-0.20	<10	-0.21	<10
Sodium	10000	500	anr							
Thallium	10	3.4	-3.2	<10	0.010	<10	-2.7	<10	-1.9	<10
Tin	50	2.8								
Vanadium	50	.66	0.010	<50	0.33	<50	-0.090	<50	0.24	<50
Zinc	20	3.8	0.020	<20	0.090	<20	-0.36	<20	-0.22	<20

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011410.ASC Date Analyzed: 01/14/10 Methods: SW846 6010B
QC Limits: result < RL Run ID: MA7780 Units: ug/l

Time: / Sample ID:			12:00 CCB4		12:42 CCB5		13:07 CCB6		13:49 CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	11	20.8	<200	17.2	<200	5.1	<200	3.4	<200
Antimony	6.0	4.5	-0.86	<6.0	0.62	<6.0	1.5	<6.0	-0.36	<6.0
Arsenic	10	3.6	-1.9	<10	-0.61	<10	1.9	<10	-0.62	<10
Barium	200	5	-0.020	<200	0.050	<200	0.060	<200	0.020	<200
Beryllium	4.0	1	-0.70	<4.0	-0.79	<4.0	-0.040	<4.0	-0.27	<4.0
Cadmium	5.0	1	0.11	<5.0	0.21	<5.0	-0.10	<5.0	-0.090	<5.0
Calcium	1000	100	-2.8	<1000	0.68	<1000	-0.41	<1000	-1.3	<1000
Chromium	10	1.6	-0.010	<10	0.24	<10	0.29	<10	-0.19	<10
Cobalt	50	.83	-0.25	<50	0.38	<50	0.18	<50	-0.050	<50
Copper	25	2.1	0.67	<25	1.0	<25	0.020	<25	0.14	<25
Iron	300	23	-11	<300	-3.3	<300	-2.8	<300	-2.3	<300
Lead	5.0	2	2.8	<10	2.5	<10	2.5	<10	3.0	<10
Magnesium	5000	100	-3.5	<5000	3.8	<5000	2.9	<5000	-2.0	<5000
Manganese	15	.5	-0.080	<15	-0.010	<15	-0.050	<15	-0.15	<15
Molybdenum	50	2.8								
Nickel	40	2.3	-0.47	<40	-0.79	<40	-0.61	<40	-0.87	<40
Potassium	10000	100	208	<10000	229	<10000	245	<10000	252	<10000
Selenium	10	3.1	3.1	<20	1.4	<20	-0.58	<20	0.58	<20
Silver	10	1.2	0.13	<10	0.40	<10	0.49	<10	0.65	<10
Sodium	10000	500	anr							
Thallium	10	3.4	-3.4	<10	-1.3	<10	1.2	<10	-1.5	<10
Tin	50	2.8								
Vanadium	50	.66	-0.12	<50	0.21	<50	0.40	<50	0.10	<50
Zinc	20	3.8	-0.16	<20	-0.060	<20	-0.060	<20	-0.14	<20

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011410.ASC Date Analyzed: 01/14/10 Methods: SW846 6010B
QC Limits: result < RL Run ID: MA7780 Units: ug/l

Time:			14:20		14:52		15:13	
Sample ID:			CCB8		CCB9		CCB10	
Metal	RL	IDL	raw	final	raw	final	raw	final
Aluminum	200	11	-3.4	<200	-9.0	<200	-8.5	<200
Antimony	6.0	4.5	-0.75	<6.0	-1.1	<6.0	-1.2	<6.0
Arsenic	10	3.6	-2.2	<10	0.65	<10	0.29	<10
Barium	200	5	0.010	<200	-0.010	<200	0.0	<200
Beryllium	4.0	1	-0.090	<4.0	0.15	<4.0	0.17	<4.0
Cadmium	5.0	1	-0.21	<5.0	-0.38	<5.0	-0.43	<5.0
Calcium	1000	100	-1.5	<1000	-1.4	<1000	0.24	<1000
Chromium	10	1.6	-0.090	<10	-0.48	<10	-0.57	<10
Cobalt	50	.83	-0.26	<50	0.37	<50	0.12	<50
Copper	25	2.1	0.20	<25	-0.38	<25	-0.16	<25
Iron	300	23	-2.7	<300	-3.7	<300	-6.7	<300
Lead	5.0	2	2.9	<10	2.3	<10	2.0	<10
Magnesium	5000	100	0.47	<5000	-2.2	<5000	1.3	<5000
Manganese	15	.5	-0.15	<15	-0.12	<15	-0.12	<15
Molybdenum	50	2.8						
Nickel	40	2.3	-0.38	<40	-0.48	<40	-0.53	<40
Potassium	10000	100	240	<10000	242	<10000	235	<10000
Selenium	10	3.1	1.3	<20	2.6	<20	2.3	<20
Silver	10	1.2	0.55	<10	0.050	<10	-0.42	<10
Sodium	10000	500	anr					
Thallium	10	3.4	-0.35	<10	0.89	<10	-1.2	<10
Tin	50	2.8						
Vanadium	50	.66	0.010	<50	-0.12	<50	-0.090	<50
Zinc	20	3.8	-0.33	<20	-0.29	<20	-0.34	<20

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011410.ASC Date Analyzed: 01/14/10 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7780 Units: ug/l

Time:		09:46			10:14			10:25	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39800	99.5	40000	40200	100.5	40000	40100	100.3
Antimony	2000	2070	103.5	2000	2120	106.0	2000	2110	105.5
Arsenic	2000	1970	98.5	2000	2020	101.0	2000	2020	101.0
Barium	2000	2050	102.5	2000	2080	104.0	2000	2060	103.0
Beryllium	2000	2060	103.0	2000	2110	105.5	2000	2100	105.0
Cadmium	2000	2070	103.5	2000	2140	107.0	2000	2130	106.5
Calcium	40000	40900	102.3	40000	42200	105.5	40000	41800	104.5
Chromium	2000	2040	102.0	2000	2090	104.5	2000	2070	103.5
Cobalt	2000	2060	103.0	2000	2120	106.0	2000	2100	105.0
Copper	2000	1980	99.0	2000	2010	100.5	2000	2000	100.0
Iron	40000	40700	101.8	40000	41700	104.3	40000	41500	103.8
Lead	2000	2050	102.5	2000	2100	105.0	2000	2090	104.5
Magnesium	40000	40700	101.8	40000	41400	103.5	40000	41100	102.8
Manganese	2000	2060	103.0	2000	2110	105.5	2000	2090	104.5
Molybdenum									
Nickel	2000	2070	103.5	2000	2130	106.5	2000	2120	106.0
Potassium	40000	39700	99.3	40000	39700	99.3	40000	39500	98.8
Selenium	2000	2040	102.0	2000	2100	105.0	2000	2100	105.0
Silver	250	248	99.2	250	251	100.4	250	250	100.0
Sodium	anr								
Thallium	2000	2100	105.0	2000	2130	106.5	2000	2130	106.5
Tin									
Vanadium	2000	1970	98.5	2000	2010	100.5	2000	2000	100.0
Zinc	2000	2100	105.0	2000	2180	109.0	2000	2160	108.0

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011410.ASC Date Analyzed: 01/14/10 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7780 Units: ug/l

Time:		11:14			11:56			12:38	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	40500	101.3	40000	40600	101.5	40000	40500	101.3
Antimony	2000	2140	107.0	2000	2130	106.5	2000	2140	107.0
Arsenic	2000	2040	102.0	2000	2030	101.5	2000	2060	103.0
Barium	2000	2130	106.5	2000	2150	107.5	2000	2120	106.0
Beryllium	2000	2110	105.5	2000	2100	105.0	2000	2130	106.5
Cadmium	2000	2140	107.0	2000	2130	106.5	2000	2160	108.0
Calcium	40000	42100	105.3	40000	41600	104.0	40000	42100	105.3
Chromium	2000	2080	104.0	2000	2070	103.5	2000	2090	104.5
Cobalt	2000	2110	105.5	2000	2090	104.5	2000	2110	105.5
Copper	2000	2040	102.0	2000	2050	102.5	2000	2020	101.0
Iron	40000	41600	104.0	40000	41400	103.5	40000	41800	104.5
Lead	2000	2100	105.0	2000	2090	104.5	2000	2120	106.0
Magnesium	40000	41300	103.3	40000	40900	102.3	40000	41000	102.5
Manganese	2000	2110	105.5	2000	2100	105.0	2000	2110	105.5
Molybdenum									
Nickel	2000	2140	107.0	2000	2130	106.5	2000	2160	108.0
Potassium	40000	40000	100.0	40000	40200	100.5	40000	39600	99.0
Selenium	2000	2130	106.5	2000	2130	106.5	2000	2140	107.0
Silver	250	250	100.0	250	249	99.6	250	250	100.0
Sodium	anr								
Thallium	2000	2140	107.0	2000	2140	107.0	2000	2150	107.5
Tin									
Vanadium	2000	2010	100.5	2000	2010	100.5	2000	2020	101.0
Zinc	2000	2160	108.0	2000	2130	106.5	2000	2190	109.5

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011410.ASC Date Analyzed: 01/14/10 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7780 Units: ug/l

Time:		13:02			13:44			14:15	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	40400	101.0	40000	40200	100.5	40000	40100	100.3
Antimony	2000	2090	104.5	2000	2050	102.5	2000	2060	103.0
Arsenic	2000	1990	99.5	2000	1930	96.5	2000	1940	97.0
Barium	2000	2080	104.0	2000	2070	103.5	2000	2040	102.0
Beryllium	2000	2070	103.5	2000	2030	101.5	2000	2060	103.0
Cadmium	2000	2070	103.5	2000	2040	102.0	2000	2070	103.5
Calcium	40000	41000	102.5	40000	40000	100.0	40000	40600	101.5
Chromium	2000	2040	102.0	2000	2010	100.5	2000	2040	102.0
Cobalt	2000	2070	103.5	2000	2040	102.0	2000	2060	103.0
Copper	2000	2020	101.0	2000	2000	100.0	2000	1980	99.0
Iron	40000	40800	102.0	40000	40100	100.3	40000	40600	101.5
Lead	2000	2060	103.0	2000	2030	101.5	2000	2050	102.5
Magnesium	40000	41100	102.8	40000	40500	101.3	40000	40900	102.3
Manganese	2000	2070	103.5	2000	2040	102.0	2000	2060	103.0
Molybdenum									
Nickel	2000	2080	104.0	2000	2040	102.0	2000	2060	103.0
Potassium	40000	40600	101.5	40000	40700	101.8	40000	40300	100.8
Selenium	2000	2060	103.0	2000	2030	101.5	2000	2020	101.0
Silver	250	249	99.6	250	249	99.6	250	251	100.4
Sodium	anr								
Thallium	2000	2090	104.5	2000	2070	103.5	2000	2080	104.0
Tin									
Vanadium	2000	1990	99.5	2000	1960	98.0	2000	1970	98.5
Zinc	2000	2080	104.0	2000	2020	101.0	2000	2070	103.5

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011410.ASC Date Analyzed: 01/14/10 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7780 Units: ug/l

Time:		14:47			15:09	
Sample ID:	CCV	CCV9		CCV	CCV10	
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39900	99.8	40000	40100	100.3
Antimony	2000	2040	102.0	2000	2050	102.5
Arsenic	2000	1920	96.0	2000	1950	97.5
Barium	2000	2030	101.5	2000	2030	101.5
Beryllium	2000	2040	102.0	2000	2050	102.5
Cadmium	2000	2050	102.5	2000	2070	103.5
Calcium	40000	40200	100.5	40000	40700	101.8
Chromium	2000	2020	101.0	2000	2040	102.0
Cobalt	2000	2040	102.0	2000	2060	103.0
Copper	2000	1980	99.0	2000	1980	99.0
Iron	40000	40300	100.8	40000	40600	101.5
Lead	2000	2030	101.5	2000	2050	102.5
Magnesium	40000	40500	101.3	40000	40800	102.0
Manganese	2000	2040	102.0	2000	2060	103.0
Molybdenum						
Nickel	2000	2040	102.0	2000	2050	102.5
Potassium	40000	40100	100.3	40000	40100	100.3
Selenium	2000	2010	100.5	2000	2020	101.0
Silver	250	249	99.6	250	250	100.0
Sodium	anr					
Thallium	2000	2060	103.0	2000	2070	103.5
Tin						
Vanadium	2000	1950	97.5	2000	1960	98.0
Zinc	2000	2050	102.5	2000	2080	104.0

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011410.ASC Date Analyzed: 01/14/10 Methods: SW846 6010B
QC Limits: 95 to 105 % Recovery Run ID: MA7780 Units: ug/l

Time:		09:43	
Sample ID:	HSTD	HSTD1	
Metal	True	Results	% Rec
Aluminum	80000	79700	99.6
Antimony	4000	3970	99.3
Arsenic	4000	3940	98.5
Barium	4000	3940	98.5
Beryllium	4000	3920	98.0
Cadmium	4000	3930	98.3
Calcium	80000	78600	98.3
Chromium	4000	3940	98.5
Cobalt	4000	3930	98.3
Copper	4000	3950	98.8
Iron	80000	77100	96.4
Lead	4000	3940	98.5
Magnesium	80000	78600	98.3
Manganese	4000	3920	98.0
Molybdenum			
Nickel	4000	3920	98.0
Potassium	80000	73500	91.9
Selenium	4000	3950	98.8
Silver	500	499	99.8
Sodium	anr		
Thallium	4000	3950	98.8
Tin			
Vanadium	4000	3970	99.3
Zinc	4000	3940	98.5

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011410.ASC Date Analyzed: 01/14/10 Methods: SW846 6010B
QC Limits: CRI 70-130% CRIA 70-130% Run ID: MA7780 Units: ug/l

Time:			09:58		10:04		14:55		14:58	
Sample ID:	CRI	CRIA	CRIA1		CRI1		CRIA2		CRI2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	400	200	194	97.0			178	89.0		
Antimony	10	5.0	5.1	102.0			2.8	56.0*(a)		
Arsenic	20	10	9.5	95.0			7.8	78.0		
Barium	400	200	204	102.0			200	100.0		
Beryllium	10	5.0	5.0	100.0			5.2	104.0		
Cadmium	10	5.0	5.5	110.0			5.0	100.0		
Calcium	2000	1000	1010	101.0			991	99.1		
Chromium	20	10	10.8	108.0			10	100.0		
Cobalt	100	50	52.8	105.6			51.8	103.6		
Copper	50	25	26.2	104.8			25.5	102.0		
Iron	600	300	288	96.0			272	90.7		
Lead	10	5.0			11.5	115.0			11.5	115.0
Magnesium	10000	5000	4880	97.6			4840	96.8		
Manganese	30	15	16.0	106.7			15.7	104.7		
Molybdenum	100	50								
Nickel	80	40	42.9	107.3			40.9	102.3		
Potassium	20000	10000	9040	90.4			9090	90.9		
Selenium	20	10			25.1	125.5			22.4	112.0
Silver	20	10	10.6	106.0			9.6	96.0		
Sodium	20000	10000	anr							
Thallium	20	10	9.9	99.0			10.2	102.0		
Tin	100	50								
Vanadium	100	50	50.7	101.4			49.4	98.8		
Zinc	40	20	21.5	107.5			21.4	107.0		

(*) Outside of QC limits
(anr) Analyte not requested
(a) Possible instrument baseline drift.

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011410.ASC Date Analyzed: 01/14/10 Methods: SW846 6010B
QC Limits: 80 to 120 % Recovery Run ID: MA7780 Units: ug/l

Time:			10:10		10:11		15:02		15:05	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	500000	500000	485000	97.0	497000	99.4	484000	96.8	494000	98.8
Antimony		1000	-1.2		1070	107.0	-6.1		1030	103.0
Arsenic		1000	-0.11		1030	103.0	4.4		986	98.6
Barium		500	0.77		545	109.0	0.75		534	106.8
Beryllium		500	-0.70		513	102.6	-0.60		497	99.4
Cadmium		1000	-0.040		998	99.8	-0.66		960	96.0
Calcium	500000	500000	446000	89.2	458000	91.6	427000	85.4	439000	87.8
Chromium		500	-0.16		488	97.6	-0.95		474	94.8
Cobalt		500	1.1		486	97.2	1.3		470	94.0
Copper		500	-4.1		516	103.2	-4.0		508	101.6
Iron	200000	200000	184000	92.0	192000	96.0	178000	89.0	187000	93.5
Lead		1000	1.9		1020	102.0	-0.30		992	99.2
Magnesium	500000	500000	495000	99.0	498000	99.6	485000	97.0	490000	98.0
Manganese		500	0.98		501	100.2	0.92		487	97.4
Molybdenum		1000	0.25		1000	100.0	-3.1		966	96.6
Nickel		1000	0.11		980	98.0	-0.10		941	94.1
Potassium			223		-200		231		-160	
Selenium		1000	1.6		1020	102.0	4.7		986	98.6
Silver		1000	0.76		1070	107.0	0.52		1060	106.0
Sodium			-140		24.9		-33		287	
Thallium		1000	-4.4		982	98.2	-8.2		958	95.8
Tin		1000	-2.1		912	91.2	-1.4		881	88.1
Vanadium		500	-4.8		484	96.8	-5.9		471	94.2
Zinc		1000	2.7		963	96.3	3.4		910	91.0

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17582 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 01/11/10

Metal	RL	IDL	MDL	MB raw	final
Mercury	1.0	.14	.15	-0.0020	<1.0

Associated samples MP17582: F70691-2, F70691-3, F70691-4, F70691-5, F70691-6

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17582
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 01/11/10 01/11/10

Metal	F70660-11A Original	DUP	RPD	QC Limits	F70660-11A Original	MS	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.0	0.0	NC	0-20	0.0	2.9	3	96.7	80-120

Associated samples MP17582: F70691-2, F70691-3, F70691-4, F70691-5, F70691-6

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17582 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 01/11/10

Metal	F70660-11A Original	MSD	Spikelot HGFLWS1	% Rec	MSD RPD	QC Limit
Mercury	0.0	2.9	3	96.7	0.0	20

Associated samples MP17582: F70691-2, F70691-3, F70691-4, F70691-5, F70691-6

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17582
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 01/11/10

Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	2.9	3	96.7	80-120

Associated samples MP17582: F70691-2, F70691-3, F70691-4, F70691-5, F70691-6

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17582
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 01/11/10

Metal	F70660-11A Original	SDL 1:5	%DIF	QC Limits
Mercury	0.00	0.00	NC	0-10

Associated samples MP17582: F70691-2, F70691-3, F70691-4, F70691-5, F70691-6

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17583
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 01/11/10

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	11	11	20.4	<200
Antimony	12	4.5	4.5	-0.63	<12
Arsenic	10	3.6	5.4	0.52	<10
Barium	200	5	5	0.010	<200
Beryllium	4.0	1	1	0.38	<4.0
Cadmium	5.0	1	1	-0.15	<5.0
Calcium	1000	100	100	0.0	<1000
Chromium	10	1.6	2	-0.20	<10
Cobalt	50	.83	1	-0.060	<50
Copper	25	2.1	5	0.62	<25
Iron	300	23	23	-7.0	<300
Lead	10	2	2	0.40	<10
Magnesium	5000	100	100	-1.1	<5000
Manganese	15	.5	1	-0.050	<15
Molybdenum	50	2.8	5		
Nickel	40	2.3	2.3	-0.36	<40
Potassium	10000	100	100	239	<10000
Selenium	10	3.1	3.4	2.0	<10
Silver	10	1.2	1.4	-0.12	<10
Sodium	10000	500	500	43.0	<10000
Thallium	10	3.4	3.6	0.83	<10
Tin	50	2.8	2.8		
Vanadium	50	.66	.9	-0.14	<50
Zinc	20	3.8	7.4	2.2	<20

Associated samples MP17583: F70691-1, F70691-2, F70691-3, F70691-4, F70691-5, F70691-6

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17583
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date:			01/11/10					01/11/10	
Metal	F70691-1 Original	DUP	RPD	QC Limits	F70691-1 Original	MS	Spikelot MPFLICP1	% Rec	QC Limits
Aluminum	96.1	98.7 (a)	2.7	0-20	96.1	31800(a)	27000	117.4	80-120
Antimony	0.0	0.0 (a)	NC	0-20	0.0	577 (a)	500	115.4	80-120
Arsenic	13.3	15.3 (a)	14.0	0-20	13.3	2290 (a)	2000	113.8	80-120
Barium	11.9	11.8	0.8	0-20	11.9	2070	2000	102.9	80-120
Beryllium	0.0	0.0	NC	0-20	0.0	46.0	50	92.0	80-120
Cadmium	0.0	0.0	NC	0-20	0.0	46.5	50	93.0	80-120
Calcium	683000	684000	0.1	0-20	683000	688000	25000	20.0 (c)	80-120
Chromium	0.0	0.0	NC	0-20	0.0	192	200	96.0	80-120
Cobalt	0.0	0.0	NC	0-20	0.0	455	500	91.0	80-120
Copper	0.0	0.0	NC	0-20	0.0	312	250	124.8N(d	80-120
Iron	0.0	0.0 (a)	NC	0-20	0.0	26000(a)	26000	100.0	80-120
Lead	0.0	0.0 (a)	NC	0-20	0.0	517 (a)	500	103.4	80-120
Magnesium	1240000	1260000	1.6	0-20	1240000	1220000	25000	-80.0(c)	80-120
Manganese	0.75	0.0	200.0(b)	0-20	0.75	499	500	99.7	80-120
Molybdenum									
Nickel	0.0	0.0	NC	0-20	0.0	445	500	89.0	80-120
Potassium	20300	20300	0.0	0-20					
Selenium	37.6	39.9 (a)	5.9	0-20	37.6	2440 (a)	2000	120.1N(d	80-120
Silver	0.0	0.0	NC	0-20	0.0	61.5	50	123.0N(d	80-120
Sodium	5000000	5150000	3.0	0-20	5000000	4890000	25000	-440.0(c	80-120
Thallium	0.0	0.0	NC	0-20	0.0	1700	2000	85.0	80-120
Tin									
Vanadium	38.2	37.9	0.8	0-20	38.2	528	500	98.0	80-120
Zinc	0.0	0.0	NC	0-20	0.0	462	500	92.4	80-120

Associated samples MP17583: F70691-1, F70691-2, F70691-3, F70691-4, F70691-5, F70691-6

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Elevated reporting limit(s) due to matrix interference.
(b) RPD acceptable due to low duplicate and sample concentrations.
(c) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
(d) Spike recovery indicates possible matrix interference.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17583
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 01/11/10

Metal	F70691-1 Original	MSD	Spikelot MPFLICP1	% Rec	MSD RPD	QC Limit
Aluminum	96.1	31900(a)	27000	117.8	0.3	20
Antimony	0.0	590 (a)	500	118.0	2.2	20
Arsenic	13.3	2310 (a)	2000	114.8	0.9	20
Barium	11.9	2080	2000	103.4	0.5	20
Beryllium	0.0	46.2	50	92.4	0.4	20
Cadmium	0.0	46.1	50	92.2	0.9	20
Calcium	683000	702000	25000	76.0 (b)	2.0	20
Chromium	0.0	192	200	96.0	0.0	20
Cobalt	0.0	459	500	91.8	0.9	20
Copper	0.0	316	250	126.4N(c	1.3	20
Iron	0.0	25900(a)	26000	99.6	0.4	20
Lead	0.0	503 (a)	500	100.6	2.7	20
Magnesium	1240000	1230000	25000	-40.0(b)	0.8	20
Manganese	0.75	502	500	100.3	0.6	20
Molybdenum						
Nickel	0.0	451	500	90.2	1.3	20
Potassium						
Selenium	37.6	2490 (a)	2000	122.6N(c	2.0	20
Silver	0.0	62.3	50	124.6N(c	1.3	20
Sodium	5000000	5070000	25000	280.0(b)	3.6	20
Thallium	0.0	1720	2000	86.0	1.2	20
Tin						
Vanadium	38.2	532	500	98.8	0.8	20
Zinc	0.0	462	500	92.4	0.0	20

Associated samples MP17583: F70691-1, F70691-2, F70691-3, F70691-4, F70691-5, F70691-6

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Elevated reporting limit(s) due to matrix interference.
(b) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
(c) Spike recovery indicates possible matrix interference.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17583
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 01/11/10

Metal	BSP Result	Spikelot MPFLICP1	% Rec	QC Limits
Aluminum	26200	27000	97.0	80-120
Antimony	523	500	104.6	80-120
Arsenic	2000	2000	100.0	80-120
Barium	2080	2000	104.0	80-120
Beryllium	53.4	50	106.8	80-120
Cadmium	53.1	50	106.2	80-120
Calcium	25600	25000	102.4	80-120
Chromium	212	200	106.0	80-120
Cobalt	527	500	105.4	80-120
Copper	269	250	107.6	80-120
Iron	26700	26000	102.7	80-120
Lead	535	500	107.0	80-120
Magnesium	24600	25000	98.4	80-120
Manganese	539	500	107.8	80-120
Molybdenum				
Nickel	541	500	108.2	80-120
Potassium	25000	25000	100.0	80-120
Selenium	2000	2000	100.0	80-120
Silver	47.3	50	94.6	80-120
Sodium	24000	25000	96.0	80-120
Thallium	2100	2000	105.0	80-120
Tin				
Vanadium	514	500	102.8	80-120
Zinc	525	500	105.0	80-120

Associated samples MP17583: F70691-1, F70691-2, F70691-3, F70691-4, F70691-5, F70691-6

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17583
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 01/11/10

Metal	F70691-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum	96.1	259	169.8(a)	0-10
Antimony	0.00	0.00	NC	0-10
Arsenic	13.3	0.00	100.0(a)	0-10
Barium	11.9	0.00	100.0(a)	0-10
Beryllium	0.00	0.00	NC	0-10
Cadmium	0.00	0.00	NC	0-10
Calcium	683000	767000	12.3*(b)	0-10
Chromium	0.00	0.00	NC	0-10
Cobalt	0.00	0.00	NC	0-10
Copper	0.00	0.00	NC	0-10
Iron	0.00	0.00	NC	0-10
Lead	0.00	0.00	NC	0-10
Magnesium	1240000	1230000	0.6	0-10
Manganese	0.750	0.00	100.0(a)	0-10
Molybdenum				
Nickel	0.00	0.00	NC	0-10
Potassium	20300	16800	17.4*(b)	0-10
Selenium	37.6	0.00	100.0(a)	0-10
Silver	0.00	0.00	NC	0-10
Sodium	5000000	5060000	1.3	0-10
Thallium	0.00	0.00	NC	0-10
Tin				
Vanadium	38.2	42.3	10.7*(b)	0-10
Zinc	0.00	0.00	NC	0-10

Associated samples MP17583: F70691-1, F70691-2, F70691-3, F70691-4, F70691-5, F70691-6

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
(b) Serial dilution indicates possible matrix interference.

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17591
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date:				01/12/10		01/12/10	
Metal	RL	IDL	MDL	MB raw	final	MB raw	final
Aluminum	200	11	11	-8.2	<200	-10	<200
Antimony	6.0	4.5	4.5	-1.7	<6.0	0.080	<6.0
Arsenic	10	3.6	5.4	-3.9	<10	1.6	<10
Barium	200	5	5	-0.060	<200	0.030	<200
Beryllium	4.0	1	1	-0.43	<4.0	-0.44	<4.0
Cadmium	5.0	1	1	-0.12	<5.0	-0.070	<5.0
Calcium	1000	100	100	10.6	<1000	56.9	<1000
Chromium	10	1.6	2	-0.28	<10	0.010	<10
Cobalt	50	.83	1	-0.69	<50	-0.20	<50
Copper	25	2.1	5	2.7	<25	0.96	<25
Iron	300	23	23	-9.4	<300	-8.8	<300
Lead	10	2	2	0.22	<10	0.54	<10
Magnesium	5000	100	100	-4.7	<5000	0.89	<5000
Manganese	15	.5	1	-0.14	<15	0.020	<15
Molybdenum	50	2.8	5				
Nickel	40	2.3	2.3	-0.18	<40	0.25	<40
Potassium	10000	100	100	244	<10000	237	<10000
Selenium	10	3.1	3.4	-0.76	<10	1.8	<10
Silver	10	1.2	1.4	-0.54	<10	-0.61	<10
Sodium	10000	500	500	129	<10000	168	<10000
Thallium	10	3.4	3.6	-5.0	<10	-2.2	<10
Tin	50	2.8	2.8				
Vanadium	50	.66	.9	-0.41	<50	-0.020	<50
Zinc	20	3.8	7.4	6.6	<20	1.6	<20

Associated samples MP17591: F70691-1F, F70691-2F, F70691-3F, F70691-4F, F70691-5F, F70691-6F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17591
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 01/12/10 01/12/10

Metal	F70691-1F Original	DUP	RPD	QC Limits	F70691-1F Original	MS	Spikelot MPFLICP1	% Rec	QC Limits
Aluminum	0.0	127 (a)	2.3	0-20	0.0	34300(a)	27000	126.6N(c	80-120
Antimony	0.0	0.0 (a)	NC	0-20	0.0	584 (a)	500	116.8	80-120
Arsenic	0.00	9.4 (a)	5.2	0-20	0.00	2300 (a)	2000	114.5	80-120
Barium	0.0	12.4	2.4	0-20	0.0	2230	2000	110.9	80-120
Beryllium	0.0	0.0	NC	0-20	0.0	44.9	50	89.8	80-120
Cadmium	0.0	0.0	NC	0-20	0.0	46.5	50	93.0	80-120
Calcium	701000	673000	0.1	0-20	701000	685000	25000	44.0 (d)	80-120
Chromium	0.0	0.0	NC	0-20	0.0	190	200	95.0	80-120
Cobalt	0.0	0.0	NC	0-20	0.0	453	500	90.6	80-120
Copper	0.00	0.0	NC	0-20	0.00	321	250	128.4N(c	80-120
Iron	0.0	0.0 (a)	NC	0-20	0.0	27400(a)	26000	105.4	80-120
Lead	0.00	0.0 (a)	NC	0-20	0.00	555 (a)	500	111.0	80-120
Magnesium	1150000	1190000	4.1	0-20	1150000	1280000	25000	160.0(d)	80-120
Manganese	0.0	0.0	NC	0-20	0.0	495	500	99.0	80-120
Molybdenum									
Nickel	0.00	0.0	NC	0-20	0.00	451	500	90.2	80-120
Potassium	30600	19300	4.6	0-20	30600	89800	25000	278.4N(c	80-120
Selenium	0.00	22.9 (a)	0.4	0-20	0.00	2450 (a)	2000	121.4N(c	80-120
Silver	0.0	0.0	NC (b)	0-20	0.0	63.4	50	124.4N(c	80-120
Sodium	4970000	4730000	4.9	0-20	4970000	4880000	25000	-360.0(d	80-120
Thallium	0.0	0.0	NC	0-20	0.0	1770	2000	88.5	80-120
Tin									
Vanadium	0.00	37.4	1.3	0-20	0.00	531	500	98.6	80-120
Zinc	0.0	0.0	NC	0-20	0.0	453	500	90.6	80-120

Associated samples MP17591: F70691-1F, F70691-2F, F70691-3F, F70691-4F, F70691-5F, F70691-6F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Elevated reporting limit(s) due to matrix interference.
(b) RPD acceptable due to low duplicate and sample concentrations.
(c) Spike recovery indicates possible matrix interference.
(d) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17591
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 01/12/10

Metal	BSP Result	Spikelot MPFLICP1	% Rec	QC Limits
Aluminum	26200	27000	97.0	80-120
Antimony	509	500	101.8	80-120
Arsenic	1960	2000	98.0	80-120
Barium	1970	2000	98.5	80-120
Beryllium	51.4	50	102.8	80-120
Cadmium	52.4	50	104.8	80-120
Calcium	24700	25000	98.8	80-120
Chromium	206	200	103.0	80-120
Cobalt	506	500	101.2	80-120
Copper	246	250	98.4	80-120
Iron	27200	26000	104.6	80-120
Lead	528	500	105.6	80-120
Magnesium	23700	25000	94.8	80-120
Manganese	517	500	103.4	80-120
Molybdenum				
Nickel	523	500	104.6	80-120
Potassium	24300	25000	97.2	80-120
Selenium	1980	2000	99.0	80-120
Silver	48.6	50	97.2	80-120
Sodium	23700	25000	94.8	80-120
Thallium	2050	2000	102.5	80-120
Tin				
Vanadium	495	500	99.0	80-120
Zinc	527	500	105.4	80-120

Associated samples MP17591: F70691-1F, F70691-2F, F70691-3F, F70691-4F, F70691-5F, F70691-6F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17591
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 01/12/10

Metal	F70691-1F Original	SDL 1:5	%DIF	QC Limits
Aluminum	0.00	477		0-10
Antimony	0.00	0.00	NC	0-10
Arsenic	0.00	0.00	NC (a)	0-10
Barium	0.00	0.00	NC (a)	0-10
Beryllium	0.00	0.00	NC	0-10
Cadmium	0.00	0.00	NC	0-10
Calcium	701000	833000	23.7*(b)	0-10
Chromium	0.00	0.00	NC	0-10
Cobalt	0.00	0.00	NC	0-10
Copper	0.00	0.00	NC	0-10
Iron	0.00	0.00	NC	0-10
Lead	0.00	0.00	NC	0-10
Magnesium	1150000	1340000	8.2	0-10
Manganese	0.00	0.00	NC	0-10
Molybdenum				
Nickel	0.00	0.00	NC	0-10
Potassium	30600	16400	18.6*(b)	0-10
Selenium	0.00	38.2	67.7 (a)	0-10
Silver	0.00	0.00	NC (a)	0-10
Sodium	4970000	5010000	0.8	0-10
Thallium	0.00	0.00	NC	0-10
Tin				
Vanadium	0.00	42.4	11.9*(b)	0-10
Zinc	0.00	0.00	NC	0-10

Associated samples MP17591: F70691-1F, F70691-2F, F70691-3F, F70691-4F, F70691-5F, F70691-6F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
(b) Serial dilution indicates possible matrix interference.

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17595 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 01/13/10

Metal	RL	IDL	MDL	MB raw	final
Mercury	1.0	.14	.15	-0.033	<1.0

Associated samples MP17595: F70691-1F, F70691-2F, F70691-3F, F70691-4F, F70691-5F, F70691-6F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17595
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 01/13/10 01/13/10

Metal	F70691-1F Original	DUP	RPD	QC Limits	F70691-1F Original	MS	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.0	0.0	NC	0-20	0.0	3.0	3	100.0	80-120

Associated samples MP17595: F70691-1F, F70691-2F, F70691-3F, F70691-4F, F70691-5F, F70691-6F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17595
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 01/13/10

Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	3.0	3	100.0	80-120

Associated samples MP17595: F70691-1F, F70691-2F, F70691-3F, F70691-4F, F70691-5F, F70691-6F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17595
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 01/13/10

Metal	F70691-1F Original	SDL 1:5	%DIF	QC Limits
Mercury	0.00	0.00	NC	0-10

Associated samples MP17595: F70691-1F, F70691-2F, F70691-3F, F70691-4F, F70691-5F, F70691-6F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17603
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 01/14/10

Metal	RL	IDL	MDL	MB raw	final
Mercury	1.0	.14	.15	-0.040	<1.0

Associated samples MP17603: F70691-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17603
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 01/14/10 01/14/10

Metal	F70691-1 Original	DUP	RPD	QC Limits	F70691-1 Original	MS	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.0	0.0	NC	0-20	0.0	2.8	3	93.3	80-120

Associated samples MP17603: F70691-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17603
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 01/14/10

Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	2.8	3	93.3	80-120

Associated samples MP17603: F70691-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17603
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 01/14/10

Metal	F70691-1 Original	SDL 1:5	%DIF	QC Limits
Mercury	0.00	0.00	NC	0-10

Associated samples MP17603: F70691-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

6.11.4

6

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries
- Instrument Runlogs/QC

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Solids, Total Dissolved	GN38070	100	0.0	mg/l				

Associated Samples:
Batch GN38070: F70691-1, F70691-2, F70691-3, F70691-4, F70691-5, F70691-6
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Solids, Total Dissolved	GN38070	F70691-1	mg/l	19800	20200	2.0	0-5%

Associated Samples:
Batch GN38070: F70691-1, F70691-2, F70691-3, F70691-4, F70691-5, F70691-6
(*) Outside of QC limits

Southeast ACCUTEST Laboratories

IT'S ALL IN THE CHEMISTRY

Reissue #1
02/19/10

Technical Report for

Tetra Tech, Inc

Holloman AFB; Alamogordo, NM

100-TEN-T93002

Accutest Job Number: F70691

Sampling Date: 01/07/10

Report to:

Tetra Tech, NUS

Virginia.Mullins@tetratech.com
Maureen.McMyler@tetratech.com
ATTN: Ginger Mullins

Total number of pages in report: **209**

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Harry Behzadi, Ph.D.
Laboratory Director

Client Service contact: Sue Bell 407-425-6700

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February 19, 2010

Ms. Ginger Mullins
Tetra Tech
800 Oak Ridge Turnpike, A 600
Oak Ridge, TN 37838

RE: Accutest job F70691 Reissue

Dear Ms. Mullins,

The final report for job number F70961 has been edited to reflect requested corrections. These edits have been incorporated into the revised report.

The report has the corrected QC for metals.

Accutest apologies for any inconvenience this may have caused. Please feel free to contact us if we can be of further assistance.

Sincerely,

Accutest Laboratories, SE

Florida ♦ 4405 Vineland Road ♦ Suite C-15 ♦ Orlando, FL 32811 ♦ tel: 407 425-6700 ♦ fax: 407 425-0707 ♦ htpp://www.accutest.com

Table of Contents

-1-

Section 1: Sample Summary 5
Section 2: Case Narrative/Conformance Summary 7
Section 3: Sample Results 9
3.1: F70691-1: MW30&33-01-010710 10
3.2: F70691-1F: MW30&33-01-010710 15
3.3: F70691-2: MW30&33-02-010710 16
3.4: F70691-2F: MW30&33-02-010710 21
3.5: F70691-3: MW30&33-03-010710 22
3.6: F70691-3F: MW30&33-03-010710 27
3.7: F70691-4: MW30&33-04-010710 28
3.8: F70691-4F: MW30&33-04-010710 33
3.9: F70691-5: MW30&33-05R-010710 34
3.10: F70691-5F: MW30&33-05R-010710 39
3.11: F70691-6: MW30&33-DUP01-010710 40
3.12: F70691-6F: MW30&33-DUP01-010710 45
3.13: F70691-7: TB02-010710 46
Section 4: Misc. Forms 49
4.1: Certification Exceptions 50
4.2: Chain of Custody 51
Section 5: GC/MS Volatiles - QC Data Summaries 53
5.1: Method Blank Summary 54
5.2: Blank Spike Summary 60
5.3: Matrix Spike/Matrix Spike Duplicate Summary 67
5.4: Instrument Performance Checks (BFB) 73
5.5: Internal Standard Area Summaries 78
5.6: Surrogate Recovery Summaries 80
5.7: Initial and Continuing Calibration Summaries 81
Section 6: Metals Analysis - QC Data Summaries 96
6.1: Inst QC MA7769: Hg 97
6.2: Inst QC MA7770: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn 107
6.3: Inst QC MA7773: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn 125
6.4: Inst QC MA7776: Hg 152
6.5: Inst QC MA7779: Hg 161
6.6: Inst QC MA7780: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Tl,V, Zn 169
6.7: Prep QC MP17582: Hg 185
6.8: Prep QC MP17583: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn 190
6.9: Prep QC MP17591: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn 195

Table of Contents

6.10: Prep QC MP17595: Hg 199
6.11: Prep QC MP17603: Hg 203
Section 7: General Chemistry - QC Data Summaries 207
7.1: Method Blank and Spike Results Summary 208
7.2: Duplicate Results Summary 209

Accutest Laboratories

Sample Summary

Tetra Tech, Inc

Job No: F70691

Holloman AFB; Alamogordo, NM
Project No: 100-TEN-T93002

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
F70691-1	01/07/10	14:40	AMJB	01/09/10	AQ	Ground Water	MW30&33-01-010710
F70691-1D	01/07/10	14:40	AMJB	01/09/10	AQ	Water Dup/MSD	MW30&33-01-010710
F70691-1DF	01/07/10	14:40	AMJB	01/09/10	AQ	Water Dup/MSD	MW30&33-01-010710
F70691-1F	01/07/10	14:40	AMJB	01/09/10	AQ	Ground Water	MW30&33-01-010710
F70691-1S	01/07/10	14:40	AMJB	01/09/10	AQ	Water Matrix Spike	MW30&33-01-010710
F70691-1SF	01/07/10	14:40	AMJB	01/09/10	AQ	Water Matrix Spike	MW30&33-01-010710
F70691-2	01/07/10	14:12	AMJB	01/09/10	AQ	Ground Water	MW30&33-02-010710
F70691-2F	01/07/10	14:12	AMJB	01/09/10	AQ	Groundwater Filtered	MW30&33-02-010710
F70691-3	01/07/10	15:25	AMJB	01/09/10	AQ	Ground Water	MW30&33-03-010710
F70691-3F	01/07/10	15:25	AMJB	01/09/10	AQ	Groundwater Filtered	MW30&33-03-010710
F70691-4	01/07/10	15:26	AMJB	01/09/10	AQ	Ground Water	MW30&33-04-010710
F70691-4F	01/07/10	15:26	AMJB	01/09/10	AQ	Groundwater Filtered	MW30&33-04-010710
F70691-5	01/07/10	16:05	AMJB	01/09/10	AQ	Ground Water	MW30&33-05R-010710

Accutest Laboratories

Sample Summary
(continued)

Tetra Tech, Inc

Job No: F70691

Holloman AFB; Alamogordo, NM
Project No: 100-TEN-T93002

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
F70691-5F	01/07/10	16:05	AMJB	01/09/10	AQ	Groundwater Filtered	MW30&33-05R-010710
F70691-6	01/07/10	00:00	AMJB	01/09/10	AQ	Ground Water	MW30&33-DUP01-010710
F70691-6F	01/07/10	00:00	AMJB	01/09/10	AQ	Groundwater Filtered	MW30&33-DUP01-010710
F70691-7	01/07/10	00:00	AMJB	01/09/10	AQ	Trip Blank Water	TB02-010710

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Tetra Tech, Inc **Job No:** F70691

Site: Holloman AFB; Alamogordo, NM **Report Date:** 1/18/2010 2:25:43 PM

6 Samples and 1 Trip Blank were collected on 01/07/2010 and were received at Accutest SE on 01/09/2010 properly preserved, at 3.6 Deg. C and intact. These Samples received an Accutest job number of F70691. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GCMS by Method SW846 8260B

Matrix: AQ **Batch ID:** VJ3081

All samples were analyzed within the recommended method holding time.

Samples F70691-1MS, F70691-1MSD were used as the QC samples indicated.

All method blanks for this batch meet method specific criteria.

Sample F70691-1 has compounds reported with a “B” qualifier, indicating analyte is found in the associated method blank.

Blank Spike Recoverys for Acetone, Acrolein, Methyl ethyl ketone are outside control limits.

Matrix Spike Recoverys for 2-Chloroethyl vinyl ether, 2-Hexanone, Acrylonitrile, cis-1,3-Dichloropropene, Methyl methacrylate are outside control limits. Probable cause due to matrix interference.

Matrix Spike Duplicate Recoverys for 2-Chloroethyl vinyl ether, 2-Hexanone, 4-Methyl-2-pentanone, cis-1,3-Dichloropropene, Methyl methacrylate, Propionitrile are outside control limits. Probable cause due to matrix interference.

RPDs for MSD for Acrylonitrile, Hexachlorobutadiene are outside control limits for sample F70691-1MSD. Probable cause due to sample non-homogeneity.

Matrix: AQ **Batch ID:** VJ3082

All samples were analyzed within the recommended method holding time.

Samples F70721-1MS, F70721-1MSD were used as the QC samples indicated.

Samples F70691-6, F70691-7 have compounds reported with a “B” qualifier, indicating analyte is found in the associated method blank.

Blank Spike Recoverys for Acetone, Acrolein, Methyl ethyl ketone are outside control limits.

Matrix Spike Recoverys for 2-Chloroethyl vinyl ether, Trans-1,4-Dichloro-2-Butene are outside control limits. Probable cause due to matrix interference.

Matrix Spike Duplicate Recoverys for 2-Chloroethyl vinyl ether, cis-1,3-Dichloropropene, cis-1,4-Dichloro-2-Butene, Trans-1,4-Dichloro-2-Butene are outside control limits. Probable cause due to matrix interference.

RPD for MSD for Hexachlorobutadiene is outside control limits for sample F70721-1MSD. Probable cause due to sample non-homogeneity.

Metals by Method SW846 6010B

Matrix: AQ **Batch ID:** MP17583

All samples were digested within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Samples F70691-1DUP, F70691-1MS, F70691-1MSD, F70691-1SDL were used as the QC samples for metals.

Matrix Spike and Matrix Spike Duplicate Recoverys for Copper, Selenium, Silver are outside control limits. Spike recovery indicates possible matrix interference.

Matrix Spike Recoverys for Calcium, Magnesium, Sodium are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

RPD for Duplicate for Manganese is outside control limits for sample MP17583-D1. RPD acceptable due to low duplicate and sample concentrations.

RPDs for Serial Dilution for Aluminum, Arsenic, Barium, Manganese, Selenium, Calcium, Potassium, Vanadium are outside control limits for sample MP17583-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Monday, January 18, 2010

Metals by Method SW846 6010B

Matrix: AQ **Batch ID:** MP17583

MP17583-SD1 for Calcium, Potassium, Vanadium: Serial dilution indicates possible matrix interference.

F70691-1, F70691-2, F70691-3, F70691-4, F70691-5, F70691-6 for Aluminum, Antimony, Arsenic, Iron, Lead, Selenium: Elevated reporting limits due to matrix interference.

Matrix: AQ **Batch ID:** MP17591

All samples were digested within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Samples F70691-1FDUP, F70691-1FMS, F70691-1FSDL were used as the QC samples for metals.

Matrix Spike Recoverys for Aluminum, Copper, Potassium, Selenium, Silver are outside control limits. Spike recovery indicates possible matrix interference.

Matrix Spike Recoverys for Calcium, Magnesium, Sodium are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

RPD for Duplicate for Silver is outside control limits for sample MP17591-D1. RPD acceptable due to low duplicate and sample concentrations.

RPDs for Serial Dilution for Arsenic, Barium, Selenium, Silver, Calcium, Potassium, Vanadium are outside control limits for sample MP17591-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

MP17591-SD1 for Calcium, Potassium, Vanadium: Serial dilution indicates possible matrix interference.

F70691-1F, F70691-2F, F70691-3F, F70691-4F, F70691-5F, F70691-6F for Aluminum, Antimony, Arsenic, Iron, Lead, Selenium: Elevated reporting limits due to matrix interference.

Metals by Method SW846 7470A

Matrix: AQ **Batch ID:** MP17582

All samples were digested within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Samples F70660-11ADUP, F70660-11AMS, F70660-11AMSD, F70660-11ASDL were used as the QC samples for metals.

Matrix: AQ **Batch ID:** MP17595

All samples were digested within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Samples F70691-1FDUP, F70691-1FMS, F70691-1FSDL were used as the QC samples for metals.

Matrix: AQ **Batch ID:** MP17603

All samples were digested within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Samples F70691-1DUP, F70691-1MS, F70691-1SDL were used as the QC samples for metals.

Wet Chemistry by Method SM19 2540C

Matrix: AQ **Batch ID:** GN38070

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample F70691-1DUP was used as the QC sample for Solids, Total Dissolved.

Accutest Laboratories Southeast (ALSE) certifies that this report meets the project requirements for analytical data produced for the samples as received at ALSE and as stated on the COC. ALSE certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the ALSE Quality Manual except as noted above. This report is to be used in its entirety. ALSE is not responsible for any assumptions of data quality if partial data packages are used.

Narrative prepared by:

_____ Date: January 18, 2010

Ellen Pampel, Inorganic QA (signature on file)

Monday, January 18, 2010

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MW30&33-01-010710		
Lab Sample ID:	F70691-1	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J052875.D	1	01/12/10	KW	n/a	n/a	VJ3081
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
75-05-8	Acetonitrile	ND	20	5.0	ug/l	
107-02-8	Acrolein	ND	20	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	2.0	ug/l	
107-05-1	Allyl chloride	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-44-7	Benzyl Chloride	ND	2.0	0.36	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.23	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.33	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.32	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.22	ug/l	
75-00-3	Chloroethane	ND	2.0	0.48	ug/l	
67-66-3	Chloroform	ND	1.0	0.28	ug/l	
544-10-5	1-Chlorohexane	ND	2.0	0.27	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.25	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.40	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.24	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.54	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.32	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.34	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.26	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.28	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW30&33-01-010710		
Lab Sample ID:	F70691-1	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
1476-11-5	cis-1,4-Dichloro-2-Butene	ND	10	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.45	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.43	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	1.0	ug/l	
76-13-1	Freon 113	ND	1.0	0.34	ug/l	
591-78-6	2-Hexanone	ND	10	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.69	ug/l	
110-54-3	Hexane	ND	2.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.32	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
126-98-7	Methacrylonitrile	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.78	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.61	ug/l	
74-88-4	Methyl iodide	ND	5.0	1.0	ug/l	
80-62-6	Methyl methacrylate	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.30	ug/l	
75-09-2	Methylene chloride	1.2	5.0	1.0	ug/l	JB
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
76-01-7	Pentachloroethane	ND	10	2.0	ug/l	
107-12-0	Propionitrile	ND	20	10	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.25	ug/l	
100-42-5	Styrene	ND	1.0	0.36	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.33	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.26	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.34	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW30&33-01-010710		
Lab Sample ID:	F70691-1	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.35	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.32	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
108-05-4	Vinyl Acetate	ND	10	3.6	ug/l	
	m,p-Xylene	ND	2.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.37	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		87-116%
17060-07-0	1,2-Dichloroethane-D4	99%		76-127%
2037-26-5	Toluene-D8	103%		86-112%
460-00-4	4-Bromofluorobenzene	103%		84-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW30&33-01-010710		
Lab Sample ID:	F70691-1	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum [a]	96.1 B	800	44	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Antimony [a]	9.0 U	12	9.0	ug/l	2	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Arsenic [a]	13.3 B	20	11	ug/l	2	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Barium	11.9 B	200	5.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [1]	SW846 3010A [4]
Beryllium	1.0 U	4.0	1.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [1]	SW846 3010A [4]
Cadmium	1.0 U	5.0	1.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [1]	SW846 3010A [4]
Calcium	683000	2000	200	ug/l	2	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Chromium	2.0 U	10	2.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [1]	SW846 3010A [4]
Cobalt	1.0 U	50	1.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [1]	SW846 3010A [4]
Copper	5.0 U	25	5.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [1]	SW846 3010A [4]
Iron [a]	92 U	1200	92	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Lead [a]	8.0 U	20	8.0	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Magnesium	1240000	20000	400	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Manganese	1.0 U	15	1.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [1]	SW846 3010A [4]
Mercury	0.15 U	1.0	0.15	ug/l	1	01/14/10	01/14/10	LM	SW846 7470A [3]	SW846 7470A [5]
Nickel	2.3 U	40	2.3	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [1]	SW846 3010A [4]
Potassium	20300	10000	100	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [1]	SW846 3010A [4]
Selenium [a]	37.6	20	6.8	ug/l	2	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Silver	1.4 U	10	1.4	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [1]	SW846 3010A [4]
Sodium	5000000	1000000	50000	ug/l	100	01/11/10	01/11/10	RS	SW846 6010B [1]	SW846 3010A [4]
Thallium	3.6 U	10	3.6	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [1]	SW846 3010A [4]
Vanadium	38.2 B	50	0.90	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [1]	SW846 3010A [4]
Zinc	7.4 U	20	7.4	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [1]	SW846 3010A [4]

(1) Instrument QC Batch: MA7770
(2) Instrument QC Batch: MA7773
(3) Instrument QC Batch: MA7779
(4) Prep QC Batch: MP17583
(5) Prep QC Batch: MP17603

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW30&33-01-010710		
Lab Sample ID:	F70691-1	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	19800	10000	1000	mg/l	100	01/11/10 10:05	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW30&33-01-010710		
Lab Sample ID:	F70691-1F	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum [a]	130 B	800	44	ug/l	4	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Antimony [a]	9.0 U	12	9.0	ug/l	2	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Arsenic [a]	11 U	20	11	ug/l	2	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Barium	12.7 B	200	5.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Beryllium	1.0 U	4.0	1.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Cadmium	1.0 U	5.0	1.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Calcium	674000	2000	200	ug/l	2	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Chromium	2.0 U	10	2.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Cobalt	1.0 U	50	1.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Copper	5.0 U	25	5.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Iron [a]	92 U	1200	92	ug/l	4	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Lead [a]	8.0 U	20	8.0	ug/l	4	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Magnesium	1240000 C	20000	400	ug/l	4	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Manganese	1.0 U	15	1.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Mercury	0.15 U	1.0	0.15	ug/l	1	01/13/10	01/13/10	LM	SW846 7470A [2]	SW846 7470A [5]
Nickel	2.3 U	40	2.3	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Potassium	20200	10000	100	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Selenium [a]	22.8	20	6.8	ug/l	2	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Silver	1.4 U	10	1.4	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Sodium	4970000	1000000	50000	ug/l	100	01/12/10	01/12/10	RS	SW846 6010B [1]	SW846 3010A [4]
Thallium	3.6 U	10	3.6	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Vanadium	37.9 B	50	0.90	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Zinc	7.4 U	20	7.4	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]

(1) Instrument QC Batch: MA7773
(2) Instrument QC Batch: MA7776
(3) Instrument QC Batch: MA7780
(4) Prep QC Batch: MP17591
(5) Prep QC Batch: MP17595

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW30&33-02-010710		
Lab Sample ID:	F70691-2	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J052897.D	1	01/13/10	KW	n/a	n/a	VJ3082
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
75-05-8	Acetonitrile	ND	20	5.0	ug/l	
107-02-8	Acrolein	ND	20	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	2.0	ug/l	
107-05-1	Allyl chloride	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-44-7	Benzyl Chloride	ND	2.0	0.36	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.23	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.33	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.32	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.22	ug/l	
75-00-3	Chloroethane	ND	2.0	0.48	ug/l	
67-66-3	Chloroform	0.75	1.0	0.28	ug/l	J
544-10-5	1-Chlorohexane	ND	2.0	0.27	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.25	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.40	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
75-34-3	1,1-Dichloroethane	2.2	1.0	0.24	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.54	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.32	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.34	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.26	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.28	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW30&33-02-010710		
Lab Sample ID:	F70691-2	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
1476-11-5	cis-1,4-Dichloro-2-Butene	ND	10	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.45	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.43	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	1.0	ug/l	
76-13-1	Freon 113	ND	1.0	0.34	ug/l	
591-78-6	2-Hexanone	ND	10	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.69	ug/l	
110-54-3	Hexane	ND	2.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.32	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
126-98-7	Methacrylonitrile	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.78	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.61	ug/l	
74-88-4	Methyl iodide	ND	5.0	1.0	ug/l	
80-62-6	Methyl methacrylate	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.30	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
76-01-7	Pentachloroethane	ND	10	2.0	ug/l	
107-12-0	Propionitrile	ND	20	10	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.25	ug/l	
100-42-5	Styrene	ND	1.0	0.36	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.33	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.26	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.34	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW30&33-02-010710		
Lab Sample ID:	F70691-2	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.35	ug/l	
79-01-6	Trichloroethylene	10.6	1.0	0.32	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
108-05-4	Vinyl Acetate	ND	10	3.6	ug/l	
	m,p-Xylene	ND	2.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.37	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		87-116%
17060-07-0	1,2-Dichloroethane-D4	98%		76-127%
2037-26-5	Toluene-D8	106%		86-112%
460-00-4	4-Bromofluorobenzene	106%		84-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW30&33-02-010710		
Lab Sample ID:	F70691-2	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum [a]	114 B	800	44	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Antimony [a]	10.0 B	12	9.0	ug/l	2	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Arsenic [a]	14.3 B	20	11	ug/l	2	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Barium	14.4 B	200	5.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Beryllium	1.0 U	4.0	1.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Cadmium	1.0 U	5.0	1.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Calcium	874000	2000	200	ug/l	2	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Chromium	2.0 U	10	2.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Cobalt	1.0 U	50	1.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Copper	5.0 U	25	5.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Iron [a]	169 B	1200	92	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Lead [a]	8.0 U	20	8.0	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Magnesium	1800000	20000	400	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Manganese	1.0 U	15	1.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Mercury	0.15 U	1.0	0.15	ug/l	1	01/11/10	01/11/10	LM	SW846 7470A [1]	SW846 7470A [4]
Nickel	2.3 U	40	2.3	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Potassium	30900	10000	100	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Selenium [a]	54.7	20	6.8	ug/l	2	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Silver	1.4 U	10	1.4	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Sodium	6750000	1000000	50000	ug/l	100	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Thallium	3.6 U	10	3.6	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Vanadium	27.2 B	50	0.90	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Zinc	7.4 U	20	7.4	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]

(1) Instrument QC Batch: MA7769
(2) Instrument QC Batch: MA7770
(3) Instrument QC Batch: MA7773
(4) Prep QC Batch: MP17582
(5) Prep QC Batch: MP17583

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW30&33-02-010710		
Lab Sample ID:	F70691-2	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	27200	10000	1000	mg/l	100	01/11/10 10:05	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW30&33-02-010710		
Lab Sample ID:	F70691-2F	**Date Sampled:**	01/07/10
Matrix:	AQ - Groundwater Filtered	**Date Received:**	01/09/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum [a]	149 B	800	44	ug/l	4	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Antimony [a]	9.0 U	12	9.0	ug/l	2	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Arsenic [a]	11 U	20	11	ug/l	2	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Barium	15.2 B	200	5.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Beryllium	1.0 U	4.0	1.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Cadmium	1.0 U	5.0	1.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Calcium	839000	2000	200	ug/l	2	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Chromium	2.0 U	10	2.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Cobalt	1.0 U	50	1.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Copper	5.0 U	25	5.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Iron [a]	226 B	1200	92	ug/l	4	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Lead [a]	8.0 U	20	8.0	ug/l	4	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Magnesium	1830000	20000	400	ug/l	4	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Manganese	1.0 U	15	1.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Mercury	0.15 U	1.0	0.15	ug/l	1	01/13/10	01/13/10	LM	SW846 7470A [2]	SW846 7470A [5]
Nickel	2.3 U	40	2.3	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Potassium	29700	10000	100	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Selenium [a]	32.1	20	6.8	ug/l	2	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Silver	1.4 U	10	1.4	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Sodium	6410000	1000000	50000	ug/l	100	01/12/10	01/12/10	RS	SW846 6010B [1]	SW846 3010A [4]
Thallium	3.6 U	10	3.6	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Vanadium	26.8 B	50	0.90	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Zinc	7.4 U	20	7.4	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]

(1) Instrument QC Batch: MA7773
(2) Instrument QC Batch: MA7776
(3) Instrument QC Batch: MA7780
(4) Prep QC Batch: MP17591
(5) Prep QC Batch: MP17595

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW30&33-03-010710		
Lab Sample ID:	F70691-3	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J052907.D	1	01/13/10	KW	n/a	n/a	VJ3082
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
75-05-8	Acetonitrile	ND	20	5.0	ug/l	
107-02-8	Acrolein	ND	20	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	2.0	ug/l	
107-05-1	Allyl chloride	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-44-7	Benzyl Chloride	ND	2.0	0.36	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.23	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.33	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.32	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.22	ug/l	
75-00-3	Chloroethane	ND	2.0	0.48	ug/l	
67-66-3	Chloroform	0.56	1.0	0.28	ug/l	J
544-10-5	1-Chlorohexane	ND	2.0	0.27	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.25	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.40	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
75-34-3	1,1-Dichloroethane	1.5	1.0	0.24	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.54	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.32	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.34	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.26	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.28	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW30&33-03-010710		
Lab Sample ID:	F70691-3	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
1476-11-5	cis-1,4-Dichloro-2-Butene	ND	10	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.45	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.43	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	1.0	ug/l	
76-13-1	Freon 113	ND	1.0	0.34	ug/l	
591-78-6	2-Hexanone	ND	10	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.69	ug/l	
110-54-3	Hexane	ND	2.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.32	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
126-98-7	Methacrylonitrile	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.78	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.61	ug/l	
74-88-4	Methyl iodide	ND	5.0	1.0	ug/l	
80-62-6	Methyl methacrylate	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.30	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
76-01-7	Pentachloroethane	ND	10	2.0	ug/l	
107-12-0	Propionitrile	ND	20	10	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.25	ug/l	
100-42-5	Styrene	ND	1.0	0.36	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.33	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.26	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.34	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW30&33-03-010710		
Lab Sample ID:	F70691-3	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.35	ug/l	
79-01-6	Trichloroethylene	8.2	1.0	0.32	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
108-05-4	Vinyl Acetate	ND	10	3.6	ug/l	
	m,p-Xylene	ND	2.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.37	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		87-116%
17060-07-0	1,2-Dichloroethane-D4	99%		76-127%
2037-26-5	Toluene-D8	105%		86-112%
460-00-4	4-Bromofluorobenzene	106%		84-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW30&33-03-010710		
Lab Sample ID:	F70691-3	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum [a]	110 B	800	44	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Antimony [a]	9.0 U	12	9.0	ug/l	2	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Arsenic [a]	11 U	20	11	ug/l	2	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Barium	22.1 B	200	5.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Beryllium	1.0 U	4.0	1.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Cadmium	1.0 U	5.0	1.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Calcium	803000	2000	200	ug/l	2	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Chromium	2.0 U	10	2.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Cobalt	1.0 U	50	1.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Copper	5.0 U	25	5.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Iron [a]	105 B	1200	92	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Lead [a]	8.0 U	20	8.0	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Magnesium	1690000	20000	400	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Manganese	1.0 U	15	1.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Mercury	0.15 U	1.0	0.15	ug/l	1	01/11/10	01/11/10	LM	SW846 7470A [1]	SW846 7470A [4]
Nickel	2.3 U	40	2.3	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Potassium	17100	10000	100	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Selenium [a]	49.2	20	6.8	ug/l	2	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Silver	1.4 U	10	1.4	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Sodium	6450000	1000000	50000	ug/l	100	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Thallium	3.6 U	10	3.6	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Vanadium	17.7 B	50	0.90	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Zinc	7.4 U	20	7.4	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]

(1) Instrument QC Batch: MA7769
(2) Instrument QC Batch: MA7770
(3) Instrument QC Batch: MA7773
(4) Prep QC Batch: MP17582
(5) Prep QC Batch: MP17583

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW30&33-03-010710		
Lab Sample ID:	F70691-3	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	28100	10000	1000	mg/l	100	01/11/10 10:05	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW30&33-03-010710		
Lab Sample ID:	F70691-3F	**Date Sampled:**	01/07/10
Matrix:	AQ - Groundwater Filtered	**Date Received:**	01/09/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum [a]	158 B	800	44	ug/l	4	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Antimony [a]	9.0 U	12	9.0	ug/l	2	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Arsenic [a]	11 U	20	11	ug/l	2	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Barium	22.6 B	200	5.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Beryllium	1.0 U	4.0	1.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Cadmium	1.0 U	5.0	1.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Calcium	757000	2000	200	ug/l	2	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Chromium	2.0 U	10	2.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Cobalt	1.0 U	50	1.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Copper	5.0 U	25	5.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Iron [a]	92 U	1200	92	ug/l	4	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Lead [a]	8.0 U	20	8.0	ug/l	4	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Magnesium	1620000	20000	400	ug/l	4	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Manganese	1.0 U	15	1.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Mercury	0.15 U	1.0	0.15	ug/l	1	01/13/10	01/13/10	LM	SW846 7470A [2]	SW846 7470A [5]
Nickel	2.3 U	40	2.3	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Potassium	15900	10000	100	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Selenium [a]	29.3	20	6.8	ug/l	2	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Silver	1.4 U	10	1.4	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Sodium	6200000	1000000	50000	ug/l	100	01/12/10	01/12/10	RS	SW846 6010B [1]	SW846 3010A [4]
Thallium	3.6 U	10	3.6	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Vanadium	17.1 B	50	0.90	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Zinc	7.4 U	20	7.4	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]

(1) Instrument QC Batch: MA7773
(2) Instrument QC Batch: MA7776
(3) Instrument QC Batch: MA7780
(4) Prep QC Batch: MP17591
(5) Prep QC Batch: MP17595

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW30&33-04-010710		
Lab Sample ID:	F70691-4	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J052908.D	1	01/13/10	KW	n/a	n/a	VJ3082
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
75-05-8	Acetonitrile	ND	20	5.0	ug/l	
107-02-8	Acrolein	ND	20	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	2.0	ug/l	
107-05-1	Allyl chloride	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-44-7	Benzyl Chloride	ND	2.0	0.36	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.23	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.33	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.32	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.22	ug/l	
75-00-3	Chloroethane	ND	2.0	0.48	ug/l	
67-66-3	Chloroform	0.52	1.0	0.28	ug/l	J
544-10-5	1-Chlorohexane	ND	2.0	0.27	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.25	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.40	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
75-34-3	1,1-Dichloroethane	1.2	1.0	0.24	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.54	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.32	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.34	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.26	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.28	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW30&33-04-010710		
Lab Sample ID:	F70691-4	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
1476-11-5	cis-1,4-Dichloro-2-Butene	ND	10	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.45	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.43	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	1.0	ug/l	
76-13-1	Freon 113	ND	1.0	0.34	ug/l	
591-78-6	2-Hexanone	ND	10	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.69	ug/l	
110-54-3	Hexane	ND	2.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.32	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
126-98-7	Methacrylonitrile	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.78	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.61	ug/l	
74-88-4	Methyl iodide	ND	5.0	1.0	ug/l	
80-62-6	Methyl methacrylate	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.30	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
76-01-7	Pentachloroethane	ND	10	2.0	ug/l	
107-12-0	Propionitrile	ND	20	10	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.25	ug/l	
100-42-5	Styrene	ND	1.0	0.36	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.33	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.26	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.34	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW30&33-04-010710		
Lab Sample ID:	F70691-4	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.35	ug/l	
79-01-6	Trichloroethylene	5.2	1.0	0.32	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
108-05-4	Vinyl Acetate	ND	10	3.6	ug/l	
	m,p-Xylene	ND	2.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.37	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		87-116%
17060-07-0	1,2-Dichloroethane-D4	97%		76-127%
2037-26-5	Toluene-D8	104%		86-112%
460-00-4	4-Bromofluorobenzene	102%		84-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW30&33-04-010710		
Lab Sample ID:	F70691-4	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum [a]	89.5 B	800	44	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Antimony [a]	9.0 U	12	9.0	ug/l	2	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Arsenic [a]	11 U	20	11	ug/l	2	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Barium	12.7 B	200	5.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Beryllium	1.0 U	4.0	1.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Cadmium	1.0 U	5.0	1.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Calcium	708000	2000	200	ug/l	2	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Chromium	2.0 U	10	2.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Cobalt	1.0 U	50	1.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Copper	5.0 U	25	5.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Iron [a]	92 U	1200	92	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Lead [a]	8.0 U	20	8.0	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Magnesium	1500000	20000	400	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Manganese	1.0 U	15	1.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Mercury	0.15 U	1.0	0.15	ug/l	1	01/11/10	01/11/10	LM	SW846 7470A [1]	SW846 7470A [4]
Nickel	2.3 U	40	2.3	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Potassium	8810 B	10000	100	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Selenium [a]	37.2	20	6.8	ug/l	2	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Silver	1.4 U	10	1.4	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Sodium	5570000	1000000	50000	ug/l	100	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Thallium	3.6 U	10	3.6	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Vanadium	30.7 B	50	0.90	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Zinc	7.4 U	20	7.4	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]

(1) Instrument QC Batch: MA7769
(2) Instrument QC Batch: MA7770
(3) Instrument QC Batch: MA7773
(4) Prep QC Batch: MP17582
(5) Prep QC Batch: MP17583

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW30&33-04-010710		
Lab Sample ID:	F70691-4	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	21800	10000	1000	mg/l	100	01/11/10 10:05	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW30&33-04-010710		
Lab Sample ID:	F70691-4F	**Date Sampled:**	01/07/10
Matrix:	AQ - Groundwater Filtered	**Date Received:**	01/09/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum [a]	143 B	800	44	ug/l	4	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Antimony [a]	9.0 U	12	9.0	ug/l	2	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Arsenic [a]	11 U	20	11	ug/l	2	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Barium	12.8 B	200	5.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Beryllium	1.0 U	4.0	1.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Cadmium	1.0 U	5.0	1.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Calcium	684000	2000	200	ug/l	2	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Chromium	2.0 U	10	2.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Cobalt	1.0 U	50	1.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Copper	5.0 U	25	5.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Iron [a]	92 U	1200	92	ug/l	4	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Lead [a]	8.0 U	20	8.0	ug/l	4	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Magnesium	1440000	20000	400	ug/l	4	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Manganese	1.0 U	15	1.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Mercury	0.15 U	1.0	0.15	ug/l	1	01/13/10	01/13/10	LM	SW846 7470A [2]	SW846 7470A [5]
Nickel	2.3 U	40	2.3	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Potassium	8120 B	10000	100	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Selenium [a]	20.6	20	6.8	ug/l	2	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Silver	1.4 U	10	1.4	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Sodium	5320000	1000000	50000	ug/l	100	01/12/10	01/12/10	RS	SW846 6010B [1]	SW846 3010A [4]
Thallium	3.6 U	10	3.6	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Vanadium	30.0 B	50	0.90	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Zinc	7.4 U	20	7.4	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]

(1) Instrument QC Batch: MA7773
(2) Instrument QC Batch: MA7776
(3) Instrument QC Batch: MA7780
(4) Prep QC Batch: MP17591
(5) Prep QC Batch: MP17595

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW30&33-05R-010710		
Lab Sample ID:	F70691-5	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J052909.D	1	01/13/10	KW	n/a	n/a	VJ3082
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
75-05-8	Acetonitrile	ND	20	5.0	ug/l	
107-02-8	Acrolein	ND	20	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	2.0	ug/l	
107-05-1	Allyl chloride	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-44-7	Benzyl Chloride	ND	2.0	0.36	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.23	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.33	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.32	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.22	ug/l	
75-00-3	Chloroethane	ND	2.0	0.48	ug/l	
67-66-3	Chloroform	0.33	1.0	0.28	ug/l	J
544-10-5	1-Chlorohexane	ND	2.0	0.27	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.25	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.40	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
75-34-3	1,1-Dichloroethane	8.8	1.0	0.24	ug/l	
75-35-4	1,1-Dichloroethylene	1.2	1.0	0.54	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.32	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.34	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.26	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.28	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW30&33-05R-010710		
Lab Sample ID:	F70691-5	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	14.9	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
1476-11-5	cis-1,4-Dichloro-2-Butene	ND	10	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.45	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.43	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	1.0	ug/l	
76-13-1	Freon 113	ND	1.0	0.34	ug/l	
591-78-6	2-Hexanone	ND	10	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.69	ug/l	
110-54-3	Hexane	ND	2.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.32	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
126-98-7	Methacrylonitrile	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.78	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.61	ug/l	
74-88-4	Methyl iodide	ND	5.0	1.0	ug/l	
80-62-6	Methyl methacrylate	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.30	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
76-01-7	Pentachloroethane	ND	10	2.0	ug/l	
107-12-0	Propionitrile	ND	20	10	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.25	ug/l	
100-42-5	Styrene	ND	1.0	0.36	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.33	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.26	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.34	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW30&33-05R-010710		
Lab Sample ID:	F70691-5	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.35	ug/l	
79-01-6	Trichloroethylene	30.6	1.0	0.32	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
108-05-4	Vinyl Acetate	ND	10	3.6	ug/l	
	m,p-Xylene	ND	2.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.37	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		87-116%
17060-07-0	1,2-Dichloroethane-D4	97%		76-127%
2037-26-5	Toluene-D8	104%		86-112%
460-00-4	4-Bromofluorobenzene	105%		84-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW30&33-05R-010710		
Lab Sample ID:	F70691-5	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum [a]	251 B	800	44	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Antimony [a]	9.0 U	12	9.0	ug/l	2	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Arsenic [a]	11 U	20	11	ug/l	2	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Barium	27.4 B	200	5.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Beryllium	1.0 U	4.0	1.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Cadmium	1.0 U	5.0	1.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Calcium	722000	2000	200	ug/l	2	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Chromium	2.0 U	10	2.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Cobalt	1.1 B	50	1.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Copper	5.0 U	25	5.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Iron [a]	92 U	1200	92	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Lead [a]	8.0 U	20	8.0	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Magnesium	1230000	20000	400	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Manganese	493	15	1.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Mercury	0.15 U	1.0	0.15	ug/l	1	01/11/10	01/11/10	LM	SW846 7470A [1]	SW846 7470A [4]
Nickel	6.5 B	40	2.3	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Potassium	20400	10000	100	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Selenium [a]	32.5	20	6.8	ug/l	2	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Silver	1.4 U	10	1.4	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Sodium	4600000	1000000	50000	ug/l	100	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Thallium	3.6 U	10	3.6	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Vanadium	48.4 B	50	0.90	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Zinc	7.4 U	20	7.4	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]

(1) Instrument QC Batch: MA7769
(2) Instrument QC Batch: MA7770
(3) Instrument QC Batch: MA7773
(4) Prep QC Batch: MP17582
(5) Prep QC Batch: MP17583

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW30&33-05R-010710		
Lab Sample ID:	F70691-5	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	13600	10000	1000	mg/l	100	01/11/10 10:05	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW30&33-05R-010710		
Lab Sample ID:	F70691-5F	**Date Sampled:**	01/07/10
Matrix:	AQ - Groundwater Filtered	**Date Received:**	01/09/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum [a]	153 B	800	44	ug/l	4	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Antimony [a]	9.0 U	12	9.0	ug/l	2	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Arsenic [a]	11 U	20	11	ug/l	2	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Barium	25.7 B	200	5.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Beryllium	1.0 U	4.0	1.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Cadmium	1.0 U	5.0	1.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Calcium	672000	2000	200	ug/l	2	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Chromium	2.0 U	10	2.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Cobalt	1.6 B	50	1.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Copper	5.0 U	25	5.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Iron [a]	92 U	1200	92	ug/l	4	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Lead [a]	8.0 U	20	8.0	ug/l	4	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Magnesium	1100000	20000	400	ug/l	4	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Manganese	455	15	1.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Mercury	0.15 U	1.0	0.15	ug/l	1	01/13/10	01/13/10	LM	SW846 7470A [2]	SW846 7470A [5]
Nickel	5.4 B	40	2.3	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Potassium	18000	10000	100	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Selenium [a]	14.1 B	20	6.8	ug/l	2	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Silver	1.4 U	10	1.4	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Sodium	4150000	1000000	50000	ug/l	100	01/12/10	01/12/10	RS	SW846 6010B [1]	SW846 3010A [4]
Thallium	3.6 U	10	3.6	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Vanadium	45.6 B	50	0.90	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Zinc	7.4 U	20	7.4	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]

(1) Instrument QC Batch: MA7773
(2) Instrument QC Batch: MA7776
(3) Instrument QC Batch: MA7780
(4) Prep QC Batch: MP17591
(5) Prep QC Batch: MP17595

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW30&33-DUP01-010710		
Lab Sample ID:	F70691-6	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J052910.D	1	01/13/10	KW	n/a	n/a	VJ3082
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
75-05-8	Acetonitrile	ND	20	5.0	ug/l	
107-02-8	Acrolein	ND	20	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	2.0	ug/l	
107-05-1	Allyl chloride	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-44-7	Benzyl Chloride	ND	2.0	0.36	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.23	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.33	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.32	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.22	ug/l	
75-00-3	Chloroethane	ND	2.0	0.48	ug/l	
67-66-3	Chloroform	0.36	1.0	0.28	ug/l	J
544-10-5	1-Chlorohexane	ND	2.0	0.27	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.25	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.40	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
75-34-3	1,1-Dichloroethane	8.2	1.0	0.24	ug/l	
75-35-4	1,1-Dichloroethylene	1.1	1.0	0.54	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.32	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.34	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.26	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.28	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW30&33-DUP01-010710		
Lab Sample ID:	F70691-6	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	13.9	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
1476-11-5	cis-1,4-Dichloro-2-Butene	ND	10	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.45	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.43	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	1.0	ug/l	
76-13-1	Freon 113	ND	1.0	0.34	ug/l	
591-78-6	2-Hexanone	ND	10	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.69	ug/l	
110-54-3	Hexane	ND	2.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.32	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
126-98-7	Methacrylonitrile	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.78	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.61	ug/l	
74-88-4	Methyl iodide	ND	5.0	1.0	ug/l	
80-62-6	Methyl methacrylate	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.30	ug/l	
75-09-2	Methylene chloride	1.1	5.0	1.0	ug/l	JB
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
76-01-7	Pentachloroethane	ND	10	2.0	ug/l	
107-12-0	Propionitrile	ND	20	10	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.25	ug/l	
100-42-5	Styrene	ND	1.0	0.36	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.33	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.26	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.34	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW30&33-DUP01-010710		
Lab Sample ID:	F70691-6	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.35	ug/l	
79-01-6	Trichloroethylene	29.2	1.0	0.32	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
108-05-4	Vinyl Acetate	ND	10	3.6	ug/l	
	m,p-Xylene	ND	2.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.37	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		87-116%
17060-07-0	1,2-Dichloroethane-D4	99%		76-127%
2037-26-5	Toluene-D8	104%		86-112%
460-00-4	4-Bromofluorobenzene	105%		84-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW30&33-DUP01-010710		
Lab Sample ID:	F70691-6	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum [a]	107 B	800	44	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Antimony [a]	9.0 U	12	9.0	ug/l	2	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Arsenic [a]	11 U	20	11	ug/l	2	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Barium	26.4 B	200	5.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Beryllium	1.0 U	4.0	1.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Cadmium	1.0 U	5.0	1.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Calcium	716000	2000	200	ug/l	2	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Chromium	2.0 U	10	2.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Cobalt	1.0 U	50	1.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Copper	5.0 U	25	5.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Iron [a]	92 U	1200	92	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Lead [a]	8.0 U	20	8.0	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Magnesium	1160000	20000	400	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Manganese	477	15	1.0	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Mercury	0.15 U	1.0	0.15	ug/l	1	01/11/10	01/11/10	LM	SW846 7470A [1]	SW846 7470A [4]
Nickel	5.6 B	40	2.3	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Potassium	20400	10000	100	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Selenium [a]	25.8	20	6.8	ug/l	2	01/11/10	01/12/10	RS	SW846 6010B [3]	SW846 3010A [5]
Silver	1.4 U	10	1.4	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Sodium	4450000	1000000	50000	ug/l	100	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Thallium	3.6 U	10	3.6	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Vanadium	47.1 B	50	0.90	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]
Zinc	7.4 U	20	7.4	ug/l	1	01/11/10	01/11/10	RS	SW846 6010B [2]	SW846 3010A [5]

(1) Instrument QC Batch: MA7769
(2) Instrument QC Batch: MA7770
(3) Instrument QC Batch: MA7773
(4) Prep QC Batch: MP17582
(5) Prep QC Batch: MP17583

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW30&33-DUP01-010710		
Lab Sample ID:	F70691-6	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/09/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	18100	10000	1000	mg/l	100	01/11/10 10:05	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW30&33-DUP01-010710		
Lab Sample ID:	F70691-6F	**Date Sampled:**	01/07/10
Matrix:	AQ - Groundwater Filtered	**Date Received:**	01/09/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum [a]	164 B	800	44	ug/l	4	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Antimony [a]	9.0 U	12	9.0	ug/l	2	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Arsenic [a]	11 U	20	11	ug/l	2	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Barium	27.4 B	200	5.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Beryllium	1.0 U	4.0	1.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Cadmium	1.0 U	5.0	1.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Calcium	704000	2000	200	ug/l	2	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Chromium	2.0 U	10	2.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Cobalt	1.4 B	50	1.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Copper	5.0 U	25	5.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Iron [a]	92 U	1200	92	ug/l	4	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Lead [a]	8.0 U	20	8.0	ug/l	4	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Magnesium	1160000	20000	400	ug/l	4	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Manganese	452	15	1.0	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Mercury	0.15 U	1.0	0.15	ug/l	1	01/13/10	01/13/10	LM	SW846 7470A [2]	SW846 7470A [5]
Nickel	4.9 B	40	2.3	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Potassium	20000	10000	100	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Selenium [a]	15.5 B	20	6.8	ug/l	2	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Silver	1.4 U	10	1.4	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Sodium	4280000	1000000	50000	ug/l	100	01/12/10	01/12/10	RS	SW846 6010B [1]	SW846 3010A [4]
Thallium	3.6 U	10	3.6	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Vanadium	44.7 B	50	0.90	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]
Zinc	7.4 U	20	7.4	ug/l	1	01/12/10	01/14/10	RS	SW846 6010B [3]	SW846 3010A [4]

(1) Instrument QC Batch: MA7773
(2) Instrument QC Batch: MA7776
(3) Instrument QC Batch: MA7780
(4) Prep QC Batch: MP17591
(5) Prep QC Batch: MP17595

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	TB02-010710		
Lab Sample ID:	F70691-7	**Date Sampled:**	01/07/10
Matrix:	AQ - Trip Blank Water	**Date Received:**	01/09/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J052911.D	1	01/13/10	KW	n/a	n/a	VJ3082
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
75-05-8	Acetonitrile	ND	20	5.0	ug/l	
107-02-8	Acrolein	ND	20	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	2.0	ug/l	
107-05-1	Allyl chloride	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-44-7	Benzyl Chloride	ND	2.0	0.36	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.23	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.33	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.32	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.22	ug/l	
75-00-3	Chloroethane	ND	2.0	0.48	ug/l	
67-66-3	Chloroform	ND	1.0	0.28	ug/l	
544-10-5	1-Chlorohexane	ND	2.0	0.27	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.25	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.40	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.24	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.54	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.32	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.34	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.26	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.28	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB02-010710		
Lab Sample ID:	F70691-7	**Date Sampled:**	01/07/10
Matrix:	AQ - Trip Blank Water	**Date Received:**	01/09/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
1476-11-5	cis-1,4-Dichloro-2-Butene	ND	10	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.45	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.43	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	1.0	ug/l	
76-13-1	Freon 113	ND	1.0	0.34	ug/l	
591-78-6	2-Hexanone	ND	10	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.69	ug/l	
110-54-3	Hexane	ND	2.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.32	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
126-98-7	Methacrylonitrile	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.78	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.61	ug/l	
74-88-4	Methyl iodide	ND	5.0	1.0	ug/l	
80-62-6	Methyl methacrylate	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.30	ug/l	
75-09-2	Methylene chloride	1.4	5.0	1.0	ug/l	JB
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
76-01-7	Pentachloroethane	ND	10	2.0	ug/l	
107-12-0	Propionitrile	ND	20	10	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.25	ug/l	
100-42-5	Styrene	ND	1.0	0.36	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.33	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.26	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.34	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB02-010710		
Lab Sample ID:	F70691-7	**Date Sampled:**	01/07/10
Matrix:	AQ - Trip Blank Water	**Date Received:**	01/09/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.35	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.32	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
108-05-4	Vinyl Acetate	ND	10	3.6	ug/l	
	m,p-Xylene	ND	2.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.37	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		87-116%
17060-07-0	1,2-Dichloroethane-D4	95%		76-127%
2037-26-5	Toluene-D8	104%		86-112%
460-00-4	4-Bromofluorobenzene	103%		84-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Certification Exceptions
- Chain of Custody

Parameter Certification Exceptions

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

The following parameters included in this report are exceptions to NELAC certification.
The certification status of each is indicated below.

Parameter	CAS#	Method	Mat	Certification Status
Freon 113	76-13-1	**SW846 8260B**	AQ	Certified by SOP MS005

Accutest Laboratories Southeast
Chain of Custody

ACCUTEST

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL. 407-425-6700 • FAX: 407-425-0707
www.accutest.com

COC-019

Accutest JOB # F70691 PAGE 1 OF 1

Accutest Quote # | SKIFF# 32505

Client / Reporting Information

Company Name: TETRA TECH
Address: 800 OAK RIDGE TURNPIKE A-600
City: OAK RIDGE State: TN Zip: 37830
Project Contact: E-mail: CLAYTON.R.MULLINS@TETRATECH.COM
Phone#: 865-599-2349
Sampler(s) Name(s) (Printed): J. BENNETT / A. MORENO

Project Information

Project Name: HOLLOMAN AFB
Street:
City: ALAMOGORDO State: NM
Project #: T93002
Fax #:
Client Purchase Order #:

Analytical Information

Accutest Sample #	Field ID / Point of Collection	DATE	TIME	SAMPLED BY:	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NaOH+ZnAc	DI WATER	MeOH	VOCs 8260	TAL METALS TOTAL	TAL METALS-DISS	TDS
1	MW30&33-01-010710	1/7/10	1440	AM	GW	6			X		X					X	X	X	X
1	MW30&33-01-MS-010710	1/7/10	1440	AM	GW	6			X		X					X	X	X	X
1	MW30&33-01-MSD-010710	1/7/10	1440	AM	GW	6			X		X					X	X	X	X
2	MW30&33-02-010710	1/7/10	1442	JB	GW	6			X		X					X	X	X	X
3	MW30&33-03-010710	1/7/10	1525	JB	GW	6			X		X					X	X	X	X
4	MW30&33-04-010710	1/7/10	1520	JB	GW	6			X		X					X	X	X	X
5	MW30&33-05R-010710	1/7/10	1405	AM	GW	6			X		X					X	X	X	X
6	MW30&33-DUP01-010710	1/7/10	—	—	GW	6			X		X					X	X	X	X
7	TB02-010710	1/7/10	—	—	W	2			X							X			

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe

LAB USE ONLY

TURNAROUND TIME (Business Days)

Approved By: / Rush Code

- [x] 10 Days Standard
- [ ] 7 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] OTHER

Emergency or Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [x] REDT1 (EPA LEVEL 3) ERPIMS
- [ ] FULT1 (EPA LEVEL 4)
- [x] EDD'S

Comments / Remarks

FEDEX 8705 1620 6520
8705 1620 6689

LAB FILTERED METALS

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished by :	Date Time:	Received By:
1	1/7/10 1700	2	3	1/8/10 1000	4 FEDEX
Relinquished by: 5	Date Time: 1/9/10 11:00	Received By: 6 Accutest 1/9/10 11:00	Relinquished by: 7	Date Time:	Received By: 8

Lab Use Only: Custody Seal in Place: Y N Temp Blank Provided: Y N Preserved where Applicable: Y N Total # of Coolers: 2 Cooler Temperature (s) Celsius: 3.6 4.0

F70691: Chain of Custody
Page 1 of 2

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: F70691 CLIENT: TetraTech PROJECT: Holloman AFB

DATE/TIME RECEIVED: 1/9/10 18:00 {MM/DD/YY 24:00} NUMBER OF COOLERS RECEIVED: 2

METHOD OF DELIVERY: (FEDEX) UPS ACCUTEST COURIER GREYHOUND DELIVERY OTHER

AIRBILL NUMBERS: 8705 1620 6689

COOLER INFORMATION

- [ ] CUSTODY SEAL NOT PRESENT OR NOT INTACT
- [ ] CHAIN OF CUSTODY NOT RECEIVED (COC)
- [ ] ANALYSIS REQUESTED IS UNCLEAR OR MISSING
- [ ] SAMPLE DATES OR TIMES UNCLEAR OR MISSING
- [ ] TEMPERATURE CRITERIA NOT MET
- [ ] WET ICE PRESENT

TRIP BLANK INFORMATION

- [X] TRIP BLANK PROVIDED
- [ ] TRIP BLANK NOT PROVIDED
- [ ] TRIP BLANK NOT ON COC
- [X] TRIP BLANK INTACT
- [ ] TRIP BLANK NOT INTACT
- [X] RECEIVED WATER TRIP BLANK
- [ ] RECEIVED SOIL TRIP BLANK

MISC. INFORMATION

NUMBER OF ENCORES ? 0

NUMBER OF 5035 FIELD KITS ? 0

NUMBER OR LAB FILTERED METALS ? 0

TEMPERATURE INFORMATION

- [ ] IR THERM ID IR2 CORR. FACTOR 1.4
- [ ] OBSERVED TEMPS: 3.2 3.6
- [ ] CORRECTED TEMPS: 3.6 4.0

SAMPLE INFORMATION

- [ ] SAMPLE LABELS PRESENT ON ALL BOTTLES
- [ ] INCORRECT NUMBER OF CONTAINERS USED
- [ ] SAMPLE RECEIVED IMPROPERLY PRESERVED
- [ ] INSUFFICIENT VOLUME FOR ANALYSIS
- [ ] DATES/TIMES ON COC DO NOT MATCH SAMPLE LABEL
- [ ] ID'S ON COC DO NOT MATCH LABEL
- [ ] VOC VIALS HAVE HEADSPACE (MACRO BUBBLES)
- [ ] BOTTLES RECEIVED BUT ANALYSIS NOT REQUESTED
- [ ] NO BOTTLES RECEIVED FOR ANALYSIS REQUESTED
- [ ] UNCLEAR FILTERING OR COMPOSITING INSTRUCTIONS
- [ ] SAMPLE CONTAINER(S) RECEIVED BROKEN
- [ ] % SOLIDS JAR NOT RECEIVED
- [ ] 5035 FIELD KIT FROZEN WITHIN 48 HOUR'S
- [ ] RESIDUAL CHLORINE PRESENT

{APPICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS}

SUMMARY OF COMMENTS:

TECHNICIAN SIGNATURE/DATE [signature] 1/9/10 REVIEWER SIGNATURE/DATE ET - 01.09.10

NF 10/09

RECEIPT CONFIRMATION 100609 (2).xls

4.2

4

F70691: Chain of Custody

Page 2 of 2

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ3081-MB	J052863.D	1	01/12/10	KW	n/a	n/a	VJ3081

The QC reported here applies to the following samples: **Method:** SW846 8260B

F70691-1

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
75-05-8	Acetonitrile	ND	20	5.0	ug/l	
107-02-8	Acrolein	ND	20	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	2.0	ug/l	
107-05-1	Allyl chloride	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-44-7	Benzyl Chloride	ND	2.0	0.36	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.23	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.33	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.32	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.22	ug/l	
75-00-3	Chloroethane	ND	2.0	0.48	ug/l	
67-66-3	Chloroform	ND	1.0	0.28	ug/l	
544-10-5	1-Chlorohexane	ND	2.0	0.27	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.25	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.40	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.24	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.54	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.32	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.34	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.26	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.28	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	

Method Blank Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ3081-MB	J052863.D	1	01/12/10	KW	n/a	n/a	VJ3081

The QC reported here applies to the following samples: **Method:** SW846 8260B

F70691-1

CAS No.	Compound	Result	RL	MDL	Units	Q
1476-11-5	cis-1,4-Dichloro-2-Butene	ND	10	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.45	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.43	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	1.0	ug/l	
76-13-1	Freon 113	ND	1.0	0.34	ug/l	
591-78-6	2-Hexanone	ND	10	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.69	ug/l	
110-54-3	Hexane	ND	2.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.32	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
126-98-7	Methacrylonitrile	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.78	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.61	ug/l	
74-88-4	Methyl iodide	ND	5.0	1.0	ug/l	
80-62-6	Methyl methacrylate	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.30	ug/l	
75-09-2	Methylene chloride	2.4	5.0	1.0	ug/l	J
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
76-01-7	Pentachloroethane	ND	10	2.0	ug/l	
107-12-0	Propionitrile	ND	20	10	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.25	ug/l	
100-42-5	Styrene	ND	1.0	0.36	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.33	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.26	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.34	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	

Method Blank Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ3081-MB	J052863.D	1	01/12/10	KW	n/a	n/a	VJ3081

The QC reported here applies to the following samples: **Method:** SW846 8260B

F70691-1

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.35	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.32	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
108-05-4	Vinyl Acetate	ND	10	3.6	ug/l	
	m,p-Xylene	ND	2.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.37	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	100%	87-116%
17060-07-0	1,2-Dichloroethane-D4	96%	76-127%
2037-26-5	Toluene-D8	103%	86-112%
460-00-4	4-Bromofluorobenzene	106%	84-120%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Method Blank Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ3082-MB	J052895.D	1	01/13/10	KW	n/a	n/a	VJ3082

The QC reported here applies to the following samples: **Method:** SW846 8260B

F70691-2, F70691-3, F70691-4, F70691-5, F70691-6, F70691-7

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
107-02-8	Acrolein	ND	20	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-44-7	Benzyl Chloride	ND	2.0	0.36	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.23	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.33	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.32	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.22	ug/l	
75-00-3	Chloroethane	ND	2.0	0.48	ug/l	
67-66-3	Chloroform	ND	1.0	0.28	ug/l	
544-10-5	1-Chlorohexane	ND	2.0	0.27	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.25	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.40	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.24	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.54	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.32	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.34	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.26	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.28	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	

Method Blank Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ3082-MB	J052895.D	1	01/13/10	KW	n/a	n/a	VJ3082

The QC reported here applies to the following samples: **Method:** SW846 8260B

F70691-2, F70691-3, F70691-4, F70691-5, F70691-6, F70691-7

CAS No.	Compound	Result	RL	MDL	Units	Q
106-46-7	p-Dichlorobenzene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.45	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.43	ug/l	
76-13-1	Freon 113	ND	1.0	0.34	ug/l	
591-78-6	2-Hexanone	ND	10	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.69	ug/l	
110-54-3	Hexane	ND	2.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.32	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.78	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.61	ug/l	
74-88-4	Methyl iodide	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.30	ug/l	
75-09-2	Methylene chloride	5.5	5.0	1.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.25	ug/l	
100-42-5	Styrene	ND	1.0	0.36	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.33	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.26	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.34	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.35	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.32	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	

Method Blank Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ3082-MB	J052895.D	1	01/13/10	KW	n/a	n/a	VJ3082

The QC reported here applies to the following samples: **Method:** SW846 8260B

F70691-2, F70691-3, F70691-4, F70691-5, F70691-6, F70691-7

CAS No.	Compound	Result	RL	MDL	Units	Q
108-05-4	Vinyl Acetate	ND	10	3.6	ug/l	
	m,p-Xylene	ND	2.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.37	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	98%	87-116%
17060-07-0	1,2-Dichloroethane-D4	95%	76-127%
2037-26-5	Toluene-D8	105%	86-112%
460-00-4	4-Bromofluorobenzene	104%	84-120%

Blank Spike Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ3081-BS	J052862.D	1	01/12/10	KW	n/a	n/a	VJ3081

The QC reported here applies to the following samples: **Method:** SW846 8260B

F70691-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	214	171*	59-134
75-05-8	Acetonitrile	250	253	101	57-123
107-02-8	Acrolein	125	233	186*	33-157
107-13-1	Acrylonitrile	125	150	120	62-124
107-05-1	Allyl chloride	25	26.7	107	48-136
71-43-2	Benzene	25	27.0	108	83-124
100-44-7	Benzyl Chloride	25	20.4	82	61-118
108-86-1	Bromobenzene	25	25.0	100	83-115
74-97-5	Bromochloromethane	25	26.0	104	78-112
75-27-4	Bromodichloromethane	25	24.2	97	76-116
75-25-2	Bromoform	25	20.6	82	68-128
104-51-8	n-Butylbenzene	25	22.8	91	84-124
135-98-8	sec-Butylbenzene	25	24.7	99	86-127
98-06-6	tert-Butylbenzene	25	24.1	96	83-126
108-90-7	Chlorobenzene	25	25.9	104	87-115
75-00-3	Chloroethane	25	27.2	109	54-166
67-66-3	Chloroform	25	26.9	108	85-123
544-10-5	1-Chlorohexane	25	25.3	101	87-128
95-49-8	o-Chlorotoluene	25	27.2	109	84-121
106-43-4	p-Chlorotoluene	25	24.3	97	84-120
110-75-8	2-Chloroethyl vinyl ether	125	105	84	63-125
75-15-0	Carbon disulfide	25	30.7	123	67-147
56-23-5	Carbon tetrachloride	25	27.5	110	74-139
75-34-3	1,1-Dichloroethane	25	27.4	110	82-127
75-35-4	1,1-Dichloroethylene	25	30.6	122	75-133
563-58-6	1,1-Dichloropropene	25	29.0	116	87-127
96-12-8	1,2-Dibromo-3-chloropropane	25	21.9	88	61-118
106-93-4	1,2-Dibromoethane	25	25.0	100	80-115
107-06-2	1,2-Dichloroethane	25	24.9	100	76-122
78-87-5	1,2-Dichloropropane	25	26.0	104	81-120
142-28-9	1,3-Dichloropropane	25	25.2	101	81-113
594-20-7	2,2-Dichloropropane	25	28.3	113	77-138
124-48-1	Dibromochloromethane	25	22.2	89	74-116
75-71-8	Dichlorodifluoromethane	25	28.9	116	34-158
156-59-2	cis-1,2-Dichloroethylene	25	26.6	106	81-114
10061-01-5	cis-1,3-Dichloropropene	25	23.7	95	83-119

Blank Spike Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ3081-BS	J052862.D	1	01/12/10	KW	n/a	n/a	VJ3081

The QC reported here applies to the following samples: **Method:** SW846 8260B

F70691-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1476-11-5	cis-1,4-Dichloro-2-Butene	25	25.9	104	41-130
541-73-1	m-Dichlorobenzene	25	25.6	102	86-115
95-50-1	o-Dichlorobenzene	25	25.3	101	85-115
106-46-7	p-Dichlorobenzene	25	25.3	101	87-113
156-60-5	trans-1,2-Dichloroethylene	25	28.3	113	82-126
10061-02-6	trans-1,3-Dichloropropene	25	27.0	108	87-123
100-41-4	Ethylbenzene	25	26.3	105	87-118
97-63-2	Ethyl methacrylate	25	21.6	86	68-110
76-13-1	Freon 113	25	32.8	131	74-139
591-78-6	2-Hexanone	125	128	102	58-125
87-68-3	Hexachlorobutadiene	25	24.7	99	71-133
110-54-3	Hexane	25	30.1	120	71-134
98-82-8	Isopropylbenzene	25	26.9	108	87-131
99-87-6	p-Isopropyltoluene	25	23.6	94	83-125
108-10-1	4-Methyl-2-pentanone	125	111	89	62-125
126-98-7	Methacrylonitrile	250	273	109	62-133
74-83-9	Methyl bromide	25	30.1	120	55-151
74-87-3	Methyl chloride	25	27.9	112	55-173
74-88-4	Methyl iodide	25	28.9	116	72-125
80-62-6	Methyl methacrylate	25	27.2	109	63-115
74-95-3	Methylene bromide	25	25.4	102	81-116
75-09-2	Methylene chloride	25	28.4	114	69-125
78-93-3	Methyl ethyl ketone	125	160	128*	61-127
1634-04-4	Methyl Tert Butyl Ether	25	26.2	105	75-116
91-20-3	Naphthalene	25	23.9	96	59-125
76-01-7	Pentachloroethane	25	27.6	110	82-111
107-12-0	Propionitrile	250	257	103	69-119
103-65-1	n-Propylbenzene	25	23.8	95	86-125
100-42-5	Styrene	25	23.3	93	78-118
630-20-6	1,1,1,2-Tetrachloroethane	25	23.4	94	81-119
71-55-6	1,1,1-Trichloroethane	25	28.2	113	79-133
79-34-5	1,1,2,2-Tetrachloroethane	25	25.1	100	71-120
79-00-5	1,1,2-Trichloroethane	25	24.7	99	80-114
87-61-6	1,2,3-Trichlorobenzene	25	24.4	98	64-126
96-18-4	1,2,3-Trichloropropane	25	22.3	89	77-115
120-82-1	1,2,4-Trichlorobenzene	25	21.9	88	68-123

Blank Spike Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ3081-BS	J052862.D	1	01/12/10	KW	n/a	n/a	VJ3081

The QC reported here applies to the following samples: **Method:** SW846 8260B

F70691-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
95-63-6	1,2,4-Trimethylbenzene	25	23.1	92	82-120
108-67-8	1,3,5-Trimethylbenzene	25	23.3	93	83-123
127-18-4	Tetrachloroethylene	25	27.4	110	80-131
108-88-3	Toluene	25	26.5	106	86-116
79-01-6	Trichloroethylene	25	27.1	108	85-124
75-69-4	Trichlorofluoromethane	25	33.9	136	66-156
110-57-6	Trans-1,4-Dichloro-2-Butene	25	28.3	113	51-137
75-01-4	Vinyl chloride	25	29.9	120	57-153
108-05-4	Vinyl Acetate	125	172	138	38-159
	m,p-Xylene	50	46.8	94	86-121
95-47-6	o-Xylene	25	23.8	95	83-121

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	100%	87-116%
17060-07-0	1,2-Dichloroethane-D4	100%	76-127%
2037-26-5	Toluene-D8	100%	86-112%
460-00-4	4-Bromofluorobenzene	101%	84-120%

Blank Spike Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ3082-BS	J052893.D	1	01/13/10	KW	n/a	n/a	VJ3082

The QC reported here applies to the following samples: **Method:** SW846 8260B

F70691-2, F70691-3, F70691-4, F70691-5, F70691-6, F70691-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	96%	87-116%
17060-07-0	1,2-Dichloroethane-D4	97%	76-127%
2037-26-5	Toluene-D8	100%	86-112%
460-00-4	4-Bromofluorobenzene	105%	84-120%

Blank Spike Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ3082-BS	J052894.D	1	01/13/10	KW	n/a	n/a	VJ3082

The QC reported here applies to the following samples: **Method:** SW846 8260B

F70691-2, F70691-3, F70691-4, F70691-5, F70691-6, F70691-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	223	178*	59-134
75-05-8	Acetonitrile	250	274	110	57-123
107-02-8	Acrolein	125	198	158*	33-157
107-13-1	Acrylonitrile	125	146	117	62-124
107-05-1	Allyl chloride	25	27.6	110	48-136
71-43-2	Benzene	25	29.2	117	83-124
100-44-7	Benzyl Chloride	25	21.1	84	61-118
108-86-1	Bromobenzene	25	25.6	102	83-115
74-97-5	Bromochloromethane	25	26.0	104	78-112
75-27-4	Bromodichloromethane	25	25.5	102	76-116
75-25-2	Bromoform	25	20.5	82	68-128
104-51-8	n-Butylbenzene	25	24.1	96	84-124
135-98-8	sec-Butylbenzene	25	26.0	104	86-127
98-06-6	tert-Butylbenzene	25	25.3	101	83-126
108-90-7	Chlorobenzene	25	27.2	109	87-115
75-00-3	Chloroethane	25	25.1	100	54-166
67-66-3	Chloroform	25	28.2	113	85-123
544-10-5	1-Chlorohexane	25	26.0	104	87-128
95-49-8	o-Chlorotoluene	25	28.3	113	84-121
106-43-4	p-Chlorotoluene	25	25.1	100	84-120
110-75-8	2-Chloroethyl vinyl ether	125	117	94	63-125
75-15-0	Carbon disulfide	25	31.8	127	67-147
56-23-5	Carbon tetrachloride	25	26.9	108	74-139
75-34-3	1,1-Dichloroethane	25	29.1	116	82-127
75-35-4	1,1-Dichloroethylene	25	30.9	124	75-133
563-58-6	1,1-Dichloropropene	25	30.9	124	87-127
96-12-8	1,2-Dibromo-3-chloropropane	25	21.9	88	61-118
106-93-4	1,2-Dibromoethane	25	25.7	103	80-115
107-06-2	1,2-Dichloroethane	25	26.2	105	76-122
78-87-5	1,2-Dichloropropane	25	27.1	108	81-120
142-28-9	1,3-Dichloropropane	25	25.8	103	81-113
594-20-7	2,2-Dichloropropane	25	28.8	115	77-138
124-48-1	Dibromochloromethane	25	22.4	90	74-116
75-71-8	Dichlorodifluoromethane	25	24.7	99	34-158
156-59-2	cis-1,2-Dichloroethylene	25	27.5	110	81-114
10061-01-5	cis-1,3-Dichloropropene	25	24.7	99	83-119

Blank Spike Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ3082-BS	J052894.D	1	01/13/10	KW	n/a	n/a	VJ3082

The QC reported here applies to the following samples: **Method:** SW846 8260B

F70691-2, F70691-3, F70691-4, F70691-5, F70691-6, F70691-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1476-11-5	cis-1,4-Dichloro-2-Butene	25	29.2	117	41-130
541-73-1	m-Dichlorobenzene	25	26.6	106	86-115
95-50-1	o-Dichlorobenzene	25	26.3	105	85-115
106-46-7	p-Dichlorobenzene	25	26.1	104	87-113
156-60-5	trans-1,2-Dichloroethylene	25	29.4	118	82-126
10061-02-6	trans-1,3-Dichloropropene	25	27.8	111	87-123
100-41-4	Ethylbenzene	25	27.5	110	87-118
97-63-2	Ethyl methacrylate	25	20.9	84	68-110
76-13-1	Freon 113	25	33.6	134	74-139
591-78-6	2-Hexanone	125	128	102	58-125
87-68-3	Hexachlorobutadiene	25	25.4	102	71-133
110-54-3	Hexane	25	32.9	132	71-134
98-82-8	Isopropylbenzene	25	28.6	114	87-131
99-87-6	p-Isopropyltoluene	25	25.0	100	83-125
108-10-1	4-Methyl-2-pentanone	125	119	95	62-125
126-98-7	Methacrylonitrile	250	285	114	62-133
74-83-9	Methyl bromide	25	27.2	109	55-151
74-87-3	Methyl chloride	25	26.1	104	55-173
74-88-4	Methyl iodide	25	29.5	118	72-125
80-62-6	Methyl methacrylate	25	27.8	111	63-115
74-95-3	Methylene bromide	25	26.5	106	81-116
75-09-2	Methylene chloride	25	30.7	123	69-125
78-93-3	Methyl ethyl ketone	125	179	143*	61-127
1634-04-4	Methyl Tert Butyl Ether	25	25.8	103	75-116
91-20-3	Naphthalene	25	25.2	101	59-125
76-01-7	Pentachloroethane	25	27.3	109	82-111
107-12-0	Propionitrile	250	260	104	69-119
103-65-1	n-Propylbenzene	25	24.9	100	86-125
100-42-5	Styrene	25	24.7	99	78-118
630-20-6	1,1,1,2-Tetrachloroethane	25	23.5	94	81-119
71-55-6	1,1,1-Trichloroethane	25	29.2	117	79-133
79-34-5	1,1,2,2-Tetrachloroethane	25	26.5	106	71-120
79-00-5	1,1,2-Trichloroethane	25	26.5	106	80-114
87-61-6	1,2,3-Trichlorobenzene	25	25.7	103	64-126
96-18-4	1,2,3-Trichloropropane	25	23.2	93	77-115
120-82-1	1,2,4-Trichlorobenzene	25	22.3	89	68-123

Blank Spike Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ3082-BS	J052894.D	1	01/13/10	KW	n/a	n/a	VJ3082

The QC reported here applies to the following samples: **Method:** SW846 8260B

F70691-2, F70691-3, F70691-4, F70691-5, F70691-6, F70691-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
95-63-6	1,2,4-Trimethylbenzene	25	24.1	96	82-120
108-67-8	1,3,5-Trimethylbenzene	25	24.3	97	83-123
127-18-4	Tetrachloroethylene	25	27.8	111	80-131
108-88-3	Toluene	25	27.3	109	86-116
79-01-6	Trichloroethylene	25	28.0	112	85-124
75-69-4	Trichlorofluoromethane	25	32.2	129	66-156
110-57-6	Trans-1,4-Dichloro-2-Butene	25	32.1	128	51-137
75-01-4	Vinyl chloride	25	27.8	111	57-153
108-05-4	Vinyl Acetate	125	172	138	38-159
	m,p-Xylene	50	48.7	97	86-121
95-47-6	o-Xylene	25	24.7	99	83-121

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	98%	87-116%
17060-07-0	1,2-Dichloroethane-D4	101%	76-127%
2037-26-5	Toluene-D8	99%	86-112%
460-00-4	4-Bromofluorobenzene	98%	84-120%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F70691-1MS	J052876.D	1	01/12/10	KW	n/a	n/a	VJ3081
F70691-1MSD	J052877.D	1	01/12/10	KW	n/a	n/a	VJ3081
F70691-1	J052875.D	1	01/12/10	KW	n/a	n/a	VJ3081

The QC reported here applies to the following samples: **Method:** SW846 8260B

F70691-1

CAS No.	Compound	F70691-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		125	126	101	135	108	7	59-134/14
75-05-8	Acetonitrile	ND		250	256	102	276	110	8	57-123/15
107-02-8	Acrolein	ND		125	166	133	172	138	4	33-157/21
107-13-1	Acrylonitrile	ND		125	186	149*	146	117	24*	62-124/13
107-05-1	Allyl chloride	ND		25	22.7	91	21.7	87	5	48-136/13
71-43-2	Benzene	ND		25	26.8	107	27.0	108	1	83-124/11
100-44-7	Benzyl Chloride	ND		25	21.0	84	20.4	82	3	61-118/12
108-86-1	Bromobenzene	ND		25	24.6	98	25.0	100	2	83-115/10
74-97-5	Bromochloromethane	ND		25	25.3	101	25.8	103	2	78-112/10
75-27-4	Bromodichloromethane	ND		25	23.6	94	22.6	90	4	76-116/10
75-25-2	Bromoform	ND		25	19.2	77	19.2	77	0	68-128/11
104-51-8	n-Butylbenzene	ND		25	21.8	87	22.5	90	3	84-124/10
135-98-8	sec-Butylbenzene	ND		25	23.9	96	24.4	98	2	86-127/10
98-06-6	tert-Butylbenzene	ND		25	23.5	94	24.3	97	3	83-126/10
108-90-7	Chlorobenzene	ND		25	25.8	103	26.6	106	3	87-115/9
75-00-3	Chloroethane	ND		25	23.3	93	25.2	101	8	54-166/20
67-66-3	Chloroform	ND		25	26.2	105	26.7	107	2	85-123/10
544-10-5	1-Chlorohexane	ND		25	24.3	97	24.9	100	2	87-128/10
95-49-8	o-Chlorotoluene	ND		25	26.5	106	26.9	108	1	84-121/10
106-43-4	p-Chlorotoluene	ND		25	23.9	96	24.1	96	1	84-120/10
110-75-8	2-Chloroethyl vinyl ether	ND		125	ND	0*	ND	0*	nc	63-125/24
75-15-0	Carbon disulfide	ND		25	23.5	94	22.9	92	3	67-147/12
56-23-5	Carbon tetrachloride	ND		25	26.6	106	26.7	107	0	74-139/13
75-34-3	1,1-Dichloroethane	ND		25	26.8	107	26.3	105	2	82-127/10
75-35-4	1,1-Dichloroethylene	ND		25	28.3	113	29.4	118	4	75-133/13
563-58-6	1,1-Dichloropropene	ND		25	28.7	115	28.5	114	1	87-127/10
96-12-8	1,2-Dibromo-3-chloropropane	ND		25	25.3	101	26.3	105	4	61-118/15
106-93-4	1,2-Dibromoethane	ND		25	26.1	104	27.4	110	5	80-115/10
107-06-2	1,2-Dichloroethane	ND		25	25.3	101	25.1	100	1	76-122/11
78-87-5	1,2-Dichloropropane	ND		25	25.7	103	26.1	104	2	81-120/11
142-28-9	1,3-Dichloropropane	ND		25	25.6	102	26.3	105	3	81-113/11
594-20-7	2,2-Dichloropropane	ND		25	26.1	104	26.0	104	0	77-138/12
124-48-1	Dibromochloromethane	ND		25	21.1	84	20.8	83	1	74-116/11
75-71-8	Dichlorodifluoromethane	ND		25	25.6	102	27.4	110	7	34-158/22
156-59-2	cis-1,2-Dichloroethylene	ND		25	26.0	104	26.6	106	2	81-114/10
10061-01-5	cis-1,3-Dichloropropene	ND		25	20.4	82*	20.1	80*	1	83-119/10

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F70691-1MS	J052876.D	1	01/12/10	KW	n/a	n/a	VJ3081
F70691-1MSD	J052877.D	1	01/12/10	KW	n/a	n/a	VJ3081
F70691-1	J052875.D	1	01/12/10	KW	n/a	n/a	VJ3081

The QC reported here applies to the following samples: **Method:** SW846 8260B

F70691-1

CAS No.	Compound	F70691-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1476-11-5	cis-1,4-Dichloro-2-Butene	ND		25	20.5	82	18.6	74	10	41-130/33
541-73-1	m-Dichlorobenzene	ND		25	25.0	100	25.6	102	2	86-115/9
95-50-1	o-Dichlorobenzene	ND		25	24.6	98	25.8	103	5	85-115/9
106-46-7	p-Dichlorobenzene	ND		25	24.5	98	25.4	102	4	87-113/10
156-60-5	trans-1,2-Dichloroethylene	ND		25	27.7	111	27.2	109	2	82-126/10
10061-02-6	trans-1,3-Dichloropropene	ND		25	25.0	100	24.5	98	2	87-123/10
100-41-4	Ethylbenzene	ND		25	26.1	104	26.5	106	2	87-118/10
97-63-2	Ethyl methacrylate	ND		25	25.6	102	26.2	105	2	68-110/11
76-13-1	Freon 113	ND		25	29.6	118	30.7	123	4	74-139/13
591-78-6	2-Hexanone	ND		125	158	126*	166	133*	5	58-125/14
87-68-3	Hexachlorobutadiene	ND		25	21.2	85	24.3	97	14*	71-133/12
110-54-3	Hexane	ND		25	29.4	118	29.0	116	1	71-134/11
98-82-8	Isopropylbenzene	ND		25	26.5	106	27.3	109	3	87-131/10
99-87-6	p-Isopropyltoluene	ND		25	22.9	92	23.5	94	3	83-125/9
108-10-1	4-Methyl-2-pentanone	ND		125	152	122	160	128*	5	62-125/13
126-98-7	Methacrylonitrile	ND		250	307	123	315	126	3	62-133/17
74-83-9	Methyl bromide	ND		25	25.6	102	27.3	109	6	55-151/21
74-87-3	Methyl chloride	ND		25	25.7	103	27.1	108	5	55-173/22
74-88-4	Methyl iodide	ND		25	26.7	107	27.0	108	1	72-125/11
80-62-6	Methyl methacrylate	ND		25	31.4	126*	32.5	130*	3	63-115/10
74-95-3	Methylene bromide	ND		25	25.7	103	26.2	105	2	81-116/10
75-09-2	Methylene chloride	1.2	JB	25	26.0	99	25.2	96	3	69-125/11
78-93-3	Methyl ethyl ketone	ND		125	144	115	153	122	6	61-127/13
1634-04-4	Methyl Tert Butyl Ether	ND		25	26.9	108	27.7	111	3	75-116/10
91-20-3	Naphthalene	ND		25	26.5	106	29.4	118	10	59-125/15
76-01-7	Pentachloroethane	ND		25	27.0	108	26.4	106	2	82-111/8
107-12-0	Propionitrile	ND		250	282	113	303	121*	7	69-119/12
103-65-1	n-Propylbenzene	ND		25	23.4	94	23.5	94	0	86-125/10
100-42-5	Styrene	ND		25	22.5	90	21.3	85	5	78-118/11
630-20-6	1,1,1,2-Tetrachloroethane	ND		25	22.9	92	22.6	90	1	81-119/10
71-55-6	1,1,1-Trichloroethane	ND		25	27.2	109	27.7	111	2	79-133/11
79-34-5	1,1,2,2-Tetrachloroethane	ND		25	27.7	111	28.1	112	1	71-120/11
79-00-5	1,1,2-Trichloroethane	ND		25	25.9	104	26.1	104	1	80-114/11
87-61-6	1,2,3-Trichlorobenzene	ND		25	23.5	94	26.5	106	12	64-126/16
96-18-4	1,2,3-Trichloropropane	ND		25	24.9	100	25.7	103	3	77-115/12
120-82-1	1,2,4-Trichlorobenzene	ND		25	20.0	80	22.4	90	11	68-123/11

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F70691-1MS	J052876.D	1	01/12/10	KW	n/a	n/a	VJ3081
F70691-1MSD	J052877.D	1	01/12/10	KW	n/a	n/a	VJ3081
F70691-1	J052875.D	1	01/12/10	KW	n/a	n/a	VJ3081

The QC reported here applies to the following samples: **Method:** SW846 8260B

F70691-1

CAS No.	Compound	F70691-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
95-63-6	1,2,4-Trimethylbenzene	ND		25	22.4	90	22.6	90	1	82-120/10
108-67-8	1,3,5-Trimethylbenzene	ND		25	22.7	91	23.2	93	2	83-123/10
127-18-4	Tetrachloroethylene	ND		25	26.2	105	27.3	109	4	80-131/12
108-88-3	Toluene	ND		25	25.9	104	26.7	107	3	86-116/10
79-01-6	Trichloroethylene	ND		25	27.1	108	28.3	113	4	85-124/10
75-69-4	Trichlorofluoromethane	ND		25	29.4	118	31.6	126	7	66-156/15
110-57-6	Trans-1,4-Dichloro-2-Butene	ND		25	24.3	97	23.5	94	3	51-137/24
75-01-4	Vinyl chloride	ND		25	26.0	104	27.9	112	7	57-153/22
108-05-4	Vinyl Acetate	ND		125	183	146	184	147	1	38-159/11
	m,p-Xylene	ND		50	46.7	93	46.9	94	0	86-121/10
95-47-6	o-Xylene	ND		25	23.7	95	24.0	96	1	83-121/10

CAS No.	Surrogate Recoveries	MS	MSD	F70691-1	Limits
1868-53-7	Dibromofluoromethane	99%	98%	100%	87-116%
17060-07-0	1,2-Dichloroethane-D4	103%	101%	99%	76-127%
2037-26-5	Toluene-D8	99%	100%	103%	86-112%
460-00-4	4-Bromofluorobenzene	100%	100%	103%	84-120%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F70721-1MS	J052899.D	1	01/13/10	KW	n/a	n/a	VJ3082
F70721-1MSD	J052900.D	1	01/13/10	KW	n/a	n/a	VJ3082
F70721-1	J052898.D	1	01/13/10	KW	n/a	n/a	VJ3082

The QC reported here applies to the following samples: **Method:** SW846 8260B

F70691-2, F70691-3, F70691-4, F70691-5, F70691-6, F70691-7

CAS No.	Compound	F70721-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	25 U		125	114	91	122	98	7	59-134/14
75-05-8	Acetonitrile	20 U		250	259	104	268	107	3	57-123/15
107-02-8	Acrolein	20 U		125	170	136	169	135	1	33-157/21
107-13-1	Acrylonitrile	10 U		125	108	86	121	97	11	62-124/13
107-05-1	Allyl chloride	10 U		25	23.1	92	22.1	88	4	48-136/13
71-43-2	Benzene	1.0 U		25	28.2	113	27.9	112	1	83-124/11
100-44-7	Benzyl Chloride	2.0 U		25	19.2	77	19.0	76	1	61-118/12
108-86-1	Bromobenzene	1.0 U		25	24.8	99	24.6	98	1	83-115/10
74-97-5	Bromochloromethane	1.0 U		25	25.3	101	24.9	100	2	78-112/10
75-27-4	Bromodichloromethane	1.0 U		25	24.2	97	23.0	92	5	76-116/10
75-25-2	Bromoform	1.0 U		25	17.9	72	17.7	71	1	68-128/11
104-51-8	n-Butylbenzene	1.0 U		25	22.8	91	23.0	92	1	84-124/10
135-98-8	sec-Butylbenzene	1.0 U		25	24.6	98	24.6	98	0	86-127/10
98-06-6	tert-Butylbenzene	1.0 U		25	24.4	98	24.5	98	0	83-126/10
108-90-7	Chlorobenzene	0.93	I	25	26.9	104	27.1	105	1	87-115/9
75-00-3	Chloroethane	2.0 U		25	23.4	94	25.5	102	9	54-166/20
67-66-3	Chloroform	1.0 U		25	27.3	109	27.0	108	1	85-123/10
544-10-5	1-Chlorohexane	2.0 U		25	25.0	100	24.9	100	0	87-128/10
95-49-8	o-Chlorotoluene	1.0 U		25	27.2	109	27.5	110	1	84-121/10
106-43-4	p-Chlorotoluene	1.0 U		25	24.5	98	24.3	97	1	84-120/10
110-75-8	2-Chloroethyl vinyl ether	5.0 U		125	ND	0*	ND	0*	nc	63-125/24
75-15-0	Carbon disulfide	2.0 U		25	26.9	108	26.1	104	3	67-147/12
56-23-5	Carbon tetrachloride	1.0 U		25	27.5	110	26.2	105	5	74-139/13
75-34-3	1,1-Dichloroethane	1.0 U		25	28.2	113	27.5	110	3	82-127/10
75-35-4	1,1-Dichloroethylene	1.0 U		25	29.3	117	31.1	124	6	75-133/13
563-58-6	1,1-Dichloropropene	1.0 U		25	29.6	118	29.1	116	2	87-127/10
96-12-8	1,2-Dibromo-3-chloropropane	2.0 U		25	21.6	86	21.1	84	2	61-118/15
106-93-4	1,2-Dibromoethane	1.0 U		25	25.0	100	25.3	101	1	80-115/10
107-06-2	1,2-Dichloroethane	1.0 U		25	25.3	101	25.0	100	1	76-122/11
78-87-5	1,2-Dichloropropane	1.0 U		25	26.7	107	26.1	104	2	81-120/11
142-28-9	1,3-Dichloropropane	1.0 U		25	25.3	101	25.0	100	1	81-113/11
594-20-7	2,2-Dichloropropane	1.0 U		25	27.4	110	27.3	109	0	77-138/12
124-48-1	Dibromochloromethane	1.0 U		25	20.6	82	19.7	79	4	74-116/11
75-71-8	Dichlorodifluoromethane	2.0 U		25	22.8	91	23.9	96	5	34-158/22
156-59-2	cis-1,2-Dichloroethylene	4.2		25	31.5	109	31.5	109	0	81-114/10
10061-01-5	cis-1,3-Dichloropropene	1.0 U		25	21.2	85	19.8	79*	7	83-119/10

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F70721-1MS	J052899.D	1	01/13/10	KW	n/a	n/a	VJ3082
F70721-1MSD	J052900.D	1	01/13/10	KW	n/a	n/a	VJ3082
F70721-1	J052898.D	1	01/13/10	KW	n/a	n/a	VJ3082

The QC reported here applies to the following samples: **Method:** SW846 8260B

F70691-2, F70691-3, F70691-4, F70691-5, F70691-6, F70691-7

CAS No.	Compound	F70721-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1476-11-5	cis-1,4-Dichloro-2-Butene	10 U		25	10.9	44	10.0	40*	9	41-130/33
541-73-1	m-Dichlorobenzene	1.0 U		25	25.5	102	26.0	104	2	86-115/9
95-50-1	o-Dichlorobenzene	0.24	I	25	25.3	100	26.1	103	3	85-115/9
106-46-7	p-Dichlorobenzene	1.0 U		25	25.3	101	25.7	103	2	87-113/10
156-60-5	trans-1,2-Dichloroethylene	1.0 U		25	29.2	117	28.7	115	2	82-126/10
10061-02-6	trans-1,3-Dichloropropene	1.0 U		25	25.1	100	23.6	94	6	87-123/10
100-41-4	Ethylbenzene	1.0 U		25	26.9	108	26.5	106	1	87-118/10
97-63-2	Ethyl methacrylate	5.0 U		25	20.2	81	20.6	82	2	68-110/11
76-13-1	Freon 113	1.0 U		25	31.9	128	32.6	130	2	74-139/13
591-78-6	2-Hexanone	10 U		125	113	90	118	94	4	58-125/14
87-68-3	Hexachlorobutadiene	2.0 U		25	22.2	89	25.8	103	15*	71-133/12
110-54-3	Hexane	2.0 U		25	31.7	127	30.5	122	4	71-134/11
98-82-8	Isopropylbenzene	1.0 U		25	27.0	108	27.0	108	0	87-131/10
99-87-6	p-Isopropyltoluene	1.0 U		25	23.1	92	23.8	95	3	83-125/9
108-10-1	4-Methyl-2-pentanone	5.0 U		125	114	91	116	93	2	62-125/13
126-98-7	Methacrylonitrile	20 U		250	272	109	273	109	0	62-133/17
74-83-9	Methyl bromide	2.0 U		25	24.1	96	27.4	110	13	55-151/21
74-87-3	Methyl chloride	2.0 U		25	25.7	103	28.2	113	9	55-173/22
74-88-4	Methyl iodide	5.0 U		25	27.3	109	28.6	114	5	72-125/11
80-62-6	Methyl methacrylate	5.0 U		25	26.6	106	26.1	104	2	63-115/10
74-95-3	Methylene bromide	2.0 U		25	25.4	102	25.6	102	1	81-116/10
75-09-2	Methylene chloride	1.1	IV	25	28.1	108	27.1	104	4	69-125/11
78-93-3	Methyl ethyl ketone	5.0 U		125	125	100	129	103	3	61-127/13
1634-04-4	Methyl Tert Butyl Ether	0.28	I	25	25.1	99	25.8	102	3	75-116/10
91-20-3	Naphthalene	5.0 U		25	23.2	93	25.7	103	10	59-125/15
76-01-7	Pentachloroethane	10 U		25	25.8	103	24.3	97	6	82-111/8
107-12-0	Propionitrile	20 U		250	245	98	257	103	5	69-119/12
103-65-1	n-Propylbenzene	1.0 U		25	23.9	96	23.7	95	1	86-125/10
100-42-5	Styrene	1.0 U		25	22.8	91	21.6	86	5	78-118/11
630-20-6	1,1,1,2-Tetrachloroethane	1.0 U		25	22.6	90	22.5	90	0	81-119/10
71-55-6	1,1,1-Trichloroethane	1.0 U		25	27.6	110	27.8	111	1	79-133/11
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U		25	25.8	103	26.1	104	1	71-120/11
79-00-5	1,1,2-Trichloroethane	1.0 U		25	25.0	100	25.2	101	1	80-114/11
87-61-6	1,2,3-Trichlorobenzene	1.0 U		25	23.2	93	25.8	103	11	64-126/16
96-18-4	1,2,3-Trichloropropane	2.0 U		25	22.0	88	22.2	89	1	77-115/12
120-82-1	1,2,4-Trichlorobenzene	1.0 U		25	20.5	82	22.0	88	7	68-123/11

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F70721-1MS	J052899.D	1	01/13/10	KW	n/a	n/a	VJ3082
F70721-1MSD	J052900.D	1	01/13/10	KW	n/a	n/a	VJ3082
F70721-1	J052898.D	1	01/13/10	KW	n/a	n/a	VJ3082

The QC reported here applies to the following samples: **Method:** SW846 8260B

F70691-2, F70691-3, F70691-4, F70691-5, F70691-6, F70691-7

CAS No.	Compound	F70721-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
95-63-6	1,2,4-Trimethylbenzene	2.0 U		25	22.5	90	22.4	90	0	82-120/10
108-67-8	1,3,5-Trimethylbenzene	2.0 U		25	23.0	92	22.5	90	2	83-123/10
127-18-4	Tetrachloroethylene	1.0 U		25	26.3	105	26.3	105	0	80-131/12
108-88-3	Toluene	1.0 U		25	26.7	107	26.6	106	0	86-116/10
79-01-6	Trichloroethylene	1.0 U		25	27.8	111	28.1	112	1	85-124/10
75-69-4	Trichlorofluoromethane	2.0 U		25	29.4	118	31.2	125	6	66-156/15
110-57-6	Trans-1,4-Dichloro-2-Butene	10 U		25	12.2	49*	11.6	46*	5	51-137/24
75-01-4	Vinyl chloride	4.1		25	29.6	102	31.4	109	6	57-153/22
108-05-4	Vinyl Acetate	10 U		125	135	108	133	106	1	38-159/11
	m,p-Xylene	2.0 U		50	47.2	94	46.8	94	1	86-121/10
95-47-6	o-Xylene	1.0 U		25	24.0	96	23.6	94	2	83-121/10

CAS No.	Surrogate Recoveries	MS	MSD	F70721-1	Limits
1868-53-7	Dibromofluoromethane	99%	98%	97%	87-116%
17060-07-0	1,2-Dichloroethane-D4	101%	100%	96%	76-127%
2037-26-5	Toluene-D8	98%	98%	104%	86-112%
460-00-4	4-Bromofluorobenzene	99%	99%	104%	84-120%

Instrument Performance Check (BFB)

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ3080-BFB
Lab File ID: J052827.D
Instrument ID: GCMSJ
Injection Date: 01/11/10
Injection Time: 12:13

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	18345	21.9		Pass
75	30.0 - 60.0% of mass 95	38317	45.7		Pass
95	Base peak, 100% relative abundance	83922	100.0		Pass
96	5.0 - 9.0% of mass 95	5510	6.6		Pass
173	Less than 2.0% of mass 174	422	0.5	(0.53) [a]	Pass
174	50.0 - 100.0% of mass 95	78925	94.0		Pass
175	5.0 - 9.0% of mass 174	5563	6.6	(7.0) [a]	Pass
176	95.0 - 101.0% of mass 174	78154	93.1	(99.0) [a]	Pass
177	5.0 - 9.0% of mass 176	5238	6.2	(6.7) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VJ3080-IC3080	J052828.D	01/11/10	12:34	00:21	Initial cal 1
VJ3080-IC3080	J052829.D	01/11/10	12:57	00:44	Initial cal 2
VJ3080-IC3080	J052830.D	01/11/10	13:20	01:07	Initial cal 3
VJ3080-ICC3080	J052831.D	01/11/10	13:43	01:30	Initial cal 4
VJ3080-IC3080	J052832.D	01/11/10	14:06	01:53	Initial cal 5
VJ3080-IC3080	J052833.D	01/11/10	14:29	02:16	Initial cal 6
VJ3080-ICV3080	J052834.D	01/11/10	14:52	02:39	Initial cal verification 4
VJ3080-BS	J052835.D	01/11/10	15:18	03:05	Blank Spike
VJ3080-MB	J052836.D	01/11/10	15:42	03:29	Method Blank
ZZZZZZ	J052837.D	01/11/10	16:05	03:52	(unrelated sample)
ZZZZZZ	J052838.D	01/11/10	16:28	04:15	(unrelated sample)
ZZZZZZ	J052839.D	01/11/10	16:51	04:38	(unrelated sample)
ZZZZZZ	J052840.D	01/11/10	17:14	05:01	(unrelated sample)
ZZZZZZ	J052841.D	01/11/10	17:37	05:24	(unrelated sample)
ZZZZZZ	J052842.D	01/11/10	18:00	05:47	(unrelated sample)
ZZZZZZ	J052843.D	01/11/10	18:23	06:10	(unrelated sample)
F70660-11	J052844.D	01/11/10	18:46	06:33	(used for QC only; not part of job F70691)
F70660-11MS	J052845.D	01/11/10	19:09	06:56	Matrix Spike
F70660-11MSD	J052846.D	01/11/10	19:32	07:19	Matrix Spike Duplicate
ZZZZZZ	J052848.D	01/11/10	20:18	08:05	(unrelated sample)
ZZZZZZ	J052849.D	01/11/10	20:41	08:28	(unrelated sample)
ZZZZZZ	J052850.D	01/11/10	21:04	08:51	(unrelated sample)
ZZZZZZ	J052851.D	01/11/10	21:27	09:14	(unrelated sample)
ZZZZZZ	J052852.D	01/11/10	21:51	09:38	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ3080-BFB
Lab File ID: J052827.D
Instrument ID: GCMSJ
Injection Date: 01/11/10
Injection Time: 12:13

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	J052853.D	01/11/10	22:14	10:01	(unrelated sample)
ZZZZZZ	J052854.D	01/11/10	22:37	10:24	(unrelated sample)
ZZZZZZ	J052855.D	01/11/10	23:00	10:47	(unrelated sample)
ZZZZZZ	J052856.D	01/11/10	23:24	11:11	(unrelated sample)
ZZZZZZ	J052857.D	01/11/10	23:47	11:34	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ3081-BFB
Lab File ID: J052860.D
Instrument ID: GCMSJ
Injection Date: 01/12/10
Injection Time: 09:13

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	15913	21.1		Pass
75	30.0 - 60.0% of mass 95	34693	45.9		Pass
95	Base peak, 100% relative abundance	75533	100.0		Pass
96	5.0 - 9.0% of mass 95	5370	7.1		Pass
173	Less than 2.0% of mass 174	440	0.58	(0.63) [a]	Pass
174	50.0 - 100.0% of mass 95	69301	91.7		Pass
175	5.0 - 9.0% of mass 174	4879	6.5	(7.0) [a]	Pass
176	95.0 - 101.0% of mass 174	69360	91.8	(100.1) [a]	Pass
177	5.0 - 9.0% of mass 176	4545	6.0	(6.6) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VJ3081-CC3080	J052861.D	01/12/10	09:35	00:22	Continuing cal 4
VJ3081-BS	J052862.D	01/12/10	10:12	00:59	Blank Spike
VJ3081-MB	J052863.D	01/12/10	10:34	01:21	Method Blank
ZZZZZZ	J052864.D	01/12/10	10:59	01:46	(unrelated sample)
ZZZZZZ	J052865.D	01/12/10	11:23	02:10	(unrelated sample)
ZZZZZZ	J052867.D	01/12/10	12:09	02:56	(unrelated sample)
ZZZZZZ	J052868.D	01/12/10	12:32	03:19	(unrelated sample)
ZZZZZZ	J052869.D	01/12/10	12:55	03:42	(unrelated sample)
ZZZZZZ	J052870.D	01/12/10	13:18	04:05	(unrelated sample)
ZZZZZZ	J052871.D	01/12/10	13:41	04:28	(unrelated sample)
ZZZZZZ	J052872.D	01/12/10	14:05	04:52	(unrelated sample)
ZZZZZZ	J052873.D	01/12/10	14:28	05:15	(unrelated sample)
ZZZZZZ	J052874.D	01/12/10	14:50	05:37	(unrelated sample)
F70691-1	J052875.D	01/12/10	15:22	06:09	MW30&33-01-010710
F70691-1MS	J052876.D	01/12/10	15:45	06:32	Matrix Spike
F70691-1MSD	J052877.D	01/12/10	16:08	06:55	Matrix Spike Duplicate
ZZZZZZ	J052879.D	01/12/10	16:54	07:41	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ3082-BFB
Lab File ID: J052884.D
Instrument ID: GCMSJ
Injection Date: 01/13/10
Injection Time: 09:38

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	14908	21.4		Pass
75	30.0 - 60.0% of mass 95	31898	45.7		Pass
95	Base peak, 100% relative abundance	69805	100.0		Pass
96	5.0 - 9.0% of mass 95	5058	7.2		Pass
173	Less than 2.0% of mass 174	331	0.47	(0.54) [a]	Pass
174	50.0 - 100.0% of mass 95	61709	88.4		Pass
175	5.0 - 9.0% of mass 174	4049	5.8	(6.6) [a]	Pass
176	95.0 - 101.0% of mass 174	62152	89.0	(100.7) [a]	Pass
177	5.0 - 9.0% of mass 176	4045	5.8	(6.5) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VJ3082-CC3080	J052885.D	01/13/10	10:00	00:22	Continuing cal 4
VJ3082-IC3082	J052886.D	01/13/10	10:29	00:51	Initial cal 1
VJ3082-IC3082	J052887.D	01/13/10	10:52	01:14	Initial cal 2
VJ3082-IC3082	J052888.D	01/13/10	11:15	01:37	Initial cal 3
VJ3082-ICC3082	J052889.D	01/13/10	11:38	02:00	Initial cal 4
VJ3082-IC3082	J052890.D	01/13/10	12:02	02:24	Initial cal 5
VJ3082-IC3082	J052891.D	01/13/10	12:25	02:47	Initial cal 6
VJ3082-ICV3082	J052892.D	01/13/10	12:48	03:10	Initial cal verification 4
VJ3082-BS	J052893.D	01/13/10	13:11	03:33	Blank Spike
VJ3082-BS	J052894.D	01/13/10	13:34	03:56	Blank Spike
VJ3082-MB	J052895.D	01/13/10	13:57	04:19	Method Blank
ZZZZZZ	J052896.D	01/13/10	14:20	04:42	(unrelated sample)
F70691-2	J052897.D	01/13/10	14:43	05:05	MW30&33-02-010710
F70721-1	J052898.D	01/13/10	15:07	05:29	(used for QC only; not part of job F70691)
F70721-1MS	J052899.D	01/13/10	15:30	05:52	Matrix Spike
F70721-1MSD	J052900.D	01/13/10	15:53	06:15	Matrix Spike Duplicate
ZZZZZZ	J052901.D	01/13/10	16:16	06:38	(unrelated sample)
ZZZZZZ	J052902.D	01/13/10	16:39	07:01	(unrelated sample)
ZZZZZZ	J052903.D	01/13/10	17:02	07:24	(unrelated sample)
ZZZZZZ	J052904.D	01/13/10	17:25	07:47	(unrelated sample)
ZZZZZZ	J052906.D	01/13/10	18:11	08:33	(unrelated sample)
F70691-3	J052907.D	01/13/10	18:35	08:57	MW30&33-03-010710
F70691-4	J052908.D	01/13/10	18:58	09:20	MW30&33-04-010710
F70691-5	J052909.D	01/13/10	19:21	09:43	MW30&33-05R-010710

Instrument Performance Check (BFB)

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ3082-BFB
Lab File ID: J052884.D
Instrument ID: GCMSJ
Injection Date: 01/13/10
Injection Time: 09:38

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
F70691-6	J052910.D	01/13/10	19:44	10:06	MW30&33-DUP01-010710
F70691-7	J052911.D	01/13/10	20:07	10:29	TB02-010710

Volatile Internal Standard Area Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Check Std:	VJ3081-CC3080	**Injection Date:**	01/12/10
Lab File ID:	J052861.D	**Injection Time:**	09:35
Instrument ID:	GCMSJ	**Method:**	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
Check Std	1858261	7.48	1435717	10.56	811114	12.92	180445	5.10
Upper Limit [a]	3716522	7.98	2871434	11.06	1622228	13.42	360890	5.60
Lower Limit [b]	929131	6.98	717859	10.06	405557	12.42	90223	4.60

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
VJ3081-BS	1980349	7.47	1508176	10.56	843927	12.92	195655	5.09
VJ3081-MB	1843500	7.47	1345432	10.56	720461	12.92	179219	5.10
ZZZZZZ	1650891	7.47	1195449	10.56	659924	12.92	366994*	5.10
ZZZZZZ	1581346	7.47	1141610	10.56	620931	12.92	352433	5.10
ZZZZZZ	1403229	7.47	1039932	10.56	602961	12.92	353225	5.10
ZZZZZZ	1558042	7.48	1181556	10.56	681063	12.92	392072*	5.10
ZZZZZZ	1616847	7.47	1229510	10.56	705875	12.92	418561*	5.09
ZZZZZZ	1730078	7.48	1329539	10.56	766380	12.92	420293*	5.10
ZZZZZZ	1674920	7.47	1283172	10.56	741756	12.92	407843*	5.10
ZZZZZZ	2050826	7.47	1529892	10.56	874048	12.92	265317	5.10
ZZZZZZ	1947771	7.48	1428223	10.56	785679	12.92	173720	5.09
ZZZZZZ	1798642	7.48	1332638	10.56	721597	12.92	209277	5.10
F70691-1	1762259	7.48	1282235	10.56	699928	12.92	214594	5.10
F70691-1MS	1771261	7.48	1365873	10.56	775576	12.92	227648	5.09
F70691-1MSD	1947982	7.47	1487474	10.56	843938	12.92	259784	5.10
ZZZZZZ	1740729	7.47	1260799	10.56	698922	12.92	217509	5.10

IS 1 = Fluorobenzene
IS 2 = Chlorobenzene-D5
IS 3 = 1,4-Dichlorobenzene-d4
IS 4 = Tert Butyl Alcohol-D10

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Internal Standard Area Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Check Std:	VJ3082-ICC3082	**Injection Date:**	01/13/10
Lab File ID:	J052889.D	**Injection Time:**	11:38
Instrument ID:	GCMSJ	**Method:**	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
Check Std	1492165	7.47	1120016	10.56	580499	12.92	136354	5.09
Upper Limit [a]	2984330	7.97	2240032	11.06	1160998	13.42	272708	5.59
Lower Limit [b]	746083	6.97	560008	10.06	290250	12.42	68177	4.59

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
VJ3082-BS	1392099	7.48	1050818	10.56	539027	12.92	124253	5.10
VJ3082-BS	1484626	7.47	1166628	10.56	664788	12.92	139733	5.11
VJ3082-MB	1502423	7.47	1077592	10.56	578161	12.92	135657	5.10
ZZZZZZ	1389410	7.47	1002799	10.56	527206	12.92	108573	5.10
F70691-2	1336102	7.48	965001	10.56	504663	12.92	170974	5.11
F70721-1	1353023	7.47	983990	10.56	525005	12.92	117019	5.10
F70721-1MS	1454712	7.47	1121075	10.56	636688	12.92	133682	5.10
F70721-1MSD	1633971	7.47	1257153	10.56	705118	12.92	159079	5.10
ZZZZZZ	1492592	7.47	1096759	10.56	604354	12.92	132182	5.10
ZZZZZZ	1504189	7.48	1108187	10.56	602510	12.92	133609	5.10
ZZZZZZ	1430097	7.48	1041096	10.56	570706	12.92	123829	5.10
ZZZZZZ	1402248	7.47	1016791	10.56	537560	12.92	122920	5.10
ZZZZZZ	1315821	7.47	968693	10.56	514729	12.92	114356	5.10
F70691-3	1293470	7.47	932749	10.56	493436	12.92	170364	5.09
F70691-4	1303665	7.47	962908	10.56	508398	12.92	151167	5.10
F70691-5	1279783	7.47	946137	10.56	496905	12.92	150000	5.09
F70691-6	1242688	7.48	912468	10.56	480881	12.92	148345	5.11
F70691-7	1226954	7.48	914546	10.56	490417	12.92	102939	5.11

IS 1 = Fluorobenzene
IS 2 = Chlorobenzene-D5
IS 3 = 1,4-Dichlorobenzene-d4
IS 4 = Tert Butyl Alcohol-D10

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Surrogate Recovery Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Method: SW846 8260B **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
F70691-1	J052875.D	100.0	99.0	103.0	103.0
F70691-2	J052897.D	98.0	98.0	106.0	106.0
F70691-3	J052907.D	97.0	99.0	105.0	106.0
F70691-4	J052908.D	98.0	97.0	104.0	102.0
F70691-5	J052909.D	98.0	97.0	104.0	105.0
F70691-6	J052910.D	98.0	99.0	104.0	105.0
F70691-7	J052911.D	97.0	95.0	104.0	103.0
F70691-1MS	J052876.D	99.0	103.0	99.0	100.0
F70691-1MSD	J052877.D	98.0	101.0	100.0	100.0
F70721-1MS	J052899.D	99.0	101.0	98.0	99.0
F70721-1MSD	J052900.D	98.0	100.0	98.0	99.0
VJ3081-BS	J052862.D	100.0	100.0	100.0	101.0
VJ3081-MB	J052863.D	100.0	96.0	103.0	106.0
VJ3082-BS	J052893.D	96.0	97.0	100.0	105.0
VJ3082-BS	J052894.D	98.0	101.0	99.0	98.0
VJ3082-MB	J052895.D	98.0	95.0	105.0	104.0

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	87-116%
S2 = 1,2-Dichloroethane-D4	76-127%
S3 = Toluene-D8	86-112%
S4 = 4-Bromofluorobenzene	84-120%

Initial Calibration Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ3080-ICC3080
Lab FileID: J052831.D

Response Factor Report MSVOA6

Method : C:\MSDCHEM\1\METHODS\8260-JAPP9.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Mon Jan 11 14:57:31 2010
Response via : Initial Calibration

Calibration Files
1 =J052828.D 2 =J052829.D 3 =J052830.D 4 =J052831.D
5 =J052832.D 6 =J052833.D

	Compound	1	2	3	4	5	6	Avg	%RSD
1) I	Fluorobenzene	----------ISTD----------							
2)	Dichlorodifluoromet	0.105	0.164	0.159	0.152	0.155	0.154	0.148	14.59
3) P	Chloromethane	0.434	0.398	0.364	0.332	0.329	0.297	0.359	13.99
4) C	Vinyl Chloride	0.251	0.294	0.299	0.282	0.293	0.269	0.281	6.56
5)	Bromomethane	0.268	0.219	0.209	0.187	0.174	0.152	0.201	20.14
	---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9996								
	Response Ratio = 0.00000 + 0.21701 *A + -0.03222 *A^2								
6)	Chloroethane	0.187	0.183	0.183	0.166	0.146	0.120	0.164	16.12
	---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9998								
	Response Ratio = 0.00000 + 0.19897 *A + -0.03913 *A^2								
7)	Trichlorofluorometh	0.289	0.335	0.360	0.355	0.373	0.331	0.341	8.70
8)	Ethyl Ether	0.221	0.227	0.247	0.248	0.246	0.226	0.236	5.31
9)	1,2-Dichlorotrifluo	0.214	0.252	0.262	0.266	0.259	0.232	0.248	8.17
10) C	1,1-Dichloroethene	0.279	0.318	0.339	0.351	0.339	0.310	0.323	8.06
11)	Freon 113	0.141	0.169	0.195	0.201	0.204	0.188	0.183	13.08
12)	Carbon Disulfide	0.650	0.587	0.605	0.611	0.589	0.543	0.597	5.90
13)	Iodomethane	0.331	0.372	0.396	0.398	0.409	0.397	0.384	7.49
14)	Allyl chloride	0.355	0.430	0.461	0.461	0.458	0.440	0.434	9.40
15)	Methylene Chloride	1.551	0.520	0.452	0.378	0.352	0.345	0.600	78.52
	---- Linear regr., Force(0,0) ---- Coefficient = 0.9984								
	Response Ratio = 0.00000 + 0.35289 *A								
16)	Acetone	0.023	0.018	0.021	0.020	0.020	0.019	0.020	7.11
17)	Methyl acetate	0.028	0.030	0.034	0.032	0.032	0.032	0.031	6.98
18)	trans-1,2-Dichloroe	0.299	0.315	0.336	0.332	0.328	0.325	0.323	4.20
19)	Hexane	0.212	0.227	0.240	0.237	0.228	0.222	0.228	4.46
20)	Methyl Tert Butyl E	0.472	0.490	0.559	0.543	0.546	0.553	0.527	6.96
21)	Acetonitrile	0.025	0.018	0.016	0.015	0.014	0.014	0.017	24.31
	---- Quadratic regr., Force(0,0) ---- Coefficient = 1.0000								
	Response Ratio = 0.00000 + 0.01589 *A + -0.00011 *A^2								
22)	Di-isopropyl ether	0.653	0.753	0.899	0.878	0.878	0.858	0.820	11.77
23)	Chloroprene	0.629	0.391	0.382	0.432	0.449	0.441	0.454	19.81
	---- Linear regr., Force(0,0) ---- Coefficient = 0.9990								
	Response Ratio = 0.00000 + 0.44082 *A								
24) P	1,1-Dichloroethane	0.360	0.415	0.449	0.440	0.439	0.432	0.423	7.70
25)	Acrylonitrile	0.126	0.074	0.084	0.073	0.069	0.071	0.083	26.12
	---- Linear regr., Force(0,0) ---- Coefficient = 0.9984								
	Response Ratio = 0.00000 + 0.07100 *A								
26)	ETBE	0.562	0.649	0.767	0.748	0.769	0.762	0.709	12.03
27)	Vinyl acetate	0.336	0.411	0.410	0.432	0.392	0.380	0.394	8.44
28)	cis-1,2-Dichloroeth	0.184	0.222	0.250	0.251	0.252	0.244	0.234	11.47

Initial Calibration Summary

Job Number: F70691 **Sample:** VJ3080-ICC3080
Account: TETTNOAK Tetra Tech, Inc **Lab FileID:** J052831.D
Project: Holloman AFB; Alamogordo, NM

```
29)      2,2-Dichloropropane 0.204 0.257 0.280 0.288 0.292 0.290 0.268  12.73
30)      Bromochloromethane  0.106 0.115 0.133 0.130 0.132 0.131 0.124   9.03
31)      Cyclohexane         0.243 0.344 0.398 0.412 0.406 0.401 0.367  17.91
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9998
               Response Ratio = 0.00000 + 0.40329 *A

32) C    Chloroform          0.336 0.380 0.413 0.408 0.409 0.402 0.391   7.56
33)      Ethyl acetate       0.238 0.248 0.267 0.247 0.271 0.247 0.253   5.12
34)      Tetrahydrofuran     0.258 0.081 0.068 0.060 0.063 0.060 0.098  80.13
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9989
               Response Ratio = 0.00000 + 0.06100 *A

35) S    Dibromofluoromethan 0.268 0.266 0.265 0.268 0.268 0.271 0.268   0.78
36)      Carbon Tetrachlorid 0.196 0.251 0.273 0.278 0.284 0.278 0.260  12.90
37)      1,1,1-Trichloroetha 0.217 0.283 0.310 0.310 0.308 0.308 0.289  12.80
38)      2-Butanone          0.088 0.089 0.104 0.103 0.103 0.098 0.097   7.43
39)      1,1-Dichloropropene 0.204 0.264 0.292 0.302 0.301 0.295 0.276  13.76
40)      Propionitrile       0.029 0.031 0.035 0.035 0.035 0.033 0.033   7.81
41)      Methacrylonitrile   0.122 0.141 0.156 0.156 0.152 0.131 0.143   9.97
42)      Benzene             0.683 0.832 0.903 0.904 0.915 0.862 0.850  10.28
43)      TAME                0.423 0.515 0.602 0.597 0.611 0.603 0.559  13.51
44) S    1,2-Dichloroethane- 0.288 0.286 0.299 0.303 0.321 0.302 0.300   4.24
45)      1,2-Dichloroethane  0.292 0.283 0.318 0.313 0.320 0.314 0.307   4.94
46)      Trichloroethene     0.192 0.220 0.236 0.242 0.249 0.242 0.230   9.28
47)      Methylcyclohexane   0.224 0.324 0.373 0.381 0.377 0.368 0.341  17.93
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9995
               Response Ratio = 0.00000 + 0.37178 *A

48)      Dibromomethane      0.111 0.125 0.141 0.141 0.145 0.143 0.134  10.00
49) C    1,2-Dichloropropane 0.187 0.230 0.263 0.264 0.270 0.264 0.246  13.25
50)      Bromodichloromethan 0.229 0.266 0.310 0.311 0.320 0.318 0.292  12.65
51)      Methyl methacrylate 0.121 0.150 0.198 0.207 0.211 0.203 0.182  20.43
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9991
               Response Ratio = 0.00000 + 0.20538 *A

52)      2-Chloroethyl vinyl 0.095 0.130 0.166 0.170 0.175 0.161 0.149  20.66
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9986
               Response Ratio = 0.00000 + 0.18204 *A + -0.00196 *A^2

53)      cis-1,3-Dichloropro 0.235 0.308 0.377 0.382 0.396 0.387 0.348  18.30
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9997
               Response Ratio = 0.00000 + 0.38902 *A


54) I    Chlorobenzene-d5      ----------------ISTD---------------------
55) S    Toluene-d8          1.314 1.271 1.246 1.239 1.225 1.222 1.253   2.77
56) C    Toluene             1.070 1.157 1.215 1.197 1.186 1.131 1.159   4.57
57)      2-Nitropropane      0.042 0.046 0.063 0.064 0.068 0.065 0.058  18.85
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9989
               Response Ratio = 0.00000 + 0.06565 *A

58)      4-Methyl-2-pentanon 0.196 0.239 0.300 0.288 0.282 0.254 0.260  14.87
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9992
               Response Ratio = 0.00000 + 0.32030 *A + -0.00646 *A^2

59)      trans-1,3-Dichlorop 0.304 0.353 0.427 0.428 0.446 0.436 0.399  14.35
60)      Tetrachloroethene   0.244 0.314 0.337 0.351 0.358 0.360 0.327  13.47
61)      Ethyl methacrylate  0.204 0.270 0.345 0.356 0.369 0.369 0.319  21.15
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9998
               Response Ratio = 0.00000 + 0.36692 *A
```

Initial Calibration Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ3080-ICC3080
Lab FileID: J052831.D

```
62)     1,1,2-Trichloroetha 0.188 0.220 0.240 0.232 0.233 0.228 0.223   8.36
63)     Dibromochloromethan 0.213 0.253 0.313 0.318 0.327 0.329 0.292  16.44
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9999
              Response Ratio = 0.00000 + 0.32675 *A

64)     1,3-Dichloropropane 0.370 0.412 0.457 0.449 0.454 0.443 0.431   7.92
65)     1,2-Dibromoethane   0.209 0.238 0.282 0.277 0.283 0.279 0.261  11.79
66)     2-hexanone          0.116 0.148 0.201 0.196 0.195 0.180 0.173  19.61
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9994
              Response Ratio = 0.00000 + 0.21143 *A + -0.00299 *A^2

67)     1-Chlorohexane      0.223 0.358 0.418 0.439 0.437 0.427 0.384  21.90
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9996
              Response Ratio = 0.00000 + 0.43060 *A

68) C   Ethylbenzene        1.146 1.262 1.370 1.380 1.363 1.240 1.293   7.23
69) P   Chlorobenzene       0.707 0.802 0.876 0.881 0.888 0.835 0.832   8.32
70)     1,1,1,2-Tetrachloro 0.205 0.264 0.300 0.306 0.313 0.316 0.284  15.16
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9999
              Response Ratio = 0.00000 + 0.31352 *A

71)     m,p-Xylene          0.695 0.906 1.023 1.029 0.993 0.870 0.920  13.84
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9988
              Response Ratio = 0.00000 + 1.15520 *A + -0.06896 *A^2

72)     o-Xylene            0.582 0.822 0.997 1.006 1.020 0.969 0.899  19.09
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9995
              Response Ratio = 0.00000 + 1.05150 *A + -0.03808 *A^2

73)     Styrene             0.457 0.676 0.855 0.867 0.893 0.858 0.768  22.25
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9992
              Response Ratio = 0.00000 + 0.86873 *A

74) P   Bromoform           0.135 0.155 0.207 0.214 0.227 0.231 0.195  20.59
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9993
              Response Ratio = 0.00000 + 0.22730 *A

75)     Isopropylbenzene    0.614 0.922 1.089 1.140 1.125 1.067 0.993  20.28
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9996
              Response Ratio = 0.00000 + 1.18235 *A + -0.05483 *A^2


76) I   1,4-Dichlorobenzene-d ----------------ISTD---------------------
77) S   4-Bromofluorobenzen 0.838 0.824 0.819 0.800 0.804 0.810 0.816   1.71
78)     cis-1,4-Dichloro-2- 0.061 0.060 0.100 0.111 0.125 0.140 0.100  33.31
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9999
              Response Ratio = 0.00000 + 0.09041 *A + 0.02493 *A^2

79)     n-Propylbenzene     1.798 2.419 2.773 2.754 2.675 2.377 2.466  14.92
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9991
              Response Ratio = 0.00000 + 3.06783 *A + -0.33474 *A^2

80)     Bromobenzene        0.522 0.627 0.716 0.710 0.747 0.737 0.677  12.82
81) P   1,1,2,2-Tetrachloro 0.493 0.515 0.602 0.569 0.570 0.556 0.551   7.29
82)     1,3,5-Trimethylbenz 1.106 1.556 1.890 1.902 1.923 1.773 1.692  18.78
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9991
              Response Ratio = 0.00000 + 2.04414 *A + -0.12743 *A^2

83)     2-Chlorotoluene     1.204 1.587 1.817 1.801 1.821 1.664 1.649  14.43
```

Initial Calibration Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ3080-ICC3080
Lab FileID: J052831.D

```
 84)     trans-1,4-Dichloro- 0.067 0.067 0.104 0.111 0.121 0.133 0.101  27.57
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9999
               Response Ratio = 0.00000 + 0.09482 *A + 0.01918 *A^2

 85)     1,2,3-Trichloroprop 0.134 0.147 0.167 0.165 0.167 0.166 0.158   8.99
 86)     Cyclohexanone       0.010 0.012 0.014 0.015 0.014 0.015 0.013  14.70
 87)     4-Chlorotoluene     1.083 1.401 1.677 1.610 1.630 1.547 1.491  14.85
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9996
               Response Ratio = 0.00000 + 1.70742 *A + -0.07623 *A^2

 88)     tert-Butylbenzene   0.614 0.840 1.013 1.033 1.051 1.003 0.926  18.42
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9995
               Response Ratio = 0.00000 + 1.07064 *A + -0.03046 *A^2

 89)     1,2,4-Trimethylbenz 1.117 1.626 1.951 1.916 1.924 1.800 1.722  18.58
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9995
               Response Ratio = 0.00000 + 2.04724 *A + -0.11791 *A^2

 90)     Pentachloroethane   0.288 0.332 0.381 0.398 0.410 0.426 0.373  14.04
 91)     sec-Butylbenzene    1.363 2.054 2.415 2.400 2.370 2.182 2.130  18.86
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9995
               Response Ratio = 0.00000 + 2.59289 *A + -0.19785 *A^2

 92)     4-Isopropyltoluene  1.007 1.629 2.047 2.035 2.060 1.919 1.783  23.19
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9993
               Response Ratio = 0.00000 + 2.17281 *A + -0.11922 *A^2

 93)     1,3-Dichlorobenzene 0.958 1.097 1.228 1.194 1.231 1.201 1.152   9.27
 94)     1,4-Dichlorobenzene 1.194 1.191 1.334 1.281 1.302 1.253 1.259   4.60
 95)     n-Butylbenzene      0.670 1.020 1.220 1.230 1.260 1.153 1.092  20.51
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9986
               Response Ratio = 0.00000 + 1.33142 *A + -0.08298 *A^2

 96)     Benzyl Chloride     0.174 0.187 0.258 0.268 0.289 0.284 0.243  20.60
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9992
               Response Ratio = 0.00000 + 0.28323 *A

 97)     1,2-Dichlorobenzene 0.899 0.994 1.169 1.139 1.176 1.143 1.087  10.45
 98)     1,2-Dibromo-3-Chlor 0.058 0.060 0.083 0.078 0.086 0.084 0.075  16.50
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9990
               Response Ratio = 0.00000 + 0.08383 *A

 99)     Hexachlorobutadiene 0.389 0.346 0.405 0.421 0.464 0.477 0.417  11.68
100)     1,2,4-Trichlorobenz 0.680 0.629 0.838 0.850 0.917 0.914 0.805  15.16
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9993
               Response Ratio = 0.00000 + 0.90690 *A

101)     Naphthalene         1.162 1.043 1.471 1.487 1.520 1.460 1.357  14.86
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9990
               Response Ratio = 0.00000 + 1.47941 *A

102)     1,2,3-Trichlorobenz 0.645 0.548 0.710 0.731 0.782 0.786 0.700  12.98

103) I   Tert Butyl Alcohol-d1 ----------------ISTD---------------------
104)     Ethanol             0.255 0.217 0.150 0.148 0.158       0.186  25.88
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9973
               Response Ratio = 0.00000 + 0.15515 *A

105)     acrolein            3.543 1.988 1.391 1.149 1.065 1.235 1.729  54.83
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9918
```

Initial Calibration Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ3080-ICC3080
Lab FileID: J052831.D

```
                Response Ratio = 0.00000 + 1.06629 *A + 0.06969 *A^2

106)     Tert Butyl Alcohol  0.909 0.882 0.981 0.956 1.066 0.956 0.958   6.67
107)     tert Amyl alcohol   0.500 0.663 0.823 0.851 0.939 0.854 0.772  20.86
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9956
                Response Ratio = 0.00000 + 0.87725 *A

108)     Isobutyl alcohol    0.367 0.389 0.399 0.422 0.435 0.383 0.399   6.32
109)     1,4-Dioxane         0.023 0.070 0.074 0.080 0.085 0.077 0.068  33.25
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9966
                Response Ratio = 0.00000 + 0.08710 *A + -0.00113 *A^2

 ---------------------------------------------------------------------------
 (#) = Out of Range

           8260-JAPP9.M        Tue Jan 12 09:09:28 2010
```

Initial Calibration Verification

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ3080-ICV3080
Lab FileID: J052834.D

Evaluate Continuing Calibration Report

```
Data File : C:\MSDCHEM\1\DATA\011110\J052834.D          Vial: 7
Acq On    : 11 Jan 2010   2:52 pm                   Operator: KarenW
Sample    : ICV3080-4                               Inst    : MSVOA6
Misc      : ms13557,vj3080,,,,,                     Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\MSDCHEM\1\METHODS\8260-JAPP9.M (RTE Integrator)
Title        : SW-846 Method 5030B/8260B & EPA 624
Last Update  : Mon Jan 11 14:57:31 2010
Response via : Multiple Level Calibration

Min. RRF     :   0.001  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	139	0.00	7.48
2		Dichlorodifluoromethane	0.148	0.148	0.0	136	0.00	2.73
3	P	Chloromethane	0.359	0.308	14.2	129	0.00	2.93
4	C	Vinyl Chloride	0.281	0.261	7.1	129	0.00	3.07
			Amount	Calc.	%Drift			
5		Bromomethane	40.000	35.318	11.7	128	0.00	3.43
6		Chloroethane	40.000	31.244	21.9#	115	0.00	3.56
			AvgRF	CCRF	%Dev			
7		Trichlorofluoromethane	0.341	0.358	-5.0	141	0.07	3.76
8		Ethyl Ether	0.236	0.238	-0.8	134	0.00	4.00
9		1,2-Dichlorotrifluoroetha	0.248	0.267	-7.7	140	0.00	4.22
10	C	1,1-Dichloroethene	0.323	0.330	-2.2	131	0.00	4.26
11		Freon 113	0.183	0.206	-12.6	143	0.00	4.34
12		Carbon Disulfide	0.597	0.635	-6.4	145	0.00	4.32
13		Iodomethane	0.384	0.453	-18.0	158	0.00	4.43
14		Allyl chloride	0.434	0.441	-1.6	134	0.00	4.74
			Amount	Calc.	%Drift			
15		Methylene Chloride	40.000	42.416	-6.0	138	0.00	4.86
			AvgRF	CCRF	%Dev			
16		Acetone	0.020	0.026	-30.0#	184	0.00	4.89
17		Methyl acetate	0.031	0.035	-12.9	151	0.00	5.00
18		trans-1,2-Dichloroethene	0.323	0.354	-9.6	149	0.00	5.03
19		Hexane	0.228	0.251	-10.1	147	0.00	5.09
20		Methyl Tert Butyl Ether	0.527	0.600	-13.9	154	0.00	5.14
			Amount	Calc.	%Drift			
21		Acetonitrile	400.000	388.691	2.8	136	0.00	5.37
			AvgRF	CCRF	%Dev			
22		Di-isopropyl ether	0.820	0.887	-8.2	141	0.00	5.50
			Amount	Calc.	%Drift			
23		Chloroprene	40.000	40.830	-2.1	145	0.00	5.64
			AvgRF	CCRF	%Dev			
24	P	1,1-Dichloroethane	0.423	0.451	-6.6	143	0.00	5.65
			Amount	Calc.	%Drift			

Initial Calibration Verification

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ3080-ICV3080
Lab FileID: J052834.D

25		Acrylonitrile	200.000	234.968	-17.5	160	-0.01	5.66
		----------	AvgRF	CCRF	%Dev	----------		
26		ETBE	0.709	0.781	-10.2	146	0.00	5.88
27		Vinyl acetate	0.394	0.480	-21.8#	155	0.00	5.87
28		cis-1,2-Dichloroethene	0.234	0.254	-8.5	141	0.00	6.21
29		2,2-Dichloropropane	0.268	0.306	-14.2	148	0.00	6.34
30		Bromochloromethane	0.124	0.141	-13.7	151	0.00	6.41
		----------	Amount	Calc.	%Drift	----------		
31		Cyclohexane	40.000	42.355	-5.9	144	0.00	6.46
		----------	AvgRF	CCRF	%Dev	----------		
32	C	Chloroform	0.391	0.425	-8.7	145	0.00	6.47
33		Ethyl acetate	0.253	0.194	23.3#	110	0.00	6.55
		----------	Amount	Calc.	%Drift	----------		
34		Tetrahydrofuran	40.000	38.999	2.5	137	0.00	6.64
		----------	AvgRF	CCRF	%Dev	----------		
35	S	Dibromofluoromethane	0.268	0.273	-1.9	142	0.00	6.66
36		Carbon Tetrachloride	0.260	0.294	-13.1	147	0.00	6.66
37		1,1,1-Trichloroethane	0.289	0.324	-12.1	146	0.00	6.72
38		2-Butanone	0.097	0.112	-15.5	152	0.00	6.75
39		1,1-Dichloropropene	0.276	0.313	-13.4	145	0.00	6.83
40		Propionitrile	0.033	0.034	-3.0	136	0.00	7.06
41		Methacrylonitrile	0.143	0.143	0.0	128	0.00	7.08
42		Benzene	0.850	0.918	-8.0	142	0.00	7.08
43		TAME	0.559	0.642	-14.8	150	0.00	7.17
44	S	1,2-Dichloroethane-d4	0.300	0.303	-1.0	139	0.00	7.20
45		1,2-Dichloroethane	0.307	0.320	-4.2	143	0.00	7.26
46		Trichloroethene	0.230	0.247	-7.4	142	0.00	7.65
		----------	Amount	Calc.	%Drift	----------		
47		Methylcyclohexane	40.000	42.560	-6.4	145	0.00	7.67
		----------	AvgRF	CCRF	%Dev	----------		
48		Dibromomethane	0.134	0.145	-8.2	144	0.00	8.07
49	C	1,2-Dichloropropane	0.246	0.263	-6.9	139	0.00	8.16
50		Bromodichloromethane	0.292	0.302	-3.4	135	0.00	8.20
		----------	Amount	Calc.	%Drift	----------		
51		Methyl methacrylate	40.000	42.639	-6.6	147	0.00	8.32
52		2-Chloroethyl vinyl ether	200.000	180.812	9.6	130	0.00	8.73
53		cis-1,3-Dichloropropene	40.000	39.627	0.9	141	0.00	8.82
		----------	AvgRF	CCRF	%Dev	----------		
54	I	Chlorobenzene-d5	1.000	1.000	0.0	136	0.00	10.56
55	S	Toluene-d8	1.253	1.240	1.0	136	0.00	9.02
56	C	Toluene	1.159	1.222	-5.4	139	0.00	9.07
		----------	Amount	Calc.	%Drift	----------		
57		2-Nitropropane	200.000	186.370	6.8	130	0.00	9.27
58		4-Methyl-2-pentanone	200.000	172.000	14.0	121	0.00	9.40
		----------	AvgRF	CCRF	%Dev	----------		
59		trans-1,3-Dichloropropene	0.399	0.462	-15.8	147	0.00	9.45
60		Tetrachloroethene	0.327	0.378	-15.6	147	0.00	9.47

Initial Calibration Verification

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ3080-ICV3080
Lab FileID: J052834.D

			Amount	Calc.	%Drift			
61		Ethyl methacrylate	40.000	36.958	7.6	130	0.00	9.57
			AvgRF	CCRF	%Dev			
62		1,1,2-Trichloroethane	0.223	0.232	-4.0	136	0.00	9.61
			Amount	Calc.	%Drift			
63		Dibromochloromethane	40.000	39.513	1.2	138	0.00	9.81
			AvgRF	CCRF	%Dev			
64		1,3-Dichloropropane	0.431	0.449	-4.2	136	0.00	9.89
65		1,2-Dibromoethane	0.261	0.288	-10.3	141	0.00	10.06
			Amount	Calc.	%Drift			
66		2-hexanone	200.000	182.855	8.6	128	0.00	10.22
67		1-Chlorohexane	40.000	39.383	1.5	132	0.00	10.53
			AvgRF	CCRF	%Dev			
68	C	Ethylbenzene	1.293	1.342	-3.8	132	0.00	10.59
69	P	Chlorobenzene	0.832	0.892	-7.2	138	0.00	10.57
			Amount	Calc.	%Drift			
70		1,1,1,2-Tetrachloroethane	40.000	40.081	-0.2	140	0.00	10.63
71		m,p-Xylene	80.000	76.094	4.9	132	0.00	10.73
72		o-Xylene	40.000	40.083	-0.2	138	0.00	11.16
73		Styrene	40.000	39.786	0.5	136	0.00	11.21
74	P	Bromoform	40.000	38.565	3.6	140	0.00	11.26
75		Isopropylbenzene	40.000	43.673	-9.2	148	0.00	11.47
			AvgRF	CCRF	%Dev			
76	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	135	0.00	12.92
77	S	4-Bromofluorobenzene	0.816	0.816	0.0	138	0.00	11.77
			Amount	Calc.	%Drift			
78		cis-1,4-Dichloro-2-butene	40.000	46.302	-15.8	159	0.00	11.81
79		n-Propylbenzene	40.000	36.631	8.4	127	0.00	11.89
			AvgRF	CCRF	%Dev			
80		Bromobenzene	0.677	0.734	-8.4	140	0.00	11.89
81	P	1,1,2,2-Tetrachloroethane	0.551	0.558	-1.3	132	0.00	11.94
			Amount	Calc.	%Drift			
82		1,3,5-Trimethylbenzene	40.000	37.818	5.5	131	0.00	12.08
			AvgRF	CCRF	%Dev			
83		2-Chlorotoluene	1.649	1.767	-7.2	133	0.00	12.07
			Amount	Calc.	%Drift			
84		trans-1,4-Dichloro-2-Bute	40.000	49.559	-23.9#	171	0.00	12.12
			AvgRF	CCRF	%Dev			
85		1,2,3-Trichloropropane	0.158	0.148	6.3	121	0.00	12.10
86		Cyclohexanone	0.013	0.015	-15.4	131	0.00	12.16
			Amount	Calc.	%Drift			
87		4-Chlorotoluene	40.000	39.158	2.1	135	0.00	12.23
88		tert-Butylbenzene	40.000	37.873	5.3	130	0.00	12.42
89		1,2,4-Trimethylbenzene	40.000	37.574	6.1	130	0.00	12.48

Initial Calibration Verification

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ3080-ICV3080
Lab FileID: J052834.D

			AvgRF	CCRF	%Dev			
90	Pentachloroethane		0.373	0.443	-18.8	150	0.00	12.45
			Amount	Calc.	%Drift			
91	sec-Butylbenzene		40.000	37.996	5.0	131	0.00	12.60
92	4-Isopropyltoluene		40.000	37.881	5.3	131	0.00	12.74
			AvgRF	CCRF	%Dev			
93	1,3-Dichlorobenzene		1.152	1.223	-6.2	138	0.00	12.85
94	1,4-Dichlorobenzene		1.259	1.298	-3.1	137	0.00	12.94
			Amount	Calc.	%Drift			
95	n-Butylbenzene		40.000	35.818	10.5	125	0.00	13.18
96	Benzyl Chloride		40.000	36.518	8.7	130	0.00	13.18
			AvgRF	CCRF	%Dev			
97	1,2-Dichlorobenzene		1.087	1.154	-6.2	137	0.00	13.37
			Amount	Calc.	%Drift			
98	1,2-Dibromo-3-Chloropropa		40.000	36.780	8.0	133	0.00	14.13
			AvgRF	CCRF	%Dev			
99	Hexachlorobutadiene		0.417	0.447	-7.2	143	0.00	14.70
			Amount	Calc.	%Drift			
100	1,2,4-Trichlorobenzene		40.000	38.294	4.3	138	0.00	14.74
101	Naphthalene		40.000	39.387	1.5	132	0.00	15.02
			AvgRF	CCRF	%Dev			
102	1,2,3-Trichlorobenzene		0.700	0.747	-6.7	138	0.00	15.17
103	Tert Butyl Alcohol-d10	I	1.000	1.000	0.0	150	-0.01	5.10
			Amount	Calc.	%Drift			
104	Ethanol		800.000	753.325	5.8	148	0.00	4.14
105	acrolein		200.000	312.945	-56.5#	236	0.00	4.59
			AvgRF	CCRF	%Dev			
106	Tert Butyl Alcohol		0.958	0.911	4.9	143	0.00	5.18
			Amount	Calc.	%Drift			
107	tert Amyl alcohol		400.000	379.677	5.1	147	0.00	7.31
			AvgRF	CCRF	%Dev			
108	Isobutyl alcohol		0.399	0.372	6.8	132	0.00	7.19
			Amount	Calc.	%Drift			
109	1,4-Dioxane		800.000	906.997	-13.4	175	0.00	8.38

(#) = Out of Range SPCC's out = 0 CCC's out = 0
J052831.D 8260-JAPP9.M Tue Jan 12 09:09:15 2010

Continuing Calibration Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ3081-CC3080
Lab FileID: J052861.D

Evaluate Continuing Calibration Report

```
Data File : C:\MSDCHEM\1\DATA\011210\J052861.D          Vial: 1
Acq On    : 12 Jan 2010   9:35 am                   Operator: KarenW
Sample    : CC3080-4                                Inst    : MSVOA6
Misc      : ms13578,vj3081,,,,,                     Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\MSDCHEM\1\METHODS\8260-JAPP9.M (RTE Integrator)
Title        : SW-846 Method 5030B/8260B & EPA 624
Last Update  : Mon Jan 11 14:57:31 2010
Response via : Multiple Level Calibration

Min. RRF     :   0.001  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	89	0.00	7.48
2		Dichlorodifluoromethane	0.148	0.149	-0.7	87	0.00	2.74
3	P	Chloromethane	0.359	0.344	4.2	92	0.02	2.95
4	C	Vinyl Chloride	0.281	0.283	-0.7	89	0.00	3.07
			Amount	Calc.	%Drift			
5		Bromomethane	40.000	43.431	-8.6	98	0.01	3.44
6		Chloroethane	40.000	42.003	-5.0	94	0.01	3.57
			AvgRF	CCRF	%Dev			
7		Trichlorofluoromethane	0.341	0.382	-12.0	95	0.07	3.76
8		Ethyl Ether	0.236	0.252	-6.8	90	0.00	4.00
9		1,2-Dichlorotrifluoroetha	0.248	0.263	-6.0	88	0.00	4.22
10	C	1,1-Dichloroethene	0.323	0.346	-7.1	88	0.00	4.25
11		Freon 113	0.183	0.200	-9.3	89	0.00	4.34
12		Carbon Disulfide	0.597	0.608	-1.8	89	0.00	4.33
13		Iodomethane	0.384	0.404	-5.2	90	0.00	4.43
14		Allyl chloride	0.434	0.460	-6.0	89	0.00	4.74
			Amount	Calc.	%Drift			
15		Methylene Chloride	40.000	45.477	-13.7	94	0.00	4.86
			AvgRF	CCRF	%Dev			
16		Acetone	0.020	0.022	-10.0	97	0.00	4.87
17		Methyl acetate	0.031	0.035	-12.9	95	0.00	5.00
18		trans-1,2-Dichloroethene	0.323	0.335	-3.7	90	0.00	5.03
19		Hexane	0.228	0.237	-3.9	89	0.00	5.09
20		Methyl Tert Butyl Ether	0.527	0.555	-5.3	91	0.00	5.13
			Amount	Calc.	%Drift			
21		Acetonitrile	400.000	416.797	-4.2	92	0.00	5.37
			AvgRF	CCRF	%Dev			
22		Di-isopropyl ether	0.820	0.906	-10.5	92	0.00	5.50
			Amount	Calc.	%Drift			
23		Chloroprene	40.000	40.953	-2.4	93	0.00	5.65
			AvgRF	CCRF	%Dev			
24	P	1,1-Dichloroethane	0.423	0.453	-7.1	92	0.00	5.65
			Amount	Calc.	%Drift			

Continuing Calibration Summary

Job Number: F70691 **Sample:** VJ3081-CC3080
Account: TETTNOAK Tetra Tech, Inc **Lab FileID:** J052861.D
Project: Holloman AFB; Alamogordo, NM

25		Acrylonitrile	200.000	220.793	-10.4	96	0.00	5.68
		----------	AvgRF	CCRF	%Dev	----------		
26		ETBE	0.709	0.766	-8.0	91	0.00	5.88
27		Vinyl acetate	0.394	0.424	-7.6	87	0.00	5.87
28		cis-1,2-Dichloroethene	0.234	0.258	-10.3	91	0.00	6.21
29		2,2-Dichloropropane	0.268	0.293	-9.3	90	0.00	6.34
30		Bromochloromethane	0.124	0.133	-7.3	92	0.00	6.41
		----------	Amount	Calc.	%Drift	----------		
31		Cyclohexane	40.000	39.679	0.8	86	0.00	6.46
		----------	AvgRF	CCRF	%Dev	----------		
32	C	Chloroform	0.391	0.419	-7.2	91	0.00	6.47
33		Ethyl acetate	0.253	0.260	-2.8	94	0.00	6.55
		----------	Amount	Calc.	%Drift	----------		
34		Tetrahydrofuran	40.000	43.359	-8.4	97	0.00	6.64
		----------	AvgRF	CCRF	%Dev	----------		
35	S	Dibromofluoromethane	0.268	0.265	1.1	88	0.00	6.66
36		Carbon Tetrachloride	0.260	0.272	-4.6	87	0.00	6.66
37		1,1,1-Trichloroethane	0.289	0.312	-8.0	90	0.00	6.72
38		2-Butanone	0.097	0.110	-13.4	95	0.00	6.75
39		1,1-Dichloropropene	0.276	0.303	-9.8	89	0.00	6.83
40		Propionitrile	0.033	0.035	-6.1	89	0.00	7.06
41		Methacrylonitrile	0.143	0.158	-10.5	90	0.00	7.09
42		Benzene	0.850	0.911	-7.2	90	0.00	7.08
43		TAME	0.559	0.611	-9.3	91	0.00	7.17
44	S	1,2-Dichloroethane-d4	0.300	0.303	-1.0	89	0.00	7.20
45		1,2-Dichloroethane	0.307	0.324	-5.5	92	0.00	7.26
46		Trichloroethene	0.230	0.246	-7.0	90	0.00	7.65
		----------	Amount	Calc.	%Drift	----------		
47		Methylcyclohexane	40.000	39.616	1.0	86	0.00	7.67
		----------	AvgRF	CCRF	%Dev	----------		
48		Dibromomethane	0.134	0.146	-9.0	92	0.00	8.07
49	C	1,2-Dichloropropane	0.246	0.270	-9.8	91	0.00	8.16
50		Bromodichloromethane	0.292	0.324	-11.0	92	0.00	8.21
		----------	Amount	Calc.	%Drift	----------		
51		Methyl methacrylate	40.000	41.292	-3.2	91	0.00	8.32
52		2-Chloroethyl vinyl ether	200.000	201.539	-0.8	92	0.00	8.73
53		cis-1,3-Dichloropropene	40.000	40.307	-0.8	91	0.00	8.82
		----------	AvgRF	CCRF	%Dev	----------		
54	I	Chlorobenzene-d5	1.000	1.000	0.0	87	0.00	10.56
55	S	Toluene-d8	1.253	1.226	2.2	87	0.00	9.02
56	C	Toluene	1.159	1.219	-5.2	89	0.00	9.07
		----------	Amount	Calc.	%Drift	----------		
57		2-Nitropropane	200.000	219.305	-9.7	98	0.00	9.27
58		4-Methyl-2-pentanone	200.000	215.134	-7.6	96	0.00	9.40
		----------	AvgRF	CCRF	%Dev	----------		
59		trans-1,3-Dichloropropene	0.399	0.447	-12.0	91	0.00	9.45
60		Tetrachloroethene	0.327	0.348	-6.4	87	0.00	9.47

Continuing Calibration Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ3081-CC3080
Lab FileID: J052861.D

			Amount	Calc.	%Drift			
61		Ethyl methacrylate	40.000	39.979	0.1	90	0.00	9.58
			AvgRF	CCRF	%Dev			
62		1,1,2-Trichloroethane	0.223	0.245	-9.9	92	0.00	9.61
			Amount	Calc.	%Drift			
63		Dibromochloromethane	40.000	39.768	0.6	89	0.00	9.81
			AvgRF	CCRF	%Dev			
64		1,3-Dichloropropane	0.431	0.468	-8.6	91	0.00	9.89
65		1,2-Dibromoethane	0.261	0.289	-10.7	91	0.00	10.06
			Amount	Calc.	%Drift			
66		2-hexanone	200.000	217.819	-8.9	97	0.00	10.22
67		1-Chlorohexane	40.000	40.378	-0.9	87	0.00	10.53
			AvgRF	CCRF	%Dev			
68	C	Ethylbenzene	1.293	1.377	-6.5	87	0.00	10.59
69	P	Chlorobenzene	0.832	0.888	-6.7	88	0.00	10.57
			Amount	Calc.	%Drift			
70		1,1,1,2-Tetrachloroethane	40.000	39.556	1.1	89	0.00	10.63
71		m,p-Xylene	80.000	79.724	0.3	89	0.00	10.73
72		o-Xylene	40.000	40.385	-1.0	90	0.00	11.16
73		Styrene	40.000	40.953	-2.4	90	0.00	11.21
74	P	Bromoform	40.000	39.269	1.8	91	0.00	11.26
75		Isopropylbenzene	40.000	39.623	0.9	87	0.00	11.47
			AvgRF	CCRF	%Dev			
76	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	85	0.00	12.92
77	S	4-Bromofluorobenzene	0.816	0.808	1.0	86	0.00	11.77
			Amount	Calc.	%Drift			
78		cis-1,4-Dichloro-2-butene	40.000	43.514	-8.8	93	0.00	11.81
79		n-Propylbenzene	40.000	40.598	-1.5	88	0.00	11.89
			AvgRF	CCRF	%Dev			
80		Bromobenzene	0.677	0.741	-9.5	89	0.00	11.89
81	P	1,1,2,2-Tetrachloroethane	0.551	0.629	-14.2	94	0.00	11.94
			Amount	Calc.	%Drift			
82		1,3,5-Trimethylbenzene	40.000	39.832	0.4	87	0.00	12.08
			AvgRF	CCRF	%Dev			
83		2-Chlorotoluene	1.649	1.877	-13.8	89	0.00	12.07
			Amount	Calc.	%Drift			
84		trans-1,4-Dichloro-2-Bute	40.000	44.807	-12.0	96	0.00	12.13
			AvgRF	CCRF	%Dev			
85		1,2,3-Trichloropropane	0.158	0.174	-10.1	90	0.00	12.10
86		Cyclohexanone	0.013	0.017	-30.8#	95	0.00	12.16
			Amount	Calc.	%Drift			
87		4-Chlorotoluene	40.000	41.193	-3.0	90	0.00	12.23
88		tert-Butylbenzene	40.000	40.221	-0.6	87	0.00	12.42
89		1,2,4-Trimethylbenzene	40.000	40.937	-2.3	89	0.00	12.48

Continuing Calibration Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ3081-CC3080
Lab FileID: J052861.D

		AvgRF	CCRF	%Dev			
90	Pentachloroethane	0.373	0.394	-5.6	84	0.00	12.45
		Amount	Calc.	%Drift			
91	sec-Butylbenzene	40.000	40.768	-1.9	88	0.00	12.60
92	4-Isopropyltoluene	40.000	40.792	-2.0	89	0.00	12.74
		AvgRF	CCRF	%Dev			
93	1,3-Dichlorobenzene	1.152	1.273	-10.5	91	0.00	12.85
94	1,4-Dichlorobenzene	1.259	1.350	-7.2	90	0.00	12.94
		Amount	Calc.	%Drift			
95	n-Butylbenzene	40.000	40.846	-2.1	89	0.00	13.18
96	Benzyl Chloride	40.000	41.412	-3.5	93	0.00	13.18
		AvgRF	CCRF	%Dev			
97	1,2-Dichlorobenzene	1.087	1.192	-9.7	89	0.00	13.37
		Amount	Calc.	%Drift			
98	1,2-Dibromo-3-Chloropropa	40.000	41.140	-2.9	93	0.00	14.13
		AvgRF	CCRF	%Dev			
99	Hexachlorobutadiene	0.417	0.423	-1.4	85	0.00	14.70
		Amount	Calc.	%Drift			
100	1,2,4-Trichlorobenzene	40.000	39.496	1.3	90	0.00	14.74
101	Naphthalene	40.000	44.319	-10.8	94	0.00	15.02
		AvgRF	CCRF	%Dev			
102	1,2,3-Trichlorobenzene	0.700	0.775	-10.7	90	0.00	15.18
103 I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	95	-0.01	5.10
		Amount	Calc.	%Drift			
104	Ethanol	800.000	809.268	-1.2	101	-0.01	4.13
105	acrolein	200.000	237.058	-18.5	111	0.00	4.59
		AvgRF	CCRF	%Dev			
106	Tert Butyl Alcohol	0.958	0.952	0.6	95	0.01	5.19
		Amount	Calc.	%Drift			
107	tert Amyl alcohol	400.000	400.698	-0.2	98	0.00	7.31
		AvgRF	CCRF	%Dev			
108	Isobutyl alcohol	0.399	0.411	-3.0	93	0.00	7.19
		Amount	Calc.	%Drift			
109	1,4-Dioxane	800.000	831.076	-3.9	102	0.00	8.39

(#) = Out of Range SPCC's out = 0 CCC's out = 0
J052831.D 8260-JAPP9.M Wed Jan 13 10:36:20 2010

Initial Calibration Summary

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ3082-ICC3082
Lab FileID: J052889.D


```
                         Response Factor Report  MSVOA6

 Method       : C:\MSDCHEM\1\METHODS\SCOXYJ.M (RTE Integrator)
 Title        : EPA 624 & SWA 5030B/8260B
 Last Update  : Wed Jan 13 13:02:59 2010
 Response via : Initial Calibration

 Calibration Files
 1   =J052886.D   2   =J052887.D   3   =J052888.D   4   =J052889.D
 5      =J052890.D    6      =J052891.D

       Compound              1     2     3     4     5     6     Avg    %RSD
 ---------------------------------------------------------------------------

 1) I   Fluorobenzene         ----------------ISTD---------------------
 2)     tert-Butyl Formate  0.136 0.169 0.197 0.207 0.222 0.220 0.192  17.41
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9993
              Response Ratio = 0.00000 + 0.21861 *A

 3) S   Dibromofluoromethan 0.265 0.262 0.261 0.256 0.259 0.253 0.259   1.65
 4) S   1,2-Dichloroethane- 0.286 0.285 0.285 0.293 0.294 0.287 0.288   1.32

 5) I   Chlorobenzene-d5      ----------------ISTD---------------------
 6) S   Toluene-d8          1.267 1.270 1.246 1.253 1.230 1.240 1.251   1.24

 7) I   1,4-Dichlorobenzene-d ----------------ISTD---------------------
 8) S   4-Bromofluorobenzen 0.847 0.845 0.848 0.865 0.866 0.872 0.857   1.36

 9) I   Tert Butyl alcohol-d1 ----------------ISTD---------------------
10)     Ethanol             0.109 0.111 0.145 0.142 0.143 0.140 0.132  12.71
11)     Ethyl tert-butyl al 0.426 0.639 0.964 0.982 1.109 1.150 0.878  32.49
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9995
              Response Ratio = 0.00000 + 0.91599 *A + 0.01202 *A^2

---------------------------------------------------------------------------
(#) = Out of Range

          SCOXYJ.M          Thu Jan 14 08:27:07 2010
```

Initial Calibration Verification

Job Number: F70691
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ3082-ICV3082
Lab FileID: J052892.D

Evaluate Continuing Calibration Report

```
Data File : C:\MSDCHEM\1\DATA\011310\J052892.D          Vial: 8
Acq On    : 13 Jan 2010  12:48 pm                   Operator: KarenW
Sample    : ICV3082-4                               Inst    : MSVOA6
Misc      : ms13578,vj3082,,,,,                     Multiplr: 1.00
MS Integration Params: small.p

Method       : C:\MSDCHEM\1\METHODS\SCOXYJ.M (RTE Integrator)
Title        : EPA 624 & SWA 5030B/8260B
Last Update  : Wed Jan 13 13:02:59 2010
Response via : Multiple Level Calibration

Min. RRF     :   0.001  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	97	0.00	7.47
		----------	Amount	Calc.	%Drift	----------		
2		tert-Butyl Formate	400.000	332.655	16.8	85	0.00	6.92
		----------	AvgRF	CCRF	%Dev	----------		
3	S	Dibromofluoromethane	0.259	0.256	1.2	97	0.00	6.66
4	S	1,2-Dichloroethane-d4	0.288	0.292	-1.4	97	0.00	7.19
5	I	Chlorobenzene-d5	1.000	1.000	0.0	98	0.00	10.56
6	S	Toluene-d8	1.251	1.243	0.6	97	0.00	9.02
7	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	97	0.00	12.92
8	S	4-Bromofluorobenzene	0.857	0.864	-0.8	96	0.00	11.77
9	I	Tert Butyl alcohol-d10	1.000	1.000	0.0	95	0.01	5.10
10		Ethanol	0.132	0.145	-9.8	97	0.01	4.15
		----------	Amount	Calc.	%Drift	----------		
11		Ethyl tert-butyl alcohol	2000.000	2093.350	-4.7	103	0.00	10.17

(#) = Out of Range SPCC's out = 0 CCC's out = 0
J052889.D SCOXYJ.M Thu Jan 14 08:26:54 2010

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Instrument Runlogs
- Initial and Continuing Calibration Blanks
- Initial and Continuing Calibration Checks
- High and Low Check Standards
- Interfering Element Check Standards
- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20111W2.PRN Date Analyzed: 01/11/10 Methods: SW846 7470A
Analyst: LM Run ID: MA7769
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:29	MA7769-STD1	1		STD01REP1
10:31	MA7769-STD2	1		STD02REP1
10:33	MA7769-STD3	1		STD03REP1
10:36	MA7769-STD4	1		STD04REP1
10:38	MA7769-STD5	1		STD05REP1
10:41	MA7769-STD6	1		STD06REP1
10:43	MA7769-HSTD1	1		
10:46	MA7769-ICV1	1		
10:48	MA7769-ICB1	1		
10:50	MA7769-CRI1	1		
10:53	MA7769-CCV1	1		
10:55	MA7769-CCB1	1		
10:57	MP17581-MB1	1		
11:00	MP17581-B1	1		
11:02	F70660-11	1		(sample used for QC only; not part of login F70691)
11:04	MP17581-D1	1		
11:06	MP17581-SD1	5		
11:08	MP17581-S1	1		
11:11	MP17581-S2	1		
11:13	ZZZZZZ	1		
11:15	ZZZZZZ	1		
11:18	ZZZZZZ	1		
11:20	MA7769-CCV2	1		
11:22	MA7769-CCB2	1		
11:25	ZZZZZZ	1		
11:27	ZZZZZZ	1		
11:29	ZZZZZZ	1		
11:32	ZZZZZZ	1		
11:34	ZZZZZZ	1		
11:38	ZZZZZZ	1		
11:41	ZZZZZZ	1		
11:44	ZZZZZZ	1		
11:46	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20111W2.PRN Date Analyzed: 01/11/10 Methods: SW846 7470A
Analyst: LM Run ID: MA7769
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:48	ZZZZZZ	1		
11:50	MA7769-CCV3	1		
11:53	MA7769-CCB3	1		
11:55	ZZZZZZ	1		
11:57	ZZZZZZ	1		
12:00	ZZZZZZ	1		
12:03	ZZZZZZ	1		
12:05	ZZZZZZ	1		
12:07	ZZZZZZ	1		
12:09	MP17582-MB1	1		
12:12	MP17582-B1	1		
12:14	F70660-11A	1		(sample used for QC only; not part of login F70691)
12:17	MP17582-D1	1		
12:19	MA7769-CCV4	1		
12:21	MA7769-CCB4	1		
12:24	MP17582-SD1	5		
12:27	MP17582-S1	1		
12:29	MP17582-S2	1		
12:32	ZZZZZZ	1		
12:34	ZZZZZZ	1		
12:36	ZZZZZZ	1		
12:39	F70691-2	1		
12:41	F70691-3	1		
12:44	F70691-4	1		
12:46	F70691-5	1		
12:49	MA7769-CCV5	1		
12:51	MA7769-CCB5	1		
12:53	ZZZZZZ	1		
12:56	ZZZZZZ	1		
12:58	ZZZZZZ	1		
13:00	ZZZZZZ	1		
13:02	ZZZZZZ	1		
13:05	F70691-6	1		

----------> Last reportable sample/prep for job F70691

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20111W2.PRN Date Analyzed: 01/11/10 Methods: SW846 7470A
Analyst: LM Run ID: MA7769
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:07	MA7769-CRI2	1		
13:10	MA7769-CCV6	1		
13:12	MA7769-CCB6	1		

----------> Last reportable CCB for job F70691
Refer to raw data for calibration curve and standards.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20111W2.PRN Date Analyzed: 01/11/10 Methods: SW846 7470A
QC Limits: result < RL Run ID: MA7769 Units: ug/l

Time:			10:48		10:55		11:22		11:53	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	1.0	.14	-0.016	<1.0	-0.064	<1.0	-0.034	<1.0	-0.036	<1.0

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20111W2.PRN Date Analyzed: 01/11/10 Methods: SW846 7470A
QC Limits: result < RL Run ID: MA7769 Units: ug/l

Time:			12:21		12:51		13:12	
Sample ID:			CCB4		CCB5		CCB6	
Metal	RL	IDL	raw	final	raw	final	raw	final
Mercury	1.0	.14	-0.044	<1.0	-0.040	<1.0	-0.037	<1.0

(*) Outside of QC limits
(anr) Analyte not requested

6.1.1
6

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20111W2.PRN Date Analyzed: 01/11/10 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA7769 Units: ug/l

Time:		10:46			10:53			11:20	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3	2.9	96.7	3.0	3.0	100.0	3	2.9	96.7

(*) Outside of QC limits
(anr) Analyte not requested

6.1.2
6

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20111W2.PRN Date Analyzed: 01/11/10 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA7769 Units: ug/l

Time:		11:50			12:19			12:49	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3	2.9	96.7	3	2.9	96.7	3	2.9	96.7

(*) Outside of QC limits
(anr) Analyte not requested

6.1.2
6

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20111W2.PRN Date Analyzed: 01/11/10 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA7769 Units: ug/l

Time:		13:10	
Sample ID:	CCV	CCV6	
Metal	True	Results	% Rec
Mercury	3.0	3.0	100.0

(*) Outside of QC limits
(anr) Analyte not requested

6.1.2
6

HIGH STANDARD CHECK SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20111W2.PRN Date Analyzed: 01/11/10 Methods: SW846 7470A
QC Limits: 95 to 105 % Recovery Run ID: MA7769 Units: ug/l

Time:		10:43	
Sample ID:	HSTD	HSTD1	
Metal	True	Results	% Rec
Mercury	6.0	6.0	100.0

(*) Outside of QC limits
(anr) Analyte not requested

6.1.3
6

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20111W2.PRN Date Analyzed: 01/11/10 Methods: SW846 7470A
QC Limits: 80 to 120 % Recovery Run ID: MA7769 Units: ug/l

Time:			10:50		13:07	
Sample ID:	CRI	CRIA	CRI1		CRI2	
Metal	True	True	Results	% Rec	Results	% Rec
Mercury	0.20		0.16	80.0	0.19	95.0

(*) Outside of QC limits
(anr) Analyte not requested

6.1.4

6

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011110.ASC Date Analyzed: 01/11/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7770
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:35	MA7770-HSTD1	1		
09:38	MA7770-ICV1	1		
09:42	MA7770-ICB1	1		
09:46	MA7770-CRIA1	1		
09:51	MA7770-CRI1	1		
10:21	MA7770-ICSA1	1		
10:22	MA7770-ICSAB1	1		
10:31	MA7770-CCV1	1		
10:35	MA7770-CCB1	1		
11:13	MA7770-CCV2	1		
11:17	MA7770-CCB2	1		
11:28	ZZZZZZ	5		
11:32	ZZZZZZ	4		
11:35	ZZZZZZ	4		
11:39	ZZZZZZ	2		
11:42	MA7770-CCV3	1		
11:46	MA7770-CCB3	1		
12:08	MA7770-CCV4	1		
12:13	MA7770-CCB4	1		
12:16	MP17583-MB1	1		
12:19	MP17583-B1	1		
12:23	F70691-1	1		
12:26	MP17583-D1	1		
12:30	MP17583-SD1	5		
12:33	MP17583-PS1	1		
12:36	MP17583-S1	1		
12:40	MP17583-S2	1		
12:43	F70691-2	1		
12:47	F70691-3	1		
12:50	MA7770-CCV5	1		
12:55	MA7770-CCB5	1		
12:58	F70691-4	1		
13:01	F70691-5	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011110.ASC Date Analyzed: 01/11/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7770
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:05	F70691-6	1		
13:08	ZZZZZZ	1		
13:12	ZZZZZZ	1		
13:15	ZZZZZZ	1		
13:18	ZZZZZZ	1		
13:22	ZZZZZZ	1		
13:25	ZZZZZZ	1		
13:29	ZZZZZZ	1		
13:32	MA7770-CCV6	1		
13:36	MA7770-CCB6	1		
13:40	ZZZZZZ	1		
13:43	ZZZZZZ	1		
13:47	ZZZZZZ	1		
13:50	ZZZZZZ	1		
13:53	MA7770-CCV7	1		
13:58	MA7770-CCB7	1		
14:03	F70691-1	100		
14:06	MP17583-D1	100		
14:09	MP17583-SD1	500		
14:13	MP17583-S1	100		
14:16	MP17583-S2	100		
14:20	F70691-2	100		
14:23	F70691-3	100		
14:26	F70691-4	100		
14:30	F70691-5	100		
14:33	F70691-6	100		
---------->	Last reportable sample/prep for job F70691			
14:37	MA7770-CCV8	1		
14:41	MA7770-CCB8	1		
16:24	MA7770-CCV9	1		
16:29	MA7770-CCB9	1		
16:32	MP17585-MB1	1		
16:35	MP17585-B1	1		
16:39	MA7770-CCV10	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011110.ASC Date Analyzed: 01/11/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7770
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
16:43	MA7770-CCB10	1		
16:47	F70659-2	1		(sample used for QC only; not part of login F70691)
16:50	MP17585-D1	1		
16:53	MP17585-SD1	5		
16:57	MP17585-PS1	1		
17:00	MP17585-S1	1		
17:04	MP17585-S2	1		
17:07	ZZZZZZ	1		
17:10	ZZZZZZ	1		
17:14	ZZZZZZ	1		
17:17	ZZZZZZ	1		
17:21	MA7770-CCV11	1		
17:25	MA7770-CCB11	1		
17:29	ZZZZZZ	1		
17:32	ZZZZZZ	1		
17:35	ZZZZZZ	1		
17:39	ZZZZZZ	1		
18:03	MA7770-CCV12	1		
18:07	MA7770-CCB12	1		
18:17	MA7770-CCV13	1		
18:22	MA7770-CCB13	1		
18:25	MA7770-CRIA2	1		
18:28	MA7770-CRI2	1		
18:32	MA7770-ICSA2	1		
18:35	MA7770-ICSAB2	1		
18:39	MA7770-CCV14	1		
18:43	MA7770-CCB14	1		

----------> Last reportable CCB for job F70691
Refer to raw data for calibration curve and standards.

INTERNAL STANDARD SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011110.ASC Date Analyzed: 01/11/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7770
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1
09:35	MA7770-HSTD1	5542
09:38	MA7770-ICV1	5669
09:42	MA7770-ICB1	5926 R
09:46	MA7770-CRIA1	5807
09:51	MA7770-CRI1	5750
10:21	MA7770-ICSA1	5005
10:22	MA7770-ICSAB1	4933
10:31	MA7770-CCV1	5490
10:35	MA7770-CCB1	5832
11:13	MA7770-CCV2	5585
11:17	MA7770-CCB2	5811
11:28	ZZZZZZ	5360
11:32	ZZZZZZ	5462
11:35	ZZZZZZ	5527
11:39	ZZZZZZ	6698
11:42	MA7770-CCV3	5560
11:46	MA7770-CCB3	5825
12:08	MA7770-CCV4	5561
12:13	MA7770-CCB4	5767
12:16	MP17583-MB1	5870
12:19	MP17583-B1	5579
12:23	F70691-1	3994
12:26	MP17583-D1	3979
12:30	MP17583-SD1	4937
12:33	MP17583-PS1	3938
12:36	MP17583-S1	4093
12:40	MP17583-S2	4082
12:43	F70691-2	3723
12:47	F70691-3	3771
12:50	MA7770-CCV5	5596
12:55	MA7770-CCB5	5829
12:58	F70691-4	3873
13:01	F70691-5	4053

INTERNAL STANDARD SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011110.ASC Date Analyzed: 01/11/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7770
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1
13:05	F70691-6	4107
13:08	ZZZZZZ	5816
13:12	ZZZZZZ	5874
13:15	ZZZZZZ	5563
13:18	ZZZZZZ	5695
13:22	ZZZZZZ	5681
13:25	ZZZZZZ	5642
13:29	ZZZZZZ	5599
13:32	MA7770-CCV6	5638
13:36	MA7770-CCB6	5887
13:40	ZZZZZZ	4847
13:43	ZZZZZZ	5503
13:47	ZZZZZZ	6068
13:50	ZZZZZZ	5536
13:53	MA7770-CCV7	5575
13:58	MA7770-CCB7	5830
14:03	F70691-1	5713
14:06	MP17583-D1	5630
14:09	MP17583-SD1	5760
14:13	MP17583-S1	5730
14:16	MP17583-S2	5634
14:20	F70691-2	5635
14:23	F70691-3	5645
14:26	F70691-4	5704
14:30	F70691-5	5725
14:33	F70691-6	5675
14:37	MA7770-CCV8	5509
14:41	MA7770-CCB8	5789
16:24	MA7770-CCV9	5487
16:29	MA7770-CCB9	5657
16:32	MP17585-MB1	5525
16:35	MP17585-B1	5487
16:39	MA7770-CCV10	5526

INTERNAL STANDARD SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011110.ASC Date Analyzed: 01/11/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7770
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1
16:43	MA7770-CCB10	5564
16:47	F70659-2	5456
16:50	MP17585-D1	5512
16:53	MP17585-SD1	5665
16:57	MP17585-PS1	5468
17:00	MP17585-S1	5497
17:04	MP17585-S2	5468
17:07	ZZZZZZ	5431
17:10	ZZZZZZ	5624
17:14	ZZZZZZ	5642
17:17	ZZZZZZ	5676
17:21	MA7770-CCV11	5494
17:25	MA7770-CCB11	5721
17:29	ZZZZZZ	5306
17:32	ZZZZZZ	5212
17:35	ZZZZZZ	5438
17:39	ZZZZZZ	5340
18:03	MA7770-CCV12	5552
18:07	MA7770-CCB12	5673
18:17	MA7770-CCV13	5474
18:22	MA7770-CCB13	5675
18:25	MA7770-CRIA2	5679
18:28	MA7770-CRI2	5570
18:32	MA7770-ICSA2	4974
18:35	MA7770-ICSAB2	5000
18:39	MA7770-CCV14	5464
18:43	MA7770-CCB14	5711

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium	60-125 %

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011110.ASC Date Analyzed: 01/11/10 Methods: SW846 6010B
QC Limits: result < RL Run ID: MA7770 Units: ug/l

Time:			09:42		10:35		11:17		11:46	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	11	16.0	<200	32.9	<200	28.1	<200	24.4	<200
Antimony	6.0	4.5	1.4	<12	2.2	<12	1.0	<12	-0.28	<12
Arsenic	10	3.6	0.87	<10	-0.54	<10	-2.6	<10	-0.33	<10
Barium	200	5	-0.070	<200	-0.050	<200	0.020	<200	0.0	<200
Beryllium	4.0	1	0.20	<4.0	0.68	<4.0	0.49	<4.0	0.47	<4.0
Cadmium	5.0	1	-0.26	<5.0	-0.38	<5.0	-0.11	<5.0	-0.11	<5.0
Calcium	1000	100	-7.0	<1000	-6.3	<1000	-4.6	<1000	-4.7	<1000
Chromium	10	1.6	-0.43	<10	0.020	<10	0.29	<10	0.30	<10
Cobalt	50	.83	-0.57	<50	-0.35	<50	-0.46	<50	-0.19	<50
Copper	25	2.1	-0.71	<25	-1.0	<25	-0.58	<25	-0.51	<25
Iron	300	23	-2.5	<300	2.0	<300	3.8	<300	2.4	<300
Lead	5.0	2	1.4	<10	1.1	<10	1.4	<10	0.74	<10
Magnesium	5000	100	-5.6	<5000	-4.2	<5000	-0.61	<5000	-1.6	<5000
Manganese	15	.5	-0.080	<15	-0.030	<15	0.040	<15	0.010	<15
Molybdenum	50	2.8								
Nickel	40	2.3	-0.51	<40	0.090	<40	0.46	<40	-0.080	<40
Potassium	10000	100	217	<10000	236	<10000	228	<10000	235	<10000
Selenium	10	3.1	2.9	<10	1.9	<10	1.4	<10	2.3	<10
Silver	10	1.2	0.52	<10	0.30	<10	0.50	<10	0.48	<10
Sodium	10000	500	-110	<10000	-43	<10000	-87	<10000	-15	<10000
Thallium	10	3.4	-1.2	<10	-1.8	<10	0.27	<10	0.15	<10
Tin	50	2.8								
Vanadium	50	.66	-0.33	<50	-0.24	<50	-0.14	<50	-0.030	<50
Zinc	20	3.8	-0.21	<20	0.72	<20	0.77	<20	0.42	<20

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011110.ASC Date Analyzed: 01/11/10 Methods: SW846 6010B
QC Limits: result < RL Run ID: MA7770 Units: ug/l

Time:			12:13		12:55		13:36		13:58	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	11	25.2	<200	27.2	<200	26.6	<200	28.4	<200
Antimony	6.0	4.5	1.6	<12	-0.87	<12	0.21	<12	-1.5	<12
Arsenic	10	3.6	-3.0	<10	-0.48	<10	-0.030	<10	-1.6	<10
Barium	200	5	0.050	<200	0.0	<200	0.0	<200	-0.010	<200
Beryllium	4.0	1	0.35	<4.0	0.44	<4.0	0.47	<4.0	0.42	<4.0
Cadmium	5.0	1	-0.12	<5.0	-0.14	<5.0	-0.33	<5.0	-0.20	<5.0
Calcium	1000	100	-3.7	<1000	-5.3	<1000	-6.3	<1000	-6.8	<1000
Chromium	10	1.6	0.46	<10	0.10	<10	0.46	<10	-0.040	<10
Cobalt	50	.83	0.16	<50	-0.42	<50	-0.38	<50	-0.59	<50
Copper	25	2.1	-0.13	<25	-0.53	<25	-0.61	<25	-0.59	<25
Iron	300	23	2.4	<300	-1.4	<300	7.1	<300	2.2	<300
Lead	5.0	2	0.48	<10	1.4	<10	1.2	<10	-0.44	<10
Magnesium	5000	100	0.39	<5000	-2.4	<5000	-0.32	<5000	-1.7	<5000
Manganese	15	.5	0.090	<15	0.0	<15	0.0	<15	-0.050	<15
Molybdenum	50	2.8								
Nickel	40	2.3	0.14	<40	0.19	<40	-0.26	<40	-0.12	<40
Potassium	10000	100	255	<10000	229	<10000	235	<10000	235	<10000
Selenium	10	3.1	0.50	<10	5.0	<10	3.5	<10	2.9	<10
Silver	10	1.2	0.10	<10	-0.48	<10	0.71	<10	0.16	<10
Sodium	10000	500	139	<10000	-93	<10000	40.4	<10000	-69	<10000
Thallium	10	3.4	-2.5	<10	-0.32	<10	-0.31	<10	1.0	<10
Tin	50	2.8								
Vanadium	50	.66	0.040	<50	-0.16	<50	0.010	<50	-0.16	<50
Zinc	20	3.8	0.83	<20	0.47	<20	0.36	<20	0.62	<20

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011110.ASC Date Analyzed: 01/11/10 Methods: SW846 6010B
QC Limits: result < RL Run ID: MA7770 Units: ug/l

Time:			14:41		16:29		16:43		17:25	
Sample ID:			CCB8		CCB9		CCB10		CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	11	33.2	<200	2.8	<200	3.1	<200	0.28	<200
Antimony	6.0	4.5	1.0	<12	1.7	<12	0.85	<12	-0.53	<12
Arsenic	10	3.6	-2.3	<10	-2.3	<10	-1.2	<10	-2.8	<10
Barium	200	5	-0.040	<200	-0.16	<200	-0.15	<200	-0.17	<200
Beryllium	4.0	1	0.39	<4.0	-0.050	<4.0	-0.25	<4.0	0.020	<4.0
Cadmium	5.0	1	-0.050	<5.0	0.25	<5.0	0.020	<5.0	-0.050	<5.0
Calcium	1000	100	-7.3	<1000	0.31	<1000	-0.89	<1000	-0.050	<1000
Chromium	10	1.6	-0.050	<10	0.38	<10	0.16	<10	-0.090	<10
Cobalt	50	.83	-0.19	<50	0.19	<50	0.080	<50	0.030	<50
Copper	25	2.1	-1.1	<25	0.13	<25	0.23	<25	-0.13	<25
Iron	300	23	-5.6	<300	3.5	<300	-9.3	<300	-4.0	<300
Lead	5.0	2	0.90	<10	2.0	<10	1.5	<10	2.0	<10
Magnesium	5000	100	-6.1	<5000	-0.060	<5000	-2.9	<5000	-4.4	<5000
Manganese	15	.5	-0.070	<15	-0.020	<15	-0.16	<15	-0.16	<15
Molybdenum	50	2.8								
Nickel	40	2.3	-0.38	<40	-0.10	<40	-0.23	<40	-0.27	<40
Potassium	10000	100	240	<10000	239	<10000	225	<10000	221	<10000
Selenium	10	3.1	2.4	<10	0.88	<10	0.97	<10	1.2	<10
Silver	10	1.2	-0.070	<10	-0.28	<10	-0.57	<10	-0.81	<10
Sodium	10000	500	-22	<10000	-56	<10000	-150	<10000	-140	<10000
Thallium	10	3.4	0.69	<10	-1.7	<10	-2.1	<10	-1.7	<10
Tin	50	2.8								
Vanadium	50	.66	-0.38	<50	0.13	<50	0.010	<50	0.070	<50
Zinc	20	3.8	-0.050	<20	0.52	<20	0.32	<20	0.50	<20

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011110.ASC Date Analyzed: 01/11/10 Methods: SW846 6010B
QC Limits: result < RL Run ID: MA7770 Units: ug/l

Time:			18:07		18:22		18:43	
Sample ID:			CCB12		CCB13		CCB14	
Metal	RL	IDL	raw	final	raw	final	raw	final
Aluminum	200	11	-2.0	<200	-6.0	<200	-7.0	<200
Antimony	6.0	4.5	-0.55	<12	-0.76	<12	-0.42	<12
Arsenic	10	3.6	-1.6	<10	-2.2	<10	-3.9	<10
Barium	200	5	-0.13	<200	-0.14	<200	-0.15	<200
Beryllium	4.0	1	0.020	<4.0	0.18	<4.0	0.22	<4.0
Cadmium	5.0	1	0.11	<5.0	-0.12	<5.0	0.070	<5.0
Calcium	1000	100	0.96	<1000	2.3	<1000	1.9	<1000
Chromium	10	1.6	0.0	<10	0.040	<10	0.12	<10
Cobalt	50	.83	-0.18	<50	0.010	<50	-0.010	<50
Copper	25	2.1	0.010	<25	-0.22	<25	-0.32	<25
Iron	300	23	-9.7	<300	-4.8	<300	-5.3	<300
Lead	5.0	2	1.4	<10	0.85	<10	1.9	<10
Magnesium	5000	100	-2.0	<5000	0.76	<5000	-3.3	<5000
Manganese	15	.5	-0.070	<15	-0.090	<15	-0.13	<15
Molybdenum	50	2.8						
Nickel	40	2.3	0.48	<40	0.24	<40	-0.54	<40
Potassium	10000	100	234	<10000	238	<10000	231	<10000
Selenium	10	3.1	0.21	<10	-0.49	<10	1.1	<10
Silver	10	1.2	-0.68	<10	-0.50	<10	-0.68	<10
Sodium	10000	500	-100	<10000	-29	<10000	-110	<10000
Thallium	10	3.4	-1.8	<10	-2.3	<10	-2.5	<10
Tin	50	2.8						
Vanadium	50	.66	0.090	<50	0.26	<50	-0.060	<50
Zinc	20	3.8	0.050	<20	0.36	<20	0.25	<20

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011110.ASC Date Analyzed: 01/11/10 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7770 Units: ug/l

Time:		09:38			10:31			11:13	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39800	99.5	40000	39700	99.3	40000	39400	98.5
Antimony	2000	2070	103.5	2000	2130	106.5	2000	2090	104.5
Arsenic	2000	1930	96.5	2000	2020	101.0	2000	2000	100.0
Barium	2000	2060	103.0	2000	2150	107.5	2000	2070	103.5
Beryllium	2000	2030	101.5	2000	2060	103.0	2000	2050	102.5
Cadmium	2000	2050	102.5	2000	2100	105.0	2000	2100	105.0
Calcium	40000	40700	101.8	40000	41800	104.5	40000	41200	103.0
Chromium	2000	2020	101.0	2000	2070	103.5	2000	2060	103.0
Cobalt	2000	2050	102.5	2000	2090	104.5	2000	2090	104.5
Copper	2000	2010	100.5	2000	2110	105.5	2000	2050	102.5
Iron	40000	40000	100.0	40000	40200	100.5	40000	40300	100.8
Lead	2000	2040	102.0	2000	2080	104.0	2000	2080	104.0
Magnesium	40000	40600	101.5	40000	41000	102.5	40000	40600	101.5
Manganese	2000	2050	102.5	2000	2100	105.0	2000	2080	104.0
Molybdenum									
Nickel	2000	2070	103.5	2000	2150	107.5	2000	2120	106.0
Potassium	40000	39900	99.8	40000	40700	101.8	40000	39900	99.8
Selenium	2000	2020	101.0	2000	2070	103.5	2000	2070	103.5
Silver	250	244	97.6	250	239	95.6	250	240	96.0
Sodium	40000	39400	98.5	40000	39700	99.3	40000	39100	97.8
Thallium	2000	2080	104.0	2000	2130	106.5	2000	2120	106.0
Tin									
Vanadium	2000	1960	98.0	2000	2010	100.5	2000	1990	99.5
Zinc	2000	2050	102.5	2000	2080	104.0	2000	2100	105.0

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011110.ASC Date Analyzed: 01/11/10 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7770 Units: ug/l

Time:		11:42			12:08			12:50	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39500	98.8	40000	39500	98.8	40000	39500	98.8
Antimony	2000	2090	104.5	2000	2110	105.5	2000	2100	105.0
Arsenic	2000	1980	99.0	2000	2000	100.0	2000	1990	99.5
Barium	2000	2080	104.0	2000	2070	103.5	2000	2070	103.5
Beryllium	2000	2040	102.0	2000	2050	102.5	2000	2050	102.5
Cadmium	2000	2090	104.5	2000	2110	105.5	2000	2100	105.0
Calcium	40000	40700	101.8	40000	40900	102.3	40000	40900	102.3
Chromium	2000	2050	102.5	2000	2060	103.0	2000	2050	102.5
Cobalt	2000	2070	103.5	2000	2080	104.0	2000	2080	104.0
Copper	2000	2050	102.5	2000	2040	102.0	2000	2040	102.0
Iron	40000	40100	100.3	40000	40400	101.0	40000	40400	101.0
Lead	2000	2070	103.5	2000	2090	104.5	2000	2090	104.5
Magnesium	40000	40400	101.0	40000	40500	101.3	40000	40200	100.5
Manganese	2000	2070	103.5	2000	2080	104.0	2000	2080	104.0
Molybdenum									
Nickel	2000	2100	105.0	2000	2120	106.0	2000	2110	105.5
Potassium	40000	40100	100.3	40000	39800	99.5	40000	39700	99.3
Selenium	2000	2060	103.0	2000	2090	104.5	2000	2090	104.5
Silver	250	241	96.4	250	241	96.4	250	241	96.4
Sodium	40000	39400	98.5	40000	39200	98.0	40000	38900	97.3
Thallium	2000	2120	106.0	2000	2140	107.0	2000	2130	106.5
Tin									
Vanadium	2000	1990	99.5	2000	1990	99.5	2000	1990	99.5
Zinc	2000	2070	103.5	2000	2100	105.0	2000	2090	104.5

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011110.ASC Date Analyzed: 01/11/10 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7770 Units: ug/l

Time:		13:32			13:53			14:37	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39300	98.3	40000	39600	99.0	40000	39600	99.0
Antimony	2000	2110	105.5	2000	2120	106.0	2000	2120	106.0
Arsenic	2000	2010	100.5	2000	2010	100.5	2000	2020	101.0
Barium	2000	2080	104.0	2000	2090	104.5	2000	2120	106.0
Beryllium	2000	2060	103.0	2000	2060	103.0	2000	2050	102.5
Cadmium	2000	2110	105.5	2000	2110	105.5	2000	2090	104.5
Calcium	40000	41100	102.8	40000	41200	103.0	40000	41000	102.5
Chromium	2000	2060	103.0	2000	2060	103.0	2000	2050	102.5
Cobalt	2000	2090	104.5	2000	2090	104.5	2000	2080	104.0
Copper	2000	2050	102.5	2000	2060	103.0	2000	2090	104.5
Iron	40000	40400	101.0	40000	40400	101.0	40000	40100	100.3
Lead	2000	2090	104.5	2000	2090	104.5	2000	2080	104.0
Magnesium	40000	40200	100.5	40000	40200	100.5	40000	40200	100.5
Manganese	2000	2080	104.0	2000	2090	104.5	2000	2080	104.0
Molybdenum									
Nickel	2000	2130	106.5	2000	2130	106.5	2000	2130	106.5
Potassium	40000	39600	99.0	40000	39800	99.5	40000	40200	100.5
Selenium	2000	2090	104.5	2000	2100	105.0	2000	2100	105.0
Silver	250	239	95.6	250	238	95.2	250	237	94.8
Sodium	40000	38600	96.5	40000	38900	97.3	40000	39100	97.8
Thallium	2000	2140	107.0	2000	2160	108.0	2000	2150	107.5
Tin									
Vanadium	2000	2000	100.0	2000	2000	100.0	2000	2000	100.0
Zinc	2000	2100	105.0	2000	2100	105.0	2000	2070	103.5

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011110.ASC Date Analyzed: 01/11/10 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7770 Units: ug/l

Time:		16:24			16:39			17:21	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39700	99.3	40000	39900	99.8	40000	40100	100.3
Antimony	2000	2050	102.5	2000	2070	103.5	2000	2070	103.5
Arsenic	2000	1930	96.5	2000	1970	98.5	2000	1960	98.0
Barium	2000	2050	102.5	2000	2050	102.5	2000	2050	102.5
Beryllium	2000	2030	101.5	2000	2070	103.5	2000	2070	103.5
Cadmium	2000	2030	101.5	2000	2090	104.5	2000	2080	104.0
Calcium	40000	40200	100.5	40000	41500	103.8	40000	41300	103.3
Chromium	2000	2010	100.5	2000	2060	103.0	2000	2050	102.5
Cobalt	2000	2040	102.0	2000	2080	104.0	2000	2080	104.0
Copper	2000	1990	99.5	2000	1990	99.5	2000	1990	99.5
Iron	40000	40100	100.3	40000	41100	102.8	40000	41000	102.5
Lead	2000	2040	102.0	2000	2070	103.5	2000	2060	103.0
Magnesium	40000	40500	101.3	40000	41100	102.8	40000	41000	102.5
Manganese	2000	2040	102.0	2000	2080	104.0	2000	2080	104.0
Molybdenum									
Nickel	2000	2040	102.0	2000	2090	104.5	2000	2070	103.5
Potassium	40000	39400	98.5	40000	39100	97.8	40000	39400	98.5
Selenium	2000	2020	101.0	2000	2050	102.5	2000	2040	102.0
Silver	250	245	98.0	250	248	99.2	250	249	99.6
Sodium	40000	39000	97.5	40000	39300	98.3	40000	39600	99.0
Thallium	2000	2080	104.0	2000	2110	105.5	2000	2100	105.0
Tin									
Vanadium	2000	1960	98.0	2000	1980	99.0	2000	1980	99.0
Zinc	2000	2040	102.0	2000	2120	106.0	2000	2110	105.5

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011110.ASC Date Analyzed: 01/11/10 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7770 Units: ug/l

Time:		18:03			18:17			18:39	
Sample ID:	CCV	CCV12		CCV	CCV13		CCV	CCV14	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	40000	100.0	40000	39700	99.3	40000	39500	98.8
Antimony	2000	2060	103.0	2000	2040	102.0	2000	2030	101.5
Arsenic	2000	1980	99.0	2000	1930	96.5	2000	1950	97.5
Barium	2000	2020	101.0	2000	2030	101.5	2000	2000	100.0
Beryllium	2000	2080	104.0	2000	2050	102.5	2000	2060	103.0
Cadmium	2000	2090	104.5	2000	2050	102.5	2000	2060	103.0
Calcium	40000	41400	103.5	40000	40600	101.5	40000	40800	102.0
Chromium	2000	2060	103.0	2000	2030	101.5	2000	2040	102.0
Cobalt	2000	2080	104.0	2000	2050	102.5	2000	2060	103.0
Copper	2000	1960	98.0	2000	1950	97.5	2000	1930	96.5
Iron	40000	41200	103.0	40000	40700	101.8	40000	40800	102.0
Lead	2000	2090	104.5	2000	2050	102.5	2000	2050	102.5
Magnesium	40000	41000	102.5	40000	40300	100.8	40000	40300	100.8
Manganese	2000	2080	104.0	2000	2050	102.5	2000	2060	103.0
Molybdenum									
Nickel	2000	2070	103.5	2000	2040	102.0	2000	2040	102.0
Potassium	40000	39100	97.8	40000	39100	97.8	40000	38700	96.8
Selenium	2000	2050	102.5	2000	2020	101.0	2000	2020	101.0
Silver	250	249	99.6	250	248	99.2	250	247	98.8
Sodium	40000	39500	98.8	40000	39100	97.8	40000	38900	97.3
Thallium	2000	2110	105.5	2000	2080	104.0	2000	2080	104.0
Tin									
Vanadium	2000	1980	99.0	2000	1960	98.0	2000	1960	98.0
Zinc	2000	2140	107.0	2000	2080	104.0	2000	2100	105.0

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011110.ASC Date Analyzed: 01/11/10 Methods: SW846 6010B
QC Limits: 95 to 105 % Recovery Run ID: MA7770 Units: ug/l

Time:		09:35	
Sample ID:	HSTD	HSTD1	
Metal	True	Results	% Rec
Aluminum	80000	80500	100.6
Antimony	4000	4010	100.3
Arsenic	4000	3970	99.3
Barium	4000	3970	99.3
Beryllium	4000	3940	98.5
Cadmium	4000	3940	98.5
Calcium	80000	79500	99.4
Chromium	4000	3970	99.3
Cobalt	4000	3970	99.3
Copper	4000	4030	100.8
Iron	80000	77300	96.6
Lead	4000	3960	99.0
Magnesium	80000	79600	99.5
Manganese	4000	3960	99.0
Molybdenum			
Nickel	4000	3950	98.8
Potassium	80000	74400	93.0
Selenium	4000	3980	99.5
Silver	500	502	100.4
Sodium	80000	78200	97.8
Thallium	4000	3960	99.0
Tin			
Vanadium	4000	4010	100.3
Zinc	4000	3940	98.5

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011110.ASC Date Analyzed: 01/11/10 Methods: SW846 6010B
QC Limits: CRI 70-130% CRIA 70-130% Run ID: MA7770 Units: ug/l

Time:			09:46		09:51		18:25		18:28	
Sample ID:	CRI	CRIA	CRIA1		CRI1		CRIA2		CRI2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	400	200	214	107.0			178	89.0		
Antimony	10	5.0			11.0	110.0			7.8	78.0
Arsenic	20	10	10.1	101.0			8.3	83.0		
Barium	400	200	212	106.0			198	99.0		
Beryllium	10	5.0	5.6	112.0			5.5	110.0		
Cadmium	10	5.0	5.4	108.0			5.5	110.0		
Calcium	2000	1000	1060	106.0			1040	104.0		
Chromium	20	10	10.1	101.0			10.4	104.0		
Cobalt	100	50	53.0	106.0			52.6	105.2		
Copper	50	25	26.5	106.0			25.0	100.0		
Iron	600	300	301	100.3			299	99.7		
Lead	10	5.0			11.2	112.0			12.5	125.0
Magnesium	10000	5000	5010	100.2			4850	97.0		
Manganese	30	15	16.5	110.0			16.0	106.7		
Molybdenum	100	50								
Nickel	80	40	44.8	112.0			43.4	108.5		
Potassium	20000	10000	9110	91.1			8730	87.3		
Selenium	20	10	12.2	122.0			11.2	112.0		
Silver	20	10	9.8	98.0			9.3	93.0		
Sodium	20000	10000	8820	88.2			8250	82.5		
Thallium	20	10	9.8	98.0			9.4	94.0		
Tin	100	50								
Vanadium	100	50	51.3	102.6			50.0	100.0		
Zinc	40	20	23.7	118.5			23.9	119.5		

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011110.ASC Date Analyzed: 01/11/10 Methods: SW846 6010B
QC Limits: 80 to 120 % Recovery Run ID: MA7770 Units: ug/l

Time:			10:21		10:22		18:32		18:35	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	500000	500000	491000	98.2	501000	100.2	481000	96.2	489000	97.8
Antimony		1000	-0.16		1100	110.0	-6.4		1030	103.0
Arsenic		1000	0.0		1050	105.0	0.61		1000	100.0
Barium		500	0.79		570	114.0	0.49		521	104.2
Beryllium		500	0.38		511	102.2	-0.29		505	101.0
Cadmium		1000	0.060		995	99.5	7.3		977	97.7
Calcium	500000	500000	471000	94.2	473000	94.6	434000	86.8	448000	89.6
Chromium		500	-1.3		495	99.0	-0.85		481	96.2
Cobalt		500	0.58		491	98.2	0.71		475	95.0
Copper		500	-6.6		549	109.8	-4.0		492	98.4
Iron	200000	200000	183000	91.5	189000	94.5	180000	90.0	190000	95.0
Lead		1000	0.39		1010	101.0	-2.8		987	98.7
Magnesium	500000	500000	507000	101.4	503000	100.6	483000	96.6	487000	97.4
Manganese		500	1.1		512	102.4	0.81		492	98.4
Molybdenum		1000	-1.6		1020	102.0	-2.4		977	97.7
Nickel		1000	0.87		1010	101.0	0.21		942	94.2
Potassium			225		-160		233		-150	
Selenium		1000	1.4		1040	104.0	16.0		1010	101.0
Silver		1000	0.63		1030	103.0	-0.010		1070	107.0
Sodium			-170		46.3		-120		269	
Thallium		1000	0.030		997	99.7	-27* (a)		938	93.8
Tin		1000	-0.13		933	93.3	-2.7		893	89.3
Vanadium		500	-4.7		495	99.0	-5.7		473	94.6
Zinc		1000	1.7		950	95.0	5.1		953	95.3

(*) Outside of QC limits
(anr) Analyte not requested
(a) Possible instrument baseline drift.

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7773
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:16	MA7773-HSTD1	1		
09:19	MA7773-ICV1	1		
09:25	MA7773-ICB1	1		
09:29	MA7773-CRIA1	1		
09:33	MA7773-CRI1	1		
09:40	MA7773-ICSA1	1		
09:41	MA7773-ICSAB1	1		
09:44	MA7773-CCV1	1		
09:48	MA7773-CCB1	1		
09:52	F70691-1	4		
09:55	MP17583-D1	4		
09:58	MP17583-SD1	20		
10:02	MP17583-PS1	4		
10:05	MP17583-S1	4		
10:09	MP17583-S2	4		
10:12	F70691-2	4		
10:15	F70691-3	4		
10:19	F70691-4	4		
10:22	F70691-5	4		
10:26	MA7773-CCV2	1		
10:30	MA7773-CCB2	1		
10:33	F70691-6	4		
10:37	F70691-1	2		
10:40	MP17583-D1	2		
10:44	MP17583-SD1	10		
10:47	MP17583-PS1	2		
10:50	MP17583-S1	2		
10:54	MP17583-S2	2		
10:57	F70691-2	2		
11:01	F70691-3	2		
11:04	F70691-4	2		
11:08	MA7773-CCV3	1		
11:12	MA7773-CCB3	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7773
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:15	F70691-5	2		
11:19	F70691-6	2		
11:22	ZZZZZZ	2		
11:26	ZZZZZZ	2		
11:29	ZZZZZZ	2		
11:32	ZZZZZZ	4		
11:36	ZZZZZZ	4		
11:39	ZZZZZZ	2		
11:43	ZZZZZZ	2		
11:46	ZZZZZZ	2		
11:49	MA7773-CCV4	1		
11:54	MA7773-CCB4	1		
11:57	ZZZZZZ	2		
12:01	ZZZZZZ	4		
12:04	MA7773-CCV5	1		
12:08	MA7773-CCB5	1		
12:16	MA7773-CCV6	1		
12:20	MA7773-CCB6	1		
12:48	MA7773-CCV7	1		
12:52	MA7773-CCB7	1		
12:57	MP17592-MB1	1		
13:01	MP17592-B1	1		
13:04	F70708-1	1		(sample used for QC only; not part of login F70691)
13:07	MP17592-D1	1		
13:11	MP17592-SD1	5		
13:14	MP17592-PS1	1		
13:18	MP17592-S1	1		
13:21	ZZZZZZ	1		
13:24	ZZZZZZ	1		
13:28	ZZZZZZ	1		
13:31	MA7773-CCV8	1		
13:36	MA7773-CCB8	1		
13:39	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7773
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:42	ZZZZZZ	1		
13:46	ZZZZZZ	1		
13:49	ZZZZZZ	1		
13:53	MA7773-CCV9	1		
13:57	MA7773-CCB9	1		
14:02	MP17593-MB1	1		
14:05	MP17593-B1	1		
14:09	F70648-1	1		(sample used for QC only; not part of login F70691)
14:12	MP17593-D1	1		
14:16	MP17593-SD1	5		
14:19	MP17593-S1	1		
14:23	MP17593-MB2	1		
14:27	MP17593-B2	1		
14:30	MA7773-CCV10	1		
14:35	MA7773-CCB10	1		
14:49	MA7773-CCV11	1		
14:53	MA7773-CCB11	1		
14:56	MP17584-MB1	1		
15:00	MP17584-B1	1		
15:03	F70660-11	10		(sample used for QC only; not part of login F70691)
15:07	MP17584-D1	10		
15:10	MP17584-SD1	50		
15:13	MP17584-PS1	10		
15:17	MP17584-S1	10		
15:20	MP17584-S2	10		
15:24	ZZZZZZ	20		
15:27	ZZZZZZ	20		
15:30	MA7773-CCV12	1		
15:35	MA7773-CCB12	1		
15:38	ZZZZZZ	20		
15:42	ZZZZZZ	20		
15:45	ZZZZZZ	20		
15:48	ZZZZZZ	5		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7773
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
15:52	ZZZZZZ	20		
15:55	ZZZZZZ	20		
15:59	ZZZZZZ	4		
16:02	ZZZZZZ	20		
16:06	MP17586-MB1	1		
16:10	MP17586-B1	1		
16:13	MA7773-CCV13	1		
16:18	MA7773-CCB13	1		
16:21	F70660-11A	10		(sample used for QC only; not part of login F70691)
16:25	MP17586-D1	10		
16:28	MP17586-SD1	50		
16:31	MP17586-PS1	10		
16:35	MP17586-S1	10		
16:38	MP17586-S2	10		
16:42	ZZZZZZ	20		
16:45	ZZZZZZ	20		
16:48	ZZZZZZ	20		
16:52	ZZZZZZ	20		
16:55	MA7773-CCV14	1		
17:00	MA7773-CCB14	1		
17:03	ZZZZZZ	20		
17:06	ZZZZZZ	5		
17:10	ZZZZZZ	20		
17:13	ZZZZZZ	20		
17:17	ZZZZZZ	4		
17:20	ZZZZZZ	20		
17:24	MP17586-MB2A	1		
17:28	MP17588-MB1	1		
17:31	MP17588-B1	1		
17:35	F70352-7R	1		(sample used for QC only; not part of login F70691)
17:38	MA7773-CCV15	1		
17:43	MA7773-CCB15	1		
17:46	MP17588-D1	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7773
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
17:49	MP17588-SD1	5		
17:53	MP17588-PS1	1		
17:56	MP17588-S1	1		
18:00	MP17588-S2	1		
18:03	ZZZZZZ	1		
18:06	ZZZZZZ	1		
18:10	ZZZZZZ	1		
18:13	ZZZZZZ	1		
18:17	ZZZZZZ	1		
18:20	MA7773-CCV16	1		
18:24	MA7773-CCB16	1		
18:28	ZZZZZZ	1		
18:31	ZZZZZZ	1		
18:35	ZZZZZZ	1		
18:38	ZZZZZZ	1		
18:42	ZZZZZZ	1		
18:45	ZZZZZZ	1		
18:48	ZZZZZZ	1		
18:52	ZZZZZZ	1		
18:55	ZZZZZZ	1		
19:00	MP17591-MB1	1		
19:03	MA7773-CCV17	1		
19:07	MA7773-CCB17	1		
19:11	MP17591-B1	1		
19:14	F70691-1F	100		
19:18	MP17591-D1	100		
19:21	MP17591-SD1	500		
19:24	MP17591-S1	100		
19:28	F70691-2F	100		
19:31	F70691-3F	100		
19:35	F70691-4F	100		
19:38	F70691-5F	100		
19:42	F70691-6F	100		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7773
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

	Time	Sample Description	Dilution Factor	PS Recov	Comments
	19:45	MA7773-CCV18	1		
	19:49	MA7773-CCB18	1		
	19:53	MP17591-MB2A	1		
---------->	Last reportable sample/prep for job F70691				
	19:56	MA7773-CRIA2	1		
	20:00	MA7773-CRI2	1		
	20:03	MA7773-ICSA2	1		
	20:06	MA7773-ICSAB2	1		
	20:10	MA7773-CCV19	1		
	20:14	MA7773-CCB19	1		
---------->	Last reportable CCB for job F70691				

Refer to raw data for calibration curve and standards.

INTERNAL STANDARD SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7773
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1
09:16	MA7773-HSTD1	5282
09:19	MA7773-ICV1	5354
09:25	MA7773-ICB1	5681 R
09:29	MA7773-CRIA1	5618
09:33	MA7773-CRI1	5541
09:40	MA7773-ICSA1	4868
09:41	MA7773-ICSAB1	4792
09:44	MA7773-CCV1	5417
09:48	MA7773-CCB1	5630
09:52	F70691-1	4695
09:55	MP17583-D1	4752
09:58	MP17583-SD1	5352
10:02	MP17583-PS1	4765
10:05	MP17583-S1	4860
10:09	MP17583-S2	4727
10:12	F70691-2	4479
10:15	F70691-3	4502
10:19	F70691-4	4726
10:22	F70691-5	4771
10:26	MA7773-CCV2	5458
10:30	MA7773-CCB2	5635
10:33	F70691-6	4761
10:37	F70691-1	4377
10:40	MP17583-D1	4367
10:44	MP17583-SD1	5096
10:47	MP17583-PS1	4383
10:50	MP17583-S1	4431
10:54	MP17583-S2	4461
10:57	F70691-2	4175
11:01	F70691-3	4188
11:04	F70691-4	4281
11:08	MA7773-CCV3	5384
11:12	MA7773-CCB3	5712

INTERNAL STANDARD SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7773
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1
11:15	F70691-5	4421
11:19	F70691-6	4408
11:22	ZZZZZZ	5280
11:26	ZZZZZZ	5373
11:29	ZZZZZZ	5289
11:32	ZZZZZZ	5302
11:36	ZZZZZZ	5388
11:39	ZZZZZZ	5312
11:43	ZZZZZZ	5300
11:46	ZZZZZZ	5326
11:49	MA7773-CCV4	5468
11:54	MA7773-CCB4	5655
11:57	ZZZZZZ	5336
12:01	ZZZZZZ	5429
12:04	MA7773-CCV5	5444
12:08	MA7773-CCB5	5668
12:16	MA7773-CCV6	5497
12:20	MA7773-CCB6	5711
12:48	MA7773-CCV7	5510
12:52	MA7773-CCB7	5724
12:57	MP17592-MB1	5559
13:01	MP17592-B1	5451
13:04	F70708-1	5004
13:07	MP17592-D1	5006
13:11	MP17592-SD1	5261
13:14	MP17592-PS1	4962
13:18	MP17592-S1	5007
13:21	ZZZZZZ	4959
13:24	ZZZZZZ	5024
13:28	ZZZZZZ	5211
13:31	MA7773-CCV8	5540
13:36	MA7773-CCB8	5785
13:39	ZZZZZZ	5137

INTERNAL STANDARD SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7773
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1
13:42	ZZZZZZ	5061
13:46	ZZZZZZ	5316
13:49	ZZZZZZ	4951
13:53	MA7773-CCV9	5566
13:57	MA7773-CCB9	5759
14:02	MP17593-MB1	5694
14:05	MP17593-B1	5562
14:09	F70648-1	7477
14:12	MP17593-D1	7516
14:16	MP17593-SD1	5966
14:19	MP17593-S1	7510
14:23	MP17593-MB2	4998
14:27	MP17593-B2	5016
14:30	MA7773-CCV10	5481
14:35	MA7773-CCB10	5731
14:49	MA7773-CCV11	5508
14:53	MA7773-CCB11	5765
14:56	MP17584-MB1	5647
15:00	MP17584-B1	5549
15:03	F70660-11	4845
15:07	MP17584-D1	4927
15:10	MP17584-SD1	5422
15:13	MP17584-PS1	4898
15:17	MP17584-S1	4927
15:20	MP17584-S2	4961
15:24	ZZZZZZ	4741
15:27	ZZZZZZ	4858
15:30	MA7773-CCV12	5557
15:35	MA7773-CCB12	5660
15:38	ZZZZZZ	4759
15:42	ZZZZZZ	4935
15:45	ZZZZZZ	4893
15:48	ZZZZZZ	4722

INTERNAL STANDARD SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7773
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1
15:52	ZZZZZZ	4880
15:55	ZZZZZZ	4901
15:59	ZZZZZZ	4951
16:02	ZZZZZZ	4897
16:06	MP17586-MB1	5721
16:10	MP17586-B1	5567
16:13	MA7773-CCV13	5550
16:18	MA7773-CCB13	5729
16:21	F70660-11A	4930
16:25	MP17586-D1	4916
16:28	MP17586-SD1	5425
16:31	MP17586-PS1	4911
16:35	MP17586-S1	4940
16:38	MP17586-S2	4934
16:42	ZZZZZZ	4855
16:45	ZZZZZZ	4771
16:48	ZZZZZZ	4785
16:52	ZZZZZZ	5001
16:55	MA7773-CCV14	5513
17:00	MA7773-CCB14	5761
17:03	ZZZZZZ	4818
17:06	ZZZZZZ	4771
17:10	ZZZZZZ	4918
17:13	ZZZZZZ	4968
17:17	ZZZZZZ	4938
17:20	ZZZZZZ	4988
17:24	MP17586-MB2A	5670
17:28	MP17588-MB1	5613
17:31	MP17588-B1	5525
17:35	F70352-7R	5628
17:38	MA7773-CCV15	5599
17:43	MA7773-CCB15	5767
17:46	MP17588-D1	5672

INTERNAL STANDARD SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7773
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1
17:49	MP17588-SD1	5830
17:53	MP17588-PS1	5630
17:56	MP17588-S1	5544
18:00	MP17588-S2	5525
18:03	ZZZZZZ	5772
18:06	ZZZZZZ	5708
18:10	ZZZZZZ	4963
18:13	ZZZZZZ	5815
18:17	ZZZZZZ	5361
18:20	MA7773-CCV16	5620
18:24	MA7773-CCB16	5761
18:28	ZZZZZZ	5723
18:31	ZZZZZZ	5155
18:35	ZZZZZZ	5148
18:38	ZZZZZZ	5650
18:42	ZZZZZZ	5472
18:45	ZZZZZZ	5006
18:48	ZZZZZZ	5936
18:52	ZZZZZZ	5021
18:55	ZZZZZZ	6058
19:00	MP17591-MB1	5750
19:03	MA7773-CCV17	5617
19:07	MA7773-CCB17	5823
19:11	MP17591-B1	5637
19:14	F70691-1F	5654
19:18	MP17591-D1	5668
19:21	MP17591-SD1	5743
19:24	MP17591-S1	5711
19:28	F70691-2F	5567
19:31	F70691-3F	5505
19:35	F70691-4F	5708
19:38	F70691-5F	5727
19:42	F70691-6F	5717

INTERNAL STANDARD SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7773
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1
19:45	MA7773-CCV18	5578
19:49	MA7773-CCB18	5789
19:53	MP17591-MB2A	5772
19:56	MA7773-CRIA2	5653
20:00	MA7773-CRI2	5650
20:03	MA7773-ICSA2	4979
20:06	MA7773-ICSAB2	5012
20:10	MA7773-CCV19	5543
20:14	MA7773-CCB19	5703

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium	60-125 %

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
QC Limits: result < RL Run ID: MA7773 Units: ug/l

Time:			09:25		09:48		10:30		11:12	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	11	0.84	<200	7.1	<200	9.0	<200	12.1	<200
Antimony	6.0	4.5	-1.5	<6.0	2.9	<6.0	3.4	<6.0	1.6	<6.0
Arsenic	10	3.6	-0.16	<10	-0.13	<10	0.89	<10	-0.12	<10
Barium	200	5	-0.080	<200	-0.060	<200	0.0	<200	-0.050	<200
Beryllium	4.0	1	0.060	<4.0	0.030	<4.0	-0.030	<4.0	0.11	<4.0
Cadmium	5.0	1	-0.16	<5.0	-0.12	<5.0	0.050	<5.0	-0.11	<5.0
Calcium	1000	100	-3.7	<1000	-2.6	<1000	-2.8	<1000	-4.2	<1000
Chromium	10	1.6	-0.21	<10	-0.14	<10	0.30	<10	-0.29	<10
Cobalt	50	.83	-0.57	<50	-0.50	<50	-0.26	<50	-0.22	<50
Copper	25	2.1	-0.17	<25	-0.19	<25	0.070	<25	-0.27	<25
Iron	300	23	-3.0	<300	-8.5	<300	-14	<300	-7.4	<300
Lead	5.0	2	1.2	<10	0.96	<10	0.29	<10	0.26	<10
Magnesium	5000	100	-5.0	<5000	-4.0	<5000	-1.6	<5000	-2.1	<5000
Manganese	15	.5	-0.20	<15	-0.11	<15	-0.16	<15	-0.20	<15
Molybdenum	50	2.8								
Nickel	40	2.3	-0.62	<40	-0.41	<40	-0.21	<40	-0.16	<40
Potassium	10000	100	242	<10000	242	<10000	236	<10000	244	<10000
Selenium	10	3.1	0.99	<10	0.74	<10	1.9	<10	1.1	<10
Silver	10	1.2	0.38	<10	0.22	<10	0.23	<10	0.34	<10
Sodium	10000	500	66.8	<10000	69.1	<10000	16.4	<10000	34.1	<10000
Thallium	10	3.4	-1.2	<10	0.53	<10	-0.37	<10	-0.21	<10
Tin	50	2.8								
Vanadium	50	.66	-0.15	<50	-0.070	<50	-0.040	<50	-0.10	<50
Zinc	20	3.8	0.12	<20	0.74	<20	0.43	<20	0.42	<20

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
QC Limits: result < RL Run ID: MA7773 Units: ug/l

Time:			11:54		12:08		12:20		12:52	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	11	15.8	<200	17.4	<200	5.2	<200	7.7	<200
Antimony	6.0	4.5	1.9	<6.0	2.7	<6.0	1.6	<6.0	2.9	<6.0
Arsenic	10	3.6	-0.85	<10	-1.6	<10	-0.59	<10	0.76	<10
Barium	200	5	-0.040	<200	-0.040	<200	0.0	<200	-0.060	<200
Beryllium	4.0	1	0.040	<4.0	0.020	<4.0	-0.23	<4.0	-0.18	<4.0
Cadmium	5.0	1	-0.16	<5.0	-0.070	<5.0	-0.080	<5.0	-0.15	<5.0
Calcium	1000	100	-5.4	<1000	-5.5	<1000	-1.2	<1000	-3.1	<1000
Chromium	10	1.6	-0.14	<10	-0.12	<10	0.22	<10	-0.65	<10
Cobalt	50	.83	-0.67	<50	-0.67	<50	0.12	<50	-0.44	<50
Copper	25	2.1	-0.15	<25	-0.040	<25	0.62	<25	-0.050	<25
Iron	300	23	-14	<300	-13	<300	-6.5	<300	-14	<300
Lead	5.0	2	0.89	<10	1.5	<10	0.50	<10	-0.65	<10
Magnesium	5000	100	-3.5	<5000	-3.2	<5000	-1.8	<5000	-5.8	<5000
Manganese	15	.5	-0.18	<15	-0.16	<15	-0.16	<15	-0.25	<15
Molybdenum	50	2.8								
Nickel	40	2.3	-0.37	<40	-0.48	<40	0.88	<40	0.12	<40
Potassium	10000	100	255	<10000	231	<10000	252	<10000	229	<10000
Selenium	10	3.1	-0.51	<10	1.1	<10	-1.6	<10	-1.9	<10
Silver	10	1.2	0.50	<10	-0.14	<10	0.26	<10	-0.57	<10
Sodium	10000	500	113	<10000	-34	<10000	64.9	<10000	-36	<10000
Thallium	10	3.4	-1.6	<10	0.43	<10	0.49	<10	0.010	<10
Tin	50	2.8								
Vanadium	50	.66	-0.070	<50	-0.040	<50	0.11	<50	-0.21	<50
Zinc	20	3.8	0.27	<20	-0.13	<20	0.21	<20	0.21	<20

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
QC Limits: result < RL Run ID: MA7773 Units: ug/l

Time:			13:36		13:57		14:35		14:53	
Sample ID:			CCB8		CCB9		CCB10		CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	11	6.4	<200	8.0	<200	12.9	<200	4.8	<200
Antimony	6.0	4.5	2.3	<6.0	2.6	<6.0	2.6	<6.0	3.5	<6.0
Arsenic	10	3.6	-2.8	<10	0.68	<10	-0.40	<10	1.3	<10
Barium	200	5	-0.040	<200	-0.010	<200	-0.020	<200	0.0	<200
Beryllium	4.0	1	-0.10	<4.0	-0.14	<4.0	-0.15	<4.0	-0.33	<4.0
Cadmium	5.0	1	0.0	<5.0	-0.050	<5.0	-0.16	<5.0	-0.050	<5.0
Calcium	1000	100	0.81	<1000	0.36	<1000	-1.1	<1000	0.29	<1000
Chromium	10	1.6	-0.22	<10	-0.13	<10	-0.27	<10	-0.11	<10
Cobalt	50	.83	-0.20	<50	-0.34	<50	-0.55	<50	-0.47	<50
Copper	25	2.1	0.24	<25	-0.040	<25	0.11	<25	0.48	<25
Iron	300	23	-8.2	<300	-10	<300	-9.6	<300	-6.6	<300
Lead	5.0	2	1.3	<10	0.10	<10	1.6	<10	0.24	<10
Magnesium	5000	100	-0.96	<5000	-3.9	<5000	-3.4	<5000	-3.6	<5000
Manganese	15	.5	-0.13	<15	-0.13	<15	-0.13	<15	-0.13	<15
Molybdenum	50	2.8								
Nickel	40	2.3	0.090	<40	-0.10	<40	-0.24	<40	-0.11	<40
Potassium	10000	100	244	<10000	234	<10000	236	<10000	252	<10000
Selenium	10	3.1	-2.6	<10	0.59	<10	-0.020	<10	-2.3	<10
Silver	10	1.2	-0.17	<10	-0.45	<10	-0.18	<10	0.060	<10
Sodium	10000	500	63.5	<10000	41.2	<10000	-21	<10000	75.7	<10000
Thallium	10	3.4	0.92	<10	-1.5	<10	0.64	<10	0.0	<10
Tin	50	2.8								
Vanadium	50	.66	0.11	<50	0.0	<50	-0.13	<50	-0.050	<50
Zinc	20	3.8	0.40	<20	0.36	<20	0.16	<20	0.21	<20

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
QC Limits: result < RL Run ID: MA7773 Units: ug/l

Time:			15:35		16:18		17:00		17:43	
Sample ID:			CCB12		CCB13		CCB14		CCB15	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	11	8.7	<200	8.0	<200	2.7	<200	2.3	<200
Antimony	6.0	4.5	1.7	<6.0	1.7	<6.0	1.2	<6.0	0.39	<6.0
Arsenic	10	3.6	-2.2	<10	0.61	<10	-2.0	<10	0.050	<10
Barium	200	5	-0.020	<200	-0.030	<200	-0.040	<200	0.010	<200
Beryllium	4.0	1	-0.57	<4.0	-0.43	<4.0	-0.41	<4.0	-0.43	<4.0
Cadmium	5.0	1	-0.060	<5.0	-0.060	<5.0	-0.11	<5.0	-0.020	<5.0
Calcium	1000	100	0.58	<1000	0.23	<1000	0.0	<1000	2.2	<1000
Chromium	10	1.6	-0.060	<10	-0.23	<10	-0.21	<10	-0.23	<10
Cobalt	50	.83	-0.10	<50	-0.77	<50	-0.43	<50	-0.47	<50
Copper	25	2.1	0.63	<25	0.52	<25	0.65	<25	0.76	<25
Iron	300	23	-5.4	<300	-9.9	<300	-12	<300	-11	<300
Lead	5.0	2	1.1	<10	0.91	<10	0.41	<10	0.070	<10
Magnesium	5000	100	-1.0	<5000	-4.7	<5000	-5.0	<5000	-3.1	<5000
Manganese	15	.5	-0.11	<15	-0.18	<15	-0.16	<15	-0.14	<15
Molybdenum	50	2.8								
Nickel	40	2.3	-0.35	<40	0.090	<40	-0.66	<40	0.69	<40
Potassium	10000	100	253	<10000	237	<10000	249	<10000	241	<10000
Selenium	10	3.1	-0.88	<10	0.31	<10	-1.6	<10	-1.0	<10
Silver	10	1.2	0.18	<10	-0.41	<10	-0.41	<10	-0.21	<10
Sodium	10000	500	85.9	<10000	15.2	<10000	41.4	<10000	65.5	<10000
Thallium	10	3.4	-1.4	<10	0.30	<10	-1.3	<10	-0.89	<10
Tin	50	2.8								
Vanadium	50	.66	0.23	<50	-0.050	<50	-0.32	<50	0.050	<50
Zinc	20	3.8	0.22	<20	-0.13	<20	-0.080	<20	-0.030	<20

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
QC Limits: result < RL Run ID: MA7773 Units: ug/l

Time:			18:24		19:07		19:49		20:14	
Sample ID:			CCB16		CCB17		CCB18		CCB19	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	11	-2.2	<200	-12	<200	-13	<200	-12	<200
Antimony	6.0	4.5	2.5	<6.0	1.6	<6.0	2.2	<6.0	2.0	<6.0
Arsenic	10	3.6	-0.88	<10	-0.22	<10	0.82	<10	3.8	<10
Barium	200	5	-0.010	<200	-0.030	<200	-0.040	<200	-0.020	<200
Beryllium	4.0	1	-0.40	<4.0	-0.34	<4.0	-0.39	<4.0	-0.44	<4.0
Cadmium	5.0	1	-0.010	<5.0	-0.11	<5.0	-0.10	<5.0	-0.020	<5.0
Calcium	1000	100	3.7	<1000	3.6	<1000	3.9	<1000	6.6	<1000
Chromium	10	1.6	-0.34	<10	-0.32	<10	-0.32	<10	-0.17	<10
Cobalt	50	.83	-0.55	<50	-0.72	<50	-0.67	<50	-0.14	<50
Copper	25	2.1	0.95	<25	0.94	<25	0.92	<25	0.96	<25
Iron	300	23	-1.5	<300	-10	<300	-9.4	<300	-13	<300
Lead	5.0	2	1.2	<10	0.21	<10	2.4	<10	-0.020	<10
Magnesium	5000	100	-3.1	<5000	-3.8	<5000	-3.1	<5000	-3.7	<5000
Manganese	15	.5	-0.18	<15	-0.20	<15	-0.18	<15	-0.13	<15
Molybdenum	50	2.8								
Nickel	40	2.3	-0.26	<40	-0.45	<40	-0.45	<40	0.0	<40
Potassium	10000	100	254	<10000	242	<10000	233	<10000	240	<10000
Selenium	10	3.1	2.1	<10	0.32	<10	-0.80	<10	0.67	<10
Silver	10	1.2	0.20	<10	-0.43	<10	-0.43	<10	-0.57	<10
Sodium	10000	500	58.4	<10000	47.1	<10000	15.0	<10000	99.7	<10000
Thallium	10	3.4	0.88	<10	-0.13	<10	2.2	<10	-0.15	<10
Tin	50	2.8								
Vanadium	50	.66	-0.10	<50	-0.13	<50	-0.10	<50	-0.050	<50
Zinc	20	3.8	0.41	<20	0.0	<20	-0.090	<20	0.11	<20

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7773 Units: ug/l

Time:		09:19			09:44			10:26	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	40300	100.8	40000	40400	101.0	40000	40100	100.3
Antimony	2000	2070	103.5	2000	2100	105.0	2000	2090	104.5
Arsenic	2000	1950	97.5	2000	1980	99.0	2000	2000	100.0
Barium	2000	2070	103.5	2000	2080	104.0	2000	2100	105.0
Beryllium	2000	2040	102.0	2000	2070	103.5	2000	2080	104.0
Cadmium	2000	2050	102.5	2000	2100	105.0	2000	2090	104.5
Calcium	40000	40500	101.3	40000	41500	103.8	40000	41800	104.5
Chromium	2000	2020	101.0	2000	2060	103.0	2000	2060	103.0
Cobalt	2000	2040	102.0	2000	2080	104.0	2000	2080	104.0
Copper	2000	2020	101.0	2000	2020	101.0	2000	2030	101.5
Iron	40000	40300	100.8	40000	41000	102.5	40000	40800	102.0
Lead	2000	2040	102.0	2000	2070	103.5	2000	2070	103.5
Magnesium	40000	40800	102.0	40000	41100	102.8	40000	40900	102.3
Manganese	2000	2050	102.5	2000	2080	104.0	2000	2090	104.5
Molybdenum									
Nickel	2000	2050	102.5	2000	2100	105.0	2000	2120	106.0
Potassium	40000	40500	101.3	40000	40100	100.3	40000	40100	100.3
Selenium	2000	2030	101.5	2000	2070	103.5	2000	2070	103.5
Silver	250	249	99.6	250	248	99.2	250	245	98.0
Sodium	40000	39700	99.3	40000	39500	98.8	40000	39200	98.0
Thallium	2000	2100	105.0	2000	2120	106.0	2000	2110	105.5
Tin									
Vanadium	2000	1970	98.5	2000	1990	99.5	2000	1990	99.5
Zinc	2000	2040	102.0	2000	2110	105.5	2000	2110	105.5

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7773 Units: ug/l

Time:		11:08			11:49			12:04	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	40300	100.8	40000	40000	100.0	40000	40100	100.3
Antimony	2000	2110	105.5	2000	2120	106.0	2000	2120	106.0
Arsenic	2000	2000	100.0	2000	2010	100.5	2000	2010	100.5
Barium	2000	2140	107.0	2000	2140	107.0	2000	2160	108.0
Beryllium	2000	2090	104.5	2000	2110	105.5	2000	2090	104.5
Cadmium	2000	2110	105.5	2000	2130	106.5	2000	2120	106.0
Calcium	40000	42000	105.0	40000	42800	107.0	40000	42500	106.3
Chromium	2000	2070	103.5	2000	2090	104.5	2000	2070	103.5
Cobalt	2000	2090	104.5	2000	2110	105.5	2000	2090	104.5
Copper	2000	2070	103.5	2000	2060	103.0	2000	2080	104.0
Iron	40000	41000	102.5	40000	41200	103.0	40000	40900	102.3
Lead	2000	2070	103.5	2000	2090	104.5	2000	2050	102.5
Magnesium	40000	41100	102.8	40000	41200	103.0	40000	41100	102.8
Manganese	2000	2100	105.0	2000	2110	105.5	2000	2100	105.0
Molybdenum									
Nickel	2000	2130	106.5	2000	2160	108.0	2000	2160	108.0
Potassium	40000	40600	101.5	40000	40000	100.0	40000	40300	100.8
Selenium	2000	2070	103.5	2000	2090	104.5	2000	2070	103.5
Silver	250	246	98.4	250	245	98.0	250	243	97.2
Sodium	40000	39500	98.8	40000	39000	97.5	40000	39400	98.5
Thallium	2000	2130	106.5	2000	2120	106.0	2000	2130	106.5
Tin									
Vanadium	2000	2010	100.5	2000	2020	101.0	2000	2010	100.5
Zinc	2000	2100	105.0	2000	2150	107.5	2000	2100	105.0

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7773 Units: ug/l

Time:		12:16			12:48			13:31	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39900	99.8	40000	39800	99.5	40000	39900	99.8
Antimony	2000	2080	104.0	2000	2090	104.5	2000	2080	104.0
Arsenic	2000	1990	99.5	2000	1990	99.5	2000	2000	100.0
Barium	2000	2070	103.5	2000	2090	104.5	2000	2090	104.5
Beryllium	2000	2080	104.0	2000	2070	103.5	2000	2070	103.5
Cadmium	2000	2120	106.0	2000	2100	105.0	2000	2100	105.0
Calcium	40000	41200	103.0	40000	41100	102.8	40000	41100	102.8
Chromium	2000	2050	102.5	2000	2040	102.0	2000	2030	101.5
Cobalt	2000	2070	103.5	2000	2050	102.5	2000	2050	102.5
Copper	2000	1970	98.5	2000	1990	99.5	2000	1990	99.5
Iron	40000	41200	103.0	40000	40900	102.3	40000	40900	102.3
Lead	2000	2090	104.5	2000	2060	103.0	2000	2060	103.0
Magnesium	40000	40300	100.8	40000	40100	100.3	40000	40100	100.3
Manganese	2000	2060	103.0	2000	2060	103.0	2000	2050	102.5
Molybdenum									
Nickel	2000	2110	105.5	2000	2110	105.5	2000	2120	106.0
Potassium	40000	39100	97.8	40000	39300	98.3	40000	39200	98.0
Selenium	2000	2090	104.5	2000	2070	103.5	2000	2080	104.0
Silver	250	248	99.2	250	246	98.4	250	244	97.6
Sodium	40000	38800	97.0	40000	38500	96.3	40000	38700	96.8
Thallium	2000	2110	105.5	2000	2110	105.5	2000	2100	105.0
Tin									
Vanadium	2000	1970	98.5	2000	1970	98.5	2000	1970	98.5
Zinc	2000	2130	106.5	2000	2100	105.0	2000	2090	104.5

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7773 Units: ug/l

Time:		13:53			14:30			14:49	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	40000	100.0	40000	40100	100.3	40000	39800	99.5
Antimony	2000	2110	105.5	2000	2110	105.5	2000	2080	104.0
Arsenic	2000	2020	101.0	2000	2030	101.5	2000	1990	99.5
Barium	2000	2100	105.0	2000	2130	106.5	2000	2080	104.0
Beryllium	2000	2090	104.5	2000	2090	104.5	2000	2050	102.5
Cadmium	2000	2130	106.5	2000	2130	106.5	2000	2090	104.5
Calcium	40000	41800	104.5	40000	41600	104.0	40000	40100	100.3
Chromium	2000	2060	103.0	2000	2060	103.0	2000	2010	100.5
Cobalt	2000	2080	104.0	2000	2070	103.5	2000	2020	101.0
Copper	2000	2000	100.0	2000	2010	100.5	2000	1970	98.5
Iron	40000	41300	103.3	40000	41300	103.3	40000	40600	101.5
Lead	2000	2090	104.5	2000	2080	104.0	2000	2050	102.5
Magnesium	40000	40500	101.3	40000	40400	101.0	40000	39600	99.0
Manganese	2000	2080	104.0	2000	2070	103.5	2000	2020	101.0
Molybdenum									
Nickel	2000	2140	107.0	2000	2150	107.5	2000	2090	104.5
Potassium	40000	39100	97.8	40000	39300	98.3	40000	38900	97.3
Selenium	2000	2100	105.0	2000	2130	106.5	2000	2080	104.0
Silver	250	246	98.4	250	246	98.4	250	245	98.0
Sodium	40000	38900	97.3	40000	39000	97.5	40000	38400	96.0
Thallium	2000	2130	106.5	2000	2130	106.5	2000	2100	105.0
Tin									
Vanadium	2000	1990	99.5	2000	1990	99.5	2000	1950	97.5
Zinc	2000	2130	106.5	2000	2120	106.0	2000	2060	103.0

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7773 Units: ug/l

Time:		15:30			16:13			16:55	
Sample ID:	CCV	CCV12		CCV	CCV13		CCV	CCV14	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39600	99.0	40000	39700	99.3	40000	39800	99.5
Antimony	2000	2090	104.5	2000	2100	105.0	2000	2090	104.5
Arsenic	2000	1990	99.5	2000	2000	100.0	2000	1990	99.5
Barium	2000	2080	104.0	2000	2080	104.0	2000	2060	103.0
Beryllium	2000	2060	103.0	2000	2070	103.5	2000	2060	103.0
Cadmium	2000	2110	105.5	2000	2120	106.0	2000	2110	105.5
Calcium	40000	40300	100.8	40000	40700	101.8	40000	40300	100.8
Chromium	2000	2010	100.5	2000	2030	101.5	2000	2020	101.0
Cobalt	2000	2030	101.5	2000	2040	102.0	2000	2030	101.5
Copper	2000	1960	98.0	2000	1960	98.0	2000	1950	97.5
Iron	40000	40800	102.0	40000	41100	102.8	40000	41000	102.5
Lead	2000	2060	103.0	2000	2080	104.0	2000	2070	103.5
Magnesium	40000	39500	98.8	40000	39600	99.0	40000	39500	98.8
Manganese	2000	2030	101.5	2000	2040	102.0	2000	2030	101.5
Molybdenum									
Nickel	2000	2110	105.5	2000	2120	106.0	2000	2110	105.5
Potassium	40000	38600	96.5	40000	38600	96.5	40000	38700	96.8
Selenium	2000	2090	104.5	2000	2090	104.5	2000	2090	104.5
Silver	250	244	97.6	250	245	98.0	250	246	98.4
Sodium	40000	38500	96.3	40000	38400	96.0	40000	38500	96.3
Thallium	2000	2110	105.5	2000	2110	105.5	2000	2120	106.0
Tin									
Vanadium	2000	1950	97.5	2000	1960	98.0	2000	1950	97.5
Zinc	2000	2090	104.5	2000	2100	105.0	2000	2090	104.5

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7773 Units: ug/l

Time:		17:38			18:20			19:03	
Sample ID:	CCV	CCV15		CCV	CCV16		CCV	CCV17	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39700	99.3	40000	39800	99.5	40000	39800	99.5
Antimony	2000	2060	103.0	2000	2070	103.5	2000	2060	103.0
Arsenic	2000	1990	99.5	2000	1980	99.0	2000	1970	98.5
Barium	2000	2040	102.0	2000	2020	101.0	2000	1990	99.5
Beryllium	2000	2060	103.0	2000	2060	103.0	2000	2060	103.0
Cadmium	2000	2120	106.0	2000	2110	105.5	2000	2110	105.5
Calcium	40000	40200	100.5	40000	39900	99.8	40000	39600	99.0
Chromium	2000	2020	101.0	2000	2010	100.5	2000	2010	100.5
Cobalt	2000	2030	101.5	2000	2020	101.0	2000	2020	101.0
Copper	2000	1920	96.0	2000	1910	95.5	2000	1890	94.5
Iron	40000	41200	103.0	40000	41200	103.0	40000	41300	103.3
Lead	2000	2080	104.0	2000	2080	104.0	2000	2090	104.5
Magnesium	40000	39400	98.5	40000	39300	98.3	40000	39200	98.0
Manganese	2000	2030	101.5	2000	2020	101.0	2000	2010	100.5
Molybdenum									
Nickel	2000	2100	105.0	2000	2080	104.0	2000	2070	103.5
Potassium	40000	38400	96.0	40000	38500	96.3	40000	38500	96.3
Selenium	2000	2090	104.5	2000	2070	103.5	2000	2080	104.0
Silver	250	248	99.2	250	250	100.0	250	252	100.8
Sodium	40000	38500	96.3	40000	38700	96.8	40000	38600	96.5
Thallium	2000	2120	106.0	2000	2120	106.0	2000	2120	106.0
Tin									
Vanadium	2000	1950	97.5	2000	1940	97.0	2000	1940	97.0
Zinc	2000	2110	105.5	2000	2110	105.5	2000	2110	105.5

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7773 Units: ug/l

Time:		19:45			20:10	
Sample ID:	CCV	CCV18		CCV	CCV19	
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39600	99.0	40000	39800	99.5
Antimony	2000	2030	101.5	2000	2020	101.0
Arsenic	2000	1930	96.5	2000	1910	95.5
Barium	2000	1970	98.5	2000	1940	97.0
Beryllium	2000	2030	101.5	2000	2020	101.0
Cadmium	2000	2070	103.5	2000	2060	103.0
Calcium	40000	38600	96.5	40000	38300	95.8
Chromium	2000	1990	99.5	2000	1980	99.0
Cobalt	2000	1990	99.5	2000	1990	99.5
Copper	2000	1870	93.5	2000	1860	93.0
Iron	40000	40800	102.0	40000	40800	102.0
Lead	2000	2060	103.0	2000	2050	102.5
Magnesium	40000	38800	97.0	40000	38600	96.5
Manganese	2000	1990	99.5	2000	1980	99.0
Molybdenum						
Nickel	2000	2020	101.0	2000	2010	100.5
Potassium	40000	38500	96.3	40000	38600	96.5
Selenium	2000	2050	102.5	2000	2040	102.0
Silver	250	251	100.4	250	250	100.0
Sodium	40000	38500	96.3	40000	38700	96.8
Thallium	2000	2100	105.0	2000	2090	104.5
Tin						
Vanadium	2000	1910	95.5	2000	1900	95.0
Zinc	2000	2070	103.5	2000	2060	103.0

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
QC Limits: 95 to 105 % Recovery Run ID: MA7773 Units: ug/l

Time:		09:16	
Sample ID:	HSTD	HSTD1	
Metal	True	Results	% Rec
Aluminum	80000	80600	100.8
Antimony	4000	4010	100.3
Arsenic	4000	3980	99.5
Barium	4000	4000	100.0
Beryllium	4000	3930	98.3
Cadmium	4000	3930	98.3
Calcium	80000	78800	98.5
Chromium	4000	3950	98.8
Cobalt	4000	3940	98.5
Copper	4000	4030	100.8
Iron	80000	77200	96.5
Lead	4000	3950	98.8
Magnesium	80000	79300	99.1
Manganese	4000	3940	98.5
Molybdenum			
Nickel	4000	3940	98.5
Potassium	80000	74800	93.5
Selenium	4000	3980	99.5
Silver	500	504	100.8
Sodium	80000	77700	97.1
Thallium	4000	3960	99.0
Tin			
Vanadium	4000	4000	100.0
Zinc	4000	3910	97.8

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
QC Limits: CRI 70-130% CRIA 70-130% Run ID: MA7773 Units: ug/l

Time:			09:29		09:33		19:56		20:00	
Sample ID:	CRI	CRIA	CRIA1		CRI1		CRIA2		CRI2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	400	200	191	95.5			176	88.0		
Antimony	10	5.0	6.0	120.0			4.2	84.0		
Arsenic	20	10	8.7	87.0			6.2	62.0*(a)		
Barium	400	200	206	103.0			193	96.5		
Beryllium	10	5.0	5.3	106.0			4.6	92.0		
Cadmium	10	5.0	5.3	106.0			5.4	108.0		
Calcium	2000	1000	1040	104.0			967	96.7		
Chromium	20	10	10.1	101.0			9.5	95.0		
Cobalt	100	50	51.9	103.8			49.8	99.6		
Copper	50	25	26.2	104.8			25.4	101.6		
Iron	600	300	288	96.0			293	97.7		
Lead	10	5.0			12.2	122.0			10.4	104.0
Magnesium	10000	5000	4920	98.4			4620	92.4		
Manganese	30	15	15.9	106.0			15.2	101.3		
Molybdenum	100	50								
Nickel	80	40	42.7	106.8			42.0	105.0		
Potassium	20000	10000	9110	91.1			8780	87.8		
Selenium	20	10	8.7	87.0			9.8	98.0		
Silver	20	10	9.3	93.0			9.3	93.0		
Sodium	20000	10000	8640	86.4			8390	83.9		
Thallium	20	10	10.9	109.0			9.4	94.0		
Tin	100	50								
Vanadium	100	50	50.0	100.0			48.0	96.0		
Zinc	40	20	23.1	115.5			22.2	111.0		

(*) Outside of QC limits
(anr) Analyte not requested
(a) Possible instrument baseline drift.

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
QC Limits: 80 to 120 % Recovery Run ID: MA7773 Units: ug/l

Time:			09:40		09:41		20:03		20:06	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	500000	500000	492000	98.4	502000	100.4	479000	95.8	491000	98.2
Antimony		1000	0.60		1060	106.0	-0.46		1010	101.0
Arsenic		1000	0.030		1010	101.0	-4.8		971	97.1
Barium		500	0.71		546	109.2	0.61		507	101.4
Beryllium		500	-0.49		502	100.4	-0.93		488	97.6
Cadmium		1000	0.010		967	96.7	2.0		952	95.2
Calcium	500000	500000	438000	87.6	450000	90.0	398000	80.0	414000	82.8
Chromium		500	-0.78		480	96.0	-0.95		459	91.8
Cobalt		500	1.1		475	95.0	0.59		451	90.2
Copper		500	-3.7		523	104.6	-2.1		475	95.0
Iron	200000	200000	180000	90.0	188000	94.0	176000	88.0	186000	93.0
Lead		1000	-0.52		983	98.3	1.2		975	97.5
Magnesium	500000	500000	490000	98.0	493000	98.6	454000	90.8	460000	92.0
Manganese		500	0.94		494	98.8	0.60		467	93.4
Molybdenum		1000	-0.35		984	98.4	-1.3		948	94.8
Nickel		1000	-0.33		952	95.2	-0.34		909	90.9
Potassium			238		-140		218		-150	
Selenium		1000	1.5		1000	100.0	-0.35		996	99.6
Silver		1000	0.72		1070	107.0	0.070		1080	108.0
Sodium			-28		303		-92		309	
Thallium		1000	-0.080		952	95.2	-14		931	93.1
Tin		1000	-4.1		891	89.1	-3.9		845	84.5
Vanadium		500	-5.5		478	95.6	-5.6		455	91.0
Zinc		1000	3.9		921	92.1	3.8		907	90.7

(*) Outside of QC limits
(anr) Analyte not requested

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20113W3.PRN Date Analyzed: 01/13/10 Methods: SW846 7470A
Analyst: LM Run ID: MA7776
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:15	MA7776-STD1	1		STD01REP1
10:17	MA7776-STD2	1		STD02REP1
10:19	MA7776-STD3	1		STD03REP1
10:22	MA7776-STD4	1		STD04REP1
10:24	MA7776-STD5	1		STD05REP1
10:26	MA7776-STD6	1		STD06REP1
10:28	MA7776-HSTD1	1		
10:30	MA7776-ICV1	1		
10:33	MA7776-ICB1	1		
10:35	MA7776-CRI1	1		
10:38	MA7776-CCV1	1		
10:40	MA7776-CCB1	1		
11:09	MA7776-CCV2	1		
11:12	MA7776-CCB2	1		
11:15	MP17595-MB1	1		
11:18	MP17595-B1	1		
11:20	F70691-1F	1		
11:22	MP17595-D1	1		
11:24	MP17595-SD1	5		
11:27	MP17595-S1	1		
11:29	F70691-2F	1		
11:32	F70691-3F	1		
11:34	F70691-4F	1		
11:37	F70691-5F	1		
11:39	MA7776-CCV3	1		
11:42	MA7776-CCB3	1		
12:21	MA7776-CCV4	1		
12:24	MA7776-CCB4	1		
12:27	F70691-6F	1		
---------->	Last reportable sample/prep for job F70691			
12:29	ZZZZZZ	1		
12:31	ZZZZZZ	1		
12:34	ZZZZZZ	1		
12:36	MP17596-MB1	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20113W3.PRN Date Analyzed: 01/13/10 Methods: SW846 7470A
Analyst: LM Run ID: MA7776
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
12:39	MP17596-B1	1		
12:41	F70648-1	10		(sample used for QC only; not part of login F70691)
12:43	MP17596-D1	10		
12:47	MP17596-SD1	5		
12:49	MP17596-S1	10		
12:51	MA7776-CCV5	1		
12:54	MA7776-CCB5	1		
12:56	MP17596-MB2	1		
12:59	MP17596-B2	1		
13:01	MA7776-CRI2	1		
13:03	MA7776-CCV6	1		
13:06	MA7776-CCB6	1		

----------> Last reportable CCB for job F70691
Refer to raw data for calibration curve and standards.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20113W3.PRN Date Analyzed: 01/13/10 Methods: SW846 7470A
QC Limits: result < RL Run ID: MA7776 Units: ug/l

Time:			10:33		10:40		11:12		11:42	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	1.0	.14	-0.080	<1.0	-0.055	<1.0	-0.015	<1.0	-0.048	<1.0

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20113W3.PRN Date Analyzed: 01/13/10 Methods: SW846 7470A
QC Limits: result < RL Run ID: MA7776 Units: ug/l

Time:			12:24		12:54		13:06	
Sample ID:			CCB4		CCB5		CCB6	
Metal	RL	IDL	raw	final	raw	final	raw	final
Mercury	1.0	.14	-0.029	<1.0	-0.055	<1.0	-0.032	<1.0

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20113W3.PRN Date Analyzed: 01/13/10 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA7776 Units: ug/l

Time:		10:30			10:38			11:09	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3.0	3.0	100.0	3.0	3.0	100.0	3.0	3.0	100.0

(*) Outside of QC limits
(anr) Analyte not requested

6.4.2
6

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20113W3.PRN Date Analyzed: 01/13/10 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA7776 Units: ug/l

Time:		11:39			12:21			12:51	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3	3.1	103.3	3.0	3.0	100.0	3	3.1	103.3

(*) Outside of QC limits
(anr) Analyte not requested

6.4.2
6

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20113W3.PRN Date Analyzed: 01/13/10 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA7776 Units: ug/l

Time:		13:03	
Sample ID:	CCV	CCV6	
Metal	True	Results	% Rec
Mercury	3	3.1	103.3

(*) Outside of QC limits
(anr) Analyte not requested

6.4.2
6

HIGH STANDARD CHECK SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20113W3.PRN Date Analyzed: 01/13/10 Methods: SW846 7470A
QC Limits: 95 to 105 % Recovery Run ID: MA7776 Units: ug/l

Time:		10:28	
Sample ID:	HSTD	HSTD1	
Metal	True	Results	% Rec
Mercury	6	5.9	98.3

(*) Outside of QC limits
(anr) Analyte not requested

6.4.3

6

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20113W3.PRN Date Analyzed: 01/13/10 Methods: SW846 7470A
QC Limits: 80 to 120 % Recovery Run ID: MA7776 Units: ug/l

Time:			10:35		13:01	
Sample ID:	CRI	CRIA	CRI1		CRI2	
Metal	True	True	Results	% Rec	Results	% Rec
Mercury	0.20		0.16	80.0	0.16	80.0

(*) Outside of QC limits
(anr) Analyte not requested

6.4.4
6

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H30114W3.PRN Date Analyzed: 01/14/10 Methods: SW846 7470A
Analyst: LM Run ID: MA7779
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:55	MA7779-STD1	1		STD01REP1
09:58	MA7779-STD2	1		STD02REP1
10:00	MA7779-STD3	1		STD03REP1
10:02	MA7779-STD4	1		STD04REP1
10:05	MA7779-STD5	1		STD05REP1
10:07	MA7779-STD6	1		STD06REP1
10:09	MA7779-HSTD1	1		
10:11	MA7779-ICV1	1		
10:14	MA7779-ICB1	1		
10:17	MA7779-CRI1	1		
10:20	MA7779-CCV1	1		
10:22	MA7779-CCB1	1		
10:24	MP17602-MB1	1		
10:26	MP17602-B1	1		
10:29	F70605-3	1		(sample used for QC only; not part of login F70691)
10:31	MP17602-D1	1		
10:33	MP17602-SD1	5		
10:35	MP17602-S1	1		
10:38	MP17602-S2	1		
10:40	ZZZZZZ	1		
10:43	ZZZZZZ	1		
10:45	ZZZZZZ	1		
10:47	MA7779-CCV2	1		
10:49	MA7779-CCB2	1		
10:52	ZZZZZZ	1		
10:54	F70702-2	1		(sample used for QC only; not part of login F70691)
10:57	MP17602-MB2	1		
10:59	MP17602-B2	1		
11:01	MP17602-D2	1		
11:03	MP17603-MB1	1		
11:06	MP17603-B1	1		
11:09	F70691-1	1		
11:12	MP17603-D1	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H30114W3.PRN Date Analyzed: 01/14/10 Methods: SW846 7470A
Analyst: LM Run ID: MA7779
Parameters: Hg

	Time	Sample Description	Dilution Factor	PS Recov	Comments
	11:14	MP17603-SD1	5		
	11:16	MA7779-CCV3	1		
	11:18	MA7779-CCB3	1		
	11:20	MP17603-S1	1		
---------->	Last reportable sample/prep for job F70691				
	11:23	ZZZZZZ	1		
	11:25	ZZZZZZ	1		
	11:28	ZZZZZZ	1		
	11:30	MP17604-MB1	1		
	11:32	MP17604-B1	1		
	11:34	F70666-1	1		(sample used for QC only; not part of login F70691)
	11:37	MP17604-D1	1		
	11:39	MP17604-SD1	5		
	11:42	MP17604-S1	1		
	11:44	MA7779-CCV4	1		
	11:47	MA7779-CCB4	1		
	11:49	MP17604-MB2	1		
	11:51	MP17604-B2	1		
	12:00	MA7779-CRI2	1		
	12:02	MA7779-CCV5	1		
	12:04	MA7779-CCB5	1		
---------->	Last reportable CCB for job F70691				

Refer to raw data for calibration curve and standards.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H30114W3.PRN Date Analyzed: 01/14/10 Methods: SW846 7470A
QC Limits: result < RL Run ID: MA7779 Units: ug/l

Time:			10:14		10:22		10:49		11:18	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	1.0	.14	0.0010	<1.0	-0.036	<1.0	-0.012	<1.0	-0.024	<1.0

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H30114W3.PRN Date Analyzed: 01/14/10 Methods: SW846 7470A
QC Limits: result < RL Run ID: MA7779 Units: ug/l

Time:			11:47		12:04	
Sample ID:			CCB4		CCB5	
Metal	RL	IDL	raw	final	raw	final
Mercury	1.0	.14	-0.037	<1.0	-0.022	<1.0

(*) Outside of QC limits
(anr) Analyte not requested

6.5.1
6

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H30114W3.PRN Date Analyzed: 01/14/10 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA7779 Units: ug/l

Time:		10:11			10:20			10:47	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3	2.8	93.3	3	2.9	96.7	3	2.8	93.3

(*) Outside of QC limits
(anr) Analyte not requested

6.5.2
6

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H30114W3.PRN Date Analyzed: 01/14/10 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA7779 Units: ug/l

Time:		11:16			11:44			12:02	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3	2.8	93.3	3	2.8	93.3	3	2.8	93.3

(*) Outside of QC limits
(anr) Analyte not requested

6.5.2
6

HIGH STANDARD CHECK SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H30114W3.PRN Date Analyzed: 01/14/10 Methods: SW846 7470A
QC Limits: 95 to 105 % Recovery Run ID: MA7779 Units: ug/l

Time:		10:09	
Sample ID:	HSTD	HSTD1	
Metal	True	Results	% Rec
Mercury	6.0	6.0	100.0

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H30114W3.PRN Date Analyzed: 01/14/10 Methods: SW846 7470A
QC Limits: 80 to 120 % Recovery Run ID: MA7779 Units: ug/l

Time:			10:17		12:00	
Sample ID:	CRI	CRIA	CRI1		CRI2	
Metal	True	True	Results	% Rec	Results	% Rec
Mercury	0.20		0.16	80.0	0.16	80.0

(*) Outside of QC limits
(anr) Analyte not requested

6.5.4
6

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011410.ASC Date Analyzed: 01/14/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7780
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:43	MA7780-HSTD1	1		
09:46	MA7780-ICV1	1		
09:53	MA7780-ICB1	1		
09:58	MA7780-CRIA1	1		
10:04	MA7780-CRI1	1		
10:10	MA7780-ICSA1	1		
10:11	MA7780-ICSAB1	1		
10:14	MA7780-CCV1	1		
10:18	MA7780-CCB1	1		
10:25	MA7780-CCV2	1		
10:36	MA7780-CCB2	1		
10:40	F70691-1F	4		
10:43	MP17591-D1	4		
10:47	MP17591-SD1	20		
10:50	MP17591-PS1	4		
10:53	MP17591-S1	4		
10:57	F70691-2F	4		
11:00	F70691-3F	4		
11:04	F70691-4F	4		
11:07	F70691-5F	4		
11:11	F70691-6F	4		
11:14	MA7780-CCV3	1		
11:18	MA7780-CCB3	1		
11:22	F70691-1F	2		
11:25	MP17591-D1	2		
11:29	MP17591-SD1	10		
11:32	MP17591-PS1	2		
11:35	MP17591-S1	2		
11:39	F70691-2F	2		
11:42	F70691-3F	2		
11:46	F70691-4F	2		
11:49	F70691-5F	2		
11:52	F70691-6F	2		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011410.ASC Date Analyzed: 01/14/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7780
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Tl,V,Zn

	Time	Sample Description	Dilution Factor	PS Recov	Comments
	11:56	MA7780-CCV4	1		
	12:00	MA7780-CCB4	1		
	12:04	F70691-1F	1		
	12:07	MP17591-D1	1		
	12:10	MP17591-SD1	5		
	12:14	MP17591-PS1	1		
	12:17	MP17591-S1	1		
	12:21	F70691-2F	1		
	12:24	F70691-3F	1		
	12:27	F70691-4F	1		
	12:31	F70691-5F	1		
	12:34	F70691-6F	1		
---------->	Last reportable sample/prep for job F70691				
	12:38	MA7780-CCV5	1		
	12:42	MA7780-CCB5	1		
	13:02	MA7780-CCV6	1		
	13:07	MA7780-CCB6	1		
	13:10	ZZZZZZ	2		
	13:14	F70702-2	2		(sample used for QC only; not part of login F70691)
	13:17	MP17601-D2	2		
	13:44	MA7780-CCV7	1		
	13:49	MA7780-CCB7	1		
	13:55	F70717-1	100		(sample used for QC only; not part of login F70691)
	13:58	MP17598-D1	100		
	14:02	MP17598-SD1	500		
	14:05	MP17598-S1	100		
	14:09	ZZZZZZ	100		
	14:12	ZZZZZZ	100		
	14:15	MA7780-CCV8	1		
	14:20	MA7780-CCB8	1		
	14:23	F70717-1	5		(sample used for QC only; not part of login F70691)
	14:27	MP17598-D1	5		
	14:30	MP17598-SD1	25		
	14:34	MP17598-PS1	5		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011410.ASC Date Analyzed: 01/14/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7780
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
14:37	MP17598-S1	5		
14:40	ZZZZZZ	5		
14:44	ZZZZZZ	5		
14:47	MA7780-CCV9	1		
14:52	MA7780-CCB9	1		
14:55	MA7780-CRIA2	1		
14:58	MA7780-CRI2	1		
15:02	MA7780-ICSA2	1		
15:05	MA7780-ICSAB2	1		
15:09	MA7780-CCV10	1		
15:13	MA7780-CCB10	1		

----------> Last reportable CCB for job F70691
Refer to raw data for calibration curve and standards.

INTERNAL STANDARD SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011410.ASC Date Analyzed: 01/14/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7780
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Tl,V,Zn

Time	Sample Description	Istd#1
09:43	MA7780-HSTD1	5271
09:46	MA7780-ICV1	5369
09:53	MA7780-ICB1	5509 R
09:58	MA7780-CRIA1	5432
10:04	MA7780-CRI1	5498
10:10	MA7780-ICSA1	4982
10:11	MA7780-ICSAB1	4928
10:14	MA7780-CCV1	5394
10:18	MA7780-CCB1	5449
10:25	MA7780-CCV2	5383
10:36	MA7780-CCB2	5451
10:40	F70691-1F	4758
10:43	MP17591-D1	4798
10:47	MP17591-SD1	5244
10:50	MP17591-PS1	4760
10:53	MP17591-S1	4799
10:57	F70691-2F	4581
11:00	F70691-3F	4677
11:04	F70691-4F	4748
11:07	F70691-5F	4812
11:11	F70691-6F	4726
11:14	MA7780-CCV3	5331
11:18	MA7780-CCB3	5515
11:22	F70691-1F	4369
11:25	MP17591-D1	4427
11:29	MP17591-SD1	5077
11:32	MP17591-PS1	4449
11:35	MP17591-S1	4404
11:39	F70691-2F	4257
11:42	F70691-3F	4329
11:46	F70691-4F	4277
11:49	F70691-5F	4500
11:52	F70691-6F	4479

INTERNAL STANDARD SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011410.ASC Date Analyzed: 01/14/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7780
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Tl,V,Zn

Time	Sample Description	Istd#1
11:56	MA7780-CCV4	5291
12:00	MA7780-CCB4	5477
12:04	F70691-1F	3877
12:07	MP17591-D1	3949
12:10	MP17591-SD1	4805
12:14	MP17591-PS1	3934
12:17	MP17591-S1	3942
12:21	F70691-2F	3664
12:24	F70691-3F	3767
12:27	F70691-4F	3904
12:31	F70691-5F	4052
12:34	F70691-6F	4004
12:38	MA7780-CCV5	5409
12:42	MA7780-CCB5	5488
13:02	MA7780-CCV6	5398
13:07	MA7780-CCB6	5606
13:10	ZZZZZZ	5051
13:14	F70702-2	4996
13:17	MP17601-D2	4965
13:44	MA7780-CCV7	5359
13:49	MA7780-CCB7	5480
13:55	F70717-1	5467
13:58	MP17598-D1	5523
14:02	MP17598-SD1	5559
14:05	MP17598-S1	5531
14:09	ZZZZZZ	5469
14:12	ZZZZZZ	5435
14:15	MA7780-CCV8	5403
14:20	MA7780-CCB8	5530
14:23	F70717-1	4991
14:27	MP17598-D1	4999
14:30	MP17598-SD1	5375
14:34	MP17598-PS1	5104

INTERNAL STANDARD SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011410.ASC Date Analyzed: 01/14/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7780
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Tl,V,Zn

Time	Sample Description	Istd#1
14:37	MP17598-S1	4930
14:40	ZZZZZZ	4998
14:44	ZZZZZZ	4889
14:47	MA7780-CCV9	5431
14:52	MA7780-CCB9	5547
14:55	MA7780-CRIA2	5564
14:58	MA7780-CRI2	5476
15:02	MA7780-ICSA2	5020
15:05	MA7780-ICSAB2	4975
15:09	MA7780-CCV10	5429
15:13	MA7780-CCB10	5566

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium	60-125 %

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011410.ASC Date Analyzed: 01/14/10 Methods: SW846 6010B
QC Limits: result < RL Run ID: MA7780 Units: ug/l

Time:			09:53		10:18		10:36		11:18	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	11	1.9	<200	15.1	<200	14.5	<200	18.2	<200
Antimony	6.0	4.5	0.76	<6.0	-0.020	<6.0	-1.8	<6.0	-0.11	<6.0
Arsenic	10	3.6	-0.48	<10	-4.2	<10	-2.3	<10	-2.3	<10
Barium	200	5	-0.060	<200	0.050	<200	0.0	<200	0.020	<200
Beryllium	4.0	1	-0.22	<4.0	-0.40	<4.0	-0.53	<4.0	-0.52	<4.0
Cadmium	5.0	1	-0.050	<5.0	0.080	<5.0	0.090	<5.0	-0.030	<5.0
Calcium	1000	100	-3.3	<1000	0.46	<1000	-1.4	<1000	-0.56	<1000
Chromium	10	1.6	0.040	<10	0.20	<10	-0.12	<10	-0.050	<10
Cobalt	50	.83	0.26	<50	0.040	<50	0.080	<50	-0.090	<50
Copper	25	2.1	0.090	<25	0.44	<25	0.57	<25	0.63	<25
Iron	300	23	-10	<300	-2.2	<300	-11	<300	-9.0	<300
Lead	5.0	2	2.2	<10	2.3	<10	2.6	<10	1.3	<10
Magnesium	5000	100	0.31	<5000	2.4	<5000	-0.29	<5000	1.1	<5000
Manganese	15	.5	-0.11	<15	-0.020	<15	-0.080	<15	-0.010	<15
Molybdenum	50	2.8								
Nickel	40	2.3	-0.33	<40	0.14	<40	-0.55	<40	-0.31	<40
Potassium	10000	100	236	<10000	225	<10000	226	<10000	200	<10000
Selenium	10	3.1	3.7	<20	2.2	<20	3.3	<20	3.4	<20
Silver	10	1.2	0.34	<10	0.73	<10	-0.20	<10	-0.21	<10
Sodium	10000	500	anr							
Thallium	10	3.4	-3.2	<10	0.010	<10	-2.7	<10	-1.9	<10
Tin	50	2.8								
Vanadium	50	.66	0.010	<50	0.33	<50	-0.090	<50	0.24	<50
Zinc	20	3.8	0.020	<20	0.090	<20	-0.36	<20	-0.22	<20

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011410.ASC Date Analyzed: 01/14/10 Methods: SW846 6010B
QC Limits: result < RL Run ID: MA7780 Units: ug/l

Time: / Sample ID:			12:00 CCB4		12:42 CCB5		13:07 CCB6		13:49 CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	11	20.8	<200	17.2	<200	5.1	<200	3.4	<200
Antimony	6.0	4.5	-0.86	<6.0	0.62	<6.0	1.5	<6.0	-0.36	<6.0
Arsenic	10	3.6	-1.9	<10	-0.61	<10	1.9	<10	-0.62	<10
Barium	200	5	-0.020	<200	0.050	<200	0.060	<200	0.020	<200
Beryllium	4.0	1	-0.70	<4.0	-0.79	<4.0	-0.040	<4.0	-0.27	<4.0
Cadmium	5.0	1	0.11	<5.0	0.21	<5.0	-0.10	<5.0	-0.090	<5.0
Calcium	1000	100	-2.8	<1000	0.68	<1000	-0.41	<1000	-1.3	<1000
Chromium	10	1.6	-0.010	<10	0.24	<10	0.29	<10	-0.19	<10
Cobalt	50	.83	-0.25	<50	0.38	<50	0.18	<50	-0.050	<50
Copper	25	2.1	0.67	<25	1.0	<25	0.020	<25	0.14	<25
Iron	300	23	-11	<300	-3.3	<300	-2.8	<300	-2.3	<300
Lead	5.0	2	2.8	<10	2.5	<10	2.5	<10	3.0	<10
Magnesium	5000	100	-3.5	<5000	3.8	<5000	2.9	<5000	-2.0	<5000
Manganese	15	.5	-0.080	<15	-0.010	<15	-0.050	<15	-0.15	<15
Molybdenum	50	2.8								
Nickel	40	2.3	-0.47	<40	-0.79	<40	-0.61	<40	-0.87	<40
Potassium	10000	100	208	<10000	229	<10000	245	<10000	252	<10000
Selenium	10	3.1	3.1	<20	1.4	<20	-0.58	<20	0.58	<20
Silver	10	1.2	0.13	<10	0.40	<10	0.49	<10	0.65	<10
Sodium	10000	500	anr							
Thallium	10	3.4	-3.4	<10	-1.3	<10	1.2	<10	-1.5	<10
Tin	50	2.8								
Vanadium	50	.66	-0.12	<50	0.21	<50	0.40	<50	0.10	<50
Zinc	20	3.8	-0.16	<20	-0.060	<20	-0.060	<20	-0.14	<20

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011410.ASC Date Analyzed: 01/14/10 Methods: SW846 6010B
QC Limits: result < RL Run ID: MA7780 Units: ug/l

Time:			14:20		14:52		15:13	
Sample ID:			CCB8		CCB9		CCB10	
Metal	RL	IDL	raw	final	raw	final	raw	final
Aluminum	200	11	-3.4	<200	-9.0	<200	-8.5	<200
Antimony	6.0	4.5	-0.75	<6.0	-1.1	<6.0	-1.2	<6.0
Arsenic	10	3.6	-2.2	<10	0.65	<10	0.29	<10
Barium	200	5	0.010	<200	-0.010	<200	0.0	<200
Beryllium	4.0	1	-0.090	<4.0	0.15	<4.0	0.17	<4.0
Cadmium	5.0	1	-0.21	<5.0	-0.38	<5.0	-0.43	<5.0
Calcium	1000	100	-1.5	<1000	-1.4	<1000	0.24	<1000
Chromium	10	1.6	-0.090	<10	-0.48	<10	-0.57	<10
Cobalt	50	.83	-0.26	<50	0.37	<50	0.12	<50
Copper	25	2.1	0.20	<25	-0.38	<25	-0.16	<25
Iron	300	23	-2.7	<300	-3.7	<300	-6.7	<300
Lead	5.0	2	2.9	<10	2.3	<10	2.0	<10
Magnesium	5000	100	0.47	<5000	-2.2	<5000	1.3	<5000
Manganese	15	.5	-0.15	<15	-0.12	<15	-0.12	<15
Molybdenum	50	2.8						
Nickel	40	2.3	-0.38	<40	-0.48	<40	-0.53	<40
Potassium	10000	100	240	<10000	242	<10000	235	<10000
Selenium	10	3.1	1.3	<20	2.6	<20	2.3	<20
Silver	10	1.2	0.55	<10	0.050	<10	-0.42	<10
Sodium	10000	500	anr					
Thallium	10	3.4	-0.35	<10	0.89	<10	-1.2	<10
Tin	50	2.8						
Vanadium	50	.66	0.010	<50	-0.12	<50	-0.090	<50
Zinc	20	3.8	-0.33	<20	-0.29	<20	-0.34	<20

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011410.ASC Date Analyzed: 01/14/10 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7780 Units: ug/l

Time:		09:46			10:14			10:25	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39800	99.5	40000	40200	100.5	40000	40100	100.3
Antimony	2000	2070	103.5	2000	2120	106.0	2000	2110	105.5
Arsenic	2000	1970	98.5	2000	2020	101.0	2000	2020	101.0
Barium	2000	2050	102.5	2000	2080	104.0	2000	2060	103.0
Beryllium	2000	2060	103.0	2000	2110	105.5	2000	2100	105.0
Cadmium	2000	2070	103.5	2000	2140	107.0	2000	2130	106.5
Calcium	40000	40900	102.3	40000	42200	105.5	40000	41800	104.5
Chromium	2000	2040	102.0	2000	2090	104.5	2000	2070	103.5
Cobalt	2000	2060	103.0	2000	2120	106.0	2000	2100	105.0
Copper	2000	1980	99.0	2000	2010	100.5	2000	2000	100.0
Iron	40000	40700	101.8	40000	41700	104.3	40000	41500	103.8
Lead	2000	2050	102.5	2000	2100	105.0	2000	2090	104.5
Magnesium	40000	40700	101.8	40000	41400	103.5	40000	41100	102.8
Manganese	2000	2060	103.0	2000	2110	105.5	2000	2090	104.5
Molybdenum									
Nickel	2000	2070	103.5	2000	2130	106.5	2000	2120	106.0
Potassium	40000	39700	99.3	40000	39700	99.3	40000	39500	98.8
Selenium	2000	2040	102.0	2000	2100	105.0	2000	2100	105.0
Silver	250	248	99.2	250	251	100.4	250	250	100.0
Sodium	anr								
Thallium	2000	2100	105.0	2000	2130	106.5	2000	2130	106.5
Tin									
Vanadium	2000	1970	98.5	2000	2010	100.5	2000	2000	100.0
Zinc	2000	2100	105.0	2000	2180	109.0	2000	2160	108.0

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011410.ASC Date Analyzed: 01/14/10 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7780 Units: ug/l

Time:		11:14			11:56			12:38	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	40500	101.3	40000	40600	101.5	40000	40500	101.3
Antimony	2000	2140	107.0	2000	2130	106.5	2000	2140	107.0
Arsenic	2000	2040	102.0	2000	2030	101.5	2000	2060	103.0
Barium	2000	2130	106.5	2000	2150	107.5	2000	2120	106.0
Beryllium	2000	2110	105.5	2000	2100	105.0	2000	2130	106.5
Cadmium	2000	2140	107.0	2000	2130	106.5	2000	2160	108.0
Calcium	40000	42100	105.3	40000	41600	104.0	40000	42100	105.3
Chromium	2000	2080	104.0	2000	2070	103.5	2000	2090	104.5
Cobalt	2000	2110	105.5	2000	2090	104.5	2000	2110	105.5
Copper	2000	2040	102.0	2000	2050	102.5	2000	2020	101.0
Iron	40000	41600	104.0	40000	41400	103.5	40000	41800	104.5
Lead	2000	2100	105.0	2000	2090	104.5	2000	2120	106.0
Magnesium	40000	41300	103.3	40000	40900	102.3	40000	41000	102.5
Manganese	2000	2110	105.5	2000	2100	105.0	2000	2110	105.5
Molybdenum									
Nickel	2000	2140	107.0	2000	2130	106.5	2000	2160	108.0
Potassium	40000	40000	100.0	40000	40200	100.5	40000	39600	99.0
Selenium	2000	2130	106.5	2000	2130	106.5	2000	2140	107.0
Silver	250	250	100.0	250	249	99.6	250	250	100.0
Sodium	anr								
Thallium	2000	2140	107.0	2000	2140	107.0	2000	2150	107.5
Tin									
Vanadium	2000	2010	100.5	2000	2010	100.5	2000	2020	101.0
Zinc	2000	2160	108.0	2000	2130	106.5	2000	2190	109.5

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011410.ASC Date Analyzed: 01/14/10 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7780 Units: ug/l

Time:		13:02			13:44			14:15	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	40400	101.0	40000	40200	100.5	40000	40100	100.3
Antimony	2000	2090	104.5	2000	2050	102.5	2000	2060	103.0
Arsenic	2000	1990	99.5	2000	1930	96.5	2000	1940	97.0
Barium	2000	2080	104.0	2000	2070	103.5	2000	2040	102.0
Beryllium	2000	2070	103.5	2000	2030	101.5	2000	2060	103.0
Cadmium	2000	2070	103.5	2000	2040	102.0	2000	2070	103.5
Calcium	40000	41000	102.5	40000	40000	100.0	40000	40600	101.5
Chromium	2000	2040	102.0	2000	2010	100.5	2000	2040	102.0
Cobalt	2000	2070	103.5	2000	2040	102.0	2000	2060	103.0
Copper	2000	2020	101.0	2000	2000	100.0	2000	1980	99.0
Iron	40000	40800	102.0	40000	40100	100.3	40000	40600	101.5
Lead	2000	2060	103.0	2000	2030	101.5	2000	2050	102.5
Magnesium	40000	41100	102.8	40000	40500	101.3	40000	40900	102.3
Manganese	2000	2070	103.5	2000	2040	102.0	2000	2060	103.0
Molybdenum									
Nickel	2000	2080	104.0	2000	2040	102.0	2000	2060	103.0
Potassium	40000	40600	101.5	40000	40700	101.8	40000	40300	100.8
Selenium	2000	2060	103.0	2000	2030	101.5	2000	2020	101.0
Silver	250	249	99.6	250	249	99.6	250	251	100.4
Sodium	anr								
Thallium	2000	2090	104.5	2000	2070	103.5	2000	2080	104.0
Tin									
Vanadium	2000	1990	99.5	2000	1960	98.0	2000	1970	98.5
Zinc	2000	2080	104.0	2000	2020	101.0	2000	2070	103.5

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011410.ASC Date Analyzed: 01/14/10 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7780 Units: ug/l

Time:		14:47			15:09	
Sample ID:	CCV	CCV9		CCV	CCV10	
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39900	99.8	40000	40100	100.3
Antimony	2000	2040	102.0	2000	2050	102.5
Arsenic	2000	1920	96.0	2000	1950	97.5
Barium	2000	2030	101.5	2000	2030	101.5
Beryllium	2000	2040	102.0	2000	2050	102.5
Cadmium	2000	2050	102.5	2000	2070	103.5
Calcium	40000	40200	100.5	40000	40700	101.8
Chromium	2000	2020	101.0	2000	2040	102.0
Cobalt	2000	2040	102.0	2000	2060	103.0
Copper	2000	1980	99.0	2000	1980	99.0
Iron	40000	40300	100.8	40000	40600	101.5
Lead	2000	2030	101.5	2000	2050	102.5
Magnesium	40000	40500	101.3	40000	40800	102.0
Manganese	2000	2040	102.0	2000	2060	103.0
Molybdenum						
Nickel	2000	2040	102.0	2000	2050	102.5
Potassium	40000	40100	100.3	40000	40100	100.3
Selenium	2000	2010	100.5	2000	2020	101.0
Silver	250	249	99.6	250	250	100.0
Sodium	anr					
Thallium	2000	2060	103.0	2000	2070	103.5
Tin						
Vanadium	2000	1950	97.5	2000	1960	98.0
Zinc	2000	2050	102.5	2000	2080	104.0

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011410.ASC Date Analyzed: 01/14/10 Methods: SW846 6010B
QC Limits: 95 to 105 % Recovery Run ID: MA7780 Units: ug/l

Time:		09:43	
Sample ID:	HSTD	HSTD1	
Metal	True	Results	% Rec
Aluminum	80000	79700	99.6
Antimony	4000	3970	99.3
Arsenic	4000	3940	98.5
Barium	4000	3940	98.5
Beryllium	4000	3920	98.0
Cadmium	4000	3930	98.3
Calcium	80000	78600	98.3
Chromium	4000	3940	98.5
Cobalt	4000	3930	98.3
Copper	4000	3950	98.8
Iron	80000	77100	96.4
Lead	4000	3940	98.5
Magnesium	80000	78600	98.3
Manganese	4000	3920	98.0
Molybdenum			
Nickel	4000	3920	98.0
Potassium	80000	73500	91.9
Selenium	4000	3950	98.8
Silver	500	499	99.8
Sodium	anr		
Thallium	4000	3950	98.8
Tin			
Vanadium	4000	3970	99.3
Zinc	4000	3940	98.5

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011410.ASC Date Analyzed: 01/14/10 Methods: SW846 6010B
QC Limits: CRI 70-130% CRIA 70-130% Run ID: MA7780 Units: ug/l

Time:			09:58		10:04		14:55		14:58	
Sample ID:	CRI	CRIA	CRIA1		CRI1		CRIA2		CRI2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	400	200	194	97.0			178	89.0		
Antimony	10	5.0	5.1	102.0			2.8	56.0*(a)		
Arsenic	20	10	9.5	95.0			7.8	78.0		
Barium	400	200	204	102.0			200	100.0		
Beryllium	10	5.0	5.0	100.0			5.2	104.0		
Cadmium	10	5.0	5.5	110.0			5.0	100.0		
Calcium	2000	1000	1010	101.0			991	99.1		
Chromium	20	10	10.8	108.0			10	100.0		
Cobalt	100	50	52.8	105.6			51.8	103.6		
Copper	50	25	26.2	104.8			25.5	102.0		
Iron	600	300	288	96.0			272	90.7		
Lead	10	5.0			11.5	115.0			11.5	115.0
Magnesium	10000	5000	4880	97.6			4840	96.8		
Manganese	30	15	16.0	106.7			15.7	104.7		
Molybdenum	100	50								
Nickel	80	40	42.9	107.3			40.9	102.3		
Potassium	20000	10000	9040	90.4			9090	90.9		
Selenium	20	10			25.1	125.5			22.4	112.0
Silver	20	10	10.6	106.0			9.6	96.0		
Sodium	20000	10000	anr							
Thallium	20	10	9.9	99.0			10.2	102.0		
Tin	100	50								
Vanadium	100	50	50.7	101.4			49.4	98.8		
Zinc	40	20	21.5	107.5			21.4	107.0		

(*) Outside of QC limits
(anr) Analyte not requested
(a) Possible instrument baseline drift.

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011410.ASC Date Analyzed: 01/14/10 Methods: SW846 6010B
QC Limits: 80 to 120 % Recovery Run ID: MA7780 Units: ug/l

Time:			10:10		10:11		15:02		15:05	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	500000	500000	485000	97.0	497000	99.4	484000	96.8	494000	98.8
Antimony		1000	-1.2		1070	107.0	-6.1		1030	103.0
Arsenic		1000	-0.11		1030	103.0	4.4		986	98.6
Barium		500	0.77		545	109.0	0.75		534	106.8
Beryllium		500	-0.70		513	102.6	-0.60		497	99.4
Cadmium		1000	-0.040		998	99.8	-0.66		960	96.0
Calcium	500000	500000	446000	89.2	458000	91.6	427000	85.4	439000	87.8
Chromium		500	-0.16		488	97.6	-0.95		474	94.8
Cobalt		500	1.1		486	97.2	1.3		470	94.0
Copper		500	-4.1		516	103.2	-4.0		508	101.6
Iron	200000	200000	184000	92.0	192000	96.0	178000	89.0	187000	93.5
Lead		1000	1.9		1020	102.0	-0.30		992	99.2
Magnesium	500000	500000	495000	99.0	498000	99.6	485000	97.0	490000	98.0
Manganese		500	0.98		501	100.2	0.92		487	97.4
Molybdenum		1000	0.25		1000	100.0	-3.1		966	96.6
Nickel		1000	0.11		980	98.0	-0.10		941	94.1
Potassium			223		-200		231		-160	
Selenium		1000	1.6		1020	102.0	4.7		986	98.6
Silver		1000	0.76		1070	107.0	0.52		1060	106.0
Sodium			-140		24.9		-33		287	
Thallium		1000	-4.4		982	98.2	-8.2		958	95.8
Tin		1000	-2.1		912	91.2	-1.4		881	88.1
Vanadium		500	-4.8		484	96.8	-5.9		471	94.2
Zinc		1000	2.7		963	96.3	3.4		910	91.0

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17582 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 01/11/10

Metal	RL	IDL	MDL	MB raw	final
Mercury	1.0	.14	.15	-0.0020	<1.0

Associated samples MP17582: F70691-2, F70691-3, F70691-4, F70691-5, F70691-6

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17582
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 01/11/10 01/11/10

Metal	F70660-11A Original	DUP	RPD	QC Limits	F70660-11A Original	MS	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.0	0.0	NC	0-20	0.0	2.9	3	96.7	80-120

Associated samples MP17582: F70691-2, F70691-3, F70691-4, F70691-5, F70691-6

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17582 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 01/11/10

Metal	F70660-11A Original	MSD	Spikelot HGFLWS1	% Rec	MSD RPD	QC Limit
Mercury	0.0	2.9	3	96.7	0.0	20

Associated samples MP17582: F70691-2, F70691-3, F70691-4, F70691-5, F70691-6

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17582
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 01/11/10

Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	2.9	3	96.7	80-120

Associated samples MP17582: F70691-2, F70691-3, F70691-4, F70691-5, F70691-6

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17582
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 01/11/10

Metal	F70660-11A Original	SDL 1:5	%DIF	QC Limits
Mercury	0.00	0.00	NC	0-10

Associated samples MP17582: F70691-2, F70691-3, F70691-4, F70691-5, F70691-6

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17583
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 01/11/10

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	11	11	20.4	<200
Antimony	12	4.5	4.5	-0.63	<12
Arsenic	10	3.6	5.4	0.52	<10
Barium	200	5	5	0.010	<200
Beryllium	4.0	1	1	0.38	<4.0
Cadmium	5.0	1	1	-0.15	<5.0
Calcium	1000	100	100	0.0	<1000
Chromium	10	1.6	2	-0.20	<10
Cobalt	50	.83	1	-0.060	<50
Copper	25	2.1	5	0.62	<25
Iron	300	23	23	-7.0	<300
Lead	10	2	2	0.40	<10
Magnesium	5000	100	100	-1.1	<5000
Manganese	15	.5	1	-0.050	<15
Molybdenum	50	2.8	5		
Nickel	40	2.3	2.3	-0.36	<40
Potassium	10000	100	100	239	<10000
Selenium	10	3.1	3.4	2.0	<10
Silver	10	1.2	1.4	-0.12	<10
Sodium	10000	500	500	43.0	<10000
Thallium	10	3.4	3.6	0.83	<10
Tin	50	2.8	2.8		
Vanadium	50	.66	.9	-0.14	<50
Zinc	20	3.8	7.4	2.2	<20

Associated samples MP17583: F70691-1, F70691-2, F70691-3, F70691-4, F70691-5, F70691-6

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17583
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date:			01/11/10					01/11/10	
Metal	F70691-1 Original	DUP	RPD	QC Limits	F70691-1 Original	MS	Spikelot MPFLICP1	% Rec	QC Limits
Aluminum	96.1	98.7 (a)	2.7	0-20	96.1	31800(a)	27000	117.4	80-120
Antimony	0.0	0.0 (a)	NC	0-20	0.0	577 (a)	500	115.4	80-120
Arsenic	13.3	15.3 (a)	14.0	0-20	13.3	2290 (a)	2000	113.8	80-120
Barium	11.9	11.8	0.8	0-20	11.9	2070	2000	102.9	80-120
Beryllium	0.0	0.0	NC	0-20	0.0	46.0	50	92.0	80-120
Cadmium	0.0	0.0	NC	0-20	0.0	46.5	50	93.0	80-120
Calcium	683000	684000	0.1	0-20	683000	688000	25000	20.0 (c)	80-120
Chromium	0.0	0.0	NC	0-20	0.0	192	200	96.0	80-120
Cobalt	0.0	0.0	NC	0-20	0.0	455	500	91.0	80-120
Copper	0.0	0.0	NC	0-20	0.0	312	250	124.8N(d	80-120
Iron	0.0	0.0 (a)	NC	0-20	0.0	26000(a)	26000	100.0	80-120
Lead	0.0	0.0 (a)	NC	0-20	0.0	517 (a)	500	103.4	80-120
Magnesium	1240000	1260000	1.6	0-20	1240000	1220000	25000	-80.0(c)	80-120
Manganese	0.75	0.0	200.0(b)	0-20	0.75	499	500	99.7	80-120
Molybdenum									
Nickel	0.0	0.0	NC	0-20	0.0	445	500	89.0	80-120
Potassium	20300	20300	0.0	0-20	20300	84800	25000	258.0N(d	80-120
Selenium	37.6	39.9 (a)	5.9	0-20	37.6	2440 (a)	2000	120.1N(d	80-120
Silver	0.0	0.0	NC	0-20	0.0	61.5	50	123.0N(d	80-120
Sodium	5000000	5150000	3.0	0-20	5000000	4890000	25000	-440.0(c	80-120
Thallium	0.0	0.0	NC	0-20	0.0	1700	2000	85.0	80-120
Tin									
Vanadium	38.2	37.9	0.8	0-20	38.2	528	500	98.0	80-120
Zinc	0.0	0.0	NC	0-20	0.0	462	500	92.4	80-120

Associated samples MP17583: F70691-1, F70691-2, F70691-3, F70691-4, F70691-5, F70691-6

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Elevated reporting limit(s) due to matrix interference.
(b) RPD acceptable due to low duplicate and sample concentrations.
(c) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
(d) Spike recovery indicates possible matrix interference.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17583
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 01/11/10

Metal	F70691-1 Original	MSD	Spikelot MPFLICP1	% Rec	MSD RPD	QC Limit
Aluminum	96.1	31900(a)	27000	117.8	0.3	20
Antimony	0.0	590 (a)	500	118.0	2.2	20
Arsenic	13.3	2310 (a)	2000	114.8	0.9	20
Barium	11.9	2080	2000	103.4	0.5	20
Beryllium	0.0	46.2	50	92.4	0.4	20
Cadmium	0.0	46.1	50	92.2	0.9	20
Calcium	683000	702000	25000	76.0 (b)	2.0	20
Chromium	0.0	192	200	96.0	0.0	20
Cobalt	0.0	459	500	91.8	0.9	20
Copper	0.0	316	250	126.4N(c	1.3	20
Iron	0.0	25900(a)	26000	99.6	0.4	20
Lead	0.0	503 (a)	500	100.6	2.7	20
Magnesium	1240000	1230000	25000	-40.0(b)	0.8	20
Manganese	0.75	502	500	100.3	0.6	20
Molybdenum						
Nickel	0.0	451	500	90.2	1.3	20
Potassium	20300	85200	25000	259.6N(c	0.5	20
Selenium	37.6	2490 (a)	2000	122.6N(c	2.0	20
Silver	0.0	62.3	50	124.6N(c	1.3	20
Sodium	5000000	5070000	25000	280.0(b)	3.6	20
Thallium	0.0	1720	2000	86.0	1.2	20
Tin						
Vanadium	38.2	532	500	98.8	0.8	20
Zinc	0.0	462	500	92.4	0.0	20

Associated samples MP17583: F70691-1, F70691-2, F70691-3, F70691-4, F70691-5, F70691-6

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Elevated reporting limit(s) due to matrix interference.
(b) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
(c) Spike recovery indicates possible matrix interference.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17583
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 01/11/10

Metal	BSP Result	Spikelot MPFLICP1	% Rec	QC Limits
Aluminum	26200	27000	97.0	80-120
Antimony	523	500	104.6	80-120
Arsenic	2000	2000	100.0	80-120
Barium	2080	2000	104.0	80-120
Beryllium	53.4	50	106.8	80-120
Cadmium	53.1	50	106.2	80-120
Calcium	25600	25000	102.4	80-120
Chromium	212	200	106.0	80-120
Cobalt	527	500	105.4	80-120
Copper	269	250	107.6	80-120
Iron	26700	26000	102.7	80-120
Lead	535	500	107.0	80-120
Magnesium	24600	25000	98.4	80-120
Manganese	539	500	107.8	80-120
Molybdenum				
Nickel	541	500	108.2	80-120
Potassium	25000	25000	100.0	80-120
Selenium	2000	2000	100.0	80-120
Silver	47.3	50	94.6	80-120
Sodium	24000	25000	96.0	80-120
Thallium	2100	2000	105.0	80-120
Tin				
Vanadium	514	500	102.8	80-120
Zinc	525	500	105.0	80-120

Associated samples MP17583: F70691-1, F70691-2, F70691-3, F70691-4, F70691-5, F70691-6

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17583
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 01/11/10

Metal	F70691-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum	96.1	259	169.8(a)	0-10
Antimony	0.00	0.00	NC	0-10
Arsenic	13.3	0.00	100.0(a)	0-10
Barium	11.9	0.00	100.0(a)	0-10
Beryllium	0.00	0.00	NC	0-10
Cadmium	0.00	0.00	NC	0-10
Calcium	683000	767000	12.3*(b)	0-10
Chromium	0.00	0.00	NC	0-10
Cobalt	0.00	0.00	NC	0-10
Copper	0.00	0.00	NC	0-10
Iron	0.00	0.00	NC	0-10
Lead	0.00	0.00	NC	0-10
Magnesium	1240000	1230000	0.6	0-10
Manganese	0.750	0.00	100.0(a)	0-10
Molybdenum				
Nickel	0.00	0.00	NC	0-10
Potassium	20300	16800	17.4*(b)	0-10
Selenium	37.6	0.00	100.0(a)	0-10
Silver	0.00	0.00	NC	0-10
Sodium	5000000	5060000	1.3	0-10
Thallium	0.00	0.00	NC	0-10
Tin				
Vanadium	38.2	42.3	10.7*(b)	0-10
Zinc	0.00	0.00	NC	0-10

Associated samples MP17583: F70691-1, F70691-2, F70691-3, F70691-4, F70691-5, F70691-6

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
(b) Serial dilution indicates possible matrix interference.

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17591
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date:				01/12/10		01/12/10	
Metal	RL	IDL	MDL	MB raw	final	MB raw	final
Aluminum	200	11	11	-8.2	<200	-10	<200
Antimony	6.0	4.5	4.5	-1.7	<6.0	0.080	<6.0
Arsenic	10	3.6	5.4	-3.9	<10	1.6	<10
Barium	200	5	5	-0.060	<200	0.030	<200
Beryllium	4.0	1	1	-0.43	<4.0	-0.44	<4.0
Cadmium	5.0	1	1	-0.12	<5.0	-0.070	<5.0
Calcium	1000	100	100	10.6	<1000	56.9	<1000
Chromium	10	1.6	2	-0.28	<10	0.010	<10
Cobalt	50	.83	1	-0.69	<50	-0.20	<50
Copper	25	2.1	5	2.7	<25	0.96	<25
Iron	300	23	23	-9.4	<300	-8.8	<300
Lead	10	2	2	0.22	<10	0.54	<10
Magnesium	5000	100	100	-4.7	<5000	0.89	<5000
Manganese	15	.5	1	-0.14	<15	0.020	<15
Molybdenum	50	2.8	5				
Nickel	40	2.3	2.3	-0.18	<40	0.25	<40
Potassium	10000	100	100	244	<10000	237	<10000
Selenium	10	3.1	3.4	-0.76	<10	1.8	<10
Silver	10	1.2	1.4	-0.54	<10	-0.61	<10
Sodium	10000	500	500	129	<10000	168	<10000
Thallium	10	3.4	3.6	-5.0	<10	-2.2	<10
Tin	50	2.8	2.8				
Vanadium	50	.66	.9	-0.41	<50	-0.020	<50
Zinc	20	3.8	7.4	6.6	<20	1.6	<20

Associated samples MP17591: F70691-1F, F70691-2F, F70691-3F, F70691-4F, F70691-5F, F70691-6F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17591
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 01/12/10 01/12/10

Metal	F70691-1F Original	DUP	RPD	QC Limits	F70691-1F Original	MS	Spikelot MPFLICP1	% Rec	QC Limits
Aluminum	130	127 (a)	2.3	0-20	130	34300(a)	27000	126.6N(c	80-120
Antimony	0.0	0.0 (a)	NC	0-20	0.0	584 (a)	500	116.8	80-120
Arsenic	9.9	9.4 (a)	5.2	0-20	9.9	2300 (a)	2000	114.5	80-120
Barium	12.7	12.4	2.4	0-20	12.7	2230	2000	110.9	80-120
Beryllium	0.0	0.0	NC	0-20	0.0	44.9	50	89.8	80-120
Cadmium	0.0	0.0	NC	0-20	0.0	46.5	50	93.0	80-120
Calcium	674000	673000	0.1	0-20	674000	685000	25000	44.0 (d)	80-120
Chromium	0.0	0.0	NC	0-20	0.0	190	200	95.0	80-120
Cobalt	0.0	0.0	NC	0-20	0.0	453	500	90.6	80-120
Copper	0.0	0.0	NC	0-20	0.0	321	250	128.4N(c	80-120
Iron	0.0	0.0 (a)	NC	0-20	0.0	27400(a)	26000	105.4	80-120
Lead	0.0	0.0 (a)	NC	0-20	0.0	555 (a)	500	111.0	80-120
Magnesium	1240000	1190000	4.1	0-20	1240000	1280000	25000	160.0(d)	80-120
Manganese	0.0	0.0	NC	0-20	0.0	495	500	99.0	80-120
Molybdenum									
Nickel	0.0	0.0	NC	0-20	0.0	451	500	90.2	80-120
Potassium	20200	19300	4.6	0-20	20200	89800	25000	278.4N(c	80-120
Selenium	22.8	22.9 (a)	0.4	0-20	22.8	2450 (a)	2000	121.4N(c	80-120
Silver	1.2	0.0	200.0(b)	0-20	1.2	63.4	50	124.4N(c	80-120
Sodium	4970000	4730000	4.9	0-20	4970000	4880000	25000	-360.0(d	80-120
Thallium	0.0	0.0	NC	0-20	0.0	1770	2000	88.5	80-120
Tin									
Vanadium	37.9	37.4	1.3	0-20	37.9	531	500	98.6	80-120
Zinc	0.0	0.0	NC	0-20	0.0	453	500	90.6	80-120

Associated samples MP17591: F70691-1F, F70691-2F, F70691-3F, F70691-4F, F70691-5F, F70691-6F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Elevated reporting limit(s) due to matrix interference.
(b) RPD acceptable due to low duplicate and sample concentrations.
(c) Spike recovery indicates possible matrix interference.
(d) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17591
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 01/12/10

Metal	BSP Result	Spikelot MPFLICP1	% Rec	QC Limits
Aluminum	26200	27000	97.0	80-120
Antimony	509	500	101.8	80-120
Arsenic	1960	2000	98.0	80-120
Barium	1970	2000	98.5	80-120
Beryllium	51.4	50	102.8	80-120
Cadmium	52.4	50	104.8	80-120
Calcium	24700	25000	98.8	80-120
Chromium	206	200	103.0	80-120
Cobalt	506	500	101.2	80-120
Copper	246	250	98.4	80-120
Iron	27200	26000	104.6	80-120
Lead	528	500	105.6	80-120
Magnesium	23700	25000	94.8	80-120
Manganese	517	500	103.4	80-120
Molybdenum				
Nickel	523	500	104.6	80-120
Potassium	24300	25000	97.2	80-120
Selenium	1980	2000	99.0	80-120
Silver	48.6	50	97.2	80-120
Sodium	23700	25000	94.8	80-120
Thallium	2050	2000	102.5	80-120
Tin				
Vanadium	495	500	99.0	80-120
Zinc	527	500	105.4	80-120

Associated samples MP17591: F70691-1F, F70691-2F, F70691-3F, F70691-4F, F70691-5F, F70691-6F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17591
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 01/12/10

Metal	F70691-1F Original	SDL 1:5	%DIF	QC Limits
Aluminum	130	477		0-10
Antimony	0.00	0.00	NC	0-10
Arsenic	9.89	0.00	100.0(a)	0-10
Barium	12.7	0.00	100.0(a)	0-10
Beryllium	0.00	0.00	NC	0-10
Cadmium	0.00	0.00	NC	0-10
Calcium	674000	833000	23.7*(b)	0-10
Chromium	0.00	0.00	NC	0-10
Cobalt	0.00	0.00	NC	0-10
Copper	0.00	0.00	NC	0-10
Iron	0.00	0.00	NC	0-10
Lead	0.00	0.00	NC	0-10
Magnesium	1240000	1340000	8.2	0-10
Manganese	0.00	0.00	NC	0-10
Molybdenum				
Nickel	0.00	0.00	NC	0-10
Potassium	20200	16400	18.6*(b)	0-10
Selenium	22.8	38.2	67.7 (a)	0-10
Silver	1.24	0.00	100.0(a)	0-10
Sodium	4970000	5010000	0.8	0-10
Thallium	0.00	0.00	NC	0-10
Tin				
Vanadium	37.9	42.4	11.9*(b)	0-10
Zinc	0.00	0.00	NC	0-10

Associated samples MP17591: F70691-1F, F70691-2F, F70691-3F, F70691-4F, F70691-5F, F70691-6F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
(b) Serial dilution indicates possible matrix interference.

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17595 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 01/13/10

Metal	RL	IDL	MDL	MB raw	final
Mercury	1.0	.14	.15	-0.033	<1.0

Associated samples MP17595: F70691-1F, F70691-2F, F70691-3F, F70691-4F, F70691-5F, F70691-6F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17595
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 01/13/10 01/13/10

Metal	F70691-1F Original	DUP	RPD	QC Limits	F70691-1F Original	MS	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.0	0.0	NC	0-20	0.0	3.0	3	100.0	80-120

Associated samples MP17595: F70691-1F, F70691-2F, F70691-3F, F70691-4F, F70691-5F, F70691-6F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17595
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 01/13/10

Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	3.0	3	100.0	80-120

Associated samples MP17595: F70691-1F, F70691-2F, F70691-3F, F70691-4F, F70691-5F, F70691-6F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17595
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 01/13/10

Metal	F70691-1F Original	SDL 1:5	%DIF	QC Limits
Mercury	0.00	0.00	NC	0-10

Associated samples MP17595: F70691-1F, F70691-2F, F70691-3F, F70691-4F, F70691-5F, F70691-6F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17603
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 01/14/10

Metal	RL	IDL	MDL	MB raw	final
Mercury	1.0	.14	.15	-0.040	<1.0

Associated samples MP17603: F70691-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17603
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 01/14/10 01/14/10

Metal	F70691-1 Original	DUP	RPD	QC Limits	F70691-1 Original	MS	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.0	0.0	NC	0-20	0.0	2.8	3	93.3	80-120

Associated samples MP17603: F70691-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17603
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 01/14/10

Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	2.8	3	93.3	80-120

Associated samples MP17603: F70691-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17603
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 01/14/10

Metal	F70691-1 Original	SDL 1:5	%DIF	QC Limits
Mercury	0.00	0.00	NC	0-10

Associated samples MP17603: F70691-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

6.11.4

6

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries
- Instrument Runlogs/QC

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Solids, Total Dissolved	GN38070	100	0.0	mg/l				

Associated Samples:
Batch GN38070: F70691-1, F70691-2, F70691-3, F70691-4, F70691-5, F70691-6
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F70691
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Solids, Total Dissolved	GN38070	F70691-1	mg/l	19800	20200	2.0	0-5%

Associated Samples:
Batch GN38070: F70691-1, F70691-2, F70691-3, F70691-4, F70691-5, F70691-6
(*) Outside of QC limits

Continuing Calibration Summary

Laboratory DRAFT - Not for Release

Sample: VJ3082-CC3080
Lab FileID: J052885.D

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\011310\J052885.D Vial: 1
Acq On : 13 Jan 2010 10:00 am Operator: KarenW
Sample : CC3080-4 Inst : MSVOA6
Misc : ms13578,vj3082,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\8260-JAPP9.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Mon Jan 11 14:57:31 2010
Response via : Multiple Level Calibration

Min. RRF : 0.001 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	84	0.00	7.48
2		Dichlorodifluoromethane	0.148	0.140	5.4	77	0.00	2.73
3	P	Chloromethane	0.359	0.318	11.4	80	0.01	2.94
4	C	Vinyl Chloride	0.281	0.279	0.7	83	0.00	3.07
			Amount	Calc.	%Drift			
5		Bromomethane	40.000	40.822	-2.1	88	0.01	3.44
6		Chloroethane	40.000	40.201	-0.5	85	0.01	3.57
			AvgRF	CCRF	%Dev			
7		Trichlorofluoromethane	0.341	0.365	-7.0	86	0.06	3.75
8		Ethyl Ether	0.236	0.239	-1.3	81	0.01	4.00
9		1,2-Dichlorotrifluoroetha	0.248	0.251	-1.2	79	0.00	4.22
10	C	1,1-Dichloroethene	0.323	0.328	-1.5	78	0.00	4.25
11		Freon 113	0.183	0.192	-4.9	80	0.00	4.34
12		Carbon Disulfide	0.597	0.581	2.7	80	0.00	4.32
13		Iodomethane	0.384	0.385	-0.3	81	0.00	4.42
14		Allyl chloride	0.434	0.461	-6.2	84	0.00	4.74
			Amount	Calc.	%Drift			
15		Methylene Chloride	40.000	43.861	-9.7	86	0.00	4.85
			AvgRF	CCRF	%Dev			
16		Acetone	0.020	0.020	0.0	86	0.00	4.88
17		Methyl acetate	0.031	0.032	-3.2	84	0.00	5.00
18		trans-1,2-Dichloroethene	0.323	0.324	-0.3	82	0.00	5.02
19		Hexane	0.228	0.227	0.4	81	0.00	5.09
20		Methyl Tert Butyl Ether	0.527	0.538	-2.1	83	0.00	5.13
			Amount	Calc.	%Drift			
21		Acetonitrile	400.000	388.137	3.0	82	0.00	5.37
			AvgRF	CCRF	%Dev			
22		Di-isopropyl ether	0.820	0.868	-5.9	83	0.00	5.50
			Amount	Calc.	%Drift			
23		Chloroprene	40.000	40.398	-1.0	87	0.00	5.65
			AvgRF	CCRF	%Dev			
24	P	1,1-Dichloroethane	0.423	0.436	-3.1	83	0.00	5.65
			Amount	Calc.	%Drift			

Continuing Calibration Summary

Laboratory DRAFT - Not for Release

Sample: VJ3082-CC3080
Lab FileID: J052885.D

25		Acrylonitrile	200.000	220.817	-10.4	90	0.00	5.68
		----------	AvgRF	CCRF	%Dev	----------		
26		ETBE	0.709	0.742	-4.7	83	0.00	5.88
27		Vinyl acetate	0.394	0.529	-34.3#	103	0.00	5.87
28		cis-1,2-Dichloroethene	0.234	0.249	-6.4	83	0.00	6.21
29		2,2-Dichloropropane	0.268	0.278	-3.7	81	0.00	6.34
30		Bromochloromethane	0.124	0.126	-1.6	82	0.00	6.41
		----------	Amount	Calc.	%Drift	----------		
31		Cyclohexane	40.000	38.292	4.3	79	0.00	6.46
		----------	AvgRF	CCRF	%Dev	----------		
32	C	Chloroform	0.391	0.407	-4.1	84	0.00	6.47
33		Ethyl acetate	0.253	0.244	3.6	83	0.00	6.55
		----------	Amount	Calc.	%Drift	----------		
34		Tetrahydrofuran	40.000	39.694	0.8	84	0.00	6.65
		----------	AvgRF	CCRF	%Dev	----------		
35	S	Dibromofluoromethane	0.268	0.259	3.4	81	0.00	6.66
36		Carbon Tetrachloride	0.260	0.264	-1.5	80	0.00	6.66
37		1,1,1-Trichloroethane	0.289	0.302	-4.5	82	0.00	6.72
38		2-Butanone	0.097	0.104	-7.2	85	0.00	6.75
39		1,1-Dichloropropene	0.276	0.292	-5.8	81	0.00	6.83
40		Propionitrile	0.033	0.034	-3.0	82	0.00	7.06
41		Methacrylonitrile	0.143	0.154	-7.7	83	0.00	7.09
42		Benzene	0.850	0.894	-5.2	83	0.00	7.08
43		TAME	0.559	0.588	-5.2	83	0.00	7.17
44	S	1,2-Dichloroethane-d4	0.300	0.302	-0.7	84	0.00	7.20
45		1,2-Dichloroethane	0.307	0.311	-1.3	84	0.00	7.26
46		Trichloroethene	0.230	0.239	-3.9	83	0.00	7.65
		----------	Amount	Calc.	%Drift	----------		
47		Methylcyclohexane	40.000	39.044	2.4	80	0.00	7.67
		----------	AvgRF	CCRF	%Dev	----------		
48		Dibromomethane	0.134	0.145	-8.2	86	0.00	8.07
49	C	1,2-Dichloropropane	0.246	0.259	-5.3	82	0.00	8.16
50		Bromodichloromethane	0.292	0.311	-6.5	84	0.00	8.20
		----------	Amount	Calc.	%Drift	----------		
51		Methyl methacrylate	40.000	39.989	0.0	83	0.00	8.32
52		2-Chloroethyl vinyl ether	200.000	193.655	3.2	84	0.00	8.73
53		cis-1,3-Dichloropropene	40.000	39.752	0.6	85	0.00	8.82
		----------	AvgRF	CCRF	%Dev	----------		
54	I	Chlorobenzene-d5	1.000	1.000	0.0	82	0.00	10.56
55	S	Toluene-d8	1.253	1.238	1.2	82	0.00	9.02
56	C	Toluene	1.159	1.191	-2.8	82	0.00	9.07
		----------	Amount	Calc.	%Drift	----------		
57		2-Nitropropane	200.000	208.360	-4.2	88	0.00	9.27
58		4-Methyl-2-pentanone	200.000	206.881	-3.4	87	0.00	9.40
		----------	AvgRF	CCRF	%Dev	----------		
59		trans-1,3-Dichloropropene	0.399	0.436	-9.3	84	0.00	9.45
60		Tetrachloroethene	0.327	0.338	-3.4	79	0.00	9.47

Continuing Calibration Summary

Sample: VJ3082-CC3080

Laboratory DRAFT - Not for Release

Lab FileID: J052885.D

			Amount	Calc.	%Drift			
61		Ethyl methacrylate	40.000	38.769	3.1	82	0.00	9.57
			AvgRF	CCRF	%Dev			
62		1,1,2-Trichloroethane	0.223	0.239	-7.2	85	0.00	9.61
			Amount	Calc.	%Drift			
63		Dibromochloromethane	40.000	38.812	3.0	82	0.00	9.81
			AvgRF	CCRF	%Dev			
64		1,3-Dichloropropane	0.431	0.455	-5.6	83	0.00	9.89
65		1,2-Dibromoethane	0.261	0.282	-8.0	84	0.00	10.06
			Amount	Calc.	%Drift			
66		2-hexanone	200.000	205.569	-2.8	86	0.00	10.21
67		1-Chlorohexane	40.000	38.732	3.2	78	0.00	10.53
			AvgRF	CCRF	%Dev			
68	C	Ethylbenzene	1.293	1.347	-4.2	80	0.00	10.59
69	P	Chlorobenzene	0.832	0.872	-4.8	81	0.00	10.57
			Amount	Calc.	%Drift			
70		1,1,1,2-Tetrachloroethane	40.000	38.584	3.5	81	0.00	10.63
71		m,p-Xylene	80.000	77.192	3.5	81	0.00	10.73
72		o-Xylene	40.000	38.721	3.2	81	0.00	11.16
73		Styrene	40.000	39.423	1.4	81	0.00	11.21
74	P	Bromoform	40.000	37.254	6.9	82	0.00	11.26
75		Isopropylbenzene	40.000	38.721	3.2	80	0.00	11.47
			AvgRF	CCRF	%Dev			
76	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	80	0.00	12.92
77	S	4-Bromofluorobenzene	0.816	0.800	2.0	80	0.00	11.77
			Amount	Calc.	%Drift			
78		cis-1,4-Dichloro-2-butene	40.000	54.841	-37.1#	117	0.00	11.81
79		n-Propylbenzene	40.000	38.705	3.2	79	0.00	11.89
			AvgRF	CCRF	%Dev			
80		Bromobenzene	0.677	0.710	-4.9	80	0.00	11.89
81	P	1,1,2,2-Tetrachloroethane	0.551	0.604	-9.6	85	0.00	11.94
			Amount	Calc.	%Drift			
82		1,3,5-Trimethylbenzene	40.000	39.120	2.2	80	0.00	12.08
			AvgRF	CCRF	%Dev			
83		2-Chlorotoluene	1.649	1.811	-9.8	81	0.00	12.07
			Amount	Calc.	%Drift			
84		trans-1,4-Dichloro-2-Bute	40.000	51.153	-27.9#	106	0.00	12.13
			AvgRF	CCRF	%Dev			
85		1,2,3-Trichloropropane	0.158	0.165	-4.4	81	0.00	12.10
86		Cyclohexanone	0.013	0.016	-23.1#	82	0.00	12.16
			Amount	Calc.	%Drift			
87		4-Chlorotoluene	40.000	39.726	0.7	82	0.00	12.23
88		tert-Butylbenzene	40.000	39.183	2.0	80	0.00	12.42
89		1,2,4-Trimethylbenzene	40.000	39.323	1.7	81	0.00	12.48

Continuing Calibration Summary

Laboratory DRAFT - Not for Release

Sample: VJ3082-CC3080
Lab FileID: J052885.D

		AvgRF / Amount	CCRF / Calc.	%Dev / %Drift			
90	Pentachloroethane	0.373	0.405	-8.6	82	0.00	12.45
91	sec-Butylbenzene	40.000	39.743	0.6	81	0.00	12.60
92	4-Isopropyltoluene	40.000	39.109	2.2	80	0.00	12.74
93	1,3-Dichlorobenzene	1.152	1.215	-5.5	82	0.00	12.85
94	1,4-Dichlorobenzene	1.259	1.307	-3.8	82	0.00	12.94
95	n-Butylbenzene	40.000	38.621	3.4	80	0.00	13.18
96	Benzyl Chloride	40.000	39.344	1.6	84	0.00	13.18
97	1,2-Dichlorobenzene	1.087	1.162	-6.9	82	0.00	13.37
98	1,2-Dibromo-3-Chloropropa	40.000	41.125	-2.8	88	0.00	14.13
99	Hexachlorobutadiene	0.417	0.404	3.1	77	0.00	14.70
100	1,2,4-Trichlorobenzene	40.000	38.063	4.8	82	0.00	14.73
101	Naphthalene	40.000	43.934	-9.8	88	0.00	15.01
102	1,2,3-Trichlorobenzene	0.700	0.766	-9.4	84	0.00	15.18
103 I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	84	0.00	5.11
104	Ethanol	800.000	727.825	9.0	80	0.01	4.16
105	acrolein	200.000	234.987	-17.5	97	0.00	4.59
106	Tert Butyl Alcohol	0.958	0.962	-0.4	85	0.01	5.19
107	tert Amyl alcohol	400.000	386.675	3.3	84	0.00	7.31
108	Isobutyl alcohol	0.399	0.416	-4.3	83	0.00	7.19
109	1,4-Dioxane	800.000	802.708	-0.3	88	0.00	8.39

(#) = Out of Range SPCC's out = 0 CCC's out = 0
J052831.D 8260-JAPP9.M Thu Jan 14 08:25:13 2010

Lot # D9G090307

Report Cover Page 1
Case Narrative 2
Executive Summary - Detection Highlights 5
Methods Summary 6
Method / Analyst Summary 7
Sample Summary 8
QC Data Association Summary 9
GC/MS Semivolatiles Forms 10
Chain of Custody 53
Sample Receipt Documents 55

Supporting Documentation 57
IC/MS/MS Raw Data 57

Total Number of Pages in this Package 107

Close Report

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

Holloman Air Force Base

Lot # D0A080569

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TestAmerica Laboratories, Inc.

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Project Manager

January 21, 2010

Case Narrative
Lot # D0A080569

With exceptions noted as flags or footnotes, standard analytical protocols were followed in the analyses of the samples and no problems were encountered or anomalies observed. All laboratory quality control samples analyzed in conjunction with the samples in this project were within established control limits, with any exceptions noted.

The test results shown in this report meet all requirements of the AFCEE 4.0 QAPP and the approved laboratory variances. Any exceptions are noted below. This report shall not be reproduced except in full, without the written approval of the laboratory.

Sample Receiving
Eleven samples were received under Chain of Custody on January 8, 2010. The samples were received in good condition at a temperature of 2.3°C.

No anomalies were observed.

Perchlorate, SW 846 6860
Each sample is analyzed to achieve the lowest possible reporting limits within the constraints of the method. Due to analytes present above the linear calibration curve, samples MW39-10-010610 (D0A080569-001), MW39-09-010610 (002), MW39-11-010610 (003), MW39-06D-010610 (004), MW39-12-010610 (005), MW39-06-010610 (006), MW39-08-010610 (007), MW39-DUP01-010610 (008), MW39-02-010710 (009), MW39-07-010710 (010) and MW39-05-010710 (011) had to be analyzed at dilutions. The reporting limits have been adjusted relative to the dilutions required.

MS/MSD analyses for QC batch 0013366 were performed on sample MW39-07-010710 (D0A080569-010), as requested. All spike parameters were within QC control limits.

Quality Control Definitions of Terms

Term	Definition
Batch	A set of up to 20 field samples plus associated laboratory QC samples that are similar in composition (matrix) and that are processed within the same time period with the same reagent and standard lots.
Laboratory Control Sample and Laboratory Control Sample Duplicate (LCS/LCSD)	A volume of reagent water for aqueous samples or a contaminant-free solid matrix (Ottawa sand) for soil and sediment samples which are spiked with known amounts of representative target analytes and required surrogates. A LCS is carried through the entire analytical process and is used to monitor the accuracy of the analytical process independent of potential matrix effects. An LCSD is a second Laboratory Control Sample.
Matrix Spike and Matrix Spike Duplicate (MS/MSD)	A field sample fortified with known quantities of target analytes that are also added to the LCS. Matrix spike duplicate is a second matrix spike sample. MSs/MSDs are carried throughout he entire analytical process and are used to determine sample matrix effect on accuracy of the measurement system. The accuracy and precision estimated using MS/MSD is only representative of the precision of the sample that was spiked.
Method Blank	A sample composed of all the reagents (in the same quantities) in reagent water carried through the entire analytical process. The method blank is used to monitor the level of contamination introduced during sample preparation steps.
Surrogate	Organic constituents not expected to be detected in environmental media and are added to every sample and QC at a known concentration. Surrogates are used to determine the efficiency of the sample preparation and the analytical process.
Sample Duplicate	A second aliquot of an environmental sample, taken form the same sample container when possible, that is processed independently with the first sample aliquot. The results are used to assess the effect of the sample matrix on the precision of the analytical process. The precision estimated using this sample is not necessarily representative to the precision for other samples in the batch.
Method Detection Limit "MDL"	The method detection limit is defined as the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from replicate analyses of low level standards in a typical representative matrix.
Reporting Limit "RL"	The STL reporting limit is normally the lowest level at which measurements become quantitatively meaningful, i.e., the quantitation limit, which is approximately three times the MDL. Some projects require RLs that are less than the quantitation limit to achieve particular maximum contaminant levels (MCLs) or relevant and appropriate requirements (ARARs), but RLs cannot be less than the statistically determined MDL.

Quality Control Definitions of Qualifiers

Qualifier	Definition
J	The analyte was positively identified; the quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
U	The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.
F	The analyte was positively identified but the associated numerical value is above the MDL and below the RL.
Q	The data are rejected due to deficiencies in the ability to analyze the sample and meet QC criteria.
B	The analyte was found in an associated blank, as well as in the sample.
M	A matrix effect was present.
NC, MSB	The recovery and RPD were not calculated because the sample amount was greater than four times the spike amount.
NC, DIL	The recovery was not calculated because the sample was diluted four times or greater.
N	Inorganics: Spiked analyte recovery is outside stated control limits.
a	Organics: Spiked analyte recovery is outside stated control limits.
*	Surrogate or LCS is outside control limits.
UJ	The analyte was not detected; however, the result is estimated due to discrepancies in meeting certain analyte specific quality control criteria.

EXECUTIVE SUMMARY - Detection Highlights

D0A080569

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
MW39-10-010610 01/06/10 11:13 001				
Perchlorate	130	25	ug/L	SW846 6860
MW39-09-010610 01/06/10 11:25 002				
Perchlorate	150	25	ug/L	SW846 6860
MW39-11-010610 01/06/10 13:30 003				
Perchlorate	81	10	ug/L	SW846 6860
MW39-06D-010610 01/06/10 14:36 004				
Perchlorate	28	10	ug/L	SW846 6860
MW39-12-010610 01/06/10 14:45 005				
Perchlorate	51	10	ug/L	SW846 6860
MW39-06-010610 01/06/10 15:55 006				
Perchlorate	25	10	ug/L	SW846 6860
MW39-08-010610 01/06/10 15:57 007				
Perchlorate	65	20	ug/L	SW846 6860
MW39-DUP01-010610 01/06/10 008				
Perchlorate	27	10	ug/L	SW846 6860
MW39-02-010710 01/07/10 09:40 009				
Perchlorate	11	5.0	ug/L	SW846 6860
MW39-07-010710 01/07/10 09:55 010				
Perchlorate	51	20	ug/L	SW846 6860
MW39-05-010710 01/07/10 10:30 011				
Perchlorate	17	10	ug/L	SW846 6860

METHODS SUMMARY

D0A080569

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
SW846 6860 Perchlorate	SW846 6860	SW846 6860

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

METHOD / ANALYST SUMMARY

D0A080569

ANALYTICAL METHOD	ANALYST	ANALYST ID
SW846 6860	Jacqueline Bonnett	003601

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

Table of Contents

SAMPLE SUMMARY

D0A080569

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
LR1RT	001	MW39-10-010610	01/06/10	11:13
LR1RX	002	MW39-09-010610	01/06/10	11:25
LR1R0	003	MW39-11-010610	01/06/10	13:30
LR1R1	004	MW39-06D-010610	01/06/10	14:36
LR1R3	005	MW39-12-010610	01/06/10	14:45
LR1R4	006	MW39-06-010610	01/06/10	15:55
LR1TJ	007	MW39-08-010610	01/06/10	15:57
LR1TK	008	MW39-DUP01-010610	01/06/10	
LR1TM	009	MW39-02-010710	01/07/10	09:40
LR1TP	010	MW39-07-010710	01/07/10	09:55
LR1TV	011	MW39-05-010710	01/07/10	10:30

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

QC DATA ASSOCIATION SUMMARY

D0A080569

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	WG	SW846 6860		0013366	0013212
002	WG	SW846 6860		0013366	0013212
003	WG	SW846 6860		0013366	0013212
004	WG	SW846 6860		0013366	0013212
005	WG	SW846 6860		0013366	0013212
006	WG	SW846 6860		0013366	0013212
007	WG	SW846 6860		0013366	0013212
008	WG	SW846 6860		0013366	0013212
009	WG	SW846 6860		0013366	0013212
010	WG	SW846 6860		0013366	0013212
011	WG	SW846 6860		0013366	0013212

TestAmerica

Semivolatile GC/MS

CLP-Like Forms

Lot ID: D0A080569

Client: Tetra Tech Inc. – Holloman AFB

Method: SW846 6860

Associated Samples: 001 through 011

Batch: 0013366

Table of Contents

TestAmerica
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Tetra Tech NUS, Inc

Holloman AFB

Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	MW39-10-010610
Lot/SDG Number:	D0A080569	**Lab Sample ID:**	D0A080569-001
Matrix:	WATER	**Lab WorkOrder:**	LR1RT1AA
% Moisture:	N/A	**Date/Time Collected:**	01/06/10 11:13
Basis:	Wet	**Date/Time Received:**	01/08/10 09:30
Analysis Method:	6860	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	01/13/10 15:30
QC Batch ID:	0013366	**Date/Time Analyzed:**	01/20/10 03:29
Sample Aliquot:	5 mL	**Instrument ID:**	LCMS1
Dilution Factor:	250	**Extraction Method:**	6860

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
14797-73-0	Perchlorate	Jacqueline Bonnett	JB	**130**	2.2	25	

Form 1 Analysis Data Sheet Equivalent

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Tetra Tech NUS, Inc
Holloman AFB
Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	MW39-09-010610
Lot/SDG Number:	D0A080569	**Lab Sample ID:**	D0A080569-002
Matrix:	WATER	**Lab WorkOrder:**	LR1RX1AA
% Moisture:	N/A	**Date/Time Collected:**	01/06/10 11:25
Basis:	Wet	**Date/Time Received:**	01/08/10 09:30
Analysis Method:	6860	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	01/13/10 15:30
QC Batch ID:	0013366	**Date/Time Analyzed:**	01/20/10 04:00
Sample Aliquot:	5 mL	**Instrument ID:**	LCMS1
Dilution Factor:	250	**Extraction Method:**	6860

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
14797-73-0	Perchlorate	Jacqueline Bonnett	JB	**150**	2.2	25	

Form 1 Analysis Data Sheet Equivalent

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Tetra Tech NUS, Inc
Holloman AFB
Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	MW39-11-010610
Lot/SDG Number:	D0A080569	**Lab Sample ID:**	D0A080569-003
Matrix:	WATER	**Lab WorkOrder:**	LR1R01AA
% Moisture:	N/A	**Date/Time Collected:**	01/06/10 13:30
Basis:	Wet	**Date/Time Received:**	01/08/10 09:30
Analysis Method:	6860	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	01/13/10 15:30
QC Batch ID:	0013366	**Date/Time Analyzed:**	01/20/10 04:32
Sample Aliquot:	5 mL	**Instrument ID:**	LCMS1
Dilution Factor:	100	**Extraction Method:**	6860

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
14797-73-0	Perchlorate	Jacqueline Bonnett	JB	**81**	0.88	10	

Form 1 Analysis Data Sheet Equivalent

TestAmerica
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Holloman AFB
Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	MW39-06D-010610
Lot/SDG Number:	D0A080569	**Lab Sample ID:**	D0A080569-004
Matrix:	WATER	**Lab WorkOrder:**	LR1R11AA
% Moisture:	N/A	**Date/Time Collected:**	01/06/10 14:36
Basis:	Wet	**Date/Time Received:**	01/08/10 09:30
Analysis Method:	6860	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	01/13/10 15:30
QC Batch ID:	0013366	**Date/Time Analyzed:**	01/20/10 08:11
Sample Aliquot:	5 mL	**Instrument ID:**	LCMS1
Dilution Factor:	100	**Extraction Method:**	6860

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
14797-73-0	Perchlorate	Jacqueline Bonnett	JB	**28**	0.88	10	

Form 1 Analysis Data Sheet Equivalent

TestAmerica
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Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	MW39-12-010610
Lot/SDG Number:	D0A080569	**Lab Sample ID:**	D0A080569-005
Matrix:	WATER	**Lab WorkOrder:**	LR1R31AA
% Moisture:	N/A	**Date/Time Collected:**	01/06/10 14:45
Basis:	Wet	**Date/Time Received:**	01/08/10 09:30
Analysis Method:	6860	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	01/13/10 15:30
QC Batch ID:	0013366	**Date/Time Analyzed:**	01/20/10 08:43
Sample Aliquot:	5 mL	**Instrument ID:**	LCMS1
Dilution Factor:	100	**Extraction Method:**	6860

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
14797-73-0	Perchlorate	Jacqueline Bonnett	JB	**51**	0.88	10	

Form 1 Analysis Data Sheet Equivalent

TestAmerica
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Holloman AFB
Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	MW39-06-010610
Lot/SDG Number:	D0A080569	**Lab Sample ID:**	D0A080569-006
Matrix:	WATER	**Lab WorkOrder:**	LR1R41AA
% Moisture:	N/A	**Date/Time Collected:**	01/06/10 15:55
Basis:	Wet	**Date/Time Received:**	01/08/10 09:30
Analysis Method:	6860	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	01/13/10 15:30
QC Batch ID:	0013366	**Date/Time Analyzed:**	01/20/10 09:14
Sample Aliquot:	5 mL	**Instrument ID:**	LCMS1
Dilution Factor:	100	**Extraction Method:**	6860

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
14797-73-0	Perchlorate	Jacqueline Bonnett	JB	**25**	0.88	10	

Form 1 Analysis Data Sheet Equivalent

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Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	MW39-08-010610
Lot/SDG Number:	D0A080569	**Lab Sample ID:**	D0A080569-007
Matrix:	WATER	**Lab WorkOrder:**	LR1TJ1AA
% Moisture:	N/A	**Date/Time Collected:**	01/06/10 15:57
Basis:	Wet	**Date/Time Received:**	01/08/10 09:30
Analysis Method:	6860	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	01/13/10 15:30
QC Batch ID:	0013366	**Date/Time Analyzed:**	01/20/10 09:46
Sample Aliquot:	5 mL	**Instrument ID:**	LCMS1
Dilution Factor:	200	**Extraction Method:**	6860

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
14797-73-0	Perchlorate	Jacqueline Bonnett	JB	**65**	1.8	20	

Form 1 Analysis Data Sheet Equivalent

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Tetra Tech NUS, Inc
Holloman AFB
Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	MW39-DUP01-010610
Lot/SDG Number:	D0A080569	**Lab Sample ID:**	D0A080569-008
Matrix:	WATER	**Lab WorkOrder:**	LR1TK1AA
% Moisture:	N/A	**Date/Time Collected:**	01/06/10 00:00
Basis:	Wet	**Date/Time Received:**	01/08/10 09:30
Analysis Method:	6860	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	01/13/10 15:30
QC Batch ID:	0013366	**Date/Time Analyzed:**	01/20/10 10:17
Sample Aliquot:	5 mL	**Instrument ID:**	LCMS1
Dilution Factor:	100	**Extraction Method:**	6860

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
14797-73-0	Perchlorate	Jacqueline Bonnett	JB	**27**	0.88	10	

Form 1 Analysis Data Sheet Equivalent

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Tetra Tech NUS, Inc
Holloman AFB
Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	MW39-02-010710
Lot/SDG Number:	D0A080569	**Lab Sample ID:**	D0A080569-009
Matrix:	WATER	**Lab WorkOrder:**	LR1TM1AA
% Moisture:	N/A	**Date/Time Collected:**	01/07/10 09:40
Basis:	Wet	**Date/Time Received:**	01/08/10 09:30
Analysis Method:	6860	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	01/13/10 15:30
QC Batch ID:	0013366	**Date/Time Analyzed:**	01/20/10 10:48
Sample Aliquot:	5 mL	**Instrument ID:**	LCMS1
Dilution Factor:	50	**Extraction Method:**	6860

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
14797-73-0	Perchlorate	Jacqueline Bonnett	JB	**11**	0.44	5.0	

Form 1 Analysis Data Sheet Equivalent

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Tetra Tech NUS, Inc
Holloman AFB
Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	MW39-07-010710
Lot/SDG Number:	D0A080569	**Lab Sample ID:**	D0A080569-010
Matrix:	WATER	**Lab WorkOrder:**	LR1TP1AA
% Moisture:	N/A	**Date/Time Collected:**	01/07/10 09:55
Basis:	Wet	**Date/Time Received:**	01/08/10 09:30
Analysis Method:	6860	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	01/13/10 15:30
QC Batch ID:	0013366	**Date/Time Analyzed:**	01/20/10 05:03
Sample Aliquot:	5 mL	**Instrument ID:**	LCMS1
Dilution Factor:	200	**Extraction Method:**	6860

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
14797-73-0	Perchlorate	Jacqueline Bonnett	JB	**51**	1.8	20	

Form 1 Analysis Data Sheet Equivalent

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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Holloman AFB
Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	MW39-05-010710
Lot/SDG Number:	D0A080569	**Lab Sample ID:**	D0A080569-011
Matrix:	WATER	**Lab WorkOrder:**	LR1TV1AA
% Moisture:	N/A	**Date/Time Collected:**	01/07/10 10:30
Basis:	Wet	**Date/Time Received:**	01/08/10 09:30
Analysis Method:	6860	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	01/13/10 15:30
QC Batch ID:	0013366	**Date/Time Analyzed:**	01/20/10 11:20
Sample Aliquot:	5 mL	**Instrument ID:**	LCMS1
Dilution Factor:	100	**Extraction Method:**	6860

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
14797-73-0	Perchlorate	Jacqueline Bonnett	JB	**17**	0.88	10	

Form 1 Analysis Data Sheet Equivalent

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Tetra Tech NUS, Inc
Holloman AFB
Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	D0A080569	**Lab Sample ID:**	R0A130000-366B
Matrix:	WATER	**Lab WorkOrder:**	LR5XM1AA
% Moisture:		**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	6860	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	01/13/10 15:30
QC Batch ID:	0013366	**Date/Time Analyzed:**	01/20/10 01:23
Sample Aliquot:	5 mL	**Instrument ID:**	LCMS1
Dilution Factor:	1	**Extraction Method:**	6860

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
14797-73-0	Perchlorate	Jacqueline Bonnett	JB	0.0088	0.0088	0.10	U

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THE LEADER IN ENVIRONMENTAL TESTING

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Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	D0A080569	**Lab Sample ID:**	R0A130000-366C
Matrix:	WATER	**Lab WorkOrder:**	LR5XM1AC
% Moisture:	N/A	**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	6860	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	01/13/10 15:30
QC Batch ID:	0013366	**Date/Time Analyzed:**	01/20/10 01:55
Sample Aliquot:	5 mL	**Instrument ID:**	LCMS1
Dilution Factor:	1		

Analyte	True	Found	%Rec	Q	Limits
Perchlorate	0.0500	0.0502	100		80 - 120

Form 3 LCS Analysis Data Sheet Equivalent

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Tetra Tech NUS, Inc

Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	MW39-07-MS-010710
Lot/SDG Number:	D0A080569	**MS Lab Sample ID:**	D0A080569-010S
Matrix:	WATER	**MS Lab WorkOrder:**	LR1TP1AC
% Moisture:	N/A	**Date/Time Collected:**	01/07/10 09:55
Basis:	Wet	**Date/Time Received:**	01/08/10 09:30
Analysis Method:	6860	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	01/13/10 15:30
QC Batch ID:	0013366	**Date/Time Analyzed:**	01/20/10 05:34
MS Sample Aliquot:	5 mL	**Instrument ID:**	LCMS1
MS Dilution Factor:	200		

Analyte	Spike Amount	Sample Result	C	MS Result	C	% Rec	Q	QC Limit
Perchlorate	10.0	51		61.7		107		80 - 120

Form 3 MS Analysis Data Sheet Equivalent

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Tetra Tech NUS, Inc

Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	MW39-07-MS-010710
Lot/SDG Number:	D0A080569	**MSD Lab Sample ID:**	D0A080569-010D
Matrix:	WATER	**MSD Lab WorkOrder:**	LR1TP1AD
% Moisture:	N/A	**Date/Time Collected:**	01/07/10 09:55
Basis:	Wet	**Date/Time Received:**	01/08/10 09:30
Analysis Method:	6860	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	01/13/10 15:30
QC Batch ID:	0013366	**Date/Time Analyzed:**	01/20/10 06:06
MSD Sample Aliquot:	5 mL	**Instrument ID:**	LCMS1
MSD Dilution Factor:	200		

Analyte	Spike Amount	Sample Result	C	MSD Result	C	% Rec	Q	RPD	Q	QC Limits	
										% Rec	RPD
Perchlorate	10.0	51		60.9		99		1.3		80 - 120	15

Form 3 MSD Analysis Data Sheet Equivalent

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Tetra Tech NUS, Inc

Method Blank Summary

Lab Name:	TESTAMERICA DENVER	**Lab File ID:**	IC30A1941
Lot/SDG Number:	D0A080569	**Lab Sample ID:**	R0A130000-366B
Matrix:	WATER	**Lab Work Order:**	LR5XM1AA
Analysis Method:	6860	**Date/Time Extracted:**	01/13/10 15:30
Extraction Method:	I88ZUA4	**Date/Time Analyzed:**	01/20/10 01:23
QC Batch ID:	0013366	**Instrument ID:**	LCMS1

Client ID	Sample Work Order #	Lab File ID	Date Analyzed	Time Analyzed
MW39-11-010610	LR1R01AA	IC30A1941	01/20/10	04:32
MW39-06D-010610	LR1R11AA	IC30A1948	01/20/10	08:11
MW39-12-010610	LR1R31AA	IC30A1949	01/20/10	08:43
MW39-06-010610	LR1R41AA	IC30A1950	01/20/10	09:14
MW39-10-010610	LR1RT1AA	IC30A1939	01/20/10	03:29
MW39-09-010610	LR1RX1AA	IC30A1940	01/20/10	04:00
MW39-08-010610	LR1TJ1AA	IC30A1951	01/20/10	09:46
MW39-DUP01-010610	LR1TK1AA	IC30A1952	01/20/10	10:17
MW39-02-010710	LR1TM1AA	IC30A1953	01/20/10	10:48
MW39-07-010710	LR1TP1AA	IC30A1942	01/20/10	05:03
MW39-07-MS-010710 MS	LR1TP1AC S	IC30A1943	01/20/10	05:34
MW39-07-MSD-010710 MSD	LR1TP1AD D	IC30A1944	01/20/10	06:06
MW39-05-010710	LR1TV1AA	IC30A1954	01/20/10	11:20
CHECK SAMPLE	LR5XM1AC C	IC30A1936	01/20/10	01:55

Form 4 Method Blank Summary Equivalent

Manual Integration Summary

SW 846 6860 Perchlorate

Lot:	See below	Batch:	13366

	Specify Paramter That has Been Manually Integrated											
Compound												
Perchlorate	--	--	--	--	--	--	--	--	--	--	--	--

Legend (Why MI needed)		Reviewed By:
1 = Baseline event	4 = Computer did NOT ID analyte	S. Carlson
2 = Split Peak	5 = Peak mis-ID by computer	
3 = Peak tailing	6 = other (specify)	

No MI's Performed

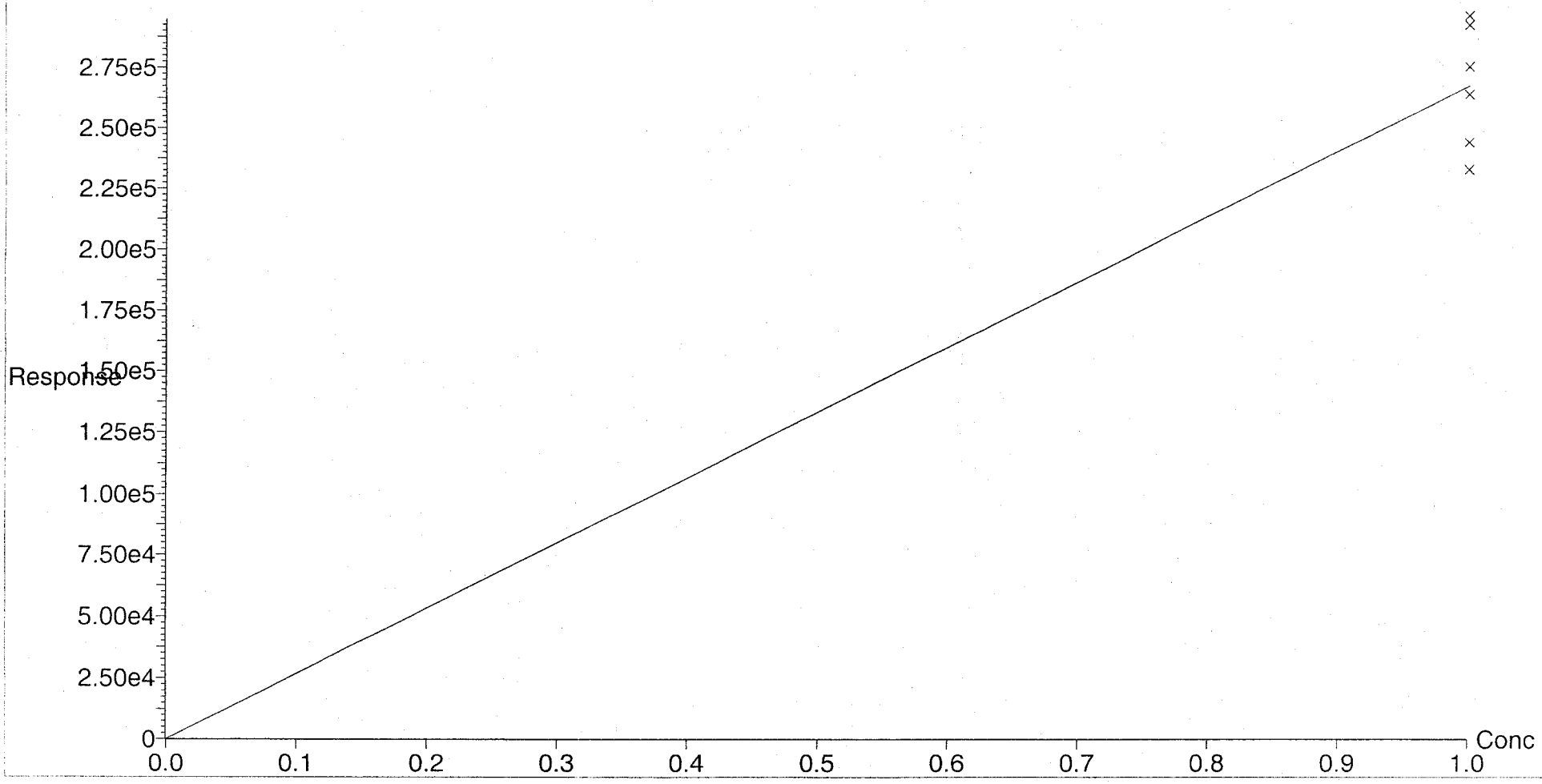
Lots covered by this form: D0A080444, D0A080569

Table of Contents

Quantify Calibration Report
IC Perchlorate Analysis

Calibration: C:\MassLynx 2010\IC Perchlorate.PRO\CurveDB\ic19L31
Last modified: Sat Jan 02 11:42:16 2010
Printed: Wed Jan 20 13:43:05 2010

Compound 1 name: 18O Perchlorate Method File: ic19L31
Response Factor: 266313
RRF SD: 25338.8, % Relative SD: 9.51470
Response type: External Std, Area
Curve type: RF



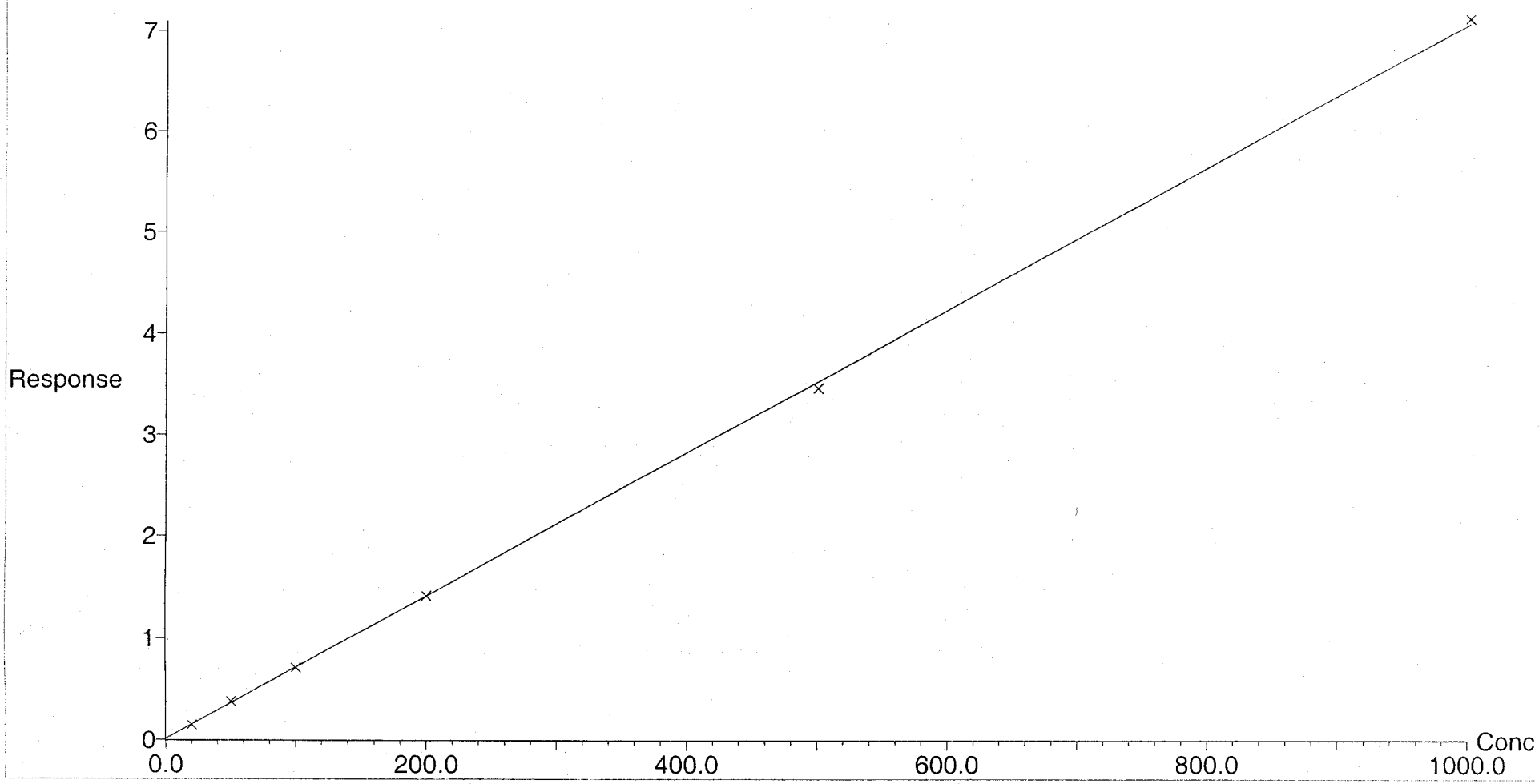
Analyst: Jacqueline Bonnett

Table of Contents

Quantify Calibration Report
IC Perchlorate Analysis

Calibration: C:\MassLynx 2010\IC Perchlorate.PRO\CurveDB\ic19L31
Last modified: Sat Jan 02 11:42:16 2010
Printed: Wed Jan 20 13:43:05 2010

Compound 2 name: Perchlorate Method File: ic19L31
Coefficient of Determination: 0.999747
Calibration curve: 0.00703393 * x + 0.0127826
Response type: Internal Std (Ref 1), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Analyst: Jacqueline Bonnett

Table of Contents

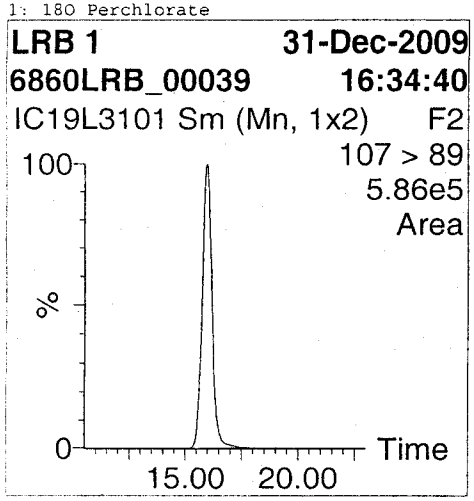
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1)
Last modified: Wed Jan 20 13:36:27 2010
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19L31
Last modified: Sat Jan 02 11:41:56 2010
Job Code:

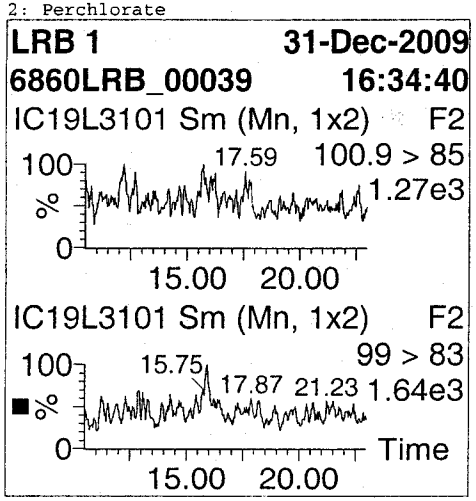
Printed: Wed Jan 20 13:43:05 2010

Name: IC19L3101
Text: LRB 1

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.949	293362	bb	1.102	110.16	ic19L31	02/Jan/10	
2	Perchlorate						ic19L31	02/Jan/10	

Analyst: Jacqueline Bonnett

Table of Contents

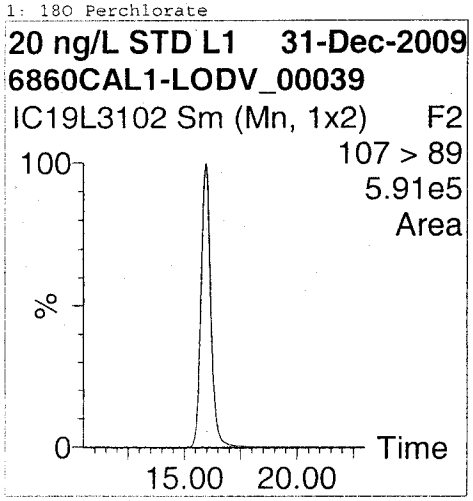
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1)
Last modified: Wed Jan 20 13:36:27 2010
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19L31
Last modified: Sat Jan 02 11:41:56 2010
Job Code:

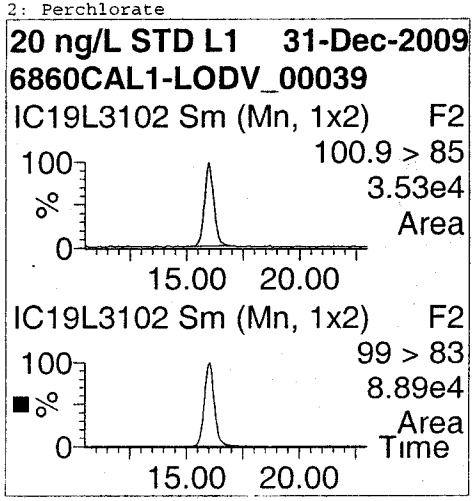
Printed: Wed Jan 20 13:43:05 2010

Name: IC19L3102
Text: 20 ng/L STD L1

1: 180 Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	180 Perchlorate	15.949	294685	bb	1.107	110.65	ic19L31	02/Jan/10	
2	Perchlorate	16.024	43855	bb	19.340	96.70	ic19L31	02/Jan/10	

Analyst: Jacqueline Bonnett

Table of Contents

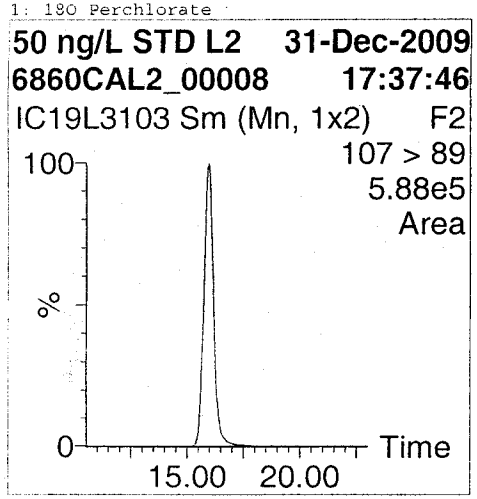
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1)
Last modified: Wed Jan 20 13:36:27 2010
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19L31
Last modified: Sat Jan 02 11:41:56 2010
Job Code:

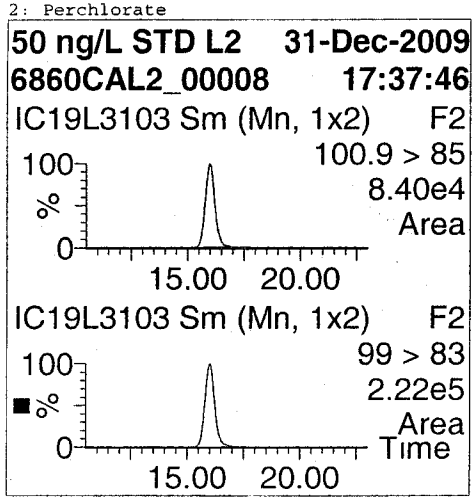
Printed: Wed Jan 20 13:43:05 2010

Name: IC19L3103
Text: 50 ng/L STD L2

1: 180 Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	180 Perchlorate	15.974	291073	bb	1.093	109.30	ic19L31	02/Jan/10	
2	Perchlorate	16.025	110978	bb	52.387	104.77	ic19L31	02/Jan/10	

Analyst: Jacqueline Bonnett

Table of Contents

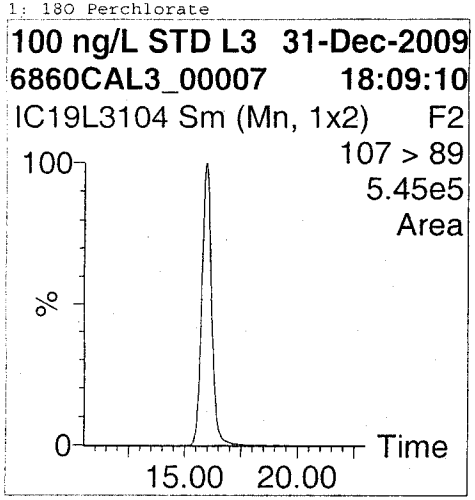
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1)
Last modified: Wed Jan 20 13:36:27 2010
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19L31
Last modified: Sat Jan 02 11:41:56 2010
Job Code:

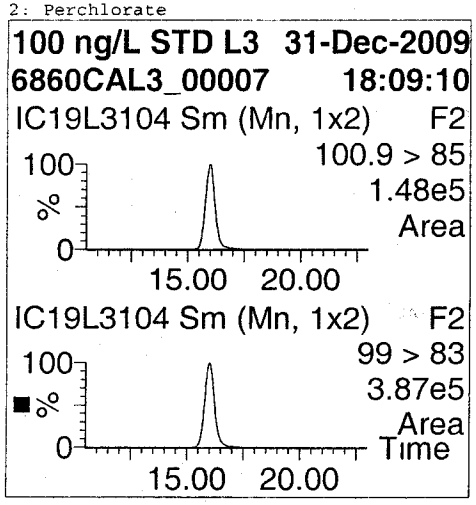
Printed: Wed Jan 20 13:43:05 2010

Name: IC19L3104
Text: 100 ng/L STD L3

1: 180 Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	180 Perchlorate	15.949	274212	bb	1.030	102.97	ic19L31	02/Jan/10	
2	Perchlorate	15.999	195232	bb	99.403	99.40	ic19L31	02/Jan/10	

Analyst: Jacqueline Bonnett

Table of Contents

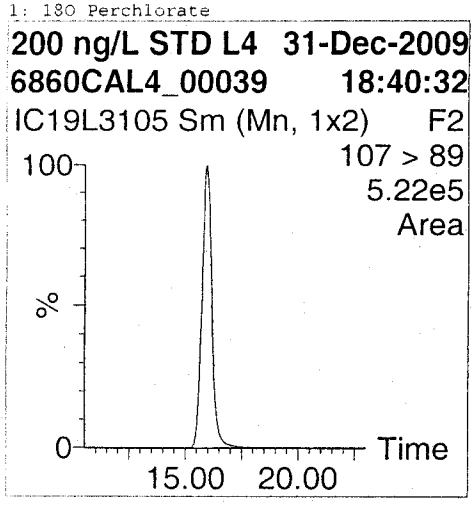
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1)
Last modified: Wed Jan 20 13:36:27 2010
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19L31
Last modified: Sat Jan 02 11:41:56 2010
Job Code:

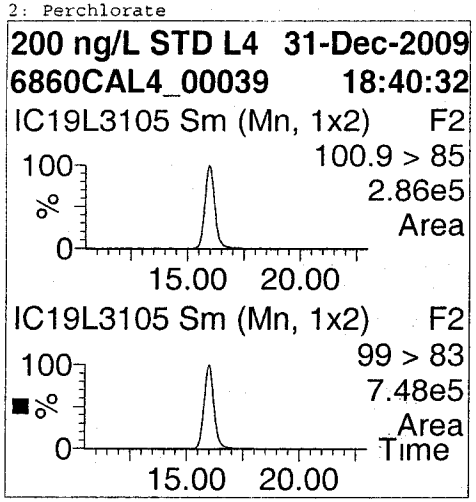
Printed: Wed Jan 20 13:43:05 2010

Name: IC19L3105
Text: 200 ng/L STD L4

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.949	262819	bb	0.987	98.69	ic19L31	02/Jan/10	
2	Perchlorate	15.999	373809	bb	200.389	100.19	ic19L31	02/Jan/10	

Analyst: Jacqueline Bonnett

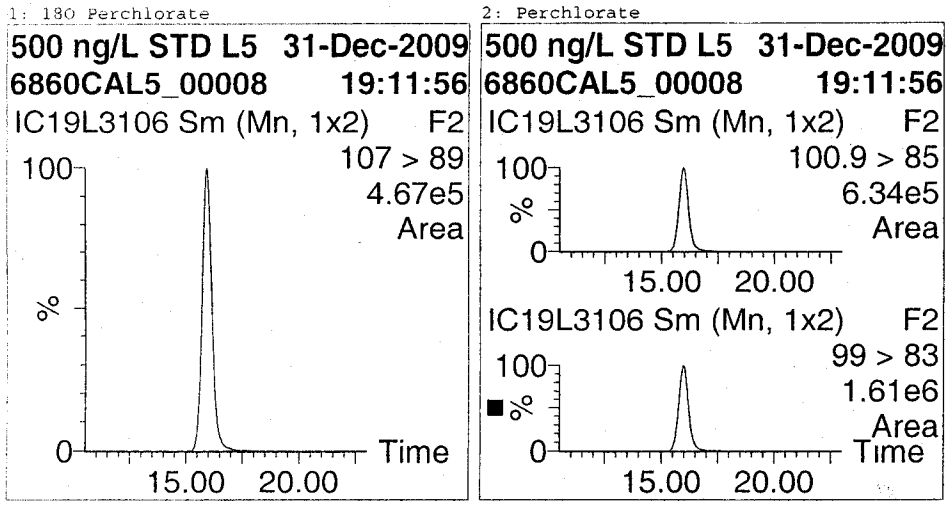
Table of Contents

Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1)
Last modified: Wed Jan 20 13:36:27 2010
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19L31
Last modified: Sat Jan 02 11:41:56 2010
Job Code:

Printed: Wed Jan 20 13:43:05 2010

Name: IC19L3106
Text: 500 ng/L STD L5



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	180 Perchlorate	15.924	231964	bb	0.871	87.10	ic19L31	02/Jan/10	
2	Perchlorate	15.974	803736	bb	490.784	98.16	ic19L31	02/Jan/10	

Analyst: Jacqueline Bonnett

Table of Contents

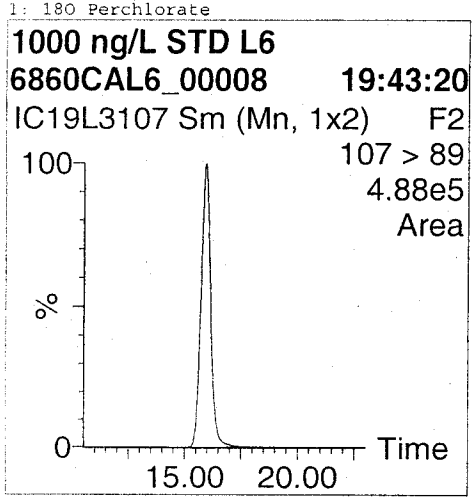
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1)
Last modified: Wed Jan 20 13:36:27 2010
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19L31
Last modified: Sat Jan 02 11:41:56 2010
Job Code:

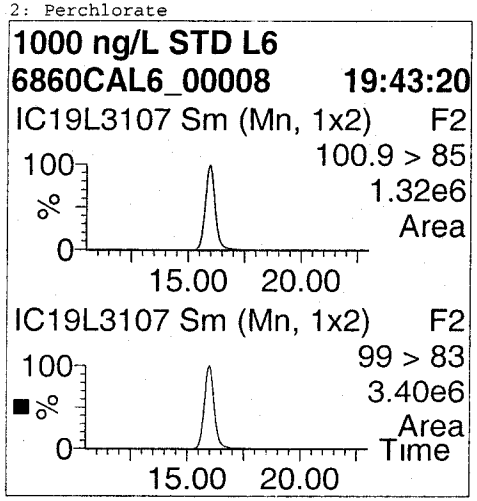
Printed: Wed Jan 20 13:43:05 2010

Name: IC19L3107
Text: 1000 ng/L STD L6

1: 180 Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	180 Perchlorate	15.924	243124	bb	0.913	91.29	ic19L31	02/Jan/10	
2	Perchlorate	15.974	1726384	bb	1007.696	100.77	ic19L31	02/Jan/10	

Analyst: Jacqueline Bonnett

Table of Contents

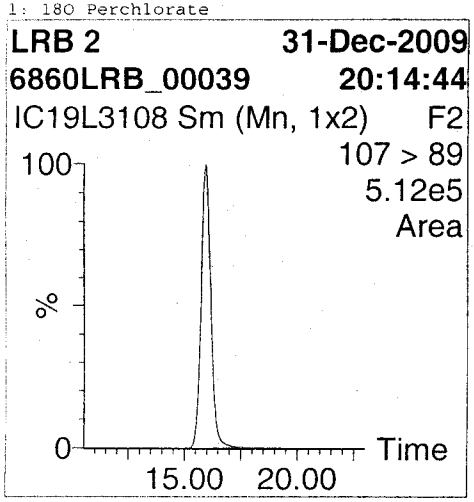
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1)
Last modified: Wed Jan 20 13:36:27 2010
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19L31
Last modified: Sat Jan 02 11:41:56 2010
Job Code:

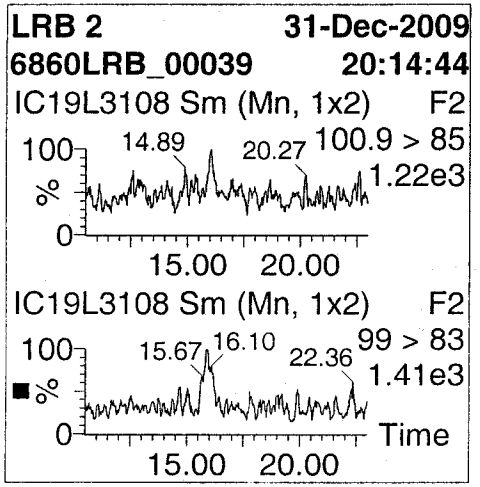
Printed: Wed Jan 20 13:43:05 2010

Name: IC19L3108
Text: LRB 2

1: 180 Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	180 Perchlorate	15.924	253994	bb	0.954	95.37	ic19L31	02/Jan/10	
2	Perchlorate						ic19L31	02/Jan/10	

Analyst: Jacqueline Bonnett

Table of Contents

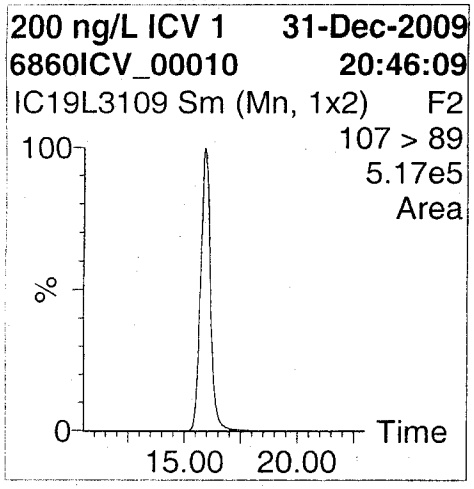
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1)
Last modified: Wed Jan 20 13:36:27 2010
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19L31
Last modified: Sat Jan 02 11:41:56 2010
Job Code:

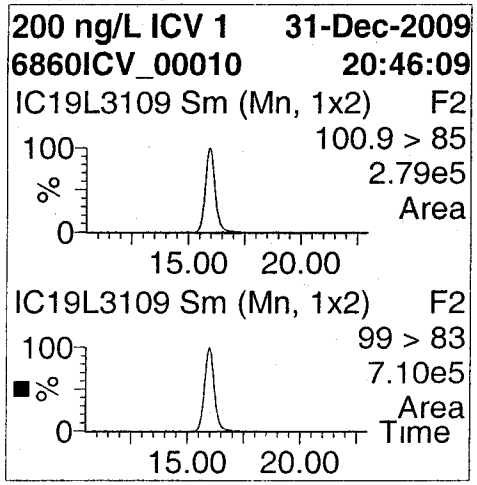
Printed: Wed Jan 20 13:43:05 2010

Name: IC19L3109
Text: 200 ng/L ICV 1

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.898	259197	bb	0.973	97.33	ic19L31	02/Jan/10	
2	Perchlorate	15.974	356002	bb	193.448	96.72	ic19L31	02/Jan/10	

Analyst: Jacqueline Bonnett

Table of Contents

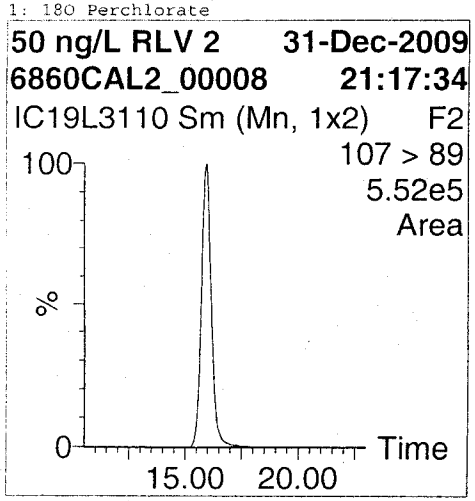
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1)
Last modified: Wed Jan 20 13:36:27 2010
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19L31
Last modified: Sat Jan 02 11:41:56 2010
Job Code:

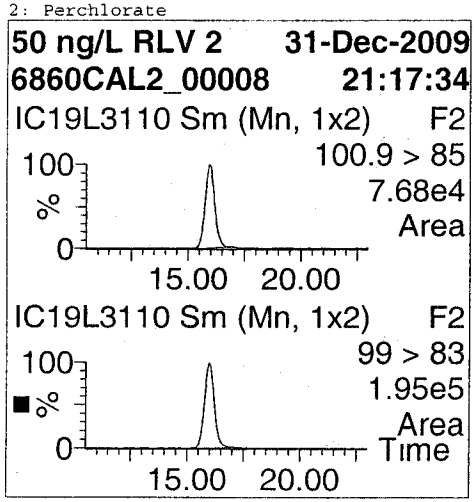
Printed: Wed Jan 20 13:43:05 2010

Name: IC19L3110
Text: 50 ng/L RLV 2

1: 180 Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	180 Perchlorate	15.924	277254	bb	1.041	104.11	ic19L31	02/Jan/10	
2	Perchlorate	15.974	97152	bb	48.000	96.00	ic19L31	02/Jan/10	

Analyst: Jacqueline Bonnett

Table of Contents

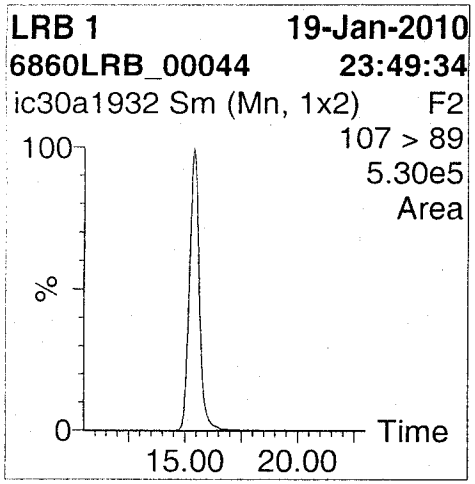
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1)
Last modified: Wed Jan 20 13:36:27 2010
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19L31
Last modified: Sat Jan 02 11:41:56 2010
Job Code:

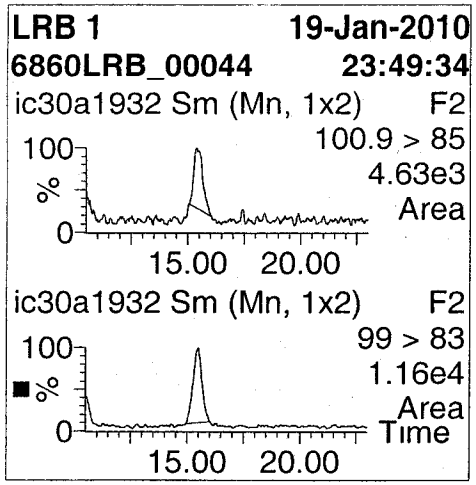
Printed: Wed Jan 20 13:43:05 2010

Name: ic30a1932
Text: LRB 1

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.394	268760	bb	1.009	100.92	ic19L31	02/Jan/10	
2	Perchlorate	15.495	4799	bb	0.721		ic19L31	02/Jan/10	

Analyst: Jacqueline Bonnett

Table of Contents

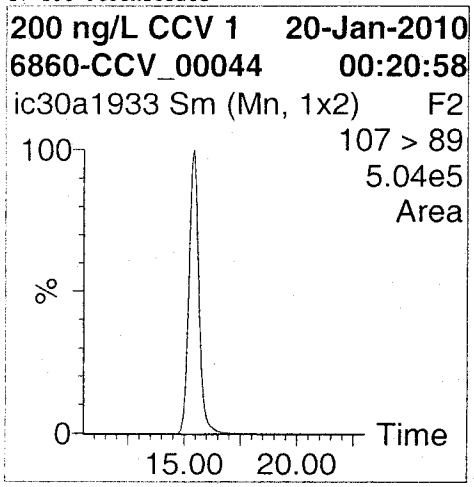
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1)
Last modified: Wed Jan 20 13:36:27 2010
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19L31
Last modified: Sat Jan 02 11:41:56 2010
Job Code:

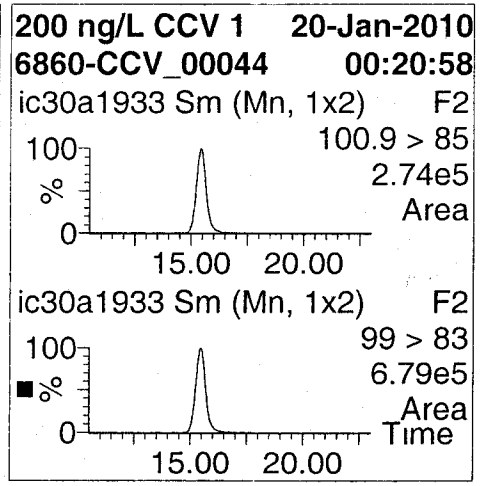
Printed: Wed Jan 20 13:43:05 2010

Name: ic30a1933
Text: 200 ng/L CCV 1

1: 180 Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	180 Perchlorate	15.394	258813	bb	0.972	97.18	ic19L31	02/Jan/10	
2	Perchlorate	15.469	348934	bb	189.855	94.93	ic19L31	02/Jan/10	

Analyst: Jacqueline Bonnett

Table of Contents

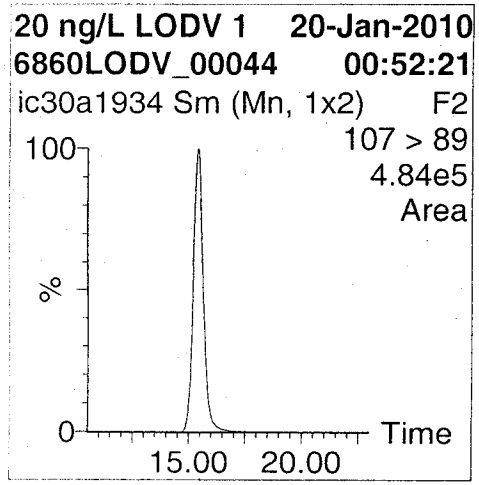
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1)
Last modified: Wed Jan 20 13:36:27 2010
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19L31
Last modified: Sat Jan 02 11:41:56 2010
Job Code:

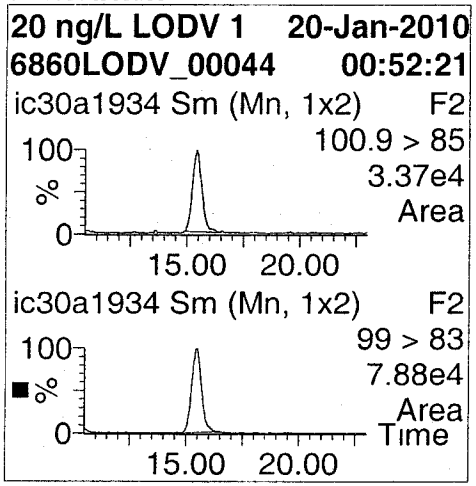
Printed: Wed Jan 20 13:43:05 2010

Name: ic30a1934
Text: 20 ng/L LODV 1

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.419	248880	bb	0.935	93.45	ic19L31	02/Jan/10	
2	Perchlorate	15.444	38804	bb	20.349	101.74	ic19L31	02/Jan/10	

Analyst: Jacqueline Bonnett

Table of Contents

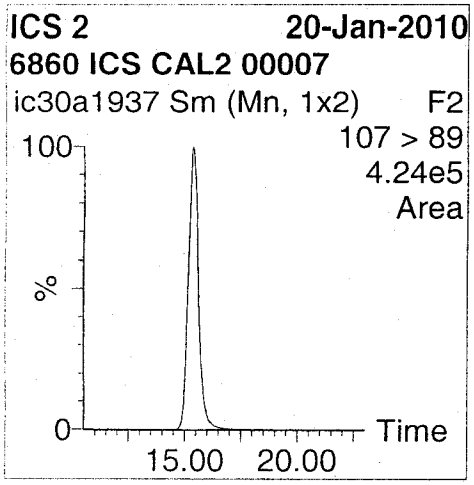
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1)
Last modified: Wed Jan 20 13:36:27 2010
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19L31
Last modified: Sat Jan 02 11:41:56 2010
Job Code:

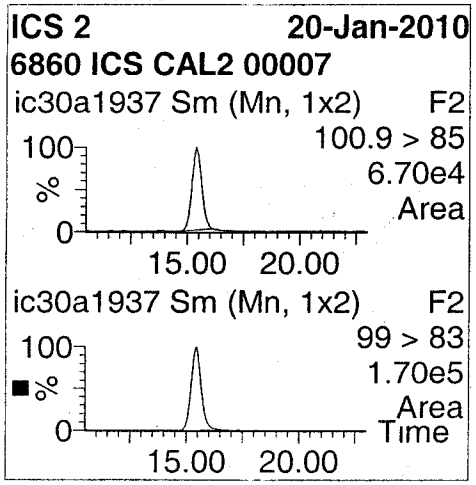
Printed: Wed Jan 20 13:43:05 2010

Name: ic30a1937
Text: ICS 2

1: 180 Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	180 Perchlorate	15.368	223055	bb	0.838	83.76	ic19L31	02/Jan/10	
2	Perchlorate	15.444	87268	bb	53.805	107.61	ic19L31	02/Jan/10	

Analyst: Jacqueline Bonnett

Table of Contents

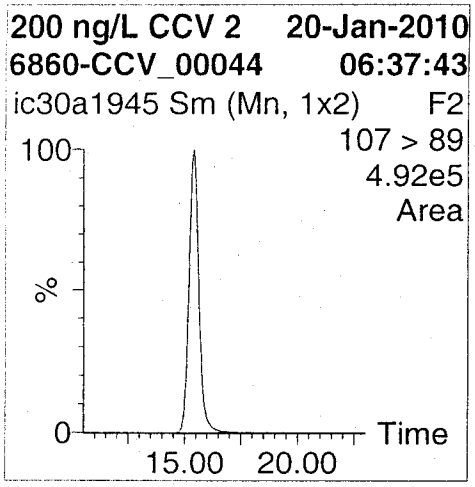
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1)
Last modified: Wed Jan 20 13:36:27 2010
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19L31
Last modified: Sat Jan 02 11:41:56 2010
Job Code:

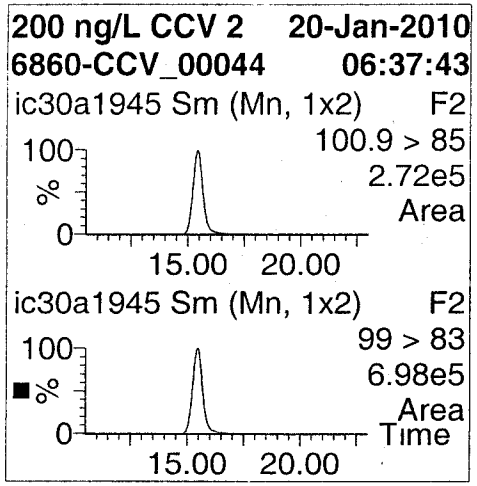
Printed: Wed Jan 20 13:43:05 2010

Name: ic30a1945
Text: 200 ng/L CCV 2

1: 180 Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	180 Perchlorate	15.393	249421	bb	0.937	93.66	ic19L31	02/Jan/10	
2	Perchlorate	15.444	357207	bb	201.788	100.89	ic19L31	02/Jan/10	

Analyst: Jacqueline Bonnett

Table of Contents

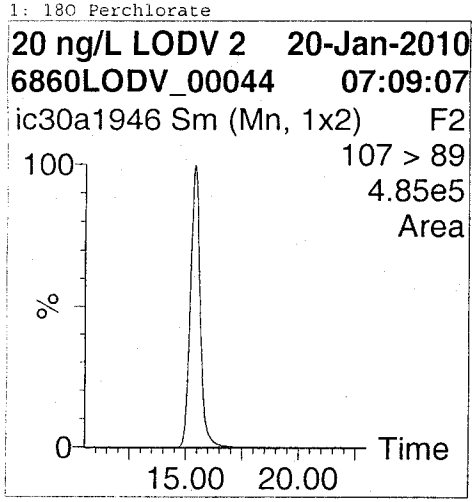
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1)
Last modified: Wed Jan 20 13:36:27 2010
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19L31
Last modified: Sat Jan 02 11:41:56 2010
Job Code:

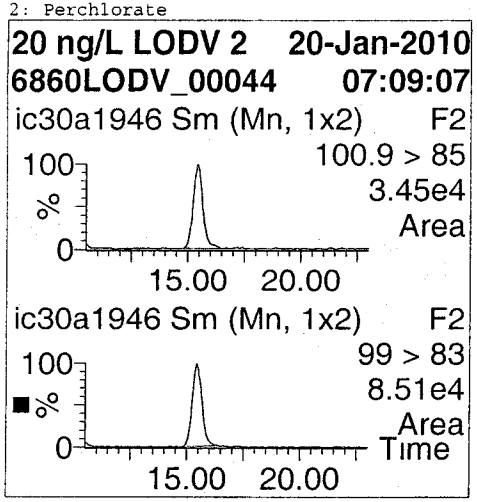
Printed: Wed Jan 20 13:43:05 2010

Name: ic30a1946
Text: 20 ng/L LODV 2

1: 180 Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	180 Perchlorate	15.394	244846	bb	0.919	91.94	ic19L31	02/Jan/10	
2	Perchlorate	15.444	41903	bb	22.514	112.57	ic19L31	02/Jan/10	

Analyst: Jacqueline Bonnett

Table of Contents

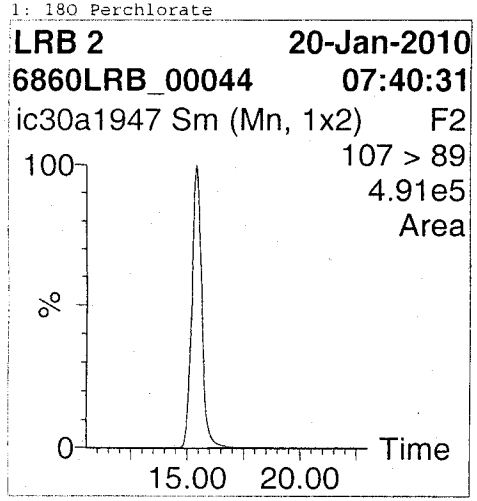
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1)
Last modified: Wed Jan 20 13:36:27 2010
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19L31
Last modified: Sat Jan 02 11:41:56 2010
Job Code:

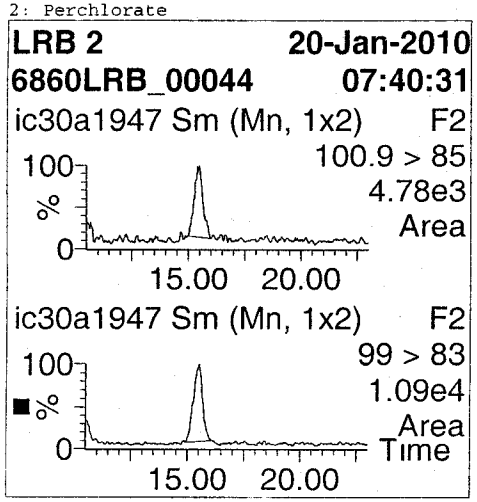
Printed: Wed Jan 20 13:43:05 2010

Name: ic30a1947
Text: LRB 2

1: 180 Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	180 Perchlorate	15.394	248595	bb	0.933	93.35	ic19L31	02/Jan/10	
2	Perchlorate	15.520	4674	bb	0.856		ic19L31	02/Jan/10	

Analyst: Jacqueline Bonnett

Table of Contents

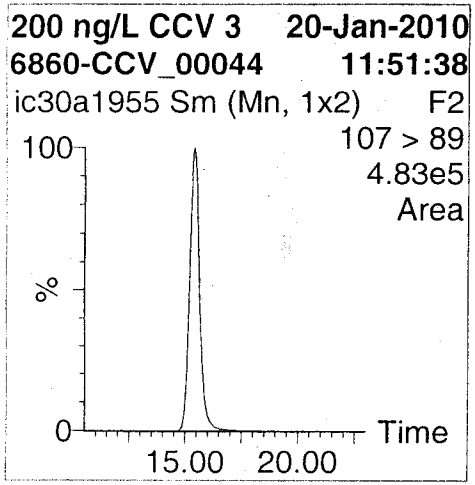
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1)
Last modified: Wed Jan 20 13:36:27 2010
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19L31
Last modified: Sat Jan 02 11:41:56 2010
Job Code:

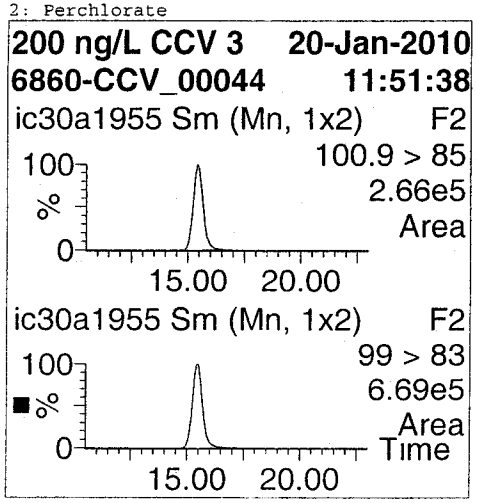
Printed: Wed Jan 20 13:43:05 2010

Name: ic30a1955
Text: 200 ng/L CCV 3

1: 180 Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	180 Perchlorate	15.394	246283	bb	0.925	92.48	ic19L31	02/Jan/10	
2	Perchlorate	15.444	345713	bb	197.747	98.87	ic19L31	02/Jan/10	

Analyst: Jacqueline Bonnett

Table of Contents

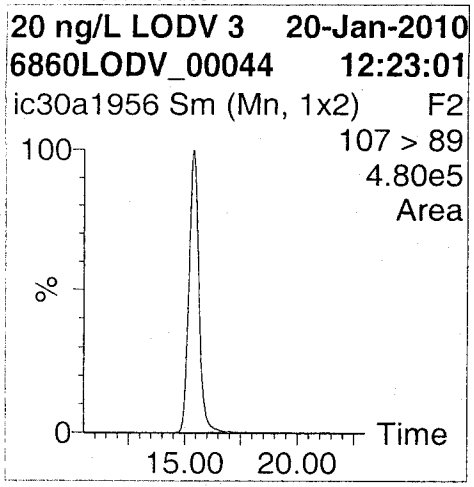
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1)
Last modified: Wed Jan 20 13:36:27 2010
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19L31
Last modified: Sat Jan 02 11:41:56 2010
Job Code:

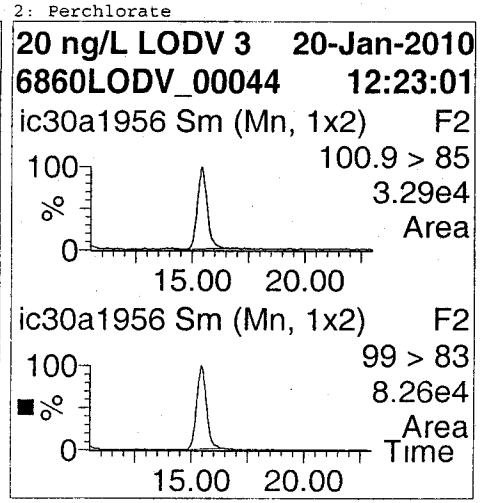
Printed: Wed Jan 20 13:43:05 2010

Name: ic30a1956
Text: 20 ng/L LODV 3

1: 180 Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	180 Perchlorate	15.394	245073	bb	0.920	92.02	ic19L31	02/Jan/10	
2	Perchlorate	15.444	40774	bb	21.836	109.18	ic19L31	02/Jan/10	

Analyst: Jacqueline Bonnett

Table of Contents

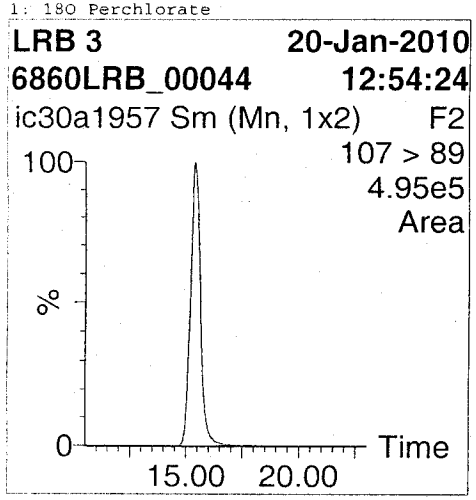
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1)
Last modified: Wed Jan 20 13:36:27 2010
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19L31
Last modified: Sat Jan 02 11:41:56 2010
Job Code:

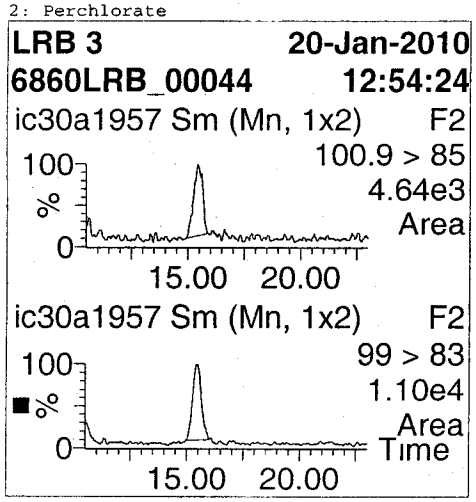
Printed: Wed Jan 20 13:43:05 2010

Name: ic30a1957
Text: LRB 3

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.394	252790	bb	0.949	94.92	ic19L31	02/Jan/10	
2	Perchlorate	15.419	4477	bb	0.700		ic19L31	02/Jan/10	

Analyst: Jacqueline Bonnett

Table of Contents

Sample List Report **MassLynx 4.0 SP4**

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1).SPL
Last Modified: Wednesday, January 20, 2010 1:36:27 PM Mountain Standard Time
Printed: Wednesday, January 20, 2010 1:39:06 PM Mountain Standard Time

Page Position (1, 1)

	File Name	Sample ID	File Text	Sample Type	Analyte ng/L	Extract mL
1	IC19L3101	6860LRB_00039	LRB 1	Blank	0	1.000000
2	IC19L3102	6860CAL1-LODV_00039	20 ng/L STD L1	Standard	20	1.000000
3	IC19L3103	6860CAL2_00008	50 ng/L STD L2	Standard	50	1.000000
4	IC19L3104	6860CAL3_00007	100 ng/L STD L3	Standard	100	1.000000
5	IC19L3105	6860CAL4_00039	200 ng/L STD L4	Standard	200	1.000000
6	IC19L3106	6860CAL5_00008	500 ng/L STD L5	Standard	500	1.000000
7	IC19L3107	6860CAL6_00008	1000 ng/L STD L6	Standard	1000	1.000000
8	IC19L3108	6860LRB_00039	LRB 2	Blank	0	1.000000
9	IC19L3109	6860ICV_00010	200 ng/L ICV 1	QC	200	1.000000
10	IC19L3110	6860CAL2_00008	50 ng/L RLV 2	QC	50	1.000000
11	ic30a1932	6860LRB_00044	LRB 1	Blank	0	1.000000
12	ic30a1933	6860-CCV_00044	200 ng/L CCV 1	QC	200	1.000000
13	ic30a1934	6860LODV_00044	20 ng/L LODV 1	QC	20	1.000000
14	ic30a1935	LR5XM1AA	R0A130000-366 MB	Blank	0	5.000000
15	ic30a1936	LR5XM1AC	R0A130000-366 LCS	QC	50	5.000000
16	ic30a1937	6860 ICS CAL2 00007	ICS 2	QC	50	1.000000
17	ic30a1938	LR0P21AD	D0A080444-001 10X	Analyte	0	5.000000
18	ic30a1939	LR1RT1AA	D0A080569-001 250X	Analyte	0	5.000000
19	ic30a1940	LR1RX1AA	D0A080569-002 250X	Analyte	0	5.000000
20	ic30a1941	LR1R01AA	D0A080569-003 100X	Analyte	0	5.000000
21	ic30a1942	LR1TP1AA	D0A080569-010 200X	Analyte	0	5.000000
22	ic30a1943	LR1TP1AC	D0A080569-010 MS 200X	QC	50	5.000000
23	ic30a1944	LR1TP1AD	D0A080569-010 MSD 200X	QC	50	5.000000
24	ic30a1945	6860-CCV_00044	200 ng/L CCV 2	QC	200	1.000000
25	ic30a1946	6860LODV_00044	20 ng/L LODV 2	QC	20	1.000000
26	ic30a1947	6860LRB_00044	LRB 2	Blank	0	1.000000
27	ic30a1948	LR1R11AA	D0A080569-004 100X	Analyte	0	5.000000
28	ic30a1949	LR1R31AA	D0A080569-005 100X	Analyte	0	5.000000
29	ic30a1950	LR1R41AA	D0A080569-006 100X	Analyte	0	5.000000
30	ic30a1951	LR1TJ1AA	D0A080569-007 200X	Analyte	0	5.000000
31	ic30a1952	LR1TK1AA	D0A080569-008 100X	Analyte	0	5.000000
32	ic30a1953	LR1TM1AA	D0A080569-009 50X	Analyte	0	5.000000
33	ic30a1954	LR1TV1AA	D0A080569-011 100X	Analyte	0	5.000000
34	ic30a1955	6860-CCV_00044	200 ng/L CCV 3	QC	200	1.000000
35	ic30a1956	6860LODV_00044	20 ng/L LODV 3	QC	20	1.000000
36	ic30a1957	6860LRB_00044	LRB 3	Blank	0	1.000000

Sample List Report **MassLynx 4.0 SP4**

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1).SPL
Last Modified: Wednesday, January 20, 2010 1:36:27 PM Mountain Standard Time
Printed: Wednesday, January 20, 2010 1:39:06 PM Mountain Standard Time

Page Position (2, 1)

Sample mL or g	Dilution	Vial	Inject Volume	MS Tune File	Inlet File	MS File
1.000000	1.000000	1	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	1.000000	1	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	1.000000	1	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	1.000000	1	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	1.000000	1	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	1.000000	1	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	1.000000	1	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	1.000000	1	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
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1.000000	1.000000	1	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
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5.000000	100.000000	1	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
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1.000000	1.000000	1	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	1.000000	1	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms

Sample List Report **MassLynx 4.0 SP4**

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1).SPL
Last Modified: Wednesday, January 20, 2010 1:36:27 PM Mountain Standard Time
Printed: Wednesday, January 20, 2010 1:39:06 PM Mountain Standard Time

Page Position (3, 1)

Process	s5
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FBAT_ML_FileMover	H:\LC_LCMS1\AutoProc
FBAT_ML_FileMover	H:\LC_LCMS1\AutoProc
FBAT_ML_FileMover	H:\LC_LCMS1\AutoProc

Chain of Custody Record

TAL-4124-280 (1007)

Sampler ID _____

Temperature on Receipt 2.3 IR fm 1/8/10

Drinking Water? Yes ☐ No ☑

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TA-COC-07

Client: TETRA TECH, INC.	Project Manager: GINGER.MULLINS@TETRATECH.COM	Date: 1/7/10	Chain of Custody Number: 100392
Address: 800 OAK RIDGE TURNPIKE A-600	Telephone Number (Area Code)/Fax Number: 865-599-2349	Lab Number	Page 1 of 2
City: OAK RIDGE; State: TN; Zip Code: 37830	Site Contact: G. MULLINS	Lab Contact: L. DRIELL	
Project Name and Location (State): HOLLOMAN AFB, NM	Carrier/Waybill Number: 8641 1005 2195 FEDEX		
Contract/Purchase Order/Quote No.: 80188 LISA DRIELL			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil		Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH		Analysis (Attach list if more space is needed): PERCHLORATE 6860											Special Instructions/ Conditions of Receipt
MW39-10-010610	1/6/10	1113		X				X							X											
MW39-09-010610	1/6/10	1125		X				X							X											
MW39-11-010610	1/6/10	1330		X				X							X											
MW39-06D-010610	1/6/10	1436		X				X							X											
MW39-12-010610	1/6/10	1445		X				X							X											
MW39-06-010610	1/6/10	1555		X				X							X											
MW39-08-010610	1/6/10	1557		X				X							X											
MW39-DUP01-010610	1/6/10	—		X				X							X											
MW39-02-010710	1/7/10	0940		X				X							X											
MW39-07-010710	1/7/10	0955		X				X							X											
MW39-07-MS-010710	1/7/10	0955		X				X							X											
MW39-07-MSD-010710	1/7/10	0955		X				X							X											

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☒ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	1/7/10	1100	1. Received By	1/7/10	1100
2. Relinquished By	1/7/10	1400	2. Received By FEDEX	1/7/10	1400
3. Relinquished By			3. Received By	1/8/10	0930

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Table of Contents

Chain of Custody Record

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TA-COC-07 54

TAL-4124-280 (0508)

Client: TETRA TECH, INC.	Project Manager: GINGER.MULLINS@TETRATECH.COM	Date: 1/7/10	Chain of Custody Number: 123573
Address: 800 OAK RIDGE TURNPIKE A-600	Telephone Number (Area Code)/Fax Number: 865-599-2349		Lab Number:
City: OAK RIDGE; State: TN; Zip Code: 37830	Site Contact: G. MULLINS	Lab Contact: L. URIELL	Page 2 of 2
Project Name and Location (State): HOLLOMAN AFB, NM	Carrier/Waybill Number: 864110052195		
Contract/Purchase Order/Quote No.: 80188 LISA URIELL			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis (Attach list if more space is needed): PERCHLORATE 6860	Special Instructions/ Conditions of Receipt
MW39-05-010710	1/7/10	1030		X			X						X	

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☒ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	1/7/10	1100	1. Received By	1/7/10	1100
2. Relinquished By	1/7/10	1400	2. Received By: FEDEX	1/7/10	1400
3. Relinquished By			3. Received By	1/8/10	0930

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Table of Contents

TestAmerica

TestAmerica Denver

Sample Receiving Checklist

Lot #: DOA080569 Date Time Received: 1/8/10 0930

Company Name & Sampling Site: Tetra-Tech Holloman AFB

PM to Complete This Section: *Yes* *No*
Residual chlorine check required: ☐ ☒

Quarantined : *Yes* ☐ *No* ☒

MIS prep : *Yes* ☐ *No* ☒

Quote #: 80188

Special Instructions:

Time Zone:
• EDT/EST • CDT/CST • MDT/MST • PDT/PST • OTHER

Unpacking Checks:

Cooler #(s): _____ _____ _____ _____ _____ _____ _____ _____

Temperatures (°C): 2.3 _____ _____ _____ _____ _____ _____ _____

N/A	Yes	No		Initials
☐	☒	☐	1. Cooler seals intact? (N/A if hand delivered) If no, document on CUR.	
	☒	☐	2. Coolers scanned for radiation. Is the reading ≤ to background levels? Yes: ✓ No:____	
	☒	☐	3. Chain of custody present? If no, document on CUR.	
	☐	☒	4. Bottles broken and/or are leaking? If yes, document on CUR.	
	☐	☒	5. Multiphasic samples obvious? If yes, document on CUR.	
	☒	☐	6. Proper container & preservatives used? (ref. Attachment D of SOP# DV-QA-0003) If no, document on CUR.	
☒	☐	☐	7. pH of all samples checked and meet requirements? If no, document on CUR.	
	☒	☐	8. Sufficient volume provided for all analysis requested? (ref. Attachment D of SOP# DV-QA-0003) If no, document on CUR, and contact PM before proceeding.	
	☒	☐	9. Did chain of custody agree with labels ID and samples received? If no, document on CUR.	
☒	☐	☐	10. Were VOA samples without headspace? If no, document on CUR.	
☒	☐	☐	11. Were VOA vials preserved? Preservative ☐HCl ☐4±2°C ☐Sodium Thiosulfate ☐ Ascorbic Acid	
	☐	☒	12. Did samples require preservation with sodium thiosulfate?	
☒	☐	☐	13. If yes to #11, did the samples contain residual chlorine? If yes, document on CUR.	
☒	☐	☐	14. Sediment present in dissolved/filtered bottles? If yes, document on CUR.	
☒	☒	☐	15. Is sufficient volume provided for client requested MS, MSD or matrix duplicates? If no, document on CUR, and contact PM before proceeding.	
	☐	☒	16. Receipt date(s) > 48 hours past the collection date(s)? If yes, notify PA/PM.	
	☐	☒	17. Are analyses with short holding times requested?	
	☐	☒	18. Was a quick Turn Around (TAT) requested?	

TestAmerica Denver

Sample Receiving Checklist

Lot # DOA080569

Login Checks:

Initials JM

N/A	Yes	No		
	☒	☐	19.	Sufficient volume provided for all analysis requested? (ref. Attachment D of SOP# DV-QA-0003) If no, document on CUR, and contact PM before proceeding.
☐	☒	☐	20.	Is sufficient volume provided for client requested MS, MSD or matrix duplicates? If no, document on CUR, and contact PM before proceeding.
	☒	☐	21.	Did the chain of custody includes "received by" and "relinquished" by signatures, dates, and times?
☐	☒	☐	22.	Were special log in instructions read and followed?
☒	☐	☐	23.	Were AFCEE metals logged for refrigerated storage?
	☒	☐	24.	Were tests logged checked against the COC? Which samples were confirmed? 1
☒	☐	☐	25.	Was a Rush form completed for quick TAT?
☒	☐	☐	26.	Was a Short Hold form completed for any short holds?
	☐	☒	27.	Were special archiving instructions indicated in the General Comments? If so, what were they?

Labeling and Storage Checks:

Initials [illegible]

N/A	Yes	No		
☒	☐	☐	28.	Was the subcontract COC signed and sent with samples to bottle prep?
	☒	☐	29.	Were sample labels double-checked by a second person?
☐	☒	☐	30.	Were sample bottles and COC double checked for dissolved/filtered metals by a second person?
	☒	☐	31.	Did the sample ID, Date, and Time from label match what was logged?
☒	☐	☐	32.	Were stickers for special archiving instructions affixed to each box? See #27
☒	☐	☐	33.	Were AFCEE metals stored refrigerated?

Document any problems or discrepancies and the actions taken to resolve them on a Condition Upon Receipt Anomaly Report (CUR).

IC/MS/MS

Supporting Documentation

Sample Sequence, Chromatograms/Mass Spectra

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Lot ID: DOA080569

Client: Tetra Tech

Method: 6860

Associated Samples: 1-11

Batch #(s): 0013366

I certify that, to the best of my knowledge, the attached package represents a complete and accurate copy of the original data.

Signature/Date: Sme 1-20-10

IC/MS/MS SEMIVOLATILE ORGANIC EXTRACTION LOG SHEETS

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

RQC058

TestAmerica Laboratories, Inc.
EXTRACTION BENCH WORKSHEET

Run Date: 1/20/10
Time: 15:18:20

LEV 1	LEV 2		LEV 1	LEV 2	
_	_	Blank	_	_	Weights/Volumes
_	_	Check	_	_	Spike & Surrogate Worksheet
_	_	MS/MSD	_	_	Vial contains correct volume
			_	_	Labels, greenbars, worksheets
			_	_	computer batch: correct & all match
			_	_	Anomalies to Extraction Method

_ Expanded Deliverable
_ COC Completed
_ Bench Sheet Copied
_ Package Submitted to AnalyticalGroup
_ Bench Sheet Copied per COC

Extractionist: _____
_____

Concentrationist: _____
_____

Reviewer/Date: _____ / 0/00/00

****
* *
* **QC BATCH: 0013366** *
* *
****

PREP DATE: 1/13/10 15:30
COMP DATE: 1/13/10 16:30

SW846 6860 Perchlorate
NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	PH"S INIT	PH"S ADJ1	PH"S ADJ2	SOLVENTS EXTRACTION	SOLVENTS VOL	SOLVENTS EXCHANGE	SOLVENTS VOL	SPIKE STANDARD/ SURROGATE ID
0/00/00	1/18/10	D0A080444-001 **LR0P2-1-AD**	R	88	ZU	WATER	**5** 5.00mL	NA	NA	NA		.0		.0	50 UL 6860_IS 00005
COMMENTS:															
0/00/00	1/27/10	D0A080569-001 **LR1RT-1-AA**	D	88	ZU	WATER	**5** 5.00mL	NA	NA	NA		.0		.0	50 UL 6860_IS 00005
COMMENTS:															
0/00/00	1/27/10	D0A080569-002 **LR1RX-1-AA**	D	88	ZU	WATER	**5** 5.00mL	NA	NA	NA		.0		.0	50 UL 6860_IS 00005
COMMENTS:															
0/00/00	1/27/10	D0A080569-003 **LR1R0-1-AA**	D	88	ZU	WATER	**5** 5.00mL	NA	NA	NA		.0		.0	50 UL 6860_IS 00005
COMMENTS:															
0/00/00	1/27/10	D0A080569-004 **LR1R1-1-AA**	D	88	ZU	WATER	**5** 5.00mL	NA	NA	NA		.0		.0	50 UL 6860_IS 00005
COMMENTS:															
0/00/00	1/27/10	D0A080569-005 **LR1R3-1-AA**	D	88	ZU	WATER	**5** 5.00mL	NA	NA	NA		.0		.0	50 UL 6860_IS 00005
COMMENTS:															
0/00/00	1/27/10	D0A080569-006 **LR1R4-1-AA**	D	88	ZU	WATER	**5** 5.00mL	NA	NA	NA		.0		.0	50 UL 6860_IS 00005
COMMENTS:															

RQC058

TestAmerica Laboratories, Inc.
EXTRACTION BENCH WORKSHEET

Run Date: 1/20/10
Time: 15:18:20

****
* QC BATCH: 0013366 *
****

PREP DATE: 1/13/10 15:30
COMP DATE: 1/13/10 16:30

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJ1	ADJ2	SOLVENTS EXTRACTION	VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
0/00/00	1/27/10	D0A080569-007 **LR1TJ-1-AA**	D	88	ZU	WATER	**5** 5.00mL	NA	NA	NA		.0		.0	50 UL 6860_IS 00005
COMMENTS:															
0/00/00	1/27/10	D0A080569-008 **LR1TK-1-AA**	D	88	ZU	WATER	**5** 5.00mL	NA	NA	NA		.0		.0	50 UL 6860_IS 00005
COMMENTS:															
0/00/00	1/27/10	D0A080569-009 **LR1TM-1-AA**	D	88	ZU	WATER	**5** 5.00mL	NA	NA	NA		.0		.0	50 UL 6860_IS 00005
COMMENTS:															
0/00/00	1/27/10	D0A080569-010 **LR1TP-1-AA**	D	88	ZU	WATER	**5** 5.00mL	NA	NA	NA		.0		.0	50 UL 6860_IS 00005
COMMENTS:															
0/00/00	1/27/10	D0A080569-010 **LR1TP-1-ACS**	D	88	ZU	WATER	**5** 5.00mL	NA	NA	NA		.0		.0	50 UL 6860LCSSPKH20 0000 50 UL 6860_IS 00005
COMMENTS:															
0/00/00	1/27/10	D0A080569-010 **LR1TP-1-ADD**	D	88	ZU	WATER	**5** 5.00mL	NA	NA	NA		.0		.0	50 UL 6860LCSSPKH20 0000 50 UL 6860_IS 00005
COMMENTS:															
0/00/00	1/27/10	D0A080569-011 **LR1TV-1-AA**	D	88	ZU	WATER	**5** 5.00mL	NA	NA	NA		.0		.0	50 UL 6860_IS 00005
COMMENTS:															
0/00/00	0/00/00	R0A130000-366 **LR5XM-1-AAB**		88	ZU	WATER	**5** 5.00mL	NA	NA	NA		.0		.0	50 UL 6860_IS 00005
COMMENTS:															
0/00/00	0/00/00	R0A130000-366 **LR5XM-1-ACC**		88	ZU	WATER	**5** 5.00mL	NA	NA	NA		.0		.0	50 UL 6860LCSSPKH20 0000 50 UL 6860_IS 00005
COMMENTS:															

R = RUSH C = CLP
E = EPA 600 D = EXP.DEL)
M = CLIENT REQ MS/MSD
↕

NUMBER OF WORK ORDERS IN BATCH: 16

Table of Contents

IC/MS/MS SEMIVOLATILE STANDARD DATA

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Calibration Information

LC/MS, LC/MS/MS, GC/CI/MS/MS, IC/MS/MS

(Circle which instrument type)

Denver Method: DV-LC-24

EPA Method: 6860

Instrument ID: LCMS 1

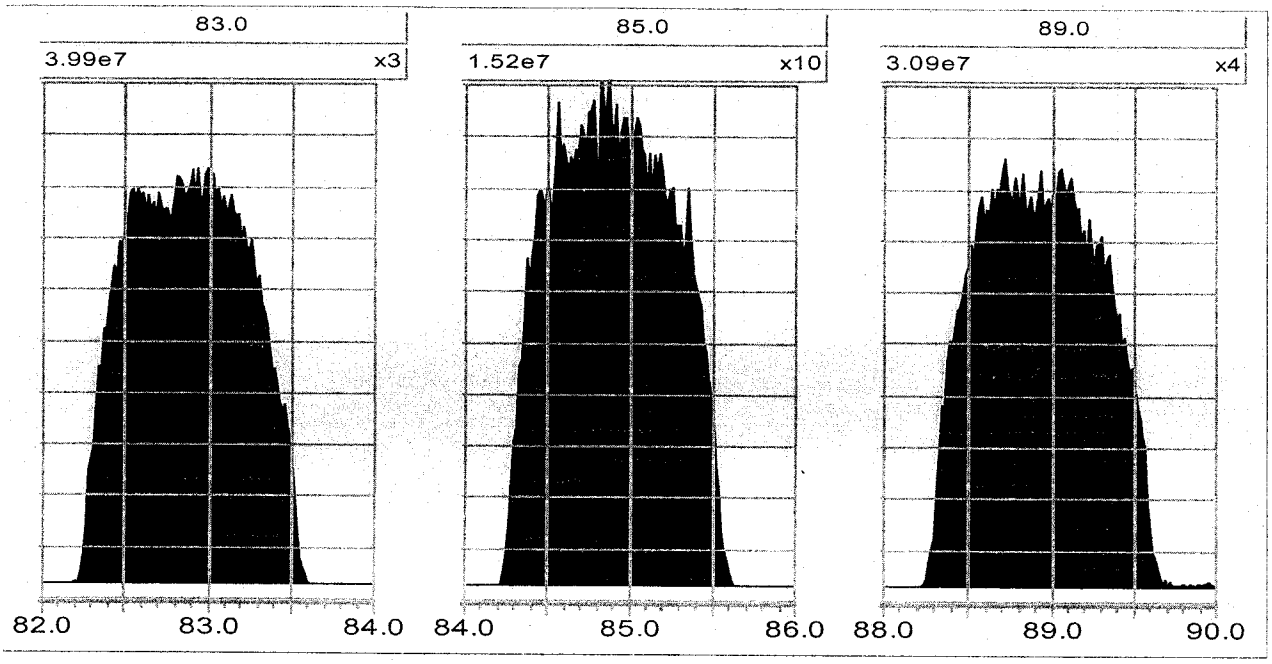
Batch Number : 0013366

Date Analyzed: 1-20-10

Tune Parameters **MassLynx 4.0 SP4** Page 1 of 1

File: C:\MassLynx 2010\IC Perchlorate.PRO\ACQUDB\ICPerchlorate_jeff.ipr

Printed: Tuesday, January 19, 2010 11:22:31 Mountain Standard Time



Type	Start Mass	End Mass	Set Mass
Daughter Scan	82	84	99
Daughter Scan	84	86	101
Daughter Scan	88	90	107

Source (ES-)	Settings	Readbacks
Capillary (kV)	0.25	-0.21
Cone (V)	80	-82
Hex 1 (V)	0.4	
Aperture (V)	0.1	
Hex 2 (V)	1.0	
Source Temperature (°C)	120	121
Desolvation Temperature (°C)	500	498
Cone Gas Flow (L/Hr)	29	
Desolvation Gas Flow (L/Hr)	734	

Analyser	Settings	Readbacks
LM 1 Resolution	10.0	
HM 1 Resolution	8.0	
Ion Energy 1	1.0	
Entrance	-2	23
Collision	25	25
Exit	1	25
LM 2 Resolution	10.0	
HM 2 Resolution	8.0	
Ion Energy 2	1.0	
Multiplier (V)	700	-695

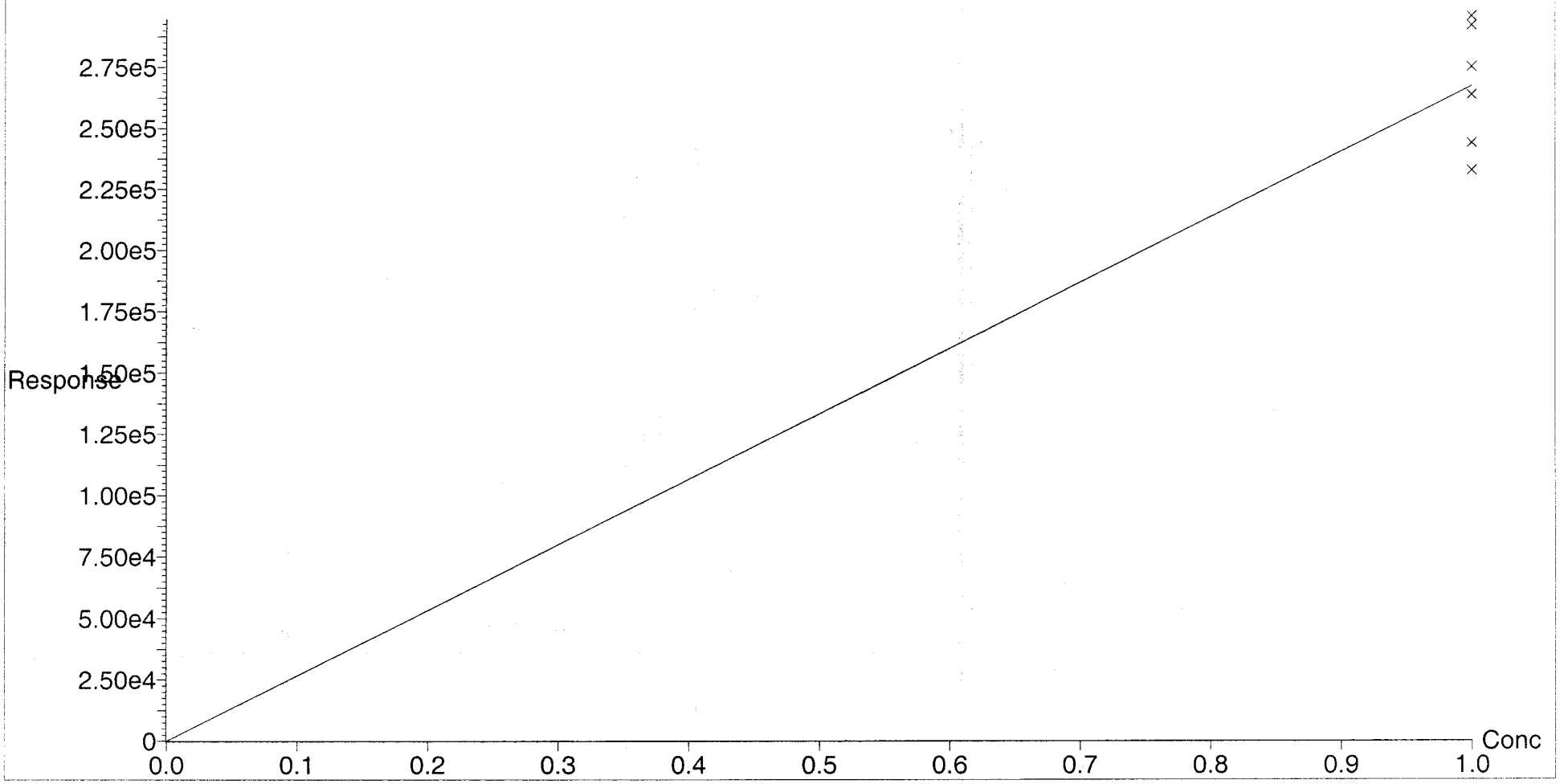
Pressure Gauges	
Collision Cell Pressure(mbar)	7.42e-3
Analyser Pressure (mbar)	OFF

MUX Configuration	
Probe	Standard

Quantify Calibration Report
IC Perchlorate Analysis

Calibration: C:\MassLynx 2010\IC Perchlorate.PRO\CurveDB\ic19L31
Last modified: Sat Jan 02 11:42:16 2010
Printed: Wed Jan 20 13:43:05 2010

Compound 1 name: 18O Perchlorate Method File: ic19L31
Response Factor: 266313
RRF SD: 25338.8, % Relative SD: 9.51470
Response type: External Std, Area
Curve type: RF

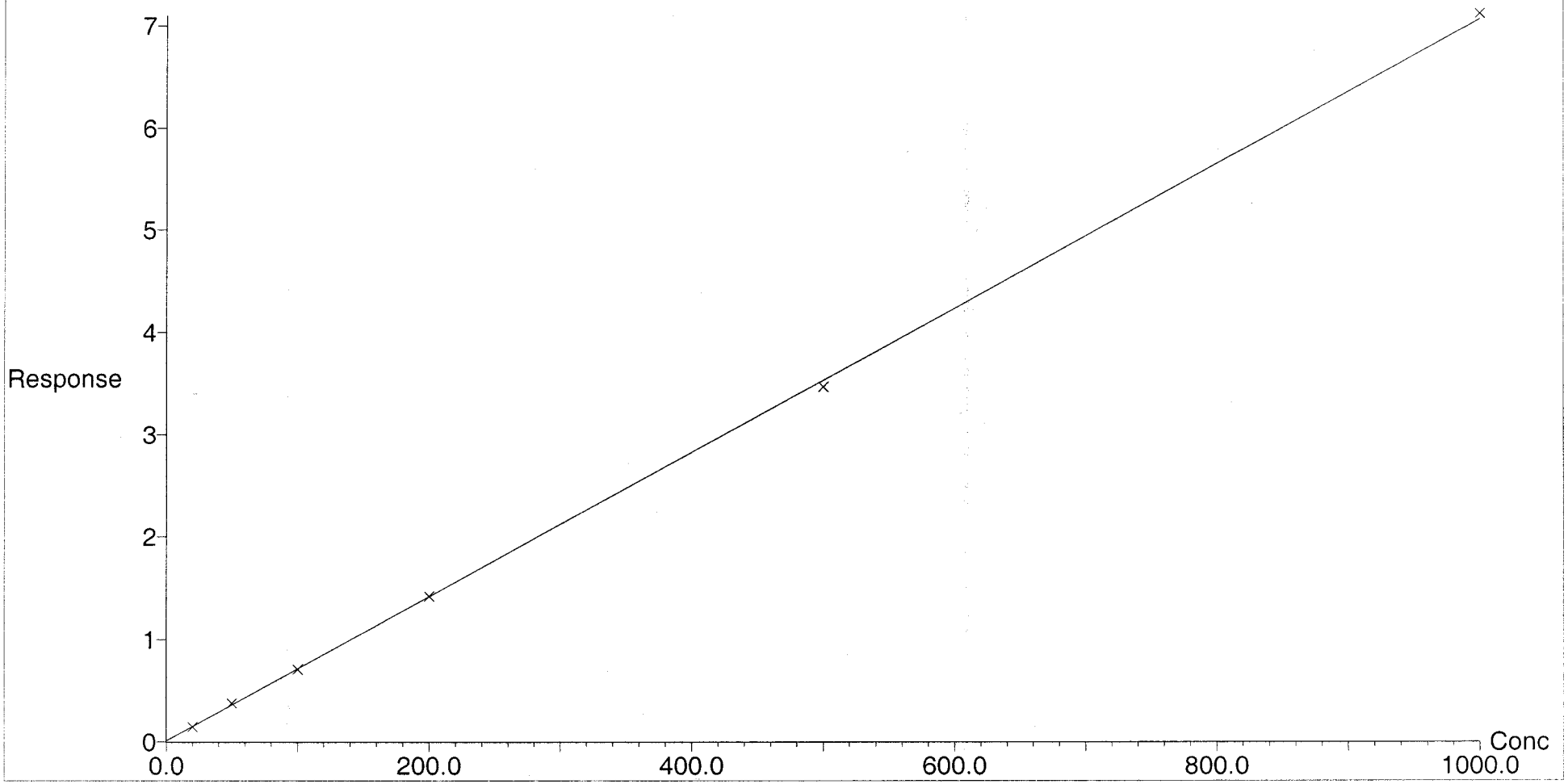


Analyst: Jacqueline Bonnett

Quantify Calibration Report
IC Perchlorate Analysis

Calibration: C:\MassLynx 2010\IC Perchlorate.PRO\CurveDB\ic19L31
Last modified: Sat Jan 02 11:42:16 2010
Printed: Wed Jan 20 13:43:05 2010

Compound 2 name: Perchlorate Method File: ic19L31
Coefficient of Determination: 0.999747
Calibration curve: 0.00703393 * x + 0.0127826
Response type: Internal Std (Ref 1), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Analyst: Jacqueline Bonnett

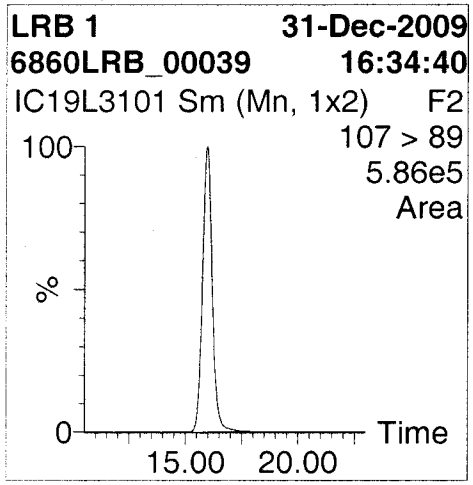
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1)
Last modified: Wed Jan 20 13:36:27 2010
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19L31
Last modified: Sat Jan 02 11:41:56 2010
Job Code:

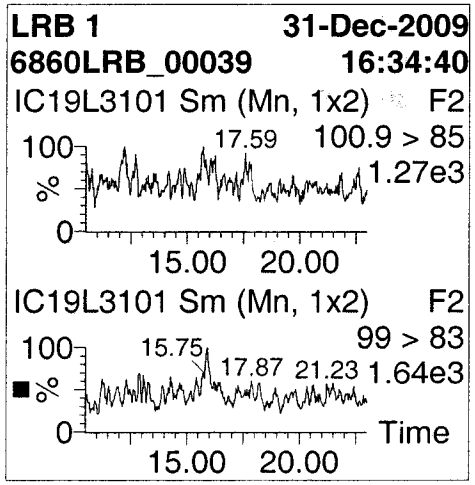
Printed: Wed Jan 20 13:43:05 2010

Name: IC19L3101
Text: LRB 1

1: 180 Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	180 Perchlorate	15.949	293362	bb	1.102	110.16	ic19L31	02/Jan/10	
2	Perchlorate						ic19L31	02/Jan/10	

Analyst: Jacqueline Bonnett

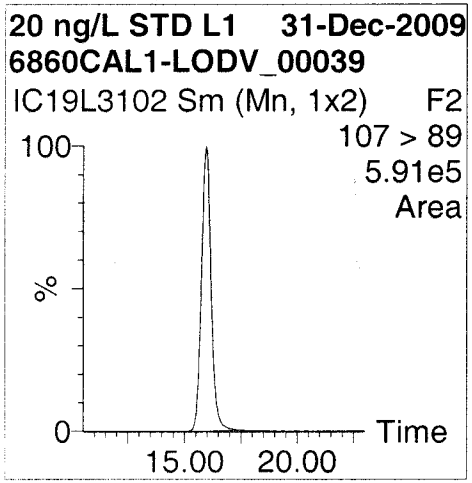
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1)
Last modified: Wed Jan 20 13:36:27 2010
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19L31
Last modified: Sat Jan 02 11:41:56 2010
Job Code:

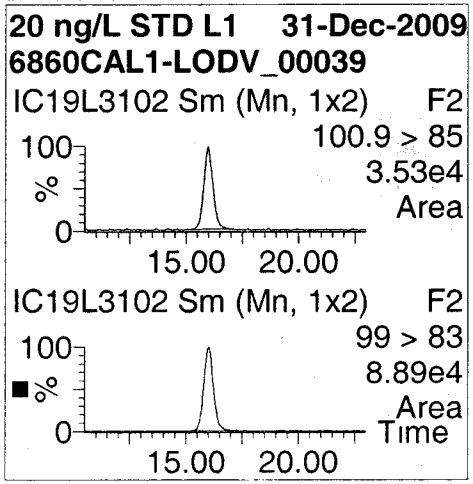
Printed: Wed Jan 20 13:43:05 2010

Name: IC19L3102
Text: 20 ng/L STD L1

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.949	294685	bb	1.107	110.65	ic19L31	02/Jan/10	
2	Perchlorate	16.024	43855	bb	19.340	96.70	ic19L31	02/Jan/10	

Analyst: Jacqueline Bonnett

Table of Contents

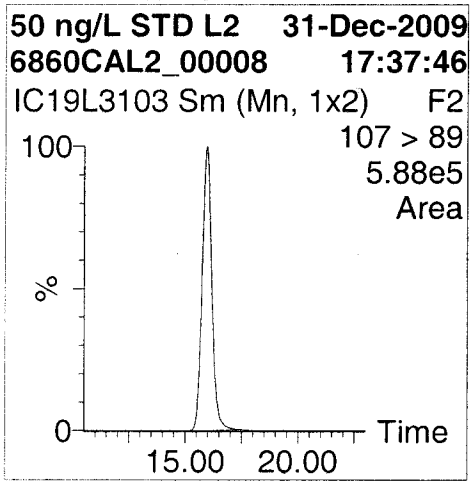
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1)
Last modified: Wed Jan 20 13:36:27 2010
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19L31
Last modified: Sat Jan 02 11:41:56 2010
Job Code:

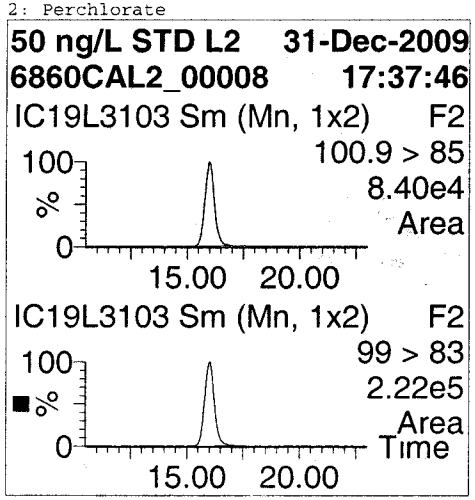
Printed: Wed Jan 20 13:43:05 2010

Name: IC19L3103
Text: 50 ng/L STD L2

1: 180 Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	180 Perchlorate	15.974	291073	bb	1.093	109.30	ic19L31	02/Jan/10	
2	Perchlorate	16.025	110978	bb	52.387	104.77	ic19L31	02/Jan/10	

Analyst: Jacqueline Bonnett

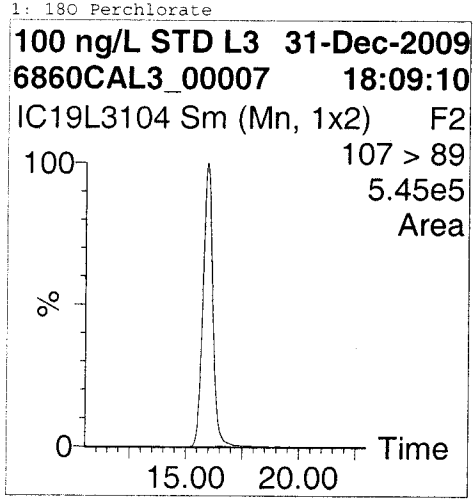
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1)
Last modified: Wed Jan 20 13:36:27 2010
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19L31
Last modified: Sat Jan 02 11:41:56 2010
Job Code:

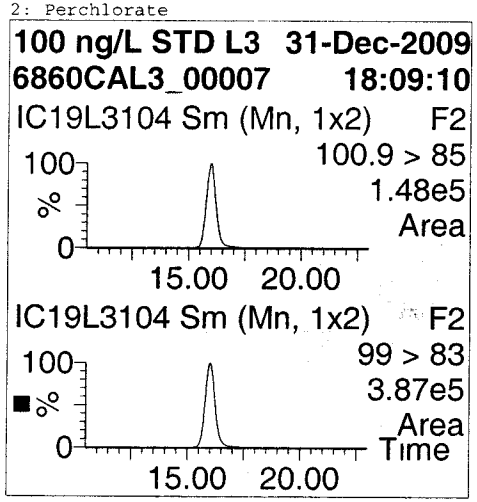
Printed: Wed Jan 20 13:43:05 2010

Name: IC19L3104
Text: 100 ng/L STD L3

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.949	274212	bb	1.030	102.97	ic19L31	02/Jan/10	
2	Perchlorate	15.999	195232	bb	99.403	99.40	ic19L31	02/Jan/10	

Analyst: Jacqueline Bonnett

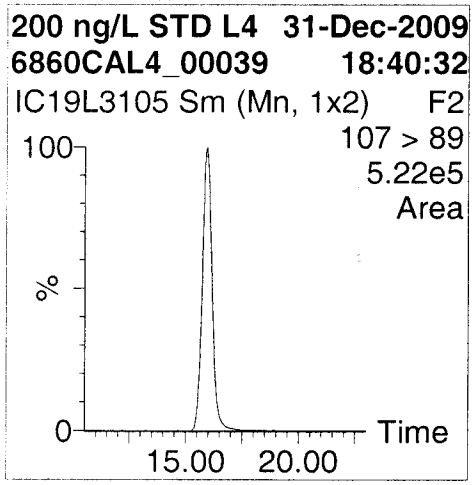
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1)
Last modified: Wed Jan 20 13:36:27 2010
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19L31
Last modified: Sat Jan 02 11:41:56 2010
Job Code:

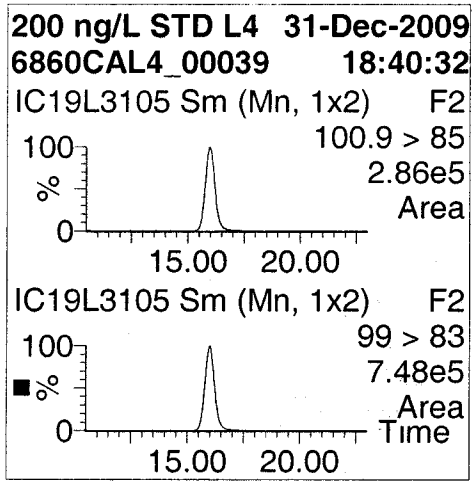
Printed: Wed Jan 20 13:43:05 2010

Name: IC19L3105
Text: 200 ng/L STD L4

1: 180 Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	180 Perchlorate	15.949	262819	bb	0.987	98.69	ic19L31	02/Jan/10	
2	Perchlorate	15.999	373809	bb	200.389	100.19	ic19L31	02/Jan/10	

Analyst: Jacqueline Bonnett

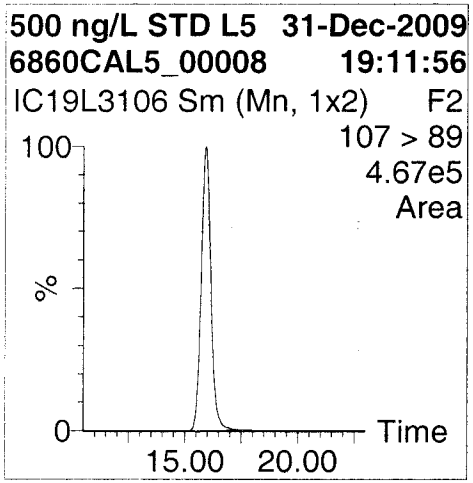
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1)
Last modified: Wed Jan 20 13:36:27 2010
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19L31
Last modified: Sat Jan 02 11:41:56 2010
Job Code:

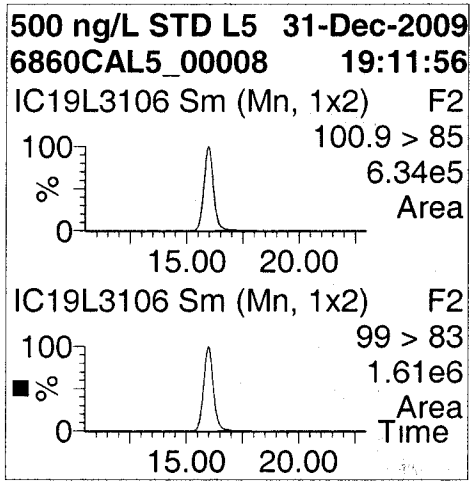
Printed: Wed Jan 20 13:43:05 2010

Name: IC19L3106
Text: 500 ng/L STD L5

1: 180 Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	180 Perchlorate	15.924	231964	bb	0.871	87.10	ic19L31	02/Jan/10	
2	Perchlorate	15.974	803736	bb	490.784	98.16	ic19L31	02/Jan/10	

Analyst: Jacqueline Bonnett

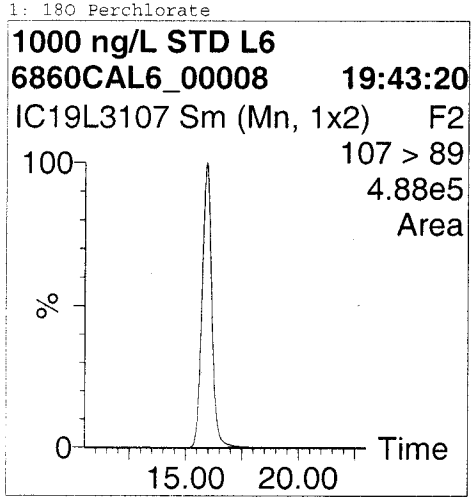
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1)
Last modified: Wed Jan 20 13:36:27 2010
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19L31
Last modified: Sat Jan 02 11:41:56 2010
Job Code:

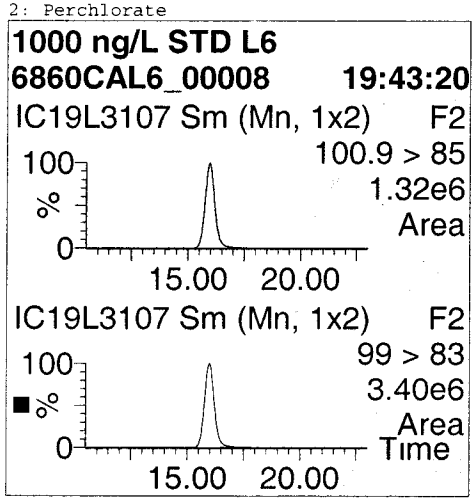
Printed: Wed Jan 20 13:43:05 2010

Name: IC19L3107
Text: 1000 ng/L STD L6

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.924	243124	bb	0.913	91.29	ic19L31	02/Jan/10	
2	Perchlorate	15.974	1726384	bb	1007.696	100.77	ic19L31	02/Jan/10	

Analyst: Jacqueline Bonnett

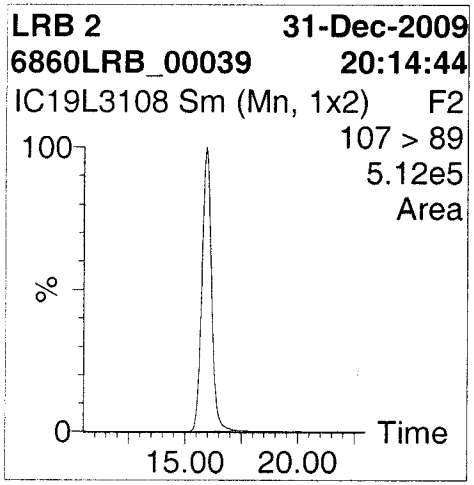
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1)
Last modified: Wed Jan 20 13:36:27 2010
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19L31
Last modified: Sat Jan 02 11:41:56 2010
Job Code:

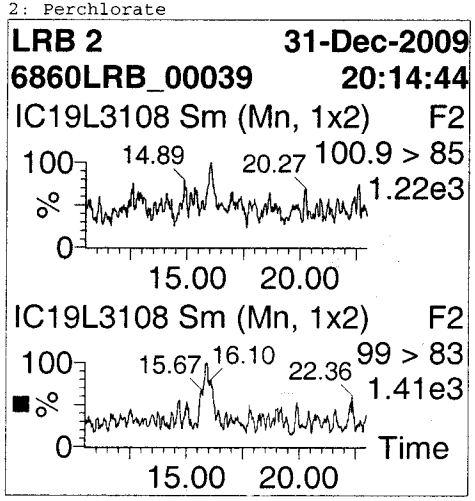
Printed: Wed Jan 20 13:43:05 2010

Name: IC19L3108
Text: LRB 2

1: 180 Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	180 Perchlorate	15.924	253994	bb	0.954	95.37	ic19L31	02/Jan/10	
2	Perchlorate						ic19L31	02/Jan/10	

Analyst: Jacqueline Bonnett

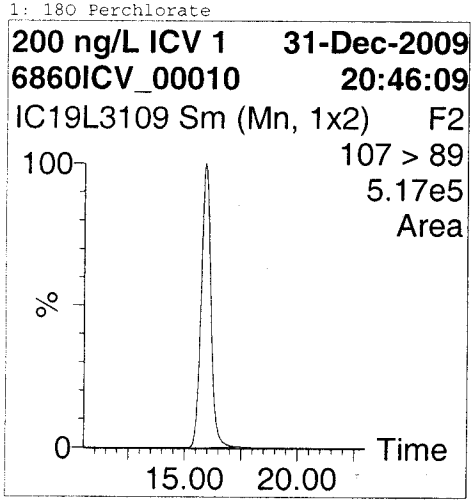
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1)
Last modified: Wed Jan 20 13:36:27 2010
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19L31
Last modified: Sat Jan 02 11:41:56 2010
Job Code:

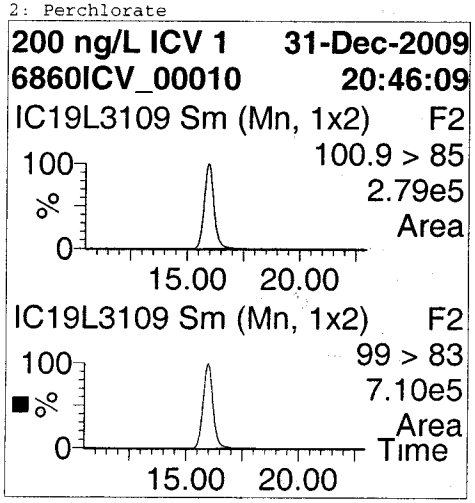
Printed: Wed Jan 20 13:43:05 2010

Name: IC19L3109
Text: 200 ng/L ICV 1

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.898	259197	bb	0.973	97.33	ic19L31	02/Jan/10	
2	Perchlorate	15.974	356002	bb	193.448	96.72	ic19L31	02/Jan/10	

Analyst: Jacqueline Bonnett

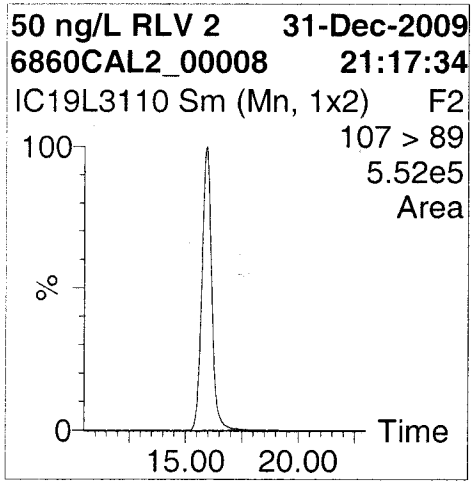
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1)
Last modified: Wed Jan 20 13:36:27 2010
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19L31
Last modified: Sat Jan 02 11:41:56 2010
Job Code:

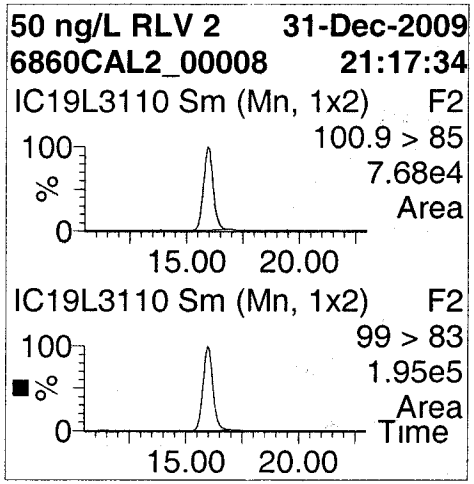
Printed: Wed Jan 20 13:43:05 2010

Name: IC19L3110
Text: 50 ng/L RLV 2

1: 180 Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	180 Perchlorate	15.924	277254	bb	1.041	104.11	ic19L31	02/Jan/10	
2	Perchlorate	15.974	97152	bb	48.000	96.00	ic19L31	02/Jan/10	

Analyst: Jacqueline Bonnett

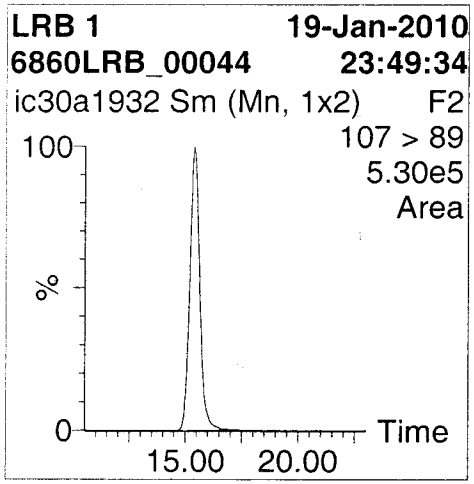
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1)
Last modified: Wed Jan 20 13:36:27 2010
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19L31
Last modified: Sat Jan 02 11:41:56 2010
Job Code:

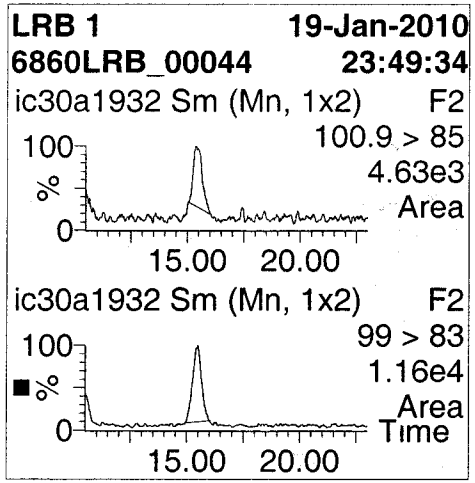
Printed: Wed Jan 20 13:43:05 2010

Name: ic30a1932
Text: LRB 1

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.394	268760	bb	1.009	100.92	ic19L31	02/Jan/10	
2	Perchlorate	15.495	4799	bb	0.721		ic19L31	02/Jan/10	

Analyst: Jacqueline Bonnett

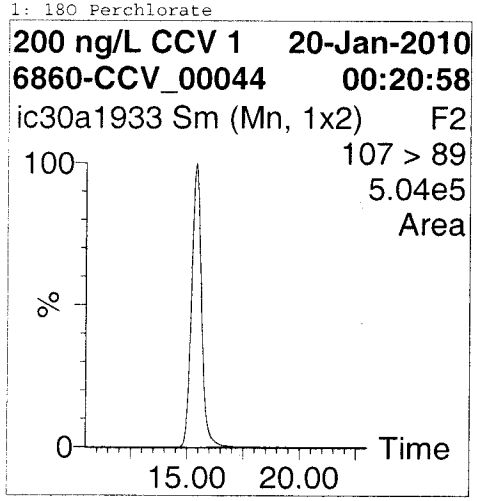
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1)
Last modified: Wed Jan 20 13:36:27 2010
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19L31
Last modified: Sat Jan 02 11:41:56 2010
Job Code:

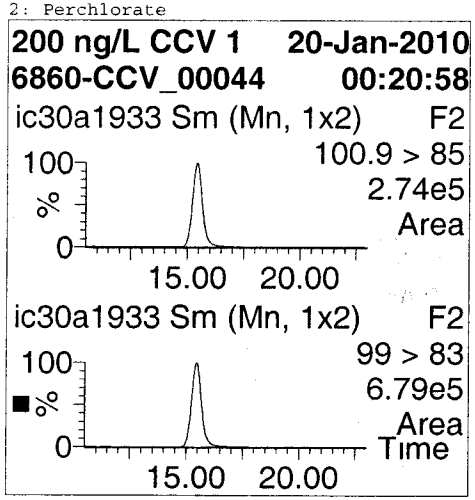
Printed: Wed Jan 20 13:43:05 2010

Name: ic30a1933
Text: 200 ng/L CCV 1

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.394	258813	bb	0.972	97.18	ic19L31	02/Jan/10	
2	Perchlorate	15.469	348934	bb	189.855	94.93	ic19L31	02/Jan/10	

Analyst: Jacqueline Bonnett

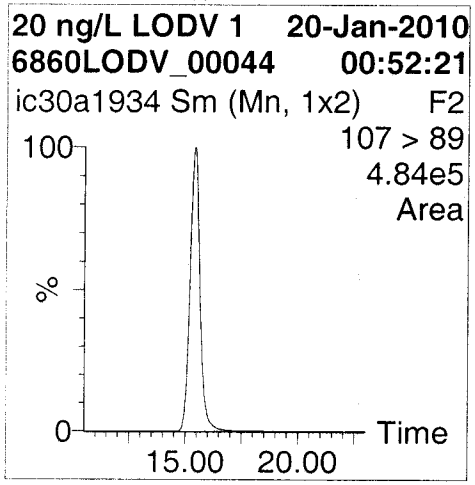
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1)
Last modified: Wed Jan 20 13:36:27 2010
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19L31
Last modified: Sat Jan 02 11:41:56 2010
Job Code:

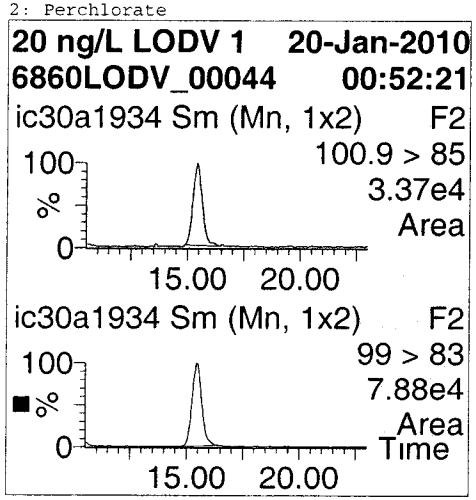
Printed: Wed Jan 20 13:43:05 2010

Name: ic30a1934
Text: 20 ng/L LODV 1

1: 180 Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	180 Perchlorate	15.419	248880	bb	0.935	93.45	ic19L31	02/Jan/10	
2	Perchlorate	15.444	38804	bb	20.349	101.74	ic19L31	02/Jan/10	

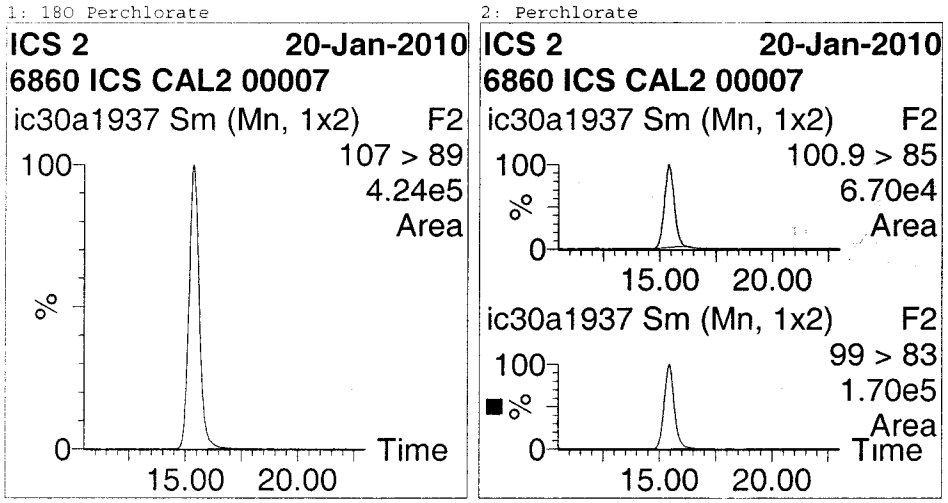
Analyst: Jacqueline Bonnett

Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1)
Last modified: Wed Jan 20 13:36:27 2010
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19L31
Last modified: Sat Jan 02 11:41:56 2010
Job Code:

Printed: Wed Jan 20 13:43:05 2010

Name: ic30a1937
Text: ICS 2



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.368	223055	bb	0.838	83.76	ic19L31	02/Jan/10	
2	Perchlorate	15.444	87268	bb	53.805	107.61	ic19L31	02/Jan/10	

Analyst: Jacqueline Bonnett

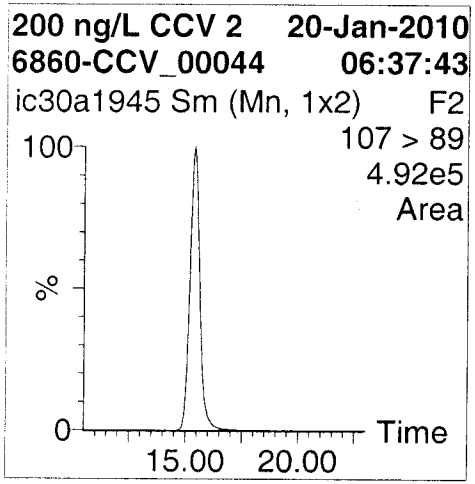
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1)
Last modified: Wed Jan 20 13:36:27 2010
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19L31
Last modified: Sat Jan 02 11:41:56 2010
Job Code:

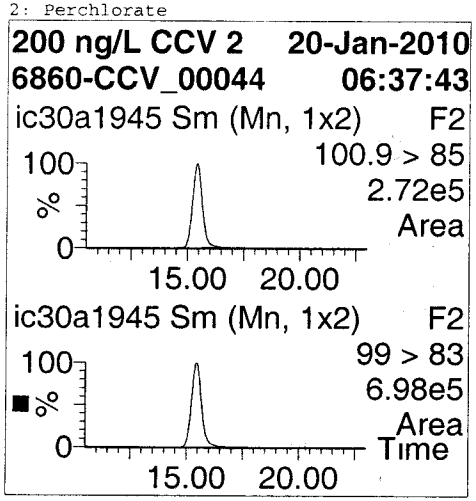
Printed: Wed Jan 20 13:43:05 2010

Name: ic30a1945
Text: 200 ng/L CCV 2

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.393	249421	bb	0.937	93.66	ic19L31	02/Jan/10	
2	Perchlorate	15.444	357207	bb	201.788	100.89	ic19L31	02/Jan/10	

Analyst: Jacqueline Bonnett

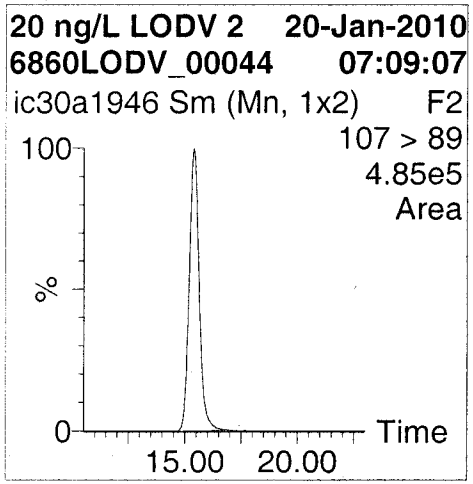
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1)
Last modified: Wed Jan 20 13:36:27 2010
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19L31
Last modified: Sat Jan 02 11:41:56 2010
Job Code:

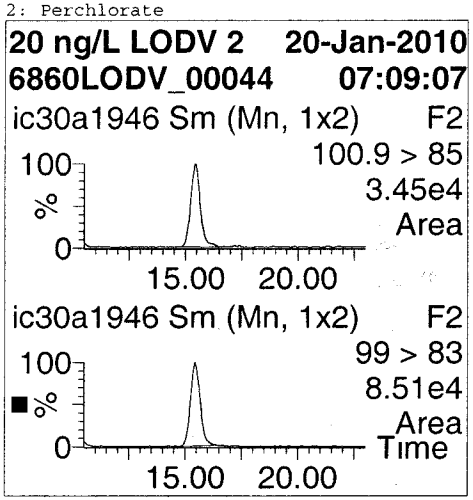
Printed: Wed Jan 20 13:43:05 2010

Name: ic30a1946
Text: 20 ng/L LODV 2

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.394	244846	bb	0.919	91.94	ic19L31	02/Jan/10	
2	Perchlorate	15.444	41903	bb	22.514	112.57	ic19L31	02/Jan/10	

Analyst: Jacqueline Bonnett

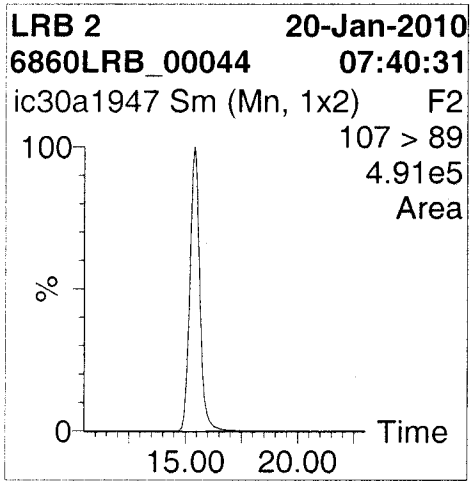
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1)
Last modified: Wed Jan 20 13:36:27 2010
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19L31
Last modified: Sat Jan 02 11:41:56 2010
Job Code:

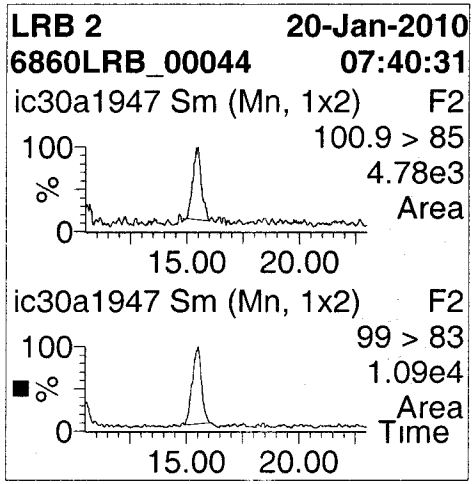
Printed: Wed Jan 20 13:43:05 2010

Name: ic30a1947
Text: LRB 2

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.394	248595	bb	0.933	93.35	ic19L31	02/Jan/10	
2	Perchlorate	15.520	4674	bb	0.856		ic19L31	02/Jan/10	

Analyst: Jacqueline Bonnett

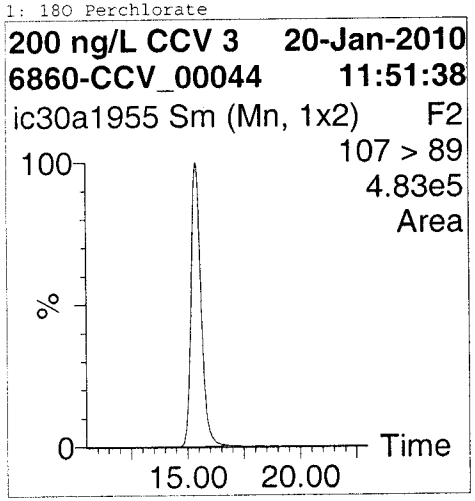
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1)
Last modified: Wed Jan 20 13:36:27 2010
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19L31
Last modified: Sat Jan 02 11:41:56 2010
Job Code:

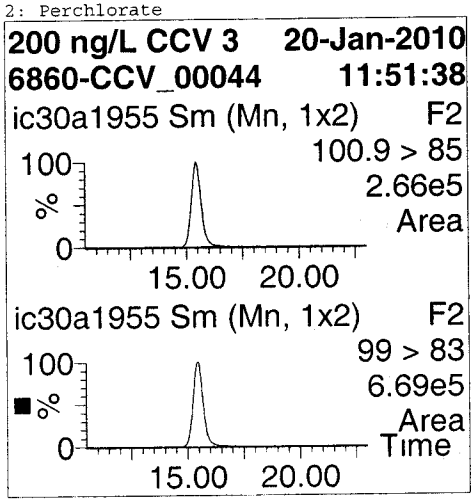
Printed: Wed Jan 20 13:43:05 2010

Name: ic30a1955
Text: 200 ng/L CCV 3

1: 180 Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	180 Perchlorate	15.394	246283	bb	0.925	92.48	ic19L31	02/Jan/10	
2	Perchlorate	15.444	345713	bb	197.747	98.87	ic19L31	02/Jan/10	

Analyst: Jacqueline Bonnett

Table of Contents

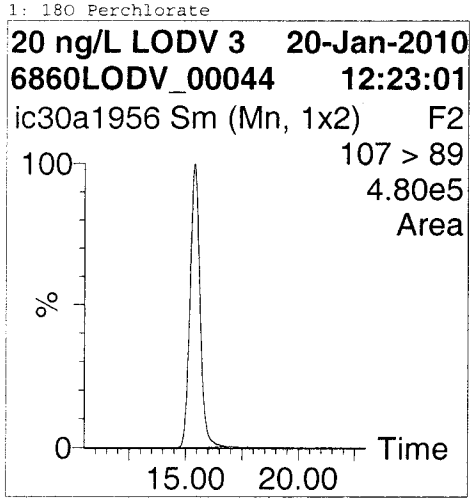
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1)
Last modified: Wed Jan 20 13:36:27 2010
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19L31
Last modified: Sat Jan 02 11:41:56 2010
Job Code:

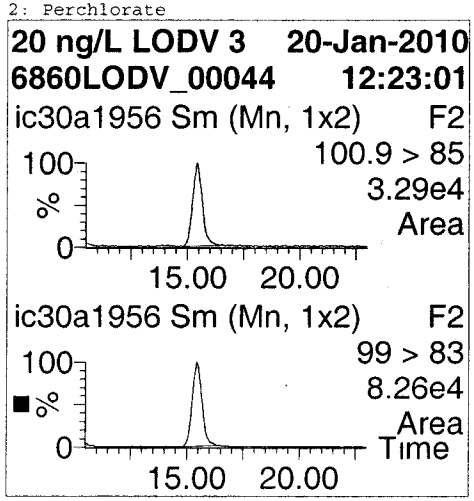
Printed: Wed Jan 20 13:43:05 2010

Name: ic30a1956
Text: 20 ng/L LODV 3

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.394	245073	bb	0.920	92.02	ic19L31	02/Jan/10	
2	Perchlorate	15.444	40774	bb	21.836	109.18	ic19L31	02/Jan/10	

Analyst: Jacqueline Bonnett

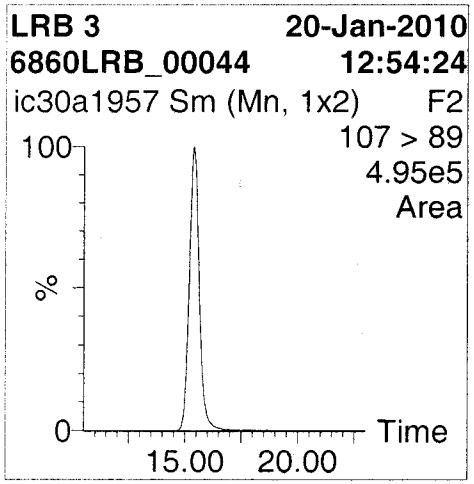
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1)
Last modified: Wed Jan 20 13:36:27 2010
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19L31
Last modified: Sat Jan 02 11:41:56 2010
Job Code:

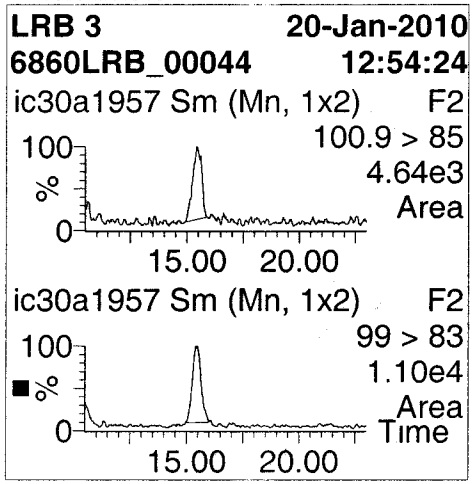
Printed: Wed Jan 20 13:43:05 2010

Name: ic30a1957
Text: LRB 3

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.394	252790	bb	0.949	94.92	ic19L31	02/Jan/10	
2	Perchlorate	15.419	4477	bb	0.700		ic19L31	02/Jan/10	

Analyst: Jacqueline Bonnett

IC/MS/MS SEMIVOLATILE SAMPLE DATA

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Sample List Report **MassLynx 4.0 SP4**

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1).SPL
Last Modified: Wednesday, January 20, 2010 1:36:27 PM Mountain Standard Time
Printed: Wednesday, January 20, 2010 1:39:06 PM Mountain Standard Time

	File Name	Sample ID	File Text	Sample Type	Analyte ng/L	Extract mL
1	IC19L3101	6860LRB_00039	LRB 1	Blank	0	1.000000
2	IC19L3102	6860CAL1-LODV_00039	20 ng/L STD L1	Standard	20	1.000000
3	IC19L3103	6860CAL2_00008	50 ng/L STD L2	Standard	50	1.000000
4	IC19L3104	6860CAL3_00007	100 ng/L STD L3	Standard	100	1.000000
5	IC19L3105	6860CAL4_00039	200 ng/L STD L4	Standard	200	1.000000
6	IC19L3106	6860CAL5_00008	500 ng/L STD L5	Standard	500	1.000000
7	IC19L3107	6860CAL6_00008	1000 ng/L STD L6	Standard	1000	1.000000
8	IC19L3108	6860LRB_00039	LRB 2	Blank	0	1.000000
9	IC19L3109	6860ICV_00010	200 ng/L ICV 1	QC	200	1.000000
10	IC19L3110	6860CAL2_00008	50 ng/L RLV 2	QC	50	1.000000
11	ic30a1932	6860LRB_00044	LRB 1	Blank	0	1.000000
12	ic30a1933	6860-CCV_00044	200 ng/L CCV 1	QC	200	1.000000
13	ic30a1934	6860LODV_00044	20 ng/L LODV 1	QC	20	1.000000
14	ic30a1935	LR5XM1AA	R0A130000-366 MB	Blank	0	5.000000
15	ic30a1936	LR5XM1AC	R0A130000-366 LCS	QC	50	5.000000
16	ic30a1937	6860 ICS CAL2 00007	ICS 2	QC	50	1.000000
17	ic30a1938	LR0P21AD	D0A080444-001 10X	Analyte	0	5.000000
18	ic30a1939	LR1RT1AA	D0A080569-001 250X	Analyte	0	5.000000
19	ic30a1940	LR1RX1AA	D0A080569-002 250X	Analyte	0	5.000000
20	ic30a1941	LR1R01AA	D0A080569-003 100X	Analyte	0	5.000000
21	ic30a1942	LR1TP1AA	D0A080569-010 200X	Analyte	0	5.000000
22	ic30a1943	LR1TP1AC	D0A080569-010 MS 200X	QC	50	5.000000
23	ic30a1944	LR1TP1AD	D0A080569-010 MSD 200X	QC	50	5.000000
24	ic30a1945	6860-CCV_00044	200 ng/L CCV 2	QC	200	1.000000
25	ic30a1946	6860LODV_00044	20 ng/L LODV 2	QC	20	1.000000
26	ic30a1947	6860LRB_00044	LRB 2	Blank	0	1.000000
27	ic30a1948	LR1R11AA	D0A080569-004 100X	Analyte	0	5.000000
28	ic30a1949	LR1R31AA	D0A080569-005 100X	Analyte	0	5.000000
29	ic30a1950	LR1R41AA	D0A080569-006 100X	Analyte	0	5.000000
30	ic30a1951	LR1TJ1AA	D0A080569-007 200X	Analyte	0	5.000000
31	ic30a1952	LR1TK1AA	D0A080569-008 100X	Analyte	0	5.000000
32	ic30a1953	LR1TM1AA	D0A080569-009 50X	Analyte	0	5.000000
33	ic30a1954	LR1TV1AA	D0A080569-011 100X	Analyte	0	5.000000
34	ic30a1955	6860-CCV_00044	200 ng/L CCV 3	QC	200	1.000000
35	ic30a1956	6860LODV_00044	20 ng/L LODV 3	QC	20	1.000000
36	ic30a1957	6860LRB_00044	LRB 3	Blank	0	1.000000

Sample List Report **MassLynx 4.0 SP4**

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1).SPL
Last Modified: Wednesday, January 20, 2010 1:36:27 PM Mountain Standard Time
Printed: Wednesday, January 20, 2010 1:39:06 PM Mountain Standard Time

Sample mL or g	Dilution	Vial	Inject Volume	MS Tune File	Inlet File	MS File
1.000000	1.000000	1	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	1.000000	1	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	1.000000	1	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	1.000000	1	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	1.000000	1	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	1.000000	1	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	1.000000	1	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	1.000000	1	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	1.000000	1	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	1.000000	1	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	1.000000	1	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	1.000000	1	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	1.000000	1	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
5.000000	1.000000	1	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
5.000000	1.000000	1	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	1.000000	1	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
5.000000	10.000000	1	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
5.000000	250.000000	1	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
5.000000	250.000000	1	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
5.000000	100.000000	1	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
5.000000	200.000000	1	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
5.000000	200.000000	1	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
5.000000	200.000000	1	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	1.000000	1	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	1.000000	1	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	1.000000	1	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
5.000000	100.000000	1	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
5.000000	100.000000	1	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
5.000000	100.000000	1	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
5.000000	200.000000	1	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
5.000000	100.000000	1	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
5.000000	50.000000	1	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
5.000000	100.000000	1	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	1.000000	1	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	1.000000	1	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms
1.000000	1.000000	1	250.000000	ICPerchlorate_jeff	icperchlorate	icperchlorate_msms

Sample List Report **MassLynx 4.0 SP4**

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1).SPL
Last Modified: Wednesday, January 20, 2010 1:36:27 PM Mountain Standard Time
Printed: Wednesday, January 20, 2010 1:39:06 PM Mountain Standard Time

Process	s5
FBAT_ML_FileMover	H:\LC_LCMS1\AutoProc
FBAT_ML_FileMover	H:\LC_LCMS1\AutoProc
FBAT_ML_FileMover	H:\LC_LCMS1\AutoProc
FBAT_ML_FileMover	H:\LC_LCMS1\AutoProc
FBAT_ML_FileMover	H:\LC_LCMS1\AutoProc
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FBAT_ML_FileMover	H:\LC_LCMS1\AutoProc
FBAT_ML_FileMover	H:\LC_LCMS1\AutoProc
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FBAT_ML_FileMover	H:\LC_LCMS1\AutoProc
FBAT_ML_FileMover	H:\LC_LCMS1\AutoProc
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FBAT_ML_FileMover	H:\LC_LCMS1\AutoProc
FBAT_ML_FileMover	H:\LC_LCMS1\AutoProc
FBAT_ML_FileMover	H:\LC_LCMS1\AutoProc
FBAT_ML_FileMover	H:\LC_LCMS1\AutoProc
FBAT_ML_FileMover	H:\LC_LCMS1\AutoProc
FBAT_ML_FileMover	H:\LC_LCMS1\AutoProc
FBAT_ML_FileMover	H:\LC_LCMS1\AutoProc
FBAT_ML_FileMover	H:\LC_LCMS1\AutoProc
FBAT_ML_FileMover	H:\LC_LCMS1\AutoProc
FBAT_ML_FileMover	H:\LC_LCMS1\AutoProc
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FBAT_ML_FileMover	H:\LC_LCMS1\AutoProc
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FBAT_ML_FileMover	H:\LC_LCMS1\AutoProc
FBAT_ML_FileMover	H:\LC_LCMS1\AutoProc
FBAT_ML_FileMover	H:\LC_LCMS1\AutoProc
FBAT_ML_FileMover	H:\LC_LCMS1\AutoProc
FBAT_ML_FileMover	H:\LC_LCMS1\AutoProc
FBAT_ML_FileMover	H:\LC_LCMS1\AutoProc

Quantify Compound Summary Report
IC Perchlorate Analysis

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1)
Last modified: Wed Jan 20 13:36:27 2010
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19L31
Last modified: Sat Jan 02 11:41:56 2010
Job Code:

Printed: Wed Jan 20 13:43:03 2010

Compound 1: 18O Perchlorate Sample List: IC10A19(1) Method File: ic19L31
Response Factor: 266313
RRF SD: 25338.8, % Relative SD: 9.51470
Response type: External Std, Area
Curve type: RF

#	Name	ID	Sample Text	Type	Std Conc	RT	RRT	Area	Flag	Ratio IS Area	Response	ng/L or kg()	%Rec	Vf	Vs	Dil	Cal.File
1	IC19L3101	6860LRB_00039	LRB 1	Blank		15.95	0.000	293362	bb		293361.563	1.102	110.16	1.0	1.00	1	ic19L31
2	IC19L3102	6860CAL1-LODV..	20 ng/L STD L1	Standard	1.00	15.95	0.000	294685	bb		294685.344	1.107	110.65	1.0	1.00	1	ic19L31
3	IC19L3103	6860CAL2_00008	50 ng/L STD L2	Standard	1.00	15.97	0.000	291073	bb		291073.250	1.093	109.30	1.0	1.00	1	ic19L31
4	IC19L3104	6860CAL3_00007	100 ng/L STD L3	Standard	1.00	15.95	0.000	274212	bb		274211.750	1.030	102.97	1.0	1.00	1	ic19L31
5	IC19L3105	6860CAL4_00039	200 ng/L STD L4	Standard	1.00	15.95	0.000	262819	bb		262818.531	0.987	98.69	1.0	1.00	1	ic19L31
6	IC19L3106	6860CAL5_00008	500 ng/L STD L5	Standard	1.00	15.92	0.000	231964	bb		231963.656	0.871	87.10	1.0	1.00	1	ic19L31
7	IC19L3107	6860CAL6_00008	1000 ng/L STD L6	Standard	1.00	15.92	0.000	243124	bb		243123.641	0.913	91.29	1.0	1.00	1	ic19L31
8	IC19L3108	6860LRB_00039	LRB 2	Blank		15.92	0.000	253994	bb		253993.500	0.954	95.37	1.0	1.00	1	ic19L31
9	IC19L3109	6860ICV_00010	200 ng/L ICV 1	QC	1.00	15.90	0.000	259197	bb		259197.188	0.973	97.33	1.0	1.00	1	ic19L31
10	IC19L3110	6860CAL2_00008	50 ng/L RLV 2	QC	1.00	15.92	0.000	277254	bb		277253.781	1.041	104.11	1.0	1.00	1	ic19L31
11	ic30a1932	6860LRB_00044	LRB 1	Blank		15.39	0.000	268760	bb		268760.031	1.009	100.92	1.0	1.00	1	ic19L31
12	ic30a1933	6860-CCV_00044	200 ng/L CCV 1	QC	1.00	15.39	0.000	258813	bb		258812.969	0.972	97.18	1.0	1.00	1	ic19L31
13	ic30a1934	6860LODV_00044	20 ng/L LODV 1	QC	1.00	15.42	0.000	248880	bb		248880.344	0.935	93.45	1.0	1.00	1	ic19L31
14	ic30a1935	LR5XM1AA	R0A130000-366 MB	Blank		15.42	0.000	245194	bb		245194.375	0.921	92.07	5.0	5.00	1	ic19L31
15	ic30a1936	LR5XM1AC	R0A130000-366 LCS	QC	1.00	15.39	0.000	255295	bb		255295.063	0.959	95.86	5.0	5.00	1	ic19L31
16	ic30a1937	6860 ICS CAL2..	ICS 2	QC	1.00	15.37	0.000	223055	bb		223054.906	0.838	83.76	1.0	1.00	1	ic19L31
17	ic30a1938	LR0P21AD	D0A080444-001 10X	Analyte		15.39	0.000	231214	bb		231213.516	0.868	86.82	5.0	5.00	10	ic19L31
18	ic30a1939	LR1RT1AA	D0A080569-001 250X	Analyte		15.39	0.000	229628	bb		229628.188	0.862	86.23	5.0	5.00	250	ic19L31
19	ic30a1940	LR1RX1AA	D0A080569-002 250X	Analyte		15.39	0.000	227668	bb		227668.156	0.855	85.49	5.0	5.00	250	ic19L31
20	ic30a1941	LR1R01AA	D0A080569-003 100X	Analyte		15.39	0.000	227165	bb		227164.875	0.853	85.30	5.0	5.00	100	ic19L31
21	ic30a1942	LR1TP1AA	D0A080569-010 200X	Analyte		15.39	0.000	232313	bb		232313.016	0.872	87.23	5.0	5.00	200	ic19L31
22	ic30a1943	LR1TP1AC	D0A080569-010 MS..	QC	1.00	15.39	0.000	228631	bb		228631.125	0.859	85.85	5.0	5.00	200	ic19L31
23	ic30a1944	LR1TP1AD	D0A080569-010 MS..	QC	1.00	15.37	0.000	230472	bb		230472.328	0.865	86.54	5.0	5.00	200	ic19L31
24	ic30a1945	6860-CCV_00044	200 ng/L CCV 2	QC	1.00	15.39	0.000	249421	bb		249420.813	0.937	93.66	1.0	1.00	1	ic19L31
25	ic30a1946	6860LODV_00044	20 ng/L LODV 2	QC	1.00	15.39	0.000	244846	bb		244845.766	0.919	91.94	1.0	1.00	1	ic19L31
26	ic30a1947	6860LRB_00044	LRB 2	Blank		15.39	0.000	248595	bb		248595.016	0.933	93.35	1.0	1.00	1	ic19L31
27	ic30a1948	LR1R11AA	D0A080569-004 100X	Analyte		15.39	0.000	231932	bb		231932.016	0.871	87.09	5.0	5.00	100	ic19L31
28	ic30a1949	LR1R31AA	D0A080569-005 100X	Analyte		15.39	0.000	231302	bb		231302.141	0.869	86.85	5.0	5.00	100	ic19L31
29	ic30a1950	LR1R41AA	D0A080569-006 100X	Analyte		15.39	0.000	238779	bb		238778.984	0.897	89.66	5.0	5.00	100	ic19L31
30	ic30a1951	LR1TJ1AA	D0A080569-007 200X	Analyte		15.39	0.000	231302	bb		231301.766	0.869	86.85	5.0	5.00	200	ic19L31
31	ic30a1952	LR1TK1AA	D0A080569-008 100X	Analyte		15.42	0.000	227513	bb		227512.984	0.854	85.43	5.0	5.00	100	ic19L31
32	ic30a1953	LR1TM1AA	D0A080569-009 50X	Analyte		15.37	0.000	231341	bb		231341.000	0.869	86.87	5.0	5.00	50	ic19L31
33	ic30a1954	LR1TV1AA	D0A080569-011 100X	Analyte		15.39	0.000	233087	bb		233086.625	0.875	87.52	5.0	5.00	100	ic19L31
34	ic30a1955	6860-CCV_00044	200 ng/L CCV 3	QC	1.00	15.39	0.000	246283	bb		246282.688	0.925	92.48	1.0	1.00	1	ic19L31
35	ic30a1956	6860LODV_00044	20 ng/L LODV 3	QC	1.00	15.39	0.000	245073	bb		245073.484	0.920	92.02	1.0	1.00	1	ic19L31
36	ic30a1957	6860LRB_00044	LRB 3	Blank		15.39	0.000	252790	bb		252790.078	0.949	94.92	1.0	1.00	1	ic19L31

Analyst: Jacqueline Bonnett

Quantify Compound Summary Report
IC Perchlorate Analysis

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1)
Last modified: Wed Jan 20 13:36:27 2010
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19L31
Last modified: Sat Jan 02 11:41:56 2010
Job Code:

Printed: Wed Jan 20 13:43:03 2010

Compound 2: Perchlorate Sample List: IC10A19(1) Method File: ic19L31
Coefficient of Determination: 0.999747
Calibration curve: 0.00703393 * x + 0.0127826
Response type: Internal Std (Ref 1), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std Conc	RT	RRT	Area	Flag	Ratio	IS Area	Response	ng/L or kg()	%Rec	Vf	Vs	Dil	Cal.File
1	IC19L3101	6860LRB_00039	LRB 1	Blank							293362				1.0	1.00	1	ic19L31
2	IC19L3102	6860CAL1-LODV..	20 ng/L STD L1	Standard	20.00	16.02	1.005	43855	bb	2.724	294685	0.149	19.340	96.70	1.0	1.00	1	ic19L31
3	IC19L3103	6860CAL2_00008	50 ng/L STD L2	Standard	50.00	16.02	1.003	110978	bb	2.722	291073	0.381	52.387	104.77	1.0	1.00	1	ic19L31
4	IC19L3104	6860CAL3_00007	100 ng/L STD L3	Standard	100.00	16.00	1.003	195232	bb	2.662	274212	0.712	99.403	99.40	1.0	1.00	1	ic19L31
5	IC19L3105	6860CAL4_00039	200 ng/L STD L4	Standard	200.00	16.00	1.003	373809	bb	2.619	262819	1.422	200.389	100.19	1.0	1.00	1	ic19L31
6	IC19L3106	6860CAL5_00008	500 ng/L STD L5	Standard	500.00	15.97	1.003	803736	bb	2.571	231964	3.465	490.784	98.16	1.0	1.00	1	ic19L31
7	IC19L3107	6860CAL6_00008	1000 ng/L STD L6	Standard	1000.00	15.97	1.003	1726384	bb	2.615	243124	7.101	1007.696	100.77	1.0	1.00	1	ic19L31
8	IC19L3108	6860LRB_00039	LRB 2	Blank							253994				1.0	1.00	1	ic19L31
9	IC19L3109	6860ICV_00010	200 ng/L ICV 1	QC	200.00	15.97	1.005	356002	bb	2.622	259197	1.373	193.448	96.72	1.0	1.00	1	ic19L31
10	IC19L3110	6860CAL2_00008	50 ng/L RLV 2	QC	50.00	15.97	1.003	97152	bb	2.605	277254	0.350	48.000	96.00	1.0	1.00	1	ic19L31
11	ic30a1932	6860LRB_00044	LRB 1	Blank		15.49	1.007	4799	bb	3.104	268760	0.018	0.721		1.0	1.00	1	ic19L31
12	ic30a1933	6860-CCV_00044	200 ng/L CCV 1	QC	200.00	15.47	1.005	348934	bb	2.514	258813	1.348	189.855	94.93	1.0	1.00	1	ic19L31
13	ic30a1934	6860LODV_00044	20 ng/L LODV 1	QC	20.00	15.44	1.002	38804	bb	2.485	248880	0.156	20.349	101.74	1.0	1.00	1	ic19L31
14	ic30a1935	LR5XM1AA	R0A130000-366 MB	Blank		15.44	1.002	4373	bb	3.926	245194	0.018	0.718		5.0	5.00	1	ic19L31
15	ic30a1936	LR5XM1AC	R0A130000-366 LCS	QC	50.00	15.44	1.003	93358	bb	2.521	255295	0.366	50.172	100.34	5.0	5.00	1	ic19L31
16	ic30a1937	6860 ICS CAL2..	ICS 2	QC	50.00	15.44	1.005	87268	bb	2.671	223055	0.391	53.805	107.61	1.0	1.00	1	ic19L31
17	ic30a1938	LR0P21AD	D0A080444-001 10X	Analyte		15.44	1.003	443253	bb	2.574	231214	1.917	2707.291		5.0	5.00	10	ic19L31
18	ic30a1939	LR1RT1AA	D0A080569-001 250X	Analyte		15.44	1.003	812663	bb	2.611	229628	3.539	125330.222		5.0	5.00	250	ic19L31
19	ic30a1940	LR1RX1AA	D0A080569-002 250X	Analyte		15.44	1.003	945879	bb	2.594	227668	4.155	147209.865		5.0	5.00	250	ic19L31
20	ic30a1941	LR1R01AA	D0A080569-003 100X	Analyte		15.44	1.003	1290786	bb	2.609	227165	5.682	80600.344		5.0	5.00	100	ic19L31
21	ic30a1942	LR1TP1AA	D0A080569-010 200X	Analyte		15.44	1.003	420029	bb	2.602	232313	1.808	51045.327		5.0	5.00	200	ic19L31
22	ic30a1943	LR1TP1AC	D0A080569-010 MS..	QC	50.00	15.44	1.003	499213	bb	2.594	228631	2.183	61720.905	1234..	5.0	5.00	200	ic19L31
23	ic30a1944	LR1TP1AD	D0A080569-010 MS..	QC	50.00	15.44	1.005	496832	bb	2.645	230472	2.156	60931.169	1218..	5.0	5.00	200	ic19L31
24	ic30a1945	6860-CCV_00044	200 ng/L CCV 2	QC	200.00	15.44	1.003	357207	bb	2.636	249421	1.432	201.788	100.89	1.0	1.00	1	ic19L31
25	ic30a1946	6860LODV_00044	20 ng/L LODV 2	QC	20.00	15.44	1.003	41903	bb	2.485	244846	0.171	22.514	112.57	1.0	1.00	1	ic19L31
26	ic30a1947	6860LRB_00044	LRB 2	Blank		15.52	1.008	4674	bb	2.588	248595	0.019	0.856		1.0	1.00	1	ic19L31
27	ic30a1948	LR1R11AA	D0A080569-004 100X	Analyte		15.44	1.003	458093	bb	2.580	231932	1.975	27898.098		5.0	5.00	100	ic19L31
28	ic30a1949	LR1R31AA	D0A080569-005 100X	Analyte		15.47	1.005	828931	bb	2.531	231302	3.584	50767.871		5.0	5.00	100	ic19L31
29	ic30a1950	LR1R41AA	D0A080569-006 100X	Analyte		15.47	1.005	416293	bb	2.523	238779	1.743	24604.209		5.0	5.00	100	ic19L31
30	ic30a1951	LR1TJ1AA	D0A080569-007 200X	Analyte		15.44	1.003	533077	bb	2.527	231302	2.305	65166.939		5.0	5.00	200	ic19L31
31	ic30a1952	LR1TK1AA	D0A080569-008 100X	Analyte		15.44	1.002	442935	bb	2.496	227513	1.947	27496.354		5.0	5.00	100	ic19L31
32	ic30a1953	LR1TM1AA	D0A080569-009 50X	Analyte		15.44	1.005	347374	bb	2.487	231341	1.502	10582.874		5.0	5.00	50	ic19L31
33	ic30a1954	LR1TV1AA	D0A080569-011 100X	Analyte		15.47	1.005	274904	bb	2.545	233087	1.179	16585.673		5.0	5.00	100	ic19L31
34	ic30a1955	6860-CCV_00044	200 ng/L CCV 3	QC	200.00	15.44	1.003	345713	bb	2.593	246283	1.404	197.747	98.87	1.0	1.00	1	ic19L31
35	ic30a1956	6860LODV_00044	20 ng/L LODV 3	QC	20.00	15.44	1.003	40774	bb	2.532	245073	0.166	21.836	109.18	1.0	1.00	1	ic19L31
36	ic30a1957	6860LRB_00044	LRB 3	Blank		15.42	1.002	4477	bb	2.419	252790	0.018	0.700		1.0	1.00	1	ic19L31

Analyst: Jacqueline Bonnett

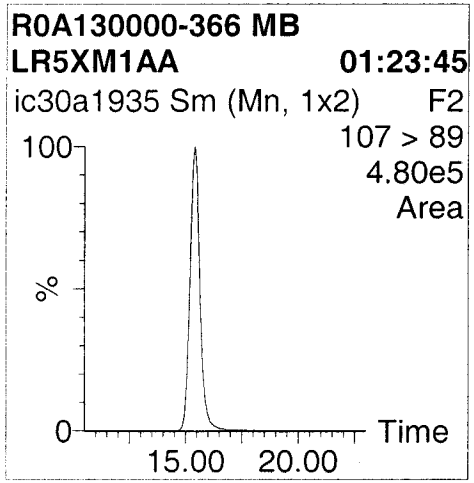
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1)
Last modified: Wed Jan 20 13:36:27 2010
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19L31
Last modified: Sat Jan 02 11:41:56 2010
Job Code:

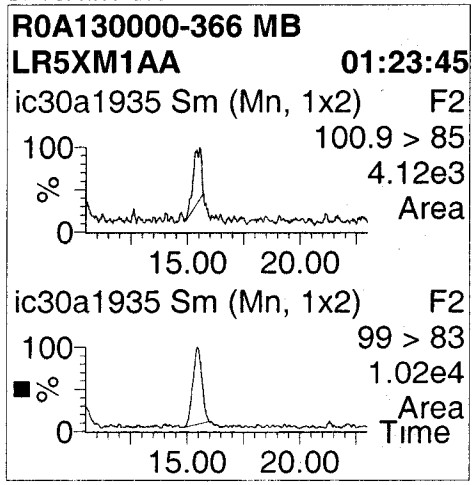
Printed: Wed Jan 20 13:43:05 2010

Name: ic30a1935
Text: R0A130000-366 MB

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.419	245194	bb	0.921	92.07	ic19L31	02/Jan/10	
2	Perchlorate	15.444	4373	bb	0.718		ic19L31	02/Jan/10	

Analyst: Jacqueline Bonnett

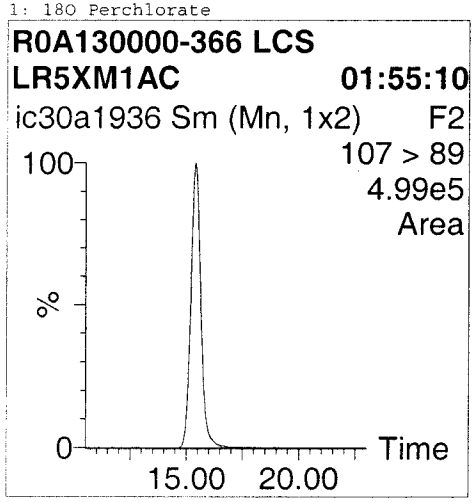
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1)
Last modified: Wed Jan 20 13:36:27 2010
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19L31
Last modified: Sat Jan 02 11:41:56 2010
Job Code:

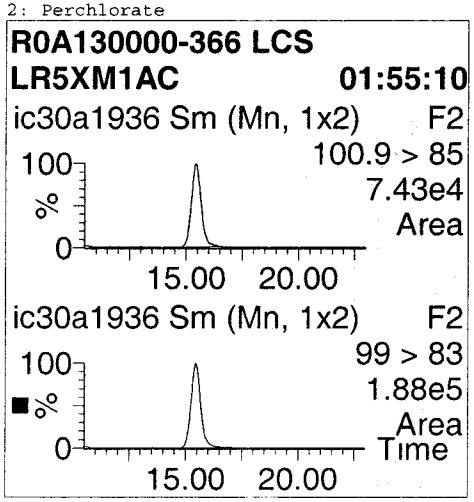
Printed: Wed Jan 20 13:43:05 2010

Name: ic30a1936
Text: R0A130000-366 LCS

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.394	255295	bb	0.959	95.86	ic19L31	02/Jan/10	
2	Perchlorate	15.444	93358	bb	50.172	100.34	ic19L31	02/Jan/10	

Analyst: Jacqueline Bonnett

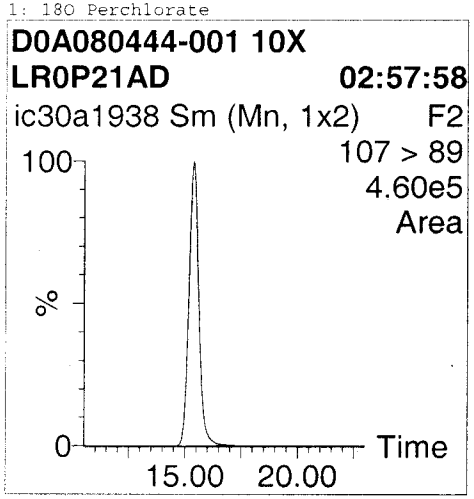
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1)
Last modified: Wed Jan 20 13:36:27 2010
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19L31
Last modified: Sat Jan 02 11:41:56 2010
Job Code:

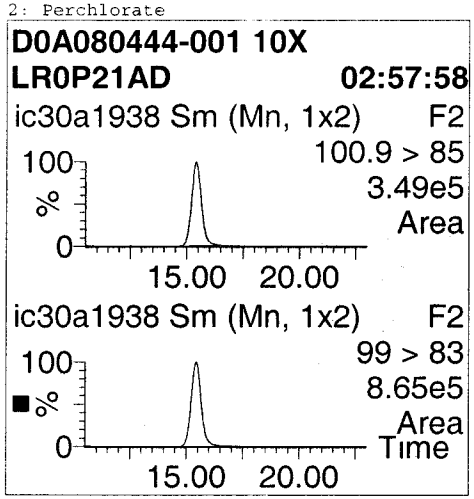
Printed: Wed Jan 20 13:43:05 2010

Name: ic30a1938
Text: D0A080444-001 10X

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.394	231214	bb	0.868	86.82	ic19L31	02/Jan/10	
2	Perchlorate	15.444	443253	bb	2707.291		ic19L31	02/Jan/10	

Analyst: Jacqueline Bonnett

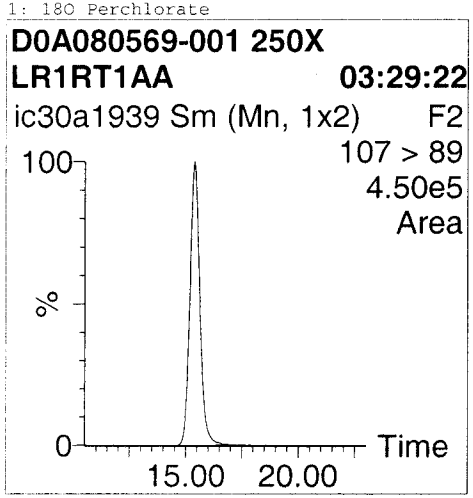
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1)
Last modified: Wed Jan 20 13:36:27 2010
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19L31
Last modified: Sat Jan 02 11:41:56 2010
Job Code:

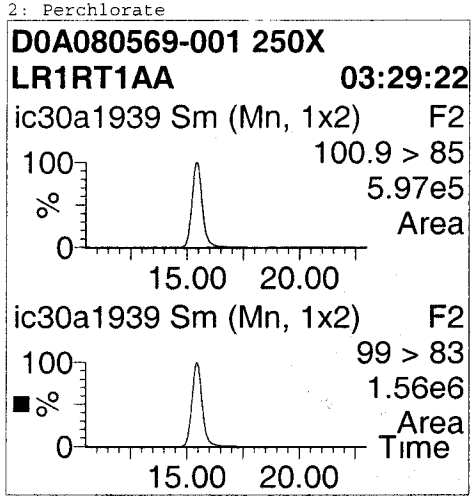
Printed: Wed Jan 20 13:43:05 2010

Name: ic30a1939
Text: D0A080569-001 250X

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.394	229628	bb	0.862	86.23	ic19L31	02/Jan/10	
2	Perchlorate	15.444	812663	bb	125330.222		ic19L31	02/Jan/10	

Analyst: Jacqueline Bonnett

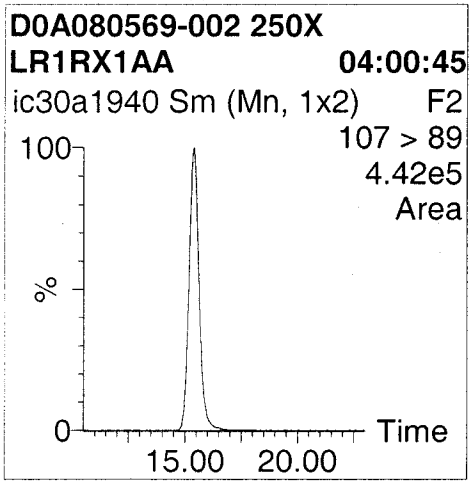
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1)
Last modified: Wed Jan 20 13:36:27 2010
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19L31
Last modified: Sat Jan 02 11:41:56 2010
Job Code:

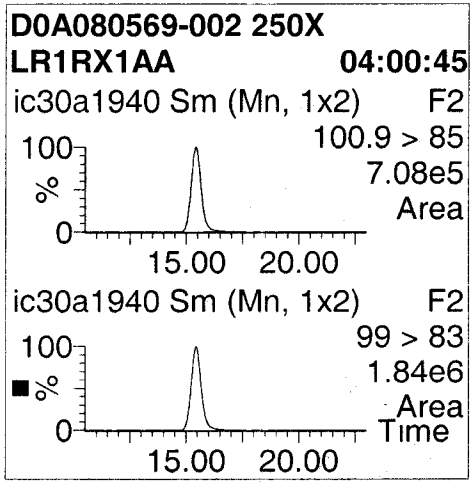
Printed: Wed Jan 20 13:43:05 2010

Name: ic30a1940
Text: D0A080569-002 250X

1: 180 Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	180 Perchlorate	15.393	227668	bb	0.855	85.49	ic19L31	02/Jan/10	
2	Perchlorate	15.444	945879	bb	147209.865		ic19L31	02/Jan/10	

Analyst: Jacqueline Bonnett

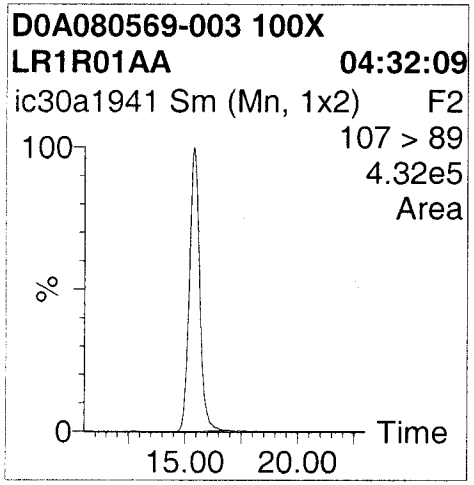
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1)
Last modified: Wed Jan 20 13:36:27 2010
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19L31
Last modified: Sat Jan 02 11:41:56 2010
Job Code:

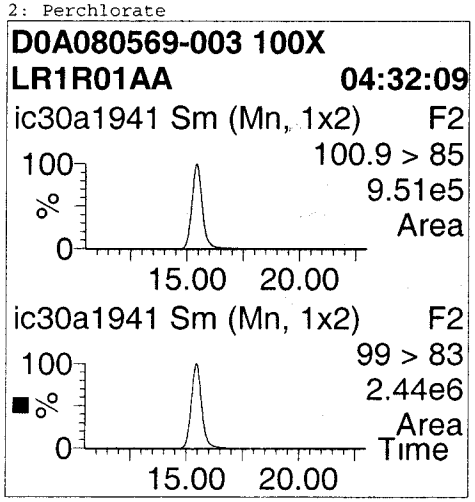
Printed: Wed Jan 20 13:43:05 2010

Name: ic30a1941
Text: D0A080569-003 100X

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.394	227165	bb	0.853	85.30	ic19L31	02/Jan/10	
2	Perchlorate	15.444	1290786	bb	80600.344		ic19L31	02/Jan/10	

Analyst: Jacqueline Bonnett

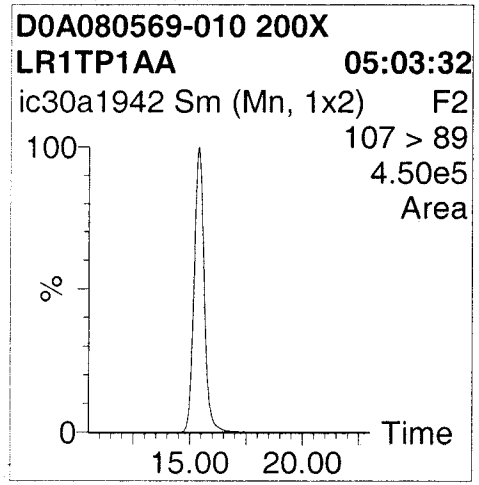
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1)
Last modified: Wed Jan 20 13:36:27 2010
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19L31
Last modified: Sat Jan 02 11:41:56 2010
Job Code:

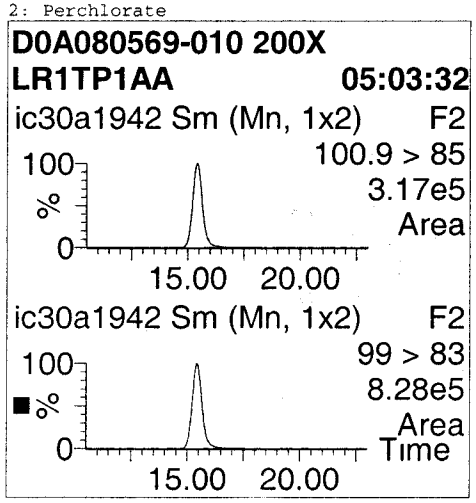
Printed: Wed Jan 20 13:43:05 2010

Name: ic30a1942
Text: D0A080569-010 200X

1: 180 Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	180 Perchlorate	15.394	232313	bb	0.872	87.23	ic19L31	02/Jan/10	
2	Perchlorate	15.444	420029	bb	51045.327		ic19L31	02/Jan/10	

Analyst: Jacqueline Bonnett

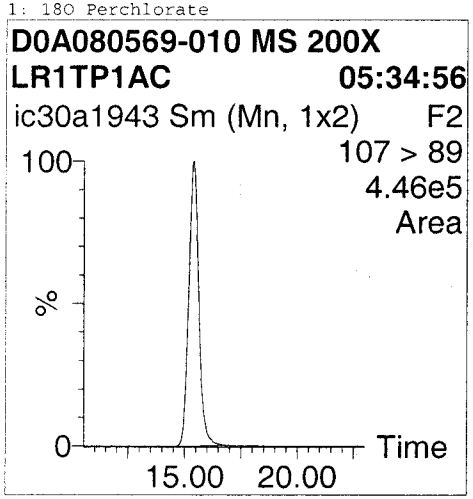
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1)
Last modified: Wed Jan 20 13:36:27 2010
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19L31
Last modified: Sat Jan 02 11:41:56 2010
Job Code:

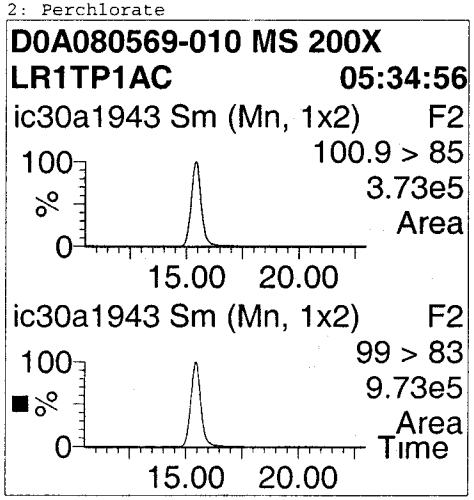
Printed: Wed Jan 20 13:43:05 2010

Name: ic30a1943
Text: D0A080569-010 MS 200X

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.394	228631	bb	0.859	85.85	ic19L31	02/Jan/10	
2	Perchlorate	15.444	499213	bb	61720.905	123441..	ic19L31	02/Jan/10	

Analyst: Jacqueline Bonnett

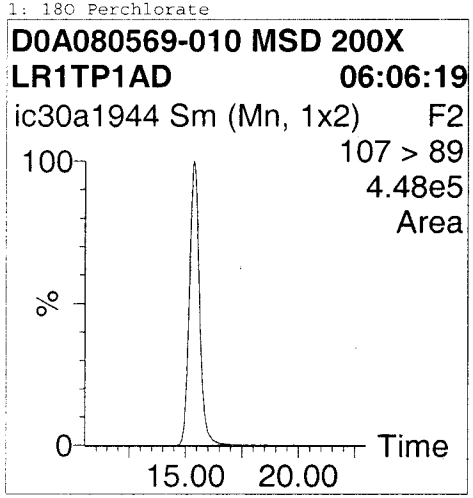
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1)
Last modified: Wed Jan 20 13:36:27 2010
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19L31
Last modified: Sat Jan 02 11:41:56 2010
Job Code:

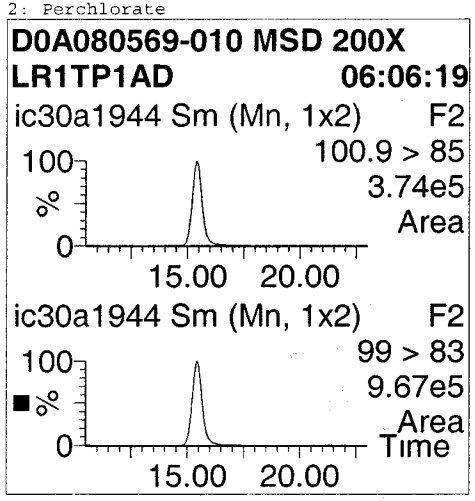
Printed: Wed Jan 20 13:43:05 2010

Name: ic30a1944
Text: D0A080569-010 MSD 200X

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.368	230472	bb	0.865	86.54	ic19L31	02/Jan/10	
2	Perchlorate	15.444	496832	bb	60931.169	121862..	ic19L31	02/Jan/10	

Analyst: Jacqueline Bonnett

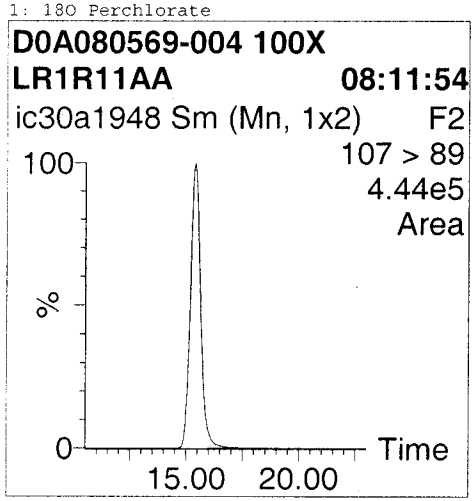
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1)
Last modified: Wed Jan 20 13:36:27 2010
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19L31
Last modified: Sat Jan 02 11:41:56 2010
Job Code:

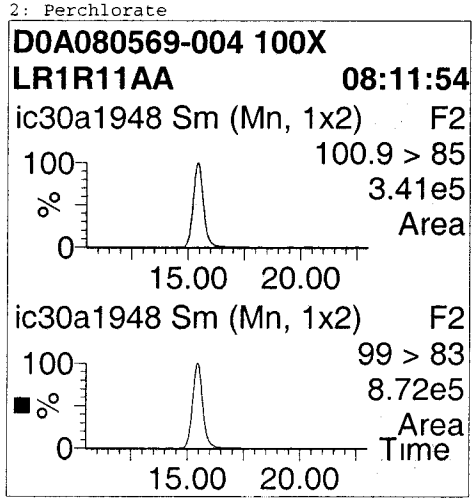
Printed: Wed Jan 20 13:43:05 2010

Name: ic30a1948
Text: D0A080569-004 100X

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.394	231932	bb	0.871	87.09	ic19L31	02/Jan/10	
2	Perchlorate	15.444	458093	bb	27898.098		ic19L31	02/Jan/10	

Analyst: Jacqueline Bonnett

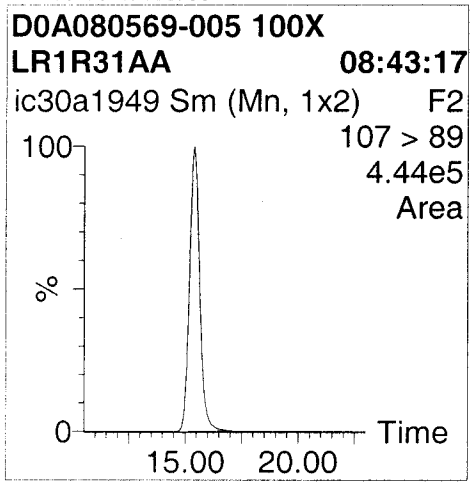
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1)
Last modified: Wed Jan 20 13:36:27 2010
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19L31
Last modified: Sat Jan 02 11:41:56 2010
Job Code:

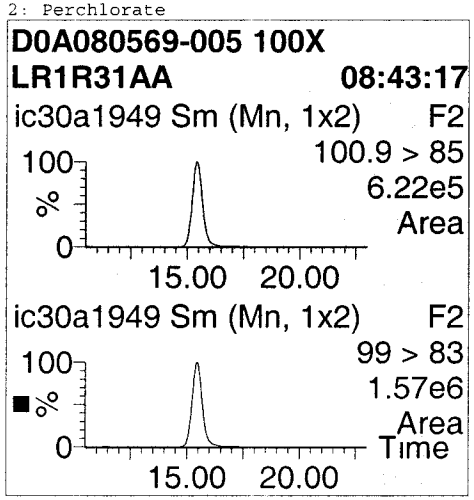
Printed: Wed Jan 20 13:43:05 2010

Name: ic30a1949
Text: D0A080569-005 100X

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.394	231302	bb	0.869	86.85	ic19L31	02/Jan/10	
2	Perchlorate	15.469	828931	bb	50767.871		ic19L31	02/Jan/10	

Analyst: Jacqueline Bonnett

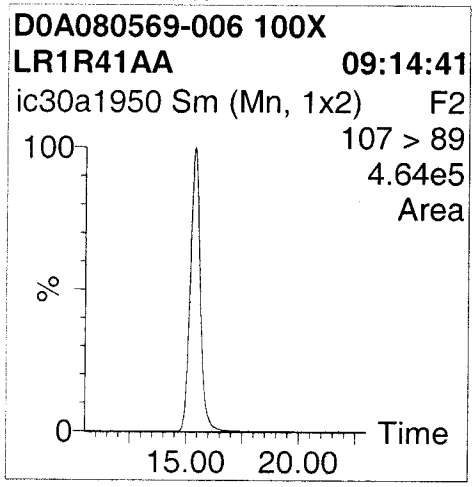
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1)
Last modified: Wed Jan 20 13:36:27 2010
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19L31
Last modified: Sat Jan 02 11:41:56 2010
Job Code:

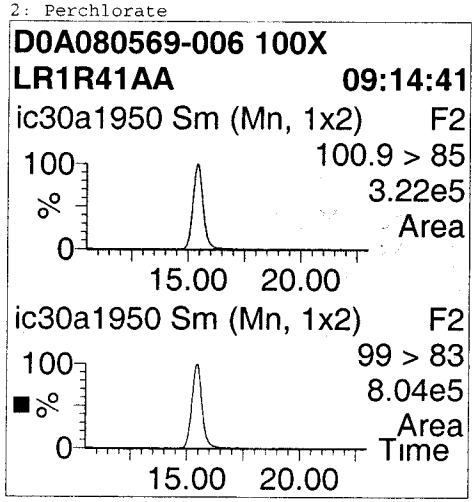
Printed: Wed Jan 20 13:43:05 2010

Name: ic30a1950
Text: D0A080569-006 100X

1: 180 Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	180 Perchlorate	15.394	238779	bb	0.897	89.66	ic19L31	02/Jan/10	
2	Perchlorate	15.469	416293	bb	24604.209		ic19L31	02/Jan/10	

Analyst: Jacqueline Bonnett

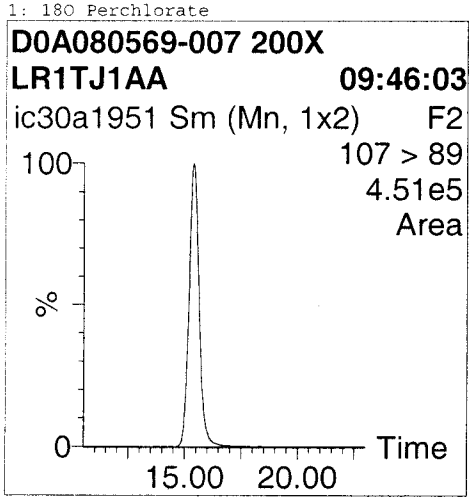
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1)
Last modified: Wed Jan 20 13:36:27 2010
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19L31
Last modified: Sat Jan 02 11:41:56 2010
Job Code:

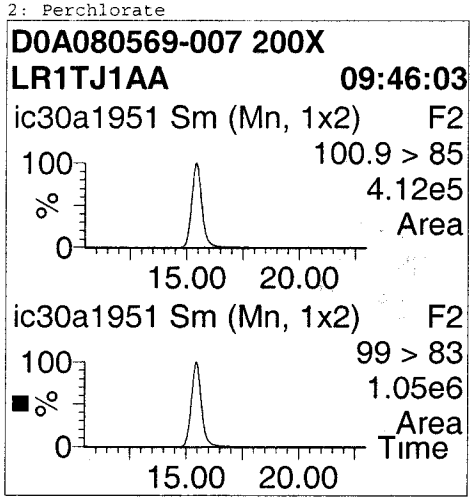
Printed: Wed Jan 20 13:43:05 2010

Name: ic30a1951
Text: D0A080569-007 200X

1: 180 Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	180 Perchlorate	15.393	231302	bb	0.869	86.85	ic19L31	02/Jan/10	
2	Perchlorate	15.444	533077	bb	65166.939		ic19L31	02/Jan/10	

Analyst: Jacqueline Bonnett

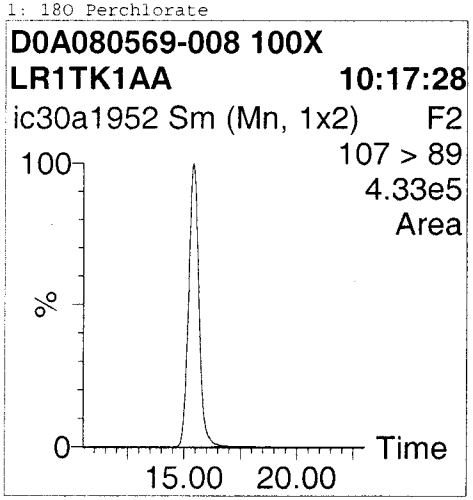
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1)
Last modified: Wed Jan 20 13:36:27 2010
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19L31
Last modified: Sat Jan 02 11:41:56 2010
Job Code:

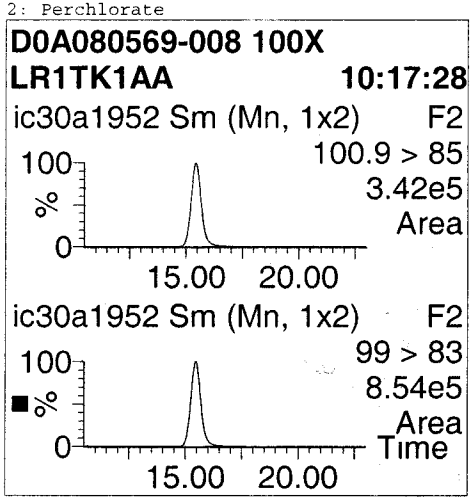
Printed: Wed Jan 20 13:43:05 2010

Name: ic30a1952
Text: D0A080569-008 100X

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.419	227513	bb	0.854	85.43	ic19L31	02/Jan/10	
2	Perchlorate	15.444	442935	bb	27496.354		ic19L31	02/Jan/10	

Analyst: Jacqueline Bonnett

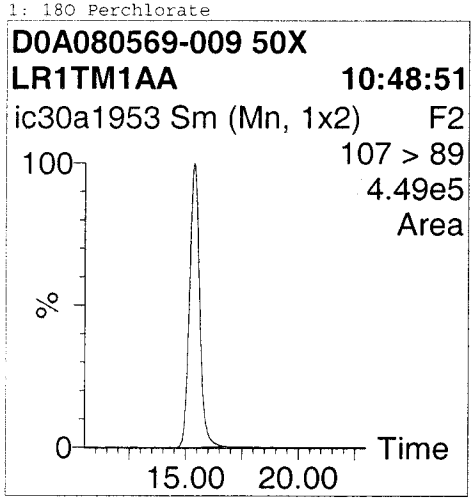
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1)
Last modified: Wed Jan 20 13:36:27 2010
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19L31
Last modified: Sat Jan 02 11:41:56 2010
Job Code:

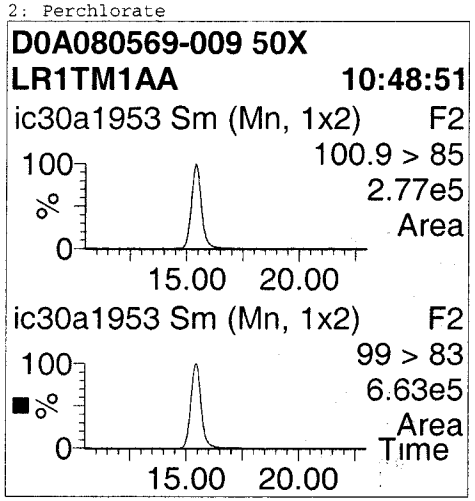
Printed: Wed Jan 20 13:43:05 2010

Name: ic30a1953
Text: D0A080569-009 50X

1: 18O Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	18O Perchlorate	15.368	231341	bb	0.869	86.87	ic19L31	02/Jan/10	
2	Perchlorate	15.444	347374	bb	10582.874		ic19L31	02/Jan/10	

Analyst: Jacqueline Bonnett

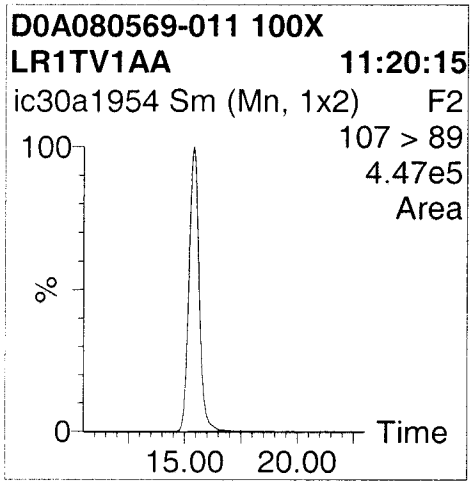
Quantify Sample Report
IC Perchlorate Analysis

Sample List: C:\MassLynx 2010\IC Perchlorate.PRO\SampleDB\IC10A19(1)
Last modified: Wed Jan 20 13:36:27 2010
Method: C:\MassLynx\IC Perchlorate.PRO\MethDB\ic19L31
Last modified: Sat Jan 02 11:41:56 2010
Job Code:

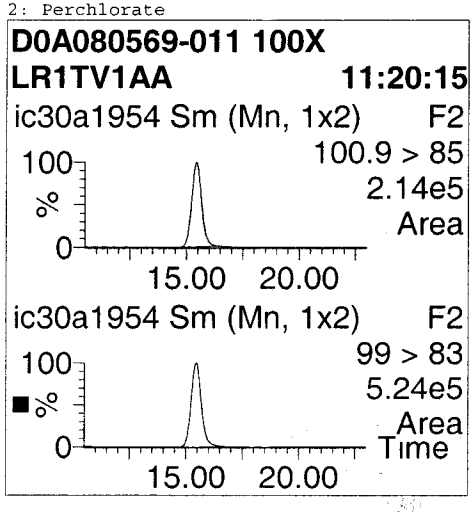
Printed: Wed Jan 20 13:43:05 2010

Name: ic30a1954
Text: D0A080569-011 100X

1: 180 Perchlorate



2: Perchlorate



#	Name	RT	Area	Flags	ng/L or kg()	%Rec	Cal.File	Cal.Date	Mod.Comment
1	180 Perchlorate	15.394	233087	bb	0.875	87.52	ic19L31	02/Jan/10	
2	Perchlorate	15.469	274904	bb	16585.673		ic19L31	02/Jan/10	

Analyst: Jacqueline Bonnett

Southeast ACCUTEST Laboratories

IT'S ALL IN THE CHEMISTRY

01/19/10

Technical Report for

Tetra Tech, Inc

Holloman AFB; Alamogordo, NM

100-TEN-T93002

Accutest Job Number: F70660

Sampling Dates: 01/06/10 - 01/07/10

Report to:

Tetra Tech
800 Oak Ridge Tpk. Suite A600
Oak Ridge, TN 37830
Virginia.Mullins@tetratech.com

ATTN: Ginger Mullins

Total number of pages in report: **182**

ACCUTEST LABORATORIES 50 YEARS 1956-2006

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Harry Behzadi, Ph.D.
Laboratory Director

Client Service contact: Sue Bell 407-425-6700

Certifications: FL (DOH E83510), NC (573), NJ (FL002), MA (FL946), IA (366), LA (03051), KS (E-10327), SC, AK

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Table of Contents

-1-

Section 1: Sample Summary 4
Section 2: Case Narrative/Conformance Summary 7
Section 3: Sample Results 9
3.1: F70660-1: MW39-10-010610 10
3.2: F70660-1A: MW39-10-010610 15
3.3: F70660-2: MW39-09-010610 16
3.4: F70660-2A: MW39-09-010610 21
3.5: F70660-3: MW39-11-010610 22
3.6: F70660-3A: MW39-11-010610 27
3.7: F70660-4: MW39-06D-010610 28
3.8: F70660-4A: MW39-06D-010610 33
3.9: F70660-5: MW39-12-010610 34
3.10: F70660-5A: MW39-12-010610 39
3.11: F70660-6: MW39-06-010610 40
3.12: F70660-6A: MW39-06-010610 45
3.13: F70660-7: MW39-08-010610 46
3.14: F70660-7A: MW39-08-010610 51
3.15: F70660-8: MW39-DUP01-010610 52
3.16: F70660-8A: MW39-DUP01-010610 57
3.17: F70660-9: TB01-010610 58
3.18: F70660-10: MW39-02-010710 61
3.19: F70660-10A: MW39-02-010710 66
3.20: F70660-11: MW39-07-010710 67
3.21: F70660-11A: MW39-07-010710 72
3.22: F70660-12: MW39-05-010710 73
3.23: F70660-12A: MW39-05-010710 78
Section 4: Misc. Forms 79
4.1: Certification Exceptions 80
4.2: Chain of Custody 81
Section 5: GC/MS Volatiles - QC Data Summaries 84
5.1: Method Blank Summary 85
5.2: Blank Spike Summary 91
5.3: Matrix Spike/Matrix Spike Duplicate Summary 97
5.4: Instrument Performance Checks (BFB) 103
5.5: Internal Standard Area Summaries 106
5.6: Surrogate Recovery Summaries 108
5.7: Initial and Continuing Calibration Summaries 109
Section 6: Metals Analysis - QC Data Summaries 122
6.1: Inst QC MA7769: Hg 123
6.2: Inst QC MA7773: As,Ba,Cd,Cr,Pb,Se,Ag 133
6.3: Prep QC MP17581: Hg 160
6.4: Prep QC MP17582: Hg 165

Table of Contents

-2-

6.5: Prep QC MP17584: As,Ba,Cd,Cr,Pb,Se,Ag 170
6.6: Prep QC MP17586: As,Ba,Cd,Cr,Pb,Se,Ag 175
Section 7: General Chemistry - QC Data Summaries 180
7.1: Method Blank and Spike Results Summary 181
7.2: Duplicate Results Summary 182

Accutest Laboratories

Sample Summary

Tetra Tech, Inc

Job No: F70660

Holloman AFB; Alamogordo, NM
Project No: 100-TEN-T93002

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
F70660-1	01/06/10	11:13	JB	01/08/10	AQ	Ground Water	MW39-10-010610
F70660-1A	01/06/10	11:13	JB	01/08/10	AQ	Groundwater Filtered	MW39-10-010610
F70660-2	01/06/10	11:25	JB	01/08/10	AQ	Ground Water	MW39-09-010610
F70660-2A	01/06/10	11:25	JB	01/08/10	AQ	Groundwater Filtered	MW39-09-010610
F70660-3	01/06/10	13:30	JB	01/08/10	AQ	Ground Water	MW39-11-010610
F70660-3A	01/06/10	13:30	JB	01/08/10	AQ	Groundwater Filtered	MW39-11-010610
F70660-4	01/06/10	14:36	JB	01/08/10	AQ	Ground Water	MW39-06D-010610
F70660-4A	01/06/10	14:36	JB	01/08/10	AQ	Groundwater Filtered	MW39-06D-010610
F70660-5	01/06/10	14:45	JB	01/08/10	AQ	Ground Water	MW39-12-010610
F70660-5A	01/06/10	14:45	JB	01/08/10	AQ	Groundwater Filtered	MW39-12-010610
F70660-6	01/06/10	15:55	JB	01/08/10	AQ	Ground Water	MW39-06-010610
F70660-6A	01/06/10	15:55	JB	01/08/10	AQ	Groundwater Filtered	MW39-06-010610
F70660-7	01/06/10	15:57	JB	01/08/10	AQ	Ground Water	MW39-08-010610

Accutest Laboratories

Sample Summary
(continued)

Tetra Tech, Inc

Job No: F70660

Holloman AFB; Alamogordo, NM
Project No: 100-TEN-T93002

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
F70660-7A	01/06/10	15:57	JB	01/08/10	AQ	Groundwater Filtered	MW39-08-010610
F70660-8	01/06/10	00:00	JB	01/08/10	AQ	Ground Water	MW39-DUP01-010610
F70660-8A	01/06/10	00:00	JB	01/08/10	AQ	Groundwater Filtered	MW39-DUP01-010610
F70660-9	01/06/10	00:00	JB	01/08/10	AQ	Ground Water	TB01-010610
F70660-10	01/07/10	09:40	JB	01/08/10	AQ	Ground Water	MW39-02-010710
F70660-10A	01/07/10	09:40	JB	01/08/10	AQ	Groundwater Filtered	MW39-02-010710
F70660-11	01/07/10	09:55	JB	01/08/10	AQ	Ground Water	MW39-07-010710
F70660-11A	01/07/10	09:55	JB	01/08/10	AQ	Groundwater Filtered	MW39-07-010710
F70660-11AD	01/07/10	09:55	JB	01/08/10	AQ	Water Dup/MSD	MW39-07-010710
F70660-11AS	01/07/10	09:55	JB	01/08/10	AQ	Water Matrix Spike	MW39-07-010710
F70660-11D	01/07/10	09:55	JB	01/08/10	AQ	Water Dup/MSD	MW39-07-010710
F70660-11S	01/07/10	09:55	JB	01/08/10	AQ	Water Matrix Spike	MW39-07-010710
F70660-12	01/07/10	10:30	JB	01/08/10	AQ	Ground Water	MW39-05-010710

Accutest Laboratories

Sample Summary
(continued)

Tetra Tech, Inc

Job No: F70660

Holloman AFB; Alamogordo, NM
Project No: 100-TEN-T93002

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
F70660-12A	01/07/10	10:30	JB	01/08/10	AQ	Groundwater Filtered	MW39-05-010710

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Tetra Tech, Inc **Job No:** F70660

Site: Holloman AFB; Alamogordo, NM **Report Date:** 1/18/2010 2:17:07 PM

12 Samples were collected on 01/06/2010 and 01/07/2010 and were received at Accutest SE on 01/08/2010 properly preserved, at 4.6 Deg. C and intact. These Samples received an Accutest job number of F70660. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GCMS by Method SW846 8260B

Matrix: AQ **Batch ID:** VJ3080

All samples were analyzed within the recommended method holding time.

Samples F70660-11MS, F70660-11MSD were used as the QC samples indicated.

All method blanks for this batch meet method specific criteria.

Samples F70660-9, F70660-6 have compounds reported with a “B” qualifier, indicating analyte is found in the associated method blank.

Blank Spike Recoverys for Acetone, Pentachloroethane are outside control limits.

Matrix Spike Recoverys for 2-Chloroethyl vinyl ether, 2-Hexanone, 4-Methyl-2-pentanone, Acrylonitrile, Methacrylonitrile, Methyl ethyl ketone, Methyl methacrylate, Propionitrile are outside control limits. Probable cause due to matrix interference.

Matrix Spike Duplicate Recoverys for 1,1,2,2-Tetrachloroethane, 1,2,3-Trichloropropane, 1,2-Dibromo-3-chloropropane, 2-Chloroethyl vinyl ether, 2-Hexanone, 4-Methyl-2-pentanone, Acrylonitrile, cis-1,3-Dichloropropene, Ethyl methacrylate, Methacrylonitrile, Methyl ethyl ketone, Methyl methacrylate, Methyl Tert Butyl Ether, Naphthalene, Propionitrile, Vinyl Acetate are outside control limits. Probable cause due to matrix interference.

RPD for MSD for Acrylonitrile are outside control limits for sample F70660-11MSD. Probable cause due to sample non-homogeneity.

F70660-2: Sample was not preserved to a pH < 2.

F70660-6 for Methylene chloride: Suspected laboratory contaminant.

F70660-2, F70660-3, F70660-5, F70660-7 for Acetone: Associated BS recovery outside control limits.

Matrix: AQ **Batch ID:** VJ3081

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Samples F70691-1MS, F70691-1MSD were used as the QC samples indicated.

Blank Spike Recoverys for Acetone, Acrolein, Methyl ethyl ketone are outside control limits.

Matrix Spike Recoverys for 2-Chloroethyl vinyl ether, 2-Hexanone, Acrylonitrile, cis-1,3-Dichloropropene, Methyl methacrylate are outside control limits. Probable cause due to matrix interference.

Matrix Spike Duplicate Recoverys for 2-Chloroethyl vinyl ether, 2-Hexanone, 4-Methyl-2-pentanone, cis-1,3-Dichloropropene, Methyl methacrylate, Propionitrile are outside control limits. Probable cause due to matrix interference.

RPDs for MSD for Acrylonitrile, Hexachlorobutadiene are outside control limits for sample F70691-1MSD. Probable cause due to sample non-homogeneity.

F70660-2, F70660-3, F70660-5, F70660-7: Confirmation run for internal standard areas.

F70660-1 for Methyl ethyl ketone: Associated BS recovery outside control limits.

F70660-1 for Acetone: Associated BS recovery outside control limits.

Metals by Method SW846 6010B

Matrix: AQ **Batch ID:** MP17584

All samples were digested within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Metals by Method SW846 6010B

Matrix: AQ **Batch ID:** MP17584

Samples F70660-11DUP, F70660-11MS, F70660-11MSD, F70660-11SDL were used as the QC samples for metals.

Matrix Spike Duplicate Recovery for Selenium is outside control limits. Probable cause due to matrix interference.

RPD for Duplicate for Selenium is outside control limits for sample MP17584-D1. RPD acceptable due to low duplicate and sample concentrations.

F70660-1, F70660-2, F70660-3, F70660-4, F70660-5, F70660-6, F70660-7, F70660-8, F70660-10, F70660-11, F70660-12 for Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver: Elevated reporting limits due to matrix interference.

Matrix: AQ **Batch ID:** MP17586

All samples were digested within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Samples F70660-11ADUP, F70660-11AMS, F70660-11AMSD, F70660-11ASDL were used as the QC samples for metals.

Matrix Spike Recovery for Selenium is outside control limits. Spike recovery indicates possible matrix interference.

RPD for Duplicate for Selenium is outside control limits for sample MP17586-D1. RPD acceptable due to low duplicate and sample concentrations.

F70660-1A, F70660-2A, F70660-3A, F70660-4A, F70660-5A, F70660-6A, F70660-7A, F70660-8A, F70660-10A, F70660-11A, F70660-12A for Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver: Elevated reporting limits due to matrix interference.

Metals by Method SW846 7470A

Matrix: AQ **Batch ID:** MP17581

All samples were digested within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Samples F70660-11DUP, F70660-11MS, F70660-11MSD, F70660-11SDL were used as the QC samples for metals.

Matrix: AQ **Batch ID:** MP17582

All samples were digested within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Samples F70660-11ADUP, F70660-11AMS, F70660-11AMSD, F70660-11ASDL were used as the QC samples for metals.

Wet Chemistry by Method SM19 2540C

Matrix: AQ **Batch ID:** GN38060

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample F70660-11DUP was used as the QC sample for Solids, Total Dissolved.

Accutest Laboratories Southeast (ALSE) certifies that this report meets the project requirements for analytical data produced for the samples as received at ALSE and as stated on the COC. ALSE certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the ALSE Quality Manual except as noted above. This report is to be used in its entirety. ALSE is not responsible for any assumptions of data quality if partial data packages are used.

Narrative prepared by:

_____ Date: January 18, 2010

Ellen Pampel, Inorganic QA (signature on file)

Monday, January 18, 2010

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MW39-10-010610		
Lab Sample ID:	F70660-1	**Date Sampled:**	01/06/10
Matrix:	AQ - Ground Water	**Date Received:**	01/08/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J052867.D	1	01/12/10	KW	n/a	n/a	VJ3081
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone [a]	14.0	25	10	ug/l	J
75-05-8	Acetonitrile	ND	20	5.0	ug/l	
107-02-8	Acrolein	ND	20	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	2.0	ug/l	
107-05-1	Allyl chloride	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-44-7	Benzyl Chloride	ND	2.0	0.36	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.23	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.33	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.32	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.22	ug/l	
75-00-3	Chloroethane	ND	2.0	0.48	ug/l	
67-66-3	Chloroform	ND	1.0	0.28	ug/l	
544-10-5	1-Chlorohexane	ND	2.0	0.27	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.25	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.40	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.24	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.54	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.32	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.34	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.26	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.28	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-10-010610		
Lab Sample ID:	F70660-1	**Date Sampled:**	01/06/10
Matrix:	AQ - Ground Water	**Date Received:**	01/08/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
1476-11-5	cis-1,4-Dichloro-2-Butene	ND	10	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.45	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.43	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	1.0	ug/l	
76-13-1	Freon 113	ND	1.0	0.34	ug/l	
591-78-6	2-Hexanone	7.8	10	5.0	ug/l	J
87-68-3	Hexachlorobutadiene	ND	2.0	0.69	ug/l	
110-54-3	Hexane	ND	2.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.32	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
126-98-7	Methacrylonitrile	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	1.8	2.0	0.78	ug/l	J
74-87-3	Methyl chloride	1.6	2.0	0.61	ug/l	J
74-88-4	Methyl iodide	ND	5.0	1.0	ug/l	
80-62-6	Methyl methacrylate	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.30	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
78-93-3	Methyl ethyl ketone [a]	2.4	5.0	2.0	ug/l	J
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
76-01-7	Pentachloroethane	ND	10	2.0	ug/l	
107-12-0	Propionitrile	ND	20	10	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.25	ug/l	
100-42-5	Styrene	ND	1.0	0.36	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.33	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.26	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.34	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-10-010610		
Lab Sample ID:	F70660-1	**Date Sampled:**	01/06/10
Matrix:	AQ - Ground Water	**Date Received:**	01/08/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.35	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.32	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
108-05-4	Vinyl Acetate	ND	10	3.6	ug/l	
	m,p-Xylene	ND	2.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.37	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		87-116%
17060-07-0	1,2-Dichloroethane-D4	103%		76-127%
2037-26-5	Toluene-D8	101%		86-112%
460-00-4	4-Bromofluorobenzene	102%		84-120%

(a) Associated BS recovery outside control limits.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-10-010610		
Lab Sample ID:	F70660-1	**Date Sampled:**	01/06/10
Matrix:	AQ - Ground Water	**Date Received:**	01/08/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic [a]	110 U	200	110	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Barium [a]	100 U	4000	100	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Cadmium [a]	20 U	100	20	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Chromium [a]	40 U	200	40	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Lead [a]	40 U	100	40	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Mercury	0.15 U	1.0	0.15	ug/l	1	01/11/10	01/11/10	LM	SW846 7470A [1]	SW846 7470A [3]
Selenium [a]	68.6 B	200	68	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Silver [a]	28 U	200	28	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA7769
(2) Instrument QC Batch: MA7773
(3) Prep QC Batch: MP17581
(4) Prep QC Batch: MP17584

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-10-010610		
Lab Sample ID:	F70660-1	**Date Sampled:**	01/06/10
Matrix:	AQ - Ground Water	**Date Received:**	01/08/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	107000	10000	1000	mg/l	100	01/08/10 13:05	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-10-010610		
Lab Sample ID:	F70660-1A	**Date Sampled:**	01/06/10
Matrix:	AQ - Groundwater Filtered	**Date Received:**	01/08/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic [a]	110 U	200	110	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Barium [a]	100 U	4000	100	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Cadmium [a]	20 U	100	20	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Chromium [a]	40 U	200	40	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Lead [a]	40 U	100	40	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Mercury	0.15 U	1.0	0.15	ug/l	1	01/11/10	01/11/10	LM	SW846 7470A [1]	SW846 7470A [3]
Selenium [a]	68 U	200	68	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Silver [a]	28 U	200	28	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA7769
(2) Instrument QC Batch: MA7773
(3) Prep QC Batch: MP17581
(4) Prep QC Batch: MP17586

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-09-010610		
Lab Sample ID:	F70660-2	**Date Sampled:**	01/06/10
Matrix:	AQ - Ground Water	**Date Received:**	01/08/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	J052848.D	1	01/11/10	KW	n/a	n/a	VJ3080
Run #2 [b]	J052868.D	1	01/12/10	KW	n/a	n/a	VJ3081

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone [c]	16.7	25	10	ug/l	J
75-05-8	Acetonitrile	ND	20	5.0	ug/l	
107-02-8	Acrolein	ND	20	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	2.0	ug/l	
107-05-1	Allyl chloride	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-44-7	Benzyl Chloride	ND	2.0	0.36	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.23	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.33	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.32	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.22	ug/l	
75-00-3	Chloroethane	ND	2.0	0.48	ug/l	
67-66-3	Chloroform	ND	1.0	0.28	ug/l	
544-10-5	1-Chlorohexane	ND	2.0	0.27	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.25	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.40	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.24	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.54	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.32	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.34	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.26	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.28	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-09-010610		
Lab Sample ID:	F70660-2	**Date Sampled:**	01/06/10
Matrix:	AQ - Ground Water	**Date Received:**	01/08/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
1476-11-5	cis-1,4-Dichloro-2-Butene	ND	10	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.45	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.43	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	1.0	ug/l	
76-13-1	Freon 113	ND	1.0	0.34	ug/l	
591-78-6	2-Hexanone	15.0	10	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.69	ug/l	
110-54-3	Hexane	ND	2.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.32	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
126-98-7	Methacrylonitrile	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.78	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.61	ug/l	
74-88-4	Methyl iodide	ND	5.0	1.0	ug/l	
80-62-6	Methyl methacrylate	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.30	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
78-93-3	Methyl ethyl ketone	3.7	5.0	2.0	ug/l	J
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
76-01-7	Pentachloroethane	ND	10	2.0	ug/l	
107-12-0	Propionitrile	ND	20	10	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.25	ug/l	
100-42-5	Styrene	ND	1.0	0.36	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.33	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.26	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.34	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-09-010610		
Lab Sample ID:	F70660-2	**Date Sampled:**	01/06/10
Matrix:	AQ - Ground Water	**Date Received:**	01/08/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.35	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.32	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
108-05-4	Vinyl Acetate	ND	10	3.6	ug/l	
	m,p-Xylene	ND	2.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.37	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%	98%	87-116%
17060-07-0	1,2-Dichloroethane-D4	103%	101%	76-127%
2037-26-5	Toluene-D8	101%	100%	86-112%
460-00-4	4-Bromofluorobenzene	102%	103%	84-120%

(a) Sample was not preserved to a pH < 2.
(b) Confirmation run for internal standard areas.
(c) Associated BS recovery outside control limits.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-09-010610		
Lab Sample ID:	F70660-2	**Date Sampled:**	01/06/10
Matrix:	AQ - Ground Water	**Date Received:**	01/08/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic [a]	110 U	200	110	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Barium [a]	152 B	4000	100	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Cadmium [a]	20 U	100	20	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Chromium [a]	40 U	200	40	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Lead [a]	40 U	100	40	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Mercury	0.15 U	1.0	0.15	ug/l	1	01/11/10	01/11/10	LM	SW846 7470A [1]	SW846 7470A [3]
Selenium [a]	85.5 B	200	68	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Silver [a]	28 U	200	28	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA7769
(2) Instrument QC Batch: MA7773
(3) Prep QC Batch: MP17581
(4) Prep QC Batch: MP17584

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-09-010610		
Lab Sample ID:	F70660-2	**Date Sampled:**	01/06/10
Matrix:	AQ - Ground Water	**Date Received:**	01/08/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	107000	10000	1000	mg/l	100	01/08/10 13:05	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-09-010610		
Lab Sample ID:	F70660-2A	**Date Sampled:**	01/06/10
Matrix:	AQ - Groundwater Filtered	**Date Received:**	01/08/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic [a]	110 U	200	110	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Barium [a]	100 U	4000	100	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Cadmium [a]	20 U	100	20	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Chromium [a]	40 U	200	40	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Lead [a]	40 U	100	40	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Mercury	0.15 U	1.0	0.15	ug/l	1	01/11/10	01/11/10	LM	SW846 7470A [1]	SW846 7470A [3]
Selenium [a]	68 U	200	68	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Silver [a]	28 U	200	28	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA7769
(2) Instrument QC Batch: MA7773
(3) Prep QC Batch: MP17581
(4) Prep QC Batch: MP17586

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-11-010610		
Lab Sample ID:	F70660-3	**Date Sampled:**	01/06/10
Matrix:	AQ - Ground Water	**Date Received:**	01/08/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J052849.D	1	01/11/10	KW	n/a	n/a	VJ3080
Run #2 [a]	J052869.D	1	01/12/10	KW	n/a	n/a	VJ3081

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone [b]	31.1	25	10	ug/l	J
75-05-8	Acetonitrile	ND	20	5.0	ug/l	
107-02-8	Acrolein	ND	20	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	2.0	ug/l	
107-05-1	Allyl chloride	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-44-7	Benzyl Chloride	ND	2.0	0.36	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.23	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.33	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.32	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.22	ug/l	
75-00-3	Chloroethane	ND	2.0	0.48	ug/l	
67-66-3	Chloroform	ND	1.0	0.28	ug/l	
544-10-5	1-Chlorohexane	ND	2.0	0.27	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.25	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.40	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.24	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.54	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.32	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.34	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.26	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.28	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-11-010610		
Lab Sample ID:	F70660-3	**Date Sampled:**	01/06/10
Matrix:	AQ - Ground Water	**Date Received:**	01/08/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
1476-11-5	cis-1,4-Dichloro-2-Butene	ND	10	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.45	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.43	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	1.0	ug/l	
76-13-1	Freon 113	ND	1.0	0.34	ug/l	
591-78-6	2-Hexanone	100	10	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.69	ug/l	
110-54-3	Hexane	ND	2.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.32	ug/l	
108-10-1	4-Methyl-2-pentanone	2.2	5.0	2.0	ug/l	J
126-98-7	Methacrylonitrile	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.78	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.61	ug/l	
74-88-4	Methyl iodide	ND	5.0	1.0	ug/l	
80-62-6	Methyl methacrylate	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.30	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
78-93-3	Methyl ethyl ketone	5.0	5.0	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
76-01-7	Pentachloroethane	ND	10	2.0	ug/l	
107-12-0	Propionitrile	ND	20	10	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.25	ug/l	
100-42-5	Styrene	ND	1.0	0.36	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.33	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.26	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.34	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-11-010610		
Lab Sample ID:	F70660-3	**Date Sampled:**	01/06/10
Matrix:	AQ - Ground Water	**Date Received:**	01/08/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.35	ug/l	
79-01-6	Trichloroethylene	39.5	1.0	0.32	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
108-05-4	Vinyl Acetate	ND	10	3.6	ug/l	
	m,p-Xylene	ND	2.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.37	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%	99%	87-116%
17060-07-0	1,2-Dichloroethane-D4	104%	101%	76-127%
2037-26-5	Toluene-D8	101%	99%	86-112%
460-00-4	4-Bromofluorobenzene	105%	102%	84-120%

(a) Confirmation run for internal standard areas.
(b) Associated BS recovery outside control limits.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-11-010610		
Lab Sample ID:	F70660-3	**Date Sampled:**	01/06/10
Matrix:	AQ - Ground Water	**Date Received:**	01/08/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic [a]	110 U	200	110	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Barium [a]	100 U	4000	100	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Cadmium [a]	20 U	100	20	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Chromium [a]	40 U	200	40	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Lead [a]	40 U	100	40	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Mercury	0.15 U	1.0	0.15	ug/l	1	01/11/10	01/11/10	LM	SW846 7470A [1]	SW846 7470A [3]
Selenium [a]	108 B	200	68	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Silver [a]	28 U	200	28	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA7769
(2) Instrument QC Batch: MA7773
(3) Prep QC Batch: MP17581
(4) Prep QC Batch: MP17584

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-11-010610		
Lab Sample ID:	F70660-3	**Date Sampled:**	01/06/10
Matrix:	AQ - Ground Water	**Date Received:**	01/08/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	105000	10000	1000	mg/l	100	01/08/10 13:05	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-11-010610		
Lab Sample ID:	F70660-3A	**Date Sampled:**	01/06/10
Matrix:	AQ - Groundwater Filtered	**Date Received:**	01/08/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic [a]	110 U	200	110	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Barium [a]	100 U	4000	100	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Cadmium [a]	20 U	100	20	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Chromium [a]	40 U	200	40	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Lead [a]	40 U	100	40	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Mercury	0.15 U	1.0	0.15	ug/l	1	01/11/10	01/11/10	LM	SW846 7470A [1]	SW846 7470A [3]
Selenium [a]	82.3 B	200	68	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Silver [a]	28 U	200	28	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA7769
(2) Instrument QC Batch: MA7773
(3) Prep QC Batch: MP17581
(4) Prep QC Batch: MP17586

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-06D-010610		
Lab Sample ID:	F70660-4	**Date Sampled:**	01/06/10
Matrix:	AQ - Ground Water	**Date Received:**	01/08/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J052864.D	1	01/12/10	KW	n/a	n/a	VJ3081
Run #2	J052850.D	10	01/11/10	KW	n/a	n/a	VJ3080

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
75-05-8	Acetonitrile	ND	20	5.0	ug/l	
107-02-8	Acrolein	ND	20	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	2.0	ug/l	
107-05-1	Allyl chloride	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-44-7	Benzyl Chloride	ND	2.0	0.36	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.23	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.33	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.32	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.22	ug/l	
75-00-3	Chloroethane	ND	2.0	0.48	ug/l	
67-66-3	Chloroform	0.82	1.0	0.28	ug/l	J
544-10-5	1-Chlorohexane	ND	2.0	0.27	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.25	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.40	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.24	ug/l	
75-35-4	1,1-Dichloroethylene	2.4	1.0	0.54	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.32	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.34	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.26	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.28	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-06D-010610		
Lab Sample ID:	F70660-4	**Date Sampled:**	01/06/10
Matrix:	AQ - Ground Water	**Date Received:**	01/08/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
1476-11-5	cis-1,4-Dichloro-2-Butene	ND	10	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.45	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.43	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	1.0	ug/l	
76-13-1	Freon 113	ND	1.0	0.34	ug/l	
591-78-6	2-Hexanone	ND	10	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.69	ug/l	
110-54-3	Hexane	ND	2.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.32	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
126-98-7	Methacrylonitrile	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.78	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.61	ug/l	
74-88-4	Methyl iodide	ND	5.0	1.0	ug/l	
80-62-6	Methyl methacrylate	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.30	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
76-01-7	Pentachloroethane	ND	10	2.0	ug/l	
107-12-0	Propionitrile	ND	20	10	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.25	ug/l	
100-42-5	Styrene	ND	1.0	0.36	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.33	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.26	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.34	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-06D-010610		
Lab Sample ID:	F70660-4	**Date Sampled:**	01/06/10
Matrix:	AQ - Ground Water	**Date Received:**	01/08/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.35	ug/l	
79-01-6	Trichloroethylene	328 [a]	10	3.2	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
108-05-4	Vinyl Acetate	ND	10	3.6	ug/l	
	m,p-Xylene	ND	2.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.37	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%	100%	87-116%
17060-07-0	1,2-Dichloroethane-D4	101%	99%	76-127%
2037-26-5	Toluene-D8	104%	104%	86-112%
460-00-4	4-Bromofluorobenzene	102%	103%	84-120%

(a) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-06D-010610		
Lab Sample ID:	F70660-4	**Date Sampled:**	01/06/10
Matrix:	AQ - Ground Water	**Date Received:**	01/08/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic [a]	110 U	200	110	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Barium [a]	100 U	4000	100	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Cadmium [a]	20 U	100	20	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Chromium [a]	40 U	200	40	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Lead [a]	40 U	100	40	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Mercury	0.15 U	1.0	0.15	ug/l	1	01/11/10	01/11/10	LM	SW846 7470A [1]	SW846 7470A [3]
Selenium [a]	103 B	200	68	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Silver [a]	28 U	200	28	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA7769
(2) Instrument QC Batch: MA7773
(3) Prep QC Batch: MP17581
(4) Prep QC Batch: MP17584

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-06D-010610		
Lab Sample ID:	F70660-4	**Date Sampled:**	01/06/10
Matrix:	AQ - Ground Water	**Date Received:**	01/08/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	102000	10000	1000	mg/l	100	01/08/10 13:05	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-06D-010610		
Lab Sample ID:	F70660-4A	**Date Sampled:**	01/06/10
Matrix:	AQ - Groundwater Filtered	**Date Received:**	01/08/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic [a]	110 U	200	110	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Barium [a]	100 U	4000	100	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Cadmium [a]	20 U	100	20	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Chromium [a]	40 U	200	40	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Lead [a]	40 U	100	40	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Mercury	0.15 U	1.0	0.15	ug/l	1	01/11/10	01/11/10	LM	SW846 7470A [1]	SW846 7470A [3]
Selenium [a]	68 U	200	68	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Silver [a]	28 U	200	28	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA7769
(2) Instrument QC Batch: MA7773
(3) Prep QC Batch: MP17581
(4) Prep QC Batch: MP17586

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-12-010610		
Lab Sample ID:	F70660-5	**Date Sampled:**	01/06/10
Matrix:	AQ - Ground Water	**Date Received:**	01/08/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J052851.D	1	01/11/10	KW	n/a	n/a	VJ3080
Run #2 [a]	J052870.D	1	01/12/10	KW	n/a	n/a	VJ3081

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone [b]	26.1	25	10	ug/l	J
75-05-8	Acetonitrile	ND	20	5.0	ug/l	
107-02-8	Acrolein	ND	20	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	2.0	ug/l	
107-05-1	Allyl chloride	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-44-7	Benzyl Chloride	ND	2.0	0.36	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.23	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.33	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.32	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.22	ug/l	
75-00-3	Chloroethane	ND	2.0	0.48	ug/l	
67-66-3	Chloroform	ND	1.0	0.28	ug/l	
544-10-5	1-Chlorohexane	ND	2.0	0.27	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.25	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.40	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.24	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.54	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.32	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.34	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.26	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.28	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-12-010610		
Lab Sample ID:	F70660-5	**Date Sampled:**	01/06/10
Matrix:	AQ - Ground Water	**Date Received:**	01/08/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
1476-11-5	cis-1,4-Dichloro-2-Butene	ND	10	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.45	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.43	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	1.0	ug/l	
76-13-1	Freon 113	ND	1.0	0.34	ug/l	
591-78-6	2-Hexanone	33.4	10	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.69	ug/l	
110-54-3	Hexane	ND	2.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.32	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
126-98-7	Methacrylonitrile	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	0.85	2.0	0.78	ug/l	J
74-87-3	Methyl chloride	1.1	2.0	0.61	ug/l	J
74-88-4	Methyl iodide	ND	5.0	1.0	ug/l	
80-62-6	Methyl methacrylate	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.30	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
78-93-3	Methyl ethyl ketone	5.4	5.0	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
76-01-7	Pentachloroethane	ND	10	2.0	ug/l	
107-12-0	Propionitrile	ND	20	10	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.25	ug/l	
100-42-5	Styrene	ND	1.0	0.36	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.33	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.26	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.34	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-12-010610		
Lab Sample ID:	F70660-5	**Date Sampled:**	01/06/10
Matrix:	AQ - Ground Water	**Date Received:**	01/08/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.35	ug/l	
79-01-6	Trichloroethylene	0.96	1.0	0.32	ug/l	J
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
108-05-4	Vinyl Acetate	ND	10	3.6	ug/l	
	m,p-Xylene	ND	2.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.37	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%	100%	87-116%
17060-07-0	1,2-Dichloroethane-D4	104%	101%	76-127%
2037-26-5	Toluene-D8	101%	100%	86-112%
460-00-4	4-Bromofluorobenzene	104%	103%	84-120%

(a) Confirmation run for internal standard areas.
(b) Associated BS recovery outside control limits.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-12-010610		
Lab Sample ID:	F70660-5	**Date Sampled:**	01/06/10
Matrix:	AQ - Ground Water	**Date Received:**	01/08/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic [a]	110 U	200	110	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Barium [a]	100 U	4000	100	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Cadmium [a]	20 U	100	20	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Chromium [a]	40 U	200	40	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Lead [a]	40 U	100	40	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Mercury	0.15 U	1.0	0.15	ug/l	1	01/11/10	01/11/10	LM	SW846 7470A [1]	SW846 7470A [3]
Selenium [a]	72.2 B	200	68	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Silver [a]	28 U	200	28	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA7769
(2) Instrument QC Batch: MA7773
(3) Prep QC Batch: MP17581
(4) Prep QC Batch: MP17584

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-12-010610		
Lab Sample ID:	F70660-5	**Date Sampled:**	01/06/10
Matrix:	AQ - Ground Water	**Date Received:**	01/08/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	98700	10000	1000	mg/l	100	01/08/10 13:05	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-12-010610		
Lab Sample ID:	F70660-5A	**Date Sampled:**	01/06/10
Matrix:	AQ - Groundwater Filtered	**Date Received:**	01/08/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic [a]	110 U	200	110	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Barium [a]	100 U	4000	100	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Cadmium [a]	20 U	100	20	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Chromium [a]	40 U	200	40	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Lead [a]	40 U	100	40	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Mercury	0.15 U	1.0	0.15	ug/l	1	01/11/10	01/11/10	LM	SW846 7470A [1]	SW846 7470A [3]
Selenium [a]	71.0 B	200	68	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Silver [a]	28 U	200	28	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA7769
(2) Instrument QC Batch: MA7773
(3) Prep QC Batch: MP17581
(4) Prep QC Batch: MP17586

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-06-010610		
Lab Sample ID:	F70660-6	**Date Sampled:**	01/06/10
Matrix:	AQ - Ground Water	**Date Received:**	01/08/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J052852.D	5	01/11/10	KW	n/a	n/a	VJ3080
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	130	50	ug/l	
75-05-8	Acetonitrile	ND	100	25	ug/l	
107-02-8	Acrolein	ND	100	25	ug/l	
107-13-1	Acrylonitrile	ND	50	10	ug/l	
107-05-1	Allyl chloride	ND	50	10	ug/l	
71-43-2	Benzene	ND	5.0	2.0	ug/l	
100-44-7	Benzyl Chloride	ND	10	1.8	ug/l	
108-86-1	Bromobenzene	ND	5.0	1.3	ug/l	
74-97-5	Bromochloromethane	ND	5.0	1.2	ug/l	
75-27-4	Bromodichloromethane	ND	5.0	1.0	ug/l	
75-25-2	Bromoform	ND	5.0	1.7	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.4	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	1.3	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	1.6	ug/l	
108-90-7	Chlorobenzene	ND	5.0	1.1	ug/l	
75-00-3	Chloroethane	ND	10	2.4	ug/l	
67-66-3	Chloroform	2.0	5.0	1.4	ug/l	J
544-10-5	1-Chlorohexane	ND	10	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	1.3	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	1.1	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	25	5.0	ug/l	
75-15-0	Carbon disulfide	ND	10	2.0	ug/l	
56-23-5	Carbon tetrachloride	2.1	5.0	1.1	ug/l	J
75-34-3	1,1-Dichloroethane	ND	5.0	1.2	ug/l	
75-35-4	1,1-Dichloroethylene	ND	5.0	2.7	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	1.2	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	10	1.6	ug/l	
106-93-4	1,2-Dibromoethane	ND	5.0	1.4	ug/l	
107-06-2	1,2-Dichloroethane	ND	5.0	1.7	ug/l	
78-87-5	1,2-Dichloropropane	ND	5.0	1.1	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	1.3	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.4	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-06-010610		
Lab Sample ID:	F70660-6	**Date Sampled:**	01/06/10
Matrix:	AQ - Ground Water	**Date Received:**	01/08/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
124-48-1	Dibromochloromethane	ND	5.0	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	10	5.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.1	ug/l	
1476-11-5	cis-1,4-Dichloro-2-Butene	ND	50	5.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	5.0	1.2	ug/l	
95-50-1	o-Dichlorobenzene	ND	5.0	1.0	ug/l	
106-46-7	p-Dichlorobenzene	ND	5.0	1.1	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	2.3	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	1.1	ug/l	
100-41-4	Ethylbenzene	ND	5.0	2.2	ug/l	
97-63-2	Ethyl methacrylate	ND	25	5.0	ug/l	
76-13-1	Freon 113	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	50	25	ug/l	
87-68-3	Hexachlorobutadiene	ND	10	3.5	ug/l	
110-54-3	Hexane	ND	10	2.5	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	1.6	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	25	10	ug/l	
126-98-7	Methacrylonitrile	ND	100	25	ug/l	
74-83-9	Methyl bromide	ND	10	3.9	ug/l	
74-87-3	Methyl chloride	ND	10	3.1	ug/l	
74-88-4	Methyl iodide	ND	25	5.0	ug/l	
80-62-6	Methyl methacrylate	ND	25	5.0	ug/l	
74-95-3	Methylene bromide	ND	10	1.5	ug/l	
75-09-2	Methylene chloride [a]	19.3	25	5.0	ug/l	JB
78-93-3	Methyl ethyl ketone	ND	25	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	1.3	ug/l	
91-20-3	Naphthalene	ND	25	5.0	ug/l	
76-01-7	Pentachloroethane	ND	50	10	ug/l	
107-12-0	Propionitrile	ND	100	50	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	1.3	ug/l	
100-42-5	Styrene	ND	5.0	1.8	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	5.0	1.7	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	1.1	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	5.0	1.3	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	2.5	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	10	1.7	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	2.5	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-06-010610		
Lab Sample ID:	F70660-6	**Date Sampled:**	01/06/10
Matrix:	AQ - Ground Water	**Date Received:**	01/08/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	10	1.1	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	10	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	5.0	1.1	ug/l	
108-88-3	Toluene	ND	5.0	1.8	ug/l	
79-01-6	Trichloroethylene	208	5.0	1.6	ug/l	
75-69-4	Trichlorofluoromethane	ND	10	2.5	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	50	10	ug/l	
75-01-4	Vinyl chloride	ND	5.0	1.5	ug/l	
108-05-4	Vinyl Acetate	ND	50	18	ug/l	
	m,p-Xylene	ND	10	3.9	ug/l	
95-47-6	o-Xylene	ND	5.0	1.9	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		87-116%
17060-07-0	1,2-Dichloroethane-D4	97%		76-127%
2037-26-5	Toluene-D8	104%		86-112%
460-00-4	4-Bromofluorobenzene	105%		84-120%

(a) Suspected laboratory contaminant.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-06-010610		
Lab Sample ID:	F70660-6	**Date Sampled:**	01/06/10
Matrix:	AQ - Ground Water	**Date Received:**	01/08/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic [a]	27 U	50	27	ug/l	5	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Barium [a]	25 U	1000	25	ug/l	5	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Cadmium [a]	5.0 U	25	5.0	ug/l	5	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Chromium [a]	10 U	50	10	ug/l	5	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Lead [a]	10 U	25	10	ug/l	5	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Mercury	0.15 U	1.0	0.15	ug/l	1	01/11/10	01/11/10	LM	SW846 7470A [1]	SW846 7470A [3]
Selenium [a]	57.7	50	17	ug/l	5	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Silver [a]	7.0 U	50	7.0	ug/l	5	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA7769
(2) Instrument QC Batch: MA7773
(3) Prep QC Batch: MP17581
(4) Prep QC Batch: MP17584

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-06-010610		
Lab Sample ID:	F70660-6	**Date Sampled:**	01/06/10
Matrix:	AQ - Ground Water	**Date Received:**	01/08/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	28000	10000	1000	mg/l	100	01/08/10 13:05	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-06-010610		
Lab Sample ID:	F70660-6A	**Date Sampled:**	01/06/10
Matrix:	AQ - Groundwater Filtered	**Date Received:**	01/08/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic [a]	27 U	50	27	ug/l	5	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Barium [a]	25 U	1000	25	ug/l	5	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Cadmium [a]	5.0 U	25	5.0	ug/l	5	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Chromium [a]	10 U	50	10	ug/l	5	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Lead [a]	10 U	25	10	ug/l	5	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Mercury	0.15 U	1.0	0.15	ug/l	1	01/11/10	01/11/10	LM	SW846 7470A [1]	SW846 7470A [3]
Selenium [a]	40.9 B	50	17	ug/l	5	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Silver [a]	7.0 U	50	7.0	ug/l	5	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA7769
(2) Instrument QC Batch: MA7773
(3) Prep QC Batch: MP17581
(4) Prep QC Batch: MP17586

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-08-010610		
Lab Sample ID:	F70660-7	**Date Sampled:**	01/06/10
Matrix:	AQ - Ground Water	**Date Received:**	01/08/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J052853.D	1	01/11/10	KW	n/a	n/a	VJ3080
Run #2 [a]	J052871.D	1	01/12/10	KW	n/a	n/a	VJ3081

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone [b]	12.9	25	10	ug/l	J
75-05-8	Acetonitrile	ND	20	5.0	ug/l	
107-02-8	Acrolein	ND	20	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	2.0	ug/l	
107-05-1	Allyl chloride	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-44-7	Benzyl Chloride	ND	2.0	0.36	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.23	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.33	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.32	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.22	ug/l	
75-00-3	Chloroethane	ND	2.0	0.48	ug/l	
67-66-3	Chloroform	ND	1.0	0.28	ug/l	
544-10-5	1-Chlorohexane	ND	2.0	0.27	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.25	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.40	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.24	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.54	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.32	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.34	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.26	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.28	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-08-010610		
Lab Sample ID:	F70660-7	**Date Sampled:**	01/06/10
Matrix:	AQ - Ground Water	**Date Received:**	01/08/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.46	1.0	0.20	ug/l	J
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
1476-11-5	cis-1,4-Dichloro-2-Butene	ND	10	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.45	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.43	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	1.0	ug/l	
76-13-1	Freon 113	ND	1.0	0.34	ug/l	
591-78-6	2-Hexanone	50.6	10	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.69	ug/l	
110-54-3	Hexane	ND	2.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.32	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
126-98-7	Methacrylonitrile	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.78	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.61	ug/l	
74-88-4	Methyl iodide	ND	5.0	1.0	ug/l	
80-62-6	Methyl methacrylate	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.30	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
78-93-3	Methyl ethyl ketone	2.7	5.0	2.0	ug/l	J
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
76-01-7	Pentachloroethane	ND	10	2.0	ug/l	
107-12-0	Propionitrile	ND	20	10	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.25	ug/l	
100-42-5	Styrene	ND	1.0	0.36	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.33	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.26	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.34	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-08-010610		
Lab Sample ID:	F70660-7	**Date Sampled:**	01/06/10
Matrix:	AQ - Ground Water	**Date Received:**	01/08/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.35	ug/l	
79-01-6	Trichloroethylene	26.0	1.0	0.32	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
108-05-4	Vinyl Acetate	ND	10	3.6	ug/l	
	m,p-Xylene	ND	2.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.37	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%	100%	87-116%
17060-07-0	1,2-Dichloroethane-D4	103%	101%	76-127%
2037-26-5	Toluene-D8	103%	101%	86-112%
460-00-4	4-Bromofluorobenzene	104%	104%	84-120%

(a) Confirmation run for internal standard areas.
(b) Associated BS recovery outside control limits.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-08-010610		
Lab Sample ID:	F70660-7	**Date Sampled:**	01/06/10
Matrix:	AQ - Ground Water	**Date Received:**	01/08/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic [a]	110 U	200	110	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Barium [a]	100 U	4000	100	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Cadmium [a]	20 U	100	20	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Chromium [a]	40 U	200	40	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Lead [a]	40 U	100	40	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Mercury	0.15 U	1.0	0.15	ug/l	1	01/11/10	01/11/10	LM	SW846 7470A [1]	SW846 7470A [3]
Selenium [a]	80.9 B	200	68	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Silver [a]	28 U	200	28	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA7769
(2) Instrument QC Batch: MA7773
(3) Prep QC Batch: MP17581
(4) Prep QC Batch: MP17584

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-08-010610		
Lab Sample ID:	F70660-7	**Date Sampled:**	01/06/10
Matrix:	AQ - Ground Water	**Date Received:**	01/08/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	103000	10000	1000	mg/l	100	01/08/10 13:05	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-08-010610		
Lab Sample ID:	F70660-7A	**Date Sampled:**	01/06/10
Matrix:	AQ - Groundwater Filtered	**Date Received:**	01/08/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic [a]	110 U	200	110	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Barium [a]	100 U	4000	100	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Cadmium [a]	20 U	100	20	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Chromium [a]	40 U	200	40	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Lead [a]	40 U	100	40	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Mercury	0.15 U	1.0	0.15	ug/l	1	01/11/10	01/11/10	LM	SW846 7470A [1]	SW846 7470A [3]
Selenium [a]	76.1 B	200	68	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Silver [a]	28 U	200	28	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA7769
(2) Instrument QC Batch: MA7773
(3) Prep QC Batch: MP17581
(4) Prep QC Batch: MP17586

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-DUP01-010610		
Lab Sample ID:	F70660-8	**Date Sampled:**	01/06/10
Matrix:	AQ - Ground Water	**Date Received:**	01/08/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J052865.D	1	01/12/10	KW	n/a	n/a	VJ3081
Run #2	J052854.D	10	01/11/10	KW	n/a	n/a	VJ3080

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
75-05-8	Acetonitrile	ND	20	5.0	ug/l	
107-02-8	Acrolein	ND	20	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	2.0	ug/l	
107-05-1	Allyl chloride	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-44-7	Benzyl Chloride	ND	2.0	0.36	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.23	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.33	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.32	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.22	ug/l	
75-00-3	Chloroethane	ND	2.0	0.48	ug/l	
67-66-3	Chloroform	0.78	1.0	0.28	ug/l	J
544-10-5	1-Chlorohexane	ND	2.0	0.27	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.25	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.40	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.24	ug/l	
75-35-4	1,1-Dichloroethylene	2.1	1.0	0.54	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.32	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.34	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.26	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.28	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-DUP01-010610		
Lab Sample ID:	F70660-8	**Date Sampled:**	01/06/10
Matrix:	AQ - Ground Water	**Date Received:**	01/08/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
1476-11-5	cis-1,4-Dichloro-2-Butene	ND	10	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.45	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.43	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	1.0	ug/l	
76-13-1	Freon 113	ND	1.0	0.34	ug/l	
591-78-6	2-Hexanone	ND	10	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.69	ug/l	
110-54-3	Hexane	ND	2.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.32	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
126-98-7	Methacrylonitrile	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.78	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.61	ug/l	
74-88-4	Methyl iodide	ND	5.0	1.0	ug/l	
80-62-6	Methyl methacrylate	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.30	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
76-01-7	Pentachloroethane	ND	10	2.0	ug/l	
107-12-0	Propionitrile	ND	20	10	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.25	ug/l	
100-42-5	Styrene	ND	1.0	0.36	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.33	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.26	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.34	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-DUP01-010610		
Lab Sample ID:	F70660-8	**Date Sampled:**	01/06/10
Matrix:	AQ - Ground Water	**Date Received:**	01/08/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.35	ug/l	
79-01-6	Trichloroethylene	319 [a]	10	3.2	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
108-05-4	Vinyl Acetate	ND	10	3.6	ug/l	
	m,p-Xylene	ND	2.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.37	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%	99%	87-116%
17060-07-0	1,2-Dichloroethane-D4	100%	98%	76-127%
2037-26-5	Toluene-D8	104%	104%	86-112%
460-00-4	4-Bromofluorobenzene	103%	106%	84-120%

(a) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-DUP01-010610		
Lab Sample ID:	F70660-8	**Date Sampled:**	01/06/10
Matrix:	AQ - Ground Water	**Date Received:**	01/08/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic [a]	110 U	200	110	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Barium [a]	100 U	4000	100	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Cadmium [a]	20 U	100	20	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Chromium [a]	40 U	200	40	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Lead [a]	40 U	100	40	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Mercury	0.15 U	1.0	0.15	ug/l	1	01/11/10	01/11/10	LM	SW846 7470A [1]	SW846 7470A [3]
Selenium [a]	73.2 B	200	68	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Silver [a]	28 U	200	28	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA7769
(2) Instrument QC Batch: MA7773
(3) Prep QC Batch: MP17581
(4) Prep QC Batch: MP17584

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-DUP01-010610		
Lab Sample ID:	F70660-8	**Date Sampled:**	01/06/10
Matrix:	AQ - Ground Water	**Date Received:**	01/08/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	99000	10000	1000	mg/l	100	01/08/10 13:05	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-DUP01-010610		
Lab Sample ID:	F70660-8A	**Date Sampled:**	01/06/10
Matrix:	AQ - Groundwater Filtered	**Date Received:**	01/08/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic [a]	110 U	200	110	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Barium [a]	100 U	4000	100	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Cadmium [a]	20 U	100	20	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Chromium [a]	40 U	200	40	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Lead [a]	40 U	100	40	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Mercury	0.15 U	1.0	0.15	ug/l	1	01/11/10	01/11/10	LM	SW846 7470A [1]	SW846 7470A [3]
Selenium [a]	102 B	200	68	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Silver [a]	28 U	200	28	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA7769
(2) Instrument QC Batch: MA7773
(3) Prep QC Batch: MP17582
(4) Prep QC Batch: MP17586

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	TB01-010610		
Lab Sample ID:	F70660-9	**Date Sampled:**	01/06/10
Matrix:	AQ - Ground Water	**Date Received:**	01/08/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J052855.D	1	01/11/10	KW	n/a	n/a	VJ3080
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
75-05-8	Acetonitrile	ND	20	5.0	ug/l	
107-02-8	Acrolein	ND	20	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	2.0	ug/l	
107-05-1	Allyl chloride	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-44-7	Benzyl Chloride	ND	2.0	0.36	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.23	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.33	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.32	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.22	ug/l	
75-00-3	Chloroethane	ND	2.0	0.48	ug/l	
67-66-3	Chloroform	ND	1.0	0.28	ug/l	
544-10-5	1-Chlorohexane	ND	2.0	0.27	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.25	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.40	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.24	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.54	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.32	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.34	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.26	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.28	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB01-010610		
Lab Sample ID:	F70660-9	**Date Sampled:**	01/06/10
Matrix:	AQ - Ground Water	**Date Received:**	01/08/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
1476-11-5	cis-1,4-Dichloro-2-Butene	ND	10	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.45	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.43	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	1.0	ug/l	
76-13-1	Freon 113	ND	1.0	0.34	ug/l	
591-78-6	2-Hexanone	ND	10	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.69	ug/l	
110-54-3	Hexane	ND	2.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.32	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
126-98-7	Methacrylonitrile	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.78	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.61	ug/l	
74-88-4	Methyl iodide	ND	5.0	1.0	ug/l	
80-62-6	Methyl methacrylate	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.30	ug/l	
75-09-2	Methylene chloride	1.1	5.0	1.0	ug/l	JB
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
76-01-7	Pentachloroethane	ND	10	2.0	ug/l	
107-12-0	Propionitrile	ND	20	10	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.25	ug/l	
100-42-5	Styrene	ND	1.0	0.36	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.33	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.26	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.34	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB01-010610		
Lab Sample ID:	F70660-9	**Date Sampled:**	01/06/10
Matrix:	AQ - Ground Water	**Date Received:**	01/08/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.35	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.32	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
108-05-4	Vinyl Acetate	ND	10	3.6	ug/l	
	m,p-Xylene	ND	2.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.37	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		87-116%
17060-07-0	1,2-Dichloroethane-D4	95%		76-127%
2037-26-5	Toluene-D8	103%		86-112%
460-00-4	4-Bromofluorobenzene	104%		84-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-02-010710		
Lab Sample ID:	F70660-10	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/08/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J052856.D	1	01/11/10	KW	n/a	n/a	VJ3080
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
75-05-8	Acetonitrile	ND	20	5.0	ug/l	
107-02-8	Acrolein	ND	20	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	2.0	ug/l	
107-05-1	Allyl chloride	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-44-7	Benzyl Chloride	ND	2.0	0.36	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.23	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.33	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.32	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.22	ug/l	
75-00-3	Chloroethane	ND	2.0	0.48	ug/l	
67-66-3	Chloroform	1.8	1.0	0.28	ug/l	
544-10-5	1-Chlorohexane	ND	2.0	0.27	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.25	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.40	ug/l	
56-23-5	Carbon tetrachloride	1.5	1.0	0.22	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.24	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.54	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.32	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.34	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.26	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.28	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-02-010710		
Lab Sample ID:	F70660-10	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/08/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
1476-11-5	cis-1,4-Dichloro-2-Butene	ND	10	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.45	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.43	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	1.0	ug/l	
76-13-1	Freon 113	ND	1.0	0.34	ug/l	
591-78-6	2-Hexanone	ND	10	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.69	ug/l	
110-54-3	Hexane	ND	2.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.32	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
126-98-7	Methacrylonitrile	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.78	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.61	ug/l	
74-88-4	Methyl iodide	ND	5.0	1.0	ug/l	
80-62-6	Methyl methacrylate	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.30	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
76-01-7	Pentachloroethane	ND	10	2.0	ug/l	
107-12-0	Propionitrile	ND	20	10	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.25	ug/l	
100-42-5	Styrene	ND	1.0	0.36	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	0.50	1.0	0.33	ug/l	J
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.26	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.34	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-02-010710		
Lab Sample ID:	F70660-10	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/08/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	0.35	1.0	0.22	ug/l	J
108-88-3	Toluene	ND	1.0	0.35	ug/l	
79-01-6	Trichloroethylene	25.1	1.0	0.32	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
108-05-4	Vinyl Acetate	ND	10	3.6	ug/l	
	m,p-Xylene	ND	2.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.37	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		87-116%
17060-07-0	1,2-Dichloroethane-D4	99%		76-127%
2037-26-5	Toluene-D8	103%		86-112%
460-00-4	4-Bromofluorobenzene	105%		84-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-02-010710		
Lab Sample ID:	F70660-10	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/08/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic [a]	22 U	40	22	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Barium [a]	20 U	800	20	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Cadmium [a]	4.0 U	20	4.0	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Chromium [a]	8.0 U	40	8.0	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Lead [a]	8.0 U	20	8.0	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Mercury	0.15 U	1.0	0.15	ug/l	1	01/11/10	01/11/10	LM	SW846 7470A [1]	SW846 7470A [3]
Selenium [a]	39.9 B	40	14	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Silver [a]	5.6 U	40	5.6	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA7769
(2) Instrument QC Batch: MA7773
(3) Prep QC Batch: MP17581
(4) Prep QC Batch: MP17584

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-02-010710		
Lab Sample ID:	F70660-10	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/08/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	11300	10000	1000	mg/l	100	01/08/10 13:05	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-02-010710		
Lab Sample ID:	F70660-10A	**Date Sampled:**	01/07/10
Matrix:	AQ - Groundwater Filtered	**Date Received:**	01/08/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic [a]	22 U	40	22	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Barium [a]	21.3 B	800	20	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Cadmium [a]	4.0 U	20	4.0	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Chromium [a]	8.0 U	40	8.0	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Lead [a]	8.0 U	20	8.0	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Mercury	0.15 U	1.0	0.15	ug/l	1	01/11/10	01/11/10	LM	SW846 7470A [1]	SW846 7470A [3]
Selenium [a]	43.8	40	14	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Silver [a]	5.6 U	40	5.6	ug/l	4	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA7769
(2) Instrument QC Batch: MA7773
(3) Prep QC Batch: MP17582
(4) Prep QC Batch: MP17586

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-07-010710		
Lab Sample ID:	F70660-11	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/08/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J052844.D	1	01/11/10	KW	n/a	n/a	VJ3080
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
75-05-8	Acetonitrile	ND	20	5.0	ug/l	
107-02-8	Acrolein	ND	20	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	2.0	ug/l	
107-05-1	Allyl chloride	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-44-7	Benzyl Chloride	ND	2.0	0.36	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.23	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.33	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.32	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.22	ug/l	
75-00-3	Chloroethane	ND	2.0	0.48	ug/l	
67-66-3	Chloroform	ND	1.0	0.28	ug/l	
544-10-5	1-Chlorohexane	ND	2.0	0.27	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.25	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.40	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.24	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.54	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.32	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.34	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.26	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.28	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-07-010710		
Lab Sample ID:	F70660-11	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/08/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
1476-11-5	cis-1,4-Dichloro-2-Butene	ND	10	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.45	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.43	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	1.0	ug/l	
76-13-1	Freon 113	ND	1.0	0.34	ug/l	
591-78-6	2-Hexanone	ND	10	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.69	ug/l	
110-54-3	Hexane	ND	2.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.32	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
126-98-7	Methacrylonitrile	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.78	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.61	ug/l	
74-88-4	Methyl iodide	ND	5.0	1.0	ug/l	
80-62-6	Methyl methacrylate	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.30	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
76-01-7	Pentachloroethane	ND	10	2.0	ug/l	
107-12-0	Propionitrile	ND	20	10	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.25	ug/l	
100-42-5	Styrene	ND	1.0	0.36	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.33	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.26	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.34	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-07-010710		
Lab Sample ID:	F70660-11	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/08/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.35	ug/l	
79-01-6	Trichloroethylene	0.93	1.0	0.32	ug/l	J
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
108-05-4	Vinyl Acetate	ND	10	3.6	ug/l	
	m,p-Xylene	ND	2.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.37	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		87-116%
17060-07-0	1,2-Dichloroethane-D4	101%		76-127%
2037-26-5	Toluene-D8	104%		86-112%
460-00-4	4-Bromofluorobenzene	106%		84-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-07-010710		
Lab Sample ID:	F70660-11	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/08/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic [a]	54 U	100	54	ug/l	10	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Barium [a]	50 U	2000	50	ug/l	10	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Cadmium [a]	10 U	50	10	ug/l	10	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Chromium [a]	20 U	100	20	ug/l	10	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Lead [a]	20 U	50	20	ug/l	10	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Mercury	0.15 U	1.0	0.15	ug/l	1	01/11/10	01/11/10	LM	SW846 7470A [1]	SW846 7470A [3]
Selenium [a]	34 U	100	34	ug/l	10	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Silver [a]	14 U	100	14	ug/l	10	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA7769
(2) Instrument QC Batch: MA7773
(3) Prep QC Batch: MP17581
(4) Prep QC Batch: MP17584

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-07-010710		
Lab Sample ID:	F70660-11	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/08/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	41900	10000	1000	mg/l	100	01/08/10 13:05	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-07-010710		
Lab Sample ID:	F70660-11A	**Date Sampled:**	01/07/10
Matrix:	AQ - Groundwater Filtered	**Date Received:**	01/08/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic [a]	54 U	100	54	ug/l	10	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Barium [a]	50 U	2000	50	ug/l	10	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Cadmium [a]	10 U	50	10	ug/l	10	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Chromium [a]	20 U	100	20	ug/l	10	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Lead [a]	20 U	50	20	ug/l	10	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Mercury	0.15 U	1.0	0.15	ug/l	1	01/11/10	01/11/10	LM	SW846 7470A [1]	SW846 7470A [3]
Selenium [a]	34 U	100	34	ug/l	10	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Silver [a]	14 U	100	14	ug/l	10	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA7769
(2) Instrument QC Batch: MA7773
(3) Prep QC Batch: MP17582
(4) Prep QC Batch: MP17586

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-05-010710		
Lab Sample ID:	F70660-12	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/08/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J052857.D	1	01/11/10	KW	n/a	n/a	VJ3080
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
75-05-8	Acetonitrile	ND	20	5.0	ug/l	
107-02-8	Acrolein	ND	20	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	2.0	ug/l	
107-05-1	Allyl chloride	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-44-7	Benzyl Chloride	ND	2.0	0.36	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.23	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.33	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.32	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.22	ug/l	
75-00-3	Chloroethane	ND	2.0	0.48	ug/l	
67-66-3	Chloroform	ND	1.0	0.28	ug/l	
544-10-5	1-Chlorohexane	ND	2.0	0.27	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.25	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.40	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.24	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.54	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.32	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.34	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.26	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.28	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-05-010710		
Lab Sample ID:	F70660-12	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/08/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
1476-11-5	cis-1,4-Dichloro-2-Butene	ND	10	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.45	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.43	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	1.0	ug/l	
76-13-1	Freon 113	ND	1.0	0.34	ug/l	
591-78-6	2-Hexanone	ND	10	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.69	ug/l	
110-54-3	Hexane	ND	2.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.32	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
126-98-7	Methacrylonitrile	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.78	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.61	ug/l	
74-88-4	Methyl iodide	ND	5.0	1.0	ug/l	
80-62-6	Methyl methacrylate	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.30	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
76-01-7	Pentachloroethane	ND	10	2.0	ug/l	
107-12-0	Propionitrile	ND	20	10	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.25	ug/l	
100-42-5	Styrene	ND	1.0	0.36	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.33	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.26	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.34	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-05-010710		
Lab Sample ID:	F70660-12	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/08/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; Alamogordo, NM		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.35	ug/l	
79-01-6	Trichloroethylene	25.9	1.0	0.32	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
108-05-4	Vinyl Acetate	ND	10	3.6	ug/l	
	m,p-Xylene	ND	2.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.37	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		87-116%
17060-07-0	1,2-Dichloroethane-D4	101%		76-127%
2037-26-5	Toluene-D8	104%		86-112%
460-00-4	4-Bromofluorobenzene	104%		84-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW39-05-010710		
Lab Sample ID:	F70660-12	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/08/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic [a]	110 U	200	110	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Barium [a]	100 U	4000	100	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Cadmium [a]	20 U	100	20	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Chromium [a]	40 U	200	40	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Lead [a]	40 U	100	40	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Mercury	0.15 U	1.0	0.15	ug/l	1	01/11/10	01/11/10	LM	SW846 7470A [1]	SW846 7470A [3]
Selenium [a]	84.0 B	200	68	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Silver [a]	28 U	200	28	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA7769
(2) Instrument QC Batch: MA7773
(3) Prep QC Batch: MP17581
(4) Prep QC Batch: MP17584

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-05-010710		
Lab Sample ID:	F70660-12	**Date Sampled:**	01/07/10
Matrix:	AQ - Ground Water	**Date Received:**	01/08/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	85000	10000	1000	mg/l	100	01/08/10 13:05	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW39-05-010710		
Lab Sample ID:	F70660-12A	**Date Sampled:**	01/07/10
Matrix:	AQ - Groundwater Filtered	**Date Received:**	01/08/10
		Percent Solids:	n/a
Project:	Holloman AFB; Alamogordo, NM		

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic [a]	110 U	200	110	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Barium [a]	100 U	4000	100	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Cadmium [a]	20 U	100	20	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Chromium [a]	40 U	200	40	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Lead [a]	40 U	100	40	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Mercury	0.15 U	1.0	0.15	ug/l	1	01/11/10	01/11/10	LM	SW846 7470A [1]	SW846 7470A [3]
Selenium [a]	79.1 B	200	68	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]
Silver [a]	28 U	200	28	ug/l	20	01/11/10	01/12/10	RS	SW846 6010B [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA7769
(2) Instrument QC Batch: MA7773
(3) Prep QC Batch: MP17582
(4) Prep QC Batch: MP17586

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Certification Exceptions
- Chain of Custody

Parameter Certification Exceptions

Job Number: F70660
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

The following parameters included in this report are exceptions to NELAC certification.
The certification status of each is indicated below.

Parameter	CAS#	Method	Mat	Certification Status
Freon 113	76-13-1	**SW846 8260B**	AQ	Certified by SOP MS005

Accutest Laboratories Southeast
Chain of Custody

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL. 407-425-6700 • FAX: 407-425-0707
www.accutest.com

COC-018

Accutest JOB # F70660 PAGE 1 OF 2

Accutest Quote # | SKIFF# 32619

Client / Reporting Information

Company Name: TETRA TECH
Address: 800 OAK RIDGE TURNPIKE A600
City: OAK RIDGE State: TN Zip: 37830
Project Contact: E-mail: GINGER.MULLINS@TETRATECH.COM
Phone#: 865-599-2347
Sampler(s) Name(s) (Printed): J. BENNETT / A. MORENO

Project Information

Project Name: HOLLOMAN AFB SS-39
Street:
City: ALAMOGORDO State: NM
Project #: T93002
Fax #:
Client Purchase Order #:

Analytical Information

Accutest Sample #	Field ID / Point of Collection	DATE	TIME	SAMPLED BY	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NaOH+ZnAc	DI WATER	MeOH	VOCs 8260 & RCRA METALS	TOTAL & RCRA METALS DISSOLVED	TDS								LAB USE ONLY
1	MW39-10-010610	1/6/10	1113	JB	GW	6			X	X						X	X	X	X							
2	MW39-09-010610	1/6/10	1125	AM	GW	6			X	X						X	X	X	X							
3	MW39-11-010610	1/6/10	1330	AM	GW	6			X	X						X	X	X	X							
4	MW39-06D-010610	1/6/10	1436	JB	GW	6			X	X						X	X	X	X							
5	MW39-12-010610	1/6/10	1445	AM	GW	6			X	X						X	X	X	X							
6	MW39-06-010610	1/6/10	1555	AM	GW	6			X	X						X	X	X	X							
7	MW39-08-010610	1/6/10	1557	JB	GW	6			X	X						X	X	X	X							
8	MW39-DUP01-010610	1/6/10	—	—	GW	6			X	X						X	X	X	X							
9	TB01-010610	1/6/10	—	—	W	3			X							X										
10	MW39-02-010710	1/7/10	0940	AM	GW	6			X	X						X	X	X	X							
11	MW39-07-010710	1/7/10	0955	JB	GW	6			X	X						X	X	X	X							
11	MW39-07-MS-010710	1/7/10	0955	JB	GW	6			X	X						X	X	X	X							

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe

TURNAROUND TIME (Business Days)

Approved By: / Rush Code

- [X] 10 Days Standard
- [ ] 7 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] OTHER

Emergency or Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [X] REDT1 (EPA LEVEL 3) ERPIMS
- [ ] FULT1 (EPA LEVEL 4)
- [X] EDD'S

Comments / Remarks

LAB FILTERED METALS
FED EX 8705 1620 6597
8705 1620 6510
8692 9697 2169

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
1	1/7/10 1100	2	3	1/7/10 1400	4 FEDEX
Relinquished by: 5 FX	Date Time:	Received By: 6 (ERPM) (ACCUTEST) 01.08.10 @1:30	Relinquished by: 7	Date Time:	Received By: 8

Lab Use Only: Custody Seal in Place: Y N Temp Blank Provided: Y N Preserved where Applicable: Y N Total # of Coolers: 3 Cooler Temperature (s) Celsius: 3.8 4.6 4.0

4.2 4

F70660: Chain of Custody
Page 1 of 3

Accutest Laboratories Southeast
Chain of Custody

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL. 407-425-6700 • FAX: 407-425-0707
www.accutest.com

COC-018

Accutest JOB # F70660 PAGE 2 OF 2

Accutest Quote #

SKIFF#

Client / Reporting Information

Company Name: TETRA TECH
Address: 800 OAK RIDGE TURNPIKE A-600
City: OAK RIDGE State: TN Zip: 37830
Project Contact: ROGER.MULLIN@TETRATECH.COM E-mail:
Phone#: 865-595-2347
Sampler(s) Name(s) (Printed)

Project Information

Project Name: HOLLOMAN AFB
Street
City: ALAMOGORDO State: NM
Project #: T93002
Fax #
Client Purchase Order #

Analytical Information

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe

Accutest Sample #	Field ID / Point of Collection	Collection DATE	Collection TIME	SAMPLED BY	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NaOH+ZnAc	DI WATER	MeOH	VOCs 8260	8 RCRA METALS TOTAL	8 RCRA METALS DISSOLVED	TDS	LAB USE ONLY
11	MW39-07-MSD-010710	1/7/10	0935	JB	GW	6			X		X					X	X	X	X	
12	MW39-05-010710	1/7/10	1030	AM	GW	6			X		X					X	X	X	X	

TURNAROUND TIME (Business Days)

Approved By: / Rush Code

- [X] 10 Days Standard
- [ ] 7 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] OTHER

Emergency or Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [X] REDT1 (EPA LEVEL 3) ERPIMS
- [ ] FULT1 (EPA LEVEL 4)
- [X] EDD'S

Comments / Remarks

LAB FILTERED METALS

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished By Sampler:	Date Time:	Received By:	Relinquished by :	Date Time:	Received By:
1	1/7/10 1100	2	3	1/7/10 1400	4 FED EX
Relinquished by: FX	Date Time:	Received By: 6 (Accutest) 01-08-10	Relinquished by: 7	Date Time:	Received By: 8

Lab Use Only: Custody Seal in Place: Y N Temp Blank Provided: Y N Preserved where Applicable: Y N Total # of Coolers: 3 Cooler Temperature (s) Celsius: 3.3 4.6 4.0

4.2 4

F70660: Chain of Custody
Page 2 of 3

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: F70660 CLIENT: TETRA TECH PROJECT: MOLLOMAN AFB

DATE/TIME RECEIVED: 01.08.10 09:30 {MM/DD/YY 24:00} NUMBER OF COOLERS RECEIVED: 3

METHOD OF DELIVERY: FEDEX UPS ACCUTEST COURIER GREYHOUND DELIVERY OTHER

AIRBILL NUMBERS:

COOLER INFORMATION

- [ ] CUSTODY SEAL NOT PRESENT OR NOT INTACT
- [ ] CHAIN OF CUSTODY NOT RECEIVED (COC)
- [ ] ANALYSIS REQUESTED IS UNCLEAR OR MISSING
- [ ] SAMPLE DATES OR TIMES UNCLEAR OR MISSING
- [ ] TEMPERATURE CRITERIA NOT MET
- [ ] WET ICE PRESENT

TRIP BLANK INFORMATION

- [x] TRIP BLANK PROVIDED
- [ ] TRIP BLANK NOT PROVIDED
- [ ] TRIP BLANK NOT ON COC
- [x] TRIP BLANK INTACT
- [ ] TRIP BLANK NOT INTACT
- [x] RECEIVED WATER TRIP BLANK
- [ ] RECEIVED SOIL TRIP BLANK

MISC. INFORMATION

NUMBER OF ENCORES ? _____

NUMBER OF 5035 FIELD KITS ? _____

NUMBER OR LAB FILTERED METALS ? _____

TEMPERATURE INFORMATION

- [ ] IR THERM ID 2 CORR. FACTOR +0.4
- [ ] OBSERVED TEMPS: 3.4 4.2 3.6
- [ ] CORRECTED TEMPS: 3.8 4.6 4.0

SAMPLE INFORMATION

- [ ] SAMPLE LABELS PRESENT ON ALL BOTTLES
- [ ] INCORRECT NUMBER OF CONTAINERS USED
- [ ] SAMPLE RECEIVED IMPROPERLY PRESERVED
- [ ] INSUFFICIENT VOLUME FOR ANALYSIS
- [ ] DATES/TIMES ON COC DO NOT MATCH SAMPLE LABEL
- [ ] ID'S ON COC DO NOT MATCH LABEL
- [ ] VOC VIALS HAVE HEADSPACE (MACRO BUBBLES)
- [ ] BOTTLES RECEIVED BUT ANALYSIS NOT REQUESTED
- [ ] NO BOTTLES RECEIVED FOR ANALYSIS REQUESTED
- [ ] UNCLEAR FILTERING OR COMPOSITING INSTRUCTIONS
- [ ] SAMPLE CONTAINER(S) RECEIVED BROKEN
- [ ] % SOLIDS JAR NOT RECEIVED
- [ ] 5035 FIELD KIT FROZEN WITHIN 48 HOUR'S
- [ ] RESIDUAL CHLORINE PRESENT

{APPICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS}

SUMMARY OF COMMENTS:

TECHNICIAN SIGNATURE/DATE JC 01-08-10 REVIEWER SIGNATURE/DATE FT 01.08.10

NF 10/09 RECEIPT CONFIRMATION 100609 (2).xls

4.2

4

F70660: Chain of Custody

Page 3 of 3

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: F70660
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ3080-MB	J052836.D	1	01/11/10	KW	n/a	n/a	VJ3080

The QC reported here applies to the following samples: **Method:** SW846 8260B

F70660-2, F70660-3, F70660-4, F70660-5, F70660-6, F70660-7, F70660-8, F70660-9, F70660-10, F70660-11, F70660-12

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
75-05-8	Acetonitrile	ND	20	5.0	ug/l	
107-02-8	Acrolein	14.4	20	5.0	ug/l	J
107-13-1	Acrylonitrile	ND	10	2.0	ug/l	
107-05-1	Allyl chloride	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-44-7	Benzyl Chloride	ND	2.0	0.36	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.23	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.33	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.32	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.22	ug/l	
75-00-3	Chloroethane	ND	2.0	0.48	ug/l	
67-66-3	Chloroform	ND	1.0	0.28	ug/l	
544-10-5	1-Chlorohexane	ND	2.0	0.27	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.25	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.40	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.24	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.54	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.32	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.34	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.26	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.28	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	

Method Blank Summary

Job Number: F70660
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ3080-MB	J052836.D	1	01/11/10	KW	n/a	n/a	VJ3080

The QC reported here applies to the following samples: **Method:** SW846 8260B

F70660-2, F70660-3, F70660-4, F70660-5, F70660-6, F70660-7, F70660-8, F70660-9, F70660-10, F70660-11, F70660-12

CAS No.	Compound	Result	RL	MDL	Units	Q
1476-11-5	cis-1,4-Dichloro-2-Butene	ND	10	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.45	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.43	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	1.0	ug/l	
76-13-1	Freon 113	ND	1.0	0.34	ug/l	
591-78-6	2-Hexanone	ND	10	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.69	ug/l	
110-54-3	Hexane	ND	2.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.32	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
126-98-7	Methacrylonitrile	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.78	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.61	ug/l	
74-88-4	Methyl iodide	ND	5.0	1.0	ug/l	
80-62-6	Methyl methacrylate	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.30	ug/l	
75-09-2	Methylene chloride	2.2	5.0	1.0	ug/l	J
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
76-01-7	Pentachloroethane	ND	10	2.0	ug/l	
107-12-0	Propionitrile	ND	20	10	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.25	ug/l	
100-42-5	Styrene	ND	1.0	0.36	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.33	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.26	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.55	1.0	0.50	ug/l	J
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.34	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	

Method Blank Summary

Job Number: F70660
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ3080-MB	J052836.D	1	01/11/10	KW	n/a	n/a	VJ3080

The QC reported here applies to the following samples: **Method:** SW846 8260B

F70660-2, F70660-3, F70660-4, F70660-5, F70660-6, F70660-7, F70660-8, F70660-9, F70660-10, F70660-11, F70660-12

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.35	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.32	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
108-05-4	Vinyl Acetate	ND	10	3.6	ug/l	
	m,p-Xylene	ND	2.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.37	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	101%	87-116%
17060-07-0	1,2-Dichloroethane-D4	97%	76-127%
2037-26-5	Toluene-D8	104%	86-112%
460-00-4	4-Bromofluorobenzene	101%	84-120%

Method Blank Summary

Job Number: F70660
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ3081-MB	J052863.D	1	01/12/10	KW	n/a	n/a	VJ3081

The QC reported here applies to the following samples: **Method:** SW846 8260B

F70660-1, F70660-4, F70660-8

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
75-05-8	Acetonitrile	ND	20	5.0	ug/l	
107-02-8	Acrolein	ND	20	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	2.0	ug/l	
107-05-1	Allyl chloride	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-44-7	Benzyl Chloride	ND	2.0	0.36	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.23	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.33	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.25	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.32	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.22	ug/l	
75-00-3	Chloroethane	ND	2.0	0.48	ug/l	
67-66-3	Chloroform	ND	1.0	0.28	ug/l	
544-10-5	1-Chlorohexane	ND	2.0	0.27	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.25	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.40	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.24	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.54	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.32	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.34	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.26	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.28	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	

Method Blank Summary

Job Number: F70660
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ3081-MB	J052863.D	1	01/12/10	KW	n/a	n/a	VJ3081

The QC reported here applies to the following samples: **Method:** SW846 8260B

F70660-1, F70660-4, F70660-8

CAS No.	Compound	Result	RL	MDL	Units	Q
1476-11-5	cis-1,4-Dichloro-2-Butene	ND	10	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.45	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.43	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	1.0	ug/l	
76-13-1	Freon 113	ND	1.0	0.34	ug/l	
591-78-6	2-Hexanone	ND	10	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.69	ug/l	
110-54-3	Hexane	ND	2.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.32	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
126-98-7	Methacrylonitrile	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.78	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.61	ug/l	
74-88-4	Methyl iodide	ND	5.0	1.0	ug/l	
80-62-6	Methyl methacrylate	ND	5.0	1.0	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.30	ug/l	
75-09-2	Methylene chloride	2.4	5.0	1.0	ug/l	J
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
76-01-7	Pentachloroethane	ND	10	2.0	ug/l	
107-12-0	Propionitrile	ND	20	10	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.25	ug/l	
100-42-5	Styrene	ND	1.0	0.36	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.33	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.26	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.34	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	

Method Blank Summary

Job Number: F70660
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ3081-MB	J052863.D	1	01/12/10	KW	n/a	n/a	VJ3081

The QC reported here applies to the following samples: **Method:** SW846 8260B

F70660-1, F70660-4, F70660-8

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.35	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.32	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
108-05-4	Vinyl Acetate	ND	10	3.6	ug/l	
	m,p-Xylene	ND	2.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.37	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	100%	87-116%
17060-07-0	1,2-Dichloroethane-D4	96%	76-127%
2037-26-5	Toluene-D8	103%	86-112%
460-00-4	4-Bromofluorobenzene	106%	84-120%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Blank Spike Summary

Job Number: F70660
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ3080-BS	J052835.D	1	01/11/10	KW	n/a	n/a	VJ3080

The QC reported here applies to the following samples: **Method:** SW846 8260B

F70660-2, F70660-3, F70660-4, F70660-5, F70660-6, F70660-7, F70660-8, F70660-9, F70660-10, F70660-11, F70660-12

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	180	144*	59-134
75-05-8	Acetonitrile	250	231	92	57-123
107-02-8	Acrolein	125	136	109	33-157
107-13-1	Acrylonitrile	125	145	116	62-124
107-05-1	Allyl chloride	25	26.4	106	48-136
71-43-2	Benzene	25	27.8	111	83-124
100-44-7	Benzyl Chloride	25	21.6	86	61-118
108-86-1	Bromobenzene	25	26.3	105	83-115
74-97-5	Bromochloromethane	25	28.0	112	78-112
75-27-4	Bromodichloromethane	25	25.5	102	76-116
75-25-2	Bromoform	25	23.5	94	68-128
104-51-8	n-Butylbenzene	25	23.0	92	84-124
135-98-8	sec-Butylbenzene	25	24.4	98	86-127
98-06-6	tert-Butylbenzene	25	24.4	98	83-126
108-90-7	Chlorobenzene	25	27.3	109	87-115
75-00-3	Chloroethane	25	21.6	86	54-166
67-66-3	Chloroform	25	27.8	111	85-123
544-10-5	1-Chlorohexane	25	26.7	107	87-128
95-49-8	o-Chlorotoluene	25	27.3	109	84-121
106-43-4	p-Chlorotoluene	25	24.5	98	84-120
110-75-8	2-Chloroethyl vinyl ether	125	109	87	63-125
75-15-0	Carbon disulfide	25	28.9	116	67-147
56-23-5	Carbon tetrachloride	25	29.5	118	74-139
75-34-3	1,1-Dichloroethane	25	27.7	111	82-127
75-35-4	1,1-Dichloroethylene	25	28.3	113	75-133
563-58-6	1,1-Dichloropropene	25	30.3	121	87-127
96-12-8	1,2-Dibromo-3-chloropropane	25	21.9	88	61-118
106-93-4	1,2-Dibromoethane	25	26.7	107	80-115
107-06-2	1,2-Dichloroethane	25	26.0	104	76-122
78-87-5	1,2-Dichloropropane	25	26.1	104	81-120
142-28-9	1,3-Dichloropropane	25	25.8	103	81-113
594-20-7	2,2-Dichloropropane	25	30.6	122	77-138
124-48-1	Dibromochloromethane	25	23.8	95	74-116
75-71-8	Dichlorodifluoromethane	25	31.0	124	34-158
156-59-2	cis-1,2-Dichloroethylene	25	27.8	111	81-114
10061-01-5	cis-1,3-Dichloropropene	25	24.4	98	83-119

Blank Spike Summary

Job Number: F70660
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ3080-BS	J052835.D	1	01/11/10	KW	n/a	n/a	VJ3080

The QC reported here applies to the following samples: **Method:** SW846 8260B

F70660-2, F70660-3, F70660-4, F70660-5, F70660-6, F70660-7, F70660-8, F70660-9, F70660-10, F70660-11, F70660-12

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1476-11-5	cis-1,4-Dichloro-2-Butene	25	29.4	118	41-130
541-73-1	m-Dichlorobenzene	25	26.8	107	86-115
95-50-1	o-Dichlorobenzene	25	25.9	104	85-115
106-46-7	p-Dichlorobenzene	25	25.9	104	87-113
156-60-5	trans-1,2-Dichloroethylene	25	29.3	117	82-126
10061-02-6	trans-1,3-Dichloropropene	25	27.9	112	87-123
100-41-4	Ethylbenzene	25	27.4	110	87-118
97-63-2	Ethyl methacrylate	25	22.4	90	68-110
76-13-1	Freon 113	25	32.7	131	74-139
591-78-6	2-Hexanone	125	118	94	58-125
87-68-3	Hexachlorobutadiene	25	27.2	109	71-133
110-54-3	Hexane	25	30.1	120	71-134
98-82-8	Isopropylbenzene	25	28.3	113	87-131
99-87-6	p-Isopropyltoluene	25	24.2	97	83-125
108-10-1	4-Methyl-2-pentanone	125	105	84	62-125
126-98-7	Methacrylonitrile	250	253	101	62-133
74-83-9	Methyl bromide	25	24.8	99	55-151
74-87-3	Methyl chloride	25	24.3	97	55-173
74-88-4	Methyl iodide	25	31.3	125	72-125
80-62-6	Methyl methacrylate	25	26.1	104	63-115
74-95-3	Methylene bromide	25	26.4	106	81-116
75-09-2	Methylene chloride	25	26.4	106	69-125
78-93-3	Methyl ethyl ketone	125	153	122	61-127
1634-04-4	Methyl Tert Butyl Ether	25	27.8	111	75-116
91-20-3	Naphthalene	25	23.8	95	59-125
76-01-7	Pentachloroethane	25	28.6	114*	82-111
107-12-0	Propionitrile	250	255	102	69-119
103-65-1	n-Propylbenzene	25	23.5	94	86-125
100-42-5	Styrene	25	25.0	100	78-118
630-20-6	1,1,1,2-Tetrachloroethane	25	24.9	100	81-119
71-55-6	1,1,1-Trichloroethane	25	30.2	121	79-133
79-34-5	1,1,2,2-Tetrachloroethane	25	24.3	97	71-120
79-00-5	1,1,2-Trichloroethane	25	25.7	103	80-114
87-61-6	1,2,3-Trichlorobenzene	25	25.6	102	64-126
96-18-4	1,2,3-Trichloropropane	25	23.1	92	77-115
120-82-1	1,2,4-Trichlorobenzene	25	23.0	92	68-123

Blank Spike Summary

Job Number: F70660
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ3080-BS	J052835.D	1	01/11/10	KW	n/a	n/a	VJ3080

The QC reported here applies to the following samples: **Method:** SW846 8260B

F70660-2, F70660-3, F70660-4, F70660-5, F70660-6, F70660-7, F70660-8, F70660-9, F70660-10, F70660-11, F70660-12

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
95-63-6	1,2,4-Trimethylbenzene	25	23.5	94	82-120
108-67-8	1,3,5-Trimethylbenzene	25	23.6	94	83-123
127-18-4	Tetrachloroethylene	25	30.9	124	80-131
108-88-3	Toluene	25	27.4	110	86-116
79-01-6	Trichloroethylene	25	28.1	112	85-124
75-69-4	Trichlorofluoromethane	25	31.4	126	66-156
110-57-6	Trans-1,4-Dichloro-2-Butene	25	30.5	122	51-137
75-01-4	Vinyl chloride	25	28.1	112	57-153
108-05-4	Vinyl Acetate	125	148	118	38-159
	m,p-Xylene	50	48.8	98	86-121
95-47-6	o-Xylene	25	25.4	102	83-121

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	101%	87-116%
17060-07-0	1,2-Dichloroethane-D4	100%	76-127%
2037-26-5	Toluene-D8	100%	86-112%
460-00-4	4-Bromofluorobenzene	99%	84-120%

Blank Spike Summary

Job Number: F70660
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ3081-BS	J052862.D	1	01/12/10	KW	n/a	n/a	VJ3081

The QC reported here applies to the following samples: **Method:** SW846 8260B

F70660-1, F70660-4, F70660-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	214	171*	59-134
75-05-8	Acetonitrile	250	253	101	57-123
107-02-8	Acrolein	125	233	186*	33-157
107-13-1	Acrylonitrile	125	150	120	62-124
107-05-1	Allyl chloride	25	26.7	107	48-136
71-43-2	Benzene	25	27.0	108	83-124
100-44-7	Benzyl Chloride	25	20.4	82	61-118
108-86-1	Bromobenzene	25	25.0	100	83-115
74-97-5	Bromochloromethane	25	26.0	104	78-112
75-27-4	Bromodichloromethane	25	24.2	97	76-116
75-25-2	Bromoform	25	20.6	82	68-128
104-51-8	n-Butylbenzene	25	22.8	91	84-124
135-98-8	sec-Butylbenzene	25	24.7	99	86-127
98-06-6	tert-Butylbenzene	25	24.1	96	83-126
108-90-7	Chlorobenzene	25	25.9	104	87-115
75-00-3	Chloroethane	25	27.2	109	54-166
67-66-3	Chloroform	25	26.9	108	85-123
544-10-5	1-Chlorohexane	25	25.3	101	87-128
95-49-8	o-Chlorotoluene	25	27.2	109	84-121
106-43-4	p-Chlorotoluene	25	24.3	97	84-120
110-75-8	2-Chloroethyl vinyl ether	125	105	84	63-125
75-15-0	Carbon disulfide	25	30.7	123	67-147
56-23-5	Carbon tetrachloride	25	27.5	110	74-139
75-34-3	1,1-Dichloroethane	25	27.4	110	82-127
75-35-4	1,1-Dichloroethylene	25	30.6	122	75-133
563-58-6	1,1-Dichloropropene	25	29.0	116	87-127
96-12-8	1,2-Dibromo-3-chloropropane	25	21.9	88	61-118
106-93-4	1,2-Dibromoethane	25	25.0	100	80-115
107-06-2	1,2-Dichloroethane	25	24.9	100	76-122
78-87-5	1,2-Dichloropropane	25	26.0	104	81-120
142-28-9	1,3-Dichloropropane	25	25.2	101	81-113
594-20-7	2,2-Dichloropropane	25	28.3	113	77-138
124-48-1	Dibromochloromethane	25	22.2	89	74-116
75-71-8	Dichlorodifluoromethane	25	28.9	116	34-158
156-59-2	cis-1,2-Dichloroethylene	25	26.6	106	81-114
10061-01-5	cis-1,3-Dichloropropene	25	23.7	95	83-119

Blank Spike Summary

Job Number: F70660
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ3081-BS	J052862.D	1	01/12/10	KW	n/a	n/a	VJ3081

The QC reported here applies to the following samples: **Method:** SW846 8260B

F70660-1, F70660-4, F70660-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1476-11-5	cis-1,4-Dichloro-2-Butene	25	25.9	104	41-130
541-73-1	m-Dichlorobenzene	25	25.6	102	86-115
95-50-1	o-Dichlorobenzene	25	25.3	101	85-115
106-46-7	p-Dichlorobenzene	25	25.3	101	87-113
156-60-5	trans-1,2-Dichloroethylene	25	28.3	113	82-126
10061-02-6	trans-1,3-Dichloropropene	25	27.0	108	87-123
100-41-4	Ethylbenzene	25	26.3	105	87-118
97-63-2	Ethyl methacrylate	25	21.6	86	68-110
76-13-1	Freon 113	25	32.8	131	74-139
591-78-6	2-Hexanone	125	128	102	58-125
87-68-3	Hexachlorobutadiene	25	24.7	99	71-133
110-54-3	Hexane	25	30.1	120	71-134
98-82-8	Isopropylbenzene	25	26.9	108	87-131
99-87-6	p-Isopropyltoluene	25	23.6	94	83-125
108-10-1	4-Methyl-2-pentanone	125	111	89	62-125
126-98-7	Methacrylonitrile	250	273	109	62-133
74-83-9	Methyl bromide	25	30.1	120	55-151
74-87-3	Methyl chloride	25	27.9	112	55-173
74-88-4	Methyl iodide	25	28.9	116	72-125
80-62-6	Methyl methacrylate	25	27.2	109	63-115
74-95-3	Methylene bromide	25	25.4	102	81-116
75-09-2	Methylene chloride	25	28.4	114	69-125
78-93-3	Methyl ethyl ketone	125	160	128*	61-127
1634-04-4	Methyl Tert Butyl Ether	25	26.2	105	75-116
91-20-3	Naphthalene	25	23.9	96	59-125
76-01-7	Pentachloroethane	25	27.6	110	82-111
107-12-0	Propionitrile	250	257	103	69-119
103-65-1	n-Propylbenzene	25	23.8	95	86-125
100-42-5	Styrene	25	23.3	93	78-118
630-20-6	1,1,1,2-Tetrachloroethane	25	23.4	94	81-119
71-55-6	1,1,1-Trichloroethane	25	28.2	113	79-133
79-34-5	1,1,2,2-Tetrachloroethane	25	25.1	100	71-120
79-00-5	1,1,2-Trichloroethane	25	24.7	99	80-114
87-61-6	1,2,3-Trichlorobenzene	25	24.4	98	64-126
96-18-4	1,2,3-Trichloropropane	25	22.3	89	77-115
120-82-1	1,2,4-Trichlorobenzene	25	21.9	88	68-123

Blank Spike Summary

Job Number: F70660
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ3081-BS	J052862.D	1	01/12/10	KW	n/a	n/a	VJ3081

The QC reported here applies to the following samples: **Method:** SW846 8260B

F70660-1, F70660-4, F70660-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
95-63-6	1,2,4-Trimethylbenzene	25	23.1	92	82-120
108-67-8	1,3,5-Trimethylbenzene	25	23.3	93	83-123
127-18-4	Tetrachloroethylene	25	27.4	110	80-131
108-88-3	Toluene	25	26.5	106	86-116
79-01-6	Trichloroethylene	25	27.1	108	85-124
75-69-4	Trichlorofluoromethane	25	33.9	136	66-156
110-57-6	Trans-1,4-Dichloro-2-Butene	25	28.3	113	51-137
75-01-4	Vinyl chloride	25	29.9	120	57-153
108-05-4	Vinyl Acetate	125	172	138	38-159
	m,p-Xylene	50	46.8	94	86-121
95-47-6	o-Xylene	25	23.8	95	83-121

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	100%	87-116%
17060-07-0	1,2-Dichloroethane-D4	100%	76-127%
2037-26-5	Toluene-D8	100%	86-112%
460-00-4	4-Bromofluorobenzene	101%	84-120%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F70660
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F70660-11MS	J052845.D	1	01/11/10	KW	n/a	n/a	VJ3080
F70660-11MSD	J052846.D	1	01/11/10	KW	n/a	n/a	VJ3080
F70660-11	J052844.D	1	01/11/10	KW	n/a	n/a	VJ3080

The QC reported here applies to the following samples: **Method:** SW846 8260B

F70660-2, F70660-3, F70660-4, F70660-5, F70660-6, F70660-7, F70660-8, F70660-9, F70660-10, F70660-11, F70660-12

CAS No.	Compound	F70660-11 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		125	144	115	161	129	11	59-134/14
75-05-8	Acetonitrile	ND		250	271	108	307	123	12	57-123/15
107-02-8	Acrolein	ND		125	111	89	121	97	9	33-157/21
107-13-1	Acrylonitrile	ND		125	160	128*	202	162*	23*	62-124/13
107-05-1	Allyl chloride	ND		25	24.2	97	22.2	89	9	48-136/13
71-43-2	Benzene	ND		25	27.2	109	27.4	110	1	83-124/11
100-44-7	Benzyl Chloride	ND		25	22.7	91	22.7	91	0	61-118/12
108-86-1	Bromobenzene	ND		25	25.1	100	24.9	100	1	83-115/10
74-97-5	Bromochloromethane	ND		25	25.6	102	26.6	106	4	78-112/10
75-27-4	Bromodichloromethane	ND		25	24.2	97	23.6	94	3	76-116/10
75-25-2	Bromoform	ND		25	22.7	91	21.7	87	5	68-128/11
104-51-8	n-Butylbenzene	ND		25	22.1	88	22.7	91	3	84-124/10
135-98-8	sec-Butylbenzene	ND		25	24.4	98	24.4	98	0	86-127/10
98-06-6	tert-Butylbenzene	ND		25	24.6	98	24.3	97	1	83-126/10
108-90-7	Chlorobenzene	ND		25	26.4	106	26.2	105	1	87-115/9
75-00-3	Chloroethane	ND		25	25.6	102	26.4	106	3	54-166/20
67-66-3	Chloroform	ND		25	26.4	106	26.8	107	2	85-123/10
544-10-5	1-Chlorohexane	ND		25	25.2	101	25.1	100	0	87-128/10
95-49-8	o-Chlorotoluene	ND		25	27.2	109	26.8	107	1	84-121/10
106-43-4	p-Chlorotoluene	ND		25	24.3	97	24.3	97	0	84-120/10
110-75-8	2-Chloroethyl vinyl ether	ND		125	ND	0*	ND	0*	nc	63-125/24
75-15-0	Carbon disulfide	ND		25	26.5	106	25.4	102	4	67-147/12
56-23-5	Carbon tetrachloride	ND		25	26.3	105	25.9	104	2	74-139/13
75-34-3	1,1-Dichloroethane	ND		25	27.1	108	27.4	110	1	82-127/10
75-35-4	1,1-Dichloroethylene	ND		25	28.9	116	31.4	126	8	75-133/13
563-58-6	1,1-Dichloropropene	ND		25	28.6	114	28.7	115	0	87-127/10
96-12-8	1,2-Dibromo-3-chloropropane	ND		25	28.7	115	31.2	125*	8	61-118/15
106-93-4	1,2-Dibromoethane	ND		25	28.0	112	28.4	114	1	80-115/10
107-06-2	1,2-Dichloroethane	ND		25	25.7	103	26.3	105	2	76-122/11
78-87-5	1,2-Dichloropropane	ND		25	25.9	104	26.5	106	2	81-120/11
142-28-9	1,3-Dichloropropane	ND		25	26.9	108	27.7	111	3	81-113/11
594-20-7	2,2-Dichloropropane	ND		25	25.5	102	25.8	103	1	77-138/12
124-48-1	Dibromochloromethane	ND		25	23.0	92	21.8	87	5	74-116/11
75-71-8	Dichlorodifluoromethane	ND		25	28.7	115	28.7	115	0	34-158/22
156-59-2	cis-1,2-Dichloroethylene	ND		25	26.6	106	26.8	107	1	81-114/10
10061-01-5	cis-1,3-Dichloropropene	ND		25	21.7	87	20.1	80*	8	83-119/10

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F70660
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F70660-11MS	J052845.D	1	01/11/10	KW	n/a	n/a	VJ3080
F70660-11MSD	J052846.D	1	01/11/10	KW	n/a	n/a	VJ3080
F70660-11	J052844.D	1	01/11/10	KW	n/a	n/a	VJ3080

The QC reported here applies to the following samples: **Method:** SW846 8260B

F70660-2, F70660-3, F70660-4, F70660-5, F70660-6, F70660-7, F70660-8, F70660-9, F70660-10, F70660-11, F70660-12

CAS No.	Compound	F70660-11 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1476-11-5	cis-1,4-Dichloro-2-Butene	ND		25	18.9	76	14.3	57	28	41-130/33
541-73-1	m-Dichlorobenzene	ND		25	25.7	103	25.9	104	1	86-115/9
95-50-1	o-Dichlorobenzene	ND		25	25.6	102	25.7	103	0	85-115/9
106-46-7	p-Dichlorobenzene	ND		25	25.2	101	25.2	101	0	87-113/10
156-60-5	trans-1,2-Dichloroethylene	ND		25	27.8	111	28.3	113	2	82-126/10
10061-02-6	trans-1,3-Dichloropropene	ND		25	26.1	104	24.6	98	6	87-123/10
100-41-4	Ethylbenzene	ND		25	26.5	106	26.6	106	0	87-118/10
97-63-2	Ethyl methacrylate	ND		25	27.5	110	28.5	114*	4	68-110/11
76-13-1	Freon 113	ND		25	30.3	121	31.4	126	4	74-139/13
591-78-6	2-Hexanone	ND		125	200	160*	224	179*	11	58-125/14
87-68-3	Hexachlorobutadiene	ND		25	21.8	87	23.6	94	8	71-133/12
110-54-3	Hexane	ND		25	29.0	116	28.9	116	0	71-134/11
98-82-8	Isopropylbenzene	ND		25	27.1	108	27.2	109	0	87-131/10
99-87-6	p-Isopropyltoluene	ND		25	23.4	94	23.4	94	0	83-125/9
108-10-1	4-Methyl-2-pentanone	ND		125	188	150*	208	166*	10	62-125/13
126-98-7	Methacrylonitrile	ND		250	336	134*	360	144*	7	62-133/17
74-83-9	Methyl bromide	ND		25	26.8	107	27.3	109	2	55-151/21
74-87-3	Methyl chloride	ND		25	28.7	115	31.3	125	9	55-173/22
74-88-4	Methyl iodide	ND		25	27.0	108	28.1	112	4	72-125/11
80-62-6	Methyl methacrylate	ND		25	35.4	142*	37.6	150*	6	63-115/10
74-95-3	Methylene bromide	ND		25	27.1	108	27.8	111	3	81-116/10
75-09-2	Methylene chloride	ND		25	26.5	106	27.0	108	2	69-125/11
78-93-3	Methyl ethyl ketone	ND		125	160	128*	178	142*	11	61-127/13
1634-04-4	Methyl Tert Butyl Ether	ND		25	28.4	114	29.3	117*	3	75-116/10
91-20-3	Naphthalene	ND		25	29.1	116	32.6	130*	11	59-125/15
76-01-7	Pentachloroethane	ND		25	27.6	110	25.5	102	8	82-111/8
107-12-0	Propionitrile	ND		250	303	121*	341	136*	12	69-119/12
103-65-1	n-Propylbenzene	ND		25	23.8	95	23.6	94	1	86-125/10
100-42-5	Styrene	ND		25	23.3	93	21.8	87	7	78-118/11
630-20-6	1,1,1,2-Tetrachloroethane	ND		25	23.1	92	22.7	91	2	81-119/10
71-55-6	1,1,1-Trichloroethane	ND		25	27.7	111	27.9	112	1	79-133/11
79-34-5	1,1,2,2-Tetrachloroethane	ND		25	30.0	120	31.6	126*	5	71-120/11
79-00-5	1,1,2-Trichloroethane	ND		25	26.8	107	27.6	110	3	80-114/11
87-61-6	1,2,3-Trichlorobenzene	ND		25	24.2	97	26.7	107	10	64-126/16
96-18-4	1,2,3-Trichloropropane	ND		25	27.9	112	29.4	118*	5	77-115/12
120-82-1	1,2,4-Trichlorobenzene	ND		25	20.7	83	22.1	88	7	68-123/11

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F70660
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F70660-11MS	J052845.D	1	01/11/10	KW	n/a	n/a	VJ3080
F70660-11MSD	J052846.D	1	01/11/10	KW	n/a	n/a	VJ3080
F70660-11	J052844.D	1	01/11/10	KW	n/a	n/a	VJ3080

The QC reported here applies to the following samples: **Method:** SW846 8260B

F70660-2, F70660-3, F70660-4, F70660-5, F70660-6, F70660-7, F70660-8, F70660-9, F70660-10, F70660-11, F70660-12

CAS No.	Compound	F70660-11 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
95-63-6	1,2,4-Trimethylbenzene	ND		25	23.3	93	23.0	92	1	82-120/10
108-67-8	1,3,5-Trimethylbenzene	ND		25	23.4	94	23.3	93	0	83-123/10
127-18-4	Tetrachloroethylene	ND		25	27.1	108	26.9	108	1	80-131/12
108-88-3	Toluene	ND		25	26.2	105	26.7	107	2	86-116/10
79-01-6	Trichloroethylene	0.93	J	25	27.9	108	28.6	111	2	85-124/10
75-69-4	Trichlorofluoromethane	ND		25	32.3	129	35.1	140	8	66-156/15
110-57-6	Trans-1,4-Dichloro-2-Butene	ND		25	23.4	94	18.7	75	22	51-137/24
75-01-4	Vinyl chloride	ND		25	28.4	114	30.2	121	6	57-153/22
108-05-4	Vinyl Acetate	ND		125	196	157	204	163*	4	38-159/11
	m,p-Xylene	ND		50	47.4	95	47.3	95	0	86-121/10
95-47-6	o-Xylene	ND		25	24.4	98	24.5	98	0	83-121/10

CAS No.	Surrogate Recoveries	MS	MSD	F70660-11	Limits
1868-53-7	Dibromofluoromethane	98%	99%	99%	87-116%
17060-07-0	1,2-Dichloroethane-D4	103%	104%	101%	76-127%
2037-26-5	Toluene-D8	100%	99%	104%	86-112%
460-00-4	4-Bromofluorobenzene	100%	99%	106%	84-120%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F70660
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F70691-1MS	J052876.D	1	01/12/10	KW	n/a	n/a	VJ3081
F70691-1MSD	J052877.D	1	01/12/10	KW	n/a	n/a	VJ3081
F70691-1	J052875.D	1	01/12/10	KW	n/a	n/a	VJ3081

The QC reported here applies to the following samples: **Method:** SW846 8260B

F70660-1, F70660-4, F70660-8

CAS No.	Compound	F70691-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		125	126	101	135	108	7	59-134/14
75-05-8	Acetonitrile	ND		250	256	102	276	110	8	57-123/15
107-02-8	Acrolein	ND		125	166	133	172	138	4	33-157/21
107-13-1	Acrylonitrile	ND		125	186	149*	146	117	24*	62-124/13
107-05-1	Allyl chloride	ND		25	22.7	91	21.7	87	5	48-136/13
71-43-2	Benzene	ND		25	26.8	107	27.0	108	1	83-124/11
100-44-7	Benzyl Chloride	ND		25	21.0	84	20.4	82	3	61-118/12
108-86-1	Bromobenzene	ND		25	24.6	98	25.0	100	2	83-115/10
74-97-5	Bromochloromethane	ND		25	25.3	101	25.8	103	2	78-112/10
75-27-4	Bromodichloromethane	ND		25	23.6	94	22.6	90	4	76-116/10
75-25-2	Bromoform	ND		25	19.2	77	19.2	77	0	68-128/11
104-51-8	n-Butylbenzene	ND		25	21.8	87	22.5	90	3	84-124/10
135-98-8	sec-Butylbenzene	ND		25	23.9	96	24.4	98	2	86-127/10
98-06-6	tert-Butylbenzene	ND		25	23.5	94	24.3	97	3	83-126/10
108-90-7	Chlorobenzene	ND		25	25.8	103	26.6	106	3	87-115/9
75-00-3	Chloroethane	ND		25	23.3	93	25.2	101	8	54-166/20
67-66-3	Chloroform	ND		25	26.2	105	26.7	107	2	85-123/10
544-10-5	1-Chlorohexane	ND		25	24.3	97	24.9	100	2	87-128/10
95-49-8	o-Chlorotoluene	ND		25	26.5	106	26.9	108	1	84-121/10
106-43-4	p-Chlorotoluene	ND		25	23.9	96	24.1	96	1	84-120/10
110-75-8	2-Chloroethyl vinyl ether	ND		125	ND	0*	ND	0*	nc	63-125/24
75-15-0	Carbon disulfide	ND		25	23.5	94	22.9	92	3	67-147/12
56-23-5	Carbon tetrachloride	ND		25	26.6	106	26.7	107	0	74-139/13
75-34-3	1,1-Dichloroethane	ND		25	26.8	107	26.3	105	2	82-127/10
75-35-4	1,1-Dichloroethylene	ND		25	28.3	113	29.4	118	4	75-133/13
563-58-6	1,1-Dichloropropene	ND		25	28.7	115	28.5	114	1	87-127/10
96-12-8	1,2-Dibromo-3-chloropropane	ND		25	25.3	101	26.3	105	4	61-118/15
106-93-4	1,2-Dibromoethane	ND		25	26.1	104	27.4	110	5	80-115/10
107-06-2	1,2-Dichloroethane	ND		25	25.3	101	25.1	100	1	76-122/11
78-87-5	1,2-Dichloropropane	ND		25	25.7	103	26.1	104	2	81-120/11
142-28-9	1,3-Dichloropropane	ND		25	25.6	102	26.3	105	3	81-113/11
594-20-7	2,2-Dichloropropane	ND		25	26.1	104	26.0	104	0	77-138/12
124-48-1	Dibromochloromethane	ND		25	21.1	84	20.8	83	1	74-116/11
75-71-8	Dichlorodifluoromethane	ND		25	25.6	102	27.4	110	7	34-158/22
156-59-2	cis-1,2-Dichloroethylene	ND		25	26.0	104	26.6	106	2	81-114/10
10061-01-5	cis-1,3-Dichloropropene	ND		25	20.4	82*	20.1	80*	1	83-119/10

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F70660
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F70691-1MS	J052876.D	1	01/12/10	KW	n/a	n/a	VJ3081
F70691-1MSD	J052877.D	1	01/12/10	KW	n/a	n/a	VJ3081
F70691-1	J052875.D	1	01/12/10	KW	n/a	n/a	VJ3081

The QC reported here applies to the following samples: **Method:** SW846 8260B

F70660-1, F70660-4, F70660-8

CAS No.	Compound	F70691-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1476-11-5	cis-1,4-Dichloro-2-Butene	ND		25	20.5	82	18.6	74	10	41-130/33
541-73-1	m-Dichlorobenzene	ND		25	25.0	100	25.6	102	2	86-115/9
95-50-1	o-Dichlorobenzene	ND		25	24.6	98	25.8	103	5	85-115/9
106-46-7	p-Dichlorobenzene	ND		25	24.5	98	25.4	102	4	87-113/10
156-60-5	trans-1,2-Dichloroethylene	ND		25	27.7	111	27.2	109	2	82-126/10
10061-02-6	trans-1,3-Dichloropropene	ND		25	25.0	100	24.5	98	2	87-123/10
100-41-4	Ethylbenzene	ND		25	26.1	104	26.5	106	2	87-118/10
97-63-2	Ethyl methacrylate	ND		25	25.6	102	26.2	105	2	68-110/11
76-13-1	Freon 113	ND		25	29.6	118	30.7	123	4	74-139/13
591-78-6	2-Hexanone	ND		125	158	126*	166	133*	5	58-125/14
87-68-3	Hexachlorobutadiene	ND		25	21.2	85	24.3	97	14*	71-133/12
110-54-3	Hexane	ND		25	29.4	118	29.0	116	1	71-134/11
98-82-8	Isopropylbenzene	ND		25	26.5	106	27.3	109	3	87-131/10
99-87-6	p-Isopropyltoluene	ND		25	22.9	92	23.5	94	3	83-125/9
108-10-1	4-Methyl-2-pentanone	ND		125	152	122	160	128*	5	62-125/13
126-98-7	Methacrylonitrile	ND		250	307	123	315	126	3	62-133/17
74-83-9	Methyl bromide	ND		25	25.6	102	27.3	109	6	55-151/21
74-87-3	Methyl chloride	ND		25	25.7	103	27.1	108	5	55-173/22
74-88-4	Methyl iodide	ND		25	26.7	107	27.0	108	1	72-125/11
80-62-6	Methyl methacrylate	ND		25	31.4	126*	32.5	130*	3	63-115/10
74-95-3	Methylene bromide	ND		25	25.7	103	26.2	105	2	81-116/10
75-09-2	Methylene chloride	1.2	JB	25	26.0	99	25.2	96	3	69-125/11
78-93-3	Methyl ethyl ketone	ND		125	144	115	153	122	6	61-127/13
1634-04-4	Methyl Tert Butyl Ether	ND		25	26.9	108	27.7	111	3	75-116/10
91-20-3	Naphthalene	ND		25	26.5	106	29.4	118	10	59-125/15
76-01-7	Pentachloroethane	ND		25	27.0	108	26.4	106	2	82-111/8
107-12-0	Propionitrile	ND		250	282	113	303	121*	7	69-119/12
103-65-1	n-Propylbenzene	ND		25	23.4	94	23.5	94	0	86-125/10
100-42-5	Styrene	ND		25	22.5	90	21.3	85	5	78-118/11
630-20-6	1,1,1,2-Tetrachloroethane	ND		25	22.9	92	22.6	90	1	81-119/10
71-55-6	1,1,1-Trichloroethane	ND		25	27.2	109	27.7	111	2	79-133/11
79-34-5	1,1,2,2-Tetrachloroethane	ND		25	27.7	111	28.1	112	1	71-120/11
79-00-5	1,1,2-Trichloroethane	ND		25	25.9	104	26.1	104	1	80-114/11
87-61-6	1,2,3-Trichlorobenzene	ND		25	23.5	94	26.5	106	12	64-126/16
96-18-4	1,2,3-Trichloropropane	ND		25	24.9	100	25.7	103	3	77-115/12
120-82-1	1,2,4-Trichlorobenzene	ND		25	20.0	80	22.4	90	11	68-123/11

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F70660
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F70691-1MS	J052876.D	1	01/12/10	KW	n/a	n/a	VJ3081
F70691-1MSD	J052877.D	1	01/12/10	KW	n/a	n/a	VJ3081
F70691-1	J052875.D	1	01/12/10	KW	n/a	n/a	VJ3081

The QC reported here applies to the following samples: **Method:** SW846 8260B

F70660-1, F70660-4, F70660-8

CAS No.	Compound	F70691-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
95-63-6	1,2,4-Trimethylbenzene	ND		25	22.4	90	22.6	90	1	82-120/10
108-67-8	1,3,5-Trimethylbenzene	ND		25	22.7	91	23.2	93	2	83-123/10
127-18-4	Tetrachloroethylene	ND		25	26.2	105	27.3	109	4	80-131/12
108-88-3	Toluene	ND		25	25.9	104	26.7	107	3	86-116/10
79-01-6	Trichloroethylene	ND		25	27.1	108	28.3	113	4	85-124/10
75-69-4	Trichlorofluoromethane	ND		25	29.4	118	31.6	126	7	66-156/15
110-57-6	Trans-1,4-Dichloro-2-Butene	ND		25	24.3	97	23.5	94	3	51-137/24
75-01-4	Vinyl chloride	ND		25	26.0	104	27.9	112	7	57-153/22
108-05-4	Vinyl Acetate	ND		125	183	146	184	147	1	38-159/11
	m,p-Xylene	ND		50	46.7	93	46.9	94	0	86-121/10
95-47-6	o-Xylene	ND		25	23.7	95	24.0	96	1	83-121/10

CAS No.	Surrogate Recoveries	MS	MSD	F70691-1	Limits
1868-53-7	Dibromofluoromethane	99%	98%	100%	87-116%
17060-07-0	1,2-Dichloroethane-D4	103%	101%	99%	76-127%
2037-26-5	Toluene-D8	99%	100%	103%	86-112%
460-00-4	4-Bromofluorobenzene	100%	100%	103%	84-120%

Instrument Performance Check (BFB)

Job Number: F70660
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ3080-BFB
Lab File ID: J052827.D
Instrument ID: GCMSJ
Injection Date: 01/11/10
Injection Time: 12:13

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	18345	21.9		Pass
75	30.0 - 60.0% of mass 95	38317	45.7		Pass
95	Base peak, 100% relative abundance	83922	100.0		Pass
96	5.0 - 9.0% of mass 95	5510	6.6		Pass
173	Less than 2.0% of mass 174	422	0.5	(0.53) [a]	Pass
174	50.0 - 100.0% of mass 95	78925	94.0		Pass
175	5.0 - 9.0% of mass 174	5563	6.6	(7.0) [a]	Pass
176	95.0 - 101.0% of mass 174	78154	93.1	(99.0) [a]	Pass
177	5.0 - 9.0% of mass 176	5238	6.2	(6.7) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VJ3080-IC3080	J052828.D	01/11/10	12:34	00:21	Initial cal 1
VJ3080-IC3080	J052829.D	01/11/10	12:57	00:44	Initial cal 2
VJ3080-IC3080	J052830.D	01/11/10	13:20	01:07	Initial cal 3
VJ3080-ICC3080	J052831.D	01/11/10	13:43	01:30	Initial cal 4
VJ3080-IC3080	J052832.D	01/11/10	14:06	01:53	Initial cal 5
VJ3080-IC3080	J052833.D	01/11/10	14:29	02:16	Initial cal 6
VJ3080-ICV3080	J052834.D	01/11/10	14:52	02:39	Initial cal verification 4
VJ3080-BS	J052835.D	01/11/10	15:18	03:05	Blank Spike
VJ3080-MB	J052836.D	01/11/10	15:42	03:29	Method Blank
ZZZZZZ	J052837.D	01/11/10	16:05	03:52	(unrelated sample)
ZZZZZZ	J052838.D	01/11/10	16:28	04:15	(unrelated sample)
ZZZZZZ	J052839.D	01/11/10	16:51	04:38	(unrelated sample)
ZZZZZZ	J052840.D	01/11/10	17:14	05:01	(unrelated sample)
ZZZZZZ	J052841.D	01/11/10	17:37	05:24	(unrelated sample)
ZZZZZZ	J052842.D	01/11/10	18:00	05:47	(unrelated sample)
ZZZZZZ	J052843.D	01/11/10	18:23	06:10	(unrelated sample)
F70660-11	J052844.D	01/11/10	18:46	06:33	MW39-07-010710
F70660-11MS	J052845.D	01/11/10	19:09	06:56	Matrix Spike
F70660-11MSD	J052846.D	01/11/10	19:32	07:19	Matrix Spike Duplicate
F70660-2	J052848.D	01/11/10	20:18	08:05	MW39-09-010610
F70660-3	J052849.D	01/11/10	20:41	08:28	MW39-11-010610
F70660-4	J052850.D	01/11/10	21:04	08:51	MW39-06D-010610
F70660-5	J052851.D	01/11/10	21:27	09:14	MW39-12-010610
F70660-6	J052852.D	01/11/10	21:51	09:38	MW39-06-010610

Instrument Performance Check (BFB)

Job Number: F70660
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ3080-BFB
Lab File ID: J052827.D
Instrument ID: GCMSJ
Injection Date: 01/11/10
Injection Time: 12:13

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
F70660-7	J052853.D	01/11/10	22:14	10:01	MW39-08-010610
F70660-8	J052854.D	01/11/10	22:37	10:24	MW39-DUP01-010610
F70660-9	J052855.D	01/11/10	23:00	10:47	TB01-010610
F70660-10	J052856.D	01/11/10	23:24	11:11	MW39-02-010710
F70660-12	J052857.D	01/11/10	23:47	11:34	MW39-05-010710

Instrument Performance Check (BFB)

Job Number: F70660
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ3081-BFB
Lab File ID: J052860.D
Instrument ID: GCMSJ
Injection Date: 01/12/10
Injection Time: 09:13

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	15913	21.1		Pass
75	30.0 - 60.0% of mass 95	34693	45.9		Pass
95	Base peak, 100% relative abundance	75533	100.0		Pass
96	5.0 - 9.0% of mass 95	5370	7.1		Pass
173	Less than 2.0% of mass 174	440	0.58	(0.63) [a]	Pass
174	50.0 - 100.0% of mass 95	69301	91.7		Pass
175	5.0 - 9.0% of mass 174	4879	6.5	(7.0) [a]	Pass
176	95.0 - 101.0% of mass 174	69360	91.8	(100.1) [a]	Pass
177	5.0 - 9.0% of mass 176	4545	6.0	(6.6) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VJ3081-CC3080	J052861.D	01/12/10	09:35	00:22	Continuing cal 4
VJ3081-BS	J052862.D	01/12/10	10:12	00:59	Blank Spike
VJ3081-MB	J052863.D	01/12/10	10:34	01:21	Method Blank
F70660-4	J052864.D	01/12/10	10:59	01:46	MW39-06D-010610
F70660-8	J052865.D	01/12/10	11:23	02:10	MW39-DUP01-010610
F70660-1	J052867.D	01/12/10	12:09	02:56	MW39-10-010610
F70660-2	J052868.D	01/12/10	12:32	03:19	MW39-09-010610
F70660-3	J052869.D	01/12/10	12:55	03:42	MW39-11-010610
F70660-5	J052870.D	01/12/10	13:18	04:05	MW39-12-010610
F70660-7	J052871.D	01/12/10	13:41	04:28	MW39-08-010610
ZZZZZZ	J052872.D	01/12/10	14:05	04:52	(unrelated sample)
ZZZZZZ	J052873.D	01/12/10	14:28	05:15	(unrelated sample)
ZZZZZZ	J052874.D	01/12/10	14:50	05:37	(unrelated sample)
F70691-1	J052875.D	01/12/10	15:22	06:09	(used for QC only; not part of job F70660)
F70691-1MS	J052876.D	01/12/10	15:45	06:32	Matrix Spike
F70691-1MSD	J052877.D	01/12/10	16:08	06:55	Matrix Spike Duplicate
ZZZZZZ	J052879.D	01/12/10	16:54	07:41	(unrelated sample)

Volatile Internal Standard Area Summary

Job Number: F70660
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Check Std:	VJ3080-ICC3080	**Injection Date:**	01/11/10
Lab File ID:	J052831.D	**Injection Time:**	13:43
Instrument ID:	GCMSJ	**Method:**	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
Check Std	2089467	7.47	1641465	10.56	953047	12.92	190037	5.12
Upper Limit [a]	4178934	7.97	3282930	11.06	1906094	13.42	380074	5.62
Lower Limit [b]	1044734	6.97	820733	10.06	476524	12.42	95019	4.62

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
VJ3080-BS	2865506	7.48	2186034	10.56	1283984	12.92	293776	5.11
VJ3080-MB	2719975	7.47	1994550	10.56	1151393	12.92	256776	5.10
ZZZZZZ	2501375	7.48	1853978	10.56	1046215	12.92	222037	5.10
ZZZZZZ	2389490	7.47	1747204	10.56	999519	12.92	216589	5.10
ZZZZZZ	2219151	7.47	1636609	10.56	923809	12.92	204328	5.10
ZZZZZZ	2078075	7.47	1525999	10.56	856266	12.92	185224	5.10
ZZZZZZ	1935679	7.47	1436162	10.56	804899	12.92	172769	5.10
ZZZZZZ	1857536	7.47	1359201	10.56	763329	12.92	164035	5.10
ZZZZZZ	1784455	7.47	1305138	10.56	722484	12.92	160459	5.11
F70660-11	1611094	7.47	1173441	10.56	619521	12.92	270869	5.10
F70660-11MS	1746029	7.48	1347460	10.56	770559	12.92	253221	5.10
F70660-11MSD	1840858	7.47	1410069	10.56	806429	12.92	314418	5.10
F70660-2 [c]	1784550	7.48	1345288	10.56	777553	12.92	532048*	5.10
F70660-3	1869001	7.48	1422956	10.56	817190	12.92	492221*	5.10
F70660-4	2101015	7.47	1539871	10.56	873507	12.92	231077	5.09
F70660-5	1843705	7.48	1400553	10.56	811009	12.92	417636*	5.10
F70660-6	2021809	7.47	1488696	10.56	823652	12.92	195931	5.10
F70660-7	1801729	7.47	1348550	10.56	784320	12.92	438360*	5.09
F70660-8	2036427	7.47	1492490	10.56	816618	12.92	218618	5.10
F70660-9	1936027	7.47	1435995	10.56	794521	12.92	179774	5.10
F70660-10	1730503	7.48	1284437	10.56	698157	12.92	209391	5.10
F70660-12	1606076	7.48	1177764	10.56	631157	12.92	344894	5.10

IS 1 = Fluorobenzene
IS 2 = Chlorobenzene-D5
IS 3 = 1,4-Dichlorobenzene-d4
IS 4 = Tert Butyl Alcohol-D10

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.
(c) Sample was not preserved to a pH < 2.

Volatile Internal Standard Area Summary

Job Number: F70660
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Check Std:	VJ3081-CC3080	**Injection Date:**	01/12/10
Lab File ID:	J052861.D	**Injection Time:**	09:35
Instrument ID:	GCMSJ	**Method:**	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
Check Std	1858261	7.48	1435717	10.56	811114	12.92	180445	5.10
Upper Limit [a]	3716522	7.98	2871434	11.06	1622228	13.42	360890	5.60
Lower Limit [b]	929131	6.98	717859	10.06	405557	12.42	90223	4.60

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
VJ3081-BS	1980349	7.47	1508176	10.56	843927	12.92	195655	5.09
VJ3081-MB	1843500	7.47	1345432	10.56	720461	12.92	179219	5.10
F70660-4	1650891	7.47	1195449	10.56	659924	12.92	366994*	5.10
F70660-8	1581346	7.47	1141610	10.56	620931	12.92	352433	5.10
F70660-1	1403229	7.47	1039932	10.56	602961	12.92	353225	5.10
F70660-2 [c]	1558042	7.48	1181556	10.56	681063	12.92	392072*	5.10
F70660-3 [c]	1616847	7.47	1229510	10.56	705875	12.92	418561*	5.09
F70660-5 [c]	1730078	7.48	1329539	10.56	766380	12.92	420293*	5.10
F70660-7 [c]	1674920	7.47	1283172	10.56	741756	12.92	407843*	5.10
ZZZZZZ	2050826	7.47	1529892	10.56	874048	12.92	265317	5.10
ZZZZZZ	1947771	7.48	1428223	10.56	785679	12.92	173720	5.09
ZZZZZZ	1798642	7.48	1332638	10.56	721597	12.92	209277	5.10
F70691-1	1762259	7.48	1282235	10.56	699928	12.92	214594	5.10
F70691-1MS	1771261	7.48	1365873	10.56	775576	12.92	227648	5.09
F70691-1MSD	1947982	7.47	1487474	10.56	843938	12.92	259784	5.10
ZZZZZZ	1740729	7.47	1260799	10.56	698922	12.92	217509	5.10

IS 1 = Fluorobenzene
IS 2 = Chlorobenzene-D5
IS 3 = 1,4-Dichlorobenzene-d4
IS 4 = Tert Butyl Alcohol-D10

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.
(c) Confirmation run for internal standard areas.

Volatile Surrogate Recovery Summary

Job Number: F70660
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Method: SW846 8260B **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
F70660-1	J052867.D	99.0	103.0	101.0	102.0
F70660-2	J052868.D	98.0	101.0	100.0	103.0
F70660-2	J052848.D	101.0	103.0	101.0	102.0
F70660-3	J052869.D	99.0	101.0	99.0	102.0
F70660-3	J052849.D	101.0	104.0	101.0	105.0
F70660-4	J052864.D	100.0	101.0	104.0	102.0
F70660-4	J052850.D	100.0	99.0	104.0	103.0
F70660-5	J052870.D	100.0	101.0	100.0	103.0
F70660-5	J052851.D	100.0	104.0	101.0	104.0
F70660-6	J052852.D	99.0	97.0	104.0	105.0
F70660-7	J052871.D	100.0	101.0	101.0	104.0
F70660-7	J052853.D	99.0	103.0	103.0	104.0
F70660-8	J052865.D	99.0	100.0	104.0	103.0
F70660-8	J052854.D	99.0	98.0	104.0	106.0
F70660-9	J052855.D	101.0	95.0	103.0	104.0
F70660-10	J052856.D	99.0	99.0	103.0	105.0
F70660-11	J052844.D	99.0	101.0	104.0	106.0
F70660-12	J052857.D	100.0	101.0	104.0	104.0
F70660-11MS	J052845.D	98.0	103.0	100.0	100.0
F70660-11MSD	J052846.D	99.0	104.0	99.0	99.0
F70691-1MS	J052876.D	99.0	103.0	99.0	100.0
F70691-1MSD	J052877.D	98.0	101.0	100.0	100.0
VJ3080-BS	J052835.D	101.0	100.0	100.0	99.0
VJ3080-MB	J052836.D	101.0	97.0	104.0	101.0
VJ3081-BS	J052862.D	100.0	100.0	100.0	101.0
VJ3081-MB	J052863.D	100.0	96.0	103.0	106.0

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	87-116%
S2 = 1,2-Dichloroethane-D4	76-127%
S3 = Toluene-D8	86-112%
S4 = 4-Bromofluorobenzene	84-120%

Initial Calibration Summary

Job Number: F70660
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ3080-ICC3080
Lab FileID: J052831.D

Response Factor Report MSVOA6

Method : C:\MSDCHEM\1\METHODS\8260-JAPP9.M (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Mon Jan 11 14:57:31 2010
Response via : Initial Calibration

Calibration Files
1 =J052828.D 2 =J052829.D 3 =J052830.D 4 =J052831.D
5 =J052832.D 6 =J052833.D

	Compound	1	2	3	4	5	6	Avg	%RSD
1) I	Fluorobenzene	----------ISTD----------							
2)	Dichlorodifluoromet	0.105	0.164	0.159	0.152	0.155	0.154	0.148	14.59
3) P	Chloromethane	0.434	0.398	0.364	0.332	0.329	0.297	0.359	13.99
4) C	Vinyl Chloride	0.251	0.294	0.299	0.282	0.293	0.269	0.281	6.56
5)	Bromomethane	0.268	0.219	0.209	0.187	0.174	0.152	0.201	20.14
	---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9996								
	Response Ratio = 0.00000 + 0.21701 *A + -0.03222 *A^2								
6)	Chloroethane	0.187	0.183	0.183	0.166	0.146	0.120	0.164	16.12
	---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9998								
	Response Ratio = 0.00000 + 0.19897 *A + -0.03913 *A^2								
7)	Trichlorofluorometh	0.289	0.335	0.360	0.355	0.373	0.331	0.341	8.70
8)	Ethyl Ether	0.221	0.227	0.247	0.248	0.246	0.226	0.236	5.31
9)	1,2-Dichlorotrifluo	0.214	0.252	0.262	0.266	0.259	0.232	0.248	8.17
10) C	1,1-Dichloroethene	0.279	0.318	0.339	0.351	0.339	0.310	0.323	8.06
11)	Freon 113	0.141	0.169	0.195	0.201	0.204	0.188	0.183	13.08
12)	Carbon Disulfide	0.650	0.587	0.605	0.611	0.589	0.543	0.597	5.90
13)	Iodomethane	0.331	0.372	0.396	0.398	0.409	0.397	0.384	7.49
14)	Allyl chloride	0.355	0.430	0.461	0.461	0.458	0.440	0.434	9.40
15)	Methylene Chloride	1.551	0.520	0.452	0.378	0.352	0.345	0.600	78.52
	---- Linear regr., Force(0,0) ---- Coefficient = 0.9984								
	Response Ratio = 0.00000 + 0.35289 *A								
16)	Acetone	0.023	0.018	0.021	0.020	0.020	0.019	0.020	7.11
17)	Methyl acetate	0.028	0.030	0.034	0.032	0.032	0.032	0.031	6.98
18)	trans-1,2-Dichloroe	0.299	0.315	0.336	0.332	0.328	0.325	0.323	4.20
19)	Hexane	0.212	0.227	0.240	0.237	0.228	0.222	0.228	4.46
20)	Methyl Tert Butyl E	0.472	0.490	0.559	0.543	0.546	0.553	0.527	6.96
21)	Acetonitrile	0.025	0.018	0.016	0.015	0.014	0.014	0.017	24.31
	---- Quadratic regr., Force(0,0) ---- Coefficient = 1.0000								
	Response Ratio = 0.00000 + 0.01589 *A + -0.00011 *A^2								
22)	Di-isopropyl ether	0.653	0.753	0.899	0.878	0.878	0.858	0.820	11.77
23)	Chloroprene	0.629	0.391	0.382	0.432	0.449	0.441	0.454	19.81
	---- Linear regr., Force(0,0) ---- Coefficient = 0.9990								
	Response Ratio = 0.00000 + 0.44082 *A								
24) P	1,1-Dichloroethane	0.360	0.415	0.449	0.440	0.439	0.432	0.423	7.70
25)	Acrylonitrile	0.126	0.074	0.084	0.073	0.069	0.071	0.083	26.12
	---- Linear regr., Force(0,0) ---- Coefficient = 0.9984								
	Response Ratio = 0.00000 + 0.07100 *A								
26)	ETBE	0.562	0.649	0.767	0.748	0.769	0.762	0.709	12.03
27)	Vinyl acetate	0.336	0.411	0.410	0.432	0.392	0.380	0.394	8.44
28)	cis-1,2-Dichloroeth	0.184	0.222	0.250	0.251	0.252	0.244	0.234	11.47

Initial Calibration Summary

Job Number: F70660 **Sample:** VJ3080-ICC3080
Account: TETTNOAK Tetra Tech, Inc **Lab FileID:** J052831.D
Project: Holloman AFB; Alamogordo, NM

```
29)      2,2-Dichloropropane 0.204 0.257 0.280 0.288 0.292 0.290 0.268  12.73
30)      Bromochloromethane  0.106 0.115 0.133 0.130 0.132 0.131 0.124   9.03
31)      Cyclohexane         0.243 0.344 0.398 0.412 0.406 0.401 0.367  17.91
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9998
               Response Ratio = 0.00000 + 0.40329 *A

32) C    Chloroform          0.336 0.380 0.413 0.408 0.409 0.402 0.391   7.56
33)      Ethyl acetate       0.238 0.248 0.267 0.247 0.271 0.247 0.253   5.12
34)      Tetrahydrofuran     0.258 0.081 0.068 0.060 0.063 0.060 0.098  80.13
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9989
               Response Ratio = 0.00000 + 0.06100 *A

35) S    Dibromofluoromethan 0.268 0.266 0.265 0.268 0.268 0.271 0.268   0.78
36)      Carbon Tetrachlorid 0.196 0.251 0.273 0.278 0.284 0.278 0.260  12.90
37)      1,1,1-Trichloroetha 0.217 0.283 0.310 0.310 0.308 0.308 0.289  12.80
38)      2-Butanone          0.088 0.089 0.104 0.103 0.103 0.098 0.097   7.43
39)      1,1-Dichloropropene 0.204 0.264 0.292 0.302 0.301 0.295 0.276  13.76
40)      Propionitrile       0.029 0.031 0.035 0.035 0.035 0.033 0.033   7.81
41)      Methacrylonitrile   0.122 0.141 0.156 0.156 0.152 0.131 0.143   9.97
42)      Benzene             0.683 0.832 0.903 0.904 0.915 0.862 0.850  10.28
43)      TAME                0.423 0.515 0.602 0.597 0.611 0.603 0.559  13.51
44) S    1,2-Dichloroethane- 0.288 0.286 0.299 0.303 0.321 0.302 0.300   4.24
45)      1,2-Dichloroethane  0.292 0.283 0.318 0.313 0.320 0.314 0.307   4.94
46)      Trichloroethene     0.192 0.220 0.236 0.242 0.249 0.242 0.230   9.28
47)      Methylcyclohexane   0.224 0.324 0.373 0.381 0.377 0.368 0.341  17.93
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9995
               Response Ratio = 0.00000 + 0.37178 *A

48)      Dibromomethane      0.111 0.125 0.141 0.141 0.145 0.143 0.134  10.00
49) C    1,2-Dichloropropane 0.187 0.230 0.263 0.264 0.270 0.264 0.246  13.25
50)      Bromodichloromethan 0.229 0.266 0.310 0.311 0.320 0.318 0.292  12.65
51)      Methyl methacrylate 0.121 0.150 0.198 0.207 0.211 0.203 0.182  20.43
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9991
               Response Ratio = 0.00000 + 0.20538 *A

52)      2-Chloroethyl vinyl 0.095 0.130 0.166 0.170 0.175 0.161 0.149  20.66
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9986
               Response Ratio = 0.00000 + 0.18204 *A + -0.00196 *A^2

53)      cis-1,3-Dichloropro 0.235 0.308 0.377 0.382 0.396 0.387 0.348  18.30
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9997
               Response Ratio = 0.00000 + 0.38902 *A


54) I    Chlorobenzene-d5      ----------------ISTD---------------------
55) S    Toluene-d8          1.314 1.271 1.246 1.239 1.225 1.222 1.253   2.77
56) C    Toluene             1.070 1.157 1.215 1.197 1.186 1.131 1.159   4.57
57)      2-Nitropropane      0.042 0.046 0.063 0.064 0.068 0.065 0.058  18.85
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9989
               Response Ratio = 0.00000 + 0.06565 *A

58)      4-Methyl-2-pentanon 0.196 0.239 0.300 0.288 0.282 0.254 0.260  14.87
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9992
               Response Ratio = 0.00000 + 0.32030 *A + -0.00646 *A^2

59)      trans-1,3-Dichlorop 0.304 0.353 0.427 0.428 0.446 0.436 0.399  14.35
60)      Tetrachloroethene   0.244 0.314 0.337 0.351 0.358 0.360 0.327  13.47
61)      Ethyl methacrylate  0.204 0.270 0.345 0.356 0.369 0.369 0.319  21.15
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9998
               Response Ratio = 0.00000 + 0.36692 *A
```

Initial Calibration Summary

Job Number: F70660
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ3080-ICC3080
Lab FileID: J052831.D

```
62)     1,1,2-Trichloroetha 0.188 0.220 0.240 0.232 0.233 0.228 0.223   8.36
63)     Dibromochloromethan 0.213 0.253 0.313 0.318 0.327 0.329 0.292  16.44
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9999
              Response Ratio = 0.00000 + 0.32675 *A

64)     1,3-Dichloropropane 0.370 0.412 0.457 0.449 0.454 0.443 0.431   7.92
65)     1,2-Dibromoethane   0.209 0.238 0.282 0.277 0.283 0.279 0.261  11.79
66)     2-hexanone          0.116 0.148 0.201 0.196 0.195 0.180 0.173  19.61
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9994
              Response Ratio = 0.00000 + 0.21143 *A + -0.00299 *A^2

67)     1-Chlorohexane      0.223 0.358 0.418 0.439 0.437 0.427 0.384  21.90
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9996
              Response Ratio = 0.00000 + 0.43060 *A

68) C   Ethylbenzene        1.146 1.262 1.370 1.380 1.363 1.240 1.293   7.23
69) P   Chlorobenzene       0.707 0.802 0.876 0.881 0.888 0.835 0.832   8.32
70)     1,1,1,2-Tetrachloro 0.205 0.264 0.300 0.306 0.313 0.316 0.284  15.16
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9999
              Response Ratio = 0.00000 + 0.31352 *A

71)     m,p-Xylene          0.695 0.906 1.023 1.029 0.993 0.870 0.920  13.84
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9988
              Response Ratio = 0.00000 + 1.15520 *A + -0.06896 *A^2

72)     o-Xylene            0.582 0.822 0.997 1.006 1.020 0.969 0.899  19.09
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9995
              Response Ratio = 0.00000 + 1.05150 *A + -0.03808 *A^2

73)     Styrene             0.457 0.676 0.855 0.867 0.893 0.858 0.768  22.25
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9992
              Response Ratio = 0.00000 + 0.86873 *A

74) P   Bromoform           0.135 0.155 0.207 0.214 0.227 0.231 0.195  20.59
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9993
              Response Ratio = 0.00000 + 0.22730 *A

75)     Isopropylbenzene    0.614 0.922 1.089 1.140 1.125 1.067 0.993  20.28
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9996
              Response Ratio = 0.00000 + 1.18235 *A + -0.05483 *A^2


76) I   1,4-Dichlorobenzene-d ----------------ISTD---------------------
77) S   4-Bromofluorobenzen 0.838 0.824 0.819 0.800 0.804 0.810 0.816   1.71
78)     cis-1,4-Dichloro-2- 0.061 0.060 0.100 0.111 0.125 0.140 0.100  33.31
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9999
              Response Ratio = 0.00000 + 0.09041 *A + 0.02493 *A^2

79)     n-Propylbenzene     1.798 2.419 2.773 2.754 2.675 2.377 2.466  14.92
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9991
              Response Ratio = 0.00000 + 3.06783 *A + -0.33474 *A^2

80)     Bromobenzene        0.522 0.627 0.716 0.710 0.747 0.737 0.677  12.82
81) P   1,1,2,2-Tetrachloro 0.493 0.515 0.602 0.569 0.570 0.556 0.551   7.29
82)     1,3,5-Trimethylbenz 1.106 1.556 1.890 1.902 1.923 1.773 1.692  18.78
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9991
              Response Ratio = 0.00000 + 2.04414 *A + -0.12743 *A^2

83)     2-Chlorotoluene     1.204 1.587 1.817 1.801 1.821 1.664 1.649  14.43
```

Initial Calibration Summary

Job Number: F70660
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ3080-ICC3080
Lab FileID: J052831.D

```
 84)     trans-1,4-Dichloro- 0.067 0.067 0.104 0.111 0.121 0.133 0.101  27.57
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9999
               Response Ratio = 0.00000 + 0.09482 *A + 0.01918 *A^2

 85)     1,2,3-Trichloroprop 0.134 0.147 0.167 0.165 0.167 0.166 0.158   8.99
 86)     Cyclohexanone       0.010 0.012 0.014 0.015 0.014 0.015 0.013  14.70
 87)     4-Chlorotoluene     1.083 1.401 1.677 1.610 1.630 1.547 1.491  14.85
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9996
               Response Ratio = 0.00000 + 1.70742 *A + -0.07623 *A^2

 88)     tert-Butylbenzene   0.614 0.840 1.013 1.033 1.051 1.003 0.926  18.42
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9995
               Response Ratio = 0.00000 + 1.07064 *A + -0.03046 *A^2

 89)     1,2,4-Trimethylbenz 1.117 1.626 1.951 1.916 1.924 1.800 1.722  18.58
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9995
               Response Ratio = 0.00000 + 2.04724 *A + -0.11791 *A^2

 90)     Pentachloroethane   0.288 0.332 0.381 0.398 0.410 0.426 0.373  14.04
 91)     sec-Butylbenzene    1.363 2.054 2.415 2.400 2.370 2.182 2.130  18.86
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9995
               Response Ratio = 0.00000 + 2.59289 *A + -0.19785 *A^2

 92)     4-Isopropyltoluene  1.007 1.629 2.047 2.035 2.060 1.919 1.783  23.19
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9993
               Response Ratio = 0.00000 + 2.17281 *A + -0.11922 *A^2

 93)     1,3-Dichlorobenzene 0.958 1.097 1.228 1.194 1.231 1.201 1.152   9.27
 94)     1,4-Dichlorobenzene 1.194 1.191 1.334 1.281 1.302 1.253 1.259   4.60
 95)     n-Butylbenzene      0.670 1.020 1.220 1.230 1.260 1.153 1.092  20.51
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9986
               Response Ratio = 0.00000 + 1.33142 *A + -0.08298 *A^2

 96)     Benzyl Chloride     0.174 0.187 0.258 0.268 0.289 0.284 0.243  20.60
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9992
               Response Ratio = 0.00000 + 0.28323 *A

 97)     1,2-Dichlorobenzene 0.899 0.994 1.169 1.139 1.176 1.143 1.087  10.45
 98)     1,2-Dibromo-3-Chlor 0.058 0.060 0.083 0.078 0.086 0.084 0.075  16.50
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9990
               Response Ratio = 0.00000 + 0.08383 *A

 99)     Hexachlorobutadiene 0.389 0.346 0.405 0.421 0.464 0.477 0.417  11.68
100)     1,2,4-Trichlorobenz 0.680 0.629 0.838 0.850 0.917 0.914 0.805  15.16
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9993
               Response Ratio = 0.00000 + 0.90690 *A

101)     Naphthalene         1.162 1.043 1.471 1.487 1.520 1.460 1.357  14.86
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9990
               Response Ratio = 0.00000 + 1.47941 *A

102)     1,2,3-Trichlorobenz 0.645 0.548 0.710 0.731 0.782 0.786 0.700  12.98

103) I   Tert Butyl Alcohol-d1 ----------------ISTD---------------------
104)     Ethanol             0.255 0.217 0.150 0.148 0.158       0.186  25.88
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9973
               Response Ratio = 0.00000 + 0.15515 *A

105)     acrolein            3.543 1.988 1.391 1.149 1.065 1.235 1.729  54.83
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9918
```

Initial Calibration Summary

Job Number: F70660
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ3080-ICC3080
Lab FileID: J052831.D

```
                Response Ratio = 0.00000 + 1.06629 *A + 0.06969 *A^2

106)     Tert Butyl Alcohol  0.909 0.882 0.981 0.956 1.066 0.956 0.958   6.67
107)     tert Amyl alcohol   0.500 0.663 0.823 0.851 0.939 0.854 0.772  20.86
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9956
                Response Ratio = 0.00000 + 0.87725 *A

108)     Isobutyl alcohol    0.367 0.389 0.399 0.422 0.435 0.383 0.399   6.32
109)     1,4-Dioxane         0.023 0.070 0.074 0.080 0.085 0.077 0.068  33.25
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9966
                Response Ratio = 0.00000 + 0.08710 *A + -0.00113 *A^2

 ---------------------------------------------------------------------------
 (#) = Out of Range

           8260-JAPP9.M        Tue Jan 12 09:09:28 2010
```

Initial Calibration Verification

Job Number: F70660
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ3080-ICV3080
Lab FileID: J052834.D

Evaluate Continuing Calibration Report

```
Data File : C:\MSDCHEM\1\DATA\011110\J052834.D          Vial: 7
Acq On    : 11 Jan 2010   2:52 pm                   Operator: KarenW
Sample    : ICV3080-4                               Inst    : MSVOA6
Misc      : ms13557,vj3080,,,,,                     Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\MSDCHEM\1\METHODS\8260-JAPP9.M (RTE Integrator)
Title        : SW-846 Method 5030B/8260B & EPA 624
Last Update  : Mon Jan 11 14:57:31 2010
Response via : Multiple Level Calibration

Min. RRF     :   0.001  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	139	0.00	7.48
2		Dichlorodifluoromethane	0.148	0.148	0.0	136	0.00	2.73
3	P	Chloromethane	0.359	0.308	14.2	129	0.00	2.93
4	C	Vinyl Chloride	0.281	0.261	7.1	129	0.00	3.07
			Amount	Calc.	%Drift			
5		Bromomethane	40.000	35.318	11.7	128	0.00	3.43
6		Chloroethane	40.000	31.244	21.9#	115	0.00	3.56
			AvgRF	CCRF	%Dev			
7		Trichlorofluoromethane	0.341	0.358	-5.0	141	0.07	3.76
8		Ethyl Ether	0.236	0.238	-0.8	134	0.00	4.00
9		1,2-Dichlorotrifluoroetha	0.248	0.267	-7.7	140	0.00	4.22
10	C	1,1-Dichloroethene	0.323	0.330	-2.2	131	0.00	4.26
11		Freon 113	0.183	0.206	-12.6	143	0.00	4.34
12		Carbon Disulfide	0.597	0.635	-6.4	145	0.00	4.32
13		Iodomethane	0.384	0.453	-18.0	158	0.00	4.43
14		Allyl chloride	0.434	0.441	-1.6	134	0.00	4.74
			Amount	Calc.	%Drift			
15		Methylene Chloride	40.000	42.416	-6.0	138	0.00	4.86
			AvgRF	CCRF	%Dev			
16		Acetone	0.020	0.026	-30.0#	184	0.00	4.89
17		Methyl acetate	0.031	0.035	-12.9	151	0.00	5.00
18		trans-1,2-Dichloroethene	0.323	0.354	-9.6	149	0.00	5.03
19		Hexane	0.228	0.251	-10.1	147	0.00	5.09
20		Methyl Tert Butyl Ether	0.527	0.600	-13.9	154	0.00	5.14
			Amount	Calc.	%Drift			
21		Acetonitrile	400.000	388.691	2.8	136	0.00	5.37
			AvgRF	CCRF	%Dev			
22		Di-isopropyl ether	0.820	0.887	-8.2	141	0.00	5.50
			Amount	Calc.	%Drift			
23		Chloroprene	40.000	40.830	-2.1	145	0.00	5.64
			AvgRF	CCRF	%Dev			
24	P	1,1-Dichloroethane	0.423	0.451	-6.6	143	0.00	5.65
			Amount	Calc.	%Drift			

Initial Calibration Verification

Job Number: F70660
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ3080-ICV3080
Lab FileID: J052834.D

25		Acrylonitrile	200.000	234.968	-17.5	160	-0.01	5.66
		----------	AvgRF	CCRF	%Dev	----------		
26		ETBE	0.709	0.781	-10.2	146	0.00	5.88
27		Vinyl acetate	0.394	0.480	-21.8#	155	0.00	5.87
28		cis-1,2-Dichloroethene	0.234	0.254	-8.5	141	0.00	6.21
29		2,2-Dichloropropane	0.268	0.306	-14.2	148	0.00	6.34
30		Bromochloromethane	0.124	0.141	-13.7	151	0.00	6.41
		----------	Amount	Calc.	%Drift	----------		
31		Cyclohexane	40.000	42.355	-5.9	144	0.00	6.46
		----------	AvgRF	CCRF	%Dev	----------		
32	C	Chloroform	0.391	0.425	-8.7	145	0.00	6.47
33		Ethyl acetate	0.253	0.194	23.3#	110	0.00	6.55
		----------	Amount	Calc.	%Drift	----------		
34		Tetrahydrofuran	40.000	38.999	2.5	137	0.00	6.64
		----------	AvgRF	CCRF	%Dev	----------		
35	S	Dibromofluoromethane	0.268	0.273	-1.9	142	0.00	6.66
36		Carbon Tetrachloride	0.260	0.294	-13.1	147	0.00	6.66
37		1,1,1-Trichloroethane	0.289	0.324	-12.1	146	0.00	6.72
38		2-Butanone	0.097	0.112	-15.5	152	0.00	6.75
39		1,1-Dichloropropene	0.276	0.313	-13.4	145	0.00	6.83
40		Propionitrile	0.033	0.034	-3.0	136	0.00	7.06
41		Methacrylonitrile	0.143	0.143	0.0	128	0.00	7.08
42		Benzene	0.850	0.918	-8.0	142	0.00	7.08
43		TAME	0.559	0.642	-14.8	150	0.00	7.17
44	S	1,2-Dichloroethane-d4	0.300	0.303	-1.0	139	0.00	7.20
45		1,2-Dichloroethane	0.307	0.320	-4.2	143	0.00	7.26
46		Trichloroethene	0.230	0.247	-7.4	142	0.00	7.65
		----------	Amount	Calc.	%Drift	----------		
47		Methylcyclohexane	40.000	42.560	-6.4	145	0.00	7.67
		----------	AvgRF	CCRF	%Dev	----------		
48		Dibromomethane	0.134	0.145	-8.2	144	0.00	8.07
49	C	1,2-Dichloropropane	0.246	0.263	-6.9	139	0.00	8.16
50		Bromodichloromethane	0.292	0.302	-3.4	135	0.00	8.20
		----------	Amount	Calc.	%Drift	----------		
51		Methyl methacrylate	40.000	42.639	-6.6	147	0.00	8.32
52		2-Chloroethyl vinyl ether	200.000	180.812	9.6	130	0.00	8.73
53		cis-1,3-Dichloropropene	40.000	39.627	0.9	141	0.00	8.82
		----------	AvgRF	CCRF	%Dev	----------		
54	I	Chlorobenzene-d5	1.000	1.000	0.0	136	0.00	10.56
55	S	Toluene-d8	1.253	1.240	1.0	136	0.00	9.02
56	C	Toluene	1.159	1.222	-5.4	139	0.00	9.07
		----------	Amount	Calc.	%Drift	----------		
57		2-Nitropropane	200.000	186.370	6.8	130	0.00	9.27
58		4-Methyl-2-pentanone	200.000	172.000	14.0	121	0.00	9.40
		----------	AvgRF	CCRF	%Dev	----------		
59		trans-1,3-Dichloropropene	0.399	0.462	-15.8	147	0.00	9.45
60		Tetrachloroethene	0.327	0.378	-15.6	147	0.00	9.47

Initial Calibration Verification

Job Number: F70660
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ3080-ICV3080
Lab FileID: J052834.D

			Amount	Calc.	%Drift			
61		Ethyl methacrylate	40.000	36.958	7.6	130	0.00	9.57
			AvgRF	CCRF	%Dev			
62		1,1,2-Trichloroethane	0.223	0.232	-4.0	136	0.00	9.61
			Amount	Calc.	%Drift			
63		Dibromochloromethane	40.000	39.513	1.2	138	0.00	9.81
			AvgRF	CCRF	%Dev			
64		1,3-Dichloropropane	0.431	0.449	-4.2	136	0.00	9.89
65		1,2-Dibromoethane	0.261	0.288	-10.3	141	0.00	10.06
			Amount	Calc.	%Drift			
66		2-hexanone	200.000	182.855	8.6	128	0.00	10.22
67		1-Chlorohexane	40.000	39.383	1.5	132	0.00	10.53
			AvgRF	CCRF	%Dev			
68	C	Ethylbenzene	1.293	1.342	-3.8	132	0.00	10.59
69	P	Chlorobenzene	0.832	0.892	-7.2	138	0.00	10.57
			Amount	Calc.	%Drift			
70		1,1,1,2-Tetrachloroethane	40.000	40.081	-0.2	140	0.00	10.63
71		m,p-Xylene	80.000	76.094	4.9	132	0.00	10.73
72		o-Xylene	40.000	40.083	-0.2	138	0.00	11.16
73		Styrene	40.000	39.786	0.5	136	0.00	11.21
74	P	Bromoform	40.000	38.565	3.6	140	0.00	11.26
75		Isopropylbenzene	40.000	43.673	-9.2	148	0.00	11.47
			AvgRF	CCRF	%Dev			
76	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	135	0.00	12.92
77	S	4-Bromofluorobenzene	0.816	0.816	0.0	138	0.00	11.77
			Amount	Calc.	%Drift			
78		cis-1,4-Dichloro-2-butene	40.000	46.302	-15.8	159	0.00	11.81
79		n-Propylbenzene	40.000	36.631	8.4	127	0.00	11.89
			AvgRF	CCRF	%Dev			
80		Bromobenzene	0.677	0.734	-8.4	140	0.00	11.89
81	P	1,1,2,2-Tetrachloroethane	0.551	0.558	-1.3	132	0.00	11.94
			Amount	Calc.	%Drift			
82		1,3,5-Trimethylbenzene	40.000	37.818	5.5	131	0.00	12.08
			AvgRF	CCRF	%Dev			
83		2-Chlorotoluene	1.649	1.767	-7.2	133	0.00	12.07
			Amount	Calc.	%Drift			
84		trans-1,4-Dichloro-2-Bute	40.000	49.559	-23.9#	171	0.00	12.12
			AvgRF	CCRF	%Dev			
85		1,2,3-Trichloropropane	0.158	0.148	6.3	121	0.00	12.10
86		Cyclohexanone	0.013	0.015	-15.4	131	0.00	12.16
			Amount	Calc.	%Drift			
87		4-Chlorotoluene	40.000	39.158	2.1	135	0.00	12.23
88		tert-Butylbenzene	40.000	37.873	5.3	130	0.00	12.42
89		1,2,4-Trimethylbenzene	40.000	37.574	6.1	130	0.00	12.48

Initial Calibration Verification

Job Number: F70660
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ3080-ICV3080
Lab FileID: J052834.D

			AvgRF	CCRF	%Dev			
90	Pentachloroethane		0.373	0.443	-18.8	150	0.00	12.45
			Amount	Calc.	%Drift			
91	sec-Butylbenzene		40.000	37.996	5.0	131	0.00	12.60
92	4-Isopropyltoluene		40.000	37.881	5.3	131	0.00	12.74
			AvgRF	CCRF	%Dev			
93	1,3-Dichlorobenzene		1.152	1.223	-6.2	138	0.00	12.85
94	1,4-Dichlorobenzene		1.259	1.298	-3.1	137	0.00	12.94
			Amount	Calc.	%Drift			
95	n-Butylbenzene		40.000	35.818	10.5	125	0.00	13.18
96	Benzyl Chloride		40.000	36.518	8.7	130	0.00	13.18
			AvgRF	CCRF	%Dev			
97	1,2-Dichlorobenzene		1.087	1.154	-6.2	137	0.00	13.37
			Amount	Calc.	%Drift			
98	1,2-Dibromo-3-Chloropropa		40.000	36.780	8.0	133	0.00	14.13
			AvgRF	CCRF	%Dev			
99	Hexachlorobutadiene		0.417	0.447	-7.2	143	0.00	14.70
			Amount	Calc.	%Drift			
100	1,2,4-Trichlorobenzene		40.000	38.294	4.3	138	0.00	14.74
101	Naphthalene		40.000	39.387	1.5	132	0.00	15.02
			AvgRF	CCRF	%Dev			
102	1,2,3-Trichlorobenzene		0.700	0.747	-6.7	138	0.00	15.17
103	I Tert Butyl Alcohol-d10		1.000	1.000	0.0	150	-0.01	5.10
			Amount	Calc.	%Drift			
104	Ethanol		800.000	753.325	5.8	148	0.00	4.14
105	acrolein		200.000	312.945	-56.5#	236	0.00	4.59
			AvgRF	CCRF	%Dev			
106	Tert Butyl Alcohol		0.958	0.911	4.9	143	0.00	5.18
			Amount	Calc.	%Drift			
107	tert Amyl alcohol		400.000	379.677	5.1	147	0.00	7.31
			AvgRF	CCRF	%Dev			
108	Isobutyl alcohol		0.399	0.372	6.8	132	0.00	7.19
			Amount	Calc.	%Drift			
109	1,4-Dioxane		800.000	906.997	-13.4	175	0.00	8.38

(#) = Out of Range SPCC's out = 0 CCC's out = 0
J052831.D 8260-JAPP9.M Tue Jan 12 09:09:15 2010

Continuing Calibration Summary

Job Number: F70660
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ3081-CC3080
Lab FileID: J052861.D

Evaluate Continuing Calibration Report

```
Data File : C:\MSDCHEM\1\DATA\011210\J052861.D          Vial: 1
Acq On    : 12 Jan 2010   9:35 am                   Operator: KarenW
Sample    : CC3080-4                                Inst    : MSVOA6
Misc      : ms13578,vj3081,,,,,                     Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\MSDCHEM\1\METHODS\8260-JAPP9.M (RTE Integrator)
Title        : SW-846 Method 5030B/8260B & EPA 624
Last Update  : Mon Jan 11 14:57:31 2010
Response via : Multiple Level Calibration

Min. RRF     :   0.001  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	89	0.00	7.48
2		Dichlorodifluoromethane	0.148	0.149	-0.7	87	0.00	2.74
3	P	Chloromethane	0.359	0.344	4.2	92	0.02	2.95
4	C	Vinyl Chloride	0.281	0.283	-0.7	89	0.00	3.07
			Amount	Calc.	%Drift			
5		Bromomethane	40.000	43.431	-8.6	98	0.01	3.44
6		Chloroethane	40.000	42.003	-5.0	94	0.01	3.57
			AvgRF	CCRF	%Dev			
7		Trichlorofluoromethane	0.341	0.382	-12.0	95	0.07	3.76
8		Ethyl Ether	0.236	0.252	-6.8	90	0.00	4.00
9		1,2-Dichlorotrifluoroetha	0.248	0.263	-6.0	88	0.00	4.22
10	C	1,1-Dichloroethene	0.323	0.346	-7.1	88	0.00	4.25
11		Freon 113	0.183	0.200	-9.3	89	0.00	4.34
12		Carbon Disulfide	0.597	0.608	-1.8	89	0.00	4.33
13		Iodomethane	0.384	0.404	-5.2	90	0.00	4.43
14		Allyl chloride	0.434	0.460	-6.0	89	0.00	4.74
			Amount	Calc.	%Drift			
15		Methylene Chloride	40.000	45.477	-13.7	94	0.00	4.86
			AvgRF	CCRF	%Dev			
16		Acetone	0.020	0.022	-10.0	97	0.00	4.87
17		Methyl acetate	0.031	0.035	-12.9	95	0.00	5.00
18		trans-1,2-Dichloroethene	0.323	0.335	-3.7	90	0.00	5.03
19		Hexane	0.228	0.237	-3.9	89	0.00	5.09
20		Methyl Tert Butyl Ether	0.527	0.555	-5.3	91	0.00	5.13
			Amount	Calc.	%Drift			
21		Acetonitrile	400.000	416.797	-4.2	92	0.00	5.37
			AvgRF	CCRF	%Dev			
22		Di-isopropyl ether	0.820	0.906	-10.5	92	0.00	5.50
			Amount	Calc.	%Drift			
23		Chloroprene	40.000	40.953	-2.4	93	0.00	5.65
			AvgRF	CCRF	%Dev			
24	P	1,1-Dichloroethane	0.423	0.453	-7.1	92	0.00	5.65
			Amount	Calc.	%Drift			

Continuing Calibration Summary

Job Number: F70660 **Sample:** VJ3081-CC3080
Account: TETTNOAK Tetra Tech, Inc **Lab FileID:** J052861.D
Project: Holloman AFB; Alamogordo, NM

25		Acrylonitrile	200.000	220.793	-10.4	96	0.00	5.68
		----------	AvgRF	CCRF	%Dev	----------		
26		ETBE	0.709	0.766	-8.0	91	0.00	5.88
27		Vinyl acetate	0.394	0.424	-7.6	87	0.00	5.87
28		cis-1,2-Dichloroethene	0.234	0.258	-10.3	91	0.00	6.21
29		2,2-Dichloropropane	0.268	0.293	-9.3	90	0.00	6.34
30		Bromochloromethane	0.124	0.133	-7.3	92	0.00	6.41
		----------	Amount	Calc.	%Drift	----------		
31		Cyclohexane	40.000	39.679	0.8	86	0.00	6.46
		----------	AvgRF	CCRF	%Dev	----------		
32	C	Chloroform	0.391	0.419	-7.2	91	0.00	6.47
33		Ethyl acetate	0.253	0.260	-2.8	94	0.00	6.55
		----------	Amount	Calc.	%Drift	----------		
34		Tetrahydrofuran	40.000	43.359	-8.4	97	0.00	6.64
		----------	AvgRF	CCRF	%Dev	----------		
35	S	Dibromofluoromethane	0.268	0.265	1.1	88	0.00	6.66
36		Carbon Tetrachloride	0.260	0.272	-4.6	87	0.00	6.66
37		1,1,1-Trichloroethane	0.289	0.312	-8.0	90	0.00	6.72
38		2-Butanone	0.097	0.110	-13.4	95	0.00	6.75
39		1,1-Dichloropropene	0.276	0.303	-9.8	89	0.00	6.83
40		Propionitrile	0.033	0.035	-6.1	89	0.00	7.06
41		Methacrylonitrile	0.143	0.158	-10.5	90	0.00	7.09
42		Benzene	0.850	0.911	-7.2	90	0.00	7.08
43		TAME	0.559	0.611	-9.3	91	0.00	7.17
44	S	1,2-Dichloroethane-d4	0.300	0.303	-1.0	89	0.00	7.20
45		1,2-Dichloroethane	0.307	0.324	-5.5	92	0.00	7.26
46		Trichloroethene	0.230	0.246	-7.0	90	0.00	7.65
		----------	Amount	Calc.	%Drift	----------		
47		Methylcyclohexane	40.000	39.616	1.0	86	0.00	7.67
		----------	AvgRF	CCRF	%Dev	----------		
48		Dibromomethane	0.134	0.146	-9.0	92	0.00	8.07
49	C	1,2-Dichloropropane	0.246	0.270	-9.8	91	0.00	8.16
50		Bromodichloromethane	0.292	0.324	-11.0	92	0.00	8.21
		----------	Amount	Calc.	%Drift	----------		
51		Methyl methacrylate	40.000	41.292	-3.2	91	0.00	8.32
52		2-Chloroethyl vinyl ether	200.000	201.539	-0.8	92	0.00	8.73
53		cis-1,3-Dichloropropene	40.000	40.307	-0.8	91	0.00	8.82
		----------	AvgRF	CCRF	%Dev	----------		
54	I	Chlorobenzene-d5	1.000	1.000	0.0	87	0.00	10.56
55	S	Toluene-d8	1.253	1.226	2.2	87	0.00	9.02
56	C	Toluene	1.159	1.219	-5.2	89	0.00	9.07
		----------	Amount	Calc.	%Drift	----------		
57		2-Nitropropane	200.000	219.305	-9.7	98	0.00	9.27
58		4-Methyl-2-pentanone	200.000	215.134	-7.6	96	0.00	9.40
		----------	AvgRF	CCRF	%Dev	----------		
59		trans-1,3-Dichloropropene	0.399	0.447	-12.0	91	0.00	9.45
60		Tetrachloroethene	0.327	0.348	-6.4	87	0.00	9.47

Continuing Calibration Summary

Job Number: F70660
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ3081-CC3080
Lab FileID: J052861.D

			Amount	Calc.	%Drift			
61		Ethyl methacrylate	40.000	39.979	0.1	90	0.00	9.58
			AvgRF	CCRF	%Dev			
62		1,1,2-Trichloroethane	0.223	0.245	-9.9	92	0.00	9.61
			Amount	Calc.	%Drift			
63		Dibromochloromethane	40.000	39.768	0.6	89	0.00	9.81
			AvgRF	CCRF	%Dev			
64		1,3-Dichloropropane	0.431	0.468	-8.6	91	0.00	9.89
65		1,2-Dibromoethane	0.261	0.289	-10.7	91	0.00	10.06
			Amount	Calc.	%Drift			
66		2-hexanone	200.000	217.819	-8.9	97	0.00	10.22
67		1-Chlorohexane	40.000	40.378	-0.9	87	0.00	10.53
			AvgRF	CCRF	%Dev			
68	C	Ethylbenzene	1.293	1.377	-6.5	87	0.00	10.59
69	P	Chlorobenzene	0.832	0.888	-6.7	88	0.00	10.57
			Amount	Calc.	%Drift			
70		1,1,1,2-Tetrachloroethane	40.000	39.556	1.1	89	0.00	10.63
71		m,p-Xylene	80.000	79.724	0.3	89	0.00	10.73
72		o-Xylene	40.000	40.385	-1.0	90	0.00	11.16
73		Styrene	40.000	40.953	-2.4	90	0.00	11.21
74	P	Bromoform	40.000	39.269	1.8	91	0.00	11.26
75		Isopropylbenzene	40.000	39.623	0.9	87	0.00	11.47
			AvgRF	CCRF	%Dev			
76	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	85	0.00	12.92
77	S	4-Bromofluorobenzene	0.816	0.808	1.0	86	0.00	11.77
			Amount	Calc.	%Drift			
78		cis-1,4-Dichloro-2-butene	40.000	43.514	-8.8	93	0.00	11.81
79		n-Propylbenzene	40.000	40.598	-1.5	88	0.00	11.89
			AvgRF	CCRF	%Dev			
80		Bromobenzene	0.677	0.741	-9.5	89	0.00	11.89
81	P	1,1,2,2-Tetrachloroethane	0.551	0.629	-14.2	94	0.00	11.94
			Amount	Calc.	%Drift			
82		1,3,5-Trimethylbenzene	40.000	39.832	0.4	87	0.00	12.08
			AvgRF	CCRF	%Dev			
83		2-Chlorotoluene	1.649	1.877	-13.8	89	0.00	12.07
			Amount	Calc.	%Drift			
84		trans-1,4-Dichloro-2-Bute	40.000	44.807	-12.0	96	0.00	12.13
			AvgRF	CCRF	%Dev			
85		1,2,3-Trichloropropane	0.158	0.174	-10.1	90	0.00	12.10
86		Cyclohexanone	0.013	0.017	-30.8#	95	0.00	12.16
			Amount	Calc.	%Drift			
87		4-Chlorotoluene	40.000	41.193	-3.0	90	0.00	12.23
88		tert-Butylbenzene	40.000	40.221	-0.6	87	0.00	12.42
89		1,2,4-Trimethylbenzene	40.000	40.937	-2.3	89	0.00	12.48

Continuing Calibration Summary

Job Number: F70660
Account: TETTNOAK Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Sample: VJ3081-CC3080
Lab FileID: J052861.D

		AvgRF	CCRF	%Dev			
90	Pentachloroethane	0.373	0.394	-5.6	84	0.00	12.45
		Amount	Calc.	%Drift			
91	sec-Butylbenzene	40.000	40.768	-1.9	88	0.00	12.60
92	4-Isopropyltoluene	40.000	40.792	-2.0	89	0.00	12.74
		AvgRF	CCRF	%Dev			
93	1,3-Dichlorobenzene	1.152	1.273	-10.5	91	0.00	12.85
94	1,4-Dichlorobenzene	1.259	1.350	-7.2	90	0.00	12.94
		Amount	Calc.	%Drift			
95	n-Butylbenzene	40.000	40.846	-2.1	89	0.00	13.18
96	Benzyl Chloride	40.000	41.412	-3.5	93	0.00	13.18
		AvgRF	CCRF	%Dev			
97	1,2-Dichlorobenzene	1.087	1.192	-9.7	89	0.00	13.37
		Amount	Calc.	%Drift			
98	1,2-Dibromo-3-Chloropropa	40.000	41.140	-2.9	93	0.00	14.13
		AvgRF	CCRF	%Dev			
99	Hexachlorobutadiene	0.417	0.423	-1.4	85	0.00	14.70
		Amount	Calc.	%Drift			
100	1,2,4-Trichlorobenzene	40.000	39.496	1.3	90	0.00	14.74
101	Naphthalene	40.000	44.319	-10.8	94	0.00	15.02
		AvgRF	CCRF	%Dev			
102	1,2,3-Trichlorobenzene	0.700	0.775	-10.7	90	0.00	15.18
103 I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	95	-0.01	5.10
		Amount	Calc.	%Drift			
104	Ethanol	800.000	809.268	-1.2	101	-0.01	4.13
105	acrolein	200.000	237.058	-18.5	111	0.00	4.59
		AvgRF	CCRF	%Dev			
106	Tert Butyl Alcohol	0.958	0.952	0.6	95	0.01	5.19
		Amount	Calc.	%Drift			
107	tert Amyl alcohol	400.000	400.698	-0.2	98	0.00	7.31
		AvgRF	CCRF	%Dev			
108	Isobutyl alcohol	0.399	0.411	-3.0	93	0.00	7.19
		Amount	Calc.	%Drift			
109	1,4-Dioxane	800.000	831.076	-3.9	102	0.00	8.39

(#) = Out of Range SPCC's out = 0 CCC's out = 0
J052831.D 8260-JAPP9.M Wed Jan 13 10:36:20 2010

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Instrument Runlogs
- Initial and Continuing Calibration Blanks
- Initial and Continuing Calibration Checks
- High and Low Check Standards
- Interfering Element Check Standards
- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F70660
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20111W2.PRN Date Analyzed: 01/11/10 Methods: SW846 7470A
Analyst: LM Run ID: MA7769
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:29	MA7769-STD1	1		STD01REP1
10:31	MA7769-STD2	1		STD02REP1
10:33	MA7769-STD3	1		STD03REP1
10:36	MA7769-STD4	1		STD04REP1
10:38	MA7769-STD5	1		STD05REP1
10:41	MA7769-STD6	1		STD06REP1
10:43	MA7769-HSTD1	1		
10:46	MA7769-ICV1	1		
10:48	MA7769-ICB1	1		
10:50	MA7769-CRI1	1		
10:53	MA7769-CCV1	1		
10:55	MA7769-CCB1	1		
10:57	MP17581-MB1	1		
11:00	MP17581-B1	1		
11:02	F70660-11	1		
11:04	MP17581-D1	1		
11:06	MP17581-SD1	5		
11:08	MP17581-S1	1		
11:11	MP17581-S2	1		
11:13	F70660-1	1		
11:15	F70660-2	1		
11:18	F70660-3	1		
11:20	MA7769-CCV2	1		
11:22	MA7769-CCB2	1		
11:25	F70660-4	1		
11:27	F70660-5	1		
11:29	F70660-6	1		
11:32	F70660-7	1		
11:34	F70660-8	1		
11:38	F70660-10	1		
11:41	F70660-12	1		
11:44	F70660-1A	1		
11:46	F70660-2A	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F70660
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20111W2.PRN Date Analyzed: 01/11/10 Methods: SW846 7470A
Analyst: LM Run ID: MA7769
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:48	F70660-3A	1		
11:50	MA7769-CCV3	1		
11:53	MA7769-CCB3	1		
11:55	F70660-4A	1		
11:57	F70660-5A	1		
12:00	F70660-6A	1		
12:03	F70660-7A	1		
12:05	ZZZZZZ	1		
12:07	ZZZZZZ	1		
12:09	MP17582-MB1	1		
12:12	MP17582-B1	1		
12:14	F70660-11A	1		
12:17	MP17582-D1	1		
12:19	MA7769-CCV4	1		
12:21	MA7769-CCB4	1		
12:24	MP17582-SD1	5		
12:27	MP17582-S1	1		
12:29	MP17582-S2	1		
12:32	F70660-8A	1		
12:34	F70660-10A	1		
12:36	F70660-12A	1		
---------->	Last reportable sample/prep for job F70660			
12:39	ZZZZZZ	1		
12:41	ZZZZZZ	1		
12:44	ZZZZZZ	1		
12:46	ZZZZZZ	1		
12:49	MA7769-CCV5	1		
12:51	MA7769-CCB5	1		
12:53	ZZZZZZ	1		
12:56	ZZZZZZ	1		
12:58	ZZZZZZ	1		
13:00	ZZZZZZ	1		
13:02	ZZZZZZ	1		
13:05	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F70660
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20111W2.PRN Date Analyzed: 01/11/10 Methods: SW846 7470A
Analyst: LM Run ID: MA7769
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:07	MA7769-CRI2	1		
13:10	MA7769-CCV6	1		
13:12	MA7769-CCB6	1		

----------> Last reportable CCB for job F70660
Refer to raw data for calibration curve and standards.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F70660
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20111W2.PRN Date Analyzed: 01/11/10 Methods: SW846 7470A
QC Limits: result < RL Run ID: MA7769 Units: ug/l

Time:			10:48		10:55		11:22		11:53	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	1.0	.14	-0.016	<1.0	-0.064	<1.0	-0.034	<1.0	-0.036	<1.0

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F70660
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20111W2.PRN Date Analyzed: 01/11/10 Methods: SW846 7470A
QC Limits: result < RL Run ID: MA7769 Units: ug/l

Time:			12:21		12:51		13:12	
Sample ID:			CCB4		CCB5		CCB6	
Metal	RL	IDL	raw	final	raw	final	raw	final
Mercury	1.0	.14	-0.044	<1.0	-0.040	<1.0	-0.037	<1.0

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F70660
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20111W2.PRN Date Analyzed: 01/11/10 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA7769 Units: ug/l

Time:		10:46			10:53			11:20	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3	2.9	96.7	3.0	3.0	100.0	3	2.9	96.7

(*) Outside of QC limits
(anr) Analyte not requested

6.1.2
6

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F70660
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20111W2.PRN Date Analyzed: 01/11/10 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA7769 Units: ug/l

Time:		11:50			12:19			12:49	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3	2.9	96.7	3	2.9	96.7	3	2.9	96.7

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F70660
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20111W2.PRN Date Analyzed: 01/11/10 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA7769 Units: ug/l

Time:		13:10	
Sample ID:	CCV	CCV6	
Metal	True	Results	% Rec
Mercury	3.0	3.0	100.0

(*) Outside of QC limits
(anr) Analyte not requested

6.1.2
6

HIGH STANDARD CHECK SUMMARY

Login Number: F70660
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20111W2.PRN Date Analyzed: 01/11/10 Methods: SW846 7470A
QC Limits: 95 to 105 % Recovery Run ID: MA7769 Units: ug/l

Time:		10:43	
Sample ID:	HSTD	HSTD1	
Metal	True	Results	% Rec
Mercury	6.0	6.0	100.0

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: F70660
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: H20111W2.PRN Date Analyzed: 01/11/10 Methods: SW846 7470A
QC Limits: 80 to 120 % Recovery Run ID: MA7769 Units: ug/l

Time:			10:50		13:07	
Sample ID:	CRI	CRIA	CRI1		CRI2	
Metal	True	True	Results	% Rec	Results	% Rec
Mercury	0.20		0.16	80.0	0.19	95.0

(*) Outside of QC limits
(anr) Analyte not requested

6.1.4

6

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F70660
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7773
Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:16	MA7773-HSTD1	1		
09:19	MA7773-ICV1	1		
09:25	MA7773-ICB1	1		
09:29	MA7773-CRIA1	1		
09:33	MA7773-CRI1	1		
09:40	MA7773-ICSA1	1		
09:41	MA7773-ICSAB1	1		
09:44	MA7773-CCV1	1		
09:48	MA7773-CCB1	1		
09:52	F70691-1	4		(sample used for QC only; not part of login F70660)
09:55	MP17583-D1	4		
09:58	MP17583-SD1	20		
10:02	MP17583-PS1	4		
10:05	MP17583-S1	4		
10:09	MP17583-S2	4		
10:12	ZZZZZZ	4		
10:15	ZZZZZZ	4		
10:19	ZZZZZZ	4		
10:22	ZZZZZZ	4		
10:26	MA7773-CCV2	1		
10:30	MA7773-CCB2	1		
10:33	ZZZZZZ	4		
10:37	F70691-1	2		(sample used for QC only; not part of login F70660)
10:40	MP17583-D1	2		
10:44	MP17583-SD1	10		
10:47	MP17583-PS1	2		
10:50	MP17583-S1	2		
10:54	MP17583-S2	2		
10:57	ZZZZZZ	2		
11:01	ZZZZZZ	2		
11:04	ZZZZZZ	2		
11:08	MA7773-CCV3	1		
11:12	MA7773-CCB3	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F70660
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7773
Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:15	ZZZZZZ	2		
11:19	ZZZZZZ	2		
11:22	ZZZZZZ	2		
11:26	ZZZZZZ	2		
11:29	ZZZZZZ	2		
11:32	ZZZZZZ	4		
11:36	ZZZZZZ	4		
11:39	ZZZZZZ	2		
11:43	ZZZZZZ	2		
11:46	ZZZZZZ	2		
11:49	MA7773-CCV4	1		
11:54	MA7773-CCB4	1		
11:57	ZZZZZZ	2		
12:01	ZZZZZZ	4		
12:04	MA7773-CCV5	1		
12:08	MA7773-CCB5	1		
12:16	MA7773-CCV6	1		
12:20	MA7773-CCB6	1		
12:48	MA7773-CCV7	1		
12:52	MA7773-CCB7	1		
12:57	MP17592-MB1	1		
13:01	MP17592-B1	1		
13:04	F70708-1	1		(sample used for QC only; not part of login F70660)
13:07	MP17592-D1	1		
13:11	MP17592-SD1	5		
13:14	MP17592-PS1	1		
13:18	MP17592-S1	1		
13:21	ZZZZZZ	1		
13:24	ZZZZZZ	1		
13:28	ZZZZZZ	1		
13:31	MA7773-CCV8	1		
13:36	MA7773-CCB8	1		
13:39	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F70660
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7773
Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:42	ZZZZZZ	1		
13:46	ZZZZZZ	1		
13:49	ZZZZZZ	1		
13:53	MA7773-CCV9	1		
13:57	MA7773-CCB9	1		
14:02	MP17593-MB1	1		
14:05	MP17593-B1	1		
14:09	F70648-1	1		(sample used for QC only; not part of login F70660)
14:12	MP17593-D1	1		
14:16	MP17593-SD1	5		
14:19	MP17593-S1	1		
14:23	MP17593-MB2	1		
14:27	MP17593-B2	1		
14:30	MA7773-CCV10	1		
14:35	MA7773-CCB10	1		
14:49	MA7773-CCV11	1		
14:53	MA7773-CCB11	1		
14:56	MP17584-MB1	1		
15:00	MP17584-B1	1		
15:03	F70660-11	10		
15:07	MP17584-D1	10		
15:10	MP17584-SD1	50		
15:13	MP17584-PS1	10		
15:17	MP17584-S1	10		
15:20	MP17584-S2	10		
15:24	F70660-1	20		
15:27	F70660-2	20		
15:30	MA7773-CCV12	1		
15:35	MA7773-CCB12	1		
15:38	F70660-3	20		
15:42	F70660-4	20		
15:45	F70660-5	20		
15:48	F70660-6	5		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F70660
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7773
Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

	Time	Sample Description	Dilution Factor	PS Recov	Comments
	15:52	F70660-7	20		
	15:55	F70660-8	20		
	15:59	F70660-10	4		
	16:02	F70660-12	20		
	16:06	MP17586-MB1	1		
	16:10	MP17586-B1	1		
	16:13	MA7773-CCV13	1		
	16:18	MA7773-CCB13	1		
	16:21	F70660-11A	10		
	16:25	MP17586-D1	10		
	16:28	MP17586-SD1	50		
	16:31	MP17586-PS1	10		
	16:35	MP17586-S1	10		
	16:38	MP17586-S2	10		
	16:42	F70660-1A	20		
	16:45	F70660-2A	20		
	16:48	F70660-3A	20		
	16:52	F70660-4A	20		
	16:55	MA7773-CCV14	1		
	17:00	MA7773-CCB14	1		
	17:03	F70660-5A	20		
	17:06	F70660-6A	5		
	17:10	F70660-7A	20		
	17:13	F70660-8A	20		
	17:17	F70660-10A	4		
	17:20	F70660-12A	20		
	17:24	MP17586-MB2A	1		
---------->	Last reportable sample/prep for job F70660				
	17:28	MP17588-MB1	1		
	17:31	MP17588-B1	1		
	17:35	F70352-7R	1		(sample used for QC only; not part of login F70660)
	17:38	MA7773-CCV15	1		
	17:43	MA7773-CCB15	1		
	17:46	MP17588-D1	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F70660
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7773
Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Dilution Factor	PS Recov	Comments
17:49	MP17588-SD1	5		
17:53	MP17588-PS1	1		
17:56	MP17588-S1	1		
18:00	MP17588-S2	1		
18:03	ZZZZZZ	1		
18:06	ZZZZZZ	1		
18:10	ZZZZZZ	1		
18:13	ZZZZZZ	1		
18:17	ZZZZZZ	1		
18:20	MA7773-CCV16	1		
18:24	MA7773-CCB16	1		
18:28	ZZZZZZ	1		
18:31	ZZZZZZ	1		
18:35	ZZZZZZ	1		
18:38	ZZZZZZ	1		
18:42	ZZZZZZ	1		
18:45	ZZZZZZ	1		
18:48	ZZZZZZ	1		
18:52	ZZZZZZ	1		
18:55	ZZZZZZ	1		
19:00	MP17591-MB1	1		
19:03	MA7773-CCV17	1		
19:07	MA7773-CCB17	1		
19:11	MP17591-B1	1		
19:14	F70691-1F	100		(sample used for QC only; not part of login F70660)
19:18	MP17591-D1	100		
19:21	MP17591-SD1	500		
19:24	MP17591-S1	100		
19:28	ZZZZZZ	100		
19:31	ZZZZZZ	100		
19:35	ZZZZZZ	100		
19:38	ZZZZZZ	100		
19:42	ZZZZZZ	100		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F70660
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7773
Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

	Time	Sample Description	Dilution Factor	PS Recov	Comments
	19:45	MA7773-CCV18	1		
	19:49	MA7773-CCB18	1		
	19:53	MP17591-MB2A	1		
	19:56	MA7773-CRIA2	1		
	20:00	MA7773-CRI2	1		
	20:03	MA7773-ICSA2	1		
	20:06	MA7773-ICSAB2	1		
	20:10	MA7773-CCV19	1		
	20:14	MA7773-CCB19	1		
---------->	Last reportable CCB for job F70660				
	Refer to raw data for calibration curve and standards.				

INTERNAL STANDARD SUMMARY

Login Number: F70660
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7773
Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Istd#1
09:16	MA7773-HSTD1	5282
09:19	MA7773-ICV1	5354
09:25	MA7773-ICB1	5681 R
09:29	MA7773-CRIA1	5618
09:33	MA7773-CRI1	5541
09:40	MA7773-ICSA1	4868
09:41	MA7773-ICSAB1	4792
09:44	MA7773-CCV1	5417
09:48	MA7773-CCB1	5630
09:52	F70691-1	4695
09:55	MP17583-D1	4752
09:58	MP17583-SD1	5352
10:02	MP17583-PS1	4765
10:05	MP17583-S1	4860
10:09	MP17583-S2	4727
10:12	ZZZZZZ	4479
10:15	ZZZZZZ	4502
10:19	ZZZZZZ	4726
10:22	ZZZZZZ	4771
10:26	MA7773-CCV2	5458
10:30	MA7773-CCB2	5635
10:33	ZZZZZZ	4761
10:37	F70691-1	4377
10:40	MP17583-D1	4367
10:44	MP17583-SD1	5096
10:47	MP17583-PS1	4383
10:50	MP17583-S1	4431
10:54	MP17583-S2	4461
10:57	ZZZZZZ	4175
11:01	ZZZZZZ	4188
11:04	ZZZZZZ	4281
11:08	MA7773-CCV3	5384
11:12	MA7773-CCB3	5712

INTERNAL STANDARD SUMMARY

Login Number: F70660
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7773
Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Istd#1
11:15	ZZZZZZ	4421
11:19	ZZZZZZ	4408
11:22	ZZZZZZ	5280
11:26	ZZZZZZ	5373
11:29	ZZZZZZ	5289
11:32	ZZZZZZ	5302
11:36	ZZZZZZ	5388
11:39	ZZZZZZ	5312
11:43	ZZZZZZ	5300
11:46	ZZZZZZ	5326
11:49	MA7773-CCV4	5468
11:54	MA7773-CCB4	5655
11:57	ZZZZZZ	5336
12:01	ZZZZZZ	5429
12:04	MA7773-CCV5	5444
12:08	MA7773-CCB5	5668
12:16	MA7773-CCV6	5497
12:20	MA7773-CCB6	5711
12:48	MA7773-CCV7	5510
12:52	MA7773-CCB7	5724
12:57	MP17592-MB1	5559
13:01	MP17592-B1	5451
13:04	F70708-1	5004
13:07	MP17592-D1	5006
13:11	MP17592-SD1	5261
13:14	MP17592-PS1	4962
13:18	MP17592-S1	5007
13:21	ZZZZZZ	4959
13:24	ZZZZZZ	5024
13:28	ZZZZZZ	5211
13:31	MA7773-CCV8	5540
13:36	MA7773-CCB8	5785
13:39	ZZZZZZ	5137

INTERNAL STANDARD SUMMARY

Login Number: F70660
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7773
Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Istd#1
13:42	ZZZZZZ	5061
13:46	ZZZZZZ	5316
13:49	ZZZZZZ	4951
13:53	MA7773-CCV9	5566
13:57	MA7773-CCB9	5759
14:02	MP17593-MB1	5694
14:05	MP17593-B1	5562
14:09	F70648-1	7477
14:12	MP17593-D1	7516
14:16	MP17593-SD1	5966
14:19	MP17593-S1	7510
14:23	MP17593-MB2	4998
14:27	MP17593-B2	5016
14:30	MA7773-CCV10	5481
14:35	MA7773-CCB10	5731
14:49	MA7773-CCV11	5508
14:53	MA7773-CCB11	5765
14:56	MP17584-MB1	5647
15:00	MP17584-B1	5549
15:03	F70660-11	4845
15:07	MP17584-D1	4927
15:10	MP17584-SD1	5422
15:13	MP17584-PS1	4898
15:17	MP17584-S1	4927
15:20	MP17584-S2	4961
15:24	F70660-1	4741
15:27	F70660-2	4858
15:30	MA7773-CCV12	5557
15:35	MA7773-CCB12	5660
15:38	F70660-3	4759
15:42	F70660-4	4935
15:45	F70660-5	4893
15:48	F70660-6	4722

INTERNAL STANDARD SUMMARY

Login Number: F70660
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7773
Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Istd#1
15:52	F70660-7	4880
15:55	F70660-8	4901
15:59	F70660-10	4951
16:02	F70660-12	4897
16:06	MP17586-MB1	5721
16:10	MP17586-B1	5567
16:13	MA7773-CCV13	5550
16:18	MA7773-CCB13	5729
16:21	F70660-11A	4930
16:25	MP17586-D1	4916
16:28	MP17586-SD1	5425
16:31	MP17586-PS1	4911
16:35	MP17586-S1	4940
16:38	MP17586-S2	4934
16:42	F70660-1A	4855
16:45	F70660-2A	4771
16:48	F70660-3A	4785
16:52	F70660-4A	5001
16:55	MA7773-CCV14	5513
17:00	MA7773-CCB14	5761
17:03	F70660-5A	4818
17:06	F70660-6A	4771
17:10	F70660-7A	4918
17:13	F70660-8A	4968
17:17	F70660-10A	4938
17:20	F70660-12A	4988
17:24	MP17586-MB2A	5670
17:28	MP17588-MB1	5613
17:31	MP17588-B1	5525
17:35	F70352-7R	5628
17:38	MA7773-CCV15	5599
17:43	MA7773-CCB15	5767
17:46	MP17588-D1	5672

INTERNAL STANDARD SUMMARY

Login Number: F70660
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7773
Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Istd#1
17:49	MP17588-SD1	5830
17:53	MP17588-PS1	5630
17:56	MP17588-S1	5544
18:00	MP17588-S2	5525
18:03	ZZZZZZ	5772
18:06	ZZZZZZ	5708
18:10	ZZZZZZ	4963
18:13	ZZZZZZ	5815
18:17	ZZZZZZ	5361
18:20	MA7773-CCV16	5620
18:24	MA7773-CCB16	5761
18:28	ZZZZZZ	5723
18:31	ZZZZZZ	5155
18:35	ZZZZZZ	5148
18:38	ZZZZZZ	5650
18:42	ZZZZZZ	5472
18:45	ZZZZZZ	5006
18:48	ZZZZZZ	5936
18:52	ZZZZZZ	5021
18:55	ZZZZZZ	6058
19:00	MP17591-MB1	5750
19:03	MA7773-CCV17	5617
19:07	MA7773-CCB17	5823
19:11	MP17591-B1	5637
19:14	F70691-1F	5654
19:18	MP17591-D1	5668
19:21	MP17591-SD1	5743
19:24	MP17591-S1	5711
19:28	ZZZZZZ	5567
19:31	ZZZZZZ	5505
19:35	ZZZZZZ	5708
19:38	ZZZZZZ	5727
19:42	ZZZZZZ	5717

INTERNAL STANDARD SUMMARY

Login Number: F70660
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
Analyst: RS Run ID: MA7773
Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Istd#1
19:45	MA7773-CCV18	5578
19:49	MA7773-CCB18	5789
19:53	MP17591-MB2A	5772
19:56	MA7773-CRIA2	5653
20:00	MA7773-CRI2	5650
20:03	MA7773-ICSA2	4979
20:06	MA7773-ICSAB2	5012
20:10	MA7773-CCV19	5543
20:14	MA7773-CCB19	5703

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium	60-125 %

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F70660
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
QC Limits: result < RL Run ID: MA7773 Units: ug/l

Time:			09:25		09:48		10:30		11:12	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	11	anr							
Antimony	6.0	4.5	anr							
Arsenic	10	3.6	-0.16	<10	-0.13	<10	0.89	<10	-0.12	<10
Barium	200	5	-0.080	<200	-0.060	<200	0.0	<200	-0.050	<200
Beryllium	4.0	1	anr							
Cadmium	5.0	1	-0.16	<5.0	-0.12	<5.0	0.050	<5.0	-0.11	<5.0
Calcium	1000	100	anr							
Chromium	10	1.6	-0.21	<10	-0.14	<10	0.30	<10	-0.29	<10
Cobalt	50	.83	anr							
Copper	25	2.1	anr							
Iron	300	23	anr							
Lead	5.0	2	1.2	<10	0.96	<10	0.29	<10	0.26	<10
Magnesium	5000	100	anr							
Manganese	15	.5	anr							
Molybdenum	50	2.8								
Nickel	40	2.3	anr							
Potassium	10000	100	anr							
Selenium	10	3.1	0.99	<10	0.74	<10	1.9	<10	1.1	<10
Silver	10	1.2	0.38	<10	0.22	<10	0.23	<10	0.34	<10
Sodium	10000	500	anr							
Thallium	10	3.4	anr							
Tin	50	2.8								
Vanadium	50	.66	anr							
Zinc	20	3.8	anr							

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F70660
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
QC Limits: result < RL Run ID: MA7773 Units: ug/l

Time:			11:54		12:08		12:20		12:52	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	11	anr							
Antimony	6.0	4.5	anr							
Arsenic	10	3.6	-0.85	<10	-1.6	<10	-0.59	<10	0.76	<10
Barium	200	5	-0.040	<200	-0.040	<200	0.0	<200	-0.060	<200
Beryllium	4.0	1	anr							
Cadmium	5.0	1	-0.16	<5.0	-0.070	<5.0	-0.080	<5.0	-0.15	<5.0
Calcium	1000	100	anr							
Chromium	10	1.6	-0.14	<10	-0.12	<10	0.22	<10	-0.65	<10
Cobalt	50	.83	anr							
Copper	25	2.1	anr							
Iron	300	23	anr							
Lead	5.0	2	0.89	<10	1.5	<10	0.50	<10	-0.65	<10
Magnesium	5000	100	anr							
Manganese	15	.5	anr							
Molybdenum	50	2.8								
Nickel	40	2.3	anr							
Potassium	10000	100	anr							
Selenium	10	3.1	-0.51	<10	1.1	<10	-1.6	<10	-1.9	<10
Silver	10	1.2	0.50	<10	-0.14	<10	0.26	<10	-0.57	<10
Sodium	10000	500	anr							
Thallium	10	3.4	anr							
Tin	50	2.8								
Vanadium	50	.66	anr							
Zinc	20	3.8	anr							

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F70660
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
QC Limits: result < RL Run ID: MA7773 Units: ug/l

Time:			13:36		13:57		14:35		14:53	
Sample ID:			CCB8		CCB9		CCB10		CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	11	anr							
Antimony	6.0	4.5	anr							
Arsenic	10	3.6	-2.8	<10	0.68	<10	-0.40	<10	1.3	<10
Barium	200	5	-0.040	<200	-0.010	<200	-0.020	<200	0.0	<200
Beryllium	4.0	1	anr							
Cadmium	5.0	1	0.0	<5.0	-0.050	<5.0	-0.16	<5.0	-0.050	<5.0
Calcium	1000	100	anr							
Chromium	10	1.6	-0.22	<10	-0.13	<10	-0.27	<10	-0.11	<10
Cobalt	50	.83	anr							
Copper	25	2.1	anr							
Iron	300	23	anr							
Lead	5.0	2	1.3	<10	0.10	<10	1.6	<10	0.24	<10
Magnesium	5000	100	anr							
Manganese	15	.5	anr							
Molybdenum	50	2.8								
Nickel	40	2.3	anr							
Potassium	10000	100	anr							
Selenium	10	3.1	-2.6	<10	0.59	<10	-0.020	<10	-2.3	<10
Silver	10	1.2	-0.17	<10	-0.45	<10	-0.18	<10	0.060	<10
Sodium	10000	500	anr							
Thallium	10	3.4	anr							
Tin	50	2.8								
Vanadium	50	.66	anr							
Zinc	20	3.8	anr							

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F70660
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
QC Limits: result < RL Run ID: MA7773 Units: ug/l

Time:			15:35		16:18		17:00		17:43	
Sample ID:			CCB12		CCB13		CCB14		CCB15	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	11	anr							
Antimony	6.0	4.5	anr							
Arsenic	10	3.6	-2.2	<10	0.61	<10	-2.0	<10	0.050	<10
Barium	200	5	-0.020	<200	-0.030	<200	-0.040	<200	0.010	<200
Beryllium	4.0	1	anr							
Cadmium	5.0	1	-0.060	<5.0	-0.060	<5.0	-0.11	<5.0	-0.020	<5.0
Calcium	1000	100	anr							
Chromium	10	1.6	-0.060	<10	-0.23	<10	-0.21	<10	-0.23	<10
Cobalt	50	.83	anr							
Copper	25	2.1	anr							
Iron	300	23	anr							
Lead	5.0	2	1.1	<10	0.91	<10	0.41	<10	0.070	<10
Magnesium	5000	100	anr							
Manganese	15	.5	anr							
Molybdenum	50	2.8								
Nickel	40	2.3	anr							
Potassium	10000	100	anr							
Selenium	10	3.1	-0.88	<10	0.31	<10	-1.6	<10	-1.0	<10
Silver	10	1.2	0.18	<10	-0.41	<10	-0.41	<10	-0.21	<10
Sodium	10000	500	anr							
Thallium	10	3.4	anr							
Tin	50	2.8								
Vanadium	50	.66	anr							
Zinc	20	3.8	anr							

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F70660
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
QC Limits: result < RL Run ID: MA7773 Units: ug/l

Time:			18:24		19:07		19:49		20:14	
Sample ID:			CCB16		CCB17		CCB18		CCB19	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	11	anr							
Antimony	6.0	4.5	anr							
Arsenic	10	3.6	-0.88	<10	-0.22	<10	0.82	<10	3.8	<10
Barium	200	5	-0.010	<200	-0.030	<200	-0.040	<200	-0.020	<200
Beryllium	4.0	1	anr							
Cadmium	5.0	1	-0.010	<5.0	-0.11	<5.0	-0.10	<5.0	-0.020	<5.0
Calcium	1000	100	anr							
Chromium	10	1.6	-0.34	<10	-0.32	<10	-0.32	<10	-0.17	<10
Cobalt	50	.83	anr							
Copper	25	2.1	anr							
Iron	300	23	anr							
Lead	5.0	2	1.2	<10	0.21	<10	2.4	<10	-0.020	<10
Magnesium	5000	100	anr							
Manganese	15	.5	anr							
Molybdenum	50	2.8								
Nickel	40	2.3	anr							
Potassium	10000	100	anr							
Selenium	10	3.1	2.1	<10	0.32	<10	-0.80	<10	0.67	<10
Silver	10	1.2	0.20	<10	-0.43	<10	-0.43	<10	-0.57	<10
Sodium	10000	500	anr							
Thallium	10	3.4	anr							
Tin	50	2.8								
Vanadium	50	.66	anr							
Zinc	20	3.8	anr							

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F70660
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7773 Units: ug/l

Time:		09:19			09:44			10:26	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	2000	1950	97.5	2000	1980	99.0	2000	2000	100.0
Barium	2000	2070	103.5	2000	2080	104.0	2000	2100	105.0
Beryllium	anr								
Cadmium	2000	2050	102.5	2000	2100	105.0	2000	2090	104.5
Calcium	anr								
Chromium	2000	2020	101.0	2000	2060	103.0	2000	2060	103.0
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	2000	2040	102.0	2000	2070	103.5	2000	2070	103.5
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Potassium	anr								
Selenium	2000	2030	101.5	2000	2070	103.5	2000	2070	103.5
Silver	250	249	99.6	250	248	99.2	250	245	98.0
Sodium	anr								
Thallium	anr								
Tin									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F70660
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7773 Units: ug/l

Time:		11:08			11:49			12:04	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	2000	2000	100.0	2000	2010	100.5	2000	2010	100.5
Barium	2000	2140	107.0	2000	2140	107.0	2000	2160	108.0
Beryllium	anr								
Cadmium	2000	2110	105.5	2000	2130	106.5	2000	2120	106.0
Calcium	anr								
Chromium	2000	2070	103.5	2000	2090	104.5	2000	2070	103.5
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	2000	2070	103.5	2000	2090	104.5	2000	2050	102.5
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Potassium	anr								
Selenium	2000	2070	103.5	2000	2090	104.5	2000	2070	103.5
Silver	250	246	98.4	250	245	98.0	250	243	97.2
Sodium	anr								
Thallium	anr								
Tin									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F70660
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7773 Units: ug/l

Time:		12:16			12:48			13:31	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	2000	1990	99.5	2000	1990	99.5	2000	2000	100.0
Barium	2000	2070	103.5	2000	2090	104.5	2000	2090	104.5
Beryllium	anr								
Cadmium	2000	2120	106.0	2000	2100	105.0	2000	2100	105.0
Calcium	anr								
Chromium	2000	2050	102.5	2000	2040	102.0	2000	2030	101.5
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	2000	2090	104.5	2000	2060	103.0	2000	2060	103.0
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Potassium	anr								
Selenium	2000	2090	104.5	2000	2070	103.5	2000	2080	104.0
Silver	250	248	99.2	250	246	98.4	250	244	97.6
Sodium	anr								
Thallium	anr								
Tin									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F70660
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7773 Units: ug/l

Time:		13:53			14:30			14:49	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	2000	2020	101.0	2000	2030	101.5	2000	1990	99.5
Barium	2000	2100	105.0	2000	2130	106.5	2000	2080	104.0
Beryllium	anr								
Cadmium	2000	2130	106.5	2000	2130	106.5	2000	2090	104.5
Calcium	anr								
Chromium	2000	2060	103.0	2000	2060	103.0	2000	2010	100.5
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	2000	2090	104.5	2000	2080	104.0	2000	2050	102.5
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Potassium	anr								
Selenium	2000	2100	105.0	2000	2130	106.5	2000	2080	104.0
Silver	250	246	98.4	250	246	98.4	250	245	98.0
Sodium	anr								
Thallium	anr								
Tin									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F70660
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7773 Units: ug/l

Time:		15:30			16:13			16:55	
Sample ID:	CCV	CCV12		CCV	CCV13		CCV	CCV14	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	2000	1990	99.5	2000	2000	100.0	2000	1990	99.5
Barium	2000	2080	104.0	2000	2080	104.0	2000	2060	103.0
Beryllium	anr								
Cadmium	2000	2110	105.5	2000	2120	106.0	2000	2110	105.5
Calcium	anr								
Chromium	2000	2010	100.5	2000	2030	101.5	2000	2020	101.0
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	2000	2060	103.0	2000	2080	104.0	2000	2070	103.5
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Potassium	anr								
Selenium	2000	2090	104.5	2000	2090	104.5	2000	2090	104.5
Silver	250	244	97.6	250	245	98.0	250	246	98.4
Sodium	anr								
Thallium	anr								
Tin									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F70660
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7773 Units: ug/l

Time:		17:38			18:20			19:03	
Sample ID:	CCV	CCV15		CCV	CCV16		CCV	CCV17	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	2000	1990	99.5	2000	1980	99.0	2000	1970	98.5
Barium	2000	2040	102.0	2000	2020	101.0	2000	1990	99.5
Beryllium	anr								
Cadmium	2000	2120	106.0	2000	2110	105.5	2000	2110	105.5
Calcium	anr								
Chromium	2000	2020	101.0	2000	2010	100.5	2000	2010	100.5
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	2000	2080	104.0	2000	2080	104.0	2000	2090	104.5
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Potassium	anr								
Selenium	2000	2090	104.5	2000	2070	103.5	2000	2080	104.0
Silver	250	248	99.2	250	250	100.0	250	252	100.8
Sodium	anr								
Thallium	anr								
Tin									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F70660
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA7773 Units: ug/l

Time:		19:45			20:10	
Sample ID:	CCV	CCV18		CCV	CCV19	
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum	anr					
Antimony	anr					
Arsenic	2000	1930	96.5	2000	1910	95.5
Barium	2000	1970	98.5	2000	1940	97.0
Beryllium	anr					
Cadmium	2000	2070	103.5	2000	2060	103.0
Calcium	anr					
Chromium	2000	1990	99.5	2000	1980	99.0
Cobalt	anr					
Copper	anr					
Iron	anr					
Lead	2000	2060	103.0	2000	2050	102.5
Magnesium	anr					
Manganese	anr					
Molybdenum						
Nickel	anr					
Potassium	anr					
Selenium	2000	2050	102.5	2000	2040	102.0
Silver	250	251	100.4	250	250	100.0
Sodium	anr					
Thallium	anr					
Tin						
Vanadium	anr					
Zinc	anr					

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: F70660
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
QC Limits: 95 to 105 % Recovery Run ID: MA7773 Units: ug/l

Time:		09:16	
Sample ID:	HSTD	HSTD1	
Metal	True	Results	% Rec
Aluminum	anr		
Antimony	anr		
Arsenic	4000	3980	99.5
Barium	4000	4000	100.0
Beryllium	anr		
Cadmium	4000	3930	98.3
Calcium	anr		
Chromium	4000	3950	98.8
Cobalt	anr		
Copper	anr		
Iron	anr		
Lead	4000	3950	98.8
Magnesium	anr		
Manganese	anr		
Molybdenum			
Nickel	anr		
Potassium	anr		
Selenium	4000	3980	99.5
Silver	500	504	100.8
Sodium	anr		
Thallium	anr		
Tin			
Vanadium	anr		
Zinc	anr		

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: F70660
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
QC Limits: CRI 70-130% CRIA 70-130% Run ID: MA7773 Units: ug/l

Time:			09:29		09:33		19:56		20:00	
Sample ID:	CRI	CRIA	CRIA1		CRI1		CRIA2		CRI2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	400	200	anr							
Antimony	10	5.0	anr							
Arsenic	20	10	8.7	87.0			6.2	62.0*(a)		
Barium	400	200	206	103.0			193	96.5		
Beryllium	10	5.0	anr							
Cadmium	10	5.0	5.3	106.0			5.4	108.0		
Calcium	2000	1000	anr							
Chromium	20	10	10.1	101.0			9.5	95.0		
Cobalt	100	50	anr							
Copper	50	25	anr							
Iron	600	300	anr							
Lead	10	5.0			12.2	122.0			10.4	104.0
Magnesium	10000	5000	anr							
Manganese	30	15	anr							
Molybdenum	100	50								
Nickel	80	40	anr							
Potassium	20000	10000	anr							
Selenium	20	10	8.7	87.0			9.8	98.0		
Silver	20	10	9.3	93.0			9.3	93.0		
Sodium	20000	10000	anr							
Thallium	20	10	anr							
Tin	100	50								
Vanadium	100	50	anr							
Zinc	40	20	anr							

(*) Outside of QC limits
(anr) Analyte not requested
(a) Possible instrument baseline drift.

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: F70660
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

File ID: IR011210.ASC Date Analyzed: 01/12/10 Methods: SW846 6010B
QC Limits: 80 to 120 % Recovery Run ID: MA7773 Units: ug/l

Time:			09:40		09:41		20:03		20:06	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	500000	500000	492000	98.4	502000	100.4	479000	95.8	491000	98.2
Antimony		1000	0.60		1060	106.0	-0.46		1010	101.0
Arsenic		1000	0.030		1010	101.0	-4.8		971	97.1
Barium		500	0.71		546	109.2	0.61		507	101.4
Beryllium		500	-0.49		502	100.4	-0.93		488	97.6
Cadmium		1000	0.010		967	96.7	2.0		952	95.2
Calcium	500000	500000	438000	87.6	450000	90.0	398000	80.0	414000	82.8
Chromium		500	-0.78		480	96.0	-0.95		459	91.8
Cobalt		500	1.1		475	95.0	0.59		451	90.2
Copper		500	-3.7		523	104.6	-2.1		475	95.0
Iron	200000	200000	180000	90.0	188000	94.0	176000	88.0	186000	93.0
Lead		1000	-0.52		983	98.3	1.2		975	97.5
Magnesium	500000	500000	490000	98.0	493000	98.6	454000	90.8	460000	92.0
Manganese		500	0.94		494	98.8	0.60		467	93.4
Molybdenum		1000	-0.35		984	98.4	-1.3		948	94.8
Nickel		1000	-0.33		952	95.2	-0.34		909	90.9
Potassium			238		-140		218		-150	
Selenium		1000	1.5		1000	100.0	-0.35		996	99.6
Silver		1000	0.72		1070	107.0	0.070		1080	108.0
Sodium			-28		303		-92		309	
Thallium		1000	-0.080		952	95.2	-14		931	93.1
Tin		1000	-4.1		891	89.1	-3.9		845	84.5
Vanadium		500	-5.5		478	95.6	-5.6		455	91.0
Zinc		1000	3.9		921	92.1	3.8		907	90.7

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: F70660
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17581
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 01/11/10

Metal	RL	IDL	MDL	MB raw	final
Mercury	1.0	.14	.15	-0.026	<1.0

Associated samples MP17581: F70660-1, F70660-2, F70660-3, F70660-4, F70660-5, F70660-6, F70660-7, F70660-8, F70660-10, F70660-11, F70660-12, F70660-1A, F70660-2A, F70660-3A, F70660-4A, F70660-5A, F70660-6A, F70660-7A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F70660
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17581 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 01/11/10 01/11/10

Metal	F70660-11 Original	DUP	RPD	QC Limits	F70660-11 Original	MS	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.0	0.0	NC	0-20	0.0	2.9	3	96.7	80-120

Associated samples MP17581: F70660-1, F70660-2, F70660-3, F70660-4, F70660-5, F70660-6, F70660-7, F70660-8, F70660-10, F70660-11, F70660-12, F70660-1A, F70660-2A, F70660-3A, F70660-4A, F70660-5A, F70660-6A, F70660-7A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F70660
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17581
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 01/11/10

Metal	F70660-11 Original	MSD	Spikelot HGFLWS1	% Rec	MSD RPD	QC Limit
Mercury	0.0	2.8	3	93.3	3.5	20

Associated samples MP17581: F70660-1, F70660-2, F70660-3, F70660-4, F70660-5, F70660-6, F70660-7, F70660-8, F70660-10, F70660-11, F70660-12, F70660-1A, F70660-2A, F70660-3A, F70660-4A, F70660-5A, F70660-6A, F70660-7A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: F70660
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17581
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 01/11/10

Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	3.1	3	103.3	80-120

Associated samples MP17581: F70660-1, F70660-2, F70660-3, F70660-4, F70660-5, F70660-6, F70660-7, F70660-8, F70660-10, F70660-11, F70660-12, F70660-1A, F70660-2A, F70660-3A, F70660-4A, F70660-5A, F70660-6A, F70660-7A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: F70660
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17581
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 01/11/10

Metal	F70660-11 Original	SDL 1:5	%DIF	QC Limits
Mercury	0.00	0.00	NC	0-10

Associated samples MP17581: F70660-1, F70660-2, F70660-3, F70660-4, F70660-5, F70660-6, F70660-7, F70660-8, F70660-10, F70660-11, F70660-12, F70660-1A, F70660-2A, F70660-3A, F70660-4A, F70660-5A, F70660-6A, F70660-7A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: F70660
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17582 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 01/11/10

Metal	RL	IDL	MDL	MB raw	final
Mercury	1.0	.14	.15	-0.0020	<1.0

Associated samples MP17582: F70660-8A, F70660-10A, F70660-11A, F70660-12A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F70660
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17582
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 01/11/10 01/11/10

Metal	F70660-11A Original	DUP	RPD	QC Limits	F70660-11A Original	MS	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.0	0.0	NC	0-20	0.0	2.9	3	96.7	80-120

Associated samples MP17582: F70660-8A, F70660-10A, F70660-11A, F70660-12A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F70660
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17582 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 01/11/10

Metal	F70660-11A Original	MSD	Spikelot HGFLWS1	% Rec	MSD RPD	QC Limit
Mercury	0.0	2.9	3	96.7	0.0	20

Associated samples MP17582: F70660-8A, F70660-10A, F70660-11A, F70660-12A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: F70660
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17582
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 01/11/10

Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	2.9	3	96.7	80-120

Associated samples MP17582: F70660-8A, F70660-10A, F70660-11A, F70660-12A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: F70660
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17582
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 01/11/10

Metal	F70660-11A Original	SDL 1:5	%DIF	QC Limits
Mercury	0.00	0.00	NC	0-10

Associated samples MP17582: F70660-8A, F70660-10A, F70660-11A, F70660-12A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: F70660
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17584
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 01/11/10

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	11	11		
Antimony	6.0	4.5	4.5		
Arsenic	10	3.6	5.4	-0.53	<10
Barium	200	5	5	-0.040	<200
Beryllium	4.0	1	1		
Cadmium	5.0	1	1	-0.080	<5.0
Calcium	1000	100	100		
Chromium	10	1.6	2	0.040	<10
Cobalt	50	.83	1		
Copper	25	2.1	5		
Iron	300	23	23		
Lead	10	2	2	0.35	<10
Magnesium	5000	100	100		
Manganese	15	.5	1		
Molybdenum	50	2.8	5		
Nickel	40	2.3	2.3		
Potassium	10000	100	100		
Selenium	10	3.1	3.4	1.8	<10
Silver	10	1.2	1.4	-0.62	<10
Sodium	10000	500	500		
Thallium	10	3.4	3.6		
Tin	50	2.8	2.8		
Vanadium	50	.66	.9		
Zinc	20	3.8	7.4		

Associated samples MP17584: F70660-1, F70660-2, F70660-3, F70660-4, F70660-5, F70660-6, F70660-7, F70660-8, F70660-10, F70660-11, F70660-12

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F70660
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17584
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Metal	F70660-11 Original	DUP	RPD	QC Limits	F70660-11 Original	MS	Spikelot MPFLICP1	% Rec	QC Limits
Prep Date:			01/11/10					01/11/10	
Aluminum									
Antimony									
Arsenic	0.00	0.0 (a)	NC	0-20	0.00	2310 (a)	2000	115.5	80-120
Barium	0.00	0.00 (a)	NC	0-20	0.00	2130 (a)	2000	106.5	80-120
Beryllium									
Cadmium	0.0	0.0 (a)	NC	0-20	0.0	52.6 (a)	50	105.2	80-120
Calcium									
Chromium	0.0	0.0 (a)	NC	0-20	0.0	205 (a)	200	102.5	80-120
Cobalt									
Copper									
Iron									
Lead	0.0	0.0 (a)	NC	0-20	0.0	509 (a)	500	101.8	80-120
Magnesium									
Manganese									
Molybdenum									
Nickel									
Potassium									
Selenium	0.00	45.0 (a)	200.0(b)	0-20	0.00	2390 (a)	2000	119.5	80-120
Silver	0.0	0.0 (a)	NC	0-20	0.0	52.7 (a)	50	105.4	80-120
Sodium									
Thallium									
Tin									
Vanadium									
Zinc									

Associated samples MP17584: F70660-1, F70660-2, F70660-3, F70660-4, F70660-5, F70660-6, F70660-7, F70660-8, F70660-10, F70660-11, F70660-12

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Elevated reporting limit(s) due to matrix interference.
(b) RPD acceptable due to low duplicate and sample concentrations.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F70660
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17584
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 01/11/10

Metal	F70660-11 Original	MSD	Spikelot MPFLICP1	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic	0.00	2340 (a)	2000	117.0	1.3	20
Barium	0.00	2170 (a)	2000	108.5	1.9	20
Beryllium						
Cadmium	0.0	52.0 (a)	50	104.0	1.1	20
Calcium						
Chromium	0.0	206 (a)	200	103.0	0.5	20
Cobalt						
Copper						
Iron						
Lead	0.0	520 (a)	500	104.0	2.1	20
Magnesium						
Manganese						
Molybdenum						
Nickel						
Potassium						
Selenium	0.00	2460 (a)	2000	123.0N(b	2.9	20
Silver	0.0	52.6 (a)	50	105.2	0.2	20
Sodium						
Thallium						
Tin						
Vanadium						
Zinc						

Associated samples MP17584: F70660-1, F70660-2, F70660-3, F70660-4, F70660-5, F70660-6, F70660-7, F70660-8, F70660-10, F70660-11, F70660-12

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Elevated reporting limit(s) due to matrix interference.
(b) Spike recovery indicates possible matrix interference.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: F70660
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17584
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 01/11/10

Metal	BSP Result	Spikelot MPFLICP1	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	1990	2000	99.5	80-120
Barium	2070	2000	103.5	80-120
Beryllium				
Cadmium	52.0	50	104.0	80-120
Calcium				
Chromium	206	200	103.0	80-120
Cobalt				
Copper				
Iron				
Lead	525	500	105.0	80-120
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium	2010	2000	100.5	80-120
Silver	47.8	50	95.6	80-120
Sodium				
Thallium				
Tin				
Vanadium				
Zinc				

Associated samples MP17584: F70660-1, F70660-2, F70660-3, F70660-4, F70660-5, F70660-6, F70660-7, F70660-8, F70660-10, F70660-11, F70660-12

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: F70660
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17584
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 01/11/10

Metal	F70660-11 Original	SDL 10:50%DIF		QC Limits
Aluminum				
Antimony				
Arsenic	0.00	0.00	NC	0-10
Barium	0.00	0.00	NC	0-10
Beryllium				
Cadmium	0.00	0.00	NC	0-10
Calcium				
Chromium	0.00	0.00	NC	0-10
Cobalt				
Copper				
Iron				
Lead	0.00	0.00	NC	0-10
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium	0.00	0.00	NC	0-10
Silver	0.00	0.00	NC	0-10
Sodium				
Thallium				
Tin				
Vanadium				
Zinc				

Associated samples MP17584: F70660-1, F70660-2, F70660-3, F70660-4, F70660-5, F70660-6, F70660-7, F70660-8, F70660-10, F70660-11, F70660-12

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: F70660
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17586
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date:					01/11/10		01/11/10
Metal	RL	IDL	MDL	MB raw	final	MB raw	final
Aluminum	200	11	11				
Antimony	6.0	4.5	4.5				
Arsenic	10	3.6	5.4	1.2	<10	-0.37	<10
Barium	200	5	5	-0.070	<200	0.050	<200
Beryllium	4.0	1	1				
Cadmium	5.0	1	1	-0.19	<5.0	-0.18	<5.0
Calcium	1000	100	100				
Chromium	10	1.6	2	-0.19	<10	0.060	<10
Cobalt	50	.83	1				
Copper	25	2.1	5				
Iron	300	23	23				
Lead	10	2	2	0.22	<10	0.20	<10
Magnesium	5000	100	100				
Manganese	15	.5	1				
Molybdenum	50	2.8	5				
Nickel	40	2.3	2.3				
Potassium	10000	100	100				
Selenium	10	3.1	3.4	0.11	<10	0.010	<10
Silver	10	1.2	1.4	-0.61	<10	0.11	<10
Sodium	10000	500	500				
Thallium	10	3.4	3.6				
Tin	50	2.8	2.8				
Vanadium	50	.66	.9				
Zinc	20	3.8	7.4				

Associated samples MP17586: F70660-1A, F70660-2A, F70660-3A, F70660-4A, F70660-5A, F70660-6A, F70660-7A, F70660-8A, F70660-10A, F70660-11A, F70660-12A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F70660
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17586
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Metal	F70660-11A Original	DUP	RPD	QC Limits	F70660-11A Original	MS	Spikelot MPFLICP1	% Rec	QC Limits
Prep Date:			01/11/10					01/11/10	
Aluminum									
Antimony									
Arsenic	0.0	0.0 (a)	NC	0-20	0.0	2320 (a)	2000	116.0	80-120
Barium	0.00	0.00 (a)	NC	0-20	0.00	2140 (a)	2000	107.0	80-120
Beryllium									
Cadmium	0.0	0.0 (a)	NC	0-20	0.0	51.6 (a)	50	103.2	80-120
Calcium									
Chromium	0.0	0.0 (a)	NC	0-20	0.0	202 (a)	200	101.0	80-120
Cobalt									
Copper									
Iron									
Lead	0.0	0.0 (a)	NC	0-20	0.0	512 (a)	500	102.4	80-120
Magnesium									
Manganese									
Molybdenum									
Nickel									
Potassium									
Selenium	0.00	35.2 (a)	200.0(b)	0-20	0.00	2420 (a)	2000	121.0N(c	80-120
Silver	0.0	0.0 (a)	NC	0-20	0.0	50.5 (a)	50	101.0	80-120
Sodium									
Thallium									
Tin									
Vanadium									
Zinc									

Associated samples MP17586: F70660-1A, F70660-2A, F70660-3A, F70660-4A, F70660-5A, F70660-6A, F70660-7A, F70660-8A, F70660-10A, F70660-11A, F70660-12A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Elevated reporting limit(s) due to matrix interference.
(b) RPD acceptable due to low duplicate and sample concentrations.
(c) Spike recovery indicates possible matrix interference.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F70660
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17586
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 01/11/10

Metal	F70660-11A Original	MSD	Spikelot MPFLICP1	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic	0.0	2360 (a)	2000	118.0	1.7	20
Barium	0.00	2160 (a)	2000	108.0	0.9	20
Beryllium						
Cadmium	0.0	51.7 (a)	50	103.4	0.2	20
Calcium						
Chromium	0.0	205 (a)	200	102.5	1.5	20
Cobalt						
Copper						
Iron						
Lead	0.0	516 (a)	500	103.2	0.8	20
Magnesium						
Manganese						
Molybdenum						
Nickel						
Potassium						
Selenium	0.00	2390 (a)	2000	119.5	1.2	20
Silver	0.0	53.4 (a)	50	106.8	5.6	20
Sodium						
Thallium						
Tin						
Vanadium						
Zinc						

Associated samples MP17586: F70660-1A, F70660-2A, F70660-3A, F70660-4A, F70660-5A, F70660-6A, F70660-7A, F70660-8A, F70660-10A, F70660-11A, F70660-12A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Elevated reporting limit(s) due to matrix interference.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: F70660
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17586
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 01/11/10

Metal	BSP Result	Spikelot MPFLICP1	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	2000	2000	100.0	80-120
Barium	2070	2000	103.5	80-120
Beryllium				
Cadmium	52.4	50	104.8	80-120
Calcium				
Chromium	207	200	103.5	80-120
Cobalt				
Copper				
Iron				
Lead	527	500	105.4	80-120
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium	2010	2000	100.5	80-120
Silver	47.0	50	94.0	80-120
Sodium				
Thallium				
Tin				
Vanadium				
Zinc				

Associated samples MP17586: F70660-1A, F70660-2A, F70660-3A, F70660-4A, F70660-5A, F70660-6A, F70660-7A, F70660-8A, F70660-10A, F70660-11A, F70660-12A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: F70660
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

QC Batch ID: MP17586
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 01/11/10

Metal	F70660-11A Original	SDL 10:50%DIF		QC Limits
Aluminum				
Antimony				
Arsenic	0.00	0.00	NC	0-10
Barium	0.00	0.00	NC	0-10
Beryllium				
Cadmium	0.00	0.00	NC	0-10
Calcium				
Chromium	0.00	0.00	NC	0-10
Cobalt				
Copper				
Iron				
Lead	0.00	0.00	NC	0-10
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium	0.00	0.00	NC	0-10
Silver	0.00	0.00	NC	0-10
Sodium				
Thallium				
Tin				
Vanadium				
Zinc				

Associated samples MP17586: F70660-1A, F70660-2A, F70660-3A, F70660-4A, F70660-5A, F70660-6A, F70660-7A, F70660-8A, F70660-10A, F70660-11A, F70660-12A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries
- Instrument Runlogs/QC

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F70660
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Solids, Total Dissolved	GN38060	100	0.00	mg/l				

Associated Samples:
Batch GN38060: F70660-1, F70660-10, F70660-11, F70660-12, F70660-2, F70660-3, F70660-4, F70660-5, F70660-6, F70660-7, F70660-8
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F70660
Account: TETTNOAK - Tetra Tech, Inc
Project: Holloman AFB; Alamogordo, NM

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Solids, Total Dissolved	GN38060	F70660-11	mg/l	41900	42800	2.1	0-5%

Associated Samples:
Batch GN38060: F70660-1, F70660-10, F70660-11, F70660-12, F70660-2, F70660-3, F70660-4, F70660-5, F70660-6, F70660-7, F70660-8
(*) Outside of QC limits

APPENDIX D

FIELD DATA FORMS

APRIL 2009 GROUNDWATER

FIELD DATA FORMS

COC-011

Accutest Laboratories Southeast
Chain of Custody

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL. 407-425-6700 • FAX: 407-425-0707
www.accutest.com

Accutest JOB #

PAGE 1 OF 1

Accutest Quote #

SKIFF# 29644

Client / Reporting Information

Company Name: TETRA TECH
Address: 800 OAK RIDGE TURNPIKE A-600
City: OAK RIDGE State: TN Zip: 37830
Project Contact: GINGER.MULLINS@TETRATECH.COM E-mail
Phone#: 865-599-2349
Sampler(s) Name(s) (Printed): V. MULLINS/A. MORENO

Project Information

Project Name: HOLLOMAN AFB
Street
City State
Project #: T93002
Fax #
Client Purchase Order #: 1041533

Analytical Information

Accutest Sample #	Field ID / Point of Collection	Date	Time	Sampled By:	Matrix	Total # of Bottles	Other	None	HCl	NaOH	HNO3	H2SO4	NaOH+ZnAc	DI Water	MeOH	Gamma-BHC	Alpha-BHC	Dieldrin	TDS
	MW16-04-040909	4/9/09	0835	AM	GW	3		X								X	X	X	X
	MW16-03-040909	4/9/09	0900	AM	GW	3		X								X	X	X	X
	MW16-02-040909	4/9/09	0925	AM	GW	3		X								X	X	X	X
	MW16-02-MS/MSD-040909	4/9/09	0925	AM	GW	3		X								X	X	X	X
	MW16-01-040909	4/9/09	0955	AM	GW	3		X								X	X	X	X
	MW16-DUP01-040909	4/9/09	—	AM	GW	3		X								X	X	X	X

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe

LAB USE ONLY

TURNAROUND TIME (Business Days)

Approved By: / Rush Code

- [x] 10 Days Standard
- [ ] 7 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] OTHER

Emergency or Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [x] REDT1 (EPA LEVEL 3) ERPIMS
- [ ] FULT1 (EPA LEVEL 4)
- [x] EDD'S

Comments / Remarks

FEDEX 8684 4331 7966
8684 4331 7977

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
	4/9/09 1600	2 FED EX	3		4
Relinquished by: 5	Date Time:	Received By: 6	Relinquished by: 7	Date Time:	Received By: 8

Lab Use Only: Custody Seal in Place: Y N Temp Blank Provided: Y N Preserved where Applicable: Y N Total # of Coolers: Cooler Temperature (s) Celsius: _____

JULY 2009 GROUNDWATER

FIELD DATA FORMS

Chain of Custody Record

TAL-4124-280 (0508)

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica ~~TA-COC-004~~ TA-COC-005

THE LEADER IN ENVIRONMENTAL TESTING

Client: TETRA TECH INC	Project Manager: GINGER.MULLINS@TETRATECH.COM	Date:	Chain of Custody Number: 114609
Address: 800 OAK RIDGE TURNPIKE A-600	Telephone Number (Area Code)/Fax Number: 865-599-2349	Lab Number:	Page ____ of ____
City: OAK RIDGE; State: TN; Zip Code: 37830	Site Contact: G. MULLINS	Lab Contact:	
Project Name and Location (State): HOLLOMAN AFB, NM	Carrier/Waybill Number:		
Contract/Purchase Order/Quote No.: 80188 LISA DRIELL			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil		Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH		Analysis (Attach list if more space is needed): PERCHLORATE 6860											Special Instructions/ Conditions of Receipt
MW39-10-070709	7/7/09	1036		X				X							X											
MW39-11-070709	7/7/09	1135		X				X							X											
MW39-09-070709	7/7/09	1358		X				X							X											
MW39-08-070709	7/7/09	1512		X				X							X											
MW39-06-070709	7/7/09	1536		X				X							X											
MW39-06D-070709	7/7/09	1635		X				X							X											
MW39-DUP01-070709	7/7/09	—		X				X							X											
MW39-02-070809	7/8/09	1110		X				X							X											
MW39-05-070809	7/8/09	1125		X				X							X											
MW39-07-070809	7/8/09	1230		X				X							X											
MW39-07-MS-070809	7/8/09	1230		X				X							X											
MW39-07-MSD-070809	7/8/09	1230		X				X							X											

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☒ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	7/8/09	1300	1. Received By	7/8/09	1300
2. Relinquished By	7/8/09	1500	2. Received By: FEDEX		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

COC-014

Accutest Laboratories Southeast
Chain of Custody

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TEL. 407-425-6700 • FAX: 407-425-0707
www.accutest.com

Accutest JOB # | PAGE 1 OF 1

Accutest Quote # | SKIFF#

Client / Reporting Information

Company Name: TETRA TECH
Address: 800 OAK RIDGE TURNPIKE A-600
City: OAK RIDGE State: TN Zip: 37830
Project Contact: GINGER.MULLINS@TETRATECH.COM E-mail:
Phone#: 865-559-2349
Sampler(s) Name(s) (Printed): A. MORENO / J. BENNETT

Project Information

Project Name: HOLLOMAN AFB
Street:
City: ALAMOGORDO State: NM
Project #: T93002
Fax #:
Client Purchase Order #: 1041533

Analytical Information

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe

Accutest Sample #	Field ID / Point of Collection	Collection DATE	Collection TIME	SAMPLED BY:	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NaOH-ZNAC	DI WATER	MEOH	VOCs 8260	TAL METALS TOTAL	TAL METALS DISS	TDS	LAB USE ONLY
	~~MW30833-05-070809~~	~~7/8/09~~		~~AM/JB~~	~~GW~~	~~6~~			~~X~~	~~X~~						~~X~~	~~X~~	~~X~~	~~X~~	
	MW30833-03-070809	7/8/09	1510	AM/JB	GW	6			X	X						X	X	X	X	
	MW30833-02-070809	7/8/09	1624	AM/JB	GW	6			X	X						X	X	X	X	
	MW30833-04-070809	7/8/09	1625	AM/JB	GW	6			X	X						X	X	X	X	
	MW30833-01-070809	7/8/09	1500	AM/JB	GW	6			X	X						X	X	X	X	
	MW30833-01-MS-070809	7/8/09	1500	AM/JB	GW	6			X	X						X	X	X	X	
	MW30833-01-MSD-070809	7/8/09	1500	AM/JB	GW	6			X	X						X	X	X	X	
	MW30833-DUP01-070809	7/8/09	—	—	GW	6			X	X						X	X	X	X	
	TB02-070809	7/8/09	—	—	W	2			X							X				

TURNAROUND TIME (Business Days)

Approved By: / Rush Code

- [X] 10 Days Standard
- [ ] 7 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] OTHER

Emergency or Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [X] REDT1 (EPA LEVEL 3) ERPIMS
- [ ] FULT1 (EPA LEVEL 4)
- [X] EDD'S

Comments / Remarks

LAB FILTERED METALS
FEDEX 8696 4911 0267
8696 4911 0289

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler	Date Time:	Received By:	Relinquished by :	Date Time:	Received By:
1	7/8/09 1715	2	3	7/8/09 1900	4 FEDEX
Relinquished by:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
5		6	7		8

Lab Use Only: Custody Seal in Place: Y N Temp Blank Provided: Y N Preserved where Applicable: Y N Total # of Coolers: Cooler Temperature (s) Celsius: _____

COC-013

Accutest Laboratories Southeast
Chain of Custody

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Accutest JOB #

Accutest Quote #

SKIFF#

Client / Reporting Information

Company Name: TETRA TECH
Address: 800 OAK RIDGE TURNPIKE A-600
City: OAK RIDGE State: TN Zip: 37830
Project Contact: GINGER.MULLINS@TETRATECH.COM E-mail
Phone#: 865-599-2349
Sampler(s) Name(s) (Printed): A. MORENO J. BENNETT

Project Information

Project Name: HOLLOMAN AFB
Street
City: ALAMOGORDO State: NM
Project #: T93002
Fax #
Client Purchase Order #: 10415533

Analytical Information

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe

Accutest Sample #	Field ID / Point of Collection	Date	Time	Sampled By	Matrix	Total # of Bottles	Other	None	HCl	NaOH	HNO3	H2SO4	NaOH+ZnAc	DI Water	MeOH	VOCs 8260	TDS	Metals Total 6 RCRA	Metals Diss 6 RCRA								LAB USE ONLY
	MW39-10-070709	7/7/09	1036	AM/JB	GW	6			X		X					X	X	X	X								
	MW39-11-070709	7/7/09	1135	AM/JB	GW	6			X		X					X	X	X	X								
	MW39-09-070709	7/7/09	1358	AM/JB	GW	6			X		X					X	X	X	X								
	MW39-08-070709	7/7/09	1512	AM/JB	GW	6			X		X					X	X	X	X								
	MW39-06-070709	7/7/09	1556	AM/JB	GW	6			X		X					X	X	X	X								
	MW39-06D-070709	7/7/09	1635	AM/JB	GW	6			X		X					X	X	X	X								
	MW39-DUP01-070709	7/7/09	—	AM/JB	GW	6			X		X					X	X	X	X								
	MW39-02-070809	7/8/09	1110	AM/JB	GW	6			X		X					X	X	X	X								
	MW39-05-070809	7/8/09	1125	AM/JB	GW	6			X		X					X	X	X	X								
	MW39-07-070809	7/8/09	1230	AM/JB	GW	6			X		X					X	X	X	X								
	MW39-07-MS-070809	7/8/09	1230	AM/JB	GW	6			X		X					X	X	X	X								
	MW39-07-MSD-070809	7/8/09	1230	AM/JB	GW	6			X		X					X	X	X	X								

TURNAROUND TIME (Business Days)

Approved By: / Rush Code

- [X] 10 Days Standard
- [ ] 7 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] OTHER

Emergency or Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [X] REDT1 (EPA LEVEL 3) ERPIMS
- [ ] FULT1 (EPA LEVEL 4)
- [X] EDD'S

Comments / Remarks

LAB FILTERED METALS
FEDEX 869649110278
869649110304

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished by :	Date Time:	Received By:
1	7/8/09 1330	2	3	7/8/09 1500	4 FEDEX
Relinquished by:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
5		6	7		8

Lab Use Only: Custody Seal in Place: Y N Temp Blank Provided: Y N Preserved where Applicable: Y N Total # of Coolers: Cooler Temperature (s) Celsius:

COC-013

Accutest Laboratories Southeast
Chain of Custody

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www.accutest.com

Accutest JOB #

Accutest Quote #

SKIFF#

Client / Reporting Information

Company Name: TETRA TECH
Address: 900 OAK RIDGE TURNPIKE A-600
City: OAK RIDGE State: TN Zip: 37830
Project Contact: GINGER.MULLINS@TETRATECH.COM E-mail:
Phone#: 865-599-2349
Sampler(s) Name(s) (Printed)

Project Information

Project Name: HOLLOMAN AFB
Street
City: ALAMOGORDO State: NM
Project #: T93002
Fax #
Client Purchase Order #

Analytical Information

VOCs 8260

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe

Accutest Sample #	Field ID / Point of Collection	COLLECTION DATE	TIME	SAMPLED BY:	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NAOH-ZNAC	DI WATER	MEOH	VOCs 8260	LAB USE ONLY
	TB01-070809	7/8/09	—	—	W	2			X								

TURNAROUND TIME (Business Days)

Approved By: / Rush Code

- [X] 10 Days Standard
- [ ] 7 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] OTHER

Emergency or Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [X] REDT1 (EPA LEVEL 3) ERPIMS
- [ ] FULT1 (EPA LEVEL 4)
- [X] EDD'S

Comments / Remarks

LAB FILTERED METALS
FEDEX 8696 4911 0278
8696 4911 0301

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished by :	Date Time:	Received By:
1	7/8/09 1330	2	3	7/8/09 1800	4 FEDEX
Relinquished by:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
5		6	7		8

Lab Use Only: Custody Seal in Place: Y N Temp Blank Provided: Y N Preserved where Applicable: Y N Total # of Coolers: Cooler Temperature (s) Celsius: _____

Accutest Laboratories Southeast
Chain of Custody

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www.accutest.com

COC-012

Accutest JOB #

PAGE 1 OF 1

Accutest Quote #

SKIFF#

Client / Reporting Information

Company Name: TETRA TECH
Address: 800 OAK RIDGE TURNPIKE A-600
City: OAK RIDGE State: TN Zip: 37830
Project Contact: GINGER MULLINS@TETRATECH.COM E-mail:
Phone#: 865-599-2349
Sampler(s) Name(s) (Printed): A. MORENO, J. BENNATT

Project Information

Project Name: HOLLOMAN AFB
Street:
City: ALAMOGORDO State: NM
Project #: T93002
Fax #:
Client Purchase Order #:

Analytical Information

Accutest Sample #	Field ID / Point of Collection	Collection Date	Collection Time	Sampled By:	Matrix	Total # of Bottles	Other	None	HCl	NaOH	HNO3	H2SO4	NaOH+ZnAc	DI Water	MeOH	Gamma-BHC	Alpha-BHC	Dieldrin	TDS								Matrix Codes / LAB USE ONLY
	MW16-04-070609	7/6/09	1523		GW	3		X								X	X	X	X								
	MW16-03-070609	7/6/09	1543		GW	3		X								X	X	X	X								
	MW16-03-MS-070609	7/6/09	1543		GW	3		X								X	X	X	X								
	MW16-03-MSD-070609	7/6/09	1543		GW	3		X								X	X	X	X								
	MW16-02-070609	7/6/09	1620		GW	3		X								X	X	X	X								
	MW16-01-070609	7/6/09	1645		GW	3		X								X	X	X	X								
	MW16-DUP01-070609	7/6/09	—		GW	3		X								X	X	X	X								

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe

TURNAROUND TIME (Business Days)

Approved By: / Rush Code

- [X] 10 Days Standard
- [ ] 7 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] OTHER

Emergency or Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [X] REDT1 (EPA LEVEL 3) ERPIMS
- [ ] FULT1 (EPA LEVEL 4)
- [X] EDD'S

Comments / Remarks

FEDEX 869649110290
869649110315

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
	7/6/09 1700	2	3		4
Relinquished by:	**Date Time:**	**Received By:**	**Relinquished by:**	**Date Time:**	**Received By:**
	7/7/09 1500	6 FED EX	7		8

Lab Use Only: Custody Seal in Place: Y N Temp Blank Provided: Y N Preserved where Applicable: Y N Total # of Coolers: Cooler Temperature (s) Celsius: _____

OCTOBER 2009 GROUNDWATER

FIELD DATA FORMS

Chain of Custody Record

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica TA-COC-06

THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124-280 (0508)

Client: TETRA TECH INC	Project Manager: GINGER.MULLINS@TETRATECH.COM	Date: 10/7/09	Chain of Custody Number: 114610
Address: 800 OAK RIDGE TURNPIKE A-600	Telephone Number (Area Code)/Fax Number: 865-599-2349	Lab Number	Page 1 of 1
City: OAK RIDGE; State: TN; Zip Code: 37830	Site Contact: G. MULLINS	Lab Contact	
Project Name and Location (State): HOLLOMAN AFB, NM	Carrier/Waybill Number: 8654 5880 2375		
Contract/Purchase Order/Quote No.: 80188 LISA DRIELL			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil		Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH		Analysis (Attach list if more space is needed): PERCHLORATE 6860											Special Instructions/ Conditions of Receipt
MW39-12-100609	10/6/09	1035		X				X							X											

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☒ 21 Days ☐ Other _____

QC Requirements (Specify):

	Date	Time		Date	Time
1. Relinquished By			1. Received By	10/6/09	1100
2. Relinquished By	~~10/6/09~~	~~1100~~	2. Received By: FED EX	10/7/09	1230
3. Relinquished By	10/7/09	1230	3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Accutest Laboratories Southeast
Chain of Custody

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www.accutest.com

COC-016

Accutest JOB #

PAGE 1 OF 1

Accutest Quote #

SKIFF#

Client / Reporting Information

Company Name: TETRA TECH
Address: 800 OAK RIDGE TURNPIKE A-600
City: OAK RIDGE State: TN Zip: 37830
Project Contact: GINGER.MULLINS@TETRATECH.COM
Phone#: 865-599-2349
Sampler(s) Name(s) (Printed)

Project Information

Project Name: HOLLOMAN AFB
Street
City: ALAMOGORDO State: NM
Project #: T93002
Fax #
Client Purchase Order #

Analytical Information

Accutest Sample #	Field ID / Point of Collection	Collection Date	Time	Sampled By	Matrix	Total # of Bottles	Other	None	HCl	NaOH	HNO3	H2SO4	NaOH-ZnAc	DI Water	MeOH	Gamma BHC	Alpha BHC	Dieldrin	TDS
	MW16-03-100609	10/6/09	1540	JB	GW	3		X								X	X	X	X
	MW16-03-MS-100609	10/6/09	1540	JB	GW	3		X								X	X	X	X
	MW16-03-MSD-100609	10/6/09	1540	JB	GW	3		X								X	X	X	X
	MW16-04-100609	10/6/09	1600	JB	GW	3		X								X	X	X	X
	MW16-02-100609	10/6/09	1630	JB	GW	3		X								X	X	X	X
	MW16-01-100609	10/6/09	1700	JB	GW	3		X								X	X	X	X
	MW16-DUP01-100609	10/6/09	—	JB	GW	3		X								X	X	X	X

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe

LAB USE ONLY

TURNAROUND TIME (Business Days)

Approved By: / Rush Code

- [x] 10 Days Standard
- [ ] 7 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] OTHER

Emergency or Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [x] REDT1 (EPA LEVEL 3) ERPIMS
- [ ] FULT1 (EPA LEVEL 4)
- [x] EDD'S

Comments / Remarks

FED EX 8696 4911 0256
8692 9697 2158

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
1	10/6/09 1730	2	3	10/7/09 1100	4 FED EX
Relinquished by:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
5		6	7		8

Lab Use Only: Custody Seal in Place: Y N Temp Blank Provided: Y N Preserved where Applicable: Y N Total # of Coolers: Cooler Temperature (s) Celsius: _____

Accutest Laboratories Southeast
Chain of Custody

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www.accutest.com

COC-~~014~~015

Accutest JOB #

PAGE 1 OF 1

Accutest Quote #

SKIFF#

Client / Reporting Information

Company Name: TETRA TECH
Address: 8000 OAK RIDGE TURNPIKE A-600
City: OAK RIDGE State: TN Zip: 37830
Project Contact: GUNTER.MULLINS@TETRATECH.COM E-mail:
Phone#: 865-599-2349
Sampler(s) Name(s) (Printed)

Project Information

Project Name: HOLLOMAN AFB
Street
City: ALAMOGORDO State: NM
Project #: TG3002
Fax #
Client Purchase Order #

Analytical Information

Accutest Sample #	Field ID / Point of Collection	Date	Time	Sampled By	Matrix	Total # of Bottles	Other	None	HCl	NaOH	HNO3	H2SO4	NaOH-ZnAc	DI Water	MeOH	VOCs 8260	TDS	Metals 8260 - Total	Metals 8260 - Diss	Metals Tal - Total	Metals Tal - Diss					Matrix Codes / Lab Use Only
	MW39-12-100609	10/6/09	1035	JB	GW	6			X		X					X	X	X	X							
	MW30833-05R-100609	10/6/09	1410	JB	GW	6			X		X					X	X			X	X					
	TB01-100609	10/6/09	—	—	GW	2			X							X										

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe

TURNAROUND TIME (Business Days)

Approved By: / Rush Code

- [X] 10 Days Standard
- [ ] 7 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] OTHER

Emergency or Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [X] REDT1 (EPA LEVEL 3) ERPIMS
- [ ] FULT1 (EPA LEVEL 4)
- [X] EDD'S

Comments / Remarks

LAB FILTERED METALS

FEDEX 8696 4911 0245

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
1	10/6/09	2	3	10/7/09 1100	4 FED EX
Relinquished by: 5	Date Time:	Received By: 6	Relinquished by: 7	Date Time:	Received By: 8

Lab Use Only: Custody Seal in Place: Y N Temp Blank Provided: Y N Preserved where Applicable: Y N Total # of Coolers: Cooler Temperature (s) Celsius: _____

JANUARY 2010 GROUNDWATER

FIELD DATA FORMS

Chain of Custody Record

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TA-COC-07

TAL-4124-280 (1007)

Client	Project Manager	Date	Chain of Custody Number
TETRA TECH, INC.	GINGER.MULLINS@TETRATECH.COM	1/7/10	100392
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	
800 OAK RIDGE TURNPIKE A-600	865-599-2349		Page 1 of 2
City / State / Zip Code	**Site Contact / Lab Contact**		
OAK RIDGE / TN / 37830	G. MULLINS / L. URIELL		
Project Name and Location (State)	**Carrier/Waybill Number**		
HOLLOMAN AFB, NM	8641 1005 2195 FEDEX		
Contract/Purchase Order/Quote No.			
80188 LISA URIELL			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil		Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH		Perchlorate 6860	Special Instructions/ Conditions of Receipt
MW39-10-010610	1/6/10	1113		X				X							X	
MW39-09-010610	1/6/10	1125		X				X							X	
MW39-11-010610	1/6/10	1330		X				X							X	
MW39-06D-010610	1/6/10	1430		X				X							X	
MW39-12-010610	1/6/10	1445		X				X							X	
MW39-06-010610	1/6/10	1555		X				X							X	
MW39-08-010610	1/6/10	1557		X				X							X	
MW39-DUP01-010610	1/6/10	—		X				X							X	
MW39-02-010710	1/7/10	0940		X				X							X	
MW39-07-010710	1/7/10	0955		X				X							X	
MW39-07-MS-010710	1/7/10	0955		X				X							X	
MW39-07-MSD-010710	1/7/10	0955		X				X							X	

Analysis (Attach list if more space is needed)

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months
(A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☒ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	1/7/10	1100	1. Received By	1/7/10	1100
2. Relinquished By	1/7/10	1400	2. Received By FEDEX	1/7/10	1400
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Chain of Custody Record

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica TA-COC-07

THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124-280 (0508)

Client: TETRA TECH, INC.	Project Manager: GINGER.MULLINS@TERATECH.COM	Date: 1/7/10	Chain of Custody Number: 123573
Address: 800 OAK RIDGE TURNPIKE A-600	Telephone Number (Area Code)/Fax Number: 865-599-2349	Lab Number	Page 2 of 2
City: OAK RIDGE; State: TN; Zip Code: 37830	Site Contact: G. MULLINS	Lab Contact: L. URIELL	
Project Name and Location (State): HOLLOMAN AFB, NM	Carrier/Waybill Number: 8641 1005 2195		
Contract/Purchase Order/Quote No.: 80188 LISA URIELL			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil		Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH		Analysis (Attach list if more space is needed): PERCHLORATE 6860											Special Instructions/ Conditions of Receipt
MW39-05-010710	1/7/10	1030		X				X							X											

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☒ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	1/7/10	1100	1. Received By	1/7/10	1100
2. Relinquished By	1/7/10	1400	2. Received By: FEDEX	1/7/10	1400
3. Relinquished By			3. Received By		

Comments

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SKIFF# 32505

Client / Reporting Information

Company Name: TETRA TECH
Address: 800 OAK RIDGE TURNPIKE A-600
City: OAK RIDGE State: TN Zip: 37830
Project Contact: GINGER.MULLINS@TETRATECH.COM E-mail:
Phone#: 865-599-2349
Sampler(s) Name(s) (Printed): J. BENNETT / A. MORENO

Project Information

Project Name: HOLLOMAN AFB
Street:
City: ALAMOGORDO State: NM
Project #: T93002
Fax #:
Client Purchase Order #:

Analytical Information

Accutest Sample #	Field ID / Point of Collection	Collection Date	Time	Sampled By:	Matrix	Total # of Bottles	Other	None	HCl	NaOH	HNO3	H2SO4	NaOH+ZnAc	DI Water	MeOH	VOCs 8260	TAL Metals Total	TAL Metals-Diss	TDS								Matrix Codes (LAB USE ONLY)
	MW30&33-01-010710	1/7/10	1440	AM	GW	6			X		X					X	X	X	X								
	MW30&33-01-MS-010710	1/7/10	1440	AM	GW	6			X		X					X	X	X	X								
	MW30&33-01-MSD-010710	1/7/10	1440	AM	GW	6			X		X					X	X	X	X								
	MW30&33-02-010710	1/7/10	1442	JB	GW	6			X		X					X	X	X	X								
	MW30&33-03-010710	1/7/10	1525	JB	GW	6			X		X					X	X	X	X								
	MW30&33-04-010710	1/7/10	1520	JB	GW	6			X		X					X	X	X	X								
	MW30&33-05R-010710	1/7/10	1605	AM	GW	6			X		X					X	X	X	X								
	MW30&33-DUP01-010710	1/7/10	—	—	GW	6			X		X					X	X	X	X								
	TB02-010710	1/7/10	—	—	W	2			X							X											

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe

TURNAROUND TIME (Business Days)

Approved By: / Rush Code

- [x] 10 Days Standard
- [ ] 7 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] OTHER

Emergency or Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [x] REDT1 (EPA LEVEL 3) ERPIMS
- [ ] FULT1 (EPA LEVEL 4)
- [x] EDD'S

Comments / Remarks

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8705 1620 6689

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1	1/7/10 1700	2	3	1/8/10 1000	4 FEDEX
Relinquished by:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
5		6	7		8

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SKIFF# 32619

Client / Reporting Information

Company Name: TETRA TECH
Address: 800 OAK RIDGE TURNPIKE A600
City: OAK RIDGE State: TN Zip: 37830
Project Contact: GINGER.MULLINS@TETRATECH.COM E-mail:
Phone#: 865-559-2349
Sampler(s) Name(s) (Printed): J. BENNETT / A. MORENO

Project Information

Project Name: HOLLOMAN AFB SS-39
Street:
City: ALAMOGORDO State: NM
Project #: T93002
Fax #:
Client Purchase Order #:

Analytical Information

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe

Accutest Sample #	Field ID / Point of Collection	Collection DATE	Collection TIME	SAMPLED BY:	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NaOH+ZnAc	DI WATER	MeOH	VOCs 8260	8 RCRA METALS TOTAL	8 RCRA METALS DISSOLVED	TDS								LAB USE ONLY
	MW39-10-010610	1/6/10	1113	JB	GW	6			X		X					X	X	X	X								
	MW39-09-010610	1/6/10	1125	AM	GW	6			X		X					X	X	X	X								
	MW39-11-010610	1/6/10	1330	AM	GW	6			X		X					X	X	X	X								
	MW39-06D-010610	1/6/10	1436	JB	GW	6			X		X					X	X	X	X								
	MW39-12-010610	1/6/10	1445	AM	GW	6			X		X					X	X	X	X								
	MW39-06-010610	1/6/10	1555	AM	GW	6			X		X					X	X	X	X								
	MW39-08-010610	1/6/10	1557	JB	GW	6			X		X					X	X	X	X								
	MW39-DUP01-010610	1/6/10	—	—	GW	6			X		X					X	X	X	X								
	TB01-010610	1/6/10	—	—	W	3			X							X											
	MW39-02-010710	1/7/10	0940	AM	GW	6			X		X					X	X	X	X								
	MW39-07-010710	1/7/10	0955	JB	GW	6			X		X					X	X	X	X								
	MW39-07-MS-010710	1/7/10	0955	JB	GW	6			X		X					X	X	X	X								

TURNAROUND TIME (Business Days)

Approved By: / Rush Code

- [X] 10 Days Standard
- [ ] 7 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] OTHER

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Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [X] REDT1 (EPA LEVEL 3) ERPIMS
- [ ] FULT1 (EPA LEVEL 4)
- [X] EDD'S

Comments / Remarks

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8705 1620 6510
8692 9697 2169

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1	1/7/10 1100	2	3	1/7/10 1400	4 FEDEX
Relinquished by:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
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Client / Reporting Information

Company Name: TETRA TECH
Address: 800 OAK RIDGE TURNPIKE A-600
City: OAK RIDGE State: TN Zip: 37830
Project Contact: E-mail: GINGER.MULLINS@TETRATECH.COM
Phone#: 865-599-2349
Sampler(s) Name(s) (Printed)

Project Information

Project Name: HOLLOMAN AFB
Street
City: ALAMOGORDO State: NM
Project #: T9300 2
Fax #
Client Purchase Order #

Analytical Information

Accutest Sample #	Field ID / Point of Collection	Date	Time	Sampled By	Matrix	Total # of Bottles	Other	None	HCl	NaOH	HNO3	H2SO4	NaOH-ZnAc	DI Water	MeOH	VOCs 8260	8 RCRA METALS TOTAL	8 RCRA METALS DISSOLVED	TDS
	MW39-07-MSD-010710	1/7/10	0955	JB	GW	6			X		X					X	X	X	X
	MW39-05-010710	1/7/10	1030	AM	GW	6			X		X					X	X	X	X

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe

LAB USE ONLY

TURNAROUND TIME (Business Days)

Approved By: / Rush Code

- [x] 10 Days Standard
- [ ] 7 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] OTHER

Emergency or Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [x] REDT1 (EPA LEVEL 3) ERPIMS
- [ ] FULT1 (EPA LEVEL 4)
- [x] EDD'S

Comments / Remarks

LAB FILTERED METALS

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Relinquished By Sampler:	Date Time:	Received By:	Relinquished by :	Date Time:	Received By:
1	1/7/10 1100	2	3	1/7/10 1400	4 FED EX
Relinquished by:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
5		6	7		8

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Client / Reporting Information

Company Name: TETRA TECH
Address: 800 OAK RIDGE TURNPIKE A-600
City: OAK RIDGE State: TN Zip: 37830
Project Contact: GINGER HUCKINS E-mail: GINGER.HUCKINS@TETRATECH.COM
Phone#: 865-599-2349
Sampler(s) Name(s) (Printed): J. BENNETT / A. MORENO

Project Information

Project Name: HOLLOMAN AFB
Street:
City: ALAMOGORDO State: NM
Project #: T93002
Fax #:
Client Purchase Order #:

Analytical Information

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe

Accutest Sample #	Field ID / Point of Collection	Collection DATE	Collection TIME	SAMPLED BY	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NaOH+ZNAC	DI WATER	MEOH	GAMMA BHC	ALPHA BHC	DIELDRIN	TDS	LAB USE ONLY
	MW16-04-010510	1/5/10	1350	JB	GW	3		X								X	X	X	X	
	MW16-03-010510	1/5/10	1406	JB	GW	3		X								X	X	X	X	
	MW16-03-MS-010510	1/5/10	1406	JB	GW	3		X								X	X	X	X	
	MW16-03-MSD-010510	1/5/10	1406	JB	GW	3		X								X	X	X	X	
	MW16-02-010510	1/5/10	1431	JB	GW	3		X								X	X	X	X	
	MW16-01-010510	1/5/10	1450	JM	GW	3		X								X	X	X	X	
	~~MW16-DUP01-10060~~																			
	MW16-DUP01-010510	1/5/10	—	JB	GW	3		X								X	X	X	X	

TURNAROUND TIME (Business Days)

Approved By: / Rush Code

- [x] 10 Days Standard
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- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] OTHER

Emergency or Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [x] REDT1 (EPA LEVEL 3) ERPIMS
- [ ] FULT1 (EPA LEVEL 4)
- [x] EDD'S

Comments / Remarks

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8702 8502 3129

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1	1/5/10 1600	2	3	1/6/10 1400	4 FEDEX
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
5		6	7		8

Lab Use Only: Custody Seal in Place: Y N Temp Blank Provided: Y N Preserved where Applicable: Y N Total # of Coolers: Cooler Temperature (s) Celsius: _____

APPENDIX E

HUMAN HEALTH RISK ASSESSMENT

HUMAN HEALTH RISK ASSESSMENT
FOR
DP-30/SD-33 (SWMU 113B) AND
SS-39 (SWMUs 165, 167, 177, 179, AND 181)
HOLLOMAN AIR FORCE BASE, NEW MEXICO
EPA ID# NM6572124422

Prepared for:

Air Force Center for Engineering and the Environment
San Antonio, Texas

Prepared by:

Tetra Tech
800 Oak Ridge Turnpike, Suite A-600
Oak Ridge, Tennessee 37830

Contract No. FA4890-06-D-0009
Task Order No. 5002

June 2010

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TABLE OF CONTENTS

1.0 INTRODUCTION 1-1

2.0 DATA EVALUATION 2-1
2.1 DATA COLLECTION AND EVALUATION 2-1
2.2 SELECTION OF THE CHEMICALS OF POTENTIAL CONCERN 2-2
2.3 CHEMICALS OF POTENTIAL CONCERN FOR GROUNDWATER 2-4
2.3.1 DP-30/SD-33 2-5
2.3.2 SS-39 2-5

3.0 EXPOSURE ASSESSMENT 3-1
3.1 EXPOSURE SETTING 3-1
3.1.1 Location and Land-Use 3-1
3.1.2 Background 3-2
3.2 RECEPTORS 3-2
3.3 EXPOSURE QUANTIFICATION 3-4
3.4 EXPOSURE POINT CONCENTRATIONS 3-5

4.0 TOXICITY ASSESSMENT 4-1

5.0 RISK CHARACTERIZATION 5-1
5.1 CARCINOGENIC RISKS FOR HAFB GROUNDWATER 5-1
5.2 NONCARCINOGENIC RISKS FOR HAFB GROUNDWATER 5-2

6.0 UNCERTAINTY ANALYSIS 6-1
6.1 UNCERTAINTIES ASSOCIATED WITH COPC SELECTION 6-1
6.1.1 Chemicals Potentially Attributable to Background 6-1
6.1.2 Absence of COPC Screening Levels 6-1
6.2 UNCERTAINTIES ASSOCIATED WITH THE EXPOSURE ASSESSMENT 6-1
6.2.1 Land-Use 6-2
6.2.2 Exposure Parameters 6-2
6.3 UNCERTAINTIES RELATED TO TOXICITY INFORMATION 6-2
6.4 UNCERTAINTIES AND ASSUMPTIONS IN THE CHARACTERIZATION 6-2

7.0 REFERENCES 7-1

TABLES

2.1 Summary of Site-Related Chemicals and COPC Screening for Groundwater, DP-30/SD-33
2.2 Summary of Site-Related Chemicals and COPC Screening for Groundwater, SS-39
2.3 Summary of Site-Related Chemicals and COPC Screening of Shallow Groundwater (0 to 10 ft bgs), SS-39
2.4 Exposure Point Concentration Summary Reasonable Maximum Exposure for Groundwater, DP30/SD33
2.5 Exposure Point Concentration Summary Reasonable Maximum Exposure for Groundwater, SS-39
2.6 Exposure Point Concentration Summary Reasonable Maximum Exposure for Groundwater, SS-39 (0-10 ft bgs)
3.1 Values of Daily Intake Calculations for Exposure of Construction Workers to Groundwater
3.2 Reasonable Maximum Exposure (RME) Calculation of Chemical Cancer Risks and Non-Cancer Hazards Including Dissolved Inorganics
5.1 DP-30/SD-33 Vapor Intrusion Risk Summary
5.2 SS-39 Vapor Intrusion Risk Summary

APPENDICES

APPENDIX A Johnson and Ettinger Model Calculations for TCE at DP-30/SD-33
APPENDIX B Johnson and Ettinger Model Calculations for Carbon Tetrachloride at SS-39
APPENDIX C Johnson and Ettinger Model Calculations for Chloroform at SS-39
APPENDIX D Johnson and Ettinger Model Calculations for Naphthalene at SS-39
APPENDIX E Johnson and Ettinger Model Calculations for TCE at SS-39

ACRONYMS AND ABBREVIATIONS

bgs	below ground surface
COC	chemical of concern
COPC	chemical of potential concern
cm^2/day	square centimeters per day
CSF	cancer slope factor
EPA	U.S. Environmental Protection Agency
EPC	exposure point concentration
ft	foot or feet
HAFB	Holloman Air Force Base
HHRA	Human Health Risk Assessment
HI	hazard index
ILCR	incremental lifetime cancer risk
LTM	Long-Term Monitoring
MCL	Maximum Contaminant Level
m^3/hour	cubic meters per hour
NMWQCC	New Mexico Water Quality Control Commission
RSL	Regional Screening Level
RAGS	Risk Assessment Guidance for Superfund
RfD	reference dose
RME	reasonable maximum exposure
SWMU	Solid Waste Management Unit
TAL	target analyte list
TCE	trichloroethene
Tetra Tech	Tetra Tech, Inc.
UCL	Upper Confidence Level
UDMH	unsymmetrical dimethylhydrazine
VOC	volatile organic compound

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1.0 INTRODUCTION

This section presents the results of the Human Health Risk Assessment (HHRA), which was conducted to characterize the risks to humans associated with the potential current or future exposures to chemicals in groundwater at DP-30/SD-33 and SS-39 at Holloman Air Force Base (HAFB). This assessment evaluates the potential risks to human health if no remedial action is taken and, therefore, represents the "No Action" alternative. This section also provides a preliminary list of chemicals of concern (COCs), which is further evaluated by the risk managers to determine final COCs.

The methods used in the HAFB groundwater HHRA are based on the following standard U.S. Environmental Protection Agency (EPA) guidance presented in:

- *Risk Assessment Guidance for Superfund* (RAGS) Volume I - Human Health Evaluation Manual (Part A) (EPA, 1989);
- RAGS Part B, (*Development of Risk-based Preliminary Remediation Goals*) (EPA, 1991a);
- RAGS Part D, *(Standardized Planning, Reporting, and Review of Superfund Risk Assessments*) (EPA, 2001);
- RAGS Part E, (*Supplemental Guidance for Dermal Risk Assessment*) (EPA, 2004b); and
- *Model for Subsurface Vapor Intrusion into Buildings* (Johnson and Ettinger, 1991);

Additional methods were taken from:

- *Dermal Exposure Assessment: Principles and Applications* (EPA, 1992);
- *Human Health Evaluation Manual, Supplemental Guidance "Standard Default Exposure Factors*" (EPA, 1991b);
- *Exposure Factors Handbook* (EPA, 1997);
- Oak Ridge National Laboratory Risk Assessment Information System internet site at http://risk.lsd.ornl.gov;

- *Integrated Risk Information System* (EPA, 2009a) (updated approximately monthly); and
- Other guidance documents.

The methods for the HHRA consist of the following six steps:

- **Step 1** – Data evaluation – The selection of chemicals of potential concern (COPCs) for groundwater at HAFB. The COPCs identified in Step 1 are evaluated quantitatively (when possible) and discussed qualitatively otherwise.
- **Step 2** – Exposure assessment – The identification of potential current and future human receptors that may be exposed to the COPCs, the evaluation of the pathways by which the receptors may be exposed, and the estimation of chemical intake resulting from exposure.
- **Step 3** – Toxicity assessment – An assessment of toxicity of each COPC including the presentation of the toxicity criteria (i.e., cancer slope factors, reference doses) typically used by EPA to estimate risk.
- **Step 4** – Risk characterization – The estimation of cancer and non-cancer risks using the intakes and toxicity criteria presented in the exposure assessment and toxicity assessment, respectively.
- **Step 5** – Uncertainty analysis – The identification of major uncertainties affecting the interpretation of the HHRA results.
- **Step 6** – Summary and Conclusions – The summary and conclusions of the HHRA.

The objectives of the HHRA are to (1) document and evaluate risks to human health; (2) determine the need, if any, for remedial action; and (3) identify COCs. COCs are those chemicals determined by the HHRA to pose (or significantly contribute to) a potential risk to human receptors in excess of target risk benchmarks. The development of chemical-specific remediation levels may be required for these chemicals. Preliminary COCs are identified for an environmental media when the receptor risk exceeds a cumulative cancer risk benchmark of 1E-06 or a total non-cancer hazard index (HI) benchmark of 1 for non-carcinogens.

Three major conditions of chemical contamination and environmental fate and transport are considered when evaluating potential risks: (1) contaminants with toxic characteristics must be

found in environmental media and must be released by either natural processes or by human action; (2) potential exposure points must exist; and (3) human receptors must be present at the point of exposure. If any of the factors listed above are absent, risks are not quantitatively evaluated for that exposure pathway.

The quantitative HHRA for HAFB groundwater is presented using tables based on EPA RAGS Part D (EPA, 2001).

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2.0 DATA EVALUATION

Data evaluation involves sorting the data by medium, evaluating the quality of data with respect to qualifiers and codes, and developing a dataset for use in the HHRA (i.e., the selection of COPCs). Section 2.1 describes the data that were used in the HHRA, Section 2.2 describes the selection of COPCs, and Section 2.3 summarizes the results of the COPC screening process.

2.1 DATA COLLECTION AND EVALUATION

The data used in the HHRA consisted of the following:

- Only recent data were used (2006 to 2010) in the preparations of this HHRA in order to represent current site conditions.
- Groundwater data collected from monitoring wells at sites DP-30/SD-33 (MW30&33-01, -02, -03, -04, and -05R) and SS-39 (MW39-02, -05, -06, -06D, -07, -08, -09, -10, -11, -12) were considered in estimating risk.
- Due to the potential risk from receptors exposed to groundwater in an excavation, groundwater data collected from 0 to 10 ft below ground surface (bgs) was evaluated separately. All other risk evaluation was calculated using groundwater data from all depths. Because groundwater is deeper than 10 ft bgs at DP-30/SD-33, risk from groundwater exposure in an excavation was only evaluated at site SS-39.
- For groundwater, filtered and unfiltered samples were collected and analyzed for target analyte list (TAL) metals. Unfiltered samples were collected and analyzed for perchlorate, unsymmetrical dimethylhydrazine (UDMH), and volatile organic compounds (VOCs) at site SS-39. Filtered explosives were not used in the risk assessment.
- The analytical laboratory selected the most appropriate analytical result if re-analyses/ dilutions were necessary. That result is evaluated in the determination of the COPCs for this risk assessment. Rejected data from data validation were not used.
- Non-detected data were retained at half their detection limit for statistical analysis.

Chemical analyses were performed in accordance with SW-846 methods. The analytical results were evaluated using the National Functional Guidelines (EPA, 1994a) to assess data usability and laboratory compliance with the analytical methods. The analytical data were reviewed, validated, and evaluated using the criteria specified in the data quality objectives. Validated data (and qualifiers) are presented in Tables 4-4, 4-8, and 4-12 of the April 2009 – January 2010 Long-Term Monitoring (LTM) Report. All unqualified positive detections and "J" qualified detections (estimated values) were considered as detected concentrations for this HHRA. All non-detect results (indicated with a "U" qualifier) were retained in the HHRA dataset. A data quality summary is presented in Appendix B of the April 2009 – January 2010 (LTM) Report.

The data evaluation included the calculation of basic descriptive statistics for each dataset evaluated in the HHRA. Basic statistics included frequency of detection, range of positive detections, arithmetic mean, normal 95 percent Upper Confidence Level (UCL) on the mean, and the most appropriate 95 percent UCL depending upon the data distribution and the skewness, as predicted by EPA Technical Support Center ProUCL Version 4.0. These descriptive statistics were also used in the determination of the exposure point concentration (EPC) selected in the exposure assessment.

2.2 SELECTION OF THE CHEMICALS OF POTENTIAL CONCERN

The purpose of the screening process is to eliminate chemicals for which no further risk evaluation is needed.

COPCs for the ingestion of groundwater pathway in the HHRA are limited to those chemicals that exceed a selection criterion. The premise of this screening step is that risk is typically dominated by a few chemicals and that, although dozens may actually be detected, many chemicals may contribute minimally to the total risk.

The following assumptions are used in the determination of the groundwater COPCs:

- Physical chemical data (e.g., alkalinity, pH, etc.) are not considered to be COPCs for HAFB groundwater.
- Both filtered and unfiltered groundwater samples were used for TAL metals analysis. Both filtered and unfiltered COPCs were determined for metals at each site; however, risk was

calculated only for unfiltered COPCs. Filtered data are typically more indicative of the soluble or dissolved, and therefore more mobile, chemical concentrations in groundwater.

Two weight-of-evidence screens (a frequency of detection screen and a screen for naturally occurring essential elements) were also used to eliminate chemicals from further consideration in the HHRA:

- If a data subset contained 20 or more data points, a frequency-of-detection screen was applied. Chemicals with a frequency of detection of less than 5 percent of the samples analyzed were noted in the text if selected as a COPC.
- Naturally occurring essential elements, including calcium, magnesium, potassium, and sodium, are typically considered to be toxic only at high concentrations and are typically not selected as COPCs. These inorganics are an integral part of the human food supply and are often added to food as supplements. EPA recommends that these chemicals not be evaluated as COPCs as long as they are (1) present at concentrations only slightly elevated above naturally occurring levels, and (2) toxic only at doses much higher than those that could be associated with contact at a site. Consequently, these essential nutrients were not selected as potential COPCs.

For this risk assessment, risk-based and health-based criteria were used to further reduce the number of chemicals considered in the risk assessment. This toxicity screening results in reduction in the number of chemicals evaluated in the HHRA. More importantly, the screening focuses the risk assessment on those chemicals most likely to be significant in terms of risk. The COPCs were defined as chemicals that were positively detected in groundwater at a maximum concentration exceeding screening values, as described below.

Environmental sampling results were compared to screening values based on New Mexico Water Quality Control Commission (NMWQCC) standards. If a chemical did not have an NMWQCC standard, it was compared to its EPA Regional Screening Levels (RSLs) (EPA, 2009). Maximum Contaminant Levels (MCLs) were also shown for informational purposes but not used in screening. Conservatively, screening levels based on RSLs for noncarcinogens are one-tenth these RSLs to further account for potential cumulative noncarcinogenic effects. If screening levels exist for a chemical for both carcinogenic and noncarcinogenic effects, the lower of the two values was used as the COPC selection criteria. The full values of NMWQCC standards were used for screening.

NMWQCCs are found at http://www.nmcpr.state.nm.us/nmac/parts/title20/20.006.0002.htm. RSLs are found at http://www.epa.gov/region09/waste/sfund/RSL/index.html. Drinking water MCLs are obtained from the EPA Safe Drinking Water website, currently at http://www.epa.gov/safewater/mcl.html.

The maximum detected concentration for each detected chemical in groundwater at each site was screened against its NMWQCC standard or the screening levels based on RSLs if an NMWQCC was not available. Chemicals that exceed toxicity screening levels were retained as COPCs. Conversely, chemicals that were not detected or were not detected at maximum concentrations exceeding toxicity screening levels were not retained as COPCs.

If EPA-approved toxicity information, such as cancer slope factors or reference doses, is available, the COPCs are then classified as quantitative COPCs. If no toxicity information is available, the chemicals are further evaluated in the uncertainty section of the HHRA. The quantitative COPCs are further discussed in the section on toxicity assessment.

All detected VOCs in the risk assessment dataset are considered COPCs for the vapor intrusion pathway.

The results of the COPC screen are shown for groundwater at each site and are presented in Tables 2.1 through 2.3. The standard tables published in the EPA RAGS Part D are used to present the exposure assumptions, intake equations, dose estimates, toxicity criteria (i.e., cancer slope factors, reference doses), and cancer and noncancer risk estimates for receptors evaluated in this HHRA. Because of the use of the standard numbering system, the table numbers may not reflect the order in which they are referenced in the document. Some standard RAGS Part D tables were not needed in this HHRA and do not appear in the attachments. There are minor formatting differences between the tables and the suggested RAGS Part D tables.

2.3 CHEMICALS OF POTENTIAL CONCERN FOR GROUNDWATER

COPCs in groundwater are summarized for each site in Tables 2.4 through 2.6. COPCs include inorganics, perchlorate, and VOCs. Uncertainties associated with COPC selection are discussed in Section 6.1.

2.3.1 DP-30/SD-33 – Grease Trap disposal Pits and Cooking Grease Disposal Trench

COPCs for groundwater at DP-30/SD-33 are listed in Table 2.4 and include antimony, arsenic, manganese, thallium, and trichloroethene (TCE). As stated in Section 2.1, because groundwater at DP-30/SD-33 is found at depths greater than 10 ft bgs, risk associated with exposure to COPCs in groundwater in an excavation was not evaluated.

2.3.2 SS-39 – Missile Fuel Spill Area

COPCs for groundwater at SS-39 are listed in Tables 2.5 and 2.6, which include arsenic, cadmium, selenium, perchlorate, carbon tetrachloride, chloroform, naphthalene, and TCE. As stated in Section 2.1, there is risk associated with exposure to groundwater in an excavation and; therefore, risk is calculated for groundwater data collected at 0 to 10 ft bgs. Table 2.5 shows COPCs for groundwater at all depths. Table 2.6 shows COPCs for groundwater at 0 to 10 ft bgs. In this case, COPCs are the same for both evaluations.

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3.0 EXPOSURE ASSESSMENT

The exposure assessment defines and evaluates the current and potential future exposures experienced by receptor populations. More specifically, an exposure assessment identifies the pathways by which humans are potentially exposed to COPCs, the magnitude of the potential human exposure, and the frequency and duration of exposure. This process involves several steps:

- Characterization of the exposure setting in terms of physical characteristics and the populations that may potentially be exposed to site-related chemicals.
- Identification of potential exposure pathways and receptors.
- Quantification of exposure for each receptor in terms of the amount of chemical that is ingested, inhaled, or absorbed through the skin from all potentially complete exposure pathways.

The output of the exposure assessment (an estimate of COPC intake) is used in conjunction with toxicity criteria (i.e., cancer slope factors and reference doses) identified in the toxicity assessment (Section 4.0) to quantify risks and hazards to receptors during risk characterization (Section 5.0). Uncertainties and assumptions associated with the exposure assessment are discussed in Section 6.2.

3.1 EXPOSURE SETTING

The following sections provide a brief summary of the location and land-use at HAFB as well aa background information on sites DP-30/SD-33 and SS-39.

3.1.1 Location and Land-Use

HAFB is situated in south-central New Mexico, in the northwest-central part of Otero County. As shown on Figure 1-1 in the April 2009 – January 2010 LTM Report, HAFB is located approximately 75 miles northeast of El Paso, Texas, and seven miles west of Alamogordo, New Mexico. HAFB occupies about 50,000 acres in the northeast quarter of section Township 17 South, Range 8 East. Additional land extending northward is occupied by the White Sands Missile Range testing facilities.

The HAFB property is occupied by active or formerly active production or storage facilities, landfills, disposal areas, burn areas, and a fire training area. Privately owned, public, and federally owned land border HAFB. The major highway serving HAFB is Highway 70, which runs southwest from Alamogordo and forms the boundary between HAFB and public lands.

3.1.2 Background

The Grease Trap Disposal Pits (DP-30) and the Cooking Grease Disposal Trench (SD-33) [Solid Waste Management Unit (SWMU) 113B] are located in the southeastern portion of HAFB, northwest of the airfield and Sabre Road and west of the Fire Protection Training Area (Figure 1-2 in the April 2009 – January 2010 LTM Report). As shown on Figure 2-1 in the April 2009 – January 2010 LTM Report, DP-30 and SD-33 are located on opposite sides of an unpaved and unnamed service road, approximately 15 ft apart. The unnamed service road connects the two sites to Sabre Road and provides vehicle access. The area north of DP-30/SD-33 is restricted. Several highly restricted buildings are located near the two sites; consequently, unauthorized access to the DP-30/SD-33 area is prohibited. DP-30 and SD-33 are currently unpaved, undeveloped, and moderately vegetated with shrubs and grasses.

The Missile Fuel Spill Area [SS-39 (SWMUs 165, 167, 177, 179, and 181)], is located in the central portion of HAFB at the Test Sled Launch Area, at Building 1176, and along the northern slope of the Lost River Drainage Basin (Figure 1-2 in the April 2009 – January 2010 LTM Report). As shown on Figure 2-2 in the April 2009 – January 2010 LTM Report, the site consists of two outfall areas located downgradient of the oxidizer and propellant spill drainpipes and drainage troughs and sumps located near Building 1176.

3.2 RECEPTORS

Potential current and future receptors considered include:

- Industrial Workers,
- Construction Workers,
- Agricultural Workers,
- Residents,
- Trespassers, and
- Visitors.

Industrial Workers

As there are no potable wells utilized onsite, industrial workers would not be exposed to groundwater through ingestion or dermal contact. Industrial workers may be exposed to inhalation of vapors intruding into a building. There are currently no buildings on the sites under assessment, and none are expected in the future; however, and evaluation was conducted to be conservative. This pathway was evaluated using the Johnson and Ettinger (1991) Model for Subsurface Vapor Intrusion into Buildings.

The industrial worker was assumed to be onsite 250 days/year for 25 years.

Construction/Excavation Workers

Construction workers may come into contact with shallow groundwater while excavating or performing work in a trench 0 to 10 ft bgs. At site DP-30/SD-33, groundwater was found at depths greater than 10 ft bgs; therefore, this pathway is not complete for that site. Groundwater was found between 0 and 10 ft bgs at SS-39, thus the construction worker pathway was evaluated for site SS-39.

The construction worker was assumed to be onsite 250 days/year for 1 year. The trench was assumed to contain groundwater every other day or 125 days/year. The incidental ingestion rate of groundwater in a trench was assumed to be 0.1 liters/day (EPA, 2002) and was assumed to be exposed 1 hour/day to groundwater in trench. The construction worker was expected to be dermally exposed to groundwater to his hands, forearms, lower legs, and feet or 5672 cm^2/day [Exhibit C-1 of RAGS E, Dermal Guidance (EPA, 2004a)]. The inhalation rate of the construction worker was assumed to be 0.83 m^3/hour.

Agricultural Workers

The areas of contamination do not include agricultural use areas, nor is agricultural use planned in the future, so exposure to agricultural workers would not be a complete pathway. This pathway was not evaluated further.

Resident

Currently, there are no residential structures at DP-30/SD-33 or SS-39. Future residential use is not expected at either site. Additionally, as there are no potable wells utilized onsite, hypothetical residents would not be exposed to groundwater through ingestion or dermal contact. This pathway was not evaluated further.

Trespassers/Visitors

The area north of DP-30/SD-33 is restricted. Several highly restricted buildings are located near the two sites; consequently, unauthorized access to the DP-30/SD-33 area is prohibited and trespassers and visitors are unlikely. Because of its central location on HAFB, trespassers are considered unlikely at SS-39 because of its distance from facility boundaries. SS-39 is not an area frequented by visitors. This pathway was not evaluated further.

3.3 EXPOSURE QUANTIFICATION

Intake or dose is defined as the amount of a COPC that could be in contact with the receptor per unit body weight per unit time. For the HAFB HHRA, intakes of groundwater for the construction worker were calculated using the standard intake equation from EPA guidance (EPA, 1989).

The standard tables published in the EPA RAGS Part D are used to present the exposure assumptions, intake equations, dose estimates, toxicity criteria (i.e., cancer slope factors, reference doses), and cancer and non-cancer risk estimates for receptors evaluated in this HHRA. These tables also include references for exposure assumptions.

For the vapor intrusion pathway, the tables provided in *The Model for Subsurface Vapor Intrusion into Buildings* (Johnson and Ettinger, 1991) are used to present the exposure assumptions, intake equations, dose estimates, toxicity criteria (i.e., cancer slope factors, reference doses), and cancer and non-cancer risk estimates for receptors evaluated in this HHRA.

Table 3.1 provides the dose equations used to estimate chemical intake for construction workers at SS-39. Where available, the exposure assumptions used in the equations were those suggested by standard EPA guidance documents.

Reasonable maximum exposure (RME) values for the construction worker at SS-39 are provided in Table 3.2.

Appendix A through Appendix E provide the values used to estimate chemical exposure for commercial/industrial workers at both sites where the vapor intrusion pathway is completed. Where available, the exposure assumptions were those suggested by the vapor intrusion model. Site-specific data were used for the average temperature of soil/groundwater, depth below grade to the water table, and soil classification.

3.4 EXPOSURE POINT CONCENTRATIONS

The EPC is the concentration of a COPC used to best estimate the intake of a COPC detected in an environmental media. Ideally, the EPC should be the true average concentration within the exposure unit for the media. However, because of the uncertainty associated with estimating the true average concentration at a site, the 95 percent UCL of the arithmetic mean is selected as the EPC. The following procedure was used to determine EPCs in the HHRA for HAFB:

- If there were fewer than ten samples, the maximum concentration was chosen as the EPC because the UCL does not provide a good estimation of the upper bound of the mean concentration for small datasets.
- For non-detect values, one-half of the detection limit was used.
- If there were more than ten samples, each dataset was evaluated using the EPA ProUCL 4.0 program for determining UCLs (EPA, 2004a). Information on this program is available at http://www.epa.gov/esd/tsc/images/proucl3.pdf
- If the calculated 95 percent UCL exceeded the maximum detected concentration, the maximum detected concentration was selected as the EPC.

EPCs were calculated for analytes detected in groundwater at DP-30/SD-33, SS-39, and for SS-39 groundwater from 0 to 10 ft bgs only. These EPCs are presented in Tables 2.4 through 2.6.

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4.0 TOXICITY ASSESSMENT

Information concerning the potential human health effects of exposure to COPCs is examined by the risk assessor during the toxicity assessment. For each COPC, the goal of the toxicity assessment is to provide a quantitative estimate of the relationship between the magnitude and type of exposure and the severity or probability of human health effects.

Toxicity values for COPCs were those from the most recent RSL tables (EPA, 2009b). These toxicity values are integrated with the exposure assessment (Section 3.0) to characterize the potential for the occurrence of adverse health effects. Uncertainties associated with toxicity information is discussed in Section 6.3.

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5.0 RISK CHARACTERIZATION

Information from the exposure and toxicity assessments were evaluated to estimate cancer risks and (HI) hazard indices in the risk characterization. Total noncarcinogenic and carcinogenic risk estimates for the exposure routes, as well as the cumulative risks for each receptor are presented in Table 3.2. Total noncarcinogenic and carcinogenic risk estimates for the vapor intrusion exposure route are presented in Tables 5.1 and 5.2. The calculations for these estimates are presented in Appendix A through Appendix E. Uncertainties and assumptions associated with the risk characterization are discussed in Section 6.4.

5.1 CARCINOGENIC RISKS FOR HAFB GROUNDWATER

The incremental lifetime cancer risk (ILCR) estimates developed for a construction worker exposed to unfiltered inorganics and organics in groundwater were as follows:

Receptor	Media and Cancer Risk Estimate		Table
SS-39 0-10 ft bgs	Groundwater	7.4E-07	3.2

ILCR estimates calculated the construction worker at SS-39 do not exceed 1E-06, the conservative end of the EPA target risk range.

ILCR estimates calculated for a commercial/industrial worker exposed to VOC intrusion into buildings were as follows:

Receptor	Media and Cancer Risk Estimate		Table
DP-30/ SD-33	Groundwater	5.6E-06	5.1
SS-39	Groundwater	5.1E-05	5.2

The ILCR estimates for the commercial/industrial worker at DP-30/ SD-33 and SS-39 are within the EPA target risk range of 1E-04 to 1E-06 but exceeds the conservative end of the range (1E-06), due to inhalation of TCE. The ICLR estimate for inhalation of other VOCs at SS-39 is 1.7E-07.

5.2 NONCARCINOGENIC RISKS FOR HAFB GROUNDWATER

HIs developed for a construction worker exposed to unfiltered inorganics and organics in groundwater were as follows:

Receptor	Media and Hazard Index		Table in Appendix
SS-39 0-10 ft bgs	Groundwater	0.28	3.2

HIs developed for a commercial/industrial worker exposed to VOC intrusion into buildings were as follows:

Receptor	Media and Hazard Index		Table in Appendix
DP-30/ SD-33	Groundwater	0.0036	5.1
SS-39	Groundwater	0.032	5.2

HIs calculated for both a construction worker in an excavation and for vapor intrusion are less than one, indicating that adverse noncarcinogenic health effects are not anticipated under the conditions established in the exposure assessment.

6.0 UNCERTAINTY ANALYSIS

This HHRA for HAFB was performed in accordance with current EPA guidance. However, there are varying degrees of uncertainty associated with the HRRA. The following sections discuss general uncertainties in risk assessment and uncertainties specific to the risk assessment for HAFB.

6.1 UNCERTAINTIES ASSOCIATED WITH COPC SELECTION

The following issues may contribute to uncertainty in COPC selection:

- The inclusion of chemicals potentially attributable to background, and
- The absence of screening levels.

A brief discussion of each of these issues is provided in the remainder of this section.

6.1.1 Chemicals Potentially Attributable to Background

The maximum concentrations of detected chemicals were not compared to background concentrations and may reflect background conditions at all sites under this assessment.

6.1.2 Absence of COPC Screening Levels

Essential human nutrients (e.g., magnesium, potassium, calcium, and sodium) do not have screening levels listed in this report. These nutrients were eliminated from consideration as COPCs. Exclusion of these chemicals as COPCs is not expected to add significant uncertainty to the risk estimates.

6.2 UNCERTAINTIES ASSOCIATED WITH THE EXPOSURE ASSESSMENT

Uncertainty in the exposure assessment arises because of the methods used to calculate EPCs, the selection of receptors, the selection of land-use scenarios and assumptions to be evaluated, and the selection of exposure parameters.

6.2.1 Land-Use

The current land use patterns of HAFB are established, thereby reducing the uncertainty associated with current land use assumptions. The anticipated future land use patterns of HAFB are not expected to change. This HHRA is based on these known and anticipated future land use scenarios; therefore, the land-use assumptions presented herein are not expected to lead to an underestimation of risk.

6.2.2 Exposure Parameters

The exposure assessment factors (e.g., exposure frequency and duration) are based on RME assumptions. Generally, exposure factors are based on surveys of physiological and lifestyle profiles across the United States. The attributes and activities studied in these surveys generally have a broad distribution. To avoid underestimation of potential risks, RME exposure factors values were used in this risk evaluation. Therefore, the risk is not likely to be underestimated for reasonably maximum exposed individuals and is more likely to be overestimated for the general populations exposed to the chemicals in the environmental media at the sites.

No default exposure parameter was available for exposure frequency to standing water in an excavation trench. An assumption of 125 days/year was used and may be an overestimation of the risk.

6.3 UNCERTAINTIES RELATED TO TOXICITY INFORMATION

Uncertainties associated with toxicity values are those associated with the developed values in the RSL tables (EPA, 2009b).

6.4 UNCERTAINTIES AND ASSUMPTIONS IN THE CHARACTERIZATION

There are uncertainties concerning the summation of hazards and carcinogenic risk estimates across chemicals and pathways. These include the possibility of synergistic or antagonistic reactions and the varying levels of accuracy and precision of the reference doses (RfDs) or cancer slope factors (CSFs). In addition, the target organs for carcinogens may be different and therefore summation of the risk may not be appropriate in all cases.

7.0 REFERENCES

EPA, 1989. *Risk Assessment Guidance for Superfund, Volume 1: Human Health Evaluation Manual (Part A)* EPA/540/1-89/002, Office of Emergency and Remedial Response, Washington, D.C.

EPA, 1991a. *Risk Assessment Guidance for Superfund: Volume 1, Human Health Evaluation Manual (Part B - Development of Risk-based Preliminary Remediation Goals)*. Office of Emergency and Remedial Response, Washington, D.C.

EPA, 1991b. *Risk Assessment Guidance for Superfund - Volume I - Human Health Evaluation Manual - Supplemental Guidance - Standard Default Exposure Factors (Interim Final)*. OSWER Directive 9285.6-03. Washington, D.C. March 25

EPA, 1992. *Dermal Exposure Assessment: Principals and Applications. Office of Health and Environmental Assessment*. EPA/600/6-88/005Cc.

EPA, 1994a. *EPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* EPA-540/R-94-012 (PB94-963501), Office of Emergency and Remedial Response, Washington, D.C.

EPA, 1997. *Exposure Factors Handbook*, EPA/600/p-95/002, Office of Health and Environmental Assessment, Washington, D.C.

EPA, 2001. *Volume I - Human Health Evaluation Manual (Part D, Standardized Planning, Reporting and Review of Superfund Risk Assessments) Final*.

EPA 2002. *Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites*. OSWER 9355.4-24. December 2002.

EPA, 2004a. *ProUCL Version 4.0 Statistical Software to Compute Upper Confidence Limits of the Unknown Population Mean*.

EPA, 2004b. *Risk Assessment Guidance for Superfund (RAGS), Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment) Interim*.

EPA, 2009a. *Integrated Risk Information System IRIS website*, visited in 2009. http://www.epa.gov/iris/

EPA, 2009b. *Regional Screening Levels (RSL) for Chemical Contaminants at Superfund Sites*. http://www.epa.gov/region09/waste/sfund/RSL/index.html. December.

Johnson, P.C., and R. A. Ettinger, 1991. *Heuristic model for predicting the intrusion rate of contaminant vapors into buildings.* Environ. Sci. Technology, 25:1445-1452.

TABLES

Table 2.1
Summary of Site-Related Chemicals and COPC Screening for Groundwater
DP-30/SD-33
Holloman AFB, New Mexico

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater

Chemical (µg/L)	Frequency of Detection (Number)	Mininum Non-Detected	Maximum Non-Detected	Mininum Detected	Maximum Detected	Sample of Maximum Detected	Mean of All Samples	[1]Residential RSL	[2]Cancer/Non-Cancer	NWWQCC	[3]MCL	Exceeds NMWQCC	Rationale
Volatile Organic Compounds													
1,1-Dichloroethane	26/32	0.24	1	0.49 J	11.5	MW30&33-05 7/15/2006	3.34	2.4	c	24.2	NA	No	BSL
1,1-Dichloroethene	9/32	0.0736	1	0.54 J	1.92	MW30&33-05 1/17/2007	0.581	34	n	340	7	No	BSL
1,3-Dichlorobenzene	1/26	0.0672	1	0.07 J	0.07 J	MW30&33-05 7/15/2006	0.151	NA	n	NA	NA	No	TOX
2-Butanone	1/32	0.394	5	0.59 J	0.59 J	MW30&33-05 7/15/2006	1.359	710	n	7065	NA	No	BSL
4-Bromofluorobenzene	3/3	-	-	47.3	49.3	MW30&33-04 1/17/2007	48.517	NA	n	NA	NA	No	TOX
Benzene	1/32	0.0495	1	0.29 J	0.29 J	MW30&33-05 7/15/2006	0.276	0.41	c	4.1	5	No	BSL
Chloroform	21/32	0.28	1	0.26 J	1.72	MW30&33-03 01/17/2007	0.570	0.19	c	1.9	80	No	BSL
cis-1,2-dichloroethene	10/32	0.101	1	0.17 J	14.9	MW30&33-05R 01/7/2010	2.105	37	n	365	70	No	BSL
Dibromofluoromethane	3/3	-	-	51.1	52.4	MW30&33-03 01/17/2007	52.067	NA	n	NA	NA	No	TOX
m,p-Xylene	1/32	0.0363	2	0.04 J	0.04 J	MW30&33-05 7/15/2006	0.481	120	n	620	NA	No	BSL
Toluene	3/23	0.35	0.35	46.9	48.1	MW30&33-04 1/17/2007	6.363	230	n	2281	1000	No	BSL
Trichloroethene	29/32	0.32	0.32	0.36 J	59.3	MW30&33-05 7/15/2006	16.041	2	c	16.5	5	**Yes**	ASL
Metals													
ALUMINUM	15/29	44	1000	54	26900	MW30&33-05 07/11/2008	1674	3700	n	36500	50	No	BSL
ANTIMONY	4/29	9	100	10	32 J	MW30&33-05 7/16/2007	17.7	1.5	n	14.6	6	**Yes**	ASL
ARSENIC	6/29	5	50	13.3 J	31.3 J	MW30&33-05 07/11/2008	14.6	0.045	c	0.448	10	**Yes**	ASL
BARIUM	17/29	20	55	11.9	315 J	MW30&33-05 07/11/2008	34	730	n	7300	2000	No	BSL
CALCIUM	29/29	-	-	670000	1560000	MW30&33-05 07/11/2008	844879	NA	n	NA	NA	No	NUT
CHROMIUM	2/20	2	10	22.8 J	31 J	MW30&33-05 07/11/2008	5.3	11	n	109.5	100	No	BSL
COBALT	7/29	1	25	1.1	17 J	MW30&33-05 7/16/2007	4.7	1.1	n	50	NA	No	BSL
COPPER	1/20	5	25	52.1	52.1	MW30&33-02 07/8/2009	8.8	150	n	1460	1300	No	BSL
IRON	7/29	92	4800	105	23600	MW30&33-05 07/11/2008	1924	2600	n	25550	300	No	BSL
LEAD	2/20	8	10	20.1	22	MW30&33-05 07/11/2008	6.0	15	n	50	15	No	BSL
MAGNESIUM	29/29	-	-	1160000	1950000	MW30&33-02 07/11/2008	1515690	NA	NA	NA	NA	No	NUT
MANGANESE	13/29	1	50	1 J	1460	MW30&33-05 07/11/2008	140	88	n	876	50	**Yes**	ASL
MERCURY	2/29	0.14	0.3	0.099 J	0.27 J	MW30&33-01 01/09/2009	0.097	0.063	n	0.561538462	2	No	BSL
MOLYBDENUM	4/6	70	70	33 J	47 J	MW30&33-05 7/16/2007	36.500	NA	NA	NA		No	BSL
NICKEL	4/20	2.3	12	5.6	33.2 J	MW30&33-05 07/11/2008	7.0	73	n	730	NA	No	BSL
POTASSIUM	23/29	5700	36500	2100 J	33000 J	MW30&33-05 01/07/2009	14148	NA	NA	NA	NA	No	NUT
SELENIUM	22/29	10	75	14.6 J	54.7	MW30&33-02 01/7/2010	28.91	18	n	182.5	50	No	BSL
SODIUM	29/29	-	-	2820000 J	7710000	MW30&33-03 01/17/2007	5440000	NA	NA	NA	NA	**Yes**	NUT
THALLIUM	5/29	3.6	110	14.7 J	39 J	MW30&33-04 7/19/2007	18.73	0.24	n	2.409	2	**Yes**	ASL
VANADIUM	25/29	19	56	17.7	121 J	MW30&33-05 07/11/2008	36.0	26	n	182.5	NA	No	BSL
ZINC	2/20	7.4	65.3	44.6	112	MW30&33-05 07/11/2008	17	1100	n	10950	5000	No	BSL

Table 2.1
Summary of Site-Related Chemicals and COPC Screening for Groundwater
DP-30/SD-33
Holloman AFB, New Mexico

Chemical (µg/L)	Frequency of Detection (Number)	Mininum Non-Detected	Maximum Non-Detected	Mininum Detected	Maximum Detected	Sample of Maximum Detected	Mean of All Samples	[1]Residential RSL	[2]Cancer/Non-Cancer	NWWQCC	[3]MCL	Exceeds NMWQCC	Rationale
Dissolved Metals													
ALUMINUM, Dissolved	10/32	9.8	1000	45.8 J	200 J	MW30&33-03 1/15/2008	120	3700	n	36500	50	No	BSL
ARSENIC, Dissolved	4/32	3.6	50	15.4	31.6	MW30&33-04 7/8/2009	12.2	0.045	c	0.448	10	**Yes**	ASL
BARIUM, Dissolved	16/32	0.4	55	6 J	34.3	MW30&33-05R 10/6/2009	16	730	n	7300	2000	No	BSL
BERYLLIUM, Dissolved	4/32	1	20	3 J	46	MW30&33-03 7/15/2006	4.43	7.3	n	73	4	No	BSL
CALCIUM, Dissolved	32/32	--	--	672000	980000	MW30&33-02 01/09/2009	784656	NA	NA	NA	NA	No	NUT
COBALT, Dissolved	6/32	1	25	1.4	34	MW30&33-03 7/15/2006	4.8	1.1	n	50	NA	No	BSL
COPPER, Dissolved	2/20	5	25	27.9	56	MW30&33-02 07/8/2009	9.9	150	n	1460	1300	No	BSL
IRON, Dissolved	3/32	2.8	3700	7 J	226	MW30&33-02 01/7/2010	390	2600	n	25550	300	No	BSL
MAGNESIUM, Dissolved	32/32	--	--	0.2	1920000	MW30&33-03 07/11/2008	1327353	NA	NA	NA	NA	No	NUT
MANGANESE, Dissolved	4/20	1	5	10.7 J	661	MW30&33-05R 10/6/2009	62	88	n	876	50	No	BSL
MERCURY, Dissolved	1/20	0.14	0.15	0.15 J	0.15 J	MW30&33-01 01/09/2009	0.078	0.063	n	0.561538462	2	No	BSL
Molybdenum, Dissolved	4/6	70	70	27 J	43 J	MW30&33-03 1/15/2008	33.667	NA	NA	NA		No	BSL
NICKEL, Dissolved	6/32	0.4	50	4 J	21	MW30&33-03 7/15/2006	8.6	73	n	730	NA	No	BSL
POTASSIUM, Dissolved	27/32	14200	35800	1800 J	47000	MW30&33-05 7/15/2006	15200	NA	NA	NA	NA	No	NUT
SELENIUM, Dissolved	20/32	5.5	75	14.1	46.2	MW30&33-03 7/8/2009	23.98	18	n	182.5	50	No	BSL
SILVER, Dissolved	1/20	1.4	7	7.6	7.6	MW30&33-01 7/8/2009	2.48	NA	NA	182.5	NA	No	BSL
SODIUM, Dissolved	32/32	--	--	2870000 J	7860000	MW30&33-03 01/17/2007	5294531	NA	NA	NA	NA	No	NUT
THALLIUM, Dissolved	2/32	3.6	110	18.5 J	109	MW30&33-03 7/15/2006	17.37	0.24	n	2.409	2	**Yes**	ASL
VANADIUM, Dissolved	27/32	1	50	12	48.5	MW30&33-01 7/8/2009	28.6	26	n	182.5	NA	No	BSL
ZINC, Dissolved	4/32	3	100	35.4	133	MW30&33-05 7/15/2006	23.1	1100	n	10950	5000	No	BSL
Miscellaneous Parameters													
Total Dissolved Solids	32/32	--	--	13600	39500	MW30&33-03 7/8/2009	26592	NA	NA	1000	NA	**Yes**	ASL

Notes:
[1]EPA Regional Screening Levels (RSL) updated September 2008.
[2]c - cancer risk; from the EPA RSL Table - cancer risk value at 10^{-6} for carcinogens.
n - noncancer risk; from the EPA RSL Table - the non-cancer RSL corresponds to a hazard quotient of 0.1.
[3]Chemicals are screened against the tapwater EPA RSLs. Federal Safe Water Drinking Act maximum concentration levels (MCLs) presented for informational purposes only.
ASL - Above Screening Level
-- chemical was detected in all samples
BSL - Below Screening Level
J - estimated value
NA - no screening level available
NMWQCC - New Mexico Water Quality Control Commission
NUT - Nutrient
MCL - maximum contaminant levels
µg/L - micrograms per liter
RSL - Regional Screening Level
TOX - toxicity

Table 2.2
Summary of Site-Related Chemicals and COPC Screening for Groundwater
SS-39
Holloman AFB, New Mexico

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater

Chemical (µgL)	Frequency of Detection (Number)	Number of Unique Results	Number of Rejections	Mininum Non-Detected	Maximum Non-Detected	Mininum Detected	Maximum Detected	Sample of Maximum Detected	Mean of All Samples	[1]Residential RSL	[2]Cancer/ Non-Cancer	NMWQCC	[3]MCL	Exceeds NMWQCC	Rationale
Volatile Organic Compounds															
1,1,1-Trichloroethane	2/40	6	0	0.33	3.3	0.35 J	0.5 J	MW-39-02 1/7/2010	0.261	910	n	9125	200	No	BSL
1,1-Dichloroethane	1/80	7	0	0.0299	2.4	0.03 J	0.03 J	MW39-06 7/13/2006	0.279	2.4	c	24.2	NA	No	BSL
1,1-Dichloroethene	12/80	16	0	0.0736	5.4	0.24 J	2.4	MW39-06D 1/6/2010	0.547	34	n	340	7	No	BSL
2-Butanone	10/80	14	0	0.394	20	2.4 J	6	MW39-11 1/8/2009	2.062	710	n	7065	NA	No	BSL
2-Hexanone	10/40	14	0	5	50	7.8 J	272 J	MW39-11 1/8/2009	20.881	4.7	n	NA	NA	No	BSL
4-Bromofluorobenzene	10/28	11	0	0.21	1.1	42.3	48	MW-39-02 1/17/2007	15.962	NA	n	NA	NA	No	BSL
4-Chlorotoluene	1/40	7	0	0.21	10	2.2 J	2.2 J	MW39-11 1/6/2010	0.769	260	n	NA	NA	No	BSL
4-Methyl-2-pentanone	1/22	5	0	2	20	4 J	4 J	MW39-11 1/8/2009	1.659	200	n	1991	NA	No	BSL
Acetone	12/80	18	0	0.854	100	1.88 J	40.5	MW39-11 1/8/2009	7.117	2200	n	21783	NA	No	BSL
Benzene	4/80	9	0	0.0495	4	0.06 J	0.09 J	MW39-06 7/13/2006, MW39-06D 7/13/2006	0.354	0.41	c	4.1	5	No	BSL
Bromodichloromethane	1/80	6	0	0.0651	2	0.14 J	0.14 J	MW39-06 7/13/2006	0.267	0.12	c	1.2	80	No	BSL
Bromoform	1/80	7	0	0.0859	3.3	0.16 J	0.16 J	MW39-09 7/14/2006	0.317	8.5	c	85.1	80	No	BSL
Bromomethane	2/40	6	0	0.78	7.8	0.85 J	1.8 J	MW39-10 1/6/2010	0.627	0.87	n	8.7	NA	No	BSL
Carbon tetrachloride	16/80	18	0	0.121	2.2	1.5	4	MW-39-02 7/10/2008	0.707	0.2	c	2.0	5	**Yes**	ASL
Chlorobenzene	3/80	8	0	0.0217	2.2	0.03 J	0.04 J	MW39-06D 7/13/2006	0.296	9.1	n	91.3	100	No	BSL
Chloroform	21/80	24	0	0.0475	2.8	0.11 J	2.85	MW39-06 7/13/2006	0.635	0.19	c	1.9	80	**Yes**	ASL
Chloromethane	13/80	18	0	0.23	6.1	0.28 J	1.6 J	MW39-10 1/6/2010	0.479	19	n	17.8	NA	No	BSL
cis-1,2-dichloroethene	5/80	10	0	0.101	2	0.12 J	0.71 J	MW39-08 7/7/2009	0.285	37	n	365	70	No	BSL
Dibromofluoromethane	10/28	10	0	0.3	1.5	51.6	53.8	MW39-12 1/18/2007	18.866	NA	n	NA	NA	No	TOX
m,p-Xylene	1/80	7	0	0.78	7.8	0.04 J	0.04 J	MW-39-02 7/15/2006	0.660	120	n	620	NA	No	BSL
Methylene chloride	4/80	9	0	0.689	25	0.58 J	27.5 J	MW39-06D 1/8/2009	1.326	4.8	c	48.0	5	No	BSL
Naphthalene	4/40	7	0	1	10	1 J	2.7 J	MW39-11 1/8/2009	0.889	NA	NA	1.4	NA	**Yes**	ASL
Tetrachloroethene	4/40	8	0	0.22	2.2	0.32 J	0.38 J	MW39-06 7/10/2008	0.187	0.11	c	1.08	5	No	BSL
Toluene	10/50	12	0	0.35	3.5	44.7 J	47.2	MW-39-02 1/17/2007	9.375	230	n	2281	1000	No	BSL
Trichloroethene	64/80	59	0	0.0495	1	0.06 J	477	MW39-06D 1/8/2009	62.444	2	c	16.5	5	**Yes**	ASL
Metals															
Arsenic	9/71	21	0	5	250	12.6 J	65 J	MW39-06D 7/17/2007	38.5	0.045	c	0.448	10	**Yes**	ASL
Barium	30/71	33	0	20	280	11	389 J	MW39-07 7/10/2008	67	730	n	7300	2000	No	BSL
Cadmium	2/71	14	0	0.4	55	12 J	38.2 J	MW39-12 7/10/2008	8	1.8	n	18.25	5	**Yes**	ASL
Chromium	4/71	18	0	1.4	250	14	46 J	MW39-11 1/17/2008	25.3	0.043	c	109.5	100	No	BSL
Lead	5/71	18	0	1.6	170	14 J	41.2	MW39-08 7/7/2009	21.1	15	n	50	15	No	BSL
Selenium	40/71	50	0	1.6	380	28 J	186 J	MW39-12 7/10/2008	64.23	18	n	182.5	50	**Yes**	ASL
Silver	2/71	17	0	0.2	130	14 J	32 J	MW39-05 7/19/2007	13.55	18	n	182.5	NA	No	BSL
Perchlorate	70/80	53	0	75	750	10	230	MW39-12 7/18/2007	99	2.6	n	24.5	NA	**Yes**	ASL
Dissolved Metals															
ARSENIC, Dissolved	14/80	28	0	2.5	250	14 J	110	MW39-06D 7/10/2008	35.8	0.045	c	0.448	10	**Yes**	ASL

Table 2.2
Summary of Site-Related Chemicals and COPC Screening for Groundwater
SS-39
Holloman AFB, New Mexico

Chemical (µgL)	Frequency of Detection (Number)	Number of Unique Results	Number of Rejections	Mininum Non-Detected	Maximum Non-Detected	Mininum Detected	Maximum Detected	Sample of Maximum Detected	Mean of All Samples	[1]Residential RSL	[2]Cancer/ Non-Cancer	NMWQCC	[3]MCL	Exceeds NMWQCC	Rationale
Dissolved Metals															
BARIUM, Dissolved	28/80	30	0	1.4	280	6 J	100	MW39-06D 7/10/2008	40	730	n	7300	2000	No	BSL
Cadmium, Dissolved	9/80	16	0	0.5	55	1	30.5 J	MW39-12 7/10/2008	7.55	1.8	n	18.25	5	**Yes**	ASL
Chromium, Dissolved	5/80	18	0	0.2	250	1 J	40	MW39-06D 7/10/2008	21.83	0.043	c	109.5	100	No	BSL
Lead, Dissolved	2/40	7	0	4	40	6 J	40	MW39-06D 7/10/2008	16	15	n	50	15	No	BSL
MERCURY, Dissolved	3/40	5	0	0.14	0.15	0.15	0.25 J	MW39-06 1/8/2009	0.081	0.057	n	0.56	2	No	BSL
SELENIUM, Dissolved	44/80	51	0	2.3	380	14	125	MW39-11 7/7/2009	55.11	18	n	182.5	50	No	BSL
SILVER, Dissolved	12/80	23	0	0.1	130	6	28	MW39-06D 7/10/2008	12.85	18	n	182.5	NA	No	BSL
Miscellaneous Parameters															
Total Dissolved Solids	80/80	66	0	--	--	11300	2300000 J	MW39-06 7/17/2007	102059	NA	NA	1000	NA	**Yes**	ASL

Notes:
[1]EPA Regional Screening Levels (RSL) updated September 2008.
[2]c - cancer risk; from the EPA RSL Table - cancer risk value at 10^{-6} for carcinogens.
n - noncancer risk; from the EPA RSL Table - the non-cancer RSL corresponds to a hazard quotient of 0.1.
[3]Chemicals are screened against the tapwater EPA RSLs. Federal Safe Water Drinking Act maximum concentration levels (MCLs) presented for informational purposes only.
ASL - Above Screening Level
-- chemical was detected in all samples
BSL - Below Screening Level
J - estimated value
NA - no screening level available
NMWQCC - New Mexico Water Quality Control Commission
NUT - Nutrient
MCL - maximum contaminant levels
µg/L - micrograms per liter
RSL - Regional Screening Level
TOX - toxicity

Table 2.3
Summary of Site-Related Chemicals and COPC Screening of Shallow Groundwater (0 to 10 ft bgs)
SS-39
Holloman AFB, New Mexico

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater

Chemical (µg/L)	Frequency of Detection (Number)	Minimum Non-Detected	Maximum Non-Detected	Minimum Detected	Maximum Detected	Sample of Maximum Detected	Mean of All Samples	[1]Residential RSL	[2]Cancer/Non-Cancer	NMWQCC	[3]MCL	Exceeds NMWQCC	Rationale
Volatile Organic Compounds													
1,1-Dichloroethane	1/72	0.0299	2.4	0.03 J	0.03 J	MW39-06 7/13/2006	0.282	2.4	c	24.2	NA	No	BSL
1,1-Dichloroethene	11/72	0.0736	5.4	0.24 J	2.4	MW39-06D 1/6/2010	0.571	34	n	340	7	No	BSL
2-Butanone	10/72	0.394	20	2.4 J	6	MW39-11 1/8/2009	2.129	710	n	7065	NA	No	BSL
2-Hexanone	10/36	5	50	7.8 J	272 J	MW39-11 1/8/2009	22.924	4.7	n	NA	NA	No	BSL
4-Bromofluorobenzene	9/27	0.21	1.1	42.3	47.3	MW39-06 1/17/2007	14.775	NA	n	NA	NA	No	BSL
4-Chlorotoluene	1/36	0.21	10	2.2 J	2.2 J	MW39-11 1/6/2010	0.843	260	n	NA	NA	No	BSL
4-Methyl-2-pentanone	1/18	2	20	4 J	4 J	MW39-11 1/8/2009	1.806	200	n	1991	NA	No	BSL
Acetone	12/72	0.854	100	1.88 J	40.5	MW39-11 1/8/2009	7.485	2200	n	21783	NA	No	BSL
Benzene	4/72	0.0495	4	0.06 J	0.09 J	MW39-06D 7/13/2006	0.361	0.41	c	4.1	5	No	BSL
Bromodichloromethane	1/72	0.0651	2	0.14 J	0.14 J	MW39-06 7/13/2006	0.270	0.12	c	1.2	80	No	BSL
Bromoform	1/72	0.0859	3.3	0.16 J	0.16 J	MW39-09 7/14/2006	0.322	8.5	c	85.1	80	No	BSL
Bromomethane	2/36	0.78	7.8	0.85 J	1.8 J	MW39-10 1/6/2010	0.654	0.87	n	8.7	NA	No	BSL
Carbon tetrachloride	8/72	0.121	2.2	1.51	2.4	MW39-06 1/15/2008	0.467	0.2	c	2.0	5	**Yes**	ASL
Chlorobenzene	3/72	0.0217	2.2	0.03 J	0.04 J	MW39-06D 7/13/2006	0.302	9.1	n	91.3	100	No	BSL
Chloroform	13/72	0.0475	2.8	0.11 J	2.85	MW39-06 7/13/2006	0.529	0.19	c	1.9	80	**Yes**	ASL
Chloromethane	13/72	0.23	6.1	0.28 J	1.6 J	MW39-10 1/6/2010	0.493	19	n	17.8	NA	No	BSL
cis-1,2-dichloroethene	5/72	0.101	2	0.12 J	0.71 J	MW39-08 7/7/2009	0.290	37	n	365	70	No	BSL
Dibromofluoromethane	9/27	0.3	1.5	51.6	53.8	MW39-12 1/18/2007	17.624	NA	n	NA	NA	No	TOX
Methylene chloride	4/72	0.689	25	0.58 J	27.5 J	MW39-06D 1/8/2009	1.388	4.8	c	48.0	5	No	BSL
Naphthalene	4/36	1	10	1 J	2.7 J	MW39-11 1/8/2009	0.932	NA	NA	1.4	NA	**Yes**	ASL
Tetrachloroethene	2/36	0.22	2.2	0.33 J	0.38 J	MW39-06 7/10/2008	0.183	0.11	c	1.08	5	No	BSL
Toluene	9/45	0.35	3.5	44.7 J	46.9	MW39-06 1/17/2007	9.352	230	n	2281	1000	No	BSL
Trichloroethene	56/72	0.0495	1	0.06 J	477	MW39-06D 1/8/2009	67.103	2	c	16.5	5	**Yes**	ASL
Metals													
Arsenic	7/64	5	250	14 J	65 J	MW39-06D 7/17/2007	40.8	0.045	c	0.448	10	**Yes**	ASL
Barium	27/64	25	280	11	389 J	MW39-07 7/10/2008	72	730	n	7300	2000	No	BSL
Cadmium	2/64	0.4	55	12 J	38.2 J	MW39-12 7/10/2008	9	1.8	n	18.25	5	**Yes**	ASL
Chromium	3/64	1.4	250	15.6 J	46 J	MW39-11 1/17/2008	26.5	0.043	c	109.5	100	No	BSL
Lead	5/64	1.6	170	14 J	41.2	MW39-08 7/7/2009	22.4	15	n	50	15	No	BSL
Selenium	36/64	1.6	380	28 J	186 J	MW39-12 7/10/2008	67.28	18	n	182.5	50	**Yes**	ASL
Silver	2/64	0.2	130	14 J	32 J	MW39-05 7/19/2007	14.30	18	n	182.5	NA	No	BSL
Perchlorate	63/72	300	750	17	230	MW39-12 7/18/2007	108	2.6	n	24.5	NA	**Yes**	ASL
Dissolved Metals													
ARSENIC, Dissolved	13/72	2.5	250	14 J	110	MW39-06D 7/10/2008	38.1	0.045	c	0.448	10	**Yes**	ASL
BARIUM, Dissolved	23/72	1.4	280	6 J	100	MW39-06D 7/10/2008	42	730	n	7300	2000	No	BSL
Cadmium, Dissolved	9/72	0.5	55	1	30.5 J	MW39-12 7/10/2008	8.06	1.8	n	18.25	5	**Yes**	ASL

Table 2.3
Summary of Site-Related Chemicals and COPC Screening of Shallow Groundwater (0 to 10 ft bgs)
SS-39
Holloman AFB, New Mexico

Chemical (µg/L)	Frequency of Detection (Number)	Minimum Non-Detected	Maximum Non-Detected	Minimum Detected	Maximum Detected	Sample of Maximum Detected	Mean of All Samples	[1]Residential RSL	[2]Cancer/Non-Cancer	NMWQCC	[3]MCL	Exceeds NMWQCC	Rationale
Dissolved Metals													
Chromium, Dissolved	4/72	0.2	250	1 J	40	MW39-06D 7/10/2008	22.93	0.043	c	109.5	100	No	BSL
Lead, Dissolved	1/36	10	40	40	40	MW39-06D 7/10/2008	17	15	n	50	15	No	BSL
MERCURY, Dissolved	3/36	0.14	0.15	0.15	0.25 J	MW39-06 1/8/2009	0.081	0.057	n	0.56	2	No	BSL
SELENIUM, Dissolved	39/72	2.3	380	21	125	MW39-11 7/7/2009	57.56	18	n	182.5	50	No	BSL
SILVER, Dissolved	11/72	0.2	130	6	28	MW39-06D 7/10/2008	13.57	18	n	182.5	NA	No	BSL
Miscellaneous Parameters													
Total Dissolved Solids	72/72	--	--	23000	2300000 J	MW39-06 7/17/2007	111702	NA	NA	1000	NA	**Yes**	ASL

Notes:
[1]EPA Regional Screening Levels (RSL) updated September 2008.
[2]c - cancer risk; from the EPA RSL Table - cancer risk value at 10^{-6} for carcinogens.
n - noncancer risk; from the EPA RSL Table - the non-cancer RSL corresponds to a hazard quotient of 0.1.
[3]Chemicals are screened against the tapwater EPA RSLs. Federal Safe Water Drinking Act maximum concentration levels (MCLs) presented for informational purposes only.
ASL - Above Screening Level
-- chemical was detected in all samples
BSL - Below Screening Level
J - estimated value
NA - no screening level available
NMWQCC - New Mexico Water Quality Control Commission
NUT - Nutrient
MCL - maximum contaminant levels
µg/L - micrograms per liter
RSL - Regional Screening Level
TOX - toxicity

Table 2.4
Exposure Point Concentration Summary
Reasonable Maximum Exposure for Groundwater
DP-30/SD-33
Holloman AFB, New Mexico

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (Distribution)	Maximum Concentration (Qualifier)	Exposure Point Concentration		
						Value	Statistic	Rationale
DP-30/SD-33	**Volatile Organic Compounds**							
	TRICHLOROETHENE	µg/L	16.0	21.2	59.3	23.4	Approximate Gamma 95% UCL	1
	Metals							
	ANTIMONY	µg/L	17.7	22.2	32	29	95% Chebyshev(Mean, Std) UCL	1
	ARSENIC	µg/L	14.6	17.3	31.3	21.6	95% Chebyshev(Mean, Std) UCL	1
	MANGANESE	µg/L	140	244	1460	752	99% Chebyshev(Mean, Std) UCL	1
	THALLIUM	µg/L	18.7	24.7	39	39	Max	2

Rationale:
1 - The UCL suggested by EPA's ProUCL.
2 - The UCL exceeded the maximum concentration; therefore, the maximum is the EPC.
3 - Less than 10 samples were used; therefore, the maximum detect is the EPC.
Notes:
UCL - Upper Confidence Limit
µg/L - micrograms per liter

Table 2.5
Exposure Point Concentration Summary
Reasonable Maximum Exposure for Groundwater
SS-39
Holloman AFB, New Mexico

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (Distribution)	Maximum Concentration (Qualifier)	Exposure Point Concentration		
						Value	Statistic	Rationale
SS-39	**Volatile Organic Compounds**							
	Carbon tetrachloride	µg/L	0.7	0.9	4	1.4	97.5% Chebyshev(Mean, Std) UCL	1
	Chloroform	µg/L	0.6	0.8	2.85	1.1	97.5% Chebyshev(Mean, Std) UCL	1
	Naphthalene	µg/L	0.9	1.1	2.7	1.5	95% Chebyshev(Mean, Std) UCL	1
	Trichloroethene	µg/L	62.4	84.6	477	194.8	99% Chebyshev(Mean, Std) UCL	1
	Metals							
	Arsenic	µg/L	38.5	44.5	65	61	97.5% Chebyshev(Mean, Std) UCL	1
	Cadmium	µg/L	8.3	9.7	38.2	13.8	97.5% Chebyshev(Mean, Std) UCL	1
	Selenium	µg/L	64	74	186	77	Approximate Gamma 95% UCL	1
	Perchlorate							
	Perchlorate	µg/L	99.1	115.4	230	130	H-UCL	1

Rationale:
1 - The UCL suggested by EPA's ProUCL.
2 - The UCL exceeded the maximum concentration; therefore, the maximum is the EPC.
3 - Less than 10 samples were used; therefore, the maximum detect is the EPC.
Notes:
UCL - Upper Confidence Limit
µg/L - micrograms per liter

Table 2.6
Exposure Point Concentration Summary
Reasonable Maximum Exposure for Groundwater
SS-39 (0-10 ft bgs)
Holloman AFB, New Mexico

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (Distribution)	Maximum Concentration (Qualifier)	Exposure Point Concentration		
						Value	Statistic	Rationale
SS-39 (0-10 ft bgs)	**Volatile Organic Compounds**							
	Carbon tetrachloride	µg/L	0.5	0.6	2.4	0.9	97.5% Chebyshev(Mean, Std) UCL	1
	Chloroform	µg/L	0.5	0.7	2.85	1.0	97.5% Chebyshev(Mean, Std) UCL	1
	Naphthalene	µg/L	0.9	1.2	2.7	1.6	95% Chebyshev(Mean, Std) UCL	1
	Trichloroethene	µg/L	67.1	91.6	477	213.2	99% Chebyshev(Mean, Std) UCL	1
	Metals							
	Arsenic	µg/L	40.8	47.1	65	64.5	97.5% Chebyshev(Mean, Std) UCL	1
	Cadmium	µg/L	8.8	10.4	38.2	14.7	97.5% Chebyshev(Mean, Std) UCL	1
	Selenium	µg/L	67	78	186	106	97.5% Chebyshev(Mean, Std) UCL	1
	Perchlorate							
	Perchlorate	µg/L	108.4	125.5	230	153	95% Chebyshev(Mean, Std) UCL	1

Rationale:
1 - The UCL suggested by EPA's ProUCL.
2 - The UCL exceeded the maximum concentration; therefore, the maximum is the EPC.
3 - Less than 10 samples were used; therefore, the maximum detect is the EPC.
Notes:
UCL - Upper Confidence Limit
µg/L - micrograms per liter
ft bgs - feet below ground surface

Table 3.1
Values of Daily Intake Calculations for Exposure of
Construction Workers To Groundwater
Holloman AFB, New Mexico

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/Reference	Intake Equation/Model Name
Ingestion	**Construction**	**Adult**	**Tap**	Cwater	Chemical Concentration in Groundwater	µg/L	--	--	Ingestion CDI[1] (mg/kg-day) =
	Worker			CF	Conversion Factor	mg/µg/L	0.001		
				IR	Ingestion Rate of Groundwater	L/day	0.1	USEPA 1991	Cwater x IR x EF x ED x CF
				EF	Exposure Frequency	days/year	125	USEPA 1991	BW x AT
				ED	Exposure Duration	years	1	USEPA 1991	
				BW	Body Weight	kg	70	USEPA 1991	USEPA 1991
				AT-C	Averaging Time (Cancer)	days	25,550	USEPA 1991	
				AT-N	Averaging Time (Non-Cancer)	days	365	USEPA 1991	
Dermal	**Construction**	**Adult**	**Trench**	Cwater	Chemical Concentration in Groundwater	µg/L	--	--	DAD [2] (mg/kg-day) =
	Worker			DAevent	Absorbed Dose per Event	mg/cm^2-event	chemical-specific	USEPA 2004	
				EV	Event Frequency	events/day	1	Site Specific	DAevent x EV x ED x EF x A
				ED	Exposure Duration	years	1	Site Specific	BW x AT
				EF	Exposure Frequency	days/year	125	Site Specific	
				A	Skin Surface Available for Contact	cm^2	5,672	USEPA 2001[3]	DAevent as defined in USEPA 2004
				t_{event}	Duration of Event	hours/event	1	Site Specific	
				Kp	Permeability Coefficient from Water	cm/hour	chemical-specific	USEPA 2004	
				t	Lag Time	hours	chemical-specific	USEPA 2004	
				t*	Time to Reach Steady State	hours	chemical-specific	USEPA 2004	
				B	Bunge Model Constant	dimensionless	chemical-specific	USEPA 2004	
				BW	Body Weight	kg	70	USEPA 1991	
				AT-C	Averaging Time (Cancer)	days	25,550	USEPA 1991	
				AT-N	Averaging Time (Non-Cancer)	days	365	USEPA 1991	

Table 3.1
Values of Daily Intake Calculations for Exposure of
Construction Workers To Groundwater
Holloman AFB, New Mexico

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/Reference	Intake Equation/Model Name
Inhalation	**Construction**	**Adult**	**Trench**	Cwater	Chemical Concentration in Groundwater	µg/L	See Table 3	--	Inhalation CDI(2) (mg/kg/day) =
	Worker			IR	Inhalation Rate of Air	m^3/hour	0.83	USEPA 1991	Cwater x K x IR x ET x EF x ED x CF
				K	Volatization Factor	L/m^3	0.133	USEPA 1999	BW x AT
				EF	Exposure Frequency	days/year	125	USEPA 1991	
				ED	Exposure Duration	years	1	USEPA 1991	
				ET	Exposure Time	hours/day	8	USEPA 1991	
				BW	Body Weight	kg	70	USEPA 1991	USEPA, December 1991
				CF	Conversion Factor	mg/µg	1.00E-03	-	
				AT-C	Averaging Time (Cancer)	days	25,550	USEPA 1991	
				AT-N	Averaging Time (Non-Cancer)	days	365	USEPA 1991	

Notes:

USEPA ,1991. Risk Assessment Guidance for Superfund, Volume 1: Human Health Evaluation Manual Supplemental Guidance "Standard Default Exposure Factors" Interim Final, OSWER Directive 9285.6-03, Office of Emergency and Remedial Response, Toxic Interaction Branch, Washington, D.C.

USEPA , 2004 – *Risk Assessment Guidance for Superfund, Volume 1: Human Health Evaluation Manual- (Part E, Supplemental Guidance for Dermal Risk Assessment)* Office of Emergency and Remedial Response, Washington, D.C.

(1) CDI - Chronic Daily Intake

(2) DAD - Dermally Absorbed Dose

(3) Surface area of hands, forearms, lower legs, and feet from Exhibit C-1 of RAGS E, Dermal Guidance, USEPA 2001.

RME - Reasonable Maximum Exposure

µg/L - micrograms per liter

mg/µg - milligrams per micrograms

L/day - liters per day

kg - killigrams

mg/µg - milligrams per micrograms

mg/cm^2 - milligrams per square centimeter

cm^2 - square centimeters

cm/hour - centimeters per hour

m^3/hour - cubic meters per hour

L/m^3 - liters per cubic meter

Table 3.2
Reasonable Maximum Exposure (RME)
Calculation of Chemical Cancer Risks and Non-Cancer Hazards
Including Dissolved Inorganics
Holloman AFB, New Mexico

Scenario Timeframe: Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		Cancer Slope Factor (Unit Risk)		ILCR	Intake/Exposure Concentration		Reference Concentration		Hazard Index
							Value	Units	Value	Units		Value	Units	Value	Units	
Groundwater	Groundwater	All Sites	Ingestion	Perchlorate	1.5E+02	µg/L	1.1E-06	mg/kg-day		(mg/kg-day)$^{-1}$		7.5E-05	mg/kg-day	7.0E-04	mg/kg-day	1.1E-01
				Arsenic	6.5E+01	µg/L	4.5E-07	mg/kg-day	1.5E+00	(mg/kg-day)$^{-1}$	6.8E-07	3.2E-05	mg/kg-day	3.0E-04	mg/kg-day	1.1E-01
				Cadmium	1.5E+01	µg/L	1.0E-07	mg/kg-day		(mg/kg-day)$^{-1}$		7.2E-06	mg/kg-day	5.0E-04	mg/kg-day	1.4E-02
				Selenium	1.1E+02	µg/L	7.4E-07	mg/kg-day		(mg/kg-day)$^{-1}$		5.2E-05	mg/kg-day	5.0E-03	mg/kg-day	1.0E-02
				Carbon tetrachloride	9.0E-01	µg/L	6.3E-09	mg/kg-day	1.3E-01	(mg/kg-day)$^{-1}$	8.2E-10	4.4E-07	mg/kg-day	7.0E-04	mg/kg-day	6.3E-04
				Chloroform	1.0E+00	µg/L	7.1E-09	mg/kg-day	3.1E-02	(mg/kg-day)$^{-1}$	2.2E-10	5.0E-07	mg/kg-day	1.0E-02	mg/kg-day	5.0E-05
				Naphthalene	1.6E+00	µg/L	1.1E-08	mg/kg-day		(mg/kg-day)$^{-1}$		7.6E-07	mg/kg-day	2.0E-02	mg/kg-day	3.8E-05
				Trichloroethene	2.1E+02	µg/L	1.5E-06	mg/kg-day	5.9E-03	(mg/kg-day)$^{-1}$	8.8E-09	1.0E-04	mg/kg-day		mg/kg-day	
			Exposure Route Total								6.9E-07					2.4E-01
			Dermal	Perchlorate	1.5E+02	µg/L	6.1E-08	mg/kg-day		(mg/kg-day)$^{-1}$		4.3E-06	mg/kg-day	7.0E-04	mg/kg-day	6.1E-03
				Arsenic	6.5E+01	µg/L	2.6E-08	mg/kg-day	1.5E+00	(mg/kg-day)$^{-1}$	3.8E-08	1.8E-06	mg/kg-day	3.0E-04	mg/kg-day	6.0E-03
				Cadmium	1.5E+01	µg/L	5.8E-09	mg/kg-day		(mg/kg-day)$^{-1}$		4.1E-07	mg/kg-day	2.5E-05	mg/kg-day	1.6E-02
				Selenium	1.1E+02	µg/L	4.2E-08	mg/kg-day		(mg/kg-day)$^{-1}$		2.9E-06	mg/kg-day	5.0E-03	mg/kg-day	5.9E-04
				Carbon tetrachloride	9.0E-01	µg/L	1.9E-08	mg/kg-day	1.3E-01	(mg/kg-day)$^{-1}$	2.5E-09	1.4E-06	mg/kg-day	7.0E-04	mg/kg-day	1.9E-03
				Chloroform	1.0E+00	µg/L	7.0E-09	mg/kg-day	3.1E-02	(mg/kg-day)$^{-1}$	2.2E-10	4.9E-07	mg/kg-day	1.0E-02	mg/kg-day	4.9E-05
				Naphthalene	1.6E+00	µg/L	8.8E-08	mg/kg-day		(mg/kg-day)$^{-1}$		6.1E-06	mg/kg-day	2.0E-02	mg/kg-day	3.1E-04
				Trichloroethene	2.1E+02	µg/L	2.8E-06	mg/kg-day	5.9E-03	(mg/kg-day)$^{-1}$	1.6E-08	1.9E-04	mg/kg-day		mg/kg-day	
			Exposure Route Total								5.7E-08					3.1E-02
			Inhalation	Perchlorate	1.5E+02	µg/L	9.5E-06	mg/kg-day		(mg/kg-day)$^{-1}$		6.6E-04	mg/kg-day		mg/kg-day	
				Arsenic	6.5E+01	µg/L	4.0E-06	mg/kg-day		(mg/kg-day)$^{-1}$		2.8E-04	mg/kg-day		mg/kg-day	
				Cadmium	1.5E+01	µg/L	9.1E-07	mg/kg-day		(mg/kg-day)$^{-1}$		6.3E-05	mg/kg-day		mg/kg-day	
				Selenium	1.1E+02	µg/L	6.6E-06	mg/kg-day		(mg/kg-day)$^{-1}$		4.6E-04	mg/kg-day		mg/kg-day	
				Carbon tetrachloride	9.0E-01	µg/L	5.6E-08	mg/kg-day	5.3E-05	(mg/kg-day)$^{-1}$	2.9E-12	3.9E-06	mg/kg-day	5.4E-02	mg/kg-day	7.2E-05
				Chloroform	1.0E+00	µg/L	6.3E-08	mg/kg-day	8.1E-05	(mg/kg-day)$^{-1}$	5.1E-12	4.4E-06	mg/kg-day	2.8E-02	mg/kg-day	1.6E-04
				Naphthalene	1.6E+00	µg/L	9.6E-08	mg/kg-day	1.2E-04	(mg/kg-day)$^{-1}$	1.1E-11	6.7E-06	mg/kg-day	1.1E-02	mg/kg-day	6.4E-04
				Trichloroethene	2.1E+02	µg/L	1.3E-05	mg/kg-day	7.0E-06	(mg/kg-day)$^{-1}$	9.2E-11	9.2E-04	mg/kg-day	1.7E-01	mg/kg-day	5.4E-03
			Exposure Route Total								1.1E-10					6.3E-03
		Exposure Point Total									7.4E-07					2.8E-01
	Exposure Medium Total										7.4E-07					2.8E-01
Groundwater Total											7.4E-07					2.8E-01

Notes:
EPC - Exposure Point Concentration
ABS - Absorption Factor
ILCR - incremental lifetime cancer risk
µg/L - micrograms per liter
mg/kg - milligrams per killogram

APPENDIX A

Johnson and Ettinger Model Calculations for TCE at DP-30/SD-33

Table A-1
Data Entry Sheet

GW-SCREEN
Version 3.1; 02/04

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES [ ]

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION
(enter "X" in "YES" box and initial groundwater conc. below)

YES [X]

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C_W (µg/L)	Chemical
79016	2.34E+01	CAS No. not found

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/ groundwater temperature, T_S (°C)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
15	660	CL	19	
#REF!	#REF! #REF! Enter correct SCS soil type.		#REF!	

MORE ↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vandose zone soil vapor permeability, k_v (cm^2)	ENTER Vadose zone SCS soil type (Lookup Soil Parameters)	ENTER Vadose zone soil dry bulk density, ρ_b^V (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)
CL			CL	1.5	0.43	0.216

Table A-1
Data Entry Sheet

Enter correct SCS soil type, or user-defined permeability. #REF!

#REF!

MORE ↓

ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)
1.0E-06	1	70	25	25	250
Used to calculate risk-based groundwater concentration.		#REF!			

Table A-2
RESULTS SHEET

RISK-BASED GROUNDWATER CONCENTRATION CALCULATIONS:

Indoor exposure groundwater conc., carcinogen (μg/L)	Indoor exposure groundwater conc., noncarcinogen (μg/L)	Risk-based indoor exposure groundwater conc., (μg/L)	Pure component water solubility, S (μg/L)	Final indoor exposure groundwater conc., (μg/L)
ERROR	ERROR	ERROR	ERROR	ERROR

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
ERROR	ERROR

MESSAGE SUMMARY BELOW:
MESSAGE: CAS No. not found.
#REF!

END

APPENDIX B

Johnson and Ettinger Model Calculations for Carbon Tetrachloride at SS-39

Table B-1
DATA ENTRY SHEET

GW-SCREEN
Version 3.1; 02/04

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES [ ]

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION
(enter "X" in "YES" box and initial groundwater conc. below)

YES [X]

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C_W (µg/L)	Chemical
56235	1.37E+00	CAS No. not found

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/ groundwater temperature, T_S (°C)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
15	236	CL	19	
#REF!	#REF! #REF! Enter correct SCS soil type.		#REF!	

MORE ↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vandose zone soil vapor permeability, k_v (cm^2)	ENTER Vadose zone SCS soil type Lookup Soil Parameters	ENTER Vadose zone soil dry bulk density, ρ_b^V (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)

Table B-1
DATA ENTRY SHEET

CL			CL	1.5	0.43	0.216

Enter correct SCS soil type, or user-defined permeability. #REF! #REF!

MORE ↓

ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)
1.0E-06	1	70	25	25	250
Used to calculate risk-based groundwater concentration.		#REF!			

Table B-2
RESULTS SHEET

RISK-BASED GROUNDWATER CONCENTRATION CALCULATIONS:

Indoor exposure groundwater conc., carcinogen (μg/L)	Indoor exposure groundwater conc., noncarcinogen (μg/L)	Risk-based indoor exposure groundwater conc., (μg/L)	Pure component water solubility, S (μg/L)	Final indoor exposure groundwater conc., (μg/L)
ERROR	ERROR	ERROR	ERROR	ERROR

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
ERROR	ERROR

MESSAGE SUMMARY BELOW:
MESSAGE: CAS No. not found.
#REF!

END

APPENDIX C

Johnson and Ettinger Model Calculations for Chloroform at SS-39

Table C-1
DATA ENTRY SHEET

GW-SCREEN
Version 3.1; 02/04

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES [ ]

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION
(enter "X" in "YES" box and initial groundwater conc. below)

YES [X]

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C_W (µg/L)	Chemical
67663	1.13E+00	CAS No. not found

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/ groundwater temperature, T_S (°C)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
15	236	CL	19	
#REF!	#REF!		#REF!	

#REF!
Enter correct SCS soil type.

MORE ↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vandose zone soil vapor permeability, k_v (cm^2)	ENTER Vadose zone SCS soil type (Lookup Soil Parameters)	ENTER Vadose zone soil dry bulk density, ρ_b^V (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)
CL			CL	1.5	0.43	0.216

Enter correct SCS soil type, or user-defined permeability.

#REF!

#REF!

Table C-1
DATA ENTRY SHEET

MORE ↓

ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)
1.0E-06	1	70	25	25	250
Used to calculate risk-based groundwater concentration.		#REF!			

Table C-2
RESULTS SHEET

RISK-BASED GROUNDWATER CONCENTRATION CALCULATIONS:

Indoor exposure groundwater conc., carcinogen (μg/L)	Indoor exposure groundwater conc., noncarcinogen (μg/L)	Risk-based indoor exposure groundwater conc., (μg/L)	Pure component water solubility, S (μg/L)	Final indoor exposure groundwater conc., (μg/L)
ERROR	ERROR	ERROR	ERROR	ERROR

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
ERROR	ERROR

MESSAGE SUMMARY BELOW:
MESSAGE: CAS No. not found.
#REF!

END

APPENDIX D

Johnson and Ettinger Model Calculations for Naphthalene at SS-39

Table D-1
DATA ENTRY SHEET

GW-SCREEN
Version 3.1; 02/04

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES [ ]

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION
(enter "X" in "YES" box and initial groundwater conc. below)

YES [X]

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C_W (μg/L)	Chemical
91203	1.46E+00	CAS No. not found

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/ groundwater temperature, T_S (^oC)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
15	236	CL	19	
#REF!	#REF!		#REF!	

#REF!
Enter correct SCS soil type.

MORE ↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vandose zone soil vapor permeability, k_v (cm^2)	ENTER Vadose zone SCS soil type (Lookup Soil Parameters)	ENTER Vadose zone soil dry bulk density, ρ_b^V (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)
CL			CL	1.5	0.43	0.216

Enter correct SCS soil type, or user-defined permeability.

#REF!

#REF!

Table D-1
DATA ENTRY SHEET

MORE ↓

ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)
1.0E-06	1	70	25	25	250
Used to calculate risk-based groundwater concentration.		#REF!			

Table D-2
RESULTS SHEET

RISK-BASED GROUNDWATER CONCENTRATION CALCULATIONS:

Indoor exposure groundwater conc., carcinogen (μg/L)	Indoor exposure groundwater conc., noncarcinogen (μg/L)	Risk-based indoor exposure groundwater conc., (μg/L)	Pure component water solubility, S (μg/L)	Final indoor exposure groundwater conc., (μg/L)
ERROR	ERROR	ERROR	ERROR	ERROR

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
ERROR	ERROR

MESSAGE SUMMARY BELOW:
MESSAGE: CAS No. not found.
#REF!

END

APPENDIX E

Johnson and Ettinger Model Calculations for TCE at SS-39

Table E-1
DATA ENTRY SHEET

GW-SCREEN
Version 3.1; 02/04

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES [ ]

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION
(enter "X" in "YES" box and initial groundwater conc. below)

YES [X]

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C_W (µg/L)	Chemical
79016	1.95E+02	CAS No. not found

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/ groundwater temperature, T_S (°C)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
15	236	CL	19	
#REF!	#REF!		#REF!	

#REF!
Enter correct SCS soil type.

MORE ↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vandose zone soil vapor permeability, k_v (cm^2)	ENTER Vadose zone SCS soil type (Lookup Soil Parameters)	ENTER Vadose zone soil dry bulk density, ρ_b^V (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)
CL			CL	1.5	0.43	0.216

Enter correct SCS soil type, or user-defined permeability.

#REF!
#REF!

Table E-1
DATA ENTRY SHEET

MORE ↓

ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)
1.0E-06	1	70	25	25	250
Used to calculate risk-based groundwater concentration.		#REF!			

Table E-2
RESULTS SHEET

RISK-BASED GROUNDWATER CONCENTRATION CALCULATIONS:

Indoor exposure groundwater conc., carcinogen (μg/L)	Indoor exposure groundwater conc., noncarcinogen (μg/L)	Risk-based indoor exposure groundwater conc., (μg/L)	Pure component water solubility, S (μg/L)	Final indoor exposure groundwater conc., (μg/L)
ERROR	ERROR	ERROR	ERROR	ERROR

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
ERROR	ERROR

MESSAGE SUMMARY BELOW:
MESSAGE: CAS No. not found.
#REF!

END