ENTERED

DEPARTMENT OF THE AIR FORCE

HEADQUARTERS 49TH WING (ACC)
HOLLOMAN AIR FORCE BASE, NEW MEXICO

APR 25 2012

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APR 2012

New Mexico Environment Department
Attn: Mr. John Kieling
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Dear New Mexico Environment Department

Holloman Air Force Base is pleased to submit the Final RCRA Facility Investigation (RFI) Report for site SWMU 8 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

20120425

A. DAVID BUDAK, GS-14, DAFC

Attachment:
RFI Report SWMU 8

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FINAL

RCRA Facility Investigation Report
SWMU 8
Holloman Air Force Base, New Mexico

Prepared For:

49 CES/CEAN
Holloman Air Force Base
New Mexico

Under Contract To:

U.S. Army Corps of Engineers
Albuquerque, New Mexico

Contract No. W912PL-07-D-0050
Delivery Order No. DM01

April 2012

Prepared by:

1608 13th Avenue South, Suite 160
Birmingham, Alabama 35205
NationView Project Number: 8080014

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FINAL
RCRA FACILITY INVESTIGATION REPORT
SWMU 8
HOLLOMAN AIR FORCE BASE, NEW MEXICO

TABLE OF CONTENTS

List of Acronyms vii
1 Introduction 1-1
1.1 Project Objectives 1-1
1.2 Document Organization 1-2
2 Site Background 2-1
2.1 HAFB Facility Description and Operational History 2-1
2.2 SWMU 8 Site Description and Background 2-1
2.3 Building 231 Activities and Waste Generation 2-1
2.4 Previously Identified Contamination 2-2
2.5 Applicable Screening Criteria 2-2
2.5.1 Soils 2-2
2.5.1.1 VOCs, SVOCs, PCBs, and TAL Metals 2-2
2.5.1.2 Total Petroleum Hydrocarbons 2-3
2.5.2 Groundwater 2-3
2.5.2.1 VOCs, SVOCs, PCBs, and TAL Metals 2-3
2.5.2.2 Total Petroleum Hydrocarbons 2-3
2.5.2.3 Total Dissolved Solids 2-3
2.6 Summary of Past Investigations and Remedial Actions 2-3
2.6.1 RCRA Facility Assessment Preliminary Review Report 2-4
2.6.2 Closure Report for Remediation of POL Contaminated Sites 2-5
2.6.3 Characterization of SWMU 8 2-6
2.6.4 Final Closure Report Addendum for Phase II Remediation of POL Contaminated Sites 2-6
2.6.5 SWMU 8 Additional Site Characterization 2-7
2.6.5.1 Soil Sampling Results 2-8
2.6.5.2 Groundwater Sampling Results 2-9
2.6.6 Voluntary Corrective Measures at SWMU 8 2-10
3 Environmental Setting 3-1
3.1 Physiography and Topography 3-1
3.2 Surface Water and Hydrology 3-1
3.3 Regional Geology 3-2

3.4 Soils 3-3
3.5 SWMU 8 Site Geology 3-4
3.6 Regional Hydrogeology 3-4
3.7 SWMU 8 Site Hydrogeology 3-5
3.8 Climate 3-6
3.9 Current and Future Land Use 3-6
3.10 Current and Future Water Use 3-6

4 Source Characterization 4-1

5 Field Activities 5-1

5.1 Subsurface Soil Sampling 5-1
5.2 Monitoring Well Installation and Development 5-3
5.3 Groundwater Sampling 5-3
5.4 Surveying 5-4
5.5 Equipment Decontamination 5-5
5.6 Waste Handling 5-5

6 Laboratory Analysis and Data Validation Summary 6-1

6.1 VOCs 6-1
6.2 SVOCs 6-2
6.3 TPH 6-2
6.4 TAL Metals 6-2
6.5 PCBs 6-3
6.6 TDS 6-3

7 Nature and Extent of Contamination 7-1

7.1 Soil Analytical Results 7-1
7.1.1 Volatile Organic Compounds 7-1
7.1.2 Semi-Volatile Organic Compounds 7-2
7.1.3 Total Petroleum Hydrocarbons 7-2
7.1.4 Polychlorinated Biphenyls 7-2
7.1.5 TAL Metals 7-2
7.1.6 Geotechnical Soil Samples 7-3
7.2 Groundwater Analytical Results 7-3
7.2.1 Volatile Organic Compounds 7-3
7.2.2 Semi-Volatile Organic Compounds 7-3
7.2.3 Polychlorinated Biphenyls 7-3
7.2.4 Total Petroleum Hydrocarbons 7-3
7.2.5 TAL Metals 7-4
7.2.6 Total Dissolved Solids 7-4

8 Risk Based Evaluation 8-1

8.1 Compilation of Data 8-1
8.2 Identification of Chemicals of Potential Concern 8-4
8.2.1 Chemicals of Potential Concern in Soil 8-4
8.2.2 Chemicals of Potential Concern in Groundwater 8-5

8.3 Development of Exposure Model 8-5
8.3.1 Receptors 8-5
8.3.2 Exposure Pathways 8-6
8.4 Calculation of Representative Concentrations 8-6
8.5 Calculation of Risks 8-7
8.5.1 Indoor Inhalation of Vapors from Groundwater 8-7
8.5.1.1 Toxicity Values 8-8
8.5.1.2 Physical and Chemical Properties 8-8
8.5.1.3 Exposure Factors 8-8
8.5.1.4 Source Parameters 8-8
8.5.1.5 Geotechnical Parameters 8-9
8.5.1.6 Building Parameters 8-10
8.5.2 Dermal Contact with Groundwater 8-10
8.5.2.1 Toxicity Values 8-10
8.5.2.2 Chemical-Specific Parameters for Dermal Contact with Water 8-10
8.5.2.3 Exposure Factors 8-11
8.5.3 Outdoor Inhalation of Vapors from Groundwater 8-11
8.5.3.1 Toxicity Values 8-11
8.5.3.2 Physical and Chemical Properties 8-11
8.5.3.3 Exposure Factors 8-11
8.5.3.4 Fate and Transport Parameters 8-11
8.5.4 Combined Pathways from Soil 8-11
8.6 Calculation of Cumulative Risks 8-12
8.7 Uncertainty Analysis 8-12
8.7.1 Inherent Sources of Uncertainty 8-13
8.7.2 Overall Impact of Uncertainties 8-14
9 Conclusions and Recommendations 9-1
10 References 10-1

Tables

Table 3-1 Groundwater Wells Located Within a 4-Mile Radius of Holloman Air Force Base
Table 3-2 Survey Data and Groundwater Elevation Summary (December 2010)
Table 5-1 Summary of Soil Boring Locations and Sample Intervals
Table 5-2 Monitoring Well Construction Details
Table 7-1 Soil Analytical Results (October 2010)
Table 7-2 Soil Geotechnical Results (October 2010)
Table 7-3 Groundwater Analytical Results (December 2010)
Table 8-1(a) Comprehensive Soil Analytical Data for Chemicals with At Least One Detected Concentration
Table 8-1(b) Soil Analytical Data Used for Risk Assessment
Table 8-1(c) Summary of Soil Data
Table 8-1(d) Comparison of Maximum Detected Concentration of Soil with Screening Levels
Table 8-2(a) Comprehensive Groundwater Analytical Data for Chemicals with At Least One Detected Concentration
Table 8-2(b) Groundwater Analytical Data Used for Risk Assessment
Table 8-2(c) Summary of Groundwater Data

Table 8-2(d) Comparison of Maximum Detected Concentration of Groundwater with Screening Levels
Table 8-3 Chemicals of Potential Concern
Table 8-4(a) Exposure Model for Current Commercial/Industrial Worker
Table 8-4(b) Exposure Model for Future Resident
Table 8-4(c) Exposure Model for Future Construction Worker
Table 8-5(a) Representative Concentrations of Groundwater for Current Commercial/Industrial Worker and Future Resident
Table 8-5(b) Representative Concentrations of Groundwater for Future Construction Worker
Table 8-5(c) Representative Concentrations of Soil for Future Construction Worker
Table 8-6(a) Toxicity and Physical and Chemical Parameters Used for Calculating Target Levels of Indoor Inhalation Vapors (J&E Model)
Table 8-6(b) Exposure Factors Used for Calculating Target Levels of Indoor Inhalation of Vapors (J&E Model)
Table 8-6(c) Media Specific Parameters Used for Calculating Target Levels of Indoor Inhalation of Vapors (J&E Model)
Table 8-7(a) Toxicity Values and Parameters Used for Calculating Target Levels for Dermal Contact with Groundwater
Table 8-7(b) Exposure Factors Used for Calculating Target Levels for Dermal Contact with Groundwater
Table 8-8(a) Toxicity and Physical/Chemical parameters for Outdoor Inhalation of Vapors from Groundwater
Table 8-8(b) Exposure Factors Used for Calculating Target Levels for Outdoor Inhalation of Vapors from Groundwater
Table 8-8(c) Fate and Transport Parameters Used for Calculating Outdoor Inhalation of Vapors from Groundwater
Table 8-9(a) Summary of Calculated Risk for Current Commercial/Industrial Worker
Table 8-9(b) Summary of Calculated Risk for Future Resident
Table 8-9(c) Summary of Calculated Risk for Future Construction Worker

Figures

Figure 2-1 Holloman AFB, New Mexico Location Map
Figure 2-2 SWMU 8 Site Location Map
Figure 2-3 SWMU 8 Site Map
Figure 2-4 SWMU 8 Soil Analytical Results Above NMED Action Levels (EBASCO, 1995)
Figure 2-5 SWMU 8 Groundwater Analytical Results Above EPA and NMED Action Levels (Bhate, 2006)
Figure 2-6 SWMU 8 Voluntary Corrective Measures Soil Analytical Results Above NMED Action Levels (Bhate, 2008)
Figure 3-1 Topographic Map Holloman AFB, New Mexico
Figure 3-2 Surface Drainages Holloman AFB, New Mexico
Figure 3-3 Generalized Geologic Cross Section of the Tularosa Basin
Figure 3-4 Generalized Near-Surface Geologic Cross Section for Holloman AFB
Figure 3-5 Soil Map Holloman AFB, New Mexico
Figure 3-6 Basewide Groundwater Contour Map Holloman AFB, New Mexico
Figure 3-7 Groundwater Wells Located Within a 4-Mile Radius of Holloman AFB
Figure 3-8 SWMU 8 Potentiometric Surface Map (December 2010)
Figure 5-1 SWMU 8 RFI Soil Boring Location Map

Figure 5-2 SWMU 8 Monitoring Well Location Map
Figure 7-1 SWMU 8 Soil Analytical Results Exceeding Action Levels (October 2010)
Figure 7-2 SWMU 8 Groundwater Analytical Results Exceeding Action Levels (December 2010)
Figure 8-1 Schematic Diagrams for J&E Model

Attachments

A NMED Correspondence

Appendices

A Historical Data from Previous Investigations
B Soil Boring Logs
C Monitoring Well Construction Diagrams
D Monitoring Well Development Forms
E Monitoring Well Sample Collection Forms
F Analytical Data Packages (Provided on Enclosed CD)
G Data Validation Reports

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LIST OF ACRONYMS

AAF	Army Air Field
AF Fm	Air Force Form
amsl	Above mean sea level
ASTM	American Society for Testing and Materials
atm-m^3/mol	Atmospheric-cubic meters per mole
bgs	Below ground surface
Bhate	Bhate Environmental Associates, Inc.
BTEX	Benzene, Toluene, Ethylbenzene, and Xylenes
°C	Degrees Celsius
CCV	Continuing Calibration Verification
CES/CEAN	Civil Engineering Squadron/Environmental Asset Management Flight
cm	Centimeter
COPC	Chemical of potential concern
DPT	Direct push technology
DQO	Data quality objectives
DRMO	Defense Reutilization Management Office
DRO	Diesel Range Organics
EM	Exposure Model
ERP	Environmental Restoration Program
°F	Degrees Fahrenheit
ft	Feet/foot
ft/ft	Feet per foot
FWENC	Foster Wheeler Environmental Corporation
GPS	Global Positioning System
GRO	Gasoline Range Organics
>	Greater than
GTI	Groundwater Technology, Inc.
H	Henry's Law constant
HAFB	Holloman Air Force Base
HHMSSL	Human Health Medium Specific Screening Level
HI	Hazard Index
IDW	Investigation Derived Waste
IELCR	Individual Excess Lifetime Cancer Risk
J	Data Qualifier (denotes an estimated value)
J&E	Johnson and Ettinger
LCS	Laboratory Control Sample
<	Less than
MCL	Maximum Contaminant Level
MDL	Method Detection Limit
µg/kg	Micrograms per kilogram
µg/L	Micrograms per liter
mg/kg	Milligrams per kilogram
mg/L	Milligrams per liter

NAD	North American Datum
NFA	No Further Action
NMAC	New Mexico Administrative Code
NMED	New Mexico Environment Department
NMWQCC	New Mexico Water Quality Control Commission
NMWRRS	New Mexico Water Rights Reporting System
NOD	Notice of Deficiency
ORO	Oil Range Organics
OWS	Oil/water separator
PCB	Polychlorinated Biphenyl
PCS	Petroleum contaminated soil
pH	Potential of Hydrogen (measurement of acidity)
PID	Photoionization detector
POL	Petroleum, Oil, and Lubricants
PRG	Preliminary Remediation Goal
PVC	Polyvinyl chloride
QA/QC	Quality Assurance/Quality Control
RA	Risk Assessment
RBC	Risk Based Concentration
RCRA	Resource Conservation Recovery Act
RFI	RCRA Facility Investigation
RI	Remedial Investigation
RL	Reporting Limit
RPD	Relative Percent Difference
RSL	Regional Screening Level
SOP	Standard Operating Procedure
SSLs	Soil Screening Levels
SVOC	Semi-volatile organic compound
SWMU	Solid Waste Management Unit
TAL	Target Analyte List
TCEQ	Texas Commission on Environmental Quality
TCLP	Toxicity Characteristic Leaching Procedure
TDS	Total dissolved solids
TPH	Total petroleum hydrocarbons
TRPH	Total recoverable petroleum hydrocarbons
2x	Two times
U	Data Qualifier (denotes analyte not detected at a level ≥ the adjusted RL)
UJ	Data Qualifier (denotes an estimated non detected value)
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
UTL	Upper Tolerance Limit
VCM	Voluntary Corrective Measures
VOC	Volatile organic compound
WRCC	Western Regional Climate Center

1 INTRODUCTION

This Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) Report was prepared for the Holloman Air Force Base (HAFB) 49th Civil Engineering Squadron/Environmental Asset Management Flight (CES/CEAN) by NationView, LLC under U.S. Army Corps of Engineers (USACE), Albuquerque District Contract W912PL-07-D-0050, Delivery Order No. DM01. This report presents the results of the RFI conducted by NationView between October 8 and December 14, 2010, at Solid Waste Management (SWMU) Unit 8 (Building 231 Oil/Water Separator) located on Holloman Air Force Base, New Mexico. SWMU 8 is listed in Table A of the HAFB Hazardous Waste Facility Permit (No. NM6572124422), Appendix 4-A (New Mexico Environment Department [NMED], 2005), which requires the site to be investigated and undergo corrective action if warranted.

All of the field work performed during this RFI was conducted in accordance with the approved *Final RCRA Facility Investigation Work Plan, SWMU 8, Holloman Air Force Base, New Mexico* (NationView, 2010) and the RFI requirements set forth in the HAFB Hazardous Waste Facility Permit No. NM6572124422, Appendix 4-B (NMED, 2004a). The Final SWMU 8 Work Plan (NationView, 2010) was revised to address deficiencies outlined by the NMED in correspondence dated August 31, 2009, and was approved by the NMED on July 19, 2010 (Attachment A-1).

1.1 Project Objectives

The primary purpose of this RFI was to review available information and to collect additional soil and groundwater analytical data to fill data gaps in order to characterize soil and groundwater conditions below Buildings 231 and 232.

The project objectives of the SWMU 8 RFI were to:

1. Collect soil samples from below Building 231 and 232 to determine the nature and extent of soil contamination beneath these structures.
2. Install additional monitoring wells to determine the nature and extent of groundwater contamination beneath Buildings 231 and 232.
3. Collect sufficient analytical data to complete a site-specific risk assessment of the exposure pathways.
4. Collect the proper data to meet the data quality objectives (DQOs) to support closure of the site based on guidance from the NMED.

This document also describes the excavation and confirmation soil sampling activities for the Voluntary Corrective Measures (VCM) which was conducted at SWMU 8 by Bhate Environmental Associates, Inc. (Bhate) in October 2008. Additionally, this document summarizes the previously known subsurface conditions including the extent of petroleum contaminated soil (PCS) and groundwater conditions. During this process, required data was collected to support the closure of the site based on guidance from

the NMED. The ultimate objective is to achieve a No Further Action (NFA) Status under NFA Criterion 5 (Appendix 4-B HAFB Hazardous Waste Facility Permit No. NM6572124422), (NMED, 2004a) and obtain a Class III permit modification to remove this SWMU from Table A of the HAFB Hazardous Waste Facility Permit. NFA Criterion 5 states:

> *"The site was characterized or remediated in accordance with applicable state and/or federal regulations, and the available data indicate that contaminants pose an acceptable level of risk under current and projected future land use."*

This criterion was accomplished by removing all of the PCS which had been located between Buildings 231 and 232 followed by the delineation of both soil and groundwater contamination below each building. A detailed description of the SWMU 8 PCS removal action (excavation and disposal/treatment) along with sampling analytical results collected during the VCM are provided in Section 2.6.6 of this report. The RFI soil and groundwater sampling results and the risk assessment are presented in Sections 7 and 8 respectively.

1.2 Document Organization

This RFI Report is organized according to the format suggested in Appendix 4-B of the RFI Report Requirements found in the HAFB RCRA Permit NM6572124422 (Appendix 4-B of the Permit) (NMED, 2004a). The document contains the following 10 sections:

- Section 1 – Introduction
- Section 2 – Site Background
- Section 3 – Environmental Setting
- Section 4 – Source Characterization
- Section 5 – Field Activities
- Section 6 – Laboratory Analysis and Data Validation Summary
- Section 7– Nature and Extent of Contamination
- Section 8 – Risk Based Evaluation
- Section 9 – Conclusions and Recommendations
- Section 10 – References

The tables and figures referenced throughout this RFI Report are included following the text (after Section 10). This report also includes the following attachment and appendices:

- Attachment A – NMED Correspondence
- Appendix A – Historical Data from Previous Investigations
- Appendix B – Soil Boring Logs
- Appendix C – Monitoring Well Construction Diagrams
- Appendix D – Monitoring Well Development Forms
- Appendix E – Monitoring Well Sample Collection Forms
- Appendix F – Analytical Data Packages (Provided on Enclosed CD)
- Appendix G – Data Validation Reports

2 SITE BACKGROUND

2.1 HAFB Facility Description and Operational History

HAFB is located in south central New Mexico, in the northwest central part of Otero County, approximately 75 miles north-northeast of El Paso, Texas (Figure 2-1). HAFB has a population of 6,000, and supports approximately 21,000 active-duty Air Force, National Guard, Air Force Reserve, retirees, civilians, and their family members. HAFB occupies approximately 59,600 acres in the northeast quarter of Section 1, Township 17 South, Range 8 East. The White Sands Missile Range testing facilities occupy additional land extending northward from the Base. Private and public owned lands border the remainder of HAFB. The major highway servicing HAFB is Highway 70, which runs southwest from the town of Alamogordo and separates HAFB from publicly owned lands to the south. Alamogordo is located approximately 7 miles east of the Base and has a population of approximately 35,000.

HAFB was first established in 1942 as Alamogordo Army Air Field (AAF). From 1942 through 1945, Alamogordo AAF served as the training ground for over 20 different flight groups, flying primarily B-17s, B-24s, and B-29s. After World War II, most operations had ceased at the Base. In 1947, Air Material Command announced the air field would be its primary site for the testing and development of un-manned aircraft, guided missiles, and other research programs. On January 13, 1948, the Alamogordo installation was renamed Holloman Air Force Base, in honor of the late Col. George V. Holloman, a pioneer in guided missile research. In 1968, the 49th Tactical Fighter Wing arrived at HAFB and has remained since, conducting fighter aircraft training and operations. HAFB has also served as the German Air Force's Tactical Training Center since 1996.

2.2 SWMU 8 Site Description and Background

SWMU 8 (former Building 231 Oil/Water Separator) is located on the south side of Building 231. Building 231 (Auto Hobby Center) is located on the Main Base at Holloman (Figure 2-2). The physical address of Building 231 is 642 West Connecticut Avenue, which is on the west side of the intersection of Second Street and Connecticut Avenue (Figure 2-3). The in-ground oil/water separator (OWS) at SWMU 8 was removed in August of 1995 (Ebasco Services, Inc, 1995). The in-ground OWS was located east of the covered walkway which connected Buildings 231 and 232 and was approximately 4 feet wide, 6 feet long, and 4 feet deep, with the top of the unit raised a few inches above the ground surface (A.T. Kearney, Inc., 1988).

2.3 Building 231 Activities and Waste Generation

Records indicate that the OWS accepted wash water from a heavy equipment wash rack located adjacent to the unit. Over a period of years the OWS released wash water

rinsate containing oils, detergents, and fuels into the surrounding soil (Bhate, 2006b). Building 231 is currently used as an Auto Hobby Center at HAFB and a new underground OWS has been installed on the west side of the building (Figure 2-3).

2.4 Previously Identified Contamination

Previous investigations and excavation activities have identified total petroleum hydrocarbon (TPH) contamination in the soil surrounding SWMU 8. PCS remedial actions (excavations) conducted by Ebasco Services (1995), Foster Wheeler (1997), and Bhate (2008) have removed approximately 133 cubic yards of PCS from the SWMU 8 site. Excavation soil sampling indicates that all PCS has been removed except for that which lies beneath Buildings 231 and 232. Three groundwater monitoring wells have previously been installed at SWMU 8 (Bhate, 2006b). Although the nature of the groundwater contamination at this site has been characterized, additional wells were required to ensure that the horizontal extent was defined beneath Buildings 231 and 232.

2.5 Applicable Screening Criteria

Analytical data obtained from previous investigations along with data collected during this RFI were evaluated against the applicable regulatory screening criteria specified in Appendix 4-F *Action Levels and Cleanup Levels* of the Holloman AFB Hazardous Waste Permit No. NM6572124422 (NMED, 2004b). Soil and groundwater data evaluation consisted of a direct comparison to the applicable action level screening criteria. The applicable screening criteria are presented on the RFI Report analytical data summary tables for the analytes and media of concern. The following sections present the regulatory criteria used to evaluate analytical data generated from this investigation.

2.5.1 Soils

2.5.1.1 VOCs, SVOCs, PCBs, and TAL Metals

The residential Soil Screening Levels (SSLs) established in NMED's *Technical Background Document for Development of Soil Screening Levels, Revision 5.0* (NMED, 2009) are used as the primary action levels for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), and target analyte list (TAL) metals. As per the HAFB Permit, Appendix 4-F V.1 (NMED, 2004b) if a NMED soil cleanup level has not been established for a particular chemical of potential concern (COPC) (e.g. 2-methylnapthalene) that constituent will be compared to the U.S. Environmental Protection Agency (USEPA) Region 6 *Human Health Medium Specific Screening Level* (HHMSSL). However, under an Interagency Agreement as an update of the USEPA Region 3 Risk Based Concentration (RBC) Table, Region 6 HHMSSL Table, and the Region 9 Preliminary Remediation Goal (PRG) Table; the Region 6 HHMSSLs have been combined into the Regional Screening

Level (RSL) Table (USEPA, 2011). Additionally, all detected TAL metals are compared to the NMED approved HAFB background levels (NMED, 2011).

2.5.1.2 Total Petroleum Hydrocarbons

The action levels for TPH are established in the *New Mexico Environment Department TPH Screening Guidelines* (NMED, 2006). The TPH screening guideline (residential direct exposure), for an unknown oil (800 milligrams per kilogram [mg/kg]) (Table 2b, NMED, 2006) is used as the action level for TPH concentrations (combined gasoline range organics [GRO], diesel range organics [DRO], and oil range organics [ORO]).

2.5.2 Groundwater

2.5.2.1 VOCs, SVOCs, PCBs, and TAL Metals

There are two applicable standards for groundwater: New Mexico Water Quality Control Commission (NMWQCC) groundwater standards for contaminants (New Mexico Administrative Code [NMAC] 20.6.2.3103) and the USEPA's *National Priority Drinking Water Regulations* (USEPA, 2009) Maximum Contaminant Levels (MCLs). The lower of the two standards is used as action levels for VOCs, SVOCs, PCBs, and TAL metals in groundwater. Additionally, all detected TAL metals are compared to the NMED approved HAFB background levels (NMED, 2011).

2.5.2.2 Total Petroleum Hydrocarbons

The action levels for TPH are established in the *New Mexico Environment Department TPH Screening Guidelines* (NMED, 2006). The NMED TPH screening guideline for unknown oil (50.0 milligrams per liter [mg/L]) is the action level which is compared to total TPH concentrations (GRO, DRO, and ORO) detected in groundwater (Table 2b, NMED, 2006).

2.5.2.3 Total Dissolved Solids

There are two applicable standards for total dissolved solids (TDS) detected in groundwater: NMWQCC groundwater standards for contaminants (NMAC 20.6.2.3103) and the USEPA's *National Priority Drinking Water Regulations* Secondary MCLs (USEPA, 2009). The lower of the two standards is used as the action level for TDS.

2.6 Summary of Past Investigations and Remedial Actions

This section presents an overview of the previous investigations and remedial actions conducted at SWMU 8. Since 1988 this SWMU has been the subject of three environmental investigations and three PCS remedial (removal) actions. This section provides a historical overview and chronology of the previous investigations and removal actions which were conducted from 1988 through 2008. The chronology of previous investigations at SWMU 8 is based on information provided in the reports

referenced below. Select analytical results summary tables, figures depicting sampling locations, soil boring logs, monitoring well construction diagrams, and waste manifests for these previous investigations and PCS removal actions are included in Appendix A of this report.

- *RCRA Facility Assessment Preliminary Review/Visual Site Inspection Report*, 1988, A.T. Kearney, Inc., and DPRA, Inc.
- *Closure Report for Remediation of POL* [Petroleum, Oil, and Lubricants] – *Contaminated Sites and Oil/Water Separator Removals, Holloman Air Force Base, New Mexico, July – November 1995,* 1995, EBASCO Services, Inc., and Groundwater Technology Government Services, Inc.
- *Additional Characterization of POL-Contaminated Sites SWMU-3, SWMU-8, SWMU-36, SWMU-123 and OT-44, Holloman Air Force Base, New Mexico,* 1996, Groundwater Technology Government Services, Inc.
- *Final Closure Report Addendum for Phase II Remediation of POL-Contaminated Sites and Oil/Water Separator and Waste Oil Tank Removals, Holloman Air Force Base, New Mexico,* 1997, Foster Wheeler Environmental Corporation.
- *Memorandum Scope of Work for Soil and Groundwater Sampling and Analysis, Holloman Air Force Base, New Mexico,* May 2, 2006, Bhate Environmental Associates, Inc.
- *Technical Memorandum Letter Report for SWMU 8 Soil and Groundwater Sampling and Analysis, Holloman AFB, New Mexico,* August 2, 2006, Bhate Environmental Associates, Inc.
- *Final Voluntary Corrective Measures Work Plan SWMU 8 Soil Remediation Holloman Air Force Base, New Mexico,* 2008, Bhate Environmental Associates, Inc.
- Figures and analytical results from the Voluntary Corrective Measures, SWMU 8 Soil Remediation activities conducted by Bhate in 2008.

Each of these actions is described below.

2.6.1 RCRA Facility Assessment Preliminary Review Report

The RCRA Facility Assessment Report (A.T. Kearney, 1988) identified the Building 231 Oil/Water Separator as SWMU 8. The top of the in-ground OWS was raised a few inches above the ground surface and was covered with a metal lid. The sides and bottom of the unit were constructed of concrete and the ground surface surrounding the unit was covered with drain rock. The OWS had a capacity of 300 gallons, and was approximately 6 feet (ft) long by 4 ft wide and 4 ft deep.

The OWS was used to collect wash water, oil, and hydraulic fluid from the vehicle maintenance shop operation (Building 231). During a visual inspection of the OWS it

was noted that the concrete sides of the unit appeared to be in good condition, and that the bottom was covered with liquid, and therefore could not be viewed. Regular inspections were conducted by Holloman engineers to assure the integrity of the unit. Waste oil from the unit was transferred to the Defense Reutilization Management Office (DRMO) Waste Storage Area, and wastewater effluent was discharged to the Wastewater Treatment Plant. The RCRA Facility Assessment Report concluded that a release had occurred from the OWS to soil and/or groundwater. Stained soils on the north side of the unit, around the cleanout pipe were thought to be the result of spills, rather than overflow. No further action was suggested at that time for SWMU 8. The descriptions of SWMU 8 from the RCRA Facility Assessment Report (A.T. Kearney, 1988) are provided in Appendix A-1 of this report.

2.6.2 Closure Report for Remediation of POL Contaminated Sites

The *Closure Report for Remediation of POL – Contaminated Sites and Oil/Water Separator Removals* (EBASCO, 1995) described OWS removal, remedial excavation, confirmation sampling, and reclamation activities at SWMU 8. The OWS received rinsate containing water, oils, detergents, and fuels from a heavy equipment washrack located at adjacent Building 231. Data for VOCs, SVOCs, and metals were not available prior to OWS removal.

The initial SWMU 8 remedial (removal) action was conducted by EBASCO Services, Inc., and took place during August 1995 (Ebasco, 1995). Approximately 21 cubic yards (28 tons) of PCS was removed at this time. Four native soil confirmation samples were collected from the excavation corners (SWMU-8-01-7 through SWMU-8-04-7), and one form the center of the excavation (SWMU-8-05-7). The sample locations are shown on Figure 10-1 in Appendix A-2 of this report.

Total recoverable petroleum hydrocarbons (TRPH) concentrations above the current NMED TPH Screening Guideline for unknown oil of 800 mg/kg (NMED, 2006) were detected in all 5 samples. TRPH concentrations of 23,000; 31,000; 6,500; 1,200; and 940 mg/kg were detected in samples SWMU-8-01-7, SWMU-8-02-7, SWMU-8-03-7, SWMU-8-04-7, and SWMU-8-05-7 respectively.

Several VOC analytes in USEPA Method 8240 were detected in samples SWMU-8-01-7 and SWMU-8-02-7. No VOC analytes in USEPA Method 8240 were detected above the laboratory quantitation limits in samples SWMU-8-03-7 through SWMU-8-05-7. In the SVOC samples, naphthalene concentrations were present in SWMU-8-01-7 and SWMU-8-05-7. In addition, 2-methylnaphthalene concentrations were present in SWMU-8-01-7 through SWMU-8-03-7. None of the other SVOC analytes in USEPA Method 8270 were detected above laboratory quantitation limits in any of the samples. Additionally, all detected VOCs and SVOCs were below the current NMED SSLs (NMED, 2009) and/or USEPA RSLs (USEPA, 2011).

EPA 6000/7000 Series analytical results indicated various metals in all five samples. All metals were detected below the current NMED SSLs. Analytical results for VOCs,

SVOCs, and TAL metals are summarized in Table 10-2 in Appendix A-2 of this report. Confirmation soil sample locations and analytical results from the EBASCO OWS removal and remedial excavation which exceeded current NMED Residential SSLs, USEPA RSLs, and/or NMED TPH Screening Guidelines are presented on Figure 2-4.

Excavated contaminated soil was stockpiled and sampled for off-site disposal. Based on the analytical results from the stockpile samples (see Table 10-3 in Appendix A-2 of this report) the 21 cubic yards of contaminated soil was transported offsite as non-hazardous waste to the Rhino Environmental Services, Inc., landfarm facility located north of Newman, New Mexico for treatment and disposal in early October 1995. Copies of the waste manifests and weight certificates/receipts are also included in Appendix A-2 of this report.

Due to the elevated TRPH detected in all five excavation sidewall samples and one bottom sample, the Closure Report (Ebasco, 1995) recommended further delineation and remediation of the remaining PCS (detected in samples SWMU-8-01-7 through SWMU-8-05-7). Additional investigation and in-situ remediation activities were planned for the site in 1996.

2.6.3 Characterization of SWMU 8

Characterization to delineate the extent of subsurface soil in excess of 1,000 mg/kg (historical TPH action level) at SWMU 8 was conducted by Groundwater Technology, Inc. (GTI), in February 1996. Four soil borings (DP-1 through DP-3, and DP-5) were advanced with direct push technology (DPT) drilling methods during this sampling event (see Figure 3 in Appendix A-3 of this report). Each borehole was advanced to 12 ft below ground surface (bgs), sampled continuously, and field screened for VOCs with a photoionization detector (PID). Two samples from each boring were analyzed for TRPH. Boring logs with PID screening results are provided in Appendix A-3 of this report.

The analytical results for these samples are summarized in Table 3 in Appendix A-3 of this report. TRPH was not detected in any of the samples collected from the boreholes advanced in the vicinity of the former Building 231 Oil/Water Separator (SWMU 8). The GTI letter report stated that TRPH was not quantified under the slab at Building 231, and that based on the locations of the four borings (see Figure 3 in Appendix A-3 of this report), it appeared that delineation of TRPH detected at the OWS was complete.

2.6.4 Final Closure Report Addendum for Phase II Remediation of POL Contaminated Sites

Five closure samples (SWMU-8-01-7 through SWMU-8-05-7) from the initial PCS removal action at SWMU 8 conducted by EBASCO Services in 1995 exceeded the current TPH Screening Guideline for an unknown oil of 800 mg/kg. After the first phase of remediation in 1995 it was discovered that contaminated soil extended beyond what had been originally anticipated. Based on an agreement between NMED and HAFB,

soil with TRPH concentrations exceeding 1,000 mg/kg (TPH action level at the time) which extended under large structures would not require remediation if this soil posed no potential health risk. As a result, additional excavation activities were planned to remove all TRPH-contaminated soil exceeding 1,000 mg/kg that did not extend under Buildings 231 and 232.

In April 1997, Foster Wheeler Environmental Corporation (FWENC) resumed remedial activities and removed an additional 31.8 cubic yards (43 tons) of PCS from an excavation which extended eastward from the eastern edge of the original SWMU 8 excavation (FWENC, 1997). Representative samples of in-place and stockpiled soil were also collected during the second remedial action. The four excavation sidewall samples (see Figure 4-1 in Appendix A-4 of this report) were analyzed for TRPH; VOCs; SVOCs; benzene, toluene, ethylbenzene, xylenes (BTEX); and metals. VOC and SVOC analytical results for the Phase II excavation confirmation samples did not exceed the current NMED SSLs (NMED, 2009). TRPH concentrations ranged from not-detected to 78 mg/kg and were all below the current TPH Screening Guideline for an unknown oil of 800 mg/kg (NMED, 2006). The analytical results for these samples are provided in Table 4-1 of Appendix A-4 of this report.

The excavated contaminated soil was stockpiled and sampled for off-site disposal. One composite soil stockpile sample was collected and analyzed for TRPH, Toxicity Characteristic Leaching Procedure (TCLP) constituents (VOCs, SVOCs, and metals), BTEX, lead, and RCRA characteristics (FWENC, 1997). As shown in Table 4-1 of Appendix A-4, the analytical result for TRPH was 36 mg/kg. All detections of VOCs, SVOCs, BTEX, and metals were below their respective NMED SSLs (NMED, 2009). Based on the analytical results from the stockpile sample, the 38.1-cubic yards of PCS from the second excavation was transported offsite as non-hazardous waste to the Rhino Environmental Services, Inc., landfarm facility located north of Newman, New Mexico for treatment and disposal. Copies of the waste manifests and weight certificates/receipts are also included in Appendix A-4 of this report.

No further excavation of contaminated soil was possible at the site to the west of samples SWMU-8-01-7 and SWMU-8-02-7 (initial PCS removal action, Ebasco 1995) due to a covered walkway which connected Building 231 and 232. Foster Wheeler requested that NFA be granted for SWMU 8 because 80-90 percent of TRPH-contaminated soil had been excavated, and no further excavation was possible. The second excavation was backfilled with clean soil (FWENC, 1997).

2.6.5 SWMU 8 Additional Site Characterization

A Notice of Deficiency (NOD) letter from NMED to HAFB dated April 14, 2006 (included in Attachment A-2 of this report), stated the Base needed to conduct additional site characterization activities prior to initializing the SWMU-8 Voluntary Corrective Measures Soil Remediation Work Plan (Phase III PCS excavation). This letter also required HAFB to utilize the residential NMED TPH Screening Guideline for an “unknown oil” (800 mg/kg) for performing all subsequent work at SWMU 8.

On behalf of HAFB, Bhate submitted a response letter to this NOD from the NMED on June 12, 2006 (included in Attachment A-3 of this report). In the response letter, Bhate agreed to make appropriate changes to the *Draft Voluntary Corrective Measures Work Plan* (Bhate, 2005) based on NMED comments. Bhate also stated that additional delineation of soil and groundwater was performed in May 2006, based on the *Memorandum Scope of Work for Soil and Groundwater Sampling and Analysis* (Bhate, 2006a). This Work Plan was provided and approved by NMED prior to the performance of the characterization.

In response to the NMED NOD dated April 14, 2006, Bhate was subcontracted to address the recommendations made by NMED concerning further site characterization. The primary objective of this investigation was to characterize the remaining soil contamination at the site (which was not underneath the adjacent structures) and to install and sample groundwater monitoring wells. This additional investigational work had to be completed prior to NMED approval of the SWMU 8 VCM Work Plan. Field work for the SWMU 8 Additional Site Characterization was conducted in accordance with the *Memorandum Scope of Work for Soil and Groundwater Sampling and Analysis* (Bhate, 2006a) which was verbally approved by the NMED. The following information was obtained from the *Technical Memorandum Letter Report for SWMU 8 Soil and Groundwater Sampling and Analysis, Holloman AFB, New Mexico* (Bhate, 2006b).

A total of three DPT soil borings were advanced at SWMU 8 in May 2006. The three soil borings were converted into 1-inch groundwater monitoring wells with 0.02-inch slot pre-packed polyvinyl chloride (PVC) screens and flush mount surface completions. One soil sample was collected from SWMU-8-DP01 and SWMU-8-DP02 for laboratory analysis. A soil sample was not collected from SWMU-8-DP03 as this borehole was installed within clean backfill from the Phase II excavation. Appendix A-5 of this report contains the boring logs and well construction diagrams from this investigation. Three groundwater samples and a round of water levels were collected from the three monitoring wells on June 7, 2006. The locations of the DPT soil borings and subsequent monitoring wells are illustrated on Figure 1 in Appendix A-5 of this report

Table 1 in Appendix A-5 presents the groundwater elevation data collected from the three monitoring wells and a potentiometric surface map was prepared using the data (see Figure 2 in Appendix A-5 of this report). The contour map indicates that groundwater flow was to the west-southwest across the site at a gradient of approximately 0.013 feet per foot (ft/ft).

2.6.5.1 Soil Sampling Results

The three soil samples (including one duplicate) were analyzed for VOCs, SVOCs, TPH (GRO/DRO/ORO), TAL metals, and PCBs. Table 2 in Appendix A-5 of this report presents the analytical results for soil samples collected from the boreholes converted into monitoring wells.

One VOC (naphthalene) was detected in the soil sample collected from SWMU-08-DP01-5; all other VOCs were not detected. The estimated concentration of naphthalene (2.7 micrograms per kilogram [µg/kg]) was well below the NMED SSL (NMED, 2009) for naphthalene of 45 mg/kg. No other SVOCs, TPH (GRO/DRO/ORO), or PCBs were detected. Additionally all TAL metals detected in the subsurface soil samples were below their respective SSLs and NMED approved HAFB background levels (Table 1, NMED 2011).

2.6.5.2 Groundwater Sampling Results

The four groundwater samples (including one duplicate) collected from monitoring wells SWMU-08-DP01, SWMU-08-DP02, and SWMU-08-DP03 were analyzed for VOCs, SVOCs, PCBs, TAL metals, and TDS. In addition to these analytes, the groundwater sample from SWMU-8-DP01 was analyzed for TPH (DRO/ORO), while groundwater samples from SWMU-08-DP02 and SWMU-08-DP03 were analyzed for TPH (GRO/DRO/ORO) (see Table 3 in Appendix A-5 of this report). Low concentrations of four VOCs (bromodichloromethane, chloroform, dibromochloromethane, and o-dichlorobenzene) were detected in the groundwater samples from the three monitoring wells installed at SWMU 8. No other VOCs were detected. All of the detected VOCs were below the NMWQCC Groundwater Standards (NMAC 20.6.2.3103). No other SVOCs, TPH (GRO/DRO/ORO), or PCBs were detected.

Fourteen TAL metals were detected in the four groundwater samples collected. Manganese exceeded the NMWQCC standard (200 micrograms per liter [µg/L]) (NMAC 20.6.2.3103) in SWMU-08-DP01 and SWMU-08-DP02. Arsenic and beryllium were both detected above their respective USEPA MCLs (USEPA, 2009), and aluminum was detected above the USEPA Secondary Drinking Water Standard (50 µg/L) (USEPA, 2009). All other detected metals were below their respective NMWQCC standards and USEPA MCLs. In addition, each of the groundwater samples had detections of several TAL metals (aluminum, arsenic, barium, beryllium, cobalt, manganese, nickel, vanadium and/or zinc) above the NMED approved background levels (Table 3, NMED, 2011).

TDS concentrations ranged from 2,600 to 3,190 mg/L. It was hypothesized that these TDS concentrations were artificially low due to the dilution of natural groundwater from leaking water lines. Interviews with the Postal Service Center (Building 232) personnel in 2006 indicated that two sink holes had developed along Connecticut Avenue (east side of Building 232) approximately 6 to 8 months prior to this work being completed (Bhate, 2006b). The main Base area at HAFB is known to have had a number of leaking underground utilities which can affect local groundwater elevations and redirect the local groundwater flow direction. Groundwater sampling locations and analytical results from the sampling performed by Bhate in 2006 which exceeded current NMWQCC standards or USEPA MCLs are presented on Figure 2-5.

2.6.6 Voluntary Corrective Measures at SWMU 8

After the additional site characterization had been completed, NMED provided a letter dated October 12, 2006, conditionally approving the *Draft Voluntary Corrective Measures Work Plan, SWMU 8 Soil Remediation* (Bhate, 2005) once changes had been made and re-submitted. A copy of the conditional approval letter is located in Attachment A-4 of this report. The *Final Voluntary Corrective Measures Work Plan, SWMU 8 Soil Remediation* (Bhate, 2008) reflected the changes suggested by NMED, and was approved on December 11, 2008. A copy of the approval letter is located in Attachment A-5 of this report. The primary objective of the VCM was to remove and properly dispose of the remaining PCS between Buildings 231 and 232. The VCM required the removal of all PCS (not including soil underneath buildings) at the site through excavation with verification of complete removal via confirmation sampling from the excavation. The following information was obtained from the *Final RCRA Facility Work Plan SWMU 8, Holloman AFB, New Mexico* (NationView, 2010).

In October 2008, Bhate performed the VCM excavation at SWMU 8. During the implementation of the VCM, the covered walkway which connected Buildings 231 and 232 was removed to allow for soil removal in the area to the west of the Phase I excavation performed by EBASCO in 1995. The approximate area of the VCM excavation was 560 square feet extending to a depth of 8.5 feet bgs. An additional 80 cubic yards of PCS was removed and transported to the permitted HAFB FT-31 Landfarm for treatment. As shown in Figure 1 of Appendix A-6 of this report, the 2008 VCM excavation extended 25 feet west of the Phase I excavation performed by EBASCO in 1995, overlapped the entire Phase I excavation along with the eastern third of the Phase II excavation performed by FWENC in 1997 and extended deeper than both previous removal actions.

Representative samples of in-place soil were collected during the VCM excavation. A total of 17 sidewall and 4 bottom confirmation soil samples were collected and analyzed for TPH, VOCs, SVOCs, PCBs, and TAL metals. TPH was analyzed for -GRO, -DRO, and -ORO fractions. TPH-GRO detections ranged from 5.3 mg/kg to 12 mg/kg. TPH-DRO detections ranged from 0.55J (data qualifier indicating an estimated concentration) mg/kg to 2,380 mg/kg. TPH-ORO detections ranged from 2.1J mg/kg to 743 mg/kg. The combined TPH (GRO/DRO/ORO) concentrations exceeded the NMED TPH Screening Guideline for unknown oil (800 mg/kg) (NMED, 2006) in 8 of the 17 excavation sidewall samples. VOC, SVOC, PCB, and TAL metal analytical results from the VCM confirmation soil samples did not exceed the current NMED SSLs (NMED, 2009), or USEPA RSLs (USEPA, 2011). In addition, all TAL metals were detected below the NMED approved HAFB background levels (Table 1, NMED 2011). A summary table of the analytical data for the sidewall and bottom samples collected in 2008 is presented in Table 1 of Appendix A-6 of this report. Soil sampling locations and analytical results from the SWMU 8 VCM which exceeded current NMED SSLs, USEPA RSLs, and/or NMED TPH Screening Guidelines are also presented on Figure 2-6.

3 ENVIRONMENTAL SETTING

The following subsections present the environmental setting. This information was obtained primarily from the *Draft Final Remedial Investigation (RI) Report, Investigation, Study and Recommendation for 29 Waste Sites* (Radian, 1992), unless cited otherwise.

3.1 Physiography and Topography

HAFB is located within the Sacramento Mountains Physiographic Province on the western edge of the Sacramento Mountains. HAFB is approximately 59,600 acres in area, and is located at a mean elevation of 4,093 feet above mean sea level (amsl). The region is characterized by high tablelands with rolling summit plains; cuesta-formed mountains dipping eastward and of west-facing escarpments with the wide bracketed basin forming the basin and range complex. The Base is located within the Tularosa Basin, which is part of a 170 mile long structural depression. The boarding mountains rise abruptly to altitudes of 7,000 to 12,000 feet amsl. The San Andres Mountains bound the basin to the west (about 30 miles) with the Sacramento Mountains approximately 10 miles to the east. At its widest point, the basin is about 60 miles east to west and stretches approximately 150 miles north to south (Figure 2-1).

The Tularosa Basin is a closed basin that contains all of the surface flow within its boundaries. Surface runoff from the surrounding mountains has deposited alluvial fans on the interior of the plain. Around the Base, ground surface is undulating; comprised of alluvial fan deposits, eolian dunes, and flat bottomed playas (pan shaped depressions carved by wind erosion). To the west of the Base lie the gypsum sand dune fields of the White Sands National Monument. A topographic map of the Base is provided as Figure 3-1.

3.2 Surface Water and Hydrology

Within the boundaries of the Base, surface water runoff is controlled by several arroyos which trend to the southwest (Figure 3-2). The nearest inflow of surface waters to the Base comes from the Lost River, located in the north-central region of the Base. HAFB is dissected by several other southwest trending arroyos which control surface drainage. Hay Draw arroyo is located to the far north. Malone and Ritas Draw, which drain into the Lost River, and Dillard Draw arroyos are located along the eastern perimeter of the Base. Approximately 10,000 years ago, indications are of a much wetter climate. The present day Lake Otero encompassed a much larger area, possibly upwards of several hundred square miles. Its remains are the Alkali Flat and Lake Lucero. Lake Lucero is a temporary feature of merely a few inches in depth during the rainy season.

Ancient lakes and streams deposited water bearing deposits over the older bedrock basement material. Fractures, cracks, and fissures in the Permian and Pennsylvanian bedrock yield small quantities of relatively good quality water in the deeper peripheral.

Potable water is only found from a handful of wells near the edges of the basin with more saline water towards the center. Two of the principal sources of potable water are a long narrow north-south trending area east of Tularosa and Alamogordo and in the far southwestern part of the basin. Alamogordo's water, as well as the Base's, is supplied from Lake Bonito (which is in the Pecos River Basin).

3.3 Regional Geology

The Tularosa Basin is the easternmost extension of the Basin and Range Province of the western United States. The Basin and Range was created by Cenozoic extensional (normal) faulting of Precambrian- through Tertiary-age sedimentary and igneous rocks. The basin is a graben, or downthrown block, bounded by the upthrown fault blocks of the San Andres and Sacramento Mountains.

During the Permian period of the Paleozoic era (approximately 270 million years ago), southern New Mexico was covered by a shallow sea. Limestone and sandstone were deposited, forming thick sedimentary units. Toward the end of the Mesozoic era (approximately 70 million years ago), the major mountain building activities which formed the Rocky Mountains took place. During these events, southern New Mexico emerged from the ocean as the earth's crust upwarped gently in this region. During the Cenozoic era (beginning approximately 70 million years ago), basin and range formation was initiated in what is now the southwestern United States. Approximately 10 million years ago, Cenozoic faulting formed the graben structure known as the Tularosa Basin. During this process, arched portions of rock collapsed between large-scale, north-south trending faults. The Tularosa Basin is a central downthrown area, bounded on the east and west by fault block mountains. Bedded Permian strata can be seen along the faces of the Sacramento and San Andres Mountains. Permian limestones also occur west of HAFB in a low bedrock outcrop near Hurtz Spring. In the millions of years following, rainfall, snowmelt, and wind eroded the mountain sediments depositing them in the valley (i.e. Tularosa Basin). Water carrying eroded limestone, dolomite, gravel, and other matter continue to flow into the basin. A generalized cross-section of the Tularosa Basin is shown in Figure 3-3.

As the Tularosa Basin is a bolson, which is a basin with no surface drainage outlet, sediments carried by surface water into a closed basin are bolson deposits. The overlying alluvium generally consists of unconsolidated gravels, sands, and clays. The bolson sediments within the Tularosa Basin are derived from the adjacent ranges as erosional deposits of limestone, dolomite, and gypsum. Coarser material is deposited at the base of the mountains while finer material is carried to the basin's interior. The bolson fill deposits thin out from Alamogordo to less than 100 feet near Hurtz Spring. Bolson fill deposits are 8,000 feet thick or more in the central portion of the Tularosa Basin.

Near-surface geologic conditions at HAFB have been established during numerous Environmental Restoration Program (ERP) investigations. The near-surface bolson deposits at HAFB consist of sediments which are alluvial, eolian, and lacustrine in

origin. The alluvial fan deposits are laterally discontinuous units of interbedded sand, silt, and clay while the eolian deposits consist primarily of gypsum sands. The eolian and alluvial deposits are usually indistinguishable because the wind simultaneously reworks alluvial fan sediments and deposits gypsum sands resulting in an intermingling of the two sediment types. The playa, or lacustrine deposits, consist of medium to high plastic clay containing gypsum crystals and are contiguous with the alluvial fan and eolian deposits throughout HAFB. There has been the identification of stiff caliche layers, varying in thickness, at different areas of the Base. A generalized near surface cross-section for HAFB is shown in Figure 3-4.

3.4 Soils

The United States Department of Agriculture (USDA) Soil Conservation Service has identified two soil associations in the vicinity of HAFB; the Holloman-Gypsum Land-Yesum complex, and the Mead silty clay loam. The permeability of these horizons ranges from $4x10^{-4}$ to 1 $x10^{-3}$ centimeters per second. The distribution of soils in the vicinity of HAFB is depicted on Figure 3-5 (USDA, 1981).

The Holloman-Gypsum land-Yesum complex, 0 to 5 percent slopes soil consists of large areas of shallow and deep, well drained soils and areas of exposed gypsum. The Holloman soil makes up about 35 percent of the complex. Typically, the surface layer is light brown very fine sandy loam about 3 inches thick. The upper 13 inches of the substratum is pink very fine sandy loam that is very high in gypsum. Below that, the substratum is white gypsum to a depth of more than 60 inches. This soil is calcareous and mildly alkaline to moderately alkaline throughout. Permeability is moderate, and available water capacity is very low.

Gypsum land makes up about 30 percent of the Holloman-Gypsum land-Yesum complex, 0 to 5 percent slopes. Typically, less than 1 inch of very fine sandy loam overlies soft to hard, white gypsum. The deep Yesum very fine sandy loam makes up about 20 percent of the complex. Typically, the surface layer is light brown very fine sandy loam about 3 inches thick. The upper 9 inches of the substratum is light brown fine sandy loam that is very high in gypsum. Below that, the substratum is pink very fine sandy loam to a depth of more than 60 inches. The soil is calcareous throughout and is mildly alkaline. Permeability is moderate, and available water capacity is moderate. Many fine gypsum crystals are found throughout the profile.

The soil type located across the main drainage area for the installation is Mead silty clay loam, 0 to 1 percent slopes. This deep, poorly drained, nearly level soil is on outer fringes of alluvial fans. This soil formed in fine textured alluvium over lacustrine lake sediment. It is very high in salt content because of periodic flooding and poor drainage. Slopes are smooth and concave. Typically, the surface layer is reddish brown silty clay loam and clay loam about 5 inches thick. The substratum, to a depth of 48 inches, is light reddish brown clay which has a high content of salts. Below that, the substratum is lacustrine material of variable texture and color to a depth of more than 60 inches. Included with this soil are areas of Holloman soils and Gypsum land along the margins

of the unit of steep, short gully sides and knolls. These inclusions make up about 15 percent of the map unit for this soil type. Individual areas are generally smaller than 10 acres. This soil is moderately calcareous throughout and is moderately to strongly alkaline. It has a layer of salt that is more soluble than gypsum. Permeability is very slow, and available water capacity is low.

3.5 SWMU 8 Site Geology

Site specific geologic information was obtained through the compilation of lithologic data from the 14 soil borings drilled during this RFI. Continuous lithologic logging was conducted for each borehole in accordance with the Unified Soil Classification System. The borehole logs from this investigation are included in Appendix B of this report.

The stratigraphy underlying SWMU 8 consists primarily of interbedded, fine-grained silty-clays, sands, and silty-sands. From below the concrete foundation and backfill material beneath both Buildings 231 and 232 to approximately 6 ft bgs soils are predominantly moist, plastic, silty-clays. A saturated sand layer was present in all soil borings beginning at depths of 6 to 9 ft bgs. A silty-sand layer with gypsum crystal inclusions was present in some boreholes beginning at approximately 9 ft bgs. The groundwater table onsite occurs at approximately 5.5 to 7 ft bgs.

3.6 Regional Hydrogeology

Groundwater occurs as an unconfined aquifer in the unconsolidated deposits of the central basin, with the primary source of recharge as rainfall percolation and minor amounts of stream run-off along the western edge of the Sacramento Mountains. Surface water/rainfall migrates downward into the alluvial sediments at the edge of the shallow aquifer near the ranges, and flows downgradient through progressively finer-grained sediments towards the central basin. Because the Tularosa Basin is a closed system, water that enters the area only leaves either through evaporation or percolation. This elevated amount of percolation results in a fairly high water table. Beneath HAFB, groundwater ranges from 5 to 50 ft bgs. Flow for the Base is generally towards the southwest with localized influences from the variations in the topography of the Base. In the northern and western portions of the Base, groundwater flows more to the west toward the Ritas Draw, Malone Draw, and Lost River drainages. Groundwater flow is affected by local topography in areas immediately adjacent to arroyos, where groundwater flows directly toward the drainages regardless of the regional flow pattern.

Figure 3-6 shows the Basewide groundwater flow direction obtained from water level measurements collected during the 2001 Long Term Monitoring groundwater sampling event (FWENC, 2002). Groundwater quality in the Tularosa Basin is of potable quality at the recharge areas in close proximity to the Sacramento Mountains and becomes increasingly mineralized toward the central portion of the basin and discharge areas (Radian, 1992). The majority (over 70 %) of the ERP Sites and SWMUs located across HAFB, have groundwater monitoring wells containing water with an average TDS

concentration greater than 10,000 mg/L. This TDS data supports the hypothesis that TDS concentrations below 10,000 mg/L at HAFB are caused by dilution of natural groundwater from leaking water lines and surface irrigation from the domestic water supply. TDS concentrations greater than 10,000 mg/L exceed the NMWQCC limit as potable water and thus, the groundwater beneath HAFB has been designated as unfit for human consumption. Additionally, based on the USEPA document, *Final Draft Guidelines for Ground-water Classification Under USEPA Ground-water Protection Strategy* (USEPA, 1986), the groundwater can be classified as Class III B. Class III B groundwater is characterized by having a TDS concentration greater than 10,000 mg/L, and a low degree of interconnection to adjacent surface waters or groundwater of a higher class. Because the Tularosa is a closed basin, its groundwater does not discharge or connect to any adjacent aquifer. Adjacent surface waters include groundwater surfacing in Lake Holloman. TDS in Lake Holloman ranges from a winter low of 12,400 mg/L to a summer high of 17,000 mg/L (Cole, et al., 1981); therefore, groundwater at Holloman AFB is not interconnected with surface water of a higher class.

There are no potable water wells on HAFB. Potable water for the Base (Boles, Douglas, and San Andres well fields) and the city of Alamogordo is derived from the foot of the nearby Sacramento Mountains, just south of Alamogordo. According to a groundwater well inventory (Table 3-1) prepared by the New Mexico Office of the State Engineer, there are approximately 25 domestic, 15 commercial, 7 irrigation, and 3 livestock wells located within a 4-mile radius of Holloman AFB (New Mexico Water Rights Reporting System [NMWRRS] database, 2009). As shown on Figure 3-7, these wells are located along HAFB's northern and eastern boundaries (upgradient and cross gradient respectively).

3.7 SWMU 8 Site Hydrogeology

To determine the groundwater flow direction, and horizontal hydraulic gradient, groundwater elevations were measured at 4 monitoring wells comprising the SWMU 8 monitoring well network on December 13, 2010. Groundwater onsite occurs in silty-sands and silty-clays in a shallow unconfined aquifer approximately 5.5 to 7 ft bgs. Static water elevations at the site ranged from 4,066.81 ft amsl at SWMU8-DP17 to 4,067.46 ft amsl at SWMU8-DP03. Table 3-2 presents the groundwater elevation data collected during this RFI.

A potentiometric surface map of SWMU 8 was developed using the data collected in December 2010 (Figure 3-8). The SWMU 8 groundwater flow direction is generally toward the south-southwest which mimics the south-southwest Basewide flow direction at HAFB.

Horizontal hydraulic gradient was calculated along the groundwater flow lines within the SWMU 8 monitoring well network. The horizontal gradient for SWMU 8 is approximately 0.006 ft/ft and was calculated using water levels obtained from monitoring wells SWMU8-DP03 (upgradient) and SWMU8-DP17 (downgradient).

3.8 Climate

As a whole, New Mexico has a mild, arid to semi-arid continental climate characterized by light precipitation totals, abundant sunshine, relatively low humidity, and relatively large annual and diurnal temperature range (Western Regional Climate Center [WRCC], 2003). The climate of the Central Closed Basins varies with elevation. The Base is found in the low areas and is characterized by warm temperatures and dry air. Daytime temperatures often exceed 100 degrees Fahrenheit (°F) in the summer months and are in the middle 50s in the winter. A preponderance of clear skies and relatively low humidity permits rapid night time cooling resulting in average diurnal temperature ranges of 25 to 35°F. Potential evapotranspiration, at 67 inches per year, significantly exceeds annual precipitation, usually less than 10 inches. The very low rainfall amounts resulting in the arid conditions, which with the topographically induced wind patterns combining with the sparse vegetation, tend to cause localized “dust devils”. The annual rainfall for Alamogordo is 12 inches per year[1]. Much of the precipitation falls during the mid-summer monsoonal period (July and August) as brief, yet frequent, intense thunderstorms culminating to 30 to 40% of the annual total rainfall.

3.9 Current and Future Land Use

The land surrounding HAFB consists of residential areas to the east and northeast (City of Alamogordo), rangeland to the south, the White Sands National Monument to the west, and areas where military activities are conducted to the north. The desert terrain of the area immediately surrounding HAFB has limited development, and there are no agricultural operations, residential communities, or large industrial operations located adjacent to the Base. HAFB is an active military installation and is expected to remain active for the foreseeable future. No transfer of military property to the public is anticipated, and public access to the Base is restricted.

Residential development on the Base is limited due to environmental and operational constraints imposed by the 100-year floodplain, historic sites, and areas identified under the Environmental Restoration Program. Safety and noise zones also limit residential development on HAFB. Future plans for residential development on the Base include renovation of existing structures, replacement of inefficient buildings, and expansion into open areas in the southeast corner of the Base (HAFB, 2000). Future land use at SWMU 8 is not expected to differ significantly from current land use practices.

3.10 Current and Future Water Use

At present, the primary fresh water resource for the City of Alamogordo and HAFB is Lake Bonita, 60 miles northeast of the Tularosa Basin. Currently, there are no potable supplies of groundwater or surface water located on the Base. HAFB obtains its water

[1] http://countrystudies.us/united-states/weather/new-mexico/

supply from the City of Alamogordo and the HAFB wells in the Boles, San Andres, and Douglas well fields at the base of the Sacramento Mountains. No water supply wells are located on or near the Base due to poor groundwater quality (TDS greater than 10,000 mg/L).

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4 SOURCE CHARACTERIZATION

Based on previous site activities described in Section 2, SWMU 8 has been the subject of three environmental investigations, and three PCS removal actions which were conducted from 1988 through 2008. A chronological list of the previous source area characterizations and remedial actions conducted at SWMU 8 is presented in Section 2.6 of this report.

The primary objectives of the SWMU 8 RFI were to:

1. Collect soil samples from below Building 231 and 232 to determine the nature and extent of soil contamination beneath these structures.
2. Install additional monitoring wells to determine the nature and extent of groundwater contamination beneath Buildings 231 and 232.
3. Collect sufficient analytical data to complete a site-specific risk assessment of the exposure pathways.
4. Collect the proper data to meet the DQOs to support closure of the site based on guidance from the NMED.

The purpose of the RFI at SWMU 8 was to collect soil and groundwater data to fill existing data gaps. The results of the additional subsurface soil and groundwater characterization at SWMU 8 are presented in Section 7 of this report (Nature and Extent of Contamination).

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5 FIELD ACTIVITIES

This section presents a summary of the SWMU 8 RFI field activities performed by NationView from October 8 through December 14, 2010.

The objectives of the RFI activities at the previously removed Building 231 Oil/Water Separator (SWMU 8) were to collect additional soil and groundwater data to evaluate the current conditions beneath Buildings 231 and 232. To meet the RFI objectives at SWMU 8, the following activities were performed by NationView from October through December 2010:

- Advanced and sampled 12 boreholes (SWMU8-DP04 through SWMU8-DP15) adjacent to the previously removed Building 231 Oil/Water Separator (SWMU 8) to identify potential releases to the soil and groundwater beneath Buildings 231 and 232.
- Collected groundwater samples from three existing monitoring wells (SWMU8-DP01 through SWMU8-DP03) and three newly installed monitoring wells (SWMU8-DP05, SWMU8-DP13, and SWMU8-DP17).
- Analyzed soil and groundwater samples for VOCs, SVOCs, TPH, PCBs, TAL metals, and TDS (groundwater only).
- Two geotechnical soil samples were collected from soil boring SWMU8-DP16 to provide geotechnical data of non-impacted soils at the site.

Prior to sampling activities, a Base Dig Permit (Air Force Form [AF Fm] 103) with a utility clearance, was submitted and approved by the proper HAFB offices. All completed field and waste handling activities at SWMU 8 were performed in accordance with HAFB Standard Operating Procedures (SOPs), provided in the *Basewide Quality Assurance Project Plan* (Bhate, 2003), as outlined in the *Final RCRA Facility Investigation Work Plan, SWMU 8, Holloman Air Force Base, New Mexico* (NationView, 2010).

5.1 Subsurface Soil Sampling

In October 2010, NationView advanced a total of 12 soil borings (SWMU8-DP04 through SWMU8-DP15) within Buildings 231 and 232 adjacent to the previously removed Building 231 Oil/Water Separator (SWMU 8) (see Figure 5-1). Soil sampling locations were strategically spaced within both buildings in order to delineate the SWMU 8 VCM sidewall samples collected by Bhate in 2008 which contained TPH-DRO concentrations exceeding NMED TPH Screening Guidelines for unknown oil (800 mg/kg) (NMED, 2006) (see Figure 2-6).

Sampling locations were moved on an as needed basis due to the presence of underground utilities, overhead obstructions, or immovable objects within both buildings.

Sampling locations were also adjusted in the field based on the presence (or absence) of visual, olfactory, or elevated PID headspace evidence indicating petroleum contamination, or lack thereof, in soil from adjacent boreholes. Soil sampling activities within both Building 231 and 232 began nearest the source area and radiated outwards to delineate the extent of potential soil contamination beneath each building.

All soil borings were advanced in accordance with HAFB SOPs provided in the *Basewide Quality Assurance Project Plan* (Bhate, 2003). Soil boring SWMU8-DP05 was advanced with a Geoprobe Systems® 7822DT Series, DPT drill rig equipped with a Geoprobe Systems® DT325 Dual Tube Soil Sampling System. Due to limited access, all remaining indoor soil borings (SWMU8-DP04 and SWMU8-DP06 through SWMU8-DP15) were advanced with a Geoprobe Systems® 420M Series, Dolly Mounted DPT drill rig equipped with a Geoprobe Systems® Macro-Core Soil Sampling System. All soil borings were sampled continuously to depths ranging between 10 and 15-ft bgs. One soil sample for chemical analysis was collected from each borehole.

Soils were visually classified in the field by a geologist according to the Unified Soil Classification System. Soils were field screened every 2 feet using a MiniRae® 2000 PID, with soil-headspace screening techniques to aid in selecting samples for laboratory chemical analysis. Soil samples with the highest PID readings were retained for offsite laboratory analysis. If no elevated PID readings were observed, soil samples were obtained from a depth of 7 ft bgs in order to be consistent with confirmation samples obtained during the Phase I excavation (EBASCO, 1995) and the VCM excavation sidewall samples collected by Bhate in 2008 (see Appendix A-2 and A-6, respectively). One soil sample was collected from each of the twelve borings for laboratory chemical analysis (VOCs, SVOCs, TPH, PCBs, and TAL metals). Soil samples were placed in the appropriate containers, packed on ice at 4 degrees Celsius (ºC), and delivered under chain-of-custody to Accutest Laboratories in Orlando, Florida. Soil boring logs for this RFI are included in Appendix B of this report.

Two soil samples were also collected for geotechnical analysis from upgradient boring SWMU8-DP16, to provide geotechnical data from non-impacted soils (Figure 5-1). Geotechnical soil samples were collected from depths of 2 to 3-ft bgs and 3 to 4-ft bgs (above the water table), and analyzed for dry bulk density, specific gravity, percent solids, and fractional organic carbon content. Geotechnical samples were collected in a thin-walled soil sampler to ensure a non-disturbed sample, and shipped under chain-of-custody to Accutest Laboratories in Orlando, Florida. A summary of soil boring locations and sample intervals is provided in Table 5-1.

Additionally, 1 soil boring was advanced downgradient of SWMU 8 using the Geoprobe Systems® DT325 Dual Tube Sampling System for installing a permanent monitoring well (SWMU8-DP17) (Figure 5-2). This soil boring was advanced to a depth of 15-ft bgs. Soils from this boring were lithologically logged and screened with a PID via headspace readings by a geologist. Soil samples for offsite chemical analysis were not collected from this borehole.

5.2 Monitoring Well Installation and Development

As shown on Figure 5-2, three soil borings were converted into permanent 1-inch diameter PVC monitoring wells (SWMU8-DP05, SWMU8-DP13, and SWMU8-DP17). Upon completion of drilling at locations SWMU8-DP05 and SWMU8-DP17, a 10 foot section of 0.010-inch slot pre-packed PVC well screen threaded to 1-inch PVC riser was lowered into the outer casing of the DPT tool string. As the DPT tool string was retracted from the borehole, 10/20 mesh silica sand was tremmied into the boring to a height of 2-ft above the top of the well screen to provide an additional sand filter pack for the monitoring well. Following placement of the sand filter pack, a 2-ft granular bentonite seal was installed above the sand filter pack and hydrated with potable water. Portland cement grout was then gravity fed into the borehole for the remaining annular seal, extending to a height of 1-ft bgs. The monitoring well installed within Building 232 (SWMU8-DP13) using the limited access dolly-mounted DPT rig was constructed of standard 1-inch 0.01 slot PVC well screen due to the fact that the dolly-mounted probe was unable to push tooling large enough to set pre-packed PVC screens. All three newly installed monitoring wells; SWMW8-DP05, SWMU8-DP13, and SWU8-DP17 were completed at the ground surface with protective flush mount covers, and a 1-inch locking cap at the well head. Monitoring well construction diagrams are provided in Appendix C of this report and a summary of monitoring well construction details is included in Table 5-2.

Monitoring wells SWMU8-DP05, SWMU8-DP13, and SWMU8-DP17 were developed using a combination of surging and pumping. Prior to well development, a water-level measurement was taken at each well using an electronic water-level probe. This information, in addition to well depth, and well diameter, was used to calculate the volume of water in each well. Each newly installed monitoring well was surged in 2-to-3 foot intervals from the bottom of the screened interval to agitate and remove the fine grained sediment from the filter pack. At the completion of surging the groundwater was removed using a peristaltic pump attached to ¼-inch polyethylene tubing. Development was performed by over-pumping the well until at least five well volumes had been removed, and the potential of Hydrogen (pH), turbidity, dissolved oxygen, specific conductivity, and temperature had stabilized by +/- 10 percent for at least three consecutive readings with a multi-parameter groundwater meter equipped with a flow-thru cell. Monitoring well development forms for each of the newly installed wells at SWMU 8 are provided in Appendix D of this report.

5.3 Groundwater Sampling

In December 2010, groundwater samples were collected from three existing monitoring wells (SWMU8-DP01 through SWMU8-DP03) and the three newly installed wells (SWMU8-DP05, SWMU8-DP13, and SWMU8-DP17) which are shown on Figure 5-2. Prior to sampling, groundwater levels were collected from each monitoring well and the wells were purged using low flow techniques utilizing a peristaltic pump, new dedicated ¼-inch polyethylene tubing, and a multi-parameter groundwater meter equipped with a

flow-thru cell. Field parameters were recorded for every well volume of groundwater removed. Field parameters were considered stable when the pH measurements remained constant within 0.1 units; specific conductivity, dissolved oxygen and temperature varied by no more than 10 percent, and turbidity by no more than 5 nephelometric units. Groundwater samples were not collected until three consecutive field parameter measurements met stabilization criteria (i.e., minimum 3 well volumes). Appendix E provides monitoring well sample collection forms which contain the groundwater parameter data recorded prior to sample collection. Groundwater samples collected for VOC analysis were collected prior to other analytes, using a new disposable Teflon® bailer. Following the collection of samples for VOC analysis, groundwater samples for the remaining analytes (SVOCs, TPH, PCBs, TDS, and TAL metals) were collected using a peristaltic pump and low-flow sampling techniques. Samples collected for TAL metals analysis were field filtered using dedicated 0.45 micron disposable filters. Groundwater samples were placed in the appropriate containers, packed on ice at 4 ºC, and delivered under chain-of-custody to Accutest Laboratories located Orlando, Florida.

5.4 Surveying

The locations of new monitoring wells within Buildings 231 and 232 (SWMU8-DP05 and SWMU8-DP13) were systematically measured (to scale) from the inside walls of each building and placed onto a figure. Using a global positioning system (GPS) to plot the indoor borehole locations was not possible due to the roof of Buildings 231 and 232 blocking out the satellite reception required to do so. All horizontal coordinates were digitized based on the drawn-to-scale figure created in the field, and referenced to the State Plane Coordinate System, New Mexico Central with an accuracy of +/- 1.0 ft. Top of casing elevations were not obtained from the two new monitoring wells within Buildings 231 and 232 due to roof interference with satellite reception. Therefore the potentiometric map (Figure 3-8) does not include groundwater elevation data from monitoring wells SWMU8-DP05 and SWMU8-DP13.

The outdoor SWMU 8 RFI boreholes and monitoring well were surveyed using a Trimble® Geometric Pro XR GPS in accordance with methods described in the *Basewide Quality Assurance Project Plan* (Bhate, 2003). The horizontal locations (northing and easting coordinates) are relative to the State Plane Coordinate System New Mexico Central and surveyed to an accuracy of +/- 1.0 ft. Vertical elevations were referenced to the North American Datum (NAD) 1983. The top of casing (vertical control) was used to determine the depth and elevation of the groundwater and surveyed to an accuracy of +/-0.01 ft. Table 3-2 summarizes the monitoring well survey data along with depth to groundwater measurements collected in December 2010.

5.5 Equipment Decontamination

All drilling equipment associated with soil sampling (DPT rod and tooling) was decontaminated in accordance with the HAFB SOPs provided in the *Basewide Quality Assurance Project Plan* (Bhate, 2003).

5.6 Waste Handling

All investigation derived waste (IDW) produced during the investigation process was handled in accordance with the HAFB SOPs provided in the *Basewide Quality Assurance Project Plan* (Bhate, 2003).

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6 LABORATORY ANALYSIS AND DATA VALIDATION SUMMARY

The analysis of soil and groundwater samples collected during this investigation followed the proposed methodologies presented in the *Final RCRA Facility Investigation Work Plan SMWU 8, Holloman AFB, New Mexico* (NationView, 2010). All analytical procedures followed the USEPA SW-846 protocol with the soil and groundwater samples being analyzed in various combinations for the following:

- VOCs by USEPA Method 8260B
- SVOCs by USEPA Method 8270C/D
- TPH – GRO, DRO, and ORO by USEPA Method 8015M/C
- TAL Metals by USEPA 6010B/7471A/7470
- PCBs by USEPA Method 8082

The groundwater samples also included:

- TDS by Method SM19 2540C

All of the laboratory data generated as part of the RFI Work Plan conducted at SWMU 8 was validated by the project chemist. Field Quality Assurance (QA)/Quality Control (QC) samples, including trip blanks, equipment blank, matrix spikes, and matrix spike duplicates were collected to document field and laboratory QA/QC. The analytical data is provided in Appendix F and Data Validation Reports are provided in Appendix G. Accutest Laboratories in Orlando, Florida performed the analysis of all samples collected.

Overall, only minor QC issues were identified during the data validation of the laboratory results and the laboratory took all necessary corrective actions. All of the data were determined to be usable with only minor qualifications. Information regarding the precision, accuracy, representativeness, and completeness is provided in the validation reports (Appendix G) with the following sections providing a synopsis of each analyte group.

6.1 VOCs

Blank contamination of methylene chloride was less than two times (2x) the reporting limit (RL) and the sample concentrations of SWMU8-DP05-7, SWMU8-DP05-7A, SWMU8-DP09-7, SWMU8-DP11-7, and SWMU8-DP12-7 were also less than (<) 2x the RL; therefore the RL for this compound was qualified as “U” (the analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted reporting limit).

The relative percent difference (RPD) between the sample (SWMU8-DP05-7) and its field duplicate was outside project defined control limits for n-propylbenzene and was qualified as estimated, “J”, in both samples.

The laboratory control sample (LCS) recoveries for acetone and methyl ethyl ketone were below QC limits. Acetone was qualified as estimated non-detected, “UJ” in samples SWMU8-DP05-7, SWMU8-DP05-7A, SWMU8-DP04-7, SWMU8-DP06-7, SWMU8-DP07-7, SWMU8-DP08-8, SWMU8-DP09-7, SWMU8-DP10-7, SWMU8-DP11-7, SWMU8-DP12-7, SWMU8-DP14-7, SWMU8-DP15-7, SWMU8-DP13-7, and SWMU8-DP13-7A. Methyl ethyl ketone was qualified as “UJ” in samples SWMU8-DP05-7, SWMU8-DP05-7A, SWMU8-DP10-7, SWMU8-DP12-7, SWMU8-DP14-7, SWMU8-DP15-7, SWMU8-DP13-7, and SWMU8-DP13-7A.

The LCS recovery for n-butylbenzene was above QC limits and yielded a positive detection in sample SWMU8-DP05. This compound was qualified as estimated, “J”.

The surrogate 1,2-dichloroethane-d4 yielded a recovery above QC limits in the confirmation run of sample SWMU8-DP10-7. All positive results were as qualified estimated, “J”.

The continuing calibration verification (CCV) was outside control limits for n-butylbenzene in sample SWMU8-DP05 and for sec-butylbenzene in samples SWMU-DP05-A and SWMU-DP05. These compounds were qualified as estimated, “J”.

6.2 SVOCs

No QC deficiencies warranted qualification of the SVOC data.

6.3 TPH

No QC deficiencies warranted qualification of the TPH data.

6.4 TAL Metals

The RPD for the laboratory duplicate of various metals was above QC limits. Due to low duplicate and sample concentrations, the RPDs for some metals were acceptable. The following are the samples and associated metals which required a qualification of estimated, “J”: SWMU8-SP10-7, SWMU8-DP11-7, SWMU8-DP12-7, SWMU8-DP14-7, SWMU8-DP15-7, SWMU8-DP13-7, and SWMU8-DP13-7A for sodium; and SWMU8-DP14-7, SWMU8-DP15-7, SWMU8-DP13-7, and SWMU8-DP13-7A for manganese.

The serial dilution for multiple metals was above QC limits. The following metals yielded sample concentrations greater than (>) 50x the method detection limit (MDL) and were qualified as estimated, “J”, in the following samples: manganese in samples SWMU8-DP05-7, SWMU8-DP05-7A, SWMU8-DP04-7, SWMU-DP06-7, SWMU8-DP07-7, SWMU8-DP08-8, SWMU8-DP09-7, SWMU8-DP10-7, SWMU8-DP11-7, and

SWMU8-DP12-7; vanadium in samples SWMU8-DP05-7, SWMU8-DP05-7A, SWMU8-DP04-7, SWMU-DP06-7, SWMU8-DP07-7, SWMU8-DP08-8, SWMU8-DP09-7, SWMU8-DP10-7, SWMU8-DP11-7, and SWMU8-DP12-7; iron in samples SWMU8-DP10-7, SWMU8-DP11-7, and SWMU8-DP12-7; calcium in samples SWMU8-DP05-A, SWMU8-DP05, SWMU8-DP01, SWMU8-DP13, SWMU8-DP02, SWMU8-DP03, and SWMU-DP17.

The RPD between the sample (SWMU8-DP05) and its field duplicate was outside project defined control limits for iron and was qualified as estimated, “J”, in both samples.

6.5 PCBs

No QC deficiencies warranted qualification of the PCB data.

6.6 TDS

No QC deficiencies warranted qualification of the TDS data.

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7 NATURE AND EXTENT OF CONTAMINATION

This section presents the soil and groundwater analytical results from the RFI field activities completed at SWMU 8 by NationView from October through December 2010. This section also presents the current nature and extent of contamination found in soil and groundwater during this investigation. The soil and groundwater sampling locations from this investigation are shown on Figures 5-1 and 5-2, respectively.

The objectives of the soil and groundwater sampling conducted during the RFI at SWMU 8 were to; collect soil samples from below Buildings 231 and 232 to determine the nature and extent of soil contamination beneath these structures, install additional monitoring wells to determine the nature and extent of groundwater contamination beneath Buildings 231 and 232, and to collect sufficient analytical and geotechnical data in order to complete a site-specific risk assessment of the exposure pathways. The ultimate objective is to obtain NFA status under criterion #5 (Appendix 4-B [NMED, 2004a]) and obtain a Class III permit modification to remove SWMU 8 from Table A of the HAFB Hazardous Waste Facility Permit No. NM6572124422.

The soil (geochemical and geotechnical) and groundwater analytical results collected during this RFI are summarized in Tables 7-1 through 7-3. Duplicate soil samples were collected from boreholes SWMU8-DP05 and SWMU8-DP13 (7 ft bgs) and a duplicate groundwater sample was collected from monitoring well SWMU8-DP05. The complete laboratory analytical results for the RFI soil and groundwater sampling are included in Appendix F of this report.

7.1 Soil Analytical Results

In October 2010, 14 subsurface soil samples (including two duplicates) were collected from the 12 DPT soil borings (SWMU8-DP04 through SWMU8-DP15) which were advanced within Buildings 231 and 232, in close proximity to the former Building 231 Oil/Water Separator (SWMU 8). These samples were analyzed for VOCs, SVOCs, TPH (DRO, GRO, and ORO), PCBs, and TAL metals. Subsurface soil samples were collected at 7 and 8 feet bgs with the last digit of the sample identification number indicating the bottom of the sample interval. The SWMU 8 soil analytical results for all detections above the MDL are summarized in Table 7-1 and the boring locations with selected results are shown on Figure 7-1.

7.1.1 Volatile Organic Compounds

Twelve VOCs were detected above the MDL in the 14 subsurface soil samples collected during the RFI (Table 7-1). The samples containing VOCs detected above the reporting limit were; SWMU8-DP05-7, SWMU8-DP05-7A (duplicate sample), SWMU8-DP06-7, SWMU8-DP08-8, and SWMU8-DP10-7. The maximum concentrations of benzene (6.0J µg/kg), n-butylbenzene (2,690 µg/kg), sec-butylbenzene (734 µg/kg), m-dichlorobenzene (856 µg/kg), o-dichlorobenzene (755 µg/kg), p-dichlorobenzene (708

µg/kg), ethylbenzene (143J µg/kg), p-isopropyltoluene (570 µg/kg), methylene chloride (1,310 µg/kg), n-propylbenezene (303J µg/kg), toluene (5.0J µg/kg), and m,p-xylene (144J µg/kg) were all well below their respective SSLs (NMED, 2009) or RSLs (USEPA, 2011). The remaining VOCs analyzed were not detected above the MDL.

7.1.2 Semi-Volatile Organic Compounds

Estimated concentrations of 3 SVOCs were detected above the MDL in 3 of the 14 subsurface soil samples collected during the RFI (Table 7-1). The samples containing SVOCs detected above the MDL were; SWMU8-DP05-7, SWMU8-DP05-7A (duplicate sample), and SWMU8-DP06-7 within a light greenish gray discolored zone (PCS horizon) which had a strong petroleum hydrocarbon odor. Maximum concentrations of 2,4-dimethylphenol (666J µg/kg), 2-nitrophenol (879J µg/kg), and 1-methylnaphthalene (646J µg/kg) were all well below their respective SSLs (NMED, 2009) or RSLs (USEPA, 2011). The remaining SVOCs analyzed were not detected above the MDL.

7.1.3 Total Petroleum Hydrocarbons

Total Petroleum Hydrocarbons were analyzed for GRO (C_6 – C_{10}), DRO (C_{10} – C_{22}), and ORO (>C_{22} – C_{36}) fractions. The samples containing TPH concentrations detected above the MDL were; SWMU8-DP04-7, SWMU8-DP05-7, SWMU8-DP05-7A (duplicate sample), SWMU8-DP06-7, and SWMU8-DP08-8. TPH-GRO detections ranged from 243 mg/kg to 737 mg/kg. TPH-DRO detections ranged from 110 mg/kg to 898 mg/kg. TPH-ORO detections ranged from 128 mg/kg to 453 mg/kg. The combined TPH (GRO/DRO/ORO) concentrations exceeded the NMED TPH Screening Guideline for unknown oil (800 mg/kg) (NMED, 2006) in 3 of the 14 soil samples (SWMU8-DP05-7, SWMU8-DP05-7A, and SWMU8-DP06-7) collected during the RFI (Table 7-1). Figure 7-1 shows the distribution of TPH detected, above the NMED TPH Screening Guideline for unknown oil in the soil samples collected during the RFI.

7.1.4 Polychlorinated Biphenyls

Estimated concentrations of 2 PCBs were detected above the MDL in 5 of the 14 subsurface soil samples collected during the RFI (Table 7-1). The samples containing PCBs detected above the MDL were; SWMU8-DP04-7, SWMU8-DP05-7, SWMU8-DP05-7A (duplicate sample), SWMU8-DP06-7, and SWMU8-DP08-8. Maximum concentrations of Aroclor 1232 (86.4J µg/kg) and Aroclor 1254 (40.2J µg/kg) were both well below their respective SSLs (NMED, 2009). The remaining PCBs analyzed were not detected above the MDL.

7.1.5 TAL Metals

Nineteen of the 23 TAL metals were detected above the MDL (Table 7-1). All TAL metals were detected below their respective SSLs (NMED, 2009) or RSLs (USEPA, 2011). Additionally, with the exception of cadmium, TAL metals were detected below their respective NMED approved HAFB background levels (NMED, 2011). Cadmium

was detected slightly above the NMED approved HAFB background level (0.3 mg/kg) in soil samples SWMU8-DP10-7 (0.32 mg/kg) and SWMU8-DP11-7 (0.32 mg/kg). The remaining TAL metals analyzed were not detected above the MDL.

7.1.6 Geotechnical Soil Samples

The two geotechnical samples collected from borehole SWMU8-DP16 (SWMU8-DP16-2 and -3) were analyzed for bulk density, fractional organic carbon, percent solids, and specific gravity. The geotechnical analytical results are presented in Table 7-2 and the complete results from Accutest Laboratories are also included in Appendix F of this report.

7.2 Groundwater Analytical Results

Groundwater samples were collected from the three new monitoring wells (SWMU8-DP05, SWMU8-DP13, and SWMU8-DP17) along with three existing onsite monitoring wells (SWMU8-DP01 through SWMU8-DP03) during the SWMU 8 RFI groundwater sampling event conducted in December 2010. A total of seven groundwater samples (including one duplicate) were analyzed for VOCs, SVOCs, TPH, PCBs, TAL metals, and TDS. Groundwater analytical results are presented in Table 7-3 and monitoring well locations are shown on Figure 5-2. The following narrative provides a summary of the groundwater data which exceeds the current screening criteria (USEPA MCLs and/or the NMWQCC groundwater standards).

7.2.1 Volatile Organic Compounds

Low and estimated concentrations of eight VOCs were detected above the MDL in groundwater samples collected during the SWMU 8 RFI. As shown in Table 7-3, each of these VOC detections was below their respective USEPA MCL and/or the NMWQCC groundwater standards.

7.2.2 Semi-Volatile Organic Compounds

Low and estimated concentrations of four SVOCs were detected in the two groundwater samples collected from monitoring well SWMU8-DP05 during the RFI (original sample and duplicate sample). As shown in Table 7-3 each of these SVOCs detections were below their respective USEPA and NMWQCC groundwater standards.

7.2.3 Polychlorinated Biphenyls

All PCB compounds were not detected in any of the SWMU 8 groundwater samples collected during this RFI (Table 7-3).

7.2.4 Total Petroleum Hydrocarbons

TPH fractions GRO (C_6 – C_{10}), DRO (C_{10} – C_{22}), and ORO (>C_{22} – C_{36}) were detected

above the MDL in the two groundwater samples collected from monitoring well SWMU8-DP05 during the RFI (Table 7-3). All detections of TPH-GRO, -DRO, and –ORO (individual and combined) in groundwater samples collected during this sampling event were below the NMED TPH screening guideline for unknown oil (50.0 mg/L) (NMED, 2006).

7.2.5 TAL Metals

A total of 16 TAL metals were detected above the MDL. Manganese is the only TAL metal which was detected above its respective USEPA MCL, USEPA Secondary MCL, and/or NMQWCC groundwater standard (Table 7-3). Manganese was detected above the USEPA Secondary MCL (50 µg/L) in three groundwater samples, with concentrations ranging from 111 µg/L (SWMU8-DP05-A [duplicate sample]) to 376 µg/L (SWMU8-DP17). Vanadium was detected above the NMED approved background level (73.8 µg/L) in one groundwater sample from monitoring well SWMU8-DP01 with a concentration of 83.6 µg/L. It should be noted that neither the NMED nor USEPA have established cleanup criteria for this metal. In addition, barium was detected at the NMED approved background level (30.2 µg/L) in monitoring well SWMU8-DP03. Additionally, iron was detected above the NMED approved background level (65.6 µg/L) in monitoring wells SWMU8-DP03 and –DP05. Figure 7-2 presents the distribution of TAL metals detected in groundwater which exceeded applicable USEPA MCLs, USEPA Secondary MCLs, and/or NMWQCC groundwater standards at SWMU 8.

7.2.6 Total Dissolved Solids

TDS concentrations ranged from 241 mg/L (SWMU8-DP17) to 2,500 mg/L (SWMU8-DP05) and exceeded the NMWQCC groundwater standard of 1,000 mg/L and the USEPA Secondary MCL (500 µg/L) but were below the HAFB total groundwater UTL (65,956.58 µg/L [NationViewIBhate JV III, 2011]) in five of the six wells sampled. TDS concentrations less than 10,000 mg/L contained in all of the SWMU 8 monitoring wells is likely anthropogenic due to leaking water lines which traverse the Main Base area at HAFB. For example, in early 2006 two large sinkholes developed along the south side of Building 232 (HAFB Postal Service Center) which resulted from a leaking underground water line located below Connecticut Avenue (G. Mayhall, 2006). Figure 7-2 presents all of the TDS concentrations which were detected above the USEPA Secondary MCL and the NMWQCC groundwater standard during the 2010 groundwater sampling event.

8 RISK BASED EVALUATION

This section presents the methodology used for risk evaluation for SWMU 8. The methodology consists of the following:

1. Compilation of data (refer to Section 8.1);
2. Identification of chemicals of potential concern (COPCs) (refer to Section 8.2);
3. Development of exposure model (EM) (refer to Section 8.3);
4. Calculation of representative concentrations (refer to Section 8.4);
5. Calculation of risk for complete exposure pathways (refer to Section 8.5);
6. Calculation of cumulative risk (refer to Section 8.6); and
7. Uncertainty analysis (refer to Section 8.7).

Each of the above steps is discussed in detail below.

8.1 Compilation of Data

Following is a summary of the available soil data that was used for the risk assessment (RA) at SWMU 8:

Date	Sample Locations	No. of Sample Locations	No. of Samples
1995	01-7 to 05-7	5	5 [a]
1996	DP-1 to DP-3, DP-5	4	8 [b]
1997	01-06 to 04-06	4	4 [c]
May 2006	DP01-5, DP02-9	2	3 [d]
October 2008	SW-1 to SW-15, SW-15OE, SW-16, Bottom 1 to Bottom 4	21	23 [e]
October 2010	DP04 to DP15	12	14 [f]

Notes:

[a] Samples collected in 1995 were not used for the RA since these samples were located where the soil was over excavated in 1997.

[b] Two samples at different depths from each location were collected. Samples collected in 1996 were not used for the RA since samples were collected where soil was excavated except at DP-2. Samples from DP-2 were not used as they are over 15 years old and not representative of current conditions. Recent samples are available from this area.

[c] Samples collected in 1997 were not used for the RA since samples were collected where soil was excavated at 03-06 and 04-06 in 2008 and the remaining samples are over 14 years old and not representative of current conditions. Recent samples are available from this area.

[d] One duplicate sample was collected from DP02-9.

[e] One duplicate sample was collected from each of two locations SW6 and SW12.

[f] One duplicate sample was collected from each of two locations DP05 and DP13.

Following is a summary of the groundwater data available that was used for the RA at SWMU 8:

Monitoring Well	No. of Sampling Events	Sampling Date
DP01	2[a]	Jun. 2006[b], Dec. 2010
DP02	2	Jun. 2006[b], Dec. 2010
DP03	2	Jun. 2006[b], Dec. 2010
DP05	1[c]	Dec. 2010
DP13	1	Dec. 2010
DP17	1	Dec. 2010

Note:
[a] One duplicate sample was collected in June 2006.
[b] Samples collected in 2006 were not used for the RA since these samples are too old and are not representative of current conditions.
[c] One duplicate sample was collected in December 2010.

Summary of Data Used for Risk Assessment

Based on the above, the soil data used for the RA are summarized below:

Date	Sample Locations	No. of Sample Locations	No. of Samples
May 2006	DP01-5, DP02-9	2	3 [a]
October 2008	SW-1 to SW-15, SW-15OE, SW-16, Bottom 1 to Bottom 4	21	23 [b]
October 2010	DP04 to DP15	12	14 [c]

Notes:
[a] One duplicate sample was collected from DP02-9.
[b] One duplicate sample was collected from each of two locations SW6 and SW12.
[c] One duplicate sample was collected from each of two locations DP05 and DP13.

Figure 1 of Appendix A-5, Figure 2-6, and Figure 7-1 show the locations of the soil samples used for the RA.

Based on the above, the groundwater data used for the RA are summarized below:

Monitoring Well	No. of Sampling Events	No. of Samples	Sampling Date
DP01	1	1	Dec. 2010
DP02	1	1	Dec. 2010
DP03	1	1	Dec. 2010
DP05	1	2	Dec. 2010
DP13	1	1	Dec. 2010
DP17	1	1	Dec. 2010

Figure 7-2 shows the locations of the groundwater samples used for the RA.

Chemicals with at least one detected concentration anywhere on the site were considered for the RA. Tables 8-1(a) and 8-2(a) present the soil and groundwater data used for the RA, respectively.

For chemicals not detected, the reporting limits are presented. The data compiled in Tables 8-1(a) and 8-2(a) were quantitatively evaluated for use in the RA as follows:

- Conservatively, data with laboratory qualifiers "B" and "J" were considered as detected concentrations.
- m-Dichlorobenzene (1,3-dichlorobenzene), o-dichlorobenzene (1,2-dichlorobenzene), p-dichlorobenzene (1,4-dichlorobenzene), and naphthalene were reported using two analytical methods under VOCs (USEPA method 8260) and SVOCs (USEPA Method 8270). The two concentrations were treated as follows and these compounds are listed under the VOCs:
    - If both results were detected, the average of the two was taken and considered as a detected concentration. Typically the VOCs method had higher detected concentrations.
    - If one of the results was detected and the other was below the reporting limit, the result below the reporting limit was replaced with half the reporting limit. The average of the two concentrations was calculated and the result was considered as a detected concentration.
    - If both results had concentrations below the reporting limits, the lower reporting limit was used and the concentration was considered as not detected. Typically, the SVOCs analytical method had higher reporting limits.
- Xylene concentrations were reported as o-xylene, m,p-xylene, and total xylenes. Total xylenes were considered in the RA. The ingestion and inhalation toxicity of total xylenes and individual isomers are the same per the RSL Tables (USEPA, 2011). If total xylenes were not reported, isomer xylenes were treated as follows:
    - If the isomer concentrations were detected, the concentrations were added and considered as a detected value;
    - If one isomer concentration was detected and the other was below the reporting limit, the concentration below the reporting limit was replaced with half the reporting limit. The two concentrations were added and considered as detected; and
    - If both isomer results had concentrations below the reporting limits, the reporting limits were added and considered as not detected.
- TPH concentrations reported as TPH-GRO (C6-C10) were not considered in the RA since individual compounds that contribute TPH-GRO (e.g., benzene, toluene, ethylbenzene, xylenes, and naphthalene) are evaluated. This is consistent with methodology per the *New Mexico Environment Department TPH Screening Guidelines* (NMED, 2006).
- TPH concentrations reported as TPH-DRO (C10-C22) and TPH-ORO (>C22-C36) were added as follows and are shown as TPHs (C10-C36):

  - If both TPH-DRO and TPH-ORO fractions contained detectable concentrations, the sum of the two concentrations were taken and considered as detected;
  - If one of the two concentrations was reported as a detectable concentration and the other concentration was below the reporting limit, the latter was replaced with half the reporting limit and the sum of the two concentrations was used and considered as detected; and
  - If both concentrations were below the reporting limits, the reporting limits were added and considered as not detected.
- All duplicate samples were averaged as follows:
  - If both samples contained detectable concentrations, the average of the two were taken and considered as detected;
  - If one of the samples contained a detected concentration and the other was below the reporting limit, the result below the reporting limit was replaced with half the reporting limit and the average of the two were taken and considered as detected; and
  - If both samples had concentrations below the reporting limits, the average of two reporting limits was taken and the sample was considered as not detected.

Based on the above considerations, Tables 8-1(b) and 8-2(b) present the soil and groundwater data used for the RA. Further, Tables 8-1(c) and 8-2(c) present summary statistics of soil and groundwater data used for the RA.

8.2 Identification of Chemicals of Potential Concern

To identify COPCs, the maximum detected concentration of each chemical that had at least one detected concentration was compared with its applicable screening level as discussed below.

8.2.1 Chemicals of Potential Concern in Soil

As described in Section 2.5.1, and as per the responses to the NMED's comments on the *Final RCRA Facility Investigation Work Plan SWMUs 122 and 123* (NationView, December 2009), the screening levels for soil were obtained from the following sources:

- NMED SSLs for residential land use (NMED, 2009);
- USEPA RSLs for residential land use (USEPA, 2011);
- NMED TPH screening levels (NMED, 2006); and
- NMED Approved HAFB Background Levels (NMED, 2011).

For chemicals not listed in the NMED (2009) and USEPA (2011), SSLs for residential land use were developed per the methodology in the *NMED Technical Background*

Document for the Development of Soil Screening Levels, Revision 5.0 (NMED, 2009).

Table 8-1(d) presents the comparison of maximum detected concentrations with screening levels for soil. The chemicals with the maximum detected concentrations greater than the screening levels were considered as COPCs. Based on this comparison, one COPC [TPHs (C10-C36)] in soil was identified. Table 8-3 summarizes the COPCs in soil and groundwater.

8.2.2 Chemicals of Potential Concern in Groundwater

As described in Section 2.5.2, and as per the responses to the NMED's comments on the *Final RCRA Facility Investigation Work Plan SWMUs 122 and 123* (NationView, December 2009), the screening levels for groundwater were obtained from the following sources:

- NMWQCC groundwater standards for contaminants (NMAC 20.6.2.3103);
- USEPA National Priority Drinking Water Regulation MCLs (USEPA, 2009);
- TPH Screening Guidelines (NMED, 2006); and
- NMED Approved HAFB Background Levels (NMED, 2011).

Table 8-2(d) presents the comparison of maximum detected concentrations with screening levels for groundwater. The chemicals with the maximum detected concentrations greater than the screening levels **and** the chemicals without screening levels were considered as COPCs. Based on this comparison, seven COPCs in groundwater were identified. Table 8-3 summarizes the COPCs in soil and groundwater.

8.3 Development of Exposure Model

This section presents the EM for SWMU 8. The EM identifies the potential receptors and the exposure pathways under current and anticipated future conditions.

8.3.1 Receptors

SWMU 8 is located on the south side of Building 231 (Auto Hobby Center) and the north side of Building 232 (Postal Service Center) as shown on Figure 2-3. Therefore, a commercial/industrial worker is considered a receptor of concern under current conditions.

As discussed in Section 3.9 of this report, residential development at the HAFB is limited and future land use is not expected to differ significantly from current land use practices, however, conservatively it was assumed that residential development at or near the site could potentially occur. Therefore, a resident is considered a receptor of concern under future conditions. Additionally, in the future, construction activities may occur, hence potential future construction workers are also considered a receptor of concern.

8.3.2 Exposure Pathways

Tables 8-4(a), 8-4(b), and 8-4(c) present the EMs for the current commercial/industrial worker, the future resident, and the future construction worker, respectively.

For the current commercial/industrial worker, indoor inhalation of vapors from groundwater is considered a complete exposure pathway and was quantitatively evaluated.

For future resident, indoor inhalation of vapors from groundwater is considered a complete exposure pathway and was quantitatively evaluated.

For future construction worker, the following complete exposure pathways were quantitatively evaluated:

- Dermal contact with soil;
- Accidental ingestion of soil;
- Outdoor inhalation of vapors or particulates from soil;
- Dermal contact with groundwater; and
- Outdoor inhalation of vapors from groundwater.

The exposures due to dermal contact with, ingestion of, and outdoor inhalation of vapors or particulates from soil were evaluated as the combined pathways from soil. This is consistent with the *Technical Background Document for Development of Soil Screening Levels, Revision 5.0* (NMED, 2009) and the *Regional Screening Levels Tables* (USEPA, 2011).

8.4 Calculation of Representative Concentrations

The representative concentrations for each of the COPCs and each pathway-receptor combination were estimated using the following methodology:

- For the indoor inhalation of vapors from groundwater by the current commercial/industrial worker, groundwater data from DP05 was used since DP05 is located within the footprint of Building 231 and has the highest impact of COPCs.
- For the indoor inhalation of vapors from groundwater by the future resident, conservatively groundwater data collected from DP05 with the highest impact was used since the location of a future residential building is unknown.
- For the outdoor inhalation of vapors from groundwater for the construction worker, representative concentrations of groundwater were calculated using all the groundwater data collected.
- For the combined pathway from soil for the construction worker, representative concentrations of soil up to the depth of construction, i.e., samples collected between 0 – 10 ft bgs were used.

- Non-detect concentrations were replaced with half the reporting limit for the calculation of representative concentrations.
- Representative concentrations were based on the arithmetic average concentrations.

The representative concentrations of groundwater for the current commercial/industrial worker and the future resident, groundwater for the future construction worker, and soil up to the depth of construction are presented in Tables 8-5(a), 8-5(b), and 8-5(c), respectively.

8.5 Calculation of Risks

This section discusses the methodology used to calculate risk for the complete exposure pathways identified in Section 8.3 of this report. As per the EM discussed in Section 8.3, the risks were calculated for the current commercial/industrial worker, the future resident, and the future construction worker. Using the representative concentrations calculated in Section 8.4 and the target levels, the carcinogenic and non-carcinogenic risks of each COPC were calculated by taking the ratio of the representative concentration to the target level. The development of target levels is discussed below.

8.5.1 Indoor Inhalation of Vapors from Groundwater

For this pathway, the target levels were calculated for the current commercial/industrial worker and the future resident. Since this pathway is not included in the *Technical Background Document for Development of Soil Screening Levels, Revision 5.0* (NMED, 2009) and the *Regional Screening Level Tables* (USEPA, 2011), the methodology as per the Johnson & Ettinger (J&E) model presented in the *User's Guide for Evaluating Subsurface Vapor Intrusion into Buildings* (USEPA, 2004a) was used to calculate the target level.

This section describes the input parameters used to calculate the target levels for indoor inhalation of vapors from groundwater. The calculated target levels for the commercial/industrial worker and residents are presented in Tables 8-9(a) and 8-9(b), respectively. The target levels for this pathway were developed only for the volatile chemicals. As per the *Technical Background Document for Development of Soil Screening Levels, Revision 5.0* (NMED, 2009), a chemical was considered volatile if it's Henry's law constant (H) is 1×10^{-5} atmospheric-cubic meters per mole (atm-m^3/mol) (unitless H of 4.2×10^{-4}) or greater and it's molecular weight is 200 grams/mole or less. All of the COPCs except for diethyl phthalate in groundwater are considered volatile.

Specifically, the calculation of risk requires the following:

- Toxicity values;
- Physical and chemical properties;
- Exposure factors;

- Source parameters;
- Geotechnical parameters; and
- Building parameters.

Each of these is discussed below.

8.5.1.1 Toxicity Values

The toxicity of chemicals with carcinogenic and non carcinogenic adverse health effects is quantified using unit risk and reference concentration respectively. The inhalation toxicity values for the COPCs are presented in Table 8-6(a) and were obtained from the following sources:

- NMED, 2009. Technical Background Document for Development of Soil Screening Levels, Revision 5.0;
- USEPA, 2011. Regional Screening Level Tables; and
- Texas Commission on Environmental Quality (TCEQ), 2011. Texas Risk Reduction Program Rules Tables.

Note that the USEPA (2011) followed the same hierarchy of human health toxicity values as recommended by the NMED (2009).

As per Table 8-6(a), two volatile COPCs in groundwater (n-butylbenzene and sec-butylbenzene) do not have inhalation toxicity values. However, these COPCs were detected in only one groundwater sample. Therefore, these COPCs were not further evaluated for this pathway.

8.5.1.2 Physical and Chemical Properties

The physical and chemical properties for COPCs are presented in Table 8-6(a) and were obtained from the same sources used for toxicity values. These values were used to run the USEPA spreadsheet implementation of the J&E model.

8.5.1.3 Exposure Factors

The exposure factors for indoor inhalation of vapors from groundwater by the commercial/industrial worker and the resident are presented in Table 8-6(b).

The exposure factors were obtained from the *Technical Background Document for Development of Soil Screening Levels, Revision 5.0* (NMED, 2009).

8.5.1.4 Source Parameters

The following source parameters are required to evaluate indoor inhalation of vapors:

- **Average soil temperature:** During the December 2010 sampling event, the site-specific average groundwater temperature was 19.1 °C at SWMU 8.

Therefore, the average groundwater temperature of 19.1 °C was considered as the approximate soil temperature at SWMU 8.

- **Depth below grade to water table:** As per Section 3.7 of this report, depth to groundwater at SWMU 8 is generally 5.5 to 7 ft bgs. An average depth to the water table of 6.25 ft bgs (191 centimeters [cm]) was used for the depth below grade to the top of contamination.
- **Thickness of capillary fringe zone:** As per Section 3.5 of this report, the vadose zone soil type at SWMU 8 is silty sand. Therefore, a value of 18.8 cm for loamy sand representative of silty sand was used as per the USEPA (2004a).

These parameters are presented in Table 8-6(c).

8.5.1.5 Geotechnical Parameters

The geotechnical parameters used are presented in Table 8-6(c). Specifically, the following geotechnical parameters are required to evaluate indoor inhalation of vapors from groundwater.

- Soil dry bulk density (ρ_b);
- Soil total porosity (n); and
- Soil water-filled porosity (θ_{wv}).

For SWMU 8, the site-specific geotechnical parameters were analyzed for the vadose zone soil (see Table 7-2). However, default values for silty sand soil type as per the USEPA (2004a) were used because the estimated volumetric water-filled porosity exceeds the estimated total porosity as per the calculation below:

$$n = 1 - \frac{\rho_b}{\rho_s} = 1 - \frac{1.35}{1.85} = 0.27$$

$$\theta_{wv} = \theta_{wg} \times \frac{\rho_b}{\rho_l} = 0.254 - \frac{1.35}{1} = 0.34$$

where,

n = Total porosity (cm^3/cm^3),
ρ_b = Soil dry bulk density (g/cm^3),
ρ_s = Soil specific gravity (unitless),
ρ_l = Water density (g/cm^3),
θ_{wv} = Volumetric water-filled porosity (cm^3/cm^3), and
θ_{wg} = Gravimetric water-filled porosity (g/g).

These types of discrepancies are often observed at such sites due to significant variability in the geotechnical parameters. Hence default parameters were used.

For the capillary fringe zone, it was assumed that the soil total porosity was the same as for the vadose zone and 90% of the soil total porosity was the soil water-filled porosity.

8.5.1.6 Building Parameters

The following building parameters are required to evaluate indoor inhalation of vapors:

- Depth below grade to bottom of enclosed space floor;
- Enclosed space floor thickness;
- Enclosed space floor length;
- Enclosed space floor width;
- Enclosed space height;
- Floor-wall seam crack width;
- Indoor air exchange rate; and
- Average vapor flow rate into building.

The building parameter values used and the source are presented in Table 8-6(c) and are shown on Figure 8-1.

8.5.2 Dermal Contact with Groundwater

For this pathway, the target levels were calculated for the future construction worker. This section describes the procedure used to calculate the target levels for dermal contact with groundwater by construction worker as per the *Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual Part E Supplemental Guidance for Dermal Risk Assessment* (USEPA, 2004b). The calculated target levels for the construction worker are presented in Table 8-9(c).

The calculation of target levels requires the following:

- Toxicity values;
- Chemical-specific parameters for dermal contact with water; and
- Exposure factors.

Each of these is discussed below.

8.5.2.1 Toxicity Values

Dermal toxicity values are not as readily available as ingestion values. In the absence of direct measurement of dermal toxicity, use of oral toxicity values is considered an acceptable alternative by the USEPA. Therefore, the oral toxicity values were used and are presented in Table 8-7(a).

8.5.2.2 Chemical-Specific Parameters for Dermal Contact with Water

The development of target levels requires parameters for dermal contact pathways. The chemical-specific parameters for dermal contact pathways are presented in Table 8-7(a).

8.5.2.3 Exposure Factors

The exposure factors for dermal contact with groundwater for a construction worker and the source of these parameters are presented in Table 8-7(b).

8.5.3 Outdoor Inhalation of Vapors from Groundwater

For this pathway, the target levels were calculated for the future construction worker. This section describes the procedure used to calculate the target levels for the outdoor inhalation of vapors from groundwater as per the *Standard Guide for Risk-Based Corrective Action Applied at Petroleum Release Sites* (American Society for Testing and Materials [ASTM], 1995). The target levels for this pathway were developed only for the volatile chemicals. The calculated target levels for the construction worker are presented in Table 8-9(c).

Specifically, the calculation of target levels requires the following:

- Toxicity values;
- Physical and chemical properties;
- Exposure factors; and
- Fate and transport parameters.

Each of these is discussed below.

8.5.3.1 Toxicity Values

As discussed in Section 8.5.2.1, the inhalation toxicity values for COPCs are presented in Table 8-8(a).

8.5.3.2 Physical and Chemical Properties

The physical and chemical properties for COPCs are presented in Table 8-8(a).

8.5.3.3 Exposure Factors

The exposure factors for outdoor inhalation of vapors from groundwater by construction worker and the source of the values are presented in Table 8-8(b).

8.5.3.4 Fate and Transport Parameters

The fate and transport parameters for outdoor inhalation of vapors from groundwater are presented in Table 8-8(c).

8.5.4 Combined Pathways from Soil

For this pathway, the target level is required for TPHs (C10-C36) for the future construction worker. For TPHs (C10-C36), the SSL for industrial direct exposure for unknown oil was used as per the *New Mexico Environment Department TPH Screening*

Guidelines (NMED, 2006).

8.6 Calculation of Cumulative Risks

The risk to human health was calculated for each COPC, for each complete exposure pathway, and for each receptor. The cumulative risk for each receptor, i.e., sum of risks for all chemicals and for all complete exposure pathways, was compared with target risks. The following are the target risks for each receptor:

- For potential carcinogenic health effects, the cumulative individual excess lifetime cancer risk (IELCR) for each receptor of 1×10^{-5}; and
- For potential non-carcinogenic health effects, the cumulative hazard index (HI) for each receptor of 1.0.

These target risks are consistent with the *Technical Background Document for Development of Soil Screening Levels, Revision 5.0* (NMED, 2009).

For SWMU 8, the current commercial/industrial worker, the future resident, and the future construction worker are receptors of concern. The calculated cumulative risks for the current commercial/industrial worker, the future resident, and the future construction worker are presented in Tables 8-9(a), 8-9(b), and 8-9(c), respectively.

The results indicate:

- For the current commercial/industrial worker, cumulative HI for non-carcinogenic effects is 0.0007, which is below the acceptable target risk level of 1.0.
- For the future resident, cumulative HI for non-carcinogenic effects is 0.02, which is below the acceptable target risk of 1.0.
- For the future construction worker, cumulative HI for non-carcinogenic effects is 0.3, which is below the acceptable target risk of 1.0.

Based on the above, the current residual concentration of COPCs in soil and groundwater are protective of current commercial/industrial worker, future resident, and future construction worker.

8.7 Uncertainty Analysis

As in any RA, the estimated carcinogenic and non-carcinogenic risks contain several sources of uncertainties. However, the general approach used in this RA has been to use conservative assumptions regarding exposure estimates, so that the estimated carcinogenic and non-carcinogenic risks represent an upper bound estimate of the risk. The following sections present the inherent sources of uncertainty and conservative assumptions used in this RA.

8.7.1 Inherent Sources of Uncertainty

The RA process is designed to provide a conservative estimate or evaluation of risks to human health. However, some degree of uncertainty is inherent to the process. Sources of uncertainty typically relate to seven areas:

- Site characterization;
- COPCs;
- Representative concentration;
- Exposure evaluation;
- Toxicity values;
- Physical and chemical properties; and
- Fate and transport parameters and models.

Inherent sources of uncertainty relating to the site characterization include:

- Field sampling location bias (sample locations were biased toward areas of highest contamination) and likely overestimation of risks.
- No consideration for source depletion, natural degradation, or attenuation of chemicals over time which is a conservative approach.

Inherent sources of uncertainty relating to the COPCs include:

- Consideration of five constituents in groundwater that do not have groundwater regulatory screening levels as COPCs which is a conservative approach.

Inherent sources of uncertainty relating to the representative concentrations include:

- Use of current concentrations for future resident and future construction worker. This would overestimate the future risks since the concentrations would decrease due to natural attenuation processes.

Inherent sources of uncertainty relating to the exposure assessment include:

- Assumption of frequent, or routine, exposure over prolonged durations, for example, the assumption that a resident stays at the same location for 30 years. This would likely overestimate the risks.
- Assumption that some pathways are negligible in comparison to others (e.g., outdoor inhalation of vapors from groundwater by current commercial/industrial worker and future resident were not quantitatively evaluated since indoor inhalation of vapors from groundwater was evaluated). This would likely underestimate the cumulative risk.

Inherent sources of uncertainty relating to the toxicity values include:

- Use of reference dose and slope factor derived by conservative methods. For example, animal testing is typically performed at very high doses and the information is used to extrapolate to humans. To compensate for lack of sufficient and detailed information regarding the human toxicity of these chemicals, USEPA typically makes substantial conservative assumptions that result in very conservative quantitative toxicity values (slope factor and reference dose) of these COCPs.
- Derivation of dermal toxicity values from ingestion toxicity values.
- Chemicals without toxicity values. For example, indoor inhalation of vapors from groundwater by resident was not evaluated for n-butylbenzene and sec-butylbenzene. However, these chemicals were detected only in one groundwater sample. Therefore, the underestimation of risks may not be significant.

The above first and second sources associated with toxicity values may not estimate the true health effects of COPCs. However, typically the toxicity values are based on very conservative assumptions that result in an overestimate of the risks.

Inherent sources of uncertainty relating to the physical and chemical properties include:

- Derivation of physical and chemical properties based on a single chemical which does not considers the effects of presence of multiple chemicals. This would underestimate the risks because presence of multiple chemicals reduces volatility and solubility.

Inherent sources of uncertainty relating to the fate and transport parameters and models include:

- Assumption of an infinite non-depleting source which is conservative.

8.7.2 Overall Impact of Uncertainties

As discussed above, there are numerous sources of uncertainty in the parameters used to calculate the potential risks. The above discussion indicates that the risks have been estimated using generally conservative assumptions for most of the sources; therefore, overall the risks have been overestimated.

9 CONCLUSIONS AND RECOMMENDATIONS

Approximately 229.1 CY of PCS was excavated and remediated from three SWMU 8 PCS excavations which were conducted between 1995 and 2008. In 1995 and 1997, 21 CY and 31.8 CY of PCS were transported offsite to the Rhino Environmental Services, Inc., landfarm facility located north of Newman, New Mexico. In addition, 176.3 CY of PCS was transported to the permitted HAFB FT-31 Landfarm for treatment in 2008. The confirmation soil samples collected from the excavations (located between Buildings 231 and 232) provide documentation of the removal of soil containing total petroleum hydrocarbons (TPH-GRO, -DRO, and –ORO), VOCs, SVOCs, PCBs, and/or TAL metals in excess of the NMED SSLs (NMED, 2009) and/or the TPH Screening Guidelines (NMED, 2006). Furthermore, a comprehensive human health risk assessment for potential future residents and current commercial/industrial workers and future construction workers was performed using the soil and groundwater data and is presented in Section 8 of this report.

The risk to human health was calculated for each COPC, for each complete exposure pathway, and for each receptor. The cumulative risk for each receptor (i.e., the sum of risks for all chemicals and for all complete exposure pathways) is compared with target risks. The cumulative risk for each potential receptor was found to be less than the target risk level for each potential receptor. Therefore, the current residual concentration of COPCs in soil and groundwater at SWMU 8 are protective of current commercial/industrial workers, future residents (adults and children), and future construction workers.

Based upon the soil and groundwater laboratory analytical results, documentation of excavation and disposal provided, and the site specific human health risk-based evaluation; No Further Action is recommended for the SWMU 8 Building 231 Oil/Water Separator at Holloman Air Force Base, NM. NFA for SWMU 8 is based upon NMED Closure Criterion #5 which states:

> *"The site was characterized or remediated in accordance with applicable state and/or federal regulations, and the available data indicate that contaminants pose an acceptable level of risk under current and projected future land use."*

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10 REFERENCES

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TABLES

Table 3-1
Groundwater Wells
Located Within a 4-Mile Radius
of Holloman Air Force Base
SWMU 8 RCRA Facility Investigation Report
Holloman Air Force Base, New Mexico

Well ID Number	Use	NAD 83 UTM (in meters)		Well Depth (ft)
		X	Y	
T 00078	Commercial	398468	3648755	428
T 00868	Domestic	400972	3650377	215
T 03794	Irrigation	403280	3651057	250
T 04855	Domestic	403784	3651965	235
T 04967	Domestic	403480	3652067	200
T 00518	Domestic	405819	3646323	305
T 00518 S	Domestic	405819	3646323	220
T 00614	Domestic	404503	3646838	245
T 00995	Domestic	405824	3646730	308
T 01868	Domestic	405824	3646730	280
T 02650	Domestic	405619	3646523	265
T 03230	Domestic	403699	3647252	160
T 04728	Domestic	404503	3646838	216
T 05079 POD1	Domestic	401365	3646757	406
T 01167	Livestock	404993	3644302	170
T 01235	Irrigation	404995	3644706	200
T 03062	Commercial	403678	3644412	295
T 03455	Domestic	403365	3644318	150
T 03483	Domestic	402565	3644318	140
T 03934	Commercial	403578	3644915	160
T 05201 POD1	Irrigation	403380	3644374	295
T 05202 POD1	Irrigation	403381	3644374	250
T 00146	Livestock	402960	3642700	110
T 03245	Commercial	406609	3643887	190
T 04228	Domestic	405295	3643589	180
T 04386 S-6	Commercial	404903	3640666	290
T 04386 S-9	Commercial	404895	3640673	320
T 00172 S	Irrigation	406088	3640755	125
T 00776	Irrigation	406391	3640650	120
T 00782	Domestic	406187	3640854	120
T 00818	Irrigation	406391	3640650	125
T 02431	Domestic	405987	3640654	152
T 03909	Livestock	404765	3639453	140
T 04386 S	Commercial	404886	3638830	290
T 04386 S-2	Commercial	404888	3638830	310
T 04386 S-3	Commercial	404886	3638837	300
T 04386 S-4	Commercial	404886	3638841	295
T 04386 S-5	Commercial	404903	3640661	310
T 03147	Domestic	406380	3638633	135
T 04080	Domestic	406481	3638734	170
T 03228	Domestic	404290	3637226	160
T 00347	Domestic	403131	3634704	182
T 00972	Domestic	404882	3636009	150
T 01602	Domestic	406510	3635592	135
T 05041 POD1	Domestic	406205	3635697	200
T 01012	Commercial	401072	3634316	72
T 01277	Commercial	404434	3633172	104
T 01327	Commercial	400958	3633604	90
T 01526	Commercial	401368	3633601	152
T 01623	Domestic	400743	3633202	260

Source: New Mexico Water Rights Reporting System Database, 2009

Table 3-2
Survey Data and Groundwater Elevation Summary (December 2010)
SWMU 8 RCRA Facility Investigation Report
Holloman Air Force Base, New Mexico

Well	Northing (NAD 83)	Easting (NAD 83)	TOC Elevation (ft amsl)	DTW from TOC (ft below TOC)	Groundwater Elevation December 13, 2010 (ft amsl)
SWMU8-DP01	1691884.472	670203.701	4,072.31	5.36	4,066.95
SWMU8-DP02	1691834.779	670266.812	4,073.57	6.61	4,066.96
SWMU8-DP03	1691878.600	670300.290	4,073.67	6.21	4,067.46
SWMU8-DP05 [1]	1691849.226	670292.279	NA	6.80	NA
SWMU8-DP13 [1]	1691862.809	670270.519	NA	6.83	NA
SWMU8-DP17	1691835.085	670205.241	4,073.63	6.82	4,066.81

Notes:
NAD 83 = North American Datum 1983
TOC = Top of Casing
DTW = Depth to Water
ft = feet
amsl = above mean sea level
NA = Not Available (Unable to obtain top of casing elevation due to building roof interference with global positioning system [GPS])
[1] Northing and Easting coordinates digitized from drawn-to-scale figure created in the field, and referenced to the State Plane Coordinate System, New Mexico Central (GPS interference).

Table 5-1
Summary of Soil Boring Locations and Sample Intervals
SWMU 8 RCRA Facility Investigation Report
Holloman Air Force Base, New Mexico

Soil Boring Number	Location	Northing (NAD 83)	Easting (NAD 83)	Total Depth (ft)	Sample Depths for Analysis (ft bgs)	Laboratory Analysis
SWMU8-DP04 [1]	SWMU 8 (OWS Source Area)	1691839.923	670286.327	11	7	VOCs, SVOCs, TPH, PCBs, TAL Metals
SWMU8-DP05 [1]	SWMU 8 (OWS Source Area)	1691849.226	670292.279	15	7	VOCs, SVOCs, TPH, PCBs, TAL Metals
SWMU8-DP06 [1]	SWMU 8 (OWS Source Area)	1691854.994	670297.672	12	7	VOCs, SVOCs, TPH, PCBs, TAL Metals
SWMU8-DP07 [1]	SWMU 8 (OWS Source Area)	1691862.436	670308.645	12	7	VOCs, SVOCs, TPH, PCBs, TAL Metals
SWMU8-DP08 [1]	SWMU 8 (OWS Source Area)	1691844.016	670297.858	11	8	VOCs, SVOCs, TPH, PCBs, TAL Metals
SWMU8-DP09 [1]	SWMU 8 (OWS Source Area)	1691830.061	670278.330	11	7	VOCs, SVOCs, TPH, PCBs, TAL Metals
SWMU8-DP10 [1]	SWMU 8 (OWS Source Area)	1691837.132	670305.111	12	7	VOCs, SVOCs, TPH, PCBs, TAL Metals
SWMU8-DP11 [1]	SWMU 8 (OWS Source Area)	1691841.597	670249.318	12	7	VOCs, SVOCs, TPH, PCBs, TAL Metals
SWMU8-DP12 [1]	SWMU 8 (OWS Source Area)	1691852.389	670261.034	12	7	VOCs, SVOCs, TPH, PCBs, TAL Metals
SWMU8-DP13 [1]	SWMU 8 (OWS Source Area)	1691862.809	670270.519	12	7	VOCs, SVOCs, TPH, PCBs, TAL Metals
SWMU8-DP14 [1]	SWMU 8 (OWS Source Area)	1691868.763	670278.330	11	7	VOCs, SVOCs, TPH, PCBs, TAL Metals
SWMU8-DP15 [1]	SWMU 8 (OWS Source Area)	1691884.392	670285.769	10	7	VOCs, SVOCs, TPH, PCBs, TAL Metals
SWMU8-DP16 [1]	SWMU 8 (Geotechnical)	1691873.414	670322.407	5	2-3, 3-4	% Solids, DBD, SG, FOC
SWMU8-DP17	SWMU 8 (Downgradient)	1691835.085	670205.241	15	None	None

Notes:
OWS = Oil/Water Separator
NAD 83 = North American Datum 1983
VOCs = Volatile Organic Compounds
SVOCs = Semi-Volatile Organic Compounds
TPH = Total Petroleum Hydrocarbons (Gasoline Range Organics, Diesel Range Organics, and Oil Range Organics)
PCBs = Polychlorinated Biphenyls
TAL = Target Analyte List
% Solids = Percent Solids
DBD = Dry Bulk Density
SG = Specific Gravity
FOC = Fractional Organic Carbon
ft bgs = feet below ground surface
[1] Northing and Easting coordinates digitized from drawn-to-scale figure created in the field, and referenced to the State Plane Coordinate System, New Mexico Central due to GPS interference.

Table 5-2
Monitoring Well Construction Details
SWMU 8 RCRA Facility Investigation Report
Holloman Air Force Base, New Mexico

Well Identification	Installation Date	Sampled 2010	Diameter (inches)	Screen Interval (ft bgs)	Depth to Water (ft below TOC)	Total depth (ft bgs)	Status
SWMU8-DP01	5/22/2006	Yes	1	4.0 - 14.0	5.36	14.0	Active
SWMU8-DP02	5/22/2006	Yes	1	4.0 - 14.0	6.61	14.0	Active
SWMU8-DP03	5/23/2006	Yes	1	6.0 - 11.0	6.21	11.0	Active
SWMU8-DP05	10/8/2010	Yes	1	4.75 - 14.75	6.80	15.0	Active
SWMU8-DP13	10/10/2010	Yes	1	1.5 - 11.5	6.83	12.0	Active
SWMU8-DP17	10/11/2010	Yes	1	4.75 - 14.75	6.82	15.0	Active

Notes:
ft bgs = Feet below ground surface
ft below TOC = Feet below top of casing (based on December 2010 groundwater elevation)

Table 7-1
Soil Analytical Results (October 2010)
SWMU 8 RCRA Facility Investigation Report
Holloman Air Force Base, New Mexico

Client Sample Identification:	Soil Screening Levels	Basewide Background Levels		SWMU8-DP04-7			SWMU8-DP05-7			SWMU8-DP05-7A			SWMU8-DP06-7			SWMU8-DP07-7			SWMU8-DP08-8			SWMU8-DP09-7		
Lab Sample Identification:	NMED Residential[1]	NMED Approved Background Level[2]	Combined Soil Background Level [3]	F77191-3			F77191-1			F77191-2			F77191-4			F77190-1			F77190-2			F77190-3		
Date Sampled:				10/8/2010			10/8/2010			10/8/2010			10/8/2010			10/8/2010			10/8/2010			10/9/2010		
Analyte (Method)				Result [4]	Q	Q1	Result [4]	Q	Q1	Result [4]	Q	Q1	Result [4]	Q	Q1	Result [4]	Q	Q1	Result [4]	Q	Q1	Result [4]	Q	Q1
Volatile Organic Compounds (8260B)	**mg/kg**	**mg/kg**	**mg/kg**	**µg/kg**			**µg/kg**			**µg/kg**			**µg/kg**			**µg/kg**			**µg/kg**			**µg/kg**		
Benzene	15.5	NV	NV	68	U		80	U		68	U		69	U		1.1	J		70	U		2.0	J	
n-Butylbenzene	3,900 [5]	NV	NV	88	U		2,180			2,690			2,310			1.4	U		91	U		1.6	U	
sec-Butylbenzene	NV [6]	NV	NV	82	U		474			617			734			1.3	U		132	J		1.5	U	
m-Dichlorobenzene (1,3-Dichlorobenzene)	NV [6]	NV	NV	82	U		485			587			856			1.3	U		157	J		1.5	U	
o-Dichlorobenzene (1,2-Dichlorobenzene)	3,010	NV	NV	75	U		369	J		478			755			1.2	U		77	U		1.4	U	
p-Dichlorobenzene (1,4-Dichlorobenzene)	32.2	NV	NV	100	U		353	J		453			708			1.7	U		101	J		1.9	U	
Ethylbenzene	69.7	NV	NV	75	U		117	J		143	J		76	U		1.2	U		77	U		1.4	U	
p-Isopropyltoluene	NV [6]	NV	NV	68	U		570			397			69	U		1.1	U		70	U		1.3	U	
Methylene chloride	199	NV	NV	495	J		672	JB		708	B		994			5.5	U		1,310			9.6	JB	
n-Propylbenzene	3,400 [5]	NV	NV	100	U		141	J	J	303	J	J	100	U		1.7	U		100	U		1.9	U	
Toluene	5,570	NV	NV	82	U		95	U		82	U		83	U		1.3	U		84	U		1.8	J	
m,p-Xylene	NV [6]	NV	NV	82	U		144	J		82	U		83	U		1.3	U		84	U		1.5	U	
Semi-Volatile Organic Compounds (8270C)	**mg/kg**	**mg/kg**	**mg/kg**	**µg/kg**			**µg/kg**			**µg/kg**			**µg/kg**			**µg/kg**			**µg/kg**			**µg/kg**		
2,4-Dimethylphenol	1,220	NV	NV	190	U		666	J		390	U		240	U		48	U		50	U		56	U	
2-Nitrophenol	NV [6]	NV	NV	170	U		380	U		350	U		879	J		43	U		45	U		50	U	
1-Methylnaphthalene	22 [5]	NV	NV	170	U		531	J		646	J		403	J		43	U		45	U		50	U	
Total Petroleum Hydrocarbons (8015)	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**			**mg/kg**			**mg/kg**			**mg/kg**			**mg/kg**			**mg/kg**			**mg/kg**		
Gasoline Range Organics (C6-C10)	800 [7]	NV	NV	243			620			696			737			3.4	U		454			4.8	U	
Diesel Range Organics (C10-C22)	800 [7]	NV	NV	110			**821**			**862**			**898**			6.6	U		114			7.5	U	
Oil Range Organics (>C22-C36)	800 [7]	NV	NV	159			453			452			431			6.6	U		128			7.5	U	
Polychlorinated Biphenyls (8082)	**mg/kg**	**mg/kg**	**mg/kg**	**µg/kg**			**µg/kg**			**µg/kg**			**µg/kg**			**µg/kg**			**µg/kg**			**µg/kg**		
Aroclor 1232	1.76	NV	NV	39.7	J		86.4	J		76.9	J		57.9	J		18	U		41.0	J		20	U	
Aroclor 1254	1.12	NV	NV	16.0	J		40.2	J		37.1	J		26.7	J		11	U		17.7	J		13	U	
TAL Metals Analysis (6010B/7471A)	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**			**mg/kg**			**mg/kg**			**mg/kg**			**mg/kg**			**mg/kg**			**mg/kg**		
Aluminum	78,100	13,722	13,722.27	2,350			3,200			3,510			2,280			3,290			2,150			2,610		
Antimony	31.3	1.6	1.6	0.088	U		0.12	U		0.13	J		0.086	U		0.18	J		0.093	U		0.13	U	
Arsenic	3.9	3.7	3.66	1.0			0.89			0.63			0.74			0.63			0.93			0.45	J	
Barium	15,600	169.3	169.25	22.4			35.6			37.9			23.5			32.5			26.0			23.9		
Beryllium	156	1.6	1.53	0.092	J		0.12	J		0.14	J		0.073	J		0.11	J		0.070	J		0.094	J	
Cadmium	77.9	0.3	0.28	0.044	U		0.058	U		0.062	U		0.043	U		0.049	U		0.047	U		0.063	U	
Calcium	NV [6]	317,332	317,331.59	167,000			197,000			176,000			225,000			245,000			195,000			192,000		
Chromium	219	25	24.95	3.0	J		3.9	J		4.5	J		2.6	J		3.2	J		2.5	J		2.9	J	
Cobalt	23 [5]	7.7	7.70	0.85	J		1.1	J		1.1	J		0.89	J		1.3	J		0.87	J		0.79	J	
Copper	3,130	13	12.96	2.0	J		2.6	J		2.5	J		3.1	J		3.2	J		2.3	J		2.3	J	
Iron	54,800	23,049	23,049.48	2,620			2,670			3,170			1,890			2,250			1,790			2,250		
Lead	400	10.9	10.87	1.4	J		1.9	J		1.6	J		1.7	J		1.4	J		1.2	J		1.2	J	
Magnesium	NV [6]	16,991	16,990.65	1,010			1,370			1,390			1,040			1,340			939			1,420		
Manganese	10,700	393	393.47	37.3		J	29.1		J	28.0		J	54.6		J	55.6		J	40.2		J	54.4		J
Nickel	1,560	17.4	17.34	1.9	J		2.2	J		2.2	J		1.7	J		2.5	J		1.6	J		1.9	J	
Potassium	NV [6]	5,077	5,077.12	628			885			957			615			839			579			646		
Sodium	NV [6]	5,196	5,195.97	93.2	J		138	J		122	J		172	J		176	J		156	J		138	J	
Vanadium	391	42.6	42.53	5.8		J	5.5		J	6.1		J	4.5		J	4.2		J	4.6		J	4.5		J
Zinc	23,500	54.6	54.53	5.1	J		7.3	J		7.7	J		5.6	J		8.4	J		4.7	J		5.1	J	
General Chemistry (2540B)	**%**	**%**	**%**	**%**			**%**			**%**			**%**			**%**			**%**			**%**		
Solids, Percent	NV	NV	NV	77.5			68.6			75.1			76.4			75.5			73.4			65.6		

Notes:

NMED = New Mexico Environment Department

TAL = Target Analyte List

µg/kg = micrograms per kilogram

mg/kg = milligrams per kilogram

% = percent

NV = No Value

Q = Laboratory Qualifier

Q1 = Validating Chemist Qualifier

Client Sample Nomenclature

SWMU8 = Solid Waste Management Unit 8

DP = Direct Push

A = Denotes a duplicate sample

Final digit(s) equal the sample interval depth below ground surface

[1] NMED, December 2009. Technical Background Document for Development of Soil Screening Levels (SSL), Revision 5.0.

[2] Table 1, Conditional Approval Letter, *Basewide Background Study Report, Holloman Air Force Base, New Mexico* (NMED, December 2011)

[3] Table 5-18, *Basewide Background Study Report, Holloman Air Force Base, New Mexico* (NationView|Bhate JV III, July 2011)

[4] If results are not detected (U) then the value is set at the Method Detection Limit (MDL)

[5] USEPA Region 3, 6, and 9 Regional Screening Levels (RSLs) (November, 2011)

[6] No Value established for NMED Residential SSL (December 2009) and USEPA RSL (November 2011)

[7] NMED TPH Screening Guidelines for Unknown Oil, Residential Direct Exposure, Table 2b (October 2006)

Bold value indicates analytes above NMED SSLs (Rev 5.0, December 2009) or TPH results above NMED TPH Screening Guidelines (October 2006)

Indicates that the combined TPH-GRO/DRO/ORO results exceed the NMED TPH Screening Guidelines (Unknown Oil, Residential Direct Exposure)

Indicates analytical results above the NMED Residential SSL, but below the NMED approved background levels (NMED, 2011)

Indicates analytical results above the NMED Approved background levels, but below the NMED Residential SSL

Qualifiers

U = Not detected

J = Indicates an estimated value

B = Indicates analyte found in the associated method blank

Table 7-1
Soil Analytical Results (October 2010)
SWMU 8 RCRA Facility Investigation Report
Holloman Air Force Base, New Mexico

Client Sample Identification:	Soil Screening Levels	Basewide Background Levels		SWMU8-DP10-7			SWMU8-DP11-7			SWMU8-DP12-7			SWMU8-DP13-7			SWMU8-DP13-7A			SWMU8-DP14-7			SWMU8-DP15-7		
Lab Sample Identification:	NMED Residential[1]	NMED Approved Background Level[2]	Combined Soil Background Level [3]	F77189-1			F77189-2			F77189-3			F77187-3			F77187-4			F77187-1			F77187-2		
Date Sampled:				10/9/2010			10/9/2010			10/9/2010			10/10/2010			10/10/2010			10/10/2010			10/10/2010		
Analyte (Method)				Result [4]	Q	Q1	Result [4]	Q	Q1	Result [4]	Q	Q1	Result [4]	Q	Q1	Result [4]	Q	Q1	Result [4]	Q	Q1	Result [4]	Q	Q1
Volatile Organic Compounds (8260B)	mg/kg	mg/kg	mg/kg	µg/kg			µg/kg			µg/kg			µg/kg			µg/kg			µg/kg			µg/kg		
Benzene	15.5	NV	NV	6.0		J	1.4	U		1.4	U		2.6	J		2.2	J		5.6	J		0.88	U	
n-Butylbenzene	3,900 [5]	NV	NV	1.5	U		1.8	U		1.8	U		1.3	U		1.4	U		2.4	U		1.1	U	
sec-Butylbenzene	NV [6]	NV	NV	1.4	U		1.7	U		1.7	U		1.2	U		1.3	U		2.2	U		1.1	U	
m-Dichlorobenzene (1,3-Dichlorobenzene)	NV [6]	NV	NV	1.4	U		1.7	U		1.7	U		1.2	U		1.3	U		2.2	U		1.1	U	
o-Dichlorobenzene (1,2-Dichlorobenzene)	3,010	NV	NV	1.3	U		1.6	U		1.5	U		1.1	U		1.2	U		2.1	U		0.97	U	
p-Dichlorobenzene (1,4-Dichlorobenzene)	32.2	NV	NV	1.7	U		2.1	U		2.1	U		1.5	U		1.6	U		2.8	U		1.3	U	
Ethylbenzene	69.7	NV	NV	1.3	U		1.6	U		1.5	U		1.1	U		1.2	U		2.1	U		0.97	U	
p-Isopropyltoluene	NV [6]	NV	NV	1.1	U		1.4	U		1.4	U		1.0	U		1.1	U		1.9	U		0.88	U	
Methylene chloride	199	NV	NV	5.7	U		13.7	JB		17.7	B		5.1	U		5.4	U		9.3	U		4.4	U	
n-Propylbenzene	3,400 [5]	NV	NV	1.7	U		2.1	U		2.1	U		1.5	U		1.6	U		2.8	U		1.3	U	
Toluene	5,570	NV	NV	5.0	J	J	1.7	U		1.7	U		2.1	J		1.8	J		4.2	J		1.1	U	
m,p-Xylene	NV [6]	NV	NV	2.3	J	J	1.7	U		1.7	U		1.2	U		1.3	U		2.2	U		1.1	U	
Semi-Volatile Organic Compounds (8270C)	mg/kg	mg/kg	mg/kg	µg/kg			µg/kg			µg/kg			µg/kg			µg/kg			µg/kg			µg/kg		
2,4-Dimethylphenol	1,220	NV	NV	49	U		50	U		46	U		42	U		44	U		46	U		45	U	
2-Nitrophenol	NV [6]	NV	NV	45	U		45	U		42	U		38	U		40	U		42	U		41	U	
1-Methylnaphthalene	22 [5]	NV	NV	45	U		45	U		42	U		38	U		40	U		42	U		41	U	
Total Petroleum Hydrocarbons (8015)	mg/kg	mg/kg	mg/kg	mg/kg			mg/kg			mg/kg			mg/kg			mg/kg			mg/kg			mg/kg		
Gasoline Range Organics (C6-C10)	800 [7]	NV	NV	3.7	U		4.2	U		3.4	U		3.0	U		3.2	U		3.3	U		3.0	U	
Diesel Range Organics (C10-C22)	800 [7]	NV	NV	6.8	U		6.7	U		6.2	U		5.7	U		6.0	U		6.2	U		6.1	U	
Oil Range Organics (>C22-C36)	800 [7]	NV	NV	6.8	U		6.7	U		6.2	U		5.7	U		6.0	U		6.2	U		6.1	U	
Polychlorinated Biphenyls (8082)	mg/kg	mg/kg	mg/kg	µg/kg			µg/kg			µg/kg			µg/kg			µg/kg			µg/kg			µg/kg		
Aroclor 1232	1.76	NV	NV	18	U		18	U		17	U		15	U		16	U		17	U		16	U	
Aroclor 1254	1.12	NV	NV	11	U		11	U		10	U		9.5	U		9.9	U		10	U		10	U	
TAL Metals Analysis (6010B/7471A)	mg/kg	mg/kg	mg/kg	mg/kg			mg/kg			mg/kg			mg/kg			mg/kg			mg/kg			mg/kg		
Aluminum	78,100	13,722	13,722.27	3,000			2,850			2,420			2,520			2,620			2,330			5,460		
Antimony	31.3	1.6	1.6	0.35	J		0.19	J		0.17	J		0.15	J		0.081	U		0.12	U		0.099	J	
Arsenic	3.9	3.7	3.66	0.75			0.83			0.76			0.88			1.1			0.45	J		2.1		
Barium	15,600	169.3	169.25	25.5			25.1			25.7			21.2			23.5			21.1			52.6		
Beryllium	156	1.6	1.53	0.14	J		0.13	J		0.10	J		0.093	J		0.10	J		0.085	J		0.23		
Cadmium	77.9	0.3	0.28	0.32			0.32			0.27			0.062	J		0.069	J		0.061	U		0.13	J	
Calcium	NV [6]	317,332	317,331.59	175,000			165,000			145,000			149,000			157,000			165,000			71,900		
Chromium	219	25	24.95	3.7	J		3.2	J		2.6	J		3.4	J		3.2	J		3.0	J		6.5		
Cobalt	23 [5]	7.7	7.70	1.2	J		1.2	J		1.0	J		0.88	J		0.94	J		0.99	J		3.1	J	
Copper	3,130	13	12.96	2.4	J		2.7	J		2.5	J		2.6	J		2.5	J		2.6	J		3.7	J	
Iron	54,800	23,049	23,049.48	2,510		J	2,350		J	2,060		J	2,010			2,160			2,020			4,000		
Lead	400	10.9	10.87	1.4	J		1.6	J		0.73	J		1.3	J		1.8	J		1.5	J		4.1		
Magnesium	NV [6]	16,991	16,990.65	1,540			1,640			1,030			1,200	J		1,330	J		1,120	J		2,100		
Manganese	10,700	393	393.47	31.8		J	101		J	51.1		J	24.9		J	25.8		J	41.2		J	90.4		J
Nickel	1,560	17.4	17.34	2.2	J		2.5	J		1.9	J		1.8	J		2.0	J		2.0	J		5.8	J	
Potassium	NV [6]	5,077	5,077.12	704			687			596			682			704			571	J		1,360		
Sodium	NV [6]	5,196	5,195.97	125	J	J	79.8	J	J	60.8	J	J	135	J	J	137	J	J	126	J	J	88.0	J	J
Vanadium	391	42.6	42.53	7.5		J	6.2		J	6.6		J	5.8			6.0			5.3			18.3		
Zinc	23,500	54.6	54.53	6.5	J		6.1	J		5.1	J		5.2	J		5.5	J		4.5	J		17.3		
General Chemistry (2540B)	%	%	%	%			%			%			%			%			%			%		
Solids, Percent	NV	NV	NV	73.5			73.8			79.2			86.0			82.7			79.6			81.0		

Notes:

NMED = New Mexico Environment Department
TAL = Target Analyte List
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
% = percent
NV = No Value
Q = Laboratory Qualifier
Q1 = Validating Chemist Qualifier

Client Sample Nomenclature
SWMU8 = Solid Waste Management Unit 8
DP = Direct Push
A = Denotes a duplicate sample
Final digit(s) equal the sample interval depth below ground surface

[1] NMED, December 2009. Technical Background Document for Development of Soil Screening Levels (SSL), Revision 5.0.
[2] Table 1, Conditional Approval Letter, *Basewide Background Study Report, Holloman Air Force Base, New Mexico* (NMED, December 2011)
[3] Table 5-18, *Basewide Background Study Report, Holloman Air Force Base, New Mexico* (NationView|Bhate JV III, July 2011)
[4] If results are not detected (U) then the value is set at the Method Detection Limit (MDL)
[5] USEPA Region 3, 6, and 9 Regional Screening Levels (RSLs) (November, 2011)
[6] No Value established for NMED Residential SSL (December 2009) and USEPA RSL (November 2011)
[7] NMED TPH Screening Guidelines for Unknown Oil, Residential Direct Exposure, Table 2b (October 2006)

Bold value indicates analytes above NMED SSLs (Rev 5.0, December 2009) or TPH results above NMED TPH Screening Guidelines (October 2006)
Indicates that the combined TPH-GRO/DRO/ORO results exceed the NMED TPH Screening Guidelines (Unknown Oil, Residential Direct Exposure)
Indicates analytical results above the NMED Residential SSL, but below the NMED approved background levels (NMED, 2011)
Indicates analytical results above the NMED Approved background levels, but below the NMED Residential SSL

Qualifiers
U = Not detected
J = Indicates an estimated value
B = Indicates analyte found in the associated method blank

Table 7-2
Soil Geotechnical Results (October 2010)
SWMU 8 RCRA Facility Investigation Report
Holloman Air Force Base, New Mexico

Sample Identification	**Method**	**Unit**	**SWMU8-DP16-2**	**SWMU8-DP16-3**	**Average**
Depth (ft bgs)			**F77187-6**	**F77187-7**	
Date sampled			**10/10/2010**	**10/10/2010**	
Parameter					
Bulk Density (Dry Basis)	ASTM D2937-94 M	g/mL	1.2	1.5	1.35
Fractional Organic Carbon	ASTM D2974-87	%	17.6	8.7	13.15
Solids, Percent	SM19 2540B M	%	70.0	79.2	74.6
Specific Gravity	ASTM 1429		1.8	1.9	1.85

Notes:
ASTM - American Society for Testing and Materials
ft bgs - Feet below ground surface
g/mL - grams per milliliter
% - percent
SWMU8 = Solid Waste Management Unit 8
DP = Direct Push
Final digit(s) equal the sample interval depth in feet below ground surface

Table 7-3
Groundwater Analytical Results (December 2010)
SWMU 8 RCRA Facility Investigation Report
Holloman Air Force Base, New Mexico

Client Sample Identification:	Groundwater Screening Levels		Basewide Background Levels		SWMU8-DP01			SWMU8-DP02			SWMU8-DP03			SWMU8-DP05			SWMU8-DP05-A			SWMU8-DP13			SWMU8-DP17		
Lab Sample Identification:	NMWQCC[1]	USEPA MCL [2]	NMED Approved Background Levels (Dissolved Constituents)[3]	Dissolved Metals in Groundwater UTL [4]	F78727-3			F78699-2			F78699-3			F78727-2			F78727-1			F78699-1			F78699-4		
Date Sampled:					12/13/2010			12/13/2010			12/13/2010			12/14/2010			12/14/2010			12/13/2010			12/13/2010		
Analyte (Method)					Result [5]	Q	Q1	Result [5]	Q	Q1	Result [5]	Q	Q1	Result [5]	Q	Q1	Result [5]	Q	Q1	Result [5]	Q	Q1	Result [5]	Q	Q1
Volatile Organic Compounds (8260B)	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**			**µg/L**			**µg/L**			**µg/L**			**µg/L**			**µg/L**			**µg/L**		
n-Butylbenzene	NV	NV	NV	NV	0.26	U		0.26	U		0.26	U		0.34	J	J	0.26	U		0.26	U		0.26	U	
sec-Butylbenzene	NV	NV	NV	NV	0.22	U		0.22	U		0.22	U		2.4	J	J	2.4	J	J	0.22	U		0.22	U	
Chloroform	100	NV	NV	NV	1.7			0.22	U		0.22	U		0.22	U		0.22	U		1.6			7.3		
Carbon disulfide	NV	NV	NV	NV	0.50	U		0.50	U		0.50	U		1.4	J		1.9	J		0.50	U		0.50	U	
m-Dichlorobenzene	NV	NV	NV	NV	0.20	U		0.20	U		0.20	U		3.2			3.1			0.20	U		0.20	U	
o-Dichlorobenzene	NV	600	NV	NV	0.25	U		0.25	U		0.25	U		2.1			2.0			0.25	U		0.25	U	
p-Dichlorobenzene	NV	75	NV	NV	0.23	U		0.23	U		0.23	U		2.1			2.1			0.23	U		0.23	U	
Toluene	750	1,000	NV	NV	0.20	U		0.20	U		0.20	U		0.20	U		0.25	J		0.20	U		0.20	U	
Semi-Volatile Organic Compounds (8270D)	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**			**µg/L**			**µg/L**			**µg/L**			**µg/L**			**µg/L**			**µg/L**		
1,2-Dichlorobenzene	NV	600	NV	NV	1.0	U		0.96	U		0.95	U		1.3	J		1.4	J		0.96	U		0.97	U	
1,3-Dichlorobenzene	NV	NV	NV	NV	1.0	U		0.96	U		0.95	U		1.9	J		2.0	J		0.96	U		0.97	U	
1,4-Dichlorobenzene	NV	75	NV	NV	1.0	U		0.96	U		0.95	U		1.3	J		1.3	J		0.96	U		0.97	U	
Diethyl phthalate	NV	NV	NV	NV	1.1	U		1.1	U		1.0	U		1.5	J		1.5	J		1.1	U		1.1	U	
Polychlorinated Biphenyls (8082A)	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**			**µg/L**			**µg/L**			**µg/L**			**µg/L**			**µg/L**			**µg/L**		
All PCBs	NV	NV	NV	NV	ND			ND			ND			ND			ND			ND			ND		
Total Petroleum Hydrocarbons (8015C)	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**			**mg/L**			**mg/L**			**mg/L**			**mg/L**			**mg/L**			**mg/L**		
Gasoline Range Organics (C6-C10)	50.0 [6]	NV	NV	NV	0.050	U		0.050	U		0.050	U		0.0551	J		0.0542	J		0.050	U		0.050	U	
Diesel Range Organics (C10-C22)	50.0 [6]	NV	NV	NV	0.10	U		0.095	U		0.095	U		0.550			0.579			0.096	U		0.097	U	
Oil Range Organics (>C22-C36)	50.0 [6]	NV	NV	NV	0.10	U		0.095	U		0.095	U		0.095	U		0.095	U		0.096	U		0.097	U	
TAL Metals Analysis (6010C/7470A)	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**			**µg/L**			**µg/L**			**µg/L**			**µg/L**			**µg/L**			**µg/L**		
Aluminum	5,000	50 [7]	54	54	25	U		25	U		25	U		25	U		25	U		33.3	J		25	U	
Antimony	NV	6	6	10	2.1	J		3.8	J		2.0	U		2.0	U		4.3	J		2.5	J		4.3	J	
Arsenic	100	10	10	28.53	7.8	J		3.2	J		2.0	U		2.0	U		2.0	U		2.0	U		2.2	J	
Barium	1,000	2,000	30.2	30.13	15.3	J		16.1	J		30.2	J		28.1	J		29.9	J		20.4	J		27.7	J	
Calcium	NV	NV	1,151,302	1,151,301.20	567,000		J	578,000		J	571,000		J	550,000		J	585,000		J	550,000		J	573,000		J
Chromium	50	100	2.5	2.5	2.3	J		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U	
Copper	1,000	1,300	22	57.46	3.6	J		3.7	J		4.5	J		2.9	J		3.4	J		3.9	J		3.3	J	
Iron	1,000	300 [7]	65.6	65.56	35	U		40.9	J		95.9	J		193	J	J	129	J	J	35	U		35	U	
Magnesium	NV	NV	3,630,927	3,630,926.70	77,500			55,200			56,600			49,600			53,100			48,200			79,100		
Manganese	200	50 [7]	50	118.65	1.0	U		9.6	J		16.6			**130**			**111**			19.8			**376**		
Nickel	200	NV	15.9	15.89	2.0	U		2.0	U		2.0	U		2.0	U		2.0	U		3.0	J		2.6	J	
Potassium	NV	NV	120,480	120,479.98	8,140	J		5,560	J		3,980	J		3,920	J		4,070	J		3,320	J		7,780	J	
Selenium	50	50	25.3	25.26	2.5	J		2.0	U		2.0	U		2.0	U		2.0	U		2.4	J		2.0	U	
Sodium	NV	NV	19,972,499	19,972,499.00	71,400			68,400			70,200			69,600			73,100			68,200			63,500		
Vanadium	NV	NV	73.8	73.73	83.6			34.6	J		18.7	J		1.0	U		1.0	U		21.3	J		34.2	J	
Zinc	10,000	5,000 [7]	23	56.28	15.9	J		17.0	J		17.3	J		13.5	J		17.7	J		14.0	J		8.2	J	
General Chemistry (2540C)	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**			**mg/L**			**mg/L**			**mg/L**			**mg/L**			**mg/L**			**mg/L**		
Solids, Total Dissolved	1,000	500 [7]	NV	65,956.58 [8]	**2,420**			**2,480**			**2,440**			**2,500**			**1,970**			**2,450**			241		

Notes:

NMWQCC = New Mexico Water Quality Control Commission
NMED = New Mexico Environment Department
USEPA = United States Environmental Protection Agency
MCL = Maximum Contaminant Level
UTL = Upper Tolerance Limit
TAL = Target Analyte List
µg/L = micrograms per liter
mg/L = milligrams per liter
NV = No Value
Q = Laboratory Qualifier
Q1 = Validating Chemist Qualifier

Qualifiers
U = Not detected
J = Indicates an estimated value

Client Sample Nomenclature
SWMU8 = Solid Waste Management Unit 8
DP = Direct Push
A = Denotes a duplicate sample

[1] Standards for Groundwater, if 10,000 mg/L Total Dissolved Solids (TDS) Concentration or Less, New Mexico Administrative Code 20.6.2.3103
[2] USEPA National Primary Drinking Water Regulations MCLs (816-F-09-004, May 2009)
[3] Table 3, Conditional Approval Letter, Basewide Background Study Report, Holloman Air Force Base, New Mexico (NMED, December 2011)
[4] Table 5-18 of the *Basewide Background Study Report, Holloman Air Force Base, New Mexico* (NationView|Bhate JV III, July 2011)
[5] If results are not detected (U) then the value is set at the Method Detection Limit (MDL)
[6] NMED TPH Screening Guidelines for Unknown Oil, Concentration in groundwater, Table 2b (October 2006)
[7] USEPA Secondary Drinking Water Standard
[8] Value established in the Basewide Background Study Report, HAFB, New Mexico (NationView/Bhate JV III, July 2011) and derived from the Total Groundwater UTL

Bold value indicates analytes above the New Mexico Groundwater Quality Standards, the USEPA MCLs, or the NMED TPH Screening Guidelines
Indicates combined TPH-GRO/DRO/ORO analytical results above the NMED TPH Screening Guideline for Unknown Oil, Concentration in Groundwater, Table 2b
Indicates analytical results above the NMED Approved Background Levels, but below established New Mexico Groundwater Quality Standards, or USEPA MCLs

Table 8-1(a)
Comprehensive Soil Analytical Data for Chemicals with At Least One Detected Concentration
SWMU 8 RCRA Facility Investigation Report
Holloman Air Force Base, New Mexico

Sample ID	SWMU08DP01-5	SWMU08DP02-9	SWMU08DP02-9A	SWMU-08-SW1	SWMU-08-SW2	SWMU-08-SW3	SWMU-08-SW4	SWMU-08-SW5
Sample Depth (ft bgs)	**5**	**9**	**9**	**7**	**7**	**7**	**7**	**7**
Date Sampled	**5/22/2006**	**5/22/2006**	**5/22/2006**	**10/8/2008**	**10/8/2008**	**10/8/2008**	**10/10/2008**	**10/10/2008**
VOCs (mg/kg)								
Benzene	<0.0066	<0.0072	<0.0068	<0.25	<0.25	<0.25	<0.25	<0.005
n-Butylbenzene	<0.0066	<0.0072	<0.0068	<0.25	<0.25	<0.25	<0.25	<0.005
sec-Butylbenzene	<0.0066	<0.0072	<0.0068	<0.25	<0.25	<0.25	<0.25	<0.005
Chloroform	<0.0066	<0.0072	<0.0068	<0.25	<0.25	<0.25	<0.25	<0.005
m-Dichlorobenzene (1,3-Dichlorobenzene)	<0.0066	<0.0072	<0.0068	<0.25	<0.25	<0.25	<0.25	<0.005
o-Dichlorobenzene (1,2-Dichlorobenzene)	<0.0066	<0.0072	<0.0068	<0.25	<0.25	<0.25	<0.25	<0.005
p-Dichlorobenzene (1,4-Dichlorobenzene)	<0.0066	<0.0072	<0.0068	<0.25	<0.25	<0.25	<0.25	<0.005
Ethylbenzene	<0.0066	<0.0072	<0.0068	<0.25	<0.25	<0.25	<0.25	<0.005
p-Isopropyltoluene	<0.0066	<0.0072	<0.0068	<0.25	<0.25	<0.25	<0.25	<0.005
Methylene chloride	<0.013	<0.014	<0.014	<0.25	<0.25	<0.25	<0.25	<0.005
Naphthalene	**0.0027 JB**	<0.0072	<0.0068	<0.25	<0.25	<0.25	<0.25	<0.005
n-Propylbenzene	<0.0066	<0.0072	<0.0068	<0.25	<0.25	<0.25	<0.25	<0.005
Tetrachloroethene	<0.0066	<0.0072	<0.0068	<0.25	<0.25	**0.174 J**	<0.25	<0.005
Toluene	<0.0066	<0.0072	<0.0068	<0.25	<0.25	<0.25	<0.25	<0.005
m,p-Xylene	<0.013	<0.014	<0.014	<0.25	<0.25	<0.25	<0.25	<0.005
o-Xylene	<0.0066	<0.0072	<0.0068	<0.25	<0.25	<0.25	<0.25	<0.005
Xylenes	NA	NA	NA	<0.25	<0.25	<0.25	<0.25	<0.005
SVOCs (mg/kg)								
2,4-Dimethylphenol	<0.22	<0.24	<0.23	<0.3	<0.3	<0.3	<0.3	<0.3
2-Nitrophenol	<0.22	<0.24	<0.23	<0.3	<0.3	<0.3	<0.3	<0.3
1-Methylnaphthalene	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	<0.22	<0.24	<0.23	<0.3	<0.3	<0.3	<0.3	<0.3
1,3-Dichlorobenzene	<0.22	<0.24	<0.23	<0.3	<0.3	<0.3	<0.3	<0.3
1,4-Dichlorobenzene	<0.22	<0.24	<0.23	<0.3	<0.3	<0.3	<0.3	<0.3
bis(2-Ethylhexyl)phthalate	<0.44	<0.47	<0.47	**0.61**	<0.3	**1.5**	**0.3**	<0.3
Butylbenzylphthalate	<0.44	<0.47	<0.47	<0.3	<0.3	**0.55**	<0.3	<0.3
Di-n-butylphthalate	<0.44	<0.47	<0.47	<0.3	**0.17 J**	**0.45**	**0.18 J**	<0.3
Diethylphthalate	<0.44	<0.47	<0.47	**0.099 J**	**0.081 J**	<0.3	<0.3	<0.3
Naphthalene	<0.22	<0.24	<0.23	<0.3	<0.3	<0.3	<0.3	<0.3
Pyrene	<0.22	<0.24	<0.23	<0.3	<0.3	**0.085 J**	<0.3	<0.3
TPHs (mg/kg)								
Gasoline Range Organics (C6-C10)	<10	<22	<9.2	<75	<75	<75	**12**	<3
Diesel Range Organics (C10-C22)	<11	<12	<12	**1,110**	**1,150**	**1,040**	**1,120**	**11**
Oil Range Organics (>C22-C36)	<11	<12	<12	**536**	**363**	**570**	**224**	**18**
PCBs (mg/kg)								
Aroclor 1232	<0.022	<0.023	<0.023	<0.05	<0.05	<0.05	<0.05	<0.05
Aroclor 1248	<0.022	<0.023	<0.023	**0.21**	**0.11**	**0.15**	**0.099**	<0.08
Aroclor 1254	<0.022	<0.023	<0.023	**0.18**	**0.15**	**0.22**	**0.17**	<0.03
Metals (mg/kg)								
Aluminum	**482**	**3,590**	**3,160**	**4,850**	**2,860**	**2,520**	**2,380**	**1,870**
Antimony	**1.2 J**	<8.5	<8.5	<3	<3	<3	<3	<3
Arsenic	**0.82 J**	**0.95 J**	**0.56 J**	<1	<1	<1	<1	<1

Table 8-1(a)
Comprehensive Soil Analytical Data for Chemicals with At Least One Detected Concentration
SWMU 8 RCRA Facility Investigation Report
Holloman Air Force Base, New Mexico

Sample ID	SWMU08DP01-5	SWMU08DP02-9	SWMU08DP02-9A	SWMU-08-SW1	SWMU-08-SW2	SWMU-08-SW3	SWMU-08-SW4	SWMU-08-SW5
Sample Depth (ft bgs)	**5**	**9**	**9**	**7**	**7**	**7**	**7**	**7**
Date Sampled	**5/22/2006**	**5/22/2006**	**5/22/2006**	**10/8/2008**	**10/8/2008**	**10/8/2008**	**10/10/2008**	**10/10/2008**
Barium	**13.2 J**	**31.8**	**26.8 J**	**56.8**	**28.6**	**25.5**	**20.6**	**15.3**
Beryllium	**0.058 J**	**0.16 J**	**0.21 J**	<0.5	<0.5	<0.5	<0.5	<0.5
Boron	NA	NA	NA	<5	<5	<5	**0.609 J**	**1.3 J**
Cadmium	<0.5	<0.57	<0.56	<0.5	<0.5	<0.5	<0.5	<0.5
Calcium	**257,000**	**171,000**	**192,000**	**61,200**	**128,000**	**126,000**	**131,000**	**123,000**
Chromium	**0.45 J**	**3.4**	**3.3**	**7.66**	**3.48**	**4.03**	**2.51**	**2.04**
Cobalt	**0.42 J**	**0.9 J**	**0.94 J**	**1.55**	**1.24**	**1.1**	**0.815**	**0.603**
Copper	**0.72 J**	**0.61 J**	**0.5 J**	**7.53**	**7.25**	**8.95**	**1.27**	**0.402 J**
Iron	**349**	**3,560**	**3,330**	**5,620**	**3,100**	**4,280**	**2,120**	**1,920**
Lead	<13	<14	<14	**12.4**	**18.5**	**21**	**0.663**	**1.38**
Magnesium	**2,090**	**1,620**	**1,640**	**1,800**	**1,910**	**1,530**	**1,090**	**831**
Manganese	**5.7**	**33.9**	**30.4**	**70.6**	**43.4**	**38.5**	**23.4**	**19**
Mercury	<0.098	**0.016 J**	<0.11	<0.14	<0.14	<0.14	<0.14	<0.14
Molybdenum	NA	NA	NA	**3.27**	**2**	**2**	**2.29**	**2.38**
Nickel	**0.69 J**	**2.4 J**	**2.2 J**	**2.87**	**2.06**	**2.42**	**1.55**	**1.11 J**
Potassium	**145 J**	**895 J**	**847 J**	**1,080**	**775**	**644**	**643**	**485**
Selenium	**0.61 J**	<14	**0.31 J**	<1	<1	<1	<1	<1
Silver	<1.3	<1.4	<1.4	<0.5	<0.5	<0.5	<0.5	**0.436 J**
Sodium	**175 J**	**249 J**	**167 J**	**82.8**	**135**	**108**	**129**	**105**
Vanadium	**2.4 J**	**7.1**	**7.1**	**22.6**	**6.4**	**5.78**	**3.15**	**4.21**
Zinc	**3.7 J**	**7.7**	**8.2**	**13.4**	**15.4**	**16.2**	**5.4**	**5.49**

Notes:

A = Duplicate sample

B = Analyte found in method blank

DUP = Duplicate sample

ft bgs = Feet below ground surface

J = Estimated value

mg/kg = Milligrams per kilogram

NA = Not analyzed

PCB = Polychlorinated biphenyls

SVOC = Semi-volatile organic compound

TPH = Total petroleum hydrocarbon

VOC = Volatile organic compound

Value in bold = Detected concentration

Table 8-1(a)
Comprehensive Soil Analytical Data for Chemicals with At Least One Detected Concentration
SWMU 8 RCRA Facility Investigation Report
Holloman Air Force Base, New Mexico

Sample ID	SWMU-08-SW6	SWMU-08-SW6-DUP	SWMU-08-SW7	SWMU-08-SW8	SWMU-08-SW9	SWMU-08-SW10	SWMU-08-SW11	SWMU-08-SW12
Sample Depth (ft bgs)	**7**	**7**	**7**	**7**	**7**	**7**	**7**	**7**
Date Sampled	**10/10/2008**	**10/10/2008**	**10/10/2008**	**10/10/2008**	**10/10/2008**	**10/10/2008**	**10/10/2008**	**10/10/2008**
VOCs (mg/kg)								
Benzene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.25	<0.005	<0.25
n-Butylbenzene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.25	<0.005	<0.25
sec-Butylbenzene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.25	<0.005	<0.25
Chloroform	<0.005	<0.005	<0.005	<0.005	<0.005	<0.25	<0.005	<0.25
m-Dichlorobenzene (1,3-Dichlorobenzene)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.25	<0.005	<0.25
o-Dichlorobenzene (1,2-Dichlorobenzene)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.25	<0.005	<0.25
p-Dichlorobenzene (1,4-Dichlorobenzene)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.25	<0.005	<0.25
Ethylbenzene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.25	<0.005	<0.25
p-Isopropyltoluene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.25	<0.005	<0.25
Methylene chloride	<0.005	<0.005	<0.005	<0.005	<0.005	<0.25	<0.005	<0.25
Naphthalene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.25	<0.005	<0.25
n-Propylbenzene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.25	<0.005	<0.25
Tetrachloroethene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.25	<0.005	<0.25
Toluene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.25	<0.005	<0.25
m,p-Xylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.25	<0.005	<0.25
o-Xylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.25	<0.005	<0.25
Xylenes	<0.005	<0.005	<0.005	<0.005	<0.005	<0.25	<0.005	<0.25
SVOCs (mg/kg)								
2,4-Dimethylphenol	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
2-Nitrophenol	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
1-Methylnaphthalene	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
1,3-Dichlorobenzene	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
1,4-Dichlorobenzene	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
bis(2-Ethylhexyl)phthalate	<0.3	<0.3	<0.3	<0.3	<0.3	**0.33**	<0.3	**0.43**
Butylbenzylphthalate	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Di-n-butylphthalate	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Diethylphthalate	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Naphthalene	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Pyrene	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
TPHs (mg/kg)								
Gasoline Range Organics (C6-C10)	<3	<3	<3	<3	<3	**6.8**	<3	**9.4**
Diesel Range Organics (C10-C22)	<1	<1	<1	<1	**106**	**1,560**	**3**	**2,380**
Oil Range Organics (>C22-C36)	<5	<5	**4.6 J**	<5	**213**	**358**	**2.1 J**	**743**
PCBs (mg/kg)								
Aroclor 1232	<0.05	NA	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Aroclor 1248	<0.08	NA	<0.08	<0.08	<0.08	**0.18**	<0.08	**0.34**
Aroclor 1254	<0.03	NA	<0.03	<0.03	**0.31**	**0.22**	<0.03	**0.47**
Metals (mg/kg)								
Aluminum	**1,940**	**1,780**	**1,690**	**2,020**	**2,320**	**2,000**	**1,670**	**2,160**
Antimony	<3	<3	<3	<3	<3	<3	<3	<3
Arsenic	<1	<1	<1	<1	<1	<1	<1	<1

Table 8-1(a)
Comprehensive Soil Analytical Data for Chemicals with At Least One Detected Concentration
SWMU 8 RCRA Facility Investigation Report
Holloman Air Force Base, New Mexico

Sample ID	SWMU-08-SW6	SWMU-08-SW6-DUP	SWMU-08-SW7	SWMU-08-SW8	SWMU-08-SW9	SWMU-08-SW10	SWMU-08-SW11	SWMU-08-SW12
Sample Depth (ft bgs)	**7**	**7**	**7**	**7**	**7**	**7**	**7**	**7**
Date Sampled	**10/10/2008**	**10/10/2008**	**10/10/2008**	**10/10/2008**	**10/10/2008**	**10/10/2008**	**10/10/2008**	**10/10/2008**
Barium	**13.4**	**13**	**13.5**	**14.4**	**22.8**	**22**	**12.8**	**22.2**
Beryllium	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Boron	**0.821 J**	**2.47 J**	<5	<5	<5	**0.333 J**	<5	<5
Cadmium	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Calcium	**108,000**	**117,000**	**78,200**	**74,100**	**106,000**	**99,300**	**97,400**	**109,000**
Chromium	**2.11**	**2.07**	**1.79**	**2.1**	**2.87**	**2.74**	**1.89**	**2.72**
Cobalt	**0.709**	**0.881**	**0.579**	**0.733**	**0.846**	**0.944**	**0.608**	**1.04**
Copper	**0.727 J**	**0.801 J**	**0.425 J**	**0.408 J**	**3.19**	**1.65**	<1	<1
Iron	**2,170**	**2,090**	**1,610**	**1,870**	**2,200**	**2,350**	**1,790**	**2,500**
Lead	**1.31**	<0.5	**2.59**	**0.659**	**13.9**	**7.45**	**0.415 J**	**49.3**
Magnesium	**1,030**	**1,030**	**1,080**	**1,230**	**1,590**	**2,560**	**877**	**1,530**
Manganese	**22.2**	**21.6**	**24.2**	**27**	**27.1**	**45.8**	**21.2**	**32.6**
Mercury	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14
Molybdenum	**2.15**	**0.523 J**	**2.21**	**1.21**	**1.84**	**1.91**	**2.08**	**2.87**
Nickel	**1.28 J**	**1.32 J**	**1.18 J**	**1.32 J**	**1.56**	**1.84**	**1.01 J**	**1.78**
Potassium	**454**	**470**	**447**	**453**	**580**	**517**	**456**	**579**
Selenium	<1	<1	<1	<1	<1	<1	<1	<1
Silver	**0.42 J**	<0.5	<0.5	<0.5	<0.5	**0.66**	<0.5	<0.5
Sodium	**109**	**98.5**	**92.4**	**82.1**	**113**	**113**	**94.3**	**191**
Vanadium	**4.51**	**4.37**	**3.54**	**2.86**	**8**	**5.67**	**2.93**	**4.77**
Zinc	**4.83 J**	**5.57**	**4.66 J**	**4.72 J**	**13.8**	**8.47**	**4.25 J**	**8.92**

Notes:

A = Duplicate sample

B = Analyte found in method blank

DUP = Duplicate sample

ft bgs = Feet below ground surface

J = Estimated value

mg/kg = Milligrams per kilogram

NA = Not analyzed

PCB = Polychlorinated biphenyls

SVOC = Semi-volatile organic compound

TPH = Total petroleum hydrocarbon

VOC = Volatile organic compound

Value in bold = Detected concentration

Table 8-1(a)
Comprehensive Soil Analytical Data for Chemicals with At Least One Detected Concentration
SWMU 8 RCRA Facility Investigation Report
Holloman Air Force Base, New Mexico

Sample ID	SWMU-08-SW12-DUP	SWMU-08-SW13	SWMU-08-SW14	SWMU-08-SW15	SWMU-08-SW15OE	SWMU-08-SW16	SWMU-08-Bottom 1	SWMU-08-Bottom 2
Sample Depth (ft bgs)	**7**	**7**	**7**	**7**	**7**	**7**	**8.5**	**8.5**
Date Sampled	**10/10/2008**	**10/10/2008**	**10/10/2008**	**10/10/2008**	**10/27/2008**	**10/10/2008**	**10/8/2008**	**10/8/2008**
VOCs (mg/kg)								
Benzene	<0.005	<0.25	<0.25	<0.25	<0.005	<0.005	<0.005	<0.005
n-Butylbenzene	<0.005	<0.25	<0.25	<0.25	<0.005	<0.005	<0.005	<0.005
sec-Butylbenzene	<0.005	<0.25	<0.25	<0.25	<0.005	<0.005	<0.005	<0.005
Chloroform	<0.005	<0.25	<0.25	<0.25	<0.005	<0.005	**0.0014 J**	**0.0017 J**
m-Dichlorobenzene (1,3-Dichlorobenzene)	<0.005	<0.25	<0.25	<0.25	<0.005	<0.005	<0.005	<0.005
o-Dichlorobenzene (1,2-Dichlorobenzene)	<0.005	<0.25	<0.25	<0.25	<0.005	<0.005	<0.005	<0.005
p-Dichlorobenzene (1,4-Dichlorobenzene)	<0.005	<0.25	<0.25	<0.25	<0.005	<0.005	<0.005	<0.005
Ethylbenzene	<0.005	<0.25	<0.25	<0.25	<0.005	<0.005	<0.005	<0.005
p-Isopropyltoluene	<0.005	<0.25	<0.25	<0.25	<0.005	<0.005	<0.005	<0.005
Methylene chloride	<0.005	<0.25	<0.25	<0.25	<0.005	<0.005	<0.005	<0.005
Naphthalene	<0.005	<0.25	<0.25	<0.25	<0.005	<0.005	<0.005	<0.005
n-Propylbenzene	<0.005	<0.25	<0.25	<0.25	<0.005	<0.005	<0.005	<0.005
Tetrachloroethene	<0.005	<0.25	<0.25	<0.25	<0.005	<0.005	<0.005	<0.005
Toluene	<0.005	<0.25	<0.25	<0.25	<0.005	<0.005	<0.005	<0.005
m,p-Xylene	<0.005	<0.25	<0.25	<0.25	<0.005	<0.005	<0.005	<0.005
o-Xylene	<0.005	<0.25	<0.25	<0.25	<0.005	<0.005	<0.005	<0.005
Xylenes	<0.005	<0.25	<0.25	<0.25	<0.005	<0.005	<0.005	<0.005
SVOCs (mg/kg)								
2,4-Dimethylphenol	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
2-Nitrophenol	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
1-Methylnaphthalene	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
1,3-Dichlorobenzene	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
1,4-Dichlorobenzene	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
bis(2-Ethylhexyl)phthalate	**0.41**	**0.7**	<0.3	**0.38**	<0.3	<0.3	<0.3	<0.3
Butylbenzylphthalate	<0.3	**0.14 J**	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Di-n-butylphthalate	**0.15 J**	**0.17 J**	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Diethylphthalate	**0.19 J**	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Naphthalene	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Pyrene	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
TPHs (mg/kg)								
Gasoline Range Organics (C6-C10)	<3	**9.4**	**5.3**	**7.3**	<3	<3	<3	<3
Diesel Range Organics (C10-C22)	**954**	**1,520**	**141**	**2,340**	<1	**0.8 J**	**0.55 J**	<1
Oil Range Organics (>C22-C36)	**700**	**426**	**148**	**642**	**6**	**12**	**3.0 J**	<5
PCBs (mg/kg)								
Aroclor 1232	NA	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Aroclor 1248	NA	**0.64**	**0.078 J**	**0.23**	<0.08	<0.08	<0.08	<0.08
Aroclor 1254	NA	**0.71**	**0.16**	**0.16**	<0.03	<0.03	<0.03	<0.03
Metals (mg/kg)								
Aluminum	**2,370**	**2,500**	**2,310**	**1,800**	**5,100**	**3,980**	**2,980**	**2,690**
Antimony	<3	<3	<3	<3	<3	<3	<3	<3
Arsenic	<1	<1	<1	<1	**0.377 J**	<1	<1	<1

Table 8-1(a)
Comprehensive Soil Analytical Data for Chemicals with At Least One Detected Concentration
SWMU 8 RCRA Facility Investigation Report
Holloman Air Force Base, New Mexico

Sample ID	SWMU-08-SW12-DUP	SWMU-08-SW13	SWMU-08-SW14	SWMU-08-SW15	SWMU-08-SW15OE	SWMU-08-SW16	SWMU-08-Bottom 1	SWMU-08-Bottom 2
Sample Depth (ft bgs)	**7**	**7**	**7**	**7**	**7**	**7**	**8.5**	**8.5**
Date Sampled	**10/10/2008**	**10/10/2008**	**10/10/2008**	**10/10/2008**	**10/27/2008**	**10/10/2008**	**10/8/2008**	**10/8/2008**
Barium	**21.5**	**22.2**	**22.2**	**11.1**	**42.9**	**53.6**	**18.1**	**20**
Beryllium	<0.5	<0.5	<0.5	<0.5	**0.176 J**	<0.5	<0.5	<0.5
Boron	**2.58 J**	<5	**2.09 J**	<5	**7.24**	**1.08 J**	<5	<5
Cadmium	<0.5	<0.5	<0.5	<0.5	**0.22 J**	<0.5	<0.5	<0.5
Calcium	**117,000**	**128,000**	**114,000**	**124,000**	**182,000**	**105,000**	**105,000**	**146,000**
Chromium	**2.79**	**3.19**	**2.57**	**2.03**	**8.37**	**3.61**	**3.17**	**2.78**
Cobalt	**1.05**	**1.09**	**0.841**	**0.767**	**2.9**	**1.34**	**0.95**	**0.8**
Copper	**2**	**1.42**	**1.44**	**7.45**	**3.69**	**9.48**	**4.33**	**4.24**
Iron	**2,820**	**3,070**	**2,170**	**1,770**	**6,390**	**3,430**	**2,580**	**2,520**
Lead	**3.15**	**8.55**	<0.5	**1.71**	**23**	**1.13**	**2.35**	**1.34**
Magnesium	**1,760**	**2,850**	**1,140**	**1,010**	**6,750**	**1,470**	**1,700**	**1,320**
Manganese	**40.8**	**59.1**	**24.7**	**33.3**	**201**	**40**	**25.4**	**22.6**
Mercury	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14
Molybdenum	**0.555 J**	**2.04**	**0.613 J**	**1.73**	**1.01**	**1.3**	**1.91**	**2.02**
Nickel	**2.01**	**2.28**	**1.57**	**1.28 J**	**6.07**	**2.35**	**1.84**	**1.61**
Potassium	**636**	**746**	**657**	**430**	**1,330**	**836**	**746**	**648**
Selenium	<1	<1	<1	<1	<1	<1	<1	<1
Silver	**0.162 J**	<0.5	<0.5	**0.183 J**	<0.5	**0.484 J**	<0.5	**0.57**
Sodium	**102**	**221**	**98.2**	**92**	**219**	**105**	**118**	**123**
Vanadium	**5.86**	**6.33**	**3.76**	**3.93**	**14.7**	**7.95**	**5.61**	**6.4**
Zinc	**9.31**	**11.2**	**8.7**	**5.68**	**26.9**	**9.78**	**8.34**	**5.83**

Notes:

A = Duplicate sample
B = Analyte found in method blank
DUP = Duplicate sample
ft bgs = Feet below ground surface
J = Estimated value
mg/kg = Milligrams per kilogram
NA = Not analyzed
PCB = Polychlorinated biphenyls
SVOC = Semi-volatile organic compound
TPH = Total petroleum hydrocarbon
VOC = Volatile organic compound
Value in bold = Detected concentration

Table 8-1(a)
Comprehensive Soil Analytical Data for Chemicals with At Least One Detected Concentration
SWMU 8 RCRA Facility Investigation Report
Holloman Air Force Base, New Mexico

Sample ID	SWMU-08-Bottom 3	SWMU-08-Bottom 4	SWMU8-DP04-7	SWMU8-DP05-7	SWMU8-DP05-7A	SWMU8-DP06-7	SWMU8-DP07-7	SWMU8-DP08-8
Sample Depth (ft bgs)	**8.5**	**8.5**	**7**	**7**	**7**	**7**	**7**	**8**
Date Sampled	**10/8/2008**	**10/8/2008**	**10/8/2010**	**10/8/2010**	**10/8/2010**	**10/8/2010**	**10/8/2010**	**10/8/2010**
VOCs (mg/kg)								
Benzene	<0.005	<0.005	<0.34	<0.4	<0.34	<0.35	**0.0011 J**	<0.35
n-Butylbenzene	<0.005	<0.005	<0.34	**2.18**	**2.69**	**2.31**	<0.0055	<0.35
sec-Butylbenzene	<0.005	<0.005	<0.34	**0.474**	**0.617**	**0.734**	<0.0055	**0.132 J**
Chloroform	<0.005	<0.005	<0.34	<0.4	<0.34	<0.35	<0.0055	<0.35
m-Dichlorobenzene (1,3-Dichlorobenzene)	<0.005	<0.005	<0.34	**0.485**	**0.587**	**0.856**	<0.0055	**0.157 J**
o-Dichlorobenzene (1,2-Dichlorobenzene)	<0.005	<0.005	<0.34	**0.369 J**	**0.478**	**0.755**	<0.0055	<0.35
p-Dichlorobenzene (1,4-Dichlorobenzene)	<0.005	<0.005	<0.34	**0.353 J**	**0.453**	**0.708**	<0.0055	**0.101 J**
Ethylbenzene	<0.005	<0.005	<0.34	**0.117 J**	**0.143 J**	<0.35	<0.0055	<0.35
p-Isopropyltoluene	<0.005	<0.005	<0.34	**0.57**	**0.397**	<0.35	<0.0055	<0.35
Methylene chloride	<0.005	<0.005	**0.495 J**	**0.672 JB**	**0.708 B**	**0.994**	<0.011	**1.31**
Naphthalene	<0.005	<0.005	<0.34	<0.4	<0.34	<0.35	<0.0055	<0.35
n-Propylbenzene	<0.005	<0.005	<0.34	**0.141 J**	**0.303 J**	<0.35	<0.0055	<0.35
Tetrachloroethene	<0.005	<0.005	<0.34	<0.4	<0.34	<0.35	<0.0055	<0.35
Toluene	<0.005	<0.005	<0.34	<0.4	<0.34	<0.35	<0.0055	<0.35
m,p-Xylene	<0.005	<0.005	<0.68	**0.144 J**	<0.68	<0.69	<0.011	<0.7
o-Xylene	<0.005	<0.005	<0.34	<0.4	<0.34	<0.35	<0.0055	<0.35
Xylenes	<0.005	<0.005	NA	NA	NA	NA	NA	NA
SVOCs (mg/kg)								
2,4-Dimethylphenol	<0.3	<0.3	<0.86	**0.666 J**	<1.8	<1.1	<0.22	<0.23
2-Nitrophenol	<0.3	<0.3	<0.86	<1.9	<1.8	**0.879 J**	<0.22	<0.23
1-Methylnaphthalene	NA	NA	<0.86	**0.531 J**	**0.646 J**	**0.403 J**	<0.22	<0.23
1,2-Dichlorobenzene	<0.3	<0.3	<0.86	<1.9	<1.8	<1.1	<0.22	<0.23
1,3-Dichlorobenzene	<0.3	<0.3	<0.86	<1.9	<1.8	<1.1	<0.22	<0.23
1,4-Dichlorobenzene	<0.3	<0.3	<0.86	<1.9	<1.8	<1.1	<0.22	<0.23
bis(2-Ethylhexyl)phthalate	<0.3	<0.3	<1.7	<3.8	<3.5	<2.1	<0.43	<0.45
Butylbenzylphthalate	<0.3	<0.3	<1.7	<3.8	<3.5	<2.1	<0.43	<0.45
Di-n-butylphthalate	<0.3	<0.3	<1.7	<3.8	<3.5	<2.1	<0.43	<0.45
Diethylphthalate	<0.3	<0.3	<1.7	<3.8	<3.5	<2.1	<0.43	<0.45
Naphthalene	<0.3	<0.3	<0.86	<1.9	<1.8	<1.1	<0.22	<0.23
Pyrene	<0.3	<0.3	<0.86	<1.9	<1.8	<1.1	<0.22	<0.23
TPHs (mg/kg)								
Gasoline Range Organics (C6-C10)	<3	<3	**243**	**620**	**696**	**737**	<6.7	**454**
Diesel Range Organics (C10-C22)	<1	<1	**110**	**821**	**862**	**898**	<11	**114**
Oil Range Organics (>C22-C36)	<5	**3.3 J**	**159**	**453**	**452**	**431**	<11	**128**
PCBs (mg/kg)								
Aroclor 1232	<0.05	<0.05	**0.0397 J**	**0.0864 J**	**0.0769 J**	**0.0579 J**	<0.022	**0.041 J**
Aroclor 1248	<0.08	<0.08	<0.021	<0.024	<0.022	<0.021	<0.022	<0.023
Aroclor 1254	<0.03	<0.03	**0.016 J**	**0.0402 J**	**0.0371 J**	**0.0267 J**	<0.022	**0.0177 J**
Metals (mg/kg)								
Aluminum	**2,840**	**2,780**	**2,350**	**3,200**	**3,510**	**2,280**	**3,290**	**2,150**
Antimony	<3	<3	<0.88	<1.2	**0.13 J**	<0.86	**0.18 J**	<0.93
Arsenic	<1	<1	**1**	**0.89**	**0.63**	**0.74**	**0.63**	**0.93**

Table 8-1(a)
Comprehensive Soil Analytical Data for Chemicals with At Least One Detected Concentration
SWMU 8 RCRA Facility Investigation Report
Holloman Air Force Base, New Mexico

Sample ID	SWMU-08-Bottom 3	SWMU-08-Bottom 4	SWMU8-DP04-7	SWMU8-DP05-7	SWMU8-DP05-7A	SWMU8-DP06-7	SWMU8-DP07-7	SWMU8-DP08-8
Sample Depth (ft bgs)	**8.5**	**8.5**	**7**	**7**	**7**	**7**	**7**	**8**
Date Sampled	**10/8/2008**	**10/8/2008**	**10/8/2010**	**10/8/2010**	**10/8/2010**	**10/8/2010**	**10/8/2010**	**10/8/2010**
Barium	**20**	**20**	**22.4**	**35.6**	**37.9**	**23.5**	**32.5**	**26**
Beryllium	<0.5	<0.5	**0.092 J**	**0.12 J**	**0.14 J**	**0.073 J**	**0.11 J**	**0.07 J**
Boron	**0.318 J**	**0.346 J**	NA	NA	NA	NA	NA	NA
Cadmium	<0.5	<0.5	<0.18	<0.23	<0.25	<0.17	<0.2	<0.19
Calcium	**120,000**	**124,000**	**167,000**	**197,000**	**176,000**	**225,000**	**245,000**	**195,000**
Chromium	**2.92**	**3.07**	**3.0 J**	**3.9 J**	**4.5 J**	**2.6 J**	**3.2 J**	**2.5 J**
Cobalt	**0.816**	**1.03**	**0.85 J**	**1.1 J**	**1.1 J**	**0.89 J**	**1.3 J**	**0.87 J**
Copper	**6.09**	**5.46**	**2.0 J**	**2.6 J**	**2.5 J**	**3.1 J**	**3.2 J**	**2.3 J**
Iron	**2,720**	**3,000**	**2,620**	**2,670**	**3,170**	**1,890**	**2,250**	**1,790**
Lead	**2.11**	**0.715**	**1.4 J**	**1.9 J**	**1.6 J**	**1.7 J**	**1.4 J**	**1.2 J**
Magnesium	**1,460**	**1,800**	**1,010**	**1,370**	**1,390**	**1,040**	**1,340**	**939**
Manganese	**26.2**	**30.3**	**37.3**	**29.1**	**28**	**54.6**	**55.6**	**40.2**
Mercury	<0.14	<0.14	<0.1	<0.12	<0.098	<0.1	<0.096	<0.11
Molybdenum	**1.56**	**1.59**	NA	NA	NA	NA	NA	NA
Nickel	**1.54**	**1.67**	**1.9 J**	**2.2 J**	**2.2 J**	**1.7 J**	**2.5 J**	**1.6 J**
Potassium	**682**	**735**	**628**	**885**	**957**	**615**	**839**	**579**
Selenium	<1	<1	<8.8	<12	<12	<17	<9.9	<9.3
Silver	<0.5	**0.44 J**	<0.44	<0.58	<0.62	<0.43	<0.49	<0.47
Sodium	**104**	**129**	**93.2 J**	**138 J**	**122 J**	**172 J**	**176 J**	**156 J**
Vanadium	**9.58**	**5.55**	**5.8**	**5.5**	**6.1**	**4.5**	**4.2**	**4.6**
Zinc	**7.35**	**8.86**	**5.1 J**	**7.3 J**	**7.7 J**	**5.6 J**	**8.4 J**	**4.7 J**

Notes:
A = Duplicate sample
B = Analyte found in method blank
DUP = Duplicate sample
ft bgs = Feet below ground surface
J = Estimated value
mg/kg = Milligrams per kilogram
NA = Not analyzed
PCB = Polychlorinated biphenyls
SVOC = Semi-volatile organic compound
TPH = Total petroleum hydrocarbon
VOC = Volatile organic compound
Value in bold = Detected concentration

Table 8-1(a)
Comprehensive Soil Analytical Data for Chemicals with At Least One Detected Concentration
SWMU 8 RCRA Facility Investigation Report
Holloman Air Force Base, New Mexico

Sample ID	SWMU8-DP09-7	SWMU8-DP10-7	SWMU8-DP11-7	SWMU8-DP12-7	SWMU8-DP13-7	SWMU8-DP13-7A	SWMU8-DP14-7	SWMU8-DP15-7
Sample Depth (ft bgs)	**7**	**7**	**7**	**7**	**7**	**7**	**7**	**7**
Date Sampled	**10/9/2010**	**10/9/2010**	**10/9/2010**	**10/9/2010**	**10/10/2010**	**10/10/2010**	**10/10/2010**	**10/10/2010**
VOCs (mg/kg)								
Benzene	**0.002 J**	**0.006**	<0.0071	<0.007	**0.0026 J**	**0.0022 J**	**0.0056 J**	<0.0044
n-Butylbenzene	<0.0063	<0.0057	<0.0071	<0.007	<0.0051	<0.0054	<0.0093	<0.0044
sec-Butylbenzene	<0.0063	<0.0057	<0.0071	<0.007	<0.0051	<0.0054	<0.0093	<0.0044
Chloroform	<0.0063	<0.0057	<0.0071	<0.007	<0.0051	<0.0054	<0.0093	<0.0044
m-Dichlorobenzene (1,3-Dichlorobenzene)	<0.0063	<0.0057	<0.0071	<0.007	<0.0051	<0.0054	<0.0093	<0.0044
o-Dichlorobenzene (1,2-Dichlorobenzene)	<0.0063	<0.0057	<0.0071	<0.007	<0.0051	<0.0054	<0.0093	<0.0044
p-Dichlorobenzene (1,4-Dichlorobenzene)	<0.0063	<0.0057	<0.0071	<0.007	<0.0051	<0.0054	<0.0093	<0.0044
Ethylbenzene	<0.0063	<0.0057	<0.0071	<0.007	<0.0051	<0.0054	<0.0093	<0.0044
p-Isopropyltoluene	<0.0063	<0.0057	<0.0071	<0.007	<0.0051	<0.0054	<0.0093	<0.0044
Methylene chloride	**0.0096 JB**	<0.011	**0.0137 JB**	**0.0177 B**	<0.01	<0.011	<0.019	<0.0088
Naphthalene	<0.0063	<0.0057	<0.0071	<0.007	<0.0051	<0.0054	<0.0093	<0.0044
n-Propylbenzene	<0.0063	<0.0057	<0.0071	<0.007	<0.0051	<0.0054	<0.0093	<0.0044
Tetrachloroethene	<0.0063	<0.0057	<0.0071	<0.007	<0.0051	<0.0054	<0.0093	<0.0044
Toluene	**0.0018 J**	**0.005 J**	<0.0071	<0.007	**0.0021 J**	**0.0018 J**	**0.0042 J**	<0.0044
m,p-Xylene	<0.013	**0.0023 J**	<0.014	<0.014	<0.01	<0.011	<0.019	<0.0088
o-Xylene	<0.0063	<0.0057	<0.0071	<0.007	<0.0051	<0.0054	<0.0093	<0.0044
Xylenes	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs (mg/kg)								
2,4-Dimethylphenol	<0.25	<0.22	<0.23	<0.21	<0.19	<0.2	<0.21	<0.2
2-Nitrophenol	<0.25	<0.22	<0.23	<0.21	<0.19	<0.2	<0.21	<0.2
1-Methylnaphthalene	<0.25	<0.22	<0.23	<0.21	<0.19	<0.2	<0.21	<0.2
1,2-Dichlorobenzene	<0.25	<0.22	<0.23	<0.21	<0.19	<0.2	<0.21	<0.2
1,3-Dichlorobenzene	<0.25	<0.22	<0.23	<0.21	<0.19	<0.2	<0.21	<0.2
1,4-Dichlorobenzene	<0.25	<0.22	<0.23	<0.21	<0.19	<0.2	<0.21	<0.2
bis(2-Ethylhexyl)phthalate	<0.5	<0.45	<0.45	<0.42	<0.38	<0.4	<0.42	<0.41
Butylbenzylphthalate	<0.5	<0.45	<0.45	<0.42	<0.38	<0.4	<0.42	<0.41
Di-n-butylphthalate	<0.5	<0.45	<0.45	<0.42	<0.38	<0.4	<0.42	<0.41
Diethylphthalate	<0.5	<0.45	<0.45	<0.42	<0.38	<0.4	<0.42	<0.41
Naphthalene	<0.25	<0.22	<0.23	<0.21	<0.19	<0.2	<0.21	<0.2
Pyrene	<0.25	<0.22	<0.23	<0.21	<0.19	<0.2	<0.21	<0.2
TPHs (mg/kg)								
Gasoline Range Organics (C6-C10)	<9.6	<7.4	<8.4	<6.8	<6	<6.5	<6.7	<6
Diesel Range Organics (C10-C22)	<12	<11	<11	<10	<9.5	<10	<10	<10
Oil Range Organics (>C22-C36)	<12	<11	<11	<10	<9.5	<10	<10	<10
PCBs (mg/kg)								
Aroclor 1232	<0.025	<0.023	<0.022	<0.021	<0.019	<0.02	<0.021	<0.021
Aroclor 1248	<0.025	<0.023	<0.022	<0.021	<0.019	<0.02	<0.021	<0.021
Aroclor 1254	<0.025	<0.023	<0.022	<0.021	<0.019	<0.02	<0.021	<0.021
Metals (mg/kg)								
Aluminum	**2,610**	**3,000**	**2,850**	**2,420**	**2,520**	**2,620**	**2,330**	**5,460**
Antimony	<1.3	**0.35 J**	**0.19 J**	**0.17 J**	**0.15 J**	<0.81	<1.2	**0.099 J**
Arsenic	**0.45 J**	**0.75**	**0.83**	**0.76**	**0.88**	**1.1**	**0.45 J**	**2.1**

Table 8-1(a)
Comprehensive Soil Analytical Data for Chemicals with At Least One Detected Concentration
SWMU 8 RCRA Facility Investigation Report
Holloman Air Force Base, New Mexico

Sample ID	SWMU8-DP09-7	SWMU8-DP10-7	SWMU8-DP11-7	SWMU8-DP12-7	SWMU8-DP13-7	SWMU8-DP13-7A	SWMU8-DP14-7	SWMU8-DP15-7
Sample Depth (ft bgs)	**7**	**7**	**7**	**7**	**7**	**7**	**7**	**7**
Date Sampled	**10/9/2010**	**10/9/2010**	**10/9/2010**	**10/9/2010**	**10/10/2010**	**10/10/2010**	**10/10/2010**	**10/10/2010**
Barium	**23.9**	**25.5**	**25.1**	**25.7**	**21.2**	**23.5**	**21.1**	**52.6**
Beryllium	**0.094 J**	**0.14 J**	**0.13 J**	**0.1 J**	**0.093 J**	**0.1 J**	**0.085 J**	**0.23**
Boron	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	<0.25	**0.32**	**0.32**	**0.27**	**0.062 J**	**0.069 J**	<0.24	**0.13 J**
Calcium	**192,000**	**175,000**	**165,000**	**145,000**	**149,000**	**157,000**	**165,000**	**71,900**
Chromium	**2.9 J**	**3.7 J**	**3.2 J**	**2.6 J**	**3.4 J**	**3.2 J**	**3.0 J**	**6.5**
Cobalt	**0.79 J**	**1.2 J**	**1.2 J**	**1.0 J**	**0.88 J**	**0.94 J**	**0.99 J**	**3.1 J**
Copper	**2.3 J**	**2.4 J**	**2.7 J**	**2.5 J**	**2.6 J**	**2.5 J**	**2.6 J**	**3.7 J**
Iron	**2,250**	**2,510**	**2,350**	**2,060**	**2,010**	**2,160**	**2,020**	**4,000**
Lead	**1.2 J**	**1.4 J**	**1.6 J**	**0.73 J**	**1.3 J**	**1.8 J**	**1.5 J**	**4.1**
Magnesium	**1,420**	**1,540**	**1,640**	**1,030**	**1,200 J**	**1,330 J**	**1,120 J**	**2,100**
Manganese	**54.4**	**31.8**	**101**	**51.1**	**24.9**	**25.8**	**41.2**	**90.4**
Mercury	<0.13	<0.11	<0.1	<0.099	<0.092	<0.098	<0.1	<0.1
Molybdenum	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	**1.9 J**	**2.2 J**	**2.5 J**	**1.9 J**	**1.8 J**	**2.0 J**	**2.0 J**	**5.8 J**
Potassium	**646**	**704**	**687**	**596**	**682**	**704**	**571 J**	**1,360**
Selenium	<13	<10	<8.7	<9	<10	<8.1	<12	<4
Silver	<0.63	<0.51	<0.43	<0.45	<0.51	<0.41	<0.61	<0.4
Sodium	**138 J**	**125 J**	**79.8 J**	**60.8 J**	**135 J**	**137 J**	**126 J**	**88.0 J**
Vanadium	**4.5**	**7.5**	**6.2**	**6.6**	**5.8**	**6**	**5.3**	**18.3**
Zinc	**5.1 J**	**6.5 J**	**6.1 J**	**5.1 J**	**5.2 J**	**5.5 J**	**4.5 J**	**17.3**

Notes:

A = Duplicate sample

B = Analyte found in method blank

DUP = Duplicate sample

ft bgs = Feet below ground surface

J = Estimated value

mg/kg = Milligrams per kilogram

NA = Not analyzed

PCB = Polychlorinated biphenyls

SVOC = Semi-volatile organic compound

TPH = Total petroleum hydrocarbon

VOC = Volatile organic compound

Value in bold = Detected concentration

Table 8-1(b)
Soil Analytical Data Used for Risk Assessment
SWMU 8 RCRA Facility Investigation Report
Holloman Air Force Base, New Mexico

Sample ID	SWMU08DP01-5	SWMU08DP02-9 (Average)	SWMU-08-SW1	SWMU-08-SW2	SWMU-08-SW3	SWMU-08-SW4	SWMU-08-SW5	SWMU-08-SW6 (Average)
Sample Depth (ft bgs)	**5**	**9**	**7**	**7**	**7**	**7**	**7**	**7**
Date Sampled	**5/22/2006**	**5/22/2006**	**10/8/2008**	**10/8/2008**	**10/8/2008**	**10/10/2008**	**10/10/2008**	**10/10/2008**
VOCs (mg/kg)								
Benzene	<0.0066	<0.007	<0.25	<0.25	<0.25	<0.25	<0.005	<0.005
n-Butylbenzene	<0.0066	<0.007	<0.25	<0.25	<0.25	<0.25	<0.005	<0.005
sec-Butylbenzene	<0.0066	<0.007	<0.25	<0.25	<0.25	<0.25	<0.005	<0.005
Chloroform	<0.0066	<0.007	<0.25	<0.25	<0.25	<0.25	<0.005	<0.005
m-Dichlorobenzene (1,3-Dichlorobenzene)	<0.0066	<0.007	<0.25	<0.25	<0.25	<0.25	<0.005	<0.005
o-Dichlorobenzene (1,2-Dichlorobenzene)	<0.0066	<0.007	<0.25	<0.25	<0.25	<0.25	<0.005	<0.005
p-Dichlorobenzene (1,4-Dichlorobenzene)	<0.0066	<0.007	<0.25	<0.25	<0.25	<0.25	<0.005	<0.005
Ethylbenzene	<0.0066	<0.007	<0.25	<0.25	<0.25	<0.25	<0.005	<0.005
p-Isopropyltoluene	<0.0066	<0.007	<0.25	<0.25	<0.25	<0.25	<0.005	<0.005
Methylene chloride	<0.013	<0.014	<0.25	<0.25	<0.25	<0.25	<0.005	<0.005
Naphthalene	**0.05635**	<0.007	<0.25	<0.25	<0.25	<0.25	<0.005	<0.005
n-Propylbenzene	<0.0066	<0.007	<0.25	<0.25	<0.25	<0.25	<0.005	<0.005
Tetrachloroethene	<0.0066	<0.007	<0.25	<0.25	**0.174**	<0.25	<0.005	<0.005
Toluene	<0.0066	<0.007	<0.25	<0.25	<0.25	<0.25	<0.005	<0.005
Xylenes	<0.0196	<0.021	<0.25	<0.25	<0.25	<0.25	<0.005	<0.005
SVOCs (mg/kg)								
2,4-Dimethylphenol	<0.22	<0.235	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
2-Nitrophenol	<0.22	<0.235	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
1-Methylnaphthalene	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	<0.44	<0.47	**0.61**	<0.3	**1.5**	**0.3**	<0.3	<0.3
Butylbenzylphthalate	<0.44	<0.47	<0.3	<0.3	**0.55**	<0.3	<0.3	<0.3
Di-n-butylphthalate	<0.44	<0.47	<0.3	**0.17**	**0.45**	**0.18**	<0.3	<0.3
Diethylphthalate	<0.44	<0.47	**0.099**	**0.081**	<0.3	<0.3	<0.3	<0.3
Pyrene	<0.22	<0.235	<0.3	<0.3	**0.085**	<0.3	<0.3	<0.3
TPHs (mg/kg)								
TPHs (C10-C36)	<22	<24	**1,646**	**1,513**	**1,610**	**1,344**	**29**	<6
PCBs (mg/kg)								
Aroclor 1232	<0.022	<0.023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Aroclor 1248	<0.022	<0.023	**0.21**	**0.11**	**0.15**	**0.099**	<0.08	<0.08
Aroclor 1254	<0.022	<0.023	**0.18**	**0.15**	**0.22**	**0.17**	<0.03	<0.03
Metals (mg/kg)								
Aluminum	**482**	**3,375**	**4,850**	**2,860**	**2,520**	**2,380**	**1,870**	**1,860**
Antimony	**1.2**	<8.5	<3	<3	<3	<3	<3	<3
Arsenic	**0.82**	**0.755**	<1	<1	<1	<1	<1	<1
Barium	**13.2**	**29.3**	**56.8**	**28.6**	**25.5**	**20.6**	**15.3**	**13.2**
Beryllium	**0.058**	**0.185**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Boron	NA	NA	<5	<5	<5	**0.609**	**1.3**	**1.6455**
Cadmium	<0.5	<0.565	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Calcium	**257,000**	**181,500**	**61,200**	**128,000**	**126,000**	**131,000**	**123,000**	**112,500**
Chromium	**0.45**	**3.35**	**7.66**	**3.48**	**4.03**	**2.51**	**2.04**	**2.09**
Cobalt	**0.42**	**0.92**	**1.55**	**1.24**	**1.1**	**0.815**	**0.603**	**0.795**

Table 8-1(b)
Soil Analytical Data Used for Risk Assessment
SWMU 8 RCRA Facility Investigation Report
Holloman Air Force Base, New Mexico

Sample ID	SWMU08DP01-5	SWMU08DP02-9 (Average)	SWMU-08-SW1	SWMU-08-SW2	SWMU-08-SW3	SWMU-08-SW4	SWMU-08-SW5	SWMU-08-SW6 (Average)
Sample Depth (ft bgs)	**5**	**9**	**7**	**7**	**7**	**7**	**7**	**7**
Date Sampled	**5/22/2006**	**5/22/2006**	**10/8/2008**	**10/8/2008**	**10/8/2008**	**10/10/2008**	**10/10/2008**	**10/10/2008**
Copper	**0.72**	**0.555**	**7.53**	**7.25**	**8.95**	**1.27**	**0.402**	**0.764**
Iron	**349**	**3,445**	**5,620**	**3,100**	**4,280**	**2,120**	**1,920**	**2,130**
Lead	<13	<14	**12.4**	**18.5**	**21**	**0.663**	**1.38**	**0.78**
Magnesium	**2,090**	**1,630**	**1,800**	**1,910**	**1,530**	**1,090**	**831**	**1,030**
Manganese	**5.7**	**32.15**	**70.6**	**43.4**	**38.5**	**23.4**	**19**	**21.9**
Mercury	<0.098	**0.0355**	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14
Molybdenum	NA	NA	**3.27**	**2**	**2**	**2.29**	**2.38**	**1.3365**
Nickel	**0.69**	**2.3**	**2.87**	**2.06**	**2.42**	**1.55**	**1.11**	**1.3**
Potassium	**145**	**871**	10,80	**775**	**644**	**643**	**485**	**462**
Selenium	**0.61**	**3.655**	<1	<1	<1	<1	<1	<1
Silver	<1.3	<1.4	<0.5	<0.5	<0.5	<0.5	**0.436**	**0.335**
Sodium	**175**	**208**	**82.8**	**135**	**108**	**129**	**105**	**103.75**
Vanadium	**2.4**	**7.1**	**22.6**	**6.4**	**5.78**	**3.15**	**4.21**	**4.44**
Zinc	**3.7**	**7.95**	**13.4**	**15.4**	**16.2**	**5.4**	**5.49**	**5.2**

Notes:

A = Duplicate sample

B = Analyte found in method blank

DUP = Duplicate sample

ft bgs = Feet below ground surface

J = Estimated value

mg/kg = Milligrams per kilogram

NA = Not analyzed

PCB = Polychlorinated biphenyls

SVOCs = Semi-volatile organic compounds

TPHs = Total petroleum hydrocarbons

VOCs = Volatile organic compounds

Value in bold = Detected concentration

Table 8-1(b)
Soil Analytical Data Used for Risk Assessment
SWMU 8 RCRA Facility Investigation Report
Holloman Air Force Base, New Mexico

Sample ID	SWMU-08-SW7	SWMU-08-SW8	SWMU-08-SW9	SWMU-08-SW10	SWMU-08-SW11	SWMU-08-SW12 (Average)	SWMU-08-SW13	SWMU-08-SW14
Sample Depth (ft bgs)	**7**	**7**	**7**	**7**	**7**	**7**	**7**	**7**
Date Sampled	**10/10/2008**	**10/10/2008**	**10/10/2008**	**10/10/2008**	**10/10/2008**	**10/10/2008**	**10/10/2008**	**10/10/2008**
VOCs (mg/kg)								
Benzene	<0.005	<0.005	<0.005	<0.25	<0.005	<0.1275	<0.25	<0.25
n-Butylbenzene	<0.005	<0.005	<0.005	<0.25	<0.005	<0.1275	<0.25	<0.25
sec-Butylbenzene	<0.005	<0.005	<0.005	<0.25	<0.005	<0.1275	<0.25	<0.25
Chloroform	<0.005	<0.005	<0.005	<0.25	<0.005	<0.1275	<0.25	<0.25
m-Dichlorobenzene (1,3-Dichlorobenzene)	<0.005	<0.005	<0.005	<0.25	<0.005	<0.1275	<0.25	<0.25
o-Dichlorobenzene (1,2-Dichlorobenzene)	<0.005	<0.005	<0.005	<0.25	<0.005	<0.1275	<0.25	<0.25
p-Dichlorobenzene (1,4-Dichlorobenzene)	<0.005	<0.005	<0.005	<0.25	<0.005	<0.1275	<0.25	<0.25
Ethylbenzene	<0.005	<0.005	<0.005	<0.25	<0.005	<0.1275	<0.25	<0.25
p-Isopropyltoluene	<0.005	<0.005	<0.005	<0.25	<0.005	<0.1275	<0.25	<0.25
Methylene chloride	<0.005	<0.005	<0.005	<0.25	<0.005	<0.1275	<0.25	<0.25
Naphthalene	<0.005	<0.005	<0.005	<0.25	<0.005	<0.1275	<0.25	<0.25
n-Propylbenzene	<0.005	<0.005	<0.005	<0.25	<0.005	<0.1275	<0.25	<0.25
Tetrachloroethene	<0.005	<0.005	<0.005	<0.25	<0.005	<0.1275	<0.25	<0.25
Toluene	<0.005	<0.005	<0.005	<0.25	<0.005	<0.1275	<0.25	<0.25
Xylenes	<0.005	<0.005	<0.005	<0.25	<0.005	<0.1275	<0.25	<0.25
SVOCs (mg/kg)								
2,4-Dimethylphenol	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
2-Nitrophenol	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
1-Methylnaphthalene	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	<0.3	<0.3	<0.3	**0.33**	<0.3	**0.42**	**0.7**	<0.3
Butylbenzylphthalate	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	**0.14**	<0.3
Di-n-butylphthalate	<0.3	<0.3	<0.3	<0.3	<0.3	**0.15**	**0.17**	<0.3
Diethylphthalate	<0.3	<0.3	<0.3	<0.3	<0.3	**0.17**	<0.3	<0.3
Pyrene	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
TPHs (mg/kg)								
TPHs (C10-C36)	**5.1**	<6	**319**	**1,918**	**5.1**	**2,388.50**	**1,946**	**289**
PCBs (mg/kg)								
Aroclor 1232	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Aroclor 1248	<0.08	<0.08	<0.08	**0.18**	<0.08	**0.34**	**0.64**	**0.078**
Aroclor 1254	<0.03	<0.03	**0.31**	**0.22**	<0.03	**0.47**	**0.71**	**0.16**
Metals (mg/kg)								
Aluminum	**1,690**	**2,020**	**2,320**	**2,000**	**1,670**	**2,265**	**2,500**	**2,310**
Antimony	<3	<3	<3	<3	<3	<3	<3	<3
Arsenic	<1	<1	<1	<1	<1	<1	<1	<1
Barium	**13.5**	**14.4**	**22.8**	**22**	**12.8**	**21.85**	**22.2**	**22.2**
Beryllium	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Boron	<5	<5	<5	**0.333**	<5	**2.54**	<5	**2.09**
Cadmium	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Calcium	**78,200**	**74,100**	**106,000**	**99,300**	**97,400**	**113,000**	**128,000**	**114,000**
Chromium	**1.79**	**2.1**	**2.87**	**2.74**	**1.89**	**2.755**	**3.19**	**2.57**
Cobalt	**0.579**	**0.733**	**0.846**	**0.944**	**0.608**	**1.045**	**1.09**	**0.841**

Table 8-1(b)
Soil Analytical Data Used for Risk Assessment
SWMU 8 RCRA Facility Investigation Report
Holloman Air Force Base, New Mexico

Sample ID	SWMU-08-SW7	SWMU-08-SW8	SWMU-08-SW9	SWMU-08-SW10	SWMU-08-SW11	SWMU-08-SW12 (Average)	SWMU-08-SW13	SWMU-08-SW14
Sample Depth (ft bgs)	**7**	**7**	**7**	**7**	**7**	**7**	**7**	**7**
Date Sampled	**10/10/2008**	**10/10/2008**	**10/10/2008**	**10/10/2008**	**10/10/2008**	**10/10/2008**	**10/10/2008**	**10/10/2008**
Copper	**0.425**	**0.408**	**3.19**	**1.65**	<1	**1.25**	**1.42**	**1.44**
Iron	**1,610**	**1,870**	**2,200**	**2,350**	**1,790**	**2,660**	**3,070**	**2,170**
Lead	**2.59**	**0.659**	**13.9**	**7.45**	**0.415**	**26.225**	**8.55**	<0.5
Magnesium	**1,080**	**1,230**	**1,590**	**2,560**	**877**	**1,645**	**2,850**	**1,140**
Manganese	**24.2**	**27**	**27.1**	**45.8**	**21.2**	**36.7**	**59.1**	**24.7**
Mercury	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14
Molybdenum	**2.21**	**1.21**	**1.84**	**1.91**	**2.08**	**1.7125**	**2.04**	**0.613**
Nickel	**1.18**	**1.32**	**1.56**	**1.84**	**1.01**	**1.895**	**2.28**	**1.57**
Potassium	**447**	**453**	**580**	**517**	**456**	**607.5**	**746**	**657**
Selenium	<1	<1	<1	<1	<1	<1	<1	<1
Silver	<0.5	<0.5	<0.5	**0.66**	<0.5	**0.206**	<0.5	<0.5
Sodium	**92.4**	**82.1**	**113**	**113**	**94.3**	**146.5**	**221**	**98.2**
Vanadium	**3.54**	**2.86**	**8**	**5.67**	**2.93**	**5.315**	**6.33**	**3.76**
Zinc	**4.66**	**4.72**	**13.8**	**8.47**	**4.25**	**9.115**	**11.2**	**8.7**

Notes:

A = Duplicate sample

B = Analyte found in method blank

DUP = Duplicate sample

ft bgs = Feet below ground surface

J = Estimated value

mg/kg = Milligrams per kilogram

NA = Not analyzed

PCB = Polychlorinated biphenyls

SVOCs = Semi-volatile organic compounds

TPHs = Total petroleum hydrocarbons

VOCs = Volatile organic compounds

Value in bold = Detected concentration

Table 8-1(b)
Soil Analytical Data Used for Risk Assessment
SWMU 8 RCRA Facility Investigation Report
Holloman Air Force Base, New Mexico

Sample ID	SWMU-08-SW15	SWMU-08-SW15OE	SWMU-08-SW16	SWMU-08-Bottom 1	SWMU-08-Bottom 2	SWMU-08-Bottom 3	SWMU-08-Bottom 4	SWMU8-DP04-7
Sample Depth (ft bgs)	**7**	**7**	**7**	**8.5**	**8.5**	**8.5**	**8.5**	**7**
Date Sampled	**10/10/2008**	**10/27/2008**	**10/10/2008**	**10/8/2008**	**10/8/2008**	**10/8/2008**	**10/8/2008**	**10/8/2010**
VOCs (mg/kg)								
Benzene	<0.25	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.34
n-Butylbenzene	<0.25	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.34
sec-Butylbenzene	<0.25	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.34
Chloroform	<0.25	<0.005	<0.005	**0.0014**	**0.0017**	<0.005	<0.005	<0.34
m-Dichlorobenzene (1,3-Dichlorobenzene)	<0.25	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.34
o-Dichlorobenzene (1,2-Dichlorobenzene)	<0.25	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.34
p-Dichlorobenzene (1,4-Dichlorobenzene)	<0.25	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.34
Ethylbenzene	<0.25	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.34
p-Isopropyltoluene	<0.25	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.34
Methylene chloride	<0.25	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	**0.495**
Naphthalene	<0.25	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.34
n-Propylbenzene	<0.25	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.34
Tetrachloroethene	<0.25	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.34
Toluene	<0.25	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.34
Xylenes	<0.25	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.02
SVOCs (mg/kg)								
2,4-Dimethylphenol	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.86
2-Nitrophenol	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.86
1-Methylnaphthalene	NA	NA	NA	NA	NA	NA	NA	<0.86
bis(2-Ethylhexyl)phthalate	**0.38**	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<1.7
Butylbenzylphthalate	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<1.7
Di-n-butylphthalate	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<1.7
Diethylphthalate	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<1.7
Pyrene	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.86
TPHs (mg/kg)								
TPHs (C10-C36)	**2,982**	**6.5**	**12.8**	**3.55**	<6	<6	**3.8**	**269**
PCBs (mg/kg)								
Aroclor 1232	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	**0.0397**
Aroclor 1248	**0.23**	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.021
Aroclor 1254	**0.16**	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	**0.016**
Metals (mg/kg)								
Aluminum	**1,800**	**5,100**	**3,980**	**2,980**	**2,690**	**2,840**	**2,780**	**2,350**
Antimony	<3	<3	<3	<3	<3	<3	<3	<0.88
Arsenic	<1	**0.377**	<1	<1	<1	<1	<1	**1**
Barium	**11.1**	**42.9**	**53.6**	**18.1**	**20**	**20**	**20**	**22.4**
Beryllium	<0.5	**0.176**	<0.5	<0.5	<0.5	<0.5	<0.5	**0.092**
Boron	<5	**7.24**	**1.08**	<5	<5	**0.318**	**0.346**	NA
Cadmium	<0.5	**0.22**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.18
Calcium	**124,000**	**182,000**	**105,000**	**105,000**	**146,000**	**120,000**	**124,000**	**167,000**
Chromium	**2.03**	**8.37**	**3.61**	**3.17**	**2.78**	**2.92**	**3.07**	**3**
Cobalt	**0.767**	**2.9**	**1.34**	**0.95**	**0.8**	**0.816**	**1.03**	**0.85**

Table 8-1(b)
Soil Analytical Data Used for Risk Assessment
SWMU 8 RCRA Facility Investigation Report
Holloman Air Force Base, New Mexico

Sample ID	SWMU-08-SW15	SWMU-08-SW15OE	SWMU-08-SW16	SWMU-08-Bottom 1	SWMU-08-Bottom 2	SWMU-08-Bottom 3	SWMU-08-Bottom 4	SWMU8-DP04-7
Sample Depth (ft bgs)	**7**	**7**	**7**	**8.5**	**8.5**	**8.5**	**8.5**	**7**
Date Sampled	**10/10/2008**	**10/27/2008**	**10/10/2008**	**10/8/2008**	**10/8/2008**	**10/8/2008**	**10/8/2008**	**10/8/2010**
Copper	**7.45**	**3.69**	**9.48**	**4.33**	**4.24**	**6.09**	**5.46**	**2**
Iron	**1,770**	**6,390**	**3,430**	**2,580**	**2,520**	**2,720**	**3,000**	**2,620**
Lead	**1.71**	**23**	**1.13**	**2.35**	**1.34**	**2.11**	**0.715**	**1.4**
Magnesium	**1,010**	**6,750**	**1,470**	**1,700**	**1,320**	**1,460**	**1,800**	**1,010**
Manganese	**33.3**	**201**	**40**	**25.4**	**22.6**	**26.2**	**30.3**	**37.3**
Mercury	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.1
Molybdenum	**1.73**	**1.01**	**1.3**	**1.91**	**2.02**	**1.56**	**1.59**	NA
Nickel	**1.28**	**6.07**	**2.35**	**1.84**	**1.61**	**1.54**	**1.67**	**1.9**
Potassium	**430**	**1,330**	**836**	**746**	**648**	**682**	**735**	**628**
Selenium	<1	<1	<1	<1	<1	<1	<1	<8.8
Silver	**0.183**	<0.5	**0.484**	<0.5	**0.57**	<0.5	**0.44**	<0.44
Sodium	**92**	**219**	**105**	**118**	**123**	**104**	**129**	**93.2**
Vanadium	**3.93**	**14.7**	**7.95**	**5.61**	**6.4**	**9.58**	**5.55**	**5.8**
Zinc	**5.68**	**26.9**	**9.78**	**8.34**	**5.83**	**7.35**	**8.86**	**5.1**

Notes:

A = Duplicate sample

B = Analyte found in method blank

DUP = Duplicate sample

ft bgs = Feet below ground surface

J = Estimated value

mg/kg = Milligrams per kilogram

NA = Not analyzed

PCB = Polychlorinated biphenyls

SVOCs = Semi-volatile organic compounds

TPHs = Total petroleum hydrocarbons

VOCs = Volatile organic compounds

Value in bold = Detected concentration

Table 8-1(b)
Soil Analytical Data Used for Risk Assessment
SWMU 8 RCRA Facility Investigation Report
Holloman Air Force Base, New Mexico

Sample ID	SWMU8-DP05-7 (Average)	SWMU8-DP06-7	SWMU8-DP07-7	SWMU8-DP08-8	SWMU8-DP09-7	SWMU8-DP10-7	SWMU8-DP11-7	SWMU8-DP12-7
Sample Depth (ft bgs)	**7**	**7**	**7**	**8**	**7**	**7**	**7**	**7**
Date Sampled	**10/8/2010**	**10/8/2010**	**10/8/2010**	**10/8/2010**	**10/9/2010**	**10/9/2010**	**10/9/2010**	**10/9/2010**
VOCs (mg/kg)								
Benzene	<0.37	<0.35	**0.0011**	<0.35	**0.002**	**0.006**	<0.0071	<0.007
n-Butylbenzene	**2.435**	**2.31**	<0.0055	<0.35	<0.0063	<0.0057	<0.0071	<0.007
sec-Butylbenzene	**0.5455**	**0.734**	<0.0055	**0.132**	<0.0063	<0.0057	<0.0071	<0.007
Chloroform	<0.37	<0.35	<0.0055	<0.35	<0.0063	<0.0057	<0.0071	<0.007
m-Dichlorobenzene (1,3-Dichlorobenzene)	**0.7305**	**0.703**	<0.0055	**0.136**	<0.0063	<0.0057	<0.0071	<0.007
o-Dichlorobenzene (1,2-Dichlorobenzene)	**0.67425**	**0.6525**	<0.0055	<0.23	<0.0063	<0.0057	<0.0071	<0.007
p-Dichlorobenzene (1,4-Dichlorobenzene)	**0.664**	**0.629**	<0.0055	**0.108**	<0.0063	<0.0057	<0.0071	<0.007
Ethylbenzene	**0.13**	<0.35	<0.0055	<0.35	<0.0063	<0.0057	<0.0071	<0.007
p-Isopropyltoluene	**0.4835**	<0.35	<0.0055	<0.35	<0.0063	<0.0057	<0.0071	<0.007
Methylene chloride	**0.69**	**0.994**	<0.011	**1.31**	**0.0096**	<0.011	**0.0137**	**0.0177**
Naphthalene	<0.37	<0.35	<0.0055	<0.23	<0.0063	<0.0057	<0.0071	<0.007
n-Propylbenzene	**0.222**	<0.35	<0.0055	<0.35	<0.0063	<0.0057	<0.0071	<0.007
Tetrachloroethene	<0.37	<0.35	<0.0055	<0.35	<0.0063	<0.0057	<0.0071	<0.007
Toluene	<0.37	<0.35	<0.0055	<0.35	**0.0018**	**0.005**	<0.0071	<0.007
Xylenes	**0.427**	<1.04	<0.0165	<1.05	<0.0193	**0.00515**	<0.0211	<0.021
SVOCs (mg/kg)								
2,4-Dimethylphenol	**0.783**	<1.1	<0.22	<0.23	<0.25	<0.22	<0.23	<0.21
2-Nitrophenol	<1.85	**0.879**	<0.22	<0.23	<0.25	<0.22	<0.23	<0.21
1-Methylnaphthalene	**0.5885**	**0.403**	<0.22	<0.23	<0.25	<0.22	<0.23	<0.21
bis(2-Ethylhexyl)phthalate	<3.65	<2.1	<0.43	<0.45	<0.5	<0.45	<0.45	<0.42
Butylbenzylphthalate	<3.65	<2.1	<0.43	<0.45	<0.5	<0.45	<0.45	<0.42
Di-n-butylphthalate	<3.65	<2.1	<0.43	<0.45	<0.5	<0.45	<0.45	<0.42
Diethylphthalate	<3.65	<2.1	<0.43	<0.45	<0.5	<0.45	<0.45	<0.42
Pyrene	<1.85	<1.1	<0.22	<0.23	<0.25	<0.22	<0.23	<0.21
TPHs (mg/kg)								
TPHs (C10-C36)	**1,294**	**1,329**	<22	**242**	<24	<22	<22	<20
PCBs (mg/kg)								
Aroclor 1232	**0.08165**	**0.0579**	<0.022	**0.041**	<0.025	<0.023	<0.022	<0.021
Aroclor 1248	<0.023	<0.021	<0.022	<0.023	<0.025	<0.023	<0.022	<0.021
Aroclor 1254	**0.03865**	**0.0267**	<0.022	**0.0177**	<0.025	<0.023	<0.022	<0.021
Metals (mg/kg)								
Aluminum	**3,355**	**2,280**	**3,290**	**2,150**	**2,610**	**3,000**	**2,850**	**2,420**
Antimony	**0.365**	<0.86	**0.18**	<0.93	<1.3	**0.35**	**0.19**	**0.17**
Arsenic	**0.76**	**0.74**	**0.63**	**0.93**	**0.45**	**0.75**	**0.83**	**0.76**
Barium	**36.75**	**23.5**	**32.5**	**26**	**23.9**	**25.5**	**25.1**	**25.7**
Beryllium	**0.13**	**0.073**	**0.11**	**0.07**	**0.094**	**0.14**	**0.13**	**0.1**
Boron	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	<0.24	<0.17	<0.2	<0.19	<0.25	**0.32**	**0.32**	**0.27**
Calcium	**186,500**	**225,000**	**245,000**	**195,000**	**192,000**	**175,000**	**165,000**	**145,000**
Chromium	**4.2**	**2.6**	**3.2**	**2.5**	**2.9**	**3.7**	**3.2**	**2.6**
Cobalt	**1.1**	**0.89**	**1.3**	**0.87**	**0.79**	**1.2**	**1.2**	**1**

Table 8-1(b)
Soil Analytical Data Used for Risk Assessment
SWMU 8 RCRA Facility Investigation Report
Holloman Air Force Base, New Mexico

Sample ID	SWMU8-DP05-7 (Average)	SWMU8-DP06-7	SWMU8-DP07-7	SWMU8-DP08-8	SWMU8-DP09-7	SWMU8-DP10-7	SWMU8-DP11-7	SWMU8-DP12-7
Sample Depth (ft bgs)	**7**	**7**	**7**	**8**	**7**	**7**	**7**	**7**
Date Sampled	**10/8/2010**	**10/8/2010**	**10/8/2010**	**10/8/2010**	**10/9/2010**	**10/9/2010**	**10/9/2010**	**10/9/2010**
Copper	**2.55**	**3.1**	**3.2**	**2.3**	**2.3**	**2.4**	**2.7**	**2.5**
Iron	**2,920**	**1,890**	**2,250**	**1,790**	**2,250**	**2,510**	**2,350**	**2,060**
Lead	**1.75**	**1.7**	**1.4**	**1.2**	**1.2**	**1.4**	**1.6**	**0.73**
Magnesium	**1,380**	**1,040**	**1,340**	**939**	**1,420**	**1,540**	**1,640**	**1,030**
Manganese	**28.55**	**54.6**	**55.6**	**40.2**	**54.4**	**31.8**	**101**	**51.1**
Mercury	<0.109	<0.1	<0.096	<0.11	<0.13	<0.11	<0.1	<0.099
Molybdenum	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	**2.2**	**1.7**	**2.5**	**1.6**	**1.9**	**2.2**	**2.5**	**1.9**
Potassium	**921**	**615**	**839**	**579**	**646**	**704**	**687**	**596**
Selenium	<12	<17	<9.9	<9.3	<13	<10	<8.7	<9
Silver	<0.6	<0.43	<0.49	<0.47	<0.63	<0.51	<0.43	<0.45
Sodium	**130**	**172**	**176**	**156**	**138**	**125**	**79.8**	**60.8**
Vanadium	**5.8**	**4.5**	**4.2**	**4.6**	**4.5**	**7.5**	**6.2**	**6.6**
Zinc	**7.5**	**5.6**	**8.4**	**4.7**	**5.1**	**6.5**	**6.1**	**5.1**

Notes:

A = Duplicate sample

B = Analyte found in method blank

DUP = Duplicate sample

ft bgs = Feet below ground surface

J = Estimated value

mg/kg = Milligrams per kilogram

NA = Not analyzed

PCB = Polychlorinated biphenyls

SVOCs = Semi-volatile organic compounds

TPHs = Total petroleum hydrocarbons

VOCs = Volatile organic compounds

Value in bold = Detected concentration

Table 8-1(b)
Soil Analytical Data Used for Risk Assessment
SWMU 8 RCRA Facility Investigation Report
Holloman Air Force Base, New Mexico

Sample ID	SWMU8-DP13-7 (Average)	SWMU8-DP14-7	SWMU8-DP15-7
Sample Depth (ft bgs)	**7**	**7**	**7**
Date Sampled	**10/10/2010**	**10/10/2010**	**10/10/2010**
VOCs (mg/kg)			
Benzene	**0.0024**	**0.0056**	<0.0044
n-Butylbenzene	<0.00525	<0.0093	<0.0044
sec-Butylbenzene	<0.00525	<0.0093	<0.0044
Chloroform	<0.00525	<0.0093	<0.0044
m-Dichlorobenzene (1,3-Dichlorobenzene)	<0.00525	<0.0093	<0.0044
o-Dichlorobenzene (1,2-Dichlorobenzene)	<0.00525	<0.0093	<0.0044
p-Dichlorobenzene (1,4-Dichlorobenzene)	<0.00525	<0.0093	<0.0044
Ethylbenzene	<0.00525	<0.0093	<0.0044
p-Isopropyltoluene	<0.00525	<0.0093	<0.0044
Methylene chloride	<0.0105	<0.019	<0.0088
Naphthalene	<0.00525	<0.0093	<0.0044
n-Propylbenzene	<0.00525	<0.0093	<0.0044
Tetrachloroethene	<0.00525	<0.0093	<0.0044
Toluene	**0.00195**	**0.0042**	<0.0044
Xylenes	<0.01575	<0.0283	<0.0132
SVOCs (mg/kg)			
2,4-Dimethylphenol	<0.195	<0.21	<0.2
2-Nitrophenol	<0.195	<0.21	<0.2
1-Methylnaphthalene	<0.195	<0.21	<0.2
bis(2-Ethylhexyl)phthalate	<0.39	<0.42	<0.41
Butylbenzylphthalate	<0.39	<0.42	<0.41
Di-n-butylphthalate	<0.39	<0.42	<0.41
Diethylphthalate	<0.39	<0.42	<0.41
Pyrene	<0.195	<0.21	<0.2
TPHs (mg/kg)			
TPHs (C10-C36)	<19.5	<20	<20
PCBs (mg/kg)			
Aroclor 1232	<0.0195	<0.021	<0.021
Aroclor 1248	<0.0195	<0.021	<0.021
Aroclor 1254	<0.0195	<0.021	<0.021
Metals (mg/kg)			
Aluminum	**2,570**	**2,330**	**5,460**
Antimony	**0.2775**	<1.2	**0.099**
Arsenic	**0.99**	**0.45**	**2.1**
Barium	**22.35**	**21.1**	**52.6**
Beryllium	**0.0965**	**0.085**	**0.23**
Boron	NA	NA	NA
Cadmium	**0.0655**	<0.24	**0.13**
Calcium	**153,000**	**165,000**	**71,900**
Chromium	**3.3**	**3**	**6.5**
Cobalt	**0.91**	**0.99**	**3.1**

Table 8-1(b)
Soil Analytical Data Used for Risk Assessment
SWMU 8 RCRA Facility Investigation Report
Holloman Air Force Base, New Mexico

Sample ID	SWMU8-DP13-7 (Average)	SWMU8-DP14-7	SWMU8-DP15-7
Sample Depth (ft bgs)	**7**	**7**	**7**
Date Sampled	**10/10/2010**	**10/10/2010**	**10/10/2010**
Copper	**2.55**	**2.6**	**3.7**
Iron	**2,085**	**2,020**	**4,000**
Lead	**1.55**	**1.5**	**4.1**
Magnesium	**1,265**	**1,120**	**2,100**
Manganese	**25.35**	**41.2**	**90.4**
Mercury	<0.095	<0.1	<0.1
Molybdenum	NA	NA	NA
Nickel	**1.9**	**2**	**5.8**
Potassium	**693**	**571**	**1,360**
Selenium	<9.05	<12	<4
Silver	<0.46	<0.61	<0.4
Sodium	**136**	**126**	**88**
Vanadium	**5.9**	**5.3**	**18.3**
Zinc	**5.35**	**4.5**	**17.3**

Notes:

A = Duplicate sample

B = Analyte found in method blank

DUP = Duplicate sample

ft bgs = Feet below ground surface

J = Estimated value

mg/kg = Milligrams per kilogram

NA = Not analyzed

PCB = Polychlorinated biphenyls

SVOCs = Semi-volatile organic compounds

TPHs = Total petroleum hydrocarbons

VOCs = Volatile organic compounds

Value in bold = Detected concentration

Table 8-1(c)
Summary of Soil Data
SWMU RCRA Facility Investigation Report
Holloman Air Force Base, New Mexico

Chemical	Number of Samples	Number of Detects	Detected Concentration		Reporting Limit	
			Maximum	Minimum	Maximum	Minimum
			(mg/kg)			
Volatile Organic Compounds (VOCs)						
Benzene	35	5	0.006	0.0011	0.37	0.0044
n-Butylbenzene	35	2	2.435	2.31	0.35	0.0044
sec-Butylbenzene	35	3	0.734	0.132	0.34	0.0044
Chloroform	35	2	0.0017	0.0014	0.37	0.0044
m-Dichlorobenzene	35	3	0.7305	0.136	0.34	0.0044
o-Dichlorobenzene	35	2	0.67425	0.6525	0.34	0.0044
p-Dichlorobenzene	35	3	0.664	0.108	0.34	0.0044
Ethylbenzene	35	1	0.13	0.13	0.35	0.0044
p-Isopropyltoluene	35	1	0.4835	0.4835	0.35	0.0044
Methylene chloride	35	7	1.31	0.0096	0.25	0.005
Naphthalene	35	1	0.05635	0.05635	0.37	0.0044
n-Propylbenzene	35	1	0.222	0.222	0.35	0.0044
Tetrachloroethene	35	1	0.174	0.174	0.37	0.0044
Toluene	35	4	0.005	0.0018	0.37	0.0044
Xylenes	35	2	0.427	0.00515	1.05	0.005
Semi-volatile Organic Compounds (SVOCs)						
2,4-Dimethylphenol	35	1	0.783	0.783	1.1	0.195
2-Nitrophenol	35	1	0.879	0.879	1.85	0.195
1-Methylnaphthalene	12	2	0.5885	0.403	0.86	0.195
bis(2-Ethylhexyl)phthalate	35	7	1.5	0.3	3.65	0.3
Butylbenzylphthalate	35	2	0.55	0.14	3.65	0.3
Di-n-butylphthalate	35	5	0.45	0.15	3.65	0.3
Diethylphthalate	35	3	0.17	0.081	3.65	0.3
Pyrene	35	1	0.085	0.85	1.85	0.195
Total Petroleum Hydrocarbons (TPHs)						
TPHs (C10-C36)	35	21	2982	3.55	24	6
Polychlorinated Biphenyls (PCBs)						
Aroclor 1232	35	4	0.08165	0.0397	0.05	0.0195
Aroclor 1248	35	9	0.64	0.078	0.08	0.0195
Aroclor 1254	35	14	0.71	0.016	0.03	0.0195
Metals						
Aluminum	35	35	5,460	482	N/A	N/A
Antimony	35	8	1.2	0.099	8.5	0.86
Arsenic	35	15	2.1	0.377	1	1
Barium	35	35	56.8	11.1	N/A	N/A
Beryllium	35	15	0.23	0.058	0.5	0.5
Boron	21	10	7.24	0.318	5	5
Cadmium	35	6	0.32	0.0655	0.565	0.17
Calcium	35	35	257,000	61,200	N/A	N/A
Chromium	35	35	8.37	0.45	N/A	N/A
Cobalt	35	35	3.1	0.42	N/A	N/A
Copper	35	34	9.48	0.402	1	1
Iron	35	35	6,390	349	N/A	N/A
Lead	35	32	26.225	0.415	14	0.5
Magnesium	35	35	6,750	831	N/A	N/A
Manganese	35	35	201	5.7	N/A	N/A
Mercury	35	1	0.0355	0.0355	0.14	0.095
Molybdenum	21	21	3.27	0.613	N/A	N/A
Nickel	35	35	6.07	0.69	N/A	N/A
Potassium	35	35	1,360	145	N/A	N/A
Selenium	35	2	3.655	0.61	17	1
Silver	35	8	0.66	0.183	1.4	0.4
Sodium	35	35	221	60.8	N/A	N/A
Vanadium	35	35	22.6	2.4	N/A	N/A
Zinc	35	35	26.9	3.7	N/A	N/A

Notes:
mg/kg = Milligrams per kilogram
N/A = Not applicable

Table 8-1(d)
Comparison of Maximum Detected Concentration of Soil with Screening Levels
SWMU 8 RCRA Facility Investigation Report
Holloman Air Force Base, New Mexico

Chemical	Maximum Detected Concentration (mg/kg)	Screening Level		Exceed/Not Exceed	COPC
		(mg/kg)	Source		
Volatile Organic Compounds (VOCs)					
Benzene	0.006	15.5	1	Not Exceed	No
n-Butylbenzene	2.435	3,900	2	Not Exceed	No
sec-Butylbenzene	0.734	1,990	5	Not Exceed	No
Chloroform	0.0017	5.72	1	Not Exceed	No
m-Dichlorobenzene	0.7305	57.7	5	Not Exceed	No
o-Dichlorobenzene	0.67425	3,010	1	Not Exceed	No
p-Dichlorobenzene	0.664	32.2	1	Not Exceed	No
Ethylbenzene	0.13	69.7	1	Not Exceed	No
p-Isopropyltoluene	0.4835	7,820	5	Not Exceed	No
Methylene chloride	1.31	199	1	Not Exceed	No
Naphthalene	0.05635	45	1	Not Exceed	No
n-Propylbenzene	0.222	3,400	2	Not Exceed	No
Tetrachloroethene	0.174	6.99	1	Not Exceed	No
Toluene	0.005	5,570	1	Not Exceed	No
Xylenes	0.427	1,090	1	Not Exceed	No
Semi-volatile Organic Compounds (SVOCs)					
2,4-Dimethylphenol	0.783	1,220	1	Not Exceed	No
2-Nitrophenol	0.879	122	5	Not Exceed	No
1-Methylnaphthalene	0.5885	22	2	Not Exceed	No
bis(2-Ethylhexyl)phthalate	1.5	347	1	Not Exceed	No
Butylbenzylphthalate	0.55	260	2	Not Exceed	No
Di-n-butylphthalate	0.45	6,110	1	Not Exceed	No
Diethylphthalate	0.17	48,900	1	Not Exceed	No
Pyrene	0.085	1,720	1	Not Exceed	No
Total Petroleum Hydrocarbons (TPHs)					
TPHs (C10-C36)	2,982	800	3	Exceed	**Yes**
Polychlorinated Biphenyls (PCBs)					
Aroclor 1232	0.08165	1.76	1	Not Exceed	No
Aroclor 1248	0.64	2.22	1	Not Exceed	No
Aroclor 1254	0.71	1.12	1	Not Exceed	No
Metals					
Aluminum	5,460	78,100	1	Not Exceed	No
Antimony	1.2	31.3	1	Not Exceed	No
Arsenic	2.1	3.9	1	Not Exceed	No
Barium	56.8	15,600	1	Not Exceed	No
Beryllium	0.23	156	1	Not Exceed	No
Boron	7.24	15,600	1	Not Exceed	No
Cadmium	0.32	77.9	1	Not Exceed	No
Calcium	257,000	317,332	4	Not Exceed	No
Chromium*	8.37	219	1	Not Exceed	No
Cobalt	3.1	23	2	Not Exceed	No
Copper	9.48	3,130	1	Not Exceed	No
Iron	6,390	54,800	1	Not Exceed	No
Lead	26.225	400	1	Not Exceed	No
Magnesium	6,750	16,991	4	Not Exceed	No
Manganese	201	10,700	1	Not Exceed	No
Mercury	0.0355	7.71	1	Not Exceed	No
Molybdenum	3.27	391	1	Not Exceed	No
Nickel	6.07	1,560	1	Not Exceed	No
Potassium	1,360	5,077	4	Not Exceed	No
Selenium	3.655	391	1	Not Exceed	No
Silver	0.66	391	1	Not Exceed	No
Sodium	221	5,196	4	Not Exceed	No
Vanadium	22.6	391	1	Not Exceed	No
Zinc	26.9	23,500	1	Not Exceed	No

Notes:
COPC = Chemical of potential concern
mg/kg = Milligrams per kilogram
*: Screening level for chromium (VI)
Sources:
1 = NMED, 2009. Technical Background Document for Development of Soil Screening Levels, Revision 5.0.
2 = USEPA, 2011. Regional Screening Level Tables, November 2011
3 = NMED, 2006. New Mexico Environment Department TPH Screening Guidelines.
4 = NMED Approved HAFB Background Levels (NMED, 2011)
5 = Screening levels developed using the methodology for residential scenario in the NMED Technical Background Document for Development of Soil Screening Levels, Revision 5.0 (2009)

Table 8-2(a)
Comprehensive Groundwater Analytical Data for Chemicals with At Least One Detected Concentration
SWMU 8 RCRA Facility Investigation Report
Holloman Air Force Base, New Mexico

Sample ID	SWMU8-DP01	SWMU8-DP02	SWMU8-DP03	SWMU8-DP05	SWMU8-DP05-A	SWMU8-DP13	SWMU8-DP17
Date Sampled	**12/13/2010**	**12/13/2010**	**12/13/2010**	**12/14/2010**	**12/14/2010**	**12/13/2010**	**12/13/2010**
VOCs (mg/L)							
n-Butylbenzene	<0.001	<0.001	<0.001	**0.00034 J**	<0.001	<0.001	<0.001
sec-Butylbenzene	<0.001	<0.001	<0.001	**0.0024 J**	**0.0024 J**	<0.001	<0.001
Chloroform	**0.0017**	<0.001	<0.001	<0.001	<0.001	**0.0016**	**0.0073**
Carbon disulfide	<0.002	<0.002	<0.002	**0.0014 J**	**0.0019 J**	<0.002	<0.002
m-Dichlorobenzene (1,3-Dichlorobenzene)	<0.001	<0.001	<0.001	**0.0032**	**0.0031**	<0.001	<0.001
o-Dichlorobenzene (1,2-Dichlorobenzene)	<0.001	<0.001	<0.001	**0.0021**	**0.002**	<0.001	<0.001
p-Dichlorobenzene (1,4-Dichlorobenzene)	<0.001	<0.001	<0.001	**0.0021**	**0.0021**	<0.001	<0.001
Toluene	<0.001	<0.001	<0.001	<0.001	**0.00025 J**	<0.001	<0.001
SVOCs (mg/L)							
1,2-Dichlorobenzene	<0.005	<0.0048	<0.0048	**0.0013 J**	**0.0014 J**	<0.0048	<0.0049
1,3-Dichlorobenzene	<0.005	<0.0048	<0.0048	**0.0019 J**	**0.002 J**	<0.0048	<0.0049
1,4-Dichlorobenzene	<0.005	<0.0048	<0.0048	**0.0013 J**	**0.0013 J**	<0.0048	<0.0049
Diethyl phthalate	<0.005	<0.0048	<0.0048	**0.0015 J**	**0.0015 J**	<0.0048	<0.0049
TPHs (mg/L)							
Gasoline Range Organics (C6-C10)	<0.1	<0.1	<0.1	**0.0551 J**	**0.0542 J**	<0.1	<0.1
Diesel Range Organics (C10-C22)	<0.25	<0.24	<0.24	**0.55**	**0.579**	<0.24	<0.24
Oil Range Organics (>C22-C36)	<0.25	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24
Metals (mg/L)							
Aluminum	<0.2	<0.2	<0.2	<0.2	<0.2	**0.0333 J**	<0.2
Antimony	**0.0021 J**	**0.0038 J**	<0.012	<0.012	**0.0043 J**	**0.0025 J**	**0.0043 J**
Arsenic	**0.0078 J**	**0.0032 J**	<0.01	<0.01	<0.01	<0.01	**0.0022 J**
Barium	**0.0153 J**	**0.0161 J**	**0.0302 J**	**0.0281 J**	**0.0299 J**	**0.0204 J**	**0.0277 J**
Calcium	**567**	**578**	**571**	**550**	**585**	**550**	**573**
Chromium	**0.0023 J**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Copper	**0.0036 J**	**0.0037 J**	**0.0045 J**	**0.0029 J**	**0.0034 J**	**0.0039 J**	**0.0033 J**
Iron	<0.3	**0.0409 J**	**0.0959 J**	**0.193 J**	**0.129 J**	<0.3	<0.3
Magnesium	**77.5**	**55.2**	**56.6**	**49.6**	**53.1**	**48.2**	**79.1**
Manganese	<0.015	**0.0096 J**	**0.0166**	**0.13**	**0.111**	**0.0198**	**0.376**
Nickel	<0.04	<0.04	<0.04	<0.04	<0.04	**0.003 J**	**0.0026 J**
Potassium	**8.14 J**	**5.56 J**	**3.98 J**	**3.92 J**	**4.07 J**	**3.32 J**	**7.78 J**
Selenium	**0.0025 J**	<0.01	<0.01	<0.01	<0.01	**0.0024 J**	<0.01
Sodium	**71.4**	**68.4**	**70.2**	**69.6**	**73.1**	**68.2**	**63.5**
Vanadium	**0.0836**	**0.0346 J**	**0.0187 J**	<0.05	<0.05	**0.0213 J**	**0.0342 J**
Zinc	**0.0159 J**	**0.017 J**	**0.0173 J**	**0.0135 J**	**0.0177 J**	**0.014 J**	**0.0082 J**

Notes:

A = Duplicate sample

J = Estimated value

mg/L = Milligrams per liter

SVOCs = Semi-volatile organic compounds

TPHs = Total petroleum hydrocarbons

VOCs = Volatile organic compounds

Value in bold = Detected concentration

Table 8-2(b)
Groundwater Analytical Data Used for Risk Assessment
SWMU 8 RCRA Facility Investigation Report
Holloman Air Force Base, New Mexico

Sample ID	SWMU8-DP01	SWMU8-DP02	SWMU8-DP03	SWMU8-DP05 (Average)	SWMU8-DP13	SWMU8-DP17
Date Sampled	**12/13/2010**	**12/13/2010**	**12/13/2010**	**12/14/2010**	**12/13/2010**	**12/13/2010**
VOCs (mg/L)						
n-Butylbenzene	<0.001	<0.001	<0.001	**0.00042**	<0.001	<0.001
sec-Butylbenzene	<0.001	<0.001	<0.001	**0.0024**	<0.001	<0.001
Chloroform	**0.0017**	<0.001	<0.001	<0.001	**0.0016**	**0.0073**
Carbon disulfide	<0.002	<0.002	<0.002	**0.00165**	<0.002	<0.002
m-Dichlorobenzene (1,3-Dichlorobenzene)	<0.001	<0.001	<0.001	**0.00255**	<0.001	<0.001
o-Dichlorobenzene (1,2-Dichlorobenzene)	<0.001	<0.001	<0.001	**0.0017**	<0.001	<0.001
p-Dichlorobenzene (1,4-Dichlorobenzene)	<0.001	<0.001	<0.001	**0.0017**	<0.001	<0.001
Toluene	<0.001	<0.001	<0.001	**0.000375**	<0.001	<0.001
SVOCs (mg/L)						
Diethyl phthalate	<0.005	<0.0048	<0.0048	**0.0015**	<0.0048	<0.0049
TPHs (mg/L)						
TPHs (C10-C36)	<0.5	<0.48	<0.48	**0.6845**	<0.48	<0.48
Metals (mg/L)						
Aluminum	<0.2	<0.2	<0.2	<0.2	**0.0333**	<0.2
Antimony	**0.0021**	**0.0038**	<0.012	**0.00515**	**0.0025**	**0.0043**
Arsenic	**0.0078**	**0.0032**	<0.01	<0.01	<0.01	**0.0022**
Barium	**0.0153**	**0.0161**	**0.0302**	**0.029**	**0.0204**	**0.0277**
Calcium	**567**	**578**	**571**	**567.5**	**550**	**573**
Chromium	**0.0023**	<0.01	<0.01	<0.01	<0.01	<0.01
Copper	**0.0036**	**0.0037**	**0.0045**	**0.00315**	**0.0039**	**0.0033**
Iron	<0.3	**0.0409**	**0.0959**	**0.161**	<0.3	<0.3
Magnesium	**77.5**	**55.2**	**56.6**	**51.35**	**48.2**	**79.1**
Manganese	<0.015	**0.0096**	**0.0166**	**0.1205**	**0.0198**	**0.376**
Nickel	<0.04	<0.04	<0.04	<0.04	**0.003**	**0.0026**
Potassium	**8.14**	**5.56**	**3.98**	**3.995**	**3.32**	**7.78**
Selenium	**0.0025**	<0.01	<0.01	<0.01	**0.0024**	<0.01
Sodium	**71.4**	**68.4**	**70.2**	**71.35**	**68.2**	**63.5**
Vanadium	**0.0836**	**0.0346**	**0.0187**	<0.05	**0.0213**	**0.0342**
Zinc	**0.0159**	**0.017**	**0.0173**	**0.0156**	**0.014**	**0.0082**

Notes:
mg/L = Milligrams per liter
SVOCs = Semi-volatile organic compounds
TPHs = Total petroleum hydrocarbons
VOCs = Volatile organic compounds
Value in bold = Detected concentration

Table 8-2(c)
Summary of Groundwater Data
SWMU 8 RCRA Facility Investigation Report
Holloman Air Force Base, New Mexico

Chemical	Number of Samples	Number of Detects	Detected Concentration		Reporting Limit	
			Maximum	Minimum	Maximum	Minimum
			(mg/L)			
VOCs						
n-Butylbenzene	6	1	0.00042	0.00042	0.001	0.001
sec-Butylbenzene	6	1	0.0024	0.0024	0.001	0.001
Chloroform	6	3	0.0073	0.0016	0.001	0.001
Carbon disulfide	6	1	0.00165	0.00165	0.002	0.002
m-Dichlorobenzene (1,3-Dichlorobenzene)	6	1	0.00255	0.00255	0.001	0.001
o-Dichlorobenzene (1,2-Dichlorobenzene)	6	1	0.0017	0.0017	0.001	0.001
p-Dichlorobenzene (1,4-Dichlorobenzene)	6	1	0.0017	0.0017	0.001	0.001
Toluene	6	1	0.000375	0.000375	0.001	0.001
SVOCs						
Diethyl phthalate	6	1	0.0015	0.0015	0.005	0.0048
TPHs						
TPHs (C10-C36)	6	1	0.6845	0.6845	0.5	0.48
Metals						
Aluminum	6	1	0.0333	0.0333	0.2	0.2
Antimony	6	5	0.00515	0.0021	0.012	0.012
Arsenic	6	3	0.0078	0.0022	0.01	0.01
Barium	6	6	0.0302	0.0153	N/A	N/A
Calcium	6	6	578	550	N/A	N/A
Chromium	6	1	0.0023	0.0023	0.01	0.01
Copper	6	6	0.0045	0.00315	N/A	N/A
Iron	6	3	0.161	0.0409	0.3	0.3
Magnesium	6	6	79.1	48.2	N/A	N/A
Manganese	6	5	0.376	0.0096	0.015	0.015
Nickel	6	2	0.003	0.0026	0.04	0.04
Potassium	6	6	8.14	3.32	N/A	N/A
Selenium	6	2	0.0025	0.0024	0.01	0.01
Sodium	6	6	71.4	63.5	N/A	N/A
Vanadium	6	5	0.0836	0.0187	0.05	0.05
Zinc	6	6	0.0173	0.0082	N/A	N/A

Notes:
mg/L = Milligrams per liter
N/A = Not applicable
SVOCs = Semi-volatile organic compounds
TPHs = Total petroleum hydrocarbons
VOCs = Volatile organic compounds

Table 8-2(d)
Comparison of Maximum Detected Concentration of Groundwater with Screening Levels
SWMU 8 RCRA Facility Investigation Report
Holloman Air Force Base, New Mexico

Chemical	Maximum Detected Concentration (mg/L)	Screening Level		Exceed/Not Exceed	COPC
		(mg/L)	Source		
Volatile Organic Compounds (VOCs)					
n-Butylbenzene	0.00042	NV		N/A	**Yes**
sec-Butylbenzene	0.0024	NV		N/A	**Yes**
Chloroform	0.0073	0.1	1	Not Exceed	No
Carbon disulfide	0.00165	NV		N/A	**Yes**
m-Dichlorobenzene (1,3-Dichlorobenzene)	0.00255	NV		N/A	**Yes**
o-Dichlorobenzene (1,2-Dichlorobenzene)	0.0017	0.6	2	Not Exceed	No
p-Dichlorobenzene (1,4-Dichlorobenzene)	0.0017	0.075	2	Not Exceed	No
Toluene	0.000375	0.75	1	Not Exceed	No
Semi-volatile Organic Compounds (SVOCs)					
Diethyl phthalate	0.0015	NV		N/A	**Yes**
Total Petroleum Hydrocarbons (TPHs)					
TPHs (C10-C36)	0.6845	50	3	Not Exceed	No
Metals					
Aluminum	0.0333	0.05	2	Not Exceed	No
Antimony	0.00515	0.006	2	Not Exceed	No
Arsenic	0.0078	0.01	2	Not Exceed	No
Barium	0.0302	1	1	Not Exceed	No
Calcium	578	1151	4	Not Exceed	No
Chromium	0.0023	0.05	1	Not Exceed	No
Copper	0.0045	1	1	Not Exceed	No
Iron	0.161	0.3	2	Not Exceed	No
Magnesium	79.1	3631	4	Not Exceed	No
Manganese	0.376	0.05	2	Exceed	**Yes**
Nickel	0.003	0.2	1	Not Exceed	No
Potassium	8.14	120	4	Not Exceed	No
Selenium	0.0025	0.05	1	Not Exceed	No
Sodium	71.4	19972	4	Not Exceed	No
Vanadium	0.0836	0.0783	4	Exceed	**Yes**
Zinc	0.0173	5	2	Not Exceed	No

Notes:
COPC = Chemical of potential concern
mg/L = Milligrams per liter
N/A = Not applicable
NV = No value
Sources:
1 = NMWQCC Groundwater Standards for Contaminants (NMAC 20.6.2.3103)
2 = USEPA National Priority Drinking Water Regulation MCLs (USEPA, 2009)
3 = TPH Screening Guidelines (NMED, 2006); from Table 2b for unknown oil
4 = NMED Approved HAFB Background Levels (NMED, 2011)

Table 8-3
Chemicals of Potential Concern
SWMU 8 RCRA Facility Investigation Report
Holloman Air Force Base, New Mexico

Chemicals	Soil	Groundwater
n-Butylbenzene		X
sec-Butylbenzene		X
Carbon disulfide		X
m-Dichlorobenzene		X
Diethyl phthalate		X
TPHs (C10-C36)	X	
Manganese		X
Vanadium		X
Total No. of COPCs	**1**	**7**

Notes:
COPC = Chemical of potential concern
X = COPC based on maximum detected concentration greater than screening level or chemical without screening level

Table 8-4(a)
Exposure Model for Current Commercial/Industrial Worker
SWMU 8 RCRA Facility Investigation Report
Holloman Air Force Base, New Mexico

No.	Exposure Pathway	C/NC	Justification
1	Dermal contact with surficial soil	NC	Surficial soil has not been impacted based on the available soil data. Therefore, this exposure pathway is not complete.
2	Ingestion of surficial soil	NC	
3	Outdoor inhalation of vapors or particulates from surficial soil	NC	
4	Outdoor inhalation of vapors from subsurface soil	NC	Total Petroleum Hydrocarbon (C10-C36) is the only COPC in soil. Only one subsurface soil (SWMU08DP01-5) sample has been collected and this sample was not impacted with TPH (C10-C36). Therefore, this exposure pathway is not complete.
5	Indoor inhalation of vapors from subsurface soil	NC	
6	Outdoor inhalation of vapors from groundwater	C	Vapors from groundwater may migrate upwards through the vadose zone and into the ambient air through cracks in the pavement. However, this pathway is generally not the “risk driver” due to considerable mixing and dilution in ambient air when the indoor inhalation pathway is evaluated. Therefore, this pathway will not be evaluated quantitatively.
7	**Indoor inhalation of vapors from groundwater**	**C**	**Groundwater has been impacted with volatile compounds and there are buildings near the area where groundwater has been impacted. Therefore, this exposure pathway is complete.**
8	Ingestion of groundwater	NC	The facility receives water from Lake Bonito. No water supply wells will be installed on or near the Base because of poor groundwater quality. Therefore, this exposure pathway is not complete.
9	Dermal contact with groundwater	NC	

Notes:
C: Complete
NC: Not complete
Pathways shown in bold will be quantitatively evaluated.
Surficial soil is assumed to be soil located 0 to 2 feet below ground surface (ft bgs).
Subsurface soil is assumed to be soil between 2 ft bgs and the groundwater table.

Table 8-4(b)
Exposure Model for Future Resident
SWMU 8 RCRA Facility Investigation Report
Holloman Air Force Base, New Mexico

No.	Exposure Pathway	C/NC	Justification
1	Dermal contact with surficial soil	NC	Surficial soil has not been impacted based on the available soil data. Therefore, this exposure pathway is not complete.
2	Ingestion of surficial soil	NC	
3	Outdoor inhalation of vapors or particulates from surficial soil	NC	
4	Outdoor inhalation of vapors from subsurface soil	NC	Total Petroleum Hydrocarbon (C10-C36) is the only COPC in soil. Only one subsurface soil (SWMU08DP01-5) sample has been collected and this sample was not impacted with TPH (C10-C36). Therefore, this exposure pathway is not complete.
5	Indoor inhalation of vapors from subsurface soil	NC	
6	Outdoor inhalation of vapors from groundwater	C	Vapors from groundwater may migrate upwards through the vadose zone and into the ambient air through cracks in the pavement. However, this pathway is generally not the “risk driver” due to considerable mixing and dilution in ambient air when the indoor inhalation pathway is evaluated. Therefore, this pathway will not be evaluated quantitatively.
7	**Indoor inhalation of vapors from groundwater**	**C**	**Groundwater has been impacted with volatile compounds and a building may be built on or near the area where groundwater has been impacted. Therefore, this pathway is complete.**
8	Ingestion of groundwater	NC	The facility receives water from Lake Bonito. No water supply wells will be installed on or near the Base because of poor groundwater quality water. Therefore, this exposure pathway is not complete.
9	Dermal contact with groundwater	NC	

Notes:

C: Complete

NC: Not complete

Pathways shown in bold will be quantitatively evaluated.

Surficial soil is assumed to be soil located 0 to 2 feet below ground surface (ft bgs).

Subsurface soil is assumed to be soil between 2 ft bgs and the groundwater table.

Table 8-4(c)
Exposure Model for Future Construction Worker
SWMU 8 RCRA Facility Investigation Report
Holloman Air Force Base, New Mexico

No.	Exposure Pathway	C/NC	Justification
1	**Dermal contact with soil to depth of construction**	**C**	**Soil to depth of construction (10 ft bgs) has been impacted. Therefore, this pathway is complete.**
2	**Ingestion of soil to depth of construction**	**C**	**Soil to depth of construction (10 ft bgs) has been impacted. Therefore, this pathway is complete.**
3	**Outdoor inhalation of vapors or particulates from soil to depth of construction**	**C**	**Soil to depth of construction (10 ft bgs) has been impacted. Therefore, this pathway is complete.**
4	Indoor inhalation of vapors from soil	NC	Typically construction would not be expected to occur indoors over an extended period of time. Therefore, this pathway is not complete.
5	Indoor inhalation of vapors from groundwater	NC	Typically construction would not be expected to occur indoors over an extended period of time. Therefore, this pathway is not complete.
6	**Dermal contact with groundwater**	**C**	**Depth to groundwater is approximately 6.25 ft bgs which is above the anticipated depth of construction (10 ft bgs). Therefore, this pathway is complete.**
7	**Outdoor inhalation of vapors from groundwater**	**C**	**Depth to groundwater is approximately 6.25 ft bgs which is above the anticipated depth of construction (10 ft bgs). Therefore, this pathway is complete.**

Notes:
C: Complete
NC: Not complete
Soil to depth of construction is assumed to be soil 0 to 10 feet below ground surface (ft bgs).

Table 8-5(a)
Representative Concentrations of Groundwater for Current Commercial/Industrial Worker and Future Resident
SWMU 8 RCRA Facility Investigation Report
Holloman Air Force Base, New Mexico

Sample ID Date Sampled	SWMU8-DP05 (Average) 12/14/2010	Representative Concentration (mg/L)
n-Butylbenzene	0.00042	0.00042
sec-Butylbenzene	0.0024	0.0024
Carbon disulfide	0.00165	0.00165
m-Dichlorobenzene	0.00255	0.00255
Diethyl phthalate	0.0015	0.0015
Manganese	0.1205	0.1205
Vanadium	0.025	0.025

Notes:
mg/L = Milligrams per liter

Table 8-5(b)
Representative Concentrations of Groundwater for Future Construction Worker
SWMU 8 RCRA Facility Investigation Report
Holloman Air Force Base, New Mexico

Sample ID	SWMU8-DP01	SWMU8-DP02	SWMU8-DP03	SWMU8-DP05 (Average)	SWMU8-DP13	SWMU8-DP17	Representative Concentration (mg/L)
Date Sampled	**12/13/2010**	**12/13/2010**	**12/13/2010**	**12/14/2010**	**12/13/2010**	**12/13/2010**	
n-Butylbenzene	<0.001	<0.001	<0.001	0.00042	<0.001	<0.001	0.0005
sec-Butylbenzene	<0.001	<0.001	<0.001	0.0024	<0.001	<0.001	0.0008
Carbon disulfide	<0.002	<0.002	<0.002	0.00165	<0.002	<0.002	0.0011
m-Dichlorobenzene	<0.001	<0.001	<0.001	0.00255	<0.001	<0.001	0.0008
Diethyl phthalate	<0.005	<0.0048	<0.0048	0.0015	<0.0048	<0.0049	0.0023
Manganese	<0.015	0.0096	0.0166	0.1205	0.0198	0.376	0.0917
Vanadium	0.0836	0.0346	0.0187	<0.05	0.0213	0.0342	0.0362

Notes:
mg/L = Milligrams per liter

Table 8-5(c)
Representative Concentration of Soil for Future Construction Worker
SWMU 8 RCRA Facility Investigation Report
Holloman Air Force Base, New Mexico

Sample ID	SWMU08DP01-5	SWMU08DP02-9 (Average)	SWMU-08-SW1	SWMU-08-SW2	SWMU-08-SW3	SWMU-08-SW4	SWMU-08-SW5	SWMU-08-SW6 (Average)	SWMU-08-SW7
Sample Depth (ft bgs)	**5**	**9**	**7**	**7**	**7**	**7**	**7**	**7**	**7**
Date Sampled	**5/22/2006**	**5/22/2006**	**10/8/2008**	**10/8/2008**	**10/8/2008**	**10/10/2008**	**10/10/2008**	**10/10/2008**	**10/10/2008**
TPHs (C10-C36)	<22	<24	1646	1513	1610	1344	29	<6	5.1

Notes:
ft bgs = Feet below ground surface
mg/kg = Milligrams per kilogram

Table 8-5(c)
Representative Concentration of Soil for Future Construction Worker
SWMU 8 RCRA Facility Investigation Report
Holloman Air Force Base, New Mexico

Sample ID	SWMU-08-SW8	SWMU-08-SW9	SWMU-08-SW10	SWMU-08-SW11	SWMU-08-SW12 (Average)	SWMU-08-SW13	SWMU-08-SW14	SWMU-08-SW15	SWMU-08-SW15OE
Sample Depth (ft bgs)	**7**	**7**	**7**	**7**	**7**	**7**	**7**	**7**	**7**
Date Sampled	**10/10/2008**	**10/10/2008**	**10/10/2008**	**10/10/2008**	**10/10/2008**	**10/10/2008**	**10/10/2008**	**10/10/2008**	**10/27/2008**
TPHs (C10-C36)	<6	319	1918	5.1	2388.5	1946	289	2982	6.5

Notes:
ft bgs = Feet below ground surface
mg/kg = Milligrams per kilogram

Table 8-5(c)
Representative Concentration of Soil for Future Construction Worker
SWMU 8 RCRA Facility Investigation Report
Holloman Air Force Base, New Mexico

Sample ID	SWMU-08-SW16	SWMU-08-Bottom 1	SWMU-08-Bottom 2	SWMU-08-Bottom 3	SWMU-08-Bottom 4	SWMU8-DP04-7	SWMU8-DP05-7 (Average)	SWMU8-DP06-7	SWMU8-DP07-7
Sample Depth (ft bgs)	**7**	**8.5**	**8.5**	**8.5**	**8.5**	**7**	**7**	**7**	**7**
Date Sampled	**10/10/2008**	**10/8/2008**	**10/8/2008**	**10/8/2008**	**10/8/2008**	**10/8/2010**	**10/8/2010**	**10/8/2010**	**10/8/2010**
TPHs (C10-C36)	12.8	3.55	<6	<6	3.8	269	1294	1329	<22

Notes:
ft bgs = Feet below ground surface
mg/kg = Milligrams per kilogram

Table 8-5(c)
Representative Concentration of Soil for Future Construction Worker
SWMU 8 RCRA Facility Investigation Report
Holloman Air Force Base, New Mexico

Sample ID	SWMU8-DP08-8	SWMU8-DP09-7	SWMU8-DP10-7	SWMU8-DP11-7	SWMU8-DP12-7	SWMU8-DP13-7 (Average)	SWMU8-DP14-7	SWMU8-DP15-7	Representative Concentration (mg/kg)
Sample Depth (ft bgs)	**8**	**7**	**7**	**7**	**7**	**7**	**7**	**7**	
Date Sampled	**10/8/2010**	**10/9/2010**	**10/9/2010**	**10/9/2010**	**10/9/2010**	**10/10/2010**	**10/10/2010**	**10/10/2010**	
TPHs (C10-C36)	242	<24	<22	<22	<20	<19.5	<20	<20	551

Notes:
ft bgs = Feet below ground surface
mg/kg = Milligrams per kilogram

Table 8-6(a)
Toxicity and Physical and Chemical Parameters Used for Calculating Target Levels of Indoor Inhalation of Vapors (J&E Model)
SWMU 8 RCRA Facility Investigation Report
Holloman Air Force Base, New Mexico

Chemical	Volatility	Molecular Weight MW (g/mol)	Organic carbon partition coefficient K_{oc} (cm^3/g)	Soil water sorption coefficient K_d (cm^3/g)	Diffusivity in air D_a (cm^2/s)	Diffusivity in water D_w (cm^2/s)	Pure component water solubility S (mg/L)	Henry's law constant H' (unitless)	Henry's law constant at reference temperature H (atm-m^3/mol)	Henry's law constant reference temperature T_R (^oC)	Normal boiling point T_B (^oK)	Critical temperature T_C (^oK)	Enthalpy of vaporization at the normal boiling point $DH_{v,b}$ (cal/mol)	Unit risk factor URF ($\mu g/m^3)^{-1}$	Reference concentration RfC (mg/m^3)
n-Butylbenzene	Volatile	*1.34E+02*	*1.48E+03*	NA	*5.28E-01*	*7.33E-06*	*1.18E+01*	*6.50E-01*	*1.59E-02*	2.50E+01	4.56E+02	6.61E+02	9.29E+03	NA	NA
sec-Butylbenzene	Volatile	***1.34E+02***	***2.09E+03***	NA	***5.75E-02***	***6.75E-06***	***1.81E+01***	***5.07E-01***	***1.24E-02***	2.50E+01	4.47E+02	6.79E+02	8.87E+04	NA	NA
Carbon disulfide	Volatile	7.60E+01	1.00E+00	NA	1.10E-01	1.30E-05	1.18E+03	5.90E-01	1.44E-02	2.50E+01	3.19E+02	5.52E+02	6.39E+03	NA	7.00E-01
m-Dichlorobenzene	Volatile	***1.47E+02***	***1.70E+02***	NA	***6.80E-02***	***8.13E-06***	***1.10E+02***	***1.95E-01***	***4.77E-03***	2.50E+01	4.46E+02	6.84E+02	9.23E+03	NA	***8.00E-03***
Diethyl phthalate	Not Volatile	2.22E+02	1.26E+02	NA	*2.61E-02*	*6.72E-06*	1.08E+03	2.50E-05	6.12E-07	NA	NA	NA	NA	NA	NA
Manganese	Not Volatile	5.49E+01	NA	2.15E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.00E-05
Vanadium	Not Volatile	5.09E+01	NA	1.00E+03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	***1.00E-04***

Notes:
NA = Not available
Value in normal font obtained from Technical Background Document for Development of Soil Screening Levels, Revision 5.0 (NMED, 2009)
Value in italics obtained from the Regional Screening Level Tables (USEPA, 2011)
Value in bold and italics obtained from the Texas Risk Reduction Program Rule Tables (TCEQ, 2011)
Value underlined obtained from the User's Guide for Evaluating Subsurface Vapor Intrusion into Buildings (USEPA, 2004a)
cm^3/g = Cubic centimeters per gram
cm^2/s = Square centimeters per second
mg/L = Milligrams per Liter
atm-m^3/mol = Atmospheric-cubic meters per mole
˚C = Degrees Celcius
˚K = Degrees Kelvin
cal/mol = Calories per mole
g/mol = Grams per mole
mg/m^3 = Milligrams per cubic meter
$\mu g/m^3$ = Micrograms per cubic meter

Table 8-6(b)
Exposure Factors Used for Calculating Target Levels of Indoor Inhalation of Vapors (J&E Model)
SWMU 8 RCRA Facility Investigation Report
Holloman Air Force Base, New Mexico

Parameter	Symbol	Unit	Values Used	Source
Averaging time for carcinogen	ATc	days	25,550	NMED, 2009
Averaging time for non-carcinogen	ATnc	days	ED*365	NMED, 2009
Exposure duration for commercial/industrial worker	ED	years	25	NMED, 2009
Exposure duration for resident	ED	years	30	NMED, 2009
Exposure frequency for commercial/industrial worker	EF	days/year	225	NMED, 2009
Exposure frequency for resident	EF	days/year	350	NMED, 2009

Notes:
NMED, 2009. Technical Background Document for Development of Soil Screening Levels, Revision 5.0
NMED = New Mexico Environment Department

Table 8-6(c)
Media Specific Parameters Used for Calculating Target Levels of Indoor Inhalation of Vapors (J&E Model)
SWMU 8 RCRA Facility Investigation Report
Holloman Air Force Base, New Mexico

Parameter	Symbol	Unit	Value Used	Source
Source Parameters				
Average soil temperature	T_s	°C	19.1	Site-specific
Depth below grade to water table	L_{WT}	cm	191	Site-specific
Thickness of capillary fringe zone	L_{cz}	cm	18.8	USEPA, 2004a
Geotechnical Parameters				
Soil dry bulk density in the vadose zone and the capillary fringe zone	ρ_b	g/cm^3	1.62	USEPA, 2004a
Soil total porosity in the vadose zone and the capillary fringe zone	n	unitless	0.39	USEPA, 2004a
Soil water-filled porosity in the vadose zone	θ_w	cm^3/cm^3	0.076	USEPA, 2004a
Soil water-filled porosity in the capillary fringe zone	θ_{wcz}	cm^3/cm^3	0.351	Professional Judgment
Building Parameters for Current Commercial/Industrial Worker				
Depth below grade to bottom of enclosed space floor	L_F	cm	15	USEPA, 2004a
Enclosed space floor thickness	L_{crack}	cm	10	USEPA, 2004a
Enclosed space floor length	L_B	cm	5,334	Site-specific
Enclosed space floor width	W_B	cm	1,829	Site-specific
Enclosed space height	H_B	cm	609.6	Site-specific
Floor-wall seam crack width	w	cm	0.1	USEPA, 2004a
Indoor air exchange rate	ER	1/hr	0.83	ASTM, 1995
Average vapor flow rate into building	Q_{soil}	L/min	5	USEPA, 2004a
Building Parameters for Future Resident				
Depth below grade to bottom of enclosed space floor	L_F	cm	15	USEPA, 2004a
Enclosed space floor thickness	L_{crack}	cm	10	USEPA, 2004a
Enclosed space floor length	L_B	cm	1,000	USEPA, 2004a
Enclosed space floor width	W_B	cm	1,000	USEPA, 2004a
Enclosed space height	H_B	cm	244	USEPA, 2004a
Floor-wall seam crack width	w	cm	0.1	USEPA, 2004a
Indoor air exchange rate	ER	1/hr	0.25	USEPA, 2004a
Average vapor flow rate into building	Q_{soil}	L/min	5	USEPA, 2004a

Notes:
ASTM = American Society for Testing and Materials
USEPA = United States Environmental Protection Agency
ASTM, 1995. Standard Guide for Risk-Based Corrective Action Applied at Petroleum Release Sites.
USEPA, 2004a. User's Guide for Evaluating Subsurface Vapor Intrusion into Buildings
˚C = Degrees celcius
cm = Centimeters
g/cm^3 = Grams per cubic centimeter
cm^3/cm^3 = Cubic centimeters per cubic centimeter
1/hr = One per hour
L/min = Liter per minute

Table 8-7(a)
Toxicity Values and Parameters Used for Calculating Target Levels for Dermal Contact with Groundwater
SWMU 8 RCRA Facility Investigation Report
Holloman Air Force Base, New Mexico

COPC	Dermal Slope Factor (SFd) [kg-day/mg]	Dermal Reference Dose (RfDd) [mg/kg-day]	Dermal Permeability Constant (Kp) [cm/hr]	Relative Contribution of Permeability Coefficient (B) [--]	Lag Time (τ_{event}) [hr]	Time to Reach Steady-State (t*) [hr]	Fraction Absorbed (FA) [--]
n-Butylbenzene	NA	*5.00E-02*	*2.25E-01*	***8.82E-01***	***5.62E-01***	***2.16E+00***	***1***
sec-Butylbenzene	NA	*4.00E-02*	***1.48E-01***	***6.51E-01***	***5.62E-01***	***2.21E+00***	***1***
Carbon disulfide	NA	1.00E-01	*1.14E-02*	**6.00E-02**	**3.00E-01**	**7.20E-01**	**1**
m-Dichlorobenzene	NA	*3.00E-02*	**5.80E-02**	**3.00E-01**	**7.10E-01**	**1.71E+00**	**1**
Diethyl phthalate	NA	8.00E-01	*3.60E-03*	**2.20E-02**	**1.87E+00**	**4.50E+00**	**1**
Manganese	NA	1.40E-01	*1.00E-03*	NA	NA	NA	NA
Vanadium	NA	5.00E-03	*1.00E-03*	NA	NA	NA	NA

Notes:
NA = Not available
Value in normal font was obtained from the Technical Background Document for Development of Soil Screening Levels, Revision 5.0 (NMED, 2009)
Value in italics obtained from the Regional Screening Level Tables (USEPA, 20011)
Value in italics and underlined obtained from the Texas Risk Reduction Program Rule Tables (TCEQ, 2011)
Value in bold was obtained from the RAGS Volume I, Part E (USEPA, 2004b)
Value in bold and italics was estimated as per the RAGS Volume I, Part E (USEPA, 2004b)
kg-day/mg = Kilograms per day per millgram
mg/kg-day = Milligrams per kilogram per day
cm/hr = Centimeters per hour
hr = Hours

Table 8-7(b)
Exposure Factors Used for Calculating Target Levels for Dermal Contact with Groundwater
SWMU 8 RCRA Facility Investigation Report
Holloman Air Force Base, New Mexico

Parameter	Symbol	Unit	Values Used	Source
Averaging time for carcinogen	ATc	days	25,550	NMED, 2009
Averaging time for non-carcinogen	ATnc	days	ED*365	NMED, 2009
Body weight for construction worker	BW	kg	70	NMED, 2009
Exposure duration for construction worker	ED	years	1	NMED, 2009
Exposure frequency for construction worker	EF	days/year	250	NMED, 2009
Skin surface area for dermal contact with water for construction worker	SA_{gw}	cm^2	3,300	USEPA, 2004b
Event frequency for dermal contact with water for construction worker	EV_{gw}	event/day	1	Professional judgment
Event duration for dermal contact with water for construction worker	t_{event}	hr/event	1	Professional judgment

Notes:
NMED = New Mexico Environment Department
USEPA = United States Environmental Protection Agency
NMED, 2009. Technical Background Document for Development of Soil Screening Levels, Revision 5.0
USEPA, 2004b. Risk Assessment Guidance for Superfund Volume I, Part E Supplemental Guidance for Dermal Risk Assessment
kg = Kilograms
cm^2 = Square centimeters
hr/event = Hours per event

Table 8-8(a)
Toxicity and Physical/Chemical Parameters for Outdoor Inhalation of Vapors from Groundwater
SWMU 8 RCRA Facility Investigation Report
Holloman Air Force Base, New Mexico

Chemical	Volatility	Molecular Weight MW (g/mol)	Organic carbon partition coefficient K_{oc} (cm^3/g)	Soil water sorption coefficient K_d (cm^3/g)	Diffusivity in air D_a (cm^2/s)	Diffusivity in water D_w (cm^2/s)	Pure component water solubility S (mg/L)	Henry's law constant H' (unitless)	Unit risk factor URF ($\mu g/m^3)^{-1}$	Reference concentration RfC (mg/m^3)
n-Butylbenzene	Volatile	*1.34E+02*	*1.48E+03*	NA	*5.28E-01*	*7.33E-06*	*1.18E+01*	*6.50E-01*	NA	NA
sec-Butylbenzene	Volatile	***1.34E+02***	***2.09E+03***	NA	***5.75E-02***	***6.75E-06***	***1.81E+01***	***5.07E-01***	NA	NA
Carbon disulfide	Volatile	7.60E+01	1.00E+00	NA	1.10E-01	1.30E-05	1.18E+03	5.90E-01	NA	7.00E-01
m-Dichlorobenzene	Volatile	***1.47E+02***	***1.70E+02***	NA	***6.80E-02***	***8.13E-06***	***1.10E+02***	***1.95E-01***	NA	***8.00E-03***
Diethyl phthalate	Not Volatile	2.22E+02	1.26E+02	NA	*2.61E-02*	*6.72E-06*	1.08E+03	2.50E-05	NA	NA
Manganese	Not Volatile	5.49E+01	NA	2.15E+02	NA	NA	NA	NA	NA	5.00E-05
Vanadium	Not Volatile	5.09E+01	NA	1.00E+03	NA	NA	NA	NA	NA	***1.00E-04***

Notes:
COPC = Chemical of potential concern
$\mu g/m^3$ = micrograms per cubic meter
mg/L = milligrams per Liter
cm^3/g = cubic centimeters per gram
cm^2/s = square centimeters per second
g/mol = grams per mole
NA = Not available
Value in normal font obtained from Technical Background Document for Development of Soil Screening Levels, Revision 5.0 (NMED, 2009)
Value in italics obtained from the Regional Screening Level Tables (USEPA, 2011)
Value in bold and italics obtained from the Texas Risk Reduction Program Rule Tables (TCEQ, 2011)

Table 8-8(b)
Exposure Factors Used for Calculating Target Levels for Outdoor Inhalation of Vapors from Groundwater
SWMU 8 RCRA Facility Investigation Report
Holloman Air Force Base, New Mexico

Parameter	Symbol	Unit	Values Used	Source
Averaging time for carcinogen	ATc	days	25,550	NMED, 2009
Averaging time for non-carcinogen	ATnc	days	ED*365	NMED, 2009
Body weight for adult	BWa	kg	70	NMED, 2009
Exposure duration for construction workers	ED_{CW}	years	1	NMED, 2009
Exposure frequency for construction workers	EF_{CW}	days/year	250	NMED, 2009
Exposure time for construction workers	ET_{CW}	Unitless	0.33	NMED, 2009

Notes:
NMED = New Mexico Environment Department
NMED, 2009. Technical Background Document for Development of Soil Screening Levels, Revision 5.0
kg = Kilograms

Table 8-8(c)
Fate and Transport Parameters Used for Calculating Outdoor Inhalation of Vapors from Groundwater
SWMU 8 RCRA Facility Investigation Report
Holloman Air Force Base, New Mexico

Parameter	Symbol	Unit	Value Used	Source
Mean annual wind speed	U_m	m/s	4.02	NMED, 2009
Breathing zone height	δ_a	cm	200	ASTM, 1995
Depth to groundwater	L_{GW}	cm	191	Site-specific
Thickness of capillary fringe[1]	h_{cap}	cm	18.8	USEPA, 2004a
Dimension of source area parallel to wind direction[2]	W_{ga}	cm	4,267	Site-specific
Soil dry bulk density in vadose zone[1]	ρ_b	g/cm^3	1.62	USEPA, 2004a
Soil total porosity in vadose zone[1]	n	unitless	0.39	USEPA, 2004a
Soil water-filled porosity in vadose zone[1]	θ_{wv}	cm^3/cm^3	0.076	USEPA, 2004a
Soil total porosity in capillary fringe[3]	n_{cap}	unitless	0.39	Professional Judgment
Soil water-filled porosity in capillary fringe[4]	θ_{wcap}	cm^3/cm^3	0.351	Professional Judgment

Notes:
ASTM = American Society for Testing and Materials
NMED = New Mexico Environment Department
ASTM, 1995. Standard Guide for Risk-Based Corrective Action Applied at Petroleum Release Sites
NMED, 2009. Technical Background Document for Development of Soil Screening Levels, Revision 5.0
USEPA, 2004a. User's Guide for Evaluating Subsurface Vapor Intrusion into Buildings
1 = Obtained from USEPA (2004a) for site-specific soil type of loamy sand
2 = Since this is not a sensitive parameter and wind direction is variable, conservatively the longer area dimension of 140 ft (4,267 cm) was used
3 = Soil total porosity in capillary fringe was assumed to be same as in vadose zone
4 = Water-filled porosity in capillary fringe was assumed to be 90% of the water-filled porosity in vadose zone
m/s = meters per second
cm = centimeters
g/cm^3 = grams per cubic centimeter
cm^3/cm^3 = cubic centimeters per cubic centimeter

Table 8-9(a)
Summary of Calculated Risk for Current Commercial/Industrial Worker
SWMU 8 RCRA Facility Investigation Report
Holloman Air Force Base, New Mexico

COPCs	Indoor Inhalation of Vapors from Groundwater				
	Representative Concentration (mg/L)	Target Level (mg/L)		Risk	
		Carcinogenic	Non-carcinogenic	Carcinogenic	Non-carcinogenic
n-Butylbenzene	0.00042	NA	NA	N/A	N/A
sec-Butylbenzene	0.0024	NA	NA	N/A	N/A
Carbon disulfide	0.00165	NA	70.2	N/A	2.4E-05
m-Dichlorobenzene	0.00255	NA	3.53	N/A	7.2E-04
Diethyl phthalate	0.0015	Not Volatile	Not Volatile	N/A	N/A
Manganese	0.1205	Not Volatile	Not Volatile	N/A	N/A
Vanadium	0.025	Not Volatile	Not Volatile	N/A	N/A
		Cumulative Risks		N/A	**7.5E-04**

Notes:
COPC = Chemical of potential concern
mg/L = Milligrams per liter
N/A = Not applicable
NA = Not available

Table 8-9(b)
Summary of Calculated Risk for Future Resident
SWU 8 RCRA Facility Investigation Report
Holloman Air Force Base, New Mexico

COPCs	Indoor Inhalation of Vapors from Groundwater				
	Representative Concentration (mg/L)	Target Level (mg/L)		Risk	
		Carcinogenic	Non-carcinogenic	Carcinogenic	Non-carcinogenic
n-Butylbenzene	0.00042	NA	NA	N/A	N/A
sec-Butylbenzene	0.0024	NA	NA	N/A	N/A
Carbon disulfide	0.00165	NA	2.64	N/A	6.3E-04
m-Dichlorobenzene	0.00255	NA	0.159	N/A	1.6E-02
Diethyl phthalate	0.0015	Not Volatile	Not Volatile	N/A	N/A
Manganese	0.1205	Not Volatile	Not Volatile	N/A	N/A
Vanadium	0.025	Not Volatile	Not Volatile	N/A	N/A
		Cumulative Risks		N/A	**1.7E-02**

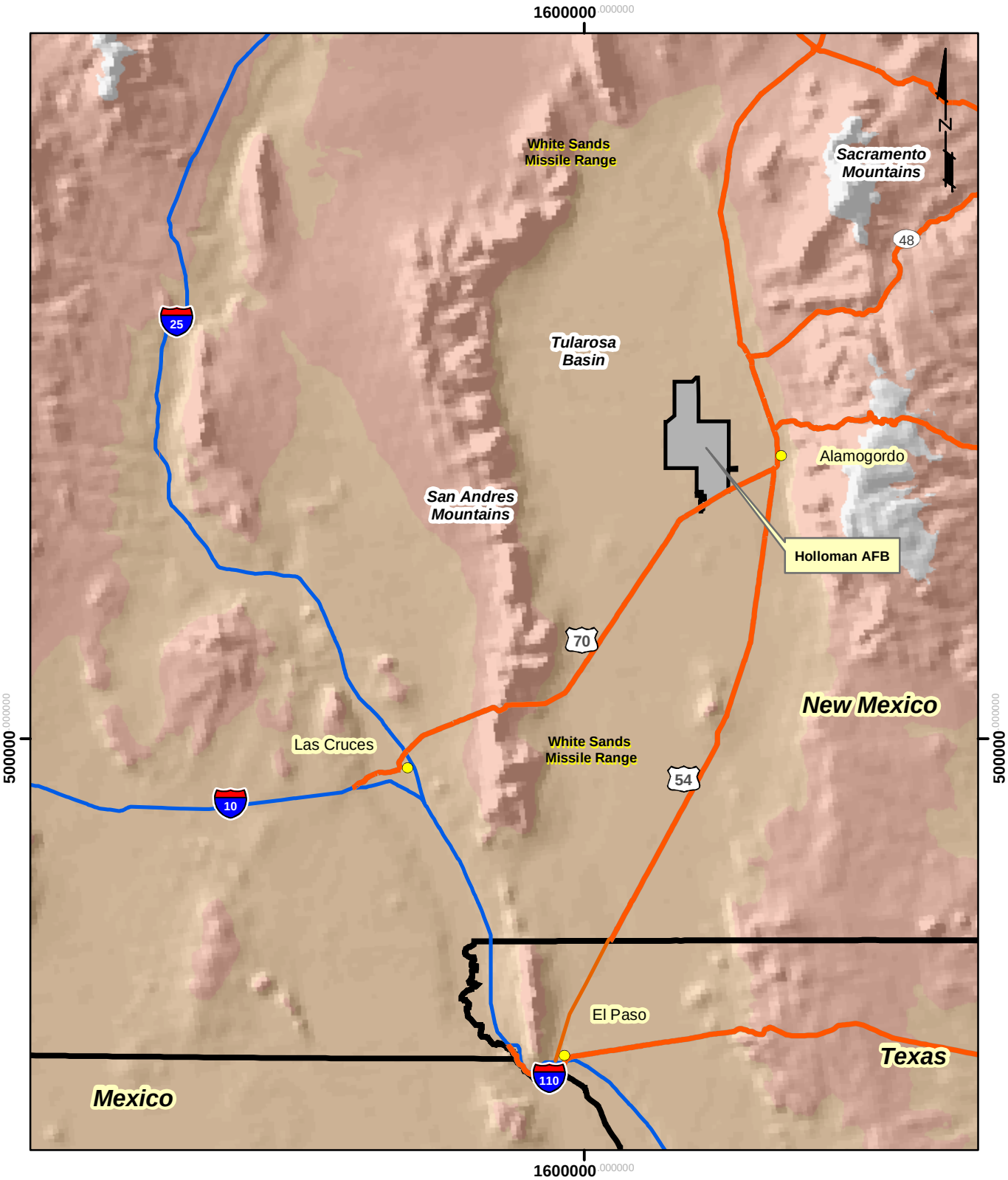
Notes:
COPC = Chemical of potential concern
mg/L = Milligrams per liter
N/A = Not applicable
NA = Not available

Table 8-9(c)
Summary of Calculated Risk for Future Construction Worker
SWMU 8 RCRA Facility Investigation Report
Holloman Air Force Base, New Mexico

COPCs	Combined Pathway for Soil					Dermal Contact with Groundwater					Outdoor Inhalation of Vapors from Groundwater					Total Risk	
	Rep. Conc. (mg/kg)	Target Level (mg/L)		Risk		Rep. Conc. (mg/L)	Target Level (mg/L)		Risk		Rep. Conc. (mg/L)	Target Level (mg/L)		Risk			
		C	NC	C	NC		C	NC	C	NC		C	NC	C	NC	C	NC
n-Butylbenzene	---	---	---	---	---	0.0005	NA	3.32	N/A	1.5E-04	0.0005	NA	NA	N/A	N/A	N/A	1.5E-04
sec-Butylbenzene	---	---	---	---	---	0.0008	NA	4.03	N/A	2.0E-04	0.0008	NA	NA	N/A	N/A	N/A	2.0E-04
Carbon disulfide	---	---	---	---	---	0.0011	NA	172	N/A	6.5E-06	0.0011	NA	NOC	N/A	N/A	N/A	6.5E-06
m-Dichlorobenzene	---	---	---	---	---	0.0008	NA	6.88	N/A	1.2E-04	0.0008	NA	NOC	N/A	N/A	N/A	1.2E-04
Diethyl phthalate	---	---	---	---	---	0.0023	NA	1820	N/A	1.3E-06	0.0023	Not Volatile		N/A	N/A	N/A	1.3E-06
TPHs (C10-C36)	551	NA	2,000	N/A	2.8E-01	---	---	---	---	---	---	---	---	---	---	N/A	2.8E-01
Manganese	---	---	---	---	---	0.0917	NA	4,340	N/A	2.1E-05	0.0917	Not Volatile		N/A	N/A	N/A	2.1E-05
Vanadium	---	---	---	---	---	0.0362	NA	155	N/A	2.3E-04	0.0362	Not Volatile		N/A	N/A	N/A	2.3E-04
														Cumulative Risks		N/A	**0.3**

Notes:
--- = Not a COPC
C = Carcinogenic
COPC = Chemical of potential concern
mg/L = Milligrams per liter
N/A = Not applicable
NA = Not available
NC = Non-carcinogenic
NOC = Not of concern since calculated target concentration exceeds water solubility

FIGURES



0 4.5 9 18 27 36 Miles

Note: Projection-New Mexico State Plane Coordinate System, Central Zone, North American Horizontal Datum 1983 (feet).

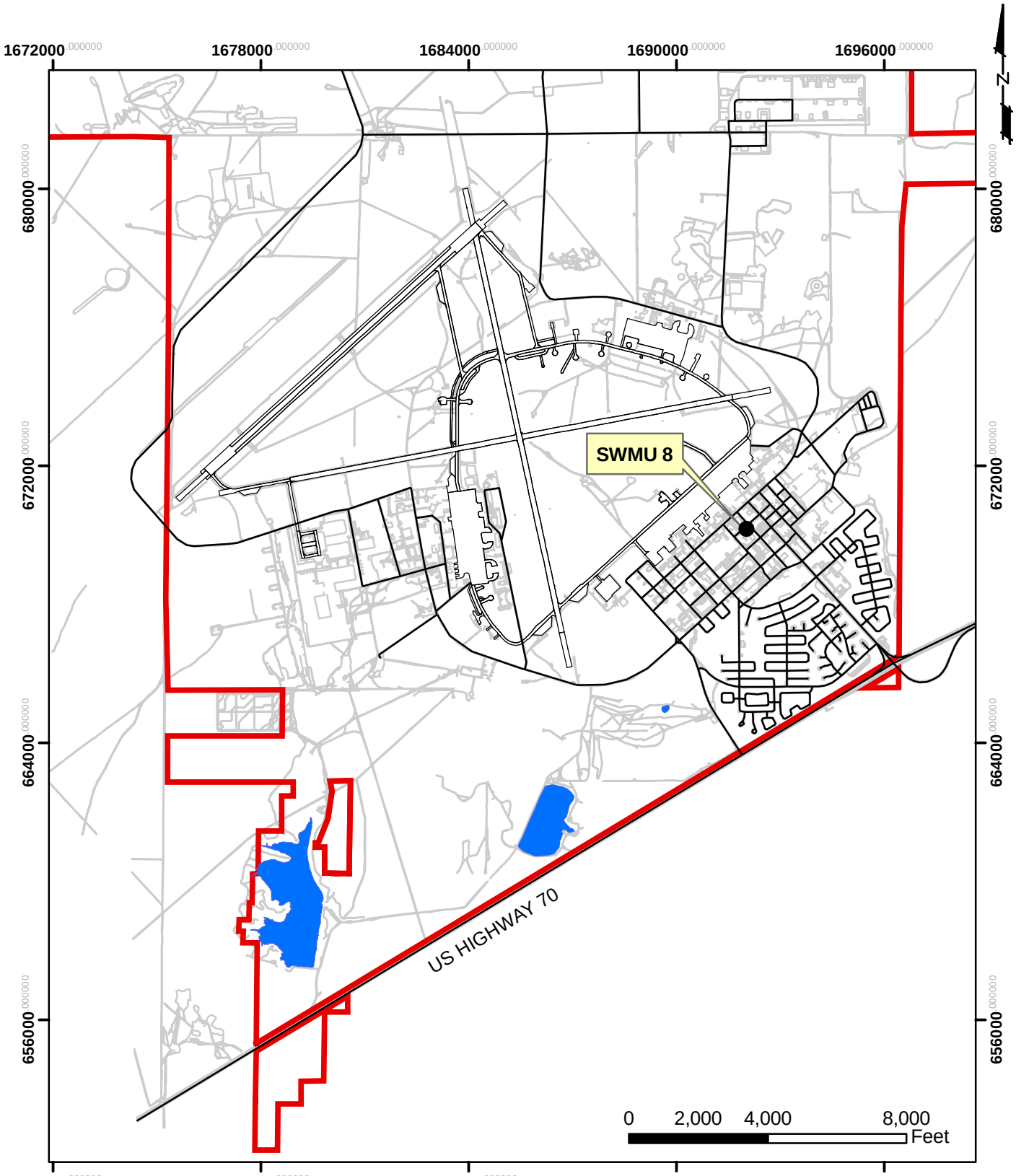
NATIONVIEW

Holloman AFB, New Mexico Location Map

PROJECT NO.	SCALE	DATE	DRAWN BY:
8080014	1"=18 Miles	11/30/10	cm
			DRAWING NO: Figure 2-1

SWMU 8
RCRA Facility Investigation Report
Holloman AFB, New Mexico

Figure 2-1



Note: Projection-New Mexico State Plane Coordinate System, Central Zone, North American Horizontal Datum 1983 (feet).

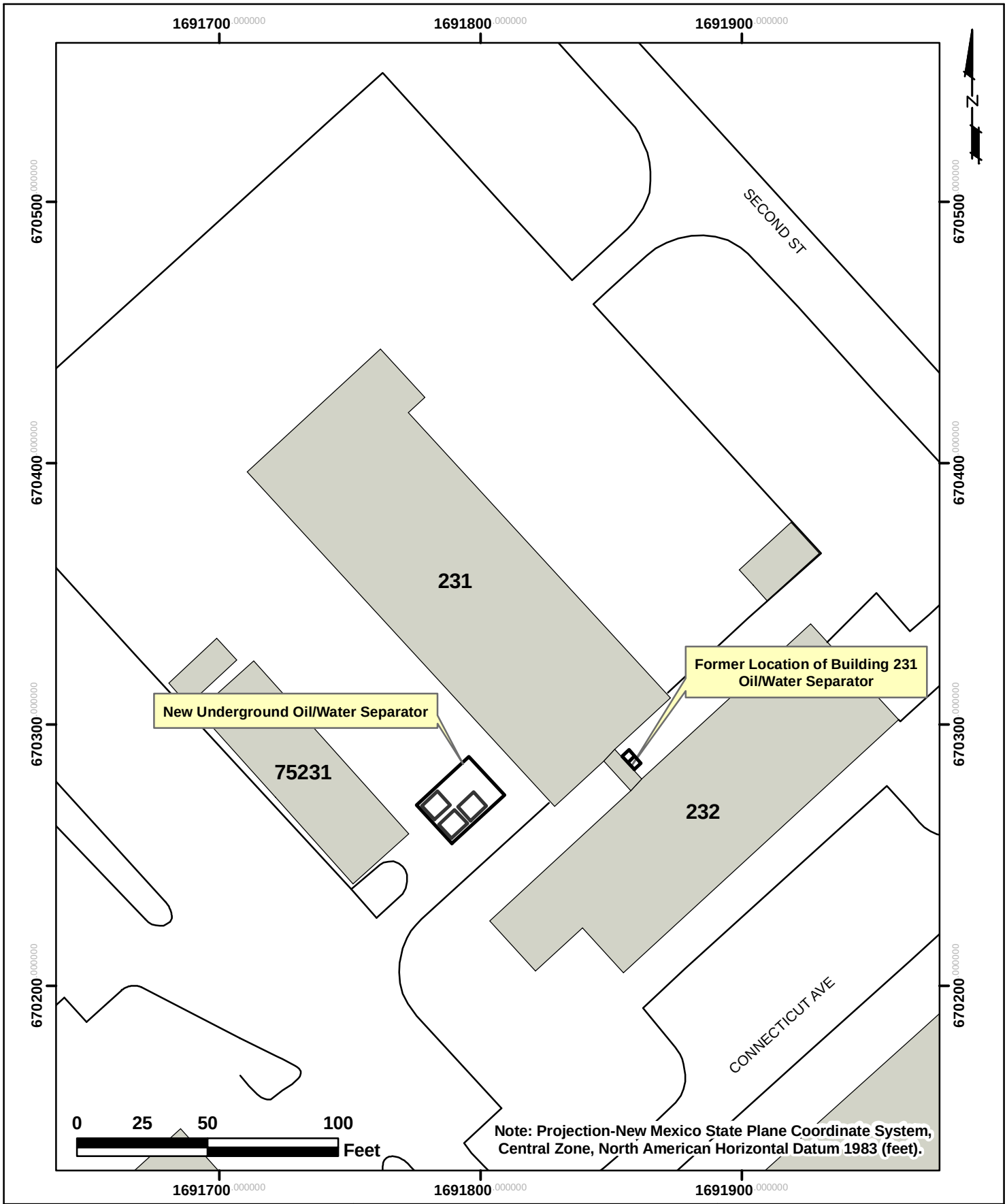
NATIONVIEW

SWMU 8
Site Location Map

PROJECT NO.	SCALE	DATE	DRAWN BY:
8080014	1"=4000'	11/30/10	cm
			DRAWING NO: Figure 2-2

SWMU 8
RCRA Facility Investigation Report
Holloman AFB, New Mexico

Figure 2-2



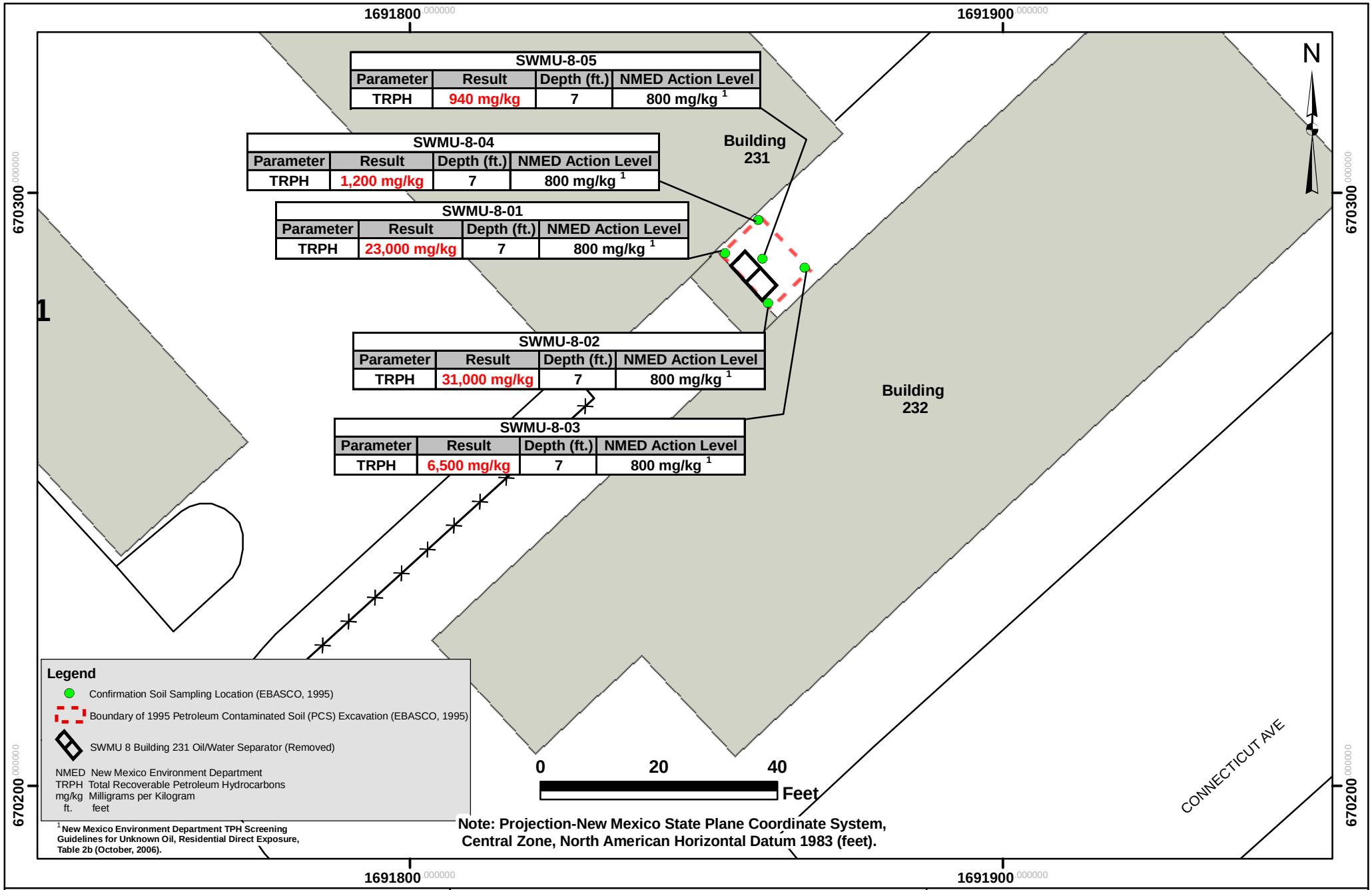
NATIONVIEW

SWMU 8
Site Map

PROJECT NO.	SCALE	DATE	DRAWN BY:
8080014	1"=50'	12/3/10	cm
			DRAWING NO: fig_2-3

SWMU 8
RCRA Facility Investigation Report
Holloman AFB, New Mexico

Figure 2-3



SWMU-8-05			
Parameter	Result	Depth (ft.)	NMED Action Level
TRPH	940 mg/kg	7	800 mg/kg [1]

SWMU-8-04			
Parameter	Result	Depth (ft.)	NMED Action Level
TRPH	1,200 mg/kg	7	800 mg/kg [1]

SWMU-8-01			
Parameter	Result	Depth (ft.)	NMED Action Level
TRPH	23,000 mg/kg	7	800 mg/kg [1]

SWMU-8-02			
Parameter	Result	Depth (ft.)	NMED Action Level
TRPH	31,000 mg/kg	7	800 mg/kg [1]

SWMU-8-03			
Parameter	Result	Depth (ft.)	NMED Action Level
TRPH	6,500 mg/kg	7	800 mg/kg [1]

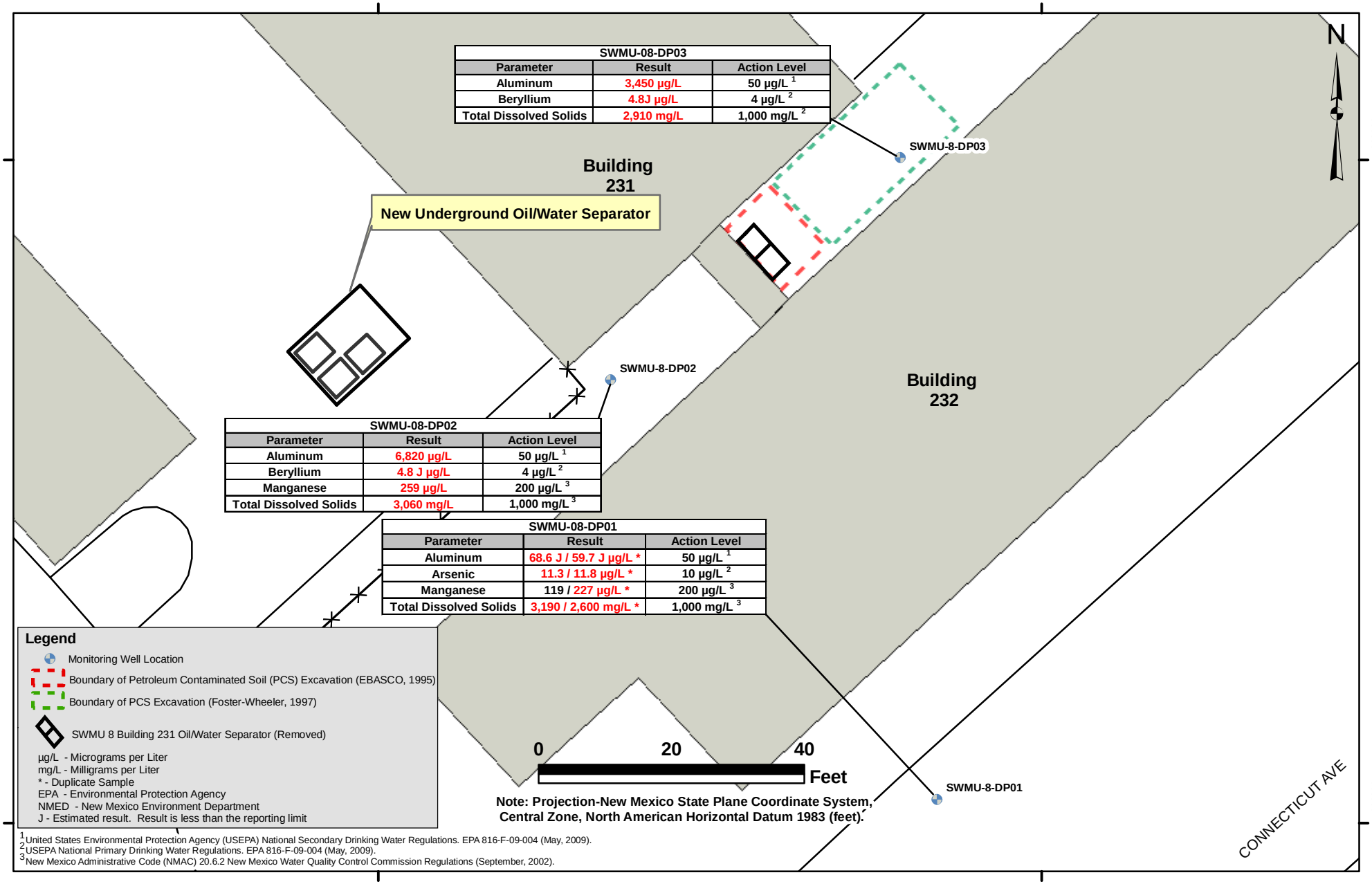
NATIONVIEW

SWMU 8
Soil Analytical Results Above NMED Action Levels (EBASCO, 1995)

PROJECT NO.	SCALE	DATE	DRAWN BY:
8080014	1"=20'	12/3/10	cm
			DRAWING NO: fig_2-4

SWMU 8
RCRA Facility Investigation Report
Holloman AFB, New Mexico

Figure 2-4



SWMU-08-DP03		
Parameter	Result	Action Level
Aluminum	3,450 µg/L	50 µg/L [1]
Beryllium	4.8J µg/L	4 µg/L [2]
Total Dissolved Solids	2,910 mg/L	1,000 mg/L [2]

SWMU-08-DP02		
Parameter	Result	Action Level
Aluminum	6,820 µg/L	50 µg/L [1]
Beryllium	4.8 J µg/L	4 µg/L [2]
Manganese	259 µg/L	200 µg/L [3]
Total Dissolved Solids	3,060 mg/L	1,000 mg/L [3]

SWMU-08-DP01		
Parameter	Result	Action Level
Aluminum	68.6 J / 59.7 J µg/L *	50 µg/L [1]
Arsenic	11.3 / 11.8 µg/L *	10 µg/L [2]
Manganese	119 / 227 µg/L *	200 µg/L [3]
Total Dissolved Solids	3,190 / 2,600 mg/L *	1,000 mg/L [3]

[1] United States Environmental Protection Agency (USEPA) National Secondary Drinking Water Regulations. EPA 816-F-09-004 (May, 2009).
[2] USEPA National Primary Drinking Water Regulations. EPA 816-F-09-004 (May, 2009).
[3] New Mexico Administrative Code (NMAC) 20.6.2 New Mexico Water Quality Control Commission Regulations (September, 2002).

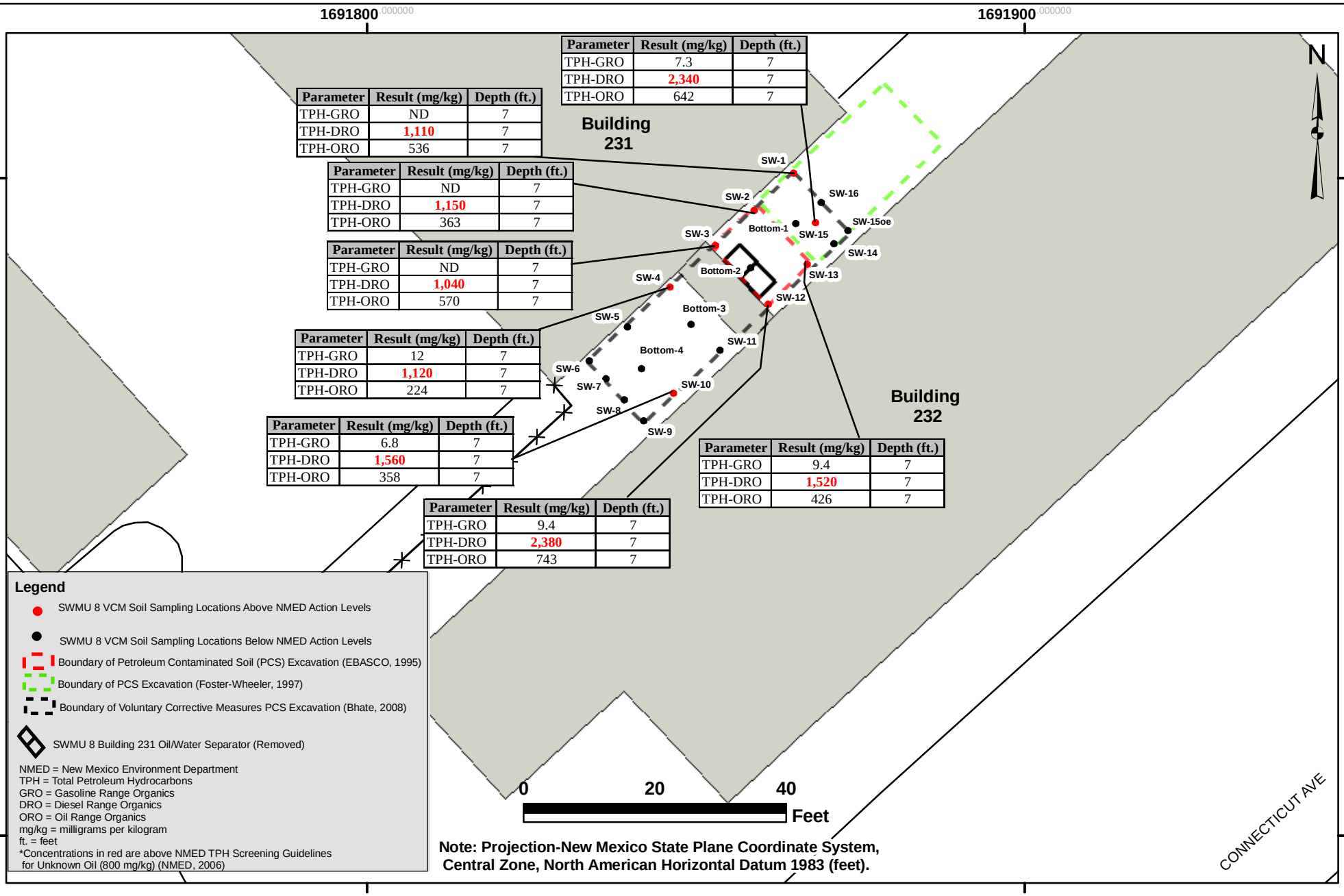
NATIONVIEW

SWMU 8
Groundwater Analytical Results Above EPA and NMED Action Levels (Bhate, 2006)

PROJECT NO.	SCALE	DATE	DRAWN BY:
8080014	1"=20'	12/3/10	cm
			DRAWING NO: fig_2-5

SWMU 8
RCRA Facility Investigation Report
Holloman AFB, New Mexico

Figure 2-5



Parameter	Result (mg/kg)	Depth (ft.)
TPH-GRO	7.3	7
TPH-DRO	2,340	7
TPH-ORO	642	7

Parameter	Result (mg/kg)	Depth (ft.)
TPH-GRO	ND	7
TPH-DRO	1,110	7
TPH-ORO	536	7

Parameter	Result (mg/kg)	Depth (ft.)
TPH-GRO	ND	7
TPH-DRO	1,150	7
TPH-ORO	363	7

Parameter	Result (mg/kg)	Depth (ft.)
TPH-GRO	ND	7
TPH-DRO	1,040	7
TPH-ORO	570	7

Parameter	Result (mg/kg)	Depth (ft.)
TPH-GRO	12	7
TPH-DRO	1,120	7
TPH-ORO	224	7

Parameter	Result (mg/kg)	Depth (ft.)
TPH-GRO	6.8	7
TPH-DRO	1,560	7
TPH-ORO	358	7

Parameter	Result (mg/kg)	Depth (ft.)
TPH-GRO	9.4	7
TPH-DRO	2,380	7
TPH-ORO	743	7

Parameter	Result (mg/kg)	Depth (ft.)
TPH-GRO	9.4	7
TPH-DRO	1,520	7
TPH-ORO	426	7

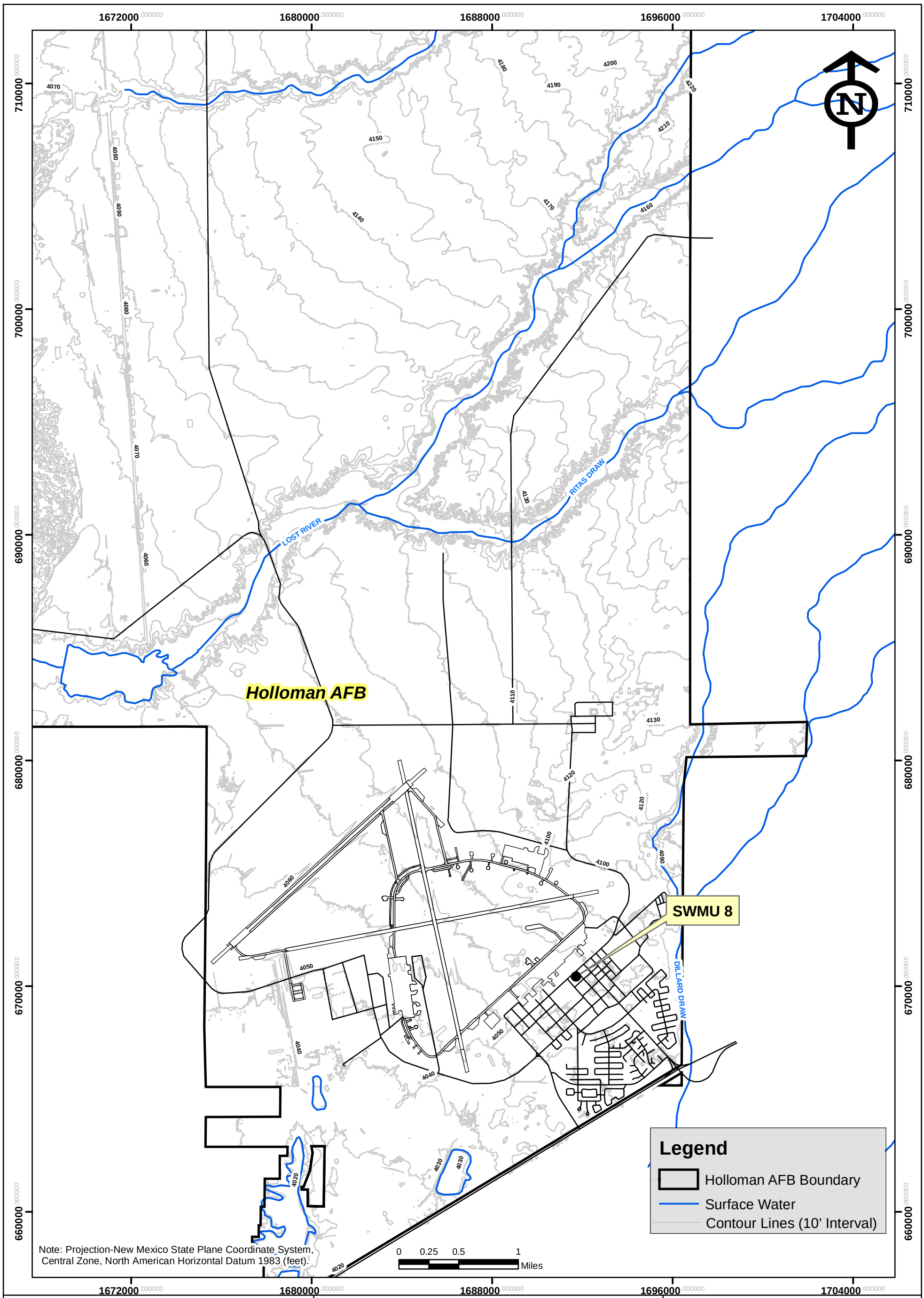
NATIONVIEW

SWMU 8 Voluntary Corrective Measures Soil Analytical Results Above NMED Action Levels (Bhate, 2008)

PROJECT NO.	SCALE	DATE	DRAWN BY:
8080014	1"=20'	12/3/10	cm
			DRAWING NO: fig_2-6

SWMU 8
RCRA Facility Investigation Report
Holloman AFB, New Mexico

Figure 2-6



Note: Projection-New Mexico State Plane Coordinate System, Central Zone, North American Horizontal Datum 1983 (feet).

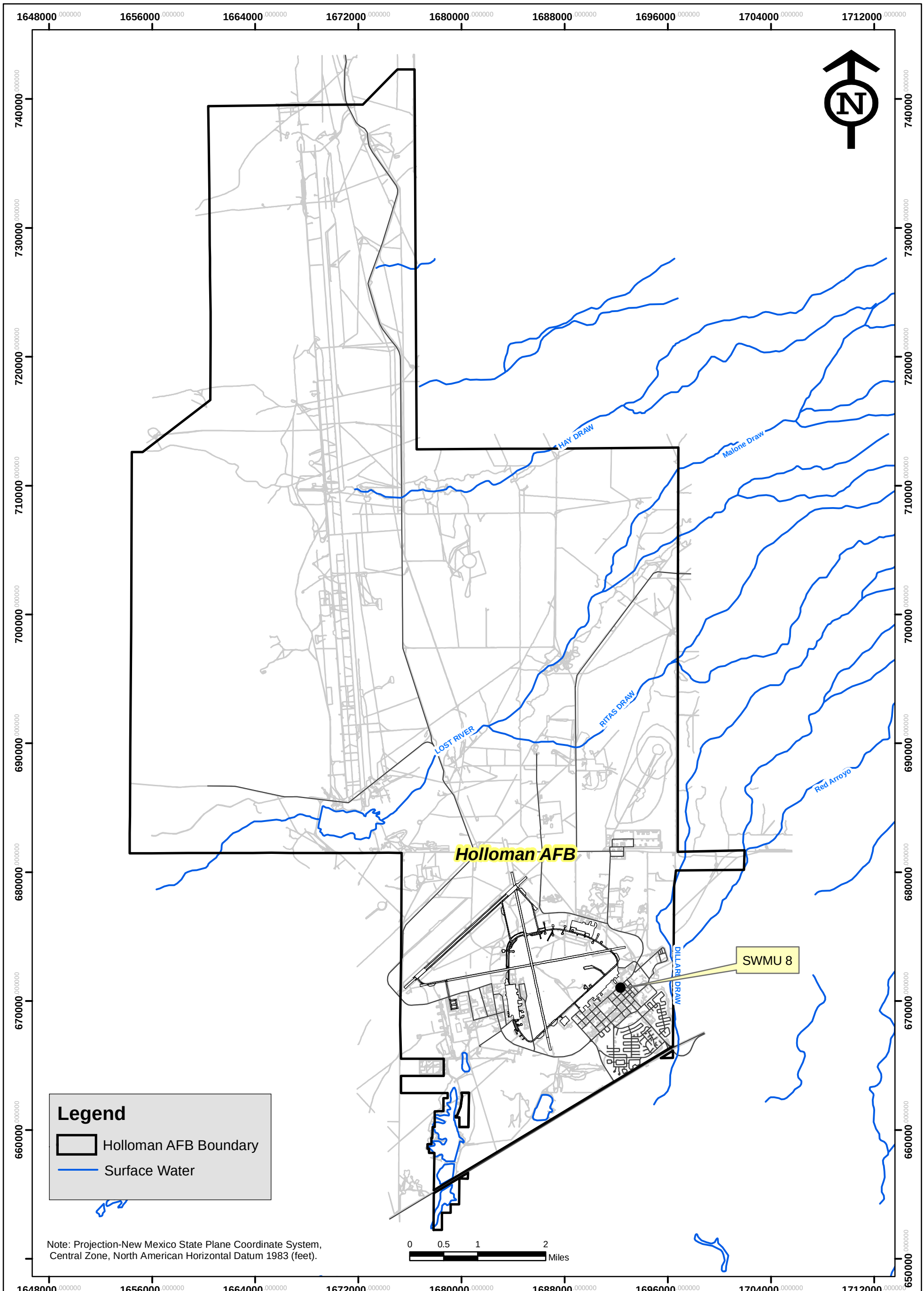
NATIONVIEW

Topographic Map
Holloman AFB, New Mexico

PROJECT NO.	SCALE	DATE	DRAWN BY: cm
8080014	1"=4000'	11/30/10	DRAWING NO: Figure 3-1

SWMU 8
RCRA Facility Investigation Report
Holloman AFB, New Mexico

Figure 3-1



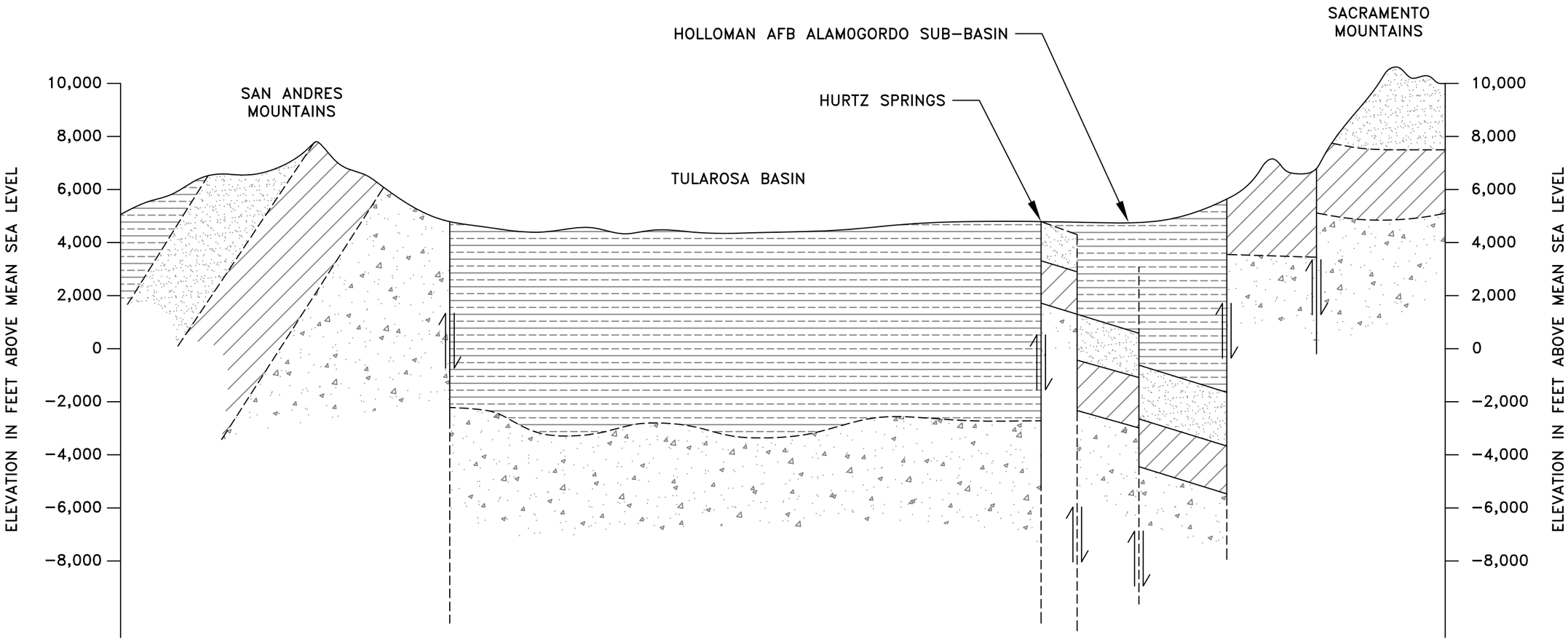
NATIONVIEW

Surface Drainages
Holloman AFB, New Mexico

PROJECT NO.	SCALE	DATE	DRAWN BY:	cm
8080014	1"=7000'	11/30/10	DRAWING NO:	Figure 3-2

SWMU 8
RCRA Facility Investigation Report
Holloman AFB, New Mexico

Figure 3-2



LEGEND:

- CENOZOIC ALLUVIUM AND LAKE DEPOSITS
- SEDIMENTARY ROCK OF PERMIAN AGE
- SEDIMENTARY ROCKS OF CAMBRIAN, ORDOVICIAN, SILURIAN, DEVONIAN, MISSISSIPPIAN AND PENNSYLVANIAN AGE
- INTRUSIVE ROCKS OF TERTIARY, CRETACEOUS OR PRECAMBRIAN AGE
- FAULT, ARROWS INDICATE RELATIVE MOVEMENT

0 5 10
SCALE IN MILES:

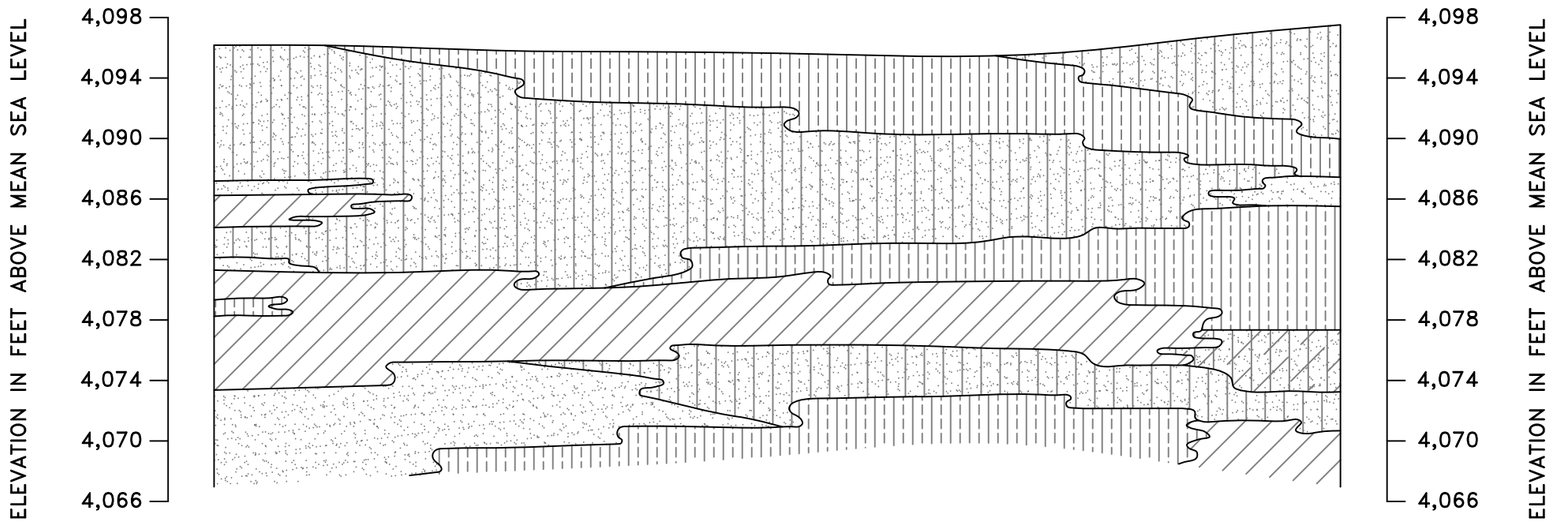
NOTES:
This information is depicted to provide visual aid within the context of this report and should not be used as a sole reference in precise dimensioning of features indicated. Please verify the location of all features including underground and aboveground utilities prior to conducting any subsurface exploration or site assessment.

SWMU 8
RCRA Facility Investigation Report
Holloman AFB, New Mexico
Figure 3-3

GENERALIZED GEOLOGIC CROSS SECTION OF THE TULAROSA BASIN

PROJECT NO.	SCALE	DATE	DRAWN BY:	DRAWING NO:
8080014	SHOWN	12/01/10	MRM	Figure 3-3

NATIONVIEW



LEGEND:

- CL AND CH – CLAY
- ML AND MH – SILT
- SM – SILTY SAND
- SM–SC – SILTY, CLAYEY SAND
- SP – SAND

NOTES:

This information is depicted to provide visual aid within the context of this report and should not be used as a sole reference in precise dimensioning of features indicated. Please verify the location of all features including underground and aboveground utilities prior to conducting any subsurface exploration or site assessment.

0' 100' 200'

SCALE IN FEET:

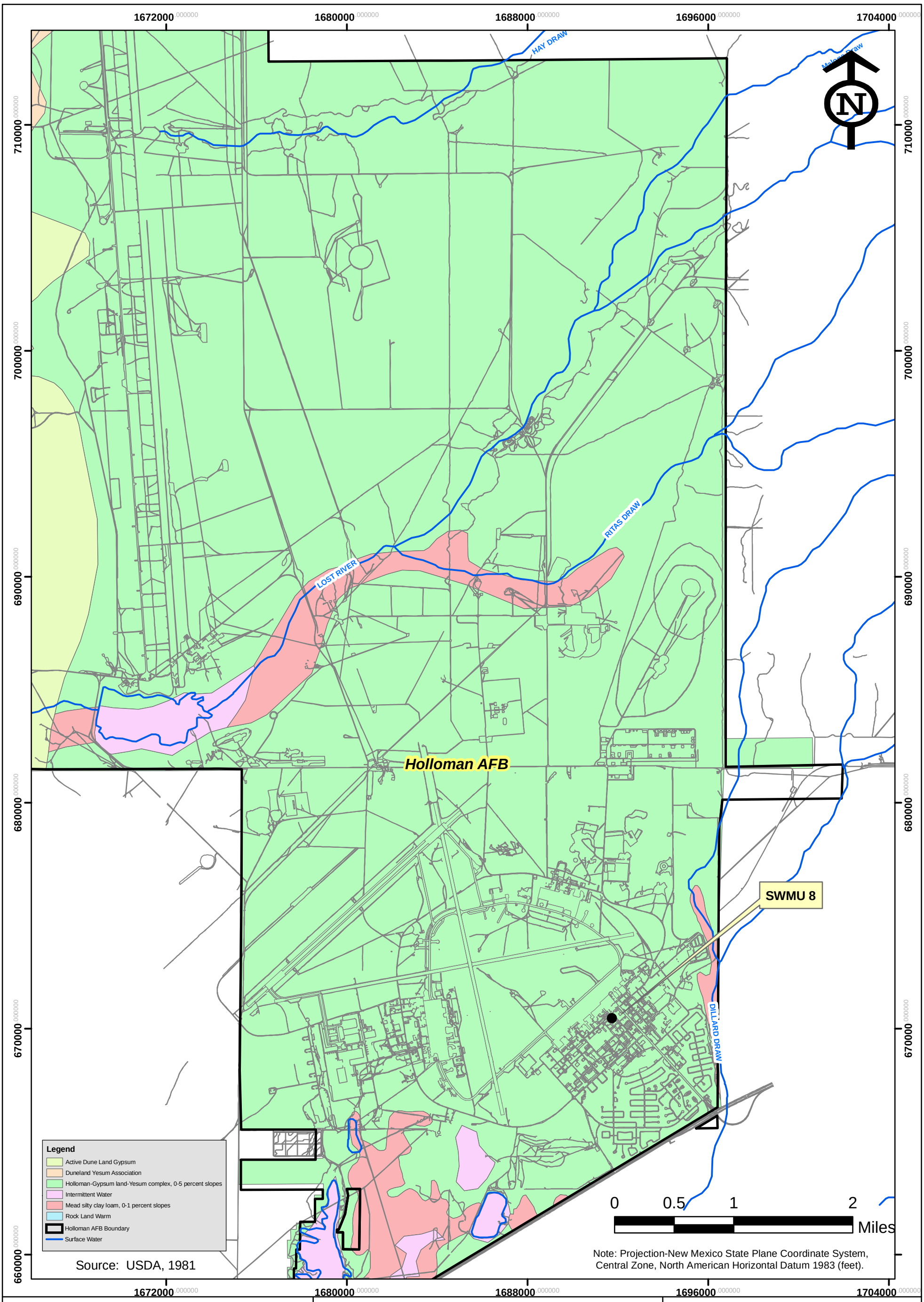
SWMU 8
RCRA Facility Investigation Report
Holloman AFB, New Mexico

Figure 3–4

GENERALIZED NEAR–SURFACE GEOLOGIC CROSS SECTION FOR HOLLOMAN AFB

PROJECT NO.	SCALE	DATE	DRAWN BY:	DRAWING NO:
8080014	SHOWN	12/01/10	MRM	Figure 3–4

NATIONVIEW



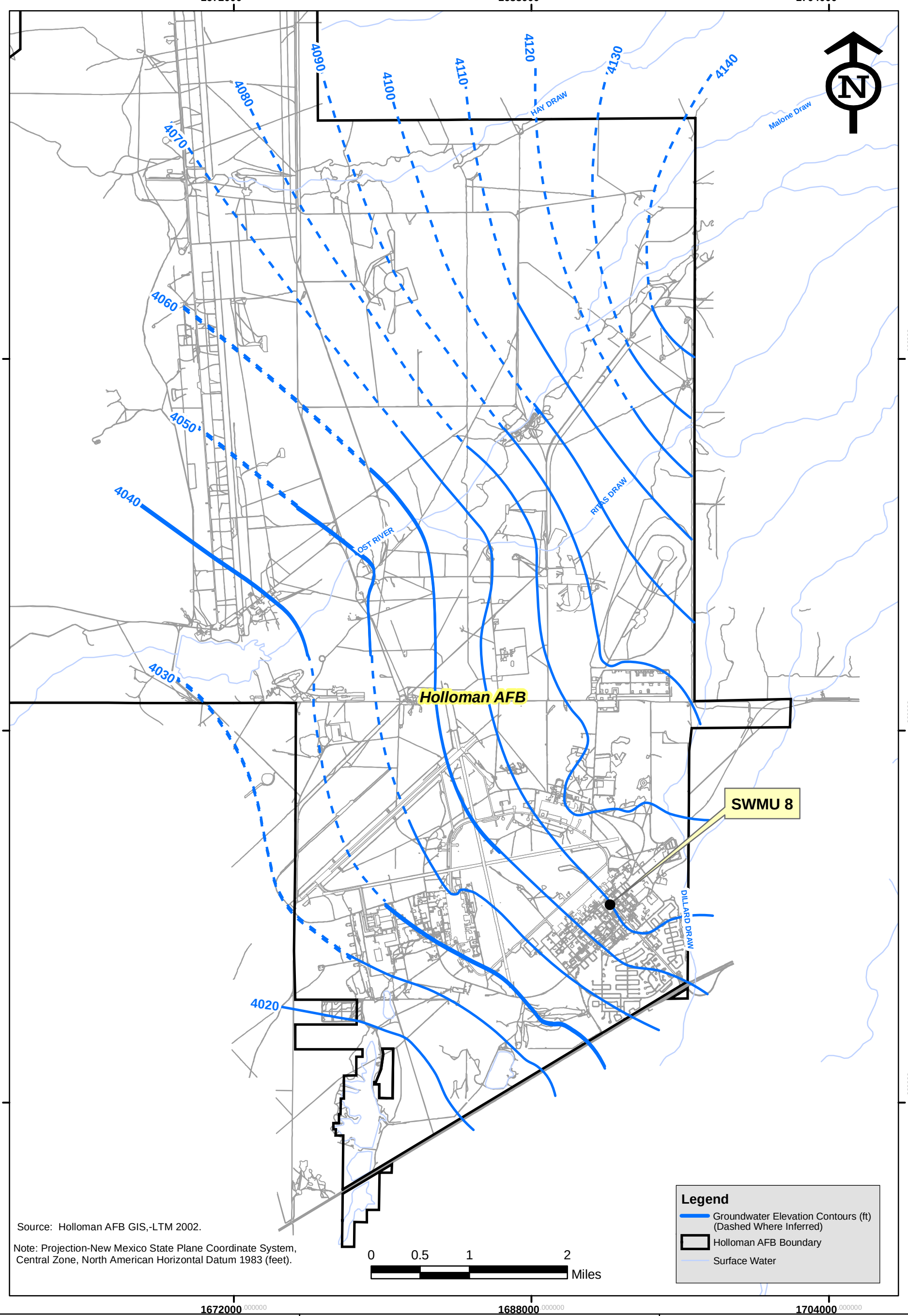
NATIONVIEW

Soil Map
Holloman AFB, New Mexico

PROJECT NO.	SCALE	DATE	DRAWN BY: cm
8080014	1"=4000'	11/30/10	DRAWING NO: Figure 3-5

SWMU 8
RCRA Facility Investigation Report
Holloman AFB, New Mexico

Figure 3-5



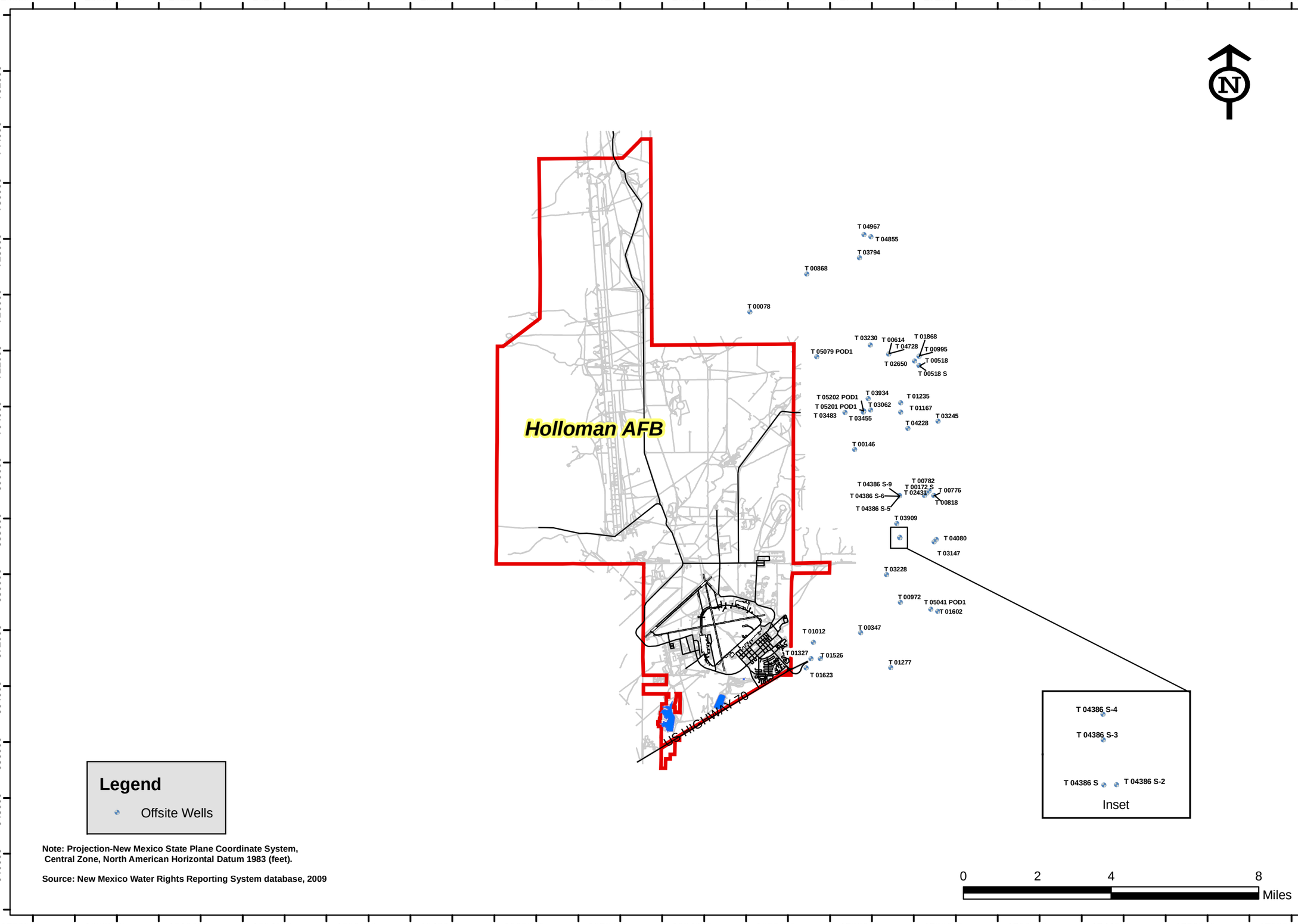
NATIONVIEW

Basewide Groundwater Contour Map
Holloman AFB, New Mexico

PROJECT NO.	SCALE	DATE	DRAWN BY: cm
8080014	1"=5000'	11/30/10	DRAWING NO: Figure 3-6

SWMU 8
RCRA Facility Investigation Report
Holloman AFB, New Mexico

Figure 3-6



Note: Projection-New Mexico State Plane Coordinate System, Central Zone, North American Horizontal Datum 1983 (feet).

Source: New Mexico Water Rights Reporting System database, 2009

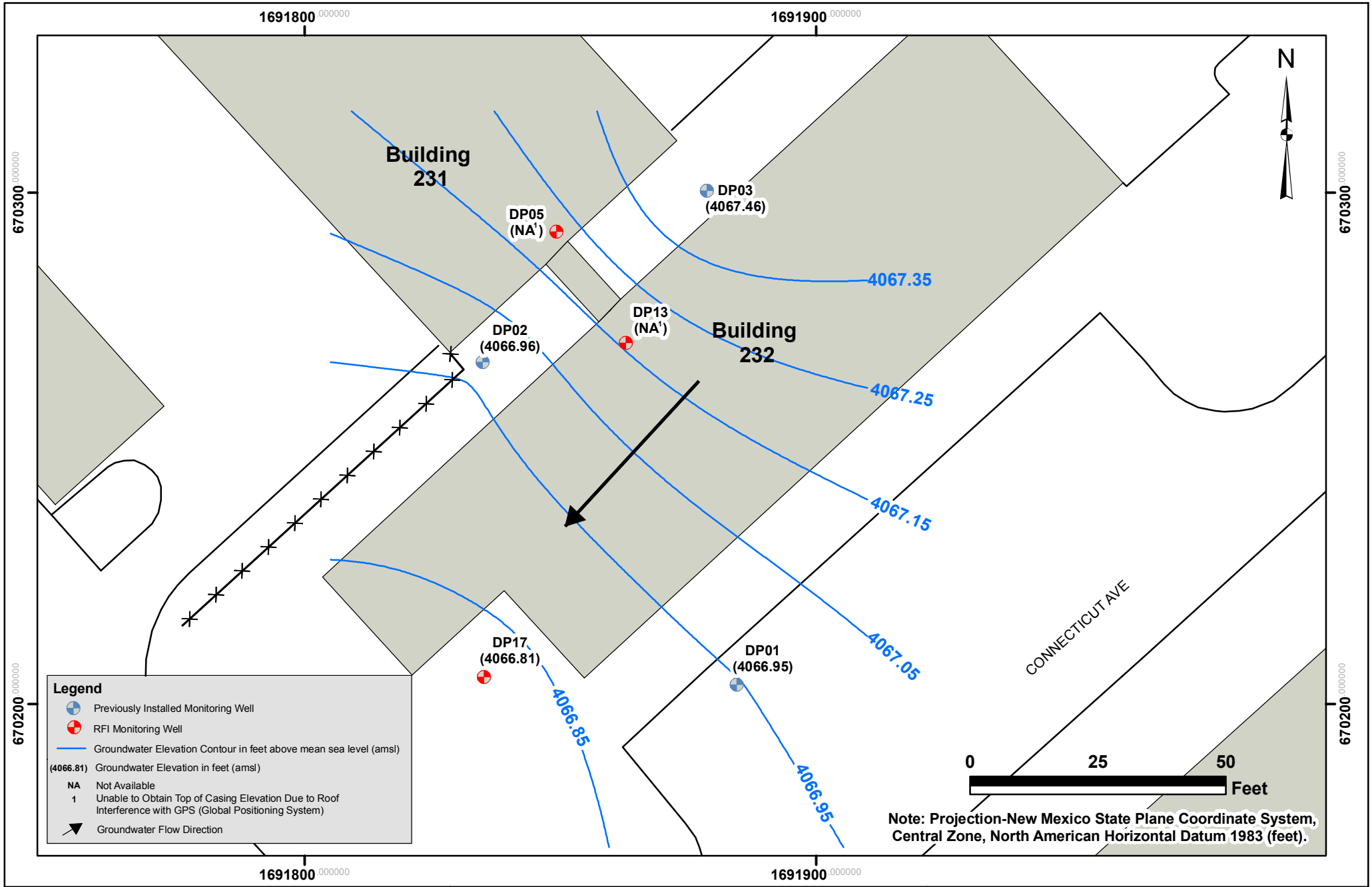
SWMU 8
RCRA Facility Investigation Report
Holloman AFB, New Mexico

Figure 3-7

Groundwater Wells Located Within a 4-Mile Radius of Holloman AFB

PROJECT NO.	SCALE	DATE	DRAWN BY:	DRAWING NO:
8080014	Shown	11/30/10	cm	Figure 3-7

NATIONVIEW



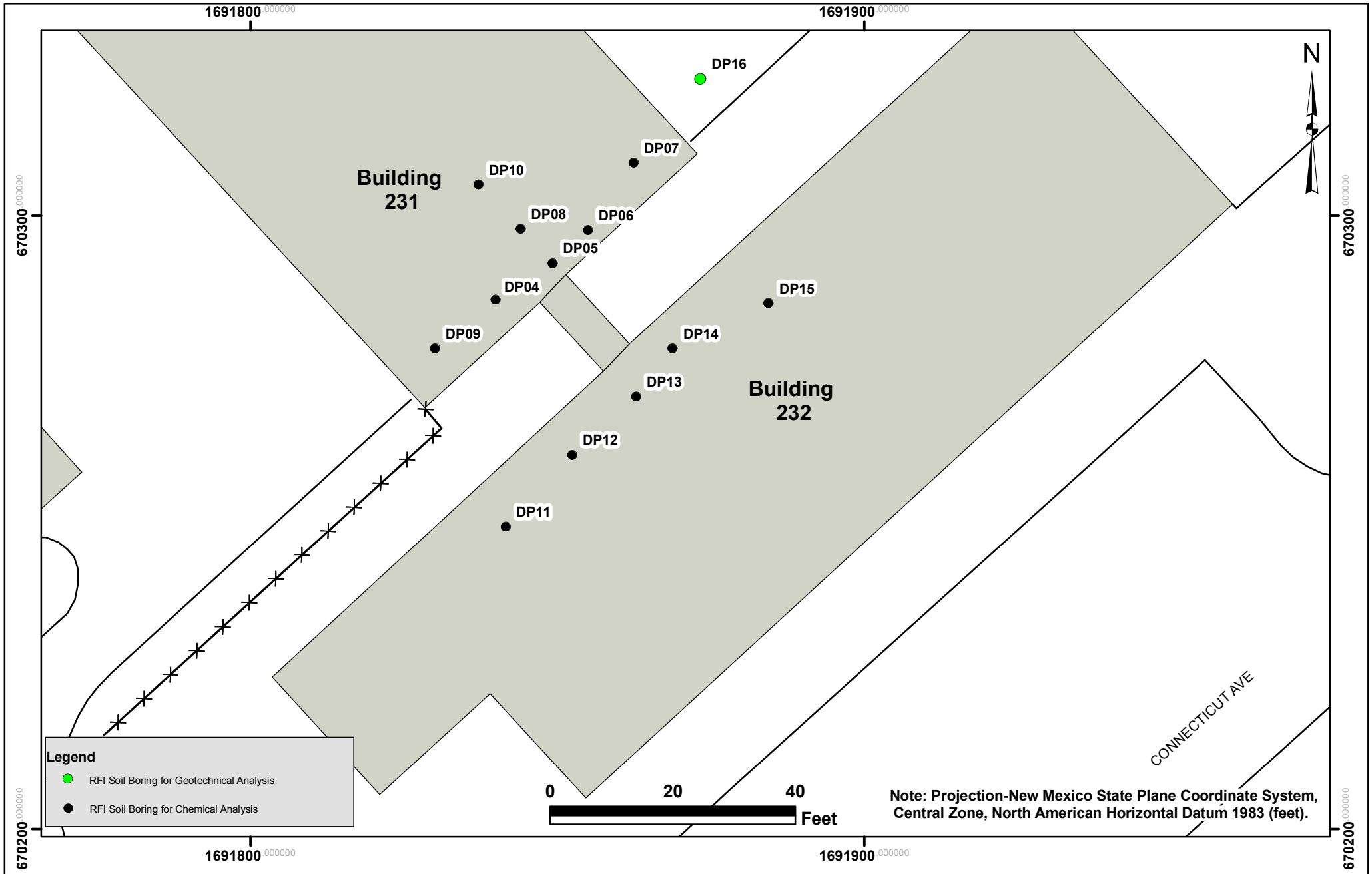
NATIONVIEW

SWMU 8
Potentiometric Surface Map
(December 2010)

PROJECT NO.	SCALE	DATE	DRAWN BY: cm
8080014	1"=25'	2/15/12	DRAWING NO: fig_3-8

SWMU 8
RCRA Facility Investigation Report
Holloman AFB, New Mexico

Figure 3-8



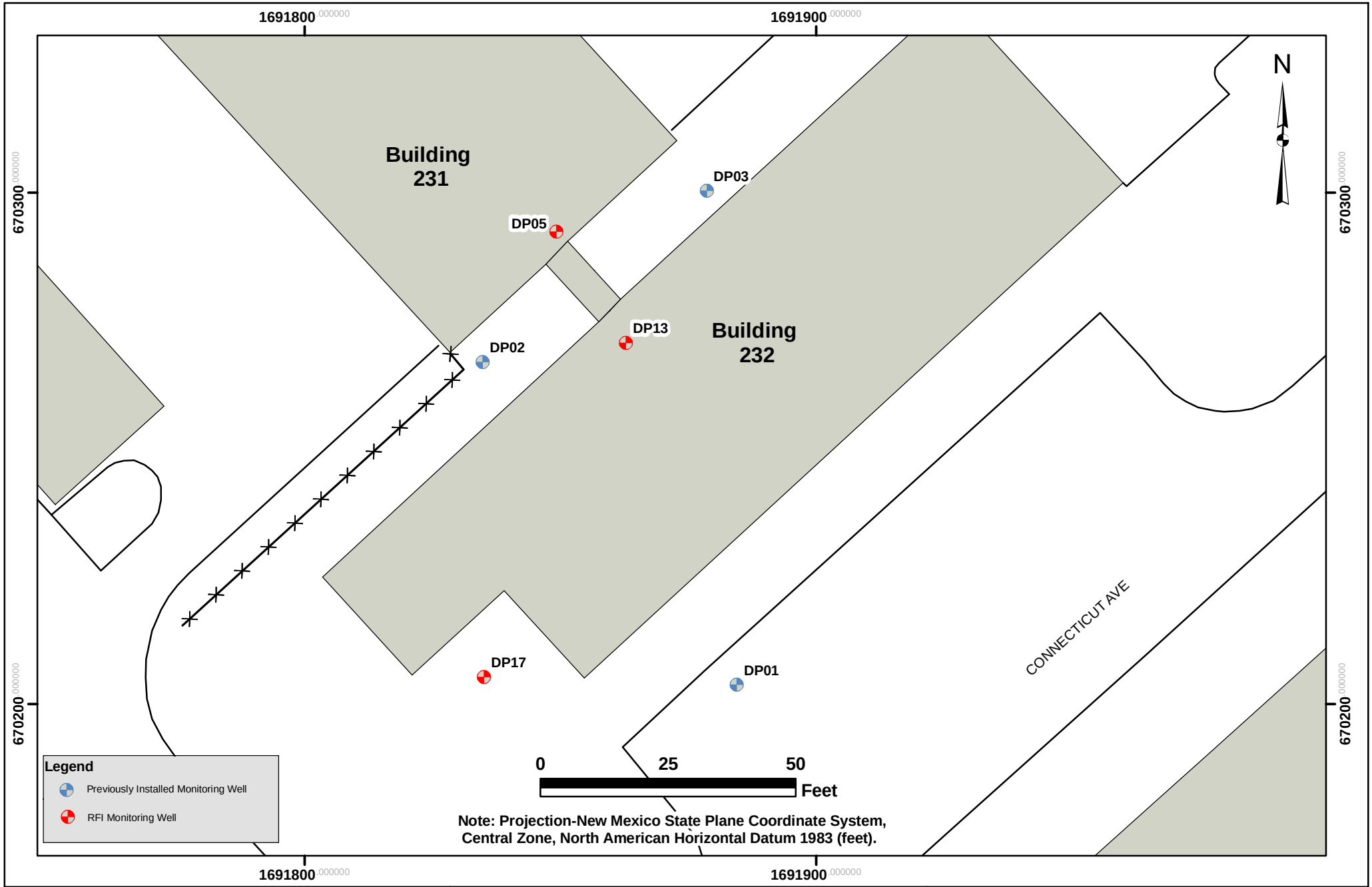
NATIONVIEW

SWMU 8
RFI Soil Boring Location Map

PROJECT NO.	SCALE	DATE	DRAWN BY:
8080014	1"=20'	2/14/12	cm
			DRAWING NO: fig_5-1

SWMU 8
RCRA Facility Investigation Report
Holloman AFB, New Mexico

Figure 5-1



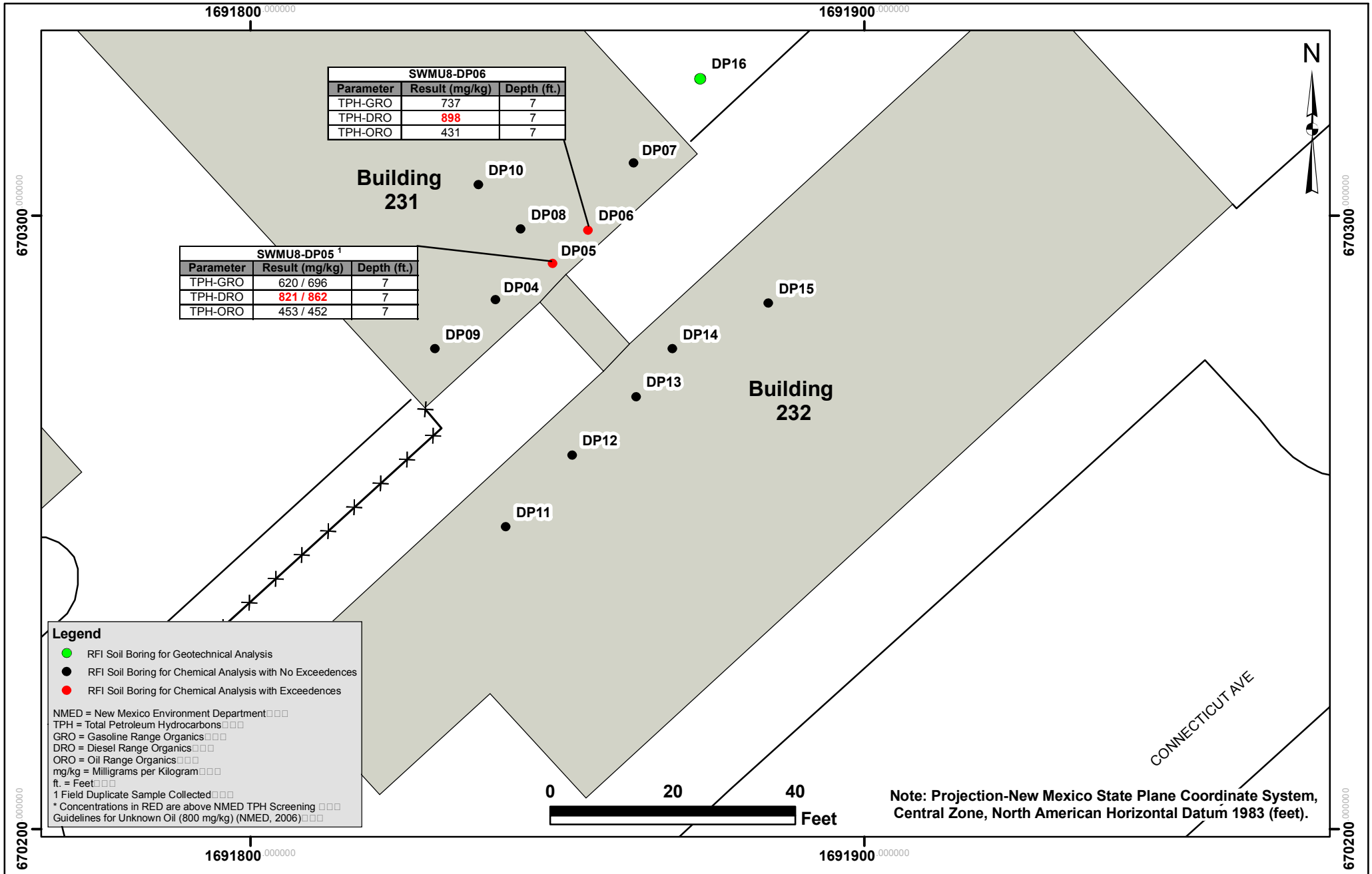
NATIONVIEW

SWMU 8
Monitoring Well Location Map

PROJECT NO.	SCALE	DATE	DRAWN BY: cm
8080014	1"=25'	1/5/11	DRAWING NO: fig_5-2

SWMU 8
RCRA Facility Investigation Report
Holloman AFB, New Mexico

Figure 5-2



SWMU8-DP06		
Parameter	Result (mg/kg)	Depth (ft.)
TPH-GRO	737	7
TPH-DRO	898	7
TPH-ORO	431	7

SWMU8-DP05 [1]		
Parameter	Result (mg/kg)	Depth (ft.)
TPH-GRO	620 / 696	7
TPH-DRO	821 / 862	7
TPH-ORO	453 / 452	7

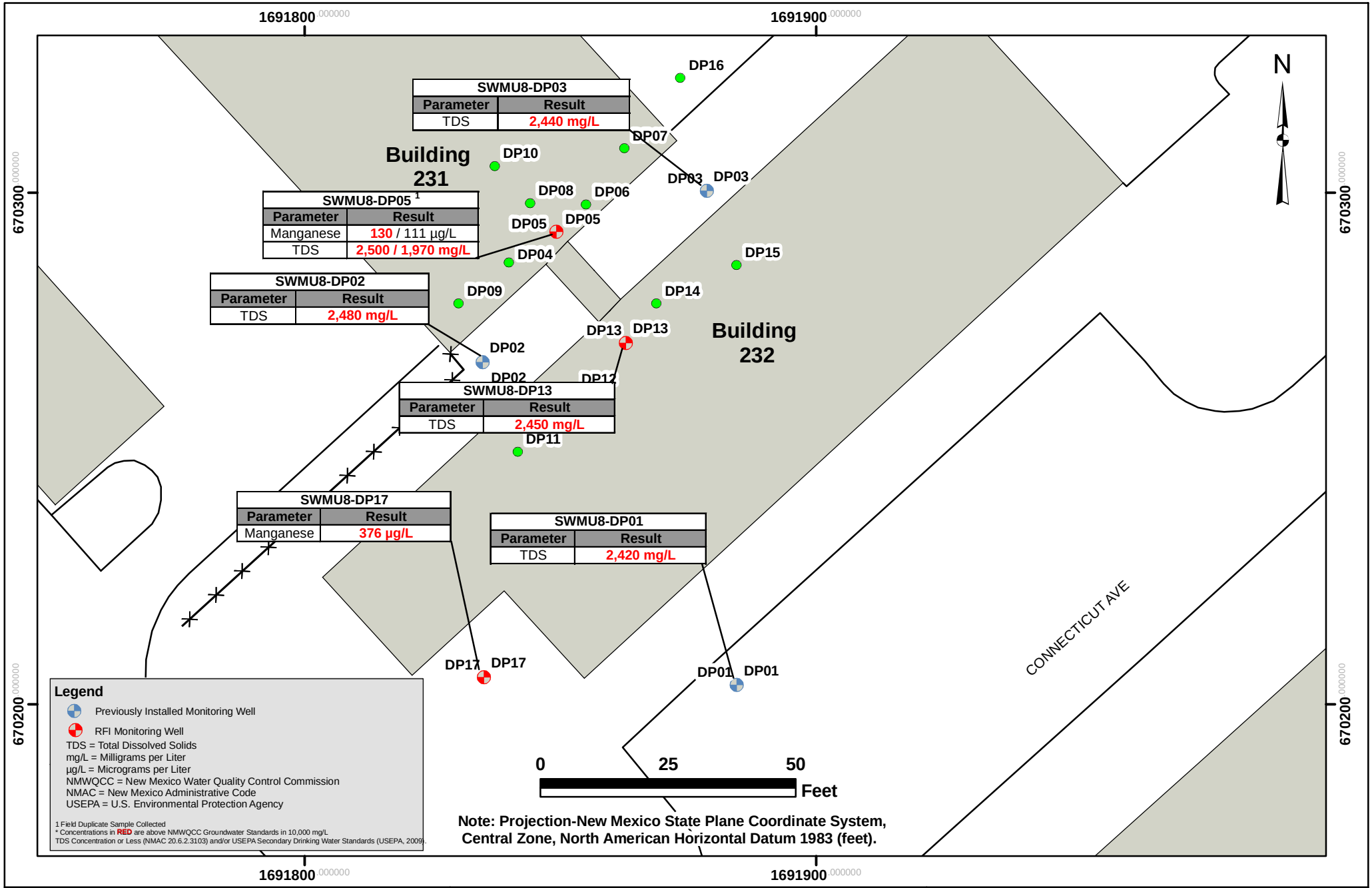
NATIONVIEW

SWMU 8
Soil Analytical Results Exceeding Action Levels (October 2010)

PROJECT NO.	SCALE	DATE	DRAWN BY:
8080014	1"=20'	2/15/12	cm
			DRAWING NO: fig_7-1

SWMU 8
RCRA Facility Investigation Report
Holloman AFB, New Mexico

Figure 7-1



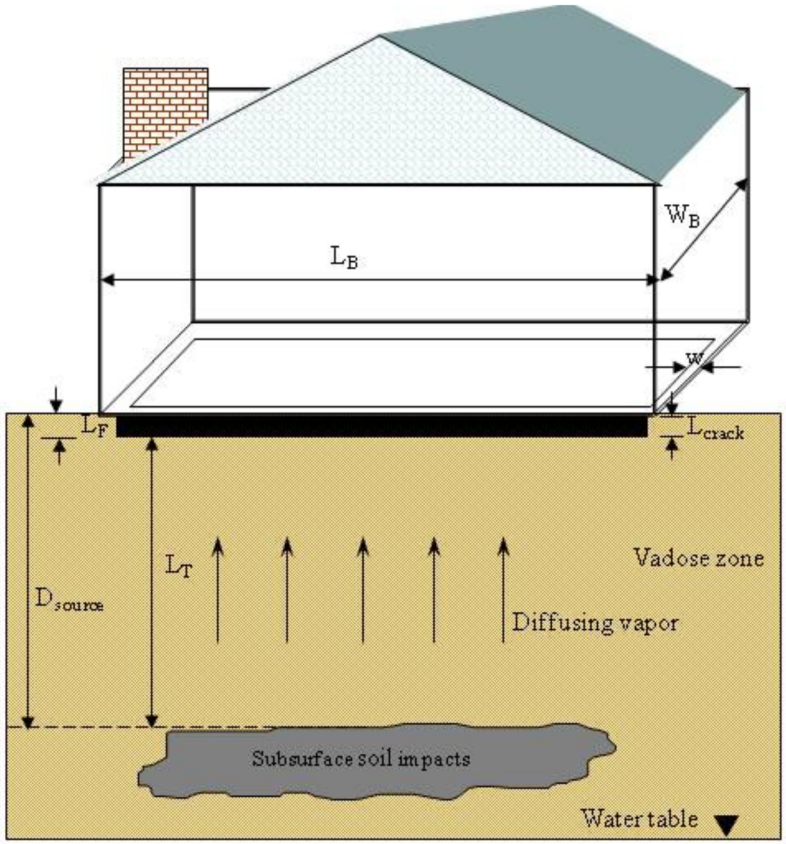
NATIONVIEW

SWMU 8
Groundwater Analytical Results
Exceeding Action Levels
(December 2010)

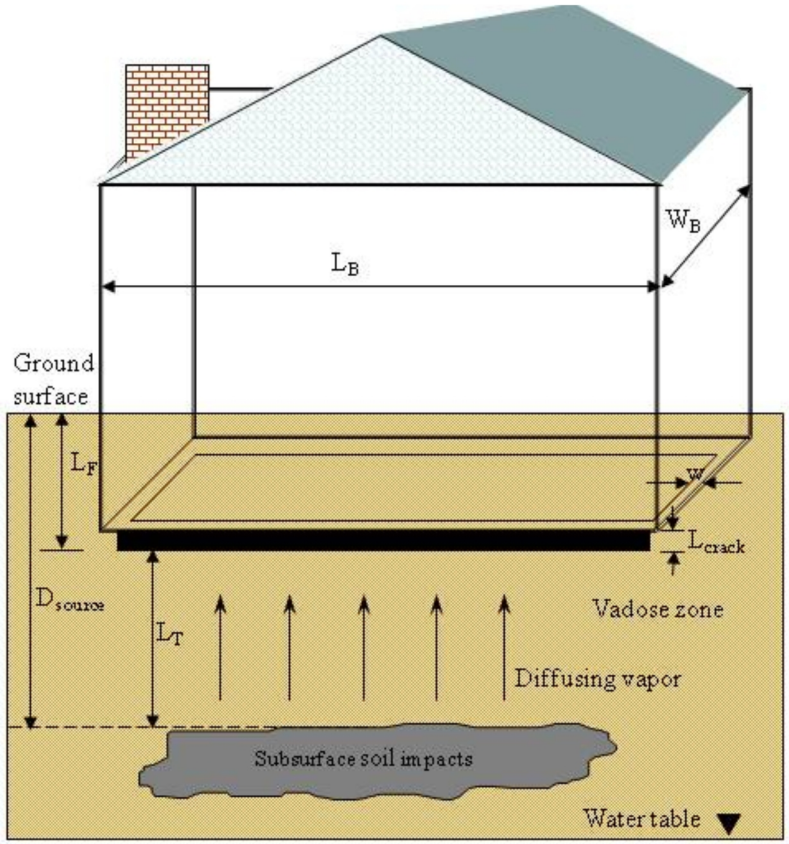
PROJECT NO.	SCALE	DATE	DRAWN BY:
8080014	1"=25'	2/15/12	cm
			DRAWING NO: fig_7-2

SWMU 8
RCRA Facility Investigation Report
Holloman AFB, New Mexico

Figure 7-2



Building with Slab-on-Grade



Building with Basement

where,

A_B	=	Surface area of enclosed space at or below grade (cm^2), $A_B = (L_B \times W_B) + (2 \times L_F \times L_B) + (2 \times L_F \times W_B)$
D_{source}	=	Distance from ground surface to top of contamination (cm)
L_B	=	Length of building (cm)
L_{crack}	=	Slab thickness (cm)
L_F	=	Distance from ground surface to bottom of enclosed space floor (cm)
L_T	=	Distance from bottom of slab to top of contamination (cm)
w	=	Floor-wall seam gap (cm)
W_B	=	Width of building (cm)

NATIONVIEW

SWMU 8
Schematic Diagrams for J & E Model

PROJECT NO.	SCALE	DATE	DRAWN BY: WB
8080014	N/A	02/16/2012	DRAWING NO: Figure 8-1

SWMU 8
RCRA Facility Investigation Report
Holloman AFB, New Mexico

Figure 8-1

ATTACHMENT A
NMED CORRESPONDENCE

NEW MEXICO
ENVIRONMENT DEPARTMENT

Hazardous Waste Bureau

2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303
Phone (505) 476-6000 Fax (505) 476-6030
www.nmenv.state.nm.us

BILL RICHARDSON
Governor

DIANE DENISH
Lieutenant Governor

RON CURRY
Secretary

SARAH COTRELL
Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

July 19, 2010

07-22-2010 A09:08

Mr. David Scruggs, Chief
Environmental Restoration Program
49 CES/CEVR
550 Tabosa Ave.
Holloman AFB, NM 88330-8458

SUBJECT: APPROVAL WITH MODIFICATIONS: RESPONSE TO THE NOTICE OF DISAPPROVAL, RCRA FACILITY INVESTIGATION WORK PLAN, SWMU 8, APRIL 16, 2010
HOLLOMAN AIR FORCE BASE, EPA ID# NM6572124422
HWB-HAFB-09-001

Dear Mr. Scruggs:

The New Mexico Environment Department (NMED) has reviewed Holloman Air Force Base's (the Permittee's) April 16, 2010 submittal of the response to the Notice of Disapproval dated August 31, 2009. NMED hereby concurs with the responses and approves the final work plan for the completion of the RCRA Facility Investigation at SWMU 8.

If you have any questions regarding this matter, please contact David Strasser of my staff at (505) 222-9526.

Sincerely,

John E. Kieling
Program Manager
Permits Management Program
Hazardous Waste Bureau

State of New Mexico
ENVIRONMENT DEPARTMENT
Hazardous Waste Bureau
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303
Telephone (505) 428-2500
Fax (505) 428-2567
www.nmenv.state.nm.us

BILL RICHARDSON
GOVERNOR

RON CURRY
SECRETARY

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

April 14, 2006

Ms. Debbie Hartell
Chief
Environmental Flight
49 CES/CEV
550 Tabosa Ave.
Holloman AFB, NM 88330-8458

SUBJECT: NOTICE OF DEFICIENCY: VOLUNTARY CORRECTIVE MEASURES WORK PLAN, SWMU 8 SOIL REMEDIATION, DECEMBER 2005 HOLLOMAN AIR FORCE BASE, EPA ID# NM6572124422 HWB-HAFB-06-002

Dear Ms. Hartell:

The New Mexico Environment Department (NMED) has reviewed the Holloman Air Force Base (HAFB) document entitled "Voluntary Corrective Measures Work Plan, SWMU 8 Soil Remediation". The following are the deficiencies that HAFB (the Permittee) is required to address before the Work Plan can be approved.

1. <u>General Comment</u>

Based upon review of the subject Work Plan, which included review of applicable portions of the previous Phase I and Phase II remediation reports, the extent of soil and ground water contamination at this site has not been adequately characterized. Therefore, the Permittee is required to conduct additional site characterization activities prior to Phase III soil excavation, as follows:

a) Figure 5 of the Work Plan shows the proposed boundary of the Phase III excavation. However, there is no indication as to how the southwest limit of the excavation was determined, as no soil sampling was conducted in this area. Therefore, the Permittee is required to submit a soil sampling plan as part of the revised Work Plan that will be

required as a result of this Notice. This plan should include a sufficient number of samples to adequately characterize the remaining soil contamination at this site that is not underneath the adjacent structures. NMED understands that soil and ground water conditions under the adjacent structures will be evaluated under a separate Work Plan addendum after the Phase III excavation and sampling is conducted. Soils should be analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), total petroleum hydrocarbons (TPH), polychlorinated biphenyls (PCBs), and target analyte list (TAL) metals (see Comment No. 6).

b) The Work Plan indicates that ground water at SWMU 8 is found at approximately 10 feet below ground surface. The Work Plan states that contaminated soils will be removed to approximately one (1) foot below the encountered ground water table. Contaminated soil is therefore in contact with ground water. The two previous remediation activities did not include ground water sampling and the proposed VCM does not include ground water sampling.

Therefore, the Permittee is required to submit a ground water sampling plan as part of the revised Work Plan that will be required as a result of this Notice. This shall be done prior to performing the Phase III excavation. The plan must include, at a minimum, the installation of two monitoring wells at the site, which can be temporary wells. One well should be installed within the boundary of the Phase II excavation and the other within the boundary of the proposed Phase III excavation. Ground water should be analyzed for VOCs, SVOCs, TPH, PCBs, TAL Metals and total dissolved solids (TDS).

2. **General Comment**

The Permittee is required to submit documentation regarding the Method Detection Limits of all soil and ground water analytes.

3. **Page 3-1, Section 3, Excavation Procedures, 1st Paragraph, 2nd Sentence**

This sentence states that soils contaminated by hydrocarbons at levels exceeding 880 mg/kg TPH will be removed. Based upon the description of the material released from the oil and water separator provided in Section 1.1.2, which included "oils, detergents and fuels" from an auto hobby shop, these materials are classified as "unknown oil". In accordance with the NMED TPH Screening Guidelines (November 2005), the residential TPH screening guideline for unknown oil is 800 mg/kg. Therefore, the Permittee is required to utilize the 800 mg/kg screening level. All sections of the Work Plan specifying TPH screening levels must be revised to reflect this change.

4. **Page 3-4, Section 3.3.3.1, Soil Screening, 1st Paragraph, 5th Sentence**

This sentence states that soils demonstrating a concentration below 880 (to be 800) mg/kg TPH will be stockpiled for backfill. This sentence must be revised to also state that soil used for backfill shall not have TPH hazardous constituent (e.g., VOCs, SVOCs) concentrations in excess of NMED residential soil screening levels.

5. **Page 3-5, Section 3.3.3.3, Confirmation Soil Sampling, Page 4-2, Section 4.2, Excavation Confirmation Sampling, and Table 3-1**

The Work Plan must be revised to show that, in addition to collecting confirmation samples at a frequency of one per 20 linear feet per sidewall and one per sidewall, a minimum of two soil samples shall be collected from any sidewall greater than 18 feet in length. Also, confirmatory sampling shall be biased to areas with the greatest potential for contamination.

6. **Page 4-1, Section 4.1.3, Laboratory Validation, 1st Sentence**

This sentence indicates that a minimum of one sample per site will be subject to laboratory validation. The Permittee shall be required to collect a minimum of two samples from suspect soil for laboratory validation. In addition, the November 2005 NMED TPH Screening Guidelines require that for sites with unknown oil sources, soil analysis must include VOCs, SVOCs, metals (TAL), and PCBs, as well as TPH. Therefore, the Permittee must revise the soil sampling plan to include laboratory analysis of soils for these parameters.

7. **Table 3-1, Sampling Plan and Related Sections**

Table 3-1 includes a column showing the "Frequency" of sample collection. NMED requires that the following changes be made regarding frequency to Table 3-1 and related sections:

a) During "Field Screening" of suspect soils for field confirmatory purposes, sample every 50 cubic yards (cy), not 100, and for laboratory validation purposes sample every 100 cy, not 300.

b) Sample the "Stock Pile" for backfill characterization every 200 cy, not 500.

8. **Figures 3, 4, and 5**

NMED requires that all site figures include a coordinate system (e.g., UTM, latitude/ longitude) and the boundaries of the site must be shown on the figures. Coordinates of

site boundaries must also be shown. High accuracy (+/-3 ft) GPS coordinates are acceptable. The Permittee is required to resubmit the subject figures satisfying these requirements.

Please respond to this Notice of Deficiency by June 15, 2006. If you have any questions regarding this letter, please contact David Strasser of my staff at (505) 222-9526.

Sincerely,

James P. Bearzi
Chief
Hazardous Waste Bureau

JPB:dcs

cc: J. Kieling, NMED HWB
W. Moats, NMED HWB
C. Amindyas, NMED HWB
D. Strasser, NMED HWB
D. Tellez, EPA, Region 6 (6PD-F)
D. Griffin, HAFB
File: Reading and HAFB 2006

bhate associates
ENGINEERING, SCIENCE AND CONSTRUCTION

445 Union Blvd, Suite 129, Lakewood, CO 80228
303-815-1762 main 303-815-1763 fax www.bhate.com

RESPONSIVENESS – INTEGRITY - TEAMWORK

June 12, 2006

New Mexico Environment Department
Hazardous Waste Bureau
Permits Management Program
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505-6303

Attention: Mr. John E. Kieling
Program Manager

Subject: Response to Notice of Deficiency: Voluntary Corrective Measures Work Plan, SWMU 8 Soil Remediation, December 2005, Holloman Air Force Base, EPA ID# NM6572124422, HWB-HAFB-06-002.

Dear Mr. Kieling,

Enclosed please find tabulated responses to the subject Notice of Deficiency (HWB-HAFB-06-002). Upon verbal or written concurrence from NMED, Bhate will submit the changed pages to NMED.

If you have any questions, please feel free to call me at 303-815-1762.

Sincerely,
Bhate Environmental Associates, Inc.

Frank Gardner, PG
Program Manager

cc w/ encl: C. Amindyas, NMED HWB
D. Strasser, NMED HWB
D. Griffin, HAFB

Voluntary Corrective Measures Work Plan SWMU 08 Soil Remediation, December 2005 Holloman AFB				
Comment No.	Section	Page	Comment	Response
Author	David Strasser		Date of Comments: April 14, 2006, Notice of Deficiency	Date of Response: June 12, 2006
1	General		Based upon review of the subject Work Plan, which included review of applicable portions of the previous Phase I and Phase II remediation reports, the extent of soil and groundwater contamination at this site has not been adequately characterized. Therefore, the Permittee is required to conduct additional site characterization activities prior to Phase III soil excavation as follows: a) Figure 5 of the Work Plan shows the proposed boundary of the Phase III excavation. However, there is no indication as to how the southwest limit of the excavation was determined, as no soil sampling was conducted in this area. Therefore, the Permittee is required to submit a soil sampling plan as part of the revised Work Plan that will be required as a result of this Notice. This plan should include a sufficient number of samples to adequately characterize the remaining soil contamination at this site that is not underneath adjacent structures. NMED understands that soil and groundwater conditions under the adjacent structures will be evaluated under a separate Work Plan addendum after the Phase III excavation and sampling is conducted. Soils should be analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), total petroleum hydrocarbons, (TPH), polychlorinated biphenyls (PCBSs), and target analyte list (TAL) metals (see Comment No. 6) b) The Work Plan indicates that groundwater at SWMU 8 is found at approximately 10 feet below ground surface. The Work Plan indicates that contaminated soils will be removed to approximately on (1) foot below the encountered ground water table. Contaminated soil is therefore in contact with ground water. The two previous remediation activities did not include ground water sampling and the proposed VCM does	Agreed. Delineation of soil and groundwater contamination at SWMU 08 was carried out in May 22, 2006, using guidance provided in the May 2, 2006, Memorandum Work Plan. The latter was provided and approved by NMED prior to the performance of the characterization. In summary, three groundwater monitoring wells were installed to delineate soil and groundwater conditions within: 1. the formerly excavated area, 2. the area proposed for excavation in the SWMU 08 Soil Remediation Work Plan and, 3. the immediate downgradient area south of Building 232. Although analytical results for soil and groundwater samples collected are not available at this time, they will be used to guide the soil excavation proposed in this work plan. The analyses requested in the NOD were performed on the samples collected on May 22, 2006. Well locations are provided in Figure 1, Attachment 1.

Voluntary Corrective Measures Work Plan SWMU 08 Soil Remediation, December 2005 Holloman AFB				
Comment No.	Section	Page	Comment	Response
Author	David Strasser		Date of Comments: April 14, 2006, Notice of Deficiency	Date of Response: June 12, 2006
			not include ground water sampling. Therefore, the Permittee is required to submit a ground water sampling plan as part of the revised Work Plan that will be required as a result of this Notice. This shall be done prior to performing Phase III excavation. The plan must include, at a minimum, installation of two monitoring wells at the site, which can be temporary wells. One well should be installed within the boundary of the Phase II excavation and the other within the boundary of the proposed Phase III excavation. Ground water should be analyzed for VOCs, SVOCs, TPH, PCBs, TAL Metals and total dissolved solids (TDS).	
2	General		The Permittee is required to submit documentation regarding the Method Detection Limits of all soil and ground water analytes.	Agreed. Table 4-3 has been changed to represent a summary of laboratory quality control criteria to include the method detection limits.
3	Section 3, 1st Para, 2nd sentence	3-1	This sentence states that soils contaminated by hydrocarbons at levels exceeding 880 mg/kg TPH will be removed. Based upon the description of the material released form the oil and water separator provided in Section 1.1.2, which included "oils, detergents and fuels" from an auto hobby shop, these materials are classified as "unknown oil". In accordance with NMED TPH Screening Guidelines (November 2005), the residential TPH screening guideline for unknown oil is 800 mg/kg. Therefore, the Permittee is required to utilize the 800 mg/kg screening level. All sections of the Work Plan specifying TPH screening levels must be revised to reflect this change.	Agreed. The 800 mg/kg TPH standard will be used as the screening level and all relevant sections of the Work Plan will be modified to reflect this change.
4	Section 3.3.3.1, 1st Para, 5th sentence	3-4	This sentence states that soils demonstrating a concentration below 880 (to be 800) mg/kg TPH will be stockpiled for backfill. This sentence must be revised to also state that soil used for backfill shall not have TPH hazardous constituent (e.g. VOCs, SVOC) concentrations in excess of NMED residential screening levels.	The following sentence has been added to the discussion: All soil stockpiled for backfill will undergo laboratory analysis to verify no TPH hazardous constituents (e.g., VOCs, SVOCs) in excess of NMED residential SSLs are present.

Voluntary Corrective Measures Work Plan SWMU 08 Soil Remediation, December 2005 Holloman AFB				
Comment No.	Section	Page	Comment	Response
Author	David Strasser		Date of Comments: April 14, 2006, Notice of Deficiency	Date of Response: June 12, 2006
5	Sections 3.3.3.3 & 4.2 & Table 3-1	3-5 & 4-2	The Work Plan must be revised to show that, in addition to collecting confirmation samples at a frequency of one per 20 linear feet per sidewall, a minimum of two soil samples shall be collected from any sidewall greater than 18 feet in length. Also, confirmatory sampling shall be biased to areas with the greatest potential for contamination.	The affected pages (3-5, 4-2 and Table 3-1) have been modified as follows: Excavation confirmation samples will be collected at a frequency of 2 per 18 linear feet (ln ft) for each side wall at mid-depth of the contamination zone. At a minimum, 1 sample per side wall will be collected for side walls less than 18 ln ft. Also, confirmatory sampling shall be biased to areas with the greatest potential for contamination.
6	Section 4.1.3, 1st sentence	4-2	This sentence indicates that a minimum of one sample per site will be subject to laboratory validation. The Permittee shall be required to collect a minimum of two samples from suspect soil for laboratory validation. In addition, the November 2005 NMED TPH Screening Guidelines require that for sites with unknown soil sources, soil analysis must include VOCs, SVOCs, metals (TAL), and PCBs as well as TPH. Therefore, the Permittee must revise the soil sampling plan to include laboratory anlaysis of soils for these parameters.	Section 4 of the work plan has been streamlined to resonate with the excavation process outlined in Section 3. Essentially, all suspect soil will be treated as contaminated soil and taken to the FT-31 Land farm for treatment. Therefore, sampling of suspect soils is no longer applicable. Table 3-1 has been changed accordingly.
7	Table 3-1		Table 3-1 includes a column showing the "Frequency" of sample collection. NMED requires that the following changes be made regarding frequency to Table 3-1 and related sections: a) During "Field Screening" of suspect soils for field confirmatory purposes, sample every 50 cubic yards (cy), not 100, and for laboratory validation purposes sample every 100 cy, not 300. b) Sample the "Stock Pile" for backfill characterization every 200 cy, not 500.	The requested changes have been made to Table 3-1 with the exception of comment 7a as all suspect soil will be handled as though contaminated and transported to the FT-31 Land farm for treatment. Table 3-1 has been changed to remove all references to suspect soils.
8	Figures 3, 4, and 5		NMED requires that all site figures include a coordinate system (e.g., UTM, latitude/longitude) and the boundaries of the site must be shown on the figures. Coordinates of site boundaries must also be shown. High accuracy (+/- 3 ft) GPS coordinates are acceptable. The	Agreed. Site coordinate information will be added to the indicated figures.

Voluntary Corrective Measures Work Plan SWMU 08 Soil Remediation, December 2005 Holloman AFB				
Comment No.	Section	Page	Comment	Response
Author	David Strasser		Date of Comments: April 14, 2006, Notice of Deficiency	Date of Response: June 12, 2006
			Permittee is required to resubmit the subject figures satisfying these requirements.	
			Response to NOD due by June 15, 2006.	

State of New Mexico
ENVIRONMENT DEPARTMENT
Hazardous Waste Bureau
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303
Telephone (505) 428-2500
Fax (505) 428-2567
www.nmenv.state.nm.us

BILL RICHARDSON
GOVERNOR

RON CURRY
SECRETARY

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

October 12, 2006

REC'D OCT 17 2006

Ms. Debbie Hartell, Chief
Environmental Flight
49 CES/CEV
550 Tabosa Ave.
Holloman AFB, NM 88330-8458

RE: APPROVAL OF THE VOLUNTARY CORRECTIVE MEASURES WORK PLAN, SWMU 8 SOIL REMEDIATION, DECEMBER 2005
HOLLOMAN AIR FORCE BASE, EPA ID# NM6572124422
HWB-HAFB-06-002

Dear Ms. Hartell:

The New Mexico Environment Department (**NMED**) has reviewed Holloman Air Force Base's (the **Permittee's**) June 12, 2006 response to NMED's April 14, 2006 Notice of Deficiency for the SWMU 8 Voluntary Corrective Measures Work Plan, dated December 2005, for the removal of contaminated soils. The NMED has also reviewed the Technical Memorandum Letter Report for SWMU 8 Soil and Groundwater Sampling and Analysis (**Letter Report**), dated August 2006, which was required to be submitted in response to the Notice of Deficiency.

The NMED hereby concurs with the Response and approves the Work Plan for implementation. The Permittee is now required to submit the changed pages, as indicated in the response, for incorporation into the Work Plan. The NMED also concurs that the soil and groundwater sampling results presented in the Letter Report indicate that the extent of contamination has been adequately defined.

If you have any questions regarding this matter, please contact David Strasser of my staff at (505) 222-9526.

Sincerely,

John E. Kieling
Manager
Permits Management Program

JEK:dcs

cc: J. Bearzi, NMED HWB
W. Moats, NMED HWB
C. Amindyas, NMED HWB
D. Strasser, NMED HWB
D. Tellez, EPA Region 6 (6PD-F)
G. Fish, HAFB
File: HAFB 2006 and Reading
HWB-HAFB-06-002

NEW MEXICO
ENVIRONMENT DEPARTMENT

Hazardous Waste Bureau

2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303
Phone (505) 476-6000 Fax (505) 476-6030
www.nmenv.state.nm.us

BILL RICHARDSON
Governor

DIANE DENISH
Lieutenant Governor

RON CURRY
Secretary

JON GOLDSTEIN
Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

December 11, 2008

12-16-2008 A08:58

Mr. David Scruggs, Chief
Environmental Restoration Program
49 CES/CEVR
550 Tabosa Ave.
Holloman AFB, NM 88330-8458

SUBJECT: APPROVAL OF THE FINAL SUBMITTAL: VOLUNTARY CORRECTIVE MEASURES WORK PLAN, SWMU 8 SOIL REMEDIATION, OCTOBER 21, 2008 HOLLOMAN AIR FORCE BASE, EPA ID# NM6572124422 HWB-HAFB-06-002

Dear Mr. Scruggs:

The New Mexico Environment Department (NMED) has reviewed Holloman Air Force Base's October 21, 2008 submittal of the finalized text, tables and figures for the SWMU 8 Voluntary Corrective Measures Work Plan. This submittal was required pursuant to NMED's October 12, 2006 letter conditionally approving the Work Plan. NMED hereby approves this final submittal.

If you have any questions regarding this matter, please contact David Strasser at (505) 222-9526.

Sincerely,

John E. Kieling
Program Manager
Permits Management Program
Hazardous Waste Bureau

APPENDIX A

HISTORICAL DATA FROM PREVIOUS INVESTIGATIONS

Appendix A-1

Portions of the *RCRA Facility Assessment Preliminary Review/Visual Site Inspection Report, Holloman Air Force Base, New Mexico*

A.T. Kearney, Inc., September 1988

RCRA FACILITY ASSESSMENT

PRELIMINARY REVIEW/VISUAL SITE INSPECTION REPORT

Holloman Air Force Base
New Mexico
NM6572124422

Prepared for:

U.S. Environmental Protection Agency
Region VI
1455 Ross Avenue
Dallas, Texas 75202-2733

Prepared by:

A.T. Kearney, Inc.
Three Lagoon Drive, Suite 170
Redwood City, California 94065

and

DPRA Incorporated
245 East 6th Street, Suite 813
St. Paul, MN 55101

Contract No. 68-01-7374
Work Assignment No. R26-05-49

September 1988

SWMU 8 - Building 231 Oil/Water Separator

DESCRIPTION

Unit Type: Oil/Water Separator

Location: Located near Building 231.

Purpose of Unit: Collects washwater and oil from vehicle maintenance shop operation.

Period of Operation: Unknown.

Dimensions/Volume: The oil capacity is 300 gallons. Approximate dimensions are six feet by four feet by four feet deep.

Material of Construction: ___ Steel ___ Wood _x_ Concrete
___ FRP ___ Plaster ___ Earthen

Underlain By: ___ Concrete ___ Asphalt ___ Gravel

___ Grass _x_ Soil

Environmental: ___ Indoors _x_ Outdoors ___ Below Ground

_x_ In Ground ___ Above Ground

___ Less than 1000 ft to Surface Water

___ Less than 1000 feet to Drinking Water Well

___ Less than 1000 feet to Residences

Details: The top of the unit is raised a few inches above the ground surface. The ground surface surrounding the unit is covered with drain rock.

CLOSURE INFORMATION

_x_ Active
___ Inactive/Physically Present
___ Closed Under State or EPA
___ Other

REGULATORY STATUS

___ RCRA
___ State or local permit
_x_ Not regulated

SHEET 523 missing ↓ NEXT PAGE

WASTES MANAGED

___ Solids	___ Corrosive	_x_ Organics
_x_ Liquids	___ Flammable	___ Inorganics
___ Gases	___ Reactive	___ Metals
_x_ Sludges		

Details: Rinsewater containing engine oil and hydraulic fluid from vehicle maintenance.

Source of Wastes: Building 231 vehicle maintenance areas.

Disposition of Waste: Waste oil is transferred to the DRMO Non-Hazardous Waste Storage Area (SMWU 76) and wastewater effluent is discharged to the Wastewater Treatment Plant (SWMUs 142 - 156).

RELEASE CONTROLS

___ Liner	___ Diking	_x_ Sewer Connection
___ Level Controls	___ Overflow Controls	___ Corrosion Protection
___ Leak Detection	_x_ Cover	

Details:

MONITORING

___ Monitoring Wells	___ Downgradient Wells
___ Upgradient Wells	___ Surface Water Monitoring

Monitoring Frequency: There are no monitoring wells near the unit.

RELEASE HISTORY

___ Past Release to Air	___ VSI Noted Release to Air
___ Past Release to Soil/Groundwater	_x_ VSI Noted Release to Soil/Groundwater
___ Past Release to Surface Water	___ VSI Noted Release to Surface Water
___ Past Release to Subsurface Gas	___ VSI Noted Release to Subsurface Gas

VSI Noted Release Conditions: The soil on the north side of the unit around the cleanout pipe was stained. The stains did not appear to be the result of overflow of the separator but rather from spills around the cleanout pipe.

Details of Past Releases: There were no past releases documented in the file information.

RELEASE POTENTIAL

Air	_x_ Low	___ Medium	___ High
Soil/Groundwater	___ Low	___ Medium	_x_ High
Surface Water	_x_ Low	___ Medium	___ High
Subsurface Gas Generation	___ Low	_x_ Medium	___ High

Details of Release Potential: Past releases appeared to have occurred from around the cleanout pipe at this unit. The separator appeared to be in good condition during the VSI. Regular inspections are made by Holloman engineers to assure its integrity.

REFERENCES: V-1, V-2

PHOTOGRAPHS: 5-1

to ensure the integrity of the entire unit. There was no evidence of past releases observed during the VSI or noted in the file information.

Supplemental Information: Consideration should be given to constructing a perimeter curb or dike to prevent rainfall runoff and silt from entering the unit.

SWMU 8 - Building 231 Oil/Water Separator

Suggested Further Action: No further action is suggested at this time.

Reasons: The separator is covered with a metal lid. The concrete sides of the unit appeared to be in good condition. The bottom was covered with liquid and could not be viewed; however, regular inspections are conducted by Holloman engineers to assure the integrity of the entire unit. At least two feet of freeboard is maintained. There were no releases observed from the unit during the VSI.

Supplemental Information: Consideration should be given to constructing a perimeter curb or dike to prevent rainfall runoff and silt from entering the separator. In addition, consideration should be given to raising the top of the cleanout pipe to restrict unauthorized access.

SWMU 9 - Building 282 Oil/Water Separator

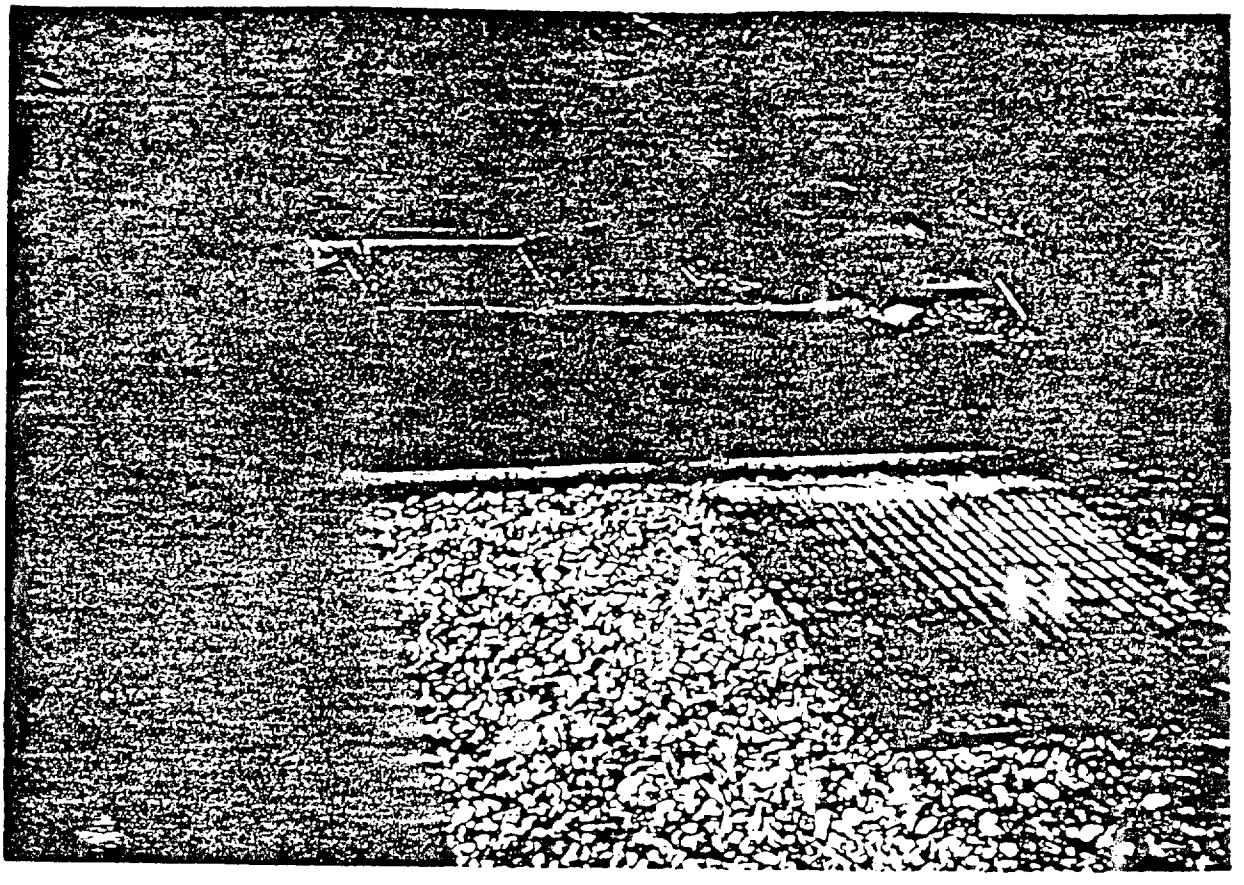
Suggested Further Action: No further action is suggested at this time.

Reasons: The concrete in-ground unit is covered and its top is raised slightly above the ground surface. There were no releases observed during the VSI. The concrete sides of the unit appeared to be in good condition. The bottom was covered with liquid and could not be viewed; however, regular inspections are conducted by Holloman engineers to assure the integrity of the entire unit. At least two feet of freeboard is maintained in the separator.

SWMU 10 - Building 283 Oil/Water Separator

Suggested Further Action: No further action is suggested at this time.

Reasons: The concrete in-ground separator is covered and its top



5-1 Overall view of the Building 231 Oil/Water Separator (SWMU 8) looking west at Building 231 - Hobby Shop. Wastewater is generated at the vehicle shop garage operation. Oil/Water Separator covered by a metal cover over a metal grate. Stains on the soil are visible on the north end of the separator near the vent.

Appendix A-2

Portions of the *Closure Report for Remediation of POL – Contaminated Sites and Oil/Water Separator Removals, Holloman Air Force Base, New Mexico, July – November 1995*

EBASCO Services, Inc., and Groundwater Technology Government Services, Inc., November 1995

CLOSURE REPORT FOR REMEDIATION OF POL - CONTAMINATED SITES AND OIL/WATER SEPARATOR REMOVALS HOLLOMAN AIR FORCE BASE, NEW MEXICO JULY - NOVEMBER 1995

Prepared for:

49 CES/CEV
Holloman Air Force Base, New Mexico

AND

HQ ACC/ESVR
Langley Air Force Base, Virginia

Prepared by:

EBASCO Services, Inc., dba
Foster Wheeler Environmental Corporation
143 Union Blvd., Suite 1010
Lakewood, Colorado 80228-1824

and

Groundwater Technology
Government Services, Inc.
2501 Yale Blvd., S.E.
Albuquerque, New Mexico 87106

Under Contract No. DACW-45-94 D0003
Delivery Order 6, Work Authorization Directive 13 and
Delivery Order 8, Work Authorization Directive 33

U.S. Army Corps of Engineers
Omaha District
Omaha, Nebraska

November 1995

HAFB-12/OW-CLOS.RPT

TABLE 10-2
SUMMARY OF NATIVE SOIL CONFIRMATION ANALYTICAL RESULTS AT SWMU 8 - BUILDING 231 HOLLOMAN AFB, NEW MEXICO AUGUST 1995

Sample No. SWMU-8	-01-7	-02-7	-03-7	-04-7	-05-7
Sample Location	West Corner	S. Corner	East Corner	N. Corner	Center
Date Sampled	8/8/95	8/8/95	8/8/95	8/8/95	8/8/95
TRPH by 418.1 (mg/kg)	23,000	31,000	6,500	1,200	940
VOCS by 8240 (µg/kg)					
Acetone	<100	<100	<2,000	<2,000	<2,000
Carbon disulfide	37	<25	<500	<500	<500
Benzene	<25	<25	<500	<500	<500
Tetrachloroethene	480	190	<500	<500	<500
Toluene	170	<25	<500	<500	<500
Ethylbenzene	460	84	<500	<500	<500
Xylenes	6,200	32	<500	<500	<500
1,2-Dichlorobenzene	710	3,500	<1,000	<1,000	<1,000
1,3-Dichlorobenzene	1,100	4,800	<1,000	<1,000	<1,000
1,4-Dichlorobenzene	750	3,300	<1,000	<1,000	<1,000
SEMI VOCS by 8270 (ug/kg)					
Naphthalene	27,000	<6,600	<1,300	<990	3,500
2-Methylnaphthalene	7,900	8,900	1,400	<990	<1,300
TAL METALS by 6000/7000 series (mg/kg)					
Aluminum	3,200	2,600	2,100	1,600	2,400
Arsenic	1.1	1.2	1.3	<1.0	<1.0
Barium	95	<40	<40	<40	<40
Calcium	140,000	150,000	140,000	150,000	170,000
Chromium	<6.0	<6.0	<6.0	<6.0	<6.0
Copper	11	<5.0	5.3	<5.0	<5.0

TABLE 10-2 (continued)
SUMMARY OF NATIVE SOIL CONFIRMATION ANALYTICAL RESULTS AT SWMU 8 - BUILDING 231 HOLLOMAN AFB, NEW MEXICO AUGUST 1995

Sample No. SWMU-8	-01-7	-02-7	-03-7	-04-7	-05-7
Sample Location	West Corner	S. Corner	East Corner	N. Corner	Center
Date Sampled	8/8/95	8/8/95	8/8/95	8/8/95	8/8/95
Iron	3,800	2,700	3,500	1,700	2,700
Lead	47	26	17	8.4	34
Magnesium	3,100	2,900	1,600	1,100	1,700
Manganese	61	38	49	34	48
Potassium	1,100	<1,000	<1,000	<1,000	<1,000
Zinc	35	11	18	8.8	11

Notes: < = Constituent not detected above laboratory quantitation limit

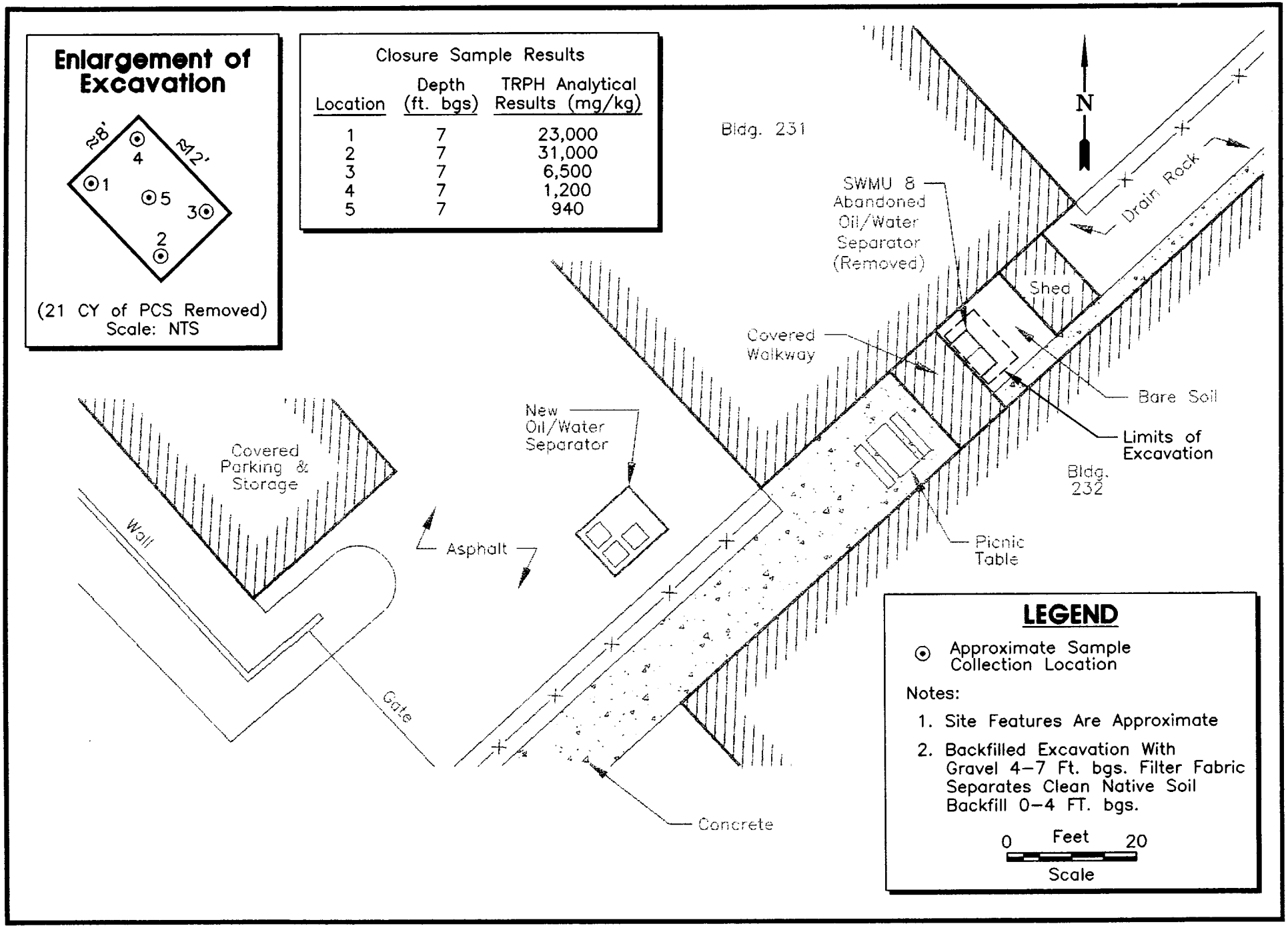
TABLE 10-3
SUMMARY OF STOCKPILE SOIL ANALYTICAL RESULTS
AT SWMU 8 - BUILDING 231
HOLLOMAN AFB, NEW MEXICO
SEPTEMBER 1995

Sample No. SWMU-8	-SP
Sample Type	Composite
Date Sampled	9/27/95
TRPH by 418.1 (mg/kg)	1,500
Aromatic Volatiles by 8021A (mg/kg)	Results
Benzene	<0.05
Toluene	<0.10
Ethylbenzene	<0.10
Xylenes	<0.20
BTEX Total	--
TPH as Gasoline	370
Lead by 7421 (mg/kg)	24
TCLP Volatiles by 1311/8240 (mg/l)	
Benzene	<0.05
Carbon tetrachloride	<0.05
Chlorobenzene	<0.05
Chloroform	<0.05
1,4-Dichlorobenzene	<0.05
1,2-Dichloroethane	<0.05
1,1-Dichloroethene	<0.05
2-Butanone	<0.02
Tetrachloroethene	<0.05
Trichloroethene	<0.05
Vinyl Chloride	<0.1
Miscellaneous Waste Characterization Analysis	
Closed Cup Flashpoint by ASTM D-93 (°F)	>220
Paint Filter by EPA 9095	No Liquids

TABLE 10-3 (continued)
SUMMARY OF STOCKPILE SOIL ANALYTICAL RESULTS
AT SWMU 8 - BUILDING 231
HOLLOMAN AFB, NEW MEXICO
SEPTEMBER 1995

Sample No. SWMU-8	-SP
Sample Type	Composite
Date Sampled	9/27/95
pH by EPA 9045A	7.1
Total Cyanide by EPA 9010A (mg/kg)	<2.0
Reactivity Sulfide by SW 846 7.3.4.2 (mg/kg)	<25
TCLP Semivolatiles by 8270A(mg/l)	
o-Cresol	<0.033
m+p-Cresol	<0.033
1,4-Dichlorobenzene	<0.033
2,4-Dinitrotoluene	<0.033
Hexachloro-1,3-butadiene	<0.033
Hexachlorobenzene	<0.033
Hexachloroethane	<0.033
Nitrobenzene	<0.033
Pentachlorophenol	<0.17
Pyridine	<0.033
2,4,5-Trichlorophenol	<0.033
2,4,6-Trichlorophenol	<0.033
TCLP Metals by 6000/7000 Series (mg/l)	
Arsenic	<0.40
Barium	<4.0
Cadmium	<0.080
Chromium	<0.080
Lead	<0.040
Mercury	<0.0080
Selenium	<0.16
Silver	<0.080

Notes: < = Constituents not detected above laboratory quantitiation limit
NA = Not Analyzed



A1154-7 (1:20)

Figure 10-1: Site Map
SWMU 8, Building 231 OWS

[redacted] STATE CERTIFICATE OF WEIGHTS AND MEASURES

DRIVER'S WEIGHT CERTIFICATE

NAME OF CARRIER (BEKINS MOVING & STGE.) (BEKINS VAN LINES)

OTHER CARRIER Rhino

Vehicle Identification 530 112

Name of Shipper

Origin of Shipment _____ Destination of Shipment _____

72ARO

lbs. Gross — Gross weight of loaded vehicle, with driver only, thereon.

lbs. Tare — Tare weight of vehicle, with driver only, thereon, including full gasoline tank and all necessary pads, chains, dollies, hand trucks, and other equipment.

lbs. Net — Net weight of the shipment.

THIS FORM PRESCRIBED BY INTERSTATE COMMERCE COMMISSION
EX PARTE - MC - 19
AS AMENDED EFFECTIVE JUNE 1, 1970

Signed Hugo Barbosa Weighmaster

The gross and tare weights were obtained at scales

NMDA APPROVED

GROSS	NAME OF SCALE OWNER	(BEKINS M & S) /	(BEKINS MOVING & STGE.)
	LOCATION	2315 S. Valley Dr. Las Cruces, N. M. /	US 70 W Alamogordo, N. M.
TARE	NAME OF SCALE OWNER	(BEKINS M & S) /	(BEKINS MOVING & STGE.)
	LOCATION	2315 S. Valley Dr. Las Cruces, N. M. /	US 70 W Alamogordo, N. M.

As shown by attached weight ticket(s) prepared by the weighmaster.

(Attach only gross weight ticket if tare weight is obtained from a weight ticket on shipments listed below.)

DRIVER ON ☐ OFF ☒

(LIST OF SHIPMENTS, IF ANY, ON VEHICLE AT TIME ABOVE WEIGHTS WERE OBTAINED)

SHIPPER	NET WEIGHT

I CERTIFY THE ABOVE ENTRIES ARE TRUE AND CORRECT.

DATE 10 4/75 B/L No. _____ Ron Ponce (Driver's Signature)

HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.

Manifest Document No.

2. Page 1 of 1 550-112

3. Generator's Name and Mailing Address
Holloman Air Force Base
Holloman Air Force Base, NM

Contract No.
DACW45-94-D-003/006

4. Generator's Phone ( )

5. Transporter 1 Company Name: Rhino Environmental Services

6. US EPA ID Number: N/A

SWMU #19

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address
Rhino Environmental Services--DF-994
1 mile North of Newman, NM
Newman, NM

10. US EPA ID Number

A. Transporter's Phone 505-392-449
B. Transporter's Phone
C. Facility's Phone 505-392-485

11. Waste Shipping Name and Description	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol
a. Hydrocarbon contaminated soils from POL and Oil/Water Separators			Bulk	
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

16. **GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name: WARREN NEFF
Signature: Warren Neff
Month Day Year: Oct 9 95

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Ron Perez
Signature: Ron Perez
Month Day Year: Oct 4 95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name
Signature
Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name
Signature
Month Day Year

GENERATOR

TRANSPORTER

FACILITY

GENERATOR'S COPY

STATE CERTIFICATE OF WEIGHTS AND MEASURES

DRIVER'S WEIGHT CERTIFICATE

NAME OF CARRIER (BEKINS MOVING & STGE.) (BEKINS VAN LINES)

OTHER CARRIER Alaine

Vehicle Identification 330

Name of Shipper

Origin of Shipment Destination of Shipment

78700

lbs. Gross — Gross weight of loaded vehicle, with driver only, thereon.

lbs. Tare — Tare weight of vehicle, with driver only, thereon, including full gasoline tank and all necessary jacks, chains, dollies, hand trucks, and other equipment.

lbs. Net — Net weight of the shipment.

THIS FORM PRESCRIBED BY INTERSTATE COMMERCE COMMISSION
EX PARTE - MC - 19
AS AMENDED EFFECTIVE JUNE 1, 1970

Signed M. Ray [illegible]
Weighmaster

The gross and tare weights were obtained at scales

NMDA APPROVED

GROSS	NAME OF SCALE OWNER	(BEKINS M & S) /	(BEKINS MOVING & STGE.)
	LOCATION	2315 S. Valley Dr. Las Cruces, N. M. /	US 70 W Alamogordo, N. M.
TARE	NAME OF SCALE OWNER	(BEKINS M & S) /	(BEKINS MOVING & STGE.)
	LOCATION	2315 S. Valley Dr. Las Cruces, N. M. /	US 70 W Alamogordo, N. M.

As shown by attached weight ticket(s) prepared by the weighmaster.

(Attach only gross weight ticket if tare weight is obtained from a weight ticket on shipments listed below.)

DRIVER ON ☐ OFF ☒

(LIST OF SHIPMENTS, IF ANY, ON VEHICLE AT TIME ABOVE WEIGHTS WERE OBTAINED)

SHIPPER	NET WEIGHT

I CERTIFY THE ABOVE ENTRIES ARE TRUE AND CORRECT.

DATE 10-[illegible] B/L No.

Ron Lowe (Driver's Signature)

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.

Manifest Document No.

2. Page 1 of 1

GENERATOR

3. Generator's Name and Mailing Address
Holloman Air Force Base
Holloman Air Force Base, NM

Contract No.
DACW45-94-D-003/006

4. Generator's Phone ( )

5. Transporter 1 Company Name: Rhino Environmental Services

6. US EPA ID Number: N/A

Sunny 1

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address
Rhino Environmental Services- DF-994
1 mile North of Newman, NM
Newman, NM

10. US EPA ID Number

A. Transporter's Phone
B. Transporter's Phone 505-392-44
C. Facility's Phone 505-392-48

11. Waste Shipping Name and Description	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol
a. Hydrocarbon contaminated soils from POL and Oil/Water Separators			Bulk	
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

16. **GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name: WARNER NEFF
Signature: Warner Neff
Month 10 Day 04 Year 91

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Ray Perry
Signature
Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name
Signature
Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name
Signature
Month Day Year

GENERATOR'S COPY

OTERO/LINCOLN COUNTY
REGIONAL LANDFILL

TRANSACTION #: 012692

CO. NAME: Rhino Environmental

ADDRESS: P.O. Box 2327

CITY & STATE: Hobbs, NM

DATE: 10-05-95 TIME: 15:38

TRUCK NO.: 15-H

GROSS WEIGHT: 34140 INB

TARE WEIGHT: 14620

NET TONS: 9.76

COST $: 214.72

5% TAX $: 10.74

TOTAL DUE $: 225.46

WASTE #: 5

WASTE DESC.: Construction Debris

WASTE ORIGIN: H.A.F.B.

DRIVER: GL Buck

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.

Manifest Document No.

2. Page 1 of 451

3. Generator's Name and Mailing Address
Holloman Air Force Base
Holloman Air Force Base, NM

Contract No. DACW45-94-D-003/006

4. Generator's Phone ( )

5. Transporter 1 Company Name: Rhino Environmental Services

6. US EPA ID Number: N/A

SWM

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address
~~Rhino Env. Services-DP-9940W~~
~~1 mile North of Newman, NM~~
~~Newman, NM~~
Otero Landfill

US EPA ID Number

A. Transporter's Phone 505-392-4498

B. Transporter's Phone

C. Facility's Phone 505-392-4898

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Concrete Debrie			90.76 BULK	tons
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

16. **GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name: WARNER NEFF — Signature: Warner Neff — Month 10 Day 05 Year 95

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Glen Buehler — Signature: Gl Buehler — Month 10 Day 05 Year 95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name — Signature — Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name — Signature — Month Day Year

GENERATOR

TRANSPORTER

FACILITY

ORIGINAL – RETURN TO GENERATOR

Appendix A-3

Portions of the *Additional Characterization of POL-Contaminated Sites SWMU-3, SWMU-8, SWMU-36, SWMU-123 and OT-44, Holloman Air Force Base, New Mexico*

Groundwater Technology Government Services, Inc., February 29, 1996

FILE 17-G
j.m.

GROUNDWATER
TECHNOLOGY
GOVERNMENT SERVICES

Groundwater Technology Government Services, Inc.
2501 Yale Boulevard SE, Suite 204 Albuquerque, NM 87106 USA
Tel: (505) 242-3113 Fax: (505) 242-1103

February 29, 1996

Job No. 830012211.01.030

Mr. Mark Mercier
Omaha District
U.S. Army Corps of Engineers
ATTN: CEMRO-ED-EA
215 North 17th Street
Omaha, Nebraska 68102

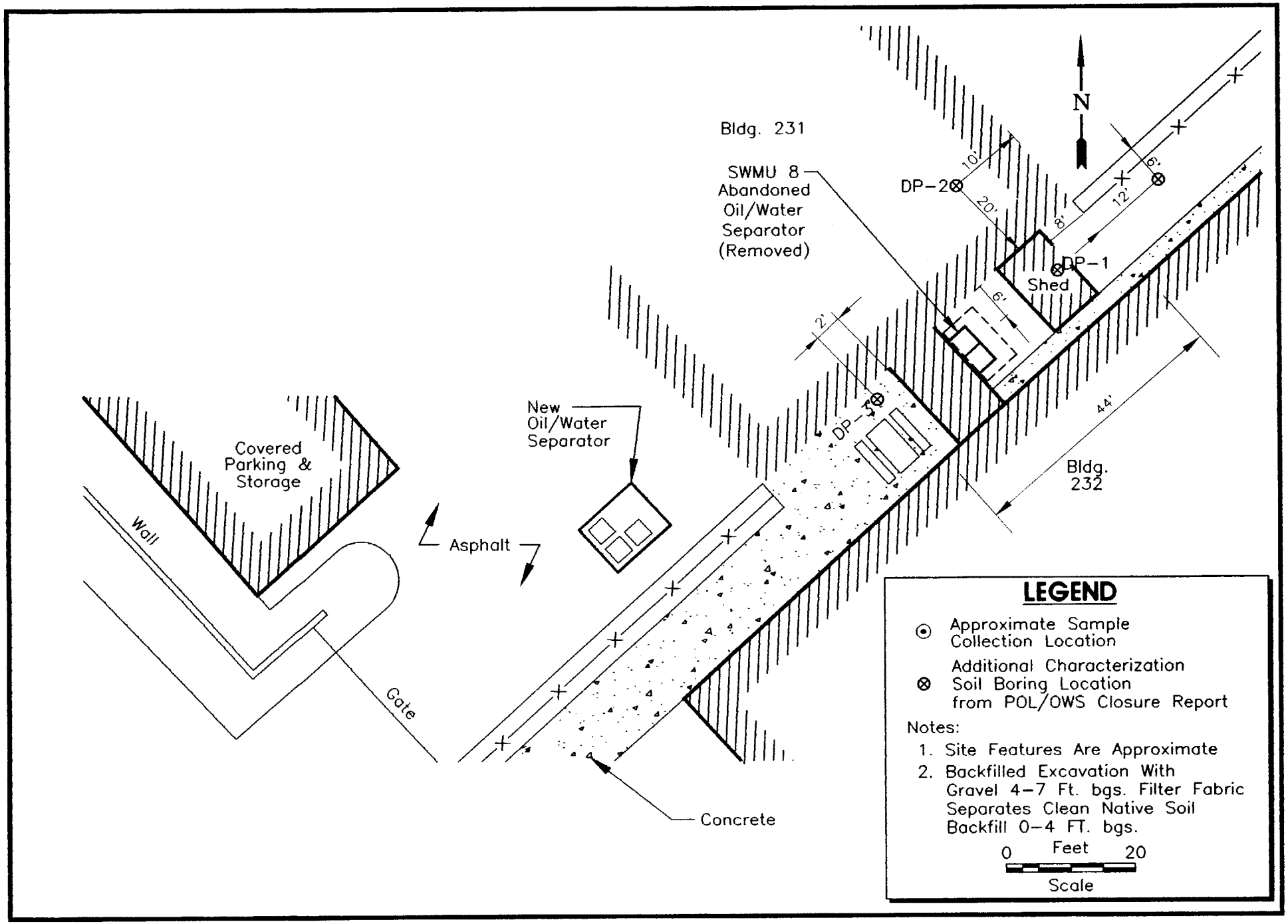
Re: ADDITIONAL CHARACTERIZATION OF POL-CONTAMINATED SITES SWMU-3, SWMU-8, SWMU-36, SWMU-123 AND OT-44 HOLLOMAN AIR FORCE BASE, NEW MEXICO
Delivery Order 11 Work Authorization Directive 1
Under Contract No. DACW45-94-D-0003

Dear Mr. Mercier:

Introduction

Additional characterization to support remedial design efforts for four Solid Waste Management Unit Sites (SWMUs) and one Installation Restoration Program (IRP) site was conducted between January 29, 1996 and February 2, 1996. The characterization was performed to determine the extent of soil in excess of 1,000 parts per million (ppm) at these sites. To accomplish this, soil samples were collected and analyzed at SWMU 3, SWMU 8, SWMU 36, SWMU 123, and Site OT-44 (AOC-P). Figure 1 is a map of the base indicating the locations of the five sites.

Soil samples were collected from each site using a direct push technology (DPT) soil sampling device, field screened for volatile organics constituents, and analyzed for total petroleum hydrocarbons (TPH) (gasoline and diesel range), total recoverable petroleum hydrocarbons (TRPH), and benzene, toluene, ethylbenzene and xylenes (BTEX). These data will be used to determine the approximate mass of petroleum-contaminated soil



2-2FEB96, 2/29/96 (1:20)

Figure 3: Site Map
SWMU 8, Building 231 OWS and Additional Characterization Sampling Locations

TABLE 3
SUMMARY OF SOIL ANALYTICAL RESULTS
SWMU -8 BUILDING 231 OWS
HOLLOMAN AFB, NM
Delivery Order 11 Work Authorization Directive 1
February, 1996

SAMPLE NO. AND DEPTH (FEET)	SWMU-8-DP-1--3 (3' TO 4')	SWMU-8-DP-1--5 (5' TO 6')	SWMU-8-DP-2--4 (4' TO 5')	SWMU-8-DP-2--9 (9' TO 10')	SWMU-8-DP-3-5&6 (5' TO 7')	SWMU-8-DP-3 3 &4 (3' TO 5')	SWMU-8-DP-5--3 (3' TO 4')	SWMU-8-DP-5--6 (6' TO 7')
PARAMETER								
Method 418.1 TRPH (mg/kg)	<20	<20	<20	<20	<20	<20	<20	<20

< = constituent not detected

Sumu-8

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NUMBER: DP-1

PROJECT: DOIL WADI 83001221.01020

INSPECTOR: Tim Lewallen

SHEET 2 OF 2 SHEETS

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	GEOTECH SAMPLE OR CORE BOX NO. (e)	ANALYTICAL SAMPLE NO. (f)	BLOW COUNT (g)	REMARKS (h)
0		Red Brown (5YR 5/3) Fine sand trace silt, trace gravel. (dry, No odor) $CaCO_3$ - gypsum	510ppm	—		soft	Recov 2' 8"
1							
2		Red yellow (5YR 7/6) Fine SAND little silt, trace clay. (damp, No odor) $CaCO_3$ - gypsum	0ppm.	—		soft	
3			0ppm		sample		
4		red yellow (5YR 7/6) Fine SAND Little silt, trace clay, trace med sand. (wet, No odor) $CaCO_3$ - gypsum	0ppm	—		soft	Recov 3'
5			0ppm		Sample		
∇ 6		white (5YR 8/1) Fine SAND, little silt, trace clay (wet, No odor) $CaCO_3$ - gypsum	0ppm	—	(12) ~~sample~~	soft	
7		white (5YR 8/1) Fine SAND, Little silt, trace clay (wet, No odor) $CaCO_3$ - gypsum	0ppm	—		soft	Recov 3'
8		dark gray (5YR 4/1) Fine SAND little silt, trace clay (wet, H_2S odor (weak) $CaCO_3$ - gypsum	0ppm	—		soft	
9			0ppm				
		Bottom of Hole Bentonite Plugged to surface					

PROJECT: DOIL WADI

HOLE NO. DP-1

ENG FORM 5056A-R, AUG 94 (Proponent: CECW-EG)

TOTAL P.06

HTRW DRILLING LOG (CONTINUATION SHEET)

Summit

PROJECT	INSPECTOR	HOLE NUMBER	SHEET / SHEETS
DOIIWADI 830012211.01020	Tim Lewallen	DP-2	2 OF 2

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	GEOTECH SAMPLE OR CORE BOX NO. (e)	ANALYTICAL SAMPLE NO (f)	BLOW COUNT (g)	REMARKS (h)
2" concrete other 0		Gravel & Hand cement		—		Inch...	Recov 2'8"
1		Red Brown (5YR 4/4) Fine SAND, little silt, trace gravel (dry, No odor) Ca, O3	@1.6ppm	—		soft	
		Pink white (5YR 8/2) Fine SAND 99% sand silt, trace clay (moist, No odor)					
2		CaCO3 - gypsum	1.2 ppm	—		soft	
3			1.2 ppm				
		yellow Red (5YR 5/6) Fine SAND some silt, trace clay, (moist, No odor)					
4			1.5 ppm	—	Sample	soft	Recov 2'
5		No CaCO3 gypsum	0.9 ppm				
6			0.9 ppm				
		Yellow Red (5YR 5/6) Fine SAND Little silt, trace clay (moist, No odor) CaCO3 present gypsum					
7			1.5 ppm	—		soft	Recov 3'
8		Pink (5YR 8/4) Fine SAND, little silt, trace clay (moist, No odor) CaCO3 present - gypsum	1.7 ppm	—		Soft	
∇ 9		Pink same as 7.5-9'	0.4 ppm		Sample		
		yellow Red (5YR 5/8) Fine SAND Little silt, trace clay. (damp, No odor)				soft	Recov 2' due to Slough
10			1.5 ppm	—			
11		CaCO3 present - gypsum	0.9 ppm				
		Bottom of Hole					
12		Bentonite water & cement		—			

PROJECT	HOLE NO.
DOIIWADI 830012211.01020	DP-2

ENG FORM 5056A-R, AUG 94

(Proponent: CECW-EG)

TOTAL P.06

Sumu-8

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NUMBER: DP-3

PROJECT: DGIIWADI 830012211101020

INSPECTOR: Tim Lewallen

SHEET 2 OF 2 SHEETS

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	GEOTECH SAMPLE OR CORE BOX NO. (e)	ANALYTICAL SAMPLE NO (f)	BLOW COUNT (g)	REMARKS (h)
0		~~Brown Yellowish red (5YR 5/6) Fine SAND Little silt, Trace gravel (Dry, No odor)~~		—		Soft	Recov 1'
1		Pink (5YR 8/4) Fine SAND, Little silt, Trace clay, (moist, No odor) $CaCO_3$ - gypsum	0 ppm	—		Soft	
2		↓	0 ppm	—		Soft	~~Recov~~
3		Red yellow (5YR 6/8) Fine SAND Little silt, Trace clay	0 ppm	—		Soft	Recov 2'
4		(damp, No odor) $CaCO_3$ gypsum	0 ppm				~~Re~~
5		Red yellow (5YR 6/8) Fine SAND, Little silt, Trace clay (damp, No odor)	0 ppm	—		Soft	Recov 2'
6		$CaCO_3$ - gypsum	0 ppm				
7		Red yellow (5YR 7/6) Fine SAND Little silt, Trace clay, (wet, No odor)	0 ppm	—			Recov 2'
8		$CaCO_3$ - gypsum	0 ppm				
		H_2S odor					
9		Bottom of Hole Bentonite water to surface Cement patch					

PROJECT: DGIIWADI 830012211101020

HOLE NO. DP-3

ENG FORM 5056A-R, AUG 94 (Proponent: CECW-EG)

TOTAL P.06

B Swmu 8

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NUMBER: DP-5

PROJECT: DOIL WADI 83001 2211.01020

INSPECTOR: Tim Lewallen

SHEET 2 OF 2 SHEETS

ELEV. (a)	DEPTH (b)	DESCRIPTION OF MATERIALS (c)	FIELD SCREENING RESULTS (d)	GEOTECH SAMPLE OR CORE BOX NO. (e)	ANALYTICAL SAMPLE NO (f)	BLOW COUNT (g)	REMARKS (h)
0		Pink (5YR 8/3) Fine SAND, little silt trace gravel (dry, no odor) $CaCO_3$ gypsum		—		soft	Recov 2'8"
1		Pink (5YR 8/3) Fine SAND, some gravel, trace clay (damp, no odor) $CaCO_3$ · gypsum	1.9 ppm	—		soft	
2			0.5 ppm	—			
3			0.7 ppm		Sample		
		Pink (5YR 8/3) Fine SAND, some silt, ~~trace clay~~ (damp, no odor) $CaCO_3$ - gypsum				soft	Recov 2'
4			0.7 ppm	—			
			0.5 ppm				
5		Dk gray (5YR 4/1) Fine SAND trace coarse sand, little silt trace clay (wet, H_2S odor) $CaCO_3$ gypsum		—		soft	
▽ 6			2.5 ppm		Sample		
		Dark gray (5YR 4/1) Fine SAND little silt, trace clay (wet, H_2S odor) ~~(wet)~~ $CaCO_3$ · gypsum				soft	Recov 3'
7			1.0 ppm	—			
8			0.8 ppm				
9			1.1 ppm				
		Bottom of Hole					
10		Bentonite Pulled to surface		—			
11							TC
12							

PROJECT: DOIL WADI

HOLE NO: DP-5

ENG FORM 5056A-R, AUG 94 (Proponent: CECW-EG)

TOTAL P.06

Appendix A-4

Portions of the *Final Closure Report Addendum for Phase II Remediation of POL-Contaminated Sites and Oil/Water Separator and Waste Oil Tank Removals, Holloman Air Force Base, New Mexico*

Foster Wheeler Environmental Corporation, December 1997

FINAL CLOSURE REPORT ADDENDUM
FOR PHASE II
REMEDIATION OF POL-CONTAMINATED SITES AND
OIL/WATER SEPARATOR AND WASTE OIL TANK REMOVALS
HOLLOMAN AIR FORCE BASE, NEW MEXICO

Prepared for:
49 CES/CEVR
Holloman Air Force Base, NM
and
HQ ACC/CEVC
Langley Air Force Base, VA

Prepared by:
Foster Wheeler Environmental Corporation
143 Union Boulevard, Suite 1010
Lakewood, Colorado 80228-1824

Under Contract No. DACW45-94-D0003

Delivery Order 11, Work Authorization Directive 3

U.S. Army Corps of Engineers
Omaha District
Omaha, Nebraska

December 1997

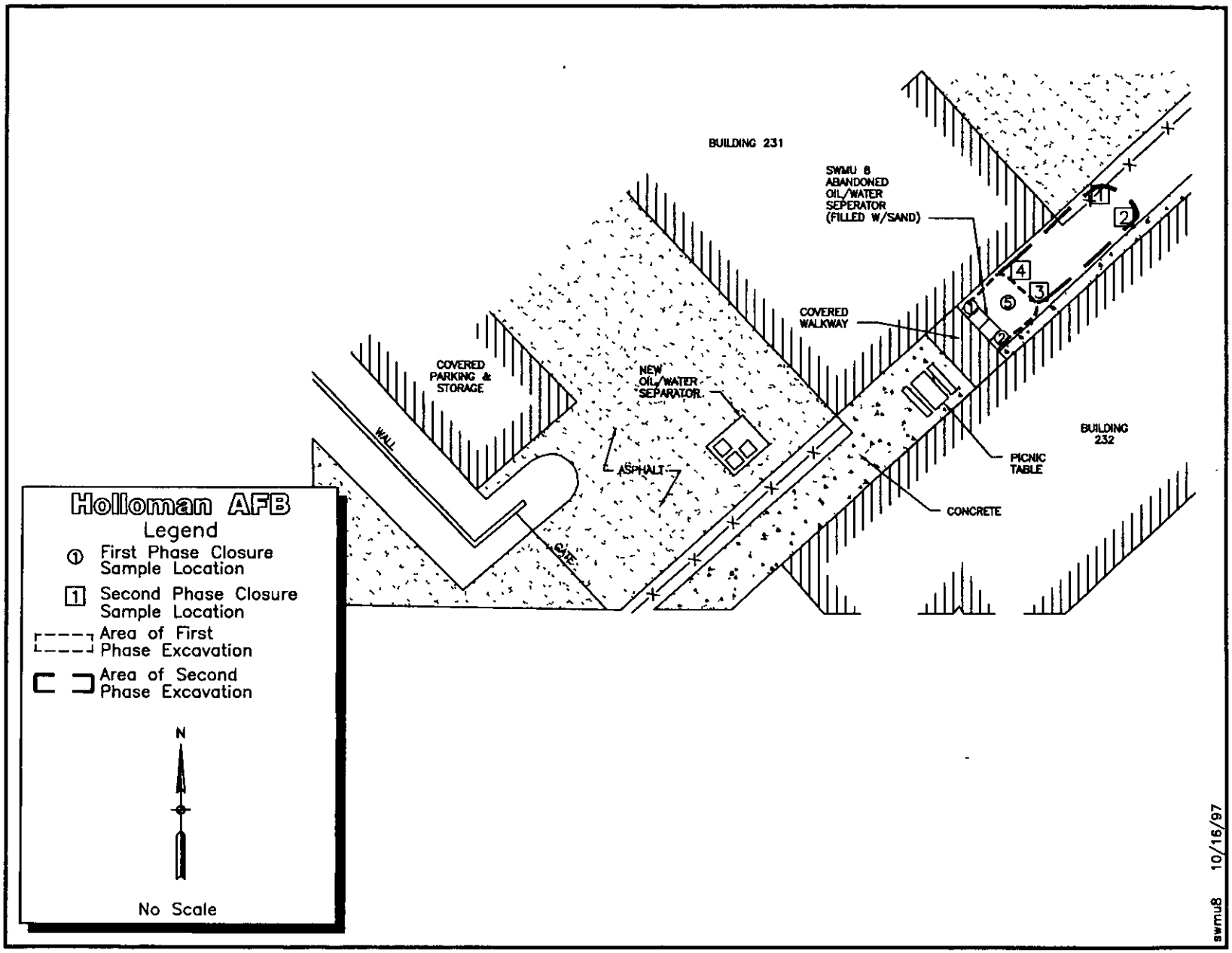


Figure 4–1. SWMU 8, Building 231 O/WS Site Map

Table 4-1
Summary of Site Closure and Stockpile Sample Analytical Results for Soil at SWMU 8, Building 231 O/WS
Page 1 of 2

Sample I.D.				SWMU08-01-06	SWMU08-02-06	SWMU08-03-06	SWMU08-04-06	SWMU8-SPI*
Figure I.D	1	2	5	1	2	3	4	—
Date Sampled	8/8/95	8/8/95	8/8/95	4/9/97	4/9/97	4/9/97	4/9/97	4/9/97
TRPH by Method 418.1 (mg/kg)	23,000	31,000	940	78	<20	58	25	36
VOCs by Method 1311/8240 (mg/L)	NA	NA	NA	NA	NA	NA	NA	ND
SVOCs by Method 1311/8270B (mg/L)	NA	NA	NA	NA	NA	NA	NA	ND
VOCs by Method 8240B (µg/kg)	NA	NA	NA	ND	ND	ND	ND	NA
SVOCs by Method 8270B (µg/kg)	NA	NA	NA	ND	ND	ND	ND	NA
VOCs by Method 8021A Benzene (mg/kg)	NA	NA	NA	<0 05	<0 05	<0.05	<0.05	<0.05
Toluene (mg/kg)	NA	NA	NA	<0 10	<0.10	<0.10	<0 10	<0 10
Ethylbenzene (mg/kg)	NA	NA	NA	<0.10	<0.10	<0.10	<0 10	<0 10
Xylenes (total) (mg/kg)	NA	NA	NA	<0.20	<0 20	<0.20	<0.20	<0.20
Metals by Method 7421 Lead (2,000 mg/kg)	NA	NA	NA	NA	NA	NA	NA	2.1
Metals by Method 9010A Total Cyanide (mg/kg)	NA	NA	NA	NA	NA	NA	NA	<2.0
Metals by Method 6010A (mg/kg)								
Aluminum[1] (77,000)	NA	NA	NA	2,200	1,800	3,600	3,400	NA
Barium[1] (5,300)	NA	NA	NA	29	20	71	62	27
Chromium[2] (230)	NA	NA	NA	<3 0	<3 0	4.1	4.0	<3.0
Copper (63,000)	NA	NA	NA	<2 5	<2.5	3 1	5 2	NA
Manganese (8,300)	NA	NA	NA	26	30	74	65	NA
Vanadium (12,000)	NA	NA	NA	6.2	6.6	9.2	11	NA
Zinc[1] (23,000)	NA	NA	NA	8 2	5.9	12	17	NA
Lead (2,000)	NA	NA	NA	5 4	<0 40	4.6	4.6	NA
Paint Filter by Method 9095	NA	NA	NA	NA	NA	NA	NA	NP

Table 4-1
Summary of Site Closure and Stockpile Sample Analytical Results for Soil at SWMU 8, Building 231 O/W
Page 2 of 2

Sample I.D.				SWMU08-01-06	SWMU08-02-06	SWMU08-03-06	SWMU08-04-06	SWMU8-SPI*
Figure I.D.	1	2	5	1	2	3	4	—
Date Sampled	8/8/95	8/8/95	8/8/95	4/9/97	4/9/97	4/9/97	4/9/97	4/9/97
Flash Point by Method ASTM D93 (°F)	NA	NA	NA	NA	NA	NA	NA	>200
pH by Method 9045A	NA	NA	NA	NA	NA	NA	NA	7.5
Reactive Sulfide by SW846 Ch#7 (mg/kg)	NA	NA	NA	NA	NA	NA	NA	<2 5

Notes.
Shading denotes site closure samples
* = Soil stockpile sample
< = Constituent not detected above laboratory quantitation limit
() = EPA Region VI risk-based criteria for industrial land use
ND = Not detected
NA = Not analyzed
NP = Not present
1 = Risk-based value above expected saturation point, value shown is residential land use risk-based concentration
2 = Represents risk-based concentration for chromium VI

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.

Manifest Document No. 0739

2. Page 1 of

Truck No 550111

Generator's Name and Mailing Address: Holloman Air Force Base, 49 CES/CEV, Holloman AFB, NM

[redacted] Summer - 8

4. Generator's Phone ( ) 505-475-5305

5. Transporter 1 Company Name: Rhino Environmental Services

6. US EPA ID Number: N/A

7. Transporter 2 Company Name:

8. US EPA ID Number:

9. Designated Facility Name and Site Address: Rhino Environmental Services, 2 mile NW of Newman, Otero County, NM

10. US EPA ID Number: DF1051

A. Transporter's Phone

B. Transporter's Phone

C. Facility's Phone

11. Waste Shipping Name and Description	12. Containers No	Type	13. Total Quantity	14. Unit Wt/Vol
a. Hydrocarbon Contaminated Soils	1	BULK	16,200	
b.				
c.				
d.				

GENERATOR

Additional Descriptions for Materials Listed Above: NON-Hazardous Materials

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information: CELL M

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste

Printed/Typed Name: WARREN NEFF — Signature: Warren Neff — Month 4 Day 7 Year 97

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Michael Swan 550-111 — Signature: [illegible] — Month 4 Day 7 Year 97

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name: — Signature: — Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19

Printed/Typed Name: [illegible] — Signature: [illegible] — Month Day Year

GENERATOR'S COPY

[illegible] Rev

N: 013210 STATE CERTIFICATE OF WEIGHTS AND MEASURES

DRIVER'S WEIGHT CERTIFICATE

NAME OF CARRIER (BEKINS MOVING & STGE.) (BEKINS VAN LINES)

OTHER CARRIER Rhino

Vehicle Identification 550-111

Name of Shipper

Origin of Shipment Destination of Shipment

69530

YGP

lbs. Gross — Gross weight of loaded vehicle, with driver only, thereon.

lbs. Tare — Tare weight of vehicle, with driver only, thereon, including full gasoline tank and all necessary pads, chains, dollies, hand trucks, and other equipment

lbs. Net — Net weight of the shipment.

THIS FORM PRESCRIBED BY INTERSTATE COMMERCE COMMISSION
EX PARTE - MC - 19
AS AMENDED EFFECTIVE JUNE 1, 1970

Signed M. Patwanda
Weighmaster

The gross and tare weights were obtained at scales

NMDA APPROVED

GROSS	NAME OF SCALE OWNER	(BEKINS M & S) /	(BEKINS MOVING & STGE.)
	LOCATION	2315 S. Valley Dr. Las Cruces, N. M. /	US 70 W Alamogordo, N. M. ✓
TARE	NAME OF SCALE OWNER	(BEKINS M & S) /	(BEKINS MOVING & STGE.)
	LOCATION	2315 S. Valley Dr. Las Cruces, N. M. /	US 70 W Alamogordo, N. M.

As shown by attached weight ticket(s) prepared by the weighmaster.

(Attach only gross weight ticket if tare weight is obtained from a weight ticket on shipments listed below.)

DRIVER ON ☐ OFF ☒

Chg 500

(LIST OF SHIPMENTS, IF ANY, ON VEHICLE AT TIME ABOVE WEIGHTS WERE OBTAINED)

SHIPPER	NET WEIGHT

I CERTIFY THE ABOVE ENTRIES ARE TRUE AND CORRECT.

DATE 4-24-97 B/L No.

Michael (Driver's Signature)

N: 013193 STATE CERTIFICATE OF WEIGHTS AND MEASURES

DRIVER'S WEIGHT CERTIFICATE

NAME OF CARRIER (BEKINS MOVING & STGE.) (BEKINS VAN LINES)

OTHER CARRIER Rhino

Vehicle Identification 550-111

Name of Shipper

Origin of Shipment Destination of Shipment

35730

lbs. Gross — Gross weight of loaded vehicle, with driver only, thereon

lbs. Tare — Tare weight of vehicle, with driver only, thereon, including full gasoline tank and all necessary pads, chains, dollies, hand trucks, and other equipment.

lbs. Net — Net weight of the shipment.

TH[illegible] PRESCRIBED BY INTERSTATE C[illegible] COMMISSION
E[illegible] MC - 19
AS [illegible]DED EFFECTIVE JUNE 1, 1970

Signed M. Patwanda
Weighmaster

The gross and tare weights were obtained at scales

NMDA APPROVED

GROSS	NAME OF SCALE OWNER	(BEKINS M & S) /	(BEKINS MOVING & STGE.)
	LOCATION	2315 S. Valley Dr. Las Cruces, N. M /	US 70 W Alamogordo, N M
TARE	NAME OF SCALE OWNER	(BEKINS M & S) /	(BEKINS MOVING & STGE.)
	LOCATION	2315 S. Valley Dr. Las Cruces, N. M /	US 70 W Alamogordo, N. M. ✓

As shown by attached weight ticket(s) prepared by the weighmaster.

(Attach only gross weight ticket if tare weight is obtained from a weight ticket on shipments listed below.)

DRIVER ON ☐ OFF ☒

Chg 500

(LIST OF SHIPMENTS, IF ANY, ON VEHICLE AT TIME ABOVE WEIGHTS WERE OBTAINED)

SHIPPER	NET WEIGHT

I CERTIFY THE ABOVE ENTRIES ARE TRUE AND CORRECT.

DATE 4-21-97 B/L No.

(Driver's Signature)

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.

Manifest Document No. 05-40

2. Page 1 of

Truck #2 SS0111

Scum 8

3. Generator's Name and Mailing Address: Holloman Air Force Base, 49 CES/CEV, Holloman AFB, NM

4. Generator's Phone ( ) 505-475-5395

5. Transporter 1 Company Name: Rhino Environmental Services

6. US EPA ID Number: N/A

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address: Rhino Environmental Services, 2 mile NW of Newman, Otero County, NM

10. US EPA ID Number: DP1051

A. Transporter's Phone

B. Transporter's Phone

C. Facility's Phone

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Hydrocarbon Contaminated Soils	1	BULK	48830	
b.				
c.				
d.				

Additional Descriptions for Materials Listed Above: NON-Hazardous Materials

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information: CELL 4

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name: WAYNE NEFF — Signature: Wayne Neff — Month 4 Day 27 Year 97

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Michael Sillano SS0-111 — Signature: Michael Sillano — Month 4 Day 27 Year 97

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name — Signature — Month Day Year

19. Discrepancy Indication Space

Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name — Signature — Month Day Year

GENERATOR'S COPY

N: 013208 STATE CERTIFICATE OF WEIGHTS AND MEASURES

DRIVER'S WEIGHT CERTIFICATE

NAME OF CARRIER (BEKINS MOVING & STGE.) (BEKINS VAN LINES)

OTHER CARRIER Rhino

Vehicle Identification 550-111

Name of Shipper

Origin of Shipment

Destination of Shipment

560

lbs. Gross — Gross weight of loaded vehicle, with driver only, thereon

lbs. Tare — Tare weight of vehicle, with driver only, thereon, including full gasoline tank and all necessary pads, chains, dollies, hand trucks, and other equipment

lbs Net — Net weight of the shipment

Signed M. Patrenude
Weighmaster

THIS FORM PRESCRIBED BY INTERSTATE COMMERCE COMMISSION
EX PARTE - MC - 15
AS AMENDED EFFECTIVE JUNE 1 1970

The gross and tare weights were obtained at scales

NMDA APPROVED

GROSS	NAME OF SCALE OWNER	(BEKINS M & S) /	(BEKINS MOVING & STGE.)
	LOCATION	2315 S. Valley Dr. Las Cruces, N. M. /	US 70 W Alamogordo, N. M.
TARE	NAME OF SCALE OWNER	(BEKINS M & S) /	(BEKINS MOVING & STGE.)
	LOCATION	2315 S. Valley Dr. Las Cruces, N. M. /	US 70 W Alamogordo, N. M.

As shown by attached weight ticket(s) prepared by the weighmaster

(Attach only gross weight ticket if tare weight is obtained from a weight ticket on shipments listed below.)

DRIVER ON ☐ OFF ☒

Chg 500

(LIST OF SHIPMENTS, IF ANY, ON VEHICLE AT TIME ABOVE WEIGHTS WERE OBTAINED)

SHIPPER	NET WEIGHT

I CERTIFY THE ABOVE ENTRIES ARE TRUE AND CORRECT.

DATE H-21-97 B/L No.

(Driver's Signature)

Appendix A-5

Portions of the *Technical Memorandum Letter Report for SWMU 8 Soil and Groundwater Sampling and Analysis, Holloman AFB, New Mexico*

Bhate Environmental Associates, Inc., August 2, 2006

TECHNICAL MEMORANDUM
LETTER REPORT
FOR
SWMU 8 SOIL AND GROUNDWATER
SAMPLING AND ANALYSIS
HOLLOMAN AFB, NEW MEXICO

DATE: August 2, 2006

FROM: Jim Moore, Bhate Environmental Associates, Inc.

TO: Dave Griffin, 49 CES/CEV, Holloman Air Force Base, NM

SUBJECT: SWMU 8 SOIL AND GROUNDWATER SAMPLING AND ANALYSIS

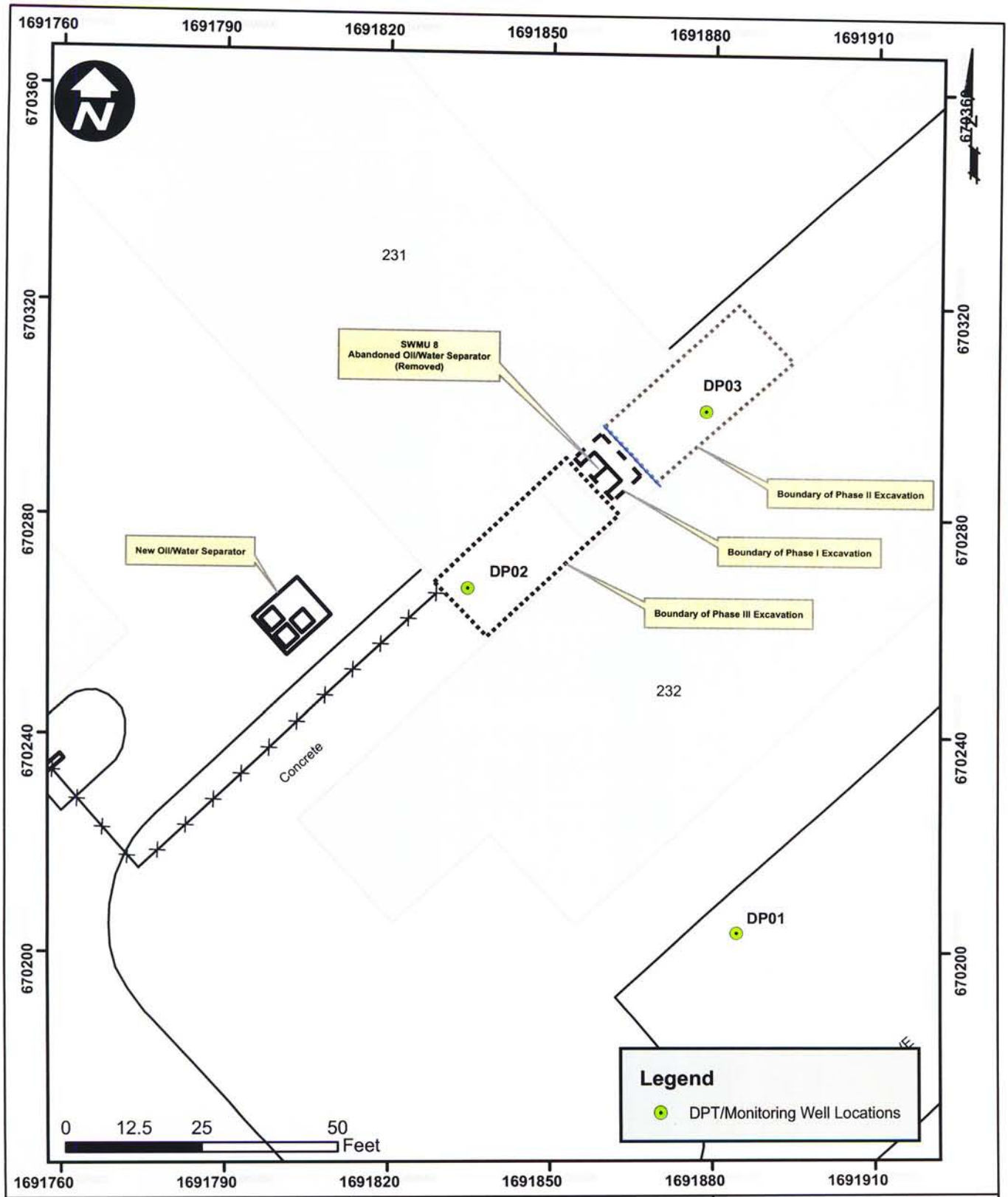
1.0 INTRODUCTION

This technical memorandum was prepared by Bhate Environmental Associates, Inc. (Bhate) for the Environmental Flight 49th CES/CEV, Holloman Air Force Base (HAFB), New Mexico. This letter report contains the results of the subsurface soil and groundwater water samples that were collected at SWMU 8 (former Oil/Water Separator located at Building 231) in May 2006. This sampling event was conducted in accordance with the *Memorandum Scope of Work for Soil and Groundwater Sampling and Analysis* (Bhate, May 2006). This Scope of Work was performed through the U.S. Army Corps of Engineers (USACE), under contract DACA45-03-D-0023, Task Order No. 017.

The scope of work for SWMU 8 was prepared to meet the requirements for additional soil and groundwater characterization as requested by the New Mexico Environment Department (NMED). General comment No. 1 in the NMED Notice of Deficiency (NOD) letter to Holloman AFB dated April 14, 2006 (Appendix A) requested that additional subsurface soil samples should be collected to characterize the remaining soil contamination at the site (that is not underneath the adjacent structures) and that at least two temporary groundwater monitoring wells be installed and sampled at the site before the Phase III soil excavation can commence.

2.0 SITE LOCATION, DESCRIPTION AND BACKGROUND

SWMU 8 is the former underground Oil/Water Separator (OWS) that was located on the south side of Building 231. Building 231 (Auto Hobby Center) is located on the main base at Holloman at 642 West Connecticut Avenue. The OWS was



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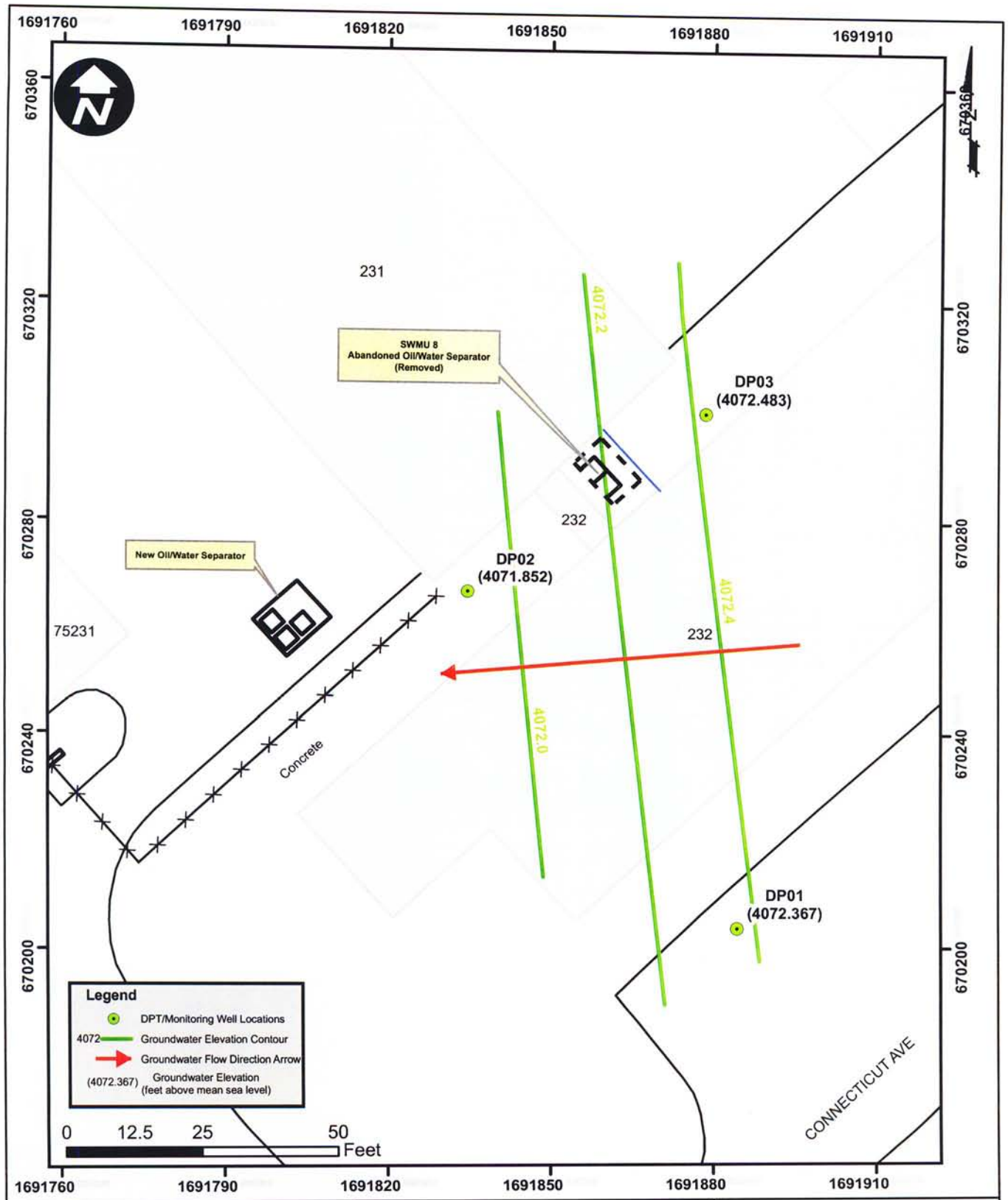
SWMU 8 Soil Boring and Monitoring Well Locations

PROJECT NO.	SCALE	DATE	DRAWN BY:
9050291	1"=25'	7/28/06	cm
			DRAWING NO: fig1

Remedial Action
Holloman Air Force Base
New Mexico

Figure 1



bhate associates
ENGINEERING, SCIENCE AND CONSTRUCTION

SWMU 8 Potentiometric Surface Map

PROJECT NO.	SCALE	DATE	DRAWN BY:
9050291	1"=25'	7/28/06	cm
			DRAWING NO. fig2

Remedial Action
Holloman Air Force Base
New Mexico

Figure 2

Table 1. Groundwater Elevation Summary
SWMU8
Holloman AFB, NM
Bhate Project No. 9050291.01.01

Well	Northing	Easting	Elevation TOC (ft above msl)	DTW from TOC (ft below TOC)	Groundwater Elevation July 2006 (ft above msl)
DP01	670203.701	1691884.472	4074.827	2.46	4072.367
DP02	670266.812	1691834.779	4076.042	4.19	4071.852
DP03	670300.290	1691878.600	4075.883	3.40	4072.483

NOTES: TOC = Top of Casing; DTW = Depth to Water; ft = feet; msl = mean seal level

Table 2.
Soil Analytical Data (June 2006)
SWMU-8
Holloman Air Force Base, New Mexico

Client Sample ID:	Soil Screening Levels	SWMU08DP01-5		SWMU08DP02-9		SWMU08DP02-9A		TRIP BLANK	
Lab Sample ID:	NMED	F40927-3		F40927-1		F40927-2		F40927-4	
Date Sampled:	Residential[1]	5/22/2006		5/22/2006		5/22/2006		5/22/2006	
Analyte		Result[2]	Q	Result[2]	Q	Result[2]	Q	Result[2]	Q
Volatile Organic Compounds	**mg/kg**	**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**	
Naphthalene	79.5	2.7	JB	2.9	U	2.7	U	2.0	U
TAL Metals Analysis	**mg/kg**	**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**	
Aluminum	77800	482		3590		3160		NA	
Antimony	31.3	1.2	J	0.75	U	0.75	U	NA	
Arsenic	3.9	0.82	J	0.95	J	0.56	J	NA	
Barium	15600	13.2	J	31.8		26.8	J	NA	
Beryllium	156	0.058	J	0.16	J	0.21	J	NA	
Calcium	NV	257000		171000		192000		NA	
Chromium	234	0.45	J	3.4		3.3		NA	
Cobalt	1520	0.42	J	0.90	J	0.94	J	NA	
Copper	3130	0.72	J	0.61	J	0.50	J	NA	
Iron	23500	349		3560		3330		NA	
Magnesium	NV	2090		1620		1640		NA	
Manganese	3590	5.7		33.9		30.4		NA	
Mercury	6.11	0.0078	U	0.016	J	0.0084	U	NA	
Nickel	1560	0.69	J	2.4	J	2.2	J	NA	
Potassium	NV	145	J	895	J	847	J	NA	
Selenium	391	0.61	J	0.28	U	0.31	J	NA	
Sodium	NV	175	J	249	J	167	J	NA	
Vanadium	78.2	2.4	J	7.1		7.1		NA	
Zinc	23500	3.7	J	7.7		8.2		NA	
General Chemistry		**%**		**%**		**%**		**%**	
Solids, Percent	NV	75.0		70.3		70.8		NA	

Notes:
NMED = New Mexico Environmental Department
TPH = Total Petroleum Hydrocarbons
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
NV = No Value
NA = Not Analyzed
Q = Qualifier
U = Not detected
J = Estimated result. Result is between the Method Detection Limit (MDL) and the Reporting Limit (RL), and/or qualified by the validating chemist (see Appendix H).
[1]NMED, June 2006. Technical Background Document for Development of Soil Screening Levels, Revision 4.0. (Residential Soil)
[2] If results are not detected (U) then the value is set at the Method Detection Limit (MDL)
[3] NMED, October 2006. TPH Screening Guidelines (Diesel #2/crankcase oil, Residential Direct Exposure)
Bold value indicate analytes above NMED Soil Screening Levels (Rev 4.0, Jun 2006) or combined TPH results above NMED TPH Screening Guidelines for Diesel #2/crankcase oil (Table 2b , Oct 2006)

Table 3.
Groundwater Analytical Data (June 2006)
SWMU-8
Holloman Air Force Base, New Mexico

Client Sample ID:	Groundwater Screening Levels		SWMU-08-DP01		SWMU-08-DP01FD		SWMU-08-DP02		TRIP BLANK		SWMU-08-DP03	
Lab Sample ID:	NMWQCC[1]	EPA MCL	F41336-1		F41336-2		F41372-1		F41372-2		F41371-1	
Date Sampled:			6/7/2006		6/7/2006		6/8/2006		6/8/2006		6/8/2006	
Analyte			Result[2]	Q	Result[2]	Q	Result[2]	Q	Result[2]	Q	Result[2]	Q
Volatile Organic Compounds	µg/L	µg/L	µg/L		µg/L		µg/L		µg/L		µg/L	
Bromodichloromethane	NV	NV	9.2		9.7		0.50	U	2.0	U	0.50	U
Chloroform	100	NV	21.0		23.7		0.50	U	2.0	U	1.7	
Dibromochloromethane	NV	NV	1.2		1.2	J	0.40	U	2.0	U	0.40	U
o-Dichlorobenzene	NV	600	0.50	U	0.50	U	0.53	J	2.0	U	0.50	U
TAL Metals Analysis	µg/L	µg/L	µg/L		µg/L		µg/L		µg/L		µg/L	
Aluminum	NV	NV	68.6	J	59.7	J	6820		NV		3450	
Arsenic	100	10	11.3		11.8		7.1	J	NV		6.6	J
Barium	1000	2000	21.6	J	22.2	J	84.3	J	NV		72.2	J
Beryllium	NV	4	2.5	J	2.3	J	4.8	J	NV		4.8	J
Calcium	NV	NV	656000		723000		822000		NV		738000	
Cobalt	50	NV	0.86	J	0.86	J	3.1	J	NV		1.2	J
Magnesium	NV	NV	81600		84100		64300		NV		57300	
Manganese	200	NV	119		227		259		NV		173	
Nickel	200	NV	5.1	J	23.8	J	8.9	J	NV		3.9	J
Potassium	NV	NV	9940	J	10200		15200		NV		6520	J
Selenium	50	50	3.8	J	3.9	J	3.8	J	NV		2.8	U
Sodium	NV	NV	78200		69000		71700		NV		72300	
Vanadium	NV	NV	108		101		29.3	J	NV		7.9	J
Zinc	10000	NV	3.4	J	1.6	U	54.3		NV		27.5	
General Chemistry	mg/L	mg/L	mg/L		mg/L		mg/L		mg/L		mg/L	
Solids, Total Dissolved	1000	NV	3190		2600		3060		NV		2910	

Notes:
NMWQCC = New Mexico Water Quality Control Commission
EPA = Environmetal Protection Agency
MCL = Maximum Contaminant Level
UTL = Upper Tolerance Limit
µg/L = micrograms per liter
mg/L = milligrams per liter
NV = No Value
Q = Qualifier
U = Not detected
J = Indicates an estimated value
[1]Standards for Groundwater, if 10,000 mg/l TDS Concentration or Less, New Mexico Administrative Code 20.6.2.3103
[2] If results are not detected (U) then the value is set at the Method Detection Limit (MDL)
Bold value indicate analytes above New Mexico Groundwater Quality Standard

HTW DRILLING LOG

HOLE NO. SWM408-DP01

SHEET 1 OF 2 SHEETS

1. COMPANY NAME: Bhate	2. DRILLING CONTRACTOR: ESN Golden, CO
3. PROJECT: GW Profiler/DPT Pilot Test	4. LOCATION: SWM408
5. NAME OF DRILLER: Dusty McNeil	6. MANUFACTURER'S DESIGNATION OF DRILL: AMS
7. SIZES & TYPES OF DRILLING & SAMPLING EQUIPMENT: AMS Power Pro 9600E; 3/4 OD rod; 2" plastic sleeves (5')	8. HOLE LOCATION: North East
	9. SURFACE ELEVATION (ft. NGVD)
	10. DATE STARTED: 5/22/06 — 11. DATE COMPLETED: 5/22/06
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: ~ 2.0' bgs
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED
14. TOTAL DEPTH OF HOLE: 14.0' bgs	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
NA			

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	TAL METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE REC %
1	X	X	ORO/DRO/GRO X X	SVOC X	PCBs X	

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
Temp. well		X		J.H. Moore

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	Field Screening Results d	Geotech Sample or Core Box No. e	Analytical Sample No. f	Blow Counts g	REMARKS h
	0	(0-2.5) Sandy silt w/ minor clay (SM) fine gr. subrounded, loose dry - sl. moist 7.5YR 8/2 pinkish white	PID 20.6 FID 2.3				SWM408-DP01-5 (Sample collected @ 2 ft bgs)
	1						
	2						
		2.5-5.0 sand v. fine grained (SP) subrounded loose, saturated/wet 7.5YR 5/4 brown	PID 23.8 FID 2.1				
	3						
	4						
	5						

PROJECT

HOLE NO. DP-01

HTW DRILLING LOG

HOLE NO. SWMU08-DP01

PROJECT: GW Profiler/DPT Pilot Test

INSPECTOR: J Moore

SHEET ~ OF 2 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	Field Screening Results d	Geotech Sample or Core Box No. e	Analytical Sample No. f	Blow Counts g	REMARKS h
		(5-7.5) sand v. fine (SP) gr. subrounded well sorted, loose saturated 7.5YR 5/4 brown	PID 32.25 FID 2.99				
	6						
	7						
		(7.5-10) silty sand v. fine grains (SM) loose moist w/ minor gypsum xtals 7.5YR 5/6 strong brown	PID 31.50 FID 3.10				
	8						
	9						
	10						
	11	11-12' sand v.f.gr (SP) well sorted, loose wet 7.5YR 5/6 strong brown	PID 35 FID 2.5				
	12						
	13	13-14' silty sand w/ minor clay/caliche (SM) w/ abundent	PID 35.5 FID 1.5				
	14	TD 14.0'					

PROJECT

HOLE NO. DP-01

HTW DRILLING LOG

HOLE NO. DP-02

1. COMPANY NAME: Bhate	2. DRILLING CONTRACTOR:
SHEET 1 OF 2 SHEETS	
3. PROJECT:	4. LOCATION: SW MU 08
5. NAME OF DRILLER: Dusty McNeil	6. MANUFACTURER'S DESIGNATION OF DRILL: Ams
7. SIZES & TYPES OF DRILLING & SAMPLING EQUIPMENT: Ams Power Pro 9600E; 3¼" OD Rod; 2" x 5' Plastic Sleeves	8. HOLE LOCATION: North East
	9. SURFACE ELEVATION (ft. NGVD):
	10. DATE STARTED: 5/22/06 — 11. DATE COMPLETED: 5/22/06
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: 2-2.5 ft bgs
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED:
14. TOTAL DEPTH OF HOLE: 14.4' bgs	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY):

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
NA			

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	TAL METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE REC %
2 (1 Dup)	X	X	ORO/DRO/GRO X X	SVOC X	PCBs X	

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
temp well		X		A Moore

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	Field Screening Results d	Geotech Sample or Core Box No. e	Analytical Sample No. f	Blow Counts g	REMARKS h
	0	0-2.5' bgs silty sand w/ minor clay (SM) subrounded loose sl. moist 7.5YR 7/4 pink	PID 32.8 FID 1.57				
	1						
	2						
		2.5-5.0' sand v.f.gr. (SP) subrounded loose saturated w/ H2O	PID 27.05 FID 6.10				
	3						
	4						
	5						

PROJECT: | HOLE NO. DP-02

HTW DRILLING LOG

HOLE NO. DP02

PROJECT SWMU8

INSPECTOR J Moore

SHEET 1 OF 2 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	Field Screening Results d	Geotech Sample or Core Box No. e	Analytical Sample No. f	Blow Counts g	REMARKS h
	5	5.0 - 7.5 ft bgs sand v.f.gr. (SP) saturated w/ H_2O well sorted, subrounded, 5YR 6/4 lt. reddish brown	PID 32.11 FID 1.82				
	6						
	7	7.5 - 10' bgs sand same as above not saturated but v. moist 5YR 6/6 reddish yellow	PID 27.60 FID 1.39				collected sample @ SWMU08-DP02-9 and dupe SWMU08-DP02-9-d
	8						
	9						
	10	10 - 12' bgs silty sand w/ clay (SM) moist v.f.gr. 5YR 5/6 yellowish red.	PID 31.6 FID 1.05				
	11						
	12	12 - 14 bgs silty sand (SM) w/ gypsum xtals/caliche mottled 7.5YR 6/6 reddish yellow.	PID 33.06 FID 1.02				
	13						
	14	TD @ 14.4' bgs					

PROJECT

HOLE NO. SWMU08 - DP02

HTW DRILLING LOG

SWMU 08

HOLE NO. DP03

1. COMPANY NAME: Bhate	2. DRILLING CONTRACTOR: ESN
SHEET 1 OF 1 SHEETS	
3. PROJECT	4. LOCATION: SWMU 08
5. NAME OF DRILLER: Toby Gonzales	6. MANUFACTURER'S DESIGNATION OF DRILL: Geoprobe
7. SIZES & TYPES OF DRILLING & SAMPLING EQUIPMENT: Geoprobe 6610 DT	8. HOLE LOCATION: North East
	9. SURFACE ELEVATION (ft. NGVD)
	10. DATE STARTED: 5/23/06 — 11. DATE COMPLETED: 5/23/06
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED
14. TOTAL DEPTH OF HOLE: 11.0 ft bgs	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE REC %
NONE						

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
MW				J H Moore

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	Field Screening Results d	Geotech Sample or Core Box No. e	Analytical Sample No. f	Blow Counts g	REMARKS h
	0	No sampling as this area has been previously excavated and backfilled to ~ 7-8 ft bgs.					
	1						
	2						
	3						
	4						
	5						

PROJECT

HOLE NO DP03

Bhate Environmental Associates — **WELL CONSTRUCTION DIAGRAM (Flush Mount)**

Project/Phase:		Well/Boring No.:	DP01
Location:	SWMU08-DP01	Drilling Method:	Direct Push Tech
Client:	USACE Omaha MW	Date(s):	5/22/06
Drilling Contractor:	ESN	Northing (NAD 83):	
Driller:	Dusty McNeil	Easting (NAD 83):	
Geologist:	Jim Moore	Bhate Project #:	

NOT TO SCALE

Surface Elevation:

Top of Casing Elevation:

Borehole Diameter (in): 3 1/4"

Well Casing Diameter (in): 1.0"

Depth to Water (ft) ~ 2.0

During Drilling: ~ 2.0

Date

Pre Development:

Date

Post Development:

Date

Top of Bentonite Seal: 0.0

Top of Filter Pack: 2.0

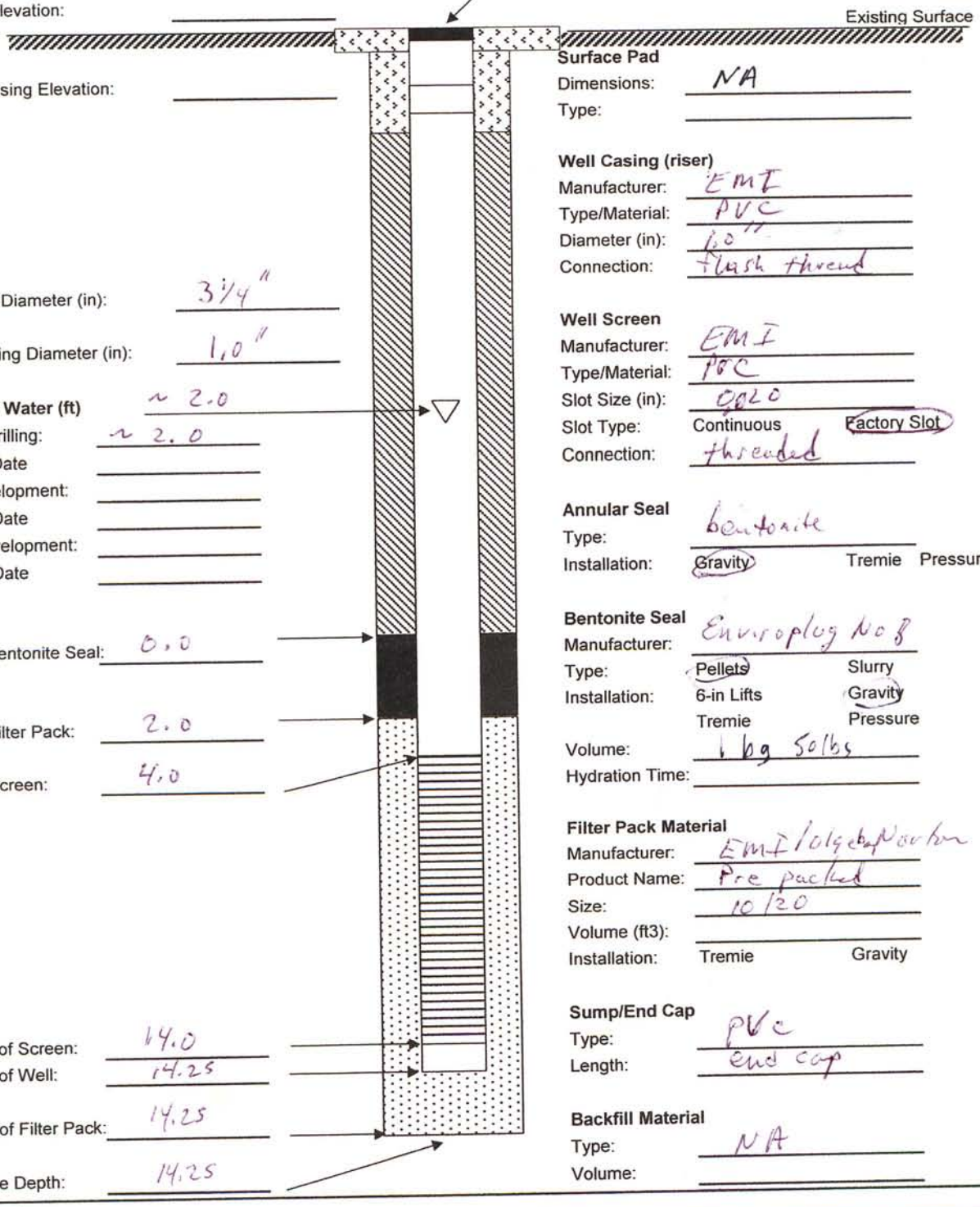
Top of Screen: 4.0

Bottom of Screen: 14.0

Bottom of Well: 14.25

Bottom of Filter Pack: 14.25

Borehole Depth: 14.25



Protective Casing
Type: manhole
Dimensions: 7 inch dia
Length: 6 inches

Surface Pad
Dimensions: NA
Type:

Well Casing (riser)
Manufacturer: EMI
Type/Material: PVC
Diameter (in): 1.0"
Connection: flush thread

Well Screen
Manufacturer: EMI
Type/Material: PVC
Slot Size (in): 0.020
Slot Type: Continuous Factory Slot
Connection: threaded

Annular Seal
Type: bentonite
Installation: Gravity Tremie Pressure

Bentonite Seal
Manufacturer: Enviroplug No 8
Type: Pellets Slurry
Installation: 6-in Lifts Gravity
Tremie Pressure
Volume: 1 bg 50lbs
Hydration Time:

Filter Pack Material
Manufacturer: EMI/Colorado Northern
Product Name: Pre packed
Size: 10/20
Volume (ft3):
Installation: Tremie Gravity

Sump/End Cap
Type: PVC
Length: end cap

Backfill Material
Type: NA
Volume:

Comments:

Bhate Environmental Associates — **WELL CONSTRUCTION DIAGRAM (Flush Mount)**

Project/Phase:		Well/Boring No.:	DP02
Location:	SWMU08-DP02	Drilling Method:	DPT
Client:	USACE Omaha	Date(s):	5/22/06
Drilling Contractor:	ESN	Northing (NAD 83):	
Driller:	Rusty McNeil	Easting (NAD 83):	
Geologist:	Jim Moore	Bhate Project #:	

NOT TO SCALE

Surface Elevation:

Top of Casing Elevation:

Borehole Diameter (in): 3¼"

Well Casing Diameter (in): 1.0"

Depth to Water (ft) 2-2.5' bgs

During Drilling: 2-2.5'

Date

Pre Development:

Date

Post Development:

Date

Top of Bentonite Seal: 0.0

Top of Filter Pack: 2.0

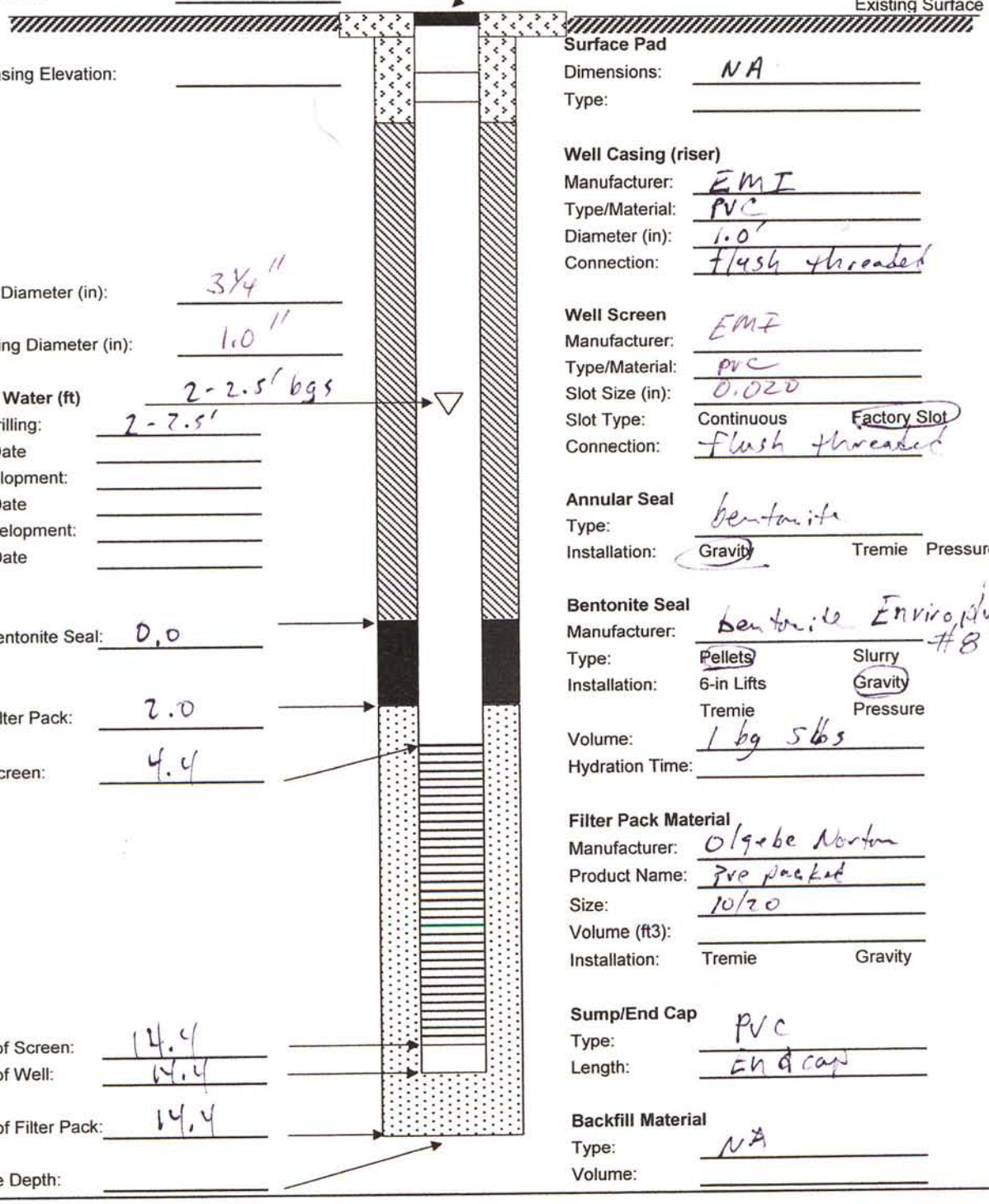
Top of Screen: 4.4

Bottom of Screen: 14.4

Bottom of Well: 14.4

Bottom of Filter Pack: 14.4

Borehole Depth:



Protective Casing
Type: manhole
Dimensions: 7-inch dia
Length: 6 inches

Surface Pad
Dimensions: NA
Type:

Well Casing (riser)
Manufacturer: EMI
Type/Material: PVC
Diameter (in): 1.0"
Connection: flush threaded

Well Screen
Manufacturer: EMI
Type/Material: PVC
Slot Size (in): 0.020
Slot Type: Continuous Factory Slot
Connection: flush threaded

Annular Seal
Type: bentonite
Installation: Gravity Tremie Pressure

Bentonite Seal
Manufacturer: Bentonite Enviroplug #8
Type: Pellets Slurry
Installation: 6-in Lifts Gravity
Tremie Pressure
Volume: 1 bg 5 lbs
Hydration Time:

Filter Pack Material
Manufacturer: Olgebe Norton
Product Name: Pre packed
Size: 10/20
Volume (ft3):
Installation: Tremie Gravity

Sump/End Cap
Type: PVC
Length: End cap

Backfill Material
Type: NA
Volume:

Comments:

Bhate Environmental Associates — **WELL CONSTRUCTION DIAGRAM (Flush Mount)**

Project/Phase:		Well/Boring No.:	DP03
Location:	SWMU08 - DP03	Drilling Method:	DPT
Client:	USACE OMAHA	Date(s):	5/23/06
Drilling Contractor:	ESN	Northing (NAD 83):	
Driller:	Toby Gonzales	Easting (NAD 83):	
Geologist:	Jim Moore	Bhate Project #:	

NOT TO SCALE

Surface Elevation:

Top of Casing Elevation:

Borehole Diameter (in): 3 1/4"

Well Casing Diameter (in): 1.0"

Depth to Water (ft) ~2.0'

During Drilling:

Date

Pre Development:

Date

Post Development:

Date

Top of Bentonite Seal: 0.0

Top of Filter Pack: 4.0

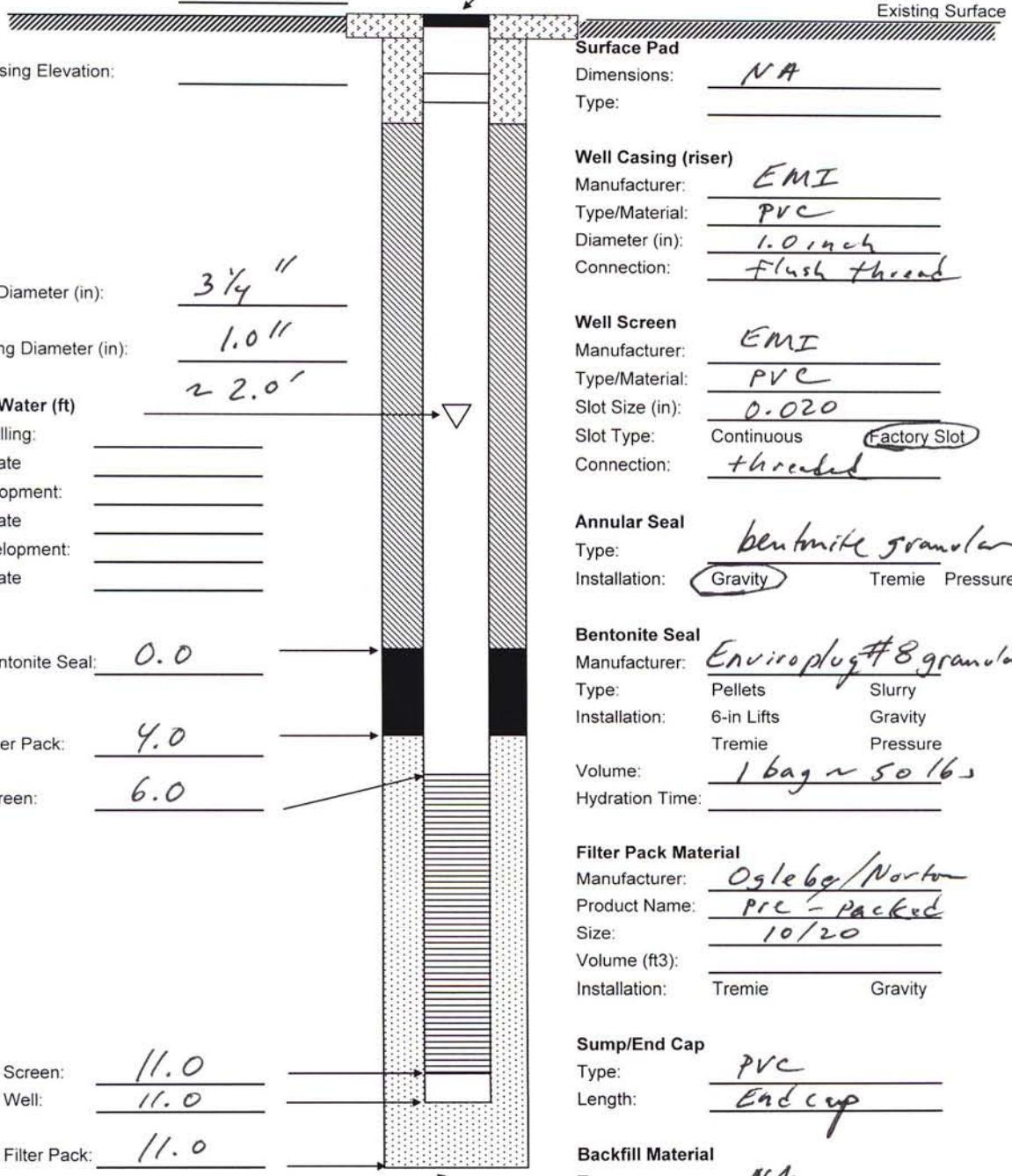
Top of Screen: 6.0

Bottom of Screen: 11.0

Bottom of Well: 11.0

Bottom of Filter Pack: 11.0

Borehole Depth: 11.0



Protective Casing
Type: manhole
Dimensions: 7 inch-dia
Length: 6 inch

Surface Pad
Dimensions: NA
Type:

Well Casing (riser)
Manufacturer: EMI
Type/Material: PVC
Diameter (in): 1.0 inch
Connection: Flush thread

Well Screen
Manufacturer: EMI
Type/Material: PVC
Slot Size (in): 0.020
Slot Type: Continuous (Factory Slot)
Connection: threaded

Annular Seal
Type: bentonite granular
Installation: (Gravity) Tremie Pressure

Bentonite Seal
Manufacturer: Enviroplug #8 granular
Type: Pellets Slurry
Installation: 6-in Lifts Gravity
Tremie Pressure
Volume: 1 bag ~ 50 lbs
Hydration Time:

Filter Pack Material
Manufacturer: Ogleby/Norton
Product Name: pre-packed
Size: 10/20
Volume (ft3):
Installation: Tremie Gravity

Sump/End Cap
Type: PVC
Length: End cap

Backfill Material
Type: NA
Volume:

Comments:

Appendix A-6

Figures and Analytical Results from the Voluntary Corrective Measures SWMU 8 Soil Remediation, Holloman Air Force Base, New Mexico

Bhate Environmental Associates, Inc., 2008

Table 1
Soil Analytical Data Hits Only (October 2008)
SWMU 8 Voluntary Corrective Measures, Soil Remediation
Holloman Air Force Base, New Mexico

Client Sample ID:	Soil Screening Levels	Basewide Background	SWMU-08-SW1	SWMU-08-SW2	SWMU-08-SW3	SWMU-08-SW4	SWMU-08-SW5	SWMU-08-SW6	SWMU-08-SW6-DUP	SWMU-08-SW7
Lab Sample ID:	NMED Residential[1]	95% UTL for Combined Soil[2]	LR221292	LR221292	LR221292	LR221436	LR221436	LR221436	LR221436	LR221436
Date Sampled:			10/08/2008	10/08/2008	10/08/2008	10/10/2008	10/10/2008	10/10/2008	10/10/2008	10/10/2008
Analyte			Result	Result	Result	Result	Result	Result	Result	Result
Total Petroleum Hydrocarbons	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**
Gasoline Range Organics (C6 -C10)	800 [3]	NV	ND	ND	ND	12	ND	ND	ND	ND
Diesel Range Organics (C10-C22)	800 [3]	NV	**1,110**	**1,150**	**1,040**	**1,120**	11	ND	ND	ND
Oil Range Organics (>C22-C36)	800 [3]	NV	536	363	570	224	18	ND	ND	4.6 J
Volatile Organic Compounds	**mg/kg**	**mg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**
Chloroform	5.72	NV	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	6.99	NV	ND	ND	174 J	ND	ND	ND	ND	ND
Semi-Volatile Organic Compounds	**mg/kg**	**mg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**	**µg/kg**
Butylbenzylphthalate	260 [4]	NV	ND	ND	550	ND	ND	ND	ND	ND
Di-n-butylphthalate	6,110	NV	ND	170 J	450	180 J	ND	ND	ND	ND
Diethylphthalate	48,900	NV	99 J	81 J	ND	ND	ND	ND	ND	ND
Pyrene	1,720	NV	ND	ND	85 J	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	347	NV	610	ND	1,500	300	ND	ND	ND	ND
Polychlorinated Biphenyls	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**
PCB-1248	2.22	NV	0.21	0.11	0.15	0.099	ND	ND	NA	ND
PCB-1254	1.12	NV	0.18	0.15	0.22	0.17	ND	ND	NA	ND
Target Analyte List Metals	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**
Aluminum	78,100	13,722.27	4,850	2,860	2,520	2,380	1,870	1,940	1,780	1,690
Arsenic	3.9	3.66	ND	ND	ND	ND	ND	ND	ND	ND
Barium	15,600	169.25	56.8	28.6	25.5	20.6	15.3	13.4	13.0	13.5
Beryllium	156	1.53	ND	ND	ND	ND	ND	ND	ND	ND
Boron	15,600	NV	ND	ND	ND	0.609 J	1.30 J	0.821 J	2.47 J	ND
Cadmium	77.9	0.28	ND	ND	ND	ND	ND	ND	ND	ND
Calcium	NV [5]	317,331.59	61,200	128,000	126,000	131,000	123,000	108,000	117,000	78,200
Chromium	219	24.95	7.66	3.48	4.03	2.51	2.04	2.11	2.07	1.79
Cobalt	23 [4]	7.70	1.55	1.24	1.10	0.815	0.603	0.709	0.881	0.579
Copper	3,130	12.96	7.53	7.25	8.95	1.27	0.402 J	0.727 J	0.801 J	0.425 J
Iron	54,800	23,049.48	5,620	3,100	4,280	2,120	1,920	2,170	2,090	1,610
Lead	400	10.87	12.4	18.5	21	0.663	1.38	1.31	ND	2.59
Magnesium	NV [5]	16,990.65	1,800	1,910	1,530	1,090	831	1,030	1,030	1,080
Manganese	10,700	393.47	70.6	43.4	38.5	23.4	19.0	22.2	21.6	24.2
Molybdenum	391	NV	3.27	2.0	2.0	2.29	2.38	2.15	0.523 J	2.21
Nickel	1,560	17.34	2.87	2.06	2.42	1.55	1.11 J	1.28 J	1.32 J	1.18 J
Potassium	NV [5]	5,077.12	1,080	775	644	643	485	454	470	447
Silver	391	65	ND	ND	ND	ND	0.436 J	0.420 J	ND	ND
Sodium	NV [4]	5,195.97	82.8	135	108	129	105	109	98.5	92.4
Vanadium	391	42.53	22.6	6.40	5.78	3.15	4.21	4.51	4.37	3.54
Zinc	23,500	54.53	13.4	15.4	16.2	5.40	5.49	4.83 J	5.57	4.66 J
General Chemistry	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**
Percent Moisture	NV	NV	28.30	24.89	28.22	27.15	28.43	29.08	28.56	29.80

Notes:

NMED = New Mexico Environment Department
USEPA = U.S. Environmental Protection Agency
UTL = Upper Tolerance Limit
TPH = Total Petroleum Hydrocarbons
GRO = Gasoline Range Organics
DRO = Diesel Range Organics
ORO = Oil Range Organics
SSL = Soil Screening Level
SW = Sidewall Sample

µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
% = percent
B = Analyte found in associated method blank
J = Indicates an estimated value
ND = Not Detected
NV = No Value
NA = Not Analyzed

[1] NMED, December 2009. Technical Background Document for Development of Soil Screening Levels (SSL), Revision 5.0.
[2] Established in the *Basewide Background Study Report, Holloman Air Force Base, New Mexico* (NationView/Bhate JV III, October 2009)
[3] NMED, October 2006. TPH Screening Guidelines (Unknown Oil, Residential Direct Exposure, Table 2b.)
[4] USEPA Region 3, 6, and 9 Regional Screening Levels (RSLs) (December, 2009)
[5] No Value established for NMED Residential SSL (December, 2009) and USEPA RSL (December, 2009)

Bold value indicates analytes above NMED SSLs (Rev 5.0, Dec. 2009) or TPH results above NMED TPH Screening Guidelines (Oct., 2006)
Indicates combined TPH-GRO/DRO/ORO results exceed NMED TPH Screening Guidelines (Unknown Oil, Residential Direct Exposure)

Table 1
Soil Analytical Data Hits Only (October 2008)
SWMU 8 Voluntary Corrective Measures, Soil Remediation
Holloman Air Force Base, New Mexico

Client Sample ID:	Soil Screening Levels	Basewide Background	SWMU-08-SW8	SWMU-08-SW9	SWMU-08-SW10	SWMU-08-SW11	SWMU-08-SW12	SWMU-08-SW12-DUP	SWMU-08-SW13	SWMU-08-SW14
Lab Sample ID:	NMED Residential[1]	95% UTL for Combined Soil[2]	LR221436	LR221436	LR221436	LR221436	LR221436	LR221436	LR221436	LR221435
Date Sampled:			10/10/2008	10/10/2008	10/10/2008	10/10/2008	10/10/2008	10/10/2008	10/10/2008	10/10/2008
Analyte			Result	Result	Result	Result	Result	Result	Result	Result
Total Petroleum Hydrocarbons	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Gasoline Range Organics (C6 -C10)	800 [3]	NV	ND	ND	6.8	ND	9.4	ND	9.4	5.3
Diesel Range Organics (C10-C22)	800 [3]	NV	ND	106	**1,560**	3.0	**2,380**	**954**	**1,520**	141
Oil Range Organics (>C22-C36)	800 [3]	NV	ND	213	358	2.1 J	743	700	426	148
Volatile Organic Compounds	mg/kg	mg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Chloroform	5.72	NV	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	6.99	NV	ND	ND	ND	ND	ND	ND	ND	ND
Semi-Volatile Organic Compounds	mg/kg	mg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Butylbenzylphthalate	260 [4]	NV	ND	ND	ND	ND	ND	ND	140 J	ND
Di-n-butylphthalate	6,110	NV	ND	ND	ND	ND	ND	150 J	170 J	ND
Diethylphthalate	48,900	NV	ND	ND	ND	ND	ND	190 J	ND	ND
Pyrene	1,720	NV	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	347	NV	ND	ND	330	ND	430	410	700	ND
Polychlorinated Biphenyls	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
PCB-1248	2.22	NV	ND	ND	0.18	ND	0.34	NA	0.64	0.078 J
PCB-1254	1.12	NV	ND	0.31	0.22	ND	0.47	NA	0.71	0.16
Target Analyte List Metals	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Aluminum	78,100	13,722.27	2,020	2,320	2,000	1,670	2,160	2,370	2,500	2,310
Arsenic	3.9	3.66	ND	ND	ND	ND	ND	ND	ND	ND
Barium	15,600	169.25	14.4	22.8	22.0	12.8	22.2	21.5	22.2	22.2
Beryllium	156	1.53	ND	ND	ND	ND	ND	ND	ND	ND
Boron	15,600	NV	ND	ND	0.333 J	ND	ND	2.58 J	ND	2.09 J
Cadmium	77.9	0.28	ND	ND	ND	ND	ND	ND	ND	ND
Calcium	NV [5]	317,331.59	74,100	106,000	99,300	97,400	109,000	117,000	128,000	114,000
Chromium	219	24.95	2.10	2.87	2.74	1.89	2.72	2.79	3.19	2.57
Cobalt	23 [4]	7.70	0.733	0.846	0.944	0.608	1.04	1.05	1.09	0.841
Copper	3,130	12.96	0.408 J	3.19	1.65	ND	ND	2.00	1.42	1.44
Iron	54,800	23,049.48	1,870	2,200	2,350	1,790	2,500	2,820	3,070	2,170
Lead	400	10.87	0.659	13.9	7.45	0.415 J	49.3	3.15	8.55	ND
Magnesium	NV [5]	16,990.65	1,230	1,590	2,560	877	1,530	1,760	2,850	1,140
Manganese	10,700	393.47	27.0	27.1	45.8	21.2	32.6	40.8	59.1	24.7
Molybdenum	391	NV	1.21	1.84	1.91	2.08	2.87	0.555 J	2.04	0.613 J
Nickel	1,560	17.34	1.32 J	1.56	1.84	1.01 J	1.78	2.01	2.28	1.57
Potassium	NV [5]	5,077.12	453	580	517	456	579	636	746	657
Silver	391	65	ND	ND	0.660	ND	ND	0.162 J	ND	ND
Sodium	NV [4]	5,195.97	82.1	113	113	94.3	191	102	221	98.2
Vanadium	391	42.53	2.86	8.00	5.67	2.93	4.77	5.86	6.33	3.76
Zinc	23,500	54.53	4.72 J	13.8	8.47	4.25 J	8.92	9.31	11.2	8.70
General Chemistry	%	%	%	%	%	%	%	%	%	%
Percent Moisture	NV	NV	28.37	27.35	29.59	28.23	28.89	25.06	25.50	26.26

Notes:

NMED = New Mexico Environment Department
USEPA = U.S. Environmental Protection Agency
UTL = Upper Tolerance Limit
TPH = Total Petroleum Hydrocarbons
GRO = Gasoline Range Organics
DRO = Diesel Range Organics
ORO = Oil Range Organics
SSL = Soil Screening Level
SW = Sidewall Sample

µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
% = percent
B = Analyte found in associated method blank
J = Indicates an estimated value
ND = Not Detected
NV = No Value
NA = Not Analyzed

[1] NMED, December 2009. Technical Background Document for Development of Soil Screening Levels (SSL), Revision 5.0.
[2] Established in the *Basewide Background Study Report, Holloman Air Force Base, New Mexico* (NationView/Bhate JV III, October 2009)
[3] NMED, October 2006. TPH Screening Guidelines (Unknown Oil, Residential Direct Exposure, Table 2b.)
[4] USEPA Region 3, 6, and 9 Regional Screening Levels (RSLs) (December, 2009)
[5] No Value established for NMED Residential SSL (December, 2009) and USEPA RSL (December, 2009)

Bold value indicates analytes above NMED SSLs (Rev 5.0, Dec. 2009) or TPH results above NMED TPH Screening Guidelines (Oct., 2006)
Indicates combined TPH-GRO/DRO/ORO results exceed NMED TPH Screening Guidelines (Unknown Oil, Residential Direct Exposure)

Table 1
Soil Analytical Data Hits Only (October 2008)
SWMU 8 Voluntary Corrective Measures, Soil Remediation
Holloman Air Force Base, New Mexico

Client Sample ID:	Soil Screening Levels	Basewide Background	SWMU-08-SW15	SWMU-08-SW15OE	SWMU-08-SW16	SWMU-08-Bottom 1	SWMU-08-Bottom 2	SWMU-08-Bottom 3	SWMU-08-Bottom 4
Lab Sample ID:	NMED Residential[1]	95% UTL for Combined Soil[2]	LR221435	LR222342	LR221435	LR221292	LR221292	LR221435	LR221435
Date Sampled:			10/10/2008	10/27/2008	10/10/2008	10/08/2008	10/08/2008	10/08/2008	10/08/2008
Analyte			Result	Result	Result	Result	Result	Result	Result
Total Petroleum Hydrocarbons	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Gasoline Range Organics (C6 -C10)	800 [3]	NV	7.3	ND	ND	ND	ND	ND	ND
Diesel Range Organics (C10-C22)	800 [3]	NV	**2,340**	ND	0.80 J	0.55 J	ND	ND	ND
Oil Range Organics (>C22-C36)	800 [3]	NV	642	6.0	12	3.0 J	ND	ND	3.3 J
Volatile Organic Compounds	mg/kg	mg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Chloroform	5.72	NV	ND	ND	ND	1.4 J	1.7 J	ND	ND
Tetrachloroethene	6.99	NV	ND	ND	ND	ND	ND	ND	ND
Semi-Volatile Organic Compounds	mg/kg	mg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Butylbenzylphthalate	260 [4]	NV	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	6,110	NV	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	48,900	NV	ND	ND	ND	ND	ND	ND	ND
Pyrene	1,720	NV	ND	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	347	NV	380	ND	ND	ND	ND	ND	ND
Polychlorinated Biphenyls	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
PCB-1248	2.22	NV	0.23	ND	ND	ND	ND	ND	ND
PCB-1254	1.12	NV	0.16	ND	ND	ND	ND	ND	ND
Target Analyte List Metals	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Aluminum	78,100	13,722.27	1,800	5,100	3,980	2,980	2,690	2,840	2,780
Arsenic	3.9	3.66	ND	0.377 J	ND	ND	ND	ND	ND
Barium	15,600	169.25	11.1	42.9	53.6	18.1	20	20.0	20.0
Beryllium	156	1.53	ND	0.176 J	ND	ND	ND	ND	ND
Boron	15,600	NV	ND	7.24	1.08 J	ND	ND	0.318 J	0.346 J
Cadmium	77.9	0.28	ND	0.220 J	ND	ND	ND	ND	ND
Calcium	NV [5]	317,331.59	124,000	182,000	105,000	105,000	146,000	120,000	124,000
Chromium	219	24.95	2.03	8.37	3.61	3.17	2.78	2.92	3.07
Cobalt	23 [4]	7.70	0.767	2.90	1.34	0.95	0.80	0.816	1.03
Copper	3,130	12.96	7.45	3.69	9.48	4.33	4.24	6.09	5.46
Iron	54,800	23,049.48	1,770	6,390	3,430	2,580	2,520	2,720	3,000
Lead	400	10.87	1.71	23.0	1.13	2.35	1.34	2.11	0.715
Magnesium	NV [5]	16,990.65	1,010	6,750	1,470	1,700	1,320	1,460	1,800
Manganese	10,700	393.47	33.3	201	40.0	25.4	22.6	26.2	30.3
Molybdenum	391	NV	1.73	1.01	1.30	1.91	2.02	1.56	1.59
Nickel	1,560	17.34	1.28 J	6.07	2.35	1.84	1.61	1.54	1.67
Potassium	NV [5]	5,077.12	430	1,330	836	746	648	682	735
Silver	391	65	0.183 J	ND	0.484 J	ND	0.57	ND	0.440 J
Sodium	NV [4]	5,195.97	92.0	219	105	118	123	104	129
Vanadium	391	42.53	3.93	14.7	7.95	5.61	6.40	9.58	5.55
Zinc	23,500	54.53	5.68	26.9	9.78	8.34	5.83	7.35	8.86
General Chemistry	%	%	%	%	%	%	%	%	%
Percent Moisture	NV	NV	30.89	5.85	23.72	27.76	28.21	28.08	28.25

Notes:

NMED = New Mexico Environment Department
USEPA = U.S. Environmental Protection Agency
UTL = Upper Tolerance Limit
TPH = Total Petroleum Hydrocarbons
GRO = Gasoline Range Organics
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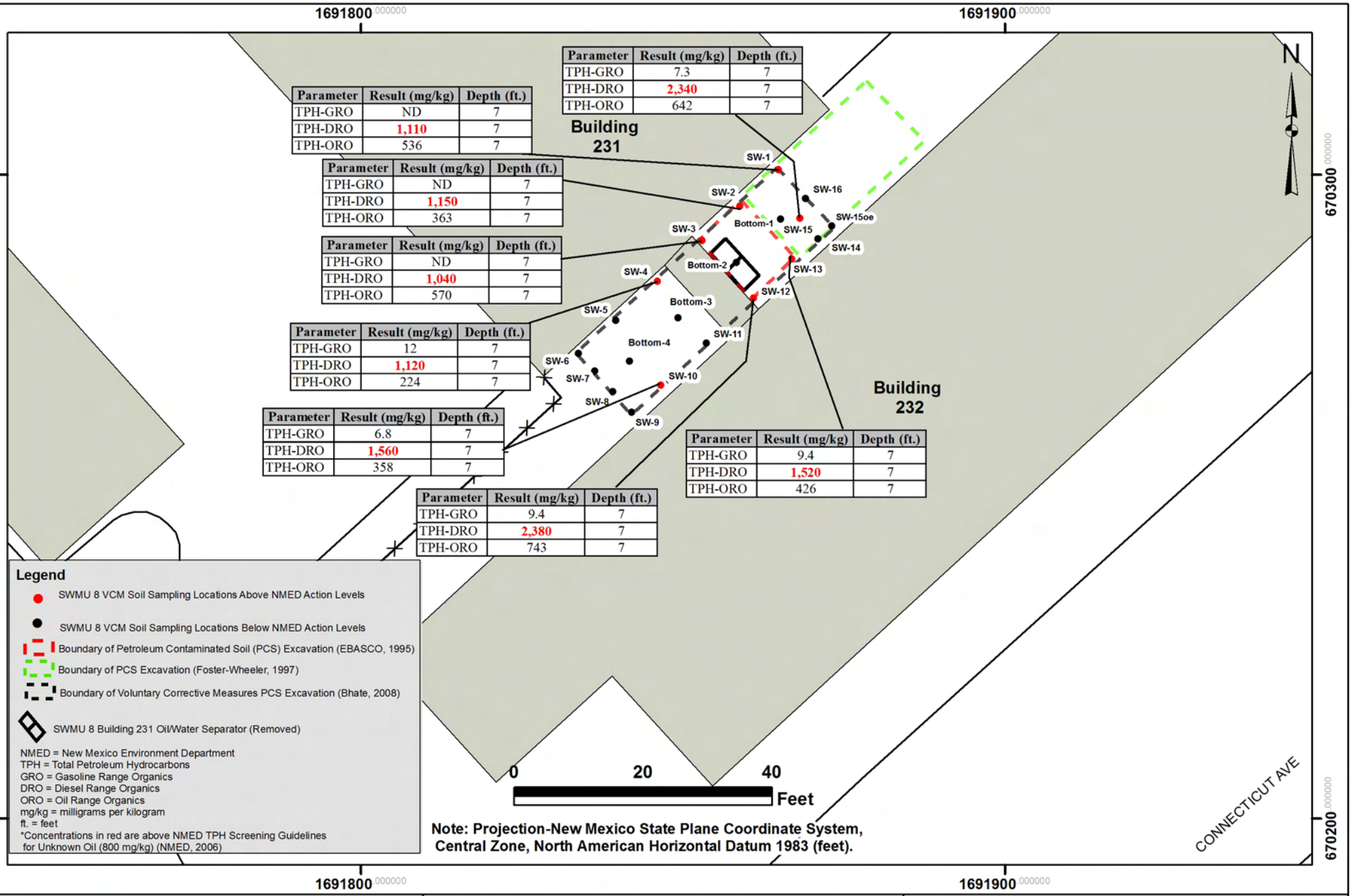
[4] USEPA Region 3, 6, and 9 Regional Screening Levels (RSLs) (December, 2009)
[5] No Value established for NMED Residential SSL (December, 2009) and USEPA RSL (December, 2009)

Bold value indicates analytes above NMED SSLs (Rev 5.0, Dec. 2009) or TPH results above NMED TPH Screening Guidelines (Oct., 2006)
Indicates combined TPH-GRO/DRO/ORO results exceed NMED TPH Screening Guidelines (Unknown Oil, Residential Direct Exposure)



Parameter	Result (mg/kg)	Depth (ft.)
TPH-GRO	7.3	7
TPH-DRO	2,340	7
TPH-ORO	642	7

Parameter	Result (mg/kg)	Depth (ft.)
TPH-GRO	ND	7
TPH-DRO	1,110	7
TPH-ORO	536	7

Parameter	Result (mg/kg)	Depth (ft.)
TPH-GRO	ND	7
TPH-DRO	1,150	7
TPH-ORO	363	7

Parameter	Result (mg/kg)	Depth (ft.)
TPH-GRO	ND	7
TPH-DRO	1,040	7
TPH-ORO	570	7

Parameter	Result (mg/kg)	Depth (ft.)
TPH-GRO	12	7
TPH-DRO	1,120	7
TPH-ORO	224	7

Parameter	Result (mg/kg)	Depth (ft.)
TPH-GRO	6.8	7
TPH-DRO	1,560	7
TPH-ORO	358	7

Parameter	Result (mg/kg)	Depth (ft.)
TPH-GRO	9.4	7
TPH-DRO	2,380	7
TPH-ORO	743	7

Parameter	Result (mg/kg)	Depth (ft.)
TPH-GRO	9.4	7
TPH-DRO	1,520	7
TPH-ORO	426	7

bhate associates
ENGINEERING, SCIENCE AND CONSTRUCTION

SWMU 8 Voluntary Corrective Measures Soil Analytical Data Exceeding NMED Action Levels

PROJECT NO.	SCALE	DATE	DRAWN BY:
9050291	1"=20'	3/17/10	cm
			DRAWING NO: fig_1

SWMU 8 Voluntary Corrective Measures
Holloman AFB, New Mexico

Figure 1

APPENDIX B
SOIL BORING LOGS

HTW DRILLING LOG

1.COMPANY NAME NationView, LLC	2.DRILLING CONTRACTOR Vironex, Inc.	HOLE NO. SWMU8-DP04 SHEET 1 OF 2 SHEETS
3.PROJECT SWMU 8, RCRA Facility Investigation	4.LOCATION Holloman Air Force Base, New Mexico	
5.NAME OF DRILLER TJ Haley	6.MANUFACTURER'S DESIGNATION OF DRILL Geoprobe Systems® 420M (Dolly Mounted Unit)	
7.SIZES AND TYPE OF DRILLING EQUIPMENT 2.5" Macro-Core Sampling System	8.HOLE LOCATION (NAD 83, NM State Plane) Northing Easting	
	9.SURFACE ELEVATION (FT. NAVD88)	
	10.DATE STARTED 8-Oct-10	11.DATE COMPLETED 8-Oct-10
12.OVERBURDEN THICKNESS NA	15. DEPTH GROUNDWATER ENCOUNTERED (ft bgs) 6	
13.DEPTH DRILLED INTO ROCK NA	16.DEPTH TO WATER (btoc) & TIME ELAPSED AFTER DRILLING COMPLETED	
14.TOTAL DEPTH OF HOLE (ft bgs) 11	17.OTHER WATER LEVEL MEASUREMENTS (SPECIFY)	

18.GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19.TOTAL NUMBER OF CORE BOXES
None	N/A	N/A	N/A

20.SAMPLES FOR CHEMICAL ANALYSIS DP04-7	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %
	8260B	6010B/7470A	8082 (PCB)	8270C (SVOC)	8015M (TPH)	

22.DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
Backfilled	X			Dustin McNeil

Depth	Description of Materials	Field Screening Results (ppm)	Geotech Sample or Box number	Analytical Sample Number	Blow Counts	Remarks
0	Concrete					
	Coarse Gravel Fill					
1	Sand white 7.5YR/8/1 fine grained, loose dry					
2	Silty Clay pink 7.5YR/8/3 plastic, soft moist	2' PID: 0.0				
3						
4		4' PID: 0.0				
5						
6	saturated	6' PID: 0.0				
	Sand					
7	greenish gray Gley 1/6/10Y fine grained, loose saturated no odor	7' PID: 0.0		SWMU8-DP04-7 (@ 13:30)		
8	Sand light brown 7.5YR/6/4 fine grained, loose moist	8' PID: 0.0				
9		9' PID: 0.0				
10						

HTW DRILLING LOG

HOLE NO. SWMU8-DP04

PROJECT
SWMU 8, RCRA Facility Investigation

INSPECTOR
D. McNeil

SHEET 2
OF 2 SHEETS

Elev.	Depth.	Description of Materials	Field Screening Results (ppm)	Geotech Sample or Box number	Analytical Sample Number	Blow Counts	Remarks
	10	Same as above					
	11	End of Boring at 11'	11' PID: 0.0				
	12						
	13						
	14						
	15						
	16						
	17						
	18						
	19						
	20						
	21						
	22						
	23						
	24						
	25						

HTW DRILLING LOG

HOLE NO.	SWMU8-DP05
1.COMPANY NAME	NationView, LLC
2.DRILLING CONTRACTOR	Vironex, Inc.
SHEET	1 OF 2 SHEETS
3.PROJECT	SWMU 8, RCRA Facility Investigation
4.LOCATION	Holloman Air Force Base, New Mexico
5.NAME OF DRILLER	TJ Haley
6.MANUFACTURER'S DESIGNATION OF DRILL	Geoprobe Systems® 7822DT
7.SIZES AND TYPE OF DRILLING EQUIPMENT	3.25" Dual Tube Sampling System
8.HOLE LOCATION (NAD 83, NM State Plane)	Northing / Easting
9.SURFACE ELEVATION (FT. NAVD88)	
10.DATE STARTED	8-Oct-10
11.DATE COMPLETED	8-Oct-10
12.OVERBURDEN THICKNESS	NA
15. DEPTH GROUNDWATER ENCOUNTERED (ft bgs)	6
13.DEPTH DRILLED INTO ROCK	NA
16.DEPTH TO WATER (btoc) & TIME ELAPSED AFTER DRILLING COMPLETED	
14.TOTAL DEPTH OF HOLE (ft bgs)	15
17.OTHER WATER LEVEL MEASUREMENTS (SPECIFY)	

18.GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19.TOTAL NUMBER OF CORE BOXES
None	N/A	N/A	N/A

20.SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %
DP05-7 DP05-7-a	8260B	6010B/7470A	8082 (PCB)	8270C (SVOC)	8015M (TPH)	

22.DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
Monitoring Well		X		Dustin McNeil

Depth	Description of Materials	Field Screening Results (ppm)	Geotech Sample or Box number	Analytical Sample Number	Blow Counts	Remarks
0	Concrete					
	Coarse Gravel Fill					
1	Silty Clay pink 7.5YR/8/3 plastic, soft moist					
2		2' PID: 0.0				
3						
4		4' PID: 0.0				
	Sandy Clay light greenish gray Gley 1/7/10Y fine grained sand					
5	plastic, soft moist	5' PID: 6.3				
6	saturated	6' PID: 1493				
7	visible product sheen on core			SWMU8-DP05-7 SWMU8-DP05-7-a (@ 11:00)		
8		8' PID: 561				
9	Sand light brown 7.5YR/6/4 fine grained, subangular loose	9' PID: 20.6				
10	saturated	10' PID: 0.0				

HTW DRILLING LOG

HOLE NO. SWMU8-DP05

PROJECT: SWMU 8, RCRA Facility Investigation

INSPECTOR: D. McNeil

SHEET 2 OF 2 SHEETS

Elev.	Depth.	Description of Materials	Field Screening Results (ppm)	Geotech Sample or Box number	Analytical Sample Number	Blow Counts	Remarks
	10	Same as above					
		Silty Sand					
	11	reddish yellow					
		5YR/6/6					
		fine grained sand					
		stiff					
		gypsum crystal inclusions					
	12	moist	12' PID: 0.0				
	13	Silty Sand					
		pink					
		7.5YR/8/3					
		fine grained sand					
		stiff					
	14	moist	14' PID: 0.0				
	15	End of Boring at 15'					
	16						
	17						
	18						
	19						
	20						
	21						
	22						
	23						
	24						
	25						

HTW DRILLING LOG

1.COMPANY NAME NationView, LLC	2.DRILLING CONTRACTOR Vironex, Inc.	HOLE NO. SWMU8-DP06 SHEET 1 OF 2 SHEETS
3.PROJECT SWMU 8, RCRA Facility Investigation	4.LOCATION Holloman Air Force Base, New Mexico	
5.NAME OF DRILLER TJ Haley	6.MANUFACTURER'S DESIGNATION OF DRILL Geoprobe Systems® 420M (Dolly Mounted Unit)	
7.SIZES AND TYPE OF DRILLING EQUIPMENT 2.5" Macro-Core Sampling System	8.HOLE LOCATION (NAD 83, NM State Plane) Northing Easting	
	9.SURFACE ELEVATION (FT. NAVD88)	
	10.DATE STARTED 8-Oct-10	11.DATE COMPLETED 8-Oct-10
12.OVERBURDEN THICKNESS NA	15. DEPTH GROUNDWATER ENCOUNTERED (ft bgs) 6	
13.DEPTH DRILLED INTO ROCK NA	16.DEPTH TO WATER (btoc) & TIME ELAPSED AFTER DRILLING COMPLETED	
14.TOTAL DEPTH OF HOLE (ft bgs) 12	17.OTHER WATER LEVEL MEASUREMENTS (SPECIFY)	

18.GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19.TOTAL NUMBER OF CORE BOXES
None	N/A	N/A	N/A

20.SAMPLES FOR CHEMICAL ANALYSIS DP06-7	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %
	8260B	6010B/7470A	8082 (PCB)	8270C (SVOC)	8015M (TPH)	

22.DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
Backfilled	X			Dustin McNeil

Depth	Description of Materials	Field Screening Results (ppm)	Geotech Sample or Box number	Analytical Sample Number	Blow Counts	Remarks
0	Concrete					
	Coarse Gravel Fill					
1	Silty Clay pink 7.5YR/8/3 plastic, soft moist					
2		2' PID: 0.0				
3						
4		4' PID: 0.0				
	Sandy Clay light greenish gray Gley 1/7/10Y fine grained sand plastic, soft moist					
5						
6	saturated	6' PID: 708				
7				SWMU8-DP06-7 (@ 14:30)		
8	Sand greenish gray Gley 1/6/10Y fine grained, loose saturated	8' PID: 302				
9	Sand light brown 7.5YR/6/4 fine grained, loose saturated					
10		10' PID: 0.0				

	Project SWMU 8, RCRA Facility Investigation	HOLE NO. SWMU8-DP06

HTW DRILLING LOG

HOLE NO. SWMU8-DP06

PROJECT: SWMU 8, RCRA Facility Investigation

INSPECTOR: D. McNeil

SHEET 2 OF 2 SHEETS

Elev.	Depth.	Description of Materials	Field Screening Results (ppm)	Geotech Sample or Box number	Analytical Sample Number	Blow Counts	Remarks
	10	Same as above					
		Silty Sand					
	11	reddish yellow					
		5YR/6/6					
		stiff					
		gypsum crystal inclusions					
		moist					
	12	End of Boring at 12'	12' PID: 0.0				
	13						
	14						
	15						
	16						
	17						
	18						
	19						
	20						
	21						
	22						
	23						
	24						
	25						

HTW DRILLING LOG

1.COMPANY NAME NationView, LLC	2.DRILLING CONTRACTOR Vironex, Inc.	HOLE NO. SWMU8-DP07 SHEET 1 OF 2 SHEETS
3.PROJECT SWMU 8, RCRA Facility Investigation	4.LOCATION Holloman Air Force Base, New Mexico	
5.NAME OF DRILLER TJ Haley	6.MANUFACTURER'S DESIGNATION OF DRILL Geoprobe Systems® 420M (Dolly Mounted Unit)	
7.SIZES AND TYPE OF DRILLING EQUIPMENT 2.5" Macro-Core Sampling System	8.HOLE LOCATION (NAD 83, NM State Plane) Northing Easting	
	9.SURFACE ELEVATION (FT. NAVD88)	
	10.DATE STARTED 8-Oct-10	11.DATE COMPLETED 8-Oct-10
12.OVERBURDEN THICKNESS NA	15. DEPTH GROUNDWATER ENCOUNTERED (ft bgs) 6	
13.DEPTH DRILLED INTO ROCK NA	16.DEPTH TO WATER (btoc) & TIME ELAPSED AFTER DRILLING COMPLETED	
14.TOTAL DEPTH OF HOLE (ft bgs) 12	17.OTHER WATER LEVEL MEASUREMENTS (SPECIFY)	

18.GEOTECHNICAL SAMPLES	DISTURBED		UNDISTURBED		19.TOTAL NUMBER OF CORE BOXES	
None	N/A		N/A		N/A	
20.SAMPLES FOR CHEMICAL ANALYSIS DP07-7	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %
	8260B	6010B/7470A	8082 (PCB)	8270C (SVOC)	8015M (TPH)	
22.DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR		
Backfilled	X			Dustin McNeil		

Depth	Description of Materials	Field Screening Results (ppm)	Geotech Sample or Box number	Analytical Sample Number	Blow Counts	Remarks
0	Concrete					
	Coarse Gravel Fill					
1	Silty Clay pink 7.5YR/8/3 plastic, soft moist					
2		2' PID: 0.0				
3						
	Silty Clay light brown 7.5YR/6/4 plastic, soft moist					
4		4' PID: 0.0				
5						
6	saturated	6' PID: 0.0				
7				SWMU8-DP07-7 (@ 15:50)		
8	Sand pinkish white 7.5YR/8/2 fine grained, loose saturated	8' PID: 0.0				
9						
10		10' PID: 0.0				

	Project SWMU 8, RCRA Facility Investigation	HOLE NO. SWMU8-DP07

HTW DRILLING LOG

HOLE NO. SWMU8-DP07

PROJECT: SWMU 8, RCRA Facility Investigation

INSPECTOR: D. McNeil

SHEET 2 OF 2 SHEETS

Elev.	Depth.	Description of Materials	Field Screening Results (ppm)	Geotech Sample or Box number	Analytical Sample Number	Blow Counts	Remarks
	10	Same as above					
		Silty Sand					
	11	reddish yellow					
		5YR/6/6					
		stiff					
		gypsum crystal inclusions					
		moist					
	12	End of Boring at 12'	12' PID: 0.0				
	13						
	14						
	15						
	16						
	17						
	18						
	19						
	20						
	21						
	22						
	23						
	24						
	25						

HTW DRILLING LOG

HOLE NO. SWMU8-DP08		
1.COMPANY NAME: NationView, LLC	2.DRILLING CONTRACTOR: Vironex, Inc.	SHEET 1 OF 2 SHEETS
3.PROJECT: SWMU 8, RCRA Facility Investigation	4.LOCATION: Holloman Air Force Base, New Mexico	
5.NAME OF DRILLER: TJ Haley	6.MANUFACTURER'S DESIGNATION OF DRILL: Geoprobe Systems® 420M (Dolly Mounted Unit)	
7.SIZES AND TYPE OF DRILLING EQUIPMENT: 2.5" Macro-Core Sampling System	8.HOLE LOCATION (NAD 83, NM State Plane): Northing / Easting	
	9.SURFACE ELEVATION (FT. NAVD88)	
	10.DATE STARTED: 8-Oct-10	11.DATE COMPLETED: 8-Oct-10
12.OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED (ft bgs): 6	
13.DEPTH DRILLED INTO ROCK: NA	16.DEPTH TO WATER (btoc) & TIME ELAPSED AFTER DRILLING COMPLETED	
14.TOTAL DEPTH OF HOLE (ft bgs): 11	17.OTHER WATER LEVEL MEASUREMENTS (SPECIFY)	

18.GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19.TOTAL NUMBER OF CORE BOXES
None	N/A	N/A	N/A

20.SAMPLES FOR CHEMICAL ANALYSIS DP08-8	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %
	8260B	6010B/7470A	8082 (PCB)	8270C (SVOC)	8015M (TPH)	

22.DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
Backfilled	X			Austin McNeil

Depth	Description of Materials	Field Screening Results (ppm)	Geotech Sample or Box number	Analytical Sample Number	Blow Counts	Remarks
0	Concrete					
	Coarse Gravel Fill					
1	Silty Clay pink 7.5YR/8/3 plastic, soft moist					
2		2' PID: 0.0				
3						
4		4' PID: 0.0				
	Silty Clay light brown 7.5YR/6/4 plastic, soft moist					
5						
6	saturated	6' PID: 0.0				
7						
8	Sand greenish gray Gley 1/6/10Y fine grained, loose saturated	8' PID: 609		SWMU8-DP08-8 (@ 16:15)		
9	Silty Sand reddish yellow 5YR/6/6 stiff gypsum crystal inclusions	10' PID: 0.0				
10	moist					

HTW DRILLING LOG

HOLE NO. SWMU8-DP08

PROJECT: SWMU 8, RCRA Facility Investigation

INSPECTOR: D. McNeil

SHEET 2 OF 2 SHEETS

Elev.	Depth.	Description of Materials	Field Screening Results (ppm)	Geotech Sample or Box number	Analytical Sample Number	Blow Counts	Remarks
	10	Same as above					
	11	End of Boring at 11'					
	12						
	13						
	14						
	15						
	16						
	17						
	18						
	19						
	20						
	21						
	22						
	23						
	24						
	25						

HTW DRILLING LOG

1.COMPANY NAME NationView, LLC	2.DRILLING CONTRACTOR Vironex, Inc.	HOLE NO. SWMU8-DP09 SHEET 1 OF 2 SHEETS
3.PROJECT SWMU 8, RCRA Facility Investigation	4.LOCATION Holloman Air Force Base, New Mexico	
5.NAME OF DRILLER TJ Haley	6.MANUFACTURER'S DESIGNATION OF DRILL Geoprobe Systems® 420M (Dolly Mounted Unit)	
7.SIZES AND TYPE OF DRILLING EQUIPMENT 2.5" Macro-Core Sampling System	8.HOLE LOCATION (NAD 83, NM State Plane) Northing Easting	
	9.SURFACE ELEVATION (FT. NAVD88)	
	10.DATE STARTED 9-Oct-10	11.DATE COMPLETED 9-Oct-10
12.OVERBURDEN THICKNESS NA	15. DEPTH GROUNDWATER ENCOUNTERED (ft bgs) 6	
13.DEPTH DRILLED INTO ROCK NA	16.DEPTH TO WATER (btoc) & TIME ELAPSED AFTER DRILLING COMPLETED	
14.TOTAL DEPTH OF HOLE (ft bgs) 11	17.OTHER WATER LEVEL MEASUREMENTS (SPECIFY)	

18.GEOTECHNICAL SAMPLES	DISTURBED		UNDISTURBED		19.TOTAL NUMBER OF CORE BOXES	
None	N/A		N/A		N/A	
20.SAMPLES FOR CHEMICAL ANALYSIS DP09-7	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %
	8260B	6010B/7470A	8082 (PCB)	8270C (SVOC)	8015M (TPH)	
22.DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR		
Backfilled	X			Dustin McNeil		

Depth	Description of Materials	Field Screening Results (ppm)	Geotech Sample or Box number	Analytical Sample Number	Blow Counts	Remarks
0	Concrete					
	Coarse Gravel Fill					
1	Silty Clay pink 7.5YR/8/3 plastic, soft moist					
2		2' PID: 0.0				
3						
4		4' PID: 0.0				
	Sandy Clay light brown 7.5YR/6/4 plastic, soft moist					
5						
6	saturated	6' PID: 0.0				
7	Sand light brown 7.5YR/6/4 fine grained, loose saturated			SWMU8-DP09-7 (@ 11:35)		
8		8' PID: 0.0				
9						
10		10' PID: 0.0				

	Project SWMU 8, RCRA Facility Investigation	HOLE NO. SWMU8-DP09

HTW DRILLING LOG

HOLE NO. SWMU8-DP09

PROJECT
SWMU 8, RCRA Facility Investigation

INSPECTOR
D. McNeil

SHEET 2
OF 2 SHEETS

Elev.	Depth.	Description of Materials	Field Screening Results (ppm)	Geotech Sample or Box number	Analytical Sample Number	Blow Counts	Remarks
	10	Same as above					
	11	End of Boring at 11'					
	12						
	13						
	14						
	15						
	16						
	17						
	18						
	19						
	20						
	21						
	22						
	23						
	24						
	25						

HTW DRILLING LOG

HOLE NO. SWMU8-DP10		
1.COMPANY NAME: NationView, LLC	2.DRILLING CONTRACTOR: Vironex, Inc.	SHEET 1 OF 2 SHEETS
3.PROJECT: SWMU 8, RCRA Facility Investigation	4.LOCATION: Holloman Air Force Base, New Mexico	
5.NAME OF DRILLER: TJ Haley	6.MANUFACTURER'S DESIGNATION OF DRILL: Geoprobe Systems® 420M (Dolly Mounted Unit)	
7.SIZES AND TYPE OF DRILLING EQUIPMENT: 2.5" Macro-Core Sampling System	8.HOLE LOCATION (NAD 83, NM State Plane) Northing / Easting	
	9.SURFACE ELEVATION (FT. NAVD88)	
	10.DATE STARTED: 9-Oct-10	11.DATE COMPLETED: 9-Oct-10
12.OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED (ft bgs): 6	
13.DEPTH DRILLED INTO ROCK: NA	16.DEPTH TO WATER (btoc) & TIME ELAPSED AFTER DRILLING COMPLETED	
14.TOTAL DEPTH OF HOLE (ft bgs): 12	17.OTHER WATER LEVEL MEASUREMENTS (SPECIFY)	

18.GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19.TOTAL NUMBER OF CORE BOXES
None	N/A	N/A	N/A

20.SAMPLES FOR CHEMICAL ANALYSIS DP10-7 -MS, -MSD	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %
	8260B	6010B/7470A	8082 (PCB)	8270C (SVOC)	8015M (TPH)	

22.DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
Backfilled	X			Dustin McNeil

Depth	Description of Materials	Field Screening Results (ppm)	Geotech Sample or Box number	Analytical Sample Number	Blow Counts	Remarks
0	Concrete					
	Coarse Gravel Fill					
1	Silty Clay pink 7.5YR/8/3 plastic, soft moist					
2		2' PID: 0.0				
3						
4		4' PID: 0.0				
	Sandy Clay light brown 7.5YR/6/4 plastic, soft moist					
5						
6	saturated	6' PID: 0.0				
7				SWMU8-DP10-7 SWMU8-DP10-7-MS SWMU8-DP10-7-MSD (@ 12:15)		
	Sand light brown 7.5YR/6/4					
8	fine grained, loose saturated	8' PID: 0.0				
9						
10		10' PID: 0.0				

	Project: SWMU 8, RCRA Facility Investigation	HOLE NO. SWMU8-DP10

HTW DRILLING LOG

HOLE NO. SWMU8-DP10

PROJECT: SWMU 8, RCRA Facility Investigation

INSPECTOR: D. McNeil

SHEET 2 OF 2 SHEETS

Elev.	Depth.	Description of Materials	Field Screening Results (ppm)	Geotech Sample or Box number	Analytical Sample Number	Blow Counts	Remarks
	10	Same as above					
	11						
	12	End of Boring at 12'	12' PID: 0.0				
	13						
	14						
	15						
	16						
	17						
	18						
	19						
	20						
	21						
	22						
	23						
	24						
	25						

HTW DRILLING LOG

1.COMPANY NAME NationView, LLC	2.DRILLING CONTRACTOR Vironex, Inc.	HOLE NO. SWMU8-DP11 SHEET 1 OF 2 SHEETS
3.PROJECT SWMU 8, RCRA Facility Investigation	4.LOCATION Holloman Air Force Base, New Mexico	
5.NAME OF DRILLER TJ Haley	6.MANUFACTURER'S DESIGNATION OF DRILL Geoprobe Systems® 420M (Dolly Mounted Unit)	
7.SIZES AND TYPE OF DRILLING EQUIPMENT 2.5" Macro-Core Sampling System	8.HOLE LOCATION (NAD 83, NM State Plane) Northing Easting	
	9.SURFACE ELEVATION (FT. NAVD88)	
	10.DATE STARTED 9-Oct-10	11.DATE COMPLETED 9-Oct-10
12.OVERBURDEN THICKNESS NA	15. DEPTH GROUNDWATER ENCOUNTERED (ft bgs) 6	
13.DEPTH DRILLED INTO ROCK NA	16.DEPTH TO WATER (btoc) & TIME ELAPSED AFTER DRILLING COMPLETED	
14.TOTAL DEPTH OF HOLE (ft bgs) 12	17.OTHER WATER LEVEL MEASUREMENTS (SPECIFY)	

18.GEOTECHNICAL SAMPLES	DISTURBED		UNDISTURBED		19.TOTAL NUMBER OF CORE BOXES	
None	N/A		N/A		N/A	
20.SAMPLES FOR CHEMICAL ANALYSIS DP11-7	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %
	8260B	6010B/7470A	8082 (PCB)	8270C (SVOC)	8015M (TPH)	
22.DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR		
Backfilled	X			Dustin McNeil		

Depth	Description of Materials	Field Screening Results (ppm)	Geotech Sample or Box number	Analytical Sample Number	Blow Counts	Remarks
0	Concrete					
	Coarse Gravel Fill					
1	Silty Clay pink 7.5YR/8/3 plastic, soft moist					
2		2' PID: 0.0				
3						
4		4' PID: 0.0				
	Sandy Clay light brown 7.5YR/6/4 plastic, soft moist					
5						
6	saturated	6' PID: 0.0				
7	Sand light brown 7.5YR/6/4 fine grained, loose saturated			SWMU8-DP11-7 (@ 15:00)		
8		8' PID: 0.0				
9						
10		10' PID: 0.0				

	Project SWMU 8, RCRA Facility Investigation	HOLE NO. SWMU8-DP11

HTW DRILLING LOG

HOLE NO. SWMU8-DP11

PROJECT: SWMU 8, RCRA Facility Investigation

INSPECTOR: D. McNeil

SHEET 2 OF 2 SHEETS

Elev.	Depth.	Description of Materials	Field Screening Results (ppm)	Geotech Sample or Box number	Analytical Sample Number	Blow Counts	Remarks
	10	Same as above					
	11						
	12	End of Boring at 12'	12' PID: 0.0				
	13						
	14						
	15						
	16						
	17						
	18						
	19						
	20						
	21						
	22						
	23						
	24						
	25						

HTW DRILLING LOG

1.COMPANY NAME NationView, LLC	2.DRILLING CONTRACTOR Vironex, Inc.	HOLE NO. SWMU8-DP12 SHEET 1 OF 2 SHEETS
3.PROJECT SWMU 8, RCRA Facility Investigation	4.LOCATION Holloman Air Force Base, New Mexico	
5.NAME OF DRILLER TJ Haley	6.MANUFACTURER'S DESIGNATION OF DRILL Geoprobe Systems® 420M (Dolly Mounted Unit)	
7.SIZES AND TYPE OF DRILLING EQUIPMENT 2.5" Macro-Core Sampling System	8.HOLE LOCATION (NAD 83, NM State Plane) Northing Easting	
	9.SURFACE ELEVATION (FT. NAVD88)	
	10.DATE STARTED 9-Oct-10	11.DATE COMPLETED 9-Oct-10
12.OVERBURDEN THICKNESS NA	15. DEPTH GROUNDWATER ENCOUNTERED (ft bgs) 6	
13.DEPTH DRILLED INTO ROCK NA	16.DEPTH TO WATER (btoc) & TIME ELAPSED AFTER DRILLING COMPLETED	
14.TOTAL DEPTH OF HOLE (ft bgs) 12	17.OTHER WATER LEVEL MEASUREMENTS (SPECIFY)	

18.GEOTECHNICAL SAMPLES	DISTURBED		UNDISTURBED		19.TOTAL NUMBER OF CORE BOXES	
None	N/A		N/A		N/A	
20.SAMPLES FOR CHEMICAL ANALYSIS DP12-7	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %
	8260B	6010B/7470A	8082 (PCB)	8270C (SVOC)	8015M (TPH)	
22.DISPOSITION OF HOLE Backfilled	BACKFILLED X	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR	Dustin McNeil	

Depth	Description of Materials	Field Screening Results (ppm)	Geotech Sample or Box number	Analytical Sample Number	Blow Counts	Remarks
0	Concrete					
	Coarse Gravel Fill					
1	Silty Clay pink 7.5YR/8/3 plastic, soft moist					
2		2' PID: 0.0				
3						
4		4' PID: 0.0				
	Sandy Clay light brown 7.5YR/6/4 plastic, soft moist					
5						
6	saturated	6' PID: 0.0				
7				SWMU8-DP12-7 (@ 16:00)		
	Sand light brown 7.5YR/6/4					
8	fine grained, loose saturated	8' PID: 0.0				
9						
10		10' PID: 0.0				

	Project SWMU 8, RCRA Facility Investigation	HOLE NO. SWMU8-DP12

HTW DRILLING LOG

HOLE NO. SWMU8-DP12

PROJECT
SWMU 8, RCRA Facility Investigation

INSPECTOR
D. McNeil

SHEET 2
OF 2 SHEETS

Elev.	Depth.	Description of Materials	Field Screening Results (ppm)	Geotech Sample or Box number	Analytical Sample Number	Blow Counts	Remarks
	10	Same as above					
	11						
	12	End of Boring at 12'	12' PID: 0.0				
	13						
	14						
	15						
	16						
	17						
	18						
	19						
	20						
	21						
	22						
	23						
	24						
	25						

HTW DRILLING LOG

1.COMPANY NAME NationView, LLC	2.DRILLING CONTRACTOR Vironex, Inc.	HOLE NO. SWMU8-DP13 SHEET 1 OF 2 SHEETS
3.PROJECT SWMU 8, RCRA Facility Investigation	4.LOCATION Holloman Air Force Base, New Mexico	
5.NAME OF DRILLER TJ Haley	6.MANUFACTURER'S DESIGNATION OF DRILL Geoprobe Systems® 420M (Dolly Mounted Unit)	
7.SIZES AND TYPE OF DRILLING EQUIPMENT 2.5" Macro-Core Sampling System	8.HOLE LOCATION (NAD 83, NM State Plane) Northing Easting	
	9.SURFACE ELEVATION (FT. NAVD88)	
	10.DATE STARTED 10-Oct-10	11.DATE COMPLETED 10-Oct-10
12.OVERBURDEN THICKNESS NA	15. DEPTH GROUNDWATER ENCOUNTERED (ft bgs) 6	
13.DEPTH DRILLED INTO ROCK NA	16.DEPTH TO WATER (btoc) & TIME ELAPSED AFTER DRILLING COMPLETED	
14.TOTAL DEPTH OF HOLE (ft bgs) 12	17.OTHER WATER LEVEL MEASUREMENTS (SPECIFY)	

18.GEOTECHNICAL SAMPLES	DISTURBED		UNDISTURBED		19.TOTAL NUMBER OF CORE BOXES	
None	N/A		N/A		N/A	
20.SAMPLES FOR CHEMICAL ANALYSIS DP013-7 DP13-7-a	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %
	8260B	6010B/7470A	8082 (PCB)	8270C (SVOC)	8015M (TPH)	
22.DISPOSITION OF HOLE Monitoring Well	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR	Dustin McNeil	
		X				

Depth	Description of Materials	Field Screening Results (ppm)	Geotech Sample or Box number	Analytical Sample Number	Blow Counts	Remarks
0	Concrete					
	Coarse Gravel Fill					
1	Silty Clay pink 7.5YR/8/3 plastic, soft moist					
2		2' PID: 0.0				
3						
4		4' PID: 0.0				
	Sandy Clay light brown 7.5YR/6/4 fine grained sand plastic, soft moist to saturated					
5						
6		6' PID: 0.0				
	Sand light brown 7.5YR/6/4 fine grained, loose saturated					
7				SWMU8-DP13-7 SWMU8-DP13-7-a (@ 11:30)		
8		8' PID: 0.0				
9						
10		10' PID: 0.0				

	Project SWMU 8, RCRA Facility Investigation	HOLE NO. SWMU8-DP13

HTW DRILLING LOG

HOLE NO. SWMU8-DP13

PROJECT: SWMU 8, RCRA Facility Investigation

INSPECTOR: D. McNeil

SHEET 2 OF 2 SHEETS

Elev.	Depth.	Description of Materials	Field Screening Results (ppm)	Geotech Sample or Box number	Analytical Sample Number	Blow Counts	Remarks
	10	Same as above					
	11						
	12	End of Boring at 12'	12' PID: 0.0				
	13						
	14						
	15						
	16						
	17						
	18						
	19						
	20						
	21						
	22						
	23						
	24						
	25						

HTW DRILLING LOG

1.COMPANY NAME NationView, LLC	2.DRILLING CONTRACTOR Vironex, Inc.	HOLE NO. SWMU8-DP14 SHEET 1 OF 2 SHEETS
3.PROJECT SWMU 8, RCRA Facility Investigation	4.LOCATION Holloman Air Force Base, New Mexico	
5.NAME OF DRILLER TJ Haley	6.MANUFACTURER'S DESIGNATION OF DRILL Geoprobe Systems® 420M (Dolly Mounted Unit)	
7.SIZES AND TYPE OF DRILLING EQUIPMENT 2.5" Macro-Core Sampling System	8.HOLE LOCATION (NAD 83, NM State Plane) Northing Easting	
	9.SURFACE ELEVATION (FT. NAVD88)	
	10.DATE STARTED 10-Oct-10	11.DATE COMPLETED 10-Oct-10
12.OVERBURDEN THICKNESS NA	15. DEPTH GROUNDWATER ENCOUNTERED (ft bgs) 6	
13.DEPTH DRILLED INTO ROCK NA	16.DEPTH TO WATER (btoc) & TIME ELAPSED AFTER DRILLING COMPLETED	
14.TOTAL DEPTH OF HOLE (ft bgs) 11	17.OTHER WATER LEVEL MEASUREMENTS (SPECIFY)	

18.GEOTECHNICAL SAMPLES	DISTURBED		UNDISTURBED		19.TOTAL NUMBER OF CORE BOXES	
None	N/A		N/A		N/A	
20.SAMPLES FOR CHEMICAL ANALYSIS DP14-7	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %
	8260B	6010B/7470A	8082 (PCB)	8270C (SVOC)	8015M (TPH)	
22.DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR		
Backfilled	X			Dustin McNeil		

Depth	Description of Materials	Field Screening Results (ppm)	Geotech Sample or Box number	Analytical Sample Number	Blow Counts	Remarks
0	Concrete					
	Coarse Gravel Fill					
1	Silty Clay pink 7.5YR/8/3 plastic, soft moist					
2		2' PID: 0.0				
3						
4		4' PID: 0.0				
	Sandy Clay light brown 7.5YR/6/4 plastic, soft moist					
5						
6	saturated	6' PID: 0.0				
7	Sand light brown 7.5YR/6/4 fine grained, loose saturated			SWMU8-DP14-7 (@ 09:30)		
8		8' PID: 0.0				
9						
10		10' PID: 0.0				

	Project SWMU 8, RCRA Facility Investigation	HOLE NO. SWMU8-DP14

HTW DRILLING LOG

HOLE NO. SWMU8-DP14

PROJECT
SWMU 8, RCRA Facility Investigation

INSPECTOR
D. McNeil

SHEET 2
OF 2 SHEETS

Elev.	Depth.	Description of Materials	Field Screening Results (ppm)	Geotech Sample or Box number	Analytical Sample Number	Blow Counts	Remarks
	10	Same as above					
	11	End of Boring at 11'					
	12						
	13						
	14						
	15						
	16						
	17						
	18						
	19						
	20						
	21						
	22						
	23						
	24						
	25						

HTW DRILLING LOG

1.COMPANY NAME NationView, LLC	2.DRILLING CONTRACTOR Vironex, Inc.	HOLE NO. SWMU8-DP15 SHEET 1 OF 1 SHEETS
3.PROJECT SWMU 8, RCRA Facility Investigation	4.LOCATION Holloman Air Force Base, New Mexico	
5.NAME OF DRILLER TJ Haley	6.MANUFACTURER'S DESIGNATION OF DRILL Geoprobe Systems® 420M (Dolly Mounted Unit)	
7.SIZES AND TYPE OF DRILLING EQUIPMENT 2.5" Macro-Core Sampling System	8.HOLE LOCATION (NAD 83, NM State Plane) Northing Easting	
	9.SURFACE ELEVATION (FT. NAVD88)	
	10.DATE STARTED 10-Oct-10	11.DATE COMPLETED 10-Oct-10
12.OVERBURDEN THICKNESS NA	15. DEPTH GROUNDWATER ENCOUNTERED (ft bgs) 6	
13.DEPTH DRILLED INTO ROCK NA	16.DEPTH TO WATER (btoc) & TIME ELAPSED AFTER DRILLING COMPLETED	
14.TOTAL DEPTH OF HOLE (ft bgs) 10	17.OTHER WATER LEVEL MEASUREMENTS (SPECIFY)	

18.GEOTECHNICAL SAMPLES	DISTURBED		UNDISTURBED		19.TOTAL NUMBER OF CORE BOXES	
None	N/A		N/A		N/A	
20.SAMPLES FOR CHEMICAL ANALYSIS DP15-7	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %
	8260B	6010B/7470A	8082 (PCB)	8270C (SVOC)	8015M (TPH)	
22.DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR	Dustin McNeil	
Backfilled	X					

Depth	Description of Materials	Field Screening Results (ppm)	Geotech Sample or Box number	Analytical Sample Number	Blow Counts	Remarks
0	Concrete					
	Coarse Gravel Fill					
1	Silty Clay pink 7.5YR/8/3 plastic, soft moist					
2		2' PID: 0.0				
3						
4		4' PID: 0.0				
	Sandy Clay light brown 7.5YR/6/4 plastic, soft moist					
5						
6	saturated	6' PID: 0.0				
7	Sand light brown 7.5YR/6/4 fine grained, loose saturated			SWMU8-DP15-7 (@ 10:45)		
8		8' PID: 0.0				
9						
10	End of Boring at 10'	10' PID: 0.0				

	Project SWMU 8, RCRA Facility Investigation	HOLE NO. SWMU8-DP15

HTW DRILLING LOG

1.COMPANY NAME NationView, LLC	2.DRILLING CONTRACTOR Vironex, Inc.	HOLE NO. SWMU8-DP16 SHEET 1 OF 1 SHEETS
3.PROJECT SWMU 8, RCRA Facility Investigation	4.LOCATION Holloman Air Force Base, New Mexico	
5.NAME OF DRILLER TJ Haley	6.MANUFACTURER'S DESIGNATION OF DRILL Geoprobe Systems® 7822DT	
7.SIZES AND TYPE OF DRILLING EQUIPMENT 3.25" Dual Tube Sampling System	8.HOLE LOCATION (NAD 83, NM State Plane) Northing Easting	
	9.SURFACE ELEVATION (FT. NAVD88)	
	10.DATE STARTED 10-Oct-10	11.DATE COMPLETED 10-Oct-10
12.OVERBURDEN THICKNESS NA	15. DEPTH GROUNDWATER ENCOUNTERED (ft bgs)	
13.DEPTH DRILLED INTO ROCK NA	16.DEPTH TO WATER (btoc) & TIME ELAPSED AFTER DRILLING COMPLETED	
14.TOTAL DEPTH OF HOLE (ft bgs) 5	17.OTHER WATER LEVEL MEASUREMENTS (SPECIFY)	

18.GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19.TOTAL NUMBER OF CORE BOXES
2		X	None

20.SAMPLES FOR CHEMICAL ANALYSIS None	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %

22.DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
Backfilled	X			Dustin McNeil

Depth	Description of Materials	Field Screening Results (ppm)	Geotech Sample or Box number	Analytical Sample Number	Blow Counts	Remarks
0	Asphalt					
	Coarse Gravel Fill					
1	Silty Clay pink 7.5YR/8/3 plastic, soft moist					
2			SWMU8-DP16-2 (@ 13:20)			
3			SWMU8-DP16-3 (@ 13:20)			
4						
5	End of Boring at 5'					
6						
7						
8						
9						
10						

HTW DRILLING LOG

1.COMPANY NAME NationView, LLC	2.DRILLING CONTRACTOR Vironex, Inc.	HOLE NO. SWMU8-DP17 SHEET 1 OF 2 SHEETS
3.PROJECT SWMU 8, RCRA Facility Investigation	4.LOCATION Holloman Air Force Base, New Mexico	
5.NAME OF DRILLER TJ Haley	6.MANUFACTURER'S DESIGNATION OF DRILL Geoprobe Systems® 7822DT	
7.SIZES AND TYPE OF DRILLING EQUIPMENT 3.25" Dual Tube Sampling System	8.HOLE LOCATION (NAD 83, NM State Plane) Northing Easting	
	9.SURFACE ELEVATION (FT. NAVD88)	
	10.DATE STARTED 11-Oct-10	11.DATE COMPLETED 11-Oct-10
12.OVERBURDEN THICKNESS NA	15. DEPTH GROUNDWATER ENCOUNTERED (ft bgs) 6	
13.DEPTH DRILLED INTO ROCK NA	16.DEPTH TO WATER (btoc) & TIME ELAPSED AFTER DRILLING COMPLETED	
14.TOTAL DEPTH OF HOLE (ft bgs) 15	17.OTHER WATER LEVEL MEASUREMENTS (SPECIFY)	

18.GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19.TOTAL NUMBER OF CORE BOXES
None	N/A	N/A	N/A

20.SAMPLES FOR CHEMICAL ANALYSIS None	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %

22.DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
Monitoring Well		X		Dustin McNeil

Depth	Description of Materials	Field Screening Results (ppm)	Geotech Sample or Box number	Analytical Sample Number	Blow Counts	Remarks
0	Backfill Coarse Gravels					
1	Silty Clay pink 7.5YR/8/3 plastic, soft moist					
2		2' PID: 0.0				
3						
4		4' PID: 0.0				
5	Sand light brown 7.5YR/6/4 fine grained, loose moist					
6	saturated	6' PID: 0.0				
7						
8		8' PID: 0.0				
9						
10		10' PID: 0.0				

	Project SWMU 8, RCRA Facility Investigation	HOLE NO. SWMU8-DP17

HTW DRILLING LOG

HOLE NO. SWMU8-DP17

PROJECT: SWMU 8, RCRA Facility Investigation

INSPECTOR: D. McNeil

SHEET 2 OF 2 SHEETS

Elev.	Depth.	Description of Materials	Field Screening Results (ppm)	Geotech Sample or Box number	Analytical Sample Number	Blow Counts	Remarks
	10	Same as above					
	11						
	12		12' PID: 0.0				
	13	very dense, stiff					
	14		14' PID: 0.0				
	15	End of Boring at 15'					
	16						
	17						
	18						
	19						
	20						
	21						
	22						
	23						
	24						
	25						

APPENDIX C
MONITORING WELL CONSTRUCTION DIAGRAMS

NATIONVIEW

WELL CONSTRUCTION DIAGRAM (Flush Mount)

SITE:	Holloman Air Force Base	**WELL/BORING ID:**	SWMU8-DP05
PROJECT NAME:	SWMU 8 RCRA Facility Investigation	**DRILLING METHOD:**	Direct Push
PROJECT NO./PHASE:	8080014/03.020	**DATE(S):**	8-Oct-10
DRILLING CONTRACTOR:	Vironex, Inc.	**SURVEYOR:**	
DRILLER:	TJ Haley	**NORTHING (NAD 83):**	
GEOLOGIST:	Dustin McNeil	**EASTING (NAD 83):**	

NOT TO SCALE

Surface Elevation (NAVD 88):

Casing Elevation (NAVD 88):

Borehole Diameter (in): 3.25

Well Casing Diameter (in): 1.00

DEPTH TO WATER

During Drilling: Approximately 6'

Date 8-Oct-10

Pre Development: 6.63' BTOC

Date 12-Oct-10

Post Development:

Date

Top of Bentonite Seal: 1.00

Top of Filter Pack: 3.00

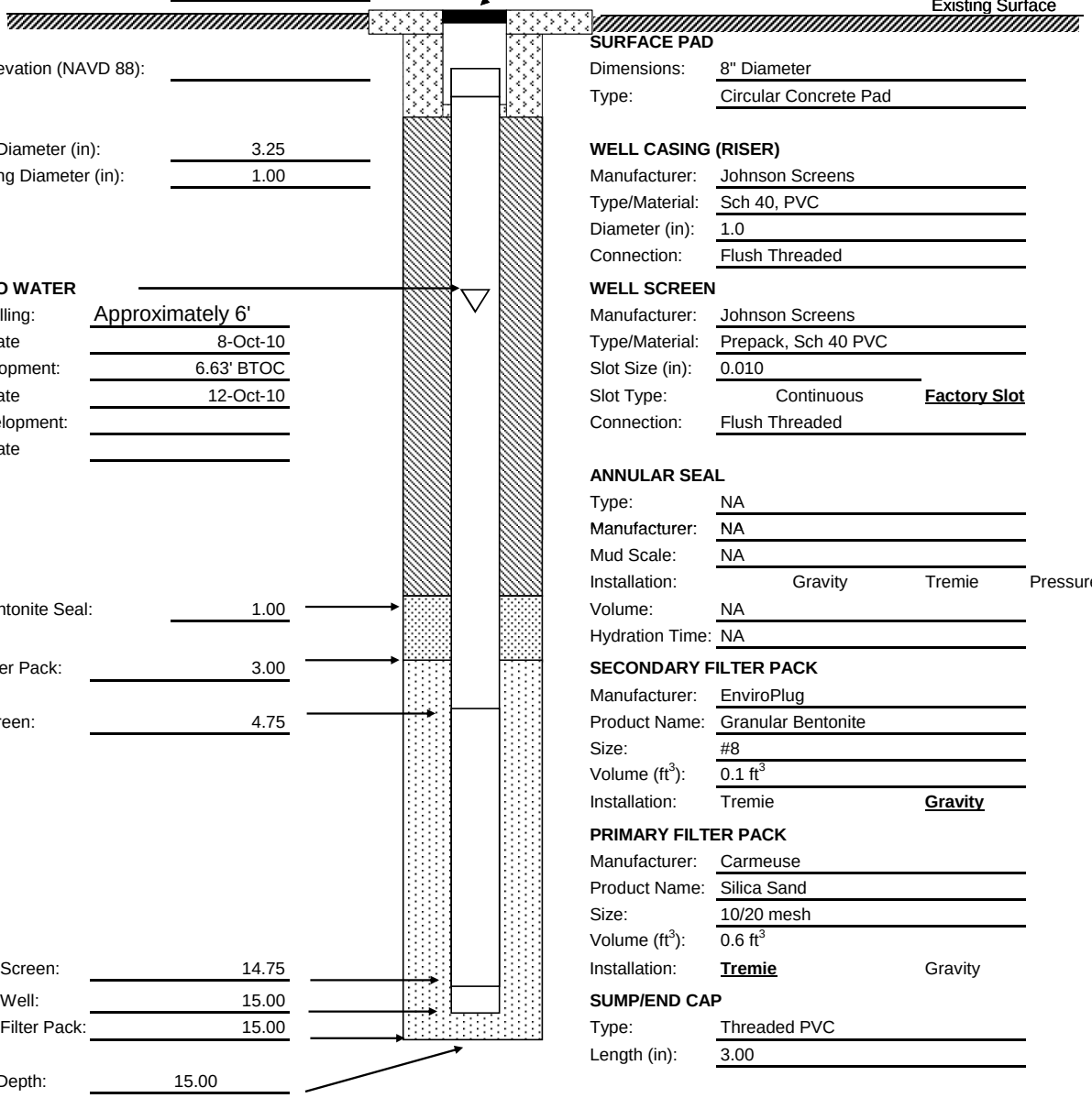
Top of Screen: 4.75

Bottom of Screen: 14.75

Bottom of Well: 15.00

Bottom of Filter Pack: 15.00

Borehole Depth: 15.00



PROTECTIVE CASING

Type: Flush Mount Cover

Dimensions: 4" Diameter

Length: 10" Skirt

SURFACE PAD

Dimensions: 8" Diameter

Type: Circular Concrete Pad

WELL CASING (RISER)

Manufacturer: Johnson Screens

Type/Material: Sch 40, PVC

Diameter (in): 1.0

Connection: Flush Threaded

WELL SCREEN

Manufacturer: Johnson Screens

Type/Material: Prepack, Sch 40 PVC

Slot Size (in): 0.010

Slot Type: Continuous **Factory Slot**

Connection: Flush Threaded

ANNULAR SEAL

Type: NA

Manufacturer: NA

Mud Scale: NA

Installation: Gravity Tremie Pressure

Volume: NA

Hydration Time: NA

SECONDARY FILTER PACK

Manufacturer: EnviroPlug

Product Name: Granular Bentonite

Size: #8

Volume (ft^3): 0.1 ft^3

Installation: Tremie **Gravity**

PRIMARY FILTER PACK

Manufacturer: Carmeuse

Product Name: Silica Sand

Size: 10/20 mesh

Volume (ft^3): 0.6 ft^3

Installation: **Tremie** Gravity

SUMP/END CAP

Type: Threaded PVC

Length (in): 3.00

BACKFILL MATERIAL

Type: NA

Volume: NA

Comments:

NATIONVIEW

WELL CONSTRUCTION DIAGRAM (Flush Mount)

SITE:	Holloman Air Force Base	**WELL/BORING ID:**	SWMU8-DP13
PROJECT NAME:	SWMU 8 RCRA Facility Investigation	**DRILLING METHOD:**	Direct Push
PROJECT NO./PHASE:	8080014/03.020	**DATE(S):**	10-Oct-10
DRILLING CONTRACTOR:	Vironex, Inc.	**SURVEYOR:**	
DRILLER:	TJ Haley	**NORTHING (NAD 83):**	
GEOLOGIST:	Dustin McNeil	**EASTING (NAD 83):**	

NOT TO SCALE

Surface Elevation (NAVD 88):

Casing Elevation (NAVD 88):

Borehole Diameter (in): 2.50

Well Casing Diameter (in): 1.00

DEPTH TO WATER

During Drilling: Approximately 6'

Date 10-Oct-10

Pre Development: 6.65' BTOC

Date 12-Oct-10

Post Development:

Date

Top of Bentonite Seal: 0.50

Top of Filter Pack: 1.50

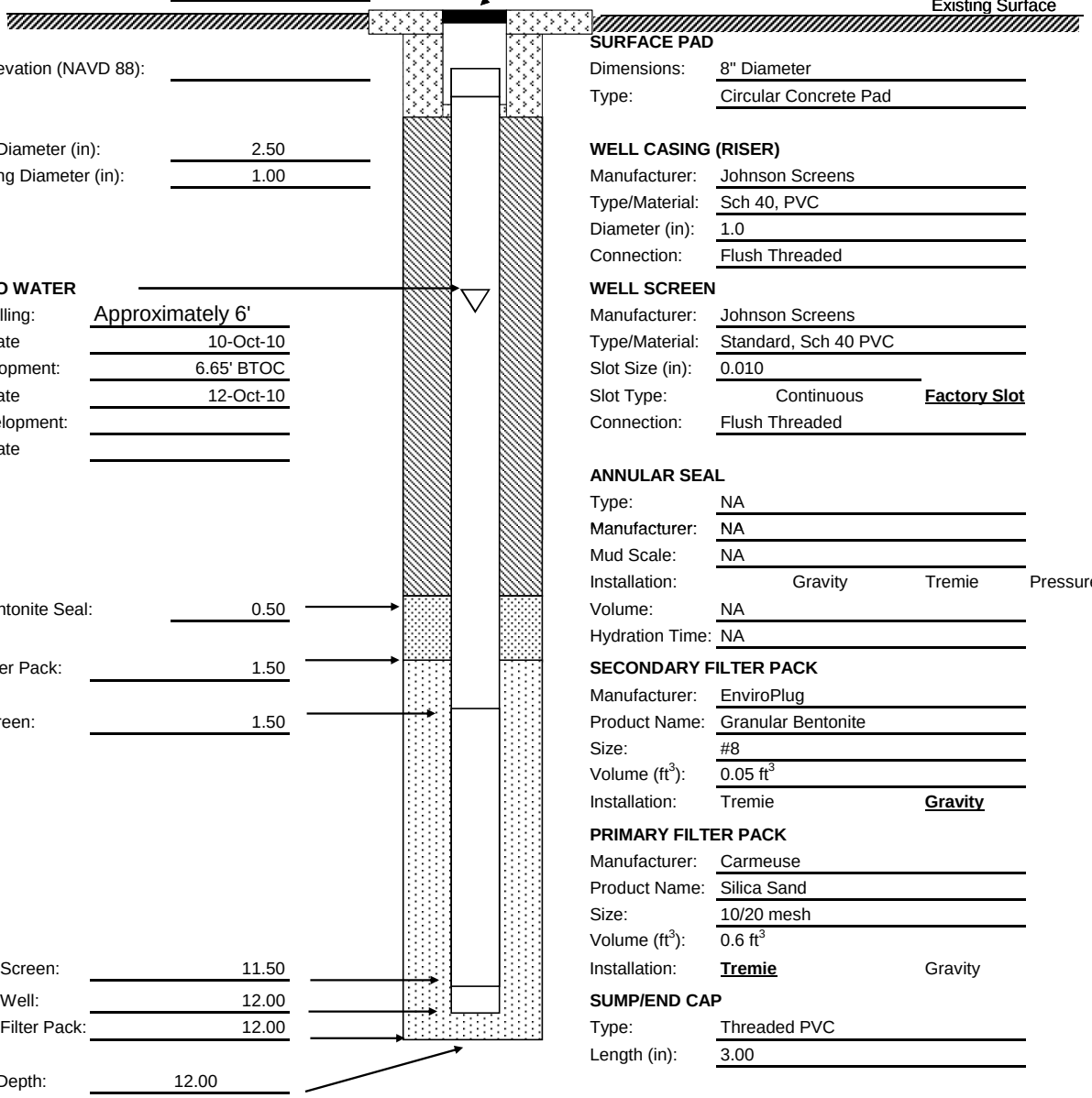
Top of Screen: 1.50

Bottom of Screen: 11.50

Bottom of Well: 12.00

Bottom of Filter Pack: 12.00

Borehole Depth: 12.00



PROTECTIVE CASING

Type: Flush Mount Cover

Dimensions: 4" Diameter

Length: 10" Skirt

SURFACE PAD

Dimensions: 8" Diameter

Type: Circular Concrete Pad

WELL CASING (RISER)

Manufacturer: Johnson Screens

Type/Material: Sch 40, PVC

Diameter (in): 1.0

Connection: Flush Threaded

WELL SCREEN

Manufacturer: Johnson Screens

Type/Material: Standard, Sch 40 PVC

Slot Size (in): 0.010

Slot Type: Continuous **Factory Slot**

Connection: Flush Threaded

ANNULAR SEAL

Type: NA

Manufacturer: NA

Mud Scale: NA

Installation: Gravity Tremie Pressure

Volume: NA

Hydration Time: NA

SECONDARY FILTER PACK

Manufacturer: EnviroPlug

Product Name: Granular Bentonite

Size: #8

Volume (ft^3): 0.05 ft^3

Installation: Tremie **Gravity**

PRIMARY FILTER PACK

Manufacturer: Carmeuse

Product Name: Silica Sand

Size: 10/20 mesh

Volume (ft^3): 0.6 ft^3

Installation: **Tremie** Gravity

SUMP/END CAP

Type: Threaded PVC

Length (in): 3.00

BACKFILL MATERIAL

Type: NA

Volume: NA

Comments:

NATIONVIEW

WELL CONSTRUCTION DIAGRAM (Flush Mount)

SITE:	Holloman Air Force Base	**WELL/BORING ID:**	SWMU8-DP17
PROJECT NAME:	SWMU 8 RCRA Facility Investigation	**DRILLING METHOD:**	Direct Push
PROJECT NO./PHASE:	8080014/03.020	**DATE(S):**	11-Oct-10
DRILLING CONTRACTOR:	Vironex, Inc.	**SURVEYOR:**	
DRILLER:	TJ Haley	**NORTHING (NAD 83):**	
GEOLOGIST:	Dustin McNeil	**EASTING (NAD 83):**	

NOT TO SCALE

Surface Elevation (NAVD 88):

Casing Elevation (NAVD 88):

Borehole Diameter (in): 3.25

Well Casing Diameter (in): 1.00

DEPTH TO WATER

During Drilling: Approximately 6'

Date 8-Oct-10

Pre Development: 6.68' BTOC

Date 12-Oct-10

Post Development:

Date

Top of Bentonite Seal: 1.00

Top of Filter Pack: 3.00

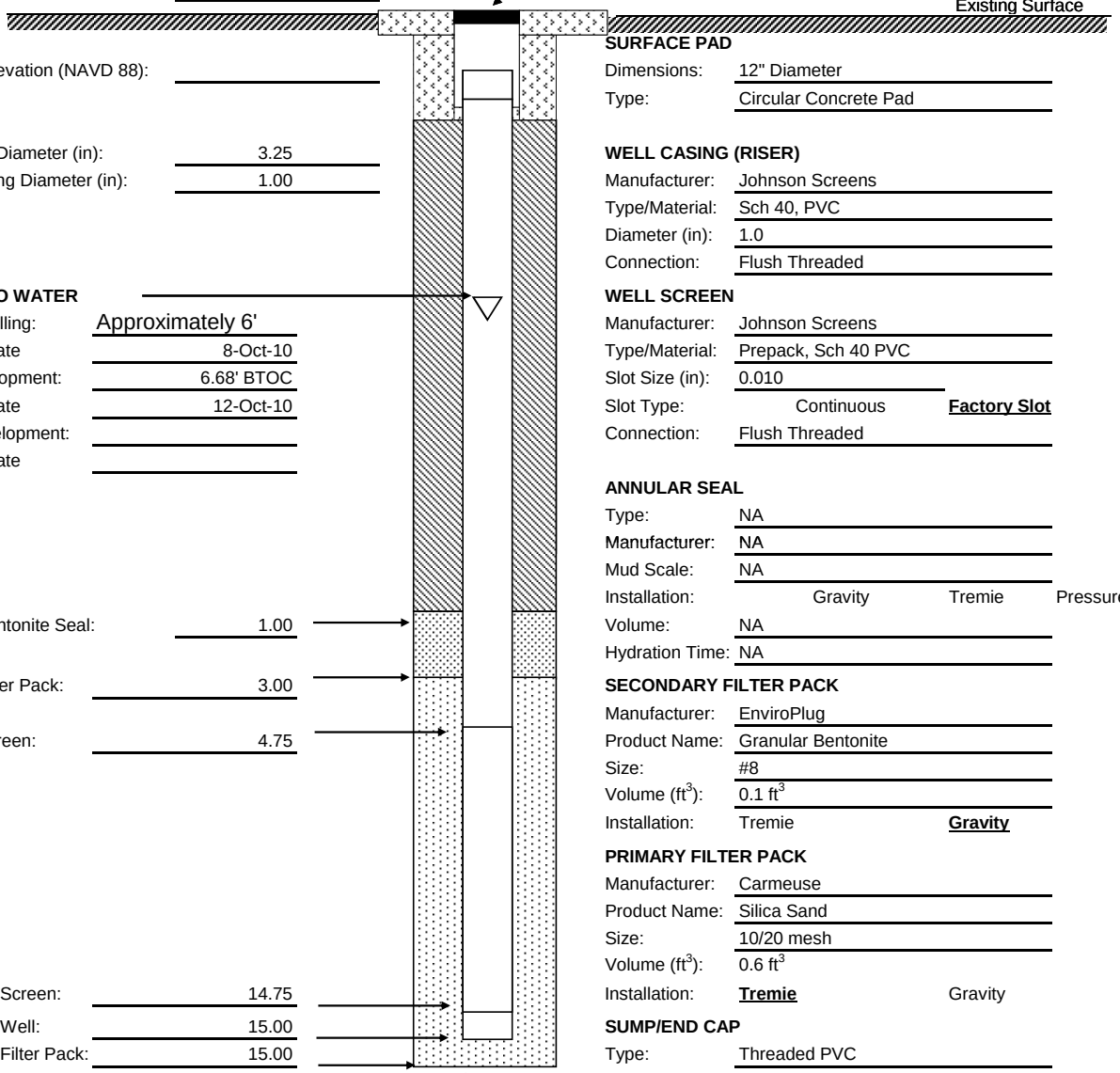
Top of Screen: 4.75

Bottom of Screen: 14.75

Bottom of Well: 15.00

Bottom of Filter Pack: 15.00

Borehole Depth: 15.00



PROTECTIVE CASING

Type: Flush Mount Cover

Dimensions: 10" Diameter

Length: 12" Skirt

SURFACE PAD

Dimensions: 12" Diameter

Type: Circular Concrete Pad

WELL CASING (RISER)

Manufacturer: Johnson Screens

Type/Material: Sch 40, PVC

Diameter (in): 1.0

Connection: Flush Threaded

WELL SCREEN

Manufacturer: Johnson Screens

Type/Material: Prepack, Sch 40 PVC

Slot Size (in): 0.010

Slot Type: Continuous **Factory Slot**

Connection: Flush Threaded

ANNULAR SEAL

Type: NA

Manufacturer: NA

Mud Scale: NA

Installation: Gravity Tremie Pressure

Volume: NA

Hydration Time: NA

SECONDARY FILTER PACK

Manufacturer: EnviroPlug

Product Name: Granular Bentonite

Size: #8

Volume (ft^3): 0.1 ft^3

Installation: Tremie **Gravity**

PRIMARY FILTER PACK

Manufacturer: Carmeuse

Product Name: Silica Sand

Size: 10/20 mesh

Volume (ft^3): 0.6 ft^3

Installation: **Tremie** Gravity

SUMP/END CAP

Type: Threaded PVC

Length (in): 3.00

BACKFILL MATERIAL

Type: NA

Volume: NA

Comments:

APPENDIX D
MONITORING WELL DEVELOPMENT FORMS

MONITORING WELL DEVELOPMENT FORM

NATIONVIEW

LOCATION	Site:	SWMU 8 - Holloman Air Force Base	Location ID:	SWMU8-DP05	Date: 10/12/2010
	Project Name:	RCRA Facility Investigation	Project No./Phase:	8080014.03.020	Recorded By: DM
EQUIPMENT	Pump Type:	Geopump (Peristaltic)	Water Quality Meter:	Horiba U-52	PID Type: NA
	Water Level Indicator Type:	Heron Dipper-T	Other Equipment:		Decon Method: Liquinox - DI Rinse
	Tubing Type/Diameter (in):	1/4" Poly	Other Equipment:		PPE Level: D C B A
WELL INFO	(A) Initial Depth to Water (ft BTOC):	6.63	Casing: Type PVC	Diam. (in) 1.00	Weather: Sunny, Warm, ~70°
	(B) Total Well Depth (ft BTOC):	14.80	(E) Casing Volume Multiplier (gal/lin ft):	0.04	Background PID (ppm): NA
	(C) Water Column Thickness (ft) (B-A):	8.17	Screen Length (lin ft):	10.00	Breathing Zone PID (ppm): NA
	(D) Well Volume (gal) (C x E):	0.33	Screen Info: Type: Prepack	Size: 0.010 Slot	Well Opening PID (ppm): NA

CASING INFO											
Riser/Well Casing Inner Diameter (in)	0.50	1.00	1.50	2.00	3.00	4.00	5.0	6.0	8.0	10
(D) Casing Volume Multiplier(gal/lin ft)	0.02	0.04	0.10	0.16	0.38	0.65	1.02	1.47	2.61	4.08

DATE (mmddyy)	TIME (24 Hr)	Water Level (BTOC)	Volume Removed (mL)	Pumping Rate (mLpm)	Temp (C)	pH	Cond. (mS/cm)	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Oxidation Reduction Potential (mV)	Remarks (odor, clarity, etc.)
10/12/2010	0945	6.63	0	250	20.99	7.19	2.68	1.85	14.7	-244	Clear, Petroleum Odor
10/12/2010	0950	6.89	1,250	250	21.67	7.16	2.73	0.44	16.5	-262	Clear, Petroleum Odor
10/12/2010	0955	6.89	2,500	250	22.21	7.21	2.70	0.35	16.3	-287	Clear, Petroleum Odor
10/12/2010	1000	6.89	3,750	250	22.28	7.23	2.67	0.32	15.9	-300	Clear, Petroleum Odor
10/12/2010	1005	6.89	5,000	250	22.31	7.25	2.66	0.25	14.0	-308	Clear, Petroleum Odor
10/12/2010	1010	6.89	6,250	250	22.31	7.25	2.65	0.25	7.6	-310	Clear, Petroleum Odor
10/12/2010	1015	6.89	7,500	250	22.31	7.25	2.65	0.25	5.0	-312	Clear, Petroleum Odor
10/12/2010	1020	6.89	8,750	250	22.31	7.25	2.65	0.25	4.8	-312	Clear, Petroleum Odor
10/12/2010	1025	6.89	10,000	250	22.31	7.25	2.65	0.25	4.8	-313	Clear, Petroleum Odor
DEVELOPMENT CRITERIA											
+/- 10% unless otherwise noted					+/- 10%	+/- 10%	+/- 10%	+/- 10%	+/- 10%	NA	

COMMENTS:

Well surged initially, pumping from bottom, to remove majority of sediment accumulated at bottom of well

MONITORING WELL DEVELOPMENT FORM

NATIONVIEW

LOCATION	Site:	SWMU 8 - Holloman Air Force Base	Location ID:	SWMU8-DP13	Date: 10/12/2010
	Project Name:	RCRA Facility Investigation	Project No./Phase:	8080014.03.020	Recorded By: DM
EQUIPMENT	Pump Type:	Geopump (Peristaltic)	Water Quality Meter:	Horiba U-52	PID Type: NA
	Water Level Indicator Type:	Heron Dipper-T	Other Equipment:		Decon Method: Liquinox - DI Rinse
	Tubing Type/Diameter (in):	1/4" Poly	Other Equipment:		PPE Level: D C B A
WELL INFO	(A) Initial Depth to Water (ft BTOC):	6.65	Casing: Type PVC	Diam. (in) 1.00	Weather: Clear, Cool, ~55°+
	(B) Total Well Depth (ft BTOC):	10.80	(E) Casing Volume Multiplier (gal/lin ft):	0.04	Background PID (ppm): NA
	(C) Water Column Thickness (ft) (B-A):	4.15	Screen Length (lin ft):	10.00	Breathing Zone PID (ppm): NA
	(D) Well Volume (gal) (C x E):	0.17	Screen Info: Type: Standard	Size: 0.010 Slot	Well Opening PID (ppm): NA

CASING INFO											
Riser/Well Casing Inner Diameter (in)	0.50	1.00	1.50	2.00	3.00	4.00	5.0	6.0	8.0	10
(D) Casing Volume Multiplier(gal/lin ft)	0.02	0.04	0.10	0.16	0.38	0.65	1.02	1.47	2.61	4.08

DATE (mmddyy)	TIME (24 Hr)	Water Level (BTOC)	Volume Removed (mL)	Pumping Rate (mLpm)	Temp (C)	pH	Cond. (mS/cm)	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Oxidation Reduction Potential (mV)	Remarks (odor, clarity, etc.)
10/12/2010	0827	6.65	0	250	20.75	7.29	2.60	0.78	> 1,000	-356	Very Cloudy, No Odor
10/12/2010	0831	7.19	644	250	20.36	7.31	2.66	0.99	530	-236	Clearing, No Odor
10/12/2010	0835	7.60	1,288	250	20.57	7.30	2.67	1.19	588	-261	Clearing, No Odor
10/12/2010	0839	7.64	1,932	250	21.00	7.25	2.63	1.69	125	-256	Clear, No Odor
10/12/2010	0843	7.65	2,576	250	21.03	7.25	2.63	1.67	71.0	-249	Clear, No Odor
10/12/2010	0847	7.66	3,220	250	21.04	7.25	2.63	1.65	32.5	-251	Clear, No Odor
10/12/2010	0851	7.66	3,864	250	21.06	7.24	2.62	1.66	19.4	-245	Clear, No Odor
10/12/2010	0855	7.66	4,508	250	21.12	7.23	2.62	1.59	9.6	-241	Clear, No Odor
10/12/2010	0859	7.67	5,152	250	21.14	7.23	2.62	1.54	4.9	-230	Clear, No Odor
10/12/2010	0903	7.67	5,796	250	21.15	7.22	2.62	1.55	4.9	-225.0	Clear, No Odor
10/12/2010	0907	7.67	6,440	250	21.14	7.23	2.62	1.54	4.8	-221.0	Clear, No Odor
DEVELOPMENT CRITERIA											
+/- 10% unless otherwise noted					+/- 10%	+/- 10%	+/- 10%	+/- 10%	+/- 10%	NA	

COMMENTS:

MONITORING WELL DEVELOPMENT FORM

NATIONVIEW

LOCATION	Site:	SWMU 8 - Holloman Air Force Base	Location ID:	SWMU8-DP17	Date: 10/12/2010
	Project Name:	RCRA Facility Investigation	Project No./Phase:	8080014.03.020	Recorded By: DM
EQUIPMENT	Pump Type:	Geopump (Peristaltic)	Water Quality Meter:	Horiba U-52	PID Type: NA
	Water Level Indicator Type:	Heron Dipper-T	Other Equipment:		Decon Method: Liquinox - DI Rinse
	Tubing Type/Diameter (in):	1/4" Poly	Other Equipment:		PPE Level: D C B A
WELL INFO	(A) Initial Depth to Water (ft BTOC):	6.68	Casing: Type PVC	Diam. (in) 1.00	Weather: Clear, Cool, ~55°+
	(B) Total Well Depth (ft BTOC):	14.39	(E) Casing Volume Multiplier (gal/lin ft):	0.04	Background PID (ppm): NA
	(C) Water Column Thickness (ft) (B-A):	7.71	Screen Length (lin ft):	10.00	Breathing Zone PID (ppm): NA
	(D) Well Volume (gal) (C x E):	0.31	Screen Info: Type: Prepack	Size: 0.010 Slot	Well Opening PID (ppm): NA

CASING INFO											
Riser/Well Casing Inner Diameter (in)	0.50	1.00	1.50	2.00	3.00	4.00	5.0	6.0	8.0	10
(D) Casing Volume Multiplier(gal/lin ft)	0.02	0.04	0.10	0.16	0.38	0.65	1.02	1.47	2.61	4.08

DATE (mmddyy)	TIME (24 Hr)	Water Level (BTOC)	Volume Removed (mL)	Pumping Rate (mLpm)	Temp (C)	pH	Cond. (mS/cm)	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Oxidation Reduction Potential (mV)	Remarks (odor, clarity, etc.)
10/12/2010	0725	6.68	0	250	20.84	7.96	2.97	2.27	> 1,000	-356	Very Cloudy, No Odor
10/12/2010	0730	6.92	1,175	250	21.63	7.37	2.86	1.01	> 1,000	-236	Very Cloudy, No Odor
10/12/2010	0735	7.19	2,350	250	21.94	7.24	2.79	0.81	192	-261	Clearing, No Odor
10/12/2010	0740	7.19	3,525	250	21.93	7.22	2.77	0.84	65.6	-256	Clearing, No Odor
10/12/2010	0745	7.20	4,700	250	21.97	7.21	2.76	0.80	33.7	-249	Clearing, No Odor
10/12/2010	0750	7.20	5,875	250	21.95	7.20	2.75	0.79	6.7	-251	Clear, No Odor
10/12/2010	0755	7.20	7,050	250	21.96	7.21	2.75	0.78	6.5	-245	Clear, No Odor
10/12/2010	0800	7.20	8,225	250	21.95	7.20	2.76	0.79	6.4	-241	Clear, No Odor
DEVELOPMENT CRITERIA											
+/- 10% unless otherwise noted					+/- 10%	+/- 10%	+/- 10%	+/- 10%	+/- 10%	NA	

COMMENTS:

APPENDIX E
MONITORING WELL SAMPLE COLLECTION FORMS

MONITORING WELL SAMPLE COLLECTION FORM

NATIONVIEW

LOCATION	Site:	Holloman AFB, New Mexico	Location ID:	SWMU8-DP01	Date: 12/13/2010
	Project Name:	SWMU 8 RFI	Project No./Phase:	8080014/03.020	Recorded By: DM / ZB
EQUIPMENT	Pump Type/ID#:	(Geopump) Peristaltic	Water Quality Meter/ID#:	Horiba U-52	PID Type/ID#:
	Water Level Indicator Type/ID#:	Heron Dipper-T	Other Equipment/ID#:		Decon Method: Liquinox soap & DI water rinse
	Tubing Type/Diameter (in):	1/4" Poly.	Other Equipment/ID#:		PPE Level: D C B A
WELL INFO	(A) Initial Depth to Water (ft BTOC):	5.37	Casing: Type PVC	Diam. (in) 1"	Weather: Sunny, warm, ~65°
	(B) Total Well Depth (ft BTOC):	13.93	(E) Casing Volume Multiplier (gal/lin ft):	0.04	Background PID (ppm): NA
	(C) Water Column Thickness (ft) (B-A):	8.56	Screen Length (lin ft):	10.00	Breathing Zone PID (ppm): NA
	(D) Well Volume (gal) (C x E):	0.34	Screen Info: Type: Prepack	Size: 0.010 Slot	Well Opening PID (ppm): NA

CASING INFO											
Riser/Well Casing Inner Diameter (in)	0.50	1.00	1.50	2.00	3.00	4.00	5.0	6.0	8.0	10
(D) Casing Volume Multiplier(gal/lin ft)	0.02	0.04	0.10	0.16	0.38	0.65	1.02	1.47	2.61	4.08

DATE (mmddyy)	TIME (24 Hr)	Water Level (BTOC)	Volume Removed (mLl)	Pumping Rate (mLpm)	Temp (C)	pH	Cond. (mS/cm)	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Oxidation Reduction Potential (mV)	Remarks (odor, clarity, etc.)
12/13/2010	1225	5.37	0	250	20.21	7.43	3.12	5.13	92.3	388	Clear, No Odor
12/13/2010	1230	11.41	1,300	250	20.75	7.44	3.12	8.91	56.4	401	Air bubbles in tubing (elevated DO)
12/13/2010	1235	13.62	2,600	250	21.25	7.42	3.15	8.34	50.1	405	Air bubbles in tubing (elevated DO)
Well went dry, allow to recharge and begin sampling											

Colorimeter Results					No. Containers/Volume/Type			Preserv.	Filter (Y/N)	Method	Parameter(s)
Time	**Analyte**	**Dilution**	**Result**	**Units**	6	40 ml	VOAs	HCl	N	8260B/ 8015	VOCs & TPH-GRO
					1	.5 L	Plastic	HNO_3	Y	6010/ 7470	TAL Metals
Sample Time					1	.5L	Plastic	None	N	2540C	TDS
1300					2	1L	Amber	H_2SO_4	N	8015	TPH-DRO/ ORO
Sample Identification					2	1 L	Amber	None	N	8270C	SVOC
SWMU8-DP01, SWMU8-DP01-MS, SWMU8-DP01-MSD					2	1L	Amber	None	N	8082	PCB
Conversions	**Stabilization Criteria**										
1 L = 0.26 gals	Temp	+/- 10%	DO	+/- 10%							
1 gal = 3.79 L	pH	+/- 0.1	Turb	+/- 5 NTU							
	Cond	+/- 10%	ORP	N/A							

MONITORING WELL SAMPLE COLLECTION FORM

NATIONVIEW

LOCATION	Site:	Holloman AFB, New Mexico	Location ID:	SWMU8-DP02	Date: 12/13/2010
	Project Name:	SWMU 8 RFI	Project No./Phase:	8080014/03.020	Recorded By: DM
EQUIPMENT	Pump Type/ID#:	(Geopump) Peristaltic	Water Quality Meter/ID#:	Horiba U-52	PID Type/ID#:
	Water Level Indicator Type/ID#:	Heron Dipper-T	Other Equipment/ID#:		Decon Method: Liquinox soap & DI water rinse
	Tubing Type/Diameter (in):	1/4" Poly.	Other Equipment/ID#:		PPE Level: D C B A
WELL INFO	(A) Initial Depth to Water (ft BTOC):	6.63	Casing: Type PVC	Diam. (in) 1"	Weather: Clear, cool, ~45°
	(B) Total Well Depth (ft BTOC):	14.98	(E) Casing Volume Multiplier (gal/lin ft):	0.04	Background PID (ppm): NA
	(C) Water Column Thickness (ft) (B-A):	8.35	Screen Length (lin ft):	10.00	Breathing Zone PID (ppm): NA
	(D) Well Volume (gal) (C x E):	0.33	Screen Info: Type: Prepack	Size: 0.010 Slot	Well Opening PID (ppm): NA

CASING INFO											
Riser/Well Casing Inner Diameter (in)	0.50	1.00	1.50	2.00	3.00	4.00	5.0	6.0	8.0	10
(D) Casing Volume Multiplier(gal/lin ft)	0.02	0.04	0.10	0.16	0.38	0.65	1.02	1.47	2.61	4.08

DATE (mmddyy)	TIME (24 Hr)	Water Level (BTOC)	Volume Removed (mLl)	Pumping Rate (mLpm)	Temp (C)	pH	Cond. (mS/cm)	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Oxidation Reduction Potential (mV)	Remarks (odor, clarity, etc.)
12/13/2010	0900	6.63	0	250	17.06	7.05	2.86	6.45	243	147	Cloudy, No Odor
12/13/2010	0905	8.22	1,300	250	19.25	7.07	2.97	2.92	91.0	136	Clear, No Odor
12/13/2010	0910	8.19	2,600	250	19.58	7.11	2.69	1.48	41.7	112	Clear, No Odor
12/13/2010	0915	8.20	3,900	250	19.59	7.12	2.69	1.27	27.2	99	Clear, No Odor
12/13/2010	0920	8.21	5,200	250	19.62	7.14	2.69	0.78	19.8	68	Clear, No Odor
12/13/2010	0925	8.20	6,500	250	19.63	7.14	2.69	0.76	17.2	55	Clear, No Odor

Colorimeter Results

Time	Analyte	Dilution	Result	Units

Sample Time
0945
Sample Identification
SWMU8-DP02

Conversions	**Stabilization Criteria**			
1 L = 0.26 gals	Temp	+/- 10%	DO	+/- 10%
1 gal = 3.79 L	pH	+/- 0.1	Turb	+/- 5 NTU
	Cond	+/- 10%	ORP	N/A

No. Containers/Volume/Type			**Preserv.**	**Filter (Y/N)**	**Method**	**Parameter(s)**
6	40 ml	VOAs	HCl	N	8260B/ 8015	VOCs & TPH-GRO
1	.5 L	Plastic	HNO_3	Y	6010/ 7470	TAL Metals
1	.5L	Plastic	None	N	2540C	TDS
2	1L	Amber	H_2SO_4	N	8015	TPH-DRO/ ORO
2	1 L	Amber	None	N	8270C	SVOC
2	1L	Amber	None	N	8082	PCB

MONITORING WELL SAMPLE COLLECTION FORM

NATIONVIEW

LOCATION	Site: Holloman AFB, New Mexico	Location ID: SWMU8-DP02	Date: 12/13/2010
	Project Name: SWMU 8 RFI	Project No./Phase: 8080014/03.020	Recorded By: DM

DATE (mmddyy)	TIME (24 Hr)	Water Level (BTOC)	Volume Removed (mL)	Pumping Rate (mLpm)	Temp (C)	pH	Cond. (mS/cm)	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Oxidation Reduction Potential	Remarks (odor, clarity, etc.)
12/13/2010	0930	8.21	7,800	250	19.64	7.15	2.68	0.77	15.0	48	Clear, No Odor

MONITORING WELL SAMPLE COLLECTION FORM

NATIONVIEW

LOCATION	Site:	Holloman AFB, New Mexico	Location ID:	SWMU8-DP03	Date: 12/13/2010
	Project Name:	SWMU 8 RFI	Project No./Phase:	8080014/03.020	Recorded By: DM
EQUIPMENT	Pump Type/ID#:	(Geopump) Peristaltic	Water Quality Meter/ID#:	Horiba U-52	PID Type/ID#:
	Water Level Indicator Type/ID#:	Heron Dipper-T	Other Equipment/ID#:		Decon Method: Liquinox soap & DI water rinse
	Tubing Type/Diameter (in):	1/4" Poly.	Other Equipment/ID#:		PPE Level: D C B A
WELL INFO	(A) Initial Depth to Water (ft BTOC):	6.22	Casing: Type PVC	Diam. (in) 1"	Weather: Sunny, ~50°+
	(B) Total Well Depth (ft BTOC):	10.64	(E) Casing Volume Multiplier (gal/lin ft):	0.04	Background PID (ppm): NA
	(C) Water Column Thickness (ft) (B-A):	4.42	Screen Length (lin ft):	5.00	Breathing Zone PID (ppm): NA
	(D) Well Volume (gal) (C x E):	0.177	Screen Info: Type: Prepack	Size: 0.010 Slot	Well Opening PID (ppm): NA

CASING INFO											
Riser/Well Casing Inner Diameter (in)	0.50	1.00	1.50	2.00	3.00	4.00	5.0	6.0	8.0	10
(D) Casing Volume Multiplier(gal/lin ft)	0.02	0.04	0.10	0.16	0.38	0.65	1.02	1.47	2.61	4.08

DATE (mmddyy)	TIME (24 Hr)	Water Level (BTOC)	Volume Removed (mLl)	Pumping Rate (mLpm)	Temp (C)	pH	Cond. (mS/cm)	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Oxidation Reduction Potential (mV)	Remarks (odor, clarity, etc.)
12/13/2010	1041	6.31	670	250	16.53	7.24	2.71	3.10	121	-10	Clear, No Odor
12/13/2010	1045	6.31	1,340	250	16.85	7.21	2.71	2.47	29.4	-2	Clear, No Odor
12/13/2010	1049	6.31	2,010	250	16.94	7.22	2.71	2.24	15.2	7	Clear, No Odor
12/13/2010	1053	6.31	2,680	250	17.01	7.23	2.70	2.05	13.8	6	Clear, No Odor
12/13/2010	1057	6.31	3,350	250	17.02	7.23	2.70	2.02	13.1	7	Clear, No Odor
12/13/2010	1101	6.31	4,020	250	17.03	7.23	2.70	2.01	12.9	7	Clear, No Odor

Colorimeter Results

Time	Analyte	Dilution	Result	Units

Sample Time
1120

Sample Identification
SWMU8-DP03

No. Containers/Volume/Type			Preserv.	Filter (Y/N)	Method	Parameter(s)
6	40 ml	VOAs	HCl	N	8260B/ 8015	VOCs & TPH-GRO
1	.5 L	Plastic	HNO_3	Y	6010/ 7470	TAL Metals
1	.5L	Plastic	None	N	2540C	TDS
2	1L	Amber	H_2SO_4	N	8015	TPH-DRO/ ORO
2	1 L	Amber	None	N	8270C	SVOC
2	1L	Amber	None	N	8082	PCB

Conversions	Stabilization Criteria			
1 L = 0.26 gals	Temp	+/- 10%	DO	+/- 10%
1 gal = 3.79 L	pH	+/- 0.1	Turb	+/- 5 NTU
	Cond	+/- 10%	ORP	N/A

MONITORING WELL SAMPLE COLLECTION FORM

NATIONVIEW

LOCATION	Site:	Holloman AFB, New Mexico	Location ID:	SWMU8-DP05	Date: 12/14/2010
	Project Name:	SWMU 8 RFI	Project No./Phase:	8080014/03.020	Recorded By: DM
EQUIPMENT	Pump Type/ID#:	(Geopump) Peristaltic	Water Quality Meter/ID#:	Horiba U-52	PID Type/ID#:
	Water Level Indicator Type/ID#:	Heron Dipper-T	Other Equipment/ID#:		Decon Method: Liquinox soap & DI water rinse
	Tubing Type/Diameter (in):	1/4" Poly.	Other Equipment/ID#:		PPE Level: D C B A
WELL INFO	(A) Initial Depth to Water (ft BTOC):	6.80	Casing: Type PVC	Diam. (in) 1"	Weather: Clear, cool, ~45°
	(B) Total Well Depth (ft BTOC):	14.83	(E) Casing Volume Multiplier (gal/lin ft):	0.04	Background PID (ppm): NA
	(C) Water Column Thickness (ft) (B-A):	8.03	Screen Length (lin ft):	10.00	Breathing Zone PID (ppm): NA
	(D) Well Volume (gal) (C x E):	0.32	Screen Info: Type: Prepack	Size: 0.010 Slot	Well Opening PID (ppm): NA

CASING INFO											
Riser/Well Casing Inner Diameter (in)	0.50	1.00	1.50	2.00	3.00	4.00	5.0	6.0	8.0	10
(D) Casing Volume Multiplier(gal/lin ft)	0.02	0.04	0.10	0.16	0.38	0.65	1.02	1.47	2.61	4.08

DATE (mmddyy)	TIME (24 Hr)	Water Level (BTOC)	Volume Removed (mLl)	Pumping Rate (mLpm)	Temp (C)	pH	Cond. (mS/cm)	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Oxidation Reduction Potential (mV)	Remarks (odor, clarity, etc.)
12/14/2010	0815	6.80	0	250	18.04	6.80	2.88	2.09	78.6	-183	Clear, Petroleum Odor
12/14/2010	0820	7.18	1,250	250	18.78	6.81	2.87	1.52	36.2	-224	Clear, Petroleum Odor
12/14/2010	0825	7.20	2,500	250	19.04	6.82	2.89	0.52	38.1	-251	Clear, Petroleum Odor
12/14/2010	0830	7.21	3,750	250	19.18	6.84	2.84	0.17	22.8	-268	Clear, Petroleum Odor
12/14/2010	0835	7.21	5,000	250	19.18	6.87	2.84	0.04	16.1	-279	Clear, Petroleum Odor
12/14/2010	0840	7.21	6,250	250	19.19	6.86	2.84	0.04	14.9	-286	Clear, Petroleum Odor

Colorimeter Results					**No. Containers/Volume/Type**			**Preserv.**	**Filter (Y/N)**	**Method**	**Parameter(s)**
Time	**Analyte**	**Dilution**	**Result**	**Units**	6	40 ml	VOAs	HCl	N	8260B/ 8015	VOCs & TPH-GRO
					1	.5 L	Plastic	HNO_3	Y	6010/ 7470	TAL Metals
Sample Time					1	.5L	Plastic	None	N	2540C	TDS
0850					2	1L	Amber	H_2SO_4	N	8015	TPH-DRO/ ORO
Sample Identification					2	1 L	Amber	None	N	8270C	SVOC
SWMU8-DP05, SWMU8-DP05-a					2	1L	Amber	None	N	8082	PCB
Conversions	**Stabilization Criteria**										
1 L = 0.26 gals	Temp	+/- 10%	DO	+/- 10%							
1 gal = 3.79 L	pH	+/- 0.1	Turb	+/- 5 NTU							
	Cond	+/- 10%	ORP	N/A							

MONITORING WELL SAMPLE COLLECTION FORM

NATIONVIEW

LOCATION	Site: Holloman AFB, New Mexico	Location ID: SWMU8-DP05	Date: 12/14/2010
	Project Name: SWMU 8 RFI	Project No./Phase: 8080014/03.020	Recorded By: DM

DATE (mmddyy)	TIME (24 Hr)	Water Level (BTOC)	Volume Removed (mL)	Pumping Rate (mLpm)	Temp (C)	pH	Cond. (mS/cm)	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Oxidation Reduction Potential	Remarks (odor, clarity, etc.)
12/14/2010	0845	7.21	7,500	250	19.19	6.87	2.84	0.04	14.7	-281	Clear, Petroleum Odor

MONITORING WELL SAMPLE COLLECTION FORM

NATIONVIEW

LOCATION	Site:	Holloman AFB, New Mexico	Location ID:	SWMU8-DP13	Date: 12/13/2010
	Project Name:	SWMU 8 RFI	Project No./Phase:	8080014/03.020	Recorded By: ZB
EQUIPMENT	Pump Type/ID#:	(Geopump) Peristaltic	Water Quality Meter/ID#:	Horiba U-52	PID Type/ID#:
	Water Level Indicator Type/ID#:	Heron Dipper-T	Other Equipment/ID#:		Decon Method: Liquinox soap & DI water rinse
	Tubing Type/Diameter (in):	1/4" Poly.	Other Equipment/ID#:		PPE Level: D C B A
WELL INFO	(A) Initial Depth to Water (ft BTOC):	6.83	Casing: Type PVC	Diam. (in) 1"	Weather: Sunny, cool, ~50°
	(B) Total Well Depth (ft BTOC):	10.95	(E) Casing Volume Multiplier (gal/lin ft):	0.04	Background PID (ppm): NA
	(C) Water Column Thickness (ft) (B-A):	4.12	Screen Length (lin ft):	10.00	Breathing Zone PID (ppm): NA
	(D) Well Volume (gal) (C x E):	0.16	Screen Info: Type: Standard	Size: 0.010 Slot	Well Opening PID (ppm): NA

CASING INFO											
Riser/Well Casing Inner Diameter (in)	0.50	1.00	1.50	2.00	3.00	4.00	5.0	6.0	8.0	10
(D) Casing Volume Multiplier(gal/lin ft)	0.02	0.04	0.10	0.16	0.38	0.65	1.02	1.47	2.61	4.08

DATE (mmddyy)	TIME (24 Hr)	Water Level (BTOC)	Volume Removed (mLl)	Pumping Rate (mLpm)	Temp (C)	pH	Cond. (mS/cm)	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Oxidation Reduction Potential (mV)	Remarks (odor, clarity, etc.)
12/13/2010	1039	6.83	0	250	14.78	7.63	3.10	5.15	143	381	Clear, No Odor
12/13/2010	1042	7.44	750	250	17.41	7.22	3.06	3.69	454	362	Cloudy, No Odor
12/13/2010	1045	8.36	1,500	250	18.43	7.17	3.00	2.75	55.4	366	Clear, No Odor
12/13/2010	1048	8.19	2,250	250	18.65	7.16	3.00	2.43	50.1	367	Clear, No Odor
12/13/2010	1051	8.19	3,000	250	18.71	7.15	3.00	2.27	34.0	368	Clear, No Odor
12/13/2010	1054	8.19	3,750	250	18.85	7.13	2.99	2.03	10.1	369	Clear, No Odor

Colorimeter Results

Time	Analyte	Dilution	Result	Units

Sample Time
1105
Sample Identification
SWMU8-DP13

No. Containers/Volume/Type			Preserv.	Filter (Y/N)	Method	Parameter(s)
6	40 ml	VOAs	HCl	N	8260B/ 8015	VOCs & TPH-GRO
1	.5 L	Plastic	HNO_3	Y	6010/ 7470	TAL Metals
1	.5L	Plastic	None	N	2540C	TDS
2	1L	Amber	H_2SO_4	N	8015	TPH-DRO/ ORO
2	1 L	Amber	None	N	8270C	SVOC
2	1L	Amber	None	N	8082	PCB

Conversions	Stabilization Criteria			
1 L = 0.26 gals	Temp	+/- 10%	DO	+/- 10%
1 gal = 3.79 L	pH	+/- 0.1	Turb	+/- 5 NTU
	Cond	+/- 10%	ORP	N/A

MONITORING WELL SAMPLE COLLECTION FORM

NATIONVIEW

LOCATION	Site: Holloman AFB, New Mexico	Location ID: SWMU8-DP13	Date: 12/13/2010
	Project Name: SWMU 8 RFI	Project No./Phase: 8080014/03.020	Recorded By: ZB

DATE (mmddyy)	TIME (24 Hr)	Water Level (BTOC)	Volume Removed (mL)	Pumping Rate (mLpm)	Temp (C)	pH	Cond. (mS/cm)	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Oxidation Reduction Potential	Remarks (odor, clarity, etc.)
12/13/2010	1057	8.19	4,500	250	18.92	7.13	2.99	2.03	8.4	370	Clear, No Odor
12/13/2010	1100	8.21	5,250	250	19.00	7.13	2.99	2.04	5.6	370	Clear, No Odor

MONITORING WELL SAMPLE COLLECTION FORM

NATIONVIEW

LOCATION	Site:	Holloman AFB, New Mexico	Location ID:	SWMU8-DP17	Date: 12/13/2010
	Project Name:	SWMU 8 RFI	Project No./Phase:	8080014/03.020	Recorded By: ZB
EQUIPMENT	Pump Type/ID#:	(Geopump) Peristaltic	Water Quality Meter/ID#:	Horiba U-52	PID Type/ID#:
	Water Level Indicator Type/ID#:	Heron Dipper-T	Other Equipment/ID#:		Decon Method: Liquinox soap & DI water rinse
	Tubing Type/Diameter (in):	1/4" Poly.	Other Equipment/ID#:		PPE Level: D C B A
WELL INFO	(A) Initial Depth to Water (ft BTOC):	6.82	Casing: Type PVC	Diam. (in) 1"	Weather: Sunny, cool, ~50°
	(B) Total Well Depth (ft BTOC):	14.39	(E) Casing Volume Multiplier (gal/lin ft):	0.04	Background PID (ppm): NA
	(C) Water Column Thickness (ft) (B-A):	7.57	Screen Length (lin ft):	10.00	Breathing Zone PID (ppm): NA
	(D) Well Volume (gal) (C x E):	0.30	Screen Info: Type: Prepack	Size: 0.010 Slot	Well Opening PID (ppm): NA

CASING INFO											
Riser/Well Casing Inner Diameter (in)	0.50	1.00	1.50	2.00	3.00	4.00	5.0	6.0	8.0	10
(D) Casing Volume Multiplier(gal/lin ft)	0.02	0.04	0.10	0.16	0.38	0.65	1.02	1.47	2.61	4.08

DATE (mmddyy)	TIME (24 Hr)	Water Level (BTOC)	Volume Removed (mLl)	Pumping Rate (mLpm)	Temp (C)	pH	Cond. (mS/cm)	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Oxidation Reduction Potential (mV)	Remarks (odor, clarity, etc.)
12/13/2010	0904	6.82	0	250	18.83	7.40	3.07	1.60	98.3	327	Clear, No Odor
12/13/2010	0909	7.34	1,250	250	19.19	7.30	3.06	2.09	90.4	321	Clear, No Odor
12/13/2010	0914	7.38	2,500	250	19.57	7.25	3.04	1.60	36.1	307	Clear, No Odor
12/13/2010	0919	7.43	3,750	250	19.64	7.22	3.04	1.60	14.2	284	Clear, No Odor
12/13/2010	0924	7.48	5,000	250	19.69	7.22	3.03	1.55	10.6	274	Clear, No Odor
12/13/2010	0929	7.48	6,250	250	19.72	7.22	3.02	1.40	9.4	268	Clear, No Odor

Colorimeter Results

Time	Analyte	Dilution	Result	Units

Sample Time
0935
Sample Identification
SWMU8-DP17

No. Containers/Volume/Type			Preserv.	Filter (Y/N)	Method	Parameter(s)
6	40 ml	VOAs	HCl	N	8260B/ 8015	VOCs & TPH-GRO
1	.5 L	Plastic	HNO_3	Y	6010/ 7470	TAL Metals
1	.5L	Plastic	None	N	2540C	TDS
2	1L	Amber	H_2SO_4	N	8015	TPH-DRO/ ORO
2	1 L	Amber	None	N	8270C	SVOC
2	1L	Amber	None	N	8082	PCB

Conversions	**Stabilization Criteria**			
1 L = 0.26 gals	Temp	+/- 10%	DO	+/- 10%
1 gal = 3.79 L	pH	+/- 0.1	Turb	+/- 5 NTU
	Cond	+/- 10%	ORP	N/A

APPENDIX F
ANALYTICAL DATA PACKAGES
(PROVIDED ON ENCLOSED CD)

Southeast ACCUTEST LABORATORIES

10/27/10

Technical Report for

Nation View

Holloman AFB; SWMU 8, ACM Investigation

8080014.03.020

Accutest Job Number: F77187

Sampling Date: 10/10/10

Report to:

NationView
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Total number of pages in report: **100**

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: Jean Dent-Smith 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 **3**
Section 2: Case Narrative/Conformance Summary **4**
Section 3: Sample Results **7**
- **3.1:** F77187-1: SWMU8-DP14-7 8
- **3.2:** F77187-2: SWMU8-DP15-7 18
- **3.3:** F77187-3: SWMU8-DP13-7 28
- **3.4:** F77187-4: SWMU8-DP13-7A 38
- **3.5:** F77187-5: TRIP BLANK 48
- **3.6:** F77187-6: SWMU8-DP16-2 51
- **3.7:** F77187-7: SWMU8-DP16-3 52

Section 4: Misc. Forms **53**
- **4.1:** Chain of Custody 54

Section 5: GC/MS Volatiles - QC Data Summaries **56**
- **5.1:** Method Blank Summary 57
- **5.2:** Blank Spike Summary 60

Section 6: GC/MS Semi-volatiles - QC Data Summaries **63**
- **6.1:** Method Blank Summary 64
- **6.2:** Blank Spike Summary 67
- **6.3:** Matrix Spike/Matrix Spike Duplicate Summary 70

Section 7: GC Volatiles - QC Data Summaries **73**
- **7.1:** Method Blank Summary 74
- **7.2:** Blank Spike Summary 75
- **7.3:** Matrix Spike/Matrix Spike Duplicate Summary 76

Section 8: GC Semi-volatiles - QC Data Summaries **77**
- **8.1:** Method Blank Summary 78
- **8.2:** Blank Spike Summary 82
- **8.3:** Matrix Spike/Matrix Spike Duplicate Summary 84

Section 9: Metals Analysis - QC Data Summaries **86**
- **9.1:** Prep QC MP19309: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn 87
- **9.2:** Prep QC MP19319: Hg 93

Section 10: General Chemistry - QC Data Summaries **98**
- **10.1:** Method Blank and Spike Results Summary 99
- **10.2:** Duplicate Results Summary 100

Accutest Laboratories

Sample Summary

Nation View

Job No: F77187

Holloman AFB; SWMU 8, ACM Investigation
Project No: 8080014.03.020

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
F77187-1	10/10/10	09:30	DMJM	10/11/10	SO	Soil	SWMU8-DP14-7
F77187-2	10/10/10	10:45	DMJM	10/11/10	SO	Soil	SWMU8-DP15-7
F77187-3	10/10/10	11:30	DMJM	10/11/10	SO	Soil	SWMU8-DP13-7
F77187-4	10/10/10	11:30	DMJM	10/11/10	SO	Soil	SWMU8-DP13-7A
F77187-5	10/10/10	00:00	DMJM	10/11/10	SO	Trip Blank Soil	TRIP BLANK
F77187-6	10/10/10	13:20	DMJM	10/11/10	SO	Soil	SWMU8-DP16-2
F77187-7	10/10/10	13:20	DMJM	10/11/10	SO	Soil	SWMU8-DP16-3

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Nation View **Job No:** F77187

Site: Holloman AFB; SWMU 8, ACM Investigation **Report Date** 10/27/2010 3:08:54

6 Samples, 1 Trip Blank were collected on 10/10/2010 and received at Accutest on 10/11/2010 properly preserved, at 2.8 Deg. C and intact. These Samples received an Accutest job number of F77187. 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: SO **Batch ID:** VH2435

All samples were analyzed within the recommended method holding time.

Sample(s) F77187-5 have compound(s) reported with a “B” qualifier, indicating analyte is found in the associated method blank.

Blank Spike Recovery(s) for Acetone, Methyl ethyl ketone are outside control limits.

F77187-5 for Methylene chloride: Suspected laboratory contaminant.

Extractables by GCMS By Method SW846 8270C

Matrix: SO **Batch ID:** OP34708

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

Sample(s) F77187-3MS, F77187-3MSD were used as the QC samples indicated.

All method blanks for this batch meet method specific criteria.

Matrix Spike Recovery(s) for 3,3'-Dichlorobenzidine are outside control limits. Probable cause due to matrix interference.

RPD(s) for MSD for 4-Chloroaniline are outside control limits for sample OP34708-MSD. Probable cause due to sample homogeneity.

Volatiles by GC By Method SW846 8015

Matrix: SO **Batch ID:** GQR2448

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) F77189-1MS, F77189-1MSD were used as the QC samples indicated.

Extractables by GC By Method SW846 8015 M

Matrix: SO **Batch ID:** OP34693

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.

Sample(s) F77189-1MS, F77189-1MSD were used as the QC samples indicated.

Extractables by GC By Method SW846 8082

Matrix: SO **Batch ID:** OP34709

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.

Sample(s) F77189-1MS, F77189-1MSD were used as the QC samples indicated.

Metals By Method SW846 6010B

Matrix: SO **Batch ID:** MP19309

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.

Sample(s) F77187-1MS, F77187-1MSD, F77187-1PS, F77187-1SDL, F77187-1DUP were used as the QC samples for metals.

Matrix Spike Recovery(s) for Aluminum, Antimony, Magnesium, Manganese are outside control limits.

Matrix Spike Duplicate Recovery(s) for Antimony, Iron, Manganese are outside control limits. Probable cause due to matrix interference.

Matrix Spike Recovery(s) for Calcium are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

RPD(s) for Duplicate for Manganese, Arsenic, Sodium are outside control limits for sample MP19309-D1. High RPD due to possible sample nonhomogeneity.

RPD(s) for MSD for Barium, Beryllium, Iron, Manganese are outside control limits for sample MP19309-S2. High RPD due to possible sample nonhomogeneity.

RPD(s) for Serial Dilution for Arsenic, Beryllium, Chromium, Cobalt, Copper, Lead, Sodium, Zinc are outside control limits for sample MP19309-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

F77187-4 for Nickel: Elevated reporting limit(s) due to matrix interference.

F77187-3 for Chromium: Elevated reporting limit(s) due to matrix interference.

F77187-2 for Magnesium: Elevated reporting limit(s) due to matrix interference.

F77187-1 for Zinc: Elevated reporting limit(s) due to matrix interference.

F77187-1 for Selenium: Elevated reporting limit(s) due to matrix interference.

F77187-4 for Selenium: Elevated reporting limit(s) due to matrix interference.

F77187-3 for Magnesium: Elevated reporting limit(s) due to matrix interference.

F77187-1 for Copper: Elevated reporting limit(s) due to matrix interference.

F77187-3 for Selenium: Elevated reporting limit(s) due to matrix interference.

F77187-3 for Zinc: Elevated reporting limit(s) due to matrix interference.

F77187-4 for Chromium: Elevated reporting limit(s) due to matrix interference.

F77187-4 for Copper: Elevated reporting limit(s) due to matrix interference.

F77187-4 for Magnesium: Elevated reporting limit(s) due to matrix interference.

F77187-3 for Copper: Elevated reporting limit(s) due to matrix interference.

F77187-2 for Cobalt: Elevated reporting limit(s) due to matrix interference.

F77187-4 for Lead: Elevated reporting limit(s) due to matrix interference.

F77187-4 for Cobalt: Elevated reporting limit(s) due to matrix interference.

F77187-3 for Thallium: Elevated reporting limit(s) due to matrix interference.

F77187-3 for Nickel: Elevated reporting limit(s) due to matrix interference.

F77187-3 for Lead: Elevated reporting limit(s) due to matrix interference.

F77187-3 for Cobalt: Elevated reporting limit(s) due to matrix interference.

F77187-2 for Zinc: Elevated reporting limit(s) due to matrix interference.

F77187-2 for Thallium: Elevated reporting limit(s) due to matrix interference.

F77187-2 for Selenium: Elevated reporting limit(s) due to matrix interference.

F77187-2 for Nickel: Elevated reporting limit(s) due to matrix interference.

F77187-1 for Magnesium: Elevated reporting limit(s) due to matrix interference.

F77187-2 for Copper: Elevated reporting limit(s) due to matrix interference.

F77187-4 for Zinc: Elevated reporting limit(s) due to matrix interference.

F77187-2 for Chromium: Elevated reporting limit(s) due to matrix interference.

Metals By Method SW846 6010B

Matrix: SO **Batch ID:** MP19309

F77187-1 for Thallium: Elevated reporting limit(s) due to matrix interference.

F77187-1 for Nickel: Elevated reporting limit(s) due to matrix interference.

F77187-1 for Lead: Elevated reporting limit(s) due to matrix interference.

F77187-1 for Cobalt: Elevated reporting limit(s) due to matrix interference.

MP19309-D1 for Sodium: RPD acceptable due to low duplicate and sample concentrations.

MP19309-D1 for Arsenic: RPD acceptable due to low duplicate and sample concentrations.

MP19309-MB1 for Iron: All sample results >10x method blank concentration.

F77187-4 for Thallium: Elevated reporting limit(s) due to matrix interference.

F77187-1 for Chromium: Elevated reporting limit(s) due to matrix interference.

F77187-2 for Lead: Elevated reporting limit(s) due to matrix interference.

Metals By Method SW846 7471A

Matrix: SO **Batch ID:** MP19319

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.

Sample(s) F77181-1DUP, F77181-1MS, F77181-1MSD, F77181-1SDL were used as the QC samples for metals.

RPD(s) for Serial Dilution for Mercury are outside control limits for sample MP19319-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Wet Chemistry By Method ASTM 1429

Matrix: ALL **Batch ID:** GN41850

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) F77187-7DUP were used as the QC samples for Specific Gravity.

Wet Chemistry By Method ASTM D2937-94 M

Matrix: SO **Batch ID:** GN41852

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) F77187-7DUP were used as the QC samples for Bulk Density (Dry Basis).

Wet Chemistry By Method ASTM D2974-87

Matrix: SO **Batch ID:** GN41795

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) F77187-7DUP were used as the QC samples for Fractional Organic Carbon.

Wet Chemistry By Method SM19 2540B M

Matrix: SO **Batch ID:** GN41769

Sample(s) F77189-1DUP were used as the QC samples for Solids, Percent.

Matrix: SO **Batch ID:** GN41773

Sample(s) F77181-1DUP were used as the QC samples for Solids, Percent.

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: October 27, 2010

Svetlana Izosimova, QA Officer (signature on file)

Southeast ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	SWMU8-DP14-7		
Lab Sample ID:	F77187-1	**Date Sampled:**	10/10/10
Matrix:	SO - Soil	**Date Received:**	10/11/10
Method:	SW846 8260B	**Percent Solids:**	79.6
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H065019.D	1	10/13/10	MM	n/a	n/a	VH2435
Run #2							

	Initial Weight
Run #1	3.36 g
Run #2	

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	93	39	ug/kg	
107-02-8	Acrolein	ND	47	19	ug/kg	
107-13-1	Acrylonitrile	ND	47	19	ug/kg	
71-43-2	Benzene	5.6	9.3	1.9	ug/kg	J
108-86-1	Bromobenzene	ND	9.3	2.2	ug/kg	
74-97-5	Bromochloromethane	ND	9.3	3.2	ug/kg	
75-27-4	Bromodichloromethane	ND	9.3	1.9	ug/kg	
75-25-2	Bromoform	ND	9.3	3.4	ug/kg	
104-51-8	n-Butylbenzene	ND	9.3	2.4	ug/kg	
135-98-8	sec-Butylbenzene	ND	9.3	2.2	ug/kg	
98-06-6	tert-Butylbenzene	ND	9.3	2.2	ug/kg	
108-90-7	Chlorobenzene	ND	9.3	1.9	ug/kg	
75-00-3	Chloroethane	ND	9.3	3.7	ug/kg	
67-66-3	Chloroform	ND	9.3	1.9	ug/kg	
95-49-8	o-Chlorotoluene	ND	9.3	2.4	ug/kg	
106-43-4	p-Chlorotoluene	ND	9.3	1.9	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	47	19	ug/kg	
75-15-0	Carbon disulfide	ND	9.3	4.5	ug/kg	
56-23-5	Carbon tetrachloride	ND	9.3	3.0	ug/kg	
75-34-3	1,1-Dichloroethane	ND	9.3	2.8	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	9.3	4.3	ug/kg	
563-58-6	1,1-Dichloropropene	ND	9.3	1.9	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	9.3	4.7	ug/kg	
106-93-4	1,2-Dibromoethane	ND	9.3	1.9	ug/kg	
107-06-2	1,2-Dichloroethane	ND	9.3	2.2	ug/kg	
78-87-5	1,2-Dichloropropane	ND	9.3	1.9	ug/kg	
142-28-9	1,3-Dichloropropane	ND	9.3	3.2	ug/kg	
594-20-7	2,2-Dichloropropane	ND	9.3	2.1	ug/kg	
124-48-1	Dibromochloromethane	ND	9.3	3.2	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	9.3	3.9	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	9.3	1.9	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	9.3	1.9	ug/kg	

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:	SWMU8-DP14-7		
Lab Sample ID:	F77187-1	**Date Sampled:**	10/10/10
Matrix:	SO - Soil	**Date Received:**	10/11/10
Method:	SW846 8260B	**Percent Solids:**	79.6
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
541-73-1	m-Dichlorobenzene	ND	9.3	2.2	ug/kg	
95-50-1	o-Dichlorobenzene	ND	9.3	2.1	ug/kg	
106-46-7	p-Dichlorobenzene	ND	9.3	2.8	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	9.3	3.6	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	9.3	2.1	ug/kg	
100-41-4	Ethylbenzene	ND	9.3	2.1	ug/kg	
591-78-6	2-Hexanone	ND	47	22	ug/kg	
87-68-3	Hexachlorobutadiene	ND	9.3	4.3	ug/kg	
110-54-3	Hexane	ND	9.3	3.7	ug/kg	
98-82-8	Isopropylbenzene	ND	9.3	2.6	ug/kg	
99-87-6	p-Isopropyltoluene	ND	9.3	1.9	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	47	16	ug/kg	
74-83-9	Methyl bromide	ND	9.3	3.7	ug/kg	
74-87-3	Methyl chloride	ND	9.3	4.7	ug/kg	
74-95-3	Methylene bromide	ND	9.3	3.9	ug/kg	
75-09-2	Methylene chloride	ND	19	9.3	ug/kg	
78-93-3	Methyl ethyl ketone	ND	47	14	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	9.3	4.3	ug/kg	
91-20-3	Naphthalene	ND	9.3	3.7	ug/kg	
103-65-1	n-Propylbenzene	ND	9.3	2.8	ug/kg	
100-42-5	Styrene	ND	9.3	1.9	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	9.3	1.9	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	9.3	3.4	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	9.3	2.4	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	9.3	2.4	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	9.3	3.7	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	9.3	3.0	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	9.3	3.7	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	9.3	2.1	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	9.3	2.8	ug/kg	
127-18-4	Tetrachloroethylene	ND	9.3	3.4	ug/kg	
108-88-3	Toluene	4.2	9.3	2.2	ug/kg	J
79-01-6	Trichloroethylene	ND	9.3	3.0	ug/kg	
75-69-4	Trichlorofluoromethane	ND	9.3	4.9	ug/kg	
75-01-4	Vinyl chloride	ND	9.3	3.7	ug/kg	
108-05-4	Vinyl Acetate	ND	47	28	ug/kg	
	m,p-Xylene	ND	19	2.2	ug/kg	
95-47-6	o-Xylene	ND	9.3	1.9	ug/kg	

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:	SWMU8-DP14-7		
Lab Sample ID:	F77187-1	**Date Sampled:**	10/10/10
Matrix:	SO - Soil	**Date Received:**	10/11/10
Method:	SW846 8260B	**Percent Solids:**	79.6
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	110%		80-121%
2037-26-5	Toluene-D8	84%		71-130%
460-00-4	4-Bromofluorobenzene	94%		59-148%
17060-07-0	1,2-Dichloroethane-D4	113%		77-123%

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:	SWMU8-DP14-7		
Lab Sample ID:	F77187-1	**Date Sampled:**	10/10/10
Matrix:	SO - Soil	**Date Received:**	10/11/10
Method:	SW846 8270C SW846 3550B	**Percent Solids:**	79.6
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X014616.D	1	10/22/10	NAF	10/14/10	OP34708	SX730
Run #2							

	Initial Weight	Final Volume
Run #1	30.1 g	1.0 ml
Run #2		

ABN Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	1000	420	ug/kg	
95-57-8	2-Chlorophenol	ND	210	42	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	210	42	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	210	42	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	210	46	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	1000	420	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	420	42	ug/kg	
95-48-7	2-Methylphenol	ND	210	42	ug/kg	
	3&4-Methylphenol	ND	210	42	ug/kg	
88-75-5	2-Nitrophenol	ND	210	42	ug/kg	
100-02-7	4-Nitrophenol	ND	1000	420	ug/kg	
87-86-5	Pentachlorophenol	ND	1000	420	ug/kg	
108-95-2	Phenol	ND	210	42	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	210	42	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	210	42	ug/kg	
83-32-9	Acenaphthene	ND	210	42	ug/kg	
208-96-8	Acenaphthylene	ND	210	42	ug/kg	
62-53-3	Aniline	ND	210	46	ug/kg	
120-12-7	Anthracene	ND	210	42	ug/kg	
92-87-5	Benzidine	ND	2100	880	ug/kg	
56-55-3	Benzo(a)anthracene	ND	210	42	ug/kg	
50-32-8	Benzo(a)pyrene	ND	210	42	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	210	42	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	210	42	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	210	42	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	210	42	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	420	83	ug/kg	
100-51-6	Benzyl Alcohol	ND	210	42	ug/kg	
91-58-7	2-Chloronaphthalene	ND	210	42	ug/kg	
106-47-8	4-Chloroaniline	ND	210	42	ug/kg	
86-74-8	Carbazole	ND	210	42	ug/kg	
218-01-9	Chrysene	ND	210	42	ug/kg	

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:	SWMU8-DP14-7		
Lab Sample ID:	F77187-1	**Date Sampled:**	10/10/10
Matrix:	SO - Soil	**Date Received:**	10/11/10
Method:	SW846 8270C SW846 3550B	**Percent Solids:**	79.6
Project:	Holloman AFB; SWMU 8, ACM Investigation		

ABN Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
111-91-1	bis(2-Chloroethoxy)methane	ND	210	42	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	210	42	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	210	42	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	210	42	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	210	83	ug/kg	
122-66-7	1,2-Diphenylhydrazine	ND	210	42	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	210	83	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	210	83	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	210	42	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	210	42	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	420	83	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	210	42	ug/kg	
132-64-9	Dibenzofuran	ND	210	42	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	420	83	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	420	83	ug/kg	
84-66-2	Diethyl phthalate	ND	420	210	ug/kg	
131-11-3	Dimethyl phthalate	ND	420	83	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	420	210	ug/kg	
206-44-0	Fluoranthene	ND	210	42	ug/kg	
86-73-7	Fluorene	ND	210	42	ug/kg	
118-74-1	Hexachlorobenzene	ND	210	42	ug/kg	
87-68-3	Hexachlorobutadiene	ND	210	42	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	210	42	ug/kg	
67-72-1	Hexachloroethane	ND	210	100	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	210	42	ug/kg	
78-59-1	Isophorone	ND	210	42	ug/kg	
90-12-0	1-Methylnaphthalene	ND	210	42	ug/kg	
91-57-6	2-Methylnaphthalene	ND	210	42	ug/kg	
88-74-4	2-Nitroaniline	ND	420	83	ug/kg	
99-09-2	3-Nitroaniline	ND	420	83	ug/kg	
100-01-6	4-Nitroaniline	ND	420	83	ug/kg	
91-20-3	Naphthalene	ND	210	42	ug/kg	
98-95-3	Nitrobenzene	ND	210	42	ug/kg	
62-75-9	N-Nitrosodimethylamine	ND	420	83	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	210	42	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	210	42	ug/kg	
85-01-8	Phenanthrene	ND	210	42	ug/kg	
129-00-0	Pyrene	ND	210	42	ug/kg	
110-86-1	Pyridine	ND	420	100	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	210	42	ug/kg	

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:	SWMU8-DP14-7		
Lab Sample ID:	F77187-1	**Date Sampled:**	10/10/10
Matrix:	SO - Soil	**Date Received:**	10/11/10
Method:	SW846 8270C SW846 3550B	**Percent Solids:**	79.6
Project:	Holloman AFB; SWMU 8, ACM Investigation		

ABN Full List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	74%		40-102%
4165-62-2	Phenol-d5	79%		41-100%
118-79-6	2,4,6-Tribromophenol	76%		42-108%
4165-60-0	Nitrobenzene-d5	70%		40-105%
321-60-8	2-Fluorobiphenyl	71%		43-107%
1718-51-0	Terphenyl-d14	79%		45-119%

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:	SWMU8-DP14-7		
Lab Sample ID:	F77187-1	**Date Sampled:**	10/10/10
Matrix:	SO - Soil	**Date Received:**	10/11/10
Method:	SW846 8015	**Percent Solids:**	79.6
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR056300.D	1	10/14/10	AH	n/a	n/a	GQR2448
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.85 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	6.7	3.3	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	93%		56-136%
98-08-8	aaa-Trifluorotoluene	81%		61-121%

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:	SWMU8-DP14-7		
Lab Sample ID:	F77187-1	**Date Sampled:**	10/10/10
Matrix:	SO - Soil	**Date Received:**	10/11/10
Method:	SW846 8082 SW846 3550B	**Percent Solids:**	79.6
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XX053697.D	1	10/20/10	NJ	10/14/10	OP34709	GXX801
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	21	10	ug/kg	
11104-28-2	Aroclor 1221	ND	21	17	ug/kg	
11141-16-5	Aroclor 1232	ND	21	17	ug/kg	
53469-21-9	Aroclor 1242	ND	21	10	ug/kg	
12672-29-6	Aroclor 1248	ND	21	10	ug/kg	
11097-69-1	Aroclor 1254	ND	21	10	ug/kg	
11096-82-5	Aroclor 1260	ND	21	10	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	92%		44-126%
2051-24-3	Decachlorobiphenyl	85%		39-157%

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:	SWMU8-DP14-7		
Lab Sample ID:	F77187-1	**Date Sampled:**	10/10/10
Matrix:	SO - Soil	**Date Received:**	10/11/10
Method:	SW846 8015 M SW846 3550B	**Percent Solids:**	79.6
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YY17991.D	1	10/15/10	MV	10/13/10	OP34693	GYY657
Run #2							

	Initial Weight	Final Volume
Run #1	30.5 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C22)	ND	10	6.2	mg/kg	
	TPH (> C22-C36)	ND	10	6.2	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	76%		49-108%

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:	SWMU8-DP14-7		
Lab Sample ID:	F77187-1	**Date Sampled:**	10/10/10
Matrix:	SO - Soil	**Date Received:**	10/11/10
		Percent Solids:	79.6
Project:	Holloman AFB; SWMU 8, ACM Investigation		

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	2330	12	1.2	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [2]	SW846 3050B [5]
Antimony	0.12 U	1.2	0.12	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [2]	SW846 3050B [5]
Arsenic	0.45 J	0.61	0.12	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [2]	SW846 3050B [5]
Barium	21.1	12	0.61	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [2]	SW846 3050B [5]
Beryllium	0.085 J	0.30	0.061	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [2]	SW846 3050B [5]
Cadmium	0.061 U	0.24	0.061	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [2]	SW846 3050B [5]
Calcium	165000	3000	61	mg/kg	10	10/18/10	10/22/10	RS	SW846 6010B [4]	SW846 3050B [5]
Chromium [a]	3.0 J	6.1	0.61	mg/kg	10	10/18/10	10/22/10	RS	SW846 6010B [4]	SW846 3050B [5]
Cobalt [a]	0.99 J	15	0.30	mg/kg	5	10/18/10	10/21/10	RS	SW846 6010B [3]	SW846 3050B [5]
Copper [a]	2.6 J	15	1.2	mg/kg	10	10/18/10	10/22/10	RS	SW846 6010B [4]	SW846 3050B [5]
Iron	2020	18	1.8	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [2]	SW846 3050B [5]
Lead [a]	1.5 J	6.1	0.30	mg/kg	5	10/18/10	10/21/10	RS	SW846 6010B [3]	SW846 3050B [5]
Magnesium [a]	1120 J	3000	61	mg/kg	10	10/18/10	10/22/10	RS	SW846 6010B [4]	SW846 3050B [5]
Manganese	41.2	0.91	0.061	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [2]	SW846 3050B [5]
Mercury	0.013 U	0.10	0.013	mg/kg	1	10/19/10	10/19/10	LM	SW846 7471A [1]	SW846 7471A [6]
Nickel [a]	2.0 J	12	0.30	mg/kg	5	10/18/10	10/21/10	RS	SW846 6010B [3]	SW846 3050B [5]
Potassium	571 J	610	30	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [2]	SW846 3050B [5]
Selenium [a]	2.4 U	12	2.4	mg/kg	10	10/18/10	10/22/10	RS	SW846 6010B [4]	SW846 3050B [5]
Silver	0.061 U	0.61	0.061	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [2]	SW846 3050B [5]
Sodium	126 J	610	46	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [2]	SW846 3050B [5]
Thallium [a]	0.61 U	3.0	0.61	mg/kg	5	10/18/10	10/21/10	RS	SW846 6010B [3]	SW846 3050B [5]
Vanadium	5.3	3.0	0.061	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [2]	SW846 3050B [5]
Zinc [a]	4.5 J	12	3.0	mg/kg	10	10/18/10	10/22/10	RS	SW846 6010B [4]	SW846 3050B [5]

(1) Instrument QC Batch: MA8450
(2) Instrument QC Batch: MA8454
(3) Instrument QC Batch: MA8455
(4) Instrument QC Batch: MA8459
(5) Prep QC Batch: MP19309
(6) Prep QC Batch: MP19319

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

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

Report of Analysis

Client Sample ID:	SWMU8-DP15-7		
Lab Sample ID:	F77187-2	**Date Sampled:**	10/10/10
Matrix:	SO - Soil	**Date Received:**	10/11/10
Method:	SW846 8260B	**Percent Solids:**	81.0
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H065020.D	1	10/13/10	MM	n/a	n/a	VH2435
Run #2							

	Initial Weight
Run #1	7.00 g
Run #2	

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	44	19	ug/kg	
107-02-8	Acrolein	ND	22	8.8	ug/kg	
107-13-1	Acrylonitrile	ND	22	8.8	ug/kg	
71-43-2	Benzene	ND	4.4	0.88	ug/kg	
108-86-1	Bromobenzene	ND	4.4	1.1	ug/kg	
74-97-5	Bromochloromethane	ND	4.4	1.5	ug/kg	
75-27-4	Bromodichloromethane	ND	4.4	0.88	ug/kg	
75-25-2	Bromoform	ND	4.4	1.6	ug/kg	
104-51-8	n-Butylbenzene	ND	4.4	1.1	ug/kg	
135-98-8	sec-Butylbenzene	ND	4.4	1.1	ug/kg	
98-06-6	tert-Butylbenzene	ND	4.4	1.1	ug/kg	
108-90-7	Chlorobenzene	ND	4.4	0.88	ug/kg	
75-00-3	Chloroethane	ND	4.4	1.8	ug/kg	
67-66-3	Chloroform	ND	4.4	0.88	ug/kg	
95-49-8	o-Chlorotoluene	ND	4.4	1.1	ug/kg	
106-43-4	p-Chlorotoluene	ND	4.4	0.88	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	22	8.8	ug/kg	
75-15-0	Carbon disulfide	ND	4.4	2.1	ug/kg	
56-23-5	Carbon tetrachloride	ND	4.4	1.4	ug/kg	
75-34-3	1,1-Dichloroethane	ND	4.4	1.3	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	4.4	2.0	ug/kg	
563-58-6	1,1-Dichloropropene	ND	4.4	0.88	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	4.4	2.2	ug/kg	
106-93-4	1,2-Dibromoethane	ND	4.4	0.88	ug/kg	
107-06-2	1,2-Dichloroethane	ND	4.4	1.1	ug/kg	
78-87-5	1,2-Dichloropropane	ND	4.4	0.88	ug/kg	
142-28-9	1,3-Dichloropropane	ND	4.4	1.5	ug/kg	
594-20-7	2,2-Dichloropropane	ND	4.4	0.97	ug/kg	
124-48-1	Dibromochloromethane	ND	4.4	1.5	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	4.4	1.9	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	4.4	0.88	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	4.4	0.88	ug/kg	

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:	SWMU8-DP15-7		
Lab Sample ID:	F77187-2	**Date Sampled:**	10/10/10
Matrix:	SO - Soil	**Date Received:**	10/11/10
Method:	SW846 8260B	**Percent Solids:**	81.0
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
541-73-1	m-Dichlorobenzene	ND	4.4	1.1	ug/kg	
95-50-1	o-Dichlorobenzene	ND	4.4	0.97	ug/kg	
106-46-7	p-Dichlorobenzene	ND	4.4	1.3	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	4.4	1.7	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	4.4	0.97	ug/kg	
100-41-4	Ethylbenzene	ND	4.4	0.97	ug/kg	
591-78-6	2-Hexanone	ND	22	10	ug/kg	
87-68-3	Hexachlorobutadiene	ND	4.4	2.0	ug/kg	
110-54-3	Hexane	ND	4.4	1.8	ug/kg	
98-82-8	Isopropylbenzene	ND	4.4	1.2	ug/kg	
99-87-6	p-Isopropyltoluene	ND	4.4	0.88	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	22	7.3	ug/kg	
74-83-9	Methyl bromide	ND	4.4	1.8	ug/kg	
74-87-3	Methyl chloride	ND	4.4	2.2	ug/kg	
74-95-3	Methylene bromide	ND	4.4	1.9	ug/kg	
75-09-2	Methylene chloride	ND	8.8	4.4	ug/kg	
78-93-3	Methyl ethyl ketone	ND	22	6.6	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	4.4	2.0	ug/kg	
91-20-3	Naphthalene	ND	4.4	1.8	ug/kg	
103-65-1	n-Propylbenzene	ND	4.4	1.3	ug/kg	
100-42-5	Styrene	ND	4.4	0.88	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	4.4	0.88	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	4.4	1.6	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	4.4	1.1	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	4.4	1.1	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	4.4	1.8	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	4.4	1.4	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	4.4	1.8	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	4.4	0.97	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	4.4	1.3	ug/kg	
127-18-4	Tetrachloroethylene	ND	4.4	1.6	ug/kg	
108-88-3	Toluene	ND	4.4	1.1	ug/kg	
79-01-6	Trichloroethylene	ND	4.4	1.4	ug/kg	
75-69-4	Trichlorofluoromethane	ND	4.4	2.3	ug/kg	
75-01-4	Vinyl chloride	ND	4.4	1.8	ug/kg	
108-05-4	Vinyl Acetate	ND	22	13	ug/kg	
	m,p-Xylene	ND	8.8	1.1	ug/kg	
95-47-6	o-Xylene	ND	4.4	0.88	ug/kg	

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:	SWMU8-DP15-7		
Lab Sample ID:	F77187-2	**Date Sampled:**	10/10/10
Matrix:	SO - Soil	**Date Received:**	10/11/10
Method:	SW846 8260B	**Percent Solids:**	81.0
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%		80-121%
2037-26-5	Toluene-D8	82%		71-130%
460-00-4	4-Bromofluorobenzene	94%		59-148%
17060-07-0	1,2-Dichloroethane-D4	110%		77-123%

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:	SWMU8-DP15-7		
Lab Sample ID:	F77187-2	**Date Sampled:**	10/10/10
Matrix:	SO - Soil	**Date Received:**	10/11/10
Method:	SW846 8270C SW846 3550B	**Percent Solids:**	81.0
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X014617.D	1	10/22/10	NAF	10/14/10	OP34708	SX730
Run #2							

	Initial Weight	Final Volume
Run #1	30.2 g	1.0 ml
Run #2		

ABN Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	1000	410	ug/kg	
95-57-8	2-Chlorophenol	ND	200	41	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	200	41	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	200	41	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	200	45	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	1000	410	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	410	41	ug/kg	
95-48-7	2-Methylphenol	ND	200	41	ug/kg	
	3&4-Methylphenol	ND	200	41	ug/kg	
88-75-5	2-Nitrophenol	ND	200	41	ug/kg	
100-02-7	4-Nitrophenol	ND	1000	410	ug/kg	
87-86-5	Pentachlorophenol	ND	1000	410	ug/kg	
108-95-2	Phenol	ND	200	41	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	200	41	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	200	41	ug/kg	
83-32-9	Acenaphthene	ND	200	41	ug/kg	
208-96-8	Acenaphthylene	ND	200	41	ug/kg	
62-53-3	Aniline	ND	200	45	ug/kg	
120-12-7	Anthracene	ND	200	41	ug/kg	
92-87-5	Benzidine	ND	2000	860	ug/kg	
56-55-3	Benzo(a)anthracene	ND	200	41	ug/kg	
50-32-8	Benzo(a)pyrene	ND	200	41	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	200	41	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	200	41	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	200	41	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	200	41	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	410	82	ug/kg	
100-51-6	Benzyl Alcohol	ND	200	41	ug/kg	
91-58-7	2-Chloronaphthalene	ND	200	41	ug/kg	
106-47-8	4-Chloroaniline	ND	200	41	ug/kg	
86-74-8	Carbazole	ND	200	41	ug/kg	
218-01-9	Chrysene	ND	200	41	ug/kg	

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:	SWMU8-DP15-7		
Lab Sample ID:	F77187-2	**Date Sampled:**	10/10/10
Matrix:	SO - Soil	**Date Received:**	10/11/10
Method:	SW846 8270C SW846 3550B	**Percent Solids:**	81.0
Project:	Holloman AFB; SWMU 8, ACM Investigation		

ABN Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
111-91-1	bis(2-Chloroethoxy)methane	ND	200	41	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	200	41	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	200	41	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	200	41	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	200	82	ug/kg	
122-66-7	1,2-Diphenylhydrazine	ND	200	41	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	200	82	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	200	82	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	200	41	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	200	41	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	410	82	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	200	41	ug/kg	
132-64-9	Dibenzofuran	ND	200	41	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	410	82	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	410	82	ug/kg	
84-66-2	Diethyl phthalate	ND	410	200	ug/kg	
131-11-3	Dimethyl phthalate	ND	410	82	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	410	200	ug/kg	
206-44-0	Fluoranthene	ND	200	41	ug/kg	
86-73-7	Fluorene	ND	200	41	ug/kg	
118-74-1	Hexachlorobenzene	ND	200	41	ug/kg	
87-68-3	Hexachlorobutadiene	ND	200	41	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	200	41	ug/kg	
67-72-1	Hexachloroethane	ND	200	100	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	200	41	ug/kg	
78-59-1	Isophorone	ND	200	41	ug/kg	
90-12-0	1-Methylnaphthalene	ND	200	41	ug/kg	
91-57-6	2-Methylnaphthalene	ND	200	41	ug/kg	
88-74-4	2-Nitroaniline	ND	410	82	ug/kg	
99-09-2	3-Nitroaniline	ND	410	82	ug/kg	
100-01-6	4-Nitroaniline	ND	410	82	ug/kg	
91-20-3	Naphthalene	ND	200	41	ug/kg	
98-95-3	Nitrobenzene	ND	200	41	ug/kg	
62-75-9	N-Nitrosodimethylamine	ND	410	82	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	200	41	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	200	41	ug/kg	
85-01-8	Phenanthrene	ND	200	41	ug/kg	
129-00-0	Pyrene	ND	200	41	ug/kg	
110-86-1	Pyridine	ND	410	100	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	200	41	ug/kg	

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:	SWMU8-DP15-7		
Lab Sample ID:	F77187-2	**Date Sampled:**	10/10/10
Matrix:	SO - Soil	**Date Received:**	10/11/10
Method:	SW846 8270C SW846 3550B	**Percent Solids:**	81.0
Project:	Holloman AFB; SWMU 8, ACM Investigation		

ABN Full List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	84%		40-102%
4165-62-2	Phenol-d5	90%		41-100%
118-79-6	2,4,6-Tribromophenol	88%		42-108%
4165-60-0	Nitrobenzene-d5	78%		40-105%
321-60-8	2-Fluorobiphenyl	80%		43-107%
1718-51-0	Terphenyl-d14	92%		45-119%

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:	SWMU8-DP15-7		
Lab Sample ID:	F77187-2	**Date Sampled:**	10/10/10
Matrix:	SO - Soil	**Date Received:**	10/11/10
Method:	SW846 8015	**Percent Solids:**	81.0
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR056301.D	1	10/14/10	AH	n/a	n/a	GQR2448
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	6.45 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	6.0	3.0	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	91%		56-136%
98-08-8	aaa-Trifluorotoluene	79%		61-121%

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:	SWMU8-DP15-7		
Lab Sample ID:	F77187-2	**Date Sampled:**	10/10/10
Matrix:	SO - Soil	**Date Received:**	10/11/10
Method:	SW846 8082 SW846 3550B	**Percent Solids:**	81.0
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XX053698.D	1	10/20/10	NJ	10/14/10	OP34709	GXX801
Run #2							

	Initial Weight	Final Volume
Run #1	30.1 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	21	10	ug/kg	
11104-28-2	Aroclor 1221	ND	21	16	ug/kg	
11141-16-5	Aroclor 1232	ND	21	16	ug/kg	
53469-21-9	Aroclor 1242	ND	21	10	ug/kg	
12672-29-6	Aroclor 1248	ND	21	10	ug/kg	
11097-69-1	Aroclor 1254	ND	21	10	ug/kg	
11096-82-5	Aroclor 1260	ND	21	10	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	86%		44-126%
2051-24-3	Decachlorobiphenyl	82%		39-157%

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:	SWMU8-DP15-7		
Lab Sample ID:	F77187-2	**Date Sampled:**	10/10/10
Matrix:	SO - Soil	**Date Received:**	10/11/10
Method:	SW846 8015 M SW846 3550B	**Percent Solids:**	81.0
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YY17992.D	1	10/15/10	MV	10/13/10	OP34693	GYY657
Run #2							

	Initial Weight	Final Volume
Run #1	30.4 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C22)	ND	10	6.1	mg/kg	
	TPH (> C22-C36)	ND	10	6.1	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	76%		49-108%

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:	SWMU8-DP15-7		
Lab Sample ID:	F77187-2	**Date Sampled:**	10/10/10
Matrix:	SO - Soil	**Date Received:**	10/11/10
		Percent Solids:	81.0
Project:	Holloman AFB; SWMU 8, ACM Investigation		

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	5460	7.9	0.79	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [2]	SW846 3050B [5]
Antimony	0.099 J	0.79	0.079	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [2]	SW846 3050B [5]
Arsenic	2.1	0.40	0.079	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [2]	SW846 3050B [5]
Barium	52.6	7.9	0.40	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [2]	SW846 3050B [5]
Beryllium	0.23	0.20	0.040	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [2]	SW846 3050B [5]
Cadmium	0.13 J	0.16	0.040	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [2]	SW846 3050B [5]
Calcium	71900	990	20	mg/kg	5	10/18/10	10/21/10	RS	SW846 6010B [3]	SW846 3050B [5]
Chromium [a]	6.5	2.0	0.20	mg/kg	5	10/18/10	10/21/10	RS	SW846 6010B [3]	SW846 3050B [5]
Cobalt [a]	3.1 J	9.9	0.20	mg/kg	5	10/18/10	10/21/10	RS	SW846 6010B [3]	SW846 3050B [5]
Copper [a]	3.7 J	4.9	0.40	mg/kg	5	10/18/10	10/21/10	RS	SW846 6010B [3]	SW846 3050B [5]
Iron	4000	12	1.2	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [2]	SW846 3050B [5]
Lead [a]	4.1	4.0	0.20	mg/kg	5	10/18/10	10/21/10	RS	SW846 6010B [3]	SW846 3050B [5]
Magnesium [a]	2100	2000	40	mg/kg	10	10/18/10	10/22/10	RS	SW846 6010B [4]	SW846 3050B [5]
Manganese	90.4	0.59	0.040	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [2]	SW846 3050B [5]
Mercury	0.013 U	0.10	0.013	mg/kg	1	10/19/10	10/19/10	LM	SW846 7471A [1]	SW846 7471A [6]
Nickel [a]	5.8 J	7.9	0.20	mg/kg	5	10/18/10	10/21/10	RS	SW846 6010B [3]	SW846 3050B [5]
Potassium	1360	400	20	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [2]	SW846 3050B [5]
Selenium [a]	0.79 U	4.0	0.79	mg/kg	5	10/18/10	10/21/10	RS	SW846 6010B [3]	SW846 3050B [5]
Silver	0.040 U	0.40	0.040	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [2]	SW846 3050B [5]
Sodium	88.0 J	400	30	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [2]	SW846 3050B [5]
Thallium [a]	0.40 U	2.0	0.40	mg/kg	5	10/18/10	10/21/10	RS	SW846 6010B [3]	SW846 3050B [5]
Vanadium	18.3	2.0	0.040	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [2]	SW846 3050B [5]
Zinc [a]	17.3	4.0	0.99	mg/kg	5	10/18/10	10/21/10	RS	SW846 6010B [3]	SW846 3050B [5]

(1) Instrument QC Batch: MA8450
(2) Instrument QC Batch: MA8454
(3) Instrument QC Batch: MA8455
(4) Instrument QC Batch: MA8459
(5) Prep QC Batch: MP19309
(6) Prep QC Batch: MP19319

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

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

Report of Analysis

Client Sample ID:	SWMU8-DP13-7		
Lab Sample ID:	F77187-3	**Date Sampled:**	10/10/10
Matrix:	SO - Soil	**Date Received:**	10/11/10
Method:	SW846 8260B	**Percent Solids:**	86.0
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H065021.D	1	10/13/10	MM	n/a	n/a	VH2435
Run #2							

	Initial Weight
Run #1	5.68 g
Run #2	

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	51	22	ug/kg	
107-02-8	Acrolein	ND	26	10	ug/kg	
107-13-1	Acrylonitrile	ND	26	10	ug/kg	
71-43-2	Benzene	2.6	5.1	1.0	ug/kg	J
108-86-1	Bromobenzene	ND	5.1	1.2	ug/kg	
74-97-5	Bromochloromethane	ND	5.1	1.7	ug/kg	
75-27-4	Bromodichloromethane	ND	5.1	1.0	ug/kg	
75-25-2	Bromoform	ND	5.1	1.8	ug/kg	
104-51-8	n-Butylbenzene	ND	5.1	1.3	ug/kg	
135-98-8	sec-Butylbenzene	ND	5.1	1.2	ug/kg	
98-06-6	tert-Butylbenzene	ND	5.1	1.2	ug/kg	
108-90-7	Chlorobenzene	ND	5.1	1.0	ug/kg	
75-00-3	Chloroethane	ND	5.1	2.0	ug/kg	
67-66-3	Chloroform	ND	5.1	1.0	ug/kg	
95-49-8	o-Chlorotoluene	ND	5.1	1.3	ug/kg	
106-43-4	p-Chlorotoluene	ND	5.1	1.0	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	26	10	ug/kg	
75-15-0	Carbon disulfide	ND	5.1	2.5	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.1	1.6	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.1	1.5	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.1	2.4	ug/kg	
563-58-6	1,1-Dichloropropene	ND	5.1	1.0	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.1	2.6	ug/kg	
106-93-4	1,2-Dibromoethane	ND	5.1	1.0	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.1	1.2	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.1	1.0	ug/kg	
142-28-9	1,3-Dichloropropane	ND	5.1	1.7	ug/kg	
594-20-7	2,2-Dichloropropane	ND	5.1	1.1	ug/kg	
124-48-1	Dibromochloromethane	ND	5.1	1.7	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.1	2.1	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.1	1.0	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.1	1.0	ug/kg	

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:	SWMU8-DP13-7		
Lab Sample ID:	F77187-3	**Date Sampled:**	10/10/10
Matrix:	SO - Soil	**Date Received:**	10/11/10
Method:	SW846 8260B	**Percent Solids:**	86.0
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
541-73-1	m-Dichlorobenzene	ND	5.1	1.2	ug/kg	
95-50-1	o-Dichlorobenzene	ND	5.1	1.1	ug/kg	
106-46-7	p-Dichlorobenzene	ND	5.1	1.5	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.1	1.9	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.1	1.1	ug/kg	
100-41-4	Ethylbenzene	ND	5.1	1.1	ug/kg	
591-78-6	2-Hexanone	ND	26	12	ug/kg	
87-68-3	Hexachlorobutadiene	ND	5.1	2.4	ug/kg	
110-54-3	Hexane	ND	5.1	2.0	ug/kg	
98-82-8	Isopropylbenzene	ND	5.1	1.4	ug/kg	
99-87-6	p-Isopropyltoluene	ND	5.1	1.0	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	26	8.5	ug/kg	
74-83-9	Methyl bromide	ND	5.1	2.0	ug/kg	
74-87-3	Methyl chloride	ND	5.1	2.6	ug/kg	
74-95-3	Methylene bromide	ND	5.1	2.1	ug/kg	
75-09-2	Methylene chloride	ND	10	5.1	ug/kg	
78-93-3	Methyl ethyl ketone	ND	26	7.7	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.1	2.4	ug/kg	
91-20-3	Naphthalene	ND	5.1	2.0	ug/kg	
103-65-1	n-Propylbenzene	ND	5.1	1.5	ug/kg	
100-42-5	Styrene	ND	5.1	1.0	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.1	1.0	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.1	1.8	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.1	1.3	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.1	1.3	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.1	2.0	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	5.1	1.6	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.1	2.0	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	5.1	1.1	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.1	1.5	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.1	1.8	ug/kg	
108-88-3	Toluene	2.1	5.1	1.2	ug/kg	J
79-01-6	Trichloroethylene	ND	5.1	1.6	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.1	2.7	ug/kg	
75-01-4	Vinyl chloride	ND	5.1	2.0	ug/kg	
108-05-4	Vinyl Acetate	ND	26	15	ug/kg	
	m,p-Xylene	ND	10	1.2	ug/kg	
95-47-6	o-Xylene	ND	5.1	1.0	ug/kg	

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:	SWMU8-DP13-7		
Lab Sample ID:	F77187-3	**Date Sampled:**	10/10/10
Matrix:	SO - Soil	**Date Received:**	10/11/10
Method:	SW846 8260B	**Percent Solids:**	86.0
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	109%		80-121%
2037-26-5	Toluene-D8	83%		71-130%
460-00-4	4-Bromofluorobenzene	93%		59-148%
17060-07-0	1,2-Dichloroethane-D4	112%		77-123%

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:	SWMU8-DP13-7		
Lab Sample ID:	F77187-3	**Date Sampled:**	10/10/10
Matrix:	SO - Soil	**Date Received:**	10/11/10
Method:	SW846 8270C SW846 3550B	**Percent Solids:**	86.0
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X014618.D	1	10/22/10	NAF	10/14/10	OP34708	SX730
Run #2							

	Initial Weight	Final Volume
Run #1	30.5 g	1.0 ml
Run #2		

ABN Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	950	380	ug/kg	
95-57-8	2-Chlorophenol	ND	190	38	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	190	38	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	190	38	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	190	42	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	950	380	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	380	38	ug/kg	
95-48-7	2-Methylphenol	ND	190	38	ug/kg	
	3&4-Methylphenol	ND	190	38	ug/kg	
88-75-5	2-Nitrophenol	ND	190	38	ug/kg	
100-02-7	4-Nitrophenol	ND	950	380	ug/kg	
87-86-5	Pentachlorophenol	ND	950	380	ug/kg	
108-95-2	Phenol	ND	190	38	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	190	38	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	190	38	ug/kg	
83-32-9	Acenaphthene	ND	190	38	ug/kg	
208-96-8	Acenaphthylene	ND	190	38	ug/kg	
62-53-3	Aniline	ND	190	42	ug/kg	
120-12-7	Anthracene	ND	190	38	ug/kg	
92-87-5	Benzidine	ND	1900	800	ug/kg	
56-55-3	Benzo(a)anthracene	ND	190	38	ug/kg	
50-32-8	Benzo(a)pyrene	ND	190	38	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	190	38	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	190	38	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	190	38	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	190	38	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	380	76	ug/kg	
100-51-6	Benzyl Alcohol	ND	190	38	ug/kg	
91-58-7	2-Chloronaphthalene	ND	190	38	ug/kg	
106-47-8	4-Chloroaniline	ND	190	38	ug/kg	
86-74-8	Carbazole	ND	190	38	ug/kg	
218-01-9	Chrysene	ND	190	38	ug/kg	

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:	SWMU8-DP13-7		
Lab Sample ID:	F77187-3	**Date Sampled:**	10/10/10
Matrix:	SO - Soil	**Date Received:**	10/11/10
Method:	SW846 8270C SW846 3550B	**Percent Solids:**	86.0
Project:	Holloman AFB; SWMU 8, ACM Investigation		

ABN Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
111-91-1	bis(2-Chloroethoxy)methane	ND	190	38	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	190	38	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	190	38	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	190	38	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	190	76	ug/kg	
122-66-7	1,2-Diphenylhydrazine	ND	190	38	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	190	76	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	190	76	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	190	38	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	190	38	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	380	76	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	190	38	ug/kg	
132-64-9	Dibenzofuran	ND	190	38	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	380	76	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	380	76	ug/kg	
84-66-2	Diethyl phthalate	ND	380	190	ug/kg	
131-11-3	Dimethyl phthalate	ND	380	76	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	380	190	ug/kg	
206-44-0	Fluoranthene	ND	190	38	ug/kg	
86-73-7	Fluorene	ND	190	38	ug/kg	
118-74-1	Hexachlorobenzene	ND	190	38	ug/kg	
87-68-3	Hexachlorobutadiene	ND	190	38	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	190	38	ug/kg	
67-72-1	Hexachloroethane	ND	190	95	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	190	38	ug/kg	
78-59-1	Isophorone	ND	190	38	ug/kg	
90-12-0	1-Methylnaphthalene	ND	190	38	ug/kg	
91-57-6	2-Methylnaphthalene	ND	190	38	ug/kg	
88-74-4	2-Nitroaniline	ND	380	76	ug/kg	
99-09-2	3-Nitroaniline	ND	380	76	ug/kg	
100-01-6	4-Nitroaniline	ND	380	76	ug/kg	
91-20-3	Naphthalene	ND	190	38	ug/kg	
98-95-3	Nitrobenzene	ND	190	38	ug/kg	
62-75-9	N-Nitrosodimethylamine	ND	380	76	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	190	38	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	190	38	ug/kg	
85-01-8	Phenanthrene	ND	190	38	ug/kg	
129-00-0	Pyrene	ND	190	38	ug/kg	
110-86-1	Pyridine	ND	380	95	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	190	38	ug/kg	

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:	SWMU8-DP13-7		
Lab Sample ID:	F77187-3	**Date Sampled:**	10/10/10
Matrix:	SO - Soil	**Date Received:**	10/11/10
Method:	SW846 8270C SW846 3550B	**Percent Solids:**	86.0
Project:	Holloman AFB; SWMU 8, ACM Investigation		

ABN Full List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	80%		40-102%
4165-62-2	Phenol-d5	85%		41-100%
118-79-6	2,4,6-Tribromophenol	77%		42-108%
4165-60-0	Nitrobenzene-d5	76%		40-105%
321-60-8	2-Fluorobiphenyl	74%		43-107%
1718-51-0	Terphenyl-d14	80%		45-119%

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:	SWMU8-DP13-7		
Lab Sample ID:	F77187-3	**Date Sampled:**	10/10/10
Matrix:	SO - Soil	**Date Received:**	10/11/10
Method:	SW846 8015	**Percent Solids:**	86.0
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR056302.D	1	10/14/10	AH	n/a	n/a	GQR2448
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.59 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	6.0	3.0	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	98%		56-136%
98-08-8	aaa-Trifluorotoluene	84%		61-121%

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:	SWMU8-DP13-7		
Lab Sample ID:	F77187-3	**Date Sampled:**	10/10/10
Matrix:	SO - Soil	**Date Received:**	10/11/10
Method:	SW846 8082 SW846 3550B	**Percent Solids:**	86.0
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XX053699.D	1	10/20/10	NJ	10/14/10	OP34709	GXX801
Run #2							

	Initial Weight	Final Volume
Run #1	30.5 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	19	9.5	ug/kg	
11104-28-2	Aroclor 1221	ND	19	15	ug/kg	
11141-16-5	Aroclor 1232	ND	19	15	ug/kg	
53469-21-9	Aroclor 1242	ND	19	9.5	ug/kg	
12672-29-6	Aroclor 1248	ND	19	9.5	ug/kg	
11097-69-1	Aroclor 1254	ND	19	9.5	ug/kg	
11096-82-5	Aroclor 1260	ND	19	9.5	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	92%		44-126%
2051-24-3	Decachlorobiphenyl	88%		39-157%

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:	SWMU8-DP13-7		
Lab Sample ID:	F77187-3	**Date Sampled:**	10/10/10
Matrix:	SO - Soil	**Date Received:**	10/11/10
Method:	SW846 8015 M SW846 3550B	**Percent Solids:**	86.0
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YY17993.D	1	10/15/10	MV	10/13/10	OP34693	GYY657
Run #2							

	Initial Weight	Final Volume
Run #1	30.5 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C22)	ND	9.5	5.7	mg/kg	
	TPH (> C22-C36)	ND	9.5	5.7	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	79%		49-108%

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:	SWMU8-DP13-7		
Lab Sample ID:	F77187-3	**Date Sampled:**	10/10/10
Matrix:	SO - Soil	**Date Received:**	10/11/10
		Percent Solids:	86.0
Project:	Holloman AFB; SWMU 8, ACM Investigation		

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	2520	10	1.0	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [2]	SW846 3050B [5]
Antimony	0.15 J	1.0	0.10	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [2]	SW846 3050B [5]
Arsenic	0.88	0.51	0.10	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [2]	SW846 3050B [5]
Barium	21.2	10	0.51	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [2]	SW846 3050B [5]
Beryllium	0.093 J	0.26	0.051	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [2]	SW846 3050B [5]
Cadmium	0.062 J	0.21	0.051	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [2]	SW846 3050B [5]
Calcium	149000	2600	51	mg/kg	10	10/18/10	10/22/10	RS	SW846 6010B [4]	SW846 3050B [5]
Chromium [a]	3.4 J	5.1	0.51	mg/kg	10	10/18/10	10/22/10	RS	SW846 6010B [4]	SW846 3050B [5]
Cobalt [a]	0.88 J	13	0.26	mg/kg	5	10/18/10	10/21/10	RS	SW846 6010B [3]	SW846 3050B [5]
Copper [a]	2.6 J	13	1.0	mg/kg	10	10/18/10	10/22/10	RS	SW846 6010B [4]	SW846 3050B [5]
Iron	2010	15	1.5	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [2]	SW846 3050B [5]
Lead [a]	1.3 J	5.1	0.26	mg/kg	5	10/18/10	10/21/10	RS	SW846 6010B [3]	SW846 3050B [5]
Magnesium [a]	1200 J	2600	51	mg/kg	10	10/18/10	10/22/10	RS	SW846 6010B [4]	SW846 3050B [5]
Manganese	24.9	0.77	0.051	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [2]	SW846 3050B [5]
Mercury	0.011 U	0.092	0.011	mg/kg	1	10/19/10	10/19/10	LM	SW846 7471A [1]	SW846 7471A [6]
Nickel [a]	1.8 J	10	0.26	mg/kg	5	10/18/10	10/21/10	RS	SW846 6010B [3]	SW846 3050B [5]
Potassium	682	510	26	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [2]	SW846 3050B [5]
Selenium [a]	2.1 U	10	2.1	mg/kg	10	10/18/10	10/22/10	RS	SW846 6010B [4]	SW846 3050B [5]
Silver	0.051 U	0.51	0.051	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [2]	SW846 3050B [5]
Sodium	135 J	510	39	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [2]	SW846 3050B [5]
Thallium [a]	0.51 U	2.6	0.51	mg/kg	5	10/18/10	10/21/10	RS	SW846 6010B [3]	SW846 3050B [5]
Vanadium	5.8	2.6	0.051	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [2]	SW846 3050B [5]
Zinc [a]	5.2 J	10	2.6	mg/kg	10	10/18/10	10/22/10	RS	SW846 6010B [4]	SW846 3050B [5]

(1) Instrument QC Batch: MA8450
(2) Instrument QC Batch: MA8454
(3) Instrument QC Batch: MA8455
(4) Instrument QC Batch: MA8459
(5) Prep QC Batch: MP19309
(6) Prep QC Batch: MP19319

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

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

Report of Analysis

Client Sample ID:	SWMU8-DP13-7A		
Lab Sample ID:	F77187-4	**Date Sampled:**	10/10/10
Matrix:	SO - Soil	**Date Received:**	10/11/10
Method:	SW846 8260B	**Percent Solids:**	82.7
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H065022.D	1	10/13/10	MM	n/a	n/a	VH2435
Run #2							

	Initial Weight
Run #1	5.58 g
Run #2	

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	54	23	ug/kg	
107-02-8	Acrolein	ND	27	11	ug/kg	
107-13-1	Acrylonitrile	ND	27	11	ug/kg	
71-43-2	Benzene	2.2	5.4	1.1	ug/kg	J
108-86-1	Bromobenzene	ND	5.4	1.3	ug/kg	
74-97-5	Bromochloromethane	ND	5.4	1.8	ug/kg	
75-27-4	Bromodichloromethane	ND	5.4	1.1	ug/kg	
75-25-2	Bromoform	ND	5.4	2.0	ug/kg	
104-51-8	n-Butylbenzene	ND	5.4	1.4	ug/kg	
135-98-8	sec-Butylbenzene	ND	5.4	1.3	ug/kg	
98-06-6	tert-Butylbenzene	ND	5.4	1.3	ug/kg	
108-90-7	Chlorobenzene	ND	5.4	1.1	ug/kg	
75-00-3	Chloroethane	ND	5.4	2.2	ug/kg	
67-66-3	Chloroform	ND	5.4	1.1	ug/kg	
95-49-8	o-Chlorotoluene	ND	5.4	1.4	ug/kg	
106-43-4	p-Chlorotoluene	ND	5.4	1.1	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	27	11	ug/kg	
75-15-0	Carbon disulfide	ND	5.4	2.6	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.4	1.7	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.4	1.6	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.4	2.5	ug/kg	
563-58-6	1,1-Dichloropropene	ND	5.4	1.1	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.4	2.7	ug/kg	
106-93-4	1,2-Dibromoethane	ND	5.4	1.1	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.4	1.3	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.4	1.1	ug/kg	
142-28-9	1,3-Dichloropropane	ND	5.4	1.8	ug/kg	
594-20-7	2,2-Dichloropropane	ND	5.4	1.2	ug/kg	
124-48-1	Dibromochloromethane	ND	5.4	1.8	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.4	2.3	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.4	1.1	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.4	1.1	ug/kg	

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:	SWMU8-DP13-7A		
Lab Sample ID:	F77187-4	**Date Sampled:**	10/10/10
Matrix:	SO - Soil	**Date Received:**	10/11/10
Method:	SW846 8260B	**Percent Solids:**	82.7
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
541-73-1	m-Dichlorobenzene	ND	5.4	1.3	ug/kg	
95-50-1	o-Dichlorobenzene	ND	5.4	1.2	ug/kg	
106-46-7	p-Dichlorobenzene	ND	5.4	1.6	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.4	2.1	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.4	1.2	ug/kg	
100-41-4	Ethylbenzene	ND	5.4	1.2	ug/kg	
591-78-6	2-Hexanone	ND	27	13	ug/kg	
87-68-3	Hexachlorobutadiene	ND	5.4	2.5	ug/kg	
110-54-3	Hexane	ND	5.4	2.2	ug/kg	
98-82-8	Isopropylbenzene	ND	5.4	1.5	ug/kg	
99-87-6	p-Isopropyltoluene	ND	5.4	1.1	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	27	9.0	ug/kg	
74-83-9	Methyl bromide	ND	5.4	2.2	ug/kg	
74-87-3	Methyl chloride	ND	5.4	2.7	ug/kg	
74-95-3	Methylene bromide	ND	5.4	2.3	ug/kg	
75-09-2	Methylene chloride	ND	11	5.4	ug/kg	
78-93-3	Methyl ethyl ketone	ND	27	8.1	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.4	2.5	ug/kg	
91-20-3	Naphthalene	ND	5.4	2.2	ug/kg	
103-65-1	n-Propylbenzene	ND	5.4	1.6	ug/kg	
100-42-5	Styrene	ND	5.4	1.1	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.4	1.1	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.4	2.0	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.4	1.4	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.4	1.4	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.4	2.2	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	5.4	1.7	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.4	2.2	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	5.4	1.2	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.4	1.6	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.4	2.0	ug/kg	
108-88-3	Toluene	1.8	5.4	1.3	ug/kg	J
79-01-6	Trichloroethylene	ND	5.4	1.7	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.4	2.8	ug/kg	
75-01-4	Vinyl chloride	ND	5.4	2.2	ug/kg	
108-05-4	Vinyl Acetate	ND	27	16	ug/kg	
	m,p-Xylene	ND	11	1.3	ug/kg	
95-47-6	o-Xylene	ND	5.4	1.1	ug/kg	

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SWMU8-DP13-7A		
Lab Sample ID:	F77187-4	**Date Sampled:**	10/10/10
Matrix:	SO - Soil	**Date Received:**	10/11/10
Method:	SW846 8260B	**Percent Solids:**	82.7
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	111%		80-121%
2037-26-5	Toluene-D8	81%		71-130%
460-00-4	4-Bromofluorobenzene	98%		59-148%
17060-07-0	1,2-Dichloroethane-D4	116%		77-123%

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J = Indicates an estimated value
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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SWMU8-DP13-7A		
Lab Sample ID:	F77187-4	**Date Sampled:**	10/10/10
Matrix:	SO - Soil	**Date Received:**	10/11/10
Method:	SW846 8270C SW846 3550B	**Percent Solids:**	82.7
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X014621.D	1	10/22/10	NAF	10/14/10	OP34708	SX730
Run #2							

	Initial Weight	Final Volume
Run #1	30.1 g	1.0 ml
Run #2		

ABN Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	1000	400	ug/kg	
95-57-8	2-Chlorophenol	ND	200	40	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	200	40	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	200	40	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	200	44	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	1000	400	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	400	40	ug/kg	
95-48-7	2-Methylphenol	ND	200	40	ug/kg	
	3&4-Methylphenol	ND	200	40	ug/kg	
88-75-5	2-Nitrophenol	ND	200	40	ug/kg	
100-02-7	4-Nitrophenol	ND	1000	400	ug/kg	
87-86-5	Pentachlorophenol	ND	1000	400	ug/kg	
108-95-2	Phenol	ND	200	40	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	200	40	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	200	40	ug/kg	
83-32-9	Acenaphthene	ND	200	40	ug/kg	
208-96-8	Acenaphthylene	ND	200	40	ug/kg	
62-53-3	Aniline	ND	200	44	ug/kg	
120-12-7	Anthracene	ND	200	40	ug/kg	
92-87-5	Benzidine	ND	2000	840	ug/kg	
56-55-3	Benzo(a)anthracene	ND	200	40	ug/kg	
50-32-8	Benzo(a)pyrene	ND	200	40	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	200	40	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	200	40	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	200	40	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	200	40	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	400	80	ug/kg	
100-51-6	Benzyl Alcohol	ND	200	40	ug/kg	
91-58-7	2-Chloronaphthalene	ND	200	40	ug/kg	
106-47-8	4-Chloroaniline	ND	200	40	ug/kg	
86-74-8	Carbazole	ND	200	40	ug/kg	
218-01-9	Chrysene	ND	200	40	ug/kg	

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SWMU8-DP13-7A		
Lab Sample ID:	F77187-4	**Date Sampled:**	10/10/10
Matrix:	SO - Soil	**Date Received:**	10/11/10
Method:	SW846 8270C SW846 3550B	**Percent Solids:**	82.7
Project:	Holloman AFB; SWMU 8, ACM Investigation		

ABN Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
111-91-1	bis(2-Chloroethoxy)methane	ND	200	40	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	200	40	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	200	40	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	200	40	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	200	80	ug/kg	
122-66-7	1,2-Diphenylhydrazine	ND	200	40	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	200	80	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	200	80	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	200	40	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	200	40	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	400	80	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	200	40	ug/kg	
132-64-9	Dibenzofuran	ND	200	40	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	400	80	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	400	80	ug/kg	
84-66-2	Diethyl phthalate	ND	400	200	ug/kg	
131-11-3	Dimethyl phthalate	ND	400	80	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	400	200	ug/kg	
206-44-0	Fluoranthene	ND	200	40	ug/kg	
86-73-7	Fluorene	ND	200	40	ug/kg	
118-74-1	Hexachlorobenzene	ND	200	40	ug/kg	
87-68-3	Hexachlorobutadiene	ND	200	40	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	200	40	ug/kg	
67-72-1	Hexachloroethane	ND	200	100	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	200	40	ug/kg	
78-59-1	Isophorone	ND	200	40	ug/kg	
90-12-0	1-Methylnaphthalene	ND	200	40	ug/kg	
91-57-6	2-Methylnaphthalene	ND	200	40	ug/kg	
88-74-4	2-Nitroaniline	ND	400	80	ug/kg	
99-09-2	3-Nitroaniline	ND	400	80	ug/kg	
100-01-6	4-Nitroaniline	ND	400	80	ug/kg	
91-20-3	Naphthalene	ND	200	40	ug/kg	
98-95-3	Nitrobenzene	ND	200	40	ug/kg	
62-75-9	N-Nitrosodimethylamine	ND	400	80	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	200	40	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	200	40	ug/kg	
85-01-8	Phenanthrene	ND	200	40	ug/kg	
129-00-0	Pyrene	ND	200	40	ug/kg	
110-86-1	Pyridine	ND	400	100	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	200	40	ug/kg	

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B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SWMU8-DP13-7A		
Lab Sample ID:	F77187-4	**Date Sampled:**	10/10/10
Matrix:	SO - Soil	**Date Received:**	10/11/10
Method:	SW846 8270C SW846 3550B	**Percent Solids:**	82.7
Project:	Holloman AFB; SWMU 8, ACM Investigation		

ABN Full List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	76%		40-102%
4165-62-2	Phenol-d5	82%		41-100%
118-79-6	2,4,6-Tribromophenol	77%		42-108%
4165-60-0	Nitrobenzene-d5	73%		40-105%
321-60-8	2-Fluorobiphenyl	72%		43-107%
1718-51-0	Terphenyl-d14	79%		45-119%

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RL = Reporting Limit
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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:	SWMU8-DP13-7A		
Lab Sample ID:	F77187-4	**Date Sampled:**	10/10/10
Matrix:	SO - Soil	**Date Received:**	10/11/10
Method:	SW846 8015	**Percent Solids:**	82.7
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR056303.D	1	10/14/10	AH	n/a	n/a	GQR2448
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.55 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	6.5	3.2	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	92%		56-136%
98-08-8	aaa-Trifluorotoluene	77%		61-121%

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:	SWMU8-DP13-7A		
Lab Sample ID:	F77187-4	**Date Sampled:**	10/10/10
Matrix:	SO - Soil	**Date Received:**	10/11/10
Method:	SW846 8082 SW846 3550B	**Percent Solids:**	82.7
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XX053700.D	1	10/20/10	NJ	10/14/10	OP34709	GXX801
Run #2							

	Initial Weight	Final Volume
Run #1	30.5 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	20	9.9	ug/kg	
11104-28-2	Aroclor 1221	ND	20	16	ug/kg	
11141-16-5	Aroclor 1232	ND	20	16	ug/kg	
53469-21-9	Aroclor 1242	ND	20	9.9	ug/kg	
12672-29-6	Aroclor 1248	ND	20	9.9	ug/kg	
11097-69-1	Aroclor 1254	ND	20	9.9	ug/kg	
11096-82-5	Aroclor 1260	ND	20	9.9	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	92%		44-126%
2051-24-3	Decachlorobiphenyl	87%		39-157%

ND = Not detected MDL - Method Detection Limit
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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:	SWMU8-DP13-7A		
Lab Sample ID:	F77187-4	**Date Sampled:**	10/10/10
Matrix:	SO - Soil	**Date Received:**	10/11/10
Method:	SW846 8015 M SW846 3550B	**Percent Solids:**	82.7
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YY17994.D	1	10/15/10	MV	10/13/10	OP34693	GYY657
Run #2							

	Initial Weight	Final Volume
Run #1	30.3 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C22)	ND	10	6.0	mg/kg	
	TPH (> C22-C36)	ND	10	6.0	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	78%		49-108%

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SWMU8-DP13-7A		
Lab Sample ID:	F77187-4	**Date Sampled:**	10/10/10
Matrix:	SO - Soil	**Date Received:**	10/11/10
		Percent Solids:	82.7
Project:	Holloman AFB; SWMU 8, ACM Investigation		

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	2620	8.1	0.81	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [2]	SW846 3050B [5]
Antimony	0.081 U	0.81	0.081	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [2]	SW846 3050B [5]
Arsenic	1.1	0.41	0.081	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [2]	SW846 3050B [5]
Barium	23.5	8.1	0.41	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [2]	SW846 3050B [5]
Beryllium	0.10 J	0.20	0.041	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [2]	SW846 3050B [5]
Cadmium	0.069 J	0.16	0.041	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [2]	SW846 3050B [5]
Calcium	157000	2000	41	mg/kg	10	10/18/10	10/22/10	RS	SW846 6010B [4]	SW846 3050B [5]
Chromium [a]	3.2 J	4.1	0.41	mg/kg	10	10/18/10	10/22/10	RS	SW846 6010B [4]	SW846 3050B [5]
Cobalt [a]	0.94 J	10	0.20	mg/kg	5	10/18/10	10/21/10	RS	SW846 6010B [3]	SW846 3050B [5]
Copper [a]	2.5 J	10	0.81	mg/kg	10	10/18/10	10/22/10	RS	SW846 6010B [4]	SW846 3050B [5]
Iron	2160	12	1.2	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [2]	SW846 3050B [5]
Lead [a]	1.8 J	4.1	0.20	mg/kg	5	10/18/10	10/21/10	RS	SW846 6010B [3]	SW846 3050B [5]
Magnesium [a]	1330 J	2000	41	mg/kg	10	10/18/10	10/22/10	RS	SW846 6010B [4]	SW846 3050B [5]
Manganese	25.8	0.61	0.041	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [2]	SW846 3050B [5]
Mercury	0.012 U	0.098	0.012	mg/kg	1	10/19/10	10/19/10	LM	SW846 7471A [1]	SW846 7471A [6]
Nickel [a]	2.0 J	8.1	0.20	mg/kg	5	10/18/10	10/21/10	RS	SW846 6010B [3]	SW846 3050B [5]
Potassium	704	410	20	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [2]	SW846 3050B [5]
Selenium [a]	1.6 U	8.1	1.6	mg/kg	10	10/18/10	10/22/10	RS	SW846 6010B [4]	SW846 3050B [5]
Silver	0.041 U	0.41	0.041	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [2]	SW846 3050B [5]
Sodium	137 J	410	30	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [2]	SW846 3050B [5]
Thallium [a]	0.41 U	2.0	0.41	mg/kg	5	10/18/10	10/21/10	RS	SW846 6010B [3]	SW846 3050B [5]
Vanadium	6.0	2.0	0.041	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [2]	SW846 3050B [5]
Zinc [a]	5.5 J	8.1	2.0	mg/kg	10	10/18/10	10/22/10	RS	SW846 6010B [4]	SW846 3050B [5]

(1) Instrument QC Batch: MA8450
(2) Instrument QC Batch: MA8454
(3) Instrument QC Batch: MA8455
(4) Instrument QC Batch: MA8459
(5) Prep QC Batch: MP19309
(6) Prep QC Batch: MP19319

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

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

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	F77187-5	**Date Sampled:**	10/10/10
Matrix:	SO - Trip Blank Soil	**Date Received:**	10/11/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H065023.D	1	10/13/10	MM	n/a	n/a	VH2435
Run #2							

	Initial Weight
Run #1	5.00 g
Run #2	

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	50	21	ug/kg	
107-02-8	Acrolein	ND	25	10	ug/kg	
107-13-1	Acrylonitrile	ND	25	10	ug/kg	
71-43-2	Benzene	ND	5.0	1.0	ug/kg	
108-86-1	Bromobenzene	ND	5.0	1.2	ug/kg	
74-97-5	Bromochloromethane	ND	5.0	1.7	ug/kg	
75-27-4	Bromodichloromethane	ND	5.0	1.0	ug/kg	
75-25-2	Bromoform	ND	5.0	1.8	ug/kg	
104-51-8	n-Butylbenzene	ND	5.0	1.3	ug/kg	
135-98-8	sec-Butylbenzene	ND	5.0	1.2	ug/kg	
98-06-6	tert-Butylbenzene	ND	5.0	1.2	ug/kg	
108-90-7	Chlorobenzene	ND	5.0	1.0	ug/kg	
75-00-3	Chloroethane	ND	5.0	2.0	ug/kg	
67-66-3	Chloroform	ND	5.0	1.0	ug/kg	
95-49-8	o-Chlorotoluene	ND	5.0	1.3	ug/kg	
106-43-4	p-Chlorotoluene	ND	5.0	1.0	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	25	10	ug/kg	
75-15-0	Carbon disulfide	ND	5.0	2.4	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.0	1.6	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.0	1.5	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.0	2.3	ug/kg	
563-58-6	1,1-Dichloropropene	ND	5.0	1.0	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	2.5	ug/kg	
106-93-4	1,2-Dibromoethane	ND	5.0	1.0	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.0	1.2	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.0	1.0	ug/kg	
142-28-9	1,3-Dichloropropane	ND	5.0	1.7	ug/kg	
594-20-7	2,2-Dichloropropane	ND	5.0	1.1	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	1.7	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.0	2.1	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.0	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.0	ug/kg	

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:	TRIP BLANK		
Lab Sample ID:	F77187-5	**Date Sampled:**	10/10/10
Matrix:	SO - Trip Blank Soil	**Date Received:**	10/11/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
541-73-1	m-Dichlorobenzene	ND	5.0	1.2	ug/kg	
95-50-1	o-Dichlorobenzene	ND	5.0	1.1	ug/kg	
106-46-7	p-Dichlorobenzene	ND	5.0	1.5	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	1.9	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	1.1	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	1.1	ug/kg	
591-78-6	2-Hexanone	ND	25	12	ug/kg	
87-68-3	Hexachlorobutadiene	ND	5.0	2.3	ug/kg	
110-54-3	Hexane	ND	5.0	2.0	ug/kg	
98-82-8	Isopropylbenzene	ND	5.0	1.4	ug/kg	
99-87-6	p-Isopropyltoluene	ND	5.0	1.0	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	25	8.3	ug/kg	
74-83-9	Methyl bromide	ND	5.0	2.0	ug/kg	
74-87-3	Methyl chloride	ND	5.0	2.5	ug/kg	
74-95-3	Methylene bromide	ND	5.0	2.1	ug/kg	
75-09-2	Methylene chloride [a]	10.7	10	5.0	ug/kg	B
78-93-3	Methyl ethyl ketone	ND	25	7.5	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	2.3	ug/kg	
91-20-3	Naphthalene	ND	5.0	2.0	ug/kg	
103-65-1	n-Propylbenzene	ND	5.0	1.5	ug/kg	
100-42-5	Styrene	ND	5.0	1.0	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	1.0	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.0	1.8	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	1.3	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.0	1.3	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	2.0	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	5.0	1.6	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	2.0	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	1.1	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.5	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.0	1.8	ug/kg	
108-88-3	Toluene	ND	5.0	1.2	ug/kg	
79-01-6	Trichloroethylene	ND	5.0	1.6	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.0	2.6	ug/kg	
75-01-4	Vinyl chloride	ND	5.0	2.0	ug/kg	
108-05-4	Vinyl Acetate	ND	25	15	ug/kg	
	m,p-Xylene	ND	10	1.2	ug/kg	
95-47-6	o-Xylene	ND	5.0	1.0	ug/kg	

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:	TRIP BLANK		
Lab Sample ID:	F77187-5	**Date Sampled:**	10/10/10
Matrix:	SO - Trip Blank Soil	**Date Received:**	10/11/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		80-121%
2037-26-5	Toluene-D8	83%		71-130%
460-00-4	4-Bromofluorobenzene	96%		59-148%
17060-07-0	1,2-Dichloroethane-D4	103%		77-123%

(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:	SWMU8-DP16-2		
Lab Sample ID:	F77187-6	**Date Sampled:**	10/10/10
Matrix:	SO - Soil	**Date Received:**	10/11/10
		Percent Solids:	70.0
Project:	Holloman AFB; SWMU 8, ACM Investigation		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Bulk Density (Dry Basis)	1.2			g/ml	1	10/19/10	LE	ASTM D2937-94 M
Fractional Organic Carbon	17.6	0.01	0.01	%	1	10/19/10	LE	ASTM D2974-87
Solids, Percent	70			%	1	10/13/10	TC	SM19 2540B M
Specific Gravity	1.8				1	10/19/10	LE	ASTM 1429

RL = Reporting Limit
MDL = Method Detection Limit

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

Report of Analysis

Client Sample ID:	SWMU8-DP16-3		
Lab Sample ID:	F77187-7	**Date Sampled:**	10/10/10
Matrix:	SO - Soil	**Date Received:**	10/11/10
		Percent Solids:	79.2
Project:	Holloman AFB; SWMU 8, ACM Investigation		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Bulk Density (Dry Basis)	1.5			g/ml	1	10/19/10	LE	ASTM D2937-94 M
Fractional Organic Carbon	8.7	0.01	0.01	%	1	10/19/10	LE	ASTM D2974-87
Solids, Percent	79.2			%	1	10/13/10	TC	SM19 2540B M
Specific Gravity	1.9				1	10/19/10	LE	ASTM 1429

RL = Reporting Limit
MDL = Method Detection Limit

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

Southeast ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Certification Exceptions
- Chain of Custody

NATIONVIEW

F77187

Page: 1 of 1

Project No: 8080014.03.020

COC Number(1): 10112010 - 04

LIMS Number:

Chain of Custody and Analytical Request

Facility/Base I.D.: Holloman AFB, New Mexico

Project/Site Name: SWMU 8, ACM Investigation

Client Name: USACE - Albuquerque District

Collected by: Dustin McNeil/ Jim Moore

	Field Sample ID (30 Characters Max)	ERPIMS LOCID (15 Characters Max)	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hhmm)	Sample Depth (beginning - ending)	SA Code (2)	Sample Number (3)	Sample Matrix (4)	Number of containers	% Solids (2540B)	VOCs (8260B)	SVOCs (8270C)	TPH-GRO (8015B)	TPH-DRO/ORO (8015B)	TAL Metals (6010B/7471A)	PCBs (8082)	Dry Bulk Density (D2937-94)	Specific Gravity (D1429-86)	FOC (D2974-87)	% Moisture			Ambient Blank Lot Control Number	Equipment Blank Lot Control Number	Trip Blank Lot Control Number	Cooler ID
	Sample Analysis Requested (5)																						Quality Assurance Samples (6)			
1	SWMU8-DP14-7	8-DP14-7	10102010	0930	5-7	N	1	SO	6	X	X	X	X	X	X	X										4
2	SWMU8-DP15-7	8-DP15-7	10102010	1045	5-7	N	1	SO	6	X	X	X	X	X	X	X										4
3	SWMU8-DP13-7	8-DP13-7	10102010	1130	5-7	N	1	SO	6	X	X	X	X	X	X	X										4
4	SWMU8-DP13-7A	8-DP13-7A	10102010	1130	5-7	FD	1	SO	6	X	X	X	X	X	X	X										4
5	Trip Blank				-	TB	1	WQ	3		X															4
6	SWMU8-DP16-2	8-DP16-2	10102010	1320	1-2	N	1	SO	1								X	X	X	X						4
7	SWMU8-DP16-3	8-DP16-3	10102010	1320	2-3	N	1	SO	1								X	X	X	X						4
					-																					
					-																					
					-																					
					-																					

COMMENTS:

Custody Transfers Prior to Receipt by Laboratory

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1.	[signature]	10/11/10	1300	[signature]	10/12/10	09:00
2.						
3.						

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab:

Method of Shipment: FedEx Express

Analytical Lab: Accutest

Lab Recipient:

Shipped No.:

Airbill Number: 8731 6942 7093

Delivery Location: Orlando, FL

Delivery Date/Time:

1.) Chain of Custody Number = date collected + custody number (e.g. 09-02-1999-01)

2.) Sample Type (SA) Codes: N = Normal Sample, TB = Trip Blank (-c) Sample, FD = Field Duplicate (-a) Samples, FR = Field Replicate (-b) Samples, EB = Equipment Blank (-d) Samples, MS = Matrix Spike, SD = Matrix Spike Duplicate, AB = Ambient Blank (-e)

3.) Sample Number: Unique sample number collected from a particular location per day. (e.g. Groundwater sample collected from MW-1 on 10/10/99 = 01, if sampled again on 10/10/99 = 02, etc.)

4.) Matrix Codes: GS = Soil Gas, WG = Groundwater, WS = Surface Water, SO = Soil, SE = Sediment, SL = Sludge, SS = Surface Soil Samples, WQ = Aqueous Blank Samples (trip, equipment, ambient, etc), SQ = Soil Blanks

5.) Sample Analysis Requested: Analytical method requested and number of containers provided for each.

6.) Quality assurance samples are assigned by date (ddmmyy) and the sample number associated with the sample (01, 02, etc) (e.g. Equipment blank collected in association with MW-1 on 10/10/99 will be designated 10109901 in the Equipment Blank Lot Control

2.8

4.1

4

F77187: Chain of Custody

Page 1 of 2

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: F77187 CLIENT: Nationview PROJECT: SWMU 8

DATE/TIME RECEIVED: 10-11-10 09:00 {MM/DD/YY 24:00} NUMBER OF COOLERS RECEIVED: 1

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

AIRBILL NUMBERS: 8731 0942 7093

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
- [ ] RECEIVED WATER TRIP BLANK
- [X] RECEIVED SOIL TRIP BLANK

MISC. INFORMATION

NUMBER OF ENCORES ? Ø

NUMBER OF 5035 FIELD KITS ? 4 +TB

NUMBER OR LAB FILTERED METALS ? Ø

TEMPERATURE INFORMATION

- [ ] IR THERM ID 3 CORR. FACTOR +.6
- [ ] OBSERVED TEMPS: 2.2
- [ ] CORRECTED TEMPS: 2.8

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. 10-12-10 REVIEWER SIGNATURE/DATE [signature] 10/12/10

NF 10/09 RECEIPT CONFIRMATION 100609 (2).xls

4.1

4

F77187: Chain of Custody

Page 2 of 2

Southeast ACCUTEST LABORATORIES

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: F77187
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VH2435-MB	H065003.D	1	10/13/10	MM	n/a	n/a	VH2435

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77187-1, F77187-2, F77187-3, F77187-4, F77187-5

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	50	21	ug/kg	
107-02-8	Acrolein	ND	25	10	ug/kg	
107-13-1	Acrylonitrile	ND	25	10	ug/kg	
71-43-2	Benzene	ND	5.0	1.0	ug/kg	
108-86-1	Bromobenzene	ND	5.0	1.2	ug/kg	
74-97-5	Bromochloromethane	ND	5.0	1.7	ug/kg	
75-27-4	Bromodichloromethane	ND	5.0	1.0	ug/kg	
75-25-2	Bromoform	ND	5.0	1.8	ug/kg	
104-51-8	n-Butylbenzene	ND	5.0	1.3	ug/kg	
135-98-8	sec-Butylbenzene	ND	5.0	1.2	ug/kg	
98-06-6	tert-Butylbenzene	ND	5.0	1.2	ug/kg	
108-90-7	Chlorobenzene	ND	5.0	1.0	ug/kg	
75-00-3	Chloroethane	ND	5.0	2.0	ug/kg	
67-66-3	Chloroform	ND	5.0	1.0	ug/kg	
95-49-8	o-Chlorotoluene	ND	5.0	1.3	ug/kg	
106-43-4	p-Chlorotoluene	ND	5.0	1.0	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	25	10	ug/kg	
75-15-0	Carbon disulfide	ND	5.0	2.4	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.0	1.6	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.0	1.5	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.0	2.3	ug/kg	
563-58-6	1,1-Dichloropropene	ND	5.0	1.0	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	2.5	ug/kg	
106-93-4	1,2-Dibromoethane	ND	5.0	1.0	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.0	1.2	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.0	1.0	ug/kg	
142-28-9	1,3-Dichloropropane	ND	5.0	1.7	ug/kg	
594-20-7	2,2-Dichloropropane	ND	5.0	1.1	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	1.7	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.0	2.1	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.0	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.0	ug/kg	
541-73-1	m-Dichlorobenzene	ND	5.0	1.2	ug/kg	
95-50-1	o-Dichlorobenzene	ND	5.0	1.1	ug/kg	
106-46-7	p-Dichlorobenzene	ND	5.0	1.5	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	1.9	ug/kg	

Method Blank Summary

Job Number: F77187
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VH2435-MB	H065003.D	1	10/13/10	MM	n/a	n/a	VH2435

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77187-1, F77187-2, F77187-3, F77187-4, F77187-5

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	1.1	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	1.1	ug/kg	
591-78-6	2-Hexanone	ND	25	12	ug/kg	
87-68-3	Hexachlorobutadiene	ND	5.0	2.3	ug/kg	
110-54-3	Hexane	ND	5.0	2.0	ug/kg	
98-82-8	Isopropylbenzene	ND	5.0	1.4	ug/kg	
99-87-6	p-Isopropyltoluene	ND	5.0	1.0	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	25	8.3	ug/kg	
74-83-9	Methyl bromide	ND	5.0	2.0	ug/kg	
74-87-3	Methyl chloride	ND	5.0	2.5	ug/kg	
74-95-3	Methylene bromide	ND	5.0	2.1	ug/kg	
75-09-2	Methylene chloride	17.5	10	5.0	ug/kg	
78-93-3	Methyl ethyl ketone	ND	25	7.5	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	2.3	ug/kg	
91-20-3	Naphthalene	ND	5.0	2.0	ug/kg	
103-65-1	n-Propylbenzene	ND	5.0	1.5	ug/kg	
100-42-5	Styrene	ND	5.0	1.0	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	1.0	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.0	1.8	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	1.3	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.0	1.3	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	2.0	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	5.0	1.6	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	2.0	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	1.1	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.5	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.0	1.8	ug/kg	
108-88-3	Toluene	ND	5.0	1.2	ug/kg	
79-01-6	Trichloroethylene	ND	5.0	1.6	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.0	2.6	ug/kg	
75-01-4	Vinyl chloride	ND	5.0	2.0	ug/kg	
108-05-4	Vinyl Acetate	ND	25	15	ug/kg	
	m,p-Xylene	ND	10	1.2	ug/kg	
95-47-6	o-Xylene	ND	5.0	1.0	ug/kg	

Method Blank Summary

Job Number: F77187
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VH2435-MB	H065003.D	1	10/13/10	MM	n/a	n/a	VH2435

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77187-1, F77187-2, F77187-3, F77187-4, F77187-5

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	109%	80-121%
2037-26-5	Toluene-D8	83%	71-130%
460-00-4	4-Bromofluorobenzene	94%	59-148%
17060-07-0	1,2-Dichloroethane-D4	104%	77-123%

Blank Spike Summary

Job Number: F77187
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VH2435-BS	H065002.D	1	10/13/10	MM	n/a	n/a	VH2435

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77187-1, F77187-2, F77187-3, F77187-4, F77187-5

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	250	95.9	38*	61-144
107-02-8	Acrolein	250	139	56	27-156
107-13-1	Acrylonitrile	250	232	93	55-144
71-43-2	Benzene	50	53.1	106	78-130
108-86-1	Bromobenzene	50	52.8	106	78-123
74-97-5	Bromochloromethane	50	53.0	106	72-122
75-27-4	Bromodichloromethane	50	52.1	104	73-122
75-25-2	Bromoform	50	46.2	92	70-139
104-51-8	n-Butylbenzene	50	52.5	105	80-138
135-98-8	sec-Butylbenzene	50	52.2	104	82-132
98-06-6	tert-Butylbenzene	50	51.3	103	79-130
108-90-7	Chlorobenzene	50	51.1	102	83-122
75-00-3	Chloroethane	50	56.3	113	61-153
67-66-3	Chloroform	50	54.3	109	79-129
95-49-8	o-Chlorotoluene	50	51.1	102	77-123
106-43-4	p-Chlorotoluene	50	50.8	102	78-129
110-75-8	2-Chloroethyl vinyl ether	250	334	134	52-142
75-15-0	Carbon disulfide	50	54.5	109	61-142
56-23-5	Carbon tetrachloride	50	55.5	111	79-135
75-34-3	1,1-Dichloroethane	50	52.9	106	77-132
75-35-4	1,1-Dichloroethylene	50	52.1	104	66-132
563-58-6	1,1-Dichloropropene	50	55.4	111	81-133
96-12-8	1,2-Dibromo-3-chloropropane	50	48.1	96	67-129
106-93-4	1,2-Dibromoethane	50	48.7	97	77-126
107-06-2	1,2-Dichloroethane	50	50.2	100	78-129
78-87-5	1,2-Dichloropropane	50	49.5	99	74-127
142-28-9	1,3-Dichloropropane	50	48.3	97	78-118
594-20-7	2,2-Dichloropropane	50	54.7	109	80-137
124-48-1	Dibromochloromethane	50	43.6	87	78-117
75-71-8	Dichlorodifluoromethane	50	36.8	74	35-162
156-59-2	cis-1,2-Dichloroethylene	50	57.1	114	74-123
10061-01-5	cis-1,3-Dichloropropene	50	53.4	107	79-130
541-73-1	m-Dichlorobenzene	50	52.6	105	82-126
95-50-1	o-Dichlorobenzene	50	51.3	103	83-123
106-46-7	p-Dichlorobenzene	50	51.7	103	84-124
156-60-5	trans-1,2-Dichloroethylene	50	52.5	105	77-129

Blank Spike Summary

Job Number: F77187
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VH2435-BS	H065002.D	1	10/13/10	MM	n/a	n/a	VH2435

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77187-1, F77187-2, F77187-3, F77187-4, F77187-5

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
10061-02-6	trans-1,3-Dichloropropene	50	53.9	108	87-131
100-41-4	Ethylbenzene	50	51.6	103	82-124
591-78-6	2-Hexanone	250	203	81	67-130
87-68-3	Hexachlorobutadiene	50	56.8	114	77-150
110-54-3	Hexane	50	67.9	136	65-147
98-82-8	Isopropylbenzene	50	60.2	120	82-133
99-87-6	p-Isopropyltoluene	50	52.9	106	82-132
108-10-1	4-Methyl-2-pentanone	250	238	95	69-125
74-83-9	Methyl bromide	50	61.0	122	60-146
74-87-3	Methyl chloride	50	51.1	102	58-163
74-95-3	Methylene bromide	50	53.2	106	75-128
75-09-2	Methylene chloride	50	56.1	112	62-140
78-93-3	Methyl ethyl ketone	250	163	65*	66-134
1634-04-4	Methyl Tert Butyl Ether	50	55.2	110	70-131
91-20-3	Naphthalene	50	47.6	95	59-143
103-65-1	n-Propylbenzene	50	51.6	103	78-129
100-42-5	Styrene	50	50.8	102	79-123
630-20-6	1,1,1,2-Tetrachloroethane	50	50.9	102	81-121
71-55-6	1,1,1-Trichloroethane	50	55.0	110	80-133
79-34-5	1,1,2,2-Tetrachloroethane	50	47.9	96	70-128
79-00-5	1,1,2-Trichloroethane	50	47.4	95	76-118
87-61-6	1,2,3-Trichlorobenzene	50	52.0	104	78-136
96-18-4	1,2,3-Trichloropropane	50	47.7	95	74-125
120-82-1	1,2,4-Trichlorobenzene	50	53.5	107	82-137
95-63-6	1,2,4-Trimethylbenzene	50	50.9	102	77-129
108-67-8	1,3,5-Trimethylbenzene	50	52.8	106	79-129
127-18-4	Tetrachloroethylene	50	56.5	113	79-132
108-88-3	Toluene	50	49.8	100	80-123
79-01-6	Trichloroethylene	50	54.2	108	78-132
75-69-4	Trichlorofluoromethane	50	57.7	115	67-149
75-01-4	Vinyl chloride	50	49.5	99	60-145
108-05-4	Vinyl Acetate	250	329	132	25-164
	m,p-Xylene	100	106	106	82-128
95-47-6	o-Xylene	50	52.0	104	82-126

Blank Spike Summary

Job Number: F77187
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VH2435-BS	H065002.D	1	10/13/10	MM	n/a	n/a	VH2435

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77187-1, F77187-2, F77187-3, F77187-4, F77187-5

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	103%	80-121%
2037-26-5	Toluene-D8	91%	71-130%
460-00-4	4-Bromofluorobenzene	101%	59-148%
17060-07-0	1,2-Dichloroethane-D4	110%	77-123%

Southeast ACCUTEST LABORATORIES

GC/MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: F77187
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34708-MB	X014613.D	1	10/22/10	NAF	10/14/10	OP34708	SX730

The QC reported here applies to the following samples: **Method:** SW846 8270C

F77187-1, F77187-2, F77187-3, F77187-4

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	830	330	ug/kg	
95-57-8	2-Chlorophenol	ND	170	33	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	170	33	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	170	33	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	170	37	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	830	330	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	330	33	ug/kg	
95-48-7	2-Methylphenol	ND	170	33	ug/kg	
	3&4-Methylphenol	ND	170	33	ug/kg	
88-75-5	2-Nitrophenol	ND	170	33	ug/kg	
100-02-7	4-Nitrophenol	ND	830	330	ug/kg	
87-86-5	Pentachlorophenol	ND	830	330	ug/kg	
108-95-2	Phenol	ND	170	33	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	170	33	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	170	33	ug/kg	
83-32-9	Acenaphthene	ND	170	33	ug/kg	
208-96-8	Acenaphthylene	ND	170	33	ug/kg	
62-53-3	Aniline	ND	170	37	ug/kg	
120-12-7	Anthracene	ND	170	33	ug/kg	
92-87-5	Benzidine	ND	1700	700	ug/kg	
56-55-3	Benzo(a)anthracene	ND	170	33	ug/kg	
50-32-8	Benzo(a)pyrene	ND	170	33	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	170	33	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	170	33	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	170	33	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	170	33	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	330	67	ug/kg	
100-51-6	Benzyl Alcohol	ND	170	33	ug/kg	
91-58-7	2-Chloronaphthalene	ND	170	33	ug/kg	
106-47-8	4-Chloroaniline	ND	170	33	ug/kg	
86-74-8	Carbazole	ND	170	33	ug/kg	
218-01-9	Chrysene	ND	170	33	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	170	33	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	170	33	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	170	33	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	170	33	ug/kg	

Method Blank Summary

Job Number: F77187
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34708-MB	X014613.D	1	10/22/10	NAF	10/14/10	OP34708	SX730

The QC reported here applies to the following samples: **Method:** SW846 8270C

F77187-1, F77187-2, F77187-3, F77187-4

CAS No.	Compound	Result	RL	MDL	Units	Q
95-50-1	1,2-Dichlorobenzene	ND	170	67	ug/kg	
122-66-7	1,2-Diphenylhydrazine	ND	170	33	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	170	67	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	170	67	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	170	33	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	170	33	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	330	67	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	170	33	ug/kg	
132-64-9	Dibenzofuran	ND	170	33	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	330	67	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	330	67	ug/kg	
84-66-2	Diethyl phthalate	ND	330	170	ug/kg	
131-11-3	Dimethyl phthalate	ND	330	67	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	330	170	ug/kg	
206-44-0	Fluoranthene	ND	170	33	ug/kg	
86-73-7	Fluorene	ND	170	33	ug/kg	
118-74-1	Hexachlorobenzene	ND	170	33	ug/kg	
87-68-3	Hexachlorobutadiene	ND	170	33	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	170	33	ug/kg	
67-72-1	Hexachloroethane	ND	170	83	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	170	33	ug/kg	
78-59-1	Isophorone	ND	170	33	ug/kg	
90-12-0	1-Methylnaphthalene	ND	170	33	ug/kg	
91-57-6	2-Methylnaphthalene	ND	170	33	ug/kg	
88-74-4	2-Nitroaniline	ND	330	67	ug/kg	
99-09-2	3-Nitroaniline	ND	330	67	ug/kg	
100-01-6	4-Nitroaniline	ND	330	67	ug/kg	
91-20-3	Naphthalene	ND	170	33	ug/kg	
98-95-3	Nitrobenzene	ND	170	33	ug/kg	
62-75-9	N-Nitrosodimethylamine	ND	330	67	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	170	33	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	170	33	ug/kg	
85-01-8	Phenanthrene	ND	170	33	ug/kg	
129-00-0	Pyrene	ND	170	33	ug/kg	
110-86-1	Pyridine	ND	330	83	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	170	33	ug/kg	

Method Blank Summary

Job Number: F77187
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34708-MB	X014613.D	1	10/22/10	NAF	10/14/10	OP34708	SX730

The QC reported here applies to the following samples: **Method:** SW846 8270C

F77187-1, F77187-2, F77187-3, F77187-4

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	81%	40-102%
4165-62-2	Phenol-d5	87%	41-100%
118-79-6	2,4,6-Tribromophenol	81%	42-108%
4165-60-0	Nitrobenzene-d5	78%	40-105%
321-60-8	2-Fluorobiphenyl	80%	43-107%
1718-51-0	Terphenyl-d14	82%	45-119%

Blank Spike Summary

Job Number: F77187
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34708-BS	X014614.D	1	10/22/10	NAF	10/14/10	OP34708	SX730

The QC reported here applies to the following samples: **Method:** SW846 8270C

F77187-1, F77187-2, F77187-3, F77187-4

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
65-85-0	Benzoic Acid	3330	2550	77	44-116
95-57-8	2-Chlorophenol	1670	1360	82	54-97
59-50-7	4-Chloro-3-methyl phenol	1670	1370	82	59-102
120-83-2	2,4-Dichlorophenol	1670	1400	84	60-101
105-67-9	2,4-Dimethylphenol	1670	1200	72	49-89
51-28-5	2,4-Dinitrophenol	3330	2350	71	39-107
534-52-1	4,6-Dinitro-o-cresol	3330	2790	84	58-109
95-48-7	2-Methylphenol	1670	1310	79	53-94
	3&4-Methylphenol	3330	2540	76	54-95
88-75-5	2-Nitrophenol	1670	1410	85	55-96
100-02-7	4-Nitrophenol	3330	2790	84	56-106
87-86-5	Pentachlorophenol	3330	2940	88	50-115
108-95-2	Phenol	1670	1360	82	55-99
95-95-4	2,4,5-Trichlorophenol	1670	1390	83	60-101
88-06-2	2,4,6-Trichlorophenol	1670	1360	82	60-100
83-32-9	Acenaphthene	1670	1380	83	59-97
208-96-8	Acenaphthylene	1670	1360	82	58-98
62-53-3	Aniline	1670	1220	73	38-92
120-12-7	Anthracene	1670	1360	82	61-104
56-55-3	Benzo(a)anthracene	1670	1400	84	60-106
50-32-8	Benzo(a)pyrene	1670	1420	85	59-102
205-99-2	Benzo(b)fluoranthene	1670	1460	88	60-107
191-24-2	Benzo(g,h,i)perylene	1670	1370	82	56-103
207-08-9	Benzo(k)fluoranthene	1670	1450	87	61-107
101-55-3	4-Bromophenyl phenyl ether	1670	1360	82	60-104
85-68-7	Butyl benzyl phthalate	1670	1420	85	57-110
100-51-6	Benzyl Alcohol	1670	1360	82	51-102
91-58-7	2-Chloronaphthalene	1670	1330	80	57-95
106-47-8	4-Chloroaniline	1670	935	56	19-85
86-74-8	Carbazole	1670	1340	80	60-106
218-01-9	Chrysene	1670	1410	85	60-107
111-91-1	bis(2-Chloroethoxy)methane	1670	1350	81	51-89
111-44-4	bis(2-Chloroethyl)ether	1670	1280	77	50-96
108-60-1	bis(2-Chloroisopropyl)ether	1670	1330	80	44-94
7005-72-3	4-Chlorophenyl phenyl ether	1670	1330	80	60-101
95-50-1	1,2-Dichlorobenzene	1670	1290	77	47-91

Blank Spike Summary

Job Number: F77187
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34708-BS	X014614.D	1	10/22/10	NAF	10/14/10	OP34708	SX730

The QC reported here applies to the following samples: **Method:** SW846 8270C

F77187-1, F77187-2, F77187-3, F77187-4

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
122-66-7	1,2-Diphenylhydrazine	1670	1370	82	58-104
541-73-1	1,3-Dichlorobenzene	1670	1270	76	45-86
106-46-7	1,4-Dichlorobenzene	1670	1300	78	45-88
121-14-2	2,4-Dinitrotoluene	1670	1320	79	59-103
606-20-2	2,6-Dinitrotoluene	1670	1340	80	57-99
91-94-1	3,3'-Dichlorobenzidine	1670	825	50	34-88
53-70-3	Dibenzo(a,h)anthracene	1670	1420	85	57-105
132-64-9	Dibenzofuran	1670	1300	78	58-103
84-74-2	Di-n-butyl phthalate	1670	1330	80	59-105
117-84-0	Di-n-octyl phthalate	1670	1500	90	59-117
84-66-2	Diethyl phthalate	1670	1350	81	59-106
131-11-3	Dimethyl phthalate	1670	1340	80	60-100
117-81-7	bis(2-Ethylhexyl)phthalate	1670	1400	84	57-111
206-44-0	Fluoranthene	1670	1370	82	60-110
86-73-7	Fluorene	1670	1350	81	60-99
118-74-1	Hexachlorobenzene	1670	1320	79	58-103
87-68-3	Hexachlorobutadiene	1670	1350	81	49-95
77-47-4	Hexachlorocyclopentadiene	1670	1360	82	36-94
67-72-1	Hexachloroethane	1670	1300	78	44-89
193-39-5	Indeno(1,2,3-cd)pyrene	1670	1420	85	57-104
78-59-1	Isophorone	1670	1110	67	58-97
90-12-0	1-Methylnaphthalene	1670	1330	80	55-93
91-57-6	2-Methylnaphthalene	1670	1290	77	57-103
88-74-4	2-Nitroaniline	1670	1450	87	53-106
99-09-2	3-Nitroaniline	1670	1070	64	29-85
100-01-6	4-Nitroaniline	1670	1310	79	49-104
91-20-3	Naphthalene	1670	1350	81	54-93
98-95-3	Nitrobenzene	1670	1380	83	53-92
62-75-9	N-Nitrosodimethylamine	1670	1210	73	37-88
621-64-7	N-Nitroso-di-n-propylamine	1670	1310	79	49-94
86-30-6	N-Nitrosodiphenylamine	1670	1410	85	53-107
85-01-8	Phenanthrene	1670	1350	81	61-103
129-00-0	Pyrene	1670	1440	86	58-109
110-86-1	Pyridine	1670	948	57	30-68
120-82-1	1,2,4-Trichlorobenzene	1670	1240	74	52-93

Blank Spike Summary

Job Number: F77187
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34708-BS	X014614.D	1	10/22/10	NAF	10/14/10	OP34708	SX730

The QC reported here applies to the following samples: **Method:** SW846 8270C

F77187-1, F77187-2, F77187-3, F77187-4

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	83%	40-102%
4165-62-2	Phenol-d5	84%	41-100%
118-79-6	2,4,6-Tribromophenol	82%	42-108%
4165-60-0	Nitrobenzene-d5	81%	40-105%
321-60-8	2-Fluorobiphenyl	79%	43-107%
1718-51-0	Terphenyl-d14	83%	45-119%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F77187
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34708-MS	X014619.D	1	10/22/10	NAF	10/14/10	OP34708	SX730
OP34708-MSD	X014620.D	1	10/22/10	NAF	10/14/10	OP34708	SX730
F77187-3	X014618.D	1	10/22/10	NAF	10/14/10	OP34708	SX730

The QC reported here applies to the following samples: **Method:** SW846 8270C

F77187-1, F77187-2, F77187-3, F77187-4

CAS No.	Compound	F77187-3 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		3880	1740	45	1690	44	3	44-116/36
95-57-8	2-Chlorophenol	ND		1940	1520	78	1530	80	1	54-97/31
59-50-7	4-Chloro-3-methyl phenol	ND		1940	1570	81	1560	82	1	59-102/27
120-83-2	2,4-Dichlorophenol	ND		1940	1620	84	1630	86	1	60-101/30
105-67-9	2,4-Dimethylphenol	ND		1940	1380	71	1410	74	2	49-89/31
51-28-5	2,4-Dinitrophenol	ND		3880	2270	59	2370	62	4	39-107/40
534-52-1	4,6-Dinitro-o-cresol	ND		3880	2970	77	3200	84	7	58-109/37
95-48-7	2-Methylphenol	ND		1940	1500	77	1510	79	1	53-94/29
	3&4-Methylphenol	ND		3880	2920	75	2920	77	0	54-95/31
88-75-5	2-Nitrophenol	ND		1940	1570	81	1610	84	3	55-96/30
100-02-7	4-Nitrophenol	ND		3880	3120	80	3130	82	0	56-106/29
87-86-5	Pentachlorophenol	ND		3880	3160	82	3310	87	5	50-115/33
108-95-2	Phenol	ND		1940	1540	79	1560	82	1	55-99/28
95-95-4	2,4,5-Trichlorophenol	ND		1940	1620	84	1640	86	1	60-101/28
88-06-2	2,4,6-Trichlorophenol	ND		1940	1570	81	1610	84	3	60-100/27
83-32-9	Acenaphthene	ND		1940	1570	81	1600	84	2	59-97/29
208-96-8	Acenaphthylene	ND		1940	1530	79	1560	82	2	58-98/30
62-53-3	Aniline	ND		1940	1170	60	1300	68	11	38-92/38
120-12-7	Anthracene	ND		1940	1530	79	1570	82	3	61-104/29
56-55-3	Benzo(a)anthracene	ND		1940	1550	80	1570	82	1	60-106/31
50-32-8	Benzo(a)pyrene	ND		1940	1530	79	1570	82	3	59-102/32
205-99-2	Benzo(b)fluoranthene	ND		1940	1550	80	1610	84	4	60-107/31
191-24-2	Benzo(g,h,i)perylene	ND		1940	1460	75	1550	81	6	56-103/32
207-08-9	Benzo(k)fluoranthene	ND		1940	1650	85	1670	88	1	61-107/30
101-55-3	4-Bromophenyl phenyl ether	ND		1940	1500	77	1550	81	3	60-104/26
85-68-7	Butyl benzyl phthalate	ND		1940	1540	79	1600	84	4	57-110/28
100-51-6	Benzyl Alcohol	ND		1940	1510	78	1550	81	3	51-102/34
91-58-7	2-Chloronaphthalene	ND		1940	1470	76	1530	80	4	57-95/28
106-47-8	4-Chloroaniline	ND		1940	512	26	747	39	37*	19-85/34
86-74-8	Carbazole	ND		1940	1500	77	1550	81	3	60-106/30
218-01-9	Chrysene	ND		1940	1520	78	1570	82	3	60-107/31
111-91-1	bis(2-Chloroethoxy)methane	ND		1940	1490	77	1520	80	2	51-89/30
111-44-4	bis(2-Chloroethyl)ether	ND		1940	1400	72	1430	75	2	50-96/33
108-60-1	bis(2-Chloroisopropyl)ether	ND		1940	1420	73	1460	77	3	44-94/32
7005-72-3	4-Chlorophenyl phenyl ether	ND		1940	1500	77	1530	80	2	60-101/26
95-50-1	1,2-Dichlorobenzene	ND		1940	1400	72	1400	73	0	47-91/35

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F77187
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34708-MS	X014619.D	1	10/22/10	NAF	10/14/10	OP34708	SX730
OP34708-MSD	X014620.D	1	10/22/10	NAF	10/14/10	OP34708	SX730
F77187-3	X014618.D	1	10/22/10	NAF	10/14/10	OP34708	SX730

The QC reported here applies to the following samples: **Method:** SW846 8270C

F77187-1, F77187-2, F77187-3, F77187-4

CAS No.	Compound	F77187-3 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
122-66-7	1,2-Diphenylhydrazine	ND		1940	1510	78	1580	83	5	58-104/27
541-73-1	1,3-Dichlorobenzene	ND		1940	1340	69	1350	71	1	45-86/36
106-46-7	1,4-Dichlorobenzene	ND		1940	1380	71	1380	72	0	45-88/36
121-14-2	2,4-Dinitrotoluene	ND		1940	1460	75	1510	79	3	59-103/30
606-20-2	2,6-Dinitrotoluene	ND		1940	1550	80	1570	82	1	57-99/30
91-94-1	3,3'-Dichlorobenzidine	ND		1940	621	32*	760	40	20	34-88/31
53-70-3	Dibenzo(a,h)anthracene	ND		1940	1510	78	1510	79	0	57-105/29
132-64-9	Dibenzofuran	ND		1940	1490	77	1520	80	2	58-103/27
84-74-2	Di-n-butyl phthalate	ND		1940	1450	75	1510	79	4	59-105/27
117-84-0	Di-n-octyl phthalate	ND		1940	1630	84	1710	90	5	59-117/28
84-66-2	Diethyl phthalate	ND		1940	1530	79	1540	81	1	59-106/27
131-11-3	Dimethyl phthalate	ND		1940	1510	78	1560	82	3	60-100/26
117-81-7	bis(2-Ethylhexyl)phthalate	ND		1940	1520	78	1600	84	5	57-111/29
206-44-0	Fluoranthene	ND		1940	1510	78	1570	82	4	60-110/32
86-73-7	Fluorene	ND		1940	1540	79	1570	82	2	60-99/30
118-74-1	Hexachlorobenzene	ND		1940	1500	77	1540	81	3	58-103/27
87-68-3	Hexachlorobutadiene	ND		1940	1470	76	1500	79	2	49-95/33
77-47-4	Hexachlorocyclopentadiene	ND		1940	1530	79	1580	83	3	36-94/41
67-72-1	Hexachloroethane	ND		1940	1370	71	1410	74	3	44-89/38
193-39-5	Indeno(1,2,3-cd)pyrene	ND		1940	1480	76	1570	82	6	57-104/33
78-59-1	Isophorone	ND		1940	1230	63	1250	66	2	58-97/30
90-12-0	1-Methylnaphthalene	ND		1940	1490	77	1510	79	1	55-93/33
91-57-6	2-Methylnaphthalene	ND		1940	1420	73	1440	76	1	57-103/32
88-74-4	2-Nitroaniline	ND		1940	1610	83	1640	86	2	53-106/29
99-09-2	3-Nitroaniline	ND		1940	953	49	1030	54	8	29-85/31
100-01-6	4-Nitroaniline	ND		1940	1420	73	1480	78	4	49-104/31
91-20-3	Naphthalene	ND		1940	1480	76	1510	79	2	54-93/32
98-95-3	Nitrobenzene	ND		1940	1500	77	1530	80	2	53-92/32
62-75-9	N-Nitrosodimethylamine	ND		1940	1330	69	1350	71	1	37-88/34
621-64-7	N-Nitroso-di-n-propylamine	ND		1940	1480	76	1520	80	3	49-94/28
86-30-6	N-Nitrosodiphenylamine	ND		1940	1560	80	1620	85	4	53-107/28
85-01-8	Phenanthrene	ND		1940	1510	78	1570	82	4	61-103/32
129-00-0	Pyrene	ND		1940	1580	82	1630	86	3	58-109/33
110-86-1	Pyridine	ND		1940	1110	57	1100	58	1	30-68/38
120-82-1	1,2,4-Trichlorobenzene	ND		1940	1410	73	1430	75	1	52-93/32

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F77187
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34708-MS	X014619.D	1	10/22/10	NAF	10/14/10	OP34708	SX730
OP34708-MSD	X014620.D	1	10/22/10	NAF	10/14/10	OP34708	SX730
F77187-3	X014618.D	1	10/22/10	NAF	10/14/10	OP34708	SX730

The QC reported here applies to the following samples: **Method:** SW846 8270C

F77187-1, F77187-2, F77187-3, F77187-4

CAS No.	Surrogate Recoveries	MS	MSD	F77187-3	Limits
367-12-4	2-Fluorophenol	80%	84%	80%	40-102%
4165-62-2	Phenol-d5	83%	85%	85%	41-100%
118-79-6	2,4,6-Tribromophenol	81%	84%	77%	42-108%
4165-60-0	Nitrobenzene-d5	78%	81%	76%	40-105%
321-60-8	2-Fluorobiphenyl	78%	82%	74%	43-107%
1718-51-0	Terphenyl-d14	80%	84%	80%	45-119%

Southeast ACCUTEST LABORATORIES

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: F77187
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR2448-MB	QR056299.D	1	10/14/10	AH	n/a	n/a	GQR2448

The QC reported here applies to the following samples: **Method:** SW846 8015

F77187-1, F77187-2, F77187-3, F77187-4

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	5.0	2.5	mg/kg	

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	94%	56-136%
98-08-8	aaa-Trifluorotoluene	77%	61-121%

Blank Spike Summary

Job Number: F77187
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR2448-BS	QR056298.D	1	10/14/10	AH	n/a	n/a	GQR2448

The QC reported here applies to the following samples: **Method:** SW846 8015

F77187-1, F77187-2, F77187-3, F77187-4

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-GRO (C6-C10)	20	19.3	97	74-121

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	106%	56-136%
98-08-8	aaa-Trifluorotoluene	100%	61-121%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F77187
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F77189-1MS	QR056313.D	1	10/14/10	AH	n/a	n/a	GQR2448
F77189-1MSD	QR056314.D	1	10/14/10	AH	n/a	n/a	GQR2448
F77189-1	QR056304.D	1	10/14/10	AH	n/a	n/a	GQR2448

The QC reported here applies to the following samples: **Method:** SW846 8015

F77187-1, F77187-2, F77187-3, F77187-4

CAS No.	Compound	F77189-1 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	ND		29.6	28.3	96	29.0	98	2	74-121/17

CAS No.	Surrogate Recoveries	MS	MSD	F77189-1	Limits
460-00-4	4-Bromofluorobenzene	96%	103%	95%	56-136%
98-08-8	aaa-Trifluorotoluene	98%	103%	81%	61-121%

Southeast ACCUTEST LABORATORIES

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: F77187
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34709-MB	XX053696.D	1	10/20/10	NJ	10/14/10	OP34709	GXX801

The QC reported here applies to the following samples: **Method:** SW846 8082

F77187-1, F77187-2, F77187-3, F77187-4

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	17	8.3	ug/kg	
11104-28-2	Aroclor 1221	ND	17	13	ug/kg	
11141-16-5	Aroclor 1232	ND	17	13	ug/kg	
53469-21-9	Aroclor 1242	ND	17	8.3	ug/kg	
12672-29-6	Aroclor 1248	ND	17	8.3	ug/kg	
11097-69-1	Aroclor 1254	ND	17	8.3	ug/kg	
11096-82-5	Aroclor 1260	ND	17	8.3	ug/kg	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	95%	44-126%
2051-24-3	Decachlorobiphenyl	89%	39-157%

Method Blank Summary

Job Number: F77187
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34709-MB	XX053740.D	1	10/21/10	NJ	10/14/10	OP34709	GXX802

The QC reported here applies to the following samples: **Method:** SW846 8082

F77187-1, F77187-2, F77187-3, F77187-4

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	17	8.3	ug/kg	
11104-28-2	Aroclor 1221	ND	17	13	ug/kg	
11141-16-5	Aroclor 1232	ND	17	13	ug/kg	
53469-21-9	Aroclor 1242	ND	17	8.3	ug/kg	
12672-29-6	Aroclor 1248	ND	17	8.3	ug/kg	
11097-69-1	Aroclor 1254	ND	17	8.3	ug/kg	
11096-82-5	Aroclor 1260	ND	17	8.3	ug/kg	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	94%	44-126%
2051-24-3	Decachlorobiphenyl	90%	39-157%

Method Blank Summary

Job Number: F77187
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34693-MB	YY17987.D	1	10/15/10	MV	10/13/10	OP34693	GYY657

The QC reported here applies to the following samples: **Method:** SW846 8015 M

F77187-1, F77187-2, F77187-3, F77187-4

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C22)	ND	8.3	5.0	mg/kg	
	TPH (> C22-C36)	ND	8.3	5.0	mg/kg	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	91%	49-108%

Method Blank Summary

Job Number: F77187
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34693-MB	YY18030.D	1	10/18/10	MV	10/13/10	OP34693	GYY658

The QC reported here applies to the following samples: **Method:** SW846 8015 M

F77187-1, F77187-2, F77187-3, F77187-4

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C22)	ND	8.3	5.0	mg/kg	
	TPH (> C22-C36)	ND	8.3	5.0	mg/kg	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	81%	49-108%

Blank Spike Summary

Job Number: F77187
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34709-BS	XX053695.D	1	10/20/10	NJ	10/14/10	OP34709	GXX801

The QC reported here applies to the following samples: **Method:** SW846 8082

F77187-1, F77187-2, F77187-3, F77187-4

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
12674-11-2	Aroclor 1016	133	126	95	69-117
11096-82-5	Aroclor 1260	133	136	102	71-121

CAS No.	Surrogate Recoveries	BSP	Limits
877-09-8	Tetrachloro-m-xylene	92%	44-126%
2051-24-3	Decachlorobiphenyl	89%	39-157%

Blank Spike Summary

Job Number: F77187
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34693-BS	YY17986.D	1	10/15/10	MV	10/13/10	OP34693	GYY657

The QC reported here applies to the following samples: **Method:** SW846 8015 M

F77187-1, F77187-2, F77187-3, F77187-4

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH (C10-C22)	33.3	27.9	84	64-102
	TPH (> C22-C36)	33.3	30.8	92	52-131

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	86%	49-108%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F77187
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34709-MS	XX053702.D	1	10/20/10	NJ	10/14/10	OP34709	GXX801
OP34709-MSD	XX053703.D	1	10/20/10	NJ	10/14/10	OP34709	GXX801
F77189-1	XX053701.D	1	10/20/10	NJ	10/14/10	OP34709	GXX801

The QC reported here applies to the following samples: **Method:** SW846 8082

F77187-1, F77187-2, F77187-3, F77187-4

CAS No.	Compound	F77189-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
12674-11-2	Aroclor 1016	ND		181	166	92	166	92	0	69-117/26
11096-82-5	Aroclor 1260	ND		181	178	98	179	100	1	71-121/30

CAS No.	Surrogate Recoveries	MS	MSD	F77189-1	Limits
877-09-8	Tetrachloro-m-xylene	91%	91%	89%	44-126%
2051-24-3	Decachlorobiphenyl	90%	91%	87%	39-157%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F77187
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34693-MS	YY18031.D	1	10/18/10	MV	10/13/10	OP34693	GYY658
OP34693-MSD	YY18000.D	1	10/16/10	MV	10/13/10	OP34693	GYY657
F77189-1	YY17998.D	1	10/15/10	MV	10/13/10	OP34693	GYY657

The QC reported here applies to the following samples: **Method:** SW846 8015 M

F77187-1, F77187-2, F77187-3, F77187-4

CAS No.	Compound	F77189-1 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH (C10-C22)	ND		44.9	33.5	75	35.3	79	5	64-102/32
	TPH (> C22-C36)	ND		44.9	38.5	86	39.5	89	3	52-131/30

CAS No.	Surrogate Recoveries	MS	MSD	F77189-1	Limits
84-15-1	o-Terphenyl	78%	82%	70%	49-108%

Southeast ACCUTEST LABORATORIES

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: F77187
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19309
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date: 10/18/10

Metal	RL	IDL	MDL	MB raw	final
Aluminum	10	1	1	-0.030	<10
Antimony	1.0	.05	.1	-0.0050	<1.0
Arsenic	0.50	.05	.1	-0.13	<0.50
Barium	10	.05	.5	-0.24	<10
Beryllium	0.25	.005	.05	-0.010	<0.25
Cadmium	0.20	.005	.05	-0.025	<0.20
Calcium	250	2.5	5	4.2	<250
Chromium	0.50	.05	.05	0.29	<1.0
Cobalt	2.5	.05	.05	-0.020	<2.5
Copper	1.3	.05	.1	0.045	<1.3
Iron	15	1.5	1.5	10.0	* (a)
Lead	1.0	.05	.05	-0.085	<1.0
Magnesium	250	2.5	5	0.12	<250
Manganese	0.75	.05	.05	0.095	<0.75
Molybdenum	2.5	.05	.05		
Nickel	2.0	.05	.05	0.090	<2.0
Potassium	500	2.5	25	3.7	<500
Selenium	1.0	.1	.2	0.18	<1.0
Silver	0.50	.05	.05	-0.015	<0.50
Sodium	500	38	38	37.9	<500
Strontium	0.50	.05	.05		
Thallium	0.50	.05	.1	-0.020	<0.50
Tin	2.5	.05	.05		
Titanium	0.50	.055	.1		
Vanadium	2.5	.05	.05	-0.025	<2.5
Zinc	1.0	.05	.25	0.11	<1.0

Associated samples MP19309: F77187-1, F77187-2, F77187-3, F77187-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) All sample results >10x method blank concentration.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F77187
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19309
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date:			10/18/10					10/18/10	
Metal	F77187-1 Original	DUP	RPD	QC Limits	F77187-1 Original	MS	Spikelot MPFLICP1	% Rec	QC Limits
Aluminum	2330	2600	11.0	0-20	2330	4380	1460	140.2N(d	80-120
Antimony	0.0	0.0	NC	0-20	0.0	19.7	27.1	72.8N(d)	80-120
Arsenic	0.45	0.71	44.8 (a)	0-20	0.45	113	108	103.9	80-120
Barium	21.1	22.8	7.7	0-20	21.1	134	108	104.2	80-120
Beryllium	0.085	0.094	10.1	0-20	0.085	2.6	2.71	92.9	80-120
Cadmium	0.0	0.0	NC	0-20	0.0	2.3	2.71	84.9	80-120
Calcium	165000	170000	3.0	0-20	165000	174000	1350	664.8(e)	80-120
Chromium	3.0	2.9 (b)	3.4	0-20	3.0	15.2 (b)	10.8	112.6	80-120
Cobalt	0.99	1.1 (b)	10.5	0-20	0.99	28.3 (b)	27.1	100.9	80-120
Copper	2.6	2.4 (b)	8.0	0-20	2.6	16.9 (b)	13.5	105.6	80-120
Iron	2020	2200	8.5	0-20	2020	3650	1410	115.8	80-120
Lead	1.5	1.6 (b)	6.5	0-20	1.5	28.6 (b)	27.1	100.1	80-120
Magnesium	953	1270 (b)	12.6	0-20	953	2760 (b)	1350	121.1N(d	80-120
Manganese	41.2	57.7	33.4*(c)	0-20	41.2	88.9	27.1	176.2N(d	80-120
Molybdenum									
Nickel	2.0	2.3 (b)	14.0	0-20	2.0	30.4 (b)	27.1	104.9	80-120
Potassium	571	621	8.4	0-20	571	2150	1350	116.6	80-120
Selenium	0.0	0.0 (b)	NC	0-20	0.0	116 (b)	108	107.1	80-120
Silver	0.0	0.0	NC	0-20	0.0	2.8	2.71	103.4	80-120
Sodium	126	90.9	32.4 (a)	0-20	126	1410	1350	94.8	80-120
Strontium									
Thallium	0.0	0.0 (b)	NC	0-20	0.0	108 (b)	108	99.7	80-120
Tin									
Titanium									
Vanadium	5.3	5.8	9.0	0-20	5.3	32.4	27.1	100.1	80-120
Zinc	4.5	5.0 (b)	10.5	0-20	4.5	34.5 (b)	27.1	110.8	80-120

Associated samples MP19309: F77187-1, F77187-2, F77187-3, F77187-4

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
(a) RPD acceptable due to low duplicate and sample concentrations.
(b) Elevated reporting limit(s) due to matrix interference.
(c) High RPD due to possible sample nonhomogeneity.
(d) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
(e) 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: F77187
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19309 Methods: SW846 6010B
Matrix Type: SOLID Units: mg/kg

Prep Date: 10/18/10

Metal	F77187-1 Original	MSD	Spikelot MPFLICP1	% Rec	MSD RPD	QC Limit
Aluminum	2330	3730	1260	111.4	16.0	20
Antimony	0.0	16.7	23.3	71.8N(a)	16.5	20
Arsenic	0.45	97.1	93.1	103.9	15.1	20
Barium	21.1	109	93.1	94.5	20.6 (b)	20
Beryllium	0.085	2.1	2.33	86.6	21.3 (b)	20
Cadmium	0.0	1.9	2.33	81.7	19.0	20
Calcium	165000	165000	1160	0.0 (c)	5.3	20
Chromium	3.0	12.8 (d)	9.31	105.3	17.1	20
Cobalt	0.99	23.3 (d)	23.3	95.9	19.4	20
Copper	2.6	14.4 (d)	11.6	101.4	16.0	20
Iron	2020	2860	1210	69.4N(a)	24.3 (b)	20
Lead	1.5	23.9 (d)	23.3	96.3	17.9	20
Magnesium	953	2360 (d)	1160	106.6	15.6	20
Manganese	41.2	53.5	23.3	52.9N(a)	49.7 (b)	20
Molybdenum						
Nickel	2.0	25.2 (d)	23.3	99.7	18.7	20
Potassium	571	1840	1160	109.1	15.5	20
Selenium	0.0	95.9 (d)	93.1	103.1	19.0	20
Silver	0.0	2.3	2.33	98.9	19.6	20
Sodium	126	1200	1160	92.3	16.1	20
Strontium						
Thallium	0.0	88.7 (d)	93.1	95.3	19.6	20
Tin						
Titanium						
Vanadium	5.3	26.7	23.3	92.0	19.3	20
Zinc	4.5	28.4 (d)	23.3	102.7	19.4	20

Associated samples MP19309: F77187-1, F77187-2, F77187-3, F77187-4

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
(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
(b) High RPD due to possible sample nonhomogeneity.
(c) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
(d) Elevated reporting limit(s) due to matrix interference.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: F77187
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19309
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date: 10/18/10

Metal	BSP Result	Spikelot MPFLICP1	% Rec	QC Limits
Aluminum	1290	1350	95.6	80-120
Antimony	24.9	25	99.6	80-120
Arsenic	92.0	100	92.0	80-120
Barium	105	100	105.0	80-120
Beryllium	2.5	2.5	100.0	80-120
Cadmium	2.5	2.5	100.0	80-120
Calcium	1150	1250	92.0	80-120
Chromium	10.7	10	107.0	80-120
Cobalt	23.4	25	93.6	80-120
Copper	12.9	12.5	103.2	80-120
Iron	1200	1300	92.3	80-120
Lead	23.0	25	92.0	80-120
Magnesium	1210	1250	96.8	80-120
Manganese	27.5	25	110.0	80-120
Molybdenum				
Nickel	23.9	25	95.6	80-120
Potassium	1230	1250	98.4	80-120
Selenium	96.7	100	96.7	80-120
Silver	2.2	2.5	88.0	80-120
Sodium	1210	1250	96.8	80-120
Strontium				
Thallium	93.1	100	93.1	80-120
Tin				
Titanium				
Vanadium	27.2	25	108.8	80-120
Zinc	24.7	25	98.8	80-120

Associated samples MP19309: F77187-1, F77187-2, F77187-3, F77187-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: F77187
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19309
Matrix Type: SOLID

Methods: SW846 6010B
Units: ug/l

Prep Date: 10/18/10

Metal	F77187-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum	38200	36300	4.8	0-10
Antimony	0.00	0.00	NC	0-10
Arsenic	7.40	0.00	100.0(a)	0-10
Barium	345	334	3.3	0-10
Beryllium	1.40	0.00	100.0(a)	0-10
Cadmium	0.00	0.00	NC	0-10
Calcium	2710000	2780000	2.9	0-10
Chromium	48.7	74.5	53.0 (a)	0-10
Cobalt	16.2	0.00	100.0(a)	0-10
Copper	42.3	84.6	100.0(a)	0-10
Iron	33100	33100	0.2	0-10
Lead	25.0	29.2	16.8 (a)	0-10
Magnesium	15600	17000	7.3	0-10
Manganese	676	731	8.1	0-10
Molybdenum				
Nickel	33.4	33.2	0.6	0-10
Potassium	9360	9010	3.7	0-10
Selenium	0.00	0.00	NC	0-10
Silver	0.00	0.00	NC	0-10
Sodium	2060	0.00	100.0(a)	0-10
Strontium				
Thallium	0.00	0.00	NC	0-10
Tin				
Titanium				
Vanadium	86.3	90.0	4.3	0-10
Zinc	73.2	65.3	10.8 (a)	0-10

Associated samples MP19309: F77187-1, F77187-2, F77187-3, F77187-4

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).

POST DIGESTATE SPIKE SUMMARY

Login Number: F77187
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19309
Matrix Type: SOLID

Methods: SW846 6010B
Units: ug/l

Prep Date: 10/18/10

Metal	Sample ml	Final ml	F77187-1 Raw	Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum	9.8	10	38170	37406.6	39770	0.2	125	2500	94.5	-
Antimony	9.8	10	0	0	105.9	0.2	5	100	105.9	-
Arsenic										
Barium										
Beryllium										
Cadmium										
Calcium										
Chromium										
Cobalt										
Copper										
Iron										
Lead										
Magnesium	9.8	10	15620	17953.6	23400	0.2	250	5000	108.9	-
Manganese	9.8	10	676.3	662.774	709.6	0.2	2.5	50	93.7	-
Molybdenum										
Nickel										
Potassium										
Selenium										
Silver										
Sodium										
Strontium										
Thallium										
Tin										
Titanium										
Vanadium										
Zinc										

Associated samples MP19309: F77187-1, F77187-2, F77187-3, F77187-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(**) Corr. sample result = Raw * (sample volume / final volume)
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: F77187
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19319
Matrix Type: SOLID

Methods: SW846 7471A
Units: mg/kg

Prep Date: 10/19/10

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.083	.0059	.01	0.0029	<0.083

Associated samples MP19319: F77187-1, F77187-2, F77187-3, F77187-4

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: F77187
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19319
Matrix Type: SOLID

Methods: SW846 7471A
Units: mg/kg

Prep Date: 10/19/10 10/19/10

Metal	F77181-1 Original	DUP	RPD	QC Limits	F77181-1 Original	MS	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.059	0.054	8.8	0-20	0.059	0.29	0.227	101.7	80-120

Associated samples MP19319: F77187-1, F77187-2, F77187-3, F77187-4

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: F77187
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19319
Matrix Type: SOLID

Methods: SW846 7471A
Units: mg/kg

Prep Date: 10/19/10

Metal	F77181-1 Original	MSD	Spikelot HGFLWS1	% Rec	MSD RPD	QC Limit
Mercury	0.059	0.30	0.241	99.8	3.4	20

Associated samples MP19319: F77187-1, F77187-2, F77187-3, F77187-4

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: F77187
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19319
Matrix Type: SOLID

Methods: SW846 7471A
Units: mg/kg

Prep Date: 10/19/10

Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.25	0.25	100.0	80-120

Associated samples MP19319: F77187-1, F77187-2, F77187-3, F77187-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

9.2.3

9

SERIAL DILUTION RESULTS SUMMARY

Login Number: F77187
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19319
Matrix Type: SOLID

Methods: SW846 7471A
Units: ug/l

Prep Date: 10/19/10

Metal	F77181-1 Original	SDL 1:5	%DIF	QC Limits
Mercury	0.716	0.503	29.7 (a)	0-10

Associated samples MP19319: F77187-1, F77187-2, F77187-3, F77187-4

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).

Southeast ACCUTEST LABORATORIES

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F77187
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Bulk Density (Dry Basis)	GN41852		0.0	g/ml				
Fractional Organic Carbon	GN41795	0.01	0.0	%				
Specific Gravity	GN41850		1.0					

Associated Samples:
Batch GN41795: F77187-6, F77187-7
Batch GN41850: F77187-6, F77187-7
Batch GN41852: F77187-6, F77187-7
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F77187
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Bulk Density (Dry Basis)	GN41852	F77187-7	g/ml	1.5	1.5	3.3	0-20%
Fractional Organic Carbon	GN41795	F77187-7	%	8.7	9.0	2.8	0-40%
Solids, Percent	GN41769	F77189-1	%	73.5	72.2	1.8	0-10%
Solids, Percent	GN41773	F77181-1	%	97.1	97.1	0.0	0-10%
Specific Gravity	GN41850	F77187-7		1.9	1.9	0.0	0-20%

Associated Samples:
Batch GN41769: F77187-6, F77187-7
Batch GN41773: F77187-1, F77187-2, F77187-3, F77187-4
Batch GN41795: F77187-6, F77187-7
Batch GN41850: F77187-6, F77187-7
Batch GN41852: F77187-6, F77187-7
(*) Outside of QC limits

Southeast ACCUTEST LABORATORIES

11/01/10

Technical Report for

Nation View

Holloman AFB; SWMU 8, ACM Investigation

8080014.03.020

Accutest Job Number: F77189

Sampling Date: 10/09/10

Report to:

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Total number of pages in report: **110**

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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

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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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Sections: 1 2 3 4 5 6 7 8 9

Table of Contents

-1-

Section 1: Sample Summary **3**
Section 2: Case Narrative/Conformance Summary **4**
Section 3: Sample Results **8**
3.1: F77189-1: SWMU8-DP10-7 9
3.2: F77189-2: SWMU8-DP11-7 19
3.3: F77189-3: SWMU8-DP12-7 29
3.4: F77189-4: TRIP BLANK 39
Section 4: Misc. Forms **42**
4.1: Chain of Custody 43
Section 5: GC/MS Volatiles - QC Data Summaries **45**
5.1: Method Blank Summary 46
5.2: Blank Spike Summary 55
5.3: Matrix Spike/Matrix Spike Duplicate Summary 64
Section 6: GC/MS Semi-volatiles - QC Data Summaries **73**
6.1: Method Blank Summary 74
6.2: Blank Spike Summary 80
6.3: Matrix Spike/Matrix Spike Duplicate Summary 83
Section 7: GC Volatiles - QC Data Summaries **86**
7.1: Method Blank Summary 87
7.2: Blank Spike Summary 88
7.3: Matrix Spike/Matrix Spike Duplicate Summary 89
Section 8: GC Semi-volatiles - QC Data Summaries **90**
8.1: Method Blank Summary 91
8.2: Blank Spike Summary 95
8.3: Matrix Spike/Matrix Spike Duplicate Summary 97
Section 9: Metals Analysis - QC Data Summaries **99**
9.1: Prep QC MP19281: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn 100
9.2: Prep QC MP19341: Hg 106

Accutest Laboratories

Sample Summary

Nation View

Job No: F77189

Holloman AFB; SWMU 8, ACM Investigation
Project No: 8080014.03.020

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
F77189-1	10/09/10	12:15	JM	10/12/10	SO	Soil	SWMU8-DP10-7
F77189-1D	10/09/10	12:15	JM	10/12/10	SO	Soil Dup/MSD	SWMU8-DP10-7
F77189-1S	10/09/10	12:15	JM	10/12/10	SO	Soil Matrix Spike	SWMU8-DP10-7
F77189-2	10/09/10	15:00	JM	10/12/10	SO	Soil	SWMU8-DP11-7
F77189-3	10/09/10	16:00	JM	10/12/10	SO	Soil	SWMU8-DP12-7
F77189-4	10/09/10	00:00	JM	10/12/10	SO	Trip Blank Soil	TRIP BLANK

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Nation View **Job No:** F77189

Site: Holloman AFB; SWMU 8, ACM Investigation **Report Date** 10/28/2010 12:19:32

3 Samples, 1 Trip Blank were collected on 10/09/2010 and were received at Accutest on 10/12/2010 properly preserved, at 4.4 Deg. C and intact. These Samples received an Accutest job number of F77189. 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: SO **Batch ID:** VG2555

All samples were analyzed within the recommended method holding time.

Sample(s) F77189-4 have compound(s) reported with a “B” qualifier, indicating analyte is found in the associated method blank.

Blank Spike Recovery(s) for Acetone, Dichlorodifluoromethane, Methyl ethyl ketone are outside control limits.

F77189-4 for Methyl ethyl ketone: ICV and associated BS recovery outside control limits.

F77189-4 for Acetone: ICV and associated BS recovery outside control limits.

F77189-4 for Methyl chloride: CCV outside of control limits; results may be biased low.

F77189-4 for Chloroethane: CCV outside of control limits; results may be biased low.

F77189-4 for Methylene chloride: Suspected laboratory contaminant.

Matrix: SO **Batch ID:** VG2558

All samples were analyzed within the recommended method holding time.

Sample(s) F77247-6MS, F77247-6MSD were used as the QC samples indicated.

Sample(s) F77189-2 have compound(s) reported with a “B” qualifier, indicating analyte is found in the associated method blank.

BS/MS/MSD Recovery(s) for Acetone are outside control limits. Reported data considerd minimum value.

Matrix Spike Recovery(s) for 1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,2,3-Trichlorobenzene, 1,2,3-Trichloropropane, 1,2,4-Trichlorobenzene, 2,2-Dichloropropane, Acrolein, Bromobenzene, Bromodichloromethane, Bromoform, Carbon tetrachloride, Chloroethane, Dibromochloromethane, Hexachlorobutadiene, Hexane, Methyl ethyl ketone, n-Butylbenzene, Naphthalene, o-Chlorotoluene, p-Chlorotoluene, trans-1,3-Dichloropropene, Trichlorofluoromethane, Vinyl Acetate are outside control limits.

Matrix Spike Duplicate Recovery(s) for 1,1,1,2-Tetrachloroethane, 1,1,2,2-Tetrachloroethane, 1,2,3-Trichlorobenzene, 1,2,3-Trichloropropane, 1,2,4-Trichlorobenzene, 2-Hexanone, Acrolein, Acrylonitrile, Bromobenzene, Bromodichloromethane, Bromoform, Carbon tetrachloride, Chloroethane, cis-1,3-Dichloropropene, Dibromochloromethane, Hexachlorobutadiene, Methyl ethyl ketone, n-Butylbenzene, Naphthalene, o-Chlorotoluene, o-Dichlorobenzene, p-Chlorotoluene, Styrene, trans-1,3-Dichloropropene, Vinyl Acetate are outside control limits. Probable cause due to matrix interference. See Blank Spike for method performance in clean matrix.

RPD(s) for MSD for 1,2-Dibromo-3-chloropropane, 2,2-Dichloropropane, Acetone, Bromodichloromethane, Carbon disulfide, Methyl bromide, Methyl ethyl ketone are outside control limits for sample F77247-6MSD. Probable cause due to sample homogeneity.

F77189-2: Sample was prepared from a bulk container but was not preserved within 48 hours of sampling.

F77189-2 for Methylene chloride: Suspected laboratory contaminant.

F77189-2 for Acetone: ICV outside of control limits.

Matrix: SO **Batch ID:** VH2438

All samples were analyzed within the recommended method holding time.

Sample(s) F77181-5MS, F77181-5MSD were used as the QC samples indicated.

Volatiles by GCMS By Method SW846 8260B

Matrix: SO **Batch ID:** VH2438

Sample(s) F77189-3 have compound(s) reported with a “B” qualifier, indicating analyte is found in the associated method blank.

Blank Spike Recovery(s) for Acetone, Methyl ethyl ketone are outside control limits.

Matrix Spike Recovery(s) for 1,2,3-Trichlorobenzene, 1,2,3-Trichloropropane, 1,2,4-Trichlorobenzene, 1,2-Dibromo-3-chloropropane, 1,2-Dibromoethane, 1,3-Dichloropropane, 2-Hexanone, Acetone, Acrolein, Bromoform,

Dibromochloromethane, Hexachlorobutadiene, Methyl ethyl ketone, trans-1,3-Dichloropropene, Vinyl Acetate are outside control

Matrix Spike Duplicate Recovery(s) for 1,2,3-Trichlorobenzene, 1,2,3-Trichloropropane, 1,2,4-Trichlorobenzene, 1,2-Dibromo-3-chloropropane, 1,2-Dibromoethane, 1,2-Dichloroethane, 1,3-Dichloropropane, 2-Hexanone, 4-Methyl-2-pentanone, Acetone, Acrolein, Bromoform, Dibromochloromethane, Hexachlorobutadiene, Methyl ethyl ketone, n-Butylbenzene, o-Dichlorobenzene, sec-Butylbenzene, Styrene, trans-1,3-Dichloropropene, Vinyl Acetate are outside control limits. Probable cause due to matrix interference.

RPD(s) for MSD for 2-Chloroethyl vinyl ether, Methylene chloride are outside control limits for sample F77181-5MSD. Probable cause due to sample homogeneity.

F77189-3: Sample was received in a bulk container and preserved within 48 hours of sampling.

F77189-3 for Methylene chloride: Suspected laboratory contaminant.

Extractables by GCMS By Method SW846 8270C

Matrix: SO **Batch ID:** OP34713

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

Sample(s) F77189-1MS, F77189-1MSD were used as the QC samples indicated.

All method blanks for this batch meet method specific criteria.

MS and/or MSD Recovery(s) for Benzoic Acid, Isophorone are outside control limits. Probable cause due to matrix interference. See Blank Spike.

RPD(s) for MSD for 4-Chloroaniline are outside control limits for sample OP34713-MSD. Probable cause due to sample homogeneity.

Volatiles by GC By Method SW846 8015

Matrix: SO **Batch ID:** GQR2447

F77189-1: Confirmation run.

Matrix: SO **Batch ID:** GQR2448

All samples were analyzed within the recommended method holding time.

Sample(s) F77189-1MS, F77189-1MSD were used as the QC samples indicated.

All method blanks for this batch meet method specific criteria.

Extractables by GC By Method SW846 8015 M

Matrix: SO **Batch ID:** OP34693

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.

Sample(s) F77189-1MS, F77189-1MSD were used as the QC samples indicated.

Extractables by GC By Method SW846 8082

Matrix: SO **Batch ID:** OP34709

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

Sample(s) F77189-1MS, F77189-1MSD were used as the QC samples indicated.

All method blanks for this batch meet method specific criteria.

Metals By Method SW846 6010B

Matrix: SO **Batch ID:** MP19281

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.

Sample(s) F77189-1MS, F77189-1MSD, F77189-1PS, F77189-1SDL, F77189-1DUP were used as the QC samples for metals.

Matrix Spike Recovery(s) for Antimony, Cadmium, Iron, Magnesium, Manganese are outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

Matrix Spike Recovery(s) for Calcium are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

RPD(s) for Duplicate for Sodium are outside control limits for sample MP19281-D1. RPD acceptable due to low duplicate and sample concentrations.

RPD(s) for Serial Dilution for Antimony, Arsenic, Beryllium, Cadmium, Chromium, Copper, Lead, Sodium, Zinc, Iron,

Manganese, Vanadium are outside control limits for sample MP19281-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

F77189-3 for Lead: Elevated reporting limit(s) due to matrix interference.

F77189-3 for Cobalt: Elevated reporting limit(s) due to matrix interference.

F77189-2 for Thallium: Elevated reporting limit(s) due to matrix interference.

F77189-2 for Lead: Elevated reporting limit(s) due to matrix interference.

F77189-2 for Cobalt: Elevated reporting limit(s) due to matrix interference.

F77189-2 for Nickel: Elevated reporting limit(s) due to matrix interference.

F77189-3 for Nickel: Elevated reporting limit(s) due to matrix interference.

F77189-3 for Thallium: Elevated reporting limit(s) due to matrix interference.

F77189-1 for Thallium: Elevated reporting limit(s) due to matrix interference.

MP19281-PS1 for Iron: Spike recovery indicates matrix interference and/or outside control limits due to high level in sample relative to spike amount.

F77189-3 for Zinc: Elevated reporting limit(s) due to matrix interference.

MP19281-SD1 for Vanadium: Serial dilution indicates possible matrix interference.

MP19281-PS1 for Cadmium: Spike recovery indicates matrix interference and/or outside control limits due to high level in sample relative to spike amount.

MP19281-SD1 for Manganese: Serial dilution indicates possible matrix interference.

F77189-3 for Copper: Elevated reporting limit(s) due to matrix interference.

F77189-2 for Chromium: Elevated reporting limit(s) due to matrix interference.

F77189-1 for Chromium: Elevated reporting limit(s) due to matrix interference.

F77189-2 for Copper: Elevated reporting limit(s) due to matrix interference.

F77189-2 for Selenium: Elevated reporting limit(s) due to matrix interference.

F77189-2 for Zinc: Elevated reporting limit(s) due to matrix interference.

F77189-1 for Lead: Elevated reporting limit(s) due to matrix interference.

F77189-1 for Selenium: Elevated reporting limit(s) due to matrix interference.

F77189-1 for Zinc: Elevated reporting limit(s) due to matrix interference.

F77189-1 for Nickel: Elevated reporting limit(s) due to matrix interference.

F77189-3 for Chromium: Elevated reporting limit(s) due to matrix interference.

MP19281-PS1 for Magnesium: Spike recovery indicates matrix interference and/or outside control limits due to high level in sample relative to spike amount.

MP19281-MB1 for Iron: All sample results >10x method blank concentration.

MP19281-SD1 for Iron: Serial dilution indicates possible matrix interference.

F77189-3 for Selenium: Elevated reporting limit(s) due to matrix interference.

Metals By Method SW846 6010B

Matrix: SO **Batch ID:** MP19281

F77189-1 for Copper: Elevated reporting limit(s) due to matrix interference.

F77189-1 for Cobalt: Elevated reporting limit(s) due to matrix interference.

Metals By Method SW846 7471A

Matrix: SO **Batch ID:** MP19341

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.

Sample(s) F77189-1MS, F77189-1MSD, F77189-1SDL, F77189-1DUP were used as the QC samples for metals.

RPD(s) for Duplicate for Mercury are outside control limits for sample MP19341-D1. RPD acceptable due to low duplicate and sample concentrations.

Wet Chemistry By Method SM19 2540B M

Matrix: SO **Batch ID:** GN41769

Sample(s) F77189-1DUP were used as the QC samples for Solids, Percent.

Matrix: SO **Batch ID:** GN41773

Sample(s) F77181-1DUP were used as the QC samples for Solids, Percent.

Matrix: SO **Batch ID:** GN41774

Sample(s) F77197-11DUP were used as the QC samples for Solids, Percent.

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: October 28, 2010

Svetlana Izosimova, QA Officer (signature on file)

Southeast ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	SWMU8-DP10-7		
Lab Sample ID:	F77189-1	**Date Sampled:**	10/09/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8260B	**Percent Solids:**	73.5
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H065119.D	1	10/18/10	MM	n/a	n/a	VH2438
Run #2 [a]	G0067544.D	1	10/15/10	MM	n/a	n/a	VG2555

	Initial Weight
Run #1	5.98 g
Run #2	5.66 g

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	57	24	ug/kg	
107-02-8	Acrolein	ND	28	11	ug/kg	
107-13-1	Acrylonitrile	ND	28	11	ug/kg	
71-43-2	Benzene	6.0	5.7	1.1	ug/kg	
108-86-1	Bromobenzene	ND	5.7	1.4	ug/kg	
74-97-5	Bromochloromethane	ND	5.7	1.9	ug/kg	
75-27-4	Bromodichloromethane	ND	5.7	1.1	ug/kg	
75-25-2	Bromoform	ND	5.7	2.0	ug/kg	
104-51-8	n-Butylbenzene	ND	5.7	1.5	ug/kg	
135-98-8	sec-Butylbenzene	ND	5.7	1.4	ug/kg	
98-06-6	tert-Butylbenzene	ND	5.7	1.4	ug/kg	
108-90-7	Chlorobenzene	ND	5.7	1.1	ug/kg	
75-00-3	Chloroethane	ND	5.7	2.3	ug/kg	
67-66-3	Chloroform	ND	5.7	1.1	ug/kg	
95-49-8	o-Chlorotoluene	ND	5.7	1.5	ug/kg	
106-43-4	p-Chlorotoluene	ND	5.7	1.1	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	28	11	ug/kg	
75-15-0	Carbon disulfide	ND	5.7	2.7	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.7	1.8	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.7	1.7	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.7	2.6	ug/kg	
563-58-6	1,1-Dichloropropene	ND	5.7	1.1	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.7	2.8	ug/kg	
106-93-4	1,2-Dibromoethane	ND	5.7	1.1	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.7	1.4	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.7	1.1	ug/kg	
142-28-9	1,3-Dichloropropane	ND	5.7	1.9	ug/kg	
594-20-7	2,2-Dichloropropane	ND	5.7	1.3	ug/kg	
124-48-1	Dibromochloromethane	ND	5.7	1.9	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.7	2.4	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.7	1.1	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.7	1.1	ug/kg	

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:	SWMU8-DP10-7		
Lab Sample ID:	F77189-1	**Date Sampled:**	10/09/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8260B	**Percent Solids:**	73.5
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
541-73-1	m-Dichlorobenzene	ND	5.7	1.4	ug/kg	
95-50-1	o-Dichlorobenzene	ND	5.7	1.3	ug/kg	
106-46-7	p-Dichlorobenzene	ND	5.7	1.7	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.7	2.2	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.7	1.3	ug/kg	
100-41-4	Ethylbenzene	ND	5.7	1.3	ug/kg	
591-78-6	2-Hexanone	ND	28	13	ug/kg	
87-68-3	Hexachlorobutadiene	ND	5.7	2.6	ug/kg	
110-54-3	Hexane	ND	5.7	2.3	ug/kg	
98-82-8	Isopropylbenzene	ND	5.7	1.6	ug/kg	
99-87-6	p-Isopropyltoluene	ND	5.7	1.1	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	28	9.4	ug/kg	
74-83-9	Methyl bromide	ND	5.7	2.3	ug/kg	
74-87-3	Methyl chloride	ND	5.7	2.8	ug/kg	
74-95-3	Methylene bromide	ND	5.7	2.4	ug/kg	
75-09-2	Methylene chloride	ND	11	5.7	ug/kg	
78-93-3	Methyl ethyl ketone	ND	28	8.5	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.7	2.6	ug/kg	
91-20-3	Naphthalene	ND	5.7	2.3	ug/kg	
103-65-1	n-Propylbenzene	ND	5.7	1.7	ug/kg	
100-42-5	Styrene	ND	5.7	1.1	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.7	1.1	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.7	2.0	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.7	1.5	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.7	1.5	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.7	2.3	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	5.7	1.8	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.7	2.3	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	5.7	1.3	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.7	1.7	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.7	2.0	ug/kg	
108-88-3	Toluene	5.0	5.7	1.4	ug/kg	J
79-01-6	Trichloroethylene	ND	5.7	1.8	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.7	3.0	ug/kg	
75-01-4	Vinyl chloride	ND	5.7	2.3	ug/kg	
108-05-4	Vinyl Acetate	ND	28	17	ug/kg	
	m,p-Xylene	2.3	11	1.4	ug/kg	J
95-47-6	o-Xylene	ND	5.7	1.1	ug/kg	

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:	SWMU8-DP10-7		
Lab Sample ID:	F77189-1	**Date Sampled:**	10/09/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8260B	**Percent Solids:**	73.5
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%	112%	80-121%
2037-26-5	Toluene-D8	87%	98%	71-130%
460-00-4	4-Bromofluorobenzene	93%	97%	59-148%
17060-07-0	1,2-Dichloroethane-D4	105%	132% [b]	77-123%

(a) Confirmation run.
(b) 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:	SWMU8-DP10-7		
Lab Sample ID:	F77189-1	**Date Sampled:**	10/09/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8270C SW846 3550B	**Percent Solids:**	73.5
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L048643.D	1	10/25/10	NAF	10/15/10	OP34713	SL2491
Run #2							

	Initial Weight	Final Volume
Run #1	30.5 g	1.0 ml
Run #2		

ABN Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	1100	450	ug/kg	
95-57-8	2-Chlorophenol	ND	220	45	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	220	45	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	220	45	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	220	49	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	1100	450	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	450	45	ug/kg	
95-48-7	2-Methylphenol	ND	220	45	ug/kg	
	3&4-Methylphenol	ND	220	45	ug/kg	
88-75-5	2-Nitrophenol	ND	220	45	ug/kg	
100-02-7	4-Nitrophenol	ND	1100	450	ug/kg	
87-86-5	Pentachlorophenol	ND	1100	450	ug/kg	
108-95-2	Phenol	ND	220	45	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	220	45	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	220	45	ug/kg	
83-32-9	Acenaphthene	ND	220	45	ug/kg	
208-96-8	Acenaphthylene	ND	220	45	ug/kg	
62-53-3	Aniline	ND	220	49	ug/kg	
120-12-7	Anthracene	ND	220	45	ug/kg	
92-87-5	Benzidine	ND	2200	940	ug/kg	
56-55-3	Benzo(a)anthracene	ND	220	45	ug/kg	
50-32-8	Benzo(a)pyrene	ND	220	45	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	220	45	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	220	45	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	220	45	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	220	45	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	450	89	ug/kg	
100-51-6	Benzyl Alcohol	ND	220	45	ug/kg	
91-58-7	2-Chloronaphthalene	ND	220	45	ug/kg	
106-47-8	4-Chloroaniline	ND	220	45	ug/kg	
86-74-8	Carbazole	ND	220	45	ug/kg	
218-01-9	Chrysene	ND	220	45	ug/kg	

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:	SWMU8-DP10-7		
Lab Sample ID:	F77189-1	**Date Sampled:**	10/09/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8270C SW846 3550B	**Percent Solids:**	73.5
Project:	Holloman AFB; SWMU 8, ACM Investigation		

ABN Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
111-91-1	bis(2-Chloroethoxy)methane	ND	220	45	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	220	45	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	220	45	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	220	45	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	220	89	ug/kg	
122-66-7	1,2-Diphenylhydrazine	ND	220	45	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	220	89	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	220	89	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	220	45	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	220	45	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	450	89	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	220	45	ug/kg	
132-64-9	Dibenzofuran	ND	220	45	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	450	89	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	450	89	ug/kg	
84-66-2	Diethyl phthalate	ND	450	220	ug/kg	
131-11-3	Dimethyl phthalate	ND	450	89	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	450	220	ug/kg	
206-44-0	Fluoranthene	ND	220	45	ug/kg	
86-73-7	Fluorene	ND	220	45	ug/kg	
118-74-1	Hexachlorobenzene	ND	220	45	ug/kg	
87-68-3	Hexachlorobutadiene	ND	220	45	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	220	45	ug/kg	
67-72-1	Hexachloroethane	ND	220	110	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	220	45	ug/kg	
78-59-1	Isophorone	ND	220	45	ug/kg	
90-12-0	1-Methylnaphthalene	ND	220	45	ug/kg	
91-57-6	2-Methylnaphthalene	ND	220	45	ug/kg	
88-74-4	2-Nitroaniline	ND	450	89	ug/kg	
99-09-2	3-Nitroaniline	ND	450	89	ug/kg	
100-01-6	4-Nitroaniline	ND	450	89	ug/kg	
91-20-3	Naphthalene	ND	220	45	ug/kg	
98-95-3	Nitrobenzene	ND	220	45	ug/kg	
62-75-9	N-Nitrosodimethylamine	ND	450	89	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	220	45	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	220	45	ug/kg	
85-01-8	Phenanthrene	ND	220	45	ug/kg	
129-00-0	Pyrene	ND	220	45	ug/kg	
110-86-1	Pyridine	ND	450	110	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	220	45	ug/kg	

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:	SWMU8-DP10-7		
Lab Sample ID:	F77189-1	**Date Sampled:**	10/09/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8270C SW846 3550B	**Percent Solids:**	73.5
Project:	Holloman AFB; SWMU 8, ACM Investigation		

ABN Full List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	71%		40-102%
4165-62-2	Phenol-d5	74%		41-100%
118-79-6	2,4,6-Tribromophenol	76%		42-108%
4165-60-0	Nitrobenzene-d5	70%		40-105%
321-60-8	2-Fluorobiphenyl	73%		43-107%
1718-51-0	Terphenyl-d14	68%		45-119%

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:	SWMU8-DP10-7		
Lab Sample ID:	F77189-1	**Date Sampled:**	10/09/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8015	**Percent Solids:**	73.5
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR056304.D	1	10/14/10	AH	n/a	n/a	GQR2448
Run #2 [a]	QR056286.D	1	10/13/10	AH	n/a	n/a	GQR2447

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	6.09 g	5.0 ml	100 ul
Run #2	6.09 g	5.0 ml	10.0 ul

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	7.4	3.7	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	95%	92%	56-136%
98-08-8	aaa-Trifluorotoluene	81%	77%	61-121%

(a) 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:	SWMU8-DP10-7		
Lab Sample ID:	F77189-1	**Date Sampled:**	10/09/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8082 SW846 3550B	**Percent Solids:**	73.5
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XX053701.D	1	10/20/10	NJ	10/14/10	OP34709	GXX801
Run #2							

	Initial Weight	Final Volume
Run #1	30.2 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	23	11	ug/kg	
11104-28-2	Aroclor 1221	ND	23	18	ug/kg	
11141-16-5	Aroclor 1232	ND	23	18	ug/kg	
53469-21-9	Aroclor 1242	ND	23	11	ug/kg	
12672-29-6	Aroclor 1248	ND	23	11	ug/kg	
11097-69-1	Aroclor 1254	ND	23	11	ug/kg	
11096-82-5	Aroclor 1260	ND	23	11	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	89%		44-126%
2051-24-3	Decachlorobiphenyl	87%		39-157%

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:	SWMU8-DP10-7		
Lab Sample ID:	F77189-1	**Date Sampled:**	10/09/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8015 M SW846 3550B	**Percent Solids:**	73.5
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YY17998.D	1	10/15/10	MV	10/13/10	OP34693	GYY657
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C22)	ND	11	6.8	mg/kg	
	TPH (> C22-C36)	ND	11	6.8	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	70%		49-108%

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:	SWMU8-DP10-7		
Lab Sample ID:	F77189-1	**Date Sampled:**	10/09/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
		Percent Solids:	73.5
Project:	Holloman AFB; SWMU 8, ACM Investigation		

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	3000	10	1.0	mg/kg	1	10/13/10	10/13/10	RS	SW846 6010B [1]	SW846 3050B [4]
Antimony	0.35 J	1.0	0.10	mg/kg	1	10/13/10	10/13/10	RS	SW846 6010B [1]	SW846 3050B [4]
Arsenic	0.75	0.51	0.10	mg/kg	1	10/13/10	10/13/10	RS	SW846 6010B [1]	SW846 3050B [4]
Barium	25.5	10	0.51	mg/kg	1	10/13/10	10/13/10	RS	SW846 6010B [1]	SW846 3050B [4]
Beryllium	0.14 J	0.25	0.051	mg/kg	1	10/13/10	10/13/10	RS	SW846 6010B [1]	SW846 3050B [4]
Cadmium	0.32	0.20	0.051	mg/kg	1	10/13/10	10/13/10	RS	SW846 6010B [1]	SW846 3050B [4]
Calcium	175000	2500	51	mg/kg	10	10/13/10	10/14/10	RS	SW846 6010B [2]	SW846 3050B [4]
Chromium [a]	3.7 J	5.1	0.51	mg/kg	10	10/13/10	10/14/10	RS	SW846 6010B [2]	SW846 3050B [4]
Cobalt [a]	1.2 J	10	0.20	mg/kg	4	10/13/10	10/14/10	RS	SW846 6010B [2]	SW846 3050B [4]
Copper [a]	2.4 J	13	1.0	mg/kg	10	10/13/10	10/14/10	RS	SW846 6010B [2]	SW846 3050B [4]
Iron	2510	15	1.5	mg/kg	1	10/13/10	10/13/10	RS	SW846 6010B [1]	SW846 3050B [4]
Lead [a]	1.4 J	4.1	0.20	mg/kg	4	10/13/10	10/14/10	RS	SW846 6010B [2]	SW846 3050B [4]
Magnesium	1540	250	5.1	mg/kg	1	10/13/10	10/13/10	RS	SW846 6010B [1]	SW846 3050B [4]
Manganese	31.8	0.76	0.051	mg/kg	1	10/13/10	10/13/10	RS	SW846 6010B [1]	SW846 3050B [4]
Mercury	0.013 U	0.11	0.013	mg/kg	1	10/22/10	10/22/10	LM	SW846 7471A [3]	SW846 7471A [5]
Nickel [a]	2.2 J	8.1	0.20	mg/kg	4	10/13/10	10/14/10	RS	SW846 6010B [2]	SW846 3050B [4]
Potassium	704	510	25	mg/kg	1	10/13/10	10/13/10	RS	SW846 6010B [1]	SW846 3050B [4]
Selenium [a]	2.0 U	10	2.0	mg/kg	10	10/13/10	10/14/10	RS	SW846 6010B [2]	SW846 3050B [4]
Silver	0.051 U	0.51	0.051	mg/kg	1	10/13/10	10/13/10	RS	SW846 6010B [1]	SW846 3050B [4]
Sodium	125 J	510	38	mg/kg	1	10/13/10	10/13/10	RS	SW846 6010B [1]	SW846 3050B [4]
Thallium [a]	0.41 U	2.0	0.41	mg/kg	4	10/13/10	10/14/10	RS	SW846 6010B [2]	SW846 3050B [4]
Vanadium	7.5	2.5	0.051	mg/kg	1	10/13/10	10/13/10	RS	SW846 6010B [1]	SW846 3050B [4]
Zinc [a]	6.5 J	10	2.5	mg/kg	10	10/13/10	10/14/10	RS	SW846 6010B [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA8441
(2) Instrument QC Batch: MA8443
(3) Instrument QC Batch: MA8460
(4) Prep QC Batch: MP19281
(5) Prep QC Batch: MP19341

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

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

Report of Analysis

Client Sample ID:	SWMU8-DP11-7		
Lab Sample ID:	F77189-2	**Date Sampled:**	10/09/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8260B	**Percent Solids:**	73.8
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	G0067666.D	1	10/20/10	MM	n/a	n/a	VG2558
Run #2							

	Initial Weight
Run #1	4.77 g
Run #2	

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone [b]	ND	71	30	ug/kg	
107-02-8	Acrolein	ND	36	14	ug/kg	
107-13-1	Acrylonitrile	ND	36	14	ug/kg	
71-43-2	Benzene	ND	7.1	1.4	ug/kg	
108-86-1	Bromobenzene	ND	7.1	1.7	ug/kg	
74-97-5	Bromochloromethane	ND	7.1	2.4	ug/kg	
75-27-4	Bromodichloromethane	ND	7.1	1.4	ug/kg	
75-25-2	Bromoform	ND	7.1	2.6	ug/kg	
104-51-8	n-Butylbenzene	ND	7.1	1.8	ug/kg	
135-98-8	sec-Butylbenzene	ND	7.1	1.7	ug/kg	
98-06-6	tert-Butylbenzene	ND	7.1	1.7	ug/kg	
108-90-7	Chlorobenzene	ND	7.1	1.4	ug/kg	
75-00-3	Chloroethane	ND	7.1	2.8	ug/kg	
67-66-3	Chloroform	ND	7.1	1.4	ug/kg	
95-49-8	o-Chlorotoluene	ND	7.1	1.8	ug/kg	
106-43-4	p-Chlorotoluene	ND	7.1	1.4	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	36	14	ug/kg	
75-15-0	Carbon disulfide	ND	7.1	3.4	ug/kg	
56-23-5	Carbon tetrachloride	ND	7.1	2.3	ug/kg	
75-34-3	1,1-Dichloroethane	ND	7.1	2.1	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	7.1	3.3	ug/kg	
563-58-6	1,1-Dichloropropene	ND	7.1	1.4	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	7.1	3.6	ug/kg	
106-93-4	1,2-Dibromoethane	ND	7.1	1.4	ug/kg	
107-06-2	1,2-Dichloroethane	ND	7.1	1.7	ug/kg	
78-87-5	1,2-Dichloropropane	ND	7.1	1.4	ug/kg	
142-28-9	1,3-Dichloropropane	ND	7.1	2.4	ug/kg	
594-20-7	2,2-Dichloropropane	ND	7.1	1.6	ug/kg	
124-48-1	Dibromochloromethane	ND	7.1	2.4	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	7.1	3.0	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	7.1	1.4	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	7.1	1.4	ug/kg	

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:	SWMU8-DP11-7		
Lab Sample ID:	F77189-2	**Date Sampled:**	10/09/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8260B	**Percent Solids:**	73.8
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
541-73-1	m-Dichlorobenzene	ND	7.1	1.7	ug/kg	
95-50-1	o-Dichlorobenzene	ND	7.1	1.6	ug/kg	
106-46-7	p-Dichlorobenzene	ND	7.1	2.1	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	7.1	2.7	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	7.1	1.6	ug/kg	
100-41-4	Ethylbenzene	ND	7.1	1.6	ug/kg	
591-78-6	2-Hexanone	ND	36	17	ug/kg	
87-68-3	Hexachlorobutadiene	ND	7.1	3.3	ug/kg	
110-54-3	Hexane	ND	7.1	2.8	ug/kg	
98-82-8	Isopropylbenzene	ND	7.1	2.0	ug/kg	
99-87-6	p-Isopropyltoluene	ND	7.1	1.4	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	36	12	ug/kg	
74-83-9	Methyl bromide	ND	7.1	2.8	ug/kg	
74-87-3	Methyl chloride	ND	7.1	3.6	ug/kg	
74-95-3	Methylene bromide	ND	7.1	3.0	ug/kg	
75-09-2	Methylene chloride [c]	13.7	14	7.1	ug/kg	JB
78-93-3	Methyl ethyl ketone	ND	36	11	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	7.1	3.3	ug/kg	
91-20-3	Naphthalene	ND	7.1	2.8	ug/kg	
103-65-1	n-Propylbenzene	ND	7.1	2.1	ug/kg	
100-42-5	Styrene	ND	7.1	1.4	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	7.1	1.4	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	7.1	2.6	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	7.1	1.8	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	7.1	1.8	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	7.1	2.8	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	7.1	2.3	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	7.1	2.8	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	7.1	1.6	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	7.1	2.1	ug/kg	
127-18-4	Tetrachloroethylene	ND	7.1	2.6	ug/kg	
108-88-3	Toluene	ND	7.1	1.7	ug/kg	
79-01-6	Trichloroethylene	ND	7.1	2.3	ug/kg	
75-69-4	Trichlorofluoromethane	ND	7.1	3.7	ug/kg	
75-01-4	Vinyl chloride	ND	7.1	2.8	ug/kg	
108-05-4	Vinyl Acetate	ND	36	21	ug/kg	
	m,p-Xylene	ND	14	1.7	ug/kg	
95-47-6	o-Xylene	ND	7.1	1.4	ug/kg	

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:	SWMU8-DP11-7		
Lab Sample ID:	F77189-2	**Date Sampled:**	10/09/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8260B	**Percent Solids:**	73.8
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		80-121%
2037-26-5	Toluene-D8	97%		71-130%
460-00-4	4-Bromofluorobenzene	101%		59-148%
17060-07-0	1,2-Dichloroethane-D4	111%		77-123%

(a) Sample was prepared from a bulk container but was not preserved within 48 hours of sampling.
(b) ICV outside of control limits.
(c) 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:	SWMU8-DP11-7		
Lab Sample ID:	F77189-2	**Date Sampled:**	10/09/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8270C SW846 3550B	**Percent Solids:**	73.8
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L048646.D	1	10/25/10	NAF	10/15/10	OP34713	SL2491
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	1.0 ml
Run #2		

ABN Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	1100	450	ug/kg	
95-57-8	2-Chlorophenol	ND	230	45	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	230	45	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	230	45	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	230	50	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	1100	450	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	450	45	ug/kg	
95-48-7	2-Methylphenol	ND	230	45	ug/kg	
	3&4-Methylphenol	ND	230	45	ug/kg	
88-75-5	2-Nitrophenol	ND	230	45	ug/kg	
100-02-7	4-Nitrophenol	ND	1100	450	ug/kg	
87-86-5	Pentachlorophenol	ND	1100	450	ug/kg	
108-95-2	Phenol	ND	230	45	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	230	45	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	230	45	ug/kg	
83-32-9	Acenaphthene	ND	230	45	ug/kg	
208-96-8	Acenaphthylene	ND	230	45	ug/kg	
62-53-3	Aniline	ND	230	50	ug/kg	
120-12-7	Anthracene	ND	230	45	ug/kg	
92-87-5	Benzidine	ND	2300	950	ug/kg	
56-55-3	Benzo(a)anthracene	ND	230	45	ug/kg	
50-32-8	Benzo(a)pyrene	ND	230	45	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	230	45	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	230	45	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	230	45	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	230	45	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	450	90	ug/kg	
100-51-6	Benzyl Alcohol	ND	230	45	ug/kg	
91-58-7	2-Chloronaphthalene	ND	230	45	ug/kg	
106-47-8	4-Chloroaniline	ND	230	45	ug/kg	
86-74-8	Carbazole	ND	230	45	ug/kg	
218-01-9	Chrysene	ND	230	45	ug/kg	

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:	SWMU8-DP11-7		
Lab Sample ID:	F77189-2	**Date Sampled:**	10/09/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8270C SW846 3550B	**Percent Solids:**	73.8
Project:	Holloman AFB; SWMU 8, ACM Investigation		

ABN Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
111-91-1	bis(2-Chloroethoxy)methane	ND	230	45	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	230	45	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	230	45	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	230	45	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	230	90	ug/kg	
122-66-7	1,2-Diphenylhydrazine	ND	230	45	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	230	90	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	230	90	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	230	45	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	230	45	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	450	90	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	230	45	ug/kg	
132-64-9	Dibenzofuran	ND	230	45	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	450	90	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	450	90	ug/kg	
84-66-2	Diethyl phthalate	ND	450	230	ug/kg	
131-11-3	Dimethyl phthalate	ND	450	90	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	450	230	ug/kg	
206-44-0	Fluoranthene	ND	230	45	ug/kg	
86-73-7	Fluorene	ND	230	45	ug/kg	
118-74-1	Hexachlorobenzene	ND	230	45	ug/kg	
87-68-3	Hexachlorobutadiene	ND	230	45	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	230	45	ug/kg	
67-72-1	Hexachloroethane	ND	230	110	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	230	45	ug/kg	
78-59-1	Isophorone	ND	230	45	ug/kg	
90-12-0	1-Methylnaphthalene	ND	230	45	ug/kg	
91-57-6	2-Methylnaphthalene	ND	230	45	ug/kg	
88-74-4	2-Nitroaniline	ND	450	90	ug/kg	
99-09-2	3-Nitroaniline	ND	450	90	ug/kg	
100-01-6	4-Nitroaniline	ND	450	90	ug/kg	
91-20-3	Naphthalene	ND	230	45	ug/kg	
98-95-3	Nitrobenzene	ND	230	45	ug/kg	
62-75-9	N-Nitrosodimethylamine	ND	450	90	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	230	45	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	230	45	ug/kg	
85-01-8	Phenanthrene	ND	230	45	ug/kg	
129-00-0	Pyrene	ND	230	45	ug/kg	
110-86-1	Pyridine	ND	450	110	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	230	45	ug/kg	

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:	SWMU8-DP11-7		
Lab Sample ID:	F77189-2	**Date Sampled:**	10/09/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8270C SW846 3550B	**Percent Solids:**	73.8
Project:	Holloman AFB; SWMU 8, ACM Investigation		

ABN Full List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	70%		40-102%
4165-62-2	Phenol-d5	73%		41-100%
118-79-6	2,4,6-Tribromophenol	75%		42-108%
4165-60-0	Nitrobenzene-d5	70%		40-105%
321-60-8	2-Fluorobiphenyl	73%		43-107%
1718-51-0	Terphenyl-d14	70%		45-119%

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:	SWMU8-DP11-7		
Lab Sample ID:	F77189-2	**Date Sampled:**	10/09/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8015	**Percent Solids:**	73.8
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR056305.D	1	10/14/10	AH	n/a	n/a	GQR2448
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.15 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	8.4	4.2	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	99%		56-136%
98-08-8	aaa-Trifluorotoluene	81%		61-121%

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:	SWMU8-DP11-7		
Lab Sample ID:	F77189-2	**Date Sampled:**	10/09/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8082 SW846 3550B	**Percent Solids:**	73.8
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XX053704.D	1	10/20/10	NJ	10/14/10	OP34709	GXX801
Run #2							

	Initial Weight	Final Volume
Run #1	30.5 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	22	11	ug/kg	
11104-28-2	Aroclor 1221	ND	22	18	ug/kg	
11141-16-5	Aroclor 1232	ND	22	18	ug/kg	
53469-21-9	Aroclor 1242	ND	22	11	ug/kg	
12672-29-6	Aroclor 1248	ND	22	11	ug/kg	
11097-69-1	Aroclor 1254	ND	22	11	ug/kg	
11096-82-5	Aroclor 1260	ND	22	11	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	88%		44-126%
2051-24-3	Decachlorobiphenyl	86%		39-157%

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:	SWMU8-DP11-7		
Lab Sample ID:	F77189-2	**Date Sampled:**	10/09/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8015 M SW846 3550B	**Percent Solids:**	73.8
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YY18001.D	1	10/16/10	MV	10/13/10	OP34693	GYY657
Run #2							

	Initial Weight	Final Volume
Run #1	30.5 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C22)	ND	11	6.7	mg/kg	
	TPH (> C22-C36)	ND	11	6.7	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	81%		49-108%

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:	SWMU8-DP11-7		
Lab Sample ID:	F77189-2	**Date Sampled:**	10/09/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
		Percent Solids:	73.8
Project:	Holloman AFB; SWMU 8, ACM Investigation		

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	2850	8.7	0.87	mg/kg	1	10/13/10	10/13/10	RS	SW846 6010B [1]	SW846 3050B [4]
Antimony	0.19 J	0.87	0.087	mg/kg	1	10/13/10	10/13/10	RS	SW846 6010B [1]	SW846 3050B [4]
Arsenic	0.83	0.43	0.087	mg/kg	1	10/13/10	10/13/10	RS	SW846 6010B [1]	SW846 3050B [4]
Barium	25.1	8.7	0.43	mg/kg	1	10/13/10	10/13/10	RS	SW846 6010B [1]	SW846 3050B [4]
Beryllium	0.13 J	0.22	0.043	mg/kg	1	10/13/10	10/13/10	RS	SW846 6010B [1]	SW846 3050B [4]
Cadmium	0.32	0.17	0.043	mg/kg	1	10/13/10	10/13/10	RS	SW846 6010B [1]	SW846 3050B [4]
Calcium	165000	2200	43	mg/kg	10	10/13/10	10/14/10	RS	SW846 6010B [2]	SW846 3050B [4]
Chromium [a]	3.2 J	4.3	0.43	mg/kg	10	10/13/10	10/14/10	RS	SW846 6010B [2]	SW846 3050B [4]
Cobalt [a]	1.2 J	8.7	0.17	mg/kg	4	10/13/10	10/14/10	RS	SW846 6010B [2]	SW846 3050B [4]
Copper [a]	2.7 J	11	0.87	mg/kg	10	10/13/10	10/14/10	RS	SW846 6010B [2]	SW846 3050B [4]
Iron	2350	13	1.3	mg/kg	1	10/13/10	10/13/10	RS	SW846 6010B [1]	SW846 3050B [4]
Lead [a]	1.6 J	3.5	0.17	mg/kg	4	10/13/10	10/14/10	RS	SW846 6010B [2]	SW846 3050B [4]
Magnesium	1640	220	4.3	mg/kg	1	10/13/10	10/13/10	RS	SW846 6010B [1]	SW846 3050B [4]
Manganese	101	0.65	0.043	mg/kg	1	10/13/10	10/13/10	RS	SW846 6010B [1]	SW846 3050B [4]
Mercury	0.013 U	0.10	0.013	mg/kg	1	10/22/10	10/22/10	LM	SW846 7471A [3]	SW846 7471A [5]
Nickel [a]	2.5 J	6.9	0.17	mg/kg	4	10/13/10	10/14/10	RS	SW846 6010B [2]	SW846 3050B [4]
Potassium	687	430	22	mg/kg	1	10/13/10	10/13/10	RS	SW846 6010B [1]	SW846 3050B [4]
Selenium [a]	1.7 U	8.7	1.7	mg/kg	10	10/13/10	10/14/10	RS	SW846 6010B [2]	SW846 3050B [4]
Silver	0.043 U	0.43	0.043	mg/kg	1	10/13/10	10/13/10	RS	SW846 6010B [1]	SW846 3050B [4]
Sodium	79.8 J	430	33	mg/kg	1	10/13/10	10/13/10	RS	SW846 6010B [1]	SW846 3050B [4]
Thallium [a]	0.35 U	1.7	0.35	mg/kg	4	10/13/10	10/14/10	RS	SW846 6010B [2]	SW846 3050B [4]
Vanadium	6.2	2.2	0.043	mg/kg	1	10/13/10	10/13/10	RS	SW846 6010B [1]	SW846 3050B [4]
Zinc [a]	6.1 J	8.7	2.2	mg/kg	10	10/13/10	10/14/10	RS	SW846 6010B [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA8441
(2) Instrument QC Batch: MA8443
(3) Instrument QC Batch: MA8460
(4) Prep QC Batch: MP19281
(5) Prep QC Batch: MP19341

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

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

Report of Analysis

Client Sample ID:	SWMU8-DP12-7		
Lab Sample ID:	F77189-3	**Date Sampled:**	10/09/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8260B	**Percent Solids:**	79.2
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	H065121.D	1	10/18/10	MM	n/a	n/a	VH2438
Run #2							

	Initial Weight
Run #1	4.54 g
Run #2	

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	70	29	ug/kg	
107-02-8	Acrolein	ND	35	14	ug/kg	
107-13-1	Acrylonitrile	ND	35	14	ug/kg	
71-43-2	Benzene	ND	7.0	1.4	ug/kg	
108-86-1	Bromobenzene	ND	7.0	1.7	ug/kg	
74-97-5	Bromochloromethane	ND	7.0	2.4	ug/kg	
75-27-4	Bromodichloromethane	ND	7.0	1.4	ug/kg	
75-25-2	Bromoform	ND	7.0	2.5	ug/kg	
104-51-8	n-Butylbenzene	ND	7.0	1.8	ug/kg	
135-98-8	sec-Butylbenzene	ND	7.0	1.7	ug/kg	
98-06-6	tert-Butylbenzene	ND	7.0	1.7	ug/kg	
108-90-7	Chlorobenzene	ND	7.0	1.4	ug/kg	
75-00-3	Chloroethane	ND	7.0	2.8	ug/kg	
67-66-3	Chloroform	ND	7.0	1.4	ug/kg	
95-49-8	o-Chlorotoluene	ND	7.0	1.8	ug/kg	
106-43-4	p-Chlorotoluene	ND	7.0	1.4	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	35	14	ug/kg	
75-15-0	Carbon disulfide	ND	7.0	3.3	ug/kg	
56-23-5	Carbon tetrachloride	ND	7.0	2.2	ug/kg	
75-34-3	1,1-Dichloroethane	ND	7.0	2.1	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	7.0	3.2	ug/kg	
563-58-6	1,1-Dichloropropene	ND	7.0	1.4	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	7.0	3.5	ug/kg	
106-93-4	1,2-Dibromoethane	ND	7.0	1.4	ug/kg	
107-06-2	1,2-Dichloroethane	ND	7.0	1.7	ug/kg	
78-87-5	1,2-Dichloropropane	ND	7.0	1.4	ug/kg	
142-28-9	1,3-Dichloropropane	ND	7.0	2.4	ug/kg	
594-20-7	2,2-Dichloropropane	ND	7.0	1.5	ug/kg	
124-48-1	Dibromochloromethane	ND	7.0	2.4	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	7.0	2.9	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	7.0	1.4	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	7.0	1.4	ug/kg	

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:	SWMU8-DP12-7		
Lab Sample ID:	F77189-3	**Date Sampled:**	10/09/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8260B	**Percent Solids:**	79.2
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
541-73-1	m-Dichlorobenzene	ND	7.0	1.7	ug/kg	
95-50-1	o-Dichlorobenzene	ND	7.0	1.5	ug/kg	
106-46-7	p-Dichlorobenzene	ND	7.0	2.1	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	7.0	2.6	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	7.0	1.5	ug/kg	
100-41-4	Ethylbenzene	ND	7.0	1.5	ug/kg	
591-78-6	2-Hexanone	ND	35	16	ug/kg	
87-68-3	Hexachlorobutadiene	ND	7.0	3.2	ug/kg	
110-54-3	Hexane	ND	7.0	2.8	ug/kg	
98-82-8	Isopropylbenzene	ND	7.0	1.9	ug/kg	
99-87-6	p-Isopropyltoluene	ND	7.0	1.4	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	35	12	ug/kg	
74-83-9	Methyl bromide	ND	7.0	2.8	ug/kg	
74-87-3	Methyl chloride	ND	7.0	3.5	ug/kg	
74-95-3	Methylene bromide	ND	7.0	2.9	ug/kg	
75-09-2	Methylene chloride [b]	17.7	14	7.0	ug/kg	B
78-93-3	Methyl ethyl ketone	ND	35	10	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	7.0	3.2	ug/kg	
91-20-3	Naphthalene	ND	7.0	2.8	ug/kg	
103-65-1	n-Propylbenzene	ND	7.0	2.1	ug/kg	
100-42-5	Styrene	ND	7.0	1.4	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	7.0	1.4	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	7.0	2.5	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	7.0	1.8	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	7.0	1.8	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	7.0	2.8	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	7.0	2.2	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	7.0	2.8	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	7.0	1.5	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	7.0	2.1	ug/kg	
127-18-4	Tetrachloroethylene	ND	7.0	2.5	ug/kg	
108-88-3	Toluene	ND	7.0	1.7	ug/kg	
79-01-6	Trichloroethylene	ND	7.0	2.2	ug/kg	
75-69-4	Trichlorofluoromethane	ND	7.0	3.6	ug/kg	
75-01-4	Vinyl chloride	ND	7.0	2.8	ug/kg	
108-05-4	Vinyl Acetate	ND	35	21	ug/kg	
	m,p-Xylene	ND	14	1.7	ug/kg	
95-47-6	o-Xylene	ND	7.0	1.4	ug/kg	

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:	SWMU8-DP12-7		
Lab Sample ID:	F77189-3	**Date Sampled:**	10/09/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8260B	**Percent Solids:**	79.2
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		80-121%
2037-26-5	Toluene-D8	87%		71-130%
460-00-4	4-Bromofluorobenzene	97%		59-148%
17060-07-0	1,2-Dichloroethane-D4	100%		77-123%

(a) Sample was received in a bulk container and preserved within 48 hours of sampling.
(b) 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:	SWMU8-DP12-7		
Lab Sample ID:	F77189-3	**Date Sampled:**	10/09/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8270C SW846 3550B	**Percent Solids:**	79.2
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L048647.D	1	10/25/10	NAF	10/15/10	OP34713	SL2491
Run #2							

	Initial Weight	Final Volume
Run #1	30.3 g	1.0 ml
Run #2		

ABN Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	1000	420	ug/kg	
95-57-8	2-Chlorophenol	ND	210	42	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	210	42	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	210	42	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	210	46	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	1000	420	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	420	42	ug/kg	
95-48-7	2-Methylphenol	ND	210	42	ug/kg	
	3&4-Methylphenol	ND	210	42	ug/kg	
88-75-5	2-Nitrophenol	ND	210	42	ug/kg	
100-02-7	4-Nitrophenol	ND	1000	420	ug/kg	
87-86-5	Pentachlorophenol	ND	1000	420	ug/kg	
108-95-2	Phenol	ND	210	42	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	210	42	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	210	42	ug/kg	
83-32-9	Acenaphthene	ND	210	42	ug/kg	
208-96-8	Acenaphthylene	ND	210	42	ug/kg	
62-53-3	Aniline	ND	210	46	ug/kg	
120-12-7	Anthracene	ND	210	42	ug/kg	
92-87-5	Benzidine	ND	2100	880	ug/kg	
56-55-3	Benzo(a)anthracene	ND	210	42	ug/kg	
50-32-8	Benzo(a)pyrene	ND	210	42	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	210	42	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	210	42	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	210	42	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	210	42	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	420	83	ug/kg	
100-51-6	Benzyl Alcohol	ND	210	42	ug/kg	
91-58-7	2-Chloronaphthalene	ND	210	42	ug/kg	
106-47-8	4-Chloroaniline	ND	210	42	ug/kg	
86-74-8	Carbazole	ND	210	42	ug/kg	
218-01-9	Chrysene	ND	210	42	ug/kg	

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:	SWMU8-DP12-7		
Lab Sample ID:	F77189-3	**Date Sampled:**	10/09/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8270C SW846 3550B	**Percent Solids:**	79.2
Project:	Holloman AFB; SWMU 8, ACM Investigation		

ABN Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
111-91-1	bis(2-Chloroethoxy)methane	ND	210	42	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	210	42	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	210	42	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	210	42	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	210	83	ug/kg	
122-66-7	1,2-Diphenylhydrazine	ND	210	42	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	210	83	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	210	83	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	210	42	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	210	42	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	420	83	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	210	42	ug/kg	
132-64-9	Dibenzofuran	ND	210	42	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	420	83	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	420	83	ug/kg	
84-66-2	Diethyl phthalate	ND	420	210	ug/kg	
131-11-3	Dimethyl phthalate	ND	420	83	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	420	210	ug/kg	
206-44-0	Fluoranthene	ND	210	42	ug/kg	
86-73-7	Fluorene	ND	210	42	ug/kg	
118-74-1	Hexachlorobenzene	ND	210	42	ug/kg	
87-68-3	Hexachlorobutadiene	ND	210	42	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	210	42	ug/kg	
67-72-1	Hexachloroethane	ND	210	100	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	210	42	ug/kg	
78-59-1	Isophorone	ND	210	42	ug/kg	
90-12-0	1-Methylnaphthalene	ND	210	42	ug/kg	
91-57-6	2-Methylnaphthalene	ND	210	42	ug/kg	
88-74-4	2-Nitroaniline	ND	420	83	ug/kg	
99-09-2	3-Nitroaniline	ND	420	83	ug/kg	
100-01-6	4-Nitroaniline	ND	420	83	ug/kg	
91-20-3	Naphthalene	ND	210	42	ug/kg	
98-95-3	Nitrobenzene	ND	210	42	ug/kg	
62-75-9	N-Nitrosodimethylamine	ND	420	83	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	210	42	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	210	42	ug/kg	
85-01-8	Phenanthrene	ND	210	42	ug/kg	
129-00-0	Pyrene	ND	210	42	ug/kg	
110-86-1	Pyridine	ND	420	100	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	210	42	ug/kg	

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:	SWMU8-DP12-7		
Lab Sample ID:	F77189-3	**Date Sampled:**	10/09/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8270C SW846 3550B	**Percent Solids:**	79.2
Project:	Holloman AFB; SWMU 8, ACM Investigation		

ABN Full List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	67%		40-102%
4165-62-2	Phenol-d5	70%		41-100%
118-79-6	2,4,6-Tribromophenol	71%		42-108%
4165-60-0	Nitrobenzene-d5	65%		40-105%
321-60-8	2-Fluorobiphenyl	71%		43-107%
1718-51-0	Terphenyl-d14	68%		45-119%

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:	SWMU8-DP12-7		
Lab Sample ID:	F77189-3	**Date Sampled:**	10/09/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8015	**Percent Solids:**	79.2
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR056306.D	1	10/14/10	AH	n/a	n/a	GQR2448
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.74 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	6.8	3.4	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	92%		56-136%
98-08-8	aaa-Trifluorotoluene	76%		61-121%

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:	SWMU8-DP12-7		
Lab Sample ID:	F77189-3	**Date Sampled:**	10/09/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8082 SW846 3550B	**Percent Solids:**	79.2
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XX053707.D	1	10/20/10	NJ	10/14/10	OP34709	GXX801
Run #2							

	Initial Weight	Final Volume
Run #1	30.3 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	21	10	ug/kg	
11104-28-2	Aroclor 1221	ND	21	17	ug/kg	
11141-16-5	Aroclor 1232	ND	21	17	ug/kg	
53469-21-9	Aroclor 1242	ND	21	10	ug/kg	
12672-29-6	Aroclor 1248	ND	21	10	ug/kg	
11097-69-1	Aroclor 1254	ND	21	10	ug/kg	
11096-82-5	Aroclor 1260	ND	21	10	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	94%		44-126%
2051-24-3	Decachlorobiphenyl	94%		39-157%

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:	SWMU8-DP12-7		
Lab Sample ID:	F77189-3	**Date Sampled:**	10/09/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8015 M SW846 3550B	**Percent Solids:**	79.2
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YY18002.D	1	10/16/10	MV	10/13/10	OP34693	GYY657
Run #2							

	Initial Weight	Final Volume
Run #1	30.6 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C22)	ND	10	6.2	mg/kg	
	TPH (> C22-C36)	ND	10	6.2	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	80%		49-108%

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:	SWMU8-DP12-7		
Lab Sample ID:	F77189-3	**Date Sampled:**	10/09/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
		Percent Solids:	79.2
Project:	Holloman AFB; SWMU 8, ACM Investigation		

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	2420	9.0	0.90	mg/kg	1	10/13/10	10/13/10	RS	SW846 6010B [1]	SW846 3050B [4]
Antimony	0.17 J	0.90	0.090	mg/kg	1	10/13/10	10/13/10	RS	SW846 6010B [1]	SW846 3050B [4]
Arsenic	0.76	0.45	0.090	mg/kg	1	10/13/10	10/13/10	RS	SW846 6010B [1]	SW846 3050B [4]
Barium	25.7	9.0	0.45	mg/kg	1	10/13/10	10/13/10	RS	SW846 6010B [1]	SW846 3050B [4]
Beryllium	0.10 J	0.23	0.045	mg/kg	1	10/13/10	10/13/10	RS	SW846 6010B [1]	SW846 3050B [4]
Cadmium	0.27	0.18	0.045	mg/kg	1	10/13/10	10/13/10	RS	SW846 6010B [1]	SW846 3050B [4]
Calcium	145000	2300	45	mg/kg	10	10/13/10	10/14/10	RS	SW846 6010B [2]	SW846 3050B [4]
Chromium [a]	2.6 J	4.5	0.45	mg/kg	10	10/13/10	10/14/10	RS	SW846 6010B [2]	SW846 3050B [4]
Cobalt [a]	1.0 J	9.0	0.18	mg/kg	4	10/13/10	10/14/10	RS	SW846 6010B [2]	SW846 3050B [4]
Copper [a]	2.5 J	11	0.90	mg/kg	10	10/13/10	10/14/10	RS	SW846 6010B [2]	SW846 3050B [4]
Iron	2060	14	1.4	mg/kg	1	10/13/10	10/13/10	RS	SW846 6010B [1]	SW846 3050B [4]
Lead [a]	0.73 J	3.6	0.18	mg/kg	4	10/13/10	10/14/10	RS	SW846 6010B [2]	SW846 3050B [4]
Magnesium	1030	230	4.5	mg/kg	1	10/13/10	10/13/10	RS	SW846 6010B [1]	SW846 3050B [4]
Manganese	51.1	0.68	0.045	mg/kg	1	10/13/10	10/13/10	RS	SW846 6010B [1]	SW846 3050B [4]
Mercury	0.012 U	0.099	0.012	mg/kg	1	10/22/10	10/22/10	LM	SW846 7471A [3]	SW846 7471A [5]
Nickel [a]	1.9 J	7.2	0.18	mg/kg	4	10/13/10	10/14/10	RS	SW846 6010B [2]	SW846 3050B [4]
Potassium	596	450	23	mg/kg	1	10/13/10	10/13/10	RS	SW846 6010B [1]	SW846 3050B [4]
Selenium [a]	1.8 U	9.0	1.8	mg/kg	10	10/13/10	10/14/10	RS	SW846 6010B [2]	SW846 3050B [4]
Silver	0.045 U	0.45	0.045	mg/kg	1	10/13/10	10/13/10	RS	SW846 6010B [1]	SW846 3050B [4]
Sodium	60.8 J	450	34	mg/kg	1	10/13/10	10/13/10	RS	SW846 6010B [1]	SW846 3050B [4]
Thallium [a]	0.36 U	1.8	0.36	mg/kg	4	10/13/10	10/14/10	RS	SW846 6010B [2]	SW846 3050B [4]
Vanadium	6.6	2.3	0.045	mg/kg	1	10/13/10	10/13/10	RS	SW846 6010B [1]	SW846 3050B [4]
Zinc [a]	5.1 J	9.0	2.3	mg/kg	10	10/13/10	10/14/10	RS	SW846 6010B [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA8441
(2) Instrument QC Batch: MA8443
(3) Instrument QC Batch: MA8460
(4) Prep QC Batch: MP19281
(5) Prep QC Batch: MP19341

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

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

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	F77189-4	**Date Sampled:**	10/09/10
Matrix:	SO - Trip Blank Soil	**Date Received:**	10/12/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G0067549.D	1	10/15/10	MM	n/a	n/a	VG2555
Run #2							

	Initial Weight
Run #1	5.00 g
Run #2	

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone [a]	ND	50	21	ug/kg	
107-02-8	Acrolein	ND	25	10	ug/kg	
107-13-1	Acrylonitrile	ND	25	10	ug/kg	
71-43-2	Benzene	ND	5.0	1.0	ug/kg	
108-86-1	Bromobenzene	ND	5.0	1.2	ug/kg	
74-97-5	Bromochloromethane	ND	5.0	1.7	ug/kg	
75-27-4	Bromodichloromethane	ND	5.0	1.0	ug/kg	
75-25-2	Bromoform	ND	5.0	1.8	ug/kg	
104-51-8	n-Butylbenzene	ND	5.0	1.3	ug/kg	
135-98-8	sec-Butylbenzene	ND	5.0	1.2	ug/kg	
98-06-6	tert-Butylbenzene	ND	5.0	1.2	ug/kg	
108-90-7	Chlorobenzene	ND	5.0	1.0	ug/kg	
75-00-3	Chloroethane [b]	ND	5.0	2.0	ug/kg	J
67-66-3	Chloroform	ND	5.0	1.0	ug/kg	
95-49-8	o-Chlorotoluene	ND	5.0	1.3	ug/kg	
106-43-4	p-Chlorotoluene	ND	5.0	1.0	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	25	10	ug/kg	
75-15-0	Carbon disulfide	ND	5.0	2.4	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.0	1.6	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.0	1.5	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.0	2.3	ug/kg	
563-58-6	1,1-Dichloropropene	ND	5.0	1.0	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	2.5	ug/kg	
106-93-4	1,2-Dibromoethane	ND	5.0	1.0	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.0	1.2	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.0	1.0	ug/kg	
142-28-9	1,3-Dichloropropane	ND	5.0	1.7	ug/kg	
594-20-7	2,2-Dichloropropane	ND	5.0	1.1	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	1.7	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.0	2.1	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.0	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.0	ug/kg	

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:	TRIP BLANK		
Lab Sample ID:	F77189-4	**Date Sampled:**	10/09/10
Matrix:	SO - Trip Blank Soil	**Date Received:**	10/12/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
541-73-1	m-Dichlorobenzene	ND	5.0	1.2	ug/kg	
95-50-1	o-Dichlorobenzene	ND	5.0	1.1	ug/kg	
106-46-7	p-Dichlorobenzene	ND	5.0	1.5	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	1.9	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	1.1	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	1.1	ug/kg	
591-78-6	2-Hexanone	ND	25	12	ug/kg	
87-68-3	Hexachlorobutadiene	ND	5.0	2.3	ug/kg	
110-54-3	Hexane	ND	5.0	2.0	ug/kg	
98-82-8	Isopropylbenzene	ND	5.0	1.4	ug/kg	
99-87-6	p-Isopropyltoluene	ND	5.0	1.0	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	25	8.3	ug/kg	
74-83-9	Methyl bromide	ND	5.0	2.0	ug/kg	
74-87-3	Methyl chloride [b]	ND	5.0	2.5	ug/kg	J
74-95-3	Methylene bromide	ND	5.0	2.1	ug/kg	
75-09-2	Methylene chloride [c]	9.3	10	5.0	ug/kg	JB
78-93-3	Methyl ethyl ketone [a]	ND	25	7.5	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	2.3	ug/kg	
91-20-3	Naphthalene	ND	5.0	2.0	ug/kg	
103-65-1	n-Propylbenzene	ND	5.0	1.5	ug/kg	
100-42-5	Styrene	ND	5.0	1.0	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	1.0	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.0	1.8	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	1.3	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.0	1.3	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	2.0	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	5.0	1.6	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	2.0	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	1.1	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.5	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.0	1.8	ug/kg	
108-88-3	Toluene	ND	5.0	1.2	ug/kg	
79-01-6	Trichloroethylene	ND	5.0	1.6	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.0	2.6	ug/kg	
75-01-4	Vinyl chloride	ND	5.0	2.0	ug/kg	
108-05-4	Vinyl Acetate	ND	25	15	ug/kg	
	m,p-Xylene	ND	10	1.2	ug/kg	
95-47-6	o-Xylene	ND	5.0	1.0	ug/kg	

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:	TRIP BLANK		
Lab Sample ID:	F77189-4	**Date Sampled:**	10/09/10
Matrix:	SO - Trip Blank Soil	**Date Received:**	10/12/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		80-121%
2037-26-5	Toluene-D8	96%		71-130%
460-00-4	4-Bromofluorobenzene	97%		59-148%
17060-07-0	1,2-Dichloroethane-D4	115%		77-123%

(a) ICV and associated BS recovery outside control limits.
(b) CCV outside of control limits; results may be biased low.
(c) 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

Southeast ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Certification Exceptions
- Chain of Custody

NATIONVIEW

F77189

Page: 1 of 1

Project No: 8080014.03.020

COC Number(1): 10112010-03

LIMS Number:

Chain of Custody and Analytical Request

Facility/Base I.D.: Holloman AFB, New Mexico

Project/Site Name: SWMU 8, ACM Investigation

Client Name: USACE - Albuquerque District

Collected by: Dustin McNeil/ Jim Moore

	Field Sample ID (30 Characters Max)	ERPIMS LOCID (15 Characters Max)	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hhmm)	Sample Depth (beginning - ending)	SA Code (2)	Sample Number (3)	Sample Matrix (4)	Number of containers	% Solids (2540B)	VOCs (8260B)	SVOCs (8270C)	TPH-GRO (8015B)	TPH-DRO/ORO (8015B)	TAL Metals (6010B/7471A)	PCBs (8082)	Dry Bulk Density (D2937-94)	Specific Gravity (D1429-86)	FOC (D2974-87)					Ambient Blank Lot Control Number	Equipment Blank Lot Control Number	Trip Blank Lot Control Number	Cooler ID
									Sample Analysis Requested (5)															Quality Assurance Samples (6)			
1	SWMU8-DP10-7MS	8-DP10-7MS	09102010	1215	5-7	MS	1	SO	6	X	X	X	X	X	X	X											3
	SWMU8-DP10-7MSD	8-DP10-7MSD	09102010	1215	5-7	SD	1	SO	6	X	X	X	X	X	X	X											3
2	SWMU8-DP11-7	8-DP11-7	09102010	1500	5-7	N	1	SO	6	X	X	X	X	X	X	X											3
3	SWMU8-DP12-7	8-DP12-7	09102010	1600	5-7	N	1	SO	6	X	X	X	X	X	X	X											3
4	Trip Blank				-	TB	1	WQ	3		X																3
					-																						
					-																						
					-																						
					-																						
					-																						
					-																						

COMMENTS:

Custody Transfers Prior to Receipt by Laboratory

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1. Jim Moore	10/11/10	1300	1. FX		09:00
2. FX			2. [illegible] (ALIZ)	10.12.10	
3.			3.		

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab:

Method of Shipment: FedEx Express

Analytical Lab: Accutest

Lab Recipient:

Shipped No.:

Airbill Number: 8731 0942 7082

Delivery Location: Orlando, FL

Delivery Date/Time:

1.) Chain of Custody Number = date collected + custody number (e.g. 09-02-1999-01)

2.) Sample Type (SA) Codes: N = Normal Sample, TB = Trip Blank (-c) Sample, FD = Field Duplicate (-a) Samples, FR = Field Replicate (-b) Samples, EB = Equipment Blank (-d) Samples, MS = Matrix Spike, SD = Matrix Spike Duplicate, AB = Ambient Blank (-e)

3.) Sample Number: Unique sample number collected from a particular location per day. (e.g. Groundwater sample collected from MW-1 on 10/10/99 = 01, if sampled again on 10/10/99 = 02, etc.)

4.) Matrix Codes: GS = Soil Gas, WG = Groundwater, WS = Surface Water, SO = Soil, SE = Sediment, SL = Sludge, SS = Surface Soil Samples, WQ = Aqueous Blank Samples (trip, equipment, ambient, etc), SQ = Soil Blanks

5.) Sample Analysis Requested: Analytical method requested and number of containers provided for each.

6.) Quality assurance samples are assigned by date (ddmmyy) and the sample number associated with the sample (01, 02, etc) (e.g. Equipment blank collected in association with MW-1 on 10/10/99 will be designated 10109901 in the Equipment Blank Lot Control

4.4

4.1

4

F77189: Chain of Custody

Page 1 of 2

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: F77189 CLIENT: NATION VIEW PROJECT: SWMU8 ACM INVESTIGATION

DATE/TIME RECEIVED: 10-12-10 09:00 {MM/DD/YY 24:00} NUMBER OF COOLERS RECEIVED: 1

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

AIRBILL NUMBERS: 8731 0942 7082

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
- [ ] RECEIVED WATER TRIP BLANK
- [x] RECEIVED SOIL TRIP BLANK

MISC. INFORMATION

NUMBER OF ENCORES ? _____

NUMBER OF 5035 FIELD KITS ? _____

NUMBER OR LAB FILTERED METALS ? _____

TEMPERATURE INFORMATION

- [ ] IR THERM ID 3 CORR. FACTOR +0.6
- [ ] OBSERVED TEMPS: 3.8
- [ ] CORRECTED TEMPS: 4.4

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 SC 10-12-10 REVIEWER SIGNATURE/DATE [signature] 10/12/10

NF 10/09 RECEIPT CONFIRMATION 100609 (2).xls

4.1

4

F77189: Chain of Custody

Page 2 of 2

Southeast ACCUTEST LABORATORIES

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: F77189
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VG2555-MB	G0067543.D	1	10/15/10	MM	n/a	n/a	VG2555

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77189-4

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	50	21	ug/kg	
107-02-8	Acrolein	ND	25	10	ug/kg	
107-13-1	Acrylonitrile	ND	25	10	ug/kg	
71-43-2	Benzene	ND	5.0	1.0	ug/kg	
108-86-1	Bromobenzene	ND	5.0	1.2	ug/kg	
74-97-5	Bromochloromethane	ND	5.0	1.7	ug/kg	
75-27-4	Bromodichloromethane	ND	5.0	1.0	ug/kg	
75-25-2	Bromoform	ND	5.0	1.8	ug/kg	
104-51-8	n-Butylbenzene	ND	5.0	1.3	ug/kg	
135-98-8	sec-Butylbenzene	ND	5.0	1.2	ug/kg	
98-06-6	tert-Butylbenzene	ND	5.0	1.2	ug/kg	
108-90-7	Chlorobenzene	ND	5.0	1.0	ug/kg	
75-00-3	Chloroethane	ND	5.0	2.0	ug/kg	
67-66-3	Chloroform	ND	5.0	1.0	ug/kg	
95-49-8	o-Chlorotoluene	ND	5.0	1.3	ug/kg	
106-43-4	p-Chlorotoluene	ND	5.0	1.0	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	25	10	ug/kg	
75-15-0	Carbon disulfide	ND	5.0	2.4	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.0	1.6	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.0	1.5	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.0	2.3	ug/kg	
563-58-6	1,1-Dichloropropene	ND	5.0	1.0	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	2.5	ug/kg	
106-93-4	1,2-Dibromoethane	ND	5.0	1.0	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.0	1.2	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.0	1.0	ug/kg	
142-28-9	1,3-Dichloropropane	ND	5.0	1.7	ug/kg	
594-20-7	2,2-Dichloropropane	ND	5.0	1.1	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	1.7	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.0	2.1	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.0	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.0	ug/kg	
541-73-1	m-Dichlorobenzene	ND	5.0	1.2	ug/kg	
95-50-1	o-Dichlorobenzene	ND	5.0	1.1	ug/kg	
106-46-7	p-Dichlorobenzene	ND	5.0	1.5	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	1.9	ug/kg	

Method Blank Summary

Job Number: F77189
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VG2555-MB	G0067543.D	1	10/15/10	MM	n/a	n/a	VG2555

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77189-4

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	1.1	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	1.1	ug/kg	
591-78-6	2-Hexanone	ND	25	12	ug/kg	
87-68-3	Hexachlorobutadiene	ND	5.0	2.3	ug/kg	
110-54-3	Hexane	ND	5.0	2.0	ug/kg	
98-82-8	Isopropylbenzene	ND	5.0	1.4	ug/kg	
99-87-6	p-Isopropyltoluene	ND	5.0	1.0	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	25	8.3	ug/kg	
74-83-9	Methyl bromide	ND	5.0	2.0	ug/kg	
74-87-3	Methyl chloride	ND	5.0	2.5	ug/kg	
74-95-3	Methylene bromide	ND	5.0	2.1	ug/kg	
75-09-2	Methylene chloride	14.4	10	5.0	ug/kg	
78-93-3	Methyl ethyl ketone	ND	25	7.5	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	2.3	ug/kg	
91-20-3	Naphthalene	ND	5.0	2.0	ug/kg	
103-65-1	n-Propylbenzene	ND	5.0	1.5	ug/kg	
100-42-5	Styrene	ND	5.0	1.0	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	1.0	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.0	1.8	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	1.3	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.0	1.3	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	2.0	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	5.0	1.6	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	2.0	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	1.1	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.5	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.0	1.8	ug/kg	
108-88-3	Toluene	ND	5.0	1.2	ug/kg	
79-01-6	Trichloroethylene	ND	5.0	1.6	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.0	2.6	ug/kg	
75-01-4	Vinyl chloride	ND	5.0	2.0	ug/kg	
108-05-4	Vinyl Acetate	ND	25	15	ug/kg	
	m,p-Xylene	ND	10	1.2	ug/kg	
95-47-6	o-Xylene	ND	5.0	1.0	ug/kg	

Method Blank Summary

Job Number: F77189
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VG2555-MB	G0067543.D	1	10/15/10	MM	n/a	n/a	VG2555

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77189-4

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	104%	80-121%
2037-26-5	Toluene-D8	97%	71-130%
460-00-4	4-Bromofluorobenzene	97%	59-148%
17060-07-0	1,2-Dichloroethane-D4	109%	77-123%

Method Blank Summary

Job Number: F77189
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VH2438-MB	H065115.D	1	10/18/10	MM	n/a	n/a	VH2438

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77189-1, F77189-3

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	50	21	ug/kg	
107-02-8	Acrolein	ND	25	10	ug/kg	
107-13-1	Acrylonitrile	ND	25	10	ug/kg	
71-43-2	Benzene	ND	5.0	1.0	ug/kg	
108-86-1	Bromobenzene	ND	5.0	1.2	ug/kg	
74-97-5	Bromochloromethane	ND	5.0	1.7	ug/kg	
75-27-4	Bromodichloromethane	ND	5.0	1.0	ug/kg	
75-25-2	Bromoform	ND	5.0	1.8	ug/kg	
104-51-8	n-Butylbenzene	ND	5.0	1.3	ug/kg	
135-98-8	sec-Butylbenzene	ND	5.0	1.2	ug/kg	
98-06-6	tert-Butylbenzene	ND	5.0	1.2	ug/kg	
108-90-7	Chlorobenzene	ND	5.0	1.0	ug/kg	
75-00-3	Chloroethane	ND	5.0	2.0	ug/kg	
67-66-3	Chloroform	ND	5.0	1.0	ug/kg	
95-49-8	o-Chlorotoluene	ND	5.0	1.3	ug/kg	
106-43-4	p-Chlorotoluene	ND	5.0	1.0	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	25	10	ug/kg	
75-15-0	Carbon disulfide	ND	5.0	2.4	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.0	1.6	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.0	1.5	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.0	2.3	ug/kg	
563-58-6	1,1-Dichloropropene	ND	5.0	1.0	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	2.5	ug/kg	
106-93-4	1,2-Dibromoethane	ND	5.0	1.0	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.0	1.2	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.0	1.0	ug/kg	
142-28-9	1,3-Dichloropropane	ND	5.0	1.7	ug/kg	
594-20-7	2,2-Dichloropropane	ND	5.0	1.1	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	1.7	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.0	2.1	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.0	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.0	ug/kg	
541-73-1	m-Dichlorobenzene	ND	5.0	1.2	ug/kg	
95-50-1	o-Dichlorobenzene	ND	5.0	1.1	ug/kg	
106-46-7	p-Dichlorobenzene	ND	5.0	1.5	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	1.9	ug/kg	

Method Blank Summary

Job Number: F77189
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VH2438-MB	H065115.D	1	10/18/10	MM	n/a	n/a	VH2438

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77189-1, F77189-3

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	1.1	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	1.1	ug/kg	
591-78-6	2-Hexanone	ND	25	12	ug/kg	
87-68-3	Hexachlorobutadiene	ND	5.0	2.3	ug/kg	
110-54-3	Hexane	ND	5.0	2.0	ug/kg	
98-82-8	Isopropylbenzene	ND	5.0	1.4	ug/kg	
99-87-6	p-Isopropyltoluene	ND	5.0	1.0	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	25	8.3	ug/kg	
74-83-9	Methyl bromide	ND	5.0	2.0	ug/kg	
74-87-3	Methyl chloride	ND	5.0	2.5	ug/kg	
74-95-3	Methylene bromide	ND	5.0	2.1	ug/kg	
75-09-2	Methylene chloride	13.4	10	5.0	ug/kg	
78-93-3	Methyl ethyl ketone	ND	25	7.5	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	2.3	ug/kg	
91-20-3	Naphthalene	ND	5.0	2.0	ug/kg	
103-65-1	n-Propylbenzene	ND	5.0	1.5	ug/kg	
100-42-5	Styrene	ND	5.0	1.0	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	1.0	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.0	1.8	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	1.3	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.0	1.3	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	2.0	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	5.0	1.6	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	2.0	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	1.1	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.5	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.0	1.8	ug/kg	
108-88-3	Toluene	ND	5.0	1.2	ug/kg	
79-01-6	Trichloroethylene	ND	5.0	1.6	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.0	2.6	ug/kg	
75-01-4	Vinyl chloride	ND	5.0	2.0	ug/kg	
108-05-4	Vinyl Acetate	ND	25	15	ug/kg	
	m,p-Xylene	ND	10	1.2	ug/kg	
95-47-6	o-Xylene	ND	5.0	1.0	ug/kg	

Method Blank Summary

Job Number: F77189
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VH2438-MB	H065115.D	1	10/18/10	MM	n/a	n/a	VH2438

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77189-1, F77189-3

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	102%	80-121%
2037-26-5	Toluene-D8	90%	71-130%
460-00-4	4-Bromofluorobenzene	91%	59-148%
17060-07-0	1,2-Dichloroethane-D4	97%	77-123%

Method Blank Summary

Job Number: F77189
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VG2558-MB	G0067665.D	1	10/20/10	MM	n/a	n/a	VG2558

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77189-2

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	50	21	ug/kg	
107-02-8	Acrolein	ND	25	10	ug/kg	
107-13-1	Acrylonitrile	ND	25	10	ug/kg	
71-43-2	Benzene	ND	5.0	1.0	ug/kg	
108-86-1	Bromobenzene	ND	5.0	1.2	ug/kg	
74-97-5	Bromochloromethane	ND	5.0	1.7	ug/kg	
75-27-4	Bromodichloromethane	ND	5.0	1.0	ug/kg	
75-25-2	Bromoform	ND	5.0	1.8	ug/kg	
104-51-8	n-Butylbenzene	ND	5.0	1.3	ug/kg	
135-98-8	sec-Butylbenzene	ND	5.0	1.2	ug/kg	
98-06-6	tert-Butylbenzene	ND	5.0	1.2	ug/kg	
108-90-7	Chlorobenzene	ND	5.0	1.0	ug/kg	
75-00-3	Chloroethane	ND	5.0	2.0	ug/kg	
67-66-3	Chloroform	ND	5.0	1.0	ug/kg	
95-49-8	o-Chlorotoluene	ND	5.0	1.3	ug/kg	
106-43-4	p-Chlorotoluene	ND	5.0	1.0	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	25	10	ug/kg	
75-15-0	Carbon disulfide	ND	5.0	2.4	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.0	1.6	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.0	1.5	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.0	2.3	ug/kg	
563-58-6	1,1-Dichloropropene	ND	5.0	1.0	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	2.5	ug/kg	
106-93-4	1,2-Dibromoethane	ND	5.0	1.0	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.0	1.2	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.0	1.0	ug/kg	
142-28-9	1,3-Dichloropropane	ND	5.0	1.7	ug/kg	
594-20-7	2,2-Dichloropropane	ND	5.0	1.1	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	1.7	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.0	2.1	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.0	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.0	ug/kg	
541-73-1	m-Dichlorobenzene	ND	5.0	1.2	ug/kg	
95-50-1	o-Dichlorobenzene	ND	5.0	1.1	ug/kg	
106-46-7	p-Dichlorobenzene	ND	5.0	1.5	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	1.9	ug/kg	

Method Blank Summary

Job Number: F77189
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VG2558-MB	G0067665.D	1	10/20/10	MM	n/a	n/a	VG2558

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77189-2

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	1.1	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	1.1	ug/kg	
591-78-6	2-Hexanone	ND	25	12	ug/kg	
87-68-3	Hexachlorobutadiene	ND	5.0	2.3	ug/kg	
110-54-3	Hexane	ND	5.0	2.0	ug/kg	
98-82-8	Isopropylbenzene	ND	5.0	1.4	ug/kg	
99-87-6	p-Isopropyltoluene	ND	5.0	1.0	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	25	8.3	ug/kg	
74-83-9	Methyl bromide	ND	5.0	2.0	ug/kg	
74-87-3	Methyl chloride	ND	5.0	2.5	ug/kg	
74-95-3	Methylene bromide	ND	5.0	2.1	ug/kg	
75-09-2	Methylene chloride	17.1	10	5.0	ug/kg	
78-93-3	Methyl ethyl ketone	ND	25	7.5	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	2.3	ug/kg	
91-20-3	Naphthalene	ND	5.0	2.0	ug/kg	
103-65-1	n-Propylbenzene	ND	5.0	1.5	ug/kg	
100-42-5	Styrene	ND	5.0	1.0	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	1.0	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.0	1.8	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	1.3	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.0	1.3	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	2.0	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	5.0	1.6	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	2.0	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	1.1	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.5	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.0	1.8	ug/kg	
108-88-3	Toluene	ND	5.0	1.2	ug/kg	
79-01-6	Trichloroethylene	ND	5.0	1.6	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.0	2.6	ug/kg	
75-01-4	Vinyl chloride	ND	5.0	2.0	ug/kg	
108-05-4	Vinyl Acetate	ND	25	15	ug/kg	
	m,p-Xylene	ND	10	1.2	ug/kg	
95-47-6	o-Xylene	ND	5.0	1.0	ug/kg	

Method Blank Summary

Job Number: F77189
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VG2558-MB	G0067665.D	1	10/20/10	MM	n/a	n/a	VG2558

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77189-2

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	108%	80-121%
2037-26-5	Toluene-D8	100%	71-130%
460-00-4	4-Bromofluorobenzene	99%	59-148%
17060-07-0	1,2-Dichloroethane-D4	108%	77-123%

Blank Spike Summary

Job Number: F77189
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VG2555-BS	G0067542.D	1	10/15/10	MM	n/a	n/a	VG2555

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77189-4

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	250	96.5	39*	61-144
107-02-8	Acrolein	250	118	47	27-156
107-13-1	Acrylonitrile	250	216	86	55-144
71-43-2	Benzene	50	49.9	100	78-130
108-86-1	Bromobenzene	50	47.4	95	78-123
74-97-5	Bromochloromethane	50	44.0	88	72-122
75-27-4	Bromodichloromethane	50	48.2	96	73-122
75-25-2	Bromoform	50	43.3	87	70-139
104-51-8	n-Butylbenzene	50	55.8	112	80-138
135-98-8	sec-Butylbenzene	50	54.6	109	82-132
98-06-6	tert-Butylbenzene	50	54.7	109	79-130
108-90-7	Chlorobenzene	50	48.0	96	83-122
75-00-3	Chloroethane	50	57.8	116	61-153
67-66-3	Chloroform	50	48.7	97	79-129
95-49-8	o-Chlorotoluene	50	52.6	105	77-123
106-43-4	p-Chlorotoluene	50	52.8	106	78-129
110-75-8	2-Chloroethyl vinyl ether	250	235	94	52-142
75-15-0	Carbon disulfide	50	54.0	108	61-142
56-23-5	Carbon tetrachloride	50	51.4	103	79-135
75-34-3	1,1-Dichloroethane	50	46.1	92	77-132
75-35-4	1,1-Dichloroethylene	50	48.9	98	66-132
563-58-6	1,1-Dichloropropene	50	51.4	103	81-133
96-12-8	1,2-Dibromo-3-chloropropane	50	50.1	100	67-129
106-93-4	1,2-Dibromoethane	50	43.6	87	77-126
107-06-2	1,2-Dichloroethane	50	47.3	95	78-129
78-87-5	1,2-Dichloropropane	50	43.2	86	74-127
142-28-9	1,3-Dichloropropane	50	43.9	88	78-118
594-20-7	2,2-Dichloropropane	50	49.3	99	80-137
124-48-1	Dibromochloromethane	50	46.4	93	78-117
75-71-8	Dichlorodifluoromethane	50	127	254*	35-162
156-59-2	cis-1,2-Dichloroethylene	50	47.6	95	74-123
10061-01-5	cis-1,3-Dichloropropene	50	48.9	98	79-130
541-73-1	m-Dichlorobenzene	50	51.5	103	82-126
95-50-1	o-Dichlorobenzene	50	47.8	96	83-123
106-46-7	p-Dichlorobenzene	50	50.5	101	84-124
156-60-5	trans-1,2-Dichloroethylene	50	48.3	97	77-129

Blank Spike Summary

Job Number: F77189
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VG2555-BS	G0067542.D	1	10/15/10	MM	n/a	n/a	VG2555

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77189-4

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
10061-02-6	trans-1,3-Dichloropropene	50	51.2	102	87-131
100-41-4	Ethylbenzene	50	49.5	99	82-124
591-78-6	2-Hexanone	250	192	77	67-130
87-68-3	Hexachlorobutadiene	50	56.6	113	77-150
110-54-3	Hexane	50	54.2	108	65-147
98-82-8	Isopropylbenzene	50	57.4	115	82-133
99-87-6	p-Isopropyltoluene	50	55.6	111	82-132
108-10-1	4-Methyl-2-pentanone	250	233	93	69-125
74-83-9	Methyl bromide	50	60.9	122	60-146
74-87-3	Methyl chloride	50	71.6	143	58-163
74-95-3	Methylene bromide	50	45.4	91	75-128
75-09-2	Methylene chloride	50	49.9	100	62-140
78-93-3	Methyl ethyl ketone	250	152	61*	66-134
1634-04-4	Methyl Tert Butyl Ether	50	46.0	92	70-131
91-20-3	Naphthalene	50	48.9	98	59-143
103-65-1	n-Propylbenzene	50	53.6	107	78-129
100-42-5	Styrene	50	49.8	100	79-123
630-20-6	1,1,1,2-Tetrachloroethane	50	47.6	95	81-121
71-55-6	1,1,1-Trichloroethane	50	49.8	100	80-133
79-34-5	1,1,2,2-Tetrachloroethane	50	47.1	94	70-128
79-00-5	1,1,2-Trichloroethane	50	42.7	85	76-118
87-61-6	1,2,3-Trichlorobenzene	50	48.1	96	78-136
96-18-4	1,2,3-Trichloropropane	50	53.5	107	74-125
120-82-1	1,2,4-Trichlorobenzene	50	52.1	104	82-137
95-63-6	1,2,4-Trimethylbenzene	50	55.3	111	77-129
108-67-8	1,3,5-Trimethylbenzene	50	52.9	106	79-129
127-18-4	Tetrachloroethylene	50	50.4	101	79-132
108-88-3	Toluene	50	47.2	94	80-123
79-01-6	Trichloroethylene	50	52.3	105	78-132
75-69-4	Trichlorofluoromethane	50	68.6	137	67-149
75-01-4	Vinyl chloride	50	65.9	132	60-145
108-05-4	Vinyl Acetate	250	224	90	25-164
	m,p-Xylene	100	103	103	82-128
95-47-6	o-Xylene	50	48.0	96	82-126

Blank Spike Summary

Job Number: F77189
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VG2555-BS	G0067542.D	1	10/15/10	MM	n/a	n/a	VG2555

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77189-4

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	98%	80-121%
2037-26-5	Toluene-D8	93%	71-130%
460-00-4	4-Bromofluorobenzene	88%	59-148%
17060-07-0	1,2-Dichloroethane-D4	106%	77-123%

Blank Spike Summary

Job Number: F77189
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VH2438-BS	H065114.D	1	10/18/10	MM	n/a	n/a	VH2438

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77189-1, F77189-3

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	250	98.6	39*	61-144
107-02-8	Acrolein	250	137	55	27-156
107-13-1	Acrylonitrile	250	220	88	55-144
71-43-2	Benzene	50	50.2	100	78-130
108-86-1	Bromobenzene	50	49.4	99	78-123
74-97-5	Bromochloromethane	50	48.9	98	72-122
75-27-4	Bromodichloromethane	50	50.1	100	73-122
75-25-2	Bromoform	50	39.8	80	70-139
104-51-8	n-Butylbenzene	50	51.3	103	80-138
135-98-8	sec-Butylbenzene	50	51.7	103	82-132
98-06-6	tert-Butylbenzene	50	50.0	100	79-130
108-90-7	Chlorobenzene	50	50.6	101	83-122
75-00-3	Chloroethane	50	57.9	116	61-153
67-66-3	Chloroform	50	47.6	95	79-129
95-49-8	o-Chlorotoluene	50	51.5	103	77-123
106-43-4	p-Chlorotoluene	50	52.6	105	78-129
110-75-8	2-Chloroethyl vinyl ether	250	254	102	52-142
75-15-0	Carbon disulfide	50	44.6	89	61-142
56-23-5	Carbon tetrachloride	50	44.3	89	79-135
75-34-3	1,1-Dichloroethane	50	47.8	96	77-132
75-35-4	1,1-Dichloroethylene	50	43.0	86	66-132
563-58-6	1,1-Dichloropropene	50	46.9	94	81-133
96-12-8	1,2-Dibromo-3-chloropropane	50	45.7	91	67-129
106-93-4	1,2-Dibromoethane	50	40.0	80	77-126
107-06-2	1,2-Dichloroethane	50	49.0	98	78-129
78-87-5	1,2-Dichloropropane	50	50.1	100	74-127
142-28-9	1,3-Dichloropropane	50	47.4	95	78-118
594-20-7	2,2-Dichloropropane	50	44.8	90	80-137
124-48-1	Dibromochloromethane	50	40.6	81	78-117
75-71-8	Dichlorodifluoromethane	50	49.0	98	35-162
156-59-2	cis-1,2-Dichloroethylene	50	50.0	100	74-123
10061-01-5	cis-1,3-Dichloropropene	50	54.0	108	79-130
541-73-1	m-Dichlorobenzene	50	51.1	102	82-126
95-50-1	o-Dichlorobenzene	50	50.3	101	83-123
106-46-7	p-Dichlorobenzene	50	51.0	102	84-124
156-60-5	trans-1,2-Dichloroethylene	50	45.6	91	77-129

Blank Spike Summary

Job Number: F77189
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VH2438-BS	H065114.D	1	10/18/10	MM	n/a	n/a	VH2438

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77189-1, F77189-3

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
10061-02-6	trans-1,3-Dichloropropene	50	47.6	95	87-131
100-41-4	Ethylbenzene	50	48.1	96	82-124
591-78-6	2-Hexanone	250	207	83	67-130
87-68-3	Hexachlorobutadiene	50	48.2	96	77-150
110-54-3	Hexane	50	51.2	102	65-147
98-82-8	Isopropylbenzene	50	54.6	109	82-133
99-87-6	p-Isopropyltoluene	50	51.5	103	82-132
108-10-1	4-Methyl-2-pentanone	250	246	98	69-125
74-83-9	Methyl bromide	50	50.1	100	60-146
74-87-3	Methyl chloride	50	48.5	97	58-163
74-95-3	Methylene bromide	50	51.4	103	75-128
75-09-2	Methylene chloride	50	58.8	118	62-140
78-93-3	Methyl ethyl ketone	250	159	64*	66-134
1634-04-4	Methyl Tert Butyl Ether	50	48.8	98	70-131
91-20-3	Naphthalene	50	50.3	101	59-143
103-65-1	n-Propylbenzene	50	52.1	104	78-129
100-42-5	Styrene	50	44.7	89	79-123
630-20-6	1,1,1,2-Tetrachloroethane	50	47.5	95	81-121
71-55-6	1,1,1-Trichloroethane	50	44.9	90	80-133
79-34-5	1,1,2,2-Tetrachloroethane	50	52.4	105	70-128
79-00-5	1,1,2-Trichloroethane	50	50.6	101	76-118
87-61-6	1,2,3-Trichlorobenzene	50	46.9	94	78-136
96-18-4	1,2,3-Trichloropropane	50	46.8	94	74-125
120-82-1	1,2,4-Trichlorobenzene	50	50.1	100	82-137
95-63-6	1,2,4-Trimethylbenzene	50	52.7	105	77-129
108-67-8	1,3,5-Trimethylbenzene	50	51.3	103	79-129
127-18-4	Tetrachloroethylene	50	47.0	94	79-132
108-88-3	Toluene	50	47.4	95	80-123
79-01-6	Trichloroethylene	50	48.9	98	78-132
75-69-4	Trichlorofluoromethane	50	49.2	98	67-149
75-01-4	Vinyl chloride	50	50.4	101	60-145
108-05-4	Vinyl Acetate	250	223	89	25-164
	m,p-Xylene	100	100	100	82-128
95-47-6	o-Xylene	50	48.0	96	82-126

Blank Spike Summary

Job Number: F77189
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VH2438-BS	H065114.D	1	10/18/10	MM	n/a	n/a	VH2438

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77189-1, F77189-3

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	103%	80-121%
2037-26-5	Toluene-D8	101%	71-130%
460-00-4	4-Bromofluorobenzene	94%	59-148%
17060-07-0	1,2-Dichloroethane-D4	105%	77-123%

Blank Spike Summary

Job Number: F77189
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VG2558-BS	G0067664.D	1	10/20/10	MM	n/a	n/a	VG2558

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77189-2

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	250	124	50*	61-144
107-02-8	Acrolein	250	95.2	38	27-156
107-13-1	Acrylonitrile	250	201	80	55-144
71-43-2	Benzene	50	54.0	108	78-130
108-86-1	Bromobenzene	50	55.0	110	78-123
74-97-5	Bromochloromethane	50	52.3	105	72-122
75-27-4	Bromodichloromethane	50	51.4	103	73-122
75-25-2	Bromoform	50	51.7	103	70-139
104-51-8	n-Butylbenzene	50	58.5	117	80-138
135-98-8	sec-Butylbenzene	50	60.2	120	82-132
98-06-6	tert-Butylbenzene	50	57.3	115	79-130
108-90-7	Chlorobenzene	50	54.0	108	83-122
75-00-3	Chloroethane	50	72.2	144	61-153
67-66-3	Chloroform	50	53.2	106	79-129
95-49-8	o-Chlorotoluene	50	56.2	112	77-123
106-43-4	p-Chlorotoluene	50	56.6	113	78-129
110-75-8	2-Chloroethyl vinyl ether	250	250	100	52-142
75-15-0	Carbon disulfide	50	51.1	102	61-142
56-23-5	Carbon tetrachloride	50	54.8	110	79-135
75-34-3	1,1-Dichloroethane	50	52.6	105	77-132
75-35-4	1,1-Dichloroethylene	50	49.9	100	66-132
563-58-6	1,1-Dichloropropene	50	55.7	111	81-133
96-12-8	1,2-Dibromo-3-chloropropane	50	49.6	99	67-129
106-93-4	1,2-Dibromoethane	50	50.0	100	77-126
107-06-2	1,2-Dichloroethane	50	56.2	112	78-129
78-87-5	1,2-Dichloropropane	50	49.1	98	74-127
142-28-9	1,3-Dichloropropane	50	48.1	96	78-118
594-20-7	2,2-Dichloropropane	50	53.5	107	80-137
124-48-1	Dibromochloromethane	50	50.8	102	78-117
75-71-8	Dichlorodifluoromethane	50	64.3	129	35-162
156-59-2	cis-1,2-Dichloroethylene	50	54.8	110	74-123
10061-01-5	cis-1,3-Dichloropropene	50	53.2	106	79-130
541-73-1	m-Dichlorobenzene	50	58.0	116	82-126
95-50-1	o-Dichlorobenzene	50	55.1	110	83-123
106-46-7	p-Dichlorobenzene	50	56.8	114	84-124
156-60-5	trans-1,2-Dichloroethylene	50	52.2	104	77-129

Blank Spike Summary

Job Number: F77189
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VG2558-BS	G0067664.D	1	10/20/10	MM	n/a	n/a	VG2558

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77189-2

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
10061-02-6	trans-1,3-Dichloropropene	50	53.1	106	87-131
100-41-4	Ethylbenzene	50	54.0	108	82-124
591-78-6	2-Hexanone	250	219	88	67-130
87-68-3	Hexachlorobutadiene	50	62.6	125	77-150
110-54-3	Hexane	50	57.1	114	65-147
98-82-8	Isopropylbenzene	50	60.6	121	82-133
99-87-6	p-Isopropyltoluene	50	61.3	123	82-132
108-10-1	4-Methyl-2-pentanone	250	253	101	69-125
74-83-9	Methyl bromide	50	53.6	107	60-146
74-87-3	Methyl chloride	50	55.3	111	58-163
74-95-3	Methylene bromide	50	51.3	103	75-128
75-09-2	Methylene chloride	50	47.6	95	62-140
78-93-3	Methyl ethyl ketone	250	191	76	66-134
1634-04-4	Methyl Tert Butyl Ether	50	51.4	103	70-131
91-20-3	Naphthalene	50	54.7	109	59-143
103-65-1	n-Propylbenzene	50	58.9	118	78-129
100-42-5	Styrene	50	50.1	100	79-123
630-20-6	1,1,1,2-Tetrachloroethane	50	53.1	106	81-121
71-55-6	1,1,1-Trichloroethane	50	55.5	111	80-133
79-34-5	1,1,2,2-Tetrachloroethane	50	50.0	100	70-128
79-00-5	1,1,2-Trichloroethane	50	49.3	99	76-118
87-61-6	1,2,3-Trichlorobenzene	50	58.0	116	78-136
96-18-4	1,2,3-Trichloropropane	50	59.3	119	74-125
120-82-1	1,2,4-Trichlorobenzene	50	52.0	104	82-137
95-63-6	1,2,4-Trimethylbenzene	50	59.6	119	77-129
108-67-8	1,3,5-Trimethylbenzene	50	57.4	115	79-129
127-18-4	Tetrachloroethylene	50	52.2	104	79-132
108-88-3	Toluene	50	51.1	102	80-123
79-01-6	Trichloroethylene	50	53.5	107	78-132
75-69-4	Trichlorofluoromethane	50	60.8	122	67-149
75-01-4	Vinyl chloride	50	54.7	109	60-145
108-05-4	Vinyl Acetate	250	221	88	25-164
	m,p-Xylene	100	115	115	82-128
95-47-6	o-Xylene	50	52.2	104	82-126

Blank Spike Summary

Job Number: F77189
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VG2558-BS	G0067664.D	1	10/20/10	MM	n/a	n/a	VG2558

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77189-2

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	111%	80-121%
2037-26-5	Toluene-D8	97%	71-130%
460-00-4	4-Bromofluorobenzene	104%	59-148%
17060-07-0	1,2-Dichloroethane-D4	107%	77-123%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F77189
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F77189-1MS	G0067545.D	1	10/15/10	MM	n/a	n/a	VG2555
F77189-1MSD	G0067546.D	1	10/15/10	MM	n/a	n/a	VG2555
F77189-1 [a]	G0067544.D	1	10/15/10	MM	n/a	n/a	VG2555

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77189-4

CAS No.	Compound	F77189-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		368	126	34*	119	33*	6	61-144/29
107-02-8	Acrolein	ND		368	240	65	231	65	4	27-156/39
107-13-1	Acrylonitrile	ND		368	267	73	244	68	9	55-144/24
71-43-2	Benzene	3.3	J	73.6	72.9	95	72.8	97	0	78-130/25
108-86-1	Bromobenzene	ND		73.6	69.3	94	72.1	101	4	78-123/30
74-97-5	Bromochloromethane	ND		73.6	60.8	83	62.3	87	2	72-122/23
75-27-4	Bromodichloromethane	ND		73.6	66.4	90	69.9	98	5	73-122/25
75-25-2	Bromoform	ND		73.6	62.6	85	59.3	83	5	70-139/26
104-51-8	n-Butylbenzene	ND		73.6	75.3	102	79.3	111	5	80-138/31
135-98-8	sec-Butylbenzene	ND		73.6	79.5	108	83.1	116	4	82-132/29
98-06-6	tert-Butylbenzene	ND		73.6	80.4	109	81.7	114	2	79-130/29
108-90-7	Chlorobenzene	ND		73.6	71.5	97	72.4	101	1	83-122/23
75-00-3	Chloroethane	ND		73.6	80.5	109	89.5	125	11	61-153/31
67-66-3	Chloroform	ND		73.6	71.1	97	69.5	97	2	79-129/27
95-49-8	o-Chlorotoluene	ND		73.6	76.0	103	78.3	110	3	77-123/31
106-43-4	p-Chlorotoluene	ND		73.6	76.2	104	80.8	113	6	78-129/29
110-75-8	2-Chloroethyl vinyl ether	ND		368	289	79	286	80	1	52-142/25
75-15-0	Carbon disulfide	ND		73.6	76.6	104	77.3	108	1	61-142/27
56-23-5	Carbon tetrachloride	ND		73.6	77.0	105	76.0	106	1	79-135/29
75-34-3	1,1-Dichloroethane	ND		73.6	69.4	94	68.3	96	2	77-132/26
75-35-4	1,1-Dichloroethylene	ND		73.6	71.6	97	73.0	102	2	66-132/27
563-58-6	1,1-Dichloropropene	ND		73.6	75.2	102	74.5	104	1	81-133/26
96-12-8	1,2-Dibromo-3-chloropropane	ND		73.6	63.4	86	60.3	84	5	67-129/29
106-93-4	1,2-Dibromoethane	ND		73.6	61.5	84	58.5	82	5	77-126/24
107-06-2	1,2-Dichloroethane	ND		73.6	65.2	89	63.9	89	2	78-129/24
78-87-5	1,2-Dichloropropane	ND		73.6	63.9	87	66.9	94	5	74-127/27
142-28-9	1,3-Dichloropropane	ND		73.6	61.3	83	60.2	84	2	78-118/26
594-20-7	2,2-Dichloropropane	ND		73.6	70.3	95	74.4	104	6	80-137/28
124-48-1	Dibromochloromethane	ND		73.6	64.9	88	62.5	87	4	78-117/27
75-71-8	Dichlorodifluoromethane	ND		73.6	167	227*	169	237*	1	35-162/30
156-59-2	cis-1,2-Dichloroethylene	ND		73.6	69.0	94	66.9	94	3	74-123/26
10061-01-5	cis-1,3-Dichloropropene	ND		73.6	67.5	92	68.1	95	1	79-130/23
541-73-1	m-Dichlorobenzene	ND		73.6	74.5	101	76.9	108	3	82-126/29
95-50-1	o-Dichlorobenzene	ND		73.6	68.5	93	69.7	98	2	83-123/28
106-46-7	p-Dichlorobenzene	ND		73.6	72.9	99	74.7	105	2	84-124/28
156-60-5	trans-1,2-Dichloroethylene	ND		73.6	71.9	98	73.6	103	2	77-129/27

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F77189
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F77189-1MS	G0067545.D	1	10/15/10	MM	n/a	n/a	VG2555
F77189-1MSD	G0067546.D	1	10/15/10	MM	n/a	n/a	VG2555
F77189-1 [a]	G0067544.D	1	10/15/10	MM	n/a	n/a	VG2555

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77189-4

CAS No.	Compound	F77189-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
10061-02-6	trans-1,3-Dichloropropene	ND		73.6	70.5	96	71.2	100	1	87-131/27
100-41-4	Ethylbenzene	ND		73.6	74.6	101	74.7	105	0	82-124/25
591-78-6	2-Hexanone	ND		368	246	67	227	64*	8	67-130/29
87-68-3	Hexachlorobutadiene	ND		73.6	77.0	105	80.7	113	5	77-150/36
110-54-3	Hexane	ND		73.6	72.1	98	77.8	109	8	65-147/27
98-82-8	Isopropylbenzene	ND		73.6	88.0	120	84.7	119	4	82-133/27
99-87-6	p-Isopropyltoluene	ND		73.6	81.0	110	83.2	116	3	82-132/29
108-10-1	4-Methyl-2-pentanone	ND		368	294	80	276	77	6	69-125/24
74-83-9	Methyl bromide	ND		73.6	96.1	131	103	144	7	60-146/31
74-87-3	Methyl chloride	ND		73.6	94.2	128	101	141	7	58-163/26
74-95-3	Methylene bromide	ND		73.6	63.0	86	62.4	87	1	75-128/26
75-09-2	Methylene chloride	ND		73.6	87.5	119	73.1	102	18	62-140/25
78-93-3	Methyl ethyl ketone	ND		368	179	49*	174	49*	3	66-134/23
1634-04-4	Methyl Tert Butyl Ether	ND		73.6	62.1	84	60.0	84	3	70-131/25
91-20-3	Naphthalene	ND		73.6	58.7	80	58.7	82	0	59-143/31
103-65-1	n-Propylbenzene	ND		73.6	79.2	108	82.0	115	3	78-129/29
100-42-5	Styrene	ND		73.6	73.9	100	73.7	103	0	79-123/28
630-20-6	1,1,1,2-Tetrachloroethane	ND		73.6	72.0	98	67.5	94	6	81-121/25
71-55-6	1,1,1-Trichloroethane	ND		73.6	73.4	100	74.3	104	1	80-133/27
79-34-5	1,1,2,2-Tetrachloroethane	ND		73.6	64.6	88	59.2	83	9	70-128/30
79-00-5	1,1,2-Trichloroethane	ND		73.6	59.0	80	58.3	82	1	76-118/28
87-61-6	1,2,3-Trichlorobenzene	ND		73.6	60.0	81	62.4	87	4	78-136/34
96-18-4	1,2,3-Trichloropropane	ND		73.6	66.6	90	67.4	94	1	74-125/30
120-82-1	1,2,4-Trichlorobenzene	ND		73.6	67.3	91	73.7	103	9	82-137/32
95-63-6	1,2,4-Trimethylbenzene	ND		73.6	80.5	109	82.5	115	2	77-129/29
108-67-8	1,3,5-Trimethylbenzene	ND		73.6	77.7	106	78.2	109	1	79-129/31
127-18-4	Tetrachloroethylene	ND		73.6	71.2	97	76.1	106	7	79-132/27
108-88-3	Toluene	3.2	J	73.6	70.6	92	71.0	95	1	80-123/26
79-01-6	Trichloroethylene	ND		73.6	74.9	102	75.2	105	0	78-132/28
75-69-4	Trichlorofluoromethane	ND		73.6	91.6	124	92.3	129	1	67-149/29
75-01-4	Vinyl chloride	ND		73.6	84.6	115	89.6	125	6	60-145/29
108-05-4	Vinyl Acetate	ND		368	255	69	251	70	2	25-164/35
	m,p-Xylene	1.5	J	147	157	106	158	110	1	82-128/25
95-47-6	o-Xylene	ND		73.6	74.9	102	73.1	102	2	82-126/25

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F77189
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F77189-1MS	G0067545.D	1	10/15/10	MM	n/a	n/a	VG2555
F77189-1MSD	G0067546.D	1	10/15/10	MM	n/a	n/a	VG2555
F77189-1 [a]	G0067544.D	1	10/15/10	MM	n/a	n/a	VG2555

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77189-4

CAS No.	Surrogate Recoveries	MS	MSD	F77189-1	Limits
1868-53-7	Dibromofluoromethane	102%	100%	112%	80-121%
2037-26-5	Toluene-D8	95%	96%	98%	71-130%
460-00-4	4-Bromofluorobenzene	94%	98%	97%	59-148%
17060-07-0	1,2-Dichloroethane-D4	99%	94%	132%* [b]	77-123%

(a) Confirmation run.
(b) Outside control limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F77189
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F77181-5MS	H065117.D	1	10/18/10	MM	n/a	n/a	VH2438
F77181-5MSD	H065118.D	1	10/18/10	MM	n/a	n/a	VH2438
F77181-5	H065116.D	1	10/18/10	MM	n/a	n/a	VH2438

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77189-1, F77189-3

CAS No.	Compound	F77181-5 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	42 U		323	81.7	25*	76.8	24*	6	61-144/29
107-02-8	Acrolein	21 U		323	49.1	15*	60.0	19*	20	27-156/39
107-13-1	Acrylonitrile	21 U		323	195	60	183	58	6	55-144/24
71-43-2	Benzene	4.2 U		64.7	61.1	95	59.7	95	2	78-130/25
108-86-1	Bromobenzene	4.2 U		64.7	59.4	92	55.8	89	6	78-123/30
74-97-5	Bromochloromethane	4.2 U		64.7	54.5	84	51.9	83	5	72-122/23
75-27-4	Bromodichloromethane	4.2 U		64.7	56.4	87	54.3	87	4	73-122/25
75-25-2	Bromoform	4.2 U		64.7	41.2	64*	40.1	64*	3	70-139/26
104-51-8	n-Butylbenzene	4.2 U		64.7	54.2	84	45.7	73*	17	80-138/31
135-98-8	sec-Butylbenzene	4.2 U		64.7	58.3	90	50.5	80*	14	82-132/29
98-06-6	tert-Butylbenzene	4.2 U		64.7	59.5	92	53.1	85	11	79-130/29
108-90-7	Chlorobenzene	4.2 U		64.7	60.6	94	58.9	94	3	83-122/23
75-00-3	Chloroethane	4.2 U		64.7	71.5	111	61.3	98	15	61-153/31
67-66-3	Chloroform	4.2 U		64.7	56.7	88	56.6	90	0	79-129/27
95-49-8	o-Chlorotoluene	4.2 U		64.7	60.4	93	57.1	91	6	77-123/31
106-43-4	p-Chlorotoluene	4.2 U		64.7	61.3	95	57.1	91	7	78-129/29
110-75-8	2-Chloroethyl vinyl ether	21 U		323	254	79	377	120	39*	52-142/25
75-15-0	Carbon disulfide	4.2 U		64.7	53.6	83	53.2	85	1	61-142/27
56-23-5	Carbon tetrachloride	4.2 U		64.7	54.2	84	54.6	87	1	79-135/29
75-34-3	1,1-Dichloroethane	4.2 U		64.7	56.9	88	56.7	90	0	77-132/26
75-35-4	1,1-Dichloroethylene	4.2 U		64.7	53.3	82	52.5	84	2	66-132/27
563-58-6	1,1-Dichloropropene	4.2 U		64.7	57.4	89	55.4	88	4	81-133/26
96-12-8	1,2-Dibromo-3-chloropropane	4.2 U		64.7	37.5	58*	35.0	56*	7	67-129/29
106-93-4	1,2-Dibromoethane	4.2 U		64.7	42.0	65*	39.8	63*	5	77-126/24
107-06-2	1,2-Dichloroethane	4.2 U		64.7	52.0	80	48.5	77*	7	78-129/24
78-87-5	1,2-Dichloropropane	4.2 U		64.7	57.2	88	55.1	88	4	74-127/27
142-28-9	1,3-Dichloropropane	4.2 U		64.7	49.5	77*	48.0	76*	3	78-118/26
594-20-7	2,2-Dichloropropane	4.2 U		64.7	53.6	83	52.2	83	3	80-137/28
124-48-1	Dibromochloromethane	4.2 U		64.7	45.5	70*	43.7	70*	4	78-117/27
75-71-8	Dichlorodifluoromethane	4.2 U		64.7	59.5	92	60.0	96	1	35-162/30
156-59-2	cis-1,2-Dichloroethylene	4.2 U		64.7	60.0	93	58.4	93	3	74-123/26
10061-01-5	cis-1,3-Dichloropropene	4.2 U		64.7	56.4	87	55.0	88	3	79-130/23
541-73-1	m-Dichlorobenzene	4.2 U		64.7	60.4	93	54.4	87	10	82-126/29
95-50-1	o-Dichlorobenzene	4.2 U		64.7	54.8	85	50.5	80*	8	83-123/28
106-46-7	p-Dichlorobenzene	4.2 U		64.7	58.4	90	54.9	87	6	84-124/28
156-60-5	trans-1,2-Dichloroethylene	4.2 U		64.7	56.1	87	55.3	88	1	77-129/27

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F77189
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F77181-5MS	H065117.D	1	10/18/10	MM	n/a	n/a	VH2438
F77181-5MSD	H065118.D	1	10/18/10	MM	n/a	n/a	VH2438
F77181-5	H065116.D	1	10/18/10	MM	n/a	n/a	VH2438

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77189-1, F77189-3

CAS No.	Compound	F77181-5 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
10061-02-6	trans-1,3-Dichloropropene	4.2 U		64.7	49.7	77*	49.2	78*	1	87-131/27
100-41-4	Ethylbenzene	4.2 U		64.7	58.2	90	56.6	90	3	82-124/25
591-78-6	2-Hexanone	21 U		323	175	54*	175	56*	0	67-130/29
87-68-3	Hexachlorobutadiene	4.2 U		64.7	40.5	63*	32.2	51*	23	77-150/36
110-54-3	Hexane	4.2 U		64.7	53.0	82	44.8	71	17	65-147/27
98-82-8	Isopropylbenzene	4.2 U		64.7	65.1	101	60.8	97	7	82-133/27
99-87-6	p-Isopropyltoluene	4.2 U		64.7	58.6	91	51.5	82	13	82-132/29
108-10-1	4-Methyl-2-pentanone	21 U		323	223	69	213	68*	5	69-125/24
74-83-9	Methyl bromide	4.2 U		64.7	66.0	102	66.0	105	0	60-146/31
74-87-3	Methyl chloride	4.2 U		64.7	62.9	97	54.8	87	14	58-163/26
74-95-3	Methylene bromide	4.2 U		64.7	51.4	80	49.7	79	3	75-128/26
75-09-2	Methylene chloride	8.3 U		64.7	90.1	139	69.7	111	26*	62-140/25
78-93-3	Methyl ethyl ketone	21 U		323	135	42*	130	41*	4	66-134/23
1634-04-4	Methyl Tert Butyl Ether	4.2 U		64.7	52.1	81	53.5	85	3	70-131/25
91-20-3	Naphthalene	4.2 U		64.7	40.1	62	39.9	64	1	59-143/31
103-65-1	n-Propylbenzene	4.2 U		64.7	61.9	96	55.5	88	11	78-129/29
100-42-5	Styrene	4.2 U		64.7	51.1	79	49.1	78*	4	79-123/28
630-20-6	1,1,1,2-Tetrachloroethane	4.2 U		64.7	57.1	88	56.0	89	2	81-121/25
71-55-6	1,1,1-Trichloroethane	4.2 U		64.7	54.0	84	54.5	87	1	80-133/27
79-34-5	1,1,2,2-Tetrachloroethane	4.2 U		64.7	51.4	80	47.8	76	7	70-128/30
79-00-5	1,1,2-Trichloroethane	4.2 U		64.7	52.4	81	48.5	77	8	76-118/28
87-61-6	1,2,3-Trichlorobenzene	4.2 U		64.7	39.0	60*	38.9	62*	0	78-136/34
96-18-4	1,2,3-Trichloropropane	4.2 U		64.7	46.4	72*	42.8	68*	8	74-125/30
120-82-1	1,2,4-Trichlorobenzene	4.2 U		64.7	46.3	72*	44.5	71*	4	82-137/32
95-63-6	1,2,4-Trimethylbenzene	4.2 U		64.7	62.5	97	57.3	91	9	77-129/29
108-67-8	1,3,5-Trimethylbenzene	4.2 U		64.7	62.5	97	56.1	89	11	79-129/31
127-18-4	Tetrachloroethylene	4.2 U		64.7	64.7	100	64.0	102	1	79-132/27
108-88-3	Toluene	4.2 U		64.7	56.3	87	55.8	89	1	80-123/26
79-01-6	Trichloroethylene	4.2 U		64.7	59.1	91	57.6	92	3	78-132/28
75-69-4	Trichlorofluoromethane	4.2 U		64.7	58.2	90	58.3	93	0	67-149/29
75-01-4	Vinyl chloride	4.2 U		64.7	60.0	93	57.6	92	4	60-145/29
108-05-4	Vinyl Acetate	21 U		323	25.4	8*	32.1	10*	23	25-164/35
	m,p-Xylene	8.3 U		129	119	92	116	92	3	82-128/25
95-47-6	o-Xylene	4.2 U		64.7	58.1	90	56.3	90	3	82-126/25

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F77189
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F77181-5MS	H065117.D	1	10/18/10	MM	n/a	n/a	VH2438
F77181-5MSD	H065118.D	1	10/18/10	MM	n/a	n/a	VH2438
F77181-5	H065116.D	1	10/18/10	MM	n/a	n/a	VH2438

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77189-1, F77189-3

CAS No.	Surrogate Recoveries	MS	MSD	F77181-5	Limits
1868-53-7	Dibromofluoromethane	98%	99%	100%	80-121%
2037-26-5	Toluene-D8	100%	102%	101%	71-130%
460-00-4	4-Bromofluorobenzene	97%	96%	116%	59-148%
17060-07-0	1,2-Dichloroethane-D4	92%	90%	96%	77-123%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F77189
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F77247-6MS	G0067670.D	1	10/20/10	MM	n/a	n/a	VG2558
F77247-6MSD	G0067671.D	1	10/20/10	MM	n/a	n/a	VG2558
F77247-6	G0067668.D	1	10/20/10	MM	n/a	n/a	VG2558

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77189-2

CAS No.	Compound	F77247-6 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	120 UQ	Q	538	201	37*	147	27*	31*	61-144/29
107-02-8	Acrolein	61 U		538	29.1	5*	33.9	6*	15	27-156/39
107-13-1	Acrylonitrile	61 U		538	307	57	268	50*	14	55-144/24
71-43-2	Benzene	12 U		108	127	118	112	105	13	78-130/25
108-86-1	Bromobenzene	12 U		108	142	132*	141	132*	1	78-123/30
74-97-5	Bromochloromethane	12 U		108	128	119	118	110	8	72-122/23
75-27-4	Bromodichloromethane	12 UJ	J	108	61.6	57*	43.4	40*	35*	73-122/25
75-25-2	Bromoform	12 UJ	J	108	35.2	33*	28.3	26*	22	70-139/26
104-51-8	n-Butylbenzene	12 U		108	69.1	64*	64.4	60*	7	80-138/31
135-98-8	sec-Butylbenzene	12 U		108	102	95	99.4	93	3	82-132/29
98-06-6	tert-Butylbenzene	12 U		108	123	114	119	111	3	79-130/29
108-90-7	Chlorobenzene	12 U		108	117	109	111	104	5	83-122/23
75-00-3	Chloroethane	12 UJ	J	108	220	204*	182	170*	19	61-153/31
67-66-3	Chloroform	12 UJ	J	108	136	126	119	111	13	79-129/27
95-49-8	o-Chlorotoluene	12 U		108	150	139*	143	133*	5	77-123/31
106-43-4	p-Chlorotoluene	12 U		108	140	130*	139	130*	1	78-129/29
110-75-8	2-Chloroethyl vinyl ether	61 U		538	393	73	342	64	14	52-142/25
75-15-0	Carbon disulfide	12 U		108	116	108	77.6	72	40*	61-142/27
56-23-5	Carbon tetrachloride	12 UJ	J	108	65.7	61*	52.0	49*	23	79-135/29
75-34-3	1,1-Dichloroethane	12 U		108	128	119	119	111	7	77-132/26
75-35-4	1,1-Dichloroethylene	12 U		108	136	126	118	110	14	66-132/27
563-58-6	1,1-Dichloropropene	12 U		108	135	125	120	112	12	81-133/26
96-12-8	1,2-Dibromo-3-chloropropane	12 U		108	116	108	83.4	78	33*	67-129/29
106-93-4	1,2-Dibromoethane	12 U		108	95.7	89	89.8	84	6	77-126/24
107-06-2	1,2-Dichloroethane	12 U		108	124	115	109	102	13	78-129/24
78-87-5	1,2-Dichloropropane	12 U		108	112	104	99.3	93	12	74-127/27
142-28-9	1,3-Dichloropropane	12 U		108	117	109	103	96	13	78-118/26
594-20-7	2,2-Dichloropropane	12 U		108	172	160*	127	119	30*	80-137/28
124-48-1	Dibromochloromethane	12 UJ	J	108	49.1	46*	38.9	36*	23	78-117/27
75-71-8	Dichlorodifluoromethane	12 U		108	168	156	144	134	15	35-162/30
156-59-2	cis-1,2-Dichloroethylene	12 U		108	126	117	113	105	11	74-123/26
10061-01-5	cis-1,3-Dichloropropene	12 U		108	84.7	79	69.9	65*	19	79-130/23
541-73-1	m-Dichlorobenzene	12 UQ	Q	108	99.5	92	99.8	93	0	82-126/29
95-50-1	o-Dichlorobenzene	12 UQ	Q	108	90.4	84	87.7	82*	3	83-123/28
106-46-7	p-Dichlorobenzene	12 UQ	Q	108	98.9	92	97.0	91	2	84-124/28
156-60-5	trans-1,2-Dichloroethylene	12 U		108	131	122	111	104	17	77-129/27

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F77189
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F77247-6MS	G0067670.D	1	10/20/10	MM	n/a	n/a	VG2558
F77247-6MSD	G0067671.D	1	10/20/10	MM	n/a	n/a	VG2558
F77247-6	G0067668.D	1	10/20/10	MM	n/a	n/a	VG2558

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77189-2

CAS No.	Compound	F77247-6 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
10061-02-6	trans-1,3-Dichloropropene	12 U		108	91.6	85*	81.1	76*	12	87-131/27
100-41-4	Ethylbenzene	12 U		108	114	106	112	105	2	82-124/25
591-78-6	2-Hexanone	61 U		538	360	67	331	62*	8	67-130/29
87-68-3	Hexachlorobutadiene	12 U		108	31.1	29*	24.3	23*	25	77-150/36
110-54-3	Hexane	12 U		108	65.1	60*	69.2	65	6	65-147/27
98-82-8	Isopropylbenzene	12 U		108	101	94	99.1	92	2	82-133/27
99-87-6	p-Isopropyltoluene	12 U		108	93.5	87	93.0	87	1	82-132/29
108-10-1	4-Methyl-2-pentanone	61 U		538	488	91	452	84	8	69-125/24
74-83-9	Methyl bromide	12 U		108	157	146	111	104	34*	60-146/31
74-87-3	Methyl chloride	12 U		108	123	114	98.0	91	23	58-163/26
74-95-3	Methylene bromide	12 U		108	124	115	115	107	8	75-128/26
75-09-2	Methylene chloride	24 U		108	136	126	112	105	19	62-140/25
78-93-3	Methyl ethyl ketone	61 U		538	280	52*	217	40*	25*	66-134/23
1634-04-4	Methyl Tert Butyl Ether	12 U		108	102	95	90.6	85	12	70-131/25
91-20-3	Naphthalene	12 U		108	32.1	30*	33.3	31*	4	59-143/31
103-65-1	n-Propylbenzene	12 U		108	135	125	137	128	1	78-129/29
100-42-5	Styrene	12 U		108	87.8	82	81.1	76*	8	79-123/28
630-20-6	1,1,1,2-Tetrachloroethane	12 U		108	97.6	91	84.9	79*	14	81-121/25
71-55-6	1,1,1-Trichloroethane	12 UJ	J	108	150	139*	121	113	21	80-133/27
79-34-5	1,1,2,2-Tetrachloroethane	12 UJQ	JQ	108	153	142*	140	131*	9	70-128/30
79-00-5	1,1,2-Trichloroethane	12 U		108	116	108	113	105	3	76-118/28
87-61-6	1,2,3-Trichlorobenzene	12 U		108	23.6	22*	23.4	22*	1	78-136/34
96-18-4	1,2,3-Trichloropropane	12 U		108	200	186*	164	153*	20	74-125/30
120-82-1	1,2,4-Trichlorobenzene	12 U		108	29.0	27*	26.6	25*	9	82-137/32
95-63-6	1,2,4-Trimethylbenzene	12 U		108	127	118	125	117	2	77-129/29
108-67-8	1,3,5-Trimethylbenzene	12 U		108	128	119	127	119	1	79-129/31
127-18-4	Tetrachloroethylene	12 U		108	111	103	111	104	0	79-132/27
108-88-3	Toluene	12 U		108	132	123	125	117	5	80-123/26
79-01-6	Trichloroethylene	12 UJ	J	108	142	132	125	117	13	78-132/28
75-69-4	Trichlorofluoromethane	12 U		108	168	156*	127	119	28	67-149/29
75-01-4	Vinyl chloride	12 UJ	J	108	141	131	116	108	19	60-145/29
108-05-4	Vinyl Acetate	61 U		538	79.3	15*	60.2	11*	27	25-164/35
	m,p-Xylene	24 U		215	248	115	234	109	6	82-128/25
95-47-6	o-Xylene	12 U		108	108	100	101	94	7	82-126/25

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F77189
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F77247-6MS	G0067670.D	1	10/20/10	MM	n/a	n/a	VG2558
F77247-6MSD	G0067671.D	1	10/20/10	MM	n/a	n/a	VG2558
F77247-6	G0067668.D	1	10/20/10	MM	n/a	n/a	VG2558

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77189-2

CAS No.	Surrogate Recoveries	MS	MSD	F77247-6	Limits
1868-53-7	Dibromofluoromethane	109%	100%	106%	80-121%
2037-26-5	Toluene-D8	114%	112%	114%	71-130%
460-00-4	4-Bromofluorobenzene	130%	132%	129%Q	59-148%
17060-07-0	1,2-Dichloroethane-D4	107%	98%	120%	77-123%

Southeast ACCUTEST LABORATORIES

GC/MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: F77189
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34713-MB	L048640.D	1	10/25/10	NAF	10/15/10	OP34713	SL2491

The QC reported here applies to the following samples: **Method:** SW846 8270C

F77189-1, F77189-2, F77189-3

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	830	330	ug/kg	
95-57-8	2-Chlorophenol	ND	170	33	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	170	33	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	170	33	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	170	37	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	830	330	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	330	33	ug/kg	
95-48-7	2-Methylphenol	ND	170	33	ug/kg	
	3&4-Methylphenol	ND	170	33	ug/kg	
88-75-5	2-Nitrophenol	ND	170	33	ug/kg	
100-02-7	4-Nitrophenol	ND	830	330	ug/kg	
87-86-5	Pentachlorophenol	ND	830	330	ug/kg	
108-95-2	Phenol	ND	170	33	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	170	33	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	170	33	ug/kg	
83-32-9	Acenaphthene	ND	170	33	ug/kg	
208-96-8	Acenaphthylene	ND	170	33	ug/kg	
62-53-3	Aniline	ND	170	37	ug/kg	
120-12-7	Anthracene	ND	170	33	ug/kg	
92-87-5	Benzidine	ND	1700	700	ug/kg	
56-55-3	Benzo(a)anthracene	ND	170	33	ug/kg	
50-32-8	Benzo(a)pyrene	ND	170	33	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	170	33	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	170	33	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	170	33	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	170	33	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	330	67	ug/kg	
100-51-6	Benzyl Alcohol	ND	170	33	ug/kg	
91-58-7	2-Chloronaphthalene	ND	170	33	ug/kg	
106-47-8	4-Chloroaniline	ND	170	33	ug/kg	
86-74-8	Carbazole	ND	170	33	ug/kg	
218-01-9	Chrysene	ND	170	33	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	170	33	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	170	33	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	170	33	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	170	33	ug/kg	

Method Blank Summary

Job Number: F77189
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34713-MB	L048640.D	1	10/25/10	NAF	10/15/10	OP34713	SL2491

The QC reported here applies to the following samples: **Method:** SW846 8270C

F77189-1, F77189-2, F77189-3

CAS No.	Compound	Result	RL	MDL	Units	Q
95-50-1	1,2-Dichlorobenzene	ND	170	67	ug/kg	
122-66-7	1,2-Diphenylhydrazine	ND	170	33	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	170	67	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	170	67	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	170	33	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	170	33	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	330	67	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	170	33	ug/kg	
132-64-9	Dibenzofuran	ND	170	33	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	330	67	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	330	67	ug/kg	
84-66-2	Diethyl phthalate	ND	330	170	ug/kg	
131-11-3	Dimethyl phthalate	ND	330	67	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	330	170	ug/kg	
206-44-0	Fluoranthene	ND	170	33	ug/kg	
86-73-7	Fluorene	ND	170	33	ug/kg	
118-74-1	Hexachlorobenzene	ND	170	33	ug/kg	
87-68-3	Hexachlorobutadiene	ND	170	33	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	170	33	ug/kg	
67-72-1	Hexachloroethane	ND	170	83	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	170	33	ug/kg	
78-59-1	Isophorone	ND	170	33	ug/kg	
90-12-0	1-Methylnaphthalene	ND	170	33	ug/kg	
91-57-6	2-Methylnaphthalene	ND	170	33	ug/kg	
88-74-4	2-Nitroaniline	ND	330	67	ug/kg	
99-09-2	3-Nitroaniline	ND	330	67	ug/kg	
100-01-6	4-Nitroaniline	ND	330	67	ug/kg	
91-20-3	Naphthalene	ND	170	33	ug/kg	
98-95-3	Nitrobenzene	ND	170	33	ug/kg	
62-75-9	N-Nitrosodimethylamine	ND	330	67	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	170	33	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	170	33	ug/kg	
85-01-8	Phenanthrene	ND	170	33	ug/kg	
129-00-0	Pyrene	ND	170	33	ug/kg	
110-86-1	Pyridine	ND	330	83	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	170	33	ug/kg	

Method Blank Summary

Job Number: F77189
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34713-MB	L048640.D	1	10/25/10	NAF	10/15/10	OP34713	SL2491

The QC reported here applies to the following samples: **Method:** SW846 8270C

F77189-1, F77189-2, F77189-3

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	75%	40-102%
4165-62-2	Phenol-d5	78%	41-100%
118-79-6	2,4,6-Tribromophenol	80%	42-108%
4165-60-0	Nitrobenzene-d5	75%	40-105%
321-60-8	2-Fluorobiphenyl	78%	43-107%
1718-51-0	Terphenyl-d14	77%	45-119%

Method Blank Summary

Job Number: F77189
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34713-MB	L048668.D	1	10/26/10	NAF	10/15/10	OP34713	SL2492

The QC reported here applies to the following samples: **Method:** SW846 8270C

F77189-1, F77189-2, F77189-3

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	830	330	ug/kg	
95-57-8	2-Chlorophenol	ND	170	33	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	170	33	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	170	33	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	170	37	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	830	330	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	330	33	ug/kg	
95-48-7	2-Methylphenol	ND	170	33	ug/kg	
	3&4-Methylphenol	ND	170	33	ug/kg	
88-75-5	2-Nitrophenol	ND	170	33	ug/kg	
100-02-7	4-Nitrophenol	ND	830	330	ug/kg	
87-86-5	Pentachlorophenol	ND	830	330	ug/kg	
108-95-2	Phenol	ND	170	33	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	170	33	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	170	33	ug/kg	
83-32-9	Acenaphthene	ND	170	33	ug/kg	
208-96-8	Acenaphthylene	ND	170	33	ug/kg	
62-53-3	Aniline	ND	170	37	ug/kg	
120-12-7	Anthracene	ND	170	33	ug/kg	
92-87-5	Benzidine	ND	1700	700	ug/kg	
56-55-3	Benzo(a)anthracene	ND	170	33	ug/kg	
50-32-8	Benzo(a)pyrene	ND	170	33	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	170	33	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	170	33	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	170	33	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	170	33	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	330	67	ug/kg	
100-51-6	Benzyl Alcohol	ND	170	33	ug/kg	
91-58-7	2-Chloronaphthalene	ND	170	33	ug/kg	
106-47-8	4-Chloroaniline	ND	170	33	ug/kg	
86-74-8	Carbazole	ND	170	33	ug/kg	
218-01-9	Chrysene	ND	170	33	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	170	33	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	170	33	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	170	33	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	170	33	ug/kg	

Method Blank Summary

Job Number: F77189
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34713-MB	L048668.D	1	10/26/10	NAF	10/15/10	OP34713	SL2492

The QC reported here applies to the following samples: **Method:** SW846 8270C

F77189-1, F77189-2, F77189-3

CAS No.	Compound	Result	RL	MDL	Units	Q
95-50-1	1,2-Dichlorobenzene	ND	170	67	ug/kg	
122-66-7	1,2-Diphenylhydrazine	ND	170	33	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	170	67	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	170	67	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	170	33	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	170	33	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	330	67	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	170	33	ug/kg	
132-64-9	Dibenzofuran	ND	170	33	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	330	67	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	330	67	ug/kg	
84-66-2	Diethyl phthalate	ND	330	170	ug/kg	
131-11-3	Dimethyl phthalate	ND	330	67	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	330	170	ug/kg	
206-44-0	Fluoranthene	ND	170	33	ug/kg	
86-73-7	Fluorene	ND	170	33	ug/kg	
118-74-1	Hexachlorobenzene	ND	170	33	ug/kg	
87-68-3	Hexachlorobutadiene	ND	170	33	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	170	33	ug/kg	
67-72-1	Hexachloroethane	ND	170	83	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	170	33	ug/kg	
78-59-1	Isophorone	ND	170	33	ug/kg	
90-12-0	1-Methylnaphthalene	ND	170	33	ug/kg	
91-57-6	2-Methylnaphthalene	ND	170	33	ug/kg	
88-74-4	2-Nitroaniline	ND	330	67	ug/kg	
99-09-2	3-Nitroaniline	ND	330	67	ug/kg	
100-01-6	4-Nitroaniline	ND	330	67	ug/kg	
91-20-3	Naphthalene	ND	170	33	ug/kg	
98-95-3	Nitrobenzene	ND	170	33	ug/kg	
62-75-9	N-Nitrosodimethylamine	ND	330	67	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	170	33	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	170	33	ug/kg	
85-01-8	Phenanthrene	ND	170	33	ug/kg	
129-00-0	Pyrene	ND	170	33	ug/kg	
110-86-1	Pyridine	ND	330	83	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	170	33	ug/kg	

Method Blank Summary

Job Number: F77189
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34713-MB	L048668.D	1	10/26/10	NAF	10/15/10	OP34713	SL2492

The QC reported here applies to the following samples: **Method:** SW846 8270C

F77189-1, F77189-2, F77189-3

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	74%	40-102%
4165-62-2	Phenol-d5	77%	41-100%
118-79-6	2,4,6-Tribromophenol	79%	42-108%
4165-60-0	Nitrobenzene-d5	72%	40-105%
321-60-8	2-Fluorobiphenyl	79%	43-107%
1718-51-0	Terphenyl-d14	73%	45-119%

Blank Spike Summary

Job Number: F77189
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34713-BS	L048639.D	1	10/25/10	NAF	10/15/10	OP34713	SL2491

The QC reported here applies to the following samples: **Method:** SW846 8270C

F77189-1, F77189-2, F77189-3

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
65-85-0	Benzoic Acid	3330	2080	62	44-116
95-57-8	2-Chlorophenol	1670	1280	77	54-97
59-50-7	4-Chloro-3-methyl phenol	1670	1390	83	59-102
120-83-2	2,4-Dichlorophenol	1670	1360	82	60-101
105-67-9	2,4-Dimethylphenol	1670	1160	70	49-89
51-28-5	2,4-Dinitrophenol	3330	2560	77	39-107
534-52-1	4,6-Dinitro-o-cresol	3330	2710	81	58-109
95-48-7	2-Methylphenol	1670	1280	77	53-94
	3&4-Methylphenol	3330	2570	77	54-95
88-75-5	2-Nitrophenol	1670	1390	83	55-96
100-02-7	4-Nitrophenol	3330	2510	75	56-106
87-86-5	Pentachlorophenol	3330	2640	79	50-115
108-95-2	Phenol	1670	1250	75	55-99
95-95-4	2,4,5-Trichlorophenol	1670	1440	86	60-101
88-06-2	2,4,6-Trichlorophenol	1670	1380	83	60-100
83-32-9	Acenaphthene	1670	1350	81	59-97
208-96-8	Acenaphthylene	1670	1330	80	58-98
62-53-3	Aniline	1670	977	59	38-92
120-12-7	Anthracene	1670	1340	80	61-104
56-55-3	Benzo(a)anthracene	1670	1330	80	60-106
50-32-8	Benzo(a)pyrene	1670	1290	77	59-102
205-99-2	Benzo(b)fluoranthene	1670	1320	79	60-107
191-24-2	Benzo(g,h,i)perylene	1670	1230	74	56-103
207-08-9	Benzo(k)fluoranthene	1670	1300	78	61-107
101-55-3	4-Bromophenyl phenyl ether	1670	1320	79	60-104
85-68-7	Butyl benzyl phthalate	1670	1290	77	57-110
100-51-6	Benzyl Alcohol	1670	1280	77	51-102
91-58-7	2-Chloronaphthalene	1670	1290	77	57-95
106-47-8	4-Chloroaniline	1670	570	34	19-85
86-74-8	Carbazole	1670	1340	80	60-106
218-01-9	Chrysene	1670	1320	79	60-107
111-91-1	bis(2-Chloroethoxy)methane	1670	1260	76	51-89
111-44-4	bis(2-Chloroethyl)ether	1670	1160	70	50-96
108-60-1	bis(2-Chloroisopropyl)ether	1670	1100	66	44-94
7005-72-3	4-Chlorophenyl phenyl ether	1670	1330	80	60-101
95-50-1	1,2-Dichlorobenzene	1670	1220	73	47-91

Blank Spike Summary

Job Number: F77189
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34713-BS	L048639.D	1	10/25/10	NAF	10/15/10	OP34713	SL2491

The QC reported here applies to the following samples: **Method:** SW846 8270C

F77189-1, F77189-2, F77189-3

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
122-66-7	1,2-Diphenylhydrazine	1670	1330	80	58-104
541-73-1	1,3-Dichlorobenzene	1670	1190	71	45-86
106-46-7	1,4-Dichlorobenzene	1670	1210	73	45-88
121-14-2	2,4-Dinitrotoluene	1670	1430	86	59-103
606-20-2	2,6-Dinitrotoluene	1670	1410	85	57-99
91-94-1	3,3'-Dichlorobenzidine	1670	569	34	34-88
53-70-3	Dibenzo(a,h)anthracene	1670	1270	76	57-105
132-64-9	Dibenzofuran	1670	1280	77	58-103
84-74-2	Di-n-butyl phthalate	1670	1270	76	59-105
117-84-0	Di-n-octyl phthalate	1670	1310	79	59-117
84-66-2	Diethyl phthalate	1670	1340	80	59-106
131-11-3	Dimethyl phthalate	1670	1360	82	60-100
117-81-7	bis(2-Ethylhexyl)phthalate	1670	1290	77	57-111
206-44-0	Fluoranthene	1670	1330	80	60-110
86-73-7	Fluorene	1670	1350	81	60-99
118-74-1	Hexachlorobenzene	1670	1310	79	58-103
87-68-3	Hexachlorobutadiene	1670	1280	77	49-95
77-47-4	Hexachlorocyclopentadiene	1670	1270	76	36-94
67-72-1	Hexachloroethane	1670	1230	74	44-89
193-39-5	Indeno(1,2,3-cd)pyrene	1670	1230	74	57-104
78-59-1	Isophorone	1670	1010	61	58-97
90-12-0	1-Methylnaphthalene	1670	1260	76	55-93
91-57-6	2-Methylnaphthalene	1670	1270	76	57-103
88-74-4	2-Nitroaniline	1670	1640	98	53-106
99-09-2	3-Nitroaniline	1670	911	55	29-85
100-01-6	4-Nitroaniline	1670	1280	77	49-104
91-20-3	Naphthalene	1670	1260	76	54-93
98-95-3	Nitrobenzene	1670	1260	76	53-92
62-75-9	N-Nitrosodimethylamine	1670	1100	66	37-88
621-64-7	N-Nitroso-di-n-propylamine	1670	1220	73	49-94
86-30-6	N-Nitrosodiphenylamine	1670	1380	83	53-107
85-01-8	Phenanthrene	1670	1320	79	61-103
129-00-0	Pyrene	1670	1360	82	58-109
110-86-1	Pyridine	1670	920	55	30-68
120-82-1	1,2,4-Trichlorobenzene	1670	1210	73	52-93

Blank Spike Summary

Job Number: F77189
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34713-BS	L048639.D	1	10/25/10	NAF	10/15/10	OP34713	SL2491

The QC reported here applies to the following samples: **Method:** SW846 8270C

F77189-1, F77189-2, F77189-3

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	79%	40-102%
4165-62-2	Phenol-d5	79%	41-100%
118-79-6	2,4,6-Tribromophenol	84%	42-108%
4165-60-0	Nitrobenzene-d5	77%	40-105%
321-60-8	2-Fluorobiphenyl	79%	43-107%
1718-51-0	Terphenyl-d14	82%	45-119%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F77189
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34713-MS	L048644.D	1	10/25/10	NAF	10/15/10	OP34713	SL2491
OP34713-MSD	L048645.D	1	10/25/10	NAF	10/15/10	OP34713	SL2491
F77189-1	L048643.D	1	10/25/10	NAF	10/15/10	OP34713	SL2491

The QC reported here applies to the following samples: **Method:** SW846 8270C

F77189-1, F77189-2, F77189-3

CAS No.	Compound	F77189-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		4480	2060	46	1950	43*	5	44-116/36
95-57-8	2-Chlorophenol	ND		2240	1580	71	1660	73	5	54-97/31
59-50-7	4-Chloro-3-methyl phenol	ND		2240	1590	71	1690	75	6	59-102/27
120-83-2	2,4-Dichlorophenol	ND		2240	1650	74	1740	77	5	60-101/30
105-67-9	2,4-Dimethylphenol	ND		2240	1430	64	1470	65	3	49-89/31
51-28-5	2,4-Dinitrophenol	ND		4480	2480	55	2400	53	3	39-107/40
534-52-1	4,6-Dinitro-o-cresol	ND		4480	2790	62	2770	61	1	58-109/37
95-48-7	2-Methylphenol	ND		2240	1550	69	1630	72	5	53-94/29
	3&4-Methylphenol	ND		4480	3130	70	3280	72	5	54-95/31
88-75-5	2-Nitrophenol	ND		2240	1700	76	1750	77	3	55-96/30
100-02-7	4-Nitrophenol	ND		4480	2810	63	3110	69	10	56-106/29
87-86-5	Pentachlorophenol	ND		4480	2910	65	3040	67	4	50-115/33
108-95-2	Phenol	ND		2240	1530	68	1630	72	6	55-99/28
95-95-4	2,4,5-Trichlorophenol	ND		2240	1700	76	1790	79	5	60-101/28
88-06-2	2,4,6-Trichlorophenol	ND		2240	1680	75	1800	79	7	60-100/27
83-32-9	Acenaphthene	ND		2240	1670	75	1750	77	5	59-97/29
208-96-8	Acenaphthylene	ND		2240	1630	73	1730	76	6	58-98/30
62-53-3	Aniline	ND		2240	1090	49	1220	54	11	38-92/38
120-12-7	Anthracene	ND		2240	1570	70	1660	73	6	61-104/29
56-55-3	Benzo(a)anthracene	ND		2240	1530	68	1650	73	8	60-106/31
50-32-8	Benzo(a)pyrene	ND		2240	1460	65	1560	69	7	59-102/32
205-99-2	Benzo(b)fluoranthene	ND		2240	1530	68	1590	70	4	60-107/31
191-24-2	Benzo(g,h,i)perylene	ND		2240	1370	61	1450	64	6	56-103/32
207-08-9	Benzo(k)fluoranthene	ND		2240	1470	66	1620	71	10	61-107/30
101-55-3	4-Bromophenyl phenyl ether	ND		2240	1570	70	1660	73	6	60-104/26
85-68-7	Butyl benzyl phthalate	ND		2240	1470	66	1570	69	7	57-110/28
100-51-6	Benzyl Alcohol	ND		2240	1590	71	1610	71	1	51-102/34
91-58-7	2-Chloronaphthalene	ND		2240	1590	71	1670	74	5	57-95/28
106-47-8	4-Chloroaniline	ND		2240	468	21	675	30	36*	19-85/34
86-74-8	Carbazole	ND		2240	1520	68	1600	71	5	60-106/30
218-01-9	Chrysene	ND		2240	1500	67	1620	71	8	60-107/31
111-91-1	bis(2-Chloroethoxy)methane	ND		2240	1530	68	1580	70	3	51-89/30
111-44-4	bis(2-Chloroethyl)ether	ND		2240	1480	66	1520	67	3	50-96/33
108-60-1	bis(2-Chloroisopropyl)ether	ND		2240	1330	59	1370	60	3	44-94/32
7005-72-3	4-Chlorophenyl phenyl ether	ND		2240	1600	72	1700	75	6	60-101/26
95-50-1	1,2-Dichlorobenzene	ND		2240	1480	66	1540	68	4	47-91/35

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F77189
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34713-MS	L048644.D	1	10/25/10	NAF	10/15/10	OP34713	SL2491
OP34713-MSD	L048645.D	1	10/25/10	NAF	10/15/10	OP34713	SL2491
F77189-1	L048643.D	1	10/25/10	NAF	10/15/10	OP34713	SL2491

The QC reported here applies to the following samples: **Method:** SW846 8270C

F77189-1, F77189-2, F77189-3

CAS No.	Compound	F77189-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
122-66-7	1,2-Diphenylhydrazine	ND		2240	1560	70	1630	72	4	58-104/27
541-73-1	1,3-Dichlorobenzene	ND		2240	1430	64	1500	66	5	45-86/36
106-46-7	1,4-Dichlorobenzene	ND		2240	1450	65	1520	67	5	45-88/36
121-14-2	2,4-Dinitrotoluene	ND		2240	1640	73	1760	78	7	59-103/30
606-20-2	2,6-Dinitrotoluene	ND		2240	1620	72	1720	76	6	57-99/30
91-94-1	3,3'-Dichlorobenzidine	ND		2240	757	34	908	40	18	34-88/31
53-70-3	Dibenzo(a,h)anthracene	ND		2240	1350	60	1520	67	12	57-105/29
132-64-9	Dibenzofuran	ND		2240	1520	68	1580	70	4	58-103/27
84-74-2	Di-n-butyl phthalate	ND		2240	1450	65	1510	67	4	59-105/27
117-84-0	Di-n-octyl phthalate	ND		2240	1520	68	1610	71	6	59-117/28
84-66-2	Diethyl phthalate	ND		2240	1530	68	1650	73	8	59-106/27
131-11-3	Dimethyl phthalate	ND		2240	1600	72	1700	75	6	60-100/26
117-81-7	bis(2-Ethylhexyl)phthalate	ND		2240	1460	65	1550	68	6	57-111/29
206-44-0	Fluoranthene	ND		2240	1490	67	1590	70	6	60-110/32
86-73-7	Fluorene	ND		2240	1640	73	1730	76	5	60-99/30
118-74-1	Hexachlorobenzene	ND		2240	1550	69	1620	71	4	58-103/27
87-68-3	Hexachlorobutadiene	ND		2240	1570	70	1610	71	3	49-95/33
77-47-4	Hexachlorocyclopentadiene	ND		2240	1550	69	1570	69	1	36-94/41
67-72-1	Hexachloroethane	ND		2240	1450	65	1500	66	3	44-89/38
193-39-5	Indeno(1,2,3-cd)pyrene	ND		2240	1390	62	1520	67	9	57-104/33
78-59-1	Isophorone	ND		2240	1230	55*	1290	57*	5	58-97/30
90-12-0	1-Methylnaphthalene	ND		2240	1520	68	1590	70	5	55-93/33
91-57-6	2-Methylnaphthalene	ND		2240	1550	69	1570	69	1	57-103/32
88-74-4	2-Nitroaniline	ND		2240	1910	85	2000	88	5	53-106/29
99-09-2	3-Nitroaniline	ND		2240	1040	46	1240	55	18	29-85/31
100-01-6	4-Nitroaniline	ND		2240	1360	61	1430	63	5	49-104/31
91-20-3	Naphthalene	ND		2240	1520	68	1590	70	5	54-93/32
98-95-3	Nitrobenzene	ND		2240	1550	69	1600	71	3	53-92/32
62-75-9	N-Nitrosodimethylamine	ND		2240	1330	59	1390	61	4	37-88/34
621-64-7	N-Nitroso-di-n-propylamine	ND		2240	1500	67	1570	69	5	49-94/28
86-30-6	N-Nitrosodiphenylamine	ND		2240	1590	71	1690	75	6	53-107/28
85-01-8	Phenanthrene	ND		2240	1530	68	1620	71	6	61-103/32
129-00-0	Pyrene	ND		2240	1580	71	1680	74	6	58-109/33
110-86-1	Pyridine	ND		2240	1120	50	1060	47	6	30-68/38
120-82-1	1,2,4-Trichlorobenzene	ND		2240	1470	66	1520	67	3	52-93/32

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F77189
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34713-MS	L048644.D	1	10/25/10	NAF	10/15/10	OP34713	SL2491
OP34713-MSD	L048645.D	1	10/25/10	NAF	10/15/10	OP34713	SL2491
F77189-1	L048643.D	1	10/25/10	NAF	10/15/10	OP34713	SL2491

The QC reported here applies to the following samples: **Method:** SW846 8270C

F77189-1, F77189-2, F77189-3

CAS No.	Surrogate Recoveries	MS	MSD	F77189-1	Limits
367-12-4	2-Fluorophenol	73%	75%	71%	40-102%
4165-62-2	Phenol-d5	72%	74%	74%	41-100%
118-79-6	2,4,6-Tribromophenol	73%	75%	76%	42-108%
4165-60-0	Nitrobenzene-d5	71%	71%	70%	40-105%
321-60-8	2-Fluorobiphenyl	75%	76%	73%	43-107%
1718-51-0	Terphenyl-d14	71%	74%	68%	45-119%

Southeast ACCUTEST LABORATORIES

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: F77189
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR2448-MB	QR056299.D	1	10/14/10	AH	n/a	n/a	GQR2448

The QC reported here applies to the following samples: **Method:** SW846 8015

F77189-1, F77189-2, F77189-3

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	5.0	2.5	mg/kg	

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	94%	56-136%
98-08-8	aaa-Trifluorotoluene	77%	61-121%

Blank Spike Summary

Job Number: F77189
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR2448-BS	QR056298.D	1	10/14/10	AH	n/a	n/a	GQR2448

The QC reported here applies to the following samples: **Method:** SW846 8015

F77189-1, F77189-2, F77189-3

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-GRO (C6-C10)	20	19.3	97	74-121

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	106%	56-136%
98-08-8	aaa-Trifluorotoluene	100%	61-121%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F77189
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F77189-1MS	QR056313.D	1	10/14/10	AH	n/a	n/a	GQR2448
F77189-1MSD	QR056314.D	1	10/14/10	AH	n/a	n/a	GQR2448
F77189-1	QR056304.D	1	10/14/10	AH	n/a	n/a	GQR2448

The QC reported here applies to the following samples: **Method:** SW846 8015

F77189-1, F77189-2, F77189-3

CAS No.	Compound	F77189-1 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	ND		29.6	28.3	96	29.0	98	2	74-121/17

CAS No.	Surrogate Recoveries	MS	MSD	F77189-1	Limits
460-00-4	4-Bromofluorobenzene	96%	103%	95%	56-136%
98-08-8	aaa-Trifluorotoluene	98%	103%	81%	61-121%

Southeast ACCUTEST LABORATORIES

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: F77189
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34709-MB	XX053696.D	1	10/20/10	NJ	10/14/10	OP34709	GXX801

The QC reported here applies to the following samples: **Method:** SW846 8082

F77189-1, F77189-2, F77189-3

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	17	8.3	ug/kg	
11104-28-2	Aroclor 1221	ND	17	13	ug/kg	
11141-16-5	Aroclor 1232	ND	17	13	ug/kg	
53469-21-9	Aroclor 1242	ND	17	8.3	ug/kg	
12672-29-6	Aroclor 1248	ND	17	8.3	ug/kg	
11097-69-1	Aroclor 1254	ND	17	8.3	ug/kg	
11096-82-5	Aroclor 1260	ND	17	8.3	ug/kg	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	95%	44-126%
2051-24-3	Decachlorobiphenyl	89%	39-157%

Method Blank Summary

Job Number: F77189
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34709-MB	XX053740.D	1	10/21/10	NJ	10/14/10	OP34709	GXX802

The QC reported here applies to the following samples: **Method:** SW846 8082

F77189-1, F77189-2, F77189-3

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	17	8.3	ug/kg	
11104-28-2	Aroclor 1221	ND	17	13	ug/kg	
11141-16-5	Aroclor 1232	ND	17	13	ug/kg	
53469-21-9	Aroclor 1242	ND	17	8.3	ug/kg	
12672-29-6	Aroclor 1248	ND	17	8.3	ug/kg	
11097-69-1	Aroclor 1254	ND	17	8.3	ug/kg	
11096-82-5	Aroclor 1260	ND	17	8.3	ug/kg	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	94%	44-126%
2051-24-3	Decachlorobiphenyl	90%	39-157%

Method Blank Summary

Job Number: F77189
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34693-MB	YY17987.D	1	10/15/10	MV	10/13/10	OP34693	GYY657

The QC reported here applies to the following samples: **Method:** SW846 8015 M

F77189-1, F77189-2, F77189-3

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C22)	ND	8.3	5.0	mg/kg	
	TPH (> C22-C36)	ND	8.3	5.0	mg/kg	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	91%	49-108%

Method Blank Summary

Job Number: F77189
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34693-MB	YY18030.D	1	10/18/10	MV	10/13/10	OP34693	GYY658

The QC reported here applies to the following samples: **Method:** SW846 8015 M

F77189-1, F77189-2, F77189-3

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C22)	ND	8.3	5.0	mg/kg	
	TPH (> C22-C36)	ND	8.3	5.0	mg/kg	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	81%	49-108%

Blank Spike Summary

Job Number: F77189
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34709-BS	XX053695.D	1	10/20/10	NJ	10/14/10	OP34709	GXX801

The QC reported here applies to the following samples: **Method:** SW846 8082

F77189-1, F77189-2, F77189-3

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
12674-11-2	Aroclor 1016	133	126	95	69-117
11096-82-5	Aroclor 1260	133	136	102	71-121

CAS No.	Surrogate Recoveries	BSP	Limits
877-09-8	Tetrachloro-m-xylene	92%	44-126%
2051-24-3	Decachlorobiphenyl	89%	39-157%

Blank Spike Summary

Job Number: F77189
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34693-BS	YY17986.D	1	10/15/10	MV	10/13/10	OP34693	GYY657

The QC reported here applies to the following samples: **Method:** SW846 8015 M

F77189-1, F77189-2, F77189-3

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH (C10-C22)	33.3	27.9	84	64-102
	TPH (> C22-C36)	33.3	30.8	92	52-131

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	86%	49-108%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F77189
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34709-MS	XX053702.D	1	10/20/10	NJ	10/14/10	OP34709	GXX801
OP34709-MSD	XX053703.D	1	10/20/10	NJ	10/14/10	OP34709	GXX801
F77189-1	XX053701.D	1	10/20/10	NJ	10/14/10	OP34709	GXX801

The QC reported here applies to the following samples: **Method:** SW846 8082

F77189-1, F77189-2, F77189-3

CAS No.	Compound	F77189-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
12674-11-2	Aroclor 1016	ND		181	166	92	166	92	0	69-117/26
11096-82-5	Aroclor 1260	ND		181	178	98	179	100	1	71-121/30

CAS No.	Surrogate Recoveries	MS	MSD	F77189-1	Limits
877-09-8	Tetrachloro-m-xylene	91%	91%	89%	44-126%
2051-24-3	Decachlorobiphenyl	90%	91%	87%	39-157%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F77189
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34693-MS	YY18031.D	1	10/18/10	MV	10/13/10	OP34693	GYY658
OP34693-MSD	YY18000.D	1	10/16/10	MV	10/13/10	OP34693	GYY657
F77189-1	YY17998.D	1	10/15/10	MV	10/13/10	OP34693	GYY657

The QC reported here applies to the following samples: **Method:** SW846 8015 M

F77189-1, F77189-2, F77189-3

CAS No.	Compound	F77189-1 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH (C10-C22)	ND		44.9	33.5	75	35.3	79	5	64-102/32
	TPH (> C22-C36)	ND		44.9	38.5	86	39.5	89	3	52-131/30

CAS No.	Surrogate Recoveries	MS	MSD	F77189-1	Limits
84-15-1	o-Terphenyl	78%	82%	70%	49-108%

Southeast ACCUTEST LABORATORIES

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: F77189
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19281
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date: 10/13/10

Metal	RL	IDL	MDL	MB raw	final
Aluminum	10	1	1	0.55	<10
Antimony	1.0	.1	.1	0.080	<1.0
Arsenic	0.50	.1	.1	-0.10	<0.50
Barium	10	.25	.5	-0.010	<10
Beryllium	0.25	.05	.05	-0.0050	<0.25
Cadmium	0.20	.05	.05	0.0	<0.20
Calcium	250	5	5	12.5	<250
Chromium	0.50	.05	.05	0.060	<0.50
Cobalt	2.5	.05	.05	-0.0050	<2.5
Copper	1.3	.1	.1	0.080	<1.3
Iron	15	1.5	1.5	10.2	* (a)
Lead	1.0	.05	.05	0.14	<1.0
Magnesium	250	5	5	-0.020	<250
Manganese	0.75	.05	.05	0.095	<0.75
Molybdenum	2.5	.05	.05		
Nickel	2.0	.05	.05	-0.010	<2.0
Potassium	500	25	25	0.25	<500
Selenium	1.0	.1	.2	0.015	<1.0
Silver	0.50	.05	.05	-0.015	<0.50
Sodium	500	38	38	80.8	<500
Strontium	0.50	.05	.05		
Thallium	0.50	.075	.1	0.065	<0.50
Tin	2.5	.05	.05		
Titanium	0.50	.1	.1		
Vanadium	2.5	.05	.05	-0.0050	<2.5
Zinc	1.0	.25	.25	0.17	<1.0

Associated samples MP19281: F77189-1, F77189-2, F77189-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) All sample results >10x method blank concentration.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F77189
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19281
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Metal	F77189-1 Original	DUP	RPD	QC Limits	F77189-1 Original	MS	Spikelot MPFLICP1	% Rec	QC Limits
Prep Date:			10/13/10					10/13/10	
Aluminum	3000	3170	5.5	0-20	3000	4790	1650	108.2	80-120
Antimony	0.35	0.34	2.9	0-20	0.35	18.6	30.6	59.6N(c)	80-120
Arsenic	0.75	0.64	15.8	0-20	0.75	118	123	95.7	80-120
Barium	25.5	26.6	4.2	0-20	25.5	145	123	97.5	80-120
Beryllium	0.14	0.14	0.0	0-20	0.14	2.9	3.06	90.1	80-120
Cadmium	0.32	0.36	11.8	0-20	0.32	2.5	3.06	71.1N(c)	80-120
Calcium	175000	171000	2.3	0-20	175000	173000	1530	-130.5(d	80-120
Chromium	3.7	3.7 (a)	0.0	0-20	3.7	17.5 (a)	12.3	112.6	80-120
Cobalt	1.2	1.2 (a)	0.0	0-20	1.2	31.6 (a)	30.6	99.2	80-120
Copper	2.4	2.4 (a)	0.0	0-20	2.4	19.1 (a)	15.3	109.0	80-120
Iron	2510	2580	2.8	0-20	2510	3780	1590	79.7N(c)	80-120
Lead	1.4	1.4 (a)	0.0	0-20	1.4	30.9 (a)	30.6	96.3	80-120
Magnesium	1540	1540	0.0	0-20	1540	2730	1530	77.7N(c)	80-120
Manganese	31.8	32.6	2.5	0-20	31.8	52.4	30.6	67.2N(c)	80-120
Molybdenum	anr								
Nickel	2.2	2.3 (a)	4.4	0-20	2.2	32.5 (a)	30.6	98.9	80-120
Potassium	704	746	5.8	0-20	704	2280	1530	102.9	80-120
Selenium	0.0	0.0 (a)	NC	0-20	0.0	130 (a)	123	106.1	80-120
Silver	0.0	0.0	NC	0-20	0.0	3.1	3.06	101.2	80-120
Sodium	125	77.6	46.8 (b)	0-20	125	1430	1530	85.2	80-120
Strontium									
Thallium	0.0	0.0 (a)	NC	0-20	0.0	116 (a)	123	94.6	80-120
Tin	anr								
Titanium									
Vanadium	7.5	7.6	1.3	0-20	7.5	34.7	30.6	88.8	80-120
Zinc	6.5	6.7 (a)	3.0	0-20	6.5	37.8 (a)	30.6	102.1	80-120

Associated samples MP19281: F77189-1, F77189-2, F77189-3

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.
(d) 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: F77189
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19281
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date: 10/13/10

Metal	F77189-1 Original	MSD	Spikelot MPFLICP1	% Rec	MSD RPD	QC Limit
Aluminum	3000	4720	1450	118.9	1.5	20
Antimony	0.35	15.7	26.8	57.3N(a)	16.9	20
Arsenic	0.75	105	107	97.3	11.7	20
Barium	25.5	131	107	98.5	10.1	20
Beryllium	0.14	2.6	2.68	91.9	10.9	20
Cadmium	0.32	2.2	2.68	70.2N(a)	12.8	20
Calcium	175000	177000	1340	149.4(b)	2.3	20
Chromium	3.7	16.1 (c)	10.7	115.7	8.3	20
Cobalt	1.2	26.1 (c)	26.8	93.0	19.1	20
Copper	2.4	17.6 (c)	13.4	113.5	8.2	20
Iron	2510	3860	1390	96.9	2.1	20
Lead	1.4	25.7 (c)	26.8	90.7	18.4	20
Magnesium	1540	2800	1340	94.1	2.5	20
Manganese	31.8	50.4	26.8	69.4N(a)	3.9	20
Molybdenum	anr					
Nickel	2.2	27.0 (c)	26.8	92.6	18.5	20
Potassium	704	2110	1340	105.0	7.7	20
Selenium	0.0	118 (c)	107	110.1	9.7	20
Silver	0.0	2.8	2.68	104.5	10.2	20
Sodium	125	1270	1340	85.5	11.9	20
Strontium						
Thallium	0.0	95.8 (c)	107	89.4	19.1	20
Tin	anr					
Titanium						
Vanadium	7.5	31.5	26.8	89.6	9.7	20
Zinc	6.5	34.9 (c)	26.8	106.0	8.0	20

Associated samples MP19281: F77189-1, F77189-2, F77189-3

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 and/or sample nonhomogeneity.
(b) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
(c) Elevated reporting limit(s) due to matrix interference.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: F77189
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19281
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date: 10/13/10

Metal	BSP Result	Spikelot MPFLICP1	% Rec	QC Limits
Aluminum	1260	1350	93.3	80-120
Antimony	22.4	25	89.6	80-120
Arsenic	83.7	100	83.7	80-120
Barium	96.6	100	96.6	80-120
Beryllium	2.5	2.5	100.0	80-120
Cadmium	2.3	2.5	92.0	80-120
Calcium	1180	1250	94.4	80-120
Chromium	10.4	10	104.0	80-120
Cobalt	23.0	25	92.0	80-120
Copper	12.7	12.5	101.6	80-120
Iron	1290	1300	99.2	80-120
Lead	22.6	25	90.4	80-120
Magnesium	1160	1250	92.8	80-120
Manganese	26.2	25	104.8	80-120
Molybdenum	anr			
Nickel	23.0	25	92.0	80-120
Potassium	1160	1250	92.8	80-120
Selenium	88.6	100	88.6	80-120
Silver	2.2	2.5	88.0	80-120
Sodium	1260	1250	100.8	80-120
Strontium				
Thallium	90.5	100	90.5	80-120
Tin	anr			
Titanium				
Vanadium	25.7	25	102.8	80-120
Zinc	24.1	25	96.4	80-120

Associated samples MP19281: F77189-1, F77189-2, F77189-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: F77189
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19281
Matrix Type: SOLID

Methods: SW846 6010B
Units: ug/l

Prep Date: 10/13/10

Metal	F77189-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum	59000	61100	3.6	0-10
Antimony	6.90	0.00	100.0(a)	0-10
Arsenic	14.8	0.00	100.0(a)	0-10
Barium	503	538	7.0	0-10
Beryllium	2.70	0.00	100.0(a)	0-10
Cadmium	6.30	0.00	100.0(a)	0-10
Calcium	3440000	3490000	1.3	0-10
Chromium	72.5	86.7	19.6 (a)	0-10
Cobalt	23.7	24.3	2.5	0-10
Copper	47.1	0.00	100.0(a)	0-10
Iron	49400	55100	11.5*(b)	0-10
Lead	27.9	0.00	100.0(a)	0-10
Magnesium	30300	32800	8.4	0-10
Manganese	627	745	18.7*(b)	0-10
Molybdenum	anr			
Nickel	43.0	43.0	0.0	0-10
Potassium	13900	14400	3.5	0-10
Selenium	0.00	0.00	NC	0-10
Silver	0.00	0.00	NC	0-10
Sodium	2460	0.00	100.0(a)	0-10
Strontium				
Thallium	0.00	0.00	NC	0-10
Tin	anr			
Titanium				
Vanadium	149	169	13.9*(b)	0-10
Zinc	129	0.00	100.0(a)	0-10

Associated samples MP19281: F77189-1, F77189-2, F77189-3

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.

POST DIGESTATE SPIKE SUMMARY

Login Number: F77189
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19281
Matrix Type: SOLID

Methods: SW846 6010B
Units: ug/l

Prep Date: 10/13/10

Metal	Sample ml	Final ml	F77189-1 Raw	Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum										
Antimony	9.8	10	6.9	6.762	105.2	0.2	5	100	98.4	-
Arsenic										
Barium										
Beryllium										
Cadmium	9.8	10	6.3	6.174	42.3	0.2	2.5	50	72.3 (a)	-
Calcium										
Chromium										
Cobalt										
Copper										
Iron	9.8	10	49420	48431.6	50060	0.2	150	3000	54.3 (a)	-
Lead										
Magnesium	9.8	10	30270	29664.6	33360	0.2	250	5000	73.9 (a)	-
Manganese	9.8	10	627.3	614.754	670.9	0.2	2.5	50	112.3	-
Molybdenum										
Nickel										
Potassium										
Selenium										
Silver										
Sodium										
Strontium										
Thallium										
Tin										
Titanium										
Vanadium	9.8	10	148.7	145.726	197.9	0.2	2.5	50	104.3	-
Zinc										

Associated samples MP19281: F77189-1, F77189-2, F77189-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(**) Corr. sample result = Raw * (sample volume / final volume)
(anr) Analyte not requested
(a) Spike recovery indicates matrix interference and/or outside control limits due to high level in sample relative to spike amount.

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: F77189
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19341
Matrix Type: SOLID

Methods: SW846 7471A
Units: mg/kg

Prep Date: 10/22/10

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.083	.0059	.01	-0.00092	<0.083

Associated samples MP19341: F77189-1, F77189-2, F77189-3

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: F77189
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19341
Matrix Type: SOLID

Methods: SW846 7471A
Units: mg/kg

Prep Date: 10/22/10 10/22/10

Metal	F77189-1 Original	DUP	RPD	QC Limits	F77189-1 Original	MS	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.0	0.015	200.0(a)	0-20	0.0	0.31	0.3	103.3	80-120

Associated samples MP19341: F77189-1, F77189-2, F77189-3

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.

9.2.2

9

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F77189
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19341
Matrix Type: SOLID

Methods: SW846 7471A
Units: mg/kg

Prep Date: 10/22/10

Metal	F77189-1 Original	MSD	Spikelot HGFLWS1	% Rec	MSD RPD	QC Limit
Mercury	0.0	0.32	0.319	100.4	3.2	20

Associated samples MP19341: F77189-1, F77189-2, F77189-3

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

9.2.2

9

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: F77189
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19341
Matrix Type: SOLID

Methods: SW846 7471A
Units: mg/kg

Prep Date: 10/22/10

Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.25	0.25	100.0	80-120

Associated samples MP19341: F77189-1, F77189-2, F77189-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

9.2.3

9

SERIAL DILUTION RESULTS SUMMARY

Login Number: F77189
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19341
Matrix Type: SOLID

Methods: SW846 7471A
Units: ug/l

Prep Date: 10/22/10

Metal	F77189-1 Original	SDL 1:5	%DIF	QC Limits
Mercury	0.00	0.00	NC	0-10

Associated samples MP19341: F77189-1, F77189-2, F77189-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

9.2.4

9

Southeast ACCUTEST LABORATORIES

Reissue #2
11/23/10

Technical Report for

Nation View

Holloman AFB; SWMU 8, ACM Investigation

8080014.03.020

Accutest Job Number: F77190

Sampling Dates: 10/08/10 - 10/09/10

Report to:

NationView

molive@bhate.com
tlucero@nationview.net; rrenvironmental@zianet.com; ywatts@bhate.com
ATTN: Marcia Olive

Total number of pages in report: **107**

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: Jean Dent-Smith 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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November 03, 2010

Ms. Marcia Olive
NationView
445 Union Blvd, Ste 129
Lakewood, CO 80228

RE: Accutest job F77190 Reissue

Dear Ms. Olive,

The final report for job number F77190 has been edited due to method reference correction.

Preparation method for metals references SW-846 3050A.

Please feel free to contact us if you have any questions or 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

November 22, 2010

Ms. Marcia Olive
Nation View
445 Union Blvd
Suite 129
Lakewood, CO 80228

RE: Accutest job F77190 Reissue 2

Dear Ms. Olive,

The final report for job number F77190 has been edited to reflect requested corrections. These edits have been incorporated into the revised report.

Sample -4 has been removed since it was also listed and analyzed on F77189.

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 6
Section 3: Sample Results 10
3.1: F77190-1: SWMU8-DP07-7 11
3.2: F77190-2: SWMU8-DP08-8 21
3.3: F77190-3: SWMU8-DP09-7 31
3.4: F77190-5: TRIP BLANK 41
Section 4: Misc. Forms 44
4.1: Chain of Custody 45
Section 5: GC/MS Volatiles - QC Data Summaries 48
5.1: Method Blank Summary 49
5.2: Blank Spike Summary 55
5.3: Matrix Spike/Matrix Spike Duplicate Summary 61
Section 6: GC/MS Semi-volatiles - QC Data Summaries 67
6.1: Method Blank Summary 68
6.2: Blank Spike Summary 74
6.3: Matrix Spike/Matrix Spike Duplicate Summary 77
Section 7: GC Volatiles - QC Data Summaries 80
7.1: Method Blank Summary 81
7.2: Blank Spike Summary 83
7.3: Matrix Spike/Matrix Spike Duplicate Summary 85
Section 8: GC Semi-volatiles - QC Data Summaries 87
8.1: Method Blank Summary 88
8.2: Blank Spike Summary 92
8.3: Matrix Spike/Matrix Spike Duplicate Summary 94
Section 9: Metals Analysis - QC Data Summaries 96
9.1: Prep QC MP19313: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn 97
9.2: Prep QC MP19341: Hg 103

Accutest Laboratories

Sample Summary

Nation View

Job No: F77190

Holloman AFB; SWMU 8, ACM Investigation
Project No: 8080014.03.020

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
F77190-1	10/08/10	15:50	JM	10/12/10	SO	Soil	SWMU8-DP07-7
F77190-2	10/08/10	16:50	JM	10/12/10	SO	Soil	SWMU8-DP08-8
F77190-3	10/09/10	11:35	JM	10/12/10	SO	Soil	SWMU8-DP09-7
F77190-5	10/08/10	00:00	JM	10/12/10	SO	Trip Blank Soil	TRIP BLANK

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Nation View **Job No:** F77190

Site: Holloman AFB; SWMU 8, ACM Investigation **Report Date** 11/1/2010 9:08:28 AM

4 Samples and 1 Trip Blank were collected between 10/08/2010 and 10/09/2010 and were received at Accutest on 10/12/2010 properly preserved, at 3.8 Deg. C and intact. These Samples received an Accutest job number of F77190. 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: SO **Batch ID:** VG2554

All samples were analyzed within the recommended method holding time.

Sample(s) F77190-3MS, F77190-3MSD were used as the QC samples indicated.

Sample(s) F77190-3 have compound(s) reported with a “B” qualifier, indicating analyte is found in the associated method blank.

F77190-3 for Methylene chloride: Suspected laboratory contaminant.

SB/MS/MSD Recovery(s) for Acetone, Dichlorodifluoromethane are outside control limits. Sample recoveries are non-detect for Acetone, Dichlorodifuoromethane.

Matrix Spike Recovery(s) for 2-Hexanone, Methyl bromide, Methyl ethyl ketone are outside control limits. Probable cause due to matrix interference. For method performance in a clean matrix, refer to SB.

Matrix Spike Duplicate Recovery(s) for Acrolein, Methyl bromide, Methyl ethyl ketone are outside control limits. Probable cause due to matrix interference. For method performance in a clean matrix, refer to SB.

RPD(s) for MSD for Acrolein are outside control limits for sample F77190-3MSD. Probable cause due to sample homogeneity.

F77190-3 for Acetone: ICV and associated BS recovery outside control limits.

F77190-3 for 1,1,2-Trichloroethane: CCV outside of control limits; results may be biased low.

Matrix: SO **Batch ID:** VH2436

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) F77190-1MS, F77190-1MSD were used as the QC samples indicated.

SB/MS/MSD Recovery(s) for Acetone, Dichlorodifluoromethane, Methyl bromide are outside control limits. Sample recoveries are non-detect for Acetone, Dichlorodifluoromethane, Methyl bromide.

Matrix Spike Recovery(s) for 2-Hexanone, Dibromochloromethane, Methyl ethyl ketone are outside control limits. Probable cause due to matrix interference. For method performance in a clean matrix, refer to SB.

Matrix Spike Duplicate Recovery(s) for 1,2,3-Trichloropropane, 2-Hexanone, Dibromochloromethane, Methyl ethyl ketone are outside control limits. Probable cause due to matrix interference. For method performance in a clean matrix, refer to SB.

F77190-2: Methanol extract analysis required due to matrix interference (non-target analytes present above calibration range).

F77190-2 for Methylene chloride: Suspected laboratory contaminant.

F77190-1 for Acetone: ICV and associated BS recovery outside control limits.

F77190-2 for Acetone: ICV and associated BS recovery outside control limits.

F77190-4 for Acetone: ICV and associated BS recovery outside control limits.

F77190-5 for Acetone: ICV and associated BS recovery outside control limits.

Extractables by GCMS By Method SW846 8270C

Matrix: SO **Batch ID:** OP34713

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.

Sample(s) F77189-1MS, F77189-1MSD were used as the QC samples indicated.

Extractables by GCMS By Method SW846 8270C

Matrix: SO **Batch ID:** OP34713

Matrix Spike Recovery(s) for Isophorone are outside control limits. Probable cause due to matrix interference. For method performance in a clean matrix, refer to SB.

Matrix Spike Duplicate Recovery(s) for Benzoic Acid, Isophorone are outside control limits. Probable cause due to matrix interference. For method performance in a clean matrix, refer to SB.

RPD(s) for MSD for 4-Chloroaniline are outside control limits for sample OP34713-MSD. Probable cause due to sample homogeneity.

Volatiles by GC By Method SW846 8015

Matrix: SO **Batch ID:** GQR2447

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) F77189-1MS, F77189-1MSD were used as the QC samples indicated.

Matrix: SO **Batch ID:** GQR2448

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) F77189-1MS, F77189-1MSD were used as the QC samples indicated.

Matrix: SO **Batch ID:** GQR2449

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) F77190-4MS, F77190-4MSD were used as the QC samples indicated.

Extractables by GC By Method SW846 8015 M

Matrix: SO **Batch ID:** OP34693

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.

Sample(s) F77189-1MS, F77189-1MSD were used as the QC samples indicated.

Extractables by GC By Method SW846 8082

Matrix: SO **Batch ID:** OP34709

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.

Sample(s) F77189-1MS, F77189-1MSD were used as the QC samples indicated.

F77190-2: All hits confirmed by dual column analysis.

F77190-2 for Aroclor 1232: Estimated value due to the presence of multiple overlapping Aroclor patterns.

F77190-2 for Aroclor 1254: Estimated value due to the presence of multiple overlapping Aroclor patterns.

Metals By Method SW846 6010B

Matrix: SO **Batch ID:** MP19313

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.

Sample(s) F77190-1DUP, F77190-1MS, F77190-1MSD, F77190-1PS, F77190-1SDL were used as the QC samples for metals.

Matrix Spike Recovery(s) for Antimony, Iron are outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity. For method performance in a clean matrix, refer to SB.

Matrix Spike Duplicate Recovery(s) for Aluminum, Cadmium, Iron, Magnesium, Manganese, Antimony are outside control limits. Probable cause due to matrix interference. For method performance in a clean matrix, refer to SB.

MS/MSD Recovery(s) for Calcium are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

Metals By Method SW846 6010B

Matrix: SO **Batch ID:** MP19313

RPD(s) for Duplicate for Manganese are outside control limits for sample MP19313-D1. High RPD due to possible sample nonhomogeneity.

MP19313-D1 for Antimony: RPD acceptable due to low duplicate and sample concentrations.

MP19313-D1 for Arsenic: RPD acceptable due to low duplicate and sample concentrations.

RPD(s) for MSD for Antimony, Cobalt, Nickel are outside control limits for sample MP19313-S2. High RPD due to possible sample nonhomogeneity.

RPD(s) for Serial Dilution for Antimony, Beryllium, Chromium, Cobalt, Copper, Lead, Nickel, Sodium, Zinc are outside control limits for sample MP19313-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

MP19313-SD1 for Manganese: Serial dilution indicates possible matrix interference.

MP19313-SD1 for Vanadium: Serial dilution indicates possible matrix interference.

MP19313-PS1 for Iron: Spike recovery indicates matrix interference and/or outside control limits due to high level in sample relative to spike amount.

F77190-1 for Nickel: Elevated reporting limit(s) due to matrix interference.

F77190-1 for Chromium: Elevated reporting limit(s) due to matrix interference.

F77190-1 for Cobalt: Elevated reporting limit(s) due to matrix interference.

F77190-1 for Copper: Elevated reporting limit(s) due to matrix interference.

F77190-1 for Lead: Elevated reporting limit(s) due to matrix interference.

F77190-1 for Selenium: Elevated reporting limit(s) due to matrix interference.

F77190-1 for Thallium: Elevated reporting limit(s) due to matrix interference.

F77190-1 for Zinc: Elevated reporting limit(s) due to matrix interference.

F77190-2 for Chromium: Elevated reporting limit(s) due to matrix interference.

F77190-2 for Cobalt: Elevated reporting limit(s) due to matrix interference.

F77190-2 for Copper: Elevated reporting limit(s) due to matrix interference.

F77190-2 for Lead: Elevated reporting limit(s) due to matrix interference.

F77190-2 for Nickel: Elevated reporting limit(s) due to matrix interference.

F77190-2 for Selenium: Elevated reporting limit(s) due to matrix interference.

F77190-2 for Thallium: Elevated reporting limit(s) due to matrix interference.

F77190-2 for Zinc: Elevated reporting limit(s) due to matrix interference.

F77190-3 for Chromium: Elevated reporting limit(s) due to matrix interference.

F77190-3 for Cobalt: Elevated reporting limit(s) due to matrix interference.

F77190-3 for Copper: Elevated reporting limit(s) due to matrix interference.

F77190-3 for Lead: Elevated reporting limit(s) due to matrix interference.

F77190-3 for Nickel: Elevated reporting limit(s) due to matrix interference.

F77190-3 for Selenium: Elevated reporting limit(s) due to matrix interference.

F77190-3 for Thallium: Elevated reporting limit(s) due to matrix interference.

F77190-3 for Zinc: Elevated reporting limit(s) due to matrix interference.

F77190-4 for Chromium: Elevated reporting limit(s) due to matrix interference.

F77190-4 for Cobalt: Elevated reporting limit(s) due to matrix interference.

F77190-4 for Copper: Elevated reporting limit(s) due to matrix interference.

F77190-4 for Lead: Elevated reporting limit(s) due to matrix interference.

F77190-4 for Nickel: Elevated reporting limit(s) due to matrix interference.

F77190-4 for Selenium: Elevated reporting limit(s) due to matrix interference.

F77190-4 for Thallium: Elevated reporting limit(s) due to matrix interference.

F77190-4 for Zinc: Elevated reporting limit(s) due to matrix interference.

Metals By Method SW846 7471A

Matrix: SO **Batch ID:** MP19341

All samples were digested within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

Metals By Method SW846 7471A

Matrix: SO **Batch ID:** MP19341

All method blanks for this batch meet method specific criteria.

Sample(s) F77189-1MS, F77189-1MSD, F77189-1SDL, F77189-1DUP were used as the QC samples for metals.

RPD(s) for Duplicate for Mercury are outside control limits for sample MP19341-D1. RPD acceptable due to low duplicate and sample concentrations.

Wet Chemistry By Method SM19 2540B M

Matrix: SO **Batch ID:** GN41769

Sample(s) F77189-1DUP were used as the QC samples for Solids, Percent.

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 1, 2010

Lovelie Metzgar, QA Assistant (signature on file)

Southeast ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	SWMU8-DP07-7		
Lab Sample ID:	F77190-1	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8260B	**Percent Solids:**	75.5
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H065048.D	1	10/14/10	MM	n/a	n/a	VH2436
Run #2							

	Initial Weight
Run #1	6.00 g
Run #2	

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone [a]	ND	55	23	ug/kg	
107-02-8	Acrolein	ND	28	11	ug/kg	
107-13-1	Acrylonitrile	ND	28	11	ug/kg	
71-43-2	Benzene	1.1	5.5	1.1	ug/kg	J
108-86-1	Bromobenzene	ND	5.5	1.3	ug/kg	
74-97-5	Bromochloromethane	ND	5.5	1.9	ug/kg	
75-27-4	Bromodichloromethane	ND	5.5	1.1	ug/kg	
75-25-2	Bromoform	ND	5.5	2.0	ug/kg	
104-51-8	n-Butylbenzene	ND	5.5	1.4	ug/kg	
135-98-8	sec-Butylbenzene	ND	5.5	1.3	ug/kg	
98-06-6	tert-Butylbenzene	ND	5.5	1.3	ug/kg	
108-90-7	Chlorobenzene	ND	5.5	1.1	ug/kg	
75-00-3	Chloroethane	ND	5.5	2.2	ug/kg	
67-66-3	Chloroform	ND	5.5	1.1	ug/kg	
95-49-8	o-Chlorotoluene	ND	5.5	1.4	ug/kg	
106-43-4	p-Chlorotoluene	ND	5.5	1.1	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	28	11	ug/kg	
75-15-0	Carbon disulfide	ND	5.5	2.6	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.5	1.8	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.5	1.7	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.5	2.5	ug/kg	
563-58-6	1,1-Dichloropropene	ND	5.5	1.1	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.5	2.8	ug/kg	
106-93-4	1,2-Dibromoethane	ND	5.5	1.1	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.5	1.3	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.5	1.1	ug/kg	
142-28-9	1,3-Dichloropropane	ND	5.5	1.9	ug/kg	
594-20-7	2,2-Dichloropropane	ND	5.5	1.2	ug/kg	
124-48-1	Dibromochloromethane	ND	5.5	1.9	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.5	2.3	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.5	1.1	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.5	1.1	ug/kg	

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:	SWMU8-DP07-7		
Lab Sample ID:	F77190-1	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8260B	**Percent Solids:**	75.5
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
541-73-1	m-Dichlorobenzene	ND	5.5	1.3	ug/kg	
95-50-1	o-Dichlorobenzene	ND	5.5	1.2	ug/kg	
106-46-7	p-Dichlorobenzene	ND	5.5	1.7	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.5	2.1	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.5	1.2	ug/kg	
100-41-4	Ethylbenzene	ND	5.5	1.2	ug/kg	
591-78-6	2-Hexanone	ND	28	13	ug/kg	
87-68-3	Hexachlorobutadiene	ND	5.5	2.5	ug/kg	
110-54-3	Hexane	ND	5.5	2.2	ug/kg	
98-82-8	Isopropylbenzene	ND	5.5	1.5	ug/kg	
99-87-6	p-Isopropyltoluene	ND	5.5	1.1	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	28	9.2	ug/kg	
74-83-9	Methyl bromide	ND	5.5	2.2	ug/kg	
74-87-3	Methyl chloride	ND	5.5	2.8	ug/kg	
74-95-3	Methylene bromide	ND	5.5	2.3	ug/kg	
75-09-2	Methylene chloride	ND	11	5.5	ug/kg	
78-93-3	Methyl ethyl ketone	ND	28	8.3	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.5	2.5	ug/kg	
91-20-3	Naphthalene	ND	5.5	2.2	ug/kg	
103-65-1	n-Propylbenzene	ND	5.5	1.7	ug/kg	
100-42-5	Styrene	ND	5.5	1.1	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.5	1.1	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.5	2.0	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.5	1.4	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.5	1.4	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.5	2.2	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	5.5	1.8	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.5	2.2	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	5.5	1.2	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.5	1.7	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.5	2.0	ug/kg	
108-88-3	Toluene	ND	5.5	1.3	ug/kg	
79-01-6	Trichloroethylene	ND	5.5	1.8	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.5	2.9	ug/kg	
75-01-4	Vinyl chloride	ND	5.5	2.2	ug/kg	
108-05-4	Vinyl Acetate	ND	28	17	ug/kg	
	m,p-Xylene	ND	11	1.3	ug/kg	
95-47-6	o-Xylene	ND	5.5	1.1	ug/kg	

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:	SWMU8-DP07-7		
Lab Sample ID:	F77190-1	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8260B	**Percent Solids:**	75.5
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		80-121%
2037-26-5	Toluene-D8	81%		71-130%
460-00-4	4-Bromofluorobenzene	90%		59-148%
17060-07-0	1,2-Dichloroethane-D4	117%		77-123%

(a) ICV and 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:	SWMU8-DP07-7		
Lab Sample ID:	F77190-1	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8270C SW846 3550B	**Percent Solids:**	75.5
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L048648.D	1	10/25/10	NAF	10/15/10	OP34713	SL2491
Run #2							

	Initial Weight	Final Volume
Run #1	30.5 g	1.0 ml
Run #2		

ABN Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	1100	430	ug/kg	
95-57-8	2-Chlorophenol	ND	220	43	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	220	43	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	220	43	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	220	48	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	1100	430	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	430	43	ug/kg	
95-48-7	2-Methylphenol	ND	220	43	ug/kg	
	3&4-Methylphenol	ND	220	43	ug/kg	
88-75-5	2-Nitrophenol	ND	220	43	ug/kg	
100-02-7	4-Nitrophenol	ND	1100	430	ug/kg	
87-86-5	Pentachlorophenol	ND	1100	430	ug/kg	
108-95-2	Phenol	ND	220	43	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	220	43	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	220	43	ug/kg	
83-32-9	Acenaphthene	ND	220	43	ug/kg	
208-96-8	Acenaphthylene	ND	220	43	ug/kg	
62-53-3	Aniline	ND	220	48	ug/kg	
120-12-7	Anthracene	ND	220	43	ug/kg	
92-87-5	Benzidine	ND	2200	910	ug/kg	
56-55-3	Benzo(a)anthracene	ND	220	43	ug/kg	
50-32-8	Benzo(a)pyrene	ND	220	43	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	220	43	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	220	43	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	220	43	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	220	43	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	430	87	ug/kg	
100-51-6	Benzyl Alcohol	ND	220	43	ug/kg	
91-58-7	2-Chloronaphthalene	ND	220	43	ug/kg	
106-47-8	4-Chloroaniline	ND	220	43	ug/kg	
86-74-8	Carbazole	ND	220	43	ug/kg	
218-01-9	Chrysene	ND	220	43	ug/kg	

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:	SWMU8-DP07-7		
Lab Sample ID:	F77190-1	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8270C SW846 3550B	**Percent Solids:**	75.5
Project:	Holloman AFB; SWMU 8, ACM Investigation		

ABN Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
111-91-1	bis(2-Chloroethoxy)methane	ND	220	43	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	220	43	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	220	43	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	220	43	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	220	87	ug/kg	
122-66-7	1,2-Diphenylhydrazine	ND	220	43	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	220	87	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	220	87	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	220	43	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	220	43	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	430	87	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	220	43	ug/kg	
132-64-9	Dibenzofuran	ND	220	43	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	430	87	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	430	87	ug/kg	
84-66-2	Diethyl phthalate	ND	430	220	ug/kg	
131-11-3	Dimethyl phthalate	ND	430	87	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	430	220	ug/kg	
206-44-0	Fluoranthene	ND	220	43	ug/kg	
86-73-7	Fluorene	ND	220	43	ug/kg	
118-74-1	Hexachlorobenzene	ND	220	43	ug/kg	
87-68-3	Hexachlorobutadiene	ND	220	43	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	220	43	ug/kg	
67-72-1	Hexachloroethane	ND	220	110	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	220	43	ug/kg	
78-59-1	Isophorone	ND	220	43	ug/kg	
90-12-0	1-Methylnaphthalene	ND	220	43	ug/kg	
91-57-6	2-Methylnaphthalene	ND	220	43	ug/kg	
88-74-4	2-Nitroaniline	ND	430	87	ug/kg	
99-09-2	3-Nitroaniline	ND	430	87	ug/kg	
100-01-6	4-Nitroaniline	ND	430	87	ug/kg	
91-20-3	Naphthalene	ND	220	43	ug/kg	
98-95-3	Nitrobenzene	ND	220	43	ug/kg	
62-75-9	N-Nitrosodimethylamine	ND	430	87	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	220	43	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	220	43	ug/kg	
85-01-8	Phenanthrene	ND	220	43	ug/kg	
129-00-0	Pyrene	ND	220	43	ug/kg	
110-86-1	Pyridine	ND	430	110	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	220	43	ug/kg	

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:	SWMU8-DP07-7		
Lab Sample ID:	F77190-1	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8270C SW846 3550B	**Percent Solids:**	75.5
Project:	Holloman AFB; SWMU 8, ACM Investigation		

ABN Full List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	71%		40-102%
4165-62-2	Phenol-d5	75%		41-100%
118-79-6	2,4,6-Tribromophenol	76%		42-108%
4165-60-0	Nitrobenzene-d5	70%		40-105%
321-60-8	2-Fluorobiphenyl	75%		43-107%
1718-51-0	Terphenyl-d14	71%		45-119%

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:	SWMU8-DP07-7		
Lab Sample ID:	F77190-1	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8015	**Percent Solids:**	75.5
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR056307.D	1	10/14/10	AH	n/a	n/a	GQR2448
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	6.48 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	6.7	3.4	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	97%		56-136%
98-08-8	aaa-Trifluorotoluene	81%		61-121%

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:	SWMU8-DP07-7		
Lab Sample ID:	F77190-1	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8082 SW846 3550B	**Percent Solids:**	75.5
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XX053708.D	1	10/20/10	NJ	10/14/10	OP34709	GXX801
Run #2							

	Initial Weight	Final Volume
Run #1	30.2 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	22	11	ug/kg	
11104-28-2	Aroclor 1221	ND	22	18	ug/kg	
11141-16-5	Aroclor 1232	ND	22	18	ug/kg	
53469-21-9	Aroclor 1242	ND	22	11	ug/kg	
12672-29-6	Aroclor 1248	ND	22	11	ug/kg	
11097-69-1	Aroclor 1254	ND	22	11	ug/kg	
11096-82-5	Aroclor 1260	ND	22	11	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	85%		44-126%
2051-24-3	Decachlorobiphenyl	84%		39-157%

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:	SWMU8-DP07-7		
Lab Sample ID:	F77190-1	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8015 M SW846 3550B	**Percent Solids:**	75.5
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YY18003.D	1	10/16/10	MV	10/13/10	OP34693	GYY657
Run #2							

	Initial Weight	Final Volume
Run #1	29.9 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C22)	ND	11	6.6	mg/kg	
	TPH (> C22-C36)	ND	11	6.6	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	82%		49-108%

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:	SWMU8-DP07-7		
Lab Sample ID:	F77190-1	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
		Percent Solids:	75.5
Project:	Holloman AFB; SWMU 8, ACM Investigation		

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	3290	9.9	0.99	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Antimony	0.18 J	0.99	0.099	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Arsenic	0.63	0.49	0.099	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Barium	32.5	9.9	0.49	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Beryllium	0.11 J	0.25	0.049	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Cadmium	0.049 U	0.20	0.049	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Calcium	245000	2500	49	mg/kg	10	10/18/10	10/20/10	RS	SW846 6010B [2]	SW846 3050B [4]
Chromium [a]	3.2 J	4.9	0.49	mg/kg	10	10/18/10	10/20/10	RS	SW846 6010B [2]	SW846 3050B [4]
Cobalt [a]	1.3 J	12	0.25	mg/kg	5	10/18/10	10/20/10	RS	SW846 6010B [2]	SW846 3050B [4]
Copper [a]	3.2 J	12	0.99	mg/kg	10	10/18/10	10/20/10	RS	SW846 6010B [2]	SW846 3050B [4]
Iron	2250	15	1.5	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Lead [a]	1.4 J	4.9	0.25	mg/kg	5	10/18/10	10/20/10	RS	SW846 6010B [2]	SW846 3050B [4]
Magnesium	1340	250	4.9	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Manganese	55.6	0.74	0.049	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Mercury	0.012 U	0.096	0.012	mg/kg	1	10/22/10	10/22/10	LM	SW846 7471A [3]	SW846 7471A [5]
Nickel [a]	2.5 J	9.9	0.25	mg/kg	5	10/18/10	10/20/10	RS	SW846 6010B [2]	SW846 3050B [4]
Potassium	839	490	25	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Selenium [a]	2.0 U	9.9	2.0	mg/kg	10	10/18/10	10/20/10	RS	SW846 6010B [2]	SW846 3050B [4]
Silver	0.049 U	0.49	0.049	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Sodium	176 J	490	37	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Thallium [a]	0.49 U	2.5	0.49	mg/kg	5	10/18/10	10/20/10	RS	SW846 6010B [2]	SW846 3050B [4]
Vanadium	4.2	2.5	0.049	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Zinc [a]	8.4 J	9.9	2.5	mg/kg	10	10/18/10	10/20/10	RS	SW846 6010B [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA8454
(2) Instrument QC Batch: MA8455
(3) Instrument QC Batch: MA8460
(4) Prep QC Batch: MP19313
(5) Prep QC Batch: MP19341

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

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

Report of Analysis

Client Sample ID:	SWMU8-DP08-8		
Lab Sample ID:	F77190-2	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8260B	**Percent Solids:**	73.4
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	H065053.D	1	10/14/10	MM	n/a	n/a	VH2436
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	6.58 g	5.0 ml	100 ul
Run #2			

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone [b]	ND	3500	1500	ug/kg	
107-02-8	Acrolein	ND	1700	700	ug/kg	
107-13-1	Acrylonitrile	ND	1700	700	ug/kg	
71-43-2	Benzene	ND	350	70	ug/kg	
108-86-1	Bromobenzene	ND	350	84	ug/kg	
74-97-5	Bromochloromethane	ND	350	120	ug/kg	
75-27-4	Bromodichloromethane	ND	350	70	ug/kg	
75-25-2	Bromoform	ND	350	130	ug/kg	
104-51-8	n-Butylbenzene	ND	350	91	ug/kg	
135-98-8	sec-Butylbenzene	132	350	84	ug/kg	J
98-06-6	tert-Butylbenzene	ND	350	84	ug/kg	
108-90-7	Chlorobenzene	ND	350	70	ug/kg	
75-00-3	Chloroethane	ND	350	140	ug/kg	
67-66-3	Chloroform	ND	350	70	ug/kg	
95-49-8	o-Chlorotoluene	ND	350	91	ug/kg	
106-43-4	p-Chlorotoluene	ND	350	70	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	1700	700	ug/kg	
75-15-0	Carbon disulfide	ND	350	170	ug/kg	
56-23-5	Carbon tetrachloride	ND	350	110	ug/kg	
75-34-3	1,1-Dichloroethane	ND	350	100	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	350	160	ug/kg	
563-58-6	1,1-Dichloropropene	ND	350	70	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	350	170	ug/kg	
106-93-4	1,2-Dibromoethane	ND	350	70	ug/kg	
107-06-2	1,2-Dichloroethane	ND	350	84	ug/kg	
78-87-5	1,2-Dichloropropane	ND	350	70	ug/kg	
142-28-9	1,3-Dichloropropane	ND	350	120	ug/kg	
594-20-7	2,2-Dichloropropane	ND	350	77	ug/kg	
124-48-1	Dibromochloromethane	ND	350	120	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	350	150	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	350	70	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	350	70	ug/kg	

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:	SWMU8-DP08-8		
Lab Sample ID:	F77190-2	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8260B	**Percent Solids:**	73.4
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
541-73-1	m-Dichlorobenzene	157	350	84	ug/kg	J
95-50-1	o-Dichlorobenzene	ND	350	77	ug/kg	
106-46-7	p-Dichlorobenzene	101	350	100	ug/kg	J
156-60-5	trans-1,2-Dichloroethylene	ND	350	130	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	350	77	ug/kg	
100-41-4	Ethylbenzene	ND	350	77	ug/kg	
591-78-6	2-Hexanone	ND	1700	820	ug/kg	
87-68-3	Hexachlorobutadiene	ND	350	160	ug/kg	
110-54-3	Hexane	ND	350	140	ug/kg	
98-82-8	Isopropylbenzene	ND	350	98	ug/kg	
99-87-6	p-Isopropyltoluene	ND	350	70	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	1700	580	ug/kg	
74-83-9	Methyl bromide	ND	350	140	ug/kg	
74-87-3	Methyl chloride	ND	350	170	ug/kg	
74-95-3	Methylene bromide	ND	350	150	ug/kg	
75-09-2	Methylene chloride [c]	1310	700	350	ug/kg	
78-93-3	Methyl ethyl ketone	ND	1700	520	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	350	160	ug/kg	
91-20-3	Naphthalene	ND	350	140	ug/kg	
103-65-1	n-Propylbenzene	ND	350	100	ug/kg	
100-42-5	Styrene	ND	350	70	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	350	70	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	350	130	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	350	91	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	350	91	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	350	140	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	350	110	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	350	140	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	350	77	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	350	100	ug/kg	
127-18-4	Tetrachloroethylene	ND	350	130	ug/kg	
108-88-3	Toluene	ND	350	84	ug/kg	
79-01-6	Trichloroethylene	ND	350	110	ug/kg	
75-69-4	Trichlorofluoromethane	ND	350	180	ug/kg	
75-01-4	Vinyl chloride	ND	350	140	ug/kg	
108-05-4	Vinyl Acetate	ND	1700	1100	ug/kg	
	m,p-Xylene	ND	700	84	ug/kg	
95-47-6	o-Xylene	ND	350	70	ug/kg	

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:	SWMU8-DP08-8		
Lab Sample ID:	F77190-2	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8260B	**Percent Solids:**	73.4
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		80-121%
2037-26-5	Toluene-D8	82%		71-130%
460-00-4	4-Bromofluorobenzene	90%		59-148%
17060-07-0	1,2-Dichloroethane-D4	106%		77-123%

(a) Methanol extract analysis required due to matrix interference (non-target analytes present above calibration range).
(b) ICV and associated BS recovery outside control limits.
(c) 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:	SWMU8-DP08-8		
Lab Sample ID:	F77190-2	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8270C SW846 3550B	**Percent Solids:**	73.4
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L048649.D	1	10/25/10	NAF	10/15/10	OP34713	SL2491
Run #2							

	Initial Weight	Final Volume
Run #1	30.2 g	1.0 ml
Run #2		

ABN Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	1100	450	ug/kg	
95-57-8	2-Chlorophenol	ND	230	45	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	230	45	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	230	45	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	230	50	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	1100	450	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	450	45	ug/kg	
95-48-7	2-Methylphenol	ND	230	45	ug/kg	
	3&4-Methylphenol	ND	230	45	ug/kg	
88-75-5	2-Nitrophenol	ND	230	45	ug/kg	
100-02-7	4-Nitrophenol	ND	1100	450	ug/kg	
87-86-5	Pentachlorophenol	ND	1100	450	ug/kg	
108-95-2	Phenol	ND	230	45	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	230	45	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	230	45	ug/kg	
83-32-9	Acenaphthene	ND	230	45	ug/kg	
208-96-8	Acenaphthylene	ND	230	45	ug/kg	
62-53-3	Aniline	ND	230	50	ug/kg	
120-12-7	Anthracene	ND	230	45	ug/kg	
92-87-5	Benzidine	ND	2300	950	ug/kg	
56-55-3	Benzo(a)anthracene	ND	230	45	ug/kg	
50-32-8	Benzo(a)pyrene	ND	230	45	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	230	45	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	230	45	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	230	45	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	230	45	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	450	90	ug/kg	
100-51-6	Benzyl Alcohol	ND	230	45	ug/kg	
91-58-7	2-Chloronaphthalene	ND	230	45	ug/kg	
106-47-8	4-Chloroaniline	ND	230	45	ug/kg	
86-74-8	Carbazole	ND	230	45	ug/kg	
218-01-9	Chrysene	ND	230	45	ug/kg	

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:	SWMU8-DP08-8		
Lab Sample ID:	F77190-2	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8270C SW846 3550B	**Percent Solids:**	73.4
Project:	Holloman AFB; SWMU 8, ACM Investigation		

ABN Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
111-91-1	bis(2-Chloroethoxy)methane	ND	230	45	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	230	45	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	230	45	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	230	45	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	230	90	ug/kg	
122-66-7	1,2-Diphenylhydrazine	ND	230	45	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	230	90	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	230	90	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	230	45	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	230	45	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	450	90	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	230	45	ug/kg	
132-64-9	Dibenzofuran	ND	230	45	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	450	90	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	450	90	ug/kg	
84-66-2	Diethyl phthalate	ND	450	230	ug/kg	
131-11-3	Dimethyl phthalate	ND	450	90	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	450	230	ug/kg	
206-44-0	Fluoranthene	ND	230	45	ug/kg	
86-73-7	Fluorene	ND	230	45	ug/kg	
118-74-1	Hexachlorobenzene	ND	230	45	ug/kg	
87-68-3	Hexachlorobutadiene	ND	230	45	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	230	45	ug/kg	
67-72-1	Hexachloroethane	ND	230	110	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	230	45	ug/kg	
78-59-1	Isophorone	ND	230	45	ug/kg	
90-12-0	1-Methylnaphthalene	ND	230	45	ug/kg	
91-57-6	2-Methylnaphthalene	ND	230	45	ug/kg	
88-74-4	2-Nitroaniline	ND	450	90	ug/kg	
99-09-2	3-Nitroaniline	ND	450	90	ug/kg	
100-01-6	4-Nitroaniline	ND	450	90	ug/kg	
91-20-3	Naphthalene	ND	230	45	ug/kg	
98-95-3	Nitrobenzene	ND	230	45	ug/kg	
62-75-9	N-Nitrosodimethylamine	ND	450	90	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	230	45	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	230	45	ug/kg	
85-01-8	Phenanthrene	ND	230	45	ug/kg	
129-00-0	Pyrene	ND	230	45	ug/kg	
110-86-1	Pyridine	ND	450	110	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	230	45	ug/kg	

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:	SWMU8-DP08-8		
Lab Sample ID:	F77190-2	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8270C SW846 3550B	**Percent Solids:**	73.4
Project:	Holloman AFB; SWMU 8, ACM Investigation		

ABN Full List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	73%		40-102%
4165-62-2	Phenol-d5	76%		41-100%
118-79-6	2,4,6-Tribromophenol	78%		42-108%
4165-60-0	Nitrobenzene-d5	78%		40-105%
321-60-8	2-Fluorobiphenyl	73%		43-107%
1718-51-0	Terphenyl-d14	73%		45-119%

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:	SWMU8-DP08-8		
Lab Sample ID:	F77190-2	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8015	**Percent Solids:**	73.4
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR056271.D	1	10/13/10	AH	n/a	n/a	GQR2447
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	6.58 g	5.0 ml	10.0 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	454	70	35	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	122%		56-136%
98-08-8	aaa-Trifluorotoluene	78%		61-121%

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:	SWMU8-DP08-8		
Lab Sample ID:	F77190-2	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8082 SW846 3550B	**Percent Solids:**	73.4
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	XX053709.D	1	10/20/10	NJ	10/14/10	OP34709	GXX801
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	23	23	ug/kg	
11104-28-2	Aroclor 1221	ND	23	18	ug/kg	
11141-16-5	Aroclor 1232 [b]	41.0	23	18	ug/kg	J
53469-21-9	Aroclor 1242	ND	23	23	ug/kg	
12672-29-6	Aroclor 1248	ND	23	23	ug/kg	
11097-69-1	Aroclor 1254 [b]	17.7	23	11	ug/kg	J
11096-82-5	Aroclor 1260	ND	23	11	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	81%		44-126%
2051-24-3	Decachlorobiphenyl	65%		39-157%

(a) All hits confirmed by dual column analysis.
(b) Estimated value due to the presence of multiple overlapping Aroclor patterns.

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:	SWMU8-DP08-8		
Lab Sample ID:	F77190-2	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8015 M SW846 3550B	**Percent Solids:**	73.4
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YY18032.D	10	10/18/10	MV	10/13/10	OP34693	GYY658
Run #2							

	Initial Weight	Final Volume
Run #1	30.4 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C22)	114	110	67	mg/kg	
	TPH (> C22-C36)	128	110	67	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	79%		49-108%

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:	SWMU8-DP08-8		
Lab Sample ID:	F77190-2	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
		Percent Solids:	73.4
Project:	Holloman AFB; SWMU 8, ACM Investigation		

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	2150	9.3	0.93	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Antimony	0.093 U	0.93	0.093	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Arsenic	0.93	0.47	0.093	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Barium	26.0	9.3	0.47	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Beryllium	0.070 J	0.23	0.047	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Cadmium	0.047 U	0.19	0.047	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Calcium	195000	2300	47	mg/kg	10	10/18/10	10/20/10	RS	SW846 6010B [2]	SW846 3050B [4]
Chromium [a]	2.5 J	4.7	0.47	mg/kg	10	10/18/10	10/20/10	RS	SW846 6010B [2]	SW846 3050B [4]
Cobalt [a]	0.87 J	12	0.23	mg/kg	5	10/18/10	10/20/10	RS	SW846 6010B [2]	SW846 3050B [4]
Copper [a]	2.3 J	12	0.93	mg/kg	10	10/18/10	10/20/10	RS	SW846 6010B [2]	SW846 3050B [4]
Iron	1790	14	1.4	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Lead [a]	1.2 J	4.7	0.23	mg/kg	5	10/18/10	10/20/10	RS	SW846 6010B [2]	SW846 3050B [4]
Magnesium	939	230	4.7	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Manganese	40.2	0.70	0.047	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Mercury	0.013 U	0.11	0.013	mg/kg	1	10/22/10	10/22/10	LM	SW846 7471A [3]	SW846 7471A [5]
Nickel [a]	1.6 J	9.3	0.23	mg/kg	5	10/18/10	10/20/10	RS	SW846 6010B [2]	SW846 3050B [4]
Potassium	579	470	23	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Selenium [a]	1.9 U	9.3	1.9	mg/kg	10	10/18/10	10/20/10	RS	SW846 6010B [2]	SW846 3050B [4]
Silver	0.047 U	0.47	0.047	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Sodium	156 J	470	35	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Thallium [a]	0.47 U	2.3	0.47	mg/kg	5	10/18/10	10/20/10	RS	SW846 6010B [2]	SW846 3050B [4]
Vanadium	4.6	2.3	0.047	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Zinc [a]	4.7 J	9.3	2.3	mg/kg	10	10/18/10	10/20/10	RS	SW846 6010B [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA8454
(2) Instrument QC Batch: MA8455
(3) Instrument QC Batch: MA8460
(4) Prep QC Batch: MP19313
(5) Prep QC Batch: MP19341

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

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

Report of Analysis

Client Sample ID:	SWMU8-DP09-7		
Lab Sample ID:	F77190-3	**Date Sampled:**	10/09/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8260B	**Percent Solids:**	65.6
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G0067506.D	1	10/14/10	MM	n/a	n/a	VG2554
Run #2							

	Initial Weight
Run #1	6.08 g
Run #2	

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone [a]	ND	63	26	ug/kg	
107-02-8	Acrolein	ND	31	13	ug/kg	
107-13-1	Acrylonitrile	ND	31	13	ug/kg	
71-43-2	Benzene	2.0	6.3	1.3	ug/kg	J
108-86-1	Bromobenzene	ND	6.3	1.5	ug/kg	
74-97-5	Bromochloromethane	ND	6.3	2.1	ug/kg	
75-27-4	Bromodichloromethane	ND	6.3	1.3	ug/kg	
75-25-2	Bromoform	ND	6.3	2.3	ug/kg	
104-51-8	n-Butylbenzene	ND	6.3	1.6	ug/kg	
135-98-8	sec-Butylbenzene	ND	6.3	1.5	ug/kg	
98-06-6	tert-Butylbenzene	ND	6.3	1.5	ug/kg	
108-90-7	Chlorobenzene	ND	6.3	1.3	ug/kg	
75-00-3	Chloroethane	ND	6.3	2.5	ug/kg	
67-66-3	Chloroform	ND	6.3	1.3	ug/kg	
95-49-8	o-Chlorotoluene	ND	6.3	1.6	ug/kg	
106-43-4	p-Chlorotoluene	ND	6.3	1.3	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	31	13	ug/kg	
75-15-0	Carbon disulfide	ND	6.3	3.0	ug/kg	
56-23-5	Carbon tetrachloride	ND	6.3	2.0	ug/kg	
75-34-3	1,1-Dichloroethane	ND	6.3	1.9	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	6.3	2.9	ug/kg	
563-58-6	1,1-Dichloropropene	ND	6.3	1.3	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	6.3	3.1	ug/kg	
106-93-4	1,2-Dibromoethane	ND	6.3	1.3	ug/kg	
107-06-2	1,2-Dichloroethane	ND	6.3	1.5	ug/kg	
78-87-5	1,2-Dichloropropane	ND	6.3	1.3	ug/kg	
142-28-9	1,3-Dichloropropane	ND	6.3	2.1	ug/kg	
594-20-7	2,2-Dichloropropane	ND	6.3	1.4	ug/kg	
124-48-1	Dibromochloromethane	ND	6.3	2.1	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	6.3	2.6	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	6.3	1.3	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	6.3	1.3	ug/kg	

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:	SWMU8-DP09-7		
Lab Sample ID:	F77190-3	**Date Sampled:**	10/09/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8260B	**Percent Solids:**	65.6
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
541-73-1	m-Dichlorobenzene	ND	6.3	1.5	ug/kg	
95-50-1	o-Dichlorobenzene	ND	6.3	1.4	ug/kg	
106-46-7	p-Dichlorobenzene	ND	6.3	1.9	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	6.3	2.4	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	6.3	1.4	ug/kg	
100-41-4	Ethylbenzene	ND	6.3	1.4	ug/kg	
591-78-6	2-Hexanone	ND	31	15	ug/kg	
87-68-3	Hexachlorobutadiene	ND	6.3	2.9	ug/kg	
110-54-3	Hexane	ND	6.3	2.5	ug/kg	
98-82-8	Isopropylbenzene	ND	6.3	1.8	ug/kg	
99-87-6	p-Isopropyltoluene	ND	6.3	1.3	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	31	10	ug/kg	
74-83-9	Methyl bromide	ND	6.3	2.5	ug/kg	
74-87-3	Methyl chloride	ND	6.3	3.1	ug/kg	
74-95-3	Methylene bromide	ND	6.3	2.6	ug/kg	
75-09-2	Methylene chloride [b]	9.6	13	6.3	ug/kg	JB
78-93-3	Methyl ethyl ketone	ND	31	9.4	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	6.3	2.9	ug/kg	
91-20-3	Naphthalene	ND	6.3	2.5	ug/kg	
103-65-1	n-Propylbenzene	ND	6.3	1.9	ug/kg	
100-42-5	Styrene	ND	6.3	1.3	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	6.3	1.3	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	6.3	2.3	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	6.3	1.6	ug/kg	
79-00-5	1,1,2-Trichloroethane [c]	ND	6.3	1.6	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	6.3	2.5	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	6.3	2.0	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	6.3	2.5	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	6.3	1.4	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	6.3	1.9	ug/kg	
127-18-4	Tetrachloroethylene	ND	6.3	2.3	ug/kg	
108-88-3	Toluene	1.8	6.3	1.5	ug/kg	J
79-01-6	Trichloroethylene	ND	6.3	2.0	ug/kg	
75-69-4	Trichlorofluoromethane	ND	6.3	3.3	ug/kg	
75-01-4	Vinyl chloride	ND	6.3	2.5	ug/kg	
108-05-4	Vinyl Acetate	ND	31	19	ug/kg	
	m,p-Xylene	ND	13	1.5	ug/kg	
95-47-6	o-Xylene	ND	6.3	1.3	ug/kg	

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:	SWMU8-DP09-7		
Lab Sample ID:	F77190-3	**Date Sampled:**	10/09/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8260B	**Percent Solids:**	65.6
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		80-121%
2037-26-5	Toluene-D8	97%		71-130%
460-00-4	4-Bromofluorobenzene	92%		59-148%
17060-07-0	1,2-Dichloroethane-D4	120%		77-123%

(a) ICV and associated BS recovery outside control limits.
(b) Suspected laboratory contaminant.
(c) CCV outside of control limits; results may be biased low.

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:	SWMU8-DP09-7		
Lab Sample ID:	F77190-3	**Date Sampled:**	10/09/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8270C SW846 3550B	**Percent Solids:**	65.6
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L048650.D	1	10/25/10	NAF	10/15/10	OP34713	SL2491
Run #2							

	Initial Weight	Final Volume
Run #1	30.2 g	1.0 ml
Run #2		

ABN Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	1300	500	ug/kg	
95-57-8	2-Chlorophenol	ND	250	50	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	250	50	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	250	50	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	250	56	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	1300	500	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	500	50	ug/kg	
95-48-7	2-Methylphenol	ND	250	50	ug/kg	
	3&4-Methylphenol	ND	250	50	ug/kg	
88-75-5	2-Nitrophenol	ND	250	50	ug/kg	
100-02-7	4-Nitrophenol	ND	1300	500	ug/kg	
87-86-5	Pentachlorophenol	ND	1300	500	ug/kg	
108-95-2	Phenol	ND	250	50	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	250	50	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	250	50	ug/kg	
83-32-9	Acenaphthene	ND	250	50	ug/kg	
208-96-8	Acenaphthylene	ND	250	50	ug/kg	
62-53-3	Aniline	ND	250	56	ug/kg	
120-12-7	Anthracene	ND	250	50	ug/kg	
92-87-5	Benzidine	ND	2500	1100	ug/kg	
56-55-3	Benzo(a)anthracene	ND	250	50	ug/kg	
50-32-8	Benzo(a)pyrene	ND	250	50	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	250	50	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	250	50	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	250	50	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	250	50	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	500	100	ug/kg	
100-51-6	Benzyl Alcohol	ND	250	50	ug/kg	
91-58-7	2-Chloronaphthalene	ND	250	50	ug/kg	
106-47-8	4-Chloroaniline	ND	250	50	ug/kg	
86-74-8	Carbazole	ND	250	50	ug/kg	
218-01-9	Chrysene	ND	250	50	ug/kg	

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:	SWMU8-DP09-7		
Lab Sample ID:	F77190-3	**Date Sampled:**	10/09/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8270C SW846 3550B	**Percent Solids:**	65.6
Project:	Holloman AFB; SWMU 8, ACM Investigation		

ABN Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
111-91-1	bis(2-Chloroethoxy)methane	ND	250	50	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	250	50	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	250	50	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	250	50	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	250	100	ug/kg	
122-66-7	1,2-Diphenylhydrazine	ND	250	50	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	250	100	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	250	100	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	250	50	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	250	50	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	500	100	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	250	50	ug/kg	
132-64-9	Dibenzofuran	ND	250	50	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	500	100	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	500	100	ug/kg	
84-66-2	Diethyl phthalate	ND	500	250	ug/kg	
131-11-3	Dimethyl phthalate	ND	500	100	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	500	250	ug/kg	
206-44-0	Fluoranthene	ND	250	50	ug/kg	
86-73-7	Fluorene	ND	250	50	ug/kg	
118-74-1	Hexachlorobenzene	ND	250	50	ug/kg	
87-68-3	Hexachlorobutadiene	ND	250	50	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	250	50	ug/kg	
67-72-1	Hexachloroethane	ND	250	130	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	250	50	ug/kg	
78-59-1	Isophorone	ND	250	50	ug/kg	
90-12-0	1-Methylnaphthalene	ND	250	50	ug/kg	
91-57-6	2-Methylnaphthalene	ND	250	50	ug/kg	
88-74-4	2-Nitroaniline	ND	500	100	ug/kg	
99-09-2	3-Nitroaniline	ND	500	100	ug/kg	
100-01-6	4-Nitroaniline	ND	500	100	ug/kg	
91-20-3	Naphthalene	ND	250	50	ug/kg	
98-95-3	Nitrobenzene	ND	250	50	ug/kg	
62-75-9	N-Nitrosodimethylamine	ND	500	100	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	250	50	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	250	50	ug/kg	
85-01-8	Phenanthrene	ND	250	50	ug/kg	
129-00-0	Pyrene	ND	250	50	ug/kg	
110-86-1	Pyridine	ND	500	130	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	250	50	ug/kg	

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:	SWMU8-DP09-7		
Lab Sample ID:	F77190-3	**Date Sampled:**	10/09/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8270C SW846 3550B	**Percent Solids:**	65.6
Project:	Holloman AFB; SWMU 8, ACM Investigation		

ABN Full List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	69%		40-102%
4165-62-2	Phenol-d5	73%		41-100%
118-79-6	2,4,6-Tribromophenol	73%		42-108%
4165-60-0	Nitrobenzene-d5	69%		40-105%
321-60-8	2-Fluorobiphenyl	73%		43-107%
1718-51-0	Terphenyl-d14	69%		45-119%

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:	SWMU8-DP09-7		
Lab Sample ID:	F77190-3	**Date Sampled:**	10/09/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8015	**Percent Solids:**	65.6
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR056310.D	1	10/14/10	AH	n/a	n/a	GQR2448
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.47 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	9.6	4.8	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	96%		56-136%
98-08-8	aaa-Trifluorotoluene	84%		61-121%

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:	SWMU8-DP09-7		
Lab Sample ID:	F77190-3	**Date Sampled:**	10/09/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8082 SW846 3550B	**Percent Solids:**	65.6
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XX053710.D	1	10/20/10	NJ	10/14/10	OP34709	GXX801
Run #2							

	Initial Weight	Final Volume
Run #1	30.2 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	25	13	ug/kg	
11104-28-2	Aroclor 1221	ND	25	20	ug/kg	
11141-16-5	Aroclor 1232	ND	25	20	ug/kg	
53469-21-9	Aroclor 1242	ND	25	13	ug/kg	
12672-29-6	Aroclor 1248	ND	25	13	ug/kg	
11097-69-1	Aroclor 1254	ND	25	13	ug/kg	
11096-82-5	Aroclor 1260	ND	25	13	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	94%		44-126%
2051-24-3	Decachlorobiphenyl	88%		39-157%

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:	SWMU8-DP09-7		
Lab Sample ID:	F77190-3	**Date Sampled:**	10/09/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8015 M SW846 3550B	**Percent Solids:**	65.6
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YY18005.D	1	10/16/10	MV	10/13/10	OP34693	GYY657
Run #2							

	Initial Weight	Final Volume
Run #1	30.6 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C22)	ND	12	7.5	mg/kg	
	TPH (> C22-C36)	ND	12	7.5	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	70%		49-108%

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:	SWMU8-DP09-7		
Lab Sample ID:	F77190-3	**Date Sampled:**	10/09/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
		Percent Solids:	65.6
Project:	Holloman AFB; SWMU 8, ACM Investigation		

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	2610	13	1.3	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Antimony	0.13 U	1.3	0.13	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Arsenic	0.45 J	0.63	0.13	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Barium	23.9	13	0.63	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Beryllium	0.094 J	0.31	0.063	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Cadmium	0.063 U	0.25	0.063	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Calcium	192000	3100	63	mg/kg	10	10/18/10	10/20/10	RS	SW846 6010B [2]	SW846 3050B [4]
Chromium [a]	2.9 J	6.3	0.63	mg/kg	10	10/18/10	10/20/10	RS	SW846 6010B [2]	SW846 3050B [4]
Cobalt [a]	0.79 J	13	0.25	mg/kg	4	10/18/10	10/20/10	RS	SW846 6010B [2]	SW846 3050B [4]
Copper [a]	2.3 J	16	1.3	mg/kg	10	10/18/10	10/20/10	RS	SW846 6010B [2]	SW846 3050B [4]
Iron	2250	19	1.9	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Lead [a]	1.2 J	5.0	0.25	mg/kg	4	10/18/10	10/20/10	RS	SW846 6010B [2]	SW846 3050B [4]
Magnesium	1420	310	6.3	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Manganese	54.4	0.94	0.063	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Mercury	0.016 U	0.13	0.016	mg/kg	1	10/22/10	10/22/10	LM	SW846 7471A [3]	SW846 7471A [5]
Nickel [a]	1.9 J	10	0.25	mg/kg	4	10/18/10	10/20/10	RS	SW846 6010B [2]	SW846 3050B [4]
Potassium	646	630	31	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Selenium [a]	2.5 U	13	2.5	mg/kg	10	10/18/10	10/20/10	RS	SW846 6010B [2]	SW846 3050B [4]
Silver	0.063 U	0.63	0.063	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Sodium	138 J	630	47	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Thallium [a]	0.50 U	2.5	0.50	mg/kg	4	10/18/10	10/20/10	RS	SW846 6010B [2]	SW846 3050B [4]
Vanadium	4.5	3.1	0.063	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Zinc [a]	5.1 J	13	3.1	mg/kg	10	10/18/10	10/20/10	RS	SW846 6010B [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA8454
(2) Instrument QC Batch: MA8455
(3) Instrument QC Batch: MA8460
(4) Prep QC Batch: MP19313
(5) Prep QC Batch: MP19341

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

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

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	F77190-5	**Date Sampled:**	10/08/10
Matrix:	SO - Trip Blank Soil	**Date Received:**	10/12/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H065054.D	1	10/14/10	MM	n/a	n/a	VH2436
Run #2							

	Initial Weight
Run #1	5.00 g
Run #2	

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone [a]	ND	50	21	ug/kg	
107-02-8	Acrolein	ND	25	10	ug/kg	
107-13-1	Acrylonitrile	ND	25	10	ug/kg	
71-43-2	Benzene	ND	5.0	1.0	ug/kg	
108-86-1	Bromobenzene	ND	5.0	1.2	ug/kg	
74-97-5	Bromochloromethane	ND	5.0	1.7	ug/kg	
75-27-4	Bromodichloromethane	ND	5.0	1.0	ug/kg	
75-25-2	Bromoform	ND	5.0	1.8	ug/kg	
104-51-8	n-Butylbenzene	ND	5.0	1.3	ug/kg	
135-98-8	sec-Butylbenzene	ND	5.0	1.2	ug/kg	
98-06-6	tert-Butylbenzene	ND	5.0	1.2	ug/kg	
108-90-7	Chlorobenzene	ND	5.0	1.0	ug/kg	
75-00-3	Chloroethane	ND	5.0	2.0	ug/kg	
67-66-3	Chloroform	ND	5.0	1.0	ug/kg	
95-49-8	o-Chlorotoluene	ND	5.0	1.3	ug/kg	
106-43-4	p-Chlorotoluene	ND	5.0	1.0	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	25	10	ug/kg	
75-15-0	Carbon disulfide	ND	5.0	2.4	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.0	1.6	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.0	1.5	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.0	2.3	ug/kg	
563-58-6	1,1-Dichloropropene	ND	5.0	1.0	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	2.5	ug/kg	
106-93-4	1,2-Dibromoethane	ND	5.0	1.0	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.0	1.2	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.0	1.0	ug/kg	
142-28-9	1,3-Dichloropropane	ND	5.0	1.7	ug/kg	
594-20-7	2,2-Dichloropropane	ND	5.0	1.1	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	1.7	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.0	2.1	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.0	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.0	ug/kg	

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:	TRIP BLANK		
Lab Sample ID:	F77190-5	**Date Sampled:**	10/08/10
Matrix:	SO - Trip Blank Soil	**Date Received:**	10/12/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
541-73-1	m-Dichlorobenzene	ND	5.0	1.2	ug/kg	
95-50-1	o-Dichlorobenzene	ND	5.0	1.1	ug/kg	
106-46-7	p-Dichlorobenzene	ND	5.0	1.5	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	1.9	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	1.1	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	1.1	ug/kg	
591-78-6	2-Hexanone	ND	25	12	ug/kg	
87-68-3	Hexachlorobutadiene	ND	5.0	2.3	ug/kg	
110-54-3	Hexane	ND	5.0	2.0	ug/kg	
98-82-8	Isopropylbenzene	ND	5.0	1.4	ug/kg	
99-87-6	p-Isopropyltoluene	ND	5.0	1.0	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	25	8.3	ug/kg	
74-83-9	Methyl bromide	ND	5.0	2.0	ug/kg	
74-87-3	Methyl chloride	ND	5.0	2.5	ug/kg	
74-95-3	Methylene bromide	ND	5.0	2.1	ug/kg	
75-09-2	Methylene chloride	ND	10	5.0	ug/kg	
78-93-3	Methyl ethyl ketone	ND	25	7.5	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	2.3	ug/kg	
91-20-3	Naphthalene	ND	5.0	2.0	ug/kg	
103-65-1	n-Propylbenzene	ND	5.0	1.5	ug/kg	
100-42-5	Styrene	ND	5.0	1.0	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	1.0	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.0	1.8	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	1.3	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.0	1.3	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	2.0	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	5.0	1.6	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	2.0	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	1.1	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.5	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.0	1.8	ug/kg	
108-88-3	Toluene	ND	5.0	1.2	ug/kg	
79-01-6	Trichloroethylene	ND	5.0	1.6	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.0	2.6	ug/kg	
75-01-4	Vinyl chloride	ND	5.0	2.0	ug/kg	
108-05-4	Vinyl Acetate	ND	25	15	ug/kg	
	m,p-Xylene	ND	10	1.2	ug/kg	
95-47-6	o-Xylene	ND	5.0	1.0	ug/kg	

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:	TRIP BLANK		
Lab Sample ID:	F77190-5	**Date Sampled:**	10/08/10
Matrix:	SO - Trip Blank Soil	**Date Received:**	10/12/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		80-121%
2037-26-5	Toluene-D8	85%		71-130%
460-00-4	4-Bromofluorobenzene	93%		59-148%
17060-07-0	1,2-Dichloroethane-D4	105%		77-123%

(a) ICV and 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

Southeast ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Certification Exceptions
- Chain of Custody

NATIONVIEW

F77190

Chain of Custody and Analytical Request

Page: 1 of 1
Project No: 8080014.03.020
COC Number(1): 101120i0-02
LIMS Number:

Facility/Base I.D.: Holloman AFB, New Mexico
Project/Site Name: SWMU 8, ACM Investigation
Client Name: USACE - Albuquerque District
Collected by: Dustin McNeil/ Jim Moore

	Field Sample ID (30 Characters Max)	ERPIMS LOCID (15 Characters Max)	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hhmm)	Sample Depth (beginning - ending)	SA Code (2)	Sample Number (3)	Sample Matrix (4)	Number of containers	% Solids (2540B)	VOCs (8260B)	SVOCs (8270C)	TPH-GRO (8015B)	TPH-DRO/ORO (8015B)	TAL Metals (6010B/7471A)	PCBs (8082)	Dry Bulk Density (D2937-94)	Specific Gravity (D1429-86)	FOC (D2974-87)				Ambient Blank Lot Control Number	Equipment Blank Lot Control Number	Trip Blank Lot Control Number	Cooler ID
	Sample Analysis Requested (5)																						Quality Assurance Samples (6)			
1	SWMU8-DP07-7	8-DP07-7	08102010	1550	5-7	N	1	SO	6	X	X	X	X	X	X	X										2
2	SWMU8-DP08-8	8-DP08-8	08102010	1650	6-8	N	1	SO	6	X	X	X	X	X	X	X										2
3	SWMU8-DP09-7	8-DP09-7	09102010	1135	5-7	N	1	SO	6	X	X	X	X	X	X	X										2
4	SWMU8-DP10-7	8-DP10-7	09102010	1215	5-7	N	1	SO	6	X	X	X	X	X	X	X										2
5	Trip Blank				-	TB	1	WQ	3		X															2
					-																					
					-																					
					-																					
					-																					
					-																					
					-																					

COMMENTS:

Custody Transfers Prior to Receipt by Laboratory

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1. [signature]	10/11/10	1300	1. FX		09:30
2. FX			2. J. Lorraine (ACSB)	10-12-10	
3.			3.		

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab:
Method of Shipment: FedEx Express
Analytical Lab: Accutest
Lab Recipient:
Shipped No.:
Airbill Number: 8771 0942 7071
Delivery Location: Orlando, FL
Delivery Date/Time:

1.) Chain of Custody Number = date collected + custody number (e.g. 09-02-1999-01)
2.) Sample Type (SA) Codes: N = Normal Sample, TB = Trip Blank (-c) Sample, FD = Field Duplicate (-a) Samples, FR = Field Replicate (-b) Samples, EB = Equipment Blank (-d) Samples, MS = Matrix Spike, SD = Matrix Spike Duplicate, AB = Ambient Blank (-e)
3.) Sample Number: Unique sample number collected from a particular location per day. (e.g. Groundwater sample collected from MW-1 on 10/10/99 = 01, if sampled again on 10/10/99 = 02, etc.)
4.) Matrix Codes: GS = Soil Gas, WG = Groundwater, WS = Surface Water, SO = Soil, SE = Sediment, SL = Sludge, SS = Surface Soil Samples, WQ = Aqueous Blank Samples (trip, equipment, ambient, etc), SQ = Soil Blanks
5.) Sample Analysis Requested: Analytical method requested and number of containers provided for each.
6.) Quality assurance samples are assigned by date (ddmmyy) and the sample number associated with the sample (01, 02, etc) (e.g. Equipment blank collected in association with MW-1 on 10/10/99 will be designated 10109901 in the Equipment Blank Lot Control

3.8

4.1
4

F77190: Chain of Custody
Page 1 of 3

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: F77190 CLIENT: NATIONVIEW PROJECT: SWMU 8 ACM INVESTIGATION

DATE/TIME RECEIVED: 10-12-10 09:00 {MM/DD/YY 24:00} NUMBER OF COOLERS RECEIVED: 1

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

AIRBILL NUMBERS: 8731 0942 7071

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
- [ ] RECEIVED WATER TRIP BLANK
- [x] RECEIVED SOIL TRIP BLANK

MISC. INFORMATION

NUMBER OF ENCORES ? _____

NUMBER OF 5035 FIELD KITS ? _____

NUMBER OR LAB FILTERED METALS ? _____

TEMPERATURE INFORMATION

- [ ] IR THERM ID 3 CORR. FACTOR +0.6
- [ ] OBSERVED TEMPS: 3.2
- [ ] CORRECTED TEMPS: 3.8

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 [C 10-12-10 REVIEWER SIGNATURE/DATE [signature] 10/12/10

NF 10/09 RECEIPT CONFIRMATION 100609 (2).xls

4.1

4

F77190: Chain of Custody

Page 2 of 3

Job Change Order: F77190_11/22/2010

Requested Date:	11/22/2010	**Received Date:**	10/12/2010
Account Name:	Nation View	**Due Date:**	10/26/2010
Project Description:	Holloman AFB; SWMU 8, ACM Investigation	**Deliverable:**	COMMBN
CSR:	JDS	**TAT (Days):**	2

Sample #:
F77190-4

SWMU8-DP10-7

Change: Please remove client sample SWMU8-DP10-7 from job. Client did not indicate COC's were continuous, sample was reported on job F77189 along with MS/MSD. Thank you.

Above Changes client, Marcia Olive per e-mail request **Date:** 11/22/2010

To Client: This Change Order is confirmation of the revisions, previously discussed with the Accutest Client Service Representative.

Page 1 of 1

Southeast ACCUTEST LABORATORIES

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: F77190
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VH2436-MB	H065044.D	1	10/14/10	MM	n/a	n/a	VH2436

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77190-1, F77190-2, F77190-5

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	50	21	ug/kg	
107-02-8	Acrolein	ND	25	10	ug/kg	
107-13-1	Acrylonitrile	ND	25	10	ug/kg	
71-43-2	Benzene	ND	5.0	1.0	ug/kg	
108-86-1	Bromobenzene	ND	5.0	1.2	ug/kg	
74-97-5	Bromochloromethane	ND	5.0	1.7	ug/kg	
75-27-4	Bromodichloromethane	ND	5.0	1.0	ug/kg	
75-25-2	Bromoform	ND	5.0	1.8	ug/kg	
104-51-8	n-Butylbenzene	ND	5.0	1.3	ug/kg	
135-98-8	sec-Butylbenzene	ND	5.0	1.2	ug/kg	
98-06-6	tert-Butylbenzene	ND	5.0	1.2	ug/kg	
108-90-7	Chlorobenzene	ND	5.0	1.0	ug/kg	
75-00-3	Chloroethane	ND	5.0	2.0	ug/kg	
67-66-3	Chloroform	ND	5.0	1.0	ug/kg	
95-49-8	o-Chlorotoluene	ND	5.0	1.3	ug/kg	
106-43-4	p-Chlorotoluene	ND	5.0	1.0	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	25	10	ug/kg	
75-15-0	Carbon disulfide	ND	5.0	2.4	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.0	1.6	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.0	1.5	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.0	2.3	ug/kg	
563-58-6	1,1-Dichloropropene	ND	5.0	1.0	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	2.5	ug/kg	
106-93-4	1,2-Dibromoethane	ND	5.0	1.0	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.0	1.2	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.0	1.0	ug/kg	
142-28-9	1,3-Dichloropropane	ND	5.0	1.7	ug/kg	
594-20-7	2,2-Dichloropropane	ND	5.0	1.1	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	1.7	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.0	2.1	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.0	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.0	ug/kg	
541-73-1	m-Dichlorobenzene	ND	5.0	1.2	ug/kg	
95-50-1	o-Dichlorobenzene	ND	5.0	1.1	ug/kg	
106-46-7	p-Dichlorobenzene	ND	5.0	1.5	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	1.9	ug/kg	

Method Blank Summary

Job Number: F77190
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VH2436-MB	H065044.D	1	10/14/10	MM	n/a	n/a	VH2436

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77190-1, F77190-2, F77190-5

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	1.1	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	1.1	ug/kg	
591-78-6	2-Hexanone	ND	25	12	ug/kg	
87-68-3	Hexachlorobutadiene	ND	5.0	2.3	ug/kg	
110-54-3	Hexane	ND	5.0	2.0	ug/kg	
98-82-8	Isopropylbenzene	ND	5.0	1.4	ug/kg	
99-87-6	p-Isopropyltoluene	ND	5.0	1.0	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	25	8.3	ug/kg	
74-83-9	Methyl bromide	ND	5.0	2.0	ug/kg	
74-87-3	Methyl chloride	ND	5.0	2.5	ug/kg	
74-95-3	Methylene bromide	ND	5.0	2.1	ug/kg	
75-09-2	Methylene chloride	ND	10	5.0	ug/kg	
78-93-3	Methyl ethyl ketone	ND	25	7.5	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	2.3	ug/kg	
91-20-3	Naphthalene	ND	5.0	2.0	ug/kg	
103-65-1	n-Propylbenzene	ND	5.0	1.5	ug/kg	
100-42-5	Styrene	ND	5.0	1.0	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	1.0	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.0	1.8	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	1.3	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.0	1.3	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	2.0	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	5.0	1.6	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	2.0	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	1.1	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.5	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.0	1.8	ug/kg	
108-88-3	Toluene	ND	5.0	1.2	ug/kg	
79-01-6	Trichloroethylene	ND	5.0	1.6	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.0	2.6	ug/kg	
75-01-4	Vinyl chloride	ND	5.0	2.0	ug/kg	
108-05-4	Vinyl Acetate	ND	25	15	ug/kg	
	m,p-Xylene	ND	10	1.2	ug/kg	
95-47-6	o-Xylene	ND	5.0	1.0	ug/kg	

Method Blank Summary

Job Number: F77190
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VH2436-MB	H065044.D	1	10/14/10	MM	n/a	n/a	VH2436

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77190-1, F77190-2, F77190-5

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	107%	80-121%
2037-26-5	Toluene-D8	82%	71-130%
460-00-4	4-Bromofluorobenzene	103%	59-148%
17060-07-0	1,2-Dichloroethane-D4	107%	77-123%

Method Blank Summary

Job Number: F77190
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VG2554-MB	G0067505.D	1	10/14/10	MM	n/a	n/a	VG2554

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77190-3

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	50	21	ug/kg	
107-02-8	Acrolein	ND	25	10	ug/kg	
107-13-1	Acrylonitrile	ND	25	10	ug/kg	
71-43-2	Benzene	ND	5.0	1.0	ug/kg	
108-86-1	Bromobenzene	ND	5.0	1.2	ug/kg	
74-97-5	Bromochloromethane	ND	5.0	1.7	ug/kg	
75-27-4	Bromodichloromethane	ND	5.0	1.0	ug/kg	
75-25-2	Bromoform	ND	5.0	1.8	ug/kg	
104-51-8	n-Butylbenzene	ND	5.0	1.3	ug/kg	
135-98-8	sec-Butylbenzene	ND	5.0	1.2	ug/kg	
98-06-6	tert-Butylbenzene	ND	5.0	1.2	ug/kg	
108-90-7	Chlorobenzene	ND	5.0	1.0	ug/kg	
75-00-3	Chloroethane	ND	5.0	2.0	ug/kg	
67-66-3	Chloroform	ND	5.0	1.0	ug/kg	
95-49-8	o-Chlorotoluene	ND	5.0	1.3	ug/kg	
106-43-4	p-Chlorotoluene	ND	5.0	1.0	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	25	10	ug/kg	
75-15-0	Carbon disulfide	ND	5.0	2.4	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.0	1.6	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.0	1.5	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.0	2.3	ug/kg	
563-58-6	1,1-Dichloropropene	ND	5.0	1.0	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	2.5	ug/kg	
106-93-4	1,2-Dibromoethane	ND	5.0	1.0	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.0	1.2	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.0	1.0	ug/kg	
142-28-9	1,3-Dichloropropane	ND	5.0	1.7	ug/kg	
594-20-7	2,2-Dichloropropane	ND	5.0	1.1	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	1.7	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.0	2.1	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.0	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.0	ug/kg	
541-73-1	m-Dichlorobenzene	ND	5.0	1.2	ug/kg	
95-50-1	o-Dichlorobenzene	ND	5.0	1.1	ug/kg	
106-46-7	p-Dichlorobenzene	ND	5.0	1.5	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	1.9	ug/kg	

Method Blank Summary

Job Number: F77190
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VG2554-MB	G0067505.D	1	10/14/10	MM	n/a	n/a	VG2554

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77190-3

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	1.1	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	1.1	ug/kg	
591-78-6	2-Hexanone	ND	25	12	ug/kg	
87-68-3	Hexachlorobutadiene	ND	5.0	2.3	ug/kg	
110-54-3	Hexane	ND	5.0	2.0	ug/kg	
98-82-8	Isopropylbenzene	ND	5.0	1.4	ug/kg	
99-87-6	p-Isopropyltoluene	ND	5.0	1.0	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	25	8.3	ug/kg	
74-83-9	Methyl bromide	ND	5.0	2.0	ug/kg	
74-87-3	Methyl chloride	ND	5.0	2.5	ug/kg	
74-95-3	Methylene bromide	ND	5.0	2.1	ug/kg	
75-09-2	Methylene chloride	23.3	10	5.0	ug/kg	
78-93-3	Methyl ethyl ketone	ND	25	7.5	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	2.3	ug/kg	
91-20-3	Naphthalene	ND	5.0	2.0	ug/kg	
103-65-1	n-Propylbenzene	ND	5.0	1.5	ug/kg	
100-42-5	Styrene	ND	5.0	1.0	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	1.0	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.0	1.8	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	1.3	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.0	1.3	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	2.0	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	5.0	1.6	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	2.0	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	1.1	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.5	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.0	1.8	ug/kg	
108-88-3	Toluene	ND	5.0	1.2	ug/kg	
79-01-6	Trichloroethylene	ND	5.0	1.6	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.0	2.6	ug/kg	
75-01-4	Vinyl chloride	ND	5.0	2.0	ug/kg	
108-05-4	Vinyl Acetate	ND	25	15	ug/kg	
	m,p-Xylene	ND	10	1.2	ug/kg	
95-47-6	o-Xylene	ND	5.0	1.0	ug/kg	

Method Blank Summary

Job Number: F77190
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VG2554-MB	G0067505.D	1	10/14/10	MM	n/a	n/a	VG2554

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77190-3

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	103%	80-121%
2037-26-5	Toluene-D8	97%	71-130%
460-00-4	4-Bromofluorobenzene	94%	59-148%
17060-07-0	1,2-Dichloroethane-D4	103%	77-123%

Blank Spike Summary

Job Number: F77190
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VH2436-BS	H065043.D	1	10/14/10	MM	n/a	n/a	VH2436

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77190-1, F77190-2, F77190-5

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	250	111	44*	61-144
107-02-8	Acrolein	250	145	58	27-156
107-13-1	Acrylonitrile	250	261	104	55-144
71-43-2	Benzene	50	56.0	112	78-130
108-86-1	Bromobenzene	50	56.8	114	78-123
74-97-5	Bromochloromethane	50	60.8	122	72-122
75-27-4	Bromodichloromethane	50	57.7	115	73-122
75-25-2	Bromoform	50	54.9	110	70-139
104-51-8	n-Butylbenzene	50	53.1	106	80-138
135-98-8	sec-Butylbenzene	50	52.1	104	82-132
98-06-6	tert-Butylbenzene	50	53.0	106	79-130
108-90-7	Chlorobenzene	50	55.8	112	83-122
75-00-3	Chloroethane	50	69.8	140	61-153
67-66-3	Chloroform	50	57.7	115	79-129
95-49-8	o-Chlorotoluene	50	52.3	105	77-123
106-43-4	p-Chlorotoluene	50	52.0	104	78-129
110-75-8	2-Chloroethyl vinyl ether	250	330	132	52-142
75-15-0	Carbon disulfide	50	57.5	115	61-142
56-23-5	Carbon tetrachloride	50	62.2	124	79-135
75-34-3	1,1-Dichloroethane	50	55.8	112	77-132
75-35-4	1,1-Dichloroethylene	50	56.4	113	66-132
563-58-6	1,1-Dichloropropene	50	58.8	118	81-133
96-12-8	1,2-Dibromo-3-chloropropane	50	53.8	108	67-129
106-93-4	1,2-Dibromoethane	50	53.3	107	77-126
107-06-2	1,2-Dichloroethane	50	56.0	112	78-129
78-87-5	1,2-Dichloropropane	50	53.0	106	74-127
142-28-9	1,3-Dichloropropane	50	52.3	105	78-118
594-20-7	2,2-Dichloropropane	50	59.1	118	80-137
124-48-1	Dibromochloromethane	50	49.3	99	78-117
75-71-8	Dichlorodifluoromethane	50	125	250*	35-162
156-59-2	cis-1,2-Dichloroethylene	50	59.4	119	74-123
10061-01-5	cis-1,3-Dichloropropene	50	56.5	113	79-130
541-73-1	m-Dichlorobenzene	50	56.9	114	82-126
95-50-1	o-Dichlorobenzene	50	53.6	107	83-123
106-46-7	p-Dichlorobenzene	50	55.4	111	84-124
156-60-5	trans-1,2-Dichloroethylene	50	56.5	113	77-129

Blank Spike Summary

Job Number: F77190
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VH2436-BS	H065043.D	1	10/14/10	MM	n/a	n/a	VH2436

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77190-1, F77190-2, F77190-5

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
10061-02-6	trans-1,3-Dichloropropene	50	57.4	115	87-131
100-41-4	Ethylbenzene	50	53.5	107	82-124
591-78-6	2-Hexanone	250	224	90	67-130
87-68-3	Hexachlorobutadiene	50	68.3	137	77-150
110-54-3	Hexane	50	69.6	139	65-147
98-82-8	Isopropylbenzene	50	60.0	120	82-133
99-87-6	p-Isopropyltoluene	50	53.7	107	82-132
108-10-1	4-Methyl-2-pentanone	250	259	104	69-125
74-83-9	Methyl bromide	50	79.3	159*	60-146
74-87-3	Methyl chloride	50	75.2	150	58-163
74-95-3	Methylene bromide	50	59.9	120	75-128
75-09-2	Methylene chloride	50	62.4	125	62-140
78-93-3	Methyl ethyl ketone	250	184	74	66-134
1634-04-4	Methyl Tert Butyl Ether	50	63.7	127	70-131
91-20-3	Naphthalene	50	52.1	104	59-143
103-65-1	n-Propylbenzene	50	52.1	104	78-129
100-42-5	Styrene	50	54.3	109	79-123
630-20-6	1,1,1,2-Tetrachloroethane	50	56.8	114	81-121
71-55-6	1,1,1-Trichloroethane	50	60.5	121	80-133
79-34-5	1,1,2,2-Tetrachloroethane	50	49.9	100	70-128
79-00-5	1,1,2-Trichloroethane	50	51.2	102	76-118
87-61-6	1,2,3-Trichlorobenzene	50	61.2	122	78-136
96-18-4	1,2,3-Trichloropropane	50	49.8	100	74-125
120-82-1	1,2,4-Trichlorobenzene	50	61.9	124	82-137
95-63-6	1,2,4-Trimethylbenzene	50	53.0	106	77-129
108-67-8	1,3,5-Trimethylbenzene	50	53.4	107	79-129
127-18-4	Tetrachloroethylene	50	63.9	128	79-132
108-88-3	Toluene	50	51.1	102	80-123
79-01-6	Trichloroethylene	50	57.3	115	78-132
75-69-4	Trichlorofluoromethane	50	68.1	136	67-149
75-01-4	Vinyl chloride	50	62.6	125	60-145
108-05-4	Vinyl Acetate	250	366	146	25-164
	m,p-Xylene	100	110	110	82-128
95-47-6	o-Xylene	50	53.4	107	82-126

Blank Spike Summary

Job Number: F77190
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VH2436-BS	H065043.D	1	10/14/10	MM	n/a	n/a	VH2436

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77190-1, F77190-2, F77190-5

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	109%	80-121%
2037-26-5	Toluene-D8	93%	71-130%
460-00-4	4-Bromofluorobenzene	106%	59-148%
17060-07-0	1,2-Dichloroethane-D4	119%	77-123%

Blank Spike Summary

Job Number: F77190
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VG2554-BS	G0067504.D	1	10/14/10	MM	n/a	n/a	VG2554

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77190-3

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	250	105	42*	61-144
107-02-8	Acrolein	250	142	57	27-156
107-13-1	Acrylonitrile	250	222	89	55-144
71-43-2	Benzene	50	50.6	101	78-130
108-86-1	Bromobenzene	50	50.3	101	78-123
74-97-5	Bromochloromethane	50	47.0	94	72-122
75-27-4	Bromodichloromethane	50	49.4	99	73-122
75-25-2	Bromoform	50	42.7	85	70-139
104-51-8	n-Butylbenzene	50	57.0	114	80-138
135-98-8	sec-Butylbenzene	50	57.5	115	82-132
98-06-6	tert-Butylbenzene	50	56.1	112	79-130
108-90-7	Chlorobenzene	50	48.5	97	83-122
75-00-3	Chloroethane	50	55.8	112	61-153
67-66-3	Chloroform	50	49.1	98	79-129
95-49-8	o-Chlorotoluene	50	54.7	109	77-123
106-43-4	p-Chlorotoluene	50	54.6	109	78-129
110-75-8	2-Chloroethyl vinyl ether	250	238	95	52-142
75-15-0	Carbon disulfide	50	54.2	108	61-142
56-23-5	Carbon tetrachloride	50	53.0	106	79-135
75-34-3	1,1-Dichloroethane	50	47.4	95	77-132
75-35-4	1,1-Dichloroethylene	50	49.5	99	66-132
563-58-6	1,1-Dichloropropene	50	52.3	105	81-133
96-12-8	1,2-Dibromo-3-chloropropane	50	53.6	107	67-129
106-93-4	1,2-Dibromoethane	50	46.2	92	77-126
107-06-2	1,2-Dichloroethane	50	48.7	97	78-129
78-87-5	1,2-Dichloropropane	50	46.4	93	74-127
142-28-9	1,3-Dichloropropane	50	44.9	90	78-118
594-20-7	2,2-Dichloropropane	50	51.7	103	80-137
124-48-1	Dibromochloromethane	50	44.2	88	78-117
75-71-8	Dichlorodifluoromethane	50	128	256*	35-162
156-59-2	cis-1,2-Dichloroethylene	50	48.2	96	74-123
10061-01-5	cis-1,3-Dichloropropene	50	51.6	103	79-130
541-73-1	m-Dichlorobenzene	50	52.9	106	82-126
95-50-1	o-Dichlorobenzene	50	49.7	99	83-123
106-46-7	p-Dichlorobenzene	50	53.0	106	84-124
156-60-5	trans-1,2-Dichloroethylene	50	50.4	101	77-129

Blank Spike Summary

Job Number: F77190
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VG2554-BS	G0067504.D	1	10/14/10	MM	n/a	n/a	VG2554

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77190-3

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
10061-02-6	trans-1,3-Dichloropropene	50	52.5	105	87-131
100-41-4	Ethylbenzene	50	49.9	100	82-124
591-78-6	2-Hexanone	250	197	79	67-130
87-68-3	Hexachlorobutadiene	50	58.9	118	77-150
110-54-3	Hexane	50	57.7	115	65-147
98-82-8	Isopropylbenzene	50	57.0	114	82-133
99-87-6	p-Isopropyltoluene	50	58.1	116	82-132
108-10-1	4-Methyl-2-pentanone	250	228	91	69-125
74-83-9	Methyl bromide	50	63.2	126	60-146
74-87-3	Methyl chloride	50	73.3	147	58-163
74-95-3	Methylene bromide	50	49.2	98	75-128
75-09-2	Methylene chloride	50	48.4	97	62-140
78-93-3	Methyl ethyl ketone	250	164	66	66-134
1634-04-4	Methyl Tert Butyl Ether	50	47.9	96	70-131
91-20-3	Naphthalene	50	51.7	103	59-143
103-65-1	n-Propylbenzene	50	54.9	110	78-129
100-42-5	Styrene	50	49.7	99	79-123
630-20-6	1,1,1,2-Tetrachloroethane	50	45.1	90	81-121
71-55-6	1,1,1-Trichloroethane	50	53.3	107	80-133
79-34-5	1,1,2,2-Tetrachloroethane	50	49.5	99	70-128
79-00-5	1,1,2-Trichloroethane	50	43.8	88	76-118
87-61-6	1,2,3-Trichlorobenzene	50	51.0	102	78-136
96-18-4	1,2,3-Trichloropropane	50	56.4	113	74-125
120-82-1	1,2,4-Trichlorobenzene	50	52.3	105	82-137
95-63-6	1,2,4-Trimethylbenzene	50	55.8	112	77-129
108-67-8	1,3,5-Trimethylbenzene	50	55.6	111	79-129
127-18-4	Tetrachloroethylene	50	50.2	100	79-132
108-88-3	Toluene	50	47.3	95	80-123
79-01-6	Trichloroethylene	50	53.6	107	78-132
75-69-4	Trichlorofluoromethane	50	65.5	131	67-149
75-01-4	Vinyl chloride	50	67.2	134	60-145
108-05-4	Vinyl Acetate	250	244	98	25-164
	m,p-Xylene	100	106	106	82-128
95-47-6	o-Xylene	50	47.9	96	82-126

Blank Spike Summary

Job Number: F77190
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VG2554-BS	G0067504.D	1	10/14/10	MM	n/a	n/a	VG2554

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77190-3

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	105%	80-121%
2037-26-5	Toluene-D8	91%	71-130%
460-00-4	4-Bromofluorobenzene	100%	59-148%
17060-07-0	1,2-Dichloroethane-D4	98%	77-123%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F77190
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F77190-3MS	G0067507.D	1	10/14/10	MM	n/a	n/a	VG2554
F77190-3MSD	G0067508.D	1	10/14/10	MM	n/a	n/a	VG2554
F77190-3	G0067506.D	1	10/14/10	MM	n/a	n/a	VG2554

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77190-3

CAS No.	Compound	F77190-3 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		421	140	33*	132	32*	6	61-144/29
107-02-8	Acrolein	ND		421	255	61	2520	615*	163*	27-156/39
107-13-1	Acrylonitrile	ND		421	277	66	278	68	0	55-144/24
71-43-2	Benzene	2.0	J	84.1	84.2	98	85.6	102	2	78-130/25
108-86-1	Bromobenzene	ND		84.1	79.5	94	77.6	95	2	78-123/30
74-97-5	Bromochloromethane	ND		84.1	66.9	80	73.1	89	9	72-122/23
75-27-4	Bromodichloromethane	ND		84.1	80.1	95	76.4	93	5	73-122/25
75-25-2	Bromoform	ND		84.1	66.1	79	64.8	79	2	70-139/26
104-51-8	n-Butylbenzene	ND		84.1	94.5	112	90.4	110	4	80-138/31
135-98-8	sec-Butylbenzene	ND		84.1	95.9	114	91.4	112	5	82-132/29
98-06-6	tert-Butylbenzene	ND		84.1	94.0	112	91.7	112	2	79-130/29
108-90-7	Chlorobenzene	ND		84.1	86.9	103	82.0	100	6	83-122/23
75-00-3	Chloroethane	ND		84.1	107	127	105	128	2	61-153/31
67-66-3	Chloroform	ND		84.1	82.3	98	82.4	101	0	79-129/27
95-49-8	o-Chlorotoluene	ND		84.1	93.1	111	87.7	107	6	77-123/31
106-43-4	p-Chlorotoluene	ND		84.1	97.4	116	91.3	111	6	78-129/29
110-75-8	2-Chloroethyl vinyl ether	ND		421	316	75	320	78	1	52-142/25
75-15-0	Carbon disulfide	ND		84.1	89.9	107	90.7	111	1	61-142/27
56-23-5	Carbon tetrachloride	ND		84.1	89.7	107	87.8	107	2	79-135/29
75-34-3	1,1-Dichloroethane	ND		84.1	82.5	98	82.1	100	0	77-132/26
75-35-4	1,1-Dichloroethylene	ND		84.1	82.6	98	81.8	100	1	66-132/27
563-58-6	1,1-Dichloropropene	ND		84.1	87.8	104	87.4	107	0	81-133/26
96-12-8	1,2-Dibromo-3-chloropropane	ND		84.1	63.9	76	75.0	92	16	67-129/29
106-93-4	1,2-Dibromoethane	ND		84.1	70.5	84	68.7	84	3	77-126/24
107-06-2	1,2-Dichloroethane	ND		84.1	75.2	89	73.4	90	2	78-129/24
78-87-5	1,2-Dichloropropane	ND		84.1	72.1	86	74.8	91	4	74-127/27
142-28-9	1,3-Dichloropropane	ND		84.1	73.8	88	69.1	84	7	78-118/26
594-20-7	2,2-Dichloropropane	ND		84.1	94.9	113	90.8	111	4	80-137/28
124-48-1	Dibromochloromethane	ND		84.1	73.5	87	73.6	90	0	78-117/27
75-71-8	Dichlorodifluoromethane	ND		84.1	211	251*	201	245*	5	35-162/30
156-59-2	cis-1,2-Dichloroethylene	ND		84.1	84.1	100	81.6	100	3	74-123/26
10061-01-5	cis-1,3-Dichloropropene	ND		84.1	76.3	91	79.0	96	3	79-130/23
541-73-1	m-Dichlorobenzene	ND		84.1	83.0	99	84.0	102	1	82-126/29
95-50-1	o-Dichlorobenzene	ND		84.1	78.6	93	77.1	94	2	83-123/28
106-46-7	p-Dichlorobenzene	ND		84.1	85.9	102	80.9	99	6	84-124/28
156-60-5	trans-1,2-Dichloroethylene	ND		84.1	82.6	98	82.2	100	0	77-129/27

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F77190
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F77190-3MS	G0067507.D	1	10/14/10	MM	n/a	n/a	VG2554
F77190-3MSD	G0067508.D	1	10/14/10	MM	n/a	n/a	VG2554
F77190-3	G0067506.D	1	10/14/10	MM	n/a	n/a	VG2554

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77190-3

CAS No.	Compound	F77190-3 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
10061-02-6	trans-1,3-Dichloropropene	ND		84.1	83.7	99	83.0	101	1	87-131/27
100-41-4	Ethylbenzene	ND		84.1	92.2	110	87.8	107	5	82-124/25
591-78-6	2-Hexanone	ND		421	274	65*	279	68	2	67-130/29
87-68-3	Hexachlorobutadiene	ND		84.1	91.3	109	84.9	104	7	77-150/36
110-54-3	Hexane	ND		84.1	95.8	114	83.4	102	14	65-147/27
98-82-8	Isopropylbenzene	ND		84.1	105	125	99.0	121	6	82-133/27
99-87-6	p-Isopropyltoluene	ND		84.1	97.1	115	93.4	114	4	82-132/29
108-10-1	4-Methyl-2-pentanone	ND		421	349	83	337	82	3	69-125/24
74-83-9	Methyl bromide	ND		84.1	124	147*	126	154*	2	60-146/31
74-87-3	Methyl chloride	ND		84.1	128	152	126	154	2	58-163/26
74-95-3	Methylene bromide	ND		84.1	70.2	83	69.0	84	2	75-128/26
75-09-2	Methylene chloride	9.6	JB	84.1	106	115	118	132	11	62-140/25
78-93-3	Methyl ethyl ketone	ND		421	198	47*	220	54*	11	66-134/23
1634-04-4	Methyl Tert Butyl Ether	ND		84.1	70.3	84	71.7	87	2	70-131/25
91-20-3	Naphthalene	ND		84.1	68.2	81	65.1	79	5	59-143/31
103-65-1	n-Propylbenzene	ND		84.1	97.4	116	91.5	112	6	78-129/29
100-42-5	Styrene	ND		84.1	87.8	104	85.0	104	3	79-123/28
630-20-6	1,1,1,2-Tetrachloroethane	ND		84.1	83.0	99	82.7	101	0	81-121/25
71-55-6	1,1,1-Trichloroethane	ND		84.1	87.9	104	85.8	105	2	80-133/27
79-34-5	1,1,2,2-Tetrachloroethane	ND		84.1	70.0	83	71.5	87	2	70-128/30
79-00-5	1,1,2-Trichloroethane	ND		84.1	69.4	82	70.5	86	2	76-118/28
87-61-6	1,2,3-Trichlorobenzene	ND		84.1	74.4	88	67.3	82	10	78-136/34
96-18-4	1,2,3-Trichloropropane	ND		84.1	71.0	84	70.5	86	1	74-125/30
120-82-1	1,2,4-Trichlorobenzene	ND		84.1	80.2	95	78.9	96	2	82-137/32
95-63-6	1,2,4-Trimethylbenzene	ND		84.1	97.2	116	91.0	111	7	77-129/29
108-67-8	1,3,5-Trimethylbenzene	ND		84.1	92.4	110	88.2	108	5	79-129/31
127-18-4	Tetrachloroethylene	ND		84.1	88.1	105	86.6	106	2	79-132/27
108-88-3	Toluene	1.8	J	84.1	87.5	102	85.0	102	3	80-123/26
79-01-6	Trichloroethylene	ND		84.1	86.9	103	88.8	108	2	78-132/28
75-69-4	Trichlorofluoromethane	ND		84.1	116	138	107	131	8	67-149/29
75-01-4	Vinyl chloride	ND		84.1	114	136	113	138	1	60-145/29
108-05-4	Vinyl Acetate	ND		421	308	73	291	71	6	25-164/35
	m,p-Xylene	ND		168	199	118	185	113	7	82-128/25
95-47-6	o-Xylene	ND		84.1	88.2	105	86.3	105	2	82-126/25

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F77190
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F77190-3MS	G0067507.D	1	10/14/10	MM	n/a	n/a	VG2554
F77190-3MSD	G0067508.D	1	10/14/10	MM	n/a	n/a	VG2554
F77190-3	G0067506.D	1	10/14/10	MM	n/a	n/a	VG2554

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77190-3

CAS No.	Surrogate Recoveries	MS	MSD	F77190-3	Limits
1868-53-7	Dibromofluoromethane	99%	99%	103%	80-121%
2037-26-5	Toluene-D8	100%	95%	97%	71-130%
460-00-4	4-Bromofluorobenzene	92%	88%	92%	59-148%
17060-07-0	1,2-Dichloroethane-D4	90%	87%	120%	77-123%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F77190
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F77190-1MS	H065049.D	1	10/14/10	MM	n/a	n/a	VH2436
F77190-1MSD	H065050.D	1	10/14/10	MM	n/a	n/a	VH2436
F77190-1	H065048.D	1	10/14/10	MM	n/a	n/a	VH2436

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77190-1, F77190-2, F77190-5

CAS No.	Compound	F77190-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		355	106	30*	104	31*	2	61-144/29
107-02-8	Acrolein	ND		355	190	54	184	54	3	27-156/39
107-13-1	Acrylonitrile	ND		355	237	67	235	69	1	55-144/24
71-43-2	Benzene	1.1	J	70.9	75.7	105	71.0	103	6	78-130/25
108-86-1	Bromobenzene	ND		70.9	71.7	101	66.9	98	7	78-123/30
74-97-5	Bromochloromethane	ND		70.9	66.6	94	62.3	91	7	72-122/23
75-27-4	Bromodichloromethane	ND		70.9	70.9	100	66.0	97	7	73-122/25
75-25-2	Bromoform	ND		70.9	50.3	71	48.7	71	3	70-139/26
104-51-8	n-Butylbenzene	ND		70.9	74.5	105	69.5	102	7	80-138/31
135-98-8	sec-Butylbenzene	ND		70.9	74.0	104	72.4	106	2	82-132/29
98-06-6	tert-Butylbenzene	ND		70.9	76.1	107	71.1	104	7	79-130/29
108-90-7	Chlorobenzene	ND		70.9	73.8	104	68.0	100	8	83-122/23
75-00-3	Chloroethane	ND		70.9	94.0	133	87.4	128	7	61-153/31
67-66-3	Chloroform	ND		70.9	71.3	101	68.2	100	4	79-129/27
95-49-8	o-Chlorotoluene	ND		70.9	73.2	103	70.6	104	4	77-123/31
106-43-4	p-Chlorotoluene	ND		70.9	73.8	104	70.6	104	4	78-129/29
110-75-8	2-Chloroethyl vinyl ether	ND		355	374	105	390	114	4	52-142/25
75-15-0	Carbon disulfide	ND		70.9	74.3	105	69.4	102	7	61-142/27
56-23-5	Carbon tetrachloride	ND		70.9	74.5	105	69.9	103	6	79-135/29
75-34-3	1,1-Dichloroethane	ND		70.9	74.5	105	68.0	100	9	77-132/26
75-35-4	1,1-Dichloroethylene	ND		70.9	71.7	101	65.8	97	9	66-132/27
563-58-6	1,1-Dichloropropene	ND		70.9	75.0	106	68.8	101	9	81-133/26
96-12-8	1,2-Dibromo-3-chloropropane	ND		70.9	53.0	75	55.1	81	4	67-129/29
106-93-4	1,2-Dibromoethane	ND		70.9	60.1	85	54.3	80	10	77-126/24
107-06-2	1,2-Dichloroethane	ND		70.9	63.0	89	59.3	87	6	78-129/24
78-87-5	1,2-Dichloropropane	ND		70.9	69.4	98	65.3	96	6	74-127/27
142-28-9	1,3-Dichloropropane	ND		70.9	61.5	87	56.4	83	9	78-118/26
594-20-7	2,2-Dichloropropane	ND		70.9	69.0	97	65.9	97	5	80-137/28
124-48-1	Dibromochloromethane	ND		70.9	54.4	77*	52.8	77*	3	78-117/27
75-71-8	Dichlorodifluoromethane	ND		70.9	148	209*	140	205*	6	35-162/30
156-59-2	cis-1,2-Dichloroethylene	ND		70.9	75.1	106	72.3	106	4	74-123/26
10061-01-5	cis-1,3-Dichloropropene	ND		70.9	69.5	98	65.2	96	6	79-130/23
541-73-1	m-Dichlorobenzene	ND		70.9	75.1	106	71.0	104	6	82-126/29
95-50-1	o-Dichlorobenzene	ND		70.9	69.7	98	65.9	97	6	83-123/28
106-46-7	p-Dichlorobenzene	ND		70.9	70.8	100	70.2	103	1	84-124/28
156-60-5	trans-1,2-Dichloroethylene	ND		70.9	72.2	102	68.7	101	5	77-129/27

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F77190
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F77190-1MS	H065049.D	1	10/14/10	MM	n/a	n/a	VH2436
F77190-1MSD	H065050.D	1	10/14/10	MM	n/a	n/a	VH2436
F77190-1	H065048.D	1	10/14/10	MM	n/a	n/a	VH2436

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77190-1, F77190-2, F77190-5

CAS No.	Compound	F77190-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
10061-02-6	trans-1,3-Dichloropropene	ND		70.9	68.3	96	63.7	93	7	87-131/27
100-41-4	Ethylbenzene	ND		70.9	74.8	105	67.5	99	10	82-124/25
591-78-6	2-Hexanone	ND		355	222	63*	210	62*	6	67-130/29
87-68-3	Hexachlorobutadiene	ND		70.9	78.2	110	75.7	111	3	77-150/36
110-54-3	Hexane	ND		70.9	84.4	119	78.8	116	7	65-147/27
98-82-8	Isopropylbenzene	ND		70.9	84.8	120	76.2	112	11	82-133/27
99-87-6	p-Isopropyltoluene	ND		70.9	76.1	107	72.6	107	5	82-132/29
108-10-1	4-Methyl-2-pentanone	ND		355	273	77	258	76	6	69-125/24
74-83-9	Methyl bromide	ND		70.9	108	152*	103	151*	5	60-146/31
74-87-3	Methyl chloride	ND		70.9	100	141	87.7	129	13	58-163/26
74-95-3	Methylene bromide	ND		70.9	64.0	90	59.1	87	8	75-128/26
75-09-2	Methylene chloride	ND		70.9	70.6	100	70.1	103	1	62-140/25
78-93-3	Methyl ethyl ketone	ND		355	163	46*	159	47*	2	66-134/23
1634-04-4	Methyl Tert Butyl Ether	ND		70.9	70.6	100	64.3	94	9	70-131/25
91-20-3	Naphthalene	ND		70.9	54.3	77	53.9	79	1	59-143/31
103-65-1	n-Propylbenzene	ND		70.9	74.3	105	71.5	105	4	78-129/29
100-42-5	Styrene	ND		70.9	72.1	102	65.3	96	10	79-123/28
630-20-6	1,1,1,2-Tetrachloroethane	ND		70.9	71.0	100	64.0	94	10	81-121/25
71-55-6	1,1,1-Trichloroethane	ND		70.9	73.3	103	68.2	100	7	80-133/27
79-34-5	1,1,2,2-Tetrachloroethane	ND		70.9	57.9	82	56.2	82	3	70-128/30
79-00-5	1,1,2-Trichloroethane	ND		70.9	62.7	88	57.7	85	8	76-118/28
87-61-6	1,2,3-Trichlorobenzene	ND		70.9	65.1	92	63.4	93	3	78-136/34
96-18-4	1,2,3-Trichloropropane	ND		70.9	52.6	74	49.6	73*	6	74-125/30
120-82-1	1,2,4-Trichlorobenzene	ND		70.9	71.1	100	68.4	100	4	82-137/32
95-63-6	1,2,4-Trimethylbenzene	ND		70.9	76.4	108	71.5	105	7	77-129/29
108-67-8	1,3,5-Trimethylbenzene	ND		70.9	75.7	107	70.9	104	7	79-129/31
127-18-4	Tetrachloroethylene	ND		70.9	80.0	113	74.6	109	7	79-132/27
108-88-3	Toluene	ND		70.9	71.8	101	65.2	96	10	80-123/26
79-01-6	Trichloroethylene	ND		70.9	75.1	106	69.4	102	8	78-132/28
75-69-4	Trichlorofluoromethane	ND		70.9	85.6	121	79.6	117	7	67-149/29
75-01-4	Vinyl chloride	ND		70.9	81.4	115	79.4	117	2	60-145/29
108-05-4	Vinyl Acetate	ND		355	367	104	350	103	5	25-164/35
	m,p-Xylene	ND		142	151	106	139	102	8	82-128/25
95-47-6	o-Xylene	ND		70.9	72.3	102	67.7	99	7	82-126/25

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F77190
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F77190-1MS	H065049.D	1	10/14/10	MM	n/a	n/a	VH2436
F77190-1MSD	H065050.D	1	10/14/10	MM	n/a	n/a	VH2436
F77190-1	H065048.D	1	10/14/10	MM	n/a	n/a	VH2436

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77190-1, F77190-2, F77190-5

CAS No.	Surrogate Recoveries	MS	MSD	F77190-1	Limits
1868-53-7	Dibromofluoromethane	98%	101%	106%	80-121%
2037-26-5	Toluene-D8	97%	95%	81%	71-130%
460-00-4	4-Bromofluorobenzene	99%	99%	90%	59-148%
17060-07-0	1,2-Dichloroethane-D4	95%	96%	117%	77-123%

Southeast ACCUTEST LABORATORIES

GC/MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: F77190
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34713-MB	L048640.D	1	10/25/10	NAF	10/15/10	OP34713	SL2491

The QC reported here applies to the following samples: **Method:** SW846 8270C

F77190-1, F77190-2, F77190-3

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	830	330	ug/kg	
95-57-8	2-Chlorophenol	ND	170	33	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	170	33	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	170	33	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	170	37	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	830	330	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	330	33	ug/kg	
95-48-7	2-Methylphenol	ND	170	33	ug/kg	
	3&4-Methylphenol	ND	170	33	ug/kg	
88-75-5	2-Nitrophenol	ND	170	33	ug/kg	
100-02-7	4-Nitrophenol	ND	830	330	ug/kg	
87-86-5	Pentachlorophenol	ND	830	330	ug/kg	
108-95-2	Phenol	ND	170	33	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	170	33	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	170	33	ug/kg	
83-32-9	Acenaphthene	ND	170	33	ug/kg	
208-96-8	Acenaphthylene	ND	170	33	ug/kg	
62-53-3	Aniline	ND	170	37	ug/kg	
120-12-7	Anthracene	ND	170	33	ug/kg	
92-87-5	Benzidine	ND	1700	700	ug/kg	
56-55-3	Benzo(a)anthracene	ND	170	33	ug/kg	
50-32-8	Benzo(a)pyrene	ND	170	33	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	170	33	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	170	33	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	170	33	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	170	33	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	330	67	ug/kg	
100-51-6	Benzyl Alcohol	ND	170	33	ug/kg	
91-58-7	2-Chloronaphthalene	ND	170	33	ug/kg	
106-47-8	4-Chloroaniline	ND	170	33	ug/kg	
86-74-8	Carbazole	ND	170	33	ug/kg	
218-01-9	Chrysene	ND	170	33	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	170	33	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	170	33	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	170	33	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	170	33	ug/kg	

Method Blank Summary

Job Number: F77190
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34713-MB	L048640.D	1	10/25/10	NAF	10/15/10	OP34713	SL2491

The QC reported here applies to the following samples: **Method:** SW846 8270C

F77190-1, F77190-2, F77190-3

CAS No.	Compound	Result	RL	MDL	Units	Q
95-50-1	1,2-Dichlorobenzene	ND	170	67	ug/kg	
122-66-7	1,2-Diphenylhydrazine	ND	170	33	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	170	67	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	170	67	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	170	33	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	170	33	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	330	67	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	170	33	ug/kg	
132-64-9	Dibenzofuran	ND	170	33	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	330	67	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	330	67	ug/kg	
84-66-2	Diethyl phthalate	ND	330	170	ug/kg	
131-11-3	Dimethyl phthalate	ND	330	67	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	330	170	ug/kg	
206-44-0	Fluoranthene	ND	170	33	ug/kg	
86-73-7	Fluorene	ND	170	33	ug/kg	
118-74-1	Hexachlorobenzene	ND	170	33	ug/kg	
87-68-3	Hexachlorobutadiene	ND	170	33	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	170	33	ug/kg	
67-72-1	Hexachloroethane	ND	170	83	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	170	33	ug/kg	
78-59-1	Isophorone	ND	170	33	ug/kg	
90-12-0	1-Methylnaphthalene	ND	170	33	ug/kg	
91-57-6	2-Methylnaphthalene	ND	170	33	ug/kg	
88-74-4	2-Nitroaniline	ND	330	67	ug/kg	
99-09-2	3-Nitroaniline	ND	330	67	ug/kg	
100-01-6	4-Nitroaniline	ND	330	67	ug/kg	
91-20-3	Naphthalene	ND	170	33	ug/kg	
98-95-3	Nitrobenzene	ND	170	33	ug/kg	
62-75-9	N-Nitrosodimethylamine	ND	330	67	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	170	33	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	170	33	ug/kg	
85-01-8	Phenanthrene	ND	170	33	ug/kg	
129-00-0	Pyrene	ND	170	33	ug/kg	
110-86-1	Pyridine	ND	330	83	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	170	33	ug/kg	

Method Blank Summary

Job Number: F77190
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34713-MB	L048640.D	1	10/25/10	NAF	10/15/10	OP34713	SL2491

The QC reported here applies to the following samples: **Method:** SW846 8270C

F77190-1, F77190-2, F77190-3

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	75%	40-102%
4165-62-2	Phenol-d5	78%	41-100%
118-79-6	2,4,6-Tribromophenol	80%	42-108%
4165-60-0	Nitrobenzene-d5	75%	40-105%
321-60-8	2-Fluorobiphenyl	78%	43-107%
1718-51-0	Terphenyl-d14	77%	45-119%

Method Blank Summary

Job Number: F77190
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34713-MB	L048668.D	1	10/26/10	NAF	10/15/10	OP34713	SL2492

The QC reported here applies to the following samples: **Method:** SW846 8270C

F77190-1, F77190-2, F77190-3

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	830	330	ug/kg	
95-57-8	2-Chlorophenol	ND	170	33	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	170	33	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	170	33	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	170	37	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	830	330	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	330	33	ug/kg	
95-48-7	2-Methylphenol	ND	170	33	ug/kg	
	3&4-Methylphenol	ND	170	33	ug/kg	
88-75-5	2-Nitrophenol	ND	170	33	ug/kg	
100-02-7	4-Nitrophenol	ND	830	330	ug/kg	
87-86-5	Pentachlorophenol	ND	830	330	ug/kg	
108-95-2	Phenol	ND	170	33	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	170	33	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	170	33	ug/kg	
83-32-9	Acenaphthene	ND	170	33	ug/kg	
208-96-8	Acenaphthylene	ND	170	33	ug/kg	
62-53-3	Aniline	ND	170	37	ug/kg	
120-12-7	Anthracene	ND	170	33	ug/kg	
92-87-5	Benzidine	ND	1700	700	ug/kg	
56-55-3	Benzo(a)anthracene	ND	170	33	ug/kg	
50-32-8	Benzo(a)pyrene	ND	170	33	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	170	33	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	170	33	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	170	33	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	170	33	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	330	67	ug/kg	
100-51-6	Benzyl Alcohol	ND	170	33	ug/kg	
91-58-7	2-Chloronaphthalene	ND	170	33	ug/kg	
106-47-8	4-Chloroaniline	ND	170	33	ug/kg	
86-74-8	Carbazole	ND	170	33	ug/kg	
218-01-9	Chrysene	ND	170	33	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	170	33	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	170	33	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	170	33	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	170	33	ug/kg	

Method Blank Summary

Job Number: F77190
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34713-MB	L048668.D	1	10/26/10	NAF	10/15/10	OP34713	SL2492

The QC reported here applies to the following samples: **Method:** SW846 8270C

F77190-1, F77190-2, F77190-3

CAS No.	Compound	Result	RL	MDL	Units	Q
95-50-1	1,2-Dichlorobenzene	ND	170	67	ug/kg	
122-66-7	1,2-Diphenylhydrazine	ND	170	33	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	170	67	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	170	67	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	170	33	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	170	33	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	330	67	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	170	33	ug/kg	
132-64-9	Dibenzofuran	ND	170	33	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	330	67	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	330	67	ug/kg	
84-66-2	Diethyl phthalate	ND	330	170	ug/kg	
131-11-3	Dimethyl phthalate	ND	330	67	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	330	170	ug/kg	
206-44-0	Fluoranthene	ND	170	33	ug/kg	
86-73-7	Fluorene	ND	170	33	ug/kg	
118-74-1	Hexachlorobenzene	ND	170	33	ug/kg	
87-68-3	Hexachlorobutadiene	ND	170	33	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	170	33	ug/kg	
67-72-1	Hexachloroethane	ND	170	83	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	170	33	ug/kg	
78-59-1	Isophorone	ND	170	33	ug/kg	
90-12-0	1-Methylnaphthalene	ND	170	33	ug/kg	
91-57-6	2-Methylnaphthalene	ND	170	33	ug/kg	
88-74-4	2-Nitroaniline	ND	330	67	ug/kg	
99-09-2	3-Nitroaniline	ND	330	67	ug/kg	
100-01-6	4-Nitroaniline	ND	330	67	ug/kg	
91-20-3	Naphthalene	ND	170	33	ug/kg	
98-95-3	Nitrobenzene	ND	170	33	ug/kg	
62-75-9	N-Nitrosodimethylamine	ND	330	67	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	170	33	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	170	33	ug/kg	
85-01-8	Phenanthrene	ND	170	33	ug/kg	
129-00-0	Pyrene	ND	170	33	ug/kg	
110-86-1	Pyridine	ND	330	83	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	170	33	ug/kg	

Method Blank Summary

Job Number: F77190
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34713-MB	L048668.D	1	10/26/10	NAF	10/15/10	OP34713	SL2492

The QC reported here applies to the following samples: **Method:** SW846 8270C

F77190-1, F77190-2, F77190-3

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	74%	40-102%
4165-62-2	Phenol-d5	77%	41-100%
118-79-6	2,4,6-Tribromophenol	79%	42-108%
4165-60-0	Nitrobenzene-d5	72%	40-105%
321-60-8	2-Fluorobiphenyl	79%	43-107%
1718-51-0	Terphenyl-d14	73%	45-119%

Blank Spike Summary

Job Number: F77190
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34713-BS	L048639.D	1	10/25/10	NAF	10/15/10	OP34713	SL2491

The QC reported here applies to the following samples: **Method:** SW846 8270C

F77190-1, F77190-2, F77190-3

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
65-85-0	Benzoic Acid	3330	2080	62	44-116
95-57-8	2-Chlorophenol	1670	1280	77	54-97
59-50-7	4-Chloro-3-methyl phenol	1670	1390	83	59-102
120-83-2	2,4-Dichlorophenol	1670	1360	82	60-101
105-67-9	2,4-Dimethylphenol	1670	1160	70	49-89
51-28-5	2,4-Dinitrophenol	3330	2560	77	39-107
534-52-1	4,6-Dinitro-o-cresol	3330	2710	81	58-109
95-48-7	2-Methylphenol	1670	1280	77	53-94
	3&4-Methylphenol	3330	2570	77	54-95
88-75-5	2-Nitrophenol	1670	1390	83	55-96
100-02-7	4-Nitrophenol	3330	2510	75	56-106
87-86-5	Pentachlorophenol	3330	2640	79	50-115
108-95-2	Phenol	1670	1250	75	55-99
95-95-4	2,4,5-Trichlorophenol	1670	1440	86	60-101
88-06-2	2,4,6-Trichlorophenol	1670	1380	83	60-100
83-32-9	Acenaphthene	1670	1350	81	59-97
208-96-8	Acenaphthylene	1670	1330	80	58-98
62-53-3	Aniline	1670	977	59	38-92
120-12-7	Anthracene	1670	1340	80	61-104
56-55-3	Benzo(a)anthracene	1670	1330	80	60-106
50-32-8	Benzo(a)pyrene	1670	1290	77	59-102
205-99-2	Benzo(b)fluoranthene	1670	1320	79	60-107
191-24-2	Benzo(g,h,i)perylene	1670	1230	74	56-103
207-08-9	Benzo(k)fluoranthene	1670	1300	78	61-107
101-55-3	4-Bromophenyl phenyl ether	1670	1320	79	60-104
85-68-7	Butyl benzyl phthalate	1670	1290	77	57-110
100-51-6	Benzyl Alcohol	1670	1280	77	51-102
91-58-7	2-Chloronaphthalene	1670	1290	77	57-95
106-47-8	4-Chloroaniline	1670	570	34	19-85
86-74-8	Carbazole	1670	1340	80	60-106
218-01-9	Chrysene	1670	1320	79	60-107
111-91-1	bis(2-Chloroethoxy)methane	1670	1260	76	51-89
111-44-4	bis(2-Chloroethyl)ether	1670	1160	70	50-96
108-60-1	bis(2-Chloroisopropyl)ether	1670	1100	66	44-94
7005-72-3	4-Chlorophenyl phenyl ether	1670	1330	80	60-101
95-50-1	1,2-Dichlorobenzene	1670	1220	73	47-91

Blank Spike Summary

Job Number: F77190
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34713-BS	L048639.D	1	10/25/10	NAF	10/15/10	OP34713	SL2491

The QC reported here applies to the following samples: **Method:** SW846 8270C

F77190-1, F77190-2, F77190-3

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
122-66-7	1,2-Diphenylhydrazine	1670	1330	80	58-104
541-73-1	1,3-Dichlorobenzene	1670	1190	71	45-86
106-46-7	1,4-Dichlorobenzene	1670	1210	73	45-88
121-14-2	2,4-Dinitrotoluene	1670	1430	86	59-103
606-20-2	2,6-Dinitrotoluene	1670	1410	85	57-99
91-94-1	3,3'-Dichlorobenzidine	1670	569	34	34-88
53-70-3	Dibenzo(a,h)anthracene	1670	1270	76	57-105
132-64-9	Dibenzofuran	1670	1280	77	58-103
84-74-2	Di-n-butyl phthalate	1670	1270	76	59-105
117-84-0	Di-n-octyl phthalate	1670	1310	79	59-117
84-66-2	Diethyl phthalate	1670	1340	80	59-106
131-11-3	Dimethyl phthalate	1670	1360	82	60-100
117-81-7	bis(2-Ethylhexyl)phthalate	1670	1290	77	57-111
206-44-0	Fluoranthene	1670	1330	80	60-110
86-73-7	Fluorene	1670	1350	81	60-99
118-74-1	Hexachlorobenzene	1670	1310	79	58-103
87-68-3	Hexachlorobutadiene	1670	1280	77	49-95
77-47-4	Hexachlorocyclopentadiene	1670	1270	76	36-94
67-72-1	Hexachloroethane	1670	1230	74	44-89
193-39-5	Indeno(1,2,3-cd)pyrene	1670	1230	74	57-104
78-59-1	Isophorone	1670	1010	61	58-97
90-12-0	1-Methylnaphthalene	1670	1260	76	55-93
91-57-6	2-Methylnaphthalene	1670	1270	76	57-103
88-74-4	2-Nitroaniline	1670	1640	98	53-106
99-09-2	3-Nitroaniline	1670	911	55	29-85
100-01-6	4-Nitroaniline	1670	1280	77	49-104
91-20-3	Naphthalene	1670	1260	76	54-93
98-95-3	Nitrobenzene	1670	1260	76	53-92
62-75-9	N-Nitrosodimethylamine	1670	1100	66	37-88
621-64-7	N-Nitroso-di-n-propylamine	1670	1220	73	49-94
86-30-6	N-Nitrosodiphenylamine	1670	1380	83	53-107
85-01-8	Phenanthrene	1670	1320	79	61-103
129-00-0	Pyrene	1670	1360	82	58-109
110-86-1	Pyridine	1670	920	55	30-68
120-82-1	1,2,4-Trichlorobenzene	1670	1210	73	52-93

Blank Spike Summary

Job Number: F77190
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34713-BS	L048639.D	1	10/25/10	NAF	10/15/10	OP34713	SL2491

The QC reported here applies to the following samples: **Method:** SW846 8270C

F77190-1, F77190-2, F77190-3

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	79%	40-102%
4165-62-2	Phenol-d5	79%	41-100%
118-79-6	2,4,6-Tribromophenol	84%	42-108%
4165-60-0	Nitrobenzene-d5	77%	40-105%
321-60-8	2-Fluorobiphenyl	79%	43-107%
1718-51-0	Terphenyl-d14	82%	45-119%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F77190
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34713-MS	L048644.D	1	10/25/10	NAF	10/15/10	OP34713	SL2491
OP34713-MSD	L048645.D	1	10/25/10	NAF	10/15/10	OP34713	SL2491
F77189-1	L048643.D	1	10/25/10	NAF	10/15/10	OP34713	SL2491

The QC reported here applies to the following samples: **Method:** SW846 8270C

F77190-1, F77190-2, F77190-3

CAS No.	Compound	F77189-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		4480	2060	46	1950	43*	5	44-116/36
95-57-8	2-Chlorophenol	ND		2240	1580	71	1660	73	5	54-97/31
59-50-7	4-Chloro-3-methyl phenol	ND		2240	1590	71	1690	75	6	59-102/27
120-83-2	2,4-Dichlorophenol	ND		2240	1650	74	1740	77	5	60-101/30
105-67-9	2,4-Dimethylphenol	ND		2240	1430	64	1470	65	3	49-89/31
51-28-5	2,4-Dinitrophenol	ND		4480	2480	55	2400	53	3	39-107/40
534-52-1	4,6-Dinitro-o-cresol	ND		4480	2790	62	2770	61	1	58-109/37
95-48-7	2-Methylphenol	ND		2240	1550	69	1630	72	5	53-94/29
	3&4-Methylphenol	ND		4480	3130	70	3280	72	5	54-95/31
88-75-5	2-Nitrophenol	ND		2240	1700	76	1750	77	3	55-96/30
100-02-7	4-Nitrophenol	ND		4480	2810	63	3110	69	10	56-106/29
87-86-5	Pentachlorophenol	ND		4480	2910	65	3040	67	4	50-115/33
108-95-2	Phenol	ND		2240	1530	68	1630	72	6	55-99/28
95-95-4	2,4,5-Trichlorophenol	ND		2240	1700	76	1790	79	5	60-101/28
88-06-2	2,4,6-Trichlorophenol	ND		2240	1680	75	1800	79	7	60-100/27
83-32-9	Acenaphthene	ND		2240	1670	75	1750	77	5	59-97/29
208-96-8	Acenaphthylene	ND		2240	1630	73	1730	76	6	58-98/30
62-53-3	Aniline	ND		2240	1090	49	1220	54	11	38-92/38
120-12-7	Anthracene	ND		2240	1570	70	1660	73	6	61-104/29
56-55-3	Benzo(a)anthracene	ND		2240	1530	68	1650	73	8	60-106/31
50-32-8	Benzo(a)pyrene	ND		2240	1460	65	1560	69	7	59-102/32
205-99-2	Benzo(b)fluoranthene	ND		2240	1530	68	1590	70	4	60-107/31
191-24-2	Benzo(g,h,i)perylene	ND		2240	1370	61	1450	64	6	56-103/32
207-08-9	Benzo(k)fluoranthene	ND		2240	1470	66	1620	71	10	61-107/30
101-55-3	4-Bromophenyl phenyl ether	ND		2240	1570	70	1660	73	6	60-104/26
85-68-7	Butyl benzyl phthalate	ND		2240	1470	66	1570	69	7	57-110/28
100-51-6	Benzyl Alcohol	ND		2240	1590	71	1610	71	1	51-102/34
91-58-7	2-Chloronaphthalene	ND		2240	1590	71	1670	74	5	57-95/28
106-47-8	4-Chloroaniline	ND		2240	468	21	675	30	36*	19-85/34
86-74-8	Carbazole	ND		2240	1520	68	1600	71	5	60-106/30
218-01-9	Chrysene	ND		2240	1500	67	1620	71	8	60-107/31
111-91-1	bis(2-Chloroethoxy)methane	ND		2240	1530	68	1580	70	3	51-89/30
111-44-4	bis(2-Chloroethyl)ether	ND		2240	1480	66	1520	67	3	50-96/33
108-60-1	bis(2-Chloroisopropyl)ether	ND		2240	1330	59	1370	60	3	44-94/32
7005-72-3	4-Chlorophenyl phenyl ether	ND		2240	1600	72	1700	75	6	60-101/26
95-50-1	1,2-Dichlorobenzene	ND		2240	1480	66	1540	68	4	47-91/35

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F77190
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34713-MS	L048644.D	1	10/25/10	NAF	10/15/10	OP34713	SL2491
OP34713-MSD	L048645.D	1	10/25/10	NAF	10/15/10	OP34713	SL2491
F77189-1	L048643.D	1	10/25/10	NAF	10/15/10	OP34713	SL2491

The QC reported here applies to the following samples: **Method:** SW846 8270C

F77190-1, F77190-2, F77190-3

CAS No.	Compound	F77189-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
122-66-7	1,2-Diphenylhydrazine	ND		2240	1560	70	1630	72	4	58-104/27
541-73-1	1,3-Dichlorobenzene	ND		2240	1430	64	1500	66	5	45-86/36
106-46-7	1,4-Dichlorobenzene	ND		2240	1450	65	1520	67	5	45-88/36
121-14-2	2,4-Dinitrotoluene	ND		2240	1640	73	1760	78	7	59-103/30
606-20-2	2,6-Dinitrotoluene	ND		2240	1620	72	1720	76	6	57-99/30
91-94-1	3,3'-Dichlorobenzidine	ND		2240	757	34	908	40	18	34-88/31
53-70-3	Dibenzo(a,h)anthracene	ND		2240	1350	60	1520	67	12	57-105/29
132-64-9	Dibenzofuran	ND		2240	1520	68	1580	70	4	58-103/27
84-74-2	Di-n-butyl phthalate	ND		2240	1450	65	1510	67	4	59-105/27
117-84-0	Di-n-octyl phthalate	ND		2240	1520	68	1610	71	6	59-117/28
84-66-2	Diethyl phthalate	ND		2240	1530	68	1650	73	8	59-106/27
131-11-3	Dimethyl phthalate	ND		2240	1600	72	1700	75	6	60-100/26
117-81-7	bis(2-Ethylhexyl)phthalate	ND		2240	1460	65	1550	68	6	57-111/29
206-44-0	Fluoranthene	ND		2240	1490	67	1590	70	6	60-110/32
86-73-7	Fluorene	ND		2240	1640	73	1730	76	5	60-99/30
118-74-1	Hexachlorobenzene	ND		2240	1550	69	1620	71	4	58-103/27
87-68-3	Hexachlorobutadiene	ND		2240	1570	70	1610	71	3	49-95/33
77-47-4	Hexachlorocyclopentadiene	ND		2240	1550	69	1570	69	1	36-94/41
67-72-1	Hexachloroethane	ND		2240	1450	65	1500	66	3	44-89/38
193-39-5	Indeno(1,2,3-cd)pyrene	ND		2240	1390	62	1520	67	9	57-104/33
78-59-1	Isophorone	ND		2240	1230	55*	1290	57*	5	58-97/30
90-12-0	1-Methylnaphthalene	ND		2240	1520	68	1590	70	5	55-93/33
91-57-6	2-Methylnaphthalene	ND		2240	1550	69	1570	69	1	57-103/32
88-74-4	2-Nitroaniline	ND		2240	1910	85	2000	88	5	53-106/29
99-09-2	3-Nitroaniline	ND		2240	1040	46	1240	55	18	29-85/31
100-01-6	4-Nitroaniline	ND		2240	1360	61	1430	63	5	49-104/31
91-20-3	Naphthalene	ND		2240	1520	68	1590	70	5	54-93/32
98-95-3	Nitrobenzene	ND		2240	1550	69	1600	71	3	53-92/32
62-75-9	N-Nitrosodimethylamine	ND		2240	1330	59	1390	61	4	37-88/34
621-64-7	N-Nitroso-di-n-propylamine	ND		2240	1500	67	1570	69	5	49-94/28
86-30-6	N-Nitrosodiphenylamine	ND		2240	1590	71	1690	75	6	53-107/28
85-01-8	Phenanthrene	ND		2240	1530	68	1620	71	6	61-103/32
129-00-0	Pyrene	ND		2240	1580	71	1680	74	6	58-109/33
110-86-1	Pyridine	ND		2240	1120	50	1060	47	6	30-68/38
120-82-1	1,2,4-Trichlorobenzene	ND		2240	1470	66	1520	67	3	52-93/32

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F77190
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34713-MS	L048644.D	1	10/25/10	NAF	10/15/10	OP34713	SL2491
OP34713-MSD	L048645.D	1	10/25/10	NAF	10/15/10	OP34713	SL2491
F77189-1	L048643.D	1	10/25/10	NAF	10/15/10	OP34713	SL2491

The QC reported here applies to the following samples: **Method:** SW846 8270C

F77190-1, F77190-2, F77190-3

CAS No.	Surrogate Recoveries	MS	MSD	F77189-1	Limits
367-12-4	2-Fluorophenol	73%	75%	71%	40-102%
4165-62-2	Phenol-d5	72%	74%	74%	41-100%
118-79-6	2,4,6-Tribromophenol	73%	75%	76%	42-108%
4165-60-0	Nitrobenzene-d5	71%	71%	70%	40-105%
321-60-8	2-Fluorobiphenyl	75%	76%	73%	43-107%
1718-51-0	Terphenyl-d14	71%	74%	68%	45-119%

Southeast ACCUTEST LABORATORIES

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: F77190
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR2447-MB	QR056269.D	1	10/13/10	AH	n/a	n/a	GQR2447

The QC reported here applies to the following samples: **Method:** SW846 8015

F77190-2

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	5.0	2.5	mg/kg	

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	94%	56-136%
98-08-8	aaa-Trifluorotoluene	80%	61-121%

Method Blank Summary

Job Number: F77190
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR2448-MB	QR056299.D	1	10/14/10	AH	n/a	n/a	GQR2448

The QC reported here applies to the following samples: **Method:** SW846 8015

F77190-1, F77190-3

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	5.0	2.5	mg/kg	

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	94%	56-136%
98-08-8	aaa-Trifluorotoluene	77%	61-121%

Blank Spike Summary

Job Number: F77190
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR2447-BS	QR056268.D	1	10/13/10	AH	n/a	n/a	GQR2447

The QC reported here applies to the following samples: **Method:** SW846 8015

F77190-2

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-GRO (C6-C10)	20	18.5	93	74-121

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	115%	56-136%
98-08-8	aaa-Trifluorotoluene	107%	61-121%

Blank Spike Summary

Job Number: F77190
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR2448-BS	QR056298.D	1	10/14/10	AH	n/a	n/a	GQR2448

The QC reported here applies to the following samples: **Method:** SW846 8015

F77190-1, F77190-3

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-GRO (C6-C10)	20	19.3	97	74-121

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	106%	56-136%
98-08-8	aaa-Trifluorotoluene	100%	61-121%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F77190
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F77189-1MS	QR056291.D	1	10/13/10	AH	n/a	n/a	GQR2447
F77189-1MSD	QR056292.D	1	10/13/10	AH	n/a	n/a	GQR2447
F77189-1 [a]	QR056286.D	1	10/13/10	AH	n/a	n/a	GQR2447

The QC reported here applies to the following samples: **Method:** SW846 8015

F77190-2

CAS No.	Compound	F77189-1 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	ND		296	244	83	247	84	1	74-121/17

CAS No.	Surrogate Recoveries	MS	MSD	F77189-1	Limits
460-00-4	4-Bromofluorobenzene	102%	94%	92%	56-136%
98-08-8	aaa-Trifluorotoluene	100%	94%	77%	61-121%

(a) Confirmation run.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F77190
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F77189-1MS	QR056313.D	1	10/14/10	AH	n/a	n/a	GQR2448
F77189-1MSD	QR056314.D	1	10/14/10	AH	n/a	n/a	GQR2448
F77189-1	QR056304.D	1	10/14/10	AH	n/a	n/a	GQR2448

The QC reported here applies to the following samples: **Method:** SW846 8015

F77190-1, F77190-3

CAS No.	Compound	F77189-1 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	ND		29.6	28.3	96	29.0	98	2	74-121/17

CAS No.	Surrogate Recoveries	MS	MSD	F77189-1	Limits
460-00-4	4-Bromofluorobenzene	96%	103%	95%	56-136%
98-08-8	aaa-Trifluorotoluene	98%	103%	81%	61-121%

Southeast ACCUTEST LABORATORIES

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: F77190
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34709-MB	XX053696.D	1	10/20/10	NJ	10/14/10	OP34709	GXX801

The QC reported here applies to the following samples: **Method:** SW846 8082

F77190-1, F77190-2, F77190-3

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	17	8.3	ug/kg	
11104-28-2	Aroclor 1221	ND	17	13	ug/kg	
11141-16-5	Aroclor 1232	ND	17	13	ug/kg	
53469-21-9	Aroclor 1242	ND	17	8.3	ug/kg	
12672-29-6	Aroclor 1248	ND	17	8.3	ug/kg	
11097-69-1	Aroclor 1254	ND	17	8.3	ug/kg	
11096-82-5	Aroclor 1260	ND	17	8.3	ug/kg	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	95%	44-126%
2051-24-3	Decachlorobiphenyl	89%	39-157%

Method Blank Summary

Job Number: F77190
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34709-MB	XX053740.D	1	10/21/10	NJ	10/14/10	OP34709	GXX802

The QC reported here applies to the following samples: **Method:** SW846 8082

F77190-1, F77190-2, F77190-3

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	17	8.3	ug/kg	
11104-28-2	Aroclor 1221	ND	17	13	ug/kg	
11141-16-5	Aroclor 1232	ND	17	13	ug/kg	
53469-21-9	Aroclor 1242	ND	17	8.3	ug/kg	
12672-29-6	Aroclor 1248	ND	17	8.3	ug/kg	
11097-69-1	Aroclor 1254	ND	17	8.3	ug/kg	
11096-82-5	Aroclor 1260	ND	17	8.3	ug/kg	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	94%	44-126%
2051-24-3	Decachlorobiphenyl	90%	39-157%

Method Blank Summary

Job Number: F77190
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34693-MB	YY17987.D	1	10/15/10	MV	10/13/10	OP34693	GYY657

The QC reported here applies to the following samples: **Method:** SW846 8015 M

F77190-1, F77190-2, F77190-3

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C22)	ND	8.3	5.0	mg/kg	
	TPH (> C22-C36)	ND	8.3	5.0	mg/kg	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	91%	49-108%

Method Blank Summary

Job Number: F77190
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34693-MB	YY18030.D	1	10/18/10	MV	10/13/10	OP34693	GYY658

The QC reported here applies to the following samples: **Method:** SW846 8015 M

F77190-1, F77190-2, F77190-3

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C22)	ND	8.3	5.0	mg/kg	
	TPH (> C22-C36)	ND	8.3	5.0	mg/kg	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	81%	49-108%

Blank Spike Summary

Job Number: F77190
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34709-BS	XX053695.D	1	10/20/10	NJ	10/14/10	OP34709	GXX801

The QC reported here applies to the following samples: **Method:** SW846 8082

F77190-1, F77190-2, F77190-3

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
12674-11-2	Aroclor 1016	133	126	95	69-117
11096-82-5	Aroclor 1260	133	136	102	71-121

CAS No.	Surrogate Recoveries	BSP	Limits
877-09-8	Tetrachloro-m-xylene	92%	44-126%
2051-24-3	Decachlorobiphenyl	89%	39-157%

Blank Spike Summary

Job Number: F77190
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34693-BS	YY17986.D	1	10/15/10	MV	10/13/10	OP34693	GYY657

The QC reported here applies to the following samples: **Method:** SW846 8015 M

F77190-1, F77190-2, F77190-3

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH (C10-C22)	33.3	27.9	84	64-102
	TPH (> C22-C36)	33.3	30.8	92	52-131

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	86%	49-108%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F77190
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34709-MS	XX053702.D	1	10/20/10	NJ	10/14/10	OP34709	GXX801
OP34709-MSD	XX053703.D	1	10/20/10	NJ	10/14/10	OP34709	GXX801
F77189-1	XX053701.D	1	10/20/10	NJ	10/14/10	OP34709	GXX801

The QC reported here applies to the following samples: **Method:** SW846 8082

F77190-1, F77190-2, F77190-3

CAS No.	Compound	F77189-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
12674-11-2	Aroclor 1016	ND		181	166	92	166	92	0	69-117/26
11096-82-5	Aroclor 1260	ND		181	178	98	179	100	1	71-121/30

CAS No.	Surrogate Recoveries	MS	MSD	F77189-1	Limits
877-09-8	Tetrachloro-m-xylene	91%	91%	89%	44-126%
2051-24-3	Decachlorobiphenyl	90%	91%	87%	39-157%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F77190
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34693-MS	YY18031.D	1	10/18/10	MV	10/13/10	OP34693	GYY658
OP34693-MSD	YY18000.D	1	10/16/10	MV	10/13/10	OP34693	GYY657
F77189-1	YY17998.D	1	10/15/10	MV	10/13/10	OP34693	GYY657

The QC reported here applies to the following samples: **Method:** SW846 8015 M

F77190-1, F77190-2, F77190-3

CAS No.	Compound	F77189-1 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH (C10-C22)	ND		44.9	33.5	75	35.3	79	5	64-102/32
	TPH (> C22-C36)	ND		44.9	38.5	86	39.5	89	3	52-131/30

CAS No.	Surrogate Recoveries	MS	MSD	F77189-1	Limits
84-15-1	o-Terphenyl	78%	82%	70%	49-108%

Southeast ACCUTEST LABORATORIES

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: F77190
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19313
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date: 10/18/10

Metal	RL	IDL	MDL	MB raw	final
Aluminum	10	1	1	-0.30	<10
Antimony	1.0	.1	.1	0.040	<1.0
Arsenic	0.50	.1	.1	-0.085	<0.50
Barium	10	.25	.5	-0.070	<10
Beryllium	0.25	.05	.05	-0.015	<0.25
Cadmium	0.20	.05	.05	-0.030	<0.20
Calcium	250	5	5	2.9	<250
Chromium	0.50	.05	.05	0.030	<0.50
Cobalt	2.5	.05	.05	-0.020	<2.5
Copper	1.3	.1	.1	0.0	<1.3
Iron	15	1.5	1.5	6.1	<15
Lead	1.0	.05	.05	-0.050	<1.0
Magnesium	250	5	5	-0.58	<250
Manganese	0.75	.05	.05	0.055	<0.75
Molybdenum	2.5	.05	.05		
Nickel	2.0	.05	.05	0.24	<2.0
Potassium	500	25	25	0.75	<500
Selenium	1.0	.1	.2	0.17	<1.0
Silver	0.50	.05	.05	-0.020	<0.50
Sodium	500	38	38	49.7	<500
Strontium	0.50	.05	.05		
Thallium	0.50	.075	.1	-0.16	<0.50
Tin	2.5	.05	.05		
Titanium	0.50	.1	.1		
Vanadium	2.5	.05	.05	-0.025	<2.5
Zinc	1.0	.25	.25	0.11	<1.0

Associated samples MP19313: F77190-1, F77190-2, F77190-3

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: F77190
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19313
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Metal	F77190-1 Original	DUP	RPD	QC Limits	F77190-1 Original	MS	Spikelot MPFLICP1	% Rec	QC Limits
Prep Date:			10/18/10					10/18/10	
Aluminum	3290	2860	14.0	0-20	3290	4620	1480	90.0	80-120
Antimony	0.18	0.0	200.0(a)	0-20	0.18	16.2	27.4	58.5N(d)	80-120
Arsenic	0.63	0.82	26.2 (a)	0-20	0.63	114	109	103.6	80-120
Barium	32.5	32.6	0.3	0-20	32.5	138	109	96.4	80-120
Beryllium	0.11	0.090	20.0	0-20	0.11	2.6	2.74	91.0	80-120
Cadmium	0.0	0.0	NC	0-20	0.0	2.3	2.74	84.0	80-120
Calcium	245000	238000	2.9	0-20	245000	237000	1370	-584.7(e	80-120
Chromium	3.2	2.7 (b)	16.9	0-20	3.2	14.9 (b)	10.9	106.9	80-120
Cobalt	1.3	1.2 (b)	8.0	0-20	1.3	29.5 (b)	27.4	103.0	80-120
Copper	3.2	3.0 (b)	6.5	0-20	3.2	17.9 (b)	13.7	107.4	80-120
Iron	2250	1960	13.8	0-20	2250	3340	1420	76.6N(d)	80-120
Lead	1.4	1.2 (b)	15.4	0-20	1.4	28.9 (b)	27.4	100.5	80-120
Magnesium	1340	1200	11.0	0-20	1340	2460	1370	81.9	80-120
Manganese	55.6	68.4	20.6*(c)	0-20	55.6	81.9	27.4	96.1	80-120
Molybdenum									
Nickel	2.5	2.1 (b)	17.4	0-20	2.5	31.0 (b)	27.4	104.1	80-120
Potassium	839	769	8.7	0-20	839	2270	1370	104.6	80-120
Selenium	0.0	0.0 (b)	NC	0-20	0.0	121 (b)	109	110.5	80-120
Silver	0.0	0.0	NC	0-20	0.0	2.9	2.74	106.0	80-120
Sodium	176	209	17.1	0-20	176	1510	1370	97.5	80-120
Strontium									
Thallium	0.0	0.0 (b)	NC	0-20	0.0	108 (b)	109	98.7	80-120
Tin									
Titanium									
Vanadium	4.2	4.0	4.9	0-20	4.2	29.4	27.4	92.1	80-120
Zinc	8.4	8.2 (b)	2.4	0-20	8.4	37.1 (b)	27.4	104.9	80-120

Associated samples MP19313: F77190-1, F77190-2, F77190-3

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) Elevated reporting limit(s) due to matrix interference.
(c) High RPD due to possible sample nonhomogeneity.
(d) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
(e) 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: F77190
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19313 | Methods: SW846 6010B
Matrix Type: SOLID | Units: mg/kg

Prep Date: 10/18/10

Metal	F77190-1 Original	MSD	Spikelot MPFLICP1	% Rec	MSD RPD	QC Limit
Aluminum	3290	3910	1350	45.8N(a)	16.6	20
Antimony	0.18	13.2	25.1	51.9N(a)	20.4 (b)	20
Arsenic	0.63	99.3	100	98.3	13.8	20
Barium	32.5	117	100	84.2	16.5	20
Beryllium	0.11	2.2	2.51	83.3	16.7	20
Cadmium	0.0	2.0	2.51	79.7N(a)	14.0	20
Calcium	245000	225000	1250	-1594.6c	5.2	20
Chromium	3.2	13.1 (d)	10	98.7	12.9	20
Cobalt	1.3	23.8 (d)	25.1	89.7	21.4 (b)	20
Copper	3.2	15.8 (d)	12.5	100.5	12.5	20
Iron	2250	2880	1300	48.3N(a)	14.8	20
Lead	1.4	24.4 (d)	25.1	91.7	16.9	20
Magnesium	1340	2120	1250	62.2N(a)	14.8	20
Manganese	55.6	74.9	25.1	76.9N(a)	8.9	20
Molybdenum						
Nickel	2.5	25.2 (d)	25.1	90.5	20.6 (b)	20
Potassium	839	1900	1250	84.6	17.7	20
Selenium	0.0	107 (d)	100	106.6	12.3	20
Silver	0.0	2.5	2.51	99.7	14.8	20
Sodium	176	1280	1250	88.0	16.5	20
Strontium						
Thallium	0.0	91.7 (d)	100	91.4	16.3	20
Tin						
Titanium						
Vanadium	4.2	25.0	25.1	82.9	16.2	20
Zinc	8.4	33.6 (d)	25.1	100.5	9.9	20

Associated samples MP19313: F77190-1, F77190-2, F77190-3

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 and/or sample nonhomogeneity.
(b) High RPD due to possible sample nonhomogeneity.
(c) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
(d) Elevated reporting limit(s) due to matrix interference.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: F77190
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19313
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date: 10/18/10

Metal	BSP Result	Spikelot MPFLICP1	% Rec	QC Limits
Aluminum	1380	1350	102.2	80-120
Antimony	24.4	25	97.6	80-120
Arsenic	91.4	100	91.4	80-120
Barium	104	100	104.0	80-120
Beryllium	2.7	2.5	108.0	80-120
Cadmium	2.5	2.5	100.0	80-120
Calcium	1290	1250	103.2	80-120
Chromium	10.9	10	109.0	80-120
Cobalt	24.4	25	97.6	80-120
Copper	12.7	12.5	101.6	80-120
Iron	1350	1300	103.8	80-120
Lead	24.0	25	96.0	80-120
Magnesium	1220	1250	97.6	80-120
Manganese	28.0	25	112.0	80-120
Molybdenum				
Nickel	24.9	25	99.6	80-120
Potassium	1230	1250	98.4	80-120
Selenium	95.4	100	95.4	80-120
Silver	2.3	2.5	92.0	80-120
Sodium	1280	1250	102.4	80-120
Strontium				
Thallium	96.7	100	96.7	80-120
Tin				
Titanium				
Vanadium	27.0	25	108.0	80-120
Zinc	26.1	25	104.4	80-120

Associated samples MP19313: F77190-1, F77190-2, F77190-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: F77190
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19313
Matrix Type: SOLID

Methods: SW846 6010B
Units: ug/l

Prep Date: 10/18/10

Metal	F77190-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum	66500	67700	1.8	0-10
Antimony	3.70	0.00	100.0(a)	0-10
Arsenic	12.8	13.5	5.5	0-10
Barium	657	703	7.0	0-10
Beryllium	2.20	0.00	100.0(a)	0-10
Cadmium	0.00	0.00	NC	0-10
Calcium	4960000	5130000	3.5	0-10
Chromium	64.4	80.0	24.2 (a)	0-10
Cobalt	27.1	0.00	100.0(a)	0-10
Copper	63.9	0.00	100.0(a)	0-10
Iron	45500	49300	8.3	0-10
Lead	29.3	0.00	100.0(a)	0-10
Magnesium	27200	28700	5.6	0-10
Manganese	1130	1380	22.6*(b)	0-10
Molybdenum				
Nickel	50.1	41.6	17.0 (a)	0-10
Potassium	17000	16800	1.3	0-10
Selenium	0.00	0.00	NC	0-10
Silver	0.00	0.00	NC	0-10
Sodium	3560	0.00	100.0(a)	0-10
Strontium				
Thallium	0.00	44.8		0-10
Tin				
Titanium				
Vanadium	84.4	96.4	14.2*(b)	0-10
Zinc	171	0.00	100.0(a)	0-10

Associated samples MP19313: F77190-1, F77190-2, F77190-3

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.

POST DIGESTATE SPIKE SUMMARY

Login Number: F77190
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19313
Matrix Type: SOLID

Methods: SW846 6010B
Units: ug/l

Prep Date: 10/18/10

Metal	Sample ml	Final ml	F77190-1 Raw	Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum										
Antimony	9.8	10	3.7	3.626	104.4	0.2	5	100	100.8	-
Arsenic										
Barium										
Beryllium										
Cadmium										
Calcium										
Chromium										
Cobalt										
Copper										
Iron	9.8	10	45510	44599.8	44980	0.2	150	3000	12.7 (a)	-
Lead										
Magnesium										
Manganese	9.8	10	1126	1103.48	1147	0.2	2.5	50	87.0	-
Molybdenum										
Nickel										
Potassium										
Selenium										
Silver										
Sodium										
Strontium										
Thallium										
Tin										
Titanium										
Vanadium	9.8	10	84.4	82.712	127.7	0.2	2.5	50	90.0	-
Zinc										

Associated samples MP19313: F77190-1, F77190-2, F77190-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(**) Corr. sample result = Raw * (sample volume / final volume)
(anr) Analyte not requested
(a) Spike recovery indicates matrix interference and/or outside control limits due to high level in sample relative to spike amount.

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: F77190
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19341
Matrix Type: SOLID

Methods: SW846 7471A
Units: mg/kg

Prep Date: 10/22/10

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.083	.0059	.01	-0.00092	<0.083

Associated samples MP19341: F77190-1, F77190-2, F77190-3

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: F77190
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19341
Matrix Type: SOLID

Methods: SW846 7471A
Units: mg/kg

Prep Date: 10/22/10 10/22/10

Metal	F77189-1 Original	DUP	RPD	QC Limits	F77189-1 Original	MS	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.0	0.015	200.0(a)	0-20	0.0	0.31	0.3	103.3	80-120

Associated samples MP19341: F77190-1, F77190-2, F77190-3

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: F77190
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19341
Matrix Type: SOLID

Methods: SW846 7471A
Units: mg/kg

Prep Date: 10/22/10

Metal	F77189-1 Original	MSD	Spikelot HGFLWS1	% Rec	MSD RPD	QC Limit
Mercury	0.0	0.32	0.319	100.4	3.2	20

Associated samples MP19341: F77190-1, F77190-2, F77190-3

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

9.2.2

9

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: F77190
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19341
Matrix Type: SOLID

Methods: SW846 7471A
Units: mg/kg

Prep Date: 10/22/10

Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.25	0.25	100.0	80-120

Associated samples MP19341: F77190-1, F77190-2, F77190-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

9.2.3

9

SERIAL DILUTION RESULTS SUMMARY

Login Number: F77190
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19341
Matrix Type: SOLID

Methods: SW846 7471A
Units: ug/l

Prep Date: 10/22/10

Metal	F77189-1 Original	SDL 1:5	%DIF	QC Limits
Mercury	0.00	0.00	NC	0-10

Associated samples MP19341: F77190-1, F77190-2, F77190-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

Southeast ACCUTEST LABORATORIES

Reissue #1
11/04/10

Technical Report for

Nation View

Holloman AFB; SWMU 8, ACM Investigation

8080014.03.020

Accutest Job Number: F77191

Sampling Date: 10/08/10

Report to:

Bhate Environmental Associates, Inc.

MOlive@bhate.com

ATTN: Marcia Olive

Total number of pages in report: **115**

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: Jean Dent-Smith 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.

Accutest Laboratories is the sole authority for authorizing edits or modifications to this document. Unauthorized modification of this report is strictly prohibited.

November 03, 2010

Ms. Marcia Olive
NationView
445 Union Blvd, Ste 129
Lakewood, CO 80228

RE: Accutest job F77191 Reissue

Dear Ms. Olive,

The final report for job number F77191 has been edited due to method reference correction.

Preparation method for metals references SW-846 3050A.

Please feel free to contact us if you have any questions or 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 **4**
Section 2: Case Narrative/Conformance Summary **5**
Section 3: Sample Results **9**
- **3.1:** F77191-1: SWMU8-DP05-7 10
- **3.2:** F77191-2: SWMU8-DP05-7A 20
- **3.3:** F77191-3: SWMU8-DP04-7 30
- **3.4:** F77191-4: SWMU8-DP06-7 40
- **3.5:** F77191-5: TRIP BLANK 50

Section 4: Misc. Forms **53**
- **4.1:** Chain of Custody 54

Section 5: GC/MS Volatiles - QC Data Summaries **56**
- **5.1:** Method Blank Summary 57
- **5.2:** Blank Spike Summary 63
- **5.3:** Matrix Spike/Matrix Spike Duplicate Summary 69

Section 6: GC/MS Semi-volatiles - QC Data Summaries **75**
- **6.1:** Method Blank Summary 76
- **6.2:** Blank Spike Summary 82
- **6.3:** Matrix Spike/Matrix Spike Duplicate Summary 85

Section 7: GC Volatiles - QC Data Summaries **88**
- **7.1:** Method Blank Summary 89
- **7.2:** Blank Spike Summary 91
- **7.3:** Matrix Spike/Matrix Spike Duplicate Summary 93

Section 8: GC Semi-volatiles - QC Data Summaries **95**
- **8.1:** Method Blank Summary 96
- **8.2:** Blank Spike Summary 100
- **8.3:** Matrix Spike/Matrix Spike Duplicate Summary 102

Section 9: Metals Analysis - QC Data Summaries **104**
- **9.1:** Prep QC MP19313: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn 105
- **9.2:** Prep QC MP19341: Hg 111

Accutest Laboratories

Sample Summary

Nation View

Job No: F77191

Holloman AFB; SWMU 8, ACM Investigation
Project No: 8080014.03.020

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
F77191-1	10/08/10	11:00	JM	10/12/10	SO	Soil	SWMU8-DP05-7
F77191-2	10/08/10	11:00	JM	10/12/10	SO	Soil	SWMU8-DP05-7A
F77191-3	10/08/10	13:00	JM	10/12/10	SO	Soil	SWMU8-DP04-7
F77191-4	10/08/10	14:30	JM	10/12/10	SO	Soil	SWMU8-DP06-7
F77191-5	10/08/10	00:00	JM	10/12/10	SO	Trip Blank Soil	TRIP BLANK

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Nation View **Job No:** F77191

Site: Holloman AFB; SWMU 8, ACM Investigation **Report Date** 11/1/2010 9:44:14 AM

4 Samples and 1 Trip Blank were collected on 10/08/2010 and were received at Accutest on 10/12/2010 properly preserved, at 4.8 Deg. C and intact. These Samples received an Accutest job number of F77191. 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: SO **Batch ID:** VH2435

All samples were analyzed within the recommended method holding time.

Sample(s) F77050-4MS, F77050-4MSD were used as the QC samples indicated.

Sample(s) F77191-1, F77191-2 have compound(s) reported with a “B” qualifier, indicating analyte is found in the associated method blank.

F77191-1 for Methylene chloride: Suspected laboratory contaminant.

F77191-2 for Methylene chloride: Suspected laboratory contaminant.

SB/MS/MSD Recovery(s) for Acetone, Methyl ethyl ketone are outside control limits. Associated sample recoveries are non-detect for Acetone, Methyl ethyl ketone.

Matrix Spike Recovery(s) for 1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene, 1,2-Dibromo-3-chloropropane, 1,2-Dibromoethane, 1,3-Dichloropropane, 2-Hexanone, 4-Methyl-2-pentanone, Acrolein, Dibromochloromethane, Hexachlorobutadiene, n-Butylbenzene, Naphthalene, Vinyl Acetate are outside control limits. Probable cause due to matrix interference. For method performance in a clean matrix, refer to SB.

Matrix Spike Duplicate Recovery(s) for 1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene, 2-Hexanone, Acrolein, Hexachlorobutadiene, Naphthalene, Vinyl Acetate are outside control limits. Probable cause due to matrix interference. For method performance in a clean matrix, refer to SB.

F77191-1: Methanol extract analysis required due to matrix interference (non-target analytes present above calibration range).

F77191-2: Methanol extract analysis required due to matrix interference (non-target analytes present above calibration range).

Matrix: SO **Batch ID:** VH2436

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) F77190-1MS, F77190-1MSD were used as the QC samples indicated.

SB/MS/MSD Recovery(s) for Acetone, Dichlorodifluoromethane, Methyl bromide are outside control limits. Associated samples are non-detect for Acetone, Dichlorodifluoromethane, Methyl bromide.

Matrix Spike Recovery(s) for 2-Hexanone, Dibromochloromethane, Methyl ethyl ketone are outside control limits. Probable cause due to matrix interference. For method performance in a clean matrix, refer to SB.

Matrix Spike Duplicate Recovery(s) for 1,2,3-Trichloropropane, 2-Hexanone, Dibromochloromethane, Methyl ethyl ketone are outside control limits. Probable cause due to matrix interference. For method performance in a clean matrix, refer to SB.

F77191-3 for Acetone: ICV and associated BS recovery outside control limits.

F77191-3: Methanol extract analysis required due to matrix interference (non-target analytes present above calibration range).

F77191-4 for Methylene chloride: Suspected laboratory contaminant.

F77191-4 for Acetone: ICV and associated BS recovery outside control limits.

F77191-4: Methanol extract analysis required due to matrix interference (non-target analytes present above calibration range).

Extractables by GCMS By Method SW846 8270C

Matrix: SO **Batch ID:** OP34713

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.

Sample(s) F77189-1MS, F77189-1MSD were used as the QC samples indicated.

Extractables by GCMS By Method SW846 8270C

Matrix: SO **Batch ID:** OP34713

Matrix Spike Recovery(s) for Isophorone are outside control limits. Probable cause due to matrix interference. For method performance in a clean matrix, refer to SB.

Matrix Spike Duplicate Recovery(s) for Benzoic Acid, Isophorone are outside control limits. Probable cause due to matrix interference. For method performance in a clean matrix, refer to SB.

RPD(s) for MSD for 4-Chloroaniline are outside control limits for sample OP34713-MSD. Probable cause due to sample homogeneity.

Extractables by GCMS By Method SW846 8270C

Matrix: SO **Batch ID:** OP34713

F77191-1: Dilution required due to matrix interference.

F77191-2: Dilution required due to matrix interference.

F77191-3: Dilution required due to matrix interference.

Sample(s) F77191-4, F77191-1, F77191-2 have surrogates outside control limits. Probable cause due to matrix interference.

F77191-1 for Nitrobenzene-d5: Outside control limits due to matrix interference.

F77191-2 for Nitrobenzene-d5: Outside control limits due to matrix interference.

F77191-4 for Nitrobenzene-d5: Outside control limits due to matrix interference.

Volatiles by GC By Method SW846 8015

Matrix: SO **Batch ID:** GQR2447

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) F77189-1MS, F77189-1MSD were used as the QC samples indicated.

Matrix: SO **Batch ID:** GQR2448

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) F77189-1MS, F77189-1MSD were used as the QC samples indicated.

Extractables by GC By Method SW846 8015 M

Matrix: SO **Batch ID:** OP34693

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.

Sample(s) F77189-1MS, F77189-1MSD were used as the QC samples indicated.

Sample(s) F77191-1, F77191-2, F77191-4 have surrogates outside control limits. Probable cause due to matrix interference.

F77191-1 for o-Terphenyl: Outside control limits due to dilution.

F77191-2 for o-Terphenyl: Outside control limits due to dilution.

F77191-4 for o-Terphenyl: Outside control limits due to dilution.

Extractables by GC By Method SW846 8082

Matrix: SO **Batch ID:** OP34709

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.

Sample(s) F77189-1MS, F77189-1MSD were used as the QC samples indicated.

F77191-1: All hits confirmed by dual column analysis.

F77191-2: All hits confirmed by dual column analysis.

F77191-3: All hits confirmed by dual column analysis.

F77191-1 for Aroclor 1232: Estimated value due to the presence of multiple overlapping Aroclor patterns.

F77191-1 for Aroclor 1254: Estimated value due to the presence of multiple overlapping Aroclor patterns.

Extractables by GC By Method SW846 8082

Matrix: SO **Batch ID:** OP34709

F77191-2 for Aroclor 1232: Estimated value due to the presence of multiple overlapping Aroclor patterns.

F77191-2 for Aroclor 1254: Estimated value due to the presence of multiple overlapping Aroclor patterns.

F77191-3 for Aroclor 1232: Estimated value due to the presence of multiple overlapping Aroclor patterns.

F77191-3 for Aroclor 1254: Estimated value due to the presence of multiple overlapping Aroclor patterns.

F77191-4 for Aroclor 1232: Estimated value due to the presence of multiple overlapping Aroclor patterns.

F77191-4 for Aroclor 1254: Estimated value due to the presence of multiple overlapping Aroclor patterns.

Metals By Method SW846 6010B

Matrix: SO **Batch ID:** MP19313

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.

Sample(s) F77190-1DUP, F77190-1MS, F77190-1MSD, F77190-1PS, F77190-1SDL were used as the QC samples for metals.

Matrix Spike Recovery(s) for Antimony, Iron are outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

Matrix Spike Duplicate Recovery(s) for Aluminum, Cadmium, Iron, Magnesium, Manganese, Antimony are outside control limits. Probable cause due to matrix interference.

MS/MSD Recovery(s) for Calcium are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

RPD(s) for Duplicate for Manganese are outside control limits for sample MP19313-D1. High RPD due to possible sample nonhomogeneity.

MP19313-D1 for Antimony: RPD acceptable due to low duplicate and sample concentrations.

MP19313-D1 for Arsenic: RPD acceptable due to low duplicate and sample concentrations.

RPD(s) for MSD for Antimony, Cobalt, Nickel are outside control limits for sample MP19313-S2. High RPD due to possible sample nonhomogeneity.

RPD(s) for Serial Dilution for Antimony, Beryllium, Chromium, Cobalt, Copper, Lead, Nickel, Sodium, Zinc are outside control limits for sample MP19313-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

MP19313-SD1 for Manganese: Serial dilution indicates possible matrix interference.

MP19313-SD1 for Vanadium: Serial dilution indicates possible matrix interference.

MP19313-PS1 for Iron: Spike recovery indicates matrix interference and/or outside control limits due to high level in sample relative to spike amount.

F77191-1 for Chromium: Elevated reporting limit(s) due to matrix interference.

F77191-1 for Cobalt: Elevated reporting limit(s) due to matrix interference.

F77191-1 for Copper: Elevated reporting limit(s) due to matrix interference.

F77191-1 for Lead: Elevated reporting limit(s) due to matrix interference.

F77191-1 for Nickel: Elevated reporting limit(s) due to matrix interference.

F77191-1 for Selenium: Elevated reporting limit(s) due to matrix interference.

F77191-1 for Zinc: Elevated reporting limit(s) due to matrix interference.

F77191-1 for Thallium: Elevated reporting limit(s) due to matrix interference.

F77191-2 for Chromium: Elevated reporting limit(s) due to matrix interference.

F77191-2 for Cobalt: Elevated reporting limit(s) due to matrix interference.

F77191-2 for Copper: Elevated reporting limit(s) due to matrix interference.

F77191-2 for Lead: Elevated reporting limit(s) due to matrix interference.

F77191-2 for Nickel: Elevated reporting limit(s) due to matrix interference.

F77191-2 for Selenium: Elevated reporting limit(s) due to matrix interference.

F77191-2 for Thallium: Elevated reporting limit(s) due to matrix interference.

F77191-2 for Zinc: Elevated reporting limit(s) due to matrix interference.

F77191-3 for Chromium: Elevated reporting limit(s) due to matrix interference.

F77191-3 for Cobalt: Elevated reporting limit(s) due to matrix interference.

F77191-3 for Copper: Elevated reporting limit(s) due to matrix interference.

F77191-3 for Lead: Elevated reporting limit(s) due to matrix interference.

Metals By Method SW846 6010B

Matrix: SO **Batch ID:** MP19313

F77191-3 for Nickel: Elevated reporting limit(s) due to matrix interference.
F77191-3 for Selenium: Elevated reporting limit(s) due to matrix interference.
F77191-3 for Thallium: Elevated reporting limit(s) due to matrix interference.
F77191-3 for Zinc: Elevated reporting limit(s) due to matrix interference.
F77191-4 for Chromium: Elevated reporting limit(s) due to matrix interference.
F77191-4 for Cobalt: Elevated reporting limit(s) due to matrix interference.
F77191-4 for Copper: Elevated reporting limit(s) due to matrix interference.
F77191-4 for Lead: Elevated reporting limit(s) due to matrix interference.
F77191-4 for Nickel: Elevated reporting limit(s) due to matrix interference.
F77191-4 for Selenium: Elevated reporting limit(s) due to matrix interference.
F77191-4 for Thallium: Elevated reporting limit(s) due to matrix interference.
F77191-4 for Zinc: Elevated reporting limit(s) due to matrix interference.

Metals By Method SW846 7471A

Matrix: SO **Batch ID:** MP19341

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.
Sample(s) F77189-1MS, F77189-1MSD, F77189-1SDL, F77189-1DUP were used as the QC samples for metals.
RPD(s) for Duplicate for Mercury are outside control limits for sample MP19341-D1. RPD acceptable due to low duplicate and sample concentrations.

Wet Chemistry By Method SM19 2540B M

Matrix: SO **Batch ID:** GN41769

Sample(s) F77189-1DUP were used as the QC samples for Solids, Percent.

Matrix: SO **Batch ID:** GN41772

Sample(s) F77191-2DUP were used as the QC samples for Solids, Percent.

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 1, 2010

Lovelie Metzgar, QA Assistant (signature on file)

Southeast ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	SWMU8-DP05-7		
Lab Sample ID:	F77191-1	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8260B	**Percent Solids:**	68.6
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	H065010.D	1	10/13/10	MM	n/a	n/a	VH2435
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	6.43 g	5.0 ml	100 ul
Run #2			

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	4000	1700	ug/kg	
107-02-8	Acrolein	ND	2000	800	ug/kg	
107-13-1	Acrylonitrile	ND	2000	800	ug/kg	
71-43-2	Benzene	ND	400	80	ug/kg	
108-86-1	Bromobenzene	ND	400	95	ug/kg	
74-97-5	Bromochloromethane	ND	400	140	ug/kg	
75-27-4	Bromodichloromethane	ND	400	80	ug/kg	
75-25-2	Bromoform	ND	400	140	ug/kg	
104-51-8	n-Butylbenzene	2180	400	100	ug/kg	
135-98-8	sec-Butylbenzene	474	400	95	ug/kg	
98-06-6	tert-Butylbenzene	ND	400	95	ug/kg	
108-90-7	Chlorobenzene	ND	400	80	ug/kg	
75-00-3	Chloroethane	ND	400	160	ug/kg	
67-66-3	Chloroform	ND	400	80	ug/kg	
95-49-8	o-Chlorotoluene	ND	400	100	ug/kg	
106-43-4	p-Chlorotoluene	ND	400	80	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	2000	800	ug/kg	
75-15-0	Carbon disulfide	ND	400	190	ug/kg	
56-23-5	Carbon tetrachloride	ND	400	130	ug/kg	
75-34-3	1,1-Dichloroethane	ND	400	120	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	400	180	ug/kg	
563-58-6	1,1-Dichloropropene	ND	400	80	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	400	200	ug/kg	
106-93-4	1,2-Dibromoethane	ND	400	80	ug/kg	
107-06-2	1,2-Dichloroethane	ND	400	95	ug/kg	
78-87-5	1,2-Dichloropropane	ND	400	80	ug/kg	
142-28-9	1,3-Dichloropropane	ND	400	140	ug/kg	
594-20-7	2,2-Dichloropropane	ND	400	88	ug/kg	
124-48-1	Dibromochloromethane	ND	400	140	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	400	170	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	400	80	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	400	80	ug/kg	

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:	SWMU8-DP05-7		
Lab Sample ID:	F77191-1	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8260B	**Percent Solids:**	68.6
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
541-73-1	m-Dichlorobenzene	485	400	95	ug/kg	
95-50-1	o-Dichlorobenzene	369	400	88	ug/kg	J
106-46-7	p-Dichlorobenzene	353	400	120	ug/kg	J
156-60-5	trans-1,2-Dichloroethylene	ND	400	150	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	400	88	ug/kg	
100-41-4	Ethylbenzene	117	400	88	ug/kg	J
591-78-6	2-Hexanone	ND	2000	930	ug/kg	
87-68-3	Hexachlorobutadiene	ND	400	180	ug/kg	
110-54-3	Hexane	ND	400	160	ug/kg	
98-82-8	Isopropylbenzene	ND	400	110	ug/kg	
99-87-6	p-Isopropyltoluene	570	400	80	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	2000	660	ug/kg	
74-83-9	Methyl bromide	ND	400	160	ug/kg	
74-87-3	Methyl chloride	ND	400	200	ug/kg	
74-95-3	Methylene bromide	ND	400	170	ug/kg	
75-09-2	Methylene chloride [b]	672	800	400	ug/kg	JB
78-93-3	Methyl ethyl ketone	ND	2000	600	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	400	180	ug/kg	
91-20-3	Naphthalene	ND	400	160	ug/kg	
103-65-1	n-Propylbenzene	141	400	120	ug/kg	J
100-42-5	Styrene	ND	400	80	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	400	80	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	400	140	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	400	100	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	400	100	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	400	160	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	400	130	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	400	160	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	400	88	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	400	120	ug/kg	
127-18-4	Tetrachloroethylene	ND	400	140	ug/kg	
108-88-3	Toluene	ND	400	95	ug/kg	
79-01-6	Trichloroethylene	ND	400	130	ug/kg	
75-69-4	Trichlorofluoromethane	ND	400	210	ug/kg	
75-01-4	Vinyl chloride	ND	400	160	ug/kg	
108-05-4	Vinyl Acetate	ND	2000	1200	ug/kg	
	m,p-Xylene	144	800	95	ug/kg	J
95-47-6	o-Xylene	ND	400	80	ug/kg	

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:	SWMU8-DP05-7		
Lab Sample ID:	F77191-1	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8260B	**Percent Solids:**	68.6
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		80-121%
2037-26-5	Toluene-D8	89%		71-130%
460-00-4	4-Bromofluorobenzene	91%		59-148%
17060-07-0	1,2-Dichloroethane-D4	102%		77-123%

(a) Methanol extract analysis required due to matrix interference (non-target analytes present above calibration range).
(b) 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:	SWMU8-DP05-7		
Lab Sample ID:	F77191-1	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8270C SW846 3550B	**Percent Solids:**	68.6
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L048669.D	8	10/26/10	NAF	10/15/10	OP34713	SL2492
Run #2							

	Initial Weight	Final Volume
Run #1	30.5 g	1.0 ml
Run #2		

ABN Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	9600	3800	ug/kg	
95-57-8	2-Chlorophenol	ND	1900	380	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	1900	380	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	1900	380	ug/kg	
105-67-9	2,4-Dimethylphenol	666	1900	420	ug/kg	J
51-28-5	2,4-Dinitrophenol	ND	9600	3800	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	3800	380	ug/kg	
95-48-7	2-Methylphenol	ND	1900	380	ug/kg	
	3&4-Methylphenol	ND	1900	380	ug/kg	
88-75-5	2-Nitrophenol	ND	1900	380	ug/kg	
100-02-7	4-Nitrophenol	ND	9600	3800	ug/kg	
87-86-5	Pentachlorophenol	ND	9600	3800	ug/kg	
108-95-2	Phenol	ND	1900	380	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	1900	380	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	1900	380	ug/kg	
83-32-9	Acenaphthene	ND	1900	380	ug/kg	
208-96-8	Acenaphthylene	ND	1900	380	ug/kg	
62-53-3	Aniline	ND	1900	420	ug/kg	
120-12-7	Anthracene	ND	1900	380	ug/kg	
92-87-5	Benzidine	ND	19000	8000	ug/kg	
56-55-3	Benzo(a)anthracene	ND	1900	380	ug/kg	
50-32-8	Benzo(a)pyrene	ND	1900	380	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	1900	380	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	1900	380	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	1900	380	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	1900	380	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	3800	760	ug/kg	
100-51-6	Benzyl Alcohol	ND	1900	380	ug/kg	
91-58-7	2-Chloronaphthalene	ND	1900	380	ug/kg	
106-47-8	4-Chloroaniline	ND	1900	380	ug/kg	
86-74-8	Carbazole	ND	1900	380	ug/kg	
218-01-9	Chrysene	ND	1900	380	ug/kg	

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:	SWMU8-DP05-7		
Lab Sample ID:	F77191-1	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8270C SW846 3550B	**Percent Solids:**	68.6
Project:	Holloman AFB; SWMU 8, ACM Investigation		

ABN Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
111-91-1	bis(2-Chloroethoxy)methane	ND	1900	380	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	1900	380	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	1900	380	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	1900	380	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	1900	760	ug/kg	
122-66-7	1,2-Diphenylhydrazine	ND	1900	380	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	1900	760	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	1900	760	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	1900	380	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	1900	380	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	3800	760	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	1900	380	ug/kg	
132-64-9	Dibenzofuran	ND	1900	380	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	3800	760	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	3800	760	ug/kg	
84-66-2	Diethyl phthalate	ND	3800	1900	ug/kg	
131-11-3	Dimethyl phthalate	ND	3800	760	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	3800	1900	ug/kg	
206-44-0	Fluoranthene	ND	1900	380	ug/kg	
86-73-7	Fluorene	ND	1900	380	ug/kg	
118-74-1	Hexachlorobenzene	ND	1900	380	ug/kg	
87-68-3	Hexachlorobutadiene	ND	1900	380	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	1900	380	ug/kg	
67-72-1	Hexachloroethane	ND	1900	960	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	1900	380	ug/kg	
78-59-1	Isophorone	ND	1900	380	ug/kg	
90-12-0	1-Methylnaphthalene	531	1900	380	ug/kg	J
91-57-6	2-Methylnaphthalene	ND	1900	380	ug/kg	
88-74-4	2-Nitroaniline	ND	3800	760	ug/kg	
99-09-2	3-Nitroaniline	ND	3800	760	ug/kg	
100-01-6	4-Nitroaniline	ND	3800	760	ug/kg	
91-20-3	Naphthalene	ND	1900	380	ug/kg	
98-95-3	Nitrobenzene	ND	1900	380	ug/kg	
62-75-9	N-Nitrosodimethylamine	ND	3800	760	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	1900	380	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	1900	380	ug/kg	
85-01-8	Phenanthrene	ND	1900	380	ug/kg	
129-00-0	Pyrene	ND	1900	380	ug/kg	
110-86-1	Pyridine	ND	3800	960	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	1900	380	ug/kg	

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:	SWMU8-DP05-7		
Lab Sample ID:	F77191-1	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8270C SW846 3550B	**Percent Solids:**	68.6
Project:	Holloman AFB; SWMU 8, ACM Investigation		

ABN Full List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	76%		40-102%
4165-62-2	Phenol-d5	82%		41-100%
118-79-6	2,4,6-Tribromophenol	80%		42-108%
4165-60-0	Nitrobenzene-d5	185% [b]		40-105%
321-60-8	2-Fluorobiphenyl	83%		43-107%
1718-51-0	Terphenyl-d14	71%		45-119%

(a) Dilution required due to matrix interference.
(b) Outside control limits 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:	SWMU8-DP05-7		
Lab Sample ID:	F77191-1	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8015	**Percent Solids:**	68.6
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR056274.D	1	10/13/10	AH	n/a	n/a	GQR2447
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	6.43 g	5.0 ml	10.0 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	620	80	40	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	124%		56-136%
98-08-8	aaa-Trifluorotoluene	79%		61-121%

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:	SWMU8-DP05-7		
Lab Sample ID:	F77191-1	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8082 SW846 3550B	**Percent Solids:**	68.6
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	XX053712.D	1	10/20/10	NJ	10/14/10	OP34709	GXX801
Run #2							

	Initial Weight	Final Volume
Run #1	30.2 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	24	24	ug/kg	
11104-28-2	Aroclor 1221	ND	24	19	ug/kg	
11141-16-5	Aroclor 1232 [b]	86.4	24	19	ug/kg	J
53469-21-9	Aroclor 1242	ND	24	24	ug/kg	
12672-29-6	Aroclor 1248	ND	24	24	ug/kg	
11097-69-1	Aroclor 1254 [b]	40.2	24	12	ug/kg	J
11096-82-5	Aroclor 1260	ND	24	12	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	74%		44-126%
2051-24-3	Decachlorobiphenyl	56%		39-157%

(a) All hits confirmed by dual column analysis.
(b) Estimated value due to the presence of multiple overlapping Aroclor patterns.

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:	SWMU8-DP05-7		
Lab Sample ID:	F77191-1	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8015 M SW846 3550B	**Percent Solids:**	68.6
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YY18033.D	20	10/18/10	MV	10/13/10	OP34693	GYY658
Run #2							

	Initial Weight	Final Volume
Run #1	30.4 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C22)	821	240	140	mg/kg	
	TPH (> C22-C36)	453	240	140	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	0% [a]		49-108%

(a) Outside control limits due to dilution.

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:	SWMU8-DP05-7		
Lab Sample ID:	F77191-1	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
		Percent Solids:	68.6
Project:	Holloman AFB; SWMU 8, ACM Investigation		

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	3200	12	1.2	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Antimony	0.12 U	1.2	0.12	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Arsenic	0.89	0.58	0.12	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Barium	35.6	12	0.58	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Beryllium	0.12 J	0.29	0.058	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Cadmium	0.058 U	0.23	0.058	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Calcium	197000	2900	58	mg/kg	10	10/18/10	10/20/10	RS	SW846 6010B [2]	SW846 3050B [4]
Chromium [a]	3.9 J	5.8	0.58	mg/kg	10	10/18/10	10/20/10	RS	SW846 6010B [2]	SW846 3050B [4]
Cobalt [a]	1.1 J	12	0.23	mg/kg	4	10/18/10	10/20/10	RS	SW846 6010B [2]	SW846 3050B [4]
Copper [a]	2.6 J	14	1.2	mg/kg	10	10/18/10	10/20/10	RS	SW846 6010B [2]	SW846 3050B [4]
Iron	2670	17	1.7	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Lead [a]	1.9 J	4.6	0.23	mg/kg	4	10/18/10	10/20/10	RS	SW846 6010B [2]	SW846 3050B [4]
Magnesium	1370	290	5.8	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Manganese	29.1	0.87	0.058	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Mercury	0.015 U	0.12	0.015	mg/kg	1	10/22/10	10/22/10	LM	SW846 7471A [3]	SW846 7471A [5]
Nickel [a]	2.2 J	9.3	0.23	mg/kg	4	10/18/10	10/20/10	RS	SW846 6010B [2]	SW846 3050B [4]
Potassium	885	580	29	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Selenium [a]	2.3 U	12	2.3	mg/kg	10	10/18/10	10/20/10	RS	SW846 6010B [2]	SW846 3050B [4]
Silver	0.058 U	0.58	0.058	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Sodium	138 J	580	43	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Thallium [a]	0.46 U	2.3	0.46	mg/kg	4	10/18/10	10/20/10	RS	SW846 6010B [2]	SW846 3050B [4]
Vanadium	5.5	2.9	0.058	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Zinc [a]	7.3 J	12	2.9	mg/kg	10	10/18/10	10/20/10	RS	SW846 6010B [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA8454
(2) Instrument QC Batch: MA8455
(3) Instrument QC Batch: MA8460
(4) Prep QC Batch: MP19313
(5) Prep QC Batch: MP19341

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

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

Report of Analysis

Client Sample ID:	SWMU8-DP05-7A		
Lab Sample ID:	F77191-2	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8260B	**Percent Solids:**	75.1
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	H065011.D	1	10/13/10	MM	n/a	n/a	VH2435
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	6.46 g	5.0 ml	100 ul
Run #2			

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	3400	1400	ug/kg	
107-02-8	Acrolein	ND	1700	680	ug/kg	
107-13-1	Acrylonitrile	ND	1700	680	ug/kg	
71-43-2	Benzene	ND	340	68	ug/kg	
108-86-1	Bromobenzene	ND	340	82	ug/kg	
74-97-5	Bromochloromethane	ND	340	120	ug/kg	
75-27-4	Bromodichloromethane	ND	340	68	ug/kg	
75-25-2	Bromoform	ND	340	120	ug/kg	
104-51-8	n-Butylbenzene	2690	340	89	ug/kg	
135-98-8	sec-Butylbenzene	617	340	82	ug/kg	
98-06-6	tert-Butylbenzene	ND	340	82	ug/kg	
108-90-7	Chlorobenzene	ND	340	68	ug/kg	
75-00-3	Chloroethane	ND	340	140	ug/kg	
67-66-3	Chloroform	ND	340	68	ug/kg	
95-49-8	o-Chlorotoluene	ND	340	89	ug/kg	
106-43-4	p-Chlorotoluene	ND	340	68	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	1700	680	ug/kg	
75-15-0	Carbon disulfide	ND	340	160	ug/kg	
56-23-5	Carbon tetrachloride	ND	340	110	ug/kg	
75-34-3	1,1-Dichloroethane	ND	340	100	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	340	160	ug/kg	
563-58-6	1,1-Dichloropropene	ND	340	68	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	340	170	ug/kg	
106-93-4	1,2-Dibromoethane	ND	340	68	ug/kg	
107-06-2	1,2-Dichloroethane	ND	340	82	ug/kg	
78-87-5	1,2-Dichloropropane	ND	340	68	ug/kg	
142-28-9	1,3-Dichloropropane	ND	340	120	ug/kg	
594-20-7	2,2-Dichloropropane	ND	340	75	ug/kg	
124-48-1	Dibromochloromethane	ND	340	120	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	340	140	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	340	68	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	340	68	ug/kg	

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:	SWMU8-DP05-7A		
Lab Sample ID:	F77191-2	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8260B	**Percent Solids:**	75.1
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
541-73-1	m-Dichlorobenzene	587	340	82	ug/kg	
95-50-1	o-Dichlorobenzene	478	340	75	ug/kg	
106-46-7	p-Dichlorobenzene	453	340	100	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	340	130	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	340	75	ug/kg	
100-41-4	Ethylbenzene	143	340	75	ug/kg	J
591-78-6	2-Hexanone	ND	1700	800	ug/kg	
87-68-3	Hexachlorobutadiene	ND	340	160	ug/kg	
110-54-3	Hexane	ND	340	140	ug/kg	
98-82-8	Isopropylbenzene	ND	340	95	ug/kg	
99-87-6	p-Isopropyltoluene	397	340	68	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	1700	570	ug/kg	
74-83-9	Methyl bromide	ND	340	140	ug/kg	
74-87-3	Methyl chloride	ND	340	170	ug/kg	
74-95-3	Methylene bromide	ND	340	140	ug/kg	
75-09-2	Methylene chloride [b]	708	680	340	ug/kg	B
78-93-3	Methyl ethyl ketone	ND	1700	510	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	340	160	ug/kg	
91-20-3	Naphthalene	ND	340	140	ug/kg	
103-65-1	n-Propylbenzene	303	340	100	ug/kg	J
100-42-5	Styrene	ND	340	68	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	340	68	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	340	120	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	340	89	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	340	89	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	340	140	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	340	110	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	340	140	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	340	75	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	340	100	ug/kg	
127-18-4	Tetrachloroethylene	ND	340	120	ug/kg	
108-88-3	Toluene	ND	340	82	ug/kg	
79-01-6	Trichloroethylene	ND	340	110	ug/kg	
75-69-4	Trichlorofluoromethane	ND	340	180	ug/kg	
75-01-4	Vinyl chloride	ND	340	140	ug/kg	
108-05-4	Vinyl Acetate	ND	1700	1000	ug/kg	
	m,p-Xylene	ND	680	82	ug/kg	
95-47-6	o-Xylene	ND	340	68	ug/kg	

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:	SWMU8-DP05-7A		
Lab Sample ID:	F77191-2	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8260B	**Percent Solids:**	75.1
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		80-121%
2037-26-5	Toluene-D8	85%		71-130%
460-00-4	4-Bromofluorobenzene	98%		59-148%
17060-07-0	1,2-Dichloroethane-D4	101%		77-123%

(a) Methanol extract analysis required due to matrix interference (non-target analytes present above calibration range).
(b) 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:	SWMU8-DP05-7A		
Lab Sample ID:	F77191-2	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8270C SW846 3550B	**Percent Solids:**	75.1
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L048670.D	8	10/26/10	NAF	10/15/10	OP34713	SL2492
Run #2							

	Initial Weight	Final Volume
Run #1	30.2 g	1.0 ml
Run #2		

ABN Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	8800	3500	ug/kg	
95-57-8	2-Chlorophenol	ND	1800	350	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	1800	350	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	1800	350	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	1800	390	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	8800	3500	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	3500	350	ug/kg	
95-48-7	2-Methylphenol	ND	1800	350	ug/kg	
	3&4-Methylphenol	ND	1800	350	ug/kg	
88-75-5	2-Nitrophenol	ND	1800	350	ug/kg	
100-02-7	4-Nitrophenol	ND	8800	3500	ug/kg	
87-86-5	Pentachlorophenol	ND	8800	3500	ug/kg	
108-95-2	Phenol	ND	1800	350	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	1800	350	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	1800	350	ug/kg	
83-32-9	Acenaphthene	ND	1800	350	ug/kg	
208-96-8	Acenaphthylene	ND	1800	350	ug/kg	
62-53-3	Aniline	ND	1800	390	ug/kg	
120-12-7	Anthracene	ND	1800	350	ug/kg	
92-87-5	Benzidine	ND	18000	7400	ug/kg	
56-55-3	Benzo(a)anthracene	ND	1800	350	ug/kg	
50-32-8	Benzo(a)pyrene	ND	1800	350	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	1800	350	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	1800	350	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	1800	350	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	1800	350	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	3500	710	ug/kg	
100-51-6	Benzyl Alcohol	ND	1800	350	ug/kg	
91-58-7	2-Chloronaphthalene	ND	1800	350	ug/kg	
106-47-8	4-Chloroaniline	ND	1800	350	ug/kg	
86-74-8	Carbazole	ND	1800	350	ug/kg	
218-01-9	Chrysene	ND	1800	350	ug/kg	

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:	SWMU8-DP05-7A		
Lab Sample ID:	F77191-2	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8270C SW846 3550B	**Percent Solids:**	75.1
Project:	Holloman AFB; SWMU 8, ACM Investigation		

ABN Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
111-91-1	bis(2-Chloroethoxy)methane	ND	1800	350	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	1800	350	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	1800	350	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	1800	350	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	1800	710	ug/kg	
122-66-7	1,2-Diphenylhydrazine	ND	1800	350	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	1800	710	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	1800	710	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	1800	350	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	1800	350	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	3500	710	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	1800	350	ug/kg	
132-64-9	Dibenzofuran	ND	1800	350	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	3500	710	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	3500	710	ug/kg	
84-66-2	Diethyl phthalate	ND	3500	1800	ug/kg	
131-11-3	Dimethyl phthalate	ND	3500	710	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	3500	1800	ug/kg	
206-44-0	Fluoranthene	ND	1800	350	ug/kg	
86-73-7	Fluorene	ND	1800	350	ug/kg	
118-74-1	Hexachlorobenzene	ND	1800	350	ug/kg	
87-68-3	Hexachlorobutadiene	ND	1800	350	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	1800	350	ug/kg	
67-72-1	Hexachloroethane	ND	1800	880	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	1800	350	ug/kg	
78-59-1	Isophorone	ND	1800	350	ug/kg	
90-12-0	1-Methylnaphthalene	646	1800	350	ug/kg	J
91-57-6	2-Methylnaphthalene	ND	1800	350	ug/kg	
88-74-4	2-Nitroaniline	ND	3500	710	ug/kg	
99-09-2	3-Nitroaniline	ND	3500	710	ug/kg	
100-01-6	4-Nitroaniline	ND	3500	710	ug/kg	
91-20-3	Naphthalene	ND	1800	350	ug/kg	
98-95-3	Nitrobenzene	ND	1800	350	ug/kg	
62-75-9	N-Nitrosodimethylamine	ND	3500	710	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	1800	350	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	1800	350	ug/kg	
85-01-8	Phenanthrene	ND	1800	350	ug/kg	
129-00-0	Pyrene	ND	1800	350	ug/kg	
110-86-1	Pyridine	ND	3500	880	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	1800	350	ug/kg	

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:	SWMU8-DP05-7A		
Lab Sample ID:	F77191-2	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8270C SW846 3550B	**Percent Solids:**	75.1
Project:	Holloman AFB; SWMU 8, ACM Investigation		

ABN Full List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	79%		40-102%
4165-62-2	Phenol-d5	89%		41-100%
118-79-6	2,4,6-Tribromophenol	77%		42-108%
4165-60-0	Nitrobenzene-d5	214% [b]		40-105%
321-60-8	2-Fluorobiphenyl	81%		43-107%
1718-51-0	Terphenyl-d14	75%		45-119%

(a) Dilution required due to matrix interference.
(b) Outside control limits 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:	SWMU8-DP05-7A		
Lab Sample ID:	F77191-2	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8015	**Percent Solids:**	75.1
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR056311.D	10	10/14/10	AH	n/a	n/a	GQR2448
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	6.46 g	5.0 ml	50.0 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	696	140	68	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	111%		56-136%
98-08-8	aaa-Trifluorotoluene	77%		61-121%

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:	SWMU8-DP05-7A		
Lab Sample ID:	F77191-2	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8082 SW846 3550B	**Percent Solids:**	75.1
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	XX053741.D	1	10/21/10	NJ	10/14/10	OP34709	GXX802
Run #2							

	Initial Weight	Final Volume
Run #1	30.3 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	22	22	ug/kg	
11104-28-2	Aroclor 1221	ND	22	18	ug/kg	
11141-16-5	Aroclor 1232 [b]	76.9	22	18	ug/kg	J
53469-21-9	Aroclor 1242	ND	22	22	ug/kg	
12672-29-6	Aroclor 1248	ND	22	22	ug/kg	
11097-69-1	Aroclor 1254 [b]	37.1	22	11	ug/kg	J
11096-82-5	Aroclor 1260	ND	22	11	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	70%		44-126%
2051-24-3	Decachlorobiphenyl	49%		39-157%

(a) All hits confirmed by dual column analysis.
(b) Estimated value due to the presence of multiple overlapping Aroclor patterns.

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:	SWMU8-DP05-7A		
Lab Sample ID:	F77191-2	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8015 M SW846 3550B	**Percent Solids:**	75.1
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YY18034.D	20	10/18/10	MV	10/13/10	OP34693	GYY658
Run #2							

	Initial Weight	Final Volume
Run #1	29.9 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C22)	862	220	130	mg/kg	
	TPH (> C22-C36)	452	220	130	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	0% [a]		49-108%

(a) Outside control limits due to dilution.

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:	SWMU8-DP05-7A		
Lab Sample ID:	F77191-2	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
		Percent Solids:	75.1
Project:	Holloman AFB; SWMU 8, ACM Investigation		

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	3510	12	1.2	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Antimony	0.13 J	1.2	0.12	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Arsenic	0.63	0.62	0.12	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Barium	37.9	12	0.62	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Beryllium	0.14 J	0.31	0.062	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Cadmium	0.062 U	0.25	0.062	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Calcium	176000	3100	62	mg/kg	10	10/18/10	10/20/10	RS	SW846 6010B [2]	SW846 3050B [4]
Chromium [a]	4.5 J	6.2	0.62	mg/kg	10	10/18/10	10/20/10	RS	SW846 6010B [2]	SW846 3050B [4]
Cobalt [a]	1.1 J	12	0.25	mg/kg	4	10/18/10	10/20/10	RS	SW846 6010B [2]	SW846 3050B [4]
Copper [a]	2.5 J	16	1.2	mg/kg	10	10/18/10	10/20/10	RS	SW846 6010B [2]	SW846 3050B [4]
Iron	3170	19	1.9	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Lead [a]	1.6 J	5.0	0.25	mg/kg	4	10/18/10	10/20/10	RS	SW846 6010B [2]	SW846 3050B [4]
Magnesium	1390	310	6.2	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Manganese	28.0	0.93	0.062	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Mercury	0.012 U	0.098	0.012	mg/kg	1	10/22/10	10/22/10	LM	SW846 7471A [3]	SW846 7471A [5]
Nickel [a]	2.2 J	10	0.25	mg/kg	4	10/18/10	10/20/10	RS	SW846 6010B [2]	SW846 3050B [4]
Potassium	957	620	31	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Selenium [a]	2.5 U	12	2.5	mg/kg	10	10/18/10	10/20/10	RS	SW846 6010B [2]	SW846 3050B [4]
Silver	0.062 U	0.62	0.062	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Sodium	122 J	620	47	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Thallium [a]	0.50 U	2.5	0.50	mg/kg	4	10/18/10	10/20/10	RS	SW846 6010B [2]	SW846 3050B [4]
Vanadium	6.1	3.1	0.062	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Zinc [a]	7.7 J	12	3.1	mg/kg	10	10/18/10	10/20/10	RS	SW846 6010B [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA8454
(2) Instrument QC Batch: MA8455
(3) Instrument QC Batch: MA8460
(4) Prep QC Batch: MP19313
(5) Prep QC Batch: MP19341

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

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

Report of Analysis

Client Sample ID:	SWMU8-DP04-7		
Lab Sample ID:	F77191-3	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8260B	**Percent Solids:**	77.5
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	H065046.D	1	10/14/10	MM	n/a	n/a	VH2436
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	6.03 g	5.0 ml	100 ul
Run #2			

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone [b]	ND	3400	1400	ug/kg	
107-02-8	Acrolein	ND	1700	680	ug/kg	
107-13-1	Acrylonitrile	ND	1700	680	ug/kg	
71-43-2	Benzene	ND	340	68	ug/kg	
108-86-1	Bromobenzene	ND	340	82	ug/kg	
74-97-5	Bromochloromethane	ND	340	120	ug/kg	
75-27-4	Bromodichloromethane	ND	340	68	ug/kg	
75-25-2	Bromoform	ND	340	120	ug/kg	
104-51-8	n-Butylbenzene	ND	340	88	ug/kg	
135-98-8	sec-Butylbenzene	ND	340	82	ug/kg	
98-06-6	tert-Butylbenzene	ND	340	82	ug/kg	
108-90-7	Chlorobenzene	ND	340	68	ug/kg	
75-00-3	Chloroethane	ND	340	140	ug/kg	
67-66-3	Chloroform	ND	340	68	ug/kg	
95-49-8	o-Chlorotoluene	ND	340	88	ug/kg	
106-43-4	p-Chlorotoluene	ND	340	68	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	1700	680	ug/kg	
75-15-0	Carbon disulfide	ND	340	160	ug/kg	
56-23-5	Carbon tetrachloride	ND	340	110	ug/kg	
75-34-3	1,1-Dichloroethane	ND	340	100	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	340	160	ug/kg	
563-58-6	1,1-Dichloropropene	ND	340	68	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	340	170	ug/kg	
106-93-4	1,2-Dibromoethane	ND	340	68	ug/kg	
107-06-2	1,2-Dichloroethane	ND	340	82	ug/kg	
78-87-5	1,2-Dichloropropane	ND	340	68	ug/kg	
142-28-9	1,3-Dichloropropane	ND	340	120	ug/kg	
594-20-7	2,2-Dichloropropane	ND	340	75	ug/kg	
124-48-1	Dibromochloromethane	ND	340	120	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	340	140	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	340	68	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	340	68	ug/kg	

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:	SWMU8-DP04-7		
Lab Sample ID:	F77191-3	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8260B	**Percent Solids:**	77.5
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
541-73-1	m-Dichlorobenzene	ND	340	82	ug/kg	
95-50-1	o-Dichlorobenzene	ND	340	75	ug/kg	
106-46-7	p-Dichlorobenzene	ND	340	100	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	340	130	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	340	75	ug/kg	
100-41-4	Ethylbenzene	ND	340	75	ug/kg	
591-78-6	2-Hexanone	ND	1700	800	ug/kg	
87-68-3	Hexachlorobutadiene	ND	340	160	ug/kg	
110-54-3	Hexane	ND	340	140	ug/kg	
98-82-8	Isopropylbenzene	ND	340	95	ug/kg	
99-87-6	p-Isopropyltoluene	ND	340	68	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	1700	560	ug/kg	
74-83-9	Methyl bromide	ND	340	140	ug/kg	
74-87-3	Methyl chloride	ND	340	170	ug/kg	
74-95-3	Methylene bromide	ND	340	140	ug/kg	
75-09-2	Methylene chloride	495	680	340	ug/kg	J
78-93-3	Methyl ethyl ketone	ND	1700	510	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	340	160	ug/kg	
91-20-3	Naphthalene	ND	340	140	ug/kg	
103-65-1	n-Propylbenzene	ND	340	100	ug/kg	
100-42-5	Styrene	ND	340	68	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	340	68	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	340	120	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	340	88	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	340	88	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	340	140	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	340	110	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	340	140	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	340	75	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	340	100	ug/kg	
127-18-4	Tetrachloroethylene	ND	340	120	ug/kg	
108-88-3	Toluene	ND	340	82	ug/kg	
79-01-6	Trichloroethylene	ND	340	110	ug/kg	
75-69-4	Trichlorofluoromethane	ND	340	180	ug/kg	
75-01-4	Vinyl chloride	ND	340	140	ug/kg	
108-05-4	Vinyl Acetate	ND	1700	1000	ug/kg	
	m,p-Xylene	ND	680	82	ug/kg	
95-47-6	o-Xylene	ND	340	68	ug/kg	

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:	SWMU8-DP04-7		
Lab Sample ID:	F77191-3	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8260B	**Percent Solids:**	77.5
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		80-121%
2037-26-5	Toluene-D8	85%		71-130%
460-00-4	4-Bromofluorobenzene	92%		59-148%
17060-07-0	1,2-Dichloroethane-D4	103%		77-123%

(a) Methanol extract analysis required due to matrix interference (non-target analytes present above calibration range).
(b) ICV and 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:	SWMU8-DP04-7		
Lab Sample ID:	F77191-3	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8270C SW846 3550B	**Percent Solids:**	77.5
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L048671.D	4	10/26/10	NAF	10/15/10	OP34713	SL2492
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	1.0 ml
Run #2		

ABN Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	4300	1700	ug/kg	
95-57-8	2-Chlorophenol	ND	860	170	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	860	170	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	860	170	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	860	190	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	4300	1700	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	1700	170	ug/kg	
95-48-7	2-Methylphenol	ND	860	170	ug/kg	
	3&4-Methylphenol	ND	860	170	ug/kg	
88-75-5	2-Nitrophenol	ND	860	170	ug/kg	
100-02-7	4-Nitrophenol	ND	4300	1700	ug/kg	
87-86-5	Pentachlorophenol	ND	4300	1700	ug/kg	
108-95-2	Phenol	ND	860	170	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	860	170	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	860	170	ug/kg	
83-32-9	Acenaphthene	ND	860	170	ug/kg	
208-96-8	Acenaphthylene	ND	860	170	ug/kg	
62-53-3	Aniline	ND	860	190	ug/kg	
120-12-7	Anthracene	ND	860	170	ug/kg	
92-87-5	Benzidine	ND	8600	3600	ug/kg	
56-55-3	Benzo(a)anthracene	ND	860	170	ug/kg	
50-32-8	Benzo(a)pyrene	ND	860	170	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	860	170	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	860	170	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	860	170	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	860	170	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	1700	340	ug/kg	
100-51-6	Benzyl Alcohol	ND	860	170	ug/kg	
91-58-7	2-Chloronaphthalene	ND	860	170	ug/kg	
106-47-8	4-Chloroaniline	ND	860	170	ug/kg	
86-74-8	Carbazole	ND	860	170	ug/kg	
218-01-9	Chrysene	ND	860	170	ug/kg	

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:	SWMU8-DP04-7		
Lab Sample ID:	F77191-3	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8270C SW846 3550B	**Percent Solids:**	77.5
Project:	Holloman AFB; SWMU 8, ACM Investigation		

ABN Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
111-91-1	bis(2-Chloroethoxy)methane	ND	860	170	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	860	170	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	860	170	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	860	170	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	860	340	ug/kg	
122-66-7	1,2-Diphenylhydrazine	ND	860	170	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	860	340	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	860	340	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	860	170	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	860	170	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	1700	340	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	860	170	ug/kg	
132-64-9	Dibenzofuran	ND	860	170	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	1700	340	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	1700	340	ug/kg	
84-66-2	Diethyl phthalate	ND	1700	860	ug/kg	
131-11-3	Dimethyl phthalate	ND	1700	340	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	1700	860	ug/kg	
206-44-0	Fluoranthene	ND	860	170	ug/kg	
86-73-7	Fluorene	ND	860	170	ug/kg	
118-74-1	Hexachlorobenzene	ND	860	170	ug/kg	
87-68-3	Hexachlorobutadiene	ND	860	170	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	860	170	ug/kg	
67-72-1	Hexachloroethane	ND	860	430	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	860	170	ug/kg	
78-59-1	Isophorone	ND	860	170	ug/kg	
90-12-0	1-Methylnaphthalene	ND	860	170	ug/kg	
91-57-6	2-Methylnaphthalene	ND	860	170	ug/kg	
88-74-4	2-Nitroaniline	ND	1700	340	ug/kg	
99-09-2	3-Nitroaniline	ND	1700	340	ug/kg	
100-01-6	4-Nitroaniline	ND	1700	340	ug/kg	
91-20-3	Naphthalene	ND	860	170	ug/kg	
98-95-3	Nitrobenzene	ND	860	170	ug/kg	
62-75-9	N-Nitrosodimethylamine	ND	1700	340	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	860	170	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	860	170	ug/kg	
85-01-8	Phenanthrene	ND	860	170	ug/kg	
129-00-0	Pyrene	ND	860	170	ug/kg	
110-86-1	Pyridine	ND	1700	430	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	860	170	ug/kg	

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:	SWMU8-DP04-7		
Lab Sample ID:	F77191-3	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8270C SW846 3550B	**Percent Solids:**	77.5
Project:	Holloman AFB; SWMU 8, ACM Investigation		

ABN Full List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	79%		40-102%
4165-62-2	Phenol-d5	82%		41-100%
118-79-6	2,4,6-Tribromophenol	74%		42-108%
4165-60-0	Nitrobenzene-d5	89%		40-105%
321-60-8	2-Fluorobiphenyl	80%		43-107%
1718-51-0	Terphenyl-d14	71%		45-119%

(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:	SWMU8-DP04-7		
Lab Sample ID:	F77191-3	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8015	**Percent Solids:**	77.5
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR056276.D	1	10/13/10	AH	n/a	n/a	GQR2447
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	6.03 g	5.0 ml	10.0 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	243	68	34	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	105%		56-136%
98-08-8	aaa-Trifluorotoluene	80%		61-121%

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:	SWMU8-DP04-7		
Lab Sample ID:	F77191-3	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8082 SW846 3550B	**Percent Solids:**	77.5
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	XX053714.D	1	10/20/10	NJ	10/14/10	OP34709	GXX801
Run #2							

	Initial Weight	Final Volume
Run #1	30.5 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	21	21	ug/kg	
11104-28-2	Aroclor 1221	ND	21	17	ug/kg	
11141-16-5	Aroclor 1232 [b]	39.7	21	17	ug/kg	J
53469-21-9	Aroclor 1242	ND	21	21	ug/kg	
12672-29-6	Aroclor 1248	ND	21	21	ug/kg	
11097-69-1	Aroclor 1254 [b]	16.0	21	11	ug/kg	J
11096-82-5	Aroclor 1260	ND	21	11	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	81%		44-126%
2051-24-3	Decachlorobiphenyl	61%		39-157%

(a) All hits confirmed by dual column analysis.
(b) Estimated value due to the presence of multiple overlapping Aroclor patterns.

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:	SWMU8-DP04-7		
Lab Sample ID:	F77191-3	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8015 M SW846 3550B	**Percent Solids:**	77.5
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YY18035.D	10	10/18/10	MV	10/13/10	OP34693	GYY658
Run #2							

	Initial Weight	Final Volume
Run #1	30.5 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C22)	110	110	63	mg/kg	
	TPH (> C22-C36)	159	110	63	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	75%		49-108%

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:	SWMU8-DP04-7		
Lab Sample ID:	F77191-3	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
		Percent Solids:	77.5
Project:	Holloman AFB; SWMU 8, ACM Investigation		

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	2350	8.8	0.88	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Antimony	0.088 U	0.88	0.088	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Arsenic	1.0	0.44	0.088	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Barium	22.4	8.8	0.44	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Beryllium	0.092 J	0.22	0.044	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Cadmium	0.044 U	0.18	0.044	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Calcium	167000	2200	44	mg/kg	10	10/18/10	10/20/10	RS	SW846 6010B [2]	SW846 3050B [4]
Chromium [a]	3.0 J	4.4	0.44	mg/kg	10	10/18/10	10/20/10	RS	SW846 6010B [2]	SW846 3050B [4]
Cobalt [a]	0.85 J	8.8	0.18	mg/kg	4	10/18/10	10/20/10	RS	SW846 6010B [2]	SW846 3050B [4]
Copper [a]	2.0 J	11	0.88	mg/kg	10	10/18/10	10/20/10	RS	SW846 6010B [2]	SW846 3050B [4]
Iron	2620	13	1.3	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Lead [a]	1.4 J	3.5	0.18	mg/kg	4	10/18/10	10/20/10	RS	SW846 6010B [2]	SW846 3050B [4]
Magnesium	1010	220	4.4	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Manganese	37.3	0.66	0.044	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Mercury	0.013 U	0.10	0.013	mg/kg	1	10/22/10	10/22/10	LM	SW846 7471A [3]	SW846 7471A [5]
Nickel [a]	1.9 J	7.0	0.18	mg/kg	4	10/18/10	10/20/10	RS	SW846 6010B [2]	SW846 3050B [4]
Potassium	628	440	22	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Selenium [a]	1.8 U	8.8	1.8	mg/kg	10	10/18/10	10/20/10	RS	SW846 6010B [2]	SW846 3050B [4]
Silver	0.044 U	0.44	0.044	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Sodium	93.2 J	440	33	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Thallium [a]	0.35 U	1.8	0.35	mg/kg	4	10/18/10	10/20/10	RS	SW846 6010B [2]	SW846 3050B [4]
Vanadium	5.8	2.2	0.044	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [4]
Zinc [a]	5.1 J	8.8	2.2	mg/kg	10	10/18/10	10/20/10	RS	SW846 6010B [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA8454
(2) Instrument QC Batch: MA8455
(3) Instrument QC Batch: MA8460
(4) Prep QC Batch: MP19313
(5) Prep QC Batch: MP19341

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

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

Report of Analysis

Client Sample ID:	SWMU8-DP06-7		
Lab Sample ID:	F77191-4	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8260B	**Percent Solids:**	76.4
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	H065047.D	1	10/14/10	MM	n/a	n/a	VH2436
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	6.09 g	5.0 ml	100 ul
Run #2			

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone [b]	ND	3500	1500	ug/kg	
107-02-8	Acrolein	ND	1700	690	ug/kg	
107-13-1	Acrylonitrile	ND	1700	690	ug/kg	
71-43-2	Benzene	ND	350	69	ug/kg	
108-86-1	Bromobenzene	ND	350	83	ug/kg	
74-97-5	Bromochloromethane	ND	350	120	ug/kg	
75-27-4	Bromodichloromethane	ND	350	69	ug/kg	
75-25-2	Bromoform	ND	350	120	ug/kg	
104-51-8	n-Butylbenzene	2310	350	90	ug/kg	
135-98-8	sec-Butylbenzene	734	350	83	ug/kg	
98-06-6	tert-Butylbenzene	ND	350	83	ug/kg	
108-90-7	Chlorobenzene	ND	350	69	ug/kg	
75-00-3	Chloroethane	ND	350	140	ug/kg	
67-66-3	Chloroform	ND	350	69	ug/kg	
95-49-8	o-Chlorotoluene	ND	350	90	ug/kg	
106-43-4	p-Chlorotoluene	ND	350	69	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	1700	690	ug/kg	
75-15-0	Carbon disulfide	ND	350	170	ug/kg	
56-23-5	Carbon tetrachloride	ND	350	110	ug/kg	
75-34-3	1,1-Dichloroethane	ND	350	100	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	350	160	ug/kg	
563-58-6	1,1-Dichloropropene	ND	350	69	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	350	170	ug/kg	
106-93-4	1,2-Dibromoethane	ND	350	69	ug/kg	
107-06-2	1,2-Dichloroethane	ND	350	83	ug/kg	
78-87-5	1,2-Dichloropropane	ND	350	69	ug/kg	
142-28-9	1,3-Dichloropropane	ND	350	120	ug/kg	
594-20-7	2,2-Dichloropropane	ND	350	76	ug/kg	
124-48-1	Dibromochloromethane	ND	350	120	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	350	150	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	350	69	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	350	69	ug/kg	

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:	SWMU8-DP06-7		
Lab Sample ID:	F77191-4	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8260B	**Percent Solids:**	76.4
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
541-73-1	m-Dichlorobenzene	856	350	83	ug/kg	
95-50-1	o-Dichlorobenzene	755	350	76	ug/kg	
106-46-7	p-Dichlorobenzene	708	350	100	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	350	130	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	350	76	ug/kg	
100-41-4	Ethylbenzene	ND	350	76	ug/kg	
591-78-6	2-Hexanone	ND	1700	810	ug/kg	
87-68-3	Hexachlorobutadiene	ND	350	160	ug/kg	
110-54-3	Hexane	ND	350	140	ug/kg	
98-82-8	Isopropylbenzene	ND	350	97	ug/kg	
99-87-6	p-Isopropyltoluene	ND	350	69	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	1700	570	ug/kg	
74-83-9	Methyl bromide	ND	350	140	ug/kg	
74-87-3	Methyl chloride	ND	350	170	ug/kg	
74-95-3	Methylene bromide	ND	350	150	ug/kg	
75-09-2	Methylene chloride [c]	994	690	350	ug/kg	
78-93-3	Methyl ethyl ketone	ND	1700	520	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	350	160	ug/kg	
91-20-3	Naphthalene	ND	350	140	ug/kg	
103-65-1	n-Propylbenzene	ND	350	100	ug/kg	
100-42-5	Styrene	ND	350	69	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	350	69	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	350	120	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	350	90	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	350	90	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	350	140	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	350	110	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	350	140	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	350	76	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	350	100	ug/kg	
127-18-4	Tetrachloroethylene	ND	350	120	ug/kg	
108-88-3	Toluene	ND	350	83	ug/kg	
79-01-6	Trichloroethylene	ND	350	110	ug/kg	
75-69-4	Trichlorofluoromethane	ND	350	180	ug/kg	
75-01-4	Vinyl chloride	ND	350	140	ug/kg	
108-05-4	Vinyl Acetate	ND	1700	1000	ug/kg	
	m,p-Xylene	ND	690	83	ug/kg	
95-47-6	o-Xylene	ND	350	69	ug/kg	

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:	SWMU8-DP06-7		
Lab Sample ID:	F77191-4	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8260B	**Percent Solids:**	76.4
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		80-121%
2037-26-5	Toluene-D8	85%		71-130%
460-00-4	4-Bromofluorobenzene	92%		59-148%
17060-07-0	1,2-Dichloroethane-D4	102%		77-123%

(a) Methanol extract analysis required due to matrix interference (non-target analytes present above calibration range).
(b) ICV and associated BS recovery outside control limits.
(c) 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:	SWMU8-DP06-7		
Lab Sample ID:	F77191-4	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8270C SW846 3550B	**Percent Solids:**	76.4
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L048672.D	5	10/26/10	NAF	10/15/10	OP34713	SL2492
Run #2							

	Initial Weight	Final Volume
Run #1	30.5 g	1.0 ml
Run #2		

ABN Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	5400	2100	ug/kg	
95-57-8	2-Chlorophenol	ND	1100	210	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	1100	210	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	1100	210	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	1100	240	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	5400	2100	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	2100	210	ug/kg	
95-48-7	2-Methylphenol	ND	1100	210	ug/kg	
	3&4-Methylphenol	ND	1100	210	ug/kg	
88-75-5	2-Nitrophenol	879	1100	210	ug/kg	J
100-02-7	4-Nitrophenol	ND	5400	2100	ug/kg	
87-86-5	Pentachlorophenol	ND	5400	2100	ug/kg	
108-95-2	Phenol	ND	1100	210	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	1100	210	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	1100	210	ug/kg	
83-32-9	Acenaphthene	ND	1100	210	ug/kg	
208-96-8	Acenaphthylene	ND	1100	210	ug/kg	
62-53-3	Aniline	ND	1100	240	ug/kg	
120-12-7	Anthracene	ND	1100	210	ug/kg	
92-87-5	Benzidine	ND	11000	4500	ug/kg	
56-55-3	Benzo(a)anthracene	ND	1100	210	ug/kg	
50-32-8	Benzo(a)pyrene	ND	1100	210	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	1100	210	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	1100	210	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	1100	210	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	1100	210	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	2100	430	ug/kg	
100-51-6	Benzyl Alcohol	ND	1100	210	ug/kg	
91-58-7	2-Chloronaphthalene	ND	1100	210	ug/kg	
106-47-8	4-Chloroaniline	ND	1100	210	ug/kg	
86-74-8	Carbazole	ND	1100	210	ug/kg	
218-01-9	Chrysene	ND	1100	210	ug/kg	

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:	SWMU8-DP06-7		
Lab Sample ID:	F77191-4	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8270C SW846 3550B	**Percent Solids:**	76.4
Project:	Holloman AFB; SWMU 8, ACM Investigation		

ABN Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
111-91-1	bis(2-Chloroethoxy)methane	ND	1100	210	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	1100	210	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	1100	210	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	1100	210	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	1100	430	ug/kg	
122-66-7	1,2-Diphenylhydrazine	ND	1100	210	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	1100	430	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	1100	430	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	1100	210	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	1100	210	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	2100	430	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	1100	210	ug/kg	
132-64-9	Dibenzofuran	ND	1100	210	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	2100	430	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	2100	430	ug/kg	
84-66-2	Diethyl phthalate	ND	2100	1100	ug/kg	
131-11-3	Dimethyl phthalate	ND	2100	430	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2100	1100	ug/kg	
206-44-0	Fluoranthene	ND	1100	210	ug/kg	
86-73-7	Fluorene	ND	1100	210	ug/kg	
118-74-1	Hexachlorobenzene	ND	1100	210	ug/kg	
87-68-3	Hexachlorobutadiene	ND	1100	210	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	1100	210	ug/kg	
67-72-1	Hexachloroethane	ND	1100	540	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	1100	210	ug/kg	
78-59-1	Isophorone	ND	1100	210	ug/kg	
90-12-0	1-Methylnaphthalene	403	1100	210	ug/kg	J
91-57-6	2-Methylnaphthalene	ND	1100	210	ug/kg	
88-74-4	2-Nitroaniline	ND	2100	430	ug/kg	
99-09-2	3-Nitroaniline	ND	2100	430	ug/kg	
100-01-6	4-Nitroaniline	ND	2100	430	ug/kg	
91-20-3	Naphthalene	ND	1100	210	ug/kg	
98-95-3	Nitrobenzene	ND	1100	210	ug/kg	
62-75-9	N-Nitrosodimethylamine	ND	2100	430	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	1100	210	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	1100	210	ug/kg	
85-01-8	Phenanthrene	ND	1100	210	ug/kg	
129-00-0	Pyrene	ND	1100	210	ug/kg	
110-86-1	Pyridine	ND	2100	540	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	1100	210	ug/kg	

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:	SWMU8-DP06-7		
Lab Sample ID:	F77191-4	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8270C SW846 3550B	**Percent Solids:**	76.4
Project:	Holloman AFB; SWMU 8, ACM Investigation		

ABN Full List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	74%		40-102%
4165-62-2	Phenol-d5	78%		41-100%
118-79-6	2,4,6-Tribromophenol	69%		42-108%
4165-60-0	Nitrobenzene-d5	158% [a]		40-105%
321-60-8	2-Fluorobiphenyl	73%		43-107%
1718-51-0	Terphenyl-d14	64%		45-119%

(a) Outside control limits 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:	SWMU8-DP06-7		
Lab Sample ID:	F77191-4	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8015	**Percent Solids:**	76.4
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR056312.D	10	10/14/10	AH	n/a	n/a	GQR2448
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	6.09 g	5.0 ml	50.0 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	737	140	69	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	122%		56-136%
98-08-8	aaa-Trifluorotoluene	74%		61-121%

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:	SWMU8-DP06-7		
Lab Sample ID:	F77191-4	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8082 SW846 3550B	**Percent Solids:**	76.4
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XX053715.D	1	10/20/10	NJ	10/14/10	OP34709	GXX801
Run #2							

	Initial Weight	Final Volume
Run #1	30.5 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	21	21	ug/kg	
11104-28-2	Aroclor 1221	ND	21	17	ug/kg	
11141-16-5	Aroclor 1232 [a]	57.9	21	17	ug/kg	J
53469-21-9	Aroclor 1242	ND	21	21	ug/kg	
12672-29-6	Aroclor 1248	ND	21	21	ug/kg	
11097-69-1	Aroclor 1254 [a]	26.7	21	11	ug/kg	J
11096-82-5	Aroclor 1260	ND	21	11	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	66%		44-126%
2051-24-3	Decachlorobiphenyl	50%		39-157%

(a) Estimated value due to the presence of multiple overlapping Aroclor patterns.

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:	SWMU8-DP06-7		
Lab Sample ID:	F77191-4	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
Method:	SW846 8015 M SW846 3550B	**Percent Solids:**	76.4
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YY18036.D	20	10/18/10	MV	10/13/10	OP34693	GYY658
Run #2							

	Initial Weight	Final Volume
Run #1	30.4 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C22)	898	220	130	mg/kg	
	TPH (> C22-C36)	431	220	130	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	0% [a]		49-108%

(a) Outside control limits due to dilution.

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:	SWMU8-DP06-7		
Lab Sample ID:	F77191-4	**Date Sampled:**	10/08/10
Matrix:	SO - Soil	**Date Received:**	10/12/10
		Percent Solids:	76.4
Project:	Holloman AFB; SWMU 8, ACM Investigation		

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	2280	8.6	0.86	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [5]
Antimony	0.086 U	0.86	0.086	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [5]
Arsenic	0.74	0.43	0.086	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [5]
Barium	23.5	8.6	0.43	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [5]
Beryllium	0.073 J	0.21	0.043	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [5]
Cadmium	0.043 U	0.17	0.043	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [5]
Calcium	225000	4300	86	mg/kg	20	10/18/10	10/21/10	RS	SW846 6010B [3]	SW846 3050B [5]
Chromium [a]	2.6 J	8.6	0.86	mg/kg	20	10/18/10	10/21/10	RS	SW846 6010B [3]	SW846 3050B [5]
Cobalt [a]	0.89 J	11	0.21	mg/kg	5	10/18/10	10/20/10	RS	SW846 6010B [2]	SW846 3050B [5]
Copper [a]	3.1 J	21	1.7	mg/kg	20	10/18/10	10/21/10	RS	SW846 6010B [3]	SW846 3050B [5]
Iron	1890	13	1.3	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [5]
Lead [a]	1.7 J	4.3	0.21	mg/kg	5	10/18/10	10/20/10	RS	SW846 6010B [2]	SW846 3050B [5]
Magnesium	1040	210	4.3	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [5]
Manganese	54.6	0.64	0.043	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [5]
Mercury	0.013 U	0.10	0.013	mg/kg	1	10/22/10	10/22/10	LM	SW846 7471A [4]	SW846 7471A [6]
Nickel [a]	1.7 J	8.6	0.21	mg/kg	5	10/18/10	10/20/10	RS	SW846 6010B [2]	SW846 3050B [5]
Potassium	615	430	21	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [5]
Selenium [a]	3.4 U	17	3.4	mg/kg	20	10/18/10	10/21/10	RS	SW846 6010B [3]	SW846 3050B [5]
Silver	0.043 U	0.43	0.043	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [5]
Sodium	172 J	430	32	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [5]
Thallium [a]	0.43 U	2.1	0.43	mg/kg	5	10/18/10	10/20/10	RS	SW846 6010B [2]	SW846 3050B [5]
Vanadium	4.5	2.1	0.043	mg/kg	1	10/18/10	10/19/10	RS	SW846 6010B [1]	SW846 3050B [5]
Zinc [a]	5.6 J	17	4.3	mg/kg	20	10/18/10	10/21/10	RS	SW846 6010B [3]	SW846 3050B [5]

(1) Instrument QC Batch: MA8454
(2) Instrument QC Batch: MA8455
(3) Instrument QC Batch: MA8458
(4) Instrument QC Batch: MA8460
(5) Prep QC Batch: MP19313
(6) Prep QC Batch: MP19341

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

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

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	F77191-5	**Date Sampled:**	10/08/10
Matrix:	SO - Trip Blank Soil	**Date Received:**	10/12/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H065014.D	1	10/13/10	MM	n/a	n/a	VH2435
Run #2							

	Initial Weight
Run #1	5.00 g
Run #2	

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	50	21	ug/kg	
107-02-8	Acrolein	ND	25	10	ug/kg	
107-13-1	Acrylonitrile	ND	25	10	ug/kg	
71-43-2	Benzene	ND	5.0	1.0	ug/kg	
108-86-1	Bromobenzene	ND	5.0	1.2	ug/kg	
74-97-5	Bromochloromethane	ND	5.0	1.7	ug/kg	
75-27-4	Bromodichloromethane	ND	5.0	1.0	ug/kg	
75-25-2	Bromoform	ND	5.0	1.8	ug/kg	
104-51-8	n-Butylbenzene	ND	5.0	1.3	ug/kg	
135-98-8	sec-Butylbenzene	ND	5.0	1.2	ug/kg	
98-06-6	tert-Butylbenzene	ND	5.0	1.2	ug/kg	
108-90-7	Chlorobenzene	ND	5.0	1.0	ug/kg	
75-00-3	Chloroethane	ND	5.0	2.0	ug/kg	
67-66-3	Chloroform	ND	5.0	1.0	ug/kg	
95-49-8	o-Chlorotoluene	ND	5.0	1.3	ug/kg	
106-43-4	p-Chlorotoluene	ND	5.0	1.0	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	25	10	ug/kg	
75-15-0	Carbon disulfide	ND	5.0	2.4	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.0	1.6	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.0	1.5	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.0	2.3	ug/kg	
563-58-6	1,1-Dichloropropene	ND	5.0	1.0	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	2.5	ug/kg	
106-93-4	1,2-Dibromoethane	ND	5.0	1.0	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.0	1.2	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.0	1.0	ug/kg	
142-28-9	1,3-Dichloropropane	ND	5.0	1.7	ug/kg	
594-20-7	2,2-Dichloropropane	ND	5.0	1.1	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	1.7	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.0	2.1	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.0	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.0	ug/kg	

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:	TRIP BLANK		
Lab Sample ID:	F77191-5	**Date Sampled:**	10/08/10
Matrix:	SO - Trip Blank Soil	**Date Received:**	10/12/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
541-73-1	m-Dichlorobenzene	ND	5.0	1.2	ug/kg	
95-50-1	o-Dichlorobenzene	ND	5.0	1.1	ug/kg	
106-46-7	p-Dichlorobenzene	ND	5.0	1.5	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	1.9	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	1.1	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	1.1	ug/kg	
591-78-6	2-Hexanone	ND	25	12	ug/kg	
87-68-3	Hexachlorobutadiene	ND	5.0	2.3	ug/kg	
110-54-3	Hexane	ND	5.0	2.0	ug/kg	
98-82-8	Isopropylbenzene	ND	5.0	1.4	ug/kg	
99-87-6	p-Isopropyltoluene	ND	5.0	1.0	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	25	8.3	ug/kg	
74-83-9	Methyl bromide	ND	5.0	2.0	ug/kg	
74-87-3	Methyl chloride	ND	5.0	2.5	ug/kg	
74-95-3	Methylene bromide	ND	5.0	2.1	ug/kg	
75-09-2	Methylene chloride	ND	10	5.0	ug/kg	
78-93-3	Methyl ethyl ketone	ND	25	7.5	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	2.3	ug/kg	
91-20-3	Naphthalene	ND	5.0	2.0	ug/kg	
103-65-1	n-Propylbenzene	ND	5.0	1.5	ug/kg	
100-42-5	Styrene	ND	5.0	1.0	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	1.0	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.0	1.8	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	1.3	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.0	1.3	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	2.0	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	5.0	1.6	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	2.0	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	1.1	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.5	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.0	1.8	ug/kg	
108-88-3	Toluene	ND	5.0	1.2	ug/kg	
79-01-6	Trichloroethylene	ND	5.0	1.6	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.0	2.6	ug/kg	
75-01-4	Vinyl chloride	ND	5.0	2.0	ug/kg	
108-05-4	Vinyl Acetate	ND	25	15	ug/kg	
	m,p-Xylene	ND	10	1.2	ug/kg	
95-47-6	o-Xylene	ND	5.0	1.0	ug/kg	

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:	TRIP BLANK		
Lab Sample ID:	F77191-5	**Date Sampled:**	10/08/10
Matrix:	SO - Trip Blank Soil	**Date Received:**	10/12/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		80-121%
2037-26-5	Toluene-D8	85%		71-130%
460-00-4	4-Bromofluorobenzene	92%		59-148%
17060-07-0	1,2-Dichloroethane-D4	103%		77-123%

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

Southeast ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Certification Exceptions
- Chain of Custody

NATIONVIEW

F77191

Chain of Custody and Analytical Request

Page: 1 of 1

Project No: 8080014.03.020

COC Number(1): 10112010-01

LIMS Number:

Facility/Base I.D.: Holloman AFB, New Mexico

Project/Site Name: SWMU 8, ACM Investigation

Client Name: USACE - Albuquerque District

Collected by: Dustin McNeil/ Jim Moore

	Field Sample ID (30 Characters Max)	ERPIMS LOCID (15 Characters Max)	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hhmm)	Sample Depth (beginning - ending)	SA Code (2)	Sample Number (3)	Sample Matrix (4)	Number of containers	% Solids (2540B)	VOCs (8260B)	SVOCs (8270C)	TPH-GRO (8015B)	TPH-DRO/ORO (8015B)	TAL Metals (6010B/7471A)	PCBs (8082)	Dry Bulk Density (D2937-94)	Specific Gravity (D1429-86)	FOC (D2974-87)				Ambient Blank Lot Control Number	Equipment Blank Lot Control Number	Trip Blank Lot Control Number	Cooler ID
	Sample Analysis Requested (5)																						Quality Assurance Samples (6)			
1	SWMUB-DP05-7	8-DP05-7	08102010	1100	5-7	N	1	SO	6	X	X	X	X	X	X	X										
2	SWMUB-DP05-7A	8-DP05-7A	08102010	1100	5-7	FD	1	SO	6	X	X	X	X	X	X	X										1
3	SWMU 8-DP04-7	8-DP04-7	08102010	1300	5-7	N	1	SO	6	X	X	X	X	X	X	X										1
4	SWMU 8-DP06-7	8-DP06-7	08102010	1430	5-7	N	1	SO	6	X	X	X	X	X	X	X										1
5	Trip Blank				-	TB	1	WQ	3		X															1
					-																					1
					-																					
					-																					
					-																					
					-																					
					-																					
					-																					

COMMENTS:

Custody Transfers Prior to Receipt by Laboratory

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1.	JH Moore	10/11/10	1300	Fx		09:00
2.	Fx			J. Lopez (ACSE)	10-12-10	
3.						

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab:

Method of Shipment: FedEx Express

Analytical Lab: Accutest

Lab Recipient:

Shipped No.:

Airbill Number: 873109427060

Delivery Location: Orlando, FL

Delivery Date/Time:

1.) Chain of Custody Number = date collected + custody number (e.g. 09-02-1999-01)

2.) Sample Type (SA) Codes: N = Normal Sample, TB = Trip Blank (-c) Sample, FD = Field Duplicate (-a) Samples, FR = Field Replicate (-b) Samples, EB = Equipment Blank (-d) Samples, MS = Matrix Spike, SD = Matrix Spike Duplicate, AB = Ambient Blank (-e)

3.) Sample Number: Unique sample number collected from a particular location per day. (e.g. Groundwater sample collected from MW-1 on 10/10/99 = 01, if sampled again on 10/10/99 = 02, etc.)

4.) Matrix Codes: GS = Soil Gas, WG = Groundwater, WS = Surface Water, SO = Soil, SE = Sediment, SL = Sludge, SS = Surface Soil Samples, WQ = Aqueous Blank Samples (trip, equipment, ambient, etc), SQ = Soil Blanks

5.) Sample Analysis Requested: Analytical method requested and number of containers provided for each.

6.) Quality assurance samples are assigned by date (ddmmyy) and the sample number associated with the sample (01, 02, etc) (e.g. Equipment blank collected in association with MW-1 on 10/10/99 will be designated 10109901 in the Equipment Blank Lot Control

4.8

4.1

4

F77191: Chain of Custody

Page 1 of 2

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: F77191 CLIENT: NATION VIEW PROJECT: SWMU 8, ACM INVESTIGATION

DATE/TIME RECEIVED: 10-12-10 09:00 {MM/DD/YY 24:00} NUMBER OF COOLERS RECEIVED: 1

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

AIRBILL NUMBERS: 8731 0942 7060

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
- [ ] RECEIVED WATER TRIP BLANK
- [x] RECEIVED SOIL TRIP BLANK

MISC. INFORMATION

NUMBER OF ENCORES ? _____

NUMBER OF 5035 FIELD KITS ? _____

NUMBER OR LAB FILTERED METALS ? _____

TEMPERATURE INFORMATION

- [ ] IR THERM ID 3 CORR. FACTOR +0.6
- [ ] OBSERVED TEMPS: 4.2
- [ ] CORRECTED TEMPS: 4.8

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 10-12-10 REVIEWER SIGNATURE/DATE [signature] 10/12/10

NF 10/09 RECEIPT CONFIRMATION 100609 (2).xls

4.1

4

F77191: Chain of Custody

Page 2 of 2

Southeast ACCUTEST LABORATORIES

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: F77191
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VH2435-MB	H065003.D	1	10/13/10	MM	n/a	n/a	VH2435

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77191-1, F77191-2, F77191-5

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	50	21	ug/kg	
107-02-8	Acrolein	ND	25	10	ug/kg	
107-13-1	Acrylonitrile	ND	25	10	ug/kg	
71-43-2	Benzene	ND	5.0	1.0	ug/kg	
108-86-1	Bromobenzene	ND	5.0	1.2	ug/kg	
74-97-5	Bromochloromethane	ND	5.0	1.7	ug/kg	
75-27-4	Bromodichloromethane	ND	5.0	1.0	ug/kg	
75-25-2	Bromoform	ND	5.0	1.8	ug/kg	
104-51-8	n-Butylbenzene	ND	5.0	1.3	ug/kg	
135-98-8	sec-Butylbenzene	ND	5.0	1.2	ug/kg	
98-06-6	tert-Butylbenzene	ND	5.0	1.2	ug/kg	
108-90-7	Chlorobenzene	ND	5.0	1.0	ug/kg	
75-00-3	Chloroethane	ND	5.0	2.0	ug/kg	
67-66-3	Chloroform	ND	5.0	1.0	ug/kg	
95-49-8	o-Chlorotoluene	ND	5.0	1.3	ug/kg	
106-43-4	p-Chlorotoluene	ND	5.0	1.0	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	25	10	ug/kg	
75-15-0	Carbon disulfide	ND	5.0	2.4	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.0	1.6	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.0	1.5	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.0	2.3	ug/kg	
563-58-6	1,1-Dichloropropene	ND	5.0	1.0	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	2.5	ug/kg	
106-93-4	1,2-Dibromoethane	ND	5.0	1.0	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.0	1.2	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.0	1.0	ug/kg	
142-28-9	1,3-Dichloropropane	ND	5.0	1.7	ug/kg	
594-20-7	2,2-Dichloropropane	ND	5.0	1.1	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	1.7	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.0	2.1	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.0	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.0	ug/kg	
541-73-1	m-Dichlorobenzene	ND	5.0	1.2	ug/kg	
95-50-1	o-Dichlorobenzene	ND	5.0	1.1	ug/kg	
106-46-7	p-Dichlorobenzene	ND	5.0	1.5	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	1.9	ug/kg	

Method Blank Summary

Job Number: F77191
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VH2435-MB	H065003.D	1	10/13/10	MM	n/a	n/a	VH2435

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77191-1, F77191-2, F77191-5

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	1.1	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	1.1	ug/kg	
591-78-6	2-Hexanone	ND	25	12	ug/kg	
87-68-3	Hexachlorobutadiene	ND	5.0	2.3	ug/kg	
110-54-3	Hexane	ND	5.0	2.0	ug/kg	
98-82-8	Isopropylbenzene	ND	5.0	1.4	ug/kg	
99-87-6	p-Isopropyltoluene	ND	5.0	1.0	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	25	8.3	ug/kg	
74-83-9	Methyl bromide	ND	5.0	2.0	ug/kg	
74-87-3	Methyl chloride	ND	5.0	2.5	ug/kg	
74-95-3	Methylene bromide	ND	5.0	2.1	ug/kg	
75-09-2	Methylene chloride	17.5	10	5.0	ug/kg	
78-93-3	Methyl ethyl ketone	ND	25	7.5	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	2.3	ug/kg	
91-20-3	Naphthalene	ND	5.0	2.0	ug/kg	
103-65-1	n-Propylbenzene	ND	5.0	1.5	ug/kg	
100-42-5	Styrene	ND	5.0	1.0	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	1.0	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.0	1.8	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	1.3	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.0	1.3	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	2.0	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	5.0	1.6	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	2.0	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	1.1	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.5	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.0	1.8	ug/kg	
108-88-3	Toluene	ND	5.0	1.2	ug/kg	
79-01-6	Trichloroethylene	ND	5.0	1.6	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.0	2.6	ug/kg	
75-01-4	Vinyl chloride	ND	5.0	2.0	ug/kg	
108-05-4	Vinyl Acetate	ND	25	15	ug/kg	
	m,p-Xylene	ND	10	1.2	ug/kg	
95-47-6	o-Xylene	ND	5.0	1.0	ug/kg	

Method Blank Summary

Job Number: F77191
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VH2435-MB	H065003.D	1	10/13/10	MM	n/a	n/a	VH2435

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77191-1, F77191-2, F77191-5

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	109%	80-121%
2037-26-5	Toluene-D8	83%	71-130%
460-00-4	4-Bromofluorobenzene	94%	59-148%
17060-07-0	1,2-Dichloroethane-D4	104%	77-123%

Method Blank Summary

Job Number: F77191
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VH2436-MB	H065044.D	1	10/14/10	MM	n/a	n/a	VH2436

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77191-3, F77191-4

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	50	21	ug/kg	
107-02-8	Acrolein	ND	25	10	ug/kg	
107-13-1	Acrylonitrile	ND	25	10	ug/kg	
71-43-2	Benzene	ND	5.0	1.0	ug/kg	
108-86-1	Bromobenzene	ND	5.0	1.2	ug/kg	
74-97-5	Bromochloromethane	ND	5.0	1.7	ug/kg	
75-27-4	Bromodichloromethane	ND	5.0	1.0	ug/kg	
75-25-2	Bromoform	ND	5.0	1.8	ug/kg	
104-51-8	n-Butylbenzene	ND	5.0	1.3	ug/kg	
135-98-8	sec-Butylbenzene	ND	5.0	1.2	ug/kg	
98-06-6	tert-Butylbenzene	ND	5.0	1.2	ug/kg	
108-90-7	Chlorobenzene	ND	5.0	1.0	ug/kg	
75-00-3	Chloroethane	ND	5.0	2.0	ug/kg	
67-66-3	Chloroform	ND	5.0	1.0	ug/kg	
95-49-8	o-Chlorotoluene	ND	5.0	1.3	ug/kg	
106-43-4	p-Chlorotoluene	ND	5.0	1.0	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	25	10	ug/kg	
75-15-0	Carbon disulfide	ND	5.0	2.4	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.0	1.6	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.0	1.5	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.0	2.3	ug/kg	
563-58-6	1,1-Dichloropropene	ND	5.0	1.0	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	2.5	ug/kg	
106-93-4	1,2-Dibromoethane	ND	5.0	1.0	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.0	1.2	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.0	1.0	ug/kg	
142-28-9	1,3-Dichloropropane	ND	5.0	1.7	ug/kg	
594-20-7	2,2-Dichloropropane	ND	5.0	1.1	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	1.7	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.0	2.1	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.0	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.0	ug/kg	
541-73-1	m-Dichlorobenzene	ND	5.0	1.2	ug/kg	
95-50-1	o-Dichlorobenzene	ND	5.0	1.1	ug/kg	
106-46-7	p-Dichlorobenzene	ND	5.0	1.5	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	1.9	ug/kg	

Method Blank Summary

Job Number: F77191
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VH2436-MB	H065044.D	1	10/14/10	MM	n/a	n/a	VH2436

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77191-3, F77191-4

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	1.1	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	1.1	ug/kg	
591-78-6	2-Hexanone	ND	25	12	ug/kg	
87-68-3	Hexachlorobutadiene	ND	5.0	2.3	ug/kg	
110-54-3	Hexane	ND	5.0	2.0	ug/kg	
98-82-8	Isopropylbenzene	ND	5.0	1.4	ug/kg	
99-87-6	p-Isopropyltoluene	ND	5.0	1.0	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	25	8.3	ug/kg	
74-83-9	Methyl bromide	ND	5.0	2.0	ug/kg	
74-87-3	Methyl chloride	ND	5.0	2.5	ug/kg	
74-95-3	Methylene bromide	ND	5.0	2.1	ug/kg	
75-09-2	Methylene chloride	ND	10	5.0	ug/kg	
78-93-3	Methyl ethyl ketone	ND	25	7.5	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	2.3	ug/kg	
91-20-3	Naphthalene	ND	5.0	2.0	ug/kg	
103-65-1	n-Propylbenzene	ND	5.0	1.5	ug/kg	
100-42-5	Styrene	ND	5.0	1.0	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	1.0	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.0	1.8	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	1.3	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.0	1.3	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	2.0	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	5.0	1.6	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	2.0	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	1.1	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.5	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.0	1.8	ug/kg	
108-88-3	Toluene	ND	5.0	1.2	ug/kg	
79-01-6	Trichloroethylene	ND	5.0	1.6	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.0	2.6	ug/kg	
75-01-4	Vinyl chloride	ND	5.0	2.0	ug/kg	
108-05-4	Vinyl Acetate	ND	25	15	ug/kg	
	m,p-Xylene	ND	10	1.2	ug/kg	
95-47-6	o-Xylene	ND	5.0	1.0	ug/kg	

Method Blank Summary

Job Number: F77191
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VH2436-MB	H065044.D	1	10/14/10	MM	n/a	n/a	VH2436

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77191-3, F77191-4

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	107%	80-121%
2037-26-5	Toluene-D8	82%	71-130%
460-00-4	4-Bromofluorobenzene	103%	59-148%
17060-07-0	1,2-Dichloroethane-D4	107%	77-123%

Blank Spike Summary

Job Number: F77191
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VH2435-BS	H065002.D	1	10/13/10	MM	n/a	n/a	VH2435

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77191-1, F77191-2, F77191-5

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	250	95.9	38*	61-144
107-02-8	Acrolein	250	139	56	27-156
107-13-1	Acrylonitrile	250	232	93	55-144
71-43-2	Benzene	50	53.1	106	78-130
108-86-1	Bromobenzene	50	52.8	106	78-123
74-97-5	Bromochloromethane	50	53.0	106	72-122
75-27-4	Bromodichloromethane	50	52.1	104	73-122
75-25-2	Bromoform	50	46.2	92	70-139
104-51-8	n-Butylbenzene	50	52.5	105	80-138
135-98-8	sec-Butylbenzene	50	52.2	104	82-132
98-06-6	tert-Butylbenzene	50	51.3	103	79-130
108-90-7	Chlorobenzene	50	51.1	102	83-122
75-00-3	Chloroethane	50	56.3	113	61-153
67-66-3	Chloroform	50	54.3	109	79-129
95-49-8	o-Chlorotoluene	50	51.1	102	77-123
106-43-4	p-Chlorotoluene	50	50.8	102	78-129
110-75-8	2-Chloroethyl vinyl ether	250	334	134	52-142
75-15-0	Carbon disulfide	50	54.5	109	61-142
56-23-5	Carbon tetrachloride	50	55.5	111	79-135
75-34-3	1,1-Dichloroethane	50	52.9	106	77-132
75-35-4	1,1-Dichloroethylene	50	52.1	104	66-132
563-58-6	1,1-Dichloropropene	50	55.4	111	81-133
96-12-8	1,2-Dibromo-3-chloropropane	50	48.1	96	67-129
106-93-4	1,2-Dibromoethane	50	48.7	97	77-126
107-06-2	1,2-Dichloroethane	50	50.2	100	78-129
78-87-5	1,2-Dichloropropane	50	49.5	99	74-127
142-28-9	1,3-Dichloropropane	50	48.3	97	78-118
594-20-7	2,2-Dichloropropane	50	54.7	109	80-137
124-48-1	Dibromochloromethane	50	43.6	87	78-117
75-71-8	Dichlorodifluoromethane	50	36.8	74	35-162
156-59-2	cis-1,2-Dichloroethylene	50	57.1	114	74-123
10061-01-5	cis-1,3-Dichloropropene	50	53.4	107	79-130
541-73-1	m-Dichlorobenzene	50	52.6	105	82-126
95-50-1	o-Dichlorobenzene	50	51.3	103	83-123
106-46-7	p-Dichlorobenzene	50	51.7	103	84-124
156-60-5	trans-1,2-Dichloroethylene	50	52.5	105	77-129

Blank Spike Summary

Job Number: F77191
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VH2435-BS	H065002.D	1	10/13/10	MM	n/a	n/a	VH2435

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77191-1, F77191-2, F77191-5

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
10061-02-6	trans-1,3-Dichloropropene	50	53.9	108	87-131
100-41-4	Ethylbenzene	50	51.6	103	82-124
591-78-6	2-Hexanone	250	203	81	67-130
87-68-3	Hexachlorobutadiene	50	56.8	114	77-150
110-54-3	Hexane	50	67.9	136	65-147
98-82-8	Isopropylbenzene	50	60.2	120	82-133
99-87-6	p-Isopropyltoluene	50	52.9	106	82-132
108-10-1	4-Methyl-2-pentanone	250	238	95	69-125
74-83-9	Methyl bromide	50	61.0	122	60-146
74-87-3	Methyl chloride	50	51.1	102	58-163
74-95-3	Methylene bromide	50	53.2	106	75-128
75-09-2	Methylene chloride	50	56.1	112	62-140
78-93-3	Methyl ethyl ketone	250	163	65*	66-134
1634-04-4	Methyl Tert Butyl Ether	50	55.2	110	70-131
91-20-3	Naphthalene	50	47.6	95	59-143
103-65-1	n-Propylbenzene	50	51.6	103	78-129
100-42-5	Styrene	50	50.8	102	79-123
630-20-6	1,1,1,2-Tetrachloroethane	50	50.9	102	81-121
71-55-6	1,1,1-Trichloroethane	50	55.0	110	80-133
79-34-5	1,1,2,2-Tetrachloroethane	50	47.9	96	70-128
79-00-5	1,1,2-Trichloroethane	50	47.4	95	76-118
87-61-6	1,2,3-Trichlorobenzene	50	52.0	104	78-136
96-18-4	1,2,3-Trichloropropane	50	47.7	95	74-125
120-82-1	1,2,4-Trichlorobenzene	50	53.5	107	82-137
95-63-6	1,2,4-Trimethylbenzene	50	50.9	102	77-129
108-67-8	1,3,5-Trimethylbenzene	50	52.8	106	79-129
127-18-4	Tetrachloroethylene	50	56.5	113	79-132
108-88-3	Toluene	50	49.8	100	80-123
79-01-6	Trichloroethylene	50	54.2	108	78-132
75-69-4	Trichlorofluoromethane	50	57.7	115	67-149
75-01-4	Vinyl chloride	50	49.5	99	60-145
108-05-4	Vinyl Acetate	250	329	132	25-164
	m,p-Xylene	100	106	106	82-128
95-47-6	o-Xylene	50	52.0	104	82-126

Blank Spike Summary

Job Number: F77191
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VH2435-BS	H065002.D	1	10/13/10	MM	n/a	n/a	VH2435

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77191-1, F77191-2, F77191-5

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	103%	80-121%
2037-26-5	Toluene-D8	91%	71-130%
460-00-4	4-Bromofluorobenzene	101%	59-148%
17060-07-0	1,2-Dichloroethane-D4	110%	77-123%

Blank Spike Summary

Job Number: F77191
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VH2436-BS	H065043.D	1	10/14/10	MM	n/a	n/a	VH2436

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77191-3, F77191-4

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	250	111	44*	61-144
107-02-8	Acrolein	250	145	58	27-156
107-13-1	Acrylonitrile	250	261	104	55-144
71-43-2	Benzene	50	56.0	112	78-130
108-86-1	Bromobenzene	50	56.8	114	78-123
74-97-5	Bromochloromethane	50	60.8	122	72-122
75-27-4	Bromodichloromethane	50	57.7	115	73-122
75-25-2	Bromoform	50	54.9	110	70-139
104-51-8	n-Butylbenzene	50	53.1	106	80-138
135-98-8	sec-Butylbenzene	50	52.1	104	82-132
98-06-6	tert-Butylbenzene	50	53.0	106	79-130
108-90-7	Chlorobenzene	50	55.8	112	83-122
75-00-3	Chloroethane	50	69.8	140	61-153
67-66-3	Chloroform	50	57.7	115	79-129
95-49-8	o-Chlorotoluene	50	52.3	105	77-123
106-43-4	p-Chlorotoluene	50	52.0	104	78-129
110-75-8	2-Chloroethyl vinyl ether	250	330	132	52-142
75-15-0	Carbon disulfide	50	57.5	115	61-142
56-23-5	Carbon tetrachloride	50	62.2	124	79-135
75-34-3	1,1-Dichloroethane	50	55.8	112	77-132
75-35-4	1,1-Dichloroethylene	50	56.4	113	66-132
563-58-6	1,1-Dichloropropene	50	58.8	118	81-133
96-12-8	1,2-Dibromo-3-chloropropane	50	53.8	108	67-129
106-93-4	1,2-Dibromoethane	50	53.3	107	77-126
107-06-2	1,2-Dichloroethane	50	56.0	112	78-129
78-87-5	1,2-Dichloropropane	50	53.0	106	74-127
142-28-9	1,3-Dichloropropane	50	52.3	105	78-118
594-20-7	2,2-Dichloropropane	50	59.1	118	80-137
124-48-1	Dibromochloromethane	50	49.3	99	78-117
75-71-8	Dichlorodifluoromethane	50	125	250*	35-162
156-59-2	cis-1,2-Dichloroethylene	50	59.4	119	74-123
10061-01-5	cis-1,3-Dichloropropene	50	56.5	113	79-130
541-73-1	m-Dichlorobenzene	50	56.9	114	82-126
95-50-1	o-Dichlorobenzene	50	53.6	107	83-123
106-46-7	p-Dichlorobenzene	50	55.4	111	84-124
156-60-5	trans-1,2-Dichloroethylene	50	56.5	113	77-129

Blank Spike Summary

Job Number: F77191
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VH2436-BS	H065043.D	1	10/14/10	MM	n/a	n/a	VH2436

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77191-3, F77191-4

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
10061-02-6	trans-1,3-Dichloropropene	50	57.4	115	87-131
100-41-4	Ethylbenzene	50	53.5	107	82-124
591-78-6	2-Hexanone	250	224	90	67-130
87-68-3	Hexachlorobutadiene	50	68.3	137	77-150
110-54-3	Hexane	50	69.6	139	65-147
98-82-8	Isopropylbenzene	50	60.0	120	82-133
99-87-6	p-Isopropyltoluene	50	53.7	107	82-132
108-10-1	4-Methyl-2-pentanone	250	259	104	69-125
74-83-9	Methyl bromide	50	79.3	159*	60-146
74-87-3	Methyl chloride	50	75.2	150	58-163
74-95-3	Methylene bromide	50	59.9	120	75-128
75-09-2	Methylene chloride	50	62.4	125	62-140
78-93-3	Methyl ethyl ketone	250	184	74	66-134
1634-04-4	Methyl Tert Butyl Ether	50	63.7	127	70-131
91-20-3	Naphthalene	50	52.1	104	59-143
103-65-1	n-Propylbenzene	50	52.1	104	78-129
100-42-5	Styrene	50	54.3	109	79-123
630-20-6	1,1,1,2-Tetrachloroethane	50	56.8	114	81-121
71-55-6	1,1,1-Trichloroethane	50	60.5	121	80-133
79-34-5	1,1,2,2-Tetrachloroethane	50	49.9	100	70-128
79-00-5	1,1,2-Trichloroethane	50	51.2	102	76-118
87-61-6	1,2,3-Trichlorobenzene	50	61.2	122	78-136
96-18-4	1,2,3-Trichloropropane	50	49.8	100	74-125
120-82-1	1,2,4-Trichlorobenzene	50	61.9	124	82-137
95-63-6	1,2,4-Trimethylbenzene	50	53.0	106	77-129
108-67-8	1,3,5-Trimethylbenzene	50	53.4	107	79-129
127-18-4	Tetrachloroethylene	50	63.9	128	79-132
108-88-3	Toluene	50	51.1	102	80-123
79-01-6	Trichloroethylene	50	57.3	115	78-132
75-69-4	Trichlorofluoromethane	50	68.1	136	67-149
75-01-4	Vinyl chloride	50	62.6	125	60-145
108-05-4	Vinyl Acetate	250	366	146	25-164
	m,p-Xylene	100	110	110	82-128
95-47-6	o-Xylene	50	53.4	107	82-126

Blank Spike Summary

Job Number: F77191
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VH2436-BS	H065043.D	1	10/14/10	MM	n/a	n/a	VH2436

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77191-3, F77191-4

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	109%	80-121%
2037-26-5	Toluene-D8	93%	71-130%
460-00-4	4-Bromofluorobenzene	106%	59-148%
17060-07-0	1,2-Dichloroethane-D4	119%	77-123%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F77191
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F77050-4MS	H065006.D	1	10/13/10	MM	n/a	n/a	VH2435
F77050-4MSD	H065007.D	1	10/13/10	MM	n/a	n/a	VH2435
F77050-4	H065004.D	1	10/13/10	MM	n/a	n/a	VH2435

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77191-1, F77191-2, F77191-5

CAS No.	Compound	F77050-4 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	42 U		310	71.6	23*	77.4	25*	8	61-144/29
107-02-8	Acrolein	21 U		310	71.0	23*	57.0	18*	22	27-156/39
107-13-1	Acrylonitrile	21 U		310	174	56	184	60	6	55-144/24
71-43-2	Benzene	4.2 U		62	62.2	100	62.7	101	1	78-130/25
108-86-1	Bromobenzene	4.2 U		62	66.2	107	64.3	104	3	78-123/30
74-97-5	Bromochloromethane	4.2 U		62	59.4	96	60.1	97	1	72-122/23
75-27-4	Bromodichloromethane	4.2 U		62	59.3	96	61.2	99	3	73-122/25
75-25-2	Bromoform	4.2 U		62	44.1	71	45.5	74	3	70-139/26
104-51-8	n-Butylbenzene	4.2 U		62	47.3	76*	50.8	82	7	80-138/31
135-98-8	sec-Butylbenzene	4.2 U		62	57.0	92	57.4	93	1	82-132/29
98-06-6	tert-Butylbenzene	4.2 U		62	63.3	102	61.0	99	4	79-130/29
108-90-7	Chlorobenzene	4.2 U		62	62.2	100	59.7	97	4	83-122/23
75-00-3	Chloroethane	4.2 U		62	71.6	115	65.4	106	9	61-153/31
67-66-3	Chloroform	4.2 U		62	63.4	102	62.1	101	2	79-129/27
95-49-8	o-Chlorotoluene	4.2 U		62	62.7	101	62.0	100	1	77-123/31
106-43-4	p-Chlorotoluene	4.2 U		62	61.3	99	60.5	98	1	78-129/29
110-75-8	2-Chloroethyl vinyl ether	21 U		310	264	85	313	101	17	52-142/25
75-15-0	Carbon disulfide	4.2 U		62	57.4	93	53.8	87	6	61-142/27
56-23-5	Carbon tetrachloride	4.2 U		62	69.8	113	69.1	112	1	79-135/29
75-34-3	1,1-Dichloroethane	4.2 U		62	60.9	98	62.1	101	2	77-132/26
75-35-4	1,1-Dichloroethylene	4.2 U		62	63.9	103	59.2	96	8	66-132/27
563-58-6	1,1-Dichloropropene	4.2 U		62	65.0	105	63.4	103	2	81-133/26
96-12-8	1,2-Dibromo-3-chloropropane	4.2 U		62	38.8	63*	42.3	68	9	67-129/29
106-93-4	1,2-Dibromoethane	4.2 U		62	47.3	76*	48.8	79	3	77-126/24
107-06-2	1,2-Dichloroethane	4.2 U		62	54.8	88	56.1	91	2	78-129/24
78-87-5	1,2-Dichloropropane	4.2 U		62	54.5	88	55.2	89	1	74-127/27
142-28-9	1,3-Dichloropropane	4.2 U		62	47.4	76*	50.4	82	6	78-118/26
594-20-7	2,2-Dichloropropane	4.2 U		62	64.0	103	61.5	100	4	80-137/28
124-48-1	Dibromochloromethane	4.2 U		62	47.6	77*	48.3	78	1	78-117/27
75-71-8	Dichlorodifluoromethane	4.2 U		62	39.7	64	36.9	60	7	35-162/30
156-59-2	cis-1,2-Dichloroethylene	4.2 U		62	62.9	101	65.9	107	5	74-123/26
10061-01-5	cis-1,3-Dichloropropene	4.2 U		62	55.8	90	58.9	95	5	79-130/23
541-73-1	m-Dichlorobenzene	4.2 U		62	59.6	96	61.2	99	3	82-126/29
95-50-1	o-Dichlorobenzene	4.2 U		62	53.4	86	54.6	88	2	83-123/28
106-46-7	p-Dichlorobenzene	4.2 U		62	58.6	94	58.9	95	1	84-124/28
156-60-5	trans-1,2-Dichloroethylene	4.2 U		62	62.7	101	61.5	100	2	77-129/27

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F77191
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F77050-4MS	H065006.D	1	10/13/10	MM	n/a	n/a	VH2435
F77050-4MSD	H065007.D	1	10/13/10	MM	n/a	n/a	VH2435
F77050-4	H065004.D	1	10/13/10	MM	n/a	n/a	VH2435

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77191-1, F77191-2, F77191-5

CAS No.	Compound	F77050-4 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
10061-02-6	trans-1,3-Dichloropropene	4.2 U		62	55.3	89	55.1	89	0	87-131/27
100-41-4	Ethylbenzene	4.2 U		62	61.0	98	60.1	97	1	82-124/25
591-78-6	2-Hexanone	21 U		310	152	49*	171	55*	12	67-130/29
87-68-3	Hexachlorobutadiene	4.2 U		62	33.8	54*	37.5	61*	10	77-150/36
110-54-3	Hexane	4.2 U		62	63.6	103	64.2	104	1	65-147/27
98-82-8	Isopropylbenzene	4.2 U		62	68.4	110	66.1	107	3	82-133/27
99-87-6	p-Isopropyltoluene	0.93	I	62	58.3	92	58.5	93	0	82-132/29
108-10-1	4-Methyl-2-pentanone	21 U		310	194	63*	217	70	11	69-125/24
74-83-9	Methyl bromide	4.2 U		62	76.0	122	71.9	116	6	60-146/31
74-87-3	Methyl chloride	4.2 U		62	47.3	76	46.5	75	2	58-163/26
74-95-3	Methylene bromide	4.2 U		62	51.2	83	58.7	95	14	75-128/26
75-09-2	Methylene chloride	8.5 U		62	56.3	91	54.0	87	4	62-140/25
78-93-3	Methyl ethyl ketone	21 U		310	117	38*	137	44*	16	66-134/23
1634-04-4	Methyl Tert Butyl Ether	4.2 U		62	52.1	84	55.0	89	5	70-131/25
91-20-3	Naphthalene	4.2 U		62	26.1	42*	32.1	52*	21	59-143/31
103-65-1	n-Propylbenzene	4.2 U		62	63.3	102	61.6	100	3	78-129/29
100-42-5	Styrene	4.2 U		62	53.2	86	52.8	85	1	79-123/28
630-20-6	1,1,1,2-Tetrachloroethane	4.2 U		62	61.1	98	60.8	98	0	81-121/25
71-55-6	1,1,1-Trichloroethane	4.2 U		62	67.7	109	66.5	108	2	80-133/27
79-34-5	1,1,2,2-Tetrachloroethane	4.2 U		62	44.5	72	47.2	76	6	70-128/30
79-00-5	1,1,2-Trichloroethane	4.2 U		62	47.6	77	50.4	82	6	76-118/28
87-61-6	1,2,3-Trichlorobenzene	4.2 U		62	27.3	44*	32.4	52*	17	78-136/34
96-18-4	1,2,3-Trichloropropane	4.2 U		62	47.4	76	46.6	75	2	74-125/30
120-82-1	1,2,4-Trichlorobenzene	4.2 U		62	35.4	57*	40.7	66*	14	82-137/32
95-63-6	1,2,4-Trimethylbenzene	4.2 U		62	63.9	103	64.6	105	1	77-129/29
108-67-8	1,3,5-Trimethylbenzene	4.2 U		62	64.3	104	63.1	102	2	79-129/31
127-18-4	Tetrachloroethylene	4.2 U		62	77.0	124	72.8	118	6	79-132/27
108-88-3	Toluene	4.2 U		62	59.0	95	58.8	95	0	80-123/26
79-01-6	Trichloroethylene	4.2 U		62	63.4	102	65.7	106	4	78-132/28
75-69-4	Trichlorofluoromethane	4.2 U		62	73.1	118	66.9	108	9	67-149/29
75-01-4	Vinyl chloride	4.2 U		62	50.0	81	48.4	78	3	60-145/29
108-05-4	Vinyl Acetate	21 U		310	29.4	9*	34.3	11*	15	25-164/35
	m,p-Xylene	8.5 U		124	130	105	126	102	3	82-128/25
95-47-6	o-Xylene	4.2 U		62	60.2	97	59.8	97	1	82-126/25

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F77191
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F77050-4MS	H065006.D	1	10/13/10	MM	n/a	n/a	VH2435
F77050-4MSD	H065007.D	1	10/13/10	MM	n/a	n/a	VH2435
F77050-4	H065004.D	1	10/13/10	MM	n/a	n/a	VH2435

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77191-1, F77191-2, F77191-5

CAS No.	Surrogate Recoveries	MS	MSD	F77050-4	Limits
1868-53-7	Dibromofluoromethane	107%	108%	110%	80-121%
2037-26-5	Toluene-D8	96%	95%	82%	71-130%
460-00-4	4-Bromofluorobenzene	112%	108%	103%	59-148%
17060-07-0	1,2-Dichloroethane-D4	96%	99%	108%	77-123%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F77191
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F77190-1MS	H065049.D	1	10/14/10	MM	n/a	n/a	VH2436
F77190-1MSD	H065050.D	1	10/14/10	MM	n/a	n/a	VH2436
F77190-1	H065048.D	1	10/14/10	MM	n/a	n/a	VH2436

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77191-3, F77191-4

CAS No.	Compound	F77190-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		355	106	30*	104	31*	2	61-144/29
107-02-8	Acrolein	ND		355	190	54	184	54	3	27-156/39
107-13-1	Acrylonitrile	ND		355	237	67	235	69	1	55-144/24
71-43-2	Benzene	1.1	J	70.9	75.7	105	71.0	103	6	78-130/25
108-86-1	Bromobenzene	ND		70.9	71.7	101	66.9	98	7	78-123/30
74-97-5	Bromochloromethane	ND		70.9	66.6	94	62.3	91	7	72-122/23
75-27-4	Bromodichloromethane	ND		70.9	70.9	100	66.0	97	7	73-122/25
75-25-2	Bromoform	ND		70.9	50.3	71	48.7	71	3	70-139/26
104-51-8	n-Butylbenzene	ND		70.9	74.5	105	69.5	102	7	80-138/31
135-98-8	sec-Butylbenzene	ND		70.9	74.0	104	72.4	106	2	82-132/29
98-06-6	tert-Butylbenzene	ND		70.9	76.1	107	71.1	104	7	79-130/29
108-90-7	Chlorobenzene	ND		70.9	73.8	104	68.0	100	8	83-122/23
75-00-3	Chloroethane	ND		70.9	94.0	133	87.4	128	7	61-153/31
67-66-3	Chloroform	ND		70.9	71.3	101	68.2	100	4	79-129/27
95-49-8	o-Chlorotoluene	ND		70.9	73.2	103	70.6	104	4	77-123/31
106-43-4	p-Chlorotoluene	ND		70.9	73.8	104	70.6	104	4	78-129/29
110-75-8	2-Chloroethyl vinyl ether	ND		355	374	105	390	114	4	52-142/25
75-15-0	Carbon disulfide	ND		70.9	74.3	105	69.4	102	7	61-142/27
56-23-5	Carbon tetrachloride	ND		70.9	74.5	105	69.9	103	6	79-135/29
75-34-3	1,1-Dichloroethane	ND		70.9	74.5	105	68.0	100	9	77-132/26
75-35-4	1,1-Dichloroethylene	ND		70.9	71.7	101	65.8	97	9	66-132/27
563-58-6	1,1-Dichloropropene	ND		70.9	75.0	106	68.8	101	9	81-133/26
96-12-8	1,2-Dibromo-3-chloropropane	ND		70.9	53.0	75	55.1	81	4	67-129/29
106-93-4	1,2-Dibromoethane	ND		70.9	60.1	85	54.3	80	10	77-126/24
107-06-2	1,2-Dichloroethane	ND		70.9	63.0	89	59.3	87	6	78-129/24
78-87-5	1,2-Dichloropropane	ND		70.9	69.4	98	65.3	96	6	74-127/27
142-28-9	1,3-Dichloropropane	ND		70.9	61.5	87	56.4	83	9	78-118/26
594-20-7	2,2-Dichloropropane	ND		70.9	69.0	97	65.9	97	5	80-137/28
124-48-1	Dibromochloromethane	ND		70.9	54.4	77*	52.8	77*	3	78-117/27
75-71-8	Dichlorodifluoromethane	ND		70.9	148	209*	140	205*	6	35-162/30
156-59-2	cis-1,2-Dichloroethylene	ND		70.9	75.1	106	72.3	106	4	74-123/26
10061-01-5	cis-1,3-Dichloropropene	ND		70.9	69.5	98	65.2	96	6	79-130/23
541-73-1	m-Dichlorobenzene	ND		70.9	75.1	106	71.0	104	6	82-126/29
95-50-1	o-Dichlorobenzene	ND		70.9	69.7	98	65.9	97	6	83-123/28
106-46-7	p-Dichlorobenzene	ND		70.9	70.8	100	70.2	103	1	84-124/28
156-60-5	trans-1,2-Dichloroethylene	ND		70.9	72.2	102	68.7	101	5	77-129/27

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F77191
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F77190-1MS	H065049.D	1	10/14/10	MM	n/a	n/a	VH2436
F77190-1MSD	H065050.D	1	10/14/10	MM	n/a	n/a	VH2436
F77190-1	H065048.D	1	10/14/10	MM	n/a	n/a	VH2436

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77191-3, F77191-4

CAS No.	Compound	F77190-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
10061-02-6	trans-1,3-Dichloropropene	ND		70.9	68.3	96	63.7	93	7	87-131/27
100-41-4	Ethylbenzene	ND		70.9	74.8	105	67.5	99	10	82-124/25
591-78-6	2-Hexanone	ND		355	222	63*	210	62*	6	67-130/29
87-68-3	Hexachlorobutadiene	ND		70.9	78.2	110	75.7	111	3	77-150/36
110-54-3	Hexane	ND		70.9	84.4	119	78.8	116	7	65-147/27
98-82-8	Isopropylbenzene	ND		70.9	84.8	120	76.2	112	11	82-133/27
99-87-6	p-Isopropyltoluene	ND		70.9	76.1	107	72.6	107	5	82-132/29
108-10-1	4-Methyl-2-pentanone	ND		355	273	77	258	76	6	69-125/24
74-83-9	Methyl bromide	ND		70.9	108	152*	103	151*	5	60-146/31
74-87-3	Methyl chloride	ND		70.9	100	141	87.7	129	13	58-163/26
74-95-3	Methylene bromide	ND		70.9	64.0	90	59.1	87	8	75-128/26
75-09-2	Methylene chloride	ND		70.9	70.6	100	70.1	103	1	62-140/25
78-93-3	Methyl ethyl ketone	ND		355	163	46*	159	47*	2	66-134/23
1634-04-4	Methyl Tert Butyl Ether	ND		70.9	70.6	100	64.3	94	9	70-131/25
91-20-3	Naphthalene	ND		70.9	54.3	77	53.9	79	1	59-143/31
103-65-1	n-Propylbenzene	ND		70.9	74.3	105	71.5	105	4	78-129/29
100-42-5	Styrene	ND		70.9	72.1	102	65.3	96	10	79-123/28
630-20-6	1,1,1,2-Tetrachloroethane	ND		70.9	71.0	100	64.0	94	10	81-121/25
71-55-6	1,1,1-Trichloroethane	ND		70.9	73.3	103	68.2	100	7	80-133/27
79-34-5	1,1,2,2-Tetrachloroethane	ND		70.9	57.9	82	56.2	82	3	70-128/30
79-00-5	1,1,2-Trichloroethane	ND		70.9	62.7	88	57.7	85	8	76-118/28
87-61-6	1,2,3-Trichlorobenzene	ND		70.9	65.1	92	63.4	93	3	78-136/34
96-18-4	1,2,3-Trichloropropane	ND		70.9	52.6	74	49.6	73*	6	74-125/30
120-82-1	1,2,4-Trichlorobenzene	ND		70.9	71.1	100	68.4	100	4	82-137/32
95-63-6	1,2,4-Trimethylbenzene	ND		70.9	76.4	108	71.5	105	7	77-129/29
108-67-8	1,3,5-Trimethylbenzene	ND		70.9	75.7	107	70.9	104	7	79-129/31
127-18-4	Tetrachloroethylene	ND		70.9	80.0	113	74.6	109	7	79-132/27
108-88-3	Toluene	ND		70.9	71.8	101	65.2	96	10	80-123/26
79-01-6	Trichloroethylene	ND		70.9	75.1	106	69.4	102	8	78-132/28
75-69-4	Trichlorofluoromethane	ND		70.9	85.6	121	79.6	117	7	67-149/29
75-01-4	Vinyl chloride	ND		70.9	81.4	115	79.4	117	2	60-145/29
108-05-4	Vinyl Acetate	ND		355	367	104	350	103	5	25-164/35
	m,p-Xylene	ND		142	151	106	139	102	8	82-128/25
95-47-6	o-Xylene	ND		70.9	72.3	102	67.7	99	7	82-126/25

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F77191
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F77190-1MS	H065049.D	1	10/14/10	MM	n/a	n/a	VH2436
F77190-1MSD	H065050.D	1	10/14/10	MM	n/a	n/a	VH2436
F77190-1	H065048.D	1	10/14/10	MM	n/a	n/a	VH2436

The QC reported here applies to the following samples: **Method:** SW846 8260B

F77191-3, F77191-4

CAS No.	Surrogate Recoveries	MS	MSD	F77190-1	Limits
1868-53-7	Dibromofluoromethane	98%	101%	106%	80-121%
2037-26-5	Toluene-D8	97%	95%	81%	71-130%
460-00-4	4-Bromofluorobenzene	99%	99%	90%	59-148%
17060-07-0	1,2-Dichloroethane-D4	95%	96%	117%	77-123%

Southeast ACCUTEST LABORATORIES

GC/MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: F77191
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34713-MB	L048640.D	1	10/25/10	NAF	10/15/10	OP34713	SL2491

The QC reported here applies to the following samples: **Method:** SW846 8270C

F77191-1, F77191-2, F77191-3, F77191-4

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	830	330	ug/kg	
95-57-8	2-Chlorophenol	ND	170	33	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	170	33	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	170	33	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	170	37	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	830	330	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	330	33	ug/kg	
95-48-7	2-Methylphenol	ND	170	33	ug/kg	
	3&4-Methylphenol	ND	170	33	ug/kg	
88-75-5	2-Nitrophenol	ND	170	33	ug/kg	
100-02-7	4-Nitrophenol	ND	830	330	ug/kg	
87-86-5	Pentachlorophenol	ND	830	330	ug/kg	
108-95-2	Phenol	ND	170	33	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	170	33	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	170	33	ug/kg	
83-32-9	Acenaphthene	ND	170	33	ug/kg	
208-96-8	Acenaphthylene	ND	170	33	ug/kg	
62-53-3	Aniline	ND	170	37	ug/kg	
120-12-7	Anthracene	ND	170	33	ug/kg	
92-87-5	Benzidine	ND	1700	700	ug/kg	
56-55-3	Benzo(a)anthracene	ND	170	33	ug/kg	
50-32-8	Benzo(a)pyrene	ND	170	33	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	170	33	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	170	33	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	170	33	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	170	33	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	330	67	ug/kg	
100-51-6	Benzyl Alcohol	ND	170	33	ug/kg	
91-58-7	2-Chloronaphthalene	ND	170	33	ug/kg	
106-47-8	4-Chloroaniline	ND	170	33	ug/kg	
86-74-8	Carbazole	ND	170	33	ug/kg	
218-01-9	Chrysene	ND	170	33	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	170	33	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	170	33	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	170	33	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	170	33	ug/kg	

Method Blank Summary

Job Number: F77191
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34713-MB	L048640.D	1	10/25/10	NAF	10/15/10	OP34713	SL2491

The QC reported here applies to the following samples: **Method:** SW846 8270C

F77191-1, F77191-2, F77191-3, F77191-4

CAS No.	Compound	Result	RL	MDL	Units	Q
95-50-1	1,2-Dichlorobenzene	ND	170	67	ug/kg	
122-66-7	1,2-Diphenylhydrazine	ND	170	33	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	170	67	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	170	67	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	170	33	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	170	33	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	330	67	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	170	33	ug/kg	
132-64-9	Dibenzofuran	ND	170	33	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	330	67	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	330	67	ug/kg	
84-66-2	Diethyl phthalate	ND	330	170	ug/kg	
131-11-3	Dimethyl phthalate	ND	330	67	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	330	170	ug/kg	
206-44-0	Fluoranthene	ND	170	33	ug/kg	
86-73-7	Fluorene	ND	170	33	ug/kg	
118-74-1	Hexachlorobenzene	ND	170	33	ug/kg	
87-68-3	Hexachlorobutadiene	ND	170	33	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	170	33	ug/kg	
67-72-1	Hexachloroethane	ND	170	83	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	170	33	ug/kg	
78-59-1	Isophorone	ND	170	33	ug/kg	
90-12-0	1-Methylnaphthalene	ND	170	33	ug/kg	
91-57-6	2-Methylnaphthalene	ND	170	33	ug/kg	
88-74-4	2-Nitroaniline	ND	330	67	ug/kg	
99-09-2	3-Nitroaniline	ND	330	67	ug/kg	
100-01-6	4-Nitroaniline	ND	330	67	ug/kg	
91-20-3	Naphthalene	ND	170	33	ug/kg	
98-95-3	Nitrobenzene	ND	170	33	ug/kg	
62-75-9	N-Nitrosodimethylamine	ND	330	67	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	170	33	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	170	33	ug/kg	
85-01-8	Phenanthrene	ND	170	33	ug/kg	
129-00-0	Pyrene	ND	170	33	ug/kg	
110-86-1	Pyridine	ND	330	83	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	170	33	ug/kg	

Method Blank Summary

Job Number: F77191
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34713-MB	L048640.D	1	10/25/10	NAF	10/15/10	OP34713	SL2491

The QC reported here applies to the following samples: **Method:** SW846 8270C

F77191-1, F77191-2, F77191-3, F77191-4

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	75%	40-102%
4165-62-2	Phenol-d5	78%	41-100%
118-79-6	2,4,6-Tribromophenol	80%	42-108%
4165-60-0	Nitrobenzene-d5	75%	40-105%
321-60-8	2-Fluorobiphenyl	78%	43-107%
1718-51-0	Terphenyl-d14	77%	45-119%

Method Blank Summary

Job Number: F77191
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34713-MB	L048668.D	1	10/26/10	NAF	10/15/10	OP34713	SL2492

The QC reported here applies to the following samples: **Method:** SW846 8270C

F77191-1, F77191-2, F77191-3, F77191-4

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	830	330	ug/kg	
95-57-8	2-Chlorophenol	ND	170	33	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	170	33	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	170	33	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	170	37	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	830	330	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	330	33	ug/kg	
95-48-7	2-Methylphenol	ND	170	33	ug/kg	
	3&4-Methylphenol	ND	170	33	ug/kg	
88-75-5	2-Nitrophenol	ND	170	33	ug/kg	
100-02-7	4-Nitrophenol	ND	830	330	ug/kg	
87-86-5	Pentachlorophenol	ND	830	330	ug/kg	
108-95-2	Phenol	ND	170	33	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	170	33	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	170	33	ug/kg	
83-32-9	Acenaphthene	ND	170	33	ug/kg	
208-96-8	Acenaphthylene	ND	170	33	ug/kg	
62-53-3	Aniline	ND	170	37	ug/kg	
120-12-7	Anthracene	ND	170	33	ug/kg	
92-87-5	Benzidine	ND	1700	700	ug/kg	
56-55-3	Benzo(a)anthracene	ND	170	33	ug/kg	
50-32-8	Benzo(a)pyrene	ND	170	33	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	170	33	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	170	33	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	170	33	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	170	33	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	330	67	ug/kg	
100-51-6	Benzyl Alcohol	ND	170	33	ug/kg	
91-58-7	2-Chloronaphthalene	ND	170	33	ug/kg	
106-47-8	4-Chloroaniline	ND	170	33	ug/kg	
86-74-8	Carbazole	ND	170	33	ug/kg	
218-01-9	Chrysene	ND	170	33	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	170	33	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	170	33	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	170	33	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	170	33	ug/kg	

Method Blank Summary

Job Number: F77191
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34713-MB	L048668.D	1	10/26/10	NAF	10/15/10	OP34713	SL2492

The QC reported here applies to the following samples: **Method:** SW846 8270C

F77191-1, F77191-2, F77191-3, F77191-4

CAS No.	Compound	Result	RL	MDL	Units	Q
95-50-1	1,2-Dichlorobenzene	ND	170	67	ug/kg	
122-66-7	1,2-Diphenylhydrazine	ND	170	33	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	170	67	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	170	67	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	170	33	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	170	33	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	330	67	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	170	33	ug/kg	
132-64-9	Dibenzofuran	ND	170	33	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	330	67	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	330	67	ug/kg	
84-66-2	Diethyl phthalate	ND	330	170	ug/kg	
131-11-3	Dimethyl phthalate	ND	330	67	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	330	170	ug/kg	
206-44-0	Fluoranthene	ND	170	33	ug/kg	
86-73-7	Fluorene	ND	170	33	ug/kg	
118-74-1	Hexachlorobenzene	ND	170	33	ug/kg	
87-68-3	Hexachlorobutadiene	ND	170	33	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	170	33	ug/kg	
67-72-1	Hexachloroethane	ND	170	83	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	170	33	ug/kg	
78-59-1	Isophorone	ND	170	33	ug/kg	
90-12-0	1-Methylnaphthalene	ND	170	33	ug/kg	
91-57-6	2-Methylnaphthalene	ND	170	33	ug/kg	
88-74-4	2-Nitroaniline	ND	330	67	ug/kg	
99-09-2	3-Nitroaniline	ND	330	67	ug/kg	
100-01-6	4-Nitroaniline	ND	330	67	ug/kg	
91-20-3	Naphthalene	ND	170	33	ug/kg	
98-95-3	Nitrobenzene	ND	170	33	ug/kg	
62-75-9	N-Nitrosodimethylamine	ND	330	67	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	170	33	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	170	33	ug/kg	
85-01-8	Phenanthrene	ND	170	33	ug/kg	
129-00-0	Pyrene	ND	170	33	ug/kg	
110-86-1	Pyridine	ND	330	83	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	170	33	ug/kg	

Method Blank Summary

Job Number: F77191
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34713-MB	L048668.D	1	10/26/10	NAF	10/15/10	OP34713	SL2492

The QC reported here applies to the following samples: **Method:** SW846 8270C

F77191-1, F77191-2, F77191-3, F77191-4

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	74%	40-102%
4165-62-2	Phenol-d5	77%	41-100%
118-79-6	2,4,6-Tribromophenol	79%	42-108%
4165-60-0	Nitrobenzene-d5	72%	40-105%
321-60-8	2-Fluorobiphenyl	79%	43-107%
1718-51-0	Terphenyl-d14	73%	45-119%

Blank Spike Summary

Job Number: F77191
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34713-BS	L048639.D	1	10/25/10	NAF	10/15/10	OP34713	SL2491

The QC reported here applies to the following samples: **Method:** SW846 8270C

F77191-1, F77191-2, F77191-3, F77191-4

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
65-85-0	Benzoic Acid	3330	2080	62	44-116
95-57-8	2-Chlorophenol	1670	1280	77	54-97
59-50-7	4-Chloro-3-methyl phenol	1670	1390	83	59-102
120-83-2	2,4-Dichlorophenol	1670	1360	82	60-101
105-67-9	2,4-Dimethylphenol	1670	1160	70	49-89
51-28-5	2,4-Dinitrophenol	3330	2560	77	39-107
534-52-1	4,6-Dinitro-o-cresol	3330	2710	81	58-109
95-48-7	2-Methylphenol	1670	1280	77	53-94
	3&4-Methylphenol	3330	2570	77	54-95
88-75-5	2-Nitrophenol	1670	1390	83	55-96
100-02-7	4-Nitrophenol	3330	2510	75	56-106
87-86-5	Pentachlorophenol	3330	2640	79	50-115
108-95-2	Phenol	1670	1250	75	55-99
95-95-4	2,4,5-Trichlorophenol	1670	1440	86	60-101
88-06-2	2,4,6-Trichlorophenol	1670	1380	83	60-100
83-32-9	Acenaphthene	1670	1350	81	59-97
208-96-8	Acenaphthylene	1670	1330	80	58-98
62-53-3	Aniline	1670	977	59	38-92
120-12-7	Anthracene	1670	1340	80	61-104
56-55-3	Benzo(a)anthracene	1670	1330	80	60-106
50-32-8	Benzo(a)pyrene	1670	1290	77	59-102
205-99-2	Benzo(b)fluoranthene	1670	1320	79	60-107
191-24-2	Benzo(g,h,i)perylene	1670	1230	74	56-103
207-08-9	Benzo(k)fluoranthene	1670	1300	78	61-107
101-55-3	4-Bromophenyl phenyl ether	1670	1320	79	60-104
85-68-7	Butyl benzyl phthalate	1670	1290	77	57-110
100-51-6	Benzyl Alcohol	1670	1280	77	51-102
91-58-7	2-Chloronaphthalene	1670	1290	77	57-95
106-47-8	4-Chloroaniline	1670	570	34	19-85
86-74-8	Carbazole	1670	1340	80	60-106
218-01-9	Chrysene	1670	1320	79	60-107
111-91-1	bis(2-Chloroethoxy)methane	1670	1260	76	51-89
111-44-4	bis(2-Chloroethyl)ether	1670	1160	70	50-96
108-60-1	bis(2-Chloroisopropyl)ether	1670	1100	66	44-94
7005-72-3	4-Chlorophenyl phenyl ether	1670	1330	80	60-101
95-50-1	1,2-Dichlorobenzene	1670	1220	73	47-91

Blank Spike Summary

Job Number: F77191
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34713-BS	L048639.D	1	10/25/10	NAF	10/15/10	OP34713	SL2491

The QC reported here applies to the following samples: **Method:** SW846 8270C

F77191-1, F77191-2, F77191-3, F77191-4

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
122-66-7	1,2-Diphenylhydrazine	1670	1330	80	58-104
541-73-1	1,3-Dichlorobenzene	1670	1190	71	45-86
106-46-7	1,4-Dichlorobenzene	1670	1210	73	45-88
121-14-2	2,4-Dinitrotoluene	1670	1430	86	59-103
606-20-2	2,6-Dinitrotoluene	1670	1410	85	57-99
91-94-1	3,3'-Dichlorobenzidine	1670	569	34	34-88
53-70-3	Dibenzo(a,h)anthracene	1670	1270	76	57-105
132-64-9	Dibenzofuran	1670	1280	77	58-103
84-74-2	Di-n-butyl phthalate	1670	1270	76	59-105
117-84-0	Di-n-octyl phthalate	1670	1310	79	59-117
84-66-2	Diethyl phthalate	1670	1340	80	59-106
131-11-3	Dimethyl phthalate	1670	1360	82	60-100
117-81-7	bis(2-Ethylhexyl)phthalate	1670	1290	77	57-111
206-44-0	Fluoranthene	1670	1330	80	60-110
86-73-7	Fluorene	1670	1350	81	60-99
118-74-1	Hexachlorobenzene	1670	1310	79	58-103
87-68-3	Hexachlorobutadiene	1670	1280	77	49-95
77-47-4	Hexachlorocyclopentadiene	1670	1270	76	36-94
67-72-1	Hexachloroethane	1670	1230	74	44-89
193-39-5	Indeno(1,2,3-cd)pyrene	1670	1230	74	57-104
78-59-1	Isophorone	1670	1010	61	58-97
90-12-0	1-Methylnaphthalene	1670	1260	76	55-93
91-57-6	2-Methylnaphthalene	1670	1270	76	57-103
88-74-4	2-Nitroaniline	1670	1640	98	53-106
99-09-2	3-Nitroaniline	1670	911	55	29-85
100-01-6	4-Nitroaniline	1670	1280	77	49-104
91-20-3	Naphthalene	1670	1260	76	54-93
98-95-3	Nitrobenzene	1670	1260	76	53-92
62-75-9	N-Nitrosodimethylamine	1670	1100	66	37-88
621-64-7	N-Nitroso-di-n-propylamine	1670	1220	73	49-94
86-30-6	N-Nitrosodiphenylamine	1670	1380	83	53-107
85-01-8	Phenanthrene	1670	1320	79	61-103
129-00-0	Pyrene	1670	1360	82	58-109
110-86-1	Pyridine	1670	920	55	30-68
120-82-1	1,2,4-Trichlorobenzene	1670	1210	73	52-93

Blank Spike Summary

Job Number: F77191
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34713-BS	L048639.D	1	10/25/10	NAF	10/15/10	OP34713	SL2491

The QC reported here applies to the following samples: **Method:** SW846 8270C

F77191-1, F77191-2, F77191-3, F77191-4

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	79%	40-102%
4165-62-2	Phenol-d5	79%	41-100%
118-79-6	2,4,6-Tribromophenol	84%	42-108%
4165-60-0	Nitrobenzene-d5	77%	40-105%
321-60-8	2-Fluorobiphenyl	79%	43-107%
1718-51-0	Terphenyl-d14	82%	45-119%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F77191
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34713-MS	L048644.D	1	10/25/10	NAF	10/15/10	OP34713	SL2491
OP34713-MSD	L048645.D	1	10/25/10	NAF	10/15/10	OP34713	SL2491
F77189-1	L048643.D	1	10/25/10	NAF	10/15/10	OP34713	SL2491

The QC reported here applies to the following samples: **Method:** SW846 8270C

F77191-1, F77191-2, F77191-3, F77191-4

CAS No.	Compound	F77189-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		4480	2060	46	1950	43*	5	44-116/36
95-57-8	2-Chlorophenol	ND		2240	1580	71	1660	73	5	54-97/31
59-50-7	4-Chloro-3-methyl phenol	ND		2240	1590	71	1690	75	6	59-102/27
120-83-2	2,4-Dichlorophenol	ND		2240	1650	74	1740	77	5	60-101/30
105-67-9	2,4-Dimethylphenol	ND		2240	1430	64	1470	65	3	49-89/31
51-28-5	2,4-Dinitrophenol	ND		4480	2480	55	2400	53	3	39-107/40
534-52-1	4,6-Dinitro-o-cresol	ND		4480	2790	62	2770	61	1	58-109/37
95-48-7	2-Methylphenol	ND		2240	1550	69	1630	72	5	53-94/29
	3&4-Methylphenol	ND		4480	3130	70	3280	72	5	54-95/31
88-75-5	2-Nitrophenol	ND		2240	1700	76	1750	77	3	55-96/30
100-02-7	4-Nitrophenol	ND		4480	2810	63	3110	69	10	56-106/29
87-86-5	Pentachlorophenol	ND		4480	2910	65	3040	67	4	50-115/33
108-95-2	Phenol	ND		2240	1530	68	1630	72	6	55-99/28
95-95-4	2,4,5-Trichlorophenol	ND		2240	1700	76	1790	79	5	60-101/28
88-06-2	2,4,6-Trichlorophenol	ND		2240	1680	75	1800	79	7	60-100/27
83-32-9	Acenaphthene	ND		2240	1670	75	1750	77	5	59-97/29
208-96-8	Acenaphthylene	ND		2240	1630	73	1730	76	6	58-98/30
62-53-3	Aniline	ND		2240	1090	49	1220	54	11	38-92/38
120-12-7	Anthracene	ND		2240	1570	70	1660	73	6	61-104/29
56-55-3	Benzo(a)anthracene	ND		2240	1530	68	1650	73	8	60-106/31
50-32-8	Benzo(a)pyrene	ND		2240	1460	65	1560	69	7	59-102/32
205-99-2	Benzo(b)fluoranthene	ND		2240	1530	68	1590	70	4	60-107/31
191-24-2	Benzo(g,h,i)perylene	ND		2240	1370	61	1450	64	6	56-103/32
207-08-9	Benzo(k)fluoranthene	ND		2240	1470	66	1620	71	10	61-107/30
101-55-3	4-Bromophenyl phenyl ether	ND		2240	1570	70	1660	73	6	60-104/26
85-68-7	Butyl benzyl phthalate	ND		2240	1470	66	1570	69	7	57-110/28
100-51-6	Benzyl Alcohol	ND		2240	1590	71	1610	71	1	51-102/34
91-58-7	2-Chloronaphthalene	ND		2240	1590	71	1670	74	5	57-95/28
106-47-8	4-Chloroaniline	ND		2240	468	21	675	30	36*	19-85/34
86-74-8	Carbazole	ND		2240	1520	68	1600	71	5	60-106/30
218-01-9	Chrysene	ND		2240	1500	67	1620	71	8	60-107/31
111-91-1	bis(2-Chloroethoxy)methane	ND		2240	1530	68	1580	70	3	51-89/30
111-44-4	bis(2-Chloroethyl)ether	ND		2240	1480	66	1520	67	3	50-96/33
108-60-1	bis(2-Chloroisopropyl)ether	ND		2240	1330	59	1370	60	3	44-94/32
7005-72-3	4-Chlorophenyl phenyl ether	ND		2240	1600	72	1700	75	6	60-101/26
95-50-1	1,2-Dichlorobenzene	ND		2240	1480	66	1540	68	4	47-91/35

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F77191
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34713-MS	L048644.D	1	10/25/10	NAF	10/15/10	OP34713	SL2491
OP34713-MSD	L048645.D	1	10/25/10	NAF	10/15/10	OP34713	SL2491
F77189-1	L048643.D	1	10/25/10	NAF	10/15/10	OP34713	SL2491

The QC reported here applies to the following samples: **Method:** SW846 8270C

F77191-1, F77191-2, F77191-3, F77191-4

CAS No.	Compound	F77189-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
122-66-7	1,2-Diphenylhydrazine	ND		2240	1560	70	1630	72	4	58-104/27
541-73-1	1,3-Dichlorobenzene	ND		2240	1430	64	1500	66	5	45-86/36
106-46-7	1,4-Dichlorobenzene	ND		2240	1450	65	1520	67	5	45-88/36
121-14-2	2,4-Dinitrotoluene	ND		2240	1640	73	1760	78	7	59-103/30
606-20-2	2,6-Dinitrotoluene	ND		2240	1620	72	1720	76	6	57-99/30
91-94-1	3,3'-Dichlorobenzidine	ND		2240	757	34	908	40	18	34-88/31
53-70-3	Dibenzo(a,h)anthracene	ND		2240	1350	60	1520	67	12	57-105/29
132-64-9	Dibenzofuran	ND		2240	1520	68	1580	70	4	58-103/27
84-74-2	Di-n-butyl phthalate	ND		2240	1450	65	1510	67	4	59-105/27
117-84-0	Di-n-octyl phthalate	ND		2240	1520	68	1610	71	6	59-117/28
84-66-2	Diethyl phthalate	ND		2240	1530	68	1650	73	8	59-106/27
131-11-3	Dimethyl phthalate	ND		2240	1600	72	1700	75	6	60-100/26
117-81-7	bis(2-Ethylhexyl)phthalate	ND		2240	1460	65	1550	68	6	57-111/29
206-44-0	Fluoranthene	ND		2240	1490	67	1590	70	6	60-110/32
86-73-7	Fluorene	ND		2240	1640	73	1730	76	5	60-99/30
118-74-1	Hexachlorobenzene	ND		2240	1550	69	1620	71	4	58-103/27
87-68-3	Hexachlorobutadiene	ND		2240	1570	70	1610	71	3	49-95/33
77-47-4	Hexachlorocyclopentadiene	ND		2240	1550	69	1570	69	1	36-94/41
67-72-1	Hexachloroethane	ND		2240	1450	65	1500	66	3	44-89/38
193-39-5	Indeno(1,2,3-cd)pyrene	ND		2240	1390	62	1520	67	9	57-104/33
78-59-1	Isophorone	ND		2240	1230	55*	1290	57*	5	58-97/30
90-12-0	1-Methylnaphthalene	ND		2240	1520	68	1590	70	5	55-93/33
91-57-6	2-Methylnaphthalene	ND		2240	1550	69	1570	69	1	57-103/32
88-74-4	2-Nitroaniline	ND		2240	1910	85	2000	88	5	53-106/29
99-09-2	3-Nitroaniline	ND		2240	1040	46	1240	55	18	29-85/31
100-01-6	4-Nitroaniline	ND		2240	1360	61	1430	63	5	49-104/31
91-20-3	Naphthalene	ND		2240	1520	68	1590	70	5	54-93/32
98-95-3	Nitrobenzene	ND		2240	1550	69	1600	71	3	53-92/32
62-75-9	N-Nitrosodimethylamine	ND		2240	1330	59	1390	61	4	37-88/34
621-64-7	N-Nitroso-di-n-propylamine	ND		2240	1500	67	1570	69	5	49-94/28
86-30-6	N-Nitrosodiphenylamine	ND		2240	1590	71	1690	75	6	53-107/28
85-01-8	Phenanthrene	ND		2240	1530	68	1620	71	6	61-103/32
129-00-0	Pyrene	ND		2240	1580	71	1680	74	6	58-109/33
110-86-1	Pyridine	ND		2240	1120	50	1060	47	6	30-68/38
120-82-1	1,2,4-Trichlorobenzene	ND		2240	1470	66	1520	67	3	52-93/32

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F77191
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34713-MS	L048644.D	1	10/25/10	NAF	10/15/10	OP34713	SL2491
OP34713-MSD	L048645.D	1	10/25/10	NAF	10/15/10	OP34713	SL2491
F77189-1	L048643.D	1	10/25/10	NAF	10/15/10	OP34713	SL2491

The QC reported here applies to the following samples: **Method:** SW846 8270C

F77191-1, F77191-2, F77191-3, F77191-4

CAS No.	Surrogate Recoveries	MS	MSD	F77189-1	Limits
367-12-4	2-Fluorophenol	73%	75%	71%	40-102%
4165-62-2	Phenol-d5	72%	74%	74%	41-100%
118-79-6	2,4,6-Tribromophenol	73%	75%	76%	42-108%
4165-60-0	Nitrobenzene-d5	71%	71%	70%	40-105%
321-60-8	2-Fluorobiphenyl	75%	76%	73%	43-107%
1718-51-0	Terphenyl-d14	71%	74%	68%	45-119%

Southeast ACCUTEST LABORATORIES

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: F77191
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR2447-MB	QR056269.D	1	10/13/10	AH	n/a	n/a	GQR2447

The QC reported here applies to the following samples: **Method:** SW846 8015

F77191-1, F77191-3

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	5.0	2.5	mg/kg	

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	94%	56-136%
98-08-8	aaa-Trifluorotoluene	80%	61-121%

Method Blank Summary

Job Number: F77191
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR2448-MB	QR056299.D	1	10/14/10	AH	n/a	n/a	GQR2448

The QC reported here applies to the following samples: **Method:** SW846 8015

F77191-2, F77191-4

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	5.0	2.5	mg/kg	

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	94%	56-136%
98-08-8	aaa-Trifluorotoluene	77%	61-121%

Blank Spike Summary

Job Number: F77191
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR2447-BS	QR056268.D	1	10/13/10	AH	n/a	n/a	GQR2447

The QC reported here applies to the following samples: **Method:** SW846 8015

F77191-1, F77191-3

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-GRO (C6-C10)	20	18.5	93	74-121

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	115%	56-136%
98-08-8	aaa-Trifluorotoluene	107%	61-121%

Blank Spike Summary

Job Number: F77191
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQR2448-BS	QR056298.D	1	10/14/10	AH	n/a	n/a	GQR2448

The QC reported here applies to the following samples: **Method:** SW846 8015

F77191-2, F77191-4

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-GRO (C6-C10)	20	19.3	97	74-121

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	106%	56-136%
98-08-8	aaa-Trifluorotoluene	100%	61-121%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F77191
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F77189-1MS	QR056291.D	1	10/13/10	AH	n/a	n/a	GQR2447
F77189-1MSD	QR056292.D	1	10/13/10	AH	n/a	n/a	GQR2447
F77189-1 [a]	QR056286.D	1	10/13/10	AH	n/a	n/a	GQR2447

The QC reported here applies to the following samples: **Method:** SW846 8015

F77191-1, F77191-3

CAS No.	Compound	F77189-1 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	ND		296	244	83	247	84	1	74-121/17

CAS No.	Surrogate Recoveries	MS	MSD	F77189-1	Limits
460-00-4	4-Bromofluorobenzene	102%	94%	92%	56-136%
98-08-8	aaa-Trifluorotoluene	100%	94%	77%	61-121%

(a) Confirmation run.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F77191
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F77189-1MS	QR056313.D	1	10/14/10	AH	n/a	n/a	GQR2448
F77189-1MSD	QR056314.D	1	10/14/10	AH	n/a	n/a	GQR2448
F77189-1	QR056304.D	1	10/14/10	AH	n/a	n/a	GQR2448

The QC reported here applies to the following samples: **Method:** SW846 8015

F77191-2, F77191-4

CAS No.	Compound	F77189-1 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	ND		29.6	28.3	96	29.0	98	2	74-121/17

CAS No.	Surrogate Recoveries	MS	MSD	F77189-1	Limits
460-00-4	4-Bromofluorobenzene	96%	103%	95%	56-136%
98-08-8	aaa-Trifluorotoluene	98%	103%	81%	61-121%

Southeast ACCUTEST LABORATORIES

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: F77191
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34709-MB	XX053696.D	1	10/20/10	NJ	10/14/10	OP34709	GXX801

The QC reported here applies to the following samples: **Method:** SW846 8082

F77191-1, F77191-2, F77191-3, F77191-4

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	17	8.3	ug/kg	
11104-28-2	Aroclor 1221	ND	17	13	ug/kg	
11141-16-5	Aroclor 1232	ND	17	13	ug/kg	
53469-21-9	Aroclor 1242	ND	17	8.3	ug/kg	
12672-29-6	Aroclor 1248	ND	17	8.3	ug/kg	
11097-69-1	Aroclor 1254	ND	17	8.3	ug/kg	
11096-82-5	Aroclor 1260	ND	17	8.3	ug/kg	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	95%	44-126%
2051-24-3	Decachlorobiphenyl	89%	39-157%

Method Blank Summary

Job Number: F77191
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34709-MB	XX053740.D	1	10/21/10	NJ	10/14/10	OP34709	GXX802

The QC reported here applies to the following samples: **Method:** SW846 8082

F77191-1, F77191-2, F77191-3, F77191-4

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	17	8.3	ug/kg	
11104-28-2	Aroclor 1221	ND	17	13	ug/kg	
11141-16-5	Aroclor 1232	ND	17	13	ug/kg	
53469-21-9	Aroclor 1242	ND	17	8.3	ug/kg	
12672-29-6	Aroclor 1248	ND	17	8.3	ug/kg	
11097-69-1	Aroclor 1254	ND	17	8.3	ug/kg	
11096-82-5	Aroclor 1260	ND	17	8.3	ug/kg	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	94%	44-126%
2051-24-3	Decachlorobiphenyl	90%	39-157%

Method Blank Summary

Job Number: F77191
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34693-MB	YY17987.D	1	10/15/10	MV	10/13/10	OP34693	GYY657

The QC reported here applies to the following samples: **Method:** SW846 8015 M

F77191-1, F77191-2, F77191-3, F77191-4

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C22)	ND	8.3	5.0	mg/kg	
	TPH (> C22-C36)	ND	8.3	5.0	mg/kg	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	91%	49-108%

Method Blank Summary

Job Number: F77191
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34693-MB	YY18030.D	1	10/18/10	MV	10/13/10	OP34693	GYY658

The QC reported here applies to the following samples: **Method:** SW846 8015 M

F77191-1, F77191-2, F77191-3, F77191-4

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C22)	ND	8.3	5.0	mg/kg	
	TPH (> C22-C36)	ND	8.3	5.0	mg/kg	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	81%	49-108%

Blank Spike Summary

Job Number: F77191
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34709-BS	XX053695.D	1	10/20/10	NJ	10/14/10	OP34709	GXX801

The QC reported here applies to the following samples: **Method:** SW846 8082

F77191-1, F77191-2, F77191-3, F77191-4

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
12674-11-2	Aroclor 1016	133	126	95	69-117
11096-82-5	Aroclor 1260	133	136	102	71-121

CAS No.	Surrogate Recoveries	BSP	Limits
877-09-8	Tetrachloro-m-xylene	92%	44-126%
2051-24-3	Decachlorobiphenyl	89%	39-157%

Blank Spike Summary

Job Number: F77191
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34693-BS	YY17986.D	1	10/15/10	MV	10/13/10	OP34693	GYY657

The QC reported here applies to the following samples: **Method:** SW846 8015 M

F77191-1, F77191-2, F77191-3, F77191-4

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH (C10-C22)	33.3	27.9	84	64-102
	TPH (> C22-C36)	33.3	30.8	92	52-131

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	86%	49-108%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F77191
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34709-MS	XX053702.D	1	10/20/10	NJ	10/14/10	OP34709	GXX801
OP34709-MSD	XX053703.D	1	10/20/10	NJ	10/14/10	OP34709	GXX801
F77189-1	XX053701.D	1	10/20/10	NJ	10/14/10	OP34709	GXX801

The QC reported here applies to the following samples: **Method:** SW846 8082

F77191-1, F77191-2, F77191-3, F77191-4

CAS No.	Compound	F77189-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
12674-11-2	Aroclor 1016	ND		181	166	92	166	92	0	69-117/26
11096-82-5	Aroclor 1260	ND		181	178	98	179	100	1	71-121/30

CAS No.	Surrogate Recoveries	MS	MSD	F77189-1	Limits
877-09-8	Tetrachloro-m-xylene	91%	91%	89%	44-126%
2051-24-3	Decachlorobiphenyl	90%	91%	87%	39-157%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F77191
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP34693-MS	YY18031.D	1	10/18/10	MV	10/13/10	OP34693	GYY658
OP34693-MSD	YY18000.D	1	10/16/10	MV	10/13/10	OP34693	GYY657
F77189-1	YY17998.D	1	10/15/10	MV	10/13/10	OP34693	GYY657

The QC reported here applies to the following samples: **Method:** SW846 8015 M

F77191-1, F77191-2, F77191-3, F77191-4

CAS No.	Compound	F77189-1 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH (C10-C22)	ND		44.9	33.5	75	35.3	79	5	64-102/32
	TPH (> C22-C36)	ND		44.9	38.5	86	39.5	89	3	52-131/30

CAS No.	Surrogate Recoveries	MS	MSD	F77189-1	Limits
84-15-1	o-Terphenyl	78%	82%	70%	49-108%

Southeast ACCUTEST LABORATORIES

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: F77191
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19313
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date: 10/18/10

Metal	RL	IDL	MDL	MB raw	final
Aluminum	10	1	1	-0.30	<10
Antimony	1.0	.1	.1	0.040	<1.0
Arsenic	0.50	.1	.1	-0.085	<0.50
Barium	10	.25	.5	-0.070	<10
Beryllium	0.25	.05	.05	-0.015	<0.25
Cadmium	0.20	.05	.05	-0.030	<0.20
Calcium	250	5	5	2.9	<250
Chromium	0.50	.05	.05	0.030	<0.50
Cobalt	2.5	.05	.05	-0.020	<2.5
Copper	1.3	.1	.1	0.0	<1.3
Iron	15	1.5	1.5	6.1	<15
Lead	1.0	.05	.05	-0.050	<1.0
Magnesium	250	5	5	-0.58	<250
Manganese	0.75	.05	.05	0.055	<0.75
Molybdenum	2.5	.05	.05		
Nickel	2.0	.05	.05	0.24	<2.0
Potassium	500	25	25	0.75	<500
Selenium	1.0	.1	.2	0.17	<1.0
Silver	0.50	.05	.05	-0.020	<0.50
Sodium	500	38	38	49.7	<500
Strontium	0.50	.05	.05		
Thallium	0.50	.075	.1	-0.16	<0.50
Tin	2.5	.05	.05		
Titanium	0.50	.1	.1		
Vanadium	2.5	.05	.05	-0.025	<2.5
Zinc	1.0	.25	.25	0.11	<1.0

Associated samples MP19313: F77191-1, F77191-2, F77191-3, F77191-4

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: F77191
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19313
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Metal	F77190-1 Original	DUP	RPD	QC Limits	F77190-1 Original	MS	Spikelot MPFLICP1	% Rec	QC Limits
Prep Date:			10/18/10					10/18/10	
Aluminum	3290	2860	14.0	0-20	3290	4620	1480	90.0	80-120
Antimony	0.18	0.0	200.0(a)	0-20	0.18	16.2	27.4	58.5N(d)	80-120
Arsenic	0.63	0.82	26.2 (a)	0-20	0.63	114	109	103.6	80-120
Barium	32.5	32.6	0.3	0-20	32.5	138	109	96.4	80-120
Beryllium	0.11	0.090	20.0	0-20	0.11	2.6	2.74	91.0	80-120
Cadmium	0.0	0.0	NC	0-20	0.0	2.3	2.74	84.0	80-120
Calcium	245000	238000	2.9	0-20	245000	237000	1370	-584.7(e	80-120
Chromium	3.2	2.7 (b)	16.9	0-20	3.2	14.9 (b)	10.9	106.9	80-120
Cobalt	1.3	1.2 (b)	8.0	0-20	1.3	29.5 (b)	27.4	103.0	80-120
Copper	3.2	3.0 (b)	6.5	0-20	3.2	17.9 (b)	13.7	107.4	80-120
Iron	2250	1960	13.8	0-20	2250	3340	1420	76.6N(d)	80-120
Lead	1.4	1.2 (b)	15.4	0-20	1.4	28.9 (b)	27.4	100.5	80-120
Magnesium	1340	1200	11.0	0-20	1340	2460	1370	81.9	80-120
Manganese	55.6	68.4	20.6*(c)	0-20	55.6	81.9	27.4	96.1	80-120
Molybdenum									
Nickel	2.5	2.1 (b)	17.4	0-20	2.5	31.0 (b)	27.4	104.1	80-120
Potassium	839	769	8.7	0-20	839	2270	1370	104.6	80-120
Selenium	0.0	0.0 (b)	NC	0-20	0.0	121 (b)	109	110.5	80-120
Silver	0.0	0.0	NC	0-20	0.0	2.9	2.74	106.0	80-120
Sodium	176	209	17.1	0-20	176	1510	1370	97.5	80-120
Strontium									
Thallium	0.0	0.0 (b)	NC	0-20	0.0	108 (b)	109	98.7	80-120
Tin									
Titanium									
Vanadium	4.2	4.0	4.9	0-20	4.2	29.4	27.4	92.1	80-120
Zinc	8.4	8.2 (b)	2.4	0-20	8.4	37.1 (b)	27.4	104.9	80-120

Associated samples MP19313: F77191-1, F77191-2, F77191-3, F77191-4

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
(a) RPD acceptable due to low duplicate and sample concentrations.
(b) Elevated reporting limit(s) due to matrix interference.
(c) High RPD due to possible sample nonhomogeneity.
(d) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
(e) 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: F77191
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19313
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date: 10/18/10

Metal	F77190-1 Original	MSD	Spikelot MPFLICP1	% Rec	MSD RPD	QC Limit
Aluminum	3290	3910	1350	45.8N(a)	16.6	20
Antimony	0.18	13.2	25.1	51.9N(a)	20.4 (b)	20
Arsenic	0.63	99.3	100	98.3	13.8	20
Barium	32.5	117	100	84.2	16.5	20
Beryllium	0.11	2.2	2.51	83.3	16.7	20
Cadmium	0.0	2.0	2.51	79.7N(a)	14.0	20
Calcium	245000	225000	1250	-1594.6c	5.2	20
Chromium	3.2	13.1 (d)	10	98.7	12.9	20
Cobalt	1.3	23.8 (d)	25.1	89.7	21.4 (b)	20
Copper	3.2	15.8 (d)	12.5	100.5	12.5	20
Iron	2250	2880	1300	48.3N(a)	14.8	20
Lead	1.4	24.4 (d)	25.1	91.7	16.9	20
Magnesium	1340	2120	1250	62.2N(a)	14.8	20
Manganese	55.6	74.9	25.1	76.9N(a)	8.9	20
Molybdenum						
Nickel	2.5	25.2 (d)	25.1	90.5	20.6 (b)	20
Potassium	839	1900	1250	84.6	17.7	20
Selenium	0.0	107 (d)	100	106.6	12.3	20
Silver	0.0	2.5	2.51	99.7	14.8	20
Sodium	176	1280	1250	88.0	16.5	20
Strontium						
Thallium	0.0	91.7 (d)	100	91.4	16.3	20
Tin						
Titanium						
Vanadium	4.2	25.0	25.1	82.9	16.2	20
Zinc	8.4	33.6 (d)	25.1	100.5	9.9	20

Associated samples MP19313: F77191-1, F77191-2, F77191-3, F77191-4

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
(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
(b) High RPD due to possible sample nonhomogeneity.
(c) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
(d) Elevated reporting limit(s) due to matrix interference.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: F77191
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19313
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date: 10/18/10

Metal	BSP Result	Spikelot MPFLICP1	% Rec	QC Limits
Aluminum	1380	1350	102.2	80-120
Antimony	24.4	25	97.6	80-120
Arsenic	91.4	100	91.4	80-120
Barium	104	100	104.0	80-120
Beryllium	2.7	2.5	108.0	80-120
Cadmium	2.5	2.5	100.0	80-120
Calcium	1290	1250	103.2	80-120
Chromium	10.9	10	109.0	80-120
Cobalt	24.4	25	97.6	80-120
Copper	12.7	12.5	101.6	80-120
Iron	1350	1300	103.8	80-120
Lead	24.0	25	96.0	80-120
Magnesium	1220	1250	97.6	80-120
Manganese	28.0	25	112.0	80-120
Molybdenum				
Nickel	24.9	25	99.6	80-120
Potassium	1230	1250	98.4	80-120
Selenium	95.4	100	95.4	80-120
Silver	2.3	2.5	92.0	80-120
Sodium	1280	1250	102.4	80-120
Strontium				
Thallium	96.7	100	96.7	80-120
Tin				
Titanium				
Vanadium	27.0	25	108.0	80-120
Zinc	26.1	25	104.4	80-120

Associated samples MP19313: F77191-1, F77191-2, F77191-3, F77191-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: F77191
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19313
Matrix Type: SOLID

Methods: SW846 6010B
Units: ug/l

Prep Date: 10/18/10

Metal	F77190-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum	66500	67700	1.8	0-10
Antimony	3.70	0.00	100.0(a)	0-10
Arsenic	12.8	13.5	5.5	0-10
Barium	657	703	7.0	0-10
Beryllium	2.20	0.00	100.0(a)	0-10
Cadmium	0.00	0.00	NC	0-10
Calcium	4960000	5130000	3.5	0-10
Chromium	64.4	80.0	24.2 (a)	0-10
Cobalt	27.1	0.00	100.0(a)	0-10
Copper	63.9	0.00	100.0(a)	0-10
Iron	45500	49300	8.3	0-10
Lead	29.3	0.00	100.0(a)	0-10
Magnesium	27200	28700	5.6	0-10
Manganese	1130	1380	22.6*(b)	0-10
Molybdenum				
Nickel	50.1	41.6	17.0 (a)	0-10
Potassium	17000	16800	1.3	0-10
Selenium	0.00	0.00	NC	0-10
Silver	0.00	0.00	NC	0-10
Sodium	3560	0.00	100.0(a)	0-10
Strontium				
Thallium	0.00	44.8		0-10
Tin				
Titanium				
Vanadium	84.4	96.4	14.2*(b)	0-10
Zinc	171	0.00	100.0(a)	0-10

Associated samples MP19313: F77191-1, F77191-2, F77191-3, F77191-4

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.

POST DIGESTATE SPIKE SUMMARY

Login Number: F77191
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19313
Matrix Type: SOLID

Methods: SW846 6010B
Units: ug/l

Prep Date: 10/18/10

Metal	Sample ml	Final ml	F77190-1 Raw	Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum										
Antimony	9.8	10	3.7	3.626	104.4	0.2	5	100	100.8	-
Arsenic										
Barium										
Beryllium										
Cadmium										
Calcium										
Chromium										
Cobalt										
Copper										
Iron	9.8	10	45510	44599.8	44980	0.2	150	3000	12.7 (a)	-
Lead										
Magnesium										
Manganese	9.8	10	1126	1103.48	1147	0.2	2.5	50	87.0	-
Molybdenum										
Nickel										
Potassium										
Selenium										
Silver										
Sodium										
Strontium										
Thallium										
Tin										
Titanium										
Vanadium	9.8	10	84.4	82.712	127.7	0.2	2.5	50	90.0	-
Zinc										

Associated samples MP19313: F77191-1, F77191-2, F77191-3, F77191-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(**) Corr. sample result = Raw * (sample volume / final volume)
(anr) Analyte not requested
(a) Spike recovery indicates matrix interference and/or outside control limits due to high level in sample relative to spike amount.

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: F77191
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19341 | Methods: SW846 7471A
Matrix Type: SOLID | Units: mg/kg

Prep Date: 10/22/10

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.083	.0059	.01	-0.00092	<0.083

Associated samples MP19341: F77191-1, F77191-2, F77191-3, F77191-4

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: F77191
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19341
Matrix Type: SOLID

Methods: SW846 7471A
Units: mg/kg

Prep Date:	10/22/10						10/22/10		
Metal	F77189-1 Original	DUP	RPD	QC Limits	F77189-1 Original	MS	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.0	0.015	200.0(a)	0-20	0.0	0.31	0.3	103.3	80-120

Associated samples MP19341: F77191-1, F77191-2, F77191-3, F77191-4

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
(a) RPD acceptable due to low duplicate and sample concentrations.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F77191
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19341
Matrix Type: SOLID

Methods: SW846 7471A
Units: mg/kg

Prep Date: 10/22/10

Metal	F77189-1 Original	MSD	Spikelot HGFLWS1	% Rec	MSD RPD	QC Limit
Mercury	0.0	0.32	0.319	100.4	3.2	20

Associated samples MP19341: F77191-1, F77191-2, F77191-3, F77191-4

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: F77191
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19341
Matrix Type: SOLID

Methods: SW846 7471A
Units: mg/kg

Prep Date: 10/22/10

Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.25	0.25	100.0	80-120

Associated samples MP19341: F77191-1, F77191-2, F77191-3, F77191-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

9.2.3

9

SERIAL DILUTION RESULTS SUMMARY

Login Number: F77191
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19341
Matrix Type: SOLID

Methods: SW846 7471A
Units: ug/l

Prep Date: 10/22/10

Metal	F77189-1 Original	SDL 1:5	%DIF	QC Limits
Mercury	0.00	0.00	NC	0-10

Associated samples MP19341: F77191-1, F77191-2, F77191-3, F77191-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

Southeast ACCUTEST LABORATORIES

01/03/11

Technical Report for

Nation View

Holloman AFB; SWMU 8, ACM Investigation

8080014.03.020

Accutest Job Number: F78699

Sampling Date: 12/13/10

Report to:

NationView
445 Union Blvd, Ste 129
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rrenvironmental@zianet.com; ywatts@bhate.com
ATTN: Marcia Olive

Total number of pages in report: **122**

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: Jean Dent-Smith 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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Sections: 1 2 3 4 5 6 7 8 9 10

Table of Contents

-1-

Section 1: Sample Summary **3**
Section 2: Case Narrative/Conformance Summary **4**
Section 3: Sample Results **7**
3.1: F78699-1: SWMU8-DP13 8
3.2: F78699-2: SWMU8-DP02 19
3.3: F78699-3: SWMU8-DP03 30
3.4: F78699-4: SWMU8-DP17 41
3.5: F78699-5: TRIP BLANK 52
3.6: F78699-6: TRIP BLANK 55
3.7: F78699-7: TRIP BLANK 58
3.8: F78699-8: TRIP BLANK 61
Section 4: Misc. Forms **64**
4.1: Chain of Custody 65
Section 5: GC/MS Volatiles - QC Data Summaries **70**
5.1: Method Blank Summary 71
5.2: Blank Spike Summary 74
5.3: Matrix Spike/Matrix Spike Duplicate Summary 77
Section 6: GC/MS Semi-volatiles - QC Data Summaries **80**
6.1: Method Blank Summary 81
6.2: Blank Spike Summary 87
6.3: Matrix Spike/Matrix Spike Duplicate Summary 93
Section 7: GC Volatiles - QC Data Summaries **96**
7.1: Method Blank Summary 97
7.2: Blank Spike Summary 98
7.3: Matrix Spike/Matrix Spike Duplicate Summary 99
Section 8: GC Semi-volatiles - QC Data Summaries **100**
8.1: Method Blank Summary 101
8.2: Blank Spike Summary 104
8.3: Matrix Spike/Matrix Spike Duplicate Summary 106
Section 9: Metals Analysis - QC Data Summaries **108**
9.1: Prep QC MP19698: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn 109
9.2: Prep QC MP19732: Hg 115
Section 10: General Chemistry - QC Data Summaries **120**
10.1: Method Blank and Spike Results Summary 121
10.2: Duplicate Results Summary 122

Accutest Laboratories

Sample Summary

Nation View

Job No: F78699

Holloman AFB; SWMU 8, ACM Investigation
Project No: 8080014.03.020

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
F78699-1	12/13/10	11:05	DMZB	12/14/10	AQ	Ground Water	SWMU8-DP13
F78699-2	12/13/10	09:45	DMZB	12/14/10	AQ	Ground Water	SWMU8-DP02
F78699-3	12/13/10	11:20	DMZB	12/14/10	AQ	Ground Water	SWMU8-DP03
F78699-4	12/13/10	09:35	DMZB	12/14/10	AQ	Ground Water	SWMU8-DP17
F78699-5	12/13/10	00:00	DMZB	12/14/10	AQ	Trip Blank Water	TRIP BLANK
F78699-6	12/13/10	00:00	DMZB	12/14/10	AQ	Trip Blank Water	TRIP BLANK
F78699-7	12/13/10	00:00	DMZB	12/14/10	AQ	Trip Blank Water	TRIP BLANK
F78699-8	12/13/10	00:00	DMZB	12/14/10	AQ	Trip Blank Water	TRIP BLANK

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Nation View **Job No:** F78699

Site: Holloman AFB; SWMU 8, ACM Investigation **Report Date** 1/3/2011 7:10:56 AM

4 Samples and 4 Trip Blanks were collected on 12/13/2010 and were received at Accutest on 12/14/2010 properly preserved, at 2.8 Deg. C and intact. These Samples received an Accutest job number of F78699. 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:** VJ3445

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) F78683-2MS, F78683-2MSD were used as the QC samples indicated.

Matrix Spike Recovery(s) for 2-Chloroethyl vinyl ether are outside control limits. Probable cause due to matrix interference. Fo rmethod performance in a clean matrix, refer to SB.

Matrix Spike Duplicate Recovery(s) for 2-Chloroethyl vinyl ether, Styrene are outside control limits. Probable cause due to matrix interference. For method performance in a clean matrix, refer to SB.

RPD(s) for MSD for cis-1,3-Dichloropropene, Styrene, trans-1,3-Dichloropropene are outside control limits for sample F78683-2MSD. Probable cause due to sample homogeneity.

F78699-5: Sample vial(s) contained significant headspace; reported results are considered minimum values.

F78699-6: Sample vial(s) contained significant headspace; reported results are considered minimum values.

F78699-7: Sample vial(s) contained significant headspace; reported results are considered minimum values.

F78699-8: Sample vial(s) contained significant headspace; reported results are considered minimum values.

Extractables by GCMS By Method SW846 8270D

Matrix: AQ **Batch ID:** OP35426

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.

Sample(s) C13816-2MS, C13816-2MSD were used as the QC samples indicated.

Matrix Spike Recovery(s) for Phenol are outside control limits. Probable cause due to matrix interference. For method performance in a clean matrix, refer to SB.

Matrix Spike Duplicate Recovery(s) for 2-Nitroaniline, Hexachlorocyclopentadiene, Phenol are outside control limits. Probable cause due to matrix interference. For method performance in a clean matrix, refer to SB.

RPD(s) for MSD for Benzoic Acid are outside control limits for sample OP35426-MSD. Probable cause due to sample homogeneity.

Sample(s) OP35426-MS, OP35426-MSD have surrogates outside control limits. Probable cause due to matrix interference.

Volatiles by GC By Method SW846 8015C

Matrix: AQ **Batch ID:** GCD4181

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) F78605-1MS, F78605-1MSD were used as the QC samples indicated.

Extractables by GC By Method SW846 8015C

Matrix: AQ **Batch ID:** OP35414

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.

Sample(s) F78699-3MS, F78699-3MSD were used as the QC samples indicated.

Extractables by GC By Method SW846 8082A

Matrix: AQ **Batch ID:** OP35432

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.

Sample(s) F78727-3MS, F78727-3MSD were used as the QC samples indicated.

Metals By Method SW846 6010C

Matrix: AQ **Batch ID:** MP19698

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.

Sample(s) F78699-1DUP, F78699-1MS, F78699-1MSD, F78699-1PS, F78699-1SDL were used as the QC samples for metals.

MS/MSD Recovery(s) for Calcium are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

RPD(s) for Duplicate for Arsenic, Iron, Selenium are outside control limits for sample MP19698-D1. RPD acceptable due to low duplicate and sample concentrations.

RPD(s) for Serial Dilution for Aluminum, Antimony, Arsenic, Barium, Copper, Nickel, Selenium are outside control limits for sample MP19698-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

MP19698-SD1 for Calcium: Serial dilution indicates possible matrix interference.

MP19698-PS1 for Calcium: Spike recovery indicates matrix interference and/or outside control limits due to high level in sample relative to spike amount.

MP19698-PS1 for Magnesium: Spike recovery indicates matrix interference and/or outside control limits due to high level in sample relative to spike amount.

F78699-1 for Antimony: Elevated RL due to instrument baseline drift.

F78699-2 for Antimony: Elevated RL due to instrument baseline drift.

F78699-3 for Antimony: Elevated RL due to instrument baseline drift.

F78699-4 for Antimony: Elevated RL due to instrument baseline drift.

Metals By Method SW846 7470A

Matrix: AQ **Batch ID:** MP19732

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.

Sample(s) F78720-1DUP, F78720-1MS, F78720-1MSD, F78720-1SDL were used as the QC samples for metals.

Wet Chemistry By Method SM19 2540C

Matrix: AQ **Batch ID:** GN42630

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) F78727-3DUP were used as the QC samples 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 3, 2011

Lovelie Metzgar, QA Assistant (signature on file)

Southeast ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	SWMU8-DP13		
Lab Sample ID:	F78699-1	**Date Sampled:**	12/13/10
Matrix:	AQ - Ground Water	**Date Received:**	12/14/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J061887.D	1	12/22/10	KW	n/a	n/a	VJ3445
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

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	3.0	ug/l	
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.25	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.22	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.20	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.26	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.22	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.27	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	1.6	1.0	0.22	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.22	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.20	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.2	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.25	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.25	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.23	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.50	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.25	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.20	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.44	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.26	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.20	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:	SWMU8-DP13		
Lab Sample ID:	F78699-1	**Date Sampled:**	12/13/10
Matrix:	AQ - Ground Water	**Date Received:**	12/14/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
541-73-1	m-Dichlorobenzene	ND	1.0	0.20	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.25	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.23	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.35	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
591-78-6	2-Hexanone	ND	10	4.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.80	ug/l	
110-54-3	Hexane	ND	2.0	0.59	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.21	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.50	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.50	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.25	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	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	0.34	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.20	ug/l	
100-42-5	Styrene	ND	1.0	0.20	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	0.20	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.23	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.22	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	0.30	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	0.27	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.21	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.25	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.26	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.22	ug/l	
108-05-4	Vinyl Acetate	ND	10	2.0	ug/l	
	m,p-Xylene	ND	2.0	0.32	ug/l	
95-47-6	o-Xylene	ND	1.0	0.20	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:	SWMU8-DP13		
Lab Sample ID:	F78699-1	**Date Sampled:**	12/13/10
Matrix:	AQ - Ground Water	**Date Received:**	12/14/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		87-116%
17060-07-0	1,2-Dichloroethane-D4	101%		76-127%
2037-26-5	Toluene-D8	94%		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:	SWMU8-DP13		
Lab Sample ID:	F78699-1	**Date Sampled:**	12/13/10
Matrix:	AQ - Ground Water	**Date Received:**	12/14/10
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X015703.D	1	12/21/10	NAF	12/16/10	OP35426	SX784
Run #2							

	Initial Volume	Final Volume
Run #1	1040 ml	1.0 ml
Run #2		

ABN Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	48	9.6	ug/l	
95-57-8	2-Chlorophenol	ND	4.8	0.48	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	4.8	0.48	ug/l	
120-83-2	2,4-Dichlorophenol	ND	4.8	0.48	ug/l	
105-67-9	2,4-Dimethylphenol	ND	4.8	1.1	ug/l	
51-28-5	2,4-Dinitrophenol	ND	24	9.6	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	9.6	1.9	ug/l	
95-48-7	2-Methylphenol	ND	4.8	0.52	ug/l	
	3&4-Methylphenol	ND	4.8	1.1	ug/l	
88-75-5	2-Nitrophenol	ND	4.8	0.52	ug/l	
100-02-7	4-Nitrophenol	ND	24	4.8	ug/l	
87-86-5	Pentachlorophenol	ND	24	5.2	ug/l	
108-95-2	Phenol	ND	4.8	0.48	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	4.8	0.48	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	4.8	0.48	ug/l	
83-32-9	Acenaphthene	ND	4.8	0.48	ug/l	
208-96-8	Acenaphthylene	ND	4.8	0.48	ug/l	
62-53-3	Aniline	ND	4.8	0.50	ug/l	
120-12-7	Anthracene	ND	4.8	0.48	ug/l	
92-87-5	Benzidine	ND	24	4.5	ug/l	
56-55-3	Benzo(a)anthracene	ND	4.8	0.48	ug/l	
50-32-8	Benzo(a)pyrene	ND	4.8	0.48	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	4.8	0.48	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	4.8	0.48	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	4.8	0.48	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	4.8	0.48	ug/l	
85-68-7	Butyl benzyl phthalate	ND	4.8	1.1	ug/l	
100-51-6	Benzyl Alcohol	ND	4.8	0.96	ug/l	
91-58-7	2-Chloronaphthalene	ND	4.8	0.48	ug/l	
106-47-8	4-Chloroaniline	ND	4.8	0.48	ug/l	
86-74-8	Carbazole	ND	4.8	0.48	ug/l	
218-01-9	Chrysene	ND	4.8	0.48	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:	SWMU8-DP13		
Lab Sample ID:	F78699-1	**Date Sampled:**	12/13/10
Matrix:	AQ - Ground Water	**Date Received:**	12/14/10
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

ABN Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
111-91-1	bis(2-Chloroethoxy)methane	ND	4.8	0.48	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	4.8	0.52	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	4.8	0.52	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	4.8	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	4.8	0.96	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	4.8	0.48	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	4.8	0.96	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	4.8	0.96	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	4.8	0.48	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	4.8	0.48	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	9.6	0.96	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	4.8	0.50	ug/l	
132-64-9	Dibenzofuran	ND	4.8	0.48	ug/l	
84-74-2	Di-n-butyl phthalate	ND	4.8	0.84	ug/l	
117-84-0	Di-n-octyl phthalate	ND	4.8	1.1	ug/l	
84-66-2	Diethyl phthalate	ND	4.8	1.1	ug/l	
131-11-3	Dimethyl phthalate	ND	4.8	0.95	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	4.8	1.1	ug/l	
206-44-0	Fluoranthene	ND	4.8	0.48	ug/l	
86-73-7	Fluorene	ND	4.8	0.48	ug/l	
118-74-1	Hexachlorobenzene	ND	4.8	0.54	ug/l	
87-68-3	Hexachlorobutadiene	ND	4.8	0.96	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	9.6	1.8	ug/l	
67-72-1	Hexachloroethane	ND	4.8	0.96	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.8	0.48	ug/l	
78-59-1	Isophorone	ND	4.8	0.48	ug/l	
90-12-0	1-Methylnaphthalene	ND	4.8	0.48	ug/l	
91-57-6	2-Methylnaphthalene	ND	4.8	0.55	ug/l	
88-74-4	2-Nitroaniline	ND	4.8	0.48	ug/l	
99-09-2	3-Nitroaniline	ND	4.8	0.48	ug/l	
100-01-6	4-Nitroaniline	ND	4.8	0.48	ug/l	
91-20-3	Naphthalene	ND	4.8	0.77	ug/l	
98-95-3	Nitrobenzene	ND	4.8	0.57	ug/l	
62-75-9	N-Nitrosodimethylamine	ND	4.8	2.3	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	4.8	0.48	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	4.8	0.96	ug/l	
85-01-8	Phenanthrene	ND	4.8	0.48	ug/l	
129-00-0	Pyrene	ND	4.8	0.48	ug/l	
110-86-1	Pyridine	ND	9.6	1.5	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	4.8	0.48	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:	SWMU8-DP13		
Lab Sample ID:	F78699-1	**Date Sampled:**	12/13/10
Matrix:	AQ - Ground Water	**Date Received:**	12/14/10
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

ABN Full List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	45%		14-62%
4165-62-2	Phenol-d5	28%		10-40%
118-79-6	2,4,6-Tribromophenol	80%		33-118%
4165-60-0	Nitrobenzene-d5	78%		42-108%
321-60-8	2-Fluorobiphenyl	82%		40-106%
1718-51-0	Terphenyl-d14	82%		39-121%

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:	SWMU8-DP13		
Lab Sample ID:	F78699-1	**Date Sampled:**	12/13/10
Matrix:	AQ - Ground Water	**Date Received:**	12/14/10
Method:	SW846 8015C	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	CD101505.D	1	12/15/10	WV	n/a	n/a	GCD4181
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	0.10	0.050	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	82%		57-129%
98-08-8	aaa-Trifluorotoluene	85%		58-120%

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:	SWMU8-DP13		
Lab Sample ID:	F78699-1	**Date Sampled:**	12/13/10
Matrix:	AQ - Ground Water	**Date Received:**	12/14/10
Method:	SW846 8082A SW846 3510C	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XX053891.D	1	12/20/10	NJ	12/16/10	OP35432	GXX807
Run #2							

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

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.48	0.19	ug/l	
11104-28-2	Aroclor 1221	ND	0.48	0.24	ug/l	
11141-16-5	Aroclor 1232	ND	0.48	0.24	ug/l	
53469-21-9	Aroclor 1242	ND	0.48	0.19	ug/l	
12672-29-6	Aroclor 1248	ND	0.48	0.19	ug/l	
11097-69-1	Aroclor 1254	ND	0.48	0.19	ug/l	
11096-82-5	Aroclor 1260	ND	0.48	0.19	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	100%		38-127%
2051-24-3	Decachlorobiphenyl	92%		25-137%

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:	SWMU8-DP13		
Lab Sample ID:	F78699-1	**Date Sampled:**	12/13/10
Matrix:	AQ - Ground Water	**Date Received:**	12/14/10
Method:	SW846 8015C SW846 3510C	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LL34560.D	1	12/21/10	MV	12/15/10	OP35414	GLL1307
Run #2							

	Initial Volume	Final Volume
Run #1	1040 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C22)	ND	0.24	0.096	mg/l	
	TPH (> C22-C36)	ND	0.24	0.096	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	96%		42-114%

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:	SWMU8-DP13		
Lab Sample ID:	F78699-1	**Date Sampled:**	12/13/10
Matrix:	AQ - Ground Water	**Date Received:**	12/14/10
		Percent Solids:	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	33.3 J	200	25	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Antimony [a]	2.5 J	12	2.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Arsenic	2.0 U	10	2.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Barium	20.4 J	200	5.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Beryllium	1.0 U	4.0	1.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Cadmium	1.0 U	5.0	1.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Calcium	550000	1000	100	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Chromium	1.0 U	10	1.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Cobalt	1.0 U	50	1.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Copper	3.9 J	25	2.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Iron	35 U	300	35	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Lead	1.0 U	5.0	1.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Magnesium	48200	5000	100	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Manganese	19.8	15	1.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Mercury	0.050 U	1.0	0.050	ug/l	1	12/23/10	12/23/10	LM	SW846 7470A [2]	SW846 7470A [4]
Nickel	3.0 J	40	2.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Potassium	3320 J	10000	500	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Selenium	2.4 J	10	2.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Silver	1.0 U	10	1.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Sodium	68200	10000	1900	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Thallium	1.9 U	10	1.9	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Vanadium	21.3 J	50	1.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Zinc	14.0 J	20	5.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA8594
(2) Instrument QC Batch: MA8605
(3) Prep QC Batch: MP19698
(4) Prep QC Batch: MP19732

(a) Elevated RL due to instrument baseline drift.

RL = Reporting Limit
MDL = Method Detection Limit

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

Report of Analysis

Client Sample ID:	SWMU8-DP13		
Lab Sample ID:	F78699-1	**Date Sampled:**	12/13/10
Matrix:	AQ - Ground Water	**Date Received:**	12/14/10
		Percent Solids:	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	2450	1000	100	mg/l	10	12/17/10 13:35	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

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

Report of Analysis

Client Sample ID:	SWMU8-DP02		
Lab Sample ID:	F78699-2	**Date Sampled:**	12/13/10
Matrix:	AQ - Ground Water	**Date Received:**	12/14/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J061888.D	1	12/22/10	KW	n/a	n/a	VJ3445
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

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	3.0	ug/l	
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.25	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.22	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.20	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.26	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.22	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.27	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.22	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.22	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.20	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.2	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.25	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.25	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.23	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.50	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.25	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.20	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.44	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.26	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.20	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:	SWMU8-DP02		
Lab Sample ID:	F78699-2	**Date Sampled:**	12/13/10
Matrix:	AQ - Ground Water	**Date Received:**	12/14/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
541-73-1	m-Dichlorobenzene	ND	1.0	0.20	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.25	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.23	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.35	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
591-78-6	2-Hexanone	ND	10	4.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.80	ug/l	
110-54-3	Hexane	ND	2.0	0.59	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.21	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.50	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.50	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.25	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	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	0.34	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.20	ug/l	
100-42-5	Styrene	ND	1.0	0.20	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	0.20	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.23	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.22	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	0.30	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	0.27	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.21	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.25	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.26	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.22	ug/l	
108-05-4	Vinyl Acetate	ND	10	2.0	ug/l	
	m,p-Xylene	ND	2.0	0.32	ug/l	
95-47-6	o-Xylene	ND	1.0	0.20	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:	SWMU8-DP02		
Lab Sample ID:	F78699-2	**Date Sampled:**	12/13/10
Matrix:	AQ - Ground Water	**Date Received:**	12/14/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

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	94%		86-112%
460-00-4	4-Bromofluorobenzene	100%		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:	SWMU8-DP02		
Lab Sample ID:	F78699-2	**Date Sampled:**	12/13/10
Matrix:	AQ - Ground Water	**Date Received:**	12/14/10
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X015704.D	1	12/21/10	NAF	12/16/10	OP35426	SX784
Run #2							

	Initial Volume	Final Volume
Run #1	1040 ml	1.0 ml
Run #2		

ABN Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	48	9.6	ug/l	
95-57-8	2-Chlorophenol	ND	4.8	0.48	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	4.8	0.48	ug/l	
120-83-2	2,4-Dichlorophenol	ND	4.8	0.48	ug/l	
105-67-9	2,4-Dimethylphenol	ND	4.8	1.1	ug/l	
51-28-5	2,4-Dinitrophenol	ND	24	9.6	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	9.6	1.9	ug/l	
95-48-7	2-Methylphenol	ND	4.8	0.52	ug/l	
	3&4-Methylphenol	ND	4.8	1.1	ug/l	
88-75-5	2-Nitrophenol	ND	4.8	0.52	ug/l	
100-02-7	4-Nitrophenol	ND	24	4.8	ug/l	
87-86-5	Pentachlorophenol	ND	24	5.2	ug/l	
108-95-2	Phenol	ND	4.8	0.48	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	4.8	0.48	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	4.8	0.48	ug/l	
83-32-9	Acenaphthene	ND	4.8	0.48	ug/l	
208-96-8	Acenaphthylene	ND	4.8	0.48	ug/l	
62-53-3	Aniline	ND	4.8	0.50	ug/l	
120-12-7	Anthracene	ND	4.8	0.48	ug/l	
92-87-5	Benzidine	ND	24	4.5	ug/l	
56-55-3	Benzo(a)anthracene	ND	4.8	0.48	ug/l	
50-32-8	Benzo(a)pyrene	ND	4.8	0.48	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	4.8	0.48	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	4.8	0.48	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	4.8	0.48	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	4.8	0.48	ug/l	
85-68-7	Butyl benzyl phthalate	ND	4.8	1.1	ug/l	
100-51-6	Benzyl Alcohol	ND	4.8	0.96	ug/l	
91-58-7	2-Chloronaphthalene	ND	4.8	0.48	ug/l	
106-47-8	4-Chloroaniline	ND	4.8	0.48	ug/l	
86-74-8	Carbazole	ND	4.8	0.48	ug/l	
218-01-9	Chrysene	ND	4.8	0.48	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:	SWMU8-DP02		
Lab Sample ID:	F78699-2	**Date Sampled:**	12/13/10
Matrix:	AQ - Ground Water	**Date Received:**	12/14/10
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

ABN Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
111-91-1	bis(2-Chloroethoxy)methane	ND	4.8	0.48	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	4.8	0.52	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	4.8	0.52	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	4.8	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	4.8	0.96	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	4.8	0.48	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	4.8	0.96	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	4.8	0.96	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	4.8	0.48	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	4.8	0.48	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	9.6	0.96	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	4.8	0.50	ug/l	
132-64-9	Dibenzofuran	ND	4.8	0.48	ug/l	
84-74-2	Di-n-butyl phthalate	ND	4.8	0.84	ug/l	
117-84-0	Di-n-octyl phthalate	ND	4.8	1.1	ug/l	
84-66-2	Diethyl phthalate	ND	4.8	1.1	ug/l	
131-11-3	Dimethyl phthalate	ND	4.8	0.95	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	4.8	1.1	ug/l	
206-44-0	Fluoranthene	ND	4.8	0.48	ug/l	
86-73-7	Fluorene	ND	4.8	0.48	ug/l	
118-74-1	Hexachlorobenzene	ND	4.8	0.54	ug/l	
87-68-3	Hexachlorobutadiene	ND	4.8	0.96	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	9.6	1.8	ug/l	
67-72-1	Hexachloroethane	ND	4.8	0.96	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.8	0.48	ug/l	
78-59-1	Isophorone	ND	4.8	0.48	ug/l	
90-12-0	1-Methylnaphthalene	ND	4.8	0.48	ug/l	
91-57-6	2-Methylnaphthalene	ND	4.8	0.55	ug/l	
88-74-4	2-Nitroaniline	ND	4.8	0.48	ug/l	
99-09-2	3-Nitroaniline	ND	4.8	0.48	ug/l	
100-01-6	4-Nitroaniline	ND	4.8	0.48	ug/l	
91-20-3	Naphthalene	ND	4.8	0.77	ug/l	
98-95-3	Nitrobenzene	ND	4.8	0.57	ug/l	
62-75-9	N-Nitrosodimethylamine	ND	4.8	2.3	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	4.8	0.48	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	4.8	0.96	ug/l	
85-01-8	Phenanthrene	ND	4.8	0.48	ug/l	
129-00-0	Pyrene	ND	4.8	0.48	ug/l	
110-86-1	Pyridine	ND	9.6	1.5	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	4.8	0.48	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:	SWMU8-DP02		
Lab Sample ID:	F78699-2	**Date Sampled:**	12/13/10
Matrix:	AQ - Ground Water	**Date Received:**	12/14/10
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

ABN Full List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	36%		14-62%
4165-62-2	Phenol-d5	22%		10-40%
118-79-6	2,4,6-Tribromophenol	65%		33-118%
4165-60-0	Nitrobenzene-d5	67%		42-108%
321-60-8	2-Fluorobiphenyl	72%		40-106%
1718-51-0	Terphenyl-d14	64%		39-121%

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:	SWMU8-DP02		
Lab Sample ID:	F78699-2	**Date Sampled:**	12/13/10
Matrix:	AQ - Ground Water	**Date Received:**	12/14/10
Method:	SW846 8015C	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	CD101506.D	1	12/15/10	WV	n/a	n/a	GCD4181
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	0.10	0.050	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	77%		57-129%
98-08-8	aaa-Trifluorotoluene	79%		58-120%

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:	SWMU8-DP02		
Lab Sample ID:	F78699-2	**Date Sampled:**	12/13/10
Matrix:	AQ - Ground Water	**Date Received:**	12/14/10
Method:	SW846 8082A SW846 3510C	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XX053892.D	1	12/20/10	NJ	12/16/10	OP35432	GXX807
Run #2							

	Initial Volume	Final Volume
Run #1	1030 ml	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.49	0.19	ug/l	
11104-28-2	Aroclor 1221	ND	0.49	0.24	ug/l	
11141-16-5	Aroclor 1232	ND	0.49	0.24	ug/l	
53469-21-9	Aroclor 1242	ND	0.49	0.19	ug/l	
12672-29-6	Aroclor 1248	ND	0.49	0.19	ug/l	
11097-69-1	Aroclor 1254	ND	0.49	0.19	ug/l	
11096-82-5	Aroclor 1260	ND	0.49	0.19	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	91%		38-127%
2051-24-3	Decachlorobiphenyl	74%		25-137%

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:	SWMU8-DP02		
Lab Sample ID:	F78699-2	**Date Sampled:**	12/13/10
Matrix:	AQ - Ground Water	**Date Received:**	12/14/10
Method:	SW846 8015C SW846 3510C	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LL34561.D	1	12/21/10	MV	12/15/10	OP35414	GLL1307
Run #2							

	Initial Volume	Final Volume
Run #1	1050 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C22)	ND	0.24	0.095	mg/l	
	TPH (> C22-C36)	ND	0.24	0.095	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	104%		42-114%

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:	SWMU8-DP02		
Lab Sample ID:	F78699-2	**Date Sampled:**	12/13/10
Matrix:	AQ - Ground Water	**Date Received:**	12/14/10
		Percent Solids:	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	25 U	200	25	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Antimony [a]	3.8 J	12	2.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Arsenic	3.2 J	10	2.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Barium	16.1 J	200	5.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Beryllium	1.0 U	4.0	1.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Cadmium	1.0 U	5.0	1.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Calcium	578000	1000	100	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Chromium	1.0 U	10	1.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Cobalt	1.0 U	50	1.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Copper	3.7 J	25	2.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Iron	40.9 J	300	35	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Lead	1.0 U	5.0	1.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Magnesium	55200	5000	100	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Manganese	9.6 J	15	1.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Mercury	0.050 U	1.0	0.050	ug/l	1	12/23/10	12/23/10	LM	SW846 7470A [2]	SW846 7470A [4]
Nickel	2.0 U	40	2.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Potassium	5560 J	10000	500	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Selenium	2.0 U	10	2.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Silver	1.0 U	10	1.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Sodium	68400	10000	1900	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Thallium	1.9 U	10	1.9	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Vanadium	34.6 J	50	1.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Zinc	17.0 J	20	5.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA8594
(2) Instrument QC Batch: MA8605
(3) Prep QC Batch: MP19698
(4) Prep QC Batch: MP19732

(a) Elevated RL due to instrument baseline drift.

RL = Reporting Limit
MDL = Method Detection Limit

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

Report of Analysis

Client Sample ID:	SWMU8-DP02		
Lab Sample ID:	F78699-2	**Date Sampled:**	12/13/10
Matrix:	AQ - Ground Water	**Date Received:**	12/14/10
		Percent Solids:	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	2480	1000	100	mg/l	10	12/17/10 13:35	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

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

Report of Analysis

Client Sample ID:	SWMU8-DP03		
Lab Sample ID:	F78699-3	**Date Sampled:**	12/13/10
Matrix:	AQ - Ground Water	**Date Received:**	12/14/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J061889.D	1	12/22/10	KW	n/a	n/a	VJ3445
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

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	3.0	ug/l	
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.25	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.22	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.20	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.26	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.22	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.27	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.22	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.22	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.20	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.2	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.25	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.25	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.23	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.50	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.25	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.20	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.44	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.26	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.20	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:	SWMU8-DP03		
Lab Sample ID:	F78699-3	**Date Sampled:**	12/13/10
Matrix:	AQ - Ground Water	**Date Received:**	12/14/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
541-73-1	m-Dichlorobenzene	ND	1.0	0.20	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.25	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.23	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.35	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
591-78-6	2-Hexanone	ND	10	4.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.80	ug/l	
110-54-3	Hexane	ND	2.0	0.59	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.21	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.50	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.50	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.25	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	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	0.34	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.20	ug/l	
100-42-5	Styrene	ND	1.0	0.20	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	0.20	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.23	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.22	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	0.30	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	0.27	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.21	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.25	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.26	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.22	ug/l	
108-05-4	Vinyl Acetate	ND	10	2.0	ug/l	
	m,p-Xylene	ND	2.0	0.32	ug/l	
95-47-6	o-Xylene	ND	1.0	0.20	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:	SWMU8-DP03		
Lab Sample ID:	F78699-3	**Date Sampled:**	12/13/10
Matrix:	AQ - Ground Water	**Date Received:**	12/14/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		87-116%
17060-07-0	1,2-Dichloroethane-D4	100%		76-127%
2037-26-5	Toluene-D8	94%		86-112%
460-00-4	4-Bromofluorobenzene	98%		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:	SWMU8-DP03		
Lab Sample ID:	F78699-3	**Date Sampled:**	12/13/10
Matrix:	AQ - Ground Water	**Date Received:**	12/14/10
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X015705.D	1	12/21/10	NAF	12/16/10	OP35426	SX784
Run #2							

	Initial Volume	Final Volume
Run #1	1050 ml	1.0 ml
Run #2		

ABN Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	48	9.5	ug/l	
95-57-8	2-Chlorophenol	ND	4.8	0.48	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	4.8	0.48	ug/l	
120-83-2	2,4-Dichlorophenol	ND	4.8	0.48	ug/l	
105-67-9	2,4-Dimethylphenol	ND	4.8	1.0	ug/l	
51-28-5	2,4-Dinitrophenol	ND	24	9.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	9.5	1.9	ug/l	
95-48-7	2-Methylphenol	ND	4.8	0.51	ug/l	
	3&4-Methylphenol	ND	4.8	1.0	ug/l	
88-75-5	2-Nitrophenol	ND	4.8	0.51	ug/l	
100-02-7	4-Nitrophenol	ND	24	4.8	ug/l	
87-86-5	Pentachlorophenol	ND	24	5.1	ug/l	
108-95-2	Phenol	ND	4.8	0.48	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	4.8	0.48	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	4.8	0.48	ug/l	
83-32-9	Acenaphthene	ND	4.8	0.48	ug/l	
208-96-8	Acenaphthylene	ND	4.8	0.48	ug/l	
62-53-3	Aniline	ND	4.8	0.50	ug/l	
120-12-7	Anthracene	ND	4.8	0.48	ug/l	
92-87-5	Benzidine	ND	24	4.5	ug/l	
56-55-3	Benzo(a)anthracene	ND	4.8	0.48	ug/l	
50-32-8	Benzo(a)pyrene	ND	4.8	0.48	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	4.8	0.48	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	4.8	0.48	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	4.8	0.48	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	4.8	0.48	ug/l	
85-68-7	Butyl benzyl phthalate	ND	4.8	1.0	ug/l	
100-51-6	Benzyl Alcohol	ND	4.8	0.95	ug/l	
91-58-7	2-Chloronaphthalene	ND	4.8	0.48	ug/l	
106-47-8	4-Chloroaniline	ND	4.8	0.48	ug/l	
86-74-8	Carbazole	ND	4.8	0.48	ug/l	
218-01-9	Chrysene	ND	4.8	0.48	ug/l	

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B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SWMU8-DP03		
Lab Sample ID:	F78699-3	**Date Sampled:**	12/13/10
Matrix:	AQ - Ground Water	**Date Received:**	12/14/10
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

ABN Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
111-91-1	bis(2-Chloroethoxy)methane	ND	4.8	0.48	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	4.8	0.51	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	4.8	0.51	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	4.8	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	4.8	0.95	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	4.8	0.48	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	4.8	0.95	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	4.8	0.95	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	4.8	0.48	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	4.8	0.48	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	9.5	0.95	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	4.8	0.50	ug/l	
132-64-9	Dibenzofuran	ND	4.8	0.48	ug/l	
84-74-2	Di-n-butyl phthalate	ND	4.8	0.83	ug/l	
117-84-0	Di-n-octyl phthalate	ND	4.8	1.0	ug/l	
84-66-2	Diethyl phthalate	ND	4.8	1.0	ug/l	
131-11-3	Dimethyl phthalate	ND	4.8	0.94	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	4.8	1.0	ug/l	
206-44-0	Fluoranthene	ND	4.8	0.48	ug/l	
86-73-7	Fluorene	ND	4.8	0.48	ug/l	
118-74-1	Hexachlorobenzene	ND	4.8	0.53	ug/l	
87-68-3	Hexachlorobutadiene	ND	4.8	0.95	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	9.5	1.8	ug/l	
67-72-1	Hexachloroethane	ND	4.8	0.95	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.8	0.48	ug/l	
78-59-1	Isophorone	ND	4.8	0.48	ug/l	
90-12-0	1-Methylnaphthalene	ND	4.8	0.48	ug/l	
91-57-6	2-Methylnaphthalene	ND	4.8	0.54	ug/l	
88-74-4	2-Nitroaniline	ND	4.8	0.48	ug/l	
99-09-2	3-Nitroaniline	ND	4.8	0.48	ug/l	
100-01-6	4-Nitroaniline	ND	4.8	0.48	ug/l	
91-20-3	Naphthalene	ND	4.8	0.76	ug/l	
98-95-3	Nitrobenzene	ND	4.8	0.56	ug/l	
62-75-9	N-Nitrosodimethylamine	ND	4.8	2.3	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	4.8	0.48	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	4.8	0.95	ug/l	
85-01-8	Phenanthrene	ND	4.8	0.48	ug/l	
129-00-0	Pyrene	ND	4.8	0.48	ug/l	
110-86-1	Pyridine	ND	9.5	1.5	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	4.8	0.48	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:	SWMU8-DP03		
Lab Sample ID:	F78699-3	**Date Sampled:**	12/13/10
Matrix:	AQ - Ground Water	**Date Received:**	12/14/10
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

ABN Full List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	36%		14-62%
4165-62-2	Phenol-d5	22%		10-40%
118-79-6	2,4,6-Tribromophenol	72%		33-118%
4165-60-0	Nitrobenzene-d5	70%		42-108%
321-60-8	2-Fluorobiphenyl	72%		40-106%
1718-51-0	Terphenyl-d14	74%		39-121%

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:	SWMU8-DP03		
Lab Sample ID:	F78699-3	**Date Sampled:**	12/13/10
Matrix:	AQ - Ground Water	**Date Received:**	12/14/10
Method:	SW846 8015C	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	CD101507.D	1	12/15/10	WV	n/a	n/a	GCD4181
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	0.10	0.050	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	78%		57-129%
98-08-8	aaa-Trifluorotoluene	84%		58-120%

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:	SWMU8-DP03		
Lab Sample ID:	F78699-3	**Date Sampled:**	12/13/10
Matrix:	AQ - Ground Water	**Date Received:**	12/14/10
Method:	SW846 8082A SW846 3510C	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XX053893.D	1	12/20/10	NJ	12/16/10	OP35432	GXX807
Run #2							

	Initial Volume	Final Volume
Run #1	1050 ml	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.48	0.19	ug/l	
11104-28-2	Aroclor 1221	ND	0.48	0.24	ug/l	
11141-16-5	Aroclor 1232	ND	0.48	0.24	ug/l	
53469-21-9	Aroclor 1242	ND	0.48	0.19	ug/l	
12672-29-6	Aroclor 1248	ND	0.48	0.19	ug/l	
11097-69-1	Aroclor 1254	ND	0.48	0.19	ug/l	
11096-82-5	Aroclor 1260	ND	0.48	0.19	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	93%		38-127%
2051-24-3	Decachlorobiphenyl	56%		25-137%

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:	SWMU8-DP03		
Lab Sample ID:	F78699-3	**Date Sampled:**	12/13/10
Matrix:	AQ - Ground Water	**Date Received:**	12/14/10
Method:	SW846 8015C SW846 3510C	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LL34562.D	1	12/21/10	MV	12/15/10	OP35414	GLL1307
Run #2							

	Initial Volume	Final Volume
Run #1	1050 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C22)	ND	0.24	0.095	mg/l	
	TPH (> C22-C36)	ND	0.24	0.095	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	94%		42-114%

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:	SWMU8-DP03		
Lab Sample ID:	F78699-3	**Date Sampled:**	12/13/10
Matrix:	AQ - Ground Water	**Date Received:**	12/14/10
		Percent Solids:	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	25 U	200	25	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Antimony [a]	2.0 U	12	2.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Arsenic	2.0 U	10	2.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Barium	30.2 J	200	5.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Beryllium	1.0 U	4.0	1.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Cadmium	1.0 U	5.0	1.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Calcium	571000	1000	100	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Chromium	1.0 U	10	1.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Cobalt	1.0 U	50	1.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Copper	4.5 J	25	2.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Iron	95.9 J	300	35	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Lead	1.0 U	5.0	1.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Magnesium	56600	5000	100	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Manganese	16.6	15	1.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Mercury	0.050 U	1.0	0.050	ug/l	1	12/23/10	12/23/10	LM	SW846 7470A [2]	SW846 7470A [4]
Nickel	2.0 U	40	2.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Potassium	3980 J	10000	500	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Selenium	2.0 U	10	2.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Silver	1.0 U	10	1.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Sodium	70200	10000	1900	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Thallium	1.9 U	10	1.9	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Vanadium	18.7 J	50	1.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Zinc	17.3 J	20	5.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA8594
(2) Instrument QC Batch: MA8605
(3) Prep QC Batch: MP19698
(4) Prep QC Batch: MP19732

(a) Elevated RL due to instrument baseline drift.

RL = Reporting Limit
MDL = Method Detection Limit

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

Report of Analysis

Client Sample ID:	SWMU8-DP03		
Lab Sample ID:	F78699-3	**Date Sampled:**	12/13/10
Matrix:	AQ - Ground Water	**Date Received:**	12/14/10
		Percent Solids:	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	2440	1000	100	mg/l	10	12/17/10 13:35	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

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

Report of Analysis

Client Sample ID:	SWMU8-DP17		
Lab Sample ID:	F78699-4	**Date Sampled:**	12/13/10
Matrix:	AQ - Ground Water	**Date Received:**	12/14/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J061890.D	1	12/22/10	KW	n/a	n/a	VJ3445
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

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	3.0	ug/l	
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.25	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.22	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.20	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.26	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.22	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.27	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	7.3	1.0	0.22	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.22	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.20	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.2	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.25	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.25	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.23	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.50	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.25	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.20	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.44	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.26	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.20	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:	SWMU8-DP17		
Lab Sample ID:	F78699-4	**Date Sampled:**	12/13/10
Matrix:	AQ - Ground Water	**Date Received:**	12/14/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
541-73-1	m-Dichlorobenzene	ND	1.0	0.20	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.25	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.23	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.35	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
591-78-6	2-Hexanone	ND	10	4.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.80	ug/l	
110-54-3	Hexane	ND	2.0	0.59	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.21	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.50	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.50	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.25	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	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	0.34	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.20	ug/l	
100-42-5	Styrene	ND	1.0	0.20	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	0.20	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.23	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.22	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	0.30	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	0.27	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.21	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.25	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.26	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.22	ug/l	
108-05-4	Vinyl Acetate	ND	10	2.0	ug/l	
	m,p-Xylene	ND	2.0	0.32	ug/l	
95-47-6	o-Xylene	ND	1.0	0.20	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:	SWMU8-DP17		
Lab Sample ID:	F78699-4	**Date Sampled:**	12/13/10
Matrix:	AQ - Ground Water	**Date Received:**	12/14/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

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	94%		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:	SWMU8-DP17		
Lab Sample ID:	F78699-4	**Date Sampled:**	12/13/10
Matrix:	AQ - Ground Water	**Date Received:**	12/14/10
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X015706.D	1	12/21/10	NAF	12/16/10	OP35426	SX784
Run #2							

	Initial Volume	Final Volume
Run #1	1030 ml	1.0 ml
Run #2		

ABN Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	49	9.7	ug/l	
95-57-8	2-Chlorophenol	ND	4.9	0.49	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	4.9	0.49	ug/l	
120-83-2	2,4-Dichlorophenol	ND	4.9	0.49	ug/l	
105-67-9	2,4-Dimethylphenol	ND	4.9	1.1	ug/l	
51-28-5	2,4-Dinitrophenol	ND	24	9.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	9.7	1.9	ug/l	
95-48-7	2-Methylphenol	ND	4.9	0.52	ug/l	
	3&4-Methylphenol	ND	4.9	1.1	ug/l	
88-75-5	2-Nitrophenol	ND	4.9	0.52	ug/l	
100-02-7	4-Nitrophenol	ND	24	4.9	ug/l	
87-86-5	Pentachlorophenol	ND	24	5.2	ug/l	
108-95-2	Phenol	ND	4.9	0.49	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	4.9	0.49	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	4.9	0.49	ug/l	
83-32-9	Acenaphthene	ND	4.9	0.49	ug/l	
208-96-8	Acenaphthylene	ND	4.9	0.49	ug/l	
62-53-3	Aniline	ND	4.9	0.50	ug/l	
120-12-7	Anthracene	ND	4.9	0.49	ug/l	
92-87-5	Benzidine	ND	24	4.6	ug/l	
56-55-3	Benzo(a)anthracene	ND	4.9	0.49	ug/l	
50-32-8	Benzo(a)pyrene	ND	4.9	0.49	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	4.9	0.49	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	4.9	0.49	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	4.9	0.49	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	4.9	0.49	ug/l	
85-68-7	Butyl benzyl phthalate	ND	4.9	1.1	ug/l	
100-51-6	Benzyl Alcohol	ND	4.9	0.97	ug/l	
91-58-7	2-Chloronaphthalene	ND	4.9	0.49	ug/l	
106-47-8	4-Chloroaniline	ND	4.9	0.49	ug/l	
86-74-8	Carbazole	ND	4.9	0.49	ug/l	
218-01-9	Chrysene	ND	4.9	0.49	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:	SWMU8-DP17		
Lab Sample ID:	F78699-4	**Date Sampled:**	12/13/10
Matrix:	AQ - Ground Water	**Date Received:**	12/14/10
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

ABN Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
111-91-1	bis(2-Chloroethoxy)methane	ND	4.9	0.49	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	4.9	0.52	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	4.9	0.52	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	4.9	0.49	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	4.9	0.97	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	4.9	0.49	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	4.9	0.97	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	4.9	0.97	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	4.9	0.49	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	4.9	0.49	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	9.7	0.97	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	4.9	0.50	ug/l	
132-64-9	Dibenzofuran	ND	4.9	0.49	ug/l	
84-74-2	Di-n-butyl phthalate	ND	4.9	0.84	ug/l	
117-84-0	Di-n-octyl phthalate	ND	4.9	1.1	ug/l	
84-66-2	Diethyl phthalate	ND	4.9	1.1	ug/l	
131-11-3	Dimethyl phthalate	ND	4.9	0.96	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	4.9	1.1	ug/l	
206-44-0	Fluoranthene	ND	4.9	0.49	ug/l	
86-73-7	Fluorene	ND	4.9	0.49	ug/l	
118-74-1	Hexachlorobenzene	ND	4.9	0.54	ug/l	
87-68-3	Hexachlorobutadiene	ND	4.9	0.97	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	9.7	1.8	ug/l	
67-72-1	Hexachloroethane	ND	4.9	0.97	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.9	0.49	ug/l	
78-59-1	Isophorone	ND	4.9	0.49	ug/l	
90-12-0	1-Methylnaphthalene	ND	4.9	0.49	ug/l	
91-57-6	2-Methylnaphthalene	ND	4.9	0.55	ug/l	
88-74-4	2-Nitroaniline	ND	4.9	0.49	ug/l	
99-09-2	3-Nitroaniline	ND	4.9	0.49	ug/l	
100-01-6	4-Nitroaniline	ND	4.9	0.49	ug/l	
91-20-3	Naphthalene	ND	4.9	0.78	ug/l	
98-95-3	Nitrobenzene	ND	4.9	0.57	ug/l	
62-75-9	N-Nitrosodimethylamine	ND	4.9	2.3	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	4.9	0.49	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	4.9	0.97	ug/l	
85-01-8	Phenanthrene	ND	4.9	0.49	ug/l	
129-00-0	Pyrene	ND	4.9	0.49	ug/l	
110-86-1	Pyridine	ND	9.7	1.6	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	4.9	0.49	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:	SWMU8-DP17		
Lab Sample ID:	F78699-4	**Date Sampled:**	12/13/10
Matrix:	AQ - Ground Water	**Date Received:**	12/14/10
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

ABN Full List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	40%		14-62%
4165-62-2	Phenol-d5	25%		10-40%
118-79-6	2,4,6-Tribromophenol	71%		33-118%
4165-60-0	Nitrobenzene-d5	67%		42-108%
321-60-8	2-Fluorobiphenyl	71%		40-106%
1718-51-0	Terphenyl-d14	83%		39-121%

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:	SWMU8-DP17		
Lab Sample ID:	F78699-4	**Date Sampled:**	12/13/10
Matrix:	AQ - Ground Water	**Date Received:**	12/14/10
Method:	SW846 8015C	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	CD101508.D	1	12/15/10	WV	n/a	n/a	GCD4181
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	0.10	0.050	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	80%		57-129%
98-08-8	aaa-Trifluorotoluene	85%		58-120%

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:	SWMU8-DP17		
Lab Sample ID:	F78699-4	**Date Sampled:**	12/13/10
Matrix:	AQ - Ground Water	**Date Received:**	12/14/10
Method:	SW846 8082A SW846 3510C	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XX053894.D	1	12/20/10	NJ	12/16/10	OP35432	GXX807
Run #2							

	Initial Volume	Final Volume
Run #1	1050 ml	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.48	0.19	ug/l	
11104-28-2	Aroclor 1221	ND	0.48	0.24	ug/l	
11141-16-5	Aroclor 1232	ND	0.48	0.24	ug/l	
53469-21-9	Aroclor 1242	ND	0.48	0.19	ug/l	
12672-29-6	Aroclor 1248	ND	0.48	0.19	ug/l	
11097-69-1	Aroclor 1254	ND	0.48	0.19	ug/l	
11096-82-5	Aroclor 1260	ND	0.48	0.19	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	85%		38-127%
2051-24-3	Decachlorobiphenyl	63%		25-137%

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:	SWMU8-DP17		
Lab Sample ID:	F78699-4	**Date Sampled:**	12/13/10
Matrix:	AQ - Ground Water	**Date Received:**	12/14/10
Method:	SW846 8015C SW846 3510C	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LL34565.D	1	12/21/10	MV	12/15/10	OP35414	GLL1307
Run #2							

	Initial Volume	Final Volume
Run #1	1030 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C22)	ND	0.24	0.097	mg/l	
	TPH (> C22-C36)	ND	0.24	0.097	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	98%		42-114%

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:	SWMU8-DP17		
Lab Sample ID:	F78699-4	**Date Sampled:**	12/13/10
Matrix:	AQ - Ground Water	**Date Received:**	12/14/10
		Percent Solids:	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	25 U	200	25	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Antimony [a]	4.3 J	12	2.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Arsenic	2.2 J	10	2.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Barium	27.7 J	200	5.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Beryllium	1.0 U	4.0	1.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Cadmium	1.0 U	5.0	1.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Calcium	573000	1000	100	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Chromium	1.0 U	10	1.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Cobalt	1.0 U	50	1.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Copper	3.3 J	25	2.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Iron	35 U	300	35	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Lead	1.0 U	5.0	1.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Magnesium	79100	5000	100	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Manganese	376	15	1.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Mercury	0.050 U	1.0	0.050	ug/l	1	12/23/10	12/23/10	LM	SW846 7470A [2]	SW846 7470A [4]
Nickel	2.6 J	40	2.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Potassium	7780 J	10000	500	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Selenium	2.0 U	10	2.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Silver	1.0 U	10	1.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Sodium	63500	10000	1900	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Thallium	1.9 U	10	1.9	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Vanadium	34.2 J	50	1.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Zinc	8.2 J	20	5.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA8594
(2) Instrument QC Batch: MA8605
(3) Prep QC Batch: MP19698
(4) Prep QC Batch: MP19732

(a) Elevated RL due to instrument baseline drift.

RL = Reporting Limit
MDL = Method Detection Limit

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

Report of Analysis

Client Sample ID:	SWMU8-DP17		
Lab Sample ID:	F78699-4	**Date Sampled:**	12/13/10
Matrix:	AQ - Ground Water	**Date Received:**	12/14/10
		Percent Solids:	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	241	100	10	mg/l	1	12/17/10 13:35	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

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

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	F78699-5	**Date Sampled:**	12/13/10
Matrix:	AQ - Trip Blank Water	**Date Received:**	12/14/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	J061891.D	1	12/22/10	KW	n/a	n/a	VJ3445
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

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	3.0	ug/l	
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.25	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.22	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.20	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.26	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.22	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.27	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.22	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.22	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.20	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.2	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.25	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.25	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.23	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.50	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.25	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.20	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.44	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.26	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.20	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:	TRIP BLANK		
Lab Sample ID:	F78699-5	**Date Sampled:**	12/13/10
Matrix:	AQ - Trip Blank Water	**Date Received:**	12/14/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
541-73-1	m-Dichlorobenzene	ND	1.0	0.20	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.25	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.23	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.35	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
591-78-6	2-Hexanone	ND	10	4.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.80	ug/l	
110-54-3	Hexane	ND	2.0	0.59	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.21	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.50	ug/l	
74-87-3	Methyl chloride	0.95	2.0	0.50	ug/l	J
74-95-3	Methylene bromide	ND	2.0	0.25	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	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	0.34	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.20	ug/l	
100-42-5	Styrene	ND	1.0	0.20	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	0.20	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.23	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.22	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	0.30	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	0.27	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.21	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.25	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.26	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.22	ug/l	
108-05-4	Vinyl Acetate	ND	10	2.0	ug/l	
	m,p-Xylene	ND	2.0	0.32	ug/l	
95-47-6	o-Xylene	ND	1.0	0.20	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:	TRIP BLANK		
Lab Sample ID:	F78699-5	**Date Sampled:**	12/13/10
Matrix:	AQ - Trip Blank Water	**Date Received:**	12/14/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		87-116%
17060-07-0	1,2-Dichloroethane-D4	99%		76-127%
2037-26-5	Toluene-D8	94%		86-112%
460-00-4	4-Bromofluorobenzene	97%		84-120%

(a) Sample vial(s) contained significant headspace; reported results are considered minimum values.

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:	TRIP BLANK		
Lab Sample ID:	F78699-6	**Date Sampled:**	12/13/10
Matrix:	AQ - Trip Blank Water	**Date Received:**	12/14/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	J061892.D	1	12/22/10	KW	n/a	n/a	VJ3445
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

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	3.0	ug/l	
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.25	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.22	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.20	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.26	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.22	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.27	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.22	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.22	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.20	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.2	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.25	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.25	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.23	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.50	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.25	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.20	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.44	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.26	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.20	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:	TRIP BLANK		
Lab Sample ID:	F78699-6	**Date Sampled:**	12/13/10
Matrix:	AQ - Trip Blank Water	**Date Received:**	12/14/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
541-73-1	m-Dichlorobenzene	ND	1.0	0.20	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.25	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.23	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.35	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
591-78-6	2-Hexanone	ND	10	4.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.80	ug/l	
110-54-3	Hexane	ND	2.0	0.59	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.21	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.50	ug/l	
74-87-3	Methyl chloride	0.53	2.0	0.50	ug/l	J
74-95-3	Methylene bromide	ND	2.0	0.25	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	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	0.34	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.20	ug/l	
100-42-5	Styrene	ND	1.0	0.20	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	0.20	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.23	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.22	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	0.30	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	0.27	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.21	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.25	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.26	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.22	ug/l	
108-05-4	Vinyl Acetate	ND	10	2.0	ug/l	
	m,p-Xylene	ND	2.0	0.32	ug/l	
95-47-6	o-Xylene	ND	1.0	0.20	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:	TRIP BLANK		
Lab Sample ID:	F78699-6	**Date Sampled:**	12/13/10
Matrix:	AQ - Trip Blank Water	**Date Received:**	12/14/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		87-116%
17060-07-0	1,2-Dichloroethane-D4	99%		76-127%
2037-26-5	Toluene-D8	94%		86-112%
460-00-4	4-Bromofluorobenzene	98%		84-120%

(a) Sample vial(s) contained significant headspace; reported results are considered minimum values.

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:	TRIP BLANK		
Lab Sample ID:	F78699-7	**Date Sampled:**	12/13/10
Matrix:	AQ - Trip Blank Water	**Date Received:**	12/14/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	J061893.D	1	12/22/10	KW	n/a	n/a	VJ3445
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

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	3.0	ug/l	
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.25	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.22	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.20	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.26	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.22	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.27	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.22	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.22	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.20	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.2	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.25	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.25	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.23	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.50	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.25	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.20	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.44	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.26	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.20	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:	TRIP BLANK		
Lab Sample ID:	F78699-7	**Date Sampled:**	12/13/10
Matrix:	AQ - Trip Blank Water	**Date Received:**	12/14/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
541-73-1	m-Dichlorobenzene	ND	1.0	0.20	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.25	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.23	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.35	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
591-78-6	2-Hexanone	ND	10	4.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.80	ug/l	
110-54-3	Hexane	ND	2.0	0.59	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.21	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.50	ug/l	
74-87-3	Methyl chloride	0.83	2.0	0.50	ug/l	J
74-95-3	Methylene bromide	ND	2.0	0.25	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	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	0.34	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.20	ug/l	
100-42-5	Styrene	ND	1.0	0.20	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	0.20	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.23	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.22	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	0.30	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	0.27	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.21	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.25	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.26	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.22	ug/l	
108-05-4	Vinyl Acetate	ND	10	2.0	ug/l	
	m,p-Xylene	ND	2.0	0.32	ug/l	
95-47-6	o-Xylene	ND	1.0	0.20	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:	TRIP BLANK		
Lab Sample ID:	F78699-7	**Date Sampled:**	12/13/10
Matrix:	AQ - Trip Blank Water	**Date Received:**	12/14/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		87-116%
17060-07-0	1,2-Dichloroethane-D4	99%		76-127%
2037-26-5	Toluene-D8	91%		86-112%
460-00-4	4-Bromofluorobenzene	97%		84-120%

(a) Sample vial(s) contained significant headspace; reported results are considered minimum values.

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:	TRIP BLANK		
Lab Sample ID:	F78699-8	**Date Sampled:**	12/13/10
Matrix:	AQ - Trip Blank Water	**Date Received:**	12/14/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	J061894.D	1	12/22/10	KW	n/a	n/a	VJ3445
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

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	3.0	ug/l	
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.25	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.22	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.20	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.26	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.22	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.27	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.22	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.22	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.20	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.2	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.25	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.25	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.23	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.50	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.25	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.20	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.44	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.26	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.20	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:	TRIP BLANK		
Lab Sample ID:	F78699-8	**Date Sampled:**	12/13/10
Matrix:	AQ - Trip Blank Water	**Date Received:**	12/14/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
541-73-1	m-Dichlorobenzene	ND	1.0	0.20	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.25	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.23	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.35	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
591-78-6	2-Hexanone	ND	10	4.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.80	ug/l	
110-54-3	Hexane	ND	2.0	0.59	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.21	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.50	ug/l	
74-87-3	Methyl chloride	0.93	2.0	0.50	ug/l	J
74-95-3	Methylene bromide	ND	2.0	0.25	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	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	0.34	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.20	ug/l	
100-42-5	Styrene	ND	1.0	0.20	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	0.20	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.23	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.22	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	0.30	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	0.27	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.21	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.25	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.26	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.22	ug/l	
108-05-4	Vinyl Acetate	ND	10	2.0	ug/l	
	m,p-Xylene	ND	2.0	0.32	ug/l	
95-47-6	o-Xylene	ND	1.0	0.20	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:	TRIP BLANK		
Lab Sample ID:	F78699-8	**Date Sampled:**	12/13/10
Matrix:	AQ - Trip Blank Water	**Date Received:**	12/14/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		87-116%
17060-07-0	1,2-Dichloroethane-D4	99%		76-127%
2037-26-5	Toluene-D8	94%		86-112%
460-00-4	4-Bromofluorobenzene	98%		84-120%

(a) Sample vial(s) contained significant headspace; reported results are considered minimum values.

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

Southeast ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Certification Exceptions
- Chain of Custody

NATIONVIEW

F78699

Chain of Custody and Analytical Request

Page: 1 of 1
Project No: 8080014.03.020
COC Number(1): 12132010-03
LIMS Number:

Facility/Base I.D.: Holloman AFB, New Mexico
Project/Site Name: SWMU 8, RFI Investigation
Client Name: USACE - Albuquerque District
Collected by: Dustin McNeil/ Zack Beck

Field Sample ID (30 Characters Max)	ERPIMS LOCID (15 Characters Max)	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hhmm)	Sample Depth (beginning - ending)	SA Code (2)	Sample Number (3)	Sample Matrix (4)	Number of containers	TDS (2540C)	VOCs (8260B)	SVOCs (8270C)	TPH-GRO (8015B)	TPH-DRO/ORO (8015B)	TAL Metals (6010B/7470A)	PCBs (8082)	Ambient Blank Lot Control Number	Equipment Blank Lot Control Number	Trip Blank Lot Control Number	Cooler ID
SWMU8-DP13 (1)	8-DP13	13122010	1105	-	N	1	WG	14	X	X	X	X	X	X	X				W
Trip Blank (5)				-	TB	1	WQ	2		X									W
				-															
				-															
				-															
				-															
				-															
				-															
				-															
				-															
				-															

Sample Analysis Requested (5)

Quality Assurance Samples (6)

COMMENTS:

Custody Transfers Prior to Receipt by Laboratory

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1. [signature]	12/3/10	1300	1. [signature]		1400
2.			2.		
3.			3.		

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab:
Method of Shipment: FedEx Express
Analytical Lab: Accutest
Lab Recipient:
Shipped No.:
Airbill Number: 7965 9462 0030
Delivery Location: Orlando, FL
Delivery Date/Time:

1.) Chain of Custody Number = date collected + custody number (e.g. 09-02-1999-01)
2.) Sample Type (SA) Codes: N = Normal Sample, TB = Trip Blank (-c) Sample, FD = Field Duplicate (-a) Samples, FR = Field Replicate (-b) Samples, EB = Equipment Blank (-d) Samples, MS = Matrix Spike, SD = Matrix Spike Duplicate, AB = Ambient Blank (-e)
3.) Sample Number: Unique sample number collected from a particular location per day. (e.g. Groundwater sample collected from MW-1 on 10/10/99 = 01, if sampled again on 10/10/99 = 02, etc.)
4.) Matrix Codes: GS = Soil Gas, WG = Groundwater, WS = Surface Water, SO = Soil, SE = Sediment, SL = Sludge, SS = Surface Soil Samples, WQ = Aqueous Blank Samples (trip, equipment, ambient, etc), SQ = Soil Blanks
5.) Sample Analysis Requested: Analytical method requested and number of containers provided for each.
6.) Quality assurance samples are assigned by date (ddmmyy) and the sample number associated with the sample (01, 02, etc) (e.g. Equipment blank collected in association with MW-1 on 10/10/99 will be designated 10109901 in the Equipment Blank Lot Control

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F78699: Chain of Custody
Page 1 of 5

NATIONVIEW

F78699

Chain of Custody and Analytical Request

Page: 1 of 1

Project No: 8080014.03.020

COC Number(1): 12132010 02

LIMS Number:

Facility/Base I.D.: Holloman AFB, New Mexico

Project/Site Name: SWMU 8, RFI Investigation

Client Name: USACE - Albuquerque District

Collected by: Dustin McNeil/ Zack Beck

Field Sample ID (30 Characters Max)	ERPIMS LOCID (15 Characters Max)	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hhmm)	Sample Depth (beginning - ending)	SA Code (2)	Sample Number (3)	Sample Matrix (4)	Number of containers	TDS (2540C)	VOCs (8260B)	SVOCs (8270C)	TPH-GRO (8015B)	TPH-DRO/ORO (8015B)	TAL Metals (6010B/7470A)	PCBs (8082)	Ambient Blank Lot Control Number	Equipment Blank Lot Control Number	Trip Blank Lot Control Number	Cooler ID
SWMU8-DP02 ②	8-DP02	13122010	0945	-	N	1	WG	14	X	X	X	X	X	X	X				
Trip Blank ⑥				-	TB	1	WQ	2		X									2
				-															2
				-															
				-															
				-															
				-															
				-															
				-															
				-															
				-															

Sample Analysis Requested (5)

Quality Assurance Samples (6)

COMMENTS:

Custody Transfers Prior to Receipt by Laboratory

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1.	[signature]	12/13/10	1300	[signature]	12/14/10	1000
2.						
3.						

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab:

Method of Shipment: FedEx Express

Analytical Lab: Accutest

Lab Recipient:

Shipped No.:

Airbill Number: 7942 0998 4550

Delivery Location: Orlando, FL

Delivery Date/Time:

1.) Chain of Custody Number = date collected + custody number (e.g. 09-02-1999-01)

2.) Sample Type (SA) Codes: N = Normal Sample, TB = Trip Blank (-c) Sample, FD = Field Duplicate (-a) Samples, FR = Field Replicate (-b) Samples, EB = Equipment Blank (-d) Samples, MS = Matrix Spike, SD = Matrix Spike Duplicate, AB = Ambient Blank (-e)

3.) Sample Number: Unique sample number collected from a particular location per day. (e.g. Groundwater sample collected from MW-1 on 10/10/99 = 01, if sampled again on 10/10/99 = 02, etc.)

4.) Matrix Codes: GS = Soil Gas, WG = Groundwater, WS = Surface Water, SO = Soil, SE = Sediment, SL = Sludge, SS = Surface Soil Samples, WQ = Aqueous Blank Samples (trip, equipment, ambient, etc), SQ = Soil Blanks

5.) Sample Analysis Requested: Analytical method requested and number of containers provided for each.

6.) Quality assurance samples are assigned by date (ddmmyy) and the sample number associated with the sample (01, 02, etc) (e.g. Equipment blank collected in association with MW-1 on 10/10/99 will be designated 10109901 in the Equipment Blank Lot Control

16

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F78699: Chain of Custody

Page 2 of 5

NATIONVIEW

F78699

Chain of Custody and Analytical Request

Page: 1 of 1

Project No: 8080014.03.020

COC Number(1): 12132010-04

LIMS Number:

Facility/Base I.D.: Holloman AFB, New Mexico

Project/Site Name: SWMU 8, RFI Investigation

Client Name: USACE - Albuquerque District

Collected by: Dustin McNeil/ Zack Beck

Field Sample ID (30 Characters Max)	ERPIMS LOCID (15 Characters Max)	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hhmm)	Sample Depth (beginning - ending)	SA Code (2)	Sample Number (3)	Sample Matrix (4)	Number of containers	TDS (2540C)	VOCs (8260B)	SVOCs (8270C)	TPH-GRO (8015B)	TPH-DRO/ORO (8015B)	TAL Metals (6010B/7470A)	PCBs (8082)	Ambient Blank Lot Control Number	Equipment Blank Lot Control Number	Trip Blank Lot Control Number	Cooler ID
SWMU8-DP03 ③	8-DP03	13-12-2010	1120	-	N	1	WG	14	X	X	X	X	X	X	X				4
Trip Blank ⑦				-	TB	1	WQ	2		X									4
				-															
				-															
				-															
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				-															
				-															
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				-															
				-															

Sample Analysis Requested (5)

Quality Assurance Samples (6)

COMMENTS:

Custody Transfers Prior to Receipt by Laboratory

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1. [signature]	12/13/10	1300	1. FX		
2. FX			2. [signature]	12/14/10	1000
3.			3.		

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab:

Method of Shipment: FedEx Express

Analytical Lab: Accutest

Lab Recipient:

Shipped No.:

Airbill Number: 7965 4464 4765

Delivery Location: Orlando, FL

Delivery Date/Time:

1.) Chain of Custody Number = date collected + custody number (e.g. 09-02-1999-01)

2.) Sample Type (SA) Codes: N = Normal Sample, TB = Trip Blank (-c) Sample, FD = Field Duplicate (-a) Samples, FR = Field Replicate (-b) Samples, EB = Equipment Blank (-d) Samples, MS = Matrix Spike, SD = Matrix Spike Duplicate, AB = Ambient Blank (-e)

3.) Sample Number: Unique sample number collected from a particular location per day. (e.g. Groundwater sample collected from MW-1 on 10/10/99 = 01, if sampled again on 10/10/99 = 02, etc.)

4.) Matrix Codes: GS = Soil Gas, WG = Groundwater, WS = Surface Water, SO = Soil, SE = Sediment, SL = Sludge, SS = Surface Soil Samples, WQ = Aqueous Blank Samples (trip, equipment, ambient, etc), SQ = Soil Blanks

5.) Sample Analysis Requested: Analytical method requested and number of containers provided for each.

6.) Quality assurance samples are assigned by date (ddmmyy) and the sample number associated with the sample (01, 02, etc) (e.g. Equipment blank collected in association with MW-1 on 10/10/99 will be designated 10109901 in the Equipment Blank Lot Control

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F78699: Chain of Custody

Page 3 of 5

NATIONVIEW

Chain of Custody and Analytical Request

F78699

Page: 1 of 1

Project No: 8080014.03.020

COC Number(1): 12132010-01

LIMS Number:

Facility/Base I.D.: Holloman AFB, New Mexico

Project/Site Name: SWMU 8, RFI Investigation

Client Name: USACE - Albuquerque District

Collected by: Dustin McNeil/ Zack Beck

Field Sample ID (30 Characters Max)	ERPIMS LOCID (15 Characters Max)	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hhmm)	Sample Depth (beginning - ending)	SA Code (2)	Sample Number (3)	Sample Matrix (4)	Number of containers	TDS (2540C)	VOCs (8260B)	SVOCs (8270C)	TPH-GRO (8015B)	TPH-DRO/ORO (8015B)	TAL Metals (6010B/7470A)	PCBs (8082)	Ambient Blank Lot Control Number	Equipment Blank Lot Control Number	Trip Blank Lot Control Number	Cooler ID
SWMU8-DP17 (4)	8-DP17	13-12-2010	0735	-	N	1	WG	14	X	X	X	X	X	X	X				
Trip Blank (8)				-	TB	1	WQ	2		X									1
				-															1
				-															
				-															
				-															
				-															
				-															
				-															
				-															
				-															
				-															

Sample Analysis Requested (5)

Quality Assurance Samples (6)

COMMENTS:

Custody Transfers Prior to Receipt by Laboratory

Relinquished By (Signed)	Date	Time	Received by (Signed)	Date	Time
1. [signature]	12/13/10	1500	1. [signature]	12/14/10	1300
2. [signature]			2.		
3.			3.		

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab:

Method of Shipment: FedEx Express

Analytical Lab: Accutest

Lab Recipient:

Shipped No.:

Airbill Number: 7942 1013 0336

Delivery Location: Orlando, FL

Delivery Date/Time:

1.) Chain of Custody Number = date collected + custody number (e.g. 09-02-1999-01)

2.) Sample Type (SA) Codes: N = Normal Sample, TB = Trip Blank (-c) Sample, FD = Field Duplicate (-a) Samples, FR = Field Replicate (-b) Samples, EB = Equipment Blank (-d) Samples, MS = Matrix Spike, SD = Matrix Spike Duplicate, AB = Ambient Blank (-e)

3.) Sample Number: Unique sample number collected from a particular location per day. (e.g. Groundwater sample collected from MW-1 on 10/10/99 = 01, if sampled again on 10/10/99 = 02, etc.)

4.) Matrix Codes: GS = Soil Gas, WG = Groundwater, WS = Surface Water, SO = Soil, SE = Sediment, SL = Sludge, SS = Surface Soil Samples, WQ = Aqueous Blank Samples (trip, equipment, ambient, etc), SQ = Soil Blanks

5.) Sample Analysis Requested: Analytical method requested and number of containers provided for each.

6.) Quality assurance samples are assigned by date (ddmmyy) and the sample number associated with the sample (01, 02, etc) (e.g. Equipment blank collected in association with MW-1 on 10/10/99 will be designated 10109901 in the Equipment Blank Lot Control

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F78699: Chain of Custody

Page 4 of 5

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: F78699 CLIENT: Bhate PROJECT: SWMU 8

DATE/TIME RECEIVED: 12-14-10 1000 {MM/DD/YY 24:00} NUMBER OF COOLERS RECEIVED: 4

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

AIRBILL NUMBERS: 7942 1013 0336

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 1 CORR. FACTOR -2
- [ ] OBSERVED TEMPS: 2.0 3.0 1.8 2.6
- [ ] CORRECTED TEMPS: 1.8 2.8 1.6 2.4

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 ET 12-14-10 REVIEWER SIGNATURE/DATE [signature] 12/14/10

NF 10/09 RECEIPT CONFIRMATION 100609 (2).xls

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4

F78699: Chain of Custody

Page 5 of 5

Southeast ACCUTEST LABORATORIES

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: F78699
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ3445-MB	J061873.D	1	12/22/10	KW	n/a	n/a	VJ3445

The QC reported here applies to the following samples: **Method:** SW846 8260B

F78699-1, F78699-2, F78699-3, F78699-4, F78699-5, F78699-6, F78699-7, F78699-8

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	3.0	ug/l	
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.25	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.22	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.20	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.26	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.22	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.27	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.22	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.22	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.20	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.2	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.25	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.25	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.23	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.50	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.25	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.20	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.44	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.26	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.20	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.25	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.23	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.35	ug/l	

Method Blank Summary

Job Number: F78699
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ3445-MB	J061873.D	1	12/22/10	KW	n/a	n/a	VJ3445

The QC reported here applies to the following samples: **Method:** SW846 8260B

F78699-1, F78699-2, F78699-3, F78699-4, F78699-5, F78699-6, F78699-7, F78699-8

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
591-78-6	2-Hexanone	ND	10	4.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.80	ug/l	
110-54-3	Hexane	ND	2.0	0.59	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.21	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.50	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.50	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.25	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	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	0.34	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.20	ug/l	
100-42-5	Styrene	ND	1.0	0.20	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	0.20	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.23	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.22	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	0.30	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	0.27	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.21	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.25	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.26	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.22	ug/l	
108-05-4	Vinyl Acetate	ND	10	2.0	ug/l	
	m,p-Xylene	ND	2.0	0.32	ug/l	
95-47-6	o-Xylene	ND	1.0	0.20	ug/l	

Method Blank Summary

Job Number: F78699
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ3445-MB	J061873.D	1	12/22/10	KW	n/a	n/a	VJ3445

The QC reported here applies to the following samples: **Method:** SW846 8260B

F78699-1, F78699-2, F78699-3, F78699-4, F78699-5, F78699-6, F78699-7, F78699-8

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	104%	87-116%
17060-07-0	1,2-Dichloroethane-D4	101%	76-127%
2037-26-5	Toluene-D8	93%	86-112%
460-00-4	4-Bromofluorobenzene	98%	84-120%

Blank Spike Summary

Job Number: F78699
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ3445-BS	J061872.D	1	12/22/10	KW	n/a	n/a	VJ3445

The QC reported here applies to the following samples: **Method:** SW846 8260B

F78699-1, F78699-2, F78699-3, F78699-4, F78699-5, F78699-6, F78699-7, F78699-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	146	117	59-134
107-02-8	Acrolein	125	108	86	33-157
107-13-1	Acrylonitrile	125	127	102	62-124
71-43-2	Benzene	25	26.9	108	83-124
108-86-1	Bromobenzene	25	28.6	114	83-115
74-97-5	Bromochloromethane	25	26.3	105	78-112
75-27-4	Bromodichloromethane	25	27.4	110	76-116
75-25-2	Bromoform	25	25.1	100	68-128
104-51-8	n-Butylbenzene	25	29.3	117	84-124
135-98-8	sec-Butylbenzene	25	29.9	120	86-127
98-06-6	tert-Butylbenzene	25	29.4	118	83-126
108-90-7	Chlorobenzene	25	28.8	115	87-115
75-00-3	Chloroethane	25	26.1	104	54-166
67-66-3	Chloroform	25	27.3	109	85-123
95-49-8	o-Chlorotoluene	25	29.0	116	84-121
106-43-4	p-Chlorotoluene	25	28.6	114	84-120
110-75-8	2-Chloroethyl vinyl ether	125	147	118	63-125
75-15-0	Carbon disulfide	25	25.1	100	67-147
56-23-5	Carbon tetrachloride	25	28.8	115	74-139
75-34-3	1,1-Dichloroethane	25	26.5	106	82-127
75-35-4	1,1-Dichloroethylene	25	26.1	104	75-133
563-58-6	1,1-Dichloropropene	25	27.7	111	87-127
96-12-8	1,2-Dibromo-3-chloropropane	25	26.3	105	61-118
106-93-4	1,2-Dibromoethane	25	27.8	111	80-115
107-06-2	1,2-Dichloroethane	25	26.5	106	76-122
78-87-5	1,2-Dichloropropane	25	26.9	108	81-120
142-28-9	1,3-Dichloropropane	25	27.2	109	81-113
594-20-7	2,2-Dichloropropane	25	27.4	110	77-138
124-48-1	Dibromochloromethane	25	28.5	114	74-116
75-71-8	Dichlorodifluoromethane	25	27.4	110	34-158
156-59-2	cis-1,2-Dichloroethylene	25	27.6	110	81-114
10061-01-5	cis-1,3-Dichloropropene	25	27.5	110	83-119
541-73-1	m-Dichlorobenzene	25	25.4	102	86-115
95-50-1	o-Dichlorobenzene	25	26.1	104	85-115
106-46-7	p-Dichlorobenzene	25	26.0	104	87-113
156-60-5	trans-1,2-Dichloroethylene	25	25.9	104	82-126

Blank Spike Summary

Job Number: F78699
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ3445-BS	J061872.D	1	12/22/10	KW	n/a	n/a	VJ3445

The QC reported here applies to the following samples: **Method:** SW846 8260B

F78699-1, F78699-2, F78699-3, F78699-4, F78699-5, F78699-6, F78699-7, F78699-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-02-6	trans-1,3-Dichloropropene	25	29.7	119	87-123
100-41-4	Ethylbenzene	25	26.0	104	87-118
591-78-6	2-Hexanone	125	137	110	58-125
87-68-3	Hexachlorobutadiene	25	29.2	117	71-133
110-54-3	Hexane	25	28.0	112	71-134
98-82-8	Isopropylbenzene	25	29.7	119	87-131
99-87-6	p-Isopropyltoluene	25	30.2	121	83-125
108-10-1	4-Methyl-2-pentanone	125	133	106	62-125
74-83-9	Methyl bromide	25	25.5	102	55-151
74-87-3	Methyl chloride	25	25.5	102	55-173
74-95-3	Methylene bromide	25	26.9	108	81-116
75-09-2	Methylene chloride	25	23.5	94	69-125
78-93-3	Methyl ethyl ketone	125	139	111	61-127
1634-04-4	Methyl Tert Butyl Ether	25	26.4	106	75-116
91-20-3	Naphthalene	25	27.0	108	59-125
103-65-1	n-Propylbenzene	25	29.5	118	86-125
100-42-5	Styrene	25	28.3	113	78-118
630-20-6	1,1,1,2-Tetrachloroethane	25	28.6	114	81-119
71-55-6	1,1,1-Trichloroethane	25	28.3	113	79-133
79-34-5	1,1,2,2-Tetrachloroethane	25	26.8	107	71-120
79-00-5	1,1,2-Trichloroethane	25	26.7	107	80-114
87-61-6	1,2,3-Trichlorobenzene	25	26.9	108	64-126
96-18-4	1,2,3-Trichloropropane	25	25.7	103	77-115
120-82-1	1,2,4-Trichlorobenzene	25	26.5	106	68-123
95-63-6	1,2,4-Trimethylbenzene	25	29.0	116	82-120
108-67-8	1,3,5-Trimethylbenzene	25	29.5	118	83-123
127-18-4	Tetrachloroethylene	25	29.1	116	80-131
108-88-3	Toluene	25	25.6	102	86-116
79-01-6	Trichloroethylene	25	29.1	116	85-124
75-69-4	Trichlorofluoromethane	25	30.9	124	66-156
75-01-4	Vinyl chloride	25	26.7	107	57-153
108-05-4	Vinyl Acetate	125	86.5	69	38-159
	m,p-Xylene	50	52.8	106	86-121
95-47-6	o-Xylene	25	25.8	103	83-121

Blank Spike Summary

Job Number: F78699
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ3445-BS	J061872.D	1	12/22/10	KW	n/a	n/a	VJ3445

The QC reported here applies to the following samples: **Method:** SW846 8260B

F78699-1, F78699-2, F78699-3, F78699-4, F78699-5, F78699-6, F78699-7, F78699-8

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	101%	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	99%	84-120%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F78699
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F78683-2MS	J061882.D	1	12/22/10	KW	n/a	n/a	VJ3445
F78683-2MSD	J061883.D	1	12/22/10	KW	n/a	n/a	VJ3445
F78683-2	J061880.D	1	12/22/10	KW	n/a	n/a	VJ3445

The QC reported here applies to the following samples: **Method:** SW846 8260B

F78699-1, F78699-2, F78699-3, F78699-4, F78699-5, F78699-6, F78699-7, F78699-8

CAS No.	Compound	F78683-2 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	81.3	65	78.4	63	4	59-134/14
107-02-8	Acrolein	20 U		125	110	88	93.6	75	16	33-157/21
107-13-1	Acrylonitrile	10 U		125	120	96	117	94	3	62-124/13
71-43-2	Benzene	1.0 U		25	27.0	108	25.6	102	5	83-124/11
108-86-1	Bromobenzene	1.0 U		25	27.6	110	26.5	106	4	83-115/10
74-97-5	Bromochloromethane	1.0 U		25	25.1	100	24.8	99	1	78-112/10
75-27-4	Bromodichloromethane	1.0 U		25	26.1	104	23.7	95	10	76-116/10
75-25-2	Bromoform	1.0 U		25	21.4	86	19.8	79	8	68-128/11
104-51-8	n-Butylbenzene	1.0 U		25	29.1	116	27.7	111	5	84-124/10
135-98-8	sec-Butylbenzene	1.0 U		25	29.3	117	27.9	112	5	86-127/10
98-06-6	tert-Butylbenzene	1.0 U		25	28.1	112	27.1	108	4	83-126/10
108-90-7	Chlorobenzene	1.0 U		25	28.2	113	27.0	108	4	87-115/9
75-00-3	Chloroethane	2.0 U		25	25.2	101	24.8	99	2	54-166/20
67-66-3	Chloroform	1.0 U		25	26.7	107	25.4	102	5	85-123/10
95-49-8	o-Chlorotoluene	1.0 U		25	28.5	114	27.6	110	3	84-121/10
106-43-4	p-Chlorotoluene	1.0 U		25	27.6	110	26.5	106	4	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	21.9	88	20.3	81	8	67-147/12
56-23-5	Carbon tetrachloride	1.0 U		25	26.4	106	23.2	93	13	74-139/13
75-34-3	1,1-Dichloroethane	1.0 U		25	26.4	106	24.8	99	6	82-127/10
75-35-4	1,1-Dichloroethylene	1.0 U		25	24.7	99	23.9	96	3	75-133/13
563-58-6	1,1-Dichloropropene	1.0 U		25	27.5	110	25.8	103	6	87-127/10
96-12-8	1,2-Dibromo-3-chloropropane	2.0 U		25	24.2	97	23.7	95	2	61-118/15
106-93-4	1,2-Dibromoethane	1.0 U		25	25.5	102	25.1	100	2	80-115/10
107-06-2	1,2-Dichloroethane	1.0 U		25	25.2	101	24.1	96	4	76-122/11
78-87-5	1,2-Dichloropropane	1.0 U		25	27.2	109	25.7	103	6	81-120/11
142-28-9	1,3-Dichloropropane	1.0 U		25	26.1	104	25.4	102	3	81-113/11
594-20-7	2,2-Dichloropropane	1.0 U		25	27.0	108	25.3	101	7	77-138/12
124-48-1	Dibromochloromethane	1.0 U		25	25.0	100	22.5	90	11	74-116/11
75-71-8	Dichlorodifluoromethane	2.0 U		25	25.8	103	24.3	97	6	34-158/22
156-59-2	cis-1,2-Dichloroethylene	0.56	I	25	27.7	109	26.2	103	6	81-114/10
10061-01-5	cis-1,3-Dichloropropene	1.0 U		25	27.1	108	23.4	94	15*	83-119/10
541-73-1	m-Dichlorobenzene	1.0 U		25	25.0	100	23.7	95	5	86-115/9
95-50-1	o-Dichlorobenzene	1.0 U		25	24.9	100	24.1	96	3	85-115/9
106-46-7	p-Dichlorobenzene	1.0 U		25	25.0	100	24.0	96	4	87-113/10
156-60-5	trans-1,2-Dichloroethylene	1.0 U		25	25.3	101	23.7	95	7	82-126/10

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F78699
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F78683-2MS	J061882.D	1	12/22/10	KW	n/a	n/a	VJ3445
F78683-2MSD	J061883.D	1	12/22/10	KW	n/a	n/a	VJ3445
F78683-2	J061880.D	1	12/22/10	KW	n/a	n/a	VJ3445

The QC reported here applies to the following samples: **Method:** SW846 8260B

F78699-1, F78699-2, F78699-3, F78699-4, F78699-5, F78699-6, F78699-7, F78699-8

CAS No.	Compound	F78683-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-02-6	trans-1,3-Dichloropropene	1.0 U		25	27.3	109	23.8	95	14*	87-123/10
100-41-4	Ethylbenzene	1.0 U		25	25.3	101	22.9	92	10	87-118/10
591-78-6	2-Hexanone	10 U		125	112	90	112	90	0	58-125/14
87-68-3	Hexachlorobutadiene	2.0 U		25	25.1	100	25.2	101	0	71-133/12
110-54-3	Hexane	2.0 U		25	27.4	110	24.9	100	10	71-134/11
98-82-8	Isopropylbenzene	1.0 U		25	28.9	116	27.4	110	5	87-131/10
99-87-6	p-Isopropyltoluene	1.0 U		25	29.3	117	27.9	112	5	83-125/9
108-10-1	4-Methyl-2-pentanone	5.0 U		125	125	100	130	104	4	62-125/13
74-83-9	Methyl bromide	2.0 U		25	24.4	98	23.1	92	5	55-151/21
74-87-3	Methyl chloride	2.0 U		25	24.5	98	23.6	94	4	55-173/22
74-95-3	Methylene bromide	2.0 U		25	26.0	104	25.0	100	4	81-116/10
75-09-2	Methylene chloride	5.0 U		25	22.3	89	21.3	85	5	69-125/11
78-93-3	Methyl ethyl ketone	5.0 U		125	103	82	99.8	80	3	61-127/13
1634-04-4	Methyl Tert Butyl Ether	1.0 U		25	24.7	99	23.6	94	5	75-116/10
91-20-3	Naphthalene	5.0 U		25	24.2	97	24.5	98	1	59-125/15
103-65-1	n-Propylbenzene	1.0 U		25	29.4	118	27.7	111	6	86-125/10
100-42-5	Styrene	1.0 U		25	25.8	103	18.1	72*	35*	78-118/11
630-20-6	1,1,1,2-Tetrachloroethane	1.0 U		25	26.2	105	25.9	104	1	81-119/10
71-55-6	1,1,1-Trichloroethane	1.0 U		25	26.1	104	25.2	101	4	79-133/11
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U		25	26.3	105	25.7	103	2	71-120/11
79-00-5	1,1,2-Trichloroethane	1.0 U		25	25.7	103	24.8	99	4	80-114/11
87-61-6	1,2,3-Trichlorobenzene	1.0 U		25	23.2	93	24.6	98	6	64-126/16
96-18-4	1,2,3-Trichloropropane	2.0 U		25	23.9	96	23.8	95	0	77-115/12
120-82-1	1,2,4-Trichlorobenzene	1.0 U		25	23.9	96	24.8	99	4	68-123/11
95-63-6	1,2,4-Trimethylbenzene	2.0 U		25	28.2	113	26.4	106	7	82-120/10
108-67-8	1,3,5-Trimethylbenzene	2.0 U		25	28.5	114	27.2	109	5	83-123/10
127-18-4	Tetrachloroethylene	1.0 U		25	26.3	105	26.5	106	1	80-131/12
108-88-3	Toluene	1.0 U		25	24.2	97	23.7	95	2	86-116/10
79-01-6	Trichloroethylene	0.81	I	25	28.5	111	26.8	104	6	85-124/10
75-69-4	Trichlorofluoromethane	2.0 U		25	30.0	120	28.9	116	4	66-156/15
75-01-4	Vinyl chloride	1.0 U		25	26.0	104	24.8	99	5	57-153/22
108-05-4	Vinyl Acetate	10 U		125	96.3	77	90.8	73	6	38-159/11
	m,p-Xylene	2.0 U		50	49.4	99	48.3	97	2	86-121/10
95-47-6	o-Xylene	1.0 U		25	25.0	100	23.1	92	8	83-121/10

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F78699
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F78683-2MS	J061882.D	1	12/22/10	KW	n/a	n/a	VJ3445
F78683-2MSD	J061883.D	1	12/22/10	KW	n/a	n/a	VJ3445
F78683-2	J061880.D	1	12/22/10	KW	n/a	n/a	VJ3445

The QC reported here applies to the following samples: **Method:** SW846 8260B

F78699-1, F78699-2, F78699-3, F78699-4, F78699-5, F78699-6, F78699-7, F78699-8

CAS No.	Surrogate Recoveries	MS	MSD	F78683-2	Limits
1868-53-7	Dibromofluoromethane	99%	100%	100%	87-116%
17060-07-0	1,2-Dichloroethane-D4	97%	98%	96%	76-127%
2037-26-5	Toluene-D8	96%	99%	95%	86-112%
460-00-4	4-Bromofluorobenzene	99%	100%	98%	84-120%

Southeast ACCUTEST LABORATORIES

GC/MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: F78699
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35426-MB	X015702.D	1	12/21/10	NAF	12/16/10	OP35426	SX784

The QC reported here applies to the following samples: **Method:** SW846 8270D

F78699-1, F78699-2, F78699-3, F78699-4

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	50	10	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.50	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	5.0	0.50	ug/l	
120-83-2	2,4-Dichlorophenol	ND	5.0	0.50	ug/l	
105-67-9	2,4-Dimethylphenol	ND	5.0	1.1	ug/l	
51-28-5	2,4-Dinitrophenol	ND	25	10	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	2.0	ug/l	
95-48-7	2-Methylphenol	ND	5.0	0.54	ug/l	
	3&4-Methylphenol	ND	5.0	1.1	ug/l	
88-75-5	2-Nitrophenol	ND	5.0	0.54	ug/l	
100-02-7	4-Nitrophenol	ND	25	5.0	ug/l	
87-86-5	Pentachlorophenol	ND	25	5.4	ug/l	
108-95-2	Phenol	ND	5.0	0.50	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	5.0	0.50	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	5.0	0.50	ug/l	
83-32-9	Acenaphthene	ND	5.0	0.50	ug/l	
208-96-8	Acenaphthylene	ND	5.0	0.50	ug/l	
62-53-3	Aniline	ND	5.0	0.52	ug/l	
120-12-7	Anthracene	ND	5.0	0.50	ug/l	
92-87-5	Benzidine	ND	25	4.7	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	0.50	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	0.50	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	0.50	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	0.50	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	0.50	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	0.50	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	1.1	ug/l	
100-51-6	Benzyl Alcohol	ND	5.0	1.0	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	0.50	ug/l	
106-47-8	4-Chloroaniline	ND	5.0	0.50	ug/l	
86-74-8	Carbazole	ND	5.0	0.50	ug/l	
218-01-9	Chrysene	ND	5.0	0.50	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	0.50	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	0.54	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	0.54	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	0.50	ug/l	

Method Blank Summary

Job Number: F78699
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35426-MB	X015702.D	1	12/21/10	NAF	12/16/10	OP35426	SX784

The QC reported here applies to the following samples: **Method:** SW846 8270D

F78699-1, F78699-2, F78699-3, F78699-4

CAS No.	Compound	Result	RL	MDL	Units	Q
95-50-1	1,2-Dichlorobenzene	ND	5.0	1.0	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	5.0	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	5.0	1.0	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	5.0	0.50	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	5.0	0.50	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	10	1.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	0.52	ug/l	
132-64-9	Dibenzofuran	ND	5.0	0.50	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.0	0.87	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.0	1.1	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	1.1	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	0.99	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	5.0	1.1	ug/l	
206-44-0	Fluoranthene	ND	5.0	0.50	ug/l	
86-73-7	Fluorene	ND	5.0	0.50	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	0.56	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.0	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	1.9	ug/l	
67-72-1	Hexachloroethane	ND	5.0	1.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	0.50	ug/l	
78-59-1	Isophorone	ND	5.0	0.50	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	0.50	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	0.57	ug/l	
88-74-4	2-Nitroaniline	ND	5.0	0.50	ug/l	
99-09-2	3-Nitroaniline	ND	5.0	0.50	ug/l	
100-01-6	4-Nitroaniline	ND	5.0	0.50	ug/l	
91-20-3	Naphthalene	ND	5.0	0.80	ug/l	
98-95-3	Nitrobenzene	ND	5.0	0.59	ug/l	
62-75-9	N-Nitrosodimethylamine	ND	5.0	2.4	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	0.50	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	1.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	0.50	ug/l	
129-00-0	Pyrene	ND	5.0	0.50	ug/l	
110-86-1	Pyridine	ND	10	1.6	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	

Method Blank Summary

Job Number: F78699
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35426-MB	X015702.D	1	12/21/10	NAF	12/16/10	OP35426	SX784

The QC reported here applies to the following samples: **Method:** SW846 8270D

F78699-1, F78699-2, F78699-3, F78699-4

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	42%	14-62%
4165-62-2	Phenol-d5	25%	10-40%
118-79-6	2,4,6-Tribromophenol	79%	33-118%
4165-60-0	Nitrobenzene-d5	79%	42-108%
321-60-8	2-Fluorobiphenyl	82%	40-106%
1718-51-0	Terphenyl-d14	90%	39-121%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile [a]		0	ug/l	

(a) No TICs detected.

Method Blank Summary

Job Number: F78699
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35426-MB	L049306.D	1	12/21/10	NAF	12/16/10	OP35426	SL2526

The QC reported here applies to the following samples: **Method:** SW846 8270D

F78699-1, F78699-2, F78699-3, F78699-4

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	50	10	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.50	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	5.0	0.50	ug/l	
120-83-2	2,4-Dichlorophenol	ND	5.0	0.50	ug/l	
105-67-9	2,4-Dimethylphenol	ND	5.0	1.1	ug/l	
51-28-5	2,4-Dinitrophenol	ND	25	10	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	2.0	ug/l	
95-48-7	2-Methylphenol	ND	5.0	0.54	ug/l	
	3&4-Methylphenol	ND	5.0	1.1	ug/l	
88-75-5	2-Nitrophenol	ND	5.0	0.54	ug/l	
100-02-7	4-Nitrophenol	ND	25	5.0	ug/l	
87-86-5	Pentachlorophenol	ND	25	5.4	ug/l	
108-95-2	Phenol	ND	5.0	0.50	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	5.0	0.50	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	5.0	0.50	ug/l	
83-32-9	Acenaphthene	ND	5.0	0.50	ug/l	
208-96-8	Acenaphthylene	ND	5.0	0.50	ug/l	
62-53-3	Aniline	ND	5.0	0.52	ug/l	
120-12-7	Anthracene	ND	5.0	0.50	ug/l	
92-87-5	Benzidine	ND	25	4.7	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	0.50	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	0.50	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	0.50	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	0.50	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	0.50	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	0.50	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	1.1	ug/l	
100-51-6	Benzyl Alcohol	ND	5.0	1.0	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	0.50	ug/l	
106-47-8	4-Chloroaniline	ND	5.0	0.50	ug/l	
86-74-8	Carbazole	ND	5.0	0.50	ug/l	
218-01-9	Chrysene	ND	5.0	0.50	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	0.50	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	0.54	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	0.54	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	0.50	ug/l	

Method Blank Summary

Job Number: F78699
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35426-MB	L049306.D	1	12/21/10	NAF	12/16/10	OP35426	SL2526

The QC reported here applies to the following samples: **Method:** SW846 8270D

F78699-1, F78699-2, F78699-3, F78699-4

CAS No.	Compound	Result	RL	MDL	Units	Q
95-50-1	1,2-Dichlorobenzene	ND	5.0	1.0	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	5.0	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	5.0	1.0	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	5.0	0.50	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	5.0	0.50	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	10	1.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	0.52	ug/l	
132-64-9	Dibenzofuran	ND	5.0	0.50	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.0	0.87	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.0	1.1	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	1.1	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	0.99	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	5.0	1.1	ug/l	
206-44-0	Fluoranthene	ND	5.0	0.50	ug/l	
86-73-7	Fluorene	ND	5.0	0.50	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	0.56	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.0	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	1.9	ug/l	
67-72-1	Hexachloroethane	ND	5.0	1.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	0.50	ug/l	
78-59-1	Isophorone	ND	5.0	0.50	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	0.50	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	0.57	ug/l	
88-74-4	2-Nitroaniline	ND	5.0	0.50	ug/l	
99-09-2	3-Nitroaniline	ND	5.0	0.50	ug/l	
100-01-6	4-Nitroaniline	ND	5.0	0.50	ug/l	
91-20-3	Naphthalene	ND	5.0	0.80	ug/l	
98-95-3	Nitrobenzene	ND	5.0	0.59	ug/l	
62-75-9	N-Nitrosodimethylamine	ND	5.0	2.4	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	0.50	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	1.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	0.50	ug/l	
129-00-0	Pyrene	ND	5.0	0.50	ug/l	
110-86-1	Pyridine	ND	10	1.6	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	

Method Blank Summary

Job Number: F78699
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35426-MB	L049306.D	1	12/21/10	NAF	12/16/10	OP35426	SL2526

The QC reported here applies to the following samples: **Method:** SW846 8270D

F78699-1, F78699-2, F78699-3, F78699-4

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	42%	14-62%
4165-62-2	Phenol-d5	27%	10-40%
118-79-6	2,4,6-Tribromophenol	84%	33-118%
4165-60-0	Nitrobenzene-d5	81%	42-108%
321-60-8	2-Fluorobiphenyl	81%	40-106%
1718-51-0	Terphenyl-d14	81%	39-121%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile [a]		0	ug/l	

(a) No TICs detected.

Blank Spike Summary

Job Number: F78699
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35426-BS	X015701.D	1	12/21/10	NAF	12/16/10	OP35426	SX784

The QC reported here applies to the following samples: **Method:** SW846 8270D

F78699-1, F78699-2, F78699-3, F78699-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	100	10.8	11	10-50
95-57-8	2-Chlorophenol	50	41.9	84	44-103
59-50-7	4-Chloro-3-methyl phenol	50	45.4	91	53-105
120-83-2	2,4-Dichlorophenol	50	47.0	94	53-108
105-67-9	2,4-Dimethylphenol	50	34.7	69	37-91
51-28-5	2,4-Dinitrophenol	100	87.8	88	37-111
534-52-1	4,6-Dinitro-o-cresol	100	96.8	97	62-115
95-48-7	2-Methylphenol	50	35.0	70	35-91
	3&4-Methylphenol	100	63.6	64	32-85
88-75-5	2-Nitrophenol	50	46.4	93	49-111
100-02-7	4-Nitrophenol	100	32.6	33	13-55
87-86-5	Pentachlorophenol	100	86.5	87	57-118
108-95-2	Phenol	50	18.4	37	13-54
95-95-4	2,4,5-Trichlorophenol	50	45.1	90	59-106
88-06-2	2,4,6-Trichlorophenol	50	46.2	92	58-107
83-32-9	Acenaphthene	50	44.8	90	58-106
208-96-8	Acenaphthylene	50	43.5	87	58-105
62-53-3	Aniline	50	38.4	77	43-98
120-12-7	Anthracene	50	46.4	93	65-108
92-87-5	Benzidine	50	25.8	52	15-73
56-55-3	Benzo(a)anthracene	50	45.9	92	63-111
50-32-8	Benzo(a)pyrene	50	47.0	94	62-106
205-99-2	Benzo(b)fluoranthene	50	47.6	95	63-109
191-24-2	Benzo(g,h,i)perylene	50	46.8	94	61-111
207-08-9	Benzo(k)fluoranthene	50	46.9	94	64-111
101-55-3	4-Bromophenyl phenyl ether	50	49.0	98	64-107
85-68-7	Butyl benzyl phthalate	50	47.0	94	59-114
100-51-6	Benzyl Alcohol	50	34.8	70	34-98
91-58-7	2-Chloronaphthalene	50	44.4	89	54-105
106-47-8	4-Chloroaniline	50	41.8	84	53-103
86-74-8	Carbazole	50	45.7	91	66-109
218-01-9	Chrysene	50	45.2	90	64-111
111-91-1	bis(2-Chloroethoxy)methane	50	46.1	92	48-101
111-44-4	bis(2-Chloroethyl)ether	50	43.9	88	51-108
108-60-1	bis(2-Chloroisopropyl)ether	50	44.1	88	43-106
7005-72-3	4-Chlorophenyl phenyl ether	50	47.0	94	61-107

Blank Spike Summary

Job Number: F78699
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35426-BS	X015701.D	1	12/21/10	NAF	12/16/10	OP35426	SX784

The QC reported here applies to the following samples: **Method:** SW846 8270D

F78699-1, F78699-2, F78699-3, F78699-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
95-50-1	1,2-Dichlorobenzene	50	39.1	78	41-102
122-66-7	1,2-Diphenylhydrazine	50	45.6	91	61-110
541-73-1	1,3-Dichlorobenzene	50	38.1	76	38-100
106-46-7	1,4-Dichlorobenzene	50	38.9	78	40-100
121-14-2	2,4-Dinitrotoluene	50	45.5	91	60-109
606-20-2	2,6-Dinitrotoluene	50	44.2	88	58-104
91-94-1	3,3'-Dichlorobenzidine	50	40.8	82	57-105
53-70-3	Dibenzo(a,h)anthracene	50	48.6	97	62-112
132-64-9	Dibenzofuran	50	44.1	88	61-108
84-74-2	Di-n-butyl phthalate	50	48.2	96	62-109
117-84-0	Di-n-octyl phthalate	50	47.3	95	60-120
84-66-2	Diethyl phthalate	50	47.4	95	62-109
131-11-3	Dimethyl phthalate	50	46.2	92	63-106
117-81-7	bis(2-Ethylhexyl)phthalate	50	45.2	90	59-116
206-44-0	Fluoranthene	50	45.5	91	65-114
86-73-7	Fluorene	50	45.8	92	61-106
118-74-1	Hexachlorobenzene	50	45.7	91	62-107
87-68-3	Hexachlorobutadiene	50	41.0	82	38-107
77-47-4	Hexachlorocyclopentadiene	50	36.7	73	19-84
67-72-1	Hexachloroethane	50	37.4	75	35-101
193-39-5	Indeno(1,2,3-cd)pyrene	50	46.6	93	61-113
78-59-1	Isophorone	50	36.6	73	56-111
90-12-0	1-Methylnaphthalene	50	43.0	86	52-102
91-57-6	2-Methylnaphthalene	50	44.7	89	56-112
88-74-4	2-Nitroaniline	50	53.7	107	60-109
99-09-2	3-Nitroaniline	50	41.2	82	52-107
100-01-6	4-Nitroaniline	50	45.4	91	59-111
91-20-3	Naphthalene	50	44.2	88	50-104
98-95-3	Nitrobenzene	50	43.2	86	52-105
62-75-9	N-Nitrosodimethylamine	50	23.5	47	20-71
621-64-7	N-Nitroso-di-n-propylamine	50	41.9	84	51-104
86-30-6	N-Nitrosodiphenylamine	50	47.0	94	57-110
85-01-8	Phenanthrene	50	46.0	92	65-108
129-00-0	Pyrene	50	46.6	93	60-113
110-86-1	Pyridine	50	22.2	44	15-67
120-82-1	1,2,4-Trichlorobenzene	50	39.2	78	45-104

Blank Spike Summary

Job Number: F78699
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35426-BS	X015701.D	1	12/21/10	NAF	12/16/10	OP35426	SX784

The QC reported here applies to the following samples: **Method:** SW846 8270D

F78699-1, F78699-2, F78699-3, F78699-4

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	49%	14-62%
4165-62-2	Phenol-d5	30%	10-40%
118-79-6	2,4,6-Tribromophenol	89%	33-118%
4165-60-0	Nitrobenzene-d5	85%	42-108%
321-60-8	2-Fluorobiphenyl	86%	40-106%
1718-51-0	Terphenyl-d14	90%	39-121%

Blank Spike Summary

Job Number: F78699
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35426-BS	L049305.D	1	12/21/10	NAF	12/16/10	OP35426	SL2526

The QC reported here applies to the following samples: **Method:** SW846 8270D

F78699-1, F78699-2, F78699-3, F78699-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	100	13.0	13	10-50
95-57-8	2-Chlorophenol	50	41.4	83	44-103
59-50-7	4-Chloro-3-methyl phenol	50	44.4	89	53-105
120-83-2	2,4-Dichlorophenol	50	46.4	93	53-108
105-67-9	2,4-Dimethylphenol	50	33.2	66	37-91
51-28-5	2,4-Dinitrophenol	100	76.2	76	37-111
534-52-1	4,6-Dinitro-o-cresol	100	102	102	62-115
95-48-7	2-Methylphenol	50	36.3	73	35-91
	3&4-Methylphenol	100	60.2	60	32-85
88-75-5	2-Nitrophenol	50	46.6	93	49-111
100-02-7	4-Nitrophenol	100	31.9	32	13-55
87-86-5	Pentachlorophenol	100	95.5	96	57-118
108-95-2	Phenol	50	18.9	38	13-54
95-95-4	2,4,5-Trichlorophenol	50	44.9	90	59-106
88-06-2	2,4,6-Trichlorophenol	50	45.3	91	58-107
83-32-9	Acenaphthene	50	45.1	90	58-106
208-96-8	Acenaphthylene	50	45.4	91	58-105
62-53-3	Aniline	50	41.5	83	43-98
120-12-7	Anthracene	50	46.2	92	65-108
92-87-5	Benzidine	50	26.1	52	15-73
56-55-3	Benzo(a)anthracene	50	45.2	90	63-111
50-32-8	Benzo(a)pyrene	50	46.8	94	62-106
205-99-2	Benzo(b)fluoranthene	50	46.9	94	63-109
191-24-2	Benzo(g,h,i)perylene	50	49.6	99	61-111
207-08-9	Benzo(k)fluoranthene	50	47.1	94	64-111
101-55-3	4-Bromophenyl phenyl ether	50	48.6	97	64-107
85-68-7	Butyl benzyl phthalate	50	48.4	97	59-114
100-51-6	Benzyl Alcohol	50	36.1	72	34-98
91-58-7	2-Chloronaphthalene	50	43.1	86	54-105
106-47-8	4-Chloroaniline	50	40.3	81	53-103
86-74-8	Carbazole	50	45.4	91	66-109
218-01-9	Chrysene	50	44.1	88	64-111
111-91-1	bis(2-Chloroethoxy)methane	50	46.2	92	48-101
111-44-4	bis(2-Chloroethyl)ether	50	43.3	87	51-108
108-60-1	bis(2-Chloroisopropyl)ether	50	47.2	94	43-106
7005-72-3	4-Chlorophenyl phenyl ether	50	46.2	92	61-107

Blank Spike Summary

Job Number: F78699
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35426-BS	L049305.D	1	12/21/10	NAF	12/16/10	OP35426	SL2526

The QC reported here applies to the following samples: **Method:** SW846 8270D

F78699-1, F78699-2, F78699-3, F78699-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
95-50-1	1,2-Dichlorobenzene	50	39.7	79	41-102
122-66-7	1,2-Diphenylhydrazine	50	46.0	92	61-110
541-73-1	1,3-Dichlorobenzene	50	38.6	77	38-100
106-46-7	1,4-Dichlorobenzene	50	39.2	78	40-100
121-14-2	2,4-Dinitrotoluene	50	44.7	89	60-109
606-20-2	2,6-Dinitrotoluene	50	45.4	91	58-104
91-94-1	3,3'-Dichlorobenzidine	50	37.4	75	57-105
53-70-3	Dibenzo(a,h)anthracene	50	47.4	95	62-112
132-64-9	Dibenzofuran	50	43.9	88	61-108
84-74-2	Di-n-butyl phthalate	50	48.1	96	62-109
117-84-0	Di-n-octyl phthalate	50	45.4	91	60-120
84-66-2	Diethyl phthalate	50	47.3	95	62-109
131-11-3	Dimethyl phthalate	50	47.6	95	63-106
117-81-7	bis(2-Ethylhexyl)phthalate	50	48.3	97	59-116
206-44-0	Fluoranthene	50	44.9	90	65-114
86-73-7	Fluorene	50	45.2	90	61-106
118-74-1	Hexachlorobenzene	50	43.7	87	62-107
87-68-3	Hexachlorobutadiene	50	41.4	83	38-107
77-47-4	Hexachlorocyclopentadiene	50	36.4	73	19-84
67-72-1	Hexachloroethane	50	38.3	77	35-101
193-39-5	Indeno(1,2,3-cd)pyrene	50	48.5	97	61-113
78-59-1	Isophorone	50	37.3	75	56-111
90-12-0	1-Methylnaphthalene	50	43.2	86	52-102
91-57-6	2-Methylnaphthalene	50	44.4	89	56-112
88-74-4	2-Nitroaniline	50	53.1	106	60-109
99-09-2	3-Nitroaniline	50	41.9	84	52-107
100-01-6	4-Nitroaniline	50	44.3	89	59-111
91-20-3	Naphthalene	50	44.7	89	50-104
98-95-3	Nitrobenzene	50	43.5	87	52-105
62-75-9	N-Nitrosodimethylamine	50	24.4	49	20-71
621-64-7	N-Nitroso-di-n-propylamine	50	40.9	82	51-104
86-30-6	N-Nitrosodiphenylamine	50	47.3	95	57-110
85-01-8	Phenanthrene	50	46.1	92	65-108
129-00-0	Pyrene	50	46.2	92	60-113
110-86-1	Pyridine	50	22.2	44	15-67
120-82-1	1,2,4-Trichlorobenzene	50	38.8	78	45-104

Blank Spike Summary

Job Number: F78699
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35426-BS	L049305.D	1	12/21/10	NAF	12/16/10	OP35426	SL2526

The QC reported here applies to the following samples: **Method:** SW846 8270D

F78699-1, F78699-2, F78699-3, F78699-4

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	52%	14-62%
4165-62-2	Phenol-d5	33%	10-40%
118-79-6	2,4,6-Tribromophenol	89%	33-118%
4165-60-0	Nitrobenzene-d5	83%	42-108%
321-60-8	2-Fluorobiphenyl	87%	40-106%
1718-51-0	Terphenyl-d14	89%	39-121%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F78699
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35426-MS	L049309.D	1	12/21/10	NAF	12/16/10	OP35426	SL2526
OP35426-MSD	L049310.D	1	12/21/10	NAF	12/16/10	OP35426	SL2526
C13816-2	L049308.D	1	12/21/10	NAF	12/16/10	OP35426	SL2526

The QC reported here applies to the following samples: **Method:** SW846 8270D

F78699-1, F78699-2, F78699-3, F78699-4

CAS No.	Compound	C13816-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		192	29.8	15	53.9	28	58*	10-50/40
95-57-8	2-Chlorophenol	ND		96.2	77.9	81	84.7	88	8	44-103/29
59-50-7	4-Chloro-3-methyl phenol	ND		96.2	81.5	85	93.2	97	13	53-105/24
120-83-2	2,4-Dichlorophenol	ND		96.2	82.5	86	92.9	97	12	53-108/26
105-67-9	2,4-Dimethylphenol	ND		96.2	64.9	67	71.5	74	10	37-91/28
51-28-5	2,4-Dinitrophenol	ND		192	128	67	160	83	22	37-111/30
534-52-1	4,6-Dinitro-o-cresol	ND		192	173	90	205	107	17	62-115/26
95-48-7	2-Methylphenol	ND		96.2	73.3	76	79.9	83	9	35-91/30
	3&4-Methylphenol	ND		192	133	69	141	73	6	32-85/29
88-75-5	2-Nitrophenol	ND		96.2	81.3	85	93.5	97	14	49-111/30
100-02-7	4-Nitrophenol	ND		192	91.4	48	103	54	12	13-55/31
87-86-5	Pentachlorophenol	ND		192	166	86	194	101	16	57-118/26
108-95-2	Phenol	ND		96.2	53.2	55*	55.2	57*	4	13-54/34
95-95-4	2,4,5-Trichlorophenol	ND		96.2	76.9	80	88.7	92	14	59-106/23
88-06-2	2,4,6-Trichlorophenol	ND		96.2	80.2	83	90.9	95	13	58-107/24
83-32-9	Acenaphthene	ND		96.2	79.2	82	89.2	93	12	58-106/21
208-96-8	Acenaphthylene	ND		96.2	79.0	82	90.9	95	14	58-105/21
62-53-3	Aniline	ND		96.2	75.7	79	83.9	87	10	43-98/28
120-12-7	Anthracene	ND		96.2	82.0	85	92.6	96	12	65-108/19
92-87-5	Benzidine	ND		96.2	46.8	49	54.4	57	15	15-73/23
56-55-3	Benzo(a)anthracene	ND		96.2	80.8	84	91.1	95	12	63-111/19
50-32-8	Benzo(a)pyrene	ND		96.2	82.9	86	91.7	95	10	62-106/20
205-99-2	Benzo(b)fluoranthene	ND		96.2	82.9	86	91.7	95	10	63-109/20
191-24-2	Benzo(g,h,i)perylene	ND		96.2	84.5	88	95.4	99	12	61-111/21
207-08-9	Benzo(k)fluoranthene	ND		96.2	83.8	87	93.8	98	11	64-111/20
101-55-3	4-Bromophenyl phenyl ether	ND		96.2	85.5	89	96.4	100	12	64-107/20
85-68-7	Butyl benzyl phthalate	ND		96.2	86.9	90	99.1	103	13	59-114/20
100-51-6	Benzyl Alcohol	ND		96.2	74.9	78	80.9	84	8	34-98/27
91-58-7	2-Chloronaphthalene	ND		96.2	75.9	79	85.7	89	12	54-105/24
106-47-8	4-Chloroaniline	ND		96.2	67.4	70	75.6	79	11	53-103/22
86-74-8	Carbazole	ND		96.2	79.3	82	89.6	93	12	66-109/20
218-01-9	Chrysene	ND		96.2	79.7	83	90.1	94	12	64-111/19
111-91-1	bis(2-Chloroethoxy)methane	ND		96.2	80.8	84	91.2	95	12	48-101/28
111-44-4	bis(2-Chloroethyl)ether	ND		96.2	78.3	81	85.6	89	9	51-108/27
108-60-1	bis(2-Chloroisopropyl)ether	ND		96.2	84.0	87	90.9	95	8	43-106/27
7005-72-3	4-Chlorophenyl phenyl ether	ND		96.2	81.1	84	91.8	95	12	61-107/20

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F78699
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35426-MS	L049309.D	1	12/21/10	NAF	12/16/10	OP35426	SL2526
OP35426-MSD	L049310.D	1	12/21/10	NAF	12/16/10	OP35426	SL2526
C13816-2	L049308.D	1	12/21/10	NAF	12/16/10	OP35426	SL2526

The QC reported here applies to the following samples: **Method:** SW846 8270D

F78699-1, F78699-2, F78699-3, F78699-4

CAS No.	Compound	C13816-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
95-50-1	1,2-Dichlorobenzene	ND		96.2	76.1	79	81.2	84	6	41-102/28
122-66-7	1,2-Diphenylhydrazine	ND		96.2	81.2	84	91.3	95	12	61-110/20
541-73-1	1,3-Dichlorobenzene	ND		96.2	74.8	78	79.6	83	6	38-100/28
106-46-7	1,4-Dichlorobenzene	ND		96.2	75.3	78	80.9	84	7	40-100/28
121-14-2	2,4-Dinitrotoluene	ND		96.2	77.2	80	88.3	92	13	60-109/20
606-20-2	2,6-Dinitrotoluene	ND		96.2	78.1	81	91.0	95	15	58-104/21
91-94-1	3,3'-Dichlorobenzidine	ND		96.2	64.2	67	69.3	72	8	57-105/25
53-70-3	Dibenzo(a,h)anthracene	ND		96.2	82.4	86	96.1	100	15	62-112/20
132-64-9	Dibenzofuran	ND		96.2	76.4	79	85.3	89	11	61-108/20
84-74-2	Di-n-butyl phthalate	ND		96.2	85.5	89	97.0	101	13	62-109/20
117-84-0	Di-n-octyl phthalate	ND		96.2	79.0	82	91.7	95	15	60-120/24
84-66-2	Diethyl phthalate	ND		96.2	83.0	86	94.0	98	12	62-109/19
131-11-3	Dimethyl phthalate	ND		96.2	83.0	86	93.6	97	12	63-106/19
117-81-7	bis(2-Ethylhexyl)phthalate	ND		96.2	86.8	90	99.1	103	13	59-116/21
206-44-0	Fluoranthene	ND		96.2	80.4	84	90.2	94	11	65-114/21
86-73-7	Fluorene	ND		96.2	79.6	83	89.5	93	12	61-106/19
118-74-1	Hexachlorobenzene	ND		96.2	78.7	82	89.4	93	13	62-107/20
87-68-3	Hexachlorobutadiene	ND		96.2	78.7	82	87.1	91	10	38-107/30
77-47-4	Hexachlorocyclopentadiene	ND		96.2	71.7	75	83.5	87*	15	19-84/35
67-72-1	Hexachloroethane	ND		96.2	73.2	76	79.7	83	9	35-101/29
193-39-5	Indeno(1,2,3-cd)pyrene	ND		96.2	82.1	85	92.8	97	12	61-113/20
78-59-1	Isophorone	ND		96.2	65.1	68	74.5	77	13	56-111/26
90-12-0	1-Methylnaphthalene	ND		96.2	77.5	81	88.6	92	13	52-102/25
91-57-6	2-Methylnaphthalene	ND		96.2	78.1	81	88.5	92	12	56-112/26
88-74-4	2-Nitroaniline	ND		96.2	91.4	95	107	111*	16	60-109/20
99-09-2	3-Nitroaniline	ND		96.2	71.6	74	77.9	81	8	52-107/21
100-01-6	4-Nitroaniline	ND		96.2	75.3	78	86.9	90	14	59-111/21
91-20-3	Naphthalene	ND		96.2	81.6	85	91.0	95	11	50-104/28
98-95-3	Nitrobenzene	ND		96.2	78.7	82	88.0	92	11	52-105/28
62-75-9	N-Nitrosodimethylamine	ND		96.2	62.4	65	65.9	69	5	20-71/32
621-64-7	N-Nitroso-di-n-propylamine	ND		96.2	72.2	75	79.3	82	9	51-104/28
86-30-6	N-Nitrosodiphenylamine	ND		96.2	84.6	88	95.5	99	12	57-110/19
85-01-8	Phenanthrene	ND		96.2	81.3	85	91.7	95	12	65-108/20
129-00-0	Pyrene	ND		96.2	83.5	87	94.6	98	12	60-113/20
110-86-1	Pyridine	ND		96.2	54.6	57	56.5	59	3	15-67/40
120-82-1	1,2,4-Trichlorobenzene	ND		96.2	72.4	75	80.8	84	11	45-104/28

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F78699
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35426-MS	L049309.D	1	12/21/10	NAF	12/16/10	OP35426	SL2526
OP35426-MSD	L049310.D	1	12/21/10	NAF	12/16/10	OP35426	SL2526
C13816-2	L049308.D	1	12/21/10	NAF	12/16/10	OP35426	SL2526

The QC reported here applies to the following samples: **Method:** SW846 8270D

F78699-1, F78699-2, F78699-3, F78699-4

CAS No.	Surrogate Recoveries	MS	MSD	C13816-2	Limits
367-12-4	2-Fluorophenol	66%*	69%*	41%	14-62%
4165-62-2	Phenol-d5	51%*	52%*	28%	10-40%
118-79-6	2,4,6-Tribromophenol	80%	92%	86%	33-118%
4165-60-0	Nitrobenzene-d5	78%	88%	79%	42-108%
321-60-8	2-Fluorobiphenyl	80%	88%	83%	40-106%
1718-51-0	Terphenyl-d14	82%	93%	81%	39-121%

Southeast ACCUTEST LABORATORIES

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: F78699
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GCD4181-MB	CD101483.D	1	12/15/10	WV	n/a	n/a	GCD4181

The QC reported here applies to the following samples: **Method:** SW846 8015C

F78699-1, F78699-2, F78699-3, F78699-4

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	0.10	0.050	mg/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	84%	57-129%
98-08-8	aaa-Trifluorotoluene	89%	58-120%

Blank Spike Summary

Job Number: F78699
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GCD4181-BS	CD101482.D	1	12/15/10	WV	n/a	n/a	GCD4181

The QC reported here applies to the following samples: **Method:** SW846 8015C

F78699-1, F78699-2, F78699-3, F78699-4

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	Limits
	TPH-GRO (C6-C10)	0.4	0.374	94	75-129

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	104%	57-129%
98-08-8	aaa-Trifluorotoluene	111%	58-120%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F78699
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F78605-1MS	CD101509.D	1	12/15/10	WV	n/a	n/a	GCD4181
F78605-1MSD	CD101510.D	1	12/15/10	WV	n/a	n/a	GCD4181
F78605-1	CD101484.D	1	12/15/10	WV	n/a	n/a	GCD4181

The QC reported here applies to the following samples: **Method:** SW846 8015C

F78699-1, F78699-2, F78699-3, F78699-4

CAS No.	Compound	F78605-1 mg/l	Q	Spike mg/l	MS mg/l	MS %	MSD mg/l	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	ND		0.4	0.366	92	0.356	89	3	75-129/13

CAS No.	Surrogate Recoveries	MS	MSD	F78605-1	Limits
460-00-4	4-Bromofluorobenzene	114%	116%	76%	57-129%
98-08-8	aaa-Trifluorotoluene	112%	106%	82%	58-120%

Southeast ACCUTEST LABORATORIES

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: F78699
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35432-MB	XX053890.D	1	12/20/10	NJ	12/16/10	OP35432	GXX807

The QC reported here applies to the following samples: **Method:** SW846 8082A

F78699-1, F78699-2, F78699-3, F78699-4

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.50	0.20	ug/l	
11104-28-2	Aroclor 1221	ND	0.50	0.25	ug/l	
11141-16-5	Aroclor 1232	ND	0.50	0.25	ug/l	
53469-21-9	Aroclor 1242	ND	0.50	0.20	ug/l	
12672-29-6	Aroclor 1248	ND	0.50	0.20	ug/l	
11097-69-1	Aroclor 1254	ND	0.50	0.20	ug/l	
11096-82-5	Aroclor 1260	ND	0.50	0.20	ug/l	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	96%	38-127%
2051-24-3	Decachlorobiphenyl	92%	25-137%

Method Blank Summary

Job Number: F78699
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35414-MB	YY19084.D	1	12/16/10	MV	12/15/10	OP35414	GYY695

The QC reported here applies to the following samples: **Method:** SW846 8015C

F78699-1, F78699-2, F78699-3, F78699-4

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C22)	ND	0.25	0.10	mg/l	
	TPH (> C22-C36)	ND	0.25	0.10	mg/l	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	102%	42-114%

Method Blank Summary

Job Number: F78699
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35414-MB	LL34558.D	1	12/21/10	MV	12/15/10	OP35414	GLL1307

The QC reported here applies to the following samples: **Method:** SW846 8015C

F78699-1, F78699-2, F78699-3, F78699-4

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C22)	ND	0.25	0.10	mg/l	
	TPH (> C22-C36)	ND	0.25	0.10	mg/l	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	112%	42-114%

Blank Spike Summary

Job Number: F78699
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35432-BS	XX053889.D	1	12/20/10	NJ	12/16/10	OP35432	GXX807

The QC reported here applies to the following samples: **Method:** SW846 8082A

F78699-1, F78699-2, F78699-3, F78699-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
12674-11-2	Aroclor 1016	4	3.9	98	76-117
11096-82-5	Aroclor 1260	4	3.6	90	65-117

CAS No.	Surrogate Recoveries	BSP	Limits
877-09-8	Tetrachloro-m-xylene	92%	38-127%
2051-24-3	Decachlorobiphenyl	89%	25-137%

Blank Spike Summary

Job Number: F78699
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35414-BS	LL34557.D	1	12/21/10	MV	12/15/10	OP35414	GLL1307

The QC reported here applies to the following samples: **Method:** SW846 8015C

F78699-1, F78699-2, F78699-3, F78699-4

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	Limits
	TPH (C10-C22)	1	1.04	104	60-140
	TPH (> C22-C36)	1	1.16	116	60-140

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	110%	42-114%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F78699
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35432-MS	XX053900.D	1	12/20/10	NJ	12/16/10	OP35432	GXX807
OP35432-MSD	XX053901.D	1	12/20/10	NJ	12/16/10	OP35432	GXX807
F78727-3	XX053899.D	1	12/20/10	NJ	12/16/10	OP35432	GXX807

The QC reported here applies to the following samples: **Method:** SW846 8082A

F78699-1, F78699-2, F78699-3, F78699-4

CAS No.	Compound	F78727-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
12674-11-2	Aroclor 1016	ND		8	7.2	90	7.4	93	3	76-117/16
11096-82-5	Aroclor 1260	ND		8	7.5	94	7.5	94	0	65-117/23

CAS No.	Surrogate Recoveries	MS	MSD	F78727-3	Limits
877-09-8	Tetrachloro-m-xylene	85%	86%	91%	38-127%
2051-24-3	Decachlorobiphenyl	86%	84%	66%	25-137%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F78699
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35414-MS	LL34563.D	1	12/21/10	MV	12/15/10	OP35414	GLL1307
OP35414-MSD	LL34564.D	1	12/21/10	MV	12/15/10	OP35414	GLL1307
F78699-3	LL34562.D	1	12/21/10	MV	12/15/10	OP35414	GLL1307

The QC reported here applies to the following samples: **Method:** SW846 8015C

F78699-1, F78699-2, F78699-3, F78699-4

CAS No.	Compound	F78699-3 mg/l	Q	Spike mg/l	MS mg/l	MS %	MSD mg/l	MSD %	RPD	Limits Rec/RPD
	TPH (C10-C22)	ND		1.92	1.98	103	1.87	97	6	60-140/30
	TPH (> C22-C36)	ND		1.92	2.21	115	2.13	111	4	60-140/30

CAS No.	Surrogate Recoveries	MS	MSD	F78699-3	Limits
84-15-1	o-Terphenyl	110%	108%	94%	42-114%

Southeast ACCUTEST LABORATORIES

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: F78699
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19698
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:					12/17/10		12/17/10
Metal	RL	IDL	MDL	MB raw	final	MB raw	final
Aluminum	200	20	25	32.0	<200	-10	<200
Antimony	12	1	2	0.60	<12	2.8	<12
Arsenic	10	1	2	-2.6	<10	-1.2	<10
Barium	200	1	5	-3.1	<200	-3.8	<200
Beryllium	4.0	.1	1	-0.20	<4.0	-0.10	<4.0
Cadmium	5.0	.1	1	-0.70	<5.0	-0.30	<5.0
Calcium	1000	50	100	5.9	<1000	65.9	<1000
Chromium	10	1	1	-0.20	<10	-0.50	<10
Cobalt	50	1	1	-0.40	<50	-0.20	<50
Copper	25	1	2	0.10	<25	-0.20	<25
Iron	300	34	35	35.4	<300	-9.2	<300
Lead	5.0	1	1	-1.0	<5.0	0.60	<5.0
Magnesium	5000	50	100	-22	<5000	13.4	<5000
Manganese	15	1	1	-0.20	<15	2.1	<15
Molybdenum	50	1	2				
Nickel	40	1	2	-0.90	<40	-0.10	<40
Potassium	10000	50	500	-31	<10000	6.4	<10000
Selenium	10	2	2	3.7	<10	1.0	<10
Silver	10	1	1	0.10	<10	0.0	<10
Sodium	10000	750	1900	881	<10000	-110	<10000
Strontium	10	1	1				
Thallium	10	1	1.9	-0.40	<10	1.7	<10
Tin	50	1	1				
Titanium	10	1.1	2				
Vanadium	50	1	1	-0.40	<50	-0.50	<50
Zinc	20	1	5	-0.50	<20	10.0	<20

Associated samples MP19698: F78699-1, F78699-2, F78699-3, F78699-4

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: F78699
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19698
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:			12/17/10					12/17/10	
Metal	F78699-1 Original	DUP	RPD	QC Limits	F78699-1 Original	MS	Spikelot MPFLICP1	% Rec	QC Limits
Aluminum	33.3	32.8	1.5	0-20	33.3	27600	27000	102.1	80-120
Antimony	2.5	2.6	3.9	0-20	2.5	536	500	106.7	80-120
Arsenic	1.3	0.0	200.0(a)	0-20	1.3	2180	2000	108.9	80-120
Barium	20.4	19.5	4.5	0-20	20.4	2070	2000	102.5	80-120
Beryllium	0.0	0.0	NC	0-20	0.0	48.6	50	97.2	80-120
Cadmium	0.0	0.0	NC	0-20	0.0	47.6	50	95.2	80-120
Calcium	550000	559000	1.6	0-20	550000	550000	25000	0.0 (b)	80-120
Chromium	0.0	0.0	NC	0-20	0.0	202	200	101.0	80-120
Cobalt	0.0	0.0	NC	0-20	0.0	462	500	92.4	80-120
Copper	3.9	3.9	0.0	0-20	3.9	283	250	111.6	80-120
Iron	0.0	63.8	200.0(a)	0-20	0.0	23300	26000	89.6	80-120
Lead	0.0	0.0	NC	0-20	0.0	454	500	90.8	80-120
Magnesium	48200	48500	0.6	0-20	48200	70300	25000	88.4	80-120
Manganese	19.8	20.5	3.5	0-20	19.8	542	500	104.4	80-120
Molybdenum									
Nickel	3.0	2.7	10.5	0-20	3.0	464	500	92.2	80-120
Potassium	3320	3420	3.0	0-20	3320	29100	25000	103.1	80-120
Selenium	2.4	0.0	200.0(a)	0-20	2.4	2310	2000	115.4	80-120
Silver	0.0	0.0	NC	0-20	0.0	49.6	50	99.2	80-120
Sodium	68200	69500	1.9	0-20	68200	92500	25000	97.2	80-120
Strontium									
Thallium	0.0	0.0	NC	0-20	0.0	1800	2000	90.0	80-120
Tin									
Titanium									
Vanadium	21.3	22.1	3.7	0-20	21.3	567	500	109.1	80-120
Zinc	14.0	14.7	4.9	0-20	14.0	458	500	88.8	80-120

Associated samples MP19698: F78699-1, F78699-2, F78699-3, F78699-4

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
(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: F78699
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19698
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 12/17/10

Metal	F78699-1 Original	MSD	Spikelot MPFLICP1	% Rec	MSD RPD	QC Limit
Aluminum	33.3	28000	27000	103.6	1.4	20
Antimony	2.5	549	500	109.3	2.4	20
Arsenic	1.3	2220	2000	110.9	1.8	20
Barium	20.4	2120	2000	105.0	2.4	20
Beryllium	0.0	49.8	50	99.6	2.4	20
Cadmium	0.0	49.0	50	98.0	2.9	20
Calcium	550000	563000	25000	52.0 (a)	2.3	20
Chromium	0.0	211	200	105.5	4.4	20
Cobalt	0.0	480	500	96.0	3.8	20
Copper	3.9	288	250	113.6	1.8	20
Iron	0.0	23800	26000	91.5	2.1	20
Lead	0.0	469	500	93.8	3.3	20
Magnesium	48200	71700	25000	94.0	2.0	20
Manganese	19.8	565	500	109.0	4.2	20
Molybdenum						
Nickel	3.0	480	500	95.4	3.4	20
Potassium	3320	29600	25000	105.1	1.7	20
Selenium	2.4	2350	2000	117.4	1.7	20
Silver	0.0	49.7	50	99.4	0.2	20
Sodium	68200	92500	25000	97.2	0.0	20
Strontium						
Thallium	0.0	1850	2000	92.5	2.7	20
Tin						
Titanium						
Vanadium	21.3	586	500	112.9	3.3	20
Zinc	14.0	472	500	91.6	3.0	20

Associated samples MP19698: F78699-1, F78699-2, F78699-3, F78699-4

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
(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: F78699
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19698
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 12/17/10

Metal	BSP Result	Spikelot MPFLICP1	% Rec	QC Limits
Aluminum	27200	27000	100.7	80-120
Antimony	503	500	100.6	80-120
Arsenic	2020	2000	101.0	80-120
Barium	2050	2000	102.5	80-120
Beryllium	51.7	50	103.4	80-120
Cadmium	50.7	50	101.4	80-120
Calcium	24000	25000	96.0	80-120
Chromium	211	200	105.5	80-120
Cobalt	477	500	95.4	80-120
Copper	268	250	107.2	80-120
Iron	25000	26000	96.2	80-120
Lead	486	500	97.2	80-120
Magnesium	23700	25000	94.8	80-120
Manganese	538	500	107.6	80-120
Molybdenum				
Nickel	480	500	96.0	80-120
Potassium	24400	25000	97.6	80-120
Selenium	2040	2000	102.0	80-120
Silver	47.9	50	95.8	80-120
Sodium	26100	25000	104.4	80-120
Strontium				
Thallium	1990	2000	99.5	80-120
Tin				
Titanium				
Vanadium	545	500	109.0	80-120
Zinc	487	500	97.4	80-120

Associated samples MP19698: F78699-1, F78699-2, F78699-3, F78699-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: F78699
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19698
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 12/17/10

Metal	F78699-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum	33.3	0.00	100.0(a)	0-10
Antimony	2.50	0.00	100.0(a)	0-10
Arsenic	1.30	0.00	100.0(a)	0-10
Barium	20.4	5.00	75.5 (a)	0-10
Beryllium	0.00	0.00	NC	0-10
Cadmium	0.00	0.00	NC	0-10
Calcium	550000	608000	10.6*(b)	0-10
Chromium	0.00	0.00	NC	0-10
Cobalt	0.00	0.00	NC	0-10
Copper	3.90	0.00	100.0(a)	0-10
Iron	0.00	253		0-10
Lead	0.00	0.00	NC	0-10
Magnesium	48200	49500	2.5	0-10
Manganese	19.8	20.6	4.0	0-10
Molybdenum				
Nickel	3.00	0.00	100.0(a)	0-10
Potassium	3320	3100	6.7	0-10
Selenium	2.40	0.00	100.0(a)	0-10
Silver	0.00	0.00	NC	0-10
Sodium	68200	72400	6.2	0-10
Strontium				
Thallium	0.00	0.00	NC	0-10
Tin				
Titanium				
Vanadium	21.3	21.0	1.4	0-10
Zinc	14.0	13.2	5.7	0-10

Associated samples MP19698: F78699-1, F78699-2, F78699-3, F78699-4

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.

POST DIGESTATE SPIKE SUMMARY

Login Number: F78699
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19698
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 12/17/10

Metal	Sample ml	Final ml	F78699-1 Raw	Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum	9.8	10	33.3	32.634	2578	0.2	125	2500	101.8	80-120
Antimony	9.8	10	2.5	2.45	108.9	0.2	5	100	106.5	80-120
Arsenic	9.8	10	1.3	1.274	111.2	0.2	5	100	109.9	80-120
Barium	9.8	10	20.4	19.992	272.2	0.2	12.5	250	100.9	80-120
Beryllium	9.8	10	0	0	46.6	0.2	2.5	50	93.2	80-120
Cadmium	9.8	10	0	0	48.4	0.2	2.5	50	96.8	80-120
Calcium	9.8	10	550000	539000	528300	0.2	250	5000	-214.0*a	80-120
Chromium	9.8	10	0	0	50.2	0.2	2.5	50	100.4	80-120
Cobalt	9.8	10	0	0	44.9	0.2	2.5	50	89.8	80-120
Copper	9.8	10	3.9	3.822	115.7	0.2	5	100	111.9	80-120
Iron	9.8	10	0	0	2755	0.2	150	3000	91.8	80-120
Lead	9.8	10	0	0	44	0.2	2.5	50	88.0	80-120
Magnesium	9.8	10	48240	47275.2	50540	0.2	250	5000	65.3*(a)	80-120
Manganese	9.8	10	19.8	19.404	72.1	0.2	2.5	50	105.4	80-120
Molybdenum										
Nickel	9.8	10	3	2.94	94.3	0.2	5	100	91.4	80-120
Potassium	9.8	10	3324	3257.52	13560	0.2	500	10000	103.0	80-120
Selenium	9.8	10	2.4	2.352	118.4	0.2	5	100	116.0	80-120
Silver	9.8	10	0	0	52.3	0.2	2.5	50	104.6	80-120
Sodium	9.8	10	68190	66826.2	75540	0.2	500	10000	87.1	80-120
Strontium										
Thallium	9.8	10	0	0	87.7	0.2	5	100	87.7	80-120
Tin										
Titanium										
Vanadium	9.8	10	21.3	20.874	75.3	0.2	2.5	50	108.9	80-120
Zinc	9.8	10	14	13.72	236.5	0.2	12.5	250	89.1	80-120

Associated samples MP19698: F78699-1, F78699-2, F78699-3, F78699-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(**) Corr. sample result = Raw * (sample volume / final volume)
(anr) Analyte not requested
(a) Spike recovery indicates matrix interference and/or outside control limits due to high level in sample relative to spike amount.

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: F78699
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19732
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 12/23/10

Metal	RL	IDL	MDL	MB raw	final
Mercury	1.0	.071	.05	0.0060	<1.0

Associated samples MP19732: F78699-1, F78699-2, F78699-3, F78699-4

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: F78699
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19732
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 12/23/10 12/23/10

Metal	F78720-1 Original	DUP	RPD	QC Limits	F78720-1 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 MP19732: F78699-1, F78699-2, F78699-3, F78699-4

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: F78699
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19732
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 12/23/10

Metal	F78720-1 Original	MSD	Spikelot HGFLWS1	% Rec	MSD RPD	QC Limit
Mercury	0.0	2.9	3	96.7	0.0	20

Associated samples MP19732: F78699-1, F78699-2, F78699-3, F78699-4

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: F78699
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19732
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 12/23/10

Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	3.0	3	100.0	80-120

Associated samples MP19732: F78699-1, F78699-2, F78699-3, F78699-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: F78699
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19732
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 12/23/10

Metal	F78720-1 Original	SDL 1:5	%DIF	QC Limits
Mercury	0.00	0.00	NC	0-10

Associated samples MP19732: F78699-1, F78699-2, F78699-3, F78699-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

Southeast ACCUTEST LABORATORIES

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F78699
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Solids, Total Dissolved	GN42630	100	0.0	mg/l				

Associated Samples:
Batch GN42630: F78699-1, F78699-2, F78699-3, F78699-4
(*) Outside of QC limits

10.1
10

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F78699
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Solids, Total Dissolved	GN42630	F78727-3	mg/l	2420	2420	0.0	0-5%

Associated Samples:
Batch GN42630: F78699-1, F78699-2, F78699-3, F78699-4
(*) Outside of QC limits

10.2
10

Southeast ACCUTEST LABORATORIES

01/03/11

Technical Report for

Nation View

Holloman AFB; SWMU 8, ACM Investigation

8080014.03.020

Accutest Job Number: F78727

Sampling Dates: 12/13/10 - 12/14/10

Report to:

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Total number of pages in report: **117**

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: Jean Dent-Smith 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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Sections: 1 2 3 4 5 6 7 8 9 10

Table of Contents

-1-

Section 1: Sample Summary **3**
Section 2: Case Narrative/Conformance Summary **4**
Section 3: Sample Results **6**
3.1: F78727-1: SWMU8-DP05-A 7
3.2: F78727-2: SWMU8-DP05 18
3.3: F78727-3: SWMU8-DP01 29
3.4: F78727-4: TRIP BLANK 40
3.5: F78727-5: TRIP BLANK 43
3.6: F78727-6: TRIP BLANK 46
3.7: F78727-7: TRIP BLANK 49
3.8: F78727-8: TRIP BLANK 52
Section 4: Misc. Forms **55**
4.1: Chain of Custody 56
Section 5: GC/MS Volatiles - QC Data Summaries **62**
5.1: Method Blank Summary 63
5.2: Blank Spike Summary 66
5.3: Matrix Spike/Matrix Spike Duplicate Summary 69
Section 6: GC/MS Semi-volatiles - QC Data Summaries **72**
6.1: Method Blank Summary 73
6.2: Blank Spike Summary 82
6.3: Matrix Spike/Matrix Spike Duplicate Summary 88
Section 7: GC Volatiles - QC Data Summaries **91**
7.1: Method Blank Summary 92
7.2: Blank Spike Summary 93
7.3: Matrix Spike/Matrix Spike Duplicate Summary 94
Section 8: GC Semi-volatiles - QC Data Summaries **95**
8.1: Method Blank Summary 96
8.2: Blank Spike Summary 99
8.3: Matrix Spike/Matrix Spike Duplicate Summary 101
Section 9: Metals Analysis - QC Data Summaries **103**
9.1: Prep QC MP19708: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na, Tl,V,Zn 104
9.2: Prep QC MP19744: Hg 110
Section 10: General Chemistry - QC Data Summaries **115**
10.1: Method Blank and Spike Results Summary 116
10.2: Duplicate Results Summary 117

Accutest Laboratories

Sample Summary

Nation View

Job No: F78727

Holloman AFB; SWMU 8, ACM Investigation
Project No: 8080014.03.020

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
F78727-1	12/14/10	08:50	DMZB	12/15/10	AQ	Ground Water	SWMU8-DP05-A
F78727-2	12/14/10	08:50	DMZB	12/15/10	AQ	Ground Water	SWMU8-DP05
F78727-3	12/13/10	13:00	DMZB	12/15/10	AQ	Ground Water	SWMU8-DP01
F78727-3D	12/13/10	13:00	DMZB	12/15/10	AQ	Water Dup/MSD	SWMU8-DP01
F78727-3S	12/13/10	13:00	DMZB	12/15/10	AQ	Water Matrix Spike	SWMU8-DP01
F78727-4	12/13/10	00:00	DMZB	12/15/10	AQ	Trip Blank Water	TRIP BLANK
F78727-5	12/13/10	00:00	DMZB	12/15/10	AQ	Trip Blank Water	TRIP BLANK
F78727-6	12/13/10	00:00	DMZB	12/15/10	AQ	Trip Blank Water	TRIP BLANK
F78727-7	12/13/10	00:00	DMZB	12/15/10	AQ	Trip Blank Water	TRIP BLANK
F78727-8	12/13/10	00:00	DMZB	12/15/10	AQ	Trip Blank Water	TRIP BLANK

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Nation View **Job No:** F78727

Site: Holloman AFB; SWMU 8, ACM Investigation **Report Date** 1/3/2011 8:36:15 AM

3 Samples and 5 Trip Blanks were collected between 12/13/2010 and 12/14/2010 and were received at Accutest on 12/15/2010 properly preserved, at 3.6 Deg. C and intact. These Samples received an Accutest job number of F78727. 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:** VJ3447

All samples were analyzed within the recommended method holding time.

Sample(s) F78727-3MS, F78727-3MSD were used as the QC samples indicated.

All method blanks for this batch meet method specific criteria.

Blank Spike Recovery(s) for Bromobenzene, n-Butylbenzene are outside control limits. SB recoveries are biased high. Associated samples are non-detect for Bromobenzene, therefore data integrity is not compromised. See comment for n-Buytlbenzene.

F78727-2 for n-Butylbenzene: CCV and BS outside of control limits; results may be biased high.

Matrix Spike Recovery(s) for 2-Chloroethyl vinyl ether, Acetone, Carbon disulfide, Trichlorofluoromethane are outside control limits. Probable cause due to matrix interference. For method performance in a clean matrix, refer to SB.

Matrix Spike Duplicate Recovery(s) for 2-Chloroethyl vinyl ether, Carbon disulfide, cis-1,3-Dichloropropene, trans-1,3-Dichloropropene are outside control limits. Probable cause due to matrix interference. For method performance in a clean matrix, refer to SB.

RPD(s) for MSD for Trichlorofluoromethane are outside control limits for sample F78727-3MSD. Probable cause due to sample homogeneity.

F78727-1 for sec-Butylbenzene: CCV outside of control limits; results may be biased high.

F78727-2 for sec-Butylbenzene: CCV outside of control limits; results may be biased high.

Extractables by GCMS By Method SW846 8270D

Matrix: AQ **Batch ID:** OP35434

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.

Sample(s) F78727-3MS, F78727-3MSD were used as the QC samples indicated.

Sample(s) OP35434-MS, OP35434-MSD have surrogates outside control limits. Probable cause due to matrix interference.

Volatiles by GC By Method SW846 8015C

Matrix: AQ **Batch ID:** GCD4185

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) F78727-3MS, F78727-3MSD were used as the QC samples indicated.

Extractables by GC By Method SW846 8015C

Matrix: AQ **Batch ID:** OP35466

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.

Sample(s) F78727-3MS, F78727-3MSD were used as the QC samples indicated.

Extractables by GC By Method SW846 8082A

Matrix: AQ **Batch ID:** OP35432

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.

Sample(s) F78727-3MS, F78727-3MSD were used as the QC samples indicated.

Metals By Method SW846 6010C

Matrix: AQ **Batch ID:** MP19708

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.

Sample(s) F78727-3DUP, F78727-3MS, F78727-3MSD, F78727-3PS, F78727-3SDL were used as the QC samples for metals.

MS/MSD Recovery(s) for Calcium are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

RPD(s) for Duplicate for Antimony, Barium, Selenium are outside control limits for sample MP19708-D1. RPD acceptable due to low duplicate and sample concentrations.

RPD(s) for Serial Dilution for Antimony, Arsenic, Barium, Chromium, Copper, Selenium are outside control limits for sample MP19708-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

MP19708-SD1 for Calcium: Serial dilution indicates possible matrix interference.

MP19708-PS1 for Calcium: Spike recovery indicates matrix interference and/or outside control limits due to high level in sample relative to spike amount.

MP19708-PS1 for Magnesium: Spike recovery indicates matrix interference and/or outside control limits due to high level in sample relative to spike amount.

F78727-1 for Antimony: Elevated RL due to instrument baseline drift.

F78727-2 for Antimony: Elevated RL due to instrument baseline drift.

F78727-3 for Antimony: Elevated RL due to instrument baseline drift.

Metals By Method SW846 7470A

Matrix: AQ **Batch ID:** MP19744

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.

Sample(s) F78727-3DUP, F78727-3MS, F78727-3MSD, F78727-3SDL were used as the QC samples for metals.

Wet Chemistry By Method SM19 2540C

Matrix: AQ **Batch ID:** GN42630

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) F78727-3DUP were used as the QC samples 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 3, 2011

Lovelie Metzgar, QA Assistant (signature on file)

Southeast ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	SWMU8-DP05-A		
Lab Sample ID:	F78727-1	**Date Sampled:**	12/14/10
Matrix:	AQ - Ground Water	**Date Received:**	12/15/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J061939.D	1	12/27/10	LD	n/a	n/a	VJ3447
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

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	3.0	ug/l	
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.25	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.22	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.20	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.26	ug/l	
135-98-8	sec-Butylbenzene [a]	2.4	1.0	0.22	ug/l	J
98-06-6	tert-Butylbenzene	ND	1.0	0.27	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.22	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.22	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.20	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.2	ug/l	
75-15-0	Carbon disulfide	1.9	2.0	0.50	ug/l	J
56-23-5	Carbon tetrachloride	ND	1.0	0.25	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.25	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.23	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.50	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.25	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.20	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.44	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.26	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.20	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:	SWMU8-DP05-A		
Lab Sample ID:	F78727-1	**Date Sampled:**	12/14/10
Matrix:	AQ - Ground Water	**Date Received:**	12/15/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
541-73-1	m-Dichlorobenzene	3.1	1.0	0.20	ug/l	
95-50-1	o-Dichlorobenzene	2.0	1.0	0.25	ug/l	
106-46-7	p-Dichlorobenzene	2.1	1.0	0.23	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.35	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
591-78-6	2-Hexanone	ND	10	4.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.80	ug/l	
110-54-3	Hexane	ND	2.0	0.59	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.21	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.50	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.50	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.25	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	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	0.34	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.20	ug/l	
100-42-5	Styrene	ND	1.0	0.20	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	0.20	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.23	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.22	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	0.30	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	0.27	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.21	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.25	ug/l	
108-88-3	Toluene	0.25	1.0	0.20	ug/l	J
79-01-6	Trichloroethylene	ND	1.0	0.26	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.22	ug/l	
108-05-4	Vinyl Acetate	ND	10	2.0	ug/l	
	m,p-Xylene	ND	2.0	0.32	ug/l	
95-47-6	o-Xylene	ND	1.0	0.20	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:	SWMU8-DP05-A		
Lab Sample ID:	F78727-1	**Date Sampled:**	12/14/10
Matrix:	AQ - Ground Water	**Date Received:**	12/15/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		87-116%
17060-07-0	1,2-Dichloroethane-D4	97%		76-127%
2037-26-5	Toluene-D8	97%		86-112%
460-00-4	4-Bromofluorobenzene	103%		84-120%

(a) CCV outside of control limits; results may be biased high.

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:	SWMU8-DP05-A		
Lab Sample ID:	F78727-1	**Date Sampled:**	12/14/10
Matrix:	AQ - Ground Water	**Date Received:**	12/15/10
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X015719.D	1	12/21/10	NAF	12/17/10	OP35434	SX784
Run #2							

	Initial Volume	Final Volume
Run #1	1050 ml	1.0 ml
Run #2		

ABN Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	48	9.5	ug/l	
95-57-8	2-Chlorophenol	ND	4.8	0.48	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	4.8	0.48	ug/l	
120-83-2	2,4-Dichlorophenol	ND	4.8	0.48	ug/l	
105-67-9	2,4-Dimethylphenol	ND	4.8	1.0	ug/l	
51-28-5	2,4-Dinitrophenol	ND	24	9.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	9.5	1.9	ug/l	
95-48-7	2-Methylphenol	ND	4.8	0.51	ug/l	
	3&4-Methylphenol	ND	4.8	1.0	ug/l	
88-75-5	2-Nitrophenol	ND	4.8	0.51	ug/l	
100-02-7	4-Nitrophenol	ND	24	4.8	ug/l	
87-86-5	Pentachlorophenol	ND	24	5.1	ug/l	
108-95-2	Phenol	ND	4.8	0.48	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	4.8	0.48	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	4.8	0.48	ug/l	
83-32-9	Acenaphthene	ND	4.8	0.48	ug/l	
208-96-8	Acenaphthylene	ND	4.8	0.48	ug/l	
62-53-3	Aniline	ND	4.8	0.50	ug/l	
120-12-7	Anthracene	ND	4.8	0.48	ug/l	
92-87-5	Benzidine	ND	24	4.5	ug/l	
56-55-3	Benzo(a)anthracene	ND	4.8	0.48	ug/l	
50-32-8	Benzo(a)pyrene	ND	4.8	0.48	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	4.8	0.48	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	4.8	0.48	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	4.8	0.48	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	4.8	0.48	ug/l	
85-68-7	Butyl benzyl phthalate	ND	4.8	1.0	ug/l	
100-51-6	Benzyl Alcohol	ND	4.8	0.95	ug/l	
91-58-7	2-Chloronaphthalene	ND	4.8	0.48	ug/l	
106-47-8	4-Chloroaniline	ND	4.8	0.48	ug/l	
86-74-8	Carbazole	ND	4.8	0.48	ug/l	
218-01-9	Chrysene	ND	4.8	0.48	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:	SWMU8-DP05-A		
Lab Sample ID:	F78727-1	**Date Sampled:**	12/14/10
Matrix:	AQ - Ground Water	**Date Received:**	12/15/10
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

ABN Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
111-91-1	bis(2-Chloroethoxy)methane	ND	4.8	0.48	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	4.8	0.51	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	4.8	0.51	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	4.8	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	1.4	4.8	0.95	ug/l	J
122-66-7	1,2-Diphenylhydrazine	ND	4.8	0.48	ug/l	
541-73-1	1,3-Dichlorobenzene	2.0	4.8	0.95	ug/l	J
106-46-7	1,4-Dichlorobenzene	1.3	4.8	0.95	ug/l	J
121-14-2	2,4-Dinitrotoluene	ND	4.8	0.48	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	4.8	0.48	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	9.5	0.95	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	4.8	0.50	ug/l	
132-64-9	Dibenzofuran	ND	4.8	0.48	ug/l	
84-74-2	Di-n-butyl phthalate	ND	4.8	0.83	ug/l	
117-84-0	Di-n-octyl phthalate	ND	4.8	1.0	ug/l	
84-66-2	Diethyl phthalate	1.5	4.8	1.0	ug/l	J
131-11-3	Dimethyl phthalate	ND	4.8	0.94	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	4.8	1.0	ug/l	
206-44-0	Fluoranthene	ND	4.8	0.48	ug/l	
86-73-7	Fluorene	ND	4.8	0.48	ug/l	
118-74-1	Hexachlorobenzene	ND	4.8	0.53	ug/l	
87-68-3	Hexachlorobutadiene	ND	4.8	0.95	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	9.5	1.8	ug/l	
67-72-1	Hexachloroethane	ND	4.8	0.95	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.8	0.48	ug/l	
78-59-1	Isophorone	ND	4.8	0.48	ug/l	
90-12-0	1-Methylnaphthalene	ND	4.8	0.48	ug/l	
91-57-6	2-Methylnaphthalene	ND	4.8	0.54	ug/l	
88-74-4	2-Nitroaniline	ND	4.8	0.48	ug/l	
99-09-2	3-Nitroaniline	ND	4.8	0.48	ug/l	
100-01-6	4-Nitroaniline	ND	4.8	0.48	ug/l	
91-20-3	Naphthalene	ND	4.8	0.76	ug/l	
98-95-3	Nitrobenzene	ND	4.8	0.56	ug/l	
62-75-9	N-Nitrosodimethylamine	ND	4.8	2.3	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	4.8	0.48	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	4.8	0.95	ug/l	
85-01-8	Phenanthrene	ND	4.8	0.48	ug/l	
129-00-0	Pyrene	ND	4.8	0.48	ug/l	
110-86-1	Pyridine	ND	9.5	1.5	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	4.8	0.48	ug/l	

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RL = Reporting Limit
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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:	SWMU8-DP05-A		
Lab Sample ID:	F78727-1	**Date Sampled:**	12/14/10
Matrix:	AQ - Ground Water	**Date Received:**	12/15/10
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

ABN Full List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	40%		14-62%
4165-62-2	Phenol-d5	25%		10-40%
118-79-6	2,4,6-Tribromophenol	81%		33-118%
4165-60-0	Nitrobenzene-d5	70%		42-108%
321-60-8	2-Fluorobiphenyl	72%		40-106%
1718-51-0	Terphenyl-d14	73%		39-121%

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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:	SWMU8-DP05-A		
Lab Sample ID:	F78727-1	**Date Sampled:**	12/14/10
Matrix:	AQ - Ground Water	**Date Received:**	12/15/10
Method:	SW846 8015C	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	CD101567.D	1	12/17/10	WV	n/a	n/a	GCD4185
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	0.0542	0.10	0.050	mg/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	87%		57-129%
98-08-8	aaa-Trifluorotoluene	83%		58-120%

ND = Not detected MDL - Method Detection Limit
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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:	SWMU8-DP05-A		
Lab Sample ID:	F78727-1	**Date Sampled:**	12/14/10
Matrix:	AQ - Ground Water	**Date Received:**	12/15/10
Method:	SW846 8082A SW846 3510C	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XX053902.D	1	12/20/10	NJ	12/16/10	OP35432	GXX807
Run #2							

	Initial Volume	Final Volume
Run #1	1050 ml	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.48	0.19	ug/l	
11104-28-2	Aroclor 1221	ND	0.48	0.24	ug/l	
11141-16-5	Aroclor 1232	ND	0.48	0.24	ug/l	
53469-21-9	Aroclor 1242	ND	0.48	0.19	ug/l	
12672-29-6	Aroclor 1248	ND	0.48	0.19	ug/l	
11097-69-1	Aroclor 1254	ND	0.48	0.19	ug/l	
11096-82-5	Aroclor 1260	ND	0.48	0.19	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	77%		38-127%
2051-24-3	Decachlorobiphenyl	59%		25-137%

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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:	SWMU8-DP05-A		
Lab Sample ID:	F78727-1	**Date Sampled:**	12/14/10
Matrix:	AQ - Ground Water	**Date Received:**	12/15/10
Method:	SW846 8015C SW846 3510C	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LL34575.D	1	12/21/10	MV	12/20/10	OP35466	GLL1307
Run #2							

	Initial Volume	Final Volume
Run #1	1050 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C22)	0.579	0.24	0.095	mg/l	
	TPH (> C22-C36)	ND	0.24	0.095	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	105%		42-114%

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:	SWMU8-DP05-A		
Lab Sample ID:	F78727-1	**Date Sampled:**	12/14/10
Matrix:	AQ - Ground Water	**Date Received:**	12/15/10
		Percent Solids:	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	25 U	200	25	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Antimony [a]	4.3 J	12	2.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Arsenic	2.0 U	10	2.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Barium	29.9 J	200	5.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Beryllium	1.0 U	4.0	1.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Cadmium	1.0 U	5.0	1.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Calcium	585000	1000	100	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Chromium	1.0 U	10	1.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Cobalt	1.0 U	50	1.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Copper	3.4 J	25	2.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Iron	129 J	300	35	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Lead	1.0 U	5.0	1.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Magnesium	53100	5000	100	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Manganese	111	15	1.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Mercury	0.050 U	1.0	0.050	ug/l	1	12/28/10	12/28/10	LM	SW846 7470A [2]	SW846 7470A [4]
Nickel	2.0 U	40	2.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Potassium	4070 J	10000	500	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Selenium	2.0 U	10	2.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Silver	1.0 U	10	1.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Sodium	73100	10000	1900	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Thallium	1.9 U	10	1.9	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Vanadium	1.0 U	50	1.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Zinc	17.7 J	20	5.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA8594
(2) Instrument QC Batch: MA8611
(3) Prep QC Batch: MP19708
(4) Prep QC Batch: MP19744

(a) Elevated RL due to instrument baseline drift.

RL = Reporting Limit
MDL = Method Detection Limit

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

Report of Analysis

Client Sample ID:	SWMU8-DP05-A		
Lab Sample ID:	F78727-1	**Date Sampled:**	12/14/10
Matrix:	AQ - Ground Water	**Date Received:**	12/15/10
		Percent Solids:	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	1970	1000	100	mg/l	10	12/17/10 13:35	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

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

Report of Analysis

Client Sample ID:	SWMU8-DP05		
Lab Sample ID:	F78727-2	**Date Sampled:**	12/14/10
Matrix:	AQ - Ground Water	**Date Received:**	12/15/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J061940.D	1	12/27/10	LD	n/a	n/a	VJ3447
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

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	3.0	ug/l	
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.25	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.22	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.20	ug/l	
104-51-8	n-Butylbenzene [a]	0.34	1.0	0.26	ug/l	J
135-98-8	sec-Butylbenzene [b]	2.4	1.0	0.22	ug/l	J
98-06-6	tert-Butylbenzene	ND	1.0	0.27	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.22	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.22	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.20	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.2	ug/l	
75-15-0	Carbon disulfide	1.4	2.0	0.50	ug/l	J
56-23-5	Carbon tetrachloride	ND	1.0	0.25	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.25	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.23	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.50	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.25	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.20	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.44	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.26	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.20	ug/l	

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B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SWMU8-DP05		
Lab Sample ID:	F78727-2	**Date Sampled:**	12/14/10
Matrix:	AQ - Ground Water	**Date Received:**	12/15/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
541-73-1	m-Dichlorobenzene	3.2	1.0	0.20	ug/l	
95-50-1	o-Dichlorobenzene	2.1	1.0	0.25	ug/l	
106-46-7	p-Dichlorobenzene	2.1	1.0	0.23	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.35	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
591-78-6	2-Hexanone	ND	10	4.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.80	ug/l	
110-54-3	Hexane	ND	2.0	0.59	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.21	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.50	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.50	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.25	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	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	0.34	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.20	ug/l	
100-42-5	Styrene	ND	1.0	0.20	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	0.20	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.23	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.22	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	0.30	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	0.27	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.21	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.25	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.26	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.22	ug/l	
108-05-4	Vinyl Acetate	ND	10	2.0	ug/l	
	m,p-Xylene	ND	2.0	0.32	ug/l	
95-47-6	o-Xylene	ND	1.0	0.20	ug/l	

ND = Not detected MDL - Method Detection Limit
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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:	SWMU8-DP05		
Lab Sample ID:	F78727-2	**Date Sampled:**	12/14/10
Matrix:	AQ - Ground Water	**Date Received:**	12/15/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		87-116%
17060-07-0	1,2-Dichloroethane-D4	96%		76-127%
2037-26-5	Toluene-D8	97%		86-112%
460-00-4	4-Bromofluorobenzene	100%		84-120%

(a) CCV and BS outside of control limits; results may be biased high.
(b) CCV outside of control limits; results may be biased high.

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:	SWMU8-DP05		
Lab Sample ID:	F78727-2	**Date Sampled:**	12/14/10
Matrix:	AQ - Ground Water	**Date Received:**	12/15/10
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X015720.D	1	12/21/10	NAF	12/17/10	OP35434	SX784
Run #2							

	Initial Volume	Final Volume
Run #1	1050 ml	1.0 ml
Run #2		

ABN Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	48	9.5	ug/l	
95-57-8	2-Chlorophenol	ND	4.8	0.48	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	4.8	0.48	ug/l	
120-83-2	2,4-Dichlorophenol	ND	4.8	0.48	ug/l	
105-67-9	2,4-Dimethylphenol	ND	4.8	1.0	ug/l	
51-28-5	2,4-Dinitrophenol	ND	24	9.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	9.5	1.9	ug/l	
95-48-7	2-Methylphenol	ND	4.8	0.51	ug/l	
	3&4-Methylphenol	ND	4.8	1.0	ug/l	
88-75-5	2-Nitrophenol	ND	4.8	0.51	ug/l	
100-02-7	4-Nitrophenol	ND	24	4.8	ug/l	
87-86-5	Pentachlorophenol	ND	24	5.1	ug/l	
108-95-2	Phenol	ND	4.8	0.48	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	4.8	0.48	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	4.8	0.48	ug/l	
83-32-9	Acenaphthene	ND	4.8	0.48	ug/l	
208-96-8	Acenaphthylene	ND	4.8	0.48	ug/l	
62-53-3	Aniline	ND	4.8	0.50	ug/l	
120-12-7	Anthracene	ND	4.8	0.48	ug/l	
92-87-5	Benzidine	ND	24	4.5	ug/l	
56-55-3	Benzo(a)anthracene	ND	4.8	0.48	ug/l	
50-32-8	Benzo(a)pyrene	ND	4.8	0.48	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	4.8	0.48	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	4.8	0.48	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	4.8	0.48	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	4.8	0.48	ug/l	
85-68-7	Butyl benzyl phthalate	ND	4.8	1.0	ug/l	
100-51-6	Benzyl Alcohol	ND	4.8	0.95	ug/l	
91-58-7	2-Chloronaphthalene	ND	4.8	0.48	ug/l	
106-47-8	4-Chloroaniline	ND	4.8	0.48	ug/l	
86-74-8	Carbazole	ND	4.8	0.48	ug/l	
218-01-9	Chrysene	ND	4.8	0.48	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:	SWMU8-DP05		
Lab Sample ID:	F78727-2	**Date Sampled:**	12/14/10
Matrix:	AQ - Ground Water	**Date Received:**	12/15/10
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

ABN Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
111-91-1	bis(2-Chloroethoxy)methane	ND	4.8	0.48	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	4.8	0.51	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	4.8	0.51	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	4.8	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	1.3	4.8	0.95	ug/l	J
122-66-7	1,2-Diphenylhydrazine	ND	4.8	0.48	ug/l	
541-73-1	1,3-Dichlorobenzene	1.9	4.8	0.95	ug/l	J
106-46-7	1,4-Dichlorobenzene	1.3	4.8	0.95	ug/l	J
121-14-2	2,4-Dinitrotoluene	ND	4.8	0.48	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	4.8	0.48	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	9.5	0.95	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	4.8	0.50	ug/l	
132-64-9	Dibenzofuran	ND	4.8	0.48	ug/l	
84-74-2	Di-n-butyl phthalate	ND	4.8	0.83	ug/l	
117-84-0	Di-n-octyl phthalate	ND	4.8	1.0	ug/l	
84-66-2	Diethyl phthalate	1.5	4.8	1.0	ug/l	J
131-11-3	Dimethyl phthalate	ND	4.8	0.94	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	4.8	1.0	ug/l	
206-44-0	Fluoranthene	ND	4.8	0.48	ug/l	
86-73-7	Fluorene	ND	4.8	0.48	ug/l	
118-74-1	Hexachlorobenzene	ND	4.8	0.53	ug/l	
87-68-3	Hexachlorobutadiene	ND	4.8	0.95	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	9.5	1.8	ug/l	
67-72-1	Hexachloroethane	ND	4.8	0.95	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.8	0.48	ug/l	
78-59-1	Isophorone	ND	4.8	0.48	ug/l	
90-12-0	1-Methylnaphthalene	ND	4.8	0.48	ug/l	
91-57-6	2-Methylnaphthalene	ND	4.8	0.54	ug/l	
88-74-4	2-Nitroaniline	ND	4.8	0.48	ug/l	
99-09-2	3-Nitroaniline	ND	4.8	0.48	ug/l	
100-01-6	4-Nitroaniline	ND	4.8	0.48	ug/l	
91-20-3	Naphthalene	ND	4.8	0.76	ug/l	
98-95-3	Nitrobenzene	ND	4.8	0.56	ug/l	
62-75-9	N-Nitrosodimethylamine	ND	4.8	2.3	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	4.8	0.48	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	4.8	0.95	ug/l	
85-01-8	Phenanthrene	ND	4.8	0.48	ug/l	
129-00-0	Pyrene	ND	4.8	0.48	ug/l	
110-86-1	Pyridine	ND	9.5	1.5	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	4.8	0.48	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:	SWMU8-DP05		
Lab Sample ID:	F78727-2	**Date Sampled:**	12/14/10
Matrix:	AQ - Ground Water	**Date Received:**	12/15/10
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

ABN Full List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	37%		14-62%
4165-62-2	Phenol-d5	24%		10-40%
118-79-6	2,4,6-Tribromophenol	77%		33-118%
4165-60-0	Nitrobenzene-d5	66%		42-108%
321-60-8	2-Fluorobiphenyl	67%		40-106%
1718-51-0	Terphenyl-d14	74%		39-121%

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:	SWMU8-DP05		
Lab Sample ID:	F78727-2	**Date Sampled:**	12/14/10
Matrix:	AQ - Ground Water	**Date Received:**	12/15/10
Method:	SW846 8015C	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	CD101568.D	1	12/17/10	WV	n/a	n/a	GCD4185
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	0.0551	0.10	0.050	mg/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	89%		57-129%
98-08-8	aaa-Trifluorotoluene	83%		58-120%

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:	SWMU8-DP05		
Lab Sample ID:	F78727-2	**Date Sampled:**	12/14/10
Matrix:	AQ - Ground Water	**Date Received:**	12/15/10
Method:	SW846 8082A SW846 3510C	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XX053903.D	1	12/20/10	NJ	12/16/10	OP35432	GXX807
Run #2							

	Initial Volume	Final Volume
Run #1	1030 ml	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.49	0.19	ug/l	
11104-28-2	Aroclor 1221	ND	0.49	0.24	ug/l	
11141-16-5	Aroclor 1232	ND	0.49	0.24	ug/l	
53469-21-9	Aroclor 1242	ND	0.49	0.19	ug/l	
12672-29-6	Aroclor 1248	ND	0.49	0.19	ug/l	
11097-69-1	Aroclor 1254	ND	0.49	0.19	ug/l	
11096-82-5	Aroclor 1260	ND	0.49	0.19	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	77%		38-127%
2051-24-3	Decachlorobiphenyl	56%		25-137%

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:	SWMU8-DP05		
Lab Sample ID:	F78727-2	**Date Sampled:**	12/14/10
Matrix:	AQ - Ground Water	**Date Received:**	12/15/10
Method:	SW846 8015C SW846 3510C	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LL34617.D	1	12/22/10	MV	12/20/10	OP35466	GLL1308
Run #2							

	Initial Volume	Final Volume
Run #1	1050 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C22)	0.550	0.24	0.095	mg/l	
	TPH (> C22-C36)	ND	0.24	0.095	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	98%		42-114%

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:	SWMU8-DP05		
Lab Sample ID:	F78727-2	**Date Sampled:**	12/14/10
Matrix:	AQ - Ground Water	**Date Received:**	12/15/10
		Percent Solids:	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	25 U	200	25	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Antimony [a]	2.0 U	12	2.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Arsenic	2.0 U	10	2.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Barium	28.1 J	200	5.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Beryllium	1.0 U	4.0	1.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Cadmium	1.0 U	5.0	1.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Calcium	550000	1000	100	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Chromium	1.0 U	10	1.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Cobalt	1.0 U	50	1.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Copper	2.9 J	25	2.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Iron	193 J	300	35	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Lead	1.0 U	5.0	1.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Magnesium	49600	5000	100	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Manganese	130	15	1.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Mercury	0.050 U	1.0	0.050	ug/l	1	12/28/10	12/28/10	LM	SW846 7470A [2]	SW846 7470A [4]
Nickel	2.0 U	40	2.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Potassium	3920 J	10000	500	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Selenium	2.0 U	10	2.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Silver	1.0 U	10	1.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Sodium	69600	10000	1900	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Thallium	1.9 U	10	1.9	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Vanadium	1.0 U	50	1.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Zinc	13.5 J	20	5.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA8594
(2) Instrument QC Batch: MA8611
(3) Prep QC Batch: MP19708
(4) Prep QC Batch: MP19744

(a) Elevated RL due to instrument baseline drift.

RL = Reporting Limit
MDL = Method Detection Limit

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

Report of Analysis

Client Sample ID:	SWMU8-DP05		
Lab Sample ID:	F78727-2	**Date Sampled:**	12/14/10
Matrix:	AQ - Ground Water	**Date Received:**	12/15/10
		Percent Solids:	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	2500	1000	100	mg/l	10	12/17/10 13:35	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

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

Report of Analysis

Client Sample ID:	SWMU8-DP01		
Lab Sample ID:	F78727-3	**Date Sampled:**	12/13/10
Matrix:	AQ - Ground Water	**Date Received:**	12/15/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J061941.D	1	12/27/10	LD	n/a	n/a	VJ3447
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

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	3.0	ug/l	
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.25	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.22	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.20	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.26	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.22	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.27	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	1.7	1.0	0.22	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.22	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.20	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.2	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.25	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.25	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.23	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.50	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.25	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.20	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.44	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.26	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.20	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:	SWMU8-DP01		
Lab Sample ID:	F78727-3	**Date Sampled:**	12/13/10
Matrix:	AQ - Ground Water	**Date Received:**	12/15/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
541-73-1	m-Dichlorobenzene	ND	1.0	0.20	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.25	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.23	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.35	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
591-78-6	2-Hexanone	ND	10	4.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.80	ug/l	
110-54-3	Hexane	ND	2.0	0.59	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.21	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.50	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.50	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.25	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	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	0.34	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.20	ug/l	
100-42-5	Styrene	ND	1.0	0.20	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	0.20	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.23	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.22	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	0.30	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	0.27	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.21	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.25	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.26	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.22	ug/l	
108-05-4	Vinyl Acetate	ND	10	2.0	ug/l	
	m,p-Xylene	ND	2.0	0.32	ug/l	
95-47-6	o-Xylene	ND	1.0	0.20	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:	SWMU8-DP01		
Lab Sample ID:	F78727-3	**Date Sampled:**	12/13/10
Matrix:	AQ - Ground Water	**Date Received:**	12/15/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

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	96%		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:	SWMU8-DP01		
Lab Sample ID:	F78727-3	**Date Sampled:**	12/13/10
Matrix:	AQ - Ground Water	**Date Received:**	12/15/10
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X015692.D	1	12/20/10	NAF	12/17/10	OP35434	SX783
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

ABN Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	50	10	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.50	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	5.0	0.50	ug/l	
120-83-2	2,4-Dichlorophenol	ND	5.0	0.50	ug/l	
105-67-9	2,4-Dimethylphenol	ND	5.0	1.1	ug/l	
51-28-5	2,4-Dinitrophenol	ND	25	10	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	2.0	ug/l	
95-48-7	2-Methylphenol	ND	5.0	0.54	ug/l	
	3&4-Methylphenol	ND	5.0	1.1	ug/l	
88-75-5	2-Nitrophenol	ND	5.0	0.54	ug/l	
100-02-7	4-Nitrophenol	ND	25	5.0	ug/l	
87-86-5	Pentachlorophenol	ND	25	5.4	ug/l	
108-95-2	Phenol	ND	5.0	0.50	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	5.0	0.50	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	5.0	0.50	ug/l	
83-32-9	Acenaphthene	ND	5.0	0.50	ug/l	
208-96-8	Acenaphthylene	ND	5.0	0.50	ug/l	
62-53-3	Aniline	ND	5.0	0.52	ug/l	
120-12-7	Anthracene	ND	5.0	0.50	ug/l	
92-87-5	Benzidine	ND	25	4.7	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	0.50	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	0.50	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	0.50	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	0.50	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	0.50	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	0.50	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	1.1	ug/l	
100-51-6	Benzyl Alcohol	ND	5.0	1.0	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	0.50	ug/l	
106-47-8	4-Chloroaniline	ND	5.0	0.50	ug/l	
86-74-8	Carbazole	ND	5.0	0.50	ug/l	
218-01-9	Chrysene	ND	5.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
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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:	SWMU8-DP01		
Lab Sample ID:	F78727-3	**Date Sampled:**	12/13/10
Matrix:	AQ - Ground Water	**Date Received:**	12/15/10
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

ABN Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	0.50	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	0.54	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	0.54	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	5.0	1.0	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	5.0	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	5.0	1.0	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	5.0	0.50	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	5.0	0.50	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	10	1.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	0.52	ug/l	
132-64-9	Dibenzofuran	ND	5.0	0.50	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.0	0.87	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.0	1.1	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	1.1	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	0.99	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	5.0	1.1	ug/l	
206-44-0	Fluoranthene	ND	5.0	0.50	ug/l	
86-73-7	Fluorene	ND	5.0	0.50	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	0.56	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.0	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	1.9	ug/l	
67-72-1	Hexachloroethane	ND	5.0	1.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	0.50	ug/l	
78-59-1	Isophorone	ND	5.0	0.50	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	0.50	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	0.57	ug/l	
88-74-4	2-Nitroaniline	ND	5.0	0.50	ug/l	
99-09-2	3-Nitroaniline	ND	5.0	0.50	ug/l	
100-01-6	4-Nitroaniline	ND	5.0	0.50	ug/l	
91-20-3	Naphthalene	ND	5.0	0.80	ug/l	
98-95-3	Nitrobenzene	ND	5.0	0.59	ug/l	
62-75-9	N-Nitrosodimethylamine	ND	5.0	2.4	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	0.50	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	1.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	0.50	ug/l	
129-00-0	Pyrene	ND	5.0	0.50	ug/l	
110-86-1	Pyridine	ND	10	1.6	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	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:	SWMU8-DP01		
Lab Sample ID:	F78727-3	**Date Sampled:**	12/13/10
Matrix:	AQ - Ground Water	**Date Received:**	12/15/10
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

ABN Full List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	44%		14-62%
4165-62-2	Phenol-d5	29%		10-40%
118-79-6	2,4,6-Tribromophenol	69%		33-118%
4165-60-0	Nitrobenzene-d5	67%		42-108%
321-60-8	2-Fluorobiphenyl	71%		40-106%
1718-51-0	Terphenyl-d14	93%		39-121%

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:	SWMU8-DP01		
Lab Sample ID:	F78727-3	**Date Sampled:**	12/13/10
Matrix:	AQ - Ground Water	**Date Received:**	12/15/10
Method:	SW846 8015C	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	CD101569.D	1	12/17/10	WV	n/a	n/a	GCD4185
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	0.10	0.050	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	87%		57-129%
98-08-8	aaa-Trifluorotoluene	87%		58-120%

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:	SWMU8-DP01		
Lab Sample ID:	F78727-3	**Date Sampled:**	12/13/10
Matrix:	AQ - Ground Water	**Date Received:**	12/15/10
Method:	SW846 8082A SW846 3510C	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XX053899.D	1	12/20/10	NJ	12/16/10	OP35432	GXX807
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.50	0.20	ug/l	
11104-28-2	Aroclor 1221	ND	0.50	0.25	ug/l	
11141-16-5	Aroclor 1232	ND	0.50	0.25	ug/l	
53469-21-9	Aroclor 1242	ND	0.50	0.20	ug/l	
12672-29-6	Aroclor 1248	ND	0.50	0.20	ug/l	
11097-69-1	Aroclor 1254	ND	0.50	0.20	ug/l	
11096-82-5	Aroclor 1260	ND	0.50	0.20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	91%		38-127%
2051-24-3	Decachlorobiphenyl	66%		25-137%

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:	SWMU8-DP01		
Lab Sample ID:	F78727-3	**Date Sampled:**	12/13/10
Matrix:	AQ - Ground Water	**Date Received:**	12/15/10
Method:	SW846 8015C SW846 3510C	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LL34570.D	1	12/21/10	MV	12/20/10	OP35466	GLL1307
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C22)	ND	0.25	0.10	mg/l	
	TPH (> C22-C36)	ND	0.25	0.10	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	82%		42-114%

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:	SWMU8-DP01		
Lab Sample ID:	F78727-3	**Date Sampled:**	12/13/10
Matrix:	AQ - Ground Water	**Date Received:**	12/15/10
		Percent Solids:	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	25 U	200	25	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Antimony [a]	2.1 J	12	2.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Arsenic	7.8 J	10	2.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Barium	15.3 J	200	5.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Beryllium	1.0 U	4.0	1.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Cadmium	1.0 U	5.0	1.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Calcium	567000	1000	100	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Chromium	2.3 J	10	1.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Cobalt	1.0 U	50	1.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Copper	3.6 J	25	2.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Iron	35 U	300	35	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Lead	1.0 U	5.0	1.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Magnesium	77500	5000	100	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Manganese	1.0 U	15	1.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Mercury	0.050 U	1.0	0.050	ug/l	1	12/28/10	12/28/10	LM	SW846 7470A [2]	SW846 7470A [4]
Nickel	2.0 U	40	2.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Potassium	8140 J	10000	500	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Selenium	2.5 J	10	2.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Silver	1.0 U	10	1.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Sodium	71400	10000	1900	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Thallium	1.9 U	10	1.9	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Vanadium	83.6	50	1.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]
Zinc	15.9 J	20	5.0	ug/l	1	12/17/10	12/17/10	RS	SW846 6010C [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA8594
(2) Instrument QC Batch: MA8611
(3) Prep QC Batch: MP19708
(4) Prep QC Batch: MP19744

(a) Elevated RL due to instrument baseline drift.

RL = Reporting Limit
MDL = Method Detection Limit

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

Report of Analysis

Client Sample ID:	SWMU8-DP01		
Lab Sample ID:	F78727-3	**Date Sampled:**	12/13/10
Matrix:	AQ - Ground Water	**Date Received:**	12/15/10
		Percent Solids:	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	2420	1000	100	mg/l	10	12/17/10 13:35	LE	SM19 2540C

RL = Reporting Limit
MDL = Method Detection Limit

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

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	F78727-4	**Date Sampled:**	12/13/10
Matrix:	AQ - Trip Blank Water	**Date Received:**	12/15/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J061944.D	1	12/27/10	LD	n/a	n/a	VJ3447
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

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	3.0	ug/l	
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.25	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.22	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.20	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.26	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.22	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.27	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.22	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.22	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.20	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.2	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.25	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.25	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.23	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.50	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.25	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.20	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.44	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.26	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.20	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:	TRIP BLANK		
Lab Sample ID:	F78727-4	**Date Sampled:**	12/13/10
Matrix:	AQ - Trip Blank Water	**Date Received:**	12/15/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
541-73-1	m-Dichlorobenzene	ND	1.0	0.20	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.25	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.23	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.35	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
591-78-6	2-Hexanone	ND	10	4.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.80	ug/l	
110-54-3	Hexane	ND	2.0	0.59	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.21	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.50	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.50	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.25	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	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	0.34	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.20	ug/l	
100-42-5	Styrene	ND	1.0	0.20	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	0.20	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.23	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.22	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	0.30	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	0.27	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.21	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.25	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.26	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.22	ug/l	
108-05-4	Vinyl Acetate	ND	10	2.0	ug/l	
	m,p-Xylene	ND	2.0	0.32	ug/l	
95-47-6	o-Xylene	ND	1.0	0.20	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:	TRIP BLANK		
Lab Sample ID:	F78727-4	**Date Sampled:**	12/13/10
Matrix:	AQ - Trip Blank Water	**Date Received:**	12/15/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

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	95%		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:	TRIP BLANK		
Lab Sample ID:	F78727-5	**Date Sampled:**	12/13/10
Matrix:	AQ - Trip Blank Water	**Date Received:**	12/15/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J061945.D	1	12/27/10	LD	n/a	n/a	VJ3447
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

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	3.0	ug/l	
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.25	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.22	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.20	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.26	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.22	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.27	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.22	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.22	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.20	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.2	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.25	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.25	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.23	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.50	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.25	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.20	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.44	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.26	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.20	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:	TRIP BLANK		
Lab Sample ID:	F78727-5	**Date Sampled:**	12/13/10
Matrix:	AQ - Trip Blank Water	**Date Received:**	12/15/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
541-73-1	m-Dichlorobenzene	ND	1.0	0.20	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.25	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.23	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.35	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
591-78-6	2-Hexanone	ND	10	4.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.80	ug/l	
110-54-3	Hexane	ND	2.0	0.59	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.21	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.50	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.50	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.25	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	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	0.34	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.20	ug/l	
100-42-5	Styrene	ND	1.0	0.20	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	0.20	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.23	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.22	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	0.30	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	0.27	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.21	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.25	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.26	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.22	ug/l	
108-05-4	Vinyl Acetate	ND	10	2.0	ug/l	
	m,p-Xylene	ND	2.0	0.32	ug/l	
95-47-6	o-Xylene	ND	1.0	0.20	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:	TRIP BLANK		
Lab Sample ID:	F78727-5	**Date Sampled:**	12/13/10
Matrix:	AQ - Trip Blank Water	**Date Received:**	12/15/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		87-116%
17060-07-0	1,2-Dichloroethane-D4	96%		76-127%
2037-26-5	Toluene-D8	96%		86-112%
460-00-4	4-Bromofluorobenzene	100%		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:	TRIP BLANK		
Lab Sample ID:	F78727-6	**Date Sampled:**	12/13/10
Matrix:	AQ - Trip Blank Water	**Date Received:**	12/15/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J061946.D	1	12/27/10	LD	n/a	n/a	VJ3447
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

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	3.0	ug/l	
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.25	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.22	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.20	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.26	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.22	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.27	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.22	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.22	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.20	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.2	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.25	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.25	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.23	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.50	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.25	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.20	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.44	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.26	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.20	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:	TRIP BLANK		
Lab Sample ID:	F78727-6	**Date Sampled:**	12/13/10
Matrix:	AQ - Trip Blank Water	**Date Received:**	12/15/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
541-73-1	m-Dichlorobenzene	ND	1.0	0.20	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.25	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.23	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.35	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
591-78-6	2-Hexanone	ND	10	4.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.80	ug/l	
110-54-3	Hexane	ND	2.0	0.59	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.21	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.50	ug/l	
74-87-3	Methyl chloride	0.59	2.0	0.50	ug/l	J
74-95-3	Methylene bromide	ND	2.0	0.25	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	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	0.34	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.20	ug/l	
100-42-5	Styrene	ND	1.0	0.20	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	0.20	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.23	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.22	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	0.30	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	0.27	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.21	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.25	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.26	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.22	ug/l	
108-05-4	Vinyl Acetate	ND	10	2.0	ug/l	
	m,p-Xylene	ND	2.0	0.32	ug/l	
95-47-6	o-Xylene	ND	1.0	0.20	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:	TRIP BLANK		
Lab Sample ID:	F78727-6	**Date Sampled:**	12/13/10
Matrix:	AQ - Trip Blank Water	**Date Received:**	12/15/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		87-116%
17060-07-0	1,2-Dichloroethane-D4	98%		76-127%
2037-26-5	Toluene-D8	96%		86-112%
460-00-4	4-Bromofluorobenzene	100%		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:	TRIP BLANK		
Lab Sample ID:	F78727-7	**Date Sampled:**	12/13/10
Matrix:	AQ - Trip Blank Water	**Date Received:**	12/15/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J061947.D	1	12/27/10	LD	n/a	n/a	VJ3447
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

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	3.0	ug/l	
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.25	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.22	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.20	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.26	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.22	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.27	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.22	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.22	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.20	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.2	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.25	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.25	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.23	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.50	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.25	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.20	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.44	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.26	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.20	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:	TRIP BLANK		
Lab Sample ID:	F78727-7	**Date Sampled:**	12/13/10
Matrix:	AQ - Trip Blank Water	**Date Received:**	12/15/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
541-73-1	m-Dichlorobenzene	ND	1.0	0.20	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.25	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.23	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.35	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
591-78-6	2-Hexanone	ND	10	4.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.80	ug/l	
110-54-3	Hexane	ND	2.0	0.59	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.21	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.50	ug/l	
74-87-3	Methyl chloride	0.55	2.0	0.50	ug/l	J
74-95-3	Methylene bromide	ND	2.0	0.25	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	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	0.34	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.20	ug/l	
100-42-5	Styrene	ND	1.0	0.20	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	0.20	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.23	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.22	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	0.30	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	0.27	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.21	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.25	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.26	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.22	ug/l	
108-05-4	Vinyl Acetate	ND	10	2.0	ug/l	
	m,p-Xylene	ND	2.0	0.32	ug/l	
95-47-6	o-Xylene	ND	1.0	0.20	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:	TRIP BLANK		
Lab Sample ID:	F78727-7	**Date Sampled:**	12/13/10
Matrix:	AQ - Trip Blank Water	**Date Received:**	12/15/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		87-116%
17060-07-0	1,2-Dichloroethane-D4	96%		76-127%
2037-26-5	Toluene-D8	97%		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:	TRIP BLANK		
Lab Sample ID:	F78727-8	**Date Sampled:**	12/13/10
Matrix:	AQ - Trip Blank Water	**Date Received:**	12/15/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J061948.D	1	12/27/10	LD	n/a	n/a	VJ3447
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

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	3.0	ug/l	
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.25	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.22	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.20	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.26	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.22	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.27	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.22	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.22	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.20	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.2	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.25	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.25	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.23	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.50	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.25	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.20	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.44	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.26	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.20	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:	TRIP BLANK		
Lab Sample ID:	F78727-8	**Date Sampled:**	12/13/10
Matrix:	AQ - Trip Blank Water	**Date Received:**	12/15/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
541-73-1	m-Dichlorobenzene	ND	1.0	0.20	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.25	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.23	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.35	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
591-78-6	2-Hexanone	ND	10	4.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.80	ug/l	
110-54-3	Hexane	ND	2.0	0.59	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.21	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.50	ug/l	
74-87-3	Methyl chloride	0.75	2.0	0.50	ug/l	J
74-95-3	Methylene bromide	ND	2.0	0.25	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	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	0.34	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.20	ug/l	
100-42-5	Styrene	ND	1.0	0.20	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	0.20	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.23	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.22	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	0.30	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	0.27	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.21	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.25	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.26	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.22	ug/l	
108-05-4	Vinyl Acetate	ND	10	2.0	ug/l	
	m,p-Xylene	ND	2.0	0.32	ug/l	
95-47-6	o-Xylene	ND	1.0	0.20	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:	TRIP BLANK		
Lab Sample ID:	F78727-8	**Date Sampled:**	12/13/10
Matrix:	AQ - Trip Blank Water	**Date Received:**	12/15/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Holloman AFB; SWMU 8, ACM Investigation		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		87-116%
17060-07-0	1,2-Dichloroethane-D4	98%		76-127%
2037-26-5	Toluene-D8	98%		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

Southeast ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Certification Exceptions
- Chain of Custody

NATIONVIEW

F78727

Page: 1 of 1

Project No: 8080014.03.020

COC Number(1): 12142010-05

LIMS Number:

Chain of Custody and Analytical Request

Facility/Base I.D.: Holloman AFB, New Mexico

Project/Site Name: SWMU 8, RFI Investigation

Client Name: USACE - Albuquerque District

Collected by: Dustin McNeil/ Zack Beck

	Field Sample ID (30 Characters Max)	ERPIMS LOCID (15 Characters Max)	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hhmm)	Sample Depth (beginning - ending)	SA Code (2)	Sample Number (3)	Sample Matrix (4)	Number of containers	TDS (2540C)	VOCs (8260B)	SVOCs (8270C)	TPH-GRO (8015B)	TPH-DRO/ORO (8015B)	TAL Metals (6010B/7470A)	PCBs (8082)	Ambient Blank Lot Control Number	Equipment Blank Lot Control Number	Trip Blank Lot Control Number	Code: ID
1	SWMU8-DP05-A	8-DP05	14-12-2010	0850	-	FD	1	WG	14	X	X	X	X	X	X	X				5
4	Trip Blank				-	TB	1	WQ	2		X									5
					-															
					-															
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					-															
					-															
					-															
					-															

Sample Analysis Requested (5) — Quality Assurance Samples (6)

COMMENTS:

Custody Transfers Prior to Receipt by Laboratory

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1. [signature]	12/14/10	1300	1. [signature]		0P:30
2. [signature]			2. J-Lorne (AZSE)	12-15-10	
3.			3.		

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab:

Method of Shipment: FedEx Express

Analytical Lab: Accutest

Lab Recipient:

Shipped No.:

Airbill Number: 7965 5001 2773

Delivery Location: Orlando, FL

Delivery Date/Time:

1.) Chain of Custody Number = date collected + custody number (e.g. 09-02-1999-01)

2.) Sample Type (SA) Codes: N = Normal Sample, TB = Trip Blank (-c) Sample, FD = Field Duplicate (-a) Samples, FR = Field Replicate (-b) Samples, EB = Equipment Blank (-d) Samples, MS = Matrix Spike, SD = Matrix Spike Duplicate, AB = Ambient Blank (-e)

3.) Sample Number: Unique sample number collected from a particular location per day. (e.g. Groundwater sample collected from MW-1 on 10/10/99 = 01, if sampled again on 10/10/99 = 02, etc.)

4.) Matrix Codes: GS = Soil Gas, WG = Groundwater, WS = Surface Water, SO = Soil, SE = Sediment, SL = Sludge, SS = Surface Soil Samples, WQ = Aqueous Blank Samples (trip, equipment, ambient, etc), SQ = Soil Blanks

5.) Sample Analysis Requested: Analytical method requested and number of containers provided for each.

6.) Quality assurance samples are assigned by date (ddmmyy) and the sample number associated with the sample (01, 02, etc) (e.g. Equipment blank collected in association with MW-1 on 10/10/99 will be designated 10109901 in the Equipment Blank Lot Control

3628 2.4 3.0 3.6

4.1

4

F78727: Chain of Custody

Page 1 of 6

NATIONVIEW

F78727

Page: 1 of 1

Project No: 8080014.03.020

COC Number(1): 1214 2010-04

LIMS Number:

Chain of Custody and Analytical Request

Facility/Base I.D.: Holloman AFB, New Mexico

Project/Site Name: SWMU 8, RFI Investigation

Client Name: USACE - Albuquerque District

Collected by: Dustin McNeil/ Zack Beck

	Field Sample ID (30 Characters Max)	ERPIMS LOCID (15 Characters Max)	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hhmm)	Sample Depth (beginning - ending)	SA Code (2)	Sample Number (3)	Sample Matrix (4)	Number of containers	TDS (2540C)	VOCs (8260B)	SVOCs (8270C)	TPH-GRO (8015B)	TPH-DRO/ORO (8015B)	TAL Metals (6010B/7470A)	PCBs (8082)	Ambient Blank Lot Control Number	Equipment Blank Lot Control Number	Trip Blank Lot Control Number	Cooler ID
									Sample Analysis Requested (5)								Quality Assurance Samples (6)			
2	SWMU8-DP05	8-DP05	14122010	0850	-	N	1	WG	4	X	X	X	X	X	X	X				4
5	Trip Blank				-	TB	1	WQ	2		X									4
					-															
					-															
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COMMENTS:

Custody Transfers Prior to Receipt by Laboratory

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1.	[signature]	12/14/10	1300	FX		07:30
2.	FX			[signature] (ALSE)	12-15-10	
3.						

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab:		Shipped No.:	
Method of Shipment:	FedEx Express	Airbill Number:	7965 4999 8059
Analytical Lab:	Accutest	Delivery Location:	Orlando, FL
Lab Recipient:		Delivery Date/Time:	

1.) Chain of Custody Number = date collected + custody number (e.g. 09-02-1999-01)

2.) Sample Type (SA) Codes: N = Normal Sample, TB = Trip Blank (-c) Sample, FD = Field Duplicate (-a) Samples, FR = Field Replicate (-b) Samples, EB = Equipment Blank (-d) Samples, MS = Matrix Spike, SD = Matrix Spike Duplicate, AB = Ambient Blank (-e)

3.) Sample Number: Unique sample number collected from a particular location per day. (e.g. Groundwater sample collected from MW-1 on 10/10/99 = 01, if sampled again on 10/10/99 = 02, etc.)

4.) Matrix Codes: GS = Soil Gas, WG = Groundwater, WS = Surface Water, SO = Soil, SE = Sediment, SL = Sludge, SS = Surface Soil Samples, WQ = Aqueous Blank Samples (trip, equipment, ambient, etc), SQ = Soil Blanks

5.) Sample Analysis Requested: Analytical method requested and number of containers provided for each

6.) Quality assurance samples are assigned by date (ddmmyy) and the sample number associated with the sample (01, 02, etc) (e.g. Equipment blank collected in association with MW-1 on 10/10/99 will be designated 10109901 in the Equipment Blank Lot Control

4.1

4

F78727: Chain of Custody

Page 2 of 6

NATIONVIEW

F78727

Page: 1 of 1

Project No: 8080014.03.020

COC Number(1): 1214 2010 - 01

LIMS Number:

Chain of Custody and Analytical Request

Facility/Base I.D.: Holloman AFB, New Mexico

Project/Site Name: SWMU 8, RFI Investigation

Client Name: USACE - Albuquerque District

Collected by: Dustin McNeil/ Zack Beck

	Field Sample ID (30 Characters Max)	ERPIMS LOCID (15 Characters Max)	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hhmm)	Sample Depth (beginning - ending)	SA Code (2)	Sample Number (3)	Sample Matrix (4)	Number of containers	TDS (2540C)	VOCs (8260B)	SVOCs (8270C)	TPH-GRO (8015B)	TPH-DRO/ORO (8015B)	TAL Metals (6010B/7470A)	PCBs (8082)	Ambient Blank Lot Control Number	Equipment Blank Lot Control Number	Trip Blank Lot Control Number	Cooler ID
3	SWMU8-DP01	8-DP01	13122010	1300	-	N	1	WG	14	X	X	X	X	X	X	X				1
6	Trip Blank				-	TB	1	WQ	2		X									1
					-															
					-															
					-															
					-															
					-															
					-															
					-															
					-															
					-															

Sample Analysis Requested (5)

Quality Assurance Samples (6)

COMMENTS:

Custody Transfers Prior to Receipt by Laboratory

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1.	[signature]	12/10/10	1300	[signature]		09:30
2.	[signature]			[signature] (ALSE)	12-15-10	
3.						

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab:

Method of Shipment: FedEx Express

Analytical Lab: Accutest

Lab Recipient:

Shipped No.:

Airbill Number: 7965 4790 1395

Delivery Location: Orlando, FL

Delivery Date/Time:

1.) Chain of Custody Number = date collected + custody number (e.g. 09-02-1999-01)

2.) Sample Type (SA) Codes: N = Normal Sample, TB = Trip Blank (-c) Sample, FD = Field Duplicate (-a) Samples, FR = Field Replicate (-b) Samples, EB = Equipment Blank (-d) Samples, MS = Matrix Spike, SD = Matrix Spike Duplicate, AB = Ambient Blank (-e)

3.) Sample Number: Unique sample number collected from a particular location per day. (e.g. Groundwater sample collected from MW-1 on 10/10/99 = 01, if sampled again on 10/10/99 = 02, etc.)

4.) Matrix Codes: GS = Soil Gas, WG = Groundwater, WS = Surface Water, SO = Soil, SE = Sediment, SL = Sludge, SS = Surface Soil Samples, WQ = Aqueous Blank Samples (trip, equipment, ambient, etc), SQ = Soil Blanks

5.) Sample Analysis Requested: Analytical method requested and number of containers provided for each.

6.) Quality assurance samples are assigned by date (ddmmyy) and the sample number associated with the sample (01, 02, etc) (e.g. Equipment blank collected in association with MW-1 on 10/10/99 will be designated 10109901 in the Equipment Blank Lot Control

F78727: Chain of Custody

Page 3 of 6

NATIONVIEW

F78727

Page: 1 of 1

Project No: 8080014.03.020

COC Number(1): 12142010-02

LIMS Number:

Chain of Custody and Analytical Request

Facility/Base I.D.: Holloman AFB, New Mexico

Project/Site Name: SWMU 8, RFI Investigation

Client Name: USACE - Albuquerque District

Collected by: Dustin McNeil/ Zack Beck

	Field Sample ID (30 Characters Max)	ERPIMS LOCID (15 Characters Max)	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hhmm)	Sample Depth (beginning - ending)	SA Code (2)	Sample Number (3)	Sample Matrix (4)	Number of containers	TDS (2540C)	VOCs (8260B)	SVOCs (8270C)	TPH-GRO (8015B)	TPH-DRO/ORO (8015B)	TAL Metals (6010B/7470A)	PCBs (8082)	Ambient Blank Lot Control Number	Equipment Blank Lot Control Number	Trip Blank Lot Control Number	Cooler ID
3	SWMU8-DP01-MS	8-DP01	13-12-2010	1300	-	MS	1	WG	11	X	X	X	X	X	X	X				2
1	Trip Blank				-	TB	1	WQ	2		X									2
					-															
					-															
					-															
					-															
					-															
					-															
					-															
					-															
					-															

Sample Analysis Requested (5)

Quality Assurance Samples (6)

COMMENTS:

Custody Transfers Prior to Receipt by Laboratory

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1.	[illegible]	12/14/10	1300	FX		07:30
2.	FX			J. Conne (ACS)	12-15-10	
3.						

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab:

Method of Shipment: FedEx Express

Analytical Lab: Accutest

Lab Recipient:

Shipped No.:

Airbill Number: 7442 1528 6664

Delivery Location: Orlando, FL

Delivery Date/Time:

1.) Chain of Custody Number = date collected + custody number (e.g. 09-02-1999-01)

2.) Sample Type (SA) Codes: N = Normal Sample, TB = Trip Blank (-c) Sample, FD = Field Duplicate (-a) Samples, FR = Field Replicate (-b) Samples, EB = Equipment Blank (-d) Samples, MS = Matrix Spike, SD = Matrix Spike Duplicate, AB = Ambient Blank (-e)

3.) Sample Number: Unique sample number collected from a particular location per day. (e.g. Groundwater sample collected from MW-1 on 10/10/99 = 01, if sampled again on 10/10/99 = 02, etc.)

4.) Matrix Codes: GS = Soil Gas, WG = Groundwater, WS = Surface Water, SO = Soil, SE = Sediment, SL = Sludge, SS = Surface Soil Samples, WQ = Aqueous Blank Samples (trip, equipment, ambient, etc), SQ = Soil Blanks

5.) Sample Analysis Requested: Analytical method requested and number of containers provided for each.

6.) Quality assurance samples are assigned by date (ddmmyy) and the sample number associated with the sample (01, 02, etc) (e.g. Equipment blank collected in association with MW-1 on 10/10/99 will be designated 10109901 in the Equipment Blank Lot Control

F78727: Chain of Custody

Page 4 of 6

NATIONVIEW

Page: 1 of 1

Project No: 8080014.03.020

COC Number(1): 121420120003

LIMS Number:

F78727

Chain of Custody and Analytical Request

Facility/Base I.D.: Holloman AFB, New Mexico

Project/Site Name: SWMU 8, RFI Investigation

Client Name: USACE - Albuquerque District

Collected by: Dustin McNeil/ Zack Beck

Sample Analysis Requested (5) / Quality Assurance Samples (6)

Field Sample ID (30 Characters Max)	ERPIMS LOCID (15 Characters Max)	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hhmm)	Sample Depth (beginning - ending)	SA Code (2)	Sample Number (3)	Sample Matrix (4)	Number of containers	TDS (2540C)	VOCs (8260B)	SVOCs (8270C)	TPH-GRO (8015B)	TPH-DRO/ORO (8015B)	TAL Metals (6010B/7470A)	PCBs (8082)	Ambient Blank Lot Control Number	Equipment Blank Lot Control Number	Trip Blank Lot Control Number	Cooler ID
3 SWMU8-DP01-MSD	8-DP01	13-12-2010	1300	-	SD	1	WG	11	X	X	X	X	X	X	X				
8 Trip Blank				-	TB	1	WQ	2		X									
				-															
				-															
				-															
				-															
				-															
				-															
				-															
				-															
				-															

COMMENTS:

Custody Transfers Prior to Receipt by Laboratory

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1.	[signature]	12/14/10	1300	FX		07:30
2.	FX			[signature] (ALSE)	12-15-10	
3.						

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab: Shipped No.:

Method of Shipment: FedEx Express Airbill Number: 7942152992 85

Analytical Lab: Accutest Delivery Location: Orlando, FL

Lab Recipient: Delivery Date/Time:

1.) Chain of Custody Number = date collected + custody number (e.g. 09-02-1999-01)

2.) Sample Type (SA) Codes: N = Normal Sample, TB = Trip Blank (-c) Sample, FD = Field Duplicate (-a) Samples, FR = Field Replicate (-b) Samples, EB = Equipment Blank (-d) Samples, MS = Matrix Spike, SD = Matrix Spike Duplicate, AB = Ambient Blank (-e)

3.) Sample Number: Unique sample number collected from a particular location per day. (e.g. Groundwater sample collected from MW-1 on 10/10/99 = 01, if sampled again on 10/10/99 = 02, etc.)

4.) Matrix Codes: GS = Soil Gas, WG = Groundwater, WS = Surface Water, SO = Soil, SE = Sediment, SL = Sludge, SS = Surface Soil Samples, WQ = Aqueous Blank Samples (trip, equipment, ambient, etc), SQ = Soil Blanks

5.) Sample Analysis Requested: Analytical method requested and number of containers provided for each.

6.) Quality assurance samples are assigned by date (ddmmyy) and the sample number associated with the sample (01, 02, etc) (e.g. Equipment blank collected in association with MW-1 on 10/10/99 will be designated 10109901 in the Equipment Blank Lot Control

4.1

4

F78727: Chain of Custody

Page 5 of 6

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: F 78727 CLIENT: NATION VIEW PROJECT: SWMU 8 RFI INVESTIGATION

DATE/TIME RECEIVED: 12-15-10 09:30 {MM/DD/YY 24:00} NUMBER OF COOLERS RECEIVED: 5

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

AIRBILL NUMBERS: 7942 1528 6664

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 5
- [ ] RECEIVED SOIL TRIP BLANK

MISC. INFORMATION

NUMBER OF ENCORES ? _____

NUMBER OF 5035 FIELD KITS ? _____

NUMBER OR LAB FILTERED METALS ? _____

TEMPERATURE INFORMATION

- [ ] IR THERM ID 1 CORR. FACTOR -0.2
- [ ] OBSERVED TEMPS: 3.8 3.0 2.6 3.2 3.8
- [ ] CORRECTED TEMPS: 3.6 2.8 2.4 3.0 3.6

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: 7

TECHNICIAN SIGNATURE/DATE JC 12-15-10 REVIEWER SIGNATURE/DATE ET 12-15-10

NF 10/09 RECEIPT CONFIRMATION 100609 (2).xls

4.1

4

F78727: Chain of Custody

Page 6 of 6

Southeast ACCUTEST LABORATORIES

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: F78727
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ3447-MB	J061934.D	1	12/27/10	LD	n/a	n/a	VJ3447

The QC reported here applies to the following samples: **Method:** SW846 8260B

F78727-1, F78727-2, F78727-3, F78727-4, F78727-5, F78727-6, F78727-7, F78727-8

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	3.0	ug/l	
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.25	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.22	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.20	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.26	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.22	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.27	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.22	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.22	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.20	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.2	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.25	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.25	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.23	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.50	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.25	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.20	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.44	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.26	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.20	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.25	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.23	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.35	ug/l	

Method Blank Summary

Job Number: F78727
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ3447-MB	J061934.D	1	12/27/10	LD	n/a	n/a	VJ3447

The QC reported here applies to the following samples: **Method:** SW846 8260B

F78727-1, F78727-2, F78727-3, F78727-4, F78727-5, F78727-6, F78727-7, F78727-8

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
591-78-6	2-Hexanone	ND	10	4.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.80	ug/l	
110-54-3	Hexane	ND	2.0	0.59	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.21	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.50	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.50	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.25	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	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	0.34	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.20	ug/l	
100-42-5	Styrene	ND	1.0	0.20	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	0.20	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.23	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.22	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	0.30	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	0.27	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.21	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.25	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.26	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.22	ug/l	
108-05-4	Vinyl Acetate	ND	10	2.0	ug/l	
	m,p-Xylene	ND	2.0	0.32	ug/l	
95-47-6	o-Xylene	ND	1.0	0.20	ug/l	

Method Blank Summary

Job Number: F78727
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ3447-MB	J061934.D	1	12/27/10	LD	n/a	n/a	VJ3447

The QC reported here applies to the following samples: **Method:** SW846 8260B

F78727-1, F78727-2, F78727-3, F78727-4, F78727-5, F78727-6, F78727-7, F78727-8

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	103%	87-116%
17060-07-0	1,2-Dichloroethane-D4	97%	76-127%
2037-26-5	Toluene-D8	96%	86-112%
460-00-4	4-Bromofluorobenzene	99%	84-120%

Blank Spike Summary

Job Number: F78727
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ3447-BS	J061933.D	1	12/27/10	LD	n/a	n/a	VJ3447

The QC reported here applies to the following samples: **Method:** SW846 8260B

F78727-1, F78727-2, F78727-3, F78727-4, F78727-5, F78727-6, F78727-7, F78727-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	134	107	59-134
107-02-8	Acrolein	125	110	88	33-157
107-13-1	Acrylonitrile	125	122	98	62-124
71-43-2	Benzene	25	25.2	101	83-124
108-86-1	Bromobenzene	25	29.3	117*	83-115
74-97-5	Bromochloromethane	25	24.1	96	78-112
75-27-4	Bromodichloromethane	25	25.3	101	76-116
75-25-2	Bromoform	25	23.7	95	68-128
104-51-8	n-Butylbenzene	25	31.6	126*	84-124
135-98-8	sec-Butylbenzene	25	31.0	124	86-127
98-06-6	tert-Butylbenzene	25	29.6	118	83-126
108-90-7	Chlorobenzene	25	28.4	114	87-115
75-00-3	Chloroethane	25	24.8	99	54-166
67-66-3	Chloroform	25	25.5	102	85-123
95-49-8	o-Chlorotoluene	25	29.4	118	84-121
106-43-4	p-Chlorotoluene	25	29.6	118	84-120
110-75-8	2-Chloroethyl vinyl ether	125	134	107	63-125
75-15-0	Carbon disulfide	25	17.5	70	67-147
56-23-5	Carbon tetrachloride	25	25.1	100	74-139
75-34-3	1,1-Dichloroethane	25	24.6	98	82-127
75-35-4	1,1-Dichloroethylene	25	20.6	82	75-133
563-58-6	1,1-Dichloropropene	25	25.6	102	87-127
96-12-8	1,2-Dibromo-3-chloropropane	25	26.5	106	61-118
106-93-4	1,2-Dibromoethane	25	26.4	106	80-115
107-06-2	1,2-Dichloroethane	25	23.5	94	76-122
78-87-5	1,2-Dichloropropane	25	25.5	102	81-120
142-28-9	1,3-Dichloropropane	25	26.4	106	81-113
594-20-7	2,2-Dichloropropane	25	26.9	108	77-138
124-48-1	Dibromochloromethane	25	26.3	105	74-116
75-71-8	Dichlorodifluoromethane	25	27.0	108	34-158
156-59-2	cis-1,2-Dichloroethylene	25	25.7	103	81-114
10061-01-5	cis-1,3-Dichloropropene	25	26.3	105	83-119
541-73-1	m-Dichlorobenzene	25	26.4	106	86-115
95-50-1	o-Dichlorobenzene	25	26.5	106	85-115
106-46-7	p-Dichlorobenzene	25	26.3	105	87-113
156-60-5	trans-1,2-Dichloroethylene	25	23.3	93	82-126

Blank Spike Summary

Job Number: F78727
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ3447-BS	J061933.D	1	12/27/10	LD	n/a	n/a	VJ3447

The QC reported here applies to the following samples: **Method:** SW846 8260B

F78727-1, F78727-2, F78727-3, F78727-4, F78727-5, F78727-6, F78727-7, F78727-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-02-6	trans-1,3-Dichloropropene	25	28.8	115	87-123
100-41-4	Ethylbenzene	25	25.5	102	87-118
591-78-6	2-Hexanone	125	128	102	58-125
87-68-3	Hexachlorobutadiene	25	27.7	111	71-133
110-54-3	Hexane	25	23.3	93	71-134
98-82-8	Isopropylbenzene	25	29.3	117	87-131
99-87-6	p-Isopropyltoluene	25	30.9	124	83-125
108-10-1	4-Methyl-2-pentanone	125	127	102	62-125
74-83-9	Methyl bromide	25	24.6	98	55-151
74-87-3	Methyl chloride	25	26.7	107	55-173
74-95-3	Methylene bromide	25	24.9	100	81-116
75-09-2	Methylene chloride	25	21.1	84	69-125
78-93-3	Methyl ethyl ketone	125	122	98	61-127
1634-04-4	Methyl Tert Butyl Ether	25	23.9	96	75-116
91-20-3	Naphthalene	25	27.3	109	59-125
103-65-1	n-Propylbenzene	25	31.2	125	86-125
100-42-5	Styrene	25	27.2	109	78-118
630-20-6	1,1,1,2-Tetrachloroethane	25	27.1	108	81-119
71-55-6	1,1,1-Trichloroethane	25	25.2	101	79-133
79-34-5	1,1,2,2-Tetrachloroethane	25	28.8	115	71-120
79-00-5	1,1,2-Trichloroethane	25	27.1	108	80-114
87-61-6	1,2,3-Trichlorobenzene	25	26.6	106	64-126
96-18-4	1,2,3-Trichloropropane	25	26.5	106	77-115
120-82-1	1,2,4-Trichlorobenzene	25	27.5	110	68-123
95-63-6	1,2,4-Trimethylbenzene	25	29.2	117	82-120
108-67-8	1,3,5-Trimethylbenzene	25	29.9	120	83-123
127-18-4	Tetrachloroethylene	25	27.0	108	80-131
108-88-3	Toluene	25	24.3	97	86-116
79-01-6	Trichloroethylene	25	26.5	106	85-124
75-69-4	Trichlorofluoromethane	25	30.1	120	66-156
75-01-4	Vinyl chloride	25	26.1	104	57-153
108-05-4	Vinyl Acetate	125	99.8	80	38-159
	m,p-Xylene	50	51.1	102	86-121
95-47-6	o-Xylene	25	25.0	100	83-121

Blank Spike Summary

Job Number: F78727
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ3447-BS	J061933.D	1	12/27/10	LD	n/a	n/a	VJ3447

The QC reported here applies to the following samples: **Method:** SW846 8260B

F78727-1, F78727-2, F78727-3, F78727-4, F78727-5, F78727-6, F78727-7, F78727-8

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	99%	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	100%	84-120%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F78727
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F78727-3MS	J061942.D	1	12/27/10	LD	n/a	n/a	VJ3447
F78727-3MSD	J061943.D	1	12/27/10	LD	n/a	n/a	VJ3447
F78727-3	J061941.D	1	12/27/10	LD	n/a	n/a	VJ3447

The QC reported here applies to the following samples: **Method:** SW846 8260B

F78727-1, F78727-2, F78727-3, F78727-4, F78727-5, F78727-6, F78727-7, F78727-8

CAS No.	Compound	F78727-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		125	71.3	57*	75.8	61	6	59-134/14
107-02-8	Acrolein	ND		125	107	86	94.8	76	12	33-157/21
107-13-1	Acrylonitrile	ND		125	111	89	113	90	2	62-124/13
71-43-2	Benzene	ND		25	25.2	101	25.4	102	1	83-124/11
108-86-1	Bromobenzene	ND		25	28.0	112	28.5	114	2	83-115/10
74-97-5	Bromochloromethane	ND		25	24.0	96	24.5	98	2	78-112/10
75-27-4	Bromodichloromethane	ND		25	24.9	100	23.4	94	6	76-116/10
75-25-2	Bromoform	ND		25	19.7	79	18.0	72	9	68-128/11
104-51-8	n-Butylbenzene	ND		25	30.0	120	30.2	121	1	84-124/10
135-98-8	sec-Butylbenzene	ND		25	30.2	121	30.4	122	1	86-127/10
98-06-6	tert-Butylbenzene	ND		25	28.8	115	29.1	116	1	83-126/10
108-90-7	Chlorobenzene	ND		25	28.4	114	28.7	115	1	87-115/9
75-00-3	Chloroethane	ND		25	25.6	102	25.4	102	1	54-166/20
67-66-3	Chloroform	1.7		25	28.1	106	28.3	106	1	85-123/10
95-49-8	o-Chlorotoluene	ND		25	29.5	118	29.8	119	1	84-121/10
106-43-4	p-Chlorotoluene	ND		25	28.4	114	28.7	115	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	15.0	60*	13.9	56*	8	67-147/12
56-23-5	Carbon tetrachloride	ND		25	24.8	99	22.9	92	8	74-139/13
75-34-3	1,1-Dichloroethane	ND		25	24.8	99	25.2	101	2	82-127/10
75-35-4	1,1-Dichloroethylene	ND		25	21.1	84	22.0	88	4	75-133/13
563-58-6	1,1-Dichloropropene	ND		25	25.5	102	25.4	102	0	87-127/10
96-12-8	1,2-Dibromo-3-chloropropane	ND		25	23.4	94	24.6	98	5	61-118/15
106-93-4	1,2-Dibromoethane	ND		25	25.5	102	26.3	105	3	80-115/10
107-06-2	1,2-Dichloroethane	ND		25	23.5	94	23.8	95	1	76-122/11
78-87-5	1,2-Dichloropropane	ND		25	25.3	101	25.9	104	2	81-120/11
142-28-9	1,3-Dichloropropane	ND		25	25.7	103	26.2	105	2	81-113/11
594-20-7	2,2-Dichloropropane	ND		25	26.2	105	26.3	105	0	77-138/12
124-48-1	Dibromochloromethane	ND		25	24.6	98	22.9	92	7	74-116/11
75-71-8	Dichlorodifluoromethane	ND		25	25.3	101	25.2	101	0	34-158/22
156-59-2	cis-1,2-Dichloroethylene	ND		25	25.8	103	25.7	103	0	81-114/10
10061-01-5	cis-1,3-Dichloropropene	ND		25	22.6	90	20.5	82*	10	83-119/10
541-73-1	m-Dichlorobenzene	ND		25	25.3	101	25.8	103	2	86-115/9
95-50-1	o-Dichlorobenzene	ND		25	25.5	102	26.0	104	2	85-115/9
106-46-7	p-Dichlorobenzene	ND		25	25.7	103	26.1	104	2	87-113/10
156-60-5	trans-1,2-Dichloroethylene	ND		25	23.0	92	23.2	93	1	82-126/10

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F78727
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F78727-3MS	J061942.D	1	12/27/10	LD	n/a	n/a	VJ3447
F78727-3MSD	J061943.D	1	12/27/10	LD	n/a	n/a	VJ3447
F78727-3	J061941.D	1	12/27/10	LD	n/a	n/a	VJ3447

The QC reported here applies to the following samples: **Method:** SW846 8260B

F78727-1, F78727-2, F78727-3, F78727-4, F78727-5, F78727-6, F78727-7, F78727-8

CAS No.	Compound	F78727-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-02-6	trans-1,3-Dichloropropene	ND		25	23.2	93	21.1	84*	9	87-123/10
100-41-4	Ethylbenzene	ND		25	25.4	102	25.4	102	0	87-118/10
591-78-6	2-Hexanone	ND		125	107	86	114	91	6	58-125/14
87-68-3	Hexachlorobutadiene	ND		25	24.7	99	26.0	104	5	71-133/12
110-54-3	Hexane	ND		25	22.4	90	22.1	88	1	71-134/11
98-82-8	Isopropylbenzene	ND		25	28.7	115	28.8	115	0	87-131/10
99-87-6	p-Isopropyltoluene	ND		25	30.1	120	30.0	120	0	83-125/9
108-10-1	4-Methyl-2-pentanone	ND		125	121	97	130	104	7	62-125/13
74-83-9	Methyl bromide	ND		25	23.7	95	24.0	96	1	55-151/21
74-87-3	Methyl chloride	ND		25	23.6	94	23.7	95	0	55-173/22
74-95-3	Methylene bromide	ND		25	24.8	99	25.2	101	2	81-116/10
75-09-2	Methylene chloride	ND		25	20.4	82	20.8	83	2	69-125/11
78-93-3	Methyl ethyl ketone	ND		125	92.4	74	100	80	8	61-127/13
1634-04-4	Methyl Tert Butyl Ether	ND		25	23.3	93	24.4	98	5	75-116/10
91-20-3	Naphthalene	ND		25	23.7	95	26.7	107	12	59-125/15
103-65-1	n-Propylbenzene	ND		25	30.1	120	30.5	122	1	86-125/10
100-42-5	Styrene	ND		25	26.4	106	25.3	101	4	78-118/11
630-20-6	1,1,1,2-Tetrachloroethane	ND		25	26.9	108	26.1	104	3	81-119/10
71-55-6	1,1,1-Trichloroethane	ND		25	25.4	102	25.6	102	1	79-133/11
79-34-5	1,1,2,2-Tetrachloroethane	ND		25	27.0	108	28.3	113	5	71-120/11
79-00-5	1,1,2-Trichloroethane	ND		25	25.5	102	26.7	107	5	80-114/11
87-61-6	1,2,3-Trichlorobenzene	ND		25	23.1	92	25.9	104	11	64-126/16
96-18-4	1,2,3-Trichloropropane	ND		25	24.7	99	25.3	101	2	77-115/12
120-82-1	1,2,4-Trichlorobenzene	ND		25	24.3	97	26.4	106	8	68-123/11
95-63-6	1,2,4-Trimethylbenzene	ND		25	28.8	115	29.0	116	1	82-120/10
108-67-8	1,3,5-Trimethylbenzene	ND		25	29.3	117	29.8	119	2	83-123/10
127-18-4	Tetrachloroethylene	ND		25	27.4	110	26.7	107	3	80-131/12
108-88-3	Toluene	ND		25	24.4	98	24.8	99	2	86-116/10
79-01-6	Trichloroethylene	ND		25	26.3	105	26.3	105	0	85-124/10
75-69-4	Trichlorofluoromethane	ND		25	14.0	56*	30.0	120	73*	66-156/15
75-01-4	Vinyl chloride	ND		25	25.4	102	25.9	104	2	57-153/22
108-05-4	Vinyl Acetate	ND		125	93.4	75	96.6	77	3	38-159/11
	m,p-Xylene	ND		50	51.5	103	51.0	102	1	86-121/10
95-47-6	o-Xylene	ND		25	24.8	99	25.1	100	1	83-121/10

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F78727
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F78727-3MS	J061942.D	1	12/27/10	LD	n/a	n/a	VJ3447
F78727-3MSD	J061943.D	1	12/27/10	LD	n/a	n/a	VJ3447
F78727-3	J061941.D	1	12/27/10	LD	n/a	n/a	VJ3447

The QC reported here applies to the following samples: **Method:** SW846 8260B

F78727-1, F78727-2, F78727-3, F78727-4, F78727-5, F78727-6, F78727-7, F78727-8

CAS No.	Surrogate Recoveries	MS	MSD	F78727-3	Limits
1868-53-7	Dibromofluoromethane	99%	100%	104%	87-116%
17060-07-0	1,2-Dichloroethane-D4	96%	96%	96%	76-127%
2037-26-5	Toluene-D8	100%	100%	96%	86-112%
460-00-4	4-Bromofluorobenzene	98%	99%	99%	84-120%

Southeast ACCUTEST LABORATORIES

GC/MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: F78727
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35434-MB	X015684.D	1	12/20/10	NAF	12/17/10	OP35434	SX783

The QC reported here applies to the following samples: **Method:** SW846 8270D

F78727-1, F78727-2, F78727-3

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	50	10	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.50	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	5.0	0.50	ug/l	
120-83-2	2,4-Dichlorophenol	ND	5.0	0.50	ug/l	
105-67-9	2,4-Dimethylphenol	ND	5.0	1.1	ug/l	
51-28-5	2,4-Dinitrophenol	ND	25	10	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	2.0	ug/l	
95-48-7	2-Methylphenol	ND	5.0	0.54	ug/l	
	3&4-Methylphenol	ND	5.0	1.1	ug/l	
88-75-5	2-Nitrophenol	ND	5.0	0.54	ug/l	
100-02-7	4-Nitrophenol	ND	25	5.0	ug/l	
87-86-5	Pentachlorophenol	ND	25	5.4	ug/l	
108-95-2	Phenol	ND	5.0	0.50	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	5.0	0.50	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	5.0	0.50	ug/l	
83-32-9	Acenaphthene	ND	5.0	0.50	ug/l	
208-96-8	Acenaphthylene	ND	5.0	0.50	ug/l	
62-53-3	Aniline	ND	5.0	0.52	ug/l	
120-12-7	Anthracene	ND	5.0	0.50	ug/l	
92-87-5	Benzidine	ND	25	4.7	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	0.50	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	0.50	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	0.50	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	0.50	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	0.50	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	0.50	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	1.1	ug/l	
100-51-6	Benzyl Alcohol	ND	5.0	1.0	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	0.50	ug/l	
106-47-8	4-Chloroaniline	ND	5.0	0.50	ug/l	
86-74-8	Carbazole	ND	5.0	0.50	ug/l	
218-01-9	Chrysene	ND	5.0	0.50	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	0.50	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	0.54	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	0.54	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	0.50	ug/l	

Method Blank Summary

Job Number: F78727
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35434-MB	X015684.D	1	12/20/10	NAF	12/17/10	OP35434	SX783

The QC reported here applies to the following samples: **Method:** SW846 8270D

F78727-1, F78727-2, F78727-3

CAS No.	Compound	Result	RL	MDL	Units	Q
95-50-1	1,2-Dichlorobenzene	ND	5.0	1.0	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	5.0	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	5.0	1.0	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	5.0	0.50	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	5.0	0.50	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	10	1.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	0.52	ug/l	
132-64-9	Dibenzofuran	ND	5.0	0.50	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.0	0.87	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.0	1.1	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	1.1	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	0.99	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	5.0	1.1	ug/l	
206-44-0	Fluoranthene	ND	5.0	0.50	ug/l	
86-73-7	Fluorene	ND	5.0	0.50	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	0.56	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.0	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	1.9	ug/l	
67-72-1	Hexachloroethane	ND	5.0	1.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	0.50	ug/l	
78-59-1	Isophorone	ND	5.0	0.50	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	0.50	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	0.57	ug/l	
88-74-4	2-Nitroaniline	ND	5.0	0.50	ug/l	
99-09-2	3-Nitroaniline	ND	5.0	0.50	ug/l	
100-01-6	4-Nitroaniline	ND	5.0	0.50	ug/l	
91-20-3	Naphthalene	ND	5.0	0.80	ug/l	
98-95-3	Nitrobenzene	ND	5.0	0.59	ug/l	
62-75-9	N-Nitrosodimethylamine	ND	5.0	2.4	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	0.50	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	1.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	0.50	ug/l	
129-00-0	Pyrene	ND	5.0	0.50	ug/l	
110-86-1	Pyridine	ND	10	1.6	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	

Method Blank Summary

Job Number: F78727
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35434-MB	X015684.D	1	12/20/10	NAF	12/17/10	OP35434	SX783

The QC reported here applies to the following samples: **Method:** SW846 8270D

F78727-1, F78727-2, F78727-3

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	36%	14-62%
4165-62-2	Phenol-d5	22%	10-40%
118-79-6	2,4,6-Tribromophenol	70%	33-118%
4165-60-0	Nitrobenzene-d5	67%	42-108%
321-60-8	2-Fluorobiphenyl	70%	40-106%
1718-51-0	Terphenyl-d14	95%	39-121%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile [a]		0	ug/l	

(a) No TICs detected.

Method Blank Summary

Job Number: F78727
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35434-MB	X015718.D	1	12/21/10	NAF	12/17/10	OP35434	SX784

The QC reported here applies to the following samples: **Method:** SW846 8270D

F78727-1, F78727-2, F78727-3

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	50	10	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.50	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	5.0	0.50	ug/l	
120-83-2	2,4-Dichlorophenol	ND	5.0	0.50	ug/l	
105-67-9	2,4-Dimethylphenol	ND	5.0	1.1	ug/l	
51-28-5	2,4-Dinitrophenol	ND	25	10	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	2.0	ug/l	
95-48-7	2-Methylphenol	ND	5.0	0.54	ug/l	
	3&4-Methylphenol	ND	5.0	1.1	ug/l	
88-75-5	2-Nitrophenol	ND	5.0	0.54	ug/l	
100-02-7	4-Nitrophenol	ND	25	5.0	ug/l	
87-86-5	Pentachlorophenol	ND	25	5.4	ug/l	
108-95-2	Phenol	ND	5.0	0.50	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	5.0	0.50	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	5.0	0.50	ug/l	
83-32-9	Acenaphthene	ND	5.0	0.50	ug/l	
208-96-8	Acenaphthylene	ND	5.0	0.50	ug/l	
62-53-3	Aniline	ND	5.0	0.52	ug/l	
120-12-7	Anthracene	ND	5.0	0.50	ug/l	
92-87-5	Benzidine	ND	25	4.7	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	0.50	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	0.50	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	0.50	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	0.50	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	0.50	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	0.50	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	1.1	ug/l	
100-51-6	Benzyl Alcohol	ND	5.0	1.0	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	0.50	ug/l	
106-47-8	4-Chloroaniline	ND	5.0	0.50	ug/l	
86-74-8	Carbazole	ND	5.0	0.50	ug/l	
218-01-9	Chrysene	ND	5.0	0.50	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	0.50	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	0.54	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	0.54	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	0.50	ug/l	

Method Blank Summary

Job Number: F78727
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35434-MB	X015718.D	1	12/21/10	NAF	12/17/10	OP35434	SX784

The QC reported here applies to the following samples: **Method:** SW846 8270D

F78727-1, F78727-2, F78727-3

CAS No.	Compound	Result	RL	MDL	Units	Q
95-50-1	1,2-Dichlorobenzene	ND	5.0	1.0	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	5.0	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	5.0	1.0	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	5.0	0.50	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	5.0	0.50	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	10	1.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	0.52	ug/l	
132-64-9	Dibenzofuran	ND	5.0	0.50	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.0	0.87	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.0	1.1	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	1.1	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	0.99	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	5.0	1.1	ug/l	
206-44-0	Fluoranthene	ND	5.0	0.50	ug/l	
86-73-7	Fluorene	ND	5.0	0.50	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	0.56	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.0	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	1.9	ug/l	
67-72-1	Hexachloroethane	ND	5.0	1.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	0.50	ug/l	
78-59-1	Isophorone	ND	5.0	0.50	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	0.50	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	0.57	ug/l	
88-74-4	2-Nitroaniline	ND	5.0	0.50	ug/l	
99-09-2	3-Nitroaniline	ND	5.0	0.50	ug/l	
100-01-6	4-Nitroaniline	ND	5.0	0.50	ug/l	
91-20-3	Naphthalene	ND	5.0	0.80	ug/l	
98-95-3	Nitrobenzene	ND	5.0	0.59	ug/l	
62-75-9	N-Nitrosodimethylamine	ND	5.0	2.4	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	0.50	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	1.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	0.50	ug/l	
129-00-0	Pyrene	ND	5.0	0.50	ug/l	
110-86-1	Pyridine	ND	10	1.6	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	

Method Blank Summary

Job Number: F78727
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35434-MB	X015718.D	1	12/21/10	NAF	12/17/10	OP35434	SX784

The QC reported here applies to the following samples: **Method:** SW846 8270D

F78727-1, F78727-2, F78727-3

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	35%	14-62%
4165-62-2	Phenol-d5	21%	10-40%
118-79-6	2,4,6-Tribromophenol	69%	33-118%
4165-60-0	Nitrobenzene-d5	62%	42-108%
321-60-8	2-Fluorobiphenyl	66%	40-106%
1718-51-0	Terphenyl-d14	88%	39-121%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile [a]		0	ug/l	

(a) No TICs detected.

Method Blank Summary

Job Number: F78727
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35434-MB	L049299.D	1	12/21/10	NAF	12/17/10	OP35434	SL2526

The QC reported here applies to the following samples: **Method:** SW846 8270D

F78727-1, F78727-2, F78727-3

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	50	10	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.50	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	5.0	0.50	ug/l	
120-83-2	2,4-Dichlorophenol	ND	5.0	0.50	ug/l	
105-67-9	2,4-Dimethylphenol	ND	5.0	1.1	ug/l	
51-28-5	2,4-Dinitrophenol	ND	25	10	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	2.0	ug/l	
95-48-7	2-Methylphenol	ND	5.0	0.54	ug/l	
	3&4-Methylphenol	ND	5.0	1.1	ug/l	
88-75-5	2-Nitrophenol	ND	5.0	0.54	ug/l	
100-02-7	4-Nitrophenol	ND	25	5.0	ug/l	
87-86-5	Pentachlorophenol	ND	25	5.4	ug/l	
108-95-2	Phenol	ND	5.0	0.50	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	5.0	0.50	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	5.0	0.50	ug/l	
83-32-9	Acenaphthene	ND	5.0	0.50	ug/l	
208-96-8	Acenaphthylene	ND	5.0	0.50	ug/l	
62-53-3	Aniline	ND	5.0	0.52	ug/l	
120-12-7	Anthracene	ND	5.0	0.50	ug/l	
92-87-5	Benzidine	ND	25	4.7	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	0.50	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	0.50	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	0.50	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	0.50	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	0.50	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	0.50	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	1.1	ug/l	
100-51-6	Benzyl Alcohol	ND	5.0	1.0	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	0.50	ug/l	
106-47-8	4-Chloroaniline	ND	5.0	0.50	ug/l	
86-74-8	Carbazole	ND	5.0	0.50	ug/l	
218-01-9	Chrysene	ND	5.0	0.50	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	0.50	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	0.54	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	0.54	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	0.50	ug/l	

Method Blank Summary

Job Number: F78727
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35434-MB	L049299.D	1	12/21/10	NAF	12/17/10	OP35434	SL2526

The QC reported here applies to the following samples: **Method:** SW846 8270D

F78727-1, F78727-2, F78727-3

CAS No.	Compound	Result	RL	MDL	Units	Q
95-50-1	1,2-Dichlorobenzene	ND	5.0	1.0	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	5.0	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	5.0	1.0	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	5.0	0.50	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	5.0	0.50	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	10	1.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	0.52	ug/l	
132-64-9	Dibenzofuran	ND	5.0	0.50	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.0	0.87	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.0	1.1	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	1.1	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	0.99	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	5.0	1.1	ug/l	
206-44-0	Fluoranthene	ND	5.0	0.50	ug/l	
86-73-7	Fluorene	ND	5.0	0.50	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	0.56	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.0	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	1.9	ug/l	
67-72-1	Hexachloroethane	ND	5.0	1.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	0.50	ug/l	
78-59-1	Isophorone	ND	5.0	0.50	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	0.50	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	0.57	ug/l	
88-74-4	2-Nitroaniline	ND	5.0	0.50	ug/l	
99-09-2	3-Nitroaniline	ND	5.0	0.50	ug/l	
100-01-6	4-Nitroaniline	ND	5.0	0.50	ug/l	
91-20-3	Naphthalene	ND	5.0	0.80	ug/l	
98-95-3	Nitrobenzene	ND	5.0	0.59	ug/l	
62-75-9	N-Nitrosodimethylamine	ND	5.0	2.4	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	0.50	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	1.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	0.50	ug/l	
129-00-0	Pyrene	ND	5.0	0.50	ug/l	
110-86-1	Pyridine	ND	10	1.6	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	

Method Blank Summary

Job Number: F78727
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35434-MB	L049299.D	1	12/21/10	NAF	12/17/10	OP35434	SL2526

The QC reported here applies to the following samples: **Method:** SW846 8270D

F78727-1, F78727-2, F78727-3

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	37%	14-62%
4165-62-2	Phenol-d5	25%	10-40%
118-79-6	2,4,6-Tribromophenol	80%	33-118%
4165-60-0	Nitrobenzene-d5	69%	42-108%
321-60-8	2-Fluorobiphenyl	71%	40-106%
1718-51-0	Terphenyl-d14	84%	39-121%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile [a]		0	ug/l	

(a) No TICs detected.

Blank Spike Summary

Job Number: F78727
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35434-BS	X015683.D	1	12/20/10	NAF	12/17/10	OP35434	SX783

The QC reported here applies to the following samples: **Method:** SW846 8270D

F78727-1, F78727-2, F78727-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
95-57-8	2-Chlorophenol	50	35.7	71	44-103
59-50-7	4-Chloro-3-methyl phenol	50	38.1	76	53-105
120-83-2	2,4-Dichlorophenol	50	38.4	77	53-108
105-67-9	2,4-Dimethylphenol	50	29.7	59	37-91
51-28-5	2,4-Dinitrophenol	100	76.9	77	37-111
534-52-1	4,6-Dinitro-o-cresol	100	82.5	83	62-115
95-48-7	2-Methylphenol	50	30.0	60	35-91
	3&4-Methylphenol	100	54.5	55	32-85
88-75-5	2-Nitrophenol	50	38.4	77	49-111
100-02-7	4-Nitrophenol	100	28.6	29	13-55
87-86-5	Pentachlorophenol	100	76.6	77	57-118
108-95-2	Phenol	50	16.4	33	13-54
95-95-4	2,4,5-Trichlorophenol	50	38.5	77	59-106
88-06-2	2,4,6-Trichlorophenol	50	39.8	80	58-107
83-32-9	Acenaphthene	50	39.0	78	58-106
208-96-8	Acenaphthylene	50	37.9	76	58-105
62-53-3	Aniline	50	32.0	64	43-98
120-12-7	Anthracene	50	40.5	81	65-108
92-87-5	Benzidine	50	20.6	41	15-73
56-55-3	Benzo(a)anthracene	50	39.2	78	63-111
50-32-8	Benzo(a)pyrene	50	39.5	79	62-106
205-99-2	Benzo(b)fluoranthene	50	39.1	78	63-109
191-24-2	Benzo(g,h,i)perylene	50	41.0	82	61-111
207-08-9	Benzo(k)fluoranthene	50	41.3	83	64-111
101-55-3	4-Bromophenyl phenyl ether	50	42.0	84	64-107
85-68-7	Butyl benzyl phthalate	50	39.1	78	59-114
100-51-6	Benzyl Alcohol	50	29.9	60	34-98
91-58-7	2-Chloronaphthalene	50	38.5	77	54-105
106-47-8	4-Chloroaniline	50	36.6	73	53-103
86-74-8	Carbazole	50	39.9	80	66-109
218-01-9	Chrysene	50	38.3	77	64-111
111-91-1	bis(2-Chloroethoxy)methane	50	38.2	76	48-101
111-44-4	bis(2-Chloroethyl)ether	50	37.3	75	51-108
108-60-1	bis(2-Chloroisopropyl)ether	50	37.4	75	43-106
7005-72-3	4-Chlorophenyl phenyl ether	50	40.6	81	61-107
95-50-1	1,2-Dichlorobenzene	50	35.0	70	41-102

Blank Spike Summary

Job Number: F78727
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35434-BS	X015683.D	1	12/20/10	NAF	12/17/10	OP35434	SX783

The QC reported here applies to the following samples: **Method:** SW846 8270D

F78727-1, F78727-2, F78727-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
122-66-7	1,2-Diphenylhydrazine	50	40.1	80	61-110
541-73-1	1,3-Dichlorobenzene	50	34.6	69	38-100
106-46-7	1,4-Dichlorobenzene	50	35.1	70	40-100
121-14-2	2,4-Dinitrotoluene	50	39.1	78	60-109
606-20-2	2,6-Dinitrotoluene	50	38.4	77	58-104
91-94-1	3,3'-Dichlorobenzidine	50	35.5	71	57-105
53-70-3	Dibenzo(a,h)anthracene	50	41.4	83	62-112
132-64-9	Dibenzofuran	50	38.7	77	61-108
84-74-2	Di-n-butyl phthalate	50	41.1	82	62-109
117-84-0	Di-n-octyl phthalate	50	36.7	73	60-120
84-66-2	Diethyl phthalate	50	40.4	81	62-109
131-11-3	Dimethyl phthalate	50	40.2	80	63-106
117-81-7	bis(2-Ethylhexyl)phthalate	50	36.9	74	59-116
206-44-0	Fluoranthene	50	38.9	78	65-114
86-73-7	Fluorene	50	40.0	80	61-106
118-74-1	Hexachlorobenzene	50	39.8	80	62-107
87-68-3	Hexachlorobutadiene	50	36.0	72	38-107
77-47-4	Hexachlorocyclopentadiene	50	32.2	64	19-84
67-72-1	Hexachloroethane	50	34.2	68	35-101
193-39-5	Indeno(1,2,3-cd)pyrene	50	39.0	78	61-113
78-59-1	Isophorone	50	30.7	61	56-111
90-12-0	1-Methylnaphthalene	50	36.6	73	52-102
91-57-6	2-Methylnaphthalene	50	37.9	76	56-112
88-74-4	2-Nitroaniline	50	46.8	94	60-109
99-09-2	3-Nitroaniline	50	37.7	75	52-107
100-01-6	4-Nitroaniline	50	38.8	78	59-111
91-20-3	Naphthalene	50	38.2	76	50-104
98-95-3	Nitrobenzene	50	36.7	73	52-105
62-75-9	N-Nitrosodimethylamine	50	20.6	41	20-71
621-64-7	N-Nitroso-di-n-propylamine	50	34.7	69	51-104
86-30-6	N-Nitrosodiphenylamine	50	41.7	83	57-110
85-01-8	Phenanthrene	50	40.3	81	65-108
129-00-0	Pyrene	50	40.9	82	60-113
110-86-1	Pyridine	50	18.3	37	15-67
120-82-1	1,2,4-Trichlorobenzene	50	34.1	68	45-104

Blank Spike Summary

Job Number: F78727
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35434-BS	X015683.D	1	12/20/10	NAF	12/17/10	OP35434	SX783

The QC reported here applies to the following samples: **Method:** SW846 8270D

F78727-1, F78727-2, F78727-3

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	44%	14-62%
4165-62-2	Phenol-d5	28%	10-40%
118-79-6	2,4,6-Tribromophenol	81%	33-118%
4165-60-0	Nitrobenzene-d5	73%	42-108%
321-60-8	2-Fluorobiphenyl	77%	40-106%
1718-51-0	Terphenyl-d14	80%	39-121%

Blank Spike Summary

Job Number: F78727
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35434-BS	L049298.D	1	12/21/10	NAF	12/17/10	OP35434	SL2526

The QC reported here applies to the following samples: **Method:** SW846 8270D

F78727-1, F78727-2, F78727-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	100	10.6	11	10-50
95-57-8	2-Chlorophenol	50	35.9	72	44-103
59-50-7	4-Chloro-3-methyl phenol	50	38.9	78	53-105
120-83-2	2,4-Dichlorophenol	50	39.4	79	53-108
105-67-9	2,4-Dimethylphenol	50	29.3	59	37-91
51-28-5	2,4-Dinitrophenol	100	68.5	69	37-111
534-52-1	4,6-Dinitro-o-cresol	100	89.6	90	62-115
95-48-7	2-Methylphenol	50	31.0	62	35-91
	3&4-Methylphenol	100	53.2	53	32-85
88-75-5	2-Nitrophenol	50	39.3	79	49-111
100-02-7	4-Nitrophenol	100	29.1	29	13-55
87-86-5	Pentachlorophenol	100	81.2	81	57-118
108-95-2	Phenol	50	16.6	33	13-54
95-95-4	2,4,5-Trichlorophenol	50	39.1	78	59-106
88-06-2	2,4,6-Trichlorophenol	50	39.5	79	58-107
83-32-9	Acenaphthene	50	39.3	79	58-106
208-96-8	Acenaphthylene	50	39.4	79	58-105
62-53-3	Aniline	50	33.8	68	43-98
120-12-7	Anthracene	50	41.2	82	65-108
92-87-5	Benzidine	50	23.2	46	15-73
56-55-3	Benzo(a)anthracene	50	39.6	79	63-111
50-32-8	Benzo(a)pyrene	50	40.0	80	62-106
205-99-2	Benzo(b)fluoranthene	50	40.4	81	63-109
191-24-2	Benzo(g,h,i)perylene	50	40.4	81	61-111
207-08-9	Benzo(k)fluoranthene	50	40.3	81	64-111
101-55-3	4-Bromophenyl phenyl ether	50	42.5	85	64-107
85-68-7	Butyl benzyl phthalate	50	42.6	85	59-114
100-51-6	Benzyl Alcohol	50	30.5	61	34-98
91-58-7	2-Chloronaphthalene	50	37.3	75	54-105
106-47-8	4-Chloroaniline	50	36.8	74	53-103
86-74-8	Carbazole	50	40.8	82	66-109
218-01-9	Chrysene	50	39.4	79	64-111
111-91-1	bis(2-Chloroethoxy)methane	50	39.2	78	48-101
111-44-4	bis(2-Chloroethyl)ether	50	37.0	74	51-108
108-60-1	bis(2-Chloroisopropyl)ether	50	40.6	81	43-106
7005-72-3	4-Chlorophenyl phenyl ether	50	40.7	81	61-107

Blank Spike Summary

Job Number: F78727
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35434-BS	L049298.D	1	12/21/10	NAF	12/17/10	OP35434	SL2526

The QC reported here applies to the following samples: **Method:** SW846 8270D

F78727-1, F78727-2, F78727-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
95-50-1	1,2-Dichlorobenzene	50	35.6	71	41-102
122-66-7	1,2-Diphenylhydrazine	50	40.1	80	61-110
541-73-1	1,3-Dichlorobenzene	50	35.0	70	38-100
106-46-7	1,4-Dichlorobenzene	50	35.5	71	40-100
121-14-2	2,4-Dinitrotoluene	50	39.0	78	60-109
606-20-2	2,6-Dinitrotoluene	50	39.4	79	58-104
91-94-1	3,3'-Dichlorobenzidine	50	35.8	72	57-105
53-70-3	Dibenzo(a,h)anthracene	50	39.5	79	62-112
132-64-9	Dibenzofuran	50	38.7	77	61-108
84-74-2	Di-n-butyl phthalate	50	42.9	86	62-109
117-84-0	Di-n-octyl phthalate	50	38.4	77	60-120
84-66-2	Diethyl phthalate	50	41.6	83	62-109
131-11-3	Dimethyl phthalate	50	41.7	83	63-106
117-81-7	bis(2-Ethylhexyl)phthalate	50	42.4	85	59-116
206-44-0	Fluoranthene	50	40.3	81	65-114
86-73-7	Fluorene	50	39.3	79	61-106
118-74-1	Hexachlorobenzene	50	39.4	79	62-107
87-68-3	Hexachlorobutadiene	50	37.8	76	38-107
77-47-4	Hexachlorocyclopentadiene	50	33.4	67	19-84
67-72-1	Hexachloroethane	50	35.5	71	35-101
193-39-5	Indeno(1,2,3-cd)pyrene	50	40.2	80	61-113
78-59-1	Isophorone	50	31.2	62	56-111
90-12-0	1-Methylnaphthalene	50	37.7	75	52-102
91-57-6	2-Methylnaphthalene	50	38.0	76	56-112
88-74-4	2-Nitroaniline	50	46.7	93	60-109
99-09-2	3-Nitroaniline	50	37.1	74	52-107
100-01-6	4-Nitroaniline	50	39.0	78	59-111
91-20-3	Naphthalene	50	38.9	78	50-104
98-95-3	Nitrobenzene	50	38.0	76	52-105
62-75-9	N-Nitrosodimethylamine	50	21.6	43	20-71
621-64-7	N-Nitroso-di-n-propylamine	50	36.1	72	51-104
86-30-6	N-Nitrosodiphenylamine	50	42.3	85	57-110
85-01-8	Phenanthrene	50	40.9	82	65-108
129-00-0	Pyrene	50	40.2	80	60-113
110-86-1	Pyridine	50	18.6	37	15-67
120-82-1	1,2,4-Trichlorobenzene	50	34.5	69	45-104

Blank Spike Summary

Job Number: F78727
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35434-BS	L049298.D	1	12/21/10	NAF	12/17/10	OP35434	SL2526

The QC reported here applies to the following samples: **Method:** SW846 8270D

F78727-1, F78727-2, F78727-3

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	47%	14-62%
4165-62-2	Phenol-d5	31%	10-40%
118-79-6	2,4,6-Tribromophenol	83%	33-118%
4165-60-0	Nitrobenzene-d5	75%	42-108%
321-60-8	2-Fluorobiphenyl	77%	40-106%
1718-51-0	Terphenyl-d14	80%	39-121%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F78727
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35434-MS	X015693.D	1	12/20/10	NAF	12/17/10	OP35434	SX783
OP35434-MSD	X015694.D	1	12/20/10	NAF	12/17/10	OP35434	SX783
F78727-3	X015692.D	1	12/20/10	NAF	12/17/10	OP35434	SX783

The QC reported here applies to the following samples: **Method:** SW846 8270D

F78727-1, F78727-2, F78727-3

CAS No.	Compound	F78727-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		192	40.8	21	48.6	25	17	10-50/40
95-57-8	2-Chlorophenol	ND		96.2	65.4	68	69.3	72	6	44-103/29
59-50-7	4-Chloro-3-methyl phenol	ND		96.2	70.8	74	79.5	83	12	53-105/24
120-83-2	2,4-Dichlorophenol	ND		96.2	70.5	73	75.7	79	7	53-108/26
105-67-9	2,4-Dimethylphenol	ND		96.2	52.4	54	59.2	62	12	37-91/28
51-28-5	2,4-Dinitrophenol	ND		192	139	72	164	85	17	37-111/30
534-52-1	4,6-Dinitro-o-cresol	ND		192	147	76	176	92	18	62-115/26
95-48-7	2-Methylphenol	ND		96.2	60.3	63	64.5	67	7	35-91/30
	3&4-Methylphenol	ND		192	117	61	126	66	7	32-85/29
88-75-5	2-Nitrophenol	ND		96.2	67.7	70	73.7	77	8	49-111/30
100-02-7	4-Nitrophenol	ND		192	87.0	45	99.5	52	13	13-55/31
87-86-5	Pentachlorophenol	ND		192	142	74	167	87	16	57-118/26
108-95-2	Phenol	ND		96.2	44.0	46	44.8	47	2	13-54/34
95-95-4	2,4,5-Trichlorophenol	ND		96.2	70.4	73	78.8	82	11	59-106/23
88-06-2	2,4,6-Trichlorophenol	ND		96.2	71.6	74	80.8	84	12	58-107/24
83-32-9	Acenaphthene	ND		96.2	71.5	74	80.2	83	11	58-106/21
208-96-8	Acenaphthylene	ND		96.2	68.9	72	77.5	81	12	58-105/21
62-53-3	Aniline	ND		96.2	62.6	65	67.7	70	8	43-98/28
120-12-7	Anthracene	ND		96.2	74.6	78	86.1	90	14	65-108/19
92-87-5	Benzidine	ND		96.2	30.6	32	38.5	40	23	15-73/23
56-55-3	Benzo(a)anthracene	ND		96.2	71.6	74	83.7	87	16	63-111/19
50-32-8	Benzo(a)pyrene	ND		96.2	72.1	75	84.9	88	16	62-106/20
205-99-2	Benzo(b)fluoranthene	ND		96.2	71.5	74	84.0	87	16	63-109/20
191-24-2	Benzo(g,h,i)perylene	ND		96.2	73.8	77	87.6	91	17	61-111/21
207-08-9	Benzo(k)fluoranthene	ND		96.2	76.2	79	88.5	92	15	64-111/20
101-55-3	4-Bromophenyl phenyl ether	ND		96.2	77.1	80	88.9	92	14	64-107/20
85-68-7	Butyl benzyl phthalate	ND		96.2	73.3	76	84.7	88	14	59-114/20
100-51-6	Benzyl Alcohol	ND		96.2	63.0	66	68.1	71	8	34-98/27
91-58-7	2-Chloronaphthalene	ND		96.2	69.9	73	76.6	80	9	54-105/24
106-47-8	4-Chloroaniline	ND		96.2	65.1	68	70.8	74	8	53-103/22
86-74-8	Carbazole	ND		96.2	73.1	76	85.3	89	15	66-109/20
218-01-9	Chrysene	ND		96.2	71.5	74	82.8	86	15	64-111/19
111-91-1	bis(2-Chloroethoxy)methane	ND		96.2	68.3	71	73.8	77	8	48-101/28
111-44-4	bis(2-Chloroethyl)ether	ND		96.2	67.2	70	71.0	74	5	51-108/27
108-60-1	bis(2-Chloroisopropyl)ether	ND		96.2	66.5	69	70.7	74	6	43-106/27
7005-72-3	4-Chlorophenyl phenyl ether	ND		96.2	74.6	78	83.9	87	12	61-107/20

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F78727
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35434-MS	X015693.D	1	12/20/10	NAF	12/17/10	OP35434	SX783
OP35434-MSD	X015694.D	1	12/20/10	NAF	12/17/10	OP35434	SX783
F78727-3	X015692.D	1	12/20/10	NAF	12/17/10	OP35434	SX783

The QC reported here applies to the following samples: **Method:** SW846 8270D

F78727-1, F78727-2, F78727-3

CAS No.	Compound	F78727-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
95-50-1	1,2-Dichlorobenzene	ND		96.2	64.1	67	68.3	71	6	41-102/28
122-66-7	1,2-Diphenylhydrazine	ND		96.2	73.3	76	83.2	87	13	61-110/20
541-73-1	1,3-Dichlorobenzene	ND		96.2	62.6	65	67.0	70	7	38-100/28
106-46-7	1,4-Dichlorobenzene	ND		96.2	64.2	67	68.2	71	6	40-100/28
121-14-2	2,4-Dinitrotoluene	ND		96.2	71.5	74	82.9	86	15	60-109/20
606-20-2	2,6-Dinitrotoluene	ND		96.2	69.2	72	79.5	83	14	58-104/21
91-94-1	3,3'-Dichlorobenzidine	ND		96.2	58.3	61	67.1	70	14	57-105/25
53-70-3	Dibenzo(a,h)anthracene	ND		96.2	73.5	76	88.2	92	18	62-112/20
132-64-9	Dibenzofuran	ND		96.2	71.3	74	80.4	84	12	61-108/20
84-74-2	Di-n-butyl phthalate	ND		96.2	75.8	79	87.6	91	14	62-109/20
117-84-0	Di-n-octyl phthalate	ND		96.2	67.8	71	79.6	83	16	60-120/24
84-66-2	Diethyl phthalate	ND		96.2	74.0	77	86.5	90	16	62-109/19
131-11-3	Dimethyl phthalate	ND		96.2	73.4	76	84.3	88	14	63-106/19
117-81-7	bis(2-Ethylhexyl)phthalate	ND		96.2	68.8	72	80.4	84	16	59-116/21
206-44-0	Fluoranthene	ND		96.2	71.0	74	82.6	86	15	65-114/21
86-73-7	Fluorene	ND		96.2	72.8	76	82.7	86	13	61-106/19
118-74-1	Hexachlorobenzene	ND		96.2	72.5	75	81.2	84	11	62-107/20
87-68-3	Hexachlorobutadiene	ND		96.2	65.9	69	70.5	73	7	38-107/30
77-47-4	Hexachlorocyclopentadiene	ND		96.2	58.7	61	63.2	66	7	19-84/35
67-72-1	Hexachloroethane	ND		96.2	62.5	65	65.4	68	5	35-101/29
193-39-5	Indeno(1,2,3-cd)pyrene	ND		96.2	69.6	72	83.8	87	19	61-113/20
78-59-1	Isophorone	ND		96.2	55.1	57	60.7	63	10	56-111/26
90-12-0	1-Methylnaphthalene	ND		96.2	66.4	69	72.7	76	9	52-102/25
91-57-6	2-Methylnaphthalene	ND		96.2	69.5	72	76.4	79	9	56-112/26
88-74-4	2-Nitroaniline	ND		96.2	85.0	88	98.0	102	14	60-109/20
99-09-2	3-Nitroaniline	ND		96.2	64.0	67	73.2	76	13	52-107/21
100-01-6	4-Nitroaniline	ND		96.2	70.5	73	83.8	87	17	59-111/21
91-20-3	Naphthalene	ND		96.2	68.3	71	73.7	77	8	50-104/28
98-95-3	Nitrobenzene	ND		96.2	65.6	68	70.4	73	7	52-105/28
62-75-9	N-Nitrosodimethylamine	ND		96.2	49.0	51	51.7	54	5	20-71/32
621-64-7	N-Nitroso-di-n-propylamine	ND		96.2	62.6	65	68.7	71	9	51-104/28
86-30-6	N-Nitrosodiphenylamine	ND		96.2	75.7	79	87.5	91	14	57-110/19
85-01-8	Phenanthrene	ND		96.2	73.8	77	85.0	88	14	65-108/20
129-00-0	Pyrene	ND		96.2	76.2	79	87.2	91	13	60-113/20
110-86-1	Pyridine	ND		96.2	43.8	46	46.4	48	6	15-67/40
120-82-1	1,2,4-Trichlorobenzene	ND		96.2	61.8	64	65.6	68	6	45-104/28

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F78727
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35434-MS	X015693.D	1	12/20/10	NAF	12/17/10	OP35434	SX783
OP35434-MSD	X015694.D	1	12/20/10	NAF	12/17/10	OP35434	SX783
F78727-3	X015692.D	1	12/20/10	NAF	12/17/10	OP35434	SX783

The QC reported here applies to the following samples: **Method:** SW846 8270D

F78727-1, F78727-2, F78727-3

CAS No.	Surrogate Recoveries	MS	MSD	F78727-3	Limits
367-12-4	2-Fluorophenol	54%	56%	44%	14-62%
4165-62-2	Phenol-d5	41%*	41%*	29%	10-40%
118-79-6	2,4,6-Tribromophenol	75%	87%	69%	33-118%
4165-60-0	Nitrobenzene-d5	67%	72%	67%	42-108%
321-60-8	2-Fluorobiphenyl	71%	79%	71%	40-106%
1718-51-0	Terphenyl-d14	77%	87%	93%	39-121%

Southeast ACCUTEST LABORATORIES

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: F78727
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GCD4185-MB	CD101563.D	1	12/17/10	WV	n/a	n/a	GCD4185

The QC reported here applies to the following samples: **Method:** SW846 8015C

F78727-1, F78727-2, F78727-3

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	0.10	0.050	mg/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	87%	57-129%
98-08-8	aaa-Trifluorotoluene	83%	58-120%

Blank Spike Summary

Job Number: F78727
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GCD4185-BS	CD101562.D	1	12/17/10	WV	n/a	n/a	GCD4185

The QC reported here applies to the following samples: **Method:** SW846 8015C

F78727-1, F78727-2, F78727-3

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	Limits
	TPH-GRO (C6-C10)	0.4	0.371	93	75-129

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	121%	57-129%
98-08-8	aaa-Trifluorotoluene	108%	58-120%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F78727
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F78727-3MS	CD101570.D	1	12/17/10	WV	n/a	n/a	GCD4185
F78727-3MSD	CD101571.D	1	12/17/10	WV	n/a	n/a	GCD4185
F78727-3	CD101569.D	1	12/17/10	WV	n/a	n/a	GCD4185

The QC reported here applies to the following samples: **Method:** SW846 8015C

F78727-1, F78727-2, F78727-3

CAS No.	Compound	F78727-3 mg/l	Q	Spike mg/l	MS mg/l	MS %	MSD mg/l	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	ND		0.4	0.354	89	0.358	90	1	75-129/13

CAS No.	Surrogate Recoveries	MS	MSD	F78727-3	Limits
460-00-4	4-Bromofluorobenzene	124%	126%	87%	57-129%
98-08-8	aaa-Trifluorotoluene	107%	106%	87%	58-120%

Southeast ACCUTEST LABORATORIES

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: F78727
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35432-MB	XX053890.D	1	12/20/10	NJ	12/16/10	OP35432	GXX807

The QC reported here applies to the following samples: **Method:** SW846 8082A

F78727-1, F78727-2, F78727-3

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.50	0.20	ug/l	
11104-28-2	Aroclor 1221	ND	0.50	0.25	ug/l	
11141-16-5	Aroclor 1232	ND	0.50	0.25	ug/l	
53469-21-9	Aroclor 1242	ND	0.50	0.20	ug/l	
12672-29-6	Aroclor 1248	ND	0.50	0.20	ug/l	
11097-69-1	Aroclor 1254	ND	0.50	0.20	ug/l	
11096-82-5	Aroclor 1260	ND	0.50	0.20	ug/l	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	96%	38-127%
2051-24-3	Decachlorobiphenyl	92%	25-137%

Method Blank Summary

Job Number: F78727
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35466-MB	LL34569.D	1	12/21/10	MV	12/20/10	OP35466	GLL1307

The QC reported here applies to the following samples: **Method:** SW846 8015C

F78727-1, F78727-2, F78727-3

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C22)	ND	0.25	0.10	mg/l	
	TPH (> C22-C36)	ND	0.25	0.10	mg/l	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	98%	42-114%

Method Blank Summary

Job Number: F78727
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35466-MB	LL34616.D	1	12/22/10	MV	12/20/10	OP35466	GLL1308

The QC reported here applies to the following samples: **Method:** SW846 8015C

F78727-1, F78727-2, F78727-3

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C22)	ND	0.25	0.10	mg/l	
	TPH (> C22-C36)	ND	0.25	0.10	mg/l	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	99%	42-114%

Blank Spike Summary

Job Number: F78727
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35432-BS	XX053889.D	1	12/20/10	NJ	12/16/10	OP35432	GXX807

The QC reported here applies to the following samples: **Method:** SW846 8082A

F78727-1, F78727-2, F78727-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
12674-11-2	Aroclor 1016	4	3.9	98	76-117
11096-82-5	Aroclor 1260	4	3.6	90	65-117

CAS No.	Surrogate Recoveries	BSP	Limits
877-09-8	Tetrachloro-m-xylene	92%	38-127%
2051-24-3	Decachlorobiphenyl	89%	25-137%

Blank Spike Summary

Job Number: F78727
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35466-BS	LL34568.D	1	12/21/10	MV	12/20/10	OP35466	GLL1307

The QC reported here applies to the following samples: **Method:** SW846 8015C

F78727-1, F78727-2, F78727-3

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	Limits
	TPH (C10-C22)	1	1.03	103	60-140
	TPH (> C22-C36)	1	1.16	116	60-140

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	113%	42-114%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F78727
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35432-MS	XX053900.D	1	12/20/10	NJ	12/16/10	OP35432	GXX807
OP35432-MSD	XX053901.D	1	12/20/10	NJ	12/16/10	OP35432	GXX807
F78727-3	XX053899.D	1	12/20/10	NJ	12/16/10	OP35432	GXX807

The QC reported here applies to the following samples: **Method:** SW846 8082A

F78727-1, F78727-2, F78727-3

CAS No.	Compound	F78727-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
12674-11-2	Aroclor 1016	ND		8	7.2	90	7.4	93	3	76-117/16
11096-82-5	Aroclor 1260	ND		8	7.5	94	7.5	94	0	65-117/23

CAS No.	Surrogate Recoveries	MS	MSD	F78727-3	Limits
877-09-8	Tetrachloro-m-xylene	85%	86%	91%	38-127%
2051-24-3	Decachlorobiphenyl	86%	84%	66%	25-137%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F78727
Account: NATVALB Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35466-MS	LL34571.D	1	12/21/10	MV	12/20/10	OP35466	GLL1307
OP35466-MSD	LL34572.D	1	12/21/10	MV	12/20/10	OP35466	GLL1307
F78727-3	LL34570.D	1	12/21/10	MV	12/20/10	OP35466	GLL1307

The QC reported here applies to the following samples: **Method:** SW846 8015C

F78727-1, F78727-2, F78727-3

CAS No.	Compound	F78727-3 mg/l	Q	Spike mg/l	MS mg/l	MS %	MSD mg/l	MSD %	RPD	Limits Rec/RPD
	TPH (C10-C22)	ND		2	1.87	94	2.01	101	7	60-140/30
	TPH (> C22-C36)	ND		2	2.18	109	2.35	118	8	60-140/30

CAS No.	Surrogate Recoveries	MS	MSD	F78727-3	Limits
84-15-1	o-Terphenyl	102%	102%	82%	42-114%

Southeast ACCUTEST LABORATORIES

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: F78727
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19708
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 12/17/10

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	20	25	-7.3	<200
Antimony	12	1	2	2.2	<12
Arsenic	10	1	2	-1.6	<10
Barium	200	1	5	-3.4	<200
Beryllium	4.0	.1	1	-0.10	<4.0
Cadmium	5.0	.1	1	-0.30	<5.0
Calcium	1000	50	100	2.1	<1000
Chromium	10	1	1	-0.30	<10
Cobalt	50	1	1	-0.20	<50
Copper	25	1	2	-0.30	<25
Iron	300	34	35	23.6	<300
Lead	5.0	1	1	-0.30	<5.0
Magnesium	5000	50	100	-2.2	<5000
Manganese	15	1	1	-0.10	<15
Molybdenum	50	1	2		
Nickel	40	1	2	-0.10	<40
Potassium	10000	50	500	-0.20	<10000
Selenium	10	2	2	2.0	<10
Silver	10	1	1	-0.30	<10
Sodium	10000	750	1900	671	<10000
Strontium	10	1	1		
Thallium	10	1	1.9	-0.60	<10
Tin	50	1	1		
Titanium	10	1.1	2		
Vanadium	50	1	1	-0.30	<50
Zinc	20	1	5	-0.10	<20

Associated samples MP19708: F78727-1, F78727-2, F78727-3

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: F78727
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19708
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 12/17/10 12/17/10

Metal	F78727-3 Original	DUP	RPD	QC Limits	F78727-3 Original	MS	Spikelot MPFLICP1	% Rec	QC Limits
Aluminum	0.0	0.0	NC	0-20	0.0	27500	27000	101.9	80-120
Antimony	2.1	1.3	47.1 (a)	0-20	2.1	547	500	109.0	80-120
Arsenic	7.8	6.6	16.7	0-20	7.8	2220	2000	110.6	80-120
Barium	15.3	11.6	27.5 (a)	0-20	15.3	2160	2000	107.2	80-120
Beryllium	0.0	0.0	NC	0-20	0.0	49.8	50	99.6	80-120
Cadmium	0.0	0.0	NC	0-20	0.0	50.2	50	100.4	80-120
Calcium	567000	553000	2.5	0-20	567000	563000	25000	-16.0(b)	80-120
Chromium	2.3	2.2	4.4	0-20	2.3	212	200	104.9	80-120
Cobalt	0.0	0.0	NC	0-20	0.0	483	500	96.6	80-120
Copper	3.6	3.3	8.7	0-20	3.6	288	250	113.8	80-120
Iron	0.0	0.0	NC	0-20	0.0	23400	26000	90.0	80-120
Lead	0.0	0.0	NC	0-20	0.0	469	500	93.8	80-120
Magnesium	77500	73600	5.2	0-20	77500	98700	25000	84.8	80-120
Manganese	0.0	0.0	NC	0-20	0.0	542	500	108.4	80-120
Molybdenum									
Nickel	0.0	0.0	NC	0-20	0.0	484	500	96.8	80-120
Potassium	8140	7720	5.3	0-20	8140	35200	25000	108.2	80-120
Selenium	2.5	0.0	200.0(a)	0-20	2.5	2340	2000	116.9	80-120
Silver	0.0	0.0	NC	0-20	0.0	50.2	50	100.4	80-120
Sodium	71400	68100	4.7	0-20	71400	96300	25000	99.6	80-120
Strontium									
Thallium	0.0	0.0	NC	0-20	0.0	1870	2000	93.5	80-120
Tin									
Titanium									
Vanadium	83.6	82.9	0.8	0-20	83.6	640	500	111.3	80-120
Zinc	15.9	15.4	3.2	0-20	15.9	486	500	94.0	80-120

Associated samples MP19708: F78727-1, F78727-2, F78727-3

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: F78727
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19708
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 12/17/10

Metal	F78727-3 Original	MSD	Spikelot MPFLICP1	% Rec	MSD RPD	QC Limit
Aluminum	0.0	27500	27000	101.9	0.0	20
Antimony	2.1	545	500	108.6	0.4	20
Arsenic	7.8	2190	2000	109.1	1.4	20
Barium	15.3	2160	2000	107.2	0.0	20
Beryllium	0.0	49.4	50	98.8	0.8	20
Cadmium	0.0	49.9	50	99.8	0.6	20
Calcium	567000	556000	25000	-44.0(a)	1.3	20
Chromium	2.3	212	200	104.9	0.0	20
Cobalt	0.0	481	500	96.2	0.4	20
Copper	3.6	289	250	114.2	0.3	20
Iron	0.0	23100	26000	88.8	1.3	20
Lead	0.0	472	500	94.4	0.6	20
Magnesium	77500	97600	25000	80.4	1.1	20
Manganese	0.0	540	500	108.0	0.4	20
Molybdenum						
Nickel	0.0	482	500	96.4	0.4	20
Potassium	8140	35100	25000	107.8	0.3	20
Selenium	2.5	2320	2000	115.9	0.9	20
Silver	0.0	50.2	50	100.4	0.0	20
Sodium	71400	95200	25000	95.2	1.1	20
Strontium						
Thallium	0.0	1870	2000	93.5	0.0	20
Tin						
Titanium						
Vanadium	83.6	639	500	111.1	0.2	20
Zinc	15.9	481	500	93.0	1.0	20

Associated samples MP19708: F78727-1, F78727-2, F78727-3

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: F78727
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19708
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 12/17/10

Metal	BSP Result	Spikelot MPFLICP1	% Rec	QC Limits
Aluminum	26400	27000	97.8	80-120
Antimony	495	500	99.0	80-120
Arsenic	1970	2000	98.5	80-120
Barium	2080	2000	104.0	80-120
Beryllium	50.7	50	101.4	80-120
Cadmium	50.9	50	101.8	80-120
Calcium	23500	25000	94.0	80-120
Chromium	211	200	105.5	80-120
Cobalt	474	500	94.8	80-120
Copper	263	250	105.2	80-120
Iron	24400	26000	93.8	80-120
Lead	478	500	95.6	80-120
Magnesium	23300	25000	93.2	80-120
Manganese	541	500	108.2	80-120
Molybdenum				
Nickel	477	500	95.4	80-120
Potassium	24900	25000	99.6	80-120
Selenium	1980	2000	99.0	80-120
Silver	46.4	50	92.8	80-120
Sodium	25200	25000	100.8	80-120
Strontium				
Thallium	1960	2000	98.0	80-120
Tin				
Titanium				
Vanadium	544	500	108.8	80-120
Zinc	488	500	97.6	80-120

Associated samples MP19708: F78727-1, F78727-2, F78727-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: F78727
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19708
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 12/17/10

Metal	F78727-3 Original	SDL 1:5	%DIF	QC Limits
Aluminum	0.00	0.00	NC	0-10
Antimony	2.10	0.00	100.0(a)	0-10
Arsenic	7.80	0.00	100.0(a)	0-10
Barium	15.3	5.00	67.3 (a)	0-10
Beryllium	0.00	0.00	NC	0-10
Cadmium	0.00	0.00	NC	0-10
Calcium	567000	629000	11.0*(b)	0-10
Chromium	2.30	0.00	100.0(a)	0-10
Cobalt	0.00	0.00	NC	0-10
Copper	3.60	0.00	100.0(a)	0-10
Iron	0.00	248		0-10
Lead	0.00	0.00	NC	0-10
Magnesium	77500	79300	2.3	0-10
Manganese	0.00	0.00	NC	0-10
Molybdenum				
Nickel	0.00	0.00	NC	0-10
Potassium	8140	8230	1.2	0-10
Selenium	2.50	0.00	100.0(a)	0-10
Silver	0.00	0.00	NC	0-10
Sodium	71400	72300	1.3	0-10
Strontium				
Thallium	0.00	7.20		0-10
Tin				
Titanium				
Vanadium	83.6	89.0	6.5	0-10
Zinc	15.9	17.1	7.5	0-10

Associated samples MP19708: F78727-1, F78727-2, F78727-3

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.

POST DIGESTATE SPIKE SUMMARY

Login Number: F78727
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19708
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 12/17/10

Metal	Sample ml	Final ml	F78727-3 Raw	Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum	9.8	10	0	0	2513	0.2	125	2500	100.5	80-120
Antimony	9.8	10	2.1	2.058	111.6	0.2	5	100	109.5	80-120
Arsenic	9.8	10	7.8	7.644	117.5	0.2	5	100	109.9	80-120
Barium	9.8	10	15.3	14.994	276.9	0.2	12.5	250	104.8	80-120
Beryllium	9.8	10	0	0	46.9	0.2	2.5	50	93.8	80-120
Cadmium	9.8	10	0	0	49.6	0.2	2.5	50	99.2	80-120
Calcium	9.8	10	566500	555170	541700	0.2	250	5000	-269.4*a	80-120
Chromium	9.8	10	2.3	2.254	54.3	0.2	2.5	50	104.1	80-120
Cobalt	9.8	10	0	0	45.9	0.2	2.5	50	91.8	80-120
Copper	9.8	10	3.6	3.528	116	0.2	5	100	112.5	80-120
Iron	9.8	10	0	0	2735	0.2	150	3000	91.2	80-120
Lead	9.8	10	0	0	42.5	0.2	2.5	50	85.0	80-120
Magnesium	9.8	10	77540	75989.2	78530	0.2	250	5000	50.8*(a)	80-120
Manganese	9.8	10	0	0	53.8	0.2	2.5	50	107.6	80-120
Molybdenum										
Nickel	9.8	10	0	0	93.5	0.2	5	100	93.5	80-120
Potassium	9.8	10	8135	7972.3	18780	0.2	500	10000	108.1	80-120
Selenium	9.8	10	2.5	2.45	117.2	0.2	5	100	114.8	80-120
Silver	9.8	10	0	0	52.6	0.2	2.5	50	105.2	80-120
Sodium	9.8	10	71370	69942.6	79620	0.2	500	10000	96.8	80-120
Strontium										
Thallium	9.8	10	0	0	88.3	0.2	5	100	88.3	80-120
Tin										
Titanium										
Vanadium	9.8	10	83.6	81.928	138	0.2	2.5	50	112.1	80-120
Zinc	9.8	10	15.9	15.582	244.6	0.2	12.5	250	91.6	80-120

Associated samples MP19708: F78727-1, F78727-2, F78727-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(**) Corr. sample result = Raw * (sample volume / final volume)
(anr) Analyte not requested
(a) Spike recovery indicates matrix interference and/or outside control limits due to high level in sample relative to spike amount.

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: F78727
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19744
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 12/28/10

Metal	RL	IDL	MDL	MB raw	final
Mercury	1.0	.071	.05	-0.023	<1.0

Associated samples MP19744: F78727-1, F78727-2, F78727-3

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: F78727
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19744
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 12/28/10 12/28/10

Metal	F78727-3 Original	DUP	RPD	QC Limits	F78727-3 Original	MS	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.0	0.0	NC	0-20	0.0	3.1	3	103.3	80-120

Associated samples MP19744: F78727-1, F78727-2, F78727-3

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

9.2.2

9

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F78727
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19744
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 12/28/10

Metal	F78727-3 Original	MSD	Spikelot HGFLWS1	% Rec	MSD RPD	QC Limit
Mercury	0.0	3.0	3	100.0	3.3	20

Associated samples MP19744: F78727-1, F78727-2, F78727-3

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: F78727
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19744
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 12/28/10

Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	3.0	3	100.0	80-120

Associated samples MP19744: F78727-1, F78727-2, F78727-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: F78727
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

QC Batch ID: MP19744
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 12/28/10

Metal	F78727-3 Original	SDL 1:5	%DIF	QC Limits
Mercury	0.00	0.00	NC	0-10

Associated samples MP19744: F78727-1, F78727-2, F78727-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

Southeast ACCUTEST LABORATORIES

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F78727
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Solids, Total Dissolved	GN42630	100	0.0	mg/l				

Associated Samples:
Batch GN42630: F78727-1, F78727-2, F78727-3
(*) Outside of QC limits

10.1
10

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F78727
Account: NATVALB - Nation View
Project: Holloman AFB; SWMU 8, ACM Investigation

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Solids, Total Dissolved	GN42630	F78727-3	mg/l	2420	2420	0.0	0-5%

Associated Samples:
Batch GN42630: F78727-1, F78727-2, F78727-3
(*) Outside of QC limits

10.2
10

APPENDIX G
DATA VALIDATION REPORTS

Data Validation Report

This report contains the results of the review and validation of the specified data package performed by Marcia Olive, Bhate Environmental Associates, Inc., Denver, Colorado.

Introduction

This data validation report covers samples taken from Holloman Air Force Base, New Mexico, on October 10, 2010. Six soil samples and one trip blank were taken from the SWMU 8 site. All analyses were performed by Accutest Laboratories in Orlando, Florida. The specific samples included in this validation were:

Sample ID	Matrix	Collection Date	Analyses (Method Number)
SWMU8-DP14-7	Soil	10/10/10	VOCs(SW8260B), SVOCs (SW8270C), TPH-GRO/DRO/ORO (SW8015), TAL Metals (SW6010B/7471A), PCBs (SW8082)
SWMU8-DP15-7			
SWMU8-DP13-7			
SWMU8-DP13-7A			
SWMU8-DP16-2			Dry Bulk Density (D2937-94), Specific Gravity (D1429), FOC (D2974-87), % Solids (2540B)
SWMU8-DP16-3			
Notes: ID – Identification, VOCs – Volatile organic compounds, SVOCs – Semi-volatile organic compounds, TPH – Total Petroleum Hydrocarbons, GRO – Gasoline Range Organics, DRO – Diesel Range Organics, ORO – Oil Range Organics, TAL – Target Analyte List, PCBs – Polychlorinated Biphenyls, FOC – Fractional Organic Carbon			

This data was validated against the laboratory's quality assurance/quality control (QA/QC) limits using the guidelines and practices published in the *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review* (USEPA, June 2008) and the *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review* (USEPA, January 2010).

Sample Handling and Holding Times

All samples were analyzed within method specific hold times for all analyses.

Blanks

Methylene chloride was detected in the trip blank and method blank. No sample yielded a positive detection for this common laboratory contaminant and no qualification was required.

Iron was detected in the method blank. The sample concentrations were all greater than (>) 10 times the blank concentration therefore no qualification was required.

Blank Spike Sample (Laboratory Control Sample)/ Surrogates

The laboratory control sample (LCS) recoveries for acetone and methyl ethyl ketone were below QC limits. These non-detected compounds were qualified estimated non-detected, "UJ".

Surrogates were injected into all field and laboratory QC samples as a requirement of the organic analysis, and the percent recovery (%R) was calculated. The recoveries were all within QC limits.

Matrix Spike (MS)/Matrix Spike Duplicates (MSD)

The MS %R for 3,3'-dichlorobenzidine and the relative percent difference (RPD) for 4-chloroaniline were outside control limits.

Antimony, aluminum, calcium, magnesium, manganese, barium, beryllium, and iron yielded MS and/or MSD outside control limits.

These compounds were cross referenced with their LCS recoveries, which were in control, therefore no qualification was required.

Project Specific Quality Assurance/Quality Control

One field duplicate sample was collected and reported with this sample delivery group and no compounds were outside project defined control limits.

Compound Quantitation and Reporting Limits

Due to matrix interference some metals, in all samples, required a dilution. Elevated reporting limits are reported.

Overall Assessment of Data

The serial dilution for arsenic, beryllium, chromium, cobalt, copper, lead, mercury, sodium, and zinc yielded a percent difference (%D) outside control limits. No compounds yielded concentrations >50 times the method detection limit (MDL); therefore no qualification was required.

The RPD for the laboratory duplicate of arsenic, manganese, and sodium was outside control limits. Due to low duplicate and sample concentrations, the RPD was acceptable for arsenic. Manganese and sodium were qualified as estimated, "J", in all samples.

Overall, the data is suitable for the intended data usage. All analyses were performed, and the data met the required QC criteria except where noted. The data is 100% complete.

Summary of Qualified Data

Sample ID	Parameter	*Qualifier
SWMU8-DP14-7	Acetone Methyl ethyl ketone Manganese Sodium	UJ UJ 41.2 J 126 J
SWMU8-DP15-7	Acetone Methyl ethyl ketone Manganese Sodium	UJ UJ 90.4 J 88 J
SWMU8-DP13-7	Acetone Methyl ethyl ketone Manganese Sodium	UJ UJ 24.9 J 135 J
SWMU8-DP13-7A	Acetone Methyl ethyl ketone Manganese Sodium	UJ UJ 25.8 J 137 J

*VOCs are in micrograms per kilograms (µg/kg), metals are in milligrams per kilogram (mg/kg)

Data Validation Report

This report contains the results of the review and validation of the specified data package performed by Marcia Olive, Bhate Environmental Associates, Inc., Denver, Colorado.

Introduction

This data validation report covers samples taken from Holloman Air Force Base, New Mexico, on October 9, 2010. Three soil samples and one trip blank were taken from the SWMU 8 site. All analyses were performed by Accutest Laboratories in Orlando, Florida. The specific samples included in this validation were:

Sample ID	Matrix	Collection Date	Analyses (USEPA Method Number)
SWMU8-DP10-7	Soil	10/9/10	VOCs (SW8260B), SVOCs (SW8270C), TPH-GRO/DRO/ORO (SW8015), TAL Metals (SW6010B/7471A), PCBs (SW8082)
SWMU8-DP11-7			
SWMU8-DP12-7			
Notes: ID – Identification, USEPA – U.S. Environmental Protection Agency, VOCs – Volatile organic compounds, SVOCs – Semi-volatile organic compounds, TPH – Total Petroleum Hydrocarbons, GRO – Gasoline Range Organics, DRO – Diesel Range Organics, ORO – Oil Range Organics, TAL – Target Analyte List, PCBs – Polychlorinated Biphenyls,			

This data was validated against the laboratory's quality assurance/quality control (QA/QC) limits using the guidelines and practices published in the *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review* (USEPA, June 2008) and the *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review* (USEPA, January 2010).

Sample Handling and Holding Times

Samples SWMU8-DP11-7 and SWMU8-DP12-7 were not preserved within 48 hours of sampling. Since the samples did not yield any positive detections, with the exception of methylene chloride, using professional judgment no qualification was necessary.

Blanks

Methylene chloride was detected in the trip blank and all method blanks. The blank concentrations were less than (<) 2 times the reporting limit (RL). The positive sample concentrations were < 2 times the RL, therefore the reporting limit was qualified as "U" in samples SWMU8-DP11-7 and SWMU8-DP12-7.

Iron was detected in the method blank. Since the sample concentrations were all greater than (>) 10 times the blank concentration, no qualification was required.

Blank Spike Sample (Laboratory Control Sample)/ Surrogates

The laboratory control sample (LCS) recovery for acetone was below control limits associated with all samples. The LCS recovery for methyl ethyl ketone was below QC

limits associated with samples SWMU8-DP10-7 and SWMU-DP12-7. Therefore, these non detected compounds were qualified as estimated non-detected, "UJ".

Surrogates were injected into all field and laboratory QC samples as a requirement of the organic analysis, and the percent recovery (%R) was calculated. The volatile surrogate 1,2-dichloroethane-D4 was above QC limits in the confirmation run of sample SWMU8-DP10-7. All positive results were qualified as estimated, "J".

Matrix Spike (MS)/Matrix Spike Duplicates (MSD)

Multiple volatile compounds yielded MS/MSD and/or relative percent differences (RPDs) outside control limits.

Matrix effect was evident for acetone and methyl ethyl ketone and sample non-homogeneity was likely the cause. But since these two compounds were not detected in any associated sample, using professional judgment, no additional qualification was necessary.

The MS/MSD %Rs and/or RPD for benzoic acid, 4-chloroaniline, and isophorone were outside control limits.

Antimony, cadmium, calcium, iron, magnesium, and manganese yielded MS and/or MSD outside control limits.

These compounds were cross referenced with their LCS recoveries, which were in control, therefore no qualification was required.

Project Specific Quality Assurance/Quality Control

No field duplicate sample was collected and reported with this sample delivery group.

Compound Quantitation and Reporting Limits

Due to matrix interference, some metals in all samples required a dilution. Elevated reporting limits are reported.

Overall Assessment of Data

The serial dilution for antimony, arsenic, beryllium, cadmium, chromium, copper, iron, lead, manganese, sodium, vanadium, and zinc yielded a percent difference (%D) outside control limits. All samples yielded concentrations for iron, manganese, and vanadium >50 times the method detection limit (MDL) and were qualified as estimated, "J".

The initial calibration verification (ICV) was outside control limits for acetone in sample SWMU8-DP11-7. Since the associated samples did not yield a positive detection no qualification was required.

The RPD for the laboratory duplicate of sodium and mercury was outside control limits. Due to low duplicate and sample concentrations the RPD was acceptable for mercury. Sodium was qualified as estimated, "J", in all samples.

Overall, the data is suitable for the intended data usage. All analyses were performed, and the data met the required QC criteria except where noted. The data is 100% complete.

Summary of Qualified Data

Sample ID	Parameter	*Qualifier
SWMU8-DP10-7	Benzene	6.0 J
	Toluene	5.0 J
	m,p-Xylene	2.3 J
	Acetone	UJ
	Methyl ethyl ketone	UJ
	Sodium	125 J
	Iron	2,510 J
	Manganese	31.8 J
	Vanadium	7.5 J
SWMU8-DP11-7	Methylene chloride	14 U*
	Acetone	UJ
	Sodium	79.8 J
	Iron	2,350 J
	Manganese	101 J
	Vanadium	6.2 J
SWMU8-DP12-7	Methylene chloride	14 U*
	Acetone	UJ
	Methyl ethyl ketone	UJ
	Sodium	60.8 J
	Iron	2,060 J
	Manganese	51.1 J
	Vanadium	6.6 J

* VOCs are in micrograms per kilogram (µg/kg) and metals are in milligrams per kilogram (mg/kg)

*U - the analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted reporting limit

Data Validation Report

This report contains the results of the review and validation of the specified data package performed by Marcia Olive, Bhate Environmental Associates, Inc., Denver, Colorado.

Introduction

This data validation report covers samples taken from Holloman Air Force Base, New Mexico, on October 8 & 9, 2010. Three soil samples and one trip blank were taken from the SWMU 8 site. All analyses were performed by Accutest Laboratories in Orlando, Florida. The specific samples included in this validation were:

Sample ID	Matrix	Collection Date	Analyses (USEPA Method Number)
SWMU8-DP07-7	Soil	10/8/10	VOCs (SW8260B), SVOCs (SW8270C), TPH-GRO/DRO/ORO (SW8015), TAL Metals (SW6010B/7471A), PCBs (SW8082)
SWMU8-DP08-8			
SWMU8-DP09-7		10/9/10	
Notes: ID – Identification, USEPA – U.S. Environmental Protection Agency, VOCs – Volatile organic compounds, SVOCs – Semi-volatile organic compounds, TPH – Total Petroleum Hydrocarbons, GRO – Gasoline Range Organics, DRO – Diesel Range Organics, ORO – Oil Range Organics, TAL – Target Analyte List, PCBs – Polychlorinated Biphenyls			

This data was validated against the laboratory's quality assurance/quality control (QA/QC) limits using the guidelines and practices published in the *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review* (USEPA, June 2008) and the *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review* (USEPA, January 2010).

Sample Handling and Holding Times

The samples were analyzed within the required hold times for all analyses.

Blanks

No compounds were detected in the trip blank.

Methylene chloride was detected in one method blank associated with sample SWMU8-DP09-7. The blank concentration was greater than (>) 2 times the reporting limit (RL). The sample concentration was less than (<) 2 times the RL, therefore the reporting limit was qualified as "U".

Blank Spike Sample (Laboratory Control Sample)/ Surrogates

The laboratory control sample (LCS) recoveries for acetone, dichlorodifluoromethane, and methyl bromide were outside control limits. Since the recovery for acetone was below control limits this non-detected compound was qualified as estimated non-detected, "UJ", in all samples. The LCS recoveries for the remaining compounds were above control limits. Therefore, the non-detected compounds did not warrant qualification.

Surrogates were injected into all field and laboratory QC samples as a requirement of the organic analysis, and the percent recovery (%R) was calculated. All surrogates met the %R QC requirements for all organic analyses.

Matrix Spike (MS)/Matrix Spike Duplicates (MSD)

The volatile compounds acetone, acrolein, dichlorodifluoromethane, 2-hexanone, methyl bromide, methyl ethyl ketone, dibromochloromethane, and 1,2,3-trichloropropane yielded MS/MSD and/or relative percent differences (RPDs) outside control limits.

Matrix effect was evident and sample non-homogeneity was likely the cause. But since acetone, dichlorodifluoromethane, and methyl bromide were not detected in any associated sample, using professional judgment, no qualification was necessary.

The MS/MSD %Rs and/or RPD for benzoic acid, 4-chloroaniline, and isophorone were outside control limits.

Antimony, calcium, iron, aluminum, cadmium, cobalt, magnesium, manganese, and nickel yielded MS/MSD and/or RPDs outside control limits.

These compounds were cross referenced with their LCS recoveries, which were in control, therefore no qualification was required.

Project Specific Quality Assurance/Quality Control

No field duplicate sample was collected and reported with this sample delivery group.

Compound Quantitation and Reporting Limits

Due to matrix interference and/or to quantify the data some analyses required a dilution. Elevated reporting limits are reported.

Overall Assessment of Data

The serial dilution for antimony, beryllium, chromium, cobalt, copper, lead, manganese, nickel, sodium, vanadium, and zinc yielded a percent difference (%D) outside control limits. All samples yielded concentrations for manganese and vanadium >50 times the method detection limit (MDL) and were qualified as estimated, “J”.

The initial calibration verification (ICV) was outside control limits for acetone. Additionally, the continuing calibration verification (CCV) for 1,1,2-trichloroethane was outside control limits. Since the associated samples did not yield positive detections for either of these compounds, no qualification was required.

The RPD for the laboratory duplicate of antimony, mercury, arsenic, and manganese was outside control limits. Due to low duplicate and sample concentrations the RPD was acceptable for antimony, mercury, and arsenic. Manganese was only marginally outside QC limits and using professional judgment, no qualification was necessary.

Overall, the data is suitable for the intended data usage. All analyses were performed, and the data met the required QC criteria except where noted. The data is 100% complete.

Summary of Qualified Data

Sample ID	Parameter	*Qualifier
SWMU8-DP07-7	Acetone Manganese Vanadium	UJ 55.6 J 4.2 J
SWMU8-DP08-8	Acetone Manganese Vanadium	UJ 40.2 J 4.6 J
SWMU8-DP09-7	Methylene chloride Acetone Manganese Vanadium	13 U* UJ 54.4 J 4.5 J

* VOCs are in micrograms per kilogram (µg/kg) and metals are in milligrams per kilogram (mg/kg)

*U - the analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted reporting limit

Data Validation Report

This report contains the results of the review and validation of the specified data package performed by Marcia Olive, Bhate Environmental Associates, Inc., Denver, Colorado.

Introduction

This data validation report covers samples taken from Holloman Air Force Base, New Mexico, on October 8, 2010. Four soil samples and one trip blank were taken from the SWMU 8 site. All analyses were performed by Accutest Laboratories in Orlando, Florida. The specific samples included in this validation were:

Sample ID	Matrix	Collection Date	Analyses (USEPA Method Number)
SWMU8-DP05-7	Soil	10/8/10	VOCs (SW8260B), SVOCs (SW8270C), TPH-GRO/DRO/ORO (SW8015), TAL Metals (SW6010B/7471A), PCBs (SW8082)
SWMU8-DP05-7A			
SWMU8-DP04-7			
SWMU8-DP06-7			
Notes: ID – Identification, USEPA – U.S. Environmental Protection Agency, VOCs – Volatile organic compounds, SVOCs – Semi-volatile organic compounds, TPH – Total Petroleum Hydrocarbons, GRO – Gasoline Range Organics, DRO – Diesel Range Organics, ORO – Oil Range Organics, TAL – Target Analyte List, PCBs – Polychlorinated Biphenyls			

This data was validated against the laboratory's quality assurance/quality control (QA/QC) limits using the guidelines and practices published in the *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review* (USEPA, June 2008) and the *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review* (USEPA, January 2010).

Sample Handling and Holding Times

The samples were analyzed within the required hold times for all analyses.

Blanks

Methylene chloride was detected in one method blank associated with sample SWMU8-DP05-7 and SWMU8-DP05-7A. The blank concentration was less than (<) 2 times the reporting limit (RL). The sample concentrations were less than (<) 2 times the RL, therefore the reporting limit was qualified as "U".

Blank Spike Sample (Laboratory Control Sample)/ Surrogates

The laboratory control sample (LCS) recoveries for acetone, methyl ethyl ketone, dichlorodifluoromethane, and methyl bromide were outside control limits. Since the recoveries for acetone and methyl ethyl ketone were below control limits these non-detected compounds were qualified as estimated non-detected, "UJ", in the associated samples. The LCS recoveries for the remaining compounds were above control limits. Therefore, the non-detected compounds did not warrant qualification.

Surrogates were injected into all field and laboratory QC samples as a requirement of the organic analysis, and the percent recovery (%R) was calculated. The semi-volatile surrogate recovery for nitrobenzene-d5, in samples SWMU-DP05-7, SWMU8-DP05-7A, and SWMU8-DP06-7 was above QC limits. Qualification is only necessary when more than one semi-volatile surrogate is outside control limits; therefore, no qualification was required.

The extractable surrogate o-terphenyl was diluted out of sample SWMU8-DP05-7, SWMU8-DP05-7A, and SWMU8-DP06-7. The surrogate recoveries for the blank and LCS analyses were in control; therefore, no qualification was necessary.

Matrix Spike (MS)/Matrix Spike Duplicates (MSD)

Multiple volatile compounds yielded MS/MSD and/or relative percent differences (RPDs) outside control limits.

The MS/MSD %Rs and/or RPD for benzoic acid, 4-chloroaniline, and isophorone were outside control limits.

Antimony, calcium, iron, aluminum, cadmium, cobalt, magnesium, manganese, and nickel yielded MS/MSD and/or RPDs outside control limits.

These compounds were cross referenced with their LCS recoveries, which were in control and/or the sample concentration did not yield a detection, therefore no qualification was required.

Project Specific Quality Assurance/Quality Control

One field duplicate sample was collected and reported with this sample delivery group. The RPD for n-propylbenzene exceeded project defined control limits and was qualified as estimated, “J”, in both the sample and duplicate.

Compound Quantitation and Reporting Limits

Due to matrix interference some analyses required a dilution. Elevated reporting limits are reported.

Overall assessment of data

The serial dilution for antimony, beryllium, chromium, cobalt, copper, lead, manganese, nickel, sodium, vanadium, and zinc yielded a percent difference (%D) outside control limits. All samples yielded concentrations for manganese and vanadium >50 times the method detection limit (MDL) and were qualified as estimated, “J”.

The initial calibration verification (ICV) was outside control limits for acetone. Since the associated samples did not yield positive detections for this compound, no further qualification was required.

The RPD for the laboratory duplicate of antimony, mercury, arsenic, and manganese was outside control limits. Due to low duplicate and sample concentrations the RPD was acceptable for antimony, mercury, and arsenic. Manganese was only marginally outside QC limits and using professional judgment, no qualification was necessary.

Overall, the data is suitable for the intended data usage. All analyses were performed, and the data met the required QC criteria except where noted. The data is 100% complete.

Summary of Qualified Data

Sample ID	Parameter	*Qualifier
SWMU8-DP05-7	Methylene chloride Acetone Methyl ethyl ketone n-Propylbenzene Manganese Vanadium	800 U* UJ UJ 141 J 29.1 J 5.5 J
SWMU8-DP05-7A	Methylene chloride Acetone Methyl ethyl ketone n-Propylbenzene Manganese Vanadium	680 U* UJ UJ 303 J 28 J 6.1 J
SWMU8-DP04-7	Acetone Manganese Vanadium	UJ 37.3 J 5.8 J
SWMU8-DP06-7	Acetone Manganese Vanadium	UJ 54.6 J 4.5 J

* VOCs are in micrograms per kilogram (µg/kg) and metals are in milligrams per kilogram (mg/kg)

*U - the analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted reporting limit

Data Validation Report

This report contains the results of the review and validation of the specified data package performed by Marcia Olive, Bhate Environmental Associates, Inc., Denver, Colorado.

Introduction

This data validation report covers samples taken from Holloman Air Force Base, New Mexico, on December 13, 2010. Four aqueous samples and associated trip blanks were taken from the SWMU 8 site. All analyses were performed by Accutest Laboratories in Orlando, Florida. The specific samples included in this validation were:

Sample ID	Matrix	Collection Date	Analyses (USEPA Method Number)
SWMU8-DP13	Water	12/13/10	VOCs (SW8260B), SVOCs (SW8270D), TPH-GRO/DRO/ORO (SW8015C), TAL Metals (SW6010C/7470A), PCBs (SW8082A), TDS (2540C)
SWMU8-DP02			
SWMU8-DP03			
SWMU8-DP17			
Notes: ID – Identification, USEPA – U.S. Environmental Protection Agency, VOCs – Volatile organic compounds, SVOCs – Semi-volatile organic compounds, TPH – Total Petroleum Hydrocarbons, GRO – Gasoline Range Organics, DRO – Diesel Range Organics, ORO – Oil Range Organics, TAL – Target Analyte List, PCBs – Polychlorinated Biphenyls, TDS – Total Dissolved Solids			

This data was validated against the laboratory's quality assurance/quality control (QA/QC) limits using the guidelines and practices published in the *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review* (USEPA, June 2008) and the *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review* (USEPA, January 2010).

Sample Handling and Holding Times

The samples were prepared and analyzed within method specific sample holding times.

Blanks

Methylene chloride was detected in all trip blanks. The samples did not yield a detection for this common laboratory contaminant; therefore no qualification was required.

The method blank yielded a detection for 1,2,3-trichlorobenzene. This compound was not detected in the samples and needed no qualification.

Blank Spike Sample (Laboratory Control Sample)/ Surrogates

The laboratory control sample (LCS) recovery for all compounds were within control limits.

Surrogates were injected into all field and laboratory QC samples as a requirement of the organic analysis, and the percent recovery (%R) was calculated. The semi-volatile surrogates, phenol-d5 and 2-fluorophenol, were above QC limits in the matrix spike

analysis. Since the sample surrogates were in control and all acid based compounds were not detected; sample integrity was not affected and no qualification was required.

Matrix Spike (MS)/Matrix Spike Duplicates (MSD)

2-Chloroethyl vinyl ether, cis-1,3-dichloropropene, trans-1,3-dichloropropene, benzoic acid, phenol, hexachlorocyclopentadiene, 2-nitroaniline, and styrene yielded MS/MSD and/or relative percent differences (RPDs) outside control limits.

These compounds were cross referenced with their LCS recoveries, which were in control, therefore no qualification was required.

Calcium yielded MS and MSD recoveries outside control limits. The spike concentration was exceeded by a factor of four or more by the sample concentration. Therefore, control limits were not applicable.

Project Specific Quality Assurance/Quality Control

No field duplicate sample was collected and reported with this sample delivery group.

Compound Quantitation and Reporting Limits

To quantify the data the analysis of TDS required a dilution. Elevated reporting limits are reported.

Due to baseline drift the reporting limit for antimony was elevated.

Overall Assessment of Data

The serial dilution for aluminum, antimony, arsenic, barium, calcium, copper, nickel, and selenium yielded a percent difference (%D) outside control limits. All samples yielded a concentration for calcium >50 times the method detection limit (MDL) and it was qualified as estimated, “J”.

The post digestate spikes (PDS) for calcium and magnesium were outside recovery limits due to high levels in the sample relative to the spike amount. A PDS is not required to confirm matrix interference because a serial dilution analysis was performed to confirm such effect which was deemed present for calcium and previously qualified.

The laboratory RPD for arsenic, iron, and selenium was outside control limits. Due to low duplicate and sample concentrations the RPDs were acceptable.

All analyses were performed, and the data met the required QC criteria except where noted. The data is 100% complete.

Summary of Qualified Data

Sample ID	Parameter	*Qualifier
SWMU8-DP13	Calcium	550,000 J
SWMU8-DP02	Calcium	578,000 J
SWMU8-DP03	Calcium	571,000 J
SWMU8-DP17	Calcium	573,000 J

* In micrograms per liter (μg/L)

Data Validation Report

This report contains the results of the review and validation of the specified data package performed by Marcia Olive, Bhate Environmental Associates, Inc., Denver, Colorado.

Introduction

This data validation report covers samples taken from Holloman Air Force Base, New Mexico, on December 14, 2010. Three aqueous samples and associated trip blanks were taken from the SWMU 8 site. All analyses were performed by Accutest Laboratories in Orlando, Florida. The specific samples included in this validation were:

Sample ID	Matrix	Collection Date	Analyses (USEPA Method Number)
SWMU8-DP05-A	Water	12/14/10	VOCs (SW8260B), SVOCs (SW8270D), TPH-GRO/DRO/ORO (SW8015C), TAL Metals (SW6010C/7470A), PCBs (SW8082A), TDS (2540C)
SWMU8-DP05			
SWMU8-DP01			
Notes: ID – Identification, USEPA – U.S. Environmental Protection Agency, VOCs – Volatile organic compounds, SVOCs – Semi-volatile organic compounds, TPH – Total Petroleum Hydrocarbons, GRO – Gasoline Range Organics, DRO – Diesel Range Organics, ORO – Oil Range Organics, TAL – Target Analyte List, PCBs – Polychlorinated Biphenyls, TDS – Total Dissolved Solids			

This data was validated against the laboratory's quality assurance/quality control (QA/QC) limits using the guidelines and practices published in the *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review* (USEPA, June 2008) and the *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review* (USEPA, January 2010).

Sample Handling and Holding Times

The samples were prepared and analyzed within method specific sample holding times.

Blanks

Methylene chloride was detected in the trip blank associated with sample SWMU8-DP01. The sample did not yield a detection for this common laboratory contaminant; therefore no qualification was required.

Blank Spike Sample (Laboratory Control Sample)/ Surrogates

The laboratory control sample (LCS) recovery for bromobenzene and n-butylbenzene were above control limits associated with all samples. Sample SWMU8-DP05 yielded the only positive result of n-butylbenzene and was qualified as estimated, "J".

Surrogates were injected into all field and laboratory QC samples as a requirement of the organic analysis, and the percent recovery (%R) was calculated. The semi-volatile surrogate phenol-d5 was above QC limits in the matrix spike analysis. Since only one semi-volatile surrogate was outside control limits no qualification was required.

Matrix Spike (MS)/Matrix Spike Duplicates (MSD)

Acetone, 2-chloroethyl vinyl ether, carbon disulfide, cis-1,3-dichloropropene, trans-1,3-dichloropropene, and trichlorofluoromethane yielded MS/MSD and/or relative percent differences (RPDs) outside control limits.

These compounds were cross referenced with their LCS recoveries, which were in control, therefore no qualification was required.

Calcium yielded MS and MSD recoveries outside control limits. The spike concentration was exceeded by a factor of four or more by the sample concentration. Therefore, control limits were not applicable.

Project Specific Quality Assurance/Quality Control

One field duplicate sample was collected and reported with this SDG. The RPD for iron was outside project defined control limits and qualified as estimated, "J", in both the sample and duplicate.

Compound Quantitation and Reporting Limits

To quantify the data the analysis of TDS, in all samples, required a dilution. Elevated reporting limits are reported.

Due to baseline drift the reporting limit for antimony was elevated.

Overall Assessment of Data

The serial dilution for antimony, arsenic, barium, calcium, chromium, copper, and selenium yielded a percent difference (%D) outside control limits. All samples yielded a concentration for calcium >50 times the method detection limit (MDL) and it was qualified as estimated, "J".

The post digestate spikes (PDS) for calcium and magnesium were outside recovery limits due to high levels in the sample relative to the spike amount. A PDS is not required to confirm matrix interference because a serial dilution analysis was performed to confirm such effect which was deemed present for calcium and previously qualified.

The continuing calibration verification (CCV) was outside control limits for n-butylbenzene (SWMU-DP05) and sec-butylbenzene (SWMU-DP05-A and SWMU-DP05). The results could be biased high and were qualified as estimated, "J".

The laboratory RPD for antimony, barium, and selenium was outside control limits. Due to low duplicate and sample concentrations, the RPDs were acceptable.

All analyses were performed, and the data met the required QC criteria except where noted. The data is 100% complete.

Summary of Qualified Data

Sample ID	Parameter	*Qualifier
SWMU8-DP05-A	Iron sec-Butylbenzene Calcium	129 J 2.4 J 585,000 J

Summary of Qualified Data

Sample ID	Parameter	*Qualifier
SWMU8-DP05	Iron n-Butylbenzene sec-Butylbenzene Calcium	193 J 0.34 J 2.4 J 550,000 J
SWMU8-DP01	Calcium	567,000 J

* In micrograms per liter (µg/L)