Melrose

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27TH SPECIAL OPERATIONS MISSION SUPPORT GROUP (AFSOC)
CANNON AIR FORCE BASE NEW MEXICO

7 Oct 13

Colonel Heather L. Buono
Commander, 27 SOMSG
110 E Alison Avenue Suite 1098
Cannon AFB NM 88103

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Mr. Daniel Comeau
Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East Bldg 1
Santa Fe NM 87505-6063

Dear Mr. Comeau

Attached is the "*2012 Annual Groundwater Monitoring Report Melrose Air Force Range*". If you have any questions regarding this submittal, please contact Mr. Ron Lancaster, Chief, Installation Management at (575) 784-1146.

Sincerely,

Heather L. Buono

HEATHER L. BUONO, Colonel, USAF

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2012 Annual Groundwater Monitoring Report Melrose Air Force Range

cc:
Environmental Protection Agency, Region VI, Ms. Wendy Jacques w/o Attachment

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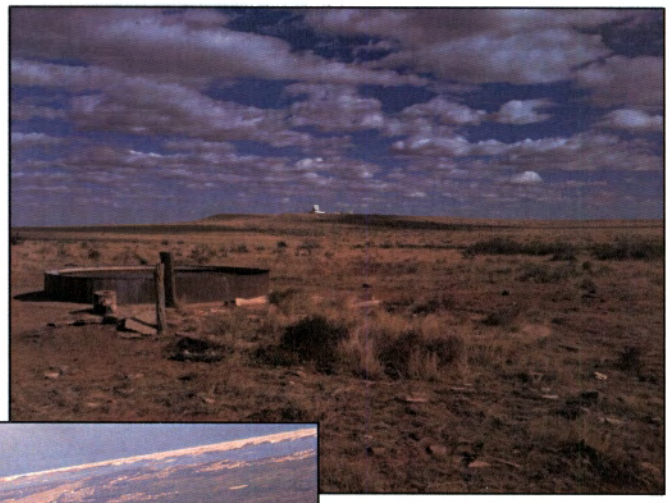
DECEMBER 2012 ANNUAL GROUNDWATER MONITORING REPORT

Melrose Air Force Range
Roosevelt and Curry Counties, New Mexico

Air Force Special Operations Command

27th Special Operations Wing

U.S. Army Corps of Engineers



TRINITY
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Environmental & Engineering Services

TITLE PAGE

DECEMBER 2012
ANNUAL GROUNDWATER
MONITORING REPORT
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO

Prepared For:
Cannon Air Force Base
Air Force Special Operations Command (AFSOC)
27th SOCES/CEANR
Cannon Air Force Base, NM 88103-5003

Prepared By:
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Under Contract To:
United States Army Corps of Engineers (USACE)
Omaha District
1616 Capitol Avenue
Omaha, NE 68102-4901

Contract Number:
W9128F-10-D-0091, Task Order 0006

September 2013

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CERTIFICATION PAGE

DECEMBER 2012
ANNUAL GROUNDWATER
MONITORING REPORT
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO

Prepared For:
Air Force Special Operations Command
And
27th Special Operations Wing

Prepared By:
Trinity Analysis & Development Corp.
1002 N. Eglin Parkway
Shalimar, FL 32579
(850) 613-6800

Under Contract To:
United States Army Corps of Engineers (USACE)
Omaha District

I hereby submit that this Annual Groundwater Monitoring Report, December 2012, for the Melrose Air Force Range was prepared by me.

Jonathan M. Kramer
Geologist
Trinity Analysis & Development Corp.

9-11-2013
Date

I hereby submit the Annual Groundwater Monitoring Report, December 2012, for the Melrose Air Force Range was prepared under my supervision and review. To the best of my knowledge, all of the work performed for this report is in accordance with applicable State and federal regulations and accepted professional practices.

Richard L. Burdine, P.G.
Senior Vice President
Trinity Analysis & Development Corp.

9-11-2013
Date

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LIST OF ABBREVIATIONS AND ACRONYMS

°C	Celsius
°F	Fahrenheit
Accutest	Accutest Laboratories, Tampa, Florida
AFB	Air Force Base
AFR	Air Force Range
AFSOC	Air Force Special Operations Command
amsl	above mean sea level
AOC	Area of Concern
bls	below land surface
CCB	continuing calibration blank
CEA	Asset Management Flight
CEC	cation exchange capacity
COCs	Chain-of-custodies
DO	dissolved oxygen
DoD	Department of Defense
DPT	direct-push technology
DQOs	data quality objectives
ECO	Eco-logical Environmental Services, Inc.
eDATApro	Environmental Data Professional, LLC
ELAP	Environmental Laboratory Accreditation Program
EOD	explosive ordnance disposal
ERP	Environmental Restoration Program
ft/ft	feet per foot
ft/yr	feet per year
GCAL	Gulf Coast Analytical Laboratories, Inc.
gpm	gallon per minute
HSWA	Hazardous and Solid Waste Amendments
ICB	Initial calibration blank
IDW	Investigation-derived waste
LCS/LCSD	Laboratory Control Sample/Laboratory Control Sample Duplicate
MB	Method Blank
MDL	Method Detection Limit
mg/L	milligrams per liter
ML	sandy silt
mph	miles per hour
MS/MSD	Matrix Spike/Matrix Spike Duplicate
NELAC	National Environmental Laboratory Accreditation Conference
NMAC	New Mexico Administrative Code
NMED	New Mexico Environment Department

NOA	Notice of Approval
NOD	Notice of Disapproval
ORP	oxidation reduction potential
psi	pounds per square inch
PVC	polyvinyl chloride
QA/QC	Quality Assurance/Quality Control
QC	Quality Control
RCRA	Resource Conservation and Recovery Act
RFI	RCRA Facility Investigation
RL	Reporting Limit
RPD	Relative Percent Difference
RSL	Regional Screening Level
SC	clayey sand
SC-CL	clayey sand to sandy clay
SDG	sample delivery group
SM	silty sand
SOW	Special Operations Wing
SR	State Road
SSL	Soil screening level
SVOC	semivolatile organic compounds
SWMUs	Solid Waste Management Units
TDS	Total Dissolved Solids
TRINITY	Trinity Analysis & Development Corp.
µg/L	micrograms per liter
US	United States
USACE	United States Army Corps of Engineers
USAF	United States Air Force
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
UXO	unexploded ordnance
VOC	volatile organic compounds
WQCC	Water Quality Control Commission

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1.0 INTRODUCTION

This Annual Groundwater Monitoring Report for the Melrose Air Force Range (AFR) has been prepared by Trinity Analysis & Development Corp. (TRINITY) on behalf of the Cannon Air Force Base (AFB) 27th Special Operations Wing (SOW) and Air Force Special Operations Command (AFSOC). TRINITY performed this work under contract to the United States (US) Army Corps of Engineers (USACE), Omaha District, Contract W9128F-10-D-0091, Task Order 006. The document was prepared for submission to the New Mexico Environment Department (NMED). As requested by NMED, this report is written and organized in general accordance with the NMED *Position Paper: General Reporting Requirements for Routine Groundwater Monitoring Activities at RCRA Sites* (NMED, 2003).

The *Draft December 2011 Annual Groundwater Monitoring Report, Melrose Air Force Range, Roosevelt and Curry Counties, New Mexico* was submitted to Cannon AFB on January 11, 2011. NMED provided a Notice of Disapproval (NOD) of the report dated September 26, 2012. Based on comments, TRINITY requested a meeting with NMED and Cannon to discuss the NOD with the intent to better understand NMED's position, prior to generating another version of the document. Personnel from Cannon Air Force Base (Mr. Matt Higginbotham) and TRINITY (Mr. Jonathan Kramer, and Mr. Richard Burdine, PG) met with personnel from NMED (Mr. Dave Cobrain, Ms. Leona Tsinnajinnie, Mr. Dan Comeau, and Ms. Neelam Dhawan) on January 10, 2013 at their office in Santa Fe, New Mexico. Based on comments and discussions occurring during the meeting the report was revised. The revised 2011 Annual Report was submitted to Cannon AFB dated February 22, 2013. NMED provided a Notice of Approval (NOA) for the 2011 Annual Report dated May 2, 2013. All comments provided in the NOA are addressed in this report, where applicable.

NMED provided the NOD for the 2011 Annual Report dated September 26, 2012 and additional comments and discussions occurred during the January 10, 2013 meeting at NMED's office in Santa Fe. While waiting for approval of the revised 2011 Annual Report TRINITY was directed by Cannon AFB to postpone the Spring 2012 sampling event. The NOA received on May 2, 2013 did not allow for sufficient time to mobilize to the field for the Spring 2012 sampling event; therefore this report only summarizes the Fall 2012 sampling event. It should also be

noted, that by the time the NOD for the 2011 Annual Report was received, and the January 10, 2013 meeting had occurred that it was not possible to incorporate comments/recommendations into the 2012 sampling event.

Site History

In 1986, the Department of Defense (DoD) established the Environmental Restoration Program (ERP) to provide guidance and funding for the investigation and remediation of hazardous waste sites caused by historical disposal activities at military installations that may have contaminated soil, groundwater, and/or surface water. The Asset Management Flight (CEA) staff at the Cannon AFB 27th SOW is administratively responsible for oversight of ERP sites at Melrose AFR.

Melrose AFR was issued a Resource Conservation and Recovery Act (RCRA) Permit (NM5572124456-1) effective December 30, 1994 in conjunction with a Hazardous and Solid Waste Amendments (HSWA) Permit effective December 15, 1994. It is TRINITY's understanding that both permits were allowed to expire on December 30, 2004 and December 15, 2004, respectively.

In accordance with the RCRA permit issued to Melrose AFR, an investigation of potential impacts to soil and groundwater that may have resulted from seven Solid Waste Management Units (SWMUs) was conducted. In accordance with the RCRA Permit a *Phase I RCRA Facility Investigation for Melrose Air Force Range, Cannon Air Force Base, Clovis, New Mexico* (Foster Wheeler, 1996) and a *RCRA Facility Investigation Report Addendum for Melrose Bombing Range, Cannon Air Force Base, New Mexico* (Foster Wheeler, 2003) were completed and the reports submitted to NMED. NMED reviewed the Phase I RCRA Facility Investigation (RFI) and the RFI Addendum and provided a response dated February 1, 2006 which requested a work plan outlining additional field investigation activities for the SWMUs located at Melrose AFR.

On May 9, 2007 the Department of the Air Force requested a deferral of the RFI Work Plan requested by NMED for Melrose AFR. The deferral request was based on the fact that the entire facility is an "*active bombing or test range*." On June 19, 2007 NMED approved deferment of a revised RFI Work Plan. In a Notice of Disapproval (NOD) dated February 11, 2010 for the

Draft Work Plan for Annual Groundwater Monitoring, Melrose Air Force Range, New Mexico (Tidewater, 2009), (Tidewater, Inc., 2009) NMED stated that NMED had previously approved deferment of the revised RFI Work Plan with the stipulation that the purpose and scope of the work plan would be modified to indicate that groundwater monitoring and reporting would continue and is "*... an interim measure, until the SWMUs are fully investigated.....*". Based on NMED comments (February 11, 2010) on the *Draft Work Plan for Annual Groundwater Monitoring, Melrose Air Force Range, New Mexico* (Tidewater, Inc., 2009), a *Final Work Plan for Annual Groundwater Monitoring, Melrose Air Force Range, New Mexico* (Tidewater, Inc., 2010) was produced.

Monitoring Network

Based on the *Final Work Plan for Annual Groundwater Monitoring, Melrose Air Force Range, New Mexico* (Tidewater, 2010), two separate monitoring well networks are designated and sampled: the Semiannual SWMU Groundwater Quality Network which currently consists of nine wells, and the Annual Groundwater Quality Network which currently consists of seven wells that are not associated with a SWMU.

The Semiannual SWMU Groundwater Quality Network includes:

- Four groundwater monitoring wells at SWMU 114;
- Four groundwater monitoring wells at SWMU 130;
- One groundwater monitoring well at SWMU 131;
- One background well.

A new background monitoring well was initially requested on October 27, 2009 when NMED provided a review of the *Final Report Initial Baseline Groundwater Monitoring, Melrose Air Force Range, New Mexico, June 2009* (URS, 2009). At the time, MWQ-10 was regarded as the background monitoring well. In that response NMED stated:

> "*NMED discourages including stock wells with steel casings in the Groundwater Quality Well Network, e.g., MWL-6, MWQ-4, MWQ-5, MWQ-6, MWQ-7, and MWQ-8, with the exception of MWQ-10. Although MWQ-10 has a steel casing, it is currently the only*

productive well located up-gradient of the impact area.

The Permittee must install a replacement monitoring well up-gradient of the impact area, then discontinue sampling and analysis of MWQ-10... "

The subsequent contractor, Tidewater, Inc. was not under contract to install a background monitoring well as discussed in the *Response to Comments contained in the February 11, 2010 Notice of Disapproval to the Draft Work Plan, Groundwater Monitoring, Melrose Air Force Range, New Mexico, October 2009* (Tidewater, Inc., 2009).

An abbreviated *Drilling Work Plan for the new background monitoring well (MWQ-24) at Melrose Air Force Range* (Trinity Analysis & Development Corp., 2013) was approved by NMED on June 18, 2013. The new background well (MWQ-24) was installed the week of August 12, 2013 and sampled the week of August 19, 2013. Details pertaining to installation and sampling will be submitted under separate cover.

The Annual Groundwater Quality Network includes seven monitoring wells. A detailed discussion of the site sampling plan for both the Semiannual and Annual Groundwater Quality Network is provided in **Section 1.3**.

Water quality sampling and reporting is being performed to monitor for the presence of potential contaminants, gauge the effectiveness of the site's monitoring system, provide the foundation for correction or improvement to the monitoring plan as necessary, and to document the site's influence on the area's groundwater quality, if any.

All field activities presented in this document were completed in general accordance with the data quality objectives (DQOs) presented in the approved work plan (Tidewater, Inc., 2010) and the *Ground Water Monitoring Project Work Plan* (Trinity Analysis & Development Corp., 2011).

1.1 SITE DESCRIPTION AND BACKGROUND

1.1.1 Location/Access

The Melrose AFR is a bombing and air-to-ground gunnery range under management of Cannon AFB within AFSOC. The Melrose AFR is situated approximately eight miles southwest of the village of Melrose, and located predominately in Roosevelt County with a small parcel in Curry County, New Mexico (**Figures 1 and 2**). Access to the range is achieved by traveling south from Melrose on New Mexico State Road (SR) 267 for approximately 9.3 miles, then west on Sundale Valley Road for approximately seven miles to the security gate.

During World War II, the area was used by the US Army Air Corps (predecessor to the US Air Force) for training. It has been continuously used by the US Air Force since World War II. In 1952 the range was expanded when the Air Force leased 7,771 acres of grassland for use as a bombing and air-to-ground gunnery range by the Tactical Air Command. Since 1952, the range has been expanded several times including land purchases and leases and currently comprises 87,925 acres. Current acreage includes Cannon AFB owned, public domain, and restricted easement land (Foster Wheeler, 2003).

The Impact Area of the Range is located northeast of the physiographically prominent Mesa and consists of grasslands with a grid of access roads and bombing targets. The Impact Area is delineated by a historical boundary that previously delineated the extent of the entire Range (**Figure 2**). In 1990-91, the boundary of the Range was expanded through the acquisition of agricultural and range land parcels on all sides. These parcels (leased lands) are currently part of Range property but are leased back to the prior owners for continued use as agricultural and range land. Leaseholders use the unconfined aquifer for irrigation and livestock watering.

Live high-explosives-filled ordnance was used on the range prior to 1969. Since then, practice bombs and inert full-scale bombs have been used at the range. Practice bombs and inert bombs are known to contain only small explosive or pyrotechnic spotting charges. Additionally, live gun ammunition has been used continuously on the range for target practice.

Over the years, portions of the Melrose AFR have been used to dispose of a variety of military

and industrial waste from Melrose AFR and Cannon AFB. Wastes have included: unexploded ordnance (UXO), exploded ordnance, scrap metal, paints, solvents, pesticides, herbicides, putrescible waste, etc. (Foster Wheeler, 1996; Foster Wheeler, 2003). Melrose AFR currently has seven SWMUs located within its boundary. Three SWMUs have permanent monitoring wells in place, two SWMUs are located within the Impact Area and as such, do not have permanent wells in place, and the wells associated with the remaining two SWMUs have been abandoned because they were dry (**Figure 2** and **3**). The SWMUs are described as follows:

SWMU 114 – Expended Ordnance and Industrial Waste Burial Site (Motor Pool Trenches)
SWMU 115 – Explosives-Contaminated Burial Site (Arroyo Burial Site)
SWMU 117 – Domestic Waste Burial Site (Southeast of Main Building)
SWMU 130 – World War II Cantonment Disposal Site (formerly Area of Concern (AOC) 1)
SWMU 131 – Domestic Waste Burial Site (East of Fire Station; formerly AOC 2)
SWMU 132 – Disposal/Burn Site (North Helicopter Pad; formerly AOC 3)
SWMU 133 – Northwest Munitions Disposal Site (Northwest Corner of Impact Area; formerly AOC 4)

1.1.2 SWMU Descriptions & History

1.1.2.1 SWMU 114 – Expended Ordnance and Industrial Waste Burial Site

SWMU 114 is located in the southeast quarter of the southwest quarter of Section 15 and the northeast quarter of the northwest quarter of Section 22, Township 1 North, Range 30 East, in Roosevelt County, New Mexico (**Figure 3**). The site and surrounding area are flat with sparse desert scrub vegetation consisting of prairie grass and cactus.

According to historical RFI reports, the military used a series of eight unlined burial trenches at SWMU 114 to dispose of a variety of military and industrial waste from Melrose AFR and Cannon AFB. Trenches were approximately 20 to 40 feet in width, 100 to 200 feet in length and up to 40 feet in depth (Foster Wheeler, 1996; Foster Wheeler, 2003). One trench approximately 15 feet deep and 400 feet long is currently open but has not been used.

Exact dates and types of waste disposed at SWMU 114 are unknown. It is known, however, that between 1952 and 1962 drummed liquids were poured into the trenches and burned. Full drums of liquid, including possible unusable fuels, paints, sludge, and solvents may have also been placed in the trenches. For an unknown period of time, the military also disposed of an estimated 12,000 to 15,000 pounds per month of scrap metal from practice bombs and munitions in the trenches at SWMU 114 (Foster Wheeler, 1996; Foster Wheeler, 2003). According to the *Phase I RCRA Facility Investigation for Melrose Air Force Range, Cannon Air Force Base, Clovis, New Mexico* (Foster Wheeler, 1996) and a *RCRA Facility Investigation Report Addendum for Melrose Bombing Range, Cannon Air Force Base, New Mexico* (Foster Wheeler, 2003) the trenches at SWMU 114 were cleared of ordnance and have been backfilled and closed.

According to historical RFI reports, four monitoring wells were installed and sampled as part of the Phase I RFI. Groundwater at this location is present approximately 150 feet below land surface (bls). No organic compounds were detected above groundwater standards during the Phase I RFI. Elevated metals concentrations were attributed to high turbidity and natural conditions. Elevated anion concentrations were attributed to natural conditions. Migration of metals from the disposal site to groundwater was determined to be unlikely due to the high cation exchange capacity (CEC) of the surface and near surface soil and the alkaline nature of the formation. It was determined that groundwater at SWMU 114 has not been impacted by disposal activities at the site (Foster Wheeler, 1996; Foster Wheeler, 2003).

1.1.2.2 SWMU 115 – Explosives-Contaminated Burial Site (Arroyo Burial Site)

SWMU 115 is located in the northeast quarter of the northeast quarter of Section 33, Township 1 North, Range 30 East in Roosevelt County, New Mexico (**Figure 3**). The site lies within a small arroyo located in the south-central portion of Melrose AFR. According to historical RFI reports, SWMU 115 was used for the disposal and burial of UXO in 1989. UXO and other exploded ordnance were reportedly collected from the surrounding areas, pushed into the arroyo, and covered with a thin layer of soil. Storm water flows intermittently down the arroyo during heavy rains.

The ground surface at the site is relatively free of debris. The disposal area was 600 feet long, 15

to 20 feet wide, and 15 to 20 feet deep. The contents of SWMU 115 are believed to consist entirely of UXO and other exploded ordnance, including 750-pound and 2,000-pound bombs covered with a thin layer of soil. Groundwater was reported present at approximately 25 to 30 feet below land surface. During the Phase I RFI, groundwater samples were collected using direct-push technology (DPT). No organics or explosives related compounds were detected in groundwater samples submitted for analysis. Elevated metals concentrations were attributed to elevated turbidity in the samples. It was determined that groundwater at SWMU 115 has not been impacted by disposal activities at the site (Foster Wheeler, 1996; Foster Wheeler, 2003).

1.1.2.3 SWMU 117 – Domestic Waste Burial Site (Southeast of Main Building)

SWMU 117 is located in the northeast quarter of the southwest quarter of Section 22, Township 1 North, Range 30 East, in Roosevelt County, New Mexico (**Figure 3**). This site is located southeast of the main control building at the Melrose AFR. The area is within a slight depression that receives storm water runoff from the surrounding area.

According to the historical RFI reports, this SWMU was formerly used to dispose of domestic waste from the control building, including such items as food waste and common household items. Other items possibly disposed in this area could include used oil and grease, solvents, batteries, pesticides, or herbicides (Foster Wheeler, 1996; Foster Wheeler, 2003). Disposal at the site appears to have begun circa 1973 as evident in aerial photographs. The area used for disposal at SWMU 117 was approximately 300 feet by 300 feet or approximately two acres. It is a closed site and currently covered by native grasses.

Groundwater was reportedly not encountered at a maximum depth of 182 feet during the Phase I RFI. The four borings were backfilled to the top of a potential confining layer (caliche) at approximately 41 feet bls with wells installed to intercept potential seasonal or perched groundwater. These four wells have been historically dry and have been abandoned at NMED's request. Based on the lack of groundwater and the lack of significant contamination in soil samples it was concluded that contamination of groundwater at SWMU 117 was unlikely (Foster Wheeler, 1996; Foster Wheeler, 2003).

1.1.2.4 SWMU 130 – World War II Cantonment Disposal Site

SWMU 130 is located in the northeast quarter of Section 17, Township 1 North, Range 30 East, in Roosevelt County, New Mexico (**Figure 3**). SWMU 130 was formerly referred to as AOC 1. According to historical RFI reports, the military used SWMU 130 as a sanitary landfill during World War II for a cantonment area (temporary housing area for troops). No documentation exists for specific wastes disposed at the site; however, it is possible that the waste stream included all items from domestic wastes to motor pool waste, UXO, munitions, batteries, oil and fuels, etc. The exact location of the disposal site is unknown; however approximately 50 acres were investigated during the Phase I RFI. Groundwater was reportedly present approximately 140 to 145 feet bls at SWMU 130. Four monitoring wells were installed and sampled as part of the Phase I RFI. No organic compounds were detected and only one metal (thallium) was detected above applicable groundwater standards. The elevated thallium concentration was attributed to natural conditions (Foster Wheeler, 1996; Foster Wheeler, 2003).

1.1.2.5 SWMU 131 – Domestic Waste Burial Site (East of Fire Station)

SWMU 131 is located in the northwest quarter of the southwest quarter of Section 22, Township 1 North, Range 30 East, in Roosevelt County, New Mexico (**Figure 3**). SWMU 131 was formerly referred to as AOC 2. This site is east of the Melrose AFR Fire Station and consists of approximately 0.5 acres. According to historical RFI reports, SWMU 131 was used for disposal and/or burning of wastes; however, the type and volume of wastes is unknown (Foster Wheeler, 2003). The suspected waste stream possibly included spent fuels, motor oil, batteries, paints, pesticides, and metals in addition to domestic waste. Waste first appears to have been disposed of at SWMU 131 circa 1966.

Two monitoring wells, a shallow and deep were installed in the investigative borings to depths of 50 and 185 feet bls, respectively. The shallow well was installed above a confining layer (caliche) to intercept seasonal or perched groundwater. The shallow well has been historically dry and has been abandoned at NMED's request. Groundwater was reportedly present in the deep well at approximately 105 feet bls.

The deep groundwater well was sampled as part of the RFI. No organic analytes were detected

in the groundwater during the Phase I RFI. Selenium and thallium were reported at concentrations above applicable groundwater standards; however, due to a lack of selenium or thallium in overlying soil samples it was determined that groundwater had not been impacted by SWMU 131 (Foster Wheeler, 1996; Foster Wheeler, 2003).

1.1.2.6 SWMU 132 – Disposal / Burn Site (North Helicopter Pad)

SWMU 132 is located in the southwest quarter of Section 22, Township 1 North, Range 30 East, in Roosevelt County, New Mexico (**Figure 3**). SWMU 132 was formerly referred to as AOC 3. This site is less than 0.5 acres located north of the former helicopter pad at the Melrose AFR operations area. SWMU 132 was reportedly used for burning and/or disposal of unknown wastes types and quantities. Possible wastes included domestic waste, motor oil, metals, and residue from burning. Waste first appears to have been disposed of at SWMU 132 circa 1973.

During the Phase I RFI no groundwater was encountered during drilling to a total depth of 182 feet bls. The boring was backfilled to the top of a potential confining layer (caliche) at approximately 50 feet bls to intercept seasonal or perched groundwater. Due to land-use (helicopter pad) the well was installed flush mount. The well was dry during the Phase I RFI (1996) and during the RFI Addendum (2003) and therefore could not be sampled. Based on the lack of groundwater this well was abandoned at NMED's request. Due to the lack of groundwater it was determined to not have been impacted by the presence of SWMU 132 (Foster Wheeler, 1996; Foster Wheeler, 2003).

1.1.2.7 SWMU 133 – NW Munitions Disposal Site (NW Corner of Impact Area)

SWMU 133 is located in the northwestern corner of the impact area. SWMU 133 was formerly referred to as AOC 4. This site is located in the east-central part of Section 17 with some overlap into Section 16, Township 1 North, Range 30 East in Roosevelt County, New Mexico (**Figure 3**). The site is flat with native scrub vegetation and areas free of vegetation. According to historical RFI reports, SWMU 133 was used from 1952 to 1960 for disposal of exploded ordnance and UXO.

Groundwater was reportedly present at approximately 112 to 127 feet bls. During the Phase I RFI, groundwater samples were collected from three of four borings using DPT. Groundwater

was not encountered in one of the borings. No organics were detected in groundwater. Concentrations of several metals exceeded applicable groundwater standards. A pattern of increased concentrations of five of the metals from west to east across the site might suggest impacts from SWMU 133 or from naturally occurring lateral changes in bedrock (Foster Wheeler, 1996; Foster Wheeler, 2003). Permanent monitoring wells were not installed due to the location of SWMU 133 in an overflight approach route along the northern portion of the active Impact Area. In a letter to Cannon AFB dated June 19, 2007 NMED stated, that "*...NMED will prepare a "corrective action-only" permit to be implemented once the range is closed, transferring, or transferred.*" (NMED, 2007). When the Range is deactivated additional assessment will likely be required.

1.1.3 Well Installation History

As previously discussed, the current monitoring well network consists of a Semiannual SWMU Groundwater Quality Network (nine wells), an Annual Groundwater Quality Network (seven wells), and 15 additional wells utilized solely for the collection of water levels. The following discussion provides a limited historical discussion of well installation at Melrose AFR, particularly as it relates to the monitoring network. Although there is limited or a lack of installation information, TRINITY has attempted to discuss network well installations in chronological order as they were installed at Melrose AFR. Available, documented, or measured well construction details have been compiled and are summarized in **Table 1**, Summary of Well Construction Details, and **Table 2**, Summary of Groundwater Levels.

Data gaps/deficiencies that have been identified are discussed below and clearly identified in associated tables. Where applicable, additional discussion is provided throughout the report specifying how the data gaps/deficiencies have affected interpretations of the data made by TRINITY and others.

Agricultural Wells

The Homestead Act of 1862 consisted of individual land grants of 160 acres each. Roosevelt County was primarily homesteaded from circa 1900 to 1915, although settlement continued beyond 1915 and portions of Melrose AFR continue to be farmed (center pivots) and grazed

(cattle) (Burroughs, 1975). During the peak of settlement activities (1905 to 1915) the area currently encompassing Melrose AFR contained four towns or villages which included Fertile Valley, Granite Valley, Benson, and Mesa, with a post office being located in Granite Valley (Burroughs, 1975). The only remnants of early settlement of the area are a few homesteads and numerous wells of which no firsthand information or records are available. Several of these wells are currently included in the monitoring network as described below.

Well ID	Network Designation	Historical Use
MWQ-1	Water-level only	Windmill-driven well
MWQ-8	Water-level only	Windmill-driven well
MWQ-9	Water-level only	Hand-dug well
MWQ-11	Water-level only	Livestock Supply/Submersible Pump
MWQ-12	Water-level only	Windmill-driven well
MWQ-13	Water-level only	Windmill-driven well
MWL-4	Water-level only	Windmill-driven well
MWL-5	Water-level only	Windmill-driven well
MWL-6	Water-level only	Windmill-driven well
MWL-7	Water-level only	Windmill-driven well
MWL-8	Water-level only	Windmill-driven well
MWL-9	Water-level only	Windmill-driven well
MWL-10	Water-level only	Windmill-driven well
MWL-11	Water-level only	Windmill-driven well
MWL-12	Water-level only	Windmill-driven well

Due to the age of these wells very limited construction details are available. In several instances total depth has been measured but construction details, lithologic data, and screened intervals are unknown (**Table 1**). Additional wells were previously designated for collection of water levels only; wells MWL-2 and MWL-3 are commonly inaccessible due to their proximity to the Jockey Live Fire Range and were therefore removed from the monitoring network. This was approved by NMED in the *Approval, Annual Ground Water Monitoring Report, December 2011* letter dated May 2, 2013

Groundwater Monitoring Wells

The remaining 16 wells that are part of the monitoring network consist of wells known to have been constructed for the purposes of environmental groundwater monitoring (**Table 1**). These are all indicated to have been installed since 1995. Investigative activities have been ongoing since 1994 when a Phase I RFI was conducted in accordance with the requirements of the RCRA permit for Melrose AFR. Investigations were conducted for SWMUs 114, 115, and 117 as well as four potential AOCs identified during a site visit in September 1994. The results of the RFI are discussed in the *Phase I RCRA Facility Investigation for Melrose Air Force Range, Cannon Air Force Base, Clovis, New Mexico* (Foster Wheeler, 1996) and a *RCRA Facility Investigation Report Addendum for Melrose Bombing Range, Cannon Air Force Base, New Mexico* (Foster Wheeler, 2003). The permit covered open burning/open detonation at the UXO Open Burn Treatment Pit (SWMU 118); however, SWMU 118 was not a subject of the investigation. Permanent monitoring wells were installed during the RFI as follows;

- SWMU 114 (M114MW001, M114MW002, M114MW003, and M114MW004)
- SWMU 117 (M117MW001, M117MW002, M117MW003, and M117MW004)
- SWMU 130 (MAO1MW001, MAO1MW002, MAO1MW003, and MAO1MW004)
- SWMU 131 (MAO2MW001S and MAO2MW001D)
- SWMU 132 (MAO3MW001)

The *Phase I RCRA Facility Investigation for Melrose Air Force Range, Cannon Air Force Base, Clovis, New Mexico* (Foster Wheeler, 1996) provides very limited discussion on well construction methodology. Boring logs, well completion reports, etc. for these wells were not provided in the Phase I RFI; however, based on discussions in the 1996 report all these wells were installed in the Ogallala Formation. According to well labels attached to the protective casings on these wells they were installed between October and December of 1995.

The four wells at SWMU 117, the shallow well at SWMU 131, and the well at SWMU 132 have historically been dry and were abandoned by TRINITY on October 5, 2011 as approved by NMED and the New Mexico Office of the State Engineer.

Since the 1995 RFI, six additional wells have been installed at Melrose AFR. Annual Groundwater Quality Network well MW-14 was installed in the previously permitted explosive ordnance disposal (EOD) pit. No boring logs, well completion reports, or well details have been discovered and the exact installation date is unknown. The United States Geologic Survey (USGS) installed Annual Groundwater Quality Network wells MWQ-1 and MWQ-2 in June 2002 as discussed in *Ground-water hydrology and water quality of the Southern High Plains aquifer, Melrose Air Force Range, Cannon Air Force Base, Curry and Roosevelt Counties, New Mexico, 2002-03: U.S. Geological Survey Scientific Investigations Report 2004-5158* (Langman, 2004). Monitoring well MWQ-1 is currently dry; however, MWQ-2 is routinely sampled. MWQ-2 was reportedly installed in the Chinle Formation at a depth of 240 feet bls to monitor a thin (two feet thick) confined aquifer section located approximately 100 feet beneath the base of the Ogallala Aquifer. Boring logs, well completion reports, etc., were not provided in the USGS report; however, based on Figure 3 of the USGS report the well appears to have approximately 15 feet of screen.

According to Melrose AFR personnel wells MWQ-18 through MWQ-22 were installed by the USGS subsequent to the 2004 USGS report. Based on available water quality data MWQ-18 and MWQ-19 were installed prior to July 2004; MWQ-20, MWQ-21, and MWQ-22 were installed prior to July 2005. Based on total depth and groundwater quality data, it appears that MWQ-2, MWQ-19, MWQ-20, and MWQ-22 were all installed in the Chinle Formation; however, this can currently only be confirmed for MWQ-2 (Langman, 2004).

Range Supply Wells

The Range complex at Melrose AFR has historically utilized two wells for supply purposes, Well #11 and Well #13 (**Figure 2,** and **Figure 3**). Well #11 was historically utilized for fire-control, maintenance, and potable supply but is not currently utilized for potable supply due to elevated levels of perchlorate. Well #11 is completed at a depth of 202 feet bls, with perforated casing from 139 to 197 feet bls. Well #13, is a high yield source but is located in an area susceptible to munitions damage and has shown elevated levels of arsenic. It is not currently connected to the water supply system (Cannon, 2011). TRINITY was not able to locate well construction details for Well #13. The installation dates for these two wells is not known by

TRINITY. Additional discussion related to these two wells is provided in **Section 1.2.2**.

1.2 HYDROGEOLOGIC SETTING

1.2.1 Geology

The stratigraphic units of interest at Melrose AFR are the Chinle, Ogallala, and Blackwater Draw Formations. In eastern New Mexico, these units form the Southern High Plains Aquifer, which is part of a larger aquifer system extending from eastern New Mexico and Colorado into Texas, Oklahoma, Kansas, Nebraska, and South Dakota (Langman, 2004). The Chinle Formation (Triassic age) is the base of the unconfined Southern High Plains Aquifer and is composed of red shales with interbedded sands (redbeds) deposited by low-energy streams in floodplains and deltas. The top of the Chinle Formation is marked by an erosional unconformity with up to several hundred feet of relief (Lee Wan and Associates, Inc., 1990). The Ogallala Formation (Tertiary age) is the uppermost formation for the central and southern parts of Melrose AFR and it lies unconformably over the upper unit of the Chinle Formation. The Blackwater Draw Formation (Quaternary age) overlies the Ogallala Formation in the northern part of Melrose AFR (**Figure 4**).

In the vicinity of Melrose AFR, the Ogallala dips gently to the southeast; no faults or buried structural lineaments are known to exist in the area. The thickness of the Ogallala Formation may vary significantly over short north-south distances. Two separate sources states that the base of the Southern High Plains Aquifer (Ogallala Formation) in the northern portion of Melrose AFR lies at a depth of greater than 182 feet bls as demonstrated during drilling conducted as part of the Phase I RFI (Foster Wheeler, 1996) and is estimated at approximately 200 feet bls (Hart, 1985). In central portions of Melrose AFR the USGS observed the base of the Ogallala Formation at approximately 135 feet bls (Langman, 2004). In the southwest most corner of Melrose AFR Langman (2004) depicts the Chinle as outcropping (**Figure 4**).

Typically, the erosional surface of the upper unit of the Chinle Formation forms an uneven contact with the Ogallala Formation and in many places is marked with gravel, cobble, or boulder deposits. The Tertiary aggradational stream deposits filled the valleys, uplands, and fluvial channels of the eroded Triassic deposits (Gustavson, 1996). Coarser materials were deposited in the channels and valleys with finer material between channels. The middle sections

of the Ogallala are characterized by unconsolidated fluvial sands, silts, and clays in a fining-upwards sequence, with the upper portion consisting of eolian sands and silts deposited over the fluvial sediments and upland areas separating paleovalleys (Hart, 1985). The unconformity and variable deposition between the Chinle and Ogallala formations and within the Southern High Plains Aquifer have resulted in vertical and horizontal changes in the unit's porosity and permeability and produced a discontinuous aquifer within the Ogallala Formation (Hart, 1985).

Sediments encountered during drilling at Melrose AFR were predominately silts and very fine sand. Gravel, cobble, and boulder deposits normally associated with the base of the Ogallala formation and a fining up sequence above were not commonly identified during drilling activities at Melrose AFR. This is likely due to the majority of the monitoring wells at Melrose AFR not being drilled to the base of the Ogallala Formation, where gravel deposits are commonly found. Gravel was identified at the base of the Ogallala Formation during installation of MWQ-2 (Langman, 2004). Based on total depth, regional geologic information, etc., wells MWQ-19, MWQ-20, and MWQ-22 appear to also be installed in the Chinle Formation, although no boring logs, well construction reports, or definitive details have been located to date. The silts and very fine sand encountered during drilling is likely representative of the eolian sequence of the Ogallala Formation.

Except where strongly cemented by calcium carbonate (caliche), the near-surface sediments of the Ogallala Formation are loose and friable. Sediments encountered during drilling at Melrose AFR were predominantly silts and very loose sands and are most likely representative of the eolian sequence of the Ogallala Formation. Sediments below approximately 50 feet bls become increasingly indurated with depth, resulting in slow drilling rates and poor sample recovery. Based on regional descriptions of the Ogallala (Hart, 1985; Gustavson, 1996) and more recent drilling by the USGS (Langman, 2004) the high induration appears to have been misinterpreted by others as sandstone, siltstone, and claystone in areas of Melrose AFR (Foster Wheeler, 1996; Foster Wheeler, 2003).

Authigenic and allogenic clays are found as trace to abundant matrix minerals in the Ogallala (Lee Wan and Associates, Inc., 1990). As reported by Lee Wan and Associates, five zones have

been distinguished within the Ogallala Formation of east-central New Mexico on the basis of clay minerals. The clay zones are characterized by moderate to high CEC values. The Ogallala Formation as a whole has a relatively high CEC value, which should inhibit the migration of metals in ionic form.

Caliche is a major feature of the Ogallala Formation, occurring in nearly continuous to discontinuous layers throughout. The uppermost caliche, termed the "climax caliche," crops out around playas and the bounding escarpments of the Ogallala Formation, and is locally termed "caprock." It is typically three to five feet thick. At Melrose AFR, this caprock forms a resistant layer on top of the Mesa in the southwestern corner of the range. Caliches that occur lower in the Ogallala Formation are platy and harder. Caliche is likely to either be thin or absent below playas. A particularly thick layer of caliche occurs between approximately 45 and 55 feet bls at Melrose AFR.

1.2.2 Hydrogeology

Melrose AFR is located near the western margin of the Southern High Plains Aquifer of which the Ogallala Formation is the primary water bearing unit. The Southern High Plains Aquifer forms the primary aquifer for potable, livestock, and irrigation water in the vicinity of Melrose AFR and throughout the eastern New Mexico region. In addition, there are several localized shallow water-bearing zones across the region used for irrigation purposes. No deeper aquifers are known to be in use in the vicinity of Melrose AFR. However, groundwater of poorer quality does occur in the Chinle Formation, which underlies the Ogallala Formation. Regional well yields from the Southern High Plains Aquifer vary from less than one gallon per minute (gpm) in thin silts and sands to more than 1,600 gpm in thick sands and gravels (Lee Wan and Associates, Inc., 1990). Within New Mexico, groundwater in the Southern High Plains Aquifer generally flows eastward (Hart, 1985), which is considered the overall direction of regional flow in the unconfined aquifer.

The Southern High Plains Aquifer was mapped by Hart as unsaturated or saturated only in isolated channels in the area occupied by the southern and western portions of Melrose AFR and as saturated in the northern portion (Hart, 1985). The Range complex at Melrose AFR has

historically utilized two wells for supply purposes, Well #11 & Well #13 (**Figure 2 & Figure 3**). Well #11 was historically utilized for fire-control, maintenance, and potable supply. The well is not currently utilized for potable supply due to elevated levels of perchlorate. The reported concentrations are at similar concentrations to the majority of the monitoring wells at Melrose AFR (two to three micrograms per liter (µg/L)). Well #11 is completed at a depth of 202 feet bls, with perforated casing from 139 to 197 feet bls. It produced 14 gpm at 35 pounds per square inch (psi) during a pump test in 1985 (William Matotan and Associates Inc., 1985). Static water levels have varied over the years in this well, ranging from 138 feet bls in 1978 (William Matotan and Associates Inc., 1985) to 96 feet bls in summer 1995 (Foster Wheeler, 1996). The supply well is located within approximately one mile of all the monitoring wells installed during the Phase I RFI (Foster Wheeler, 1996), but its terminus is approximately 20 feet deeper. Its high production rate and higher static water elevation as compared to other monitoring wells at the investigation sites indicates it was completed in a more permeable portion of the aquifer or perhaps an isolated palaeochannel that has been infilled with coarse gravels.

Well #13, is a high yield source (approximately 150 gpm), but is located in an area susceptible to munitions damage and has shown elevated levels of arsenic. It is not currently connected to the water system (Cannon, 2011). TRINITY was not able to locate well construction details for this well.

The groundwater hydrology and water quality of the Southern High Plains Aquifer at Melrose AFR was also further characterized by the USGS, in cooperation with the US Air Force, based on data collected in 2002 and 2003 and discussed in *Ground-water hydrology and water quality of the Southern High Plains aquifer, Melrose Air Force Range, Cannon Air Force Base, Curry and Roosevelt Counties, New Mexico, 2002-03: U.S. Geological Survey Scientific Investigations Report 2004-5158* (Langman, 2004). A 29-well monitoring network that included wells in the impact area and leased lands of Melrose AFR was investigated. Water level measurements and water quality data from the Southern High Plains Aquifer of the Ogallala Formation (28 wells) and deeper, confined aquifer of the Chinle Formation (one well) were analyzed. Information from previous investigations, including water level and water quality data collected statewide and dating from 1962, and results from the Phase I RFI (Foster Wheeler, 1996) and RFI

Addendum (Foster Wheeler, 2003) were evaluated as part of the 2004 USGS study.

USGS monitoring data show that water levels in the Southern High Plains Aquifer at Melrose AFR declined between 1962 and 2003. At 13 wells monitored since 1962, water levels declined between one foot and 18 feet during varying periods of record. In wells installed above a localized confining unit (caliche), as part of the Phase I RFI, appear to never have contained groundwater. Previous reports have indicated that these shallow wells have become dry due to declining water table (URS, 2009; Tidewater, Inc., 2010). However, during the Phase I RFI, minimal water was measured in the silt trap of several wells but never appeared to rise above the bottom of the screen. Recent inspections of these wells by TRINITY appear to indicate moist silt has accumulated in the silt traps, likely the result of condensation in the well. These wells appear to never have contained groundwater.

Using 1978 data, the regional groundwater flow direction in the Southern High Plains Aquifer of the Ogallala Formation in the Melrose AFR is to the northeast with a hydraulic gradient of about 0.013 feet per foot (ft/ft), and inferred that the depth to groundwater ranged from 40 to 120 feet bls from southwest to northeast across the active portion of the range (Hart, 1985). Based on data from limited aquifer testing during the Phase I RFI, hydraulic conductivities in the Southern High Plains Aquifer of the Ogallala Formation at Melrose AFR ranged from 0.001 to 0.073 feet per day and hydraulic gradients were between 0.007 and 0.014 ft/ft. Assuming an effective porosity of 25 percent, linear flow velocities at Melrose AFR appear to range from 0.01 to less than 5 feet per year (ft/yr) (Foster Wheeler, 1996). Depths to groundwater measured during the Phase I RFI (Foster Wheeler, 1996) varied from an average of 45 feet bls at SWMU 115 in the central part of Melrose AFR to average depths ranging from 112.5 feet to more than 182 feet at all other sites. The median groundwater surface and flow direction within the regional aquifer based on depth to water measurements in 2002 to 2003 is depicted on **Figure 5** (Langman, 2004).

Recharge to the Southern High Plains Aquifer is primarily through precipitation. The recharge rate has been estimated to be very low (0.5 to 0.8 inch/year) and is much lower than the discharge rate (Kearney, 1987). Because of the high evapotranspiration rate and low precipitation, recharge can only occur during cool months, when precipitation my exceed

evapotranspiration, or during heavy rainfall events in which the infiltration capacity of the soil is exceeded. When the infiltration capacity of the soil is exceeded, runoff flows to playas. In this instance, the presence of the water in the playas may allow deep percolation to the aquifer. The fact that percolation has occurred is indicated by the presence of clay deposits in playas and the likelihood that caliche is thin or absent directly below the playas. Caliche is soluble in acidic rainwater and over time the solution forms percolation pathways through sediments. Discharge from the Southern High Plains Aquifer occurs through well pumping and springs located along the eroded margins. No discharging springs are known to occur on or near Melrose AFR.

As previously discussed, limited to no well construction details, boring logs, well completion reports, etc. are available for the majority of the wells at Melrose AFR. Therefore, as has been pointed out by NMED, it is not possible to confirm that a well is screened entirely in the Ogallala Formation of the Southern High Plains Aquifer. Based on measured total depths (where available), water quality, and discussions by others (Langman, 2004) it appears that all but four wells are installed in the Ogallala Formation. However, with the exception of MWQ-2 for which construction details are available this has not been entirely confirmed. Water level contours for the unconfined Southern High Plains Aquifer indicate groundwater flows predominantly to the northeast from the Mesa to the Portales Valley (**Figure 5**). The flow direction changes in the Portales Valley, indicating two flow systems are present, one local, and one regional. In the local flow system, groundwater in the southwestern part of Melrose AFR flows northeast, while regional flow is to the east to southeast across the northern part of Melrose AFR. It appears that the direction of groundwater flow reflects the contact between the Ogallala and Chinle formations, which determines groundwater gradient and saturated thickness of the Southern High Plains Aquifer. The local flow system gradient is about 1.3 percent, and the regional flow system gradient is about 0.1 percent. The saturated thickness of the aquifer increases as the local and regional flow systems merge.

Regional water quality in the Southern High Plains Aquifer is generally good, with total dissolved solids (TDS) ranging from 250 to 500 milligrams per liter (mg/L) (Gutentag, 1984) and fluorides ranging from 2.2 to 2.7 mg/L (William Matotan and Associates Inc., 1985). Water quality data for the Melrose AFR supply well (Well #11, screened in the Ogallala Formation)

provided by Cannon AFB in September 1995 indicated dissolved solids at 555 mg/L, filterable residues at 461 mg/L, and fluoride at 2.1 mg/L.

Groundwater in the Chinle is of poorer quality than the Ogallala Aquifer and is generally characterized by high concentrations of TDS (<1,000 to 10,000 mg/L) and sodium (in some locales the sodium concentrations are high enough to make the groundwater unusable for potable, irrigation, or livestock supply purposes). Uranium commonly occurs throughout the Dockum Group of which the Chinle Formation is a member and is the source for commonly elevated radium-226 and radium-228 levels in the groundwater (Bradley and Sanjeev, 2003). As previously discussed, limited to no well construction details are available; however, based on measured total depths (where available), water quality, and discussions by others (Langman, 2004) it appears that four monitoring wells at Melrose AFR are installed in the Chinle Formation and include MWQ-2, MWQ-19, MWQ-20, and MWQ-22.

According to the USGS, results of water quality analysis for samples collected in 1995, 2000, and 2002-2003 indicate three areas or sources of different water quality types at Melrose AFR: (1) local flow system near the Mesa and ephemeral channels, (2) local flow system in the impact area, and (3) regional flow in the Portales Valley (Langman, 2004). Groundwater quality near the Mesa was similar to that of the regional flow system and to water from the southern part of Melrose AFR. Ion concentrations in groundwater from the center of the impact area were similar to groundwater from the underlying Chinle Formation, indicating likely connection with the deeper water-producing zone. Results of monitoring in 2004 showed that higher concentrations of dissolved solids and metals occur in the impact area; thereby confirming that groundwater in the impact area is different from other groundwater at Melrose AFR (Langman, 2004). No pesticides, explosives, volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), or organic halogens were found in the groundwater samples from the 2002-2003 events (Langman, 2004). Perchlorate was detected at estimated concentrations in wells MWQ-14 (2.6 μg/L) and MWQ-15 (20 μg/L). However, Langman (2004) attributed the perchlorate results to analytical method interference due to elevated chloride concentrations in these samples.

Groundwater age, determined during the USGS study, indicates groundwater is less than 55 years old across the range, with younger groundwater occurring near the Mesa and ephemeral drainages (less than 25 years) and older water toward the Portales Valley (25 to 55 years) (Langman, 2004). The Ogallala Formation is the primary source of water for domestic, municipal and irrigation uses in this region of New Mexico.

1.2.3 Topography

Melrose AFR is located in the Southern High Plains physiographic region and lies atop a large plateau known as the Llano Estacado (Hawley, 1976). The Llano Estacado is a nearly flat plain that slopes gently (typically 10 to 15 feet per mile) to the east and southeast from eastern New Mexico into western Texas. In eastern New Mexico, the Llano exceeds 4,000 feet above mean sea level (amsl), and elevations in the vicinity of Melrose AFR range from 4,200 to 4,650 feet amsl **Figure 6**. Streams in the region are ephemeral and the regional drainage pattern is poorly developed. The closest named drainages to Melrose AFR are Chapman Draw, approximately two miles west of Melrose AFR, and Cañada del Tule, about two miles southeast of the southeastern corner of Melrose AFR. Chapman Draw drains to the north, and Cañada del Tule drains to the east. The surface topography of Melrose AFR slopes to the northeast and overland flow and ephemeral drainage from the area of the sites is toward the northeast and not toward either named drainage.

The most prominent geomorphic features in the vicinity of Melrose AFR are two spurs of an escarpment known as the Mesa, which rise about 200 feet above the average elevation of the surrounding surface. The northern spur, referred to as the West Mesa, which runs near the western side of the active impact area, ends in a small butte near the center and overlooks much of the facility. Various observation and communication and control facilities associated with operations at Melrose AFR are located on the butte. The eastward-trending southern spur, which bounds the southern side of the active impact area, is referred to as the South Mesa.

Melrose AFR topography (excluding the Mesa) is open and mostly flat, gently sloping to the northeast. The Mesa dominates the southwest part of Melrose AFR. It is a topographic high and is part of the Western Caprock Escarpment that defines the western boundary of the Southern

High Plains aquifer. The Mesa has a plateau area of about 7,775 acres ranging in altitude from 4,600 to 4,700 feet amsl and forms the surface basin boundary between the Pecos River Basin to the west and the Portales Valley to the east. The Impact Area gently slopes from southwest to northeast, away from the Mesa.

1.2.4 Soils

According to the soil survey of Curry and Roosevelt County (USDA, 2010), soil types in the Melrose AFR area include loams, fine sandy loams, and loamy fine sands of the Amarillo-Clovis association and calcareous soils of the Potter-Mansker association. These soils would be classified as fine sandy silt (ML), silty fine sand (SM), clayey sand (SC), and clayey sand to silty, fine sandy clay (SC-CL) under the Unified Soil Classification System, and as aridisols (calciorthids) under the US Department of Agriculture-Soil Conservation Service Comprehensive Soil Classification System.

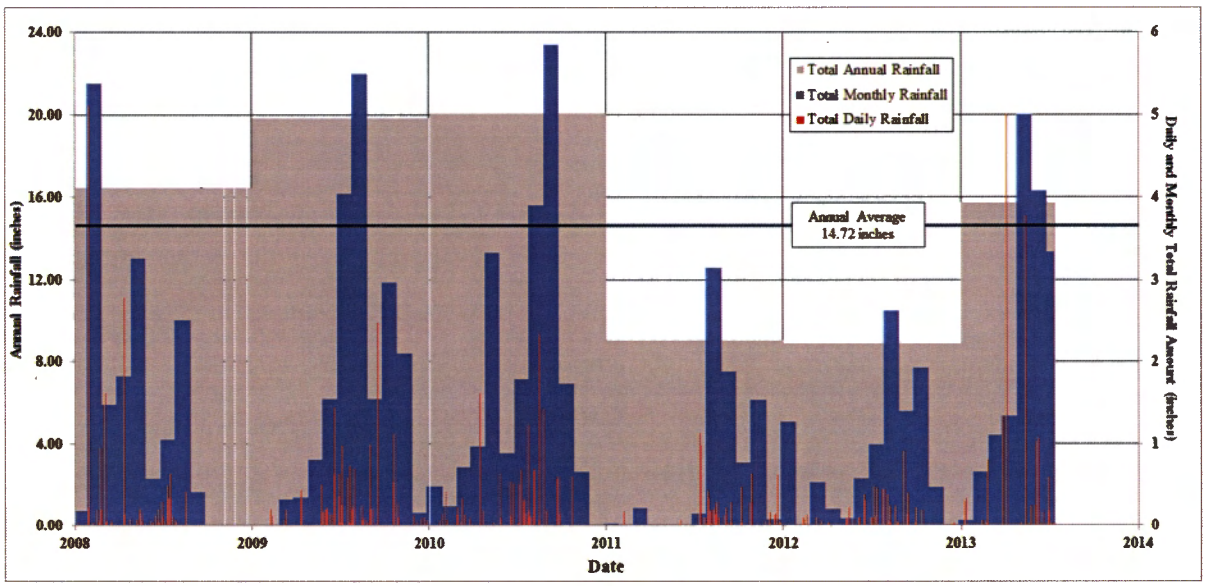
1.2.5 Surface Water Drainage Systems

Relict sand dunes and minor playas are located to the north of Melrose AFR, along the southern side of the US Highway 84, and larger playas with surface areas greater than 1/3 square mile are present one to two miles north of Melrose AFR. During periods of rainfall, the playas collect surface runoff to form ephemeral playa lakes.

An arroyo drainage rises in the southwest corner of Melrose AFR, at the intersection of the West and South mesas, and extends about four miles to the northeast across the active impact area before its surface expression fades out. Other than the arroyo, no streams or integrated drainage pattern exists on or near Melrose AFR. An impoundment formed by an earthen dam about a mile upstream of the drainage's terminus intermittently stores surface water during periods when precipitation is sufficient to generate flow. During most of the year both the arroyo and impoundment are dry. No other surface water bodies are located within Melrose AFR except minor ephemeral channels including the Chapman Draw and the Cañada del Tule, which originate at the Mesa.

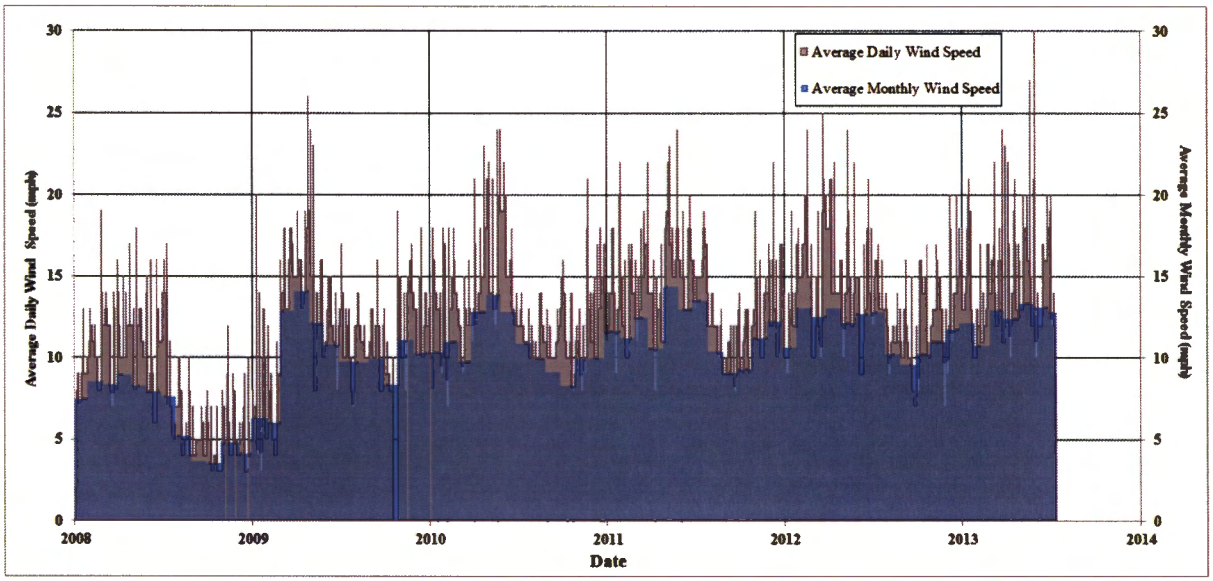
1.2.6 Climate

The climate of the east-central New Mexico area is tropical semiarid. Based on data collected from 1914 to 2007 for the village of Melrose, the average annual minimum and maximum temperatures are 42.3 and 72.8 degrees Fahrenheit (°F); the maximum temperatures and precipitation occur during the summer months. The Melrose area is characterized by highly variable precipitation patterns; the average monthly precipitation ranges from 0.42 inches in January to 2.91 inches in July. The average annual precipitation is 14.72 inches, and most of the precipitation is lost to evaporation. Annual pan evaporation at a weather station in Clovis, New Mexico, is 86.68 inches; evaporation is greatest between May and August (Western Regional Climate Center). In the chart below, recent local rainfall (daily and monthly) is plotted for Melrose AFR. As is evident from the chart, the site vicinity receives the majority of annual rainfall during the summer months. The total annual rainfall for 2011 and 2012 was 9.05 and 8.89 inches, respectively. Rainfall in 2011 and 2012 is below the annual average. The area is characterized by highly variable precipitation patterns, the apparent greater than normal rainfall in 2010 (20.06 inches) and the lower than normal in 2011 and 2012 may not be altogether atypical.



Prevailing winds are from the west with an average speed of 10 miles per hour (mph). Windblown dust is generated frequently in this region of the country because the winds are often

gusty and the climate is semiarid. The Texas Panhandle/eastern New Mexico area is considered to have the highest dust particulate counts in the continental United States; occasionally, this windblown dust is of sufficient quantity to restrict visibility. Most of the seasonal dust storms occur in March and April, when the average daily wind speed commonly exceeds 20 to 20 mph and the average monthly wind speed approaches 15 mph (Weather Undergound, 2013).



1.3 MONITORING PLAN

1.3.1 Semiannual – SWMU Groundwater Quality Network Monitoring Requirements

Based on the previously approved Work Plan (Tidewater, Inc., 2010) and the *Ground Water Monitoring Project Work Plan* (Trinity Analysis & Development Corp., 2011) the current groundwater monitoring plan provides for semiannual testing at ten wells associated with the Semiannual SWMU Groundwater Quality Network. As previously discussed, a new background monitoring well (MWQ-24), was installed in August 2013. Details pertaining to installation and sampling will be submitted under separate cover. The accompanying tables summarize current testing requirements.

Semiannual - SWMU Groundwater Quality Network

Analyte	Field Parameters [1]	VOCs [2]	Explosives [3]	Metals [4] (Total & Diss.)	Chromium (VI)	Cyanide	Mercury	Nitrite, Nitrate	Chloride, Sulfate	Perchlorate	Alkalinity	TDS
Method	NA	8260B	8330	6010C	7196A	9012A	7470A	300.0	300.0	6860	2320B	2540C
M114MW001	x	x	x	x	x	x	x	x	x	x	x	x
M114MW002	x	x	x	x	x	x	x	x	x	x	x	x
M114MW003	x	x	x	x	x	x	x	x	x	x	x	x
M114MW004	x	x	x	x	x	x	x	x	x	x	x	x
MAO1MW001	x	x	x	x	x	x	x	x	x	x	x	x
MAO1MW002	x	x	x	x	x	x	x	x	x	x	x	x
MAO1MW003	x	x	x	x	x	x	x	x	x	x	x	x
MAO1MW004	x	x	x	x	x	x	x	x	x	x	x	x
MAO2MW001D	x	x	x	x	x	x	x	x	x	x	x	x

[1] Field Parameters: Conductivity, Dissolved Oxygen, pH, Temperature, Turbidity

[2] VOCs: Target Compound List

[3] Explosives: 1,3,5-Trinitrobenzene, 1,3-Dinitrobenzene, 2,4,6-Trinitrotoluene, 2,4-Dinitrotoluene, 2,6-Dinitrotoluene, 2-Amino-4,6-dinitrotoluene, 2-Nitrotoluene, 3-Nitrotoluene, 4-Amino-2,6-dinitrotoluene, 4-Nitrotoluene, HMX, Nitrobenzene, RDX, Tetryl

[4] Metals: Target Analyte List

1.3.2 Annual Groundwater Quality Network Monitoring Requirements

Based on the *Approval Annual Ground Water Monitoring Report December 2011, Melrose Air Force Range, Roosevelt and Curry Counties, New Mexico* (NMED, 2013) the current groundwater monitoring plan provides for annual testing at seven wells associated with the Annual Groundwater Quality Network. The accompanying tables summarize testing requirements.

Annual - Groundwater Quality Network

Analyte	Field Parameters	Metals (Total & Diss.)	Chromium (VI)	Cyanide	Nitrite, Nitrate	Chloride, Sulfate	Perchlorate	Alkalinity	TDS
Method	NA	6010C	7196	9012A	353.2	300.0	314.0	2320B	2540C
MWQ-2	x	x	x	x	x	x	x	x	x
MWQ-14	x	x	x	x	x	x	x	x	x
MWQ-18	x	x	x	x	x	x	x	x	x
MWQ-19	x	x	x	x	x	x	x	x	x
MWQ-20	x	x	x	x	x	x	x	x	x
MWQ-21	x	x	x	x	x	x	x	x	x
MWQ-22	x	x	x	x	x	x	x	x	x

[1] Field Parameters: Conductivity, Dissolved Oxygen, pH, Temperature, Turbidity

[2] Metals: Target Analyte List

1.3.3 Data Summary

Although this report includes readily available historical water quality data collected since January 2004, the focus of this report is on data collected in the most recent one-year reporting period (2012). The table below summarizes the known water quality testing events conducted at Melrose AFR and presented in this report.

Summary of Water Quality Test Events

Sampling Event			USGS January 2004 [1]	USGS July 2004 [2]	USGS July 2005 [1]	USGS June 2007 [2]	Initial Baseline Ground Water Monitoring [3,4]	2010 Spring Semiannual & Annual Sampling Event [4,5]	2010 Fall Semiannual Sampling Event [5]	2011 Spring Semiannual & Annual Sampling Event [4,5]	2011 Fall Semiannual Sampling Event [5]	2012 Fall Semiannual Sampling Event [5]
Sample Dates		Start	1/12/2004	7/19/2004	7/18/2005	7/18/2007	1/20/2009	1/26/2010	10/25/2010	5/3/2011	9/27/2011	11/2/2012
		End	1/15/2004	7/21/2004	7/20/2005	7/22/2007	2/3/2009	3/4/2010	10/29/2010	5/18/2011	10/3/2011	11/8/2012
Semiannual - SWMU Ground Water	SWMU 114	M114MW001	—	—	—	—	x	x	x	x	x	x
		M114MW002	—	—	—	—	x	x	x	x	x	x
		M114MW003	x	x	x	x	x	x	x	x	x	x
		M114MW004	—	—	—	—	x	x	x	x	x	x
	SWMU 130	MAO1MW001	—	—	—	—	x	x	x	x	x	x
		MAO1MW002	—	—	—	—	x	x	x	x	x	x
		MAO1MW003	x	x	—	—	x	x	x	x	x	x
		MAO1MW004	—	—	—	—	x	x	x	x	x	x
	SWMU 131	MAO2MW001D	x	x	x	x	x	x	x	x	x	x
Annual - Ground Water Quality Well	MWQ-2		x	x	x	x	x	x	—	x	—	—
	MWQ-14		x	x	x	x	x	x	—	x	—	—
	MWQ-18		—	—	x	x	x	x	—	x	—	—
	MWQ-19		—	—	—	—	x	x	—	x	—	—
	MWQ-20		—	—	x	x	x	x	—	x	—	—
	MWQ-21		—	—	x	x	x	x	—	x	—	—
	MWQ-22		—	—	x	x	x	x	—	x	—	—

x = sampled; --- = not sampled

[1] Filtered ground-water samples were analyzed for explosives, metals, nitrate plus nitrite, ammonia as nitrogen, phosphorus, anions (bromide, chloride, fluoride, and sulfate), sulfide, organic carbon, alkalinity, dissolved solids, and perchlorate.

[2] Filtered ground-water samples were analyzed for volatile organic compounds, semi-volatile organic compounds, organochlorine pesticides, organophosphorus pesticides, metals, anions (bromide, chloride, fluoride, and sulfate), alkalinity, dissolved solids, organic carbon, phosphorus, sulfide, ammonia, nitrate plus nitrite, and perchlorate.

[3] 2009 Semiannual samples were collected and analyzed for VOCs, SVOCs, organochlorine pesticides, metals, hexavalent chromium, perchlorate, bromide, chloride, fluoride, sulfate, explosives, TOC, phosphate, and ammonia.

[4] 2010-2011 Annual samples were collected and analyzed for metals, TDS, hexavalent chromium, alkalinity, TOC, phosphate, ammonia, and nitrate/nitrite.

[5] 2010-2012 Semiannual samples were collected and analyzed for VOCs, explosives, metals, chloride, sulfate, nitrate, nitrite, total dissolved solids, alkalinity, cyanide, perchlorate, and hexavalent chromium.

2.0 SCOPE OF SERVICES

2.1 SUMMARY OF FIELD ACTIVITIES

The Annual Groundwater Monitoring Report focuses on data collected during the most recent one-year reporting period (2012). As previously mentioned, the 2012 spring sampling event was not conducted during the 2012 reporting period. The 2012 fall sampling event, which included sampling associated with the Semiannual SWMU Groundwater Quality Network was conducted between November 2, 2012 and November 8, 2012.

The most recent field activities were completed in general accordance with field protocols included in the approved work plan (Tidewater, Inc., 2010) and the *Ground Water Monitoring Project Work Plan* (Trinity Analysis & Development Corp., 2011). Activities during recent field sampling events included:

- inspecting the monitoring well network (Semiannual SWMU Groundwater Quality Network and the Annual Groundwater Quality Network),
- collecting groundwater levels from the entire monitoring network,
- collecting groundwater samples from the Semiannual SWMU Groundwater Quality Network

Activities associated with each task are discussed in more detail below. Semiannual sample locations are depicted on **Figure 3**, Annual sample locations are depicted on **Figure 7**, and well construction details are summarized in **Table 1**.

2.1.1 Monitoring Well Network - Groundwater Sampling

Prior to sampling, the wells were purged using low-flow sampling techniques using a Proactive SS Mega-Monsoon stainless steel submersible pump. Field parameters were monitored with an YSI 556-MPS multi-parameter water quality meter with attached flow through cell. The YSI multi-parameter water quality meter monitored dissolved oxygen (DO), temperature, pH, specific conductance, and oxidation reduction potential (ORP). Turbidity was monitored with a Hanna HI-98703 Turbidity Meter. Groundwater levels were measured prior to and during

pumping to monitor drawdown. Water levels were measured with a Geotech Water Level Meter (500 foot). The water quality meter was calibrated once per day before use. The turbidity meter was calibrated at the beginning of sampling activities, with the calibration verified each day of use, per the manufacturers' instruction. Field Methods are provided in **Appendix A** and Field Data in provided in **Appendix B.**

Gulf Coast Analytical Laboratories, Inc. (GCAL), Baton Rouge, LA was used for sample analysis during this investigation. GCAL is accredited in accordance with the National Environmental Laboratory Accreditation Conference (NELAC) (Certificate Number 01955), and the DoD Environmental Laboratory Accreditation Program (ELAP) (Certificate Number 1482). The laboratory provided coolers, sample containers (including preservatives where applicable), custody seals, and chain-of-custody (COC) documents. Analytical data validation was conducted by third party Environmental Data Professional, LLC (eDATApro), Lake Charles, LA.

In accordance with the approved work plan (Tidewater, Inc., 2010) and the *Ground Water Monitoring Project Work Plan* (Trinity Analysis & Development Corp., 2011) a quality control-split sample was collected and submitted to an alternate laboratory. The purpose of the split sample was to use the alternate laboratory to verify the accuracy of the primary laboratory. Accutest Laboratories (Accutest), Tampa, FL was used for analysis of the split sample. Accutest is accredited in accordance with the NELAC (Certificate Number E83510), and the DoD ELAP (Certificate Number L2229). The laboratory provided coolers, sample containers (including preservatives where applicable), custody seals, and COC documents.

In accordance with the approved work plan (Tidewater, Inc., 2010) and the *Ground Water Monitoring Project Work Plan* (Trinity Analysis & Development Corp., 2011), Field Duplicate samples and Equipment Blanks were collected at a 10-percent rate (i.e., one per every 10 samples collected) for all parameters. Laboratory quality control (QC) samples, including matrix spike/matrix spike duplicates (MS/MSDs), were collected at a 5-percent rate (i.e., one per every 20 samples collected) for all parameters. Trip Blanks were analyzed for VOCs and were included in each cooler shipped to the laboratory from the field. Split Samples were collected at

a 5-percent rate (i.e., one per every 20 samples collected).

Analysis of samples within the prescribed holding time is critical to ensuring that samples may be considered valid and representative of the sample matrix. Sample holding time is defined as the interval between sample collection and sample preparation/analysis. Allowable holding times for analyses employed in this investigation are included in the table below.

Appropriate Sample Containers, Preservatives, and Holding Times

Analytical Parameter	Method	Container	Preservation	Maximum Holding Time
Alkalinity	SM2320B	Plastic	Cool, ≤6 °C	14 days
Cyanide	SW 846 9012A	Plastic	Cool, ≤6 °C, NaOH to pH>12	14 days
Explosives	EPA 8330	Glass Amber	Cool, ≤6 °C	14 days
Hexavalent Chromium	SW 846 7196A	Plastic	Cool, ≤6 °C	24 hours
Metals	EPA 6010C	Plastic	HNO3 to pH<2	6 months
Nitrate + Nitrite	EPA 353.2	Plastic	Cool, ≤6 °C	48 hours
Perchlorate	EPA 314.0	Plastic	Cool, ≤6 °C	28 days
Chloride, Sulfate	EPA 300.0	Plastic	Cool, ≤6 °C	28 days
Total Dissolved Solids	SM2540C	Plastic	Cool, ≤6 °C	7 days
VOCs	8260B	G, FP-lined septum	Cool, ≤6 °C, HCl to pH 2	14 days

Samples intended for chemical analyses were packed on wet ice in sealed coolers for transport to the laboratory. Placing the samples on wet ice ensures a temperature of 4° ±2°Celsius (°C) upon receipt by the contract laboratory. Samples were shipped by overnight commercial courier to the designated laboratory. Proper shipping and handling protocol included: filling of containers with an appropriate amount of sample medium, ensuring that container lids were tight, ensuring that labels were completed, wrapping containers in bubble wrap for protection, double bagging of ice, and inclusion of appropriate quality assurance/quality control (QA/QC) blanks. COCs accompanied samples in a waterproof plastic bag taped to the inside of the cooler lid. Copies of the COCs are provided in **Appendix B**.

Decontamination procedures were in general accordance with the *Ground Water Monitoring Project Work Plan* (Trinity Analysis & Development Corp., 2011). Sufficient quantity of clean equipment was transported to the field to last the entire day. Disposable equipment was used when possible to eliminate the possibility of cross contamination. Additionally, new sample containers for laboratory analyses were provided by the laboratory for each sample collected.

2.1.1.1 2012 Semiannual Fall - SWMU Groundwater Quality Network

Groundwater samples were collected from the following wells at the dates and times specified:

Sampling Schedule

SWMU 114	M114MW001	11/06/2012 13:30
	M114MW002	11/07/2012 12:06
	M114MW003	11/07/2012 14:01
	M114MW004	11/06/2012 10:41
SWMU 130	MAO1MW001	11/02/2012 11:26
	MAO1MW002	11/06/2012 09:00
	MAO1MW003	11/08/2012 10:15
	MAO1MW004	11/07/2012 10:30
SWMU 131	MAO2MW001D	11/08/2012 13:06

The monitoring wells were purged and sampled using low-flow sampling techniques using a Proactive SS Mega-Monsoon stainless steel submersible pump. Sample locations are depicted on **Figures 3** and **Figure 7** and well construction summary details are provided in **Table 1**. After purging was completed as demonstrated by stabilized water quality parameters, samples were collected and analyzed for VOCs, explosives, total and dissolved metals, chloride, sulfate, nitrate, nitrite, TDS, alkalinity, cyanide, perchlorate, and hexavalent chromium. A summary of analytical and field data from the most recent sampling event is provided in **Table 2** through **Table 6ai**.

Groundwater samples were placed in appropriately-labeled sample containers, packaged in coolers with wet ice to attain a temperature of 4 °C, and shipped to GCAL in Baton Rouge, Louisiana via Federal Express.

QC samples collected in the field included:

- Field Duplicates: MA02MW001D
- MS/MSD: M114MW003
- Split Sample: M114MW002
- Equipment Blank: EB-01
- Trip Blanks: TB-1, TB-03, TB-04, TB-05 and TB-06 (TB-05 was submitted to Accutest as part of the Split Sample)

2.1.1.2 2012 Annual Spring – Groundwater Quality Network

At the direction of Cannon AFB, the annual groundwater quality network was not sampled during the 2012 reporting period.

2.1.2 Investigation Derived Waste

Investigative-derived waste (IDW) from the Fall 2012 sampling event was temporarily containerized in 5-gallon buckets with lids secured in the bed of the pickup truck. At the completion of daily field activities, the IDW was discharged into a 250-gallon carboy located at a designated area for IDW storage. The IDW will be disposed of in accordance with the approved work plan (Tidewater, Inc., 2010) and the *Ground Water Monitoring Project Work Plan* (Trinity Analysis & Development Corp., 2011).

2.1.3 Groundwater Elevation Measurements

Water levels were measured from the surveyed elevation reference points on the tops of the polyvinyl chloride (PVC) casings or, in the case of metal or concrete well casings, from the highest point of the casing using a Geotech Water Level Meter (500 foot). Measurements were taken to the nearest hundredth of a foot, and were documented in the log book. The probes were decontaminated before use, between wells, and at the conclusion of measurement activities. Recent and historical groundwater level measurement information is presented in **Table 2**.

Water levels from the Fall 2012 sampling event were collected prior to the start of groundwater sample collection at all accessible monitoring wells prior to well purging and sampling between October 31 and November 8, 2012.

2.1.4 Monitoring Network Well Inspection/Maintenance

Well inspections sought to verify presence of: identification tag, total well depth, well type completion, presence, and condition of bollards, protective casings, well pads, type of cap, etc. Well conditions for the Semiannual SWMU Groundwater Quality Network and Annual Groundwater Quality Network are summarized in **Table 1**.

2.1.5 Geophysical Logging/Downhole Camera Activities

Due to insufficient funding in 2012, geophysical logging and downhole camera invstigations were not conducted. All 16 existing monitoring wells, in addition to the new background well MWQ-24, will be investigated during the 2013 Fall sampling event. The geophysical logging suite will consist of natural gamma and induction resistivity logs. The data will be submitted under separate cover.

3.0 REGULATORY CRITERIA

The *2012 NMED Risk Assessment Guidance for Site Investigations and Remediation* (NMED, 2012) document was used to determine whether potential site-related contaminants exceed groundwater screening guidelines. The groundwater screening guidelines are included on all appropriate tables. Exceedances of groundwater screening guidelines are highlighted in red.

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4.0 GROUNDWATER MONITORING RESULTS

4.1 Field Water Quality Measurements

As requested by NMED, this report is written and organized in general accordance with the NMED *Position Paper: General Reporting Requirements for Routine Groundwater Monitoring Activities at RCRA Sites,* (NMED, 2003). As such, limited to no discussion is provided below as tables "*summarizing ... field water quality measurements can be substituted for this section.*" Applicable data is included in **Table 3**.

4.2 Groundwater Elevation, Gradient and Flow Velocity

A comprehensive round of water levels was collected from the Semiannual SWMU Groundwater Monitoring Network and Annual Groundwater Monitoring Network by TRINITY between October 31, 2012 and November 8, 2012. Recent and historic groundwater elevations and trends are summarized in **Table 2**. Two groundwater flow maps are presented, in chronological order, as part of this report:

1. **Figure 5** - Median groundwater flow direction based on data collected and analyzed by the USGS between 2002 and 2003 (Langman, 2004);
2. **Figure 8** - Groundwater flow direction based on data collected by TRINITY between October 31, 2012 and November 8, 2012.

Water-level contours for the Southern High Plains Aquifer indicate two groundwater flow systems – local and regional (**Figures 5** and **8**). Locally, in southwest portions of Melrose AFR, groundwater flows northeast from the Mesa to the Portales Valley. Groundwater flow is southeast and east in the Portales Valley. This corresponds with the regional general flow direction for the Melrose AFR vicinity (Hart, 1985). A direct connection between the structural surface of the Chinle Formation confining unit and the direction of groundwater flow is evident. Based on data from limited aquifer testing during the Phase I RFI, hydraulic conductivities in the Southern High Plains Aquifer of the Ogallala Formation at Melrose AFR ranged from 0.001 to 0.073 feet per day. The hydraulic conductivities for wells in the regional flow system have not been determined. The groundwater gradient and flow velocities are summarized in the table

below.

	gradient (ft/ft)		velocity (ft/y) [2]		
	local	regional	local		regional
			min	max	
1/1/2003 [1]	0.011	0.001	0.016	1.17	---
1/16/2009	0.015	0.001	0.022	1.60	---
10/25/2010	0.011	0.002	0.016	1.17	---
5/3/2011	0.014	0.002	0.020	1.49	---
9/26/2011	0.014	0.002	0.020	1.49	---
11/8/2012	0.009	0.002	0.013	0.96	---

[1] The January 2003 groundwater flow data is the "median altitude of water table" between 2002 and 2003 (Langman, 2004).
[2] Darcy's formula: V = KI/Ø where V = groundwater velocity in ft/d; K = aquifer hydraulic conductivity in ft/d; I = groundwater gradient in ft/ft; Ø = effective porosity. [3] The effective porosity is estimated to be 25 percent (Fetter, 1994).

It is not possible to calculate the flow velocity for groundwater in the vicinity of the Portales Valley (regional flow system) due to a lack of data such as hydraulic conductivities.

4.3 Well Condition Inspection/Maintenance

The condition of the wells in the network, based on the most current inspection, is summarized in **Table 1**. In general, the condition of the Semiannual SWMU Groundwater Quality Network and Annual Groundwater Quality Network is adequate for groundwater quality sampling activities.

5.0 GROUNDWATER CHEMICAL ANALYTICAL DATA

Although this report utilizes available historical data (groundwater elevations, hydraulic conductivities, water quality data, etc.) gathered since 1994, the focus of this report is on data collected in the most recent one-year reporting period (2012). Much of the information presented in this report is in the form of tables, charts, and diagrams. Limited discussion accompanies each section since most illustrations do not require detailed explanation. A summary of analytical and field data from the most recent sampling event are provided in **Table 2** through **6ai** and includes parameter summary tables and trend plots. Chemical analytical reports (laboratory analytical data) are included in **Appendix C**. In accordance with the *Ground Water Monitoring Project Work Plan* (Trinity Analysis & Development Corp., 2011) split samples were collected for submittal to an alternative laboratory. The analytical data for the split samples are also included in **Appendix C**.

The presence of metals in groundwater samples collected from monitoring wells can be natural, anthropogenic in origin, or both. Metals are common, naturally occurring, ubiquitous elements in sediments such as the Ogallala Formation, and in some instances may naturally exceed applicable standards. Elevated metals in groundwater samples may be an artifact of the well installation process in that formation damage incurred during drilling may not be sufficiently repaired and/or the well may not be completely developed, which result in elevated turbidity during groundwater sampling. Additionally, and sometimes unavoidably, the targeting of less desirable strata, i.e., placing the screen intake opposite clayey sediment, can also result in the introduction of colloidal clay into samples, which may also produce high metals results. Sampling protocol can have significant effect on measured concentrations.

It is TRINITY's experience that for groundwater collected from wells installed in clastic aquifers such as this one, comparison of total and dissolved metals results is essential. Large discrepancies between total and dissolved results for groundwater collected in this type of environment suggests 'artificial' influence from the well. When similar concentrations for total and dissolved metals are reported during a single sampling event the total result is likely an accurate reflection of the metal concentration in groundwater moving through the aquifer, and would suggest that the reported concentrations are ambient in origin, waste related, or both. To

date, insufficient data has been collected to accurately determine a relationship between turbidity and elevated metals concentrations in total and dissolved groundwater samples.

Previous sampling events conducted at Melrose AFR have included dissolved (filtered) metals results. In the majority of sampling conducted prior to January 2010 only dissolved metals results have been reported. NMED has previously accepted the use of dissolved metals data at Melrose AFR to support the argument that increased turbidity may result in increased metals concentrations. Documents where data has previously been submitted and accepted include but are not limited to:

- *Phase I RCRA Facility Investigation for Melrose Air Force Range* (Foster Wheeler, 1996);
- *RCRA Facility Investigation Report Addendum for Melrose Bombing Range* (Foster Wheeler, 2003);
- *Final Report, Initial Baseline Groundwater Monitoring, Melrose Air Force Range, New Mexico* (URS, 2009).

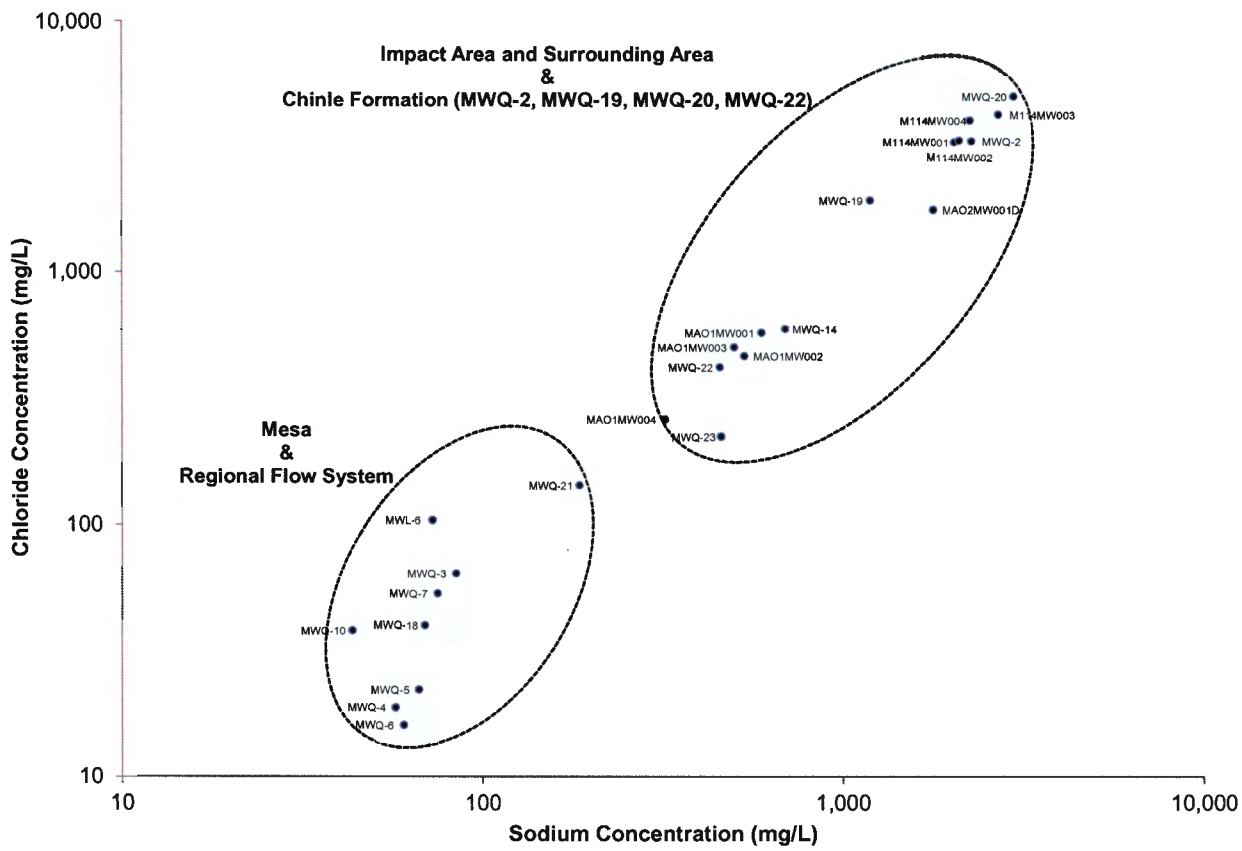
Although current direction from NMED is for the collection and use of total or non-filtered inorganic analytical results, it is TRINITY's professional opinion and is our suggestion to the United States Air Force (USAF), that they continue to collect total and dissolved analysis for the inorganic analytes until a trend can be established.

Based on data validation of the 2012 sampling event, the data were determined to be valid and achieved data completeness. Chemical Analytical Program data (Quality Assurance Summary Report and data validation reports) are provided in **Appendix D**. All analytical data for the 2012 sampling event were evaluated by eDATApro. Level III Data Validation was performed according to guidance from *USEPA: Contract Laboratory Program, National Functional Guidelines for Organic Data Review* (USEPA, 1999), *USEPA: Contract Laboratory Program, National Functional Guidelines for Inorganic Data Review* (USEPA, 2004). All data was determined to be valid and achieved data completeness.

5.1 Groundwater Quality

5.1.1 Background/General Water Quality

Based on major ion chemistry, temperature, specific conductance, and TDS, etc. the USGS identified three sources of different groundwater in the immediate vicinity of the Melrose AFR: (1) local flow system near the Mesa and ephemeral channels, (2) local flow system in the impact area, and (3) regional flow in the Portales Valley (Langman, 2004). However, water from the local flow system near the Mesa and water in the regional flow system in the Portales Valley were determined to be of somewhat similar quality. Based on the USGS findings, groundwater in the vicinity of the Melrose AFR Impact Area is a different flow system and not the same quality water as the Regional Flow System. The USGS inferred that the difference in water quality is likely attributable to the upward potential/migration of groundwater from the Chinle Formation. Using the same geochemical theory and comparison technique, TRINITY averaged all sodium/chloride concentration data available from 2004 to present. The data is plotted below (log-log scale):



As demonstrated in the plot above, the data plotted very similar to that of the USGS, indicating a higher quality of water in the Mesa area and the Regional Flow System (Portales Valley) than the local flow system beneath the Impact Area. As previously discussed, a new background monitoring well (MWQ-24), was installed in August 2013 upgradient of the SWMUs adjacent to MWQ-10. Details pertaining to installation and sampling will be submitted under separate cover.

5.1.2 Semiannual SWMU Groundwater Quality Network

This report summarizes the 2012 semiannual groundwater sampling event conducted at Melrose AFR. Available historic data is summarized in **Table 4a – 4e** and **Table 6a – 6ai** and includes parameter summary tables and trend plots. Recent field and laboratory analytical data are provided in **Table 3** and **Table 5, respectively**. Discussions provided below are based on data collected during the current reporting period. As requested by NMED, this report is written and organized in general accordance with the NMED *Position Paper: General Reporting Requirements for Routine Groundwater Monitoring Activities at RCRA Sites* (NMED, 2003). As such, limited to no discussion is provided below as tables "*summarizing the groundwater and QA/QC chemical analytical data, applicable cleanup levels and modifications to the groundwater sampling program can be substituted for this section.*"

Several metals including aluminum, chromium, copper, iron, manganese, and titanium are reported at concentrations higher than historical data would suggest in multiple wells in the unfiltered samples. The concentrations do not exceed their respective Tapwater Screening Levels and in most cases are significantly less than the Tapwater Screening Level. No apparent pattern could be ascertained; the data appears anomalous and will be monitored in future sampling events.

During the Spring 2011 sampling event vanadium showed significant increases in both total and dissolved concentrations. No analytical issues concerning vanadium were identified during data validation. During the recent reporting period vanadium concentrations appear in line with historic data; with the exception of MWQ-23, which has been removed from the monitor network. The Spring 2011 data appears anomalous with regards to elevated vanadium

concentrations.

5.1.2.1 SWMU 114

Of the analyses performed, VOCs, explosives, hexavalent chromium, or cyanide were undetected or were detected at concentrations below applicable screening guidelines. A total of four parameters were detected above applicable screening guidelines during the 2012 reporting period. A summary of the exceedances of screening guidelines is provided in **Table 5**. Laboratory analytical data can be found in **Appendix C**.

Dissolved arsenic was detected in samples collected from M114MW001 at a concentration of 3.97 µg/L, exceeding the Tapwater Screening Level of 0.448 µg/L. Total thallium was also detected in M114MW001 at a concentration of 3.04 µg/L, exceeding the Tapwater Screening Level of 0.365 µg/L. Dissolved thallium concentrations detected in M114MW004 (5.18 µg/L) also exceeded the Tapwater Screening Level of 0.365 µg/L.

Perchlorate was reported present in monitoring well M114MW002 at a concentration of 28.2 µg/L, above the screening criteria of 25.6 µg/L. Historically, there have been no perchlorate exceedances in monitoring well M114MW002.

The results of a recent study of wells located throughout the High Plains indicate that perchlorate may be naturally occurring. The results of the study strongly indicate a surface source for the perchlorate concentrations, likely atmospheric deposition in arid and semiarid areas where evaporative concentrations and unsaturated transport may occur (Rajagopalan, et al., 2006). No evidence of specific activities associated with a release or discharge of perchlorate is noted at the installation, but due to Melrose AFB being an active military test range, an anthropogenic source cannot be completely precluded. The reported concentrations of perchlorate in monitoring well M114MW002 are well within the naturally occurring background range discussed in the recent study (Rajagopala, et. al., 2006).

5.1.2.2 SWMU 130

Of the analyses performed, VOCs, explosives, hexavalent chromium, perchlorate, or cyanide

were either undetected, or were detected at concentrations below applicable screening guidelines. Thallium (dissolved) was detected at a concentration of 4.91 µg/L in samples collected from MA01MW002, exceeding the Tap Water Screening Level of 0.365 µg/L. A summary of the exceedances of groundwater screening guidelines is provided in **Table 5**. Laboratory analytical data can be found in **Appendix C**.

5.1.2.3 SWMU 131

Of the analysis performed, VOCs, explosives, hexavalent chromium, perchlorate, or cyanide were either undetected or were detected at concentrations below applicable screening guidelines. There were no parameters detected above applicable groundwater screening guidelines. A summary of the results is provided in **Table 5**. Laboratory analytical data can be found in **Appendix C**.

6.0 SUMMARY

Based on the information and data collected during the 2012 Groundwater Quality sampling event, the following conclusions were reached:

- Based on TRINITYs review of the historical and recent 2012 groundwater analytical data, groundwater beneath Melrose AFR does not appear to be impacted by potential contaminants or activities associated with the SWMUs or activities associated with the Impact Area.

- All analytical data for the 2012 sampling event were evaluated by eDATApro. Level III Data Validation was performed by eDATApro according to guidance from *USEPA; Contract Laboratory Program, National Functional Guidelines for Organic Data Review* (USEPA, 1999), *USEPA; Contract Laboratory Program, National Functional Guidelines for Inorganic Data Review* (USEPA, 2004). Based on data validation of the 2012 sampling event, the data was determined to be valid and achieved data completeness.

- A background monitoring well was initially requested on October 27, 2009 when NMED provided a review of the *Initial Baseline Groundwater Monitoring, Melrose Air Force Range, New Mexico, June 2009* (URS, 2009). In that response NMED Stated:

  > *"NMED discourages included stock wells with steel casings in the Groundwater Quality Well Network, e.g., MWL-6, MWQ-4, MWQ-5, MWQ-6, MWQ-7, and MWQ-8, with the exception of MWQ-10. Although MWQ-10 has a steel casing, it is currently the only productive well located up-gradient of the impact area.*
  >
  > *The Permittee must install a replacement monitoring well up-gradient of the impact area, then discontinue sampling and analysis of MWQ-10..."*

  A new background well, MWQ-24, was installed August 2013 in accordance with *Drilling work plan for new background monitoring well (MWQ-24) at Melrose Air Force Range* (Trinity Analysis & Development Corp., 2013). As such, TRINITY proposes to remove MWQ-10 from the groundwater sampling network.

- Water-level only well MWQ-11 contains a pumps integral plumbing, and live electrical wires. Therefore, water levels are not routinely taken due to the electrical shock hazard and high likelihood of the water level tape becoming entangled in the wiring. TRINITY proposes to remove MWQ-11 from the water-level only network.

- Limited to no well construction details, boring logs, well completion reports, etc. are available for the majority of the wells at Melrose AFR. Therefore, as has been pointed out by NMED, it is not possible to confirm that a well is screened entirely in the Ogallala Formation of the Southern High Plains Aquifer. Based on measured total depths (where available), water quality, and discussions by others (Langman, 2004) it appears that all but four wells (MWQ-2, MWQ-19, MWQ-20, and MWQ-22) are installed in the Ogallala Formation. However, with the exception of MWQ-2 for which construction details are available, this has not been entirely confirmed. Gamma and resistivity logs, in addition to downhole camera work, will be conducted during the Fall 2013 sampling event. The target formation of the wells should be detectable by using the collected data along with regional lithologic information.

- Perchlorate was reported present at low concentrations in nine monitoring wells during the 2012 sampling period; only one sample was reported at a concentration slightly exceeding the screening criteria. The results of a recent study of wells located throughout the High Plains of Texas and New Mexico indicate that perchlorate may be naturally occurring and strongly indicates a surface source for the perchlorate concentrations, likely atmospheric deposition in arid and semiarid areas where evaporative concentrations and unsaturated transport may occur (Rajagopalan, et al., 2006). No apparent trend exists at this time but will be monitored over time.

- As previously discussed in the 2011 Annual Report TRINITY is proposing to implement EPA Method 6850 for perchlorate analysis at Melrose AFR.

- As previously discussed in the 2011 Annual Report TRINITY is proposing to implement EPA Method 218.6 for hexavalent chromium analysis at Melrose AFR.

- During the Fall 2012 sampling event, arsenic and thallium were analyzed using a MDL slightly higher than the screening guideline. Future testing will attempt to utilize a lower MDL. To comply with the approved work plan (Tidewater, Inc., 2010) it is necessary to analyze metals by method 6010C. Based on the *Approval Annual Ground Water Monitoring Report December 2011, Melrose Air Force Range, Roosevelt and Curry Counties, New Mexico* (NMED, 2013) alternative method EPA 6020A will be implemented for all metals analysis in the Fall 2013 sampling event.

- At the direction of Cannon AFB, TRINITY did not sample the annual groundwater quality network during the 2012 reporting.

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TABLES

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TABLE 1
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO

	Well No.	Common/Alternate Name	Location (State Plane)[1]		Top of Casing[1]	Installation Date	Well Type	Top of Screen	Screen Length	Total Well Depth	Well I.D.	Well Material	Pump	Aquifer Monitored	Status	Bollards	Bollard Condition	Protective Casing	Cap Type	Notes
			Easting (ft)	Northing (ft)	ft NAVD			ft bls	feet	ft bls	inches									
Semiannual-SWMU GW Quality Well Network	M114MW001	---	706827.67	1203539.67	4327.21	11-13-1995	MW	UNK	UNK	182.0	4.0	PVC	none	Ogallala	Active	3	Good	Steel w/locking lid	Slip Cap	---
	M114MW002	---	706680.51	1203596.93	4328.11	11-13-1995	MW	UNK	UNK	183.3	4.0	PVC	none	Ogallala	Active	3	Good	Steel w/locking lid	Slip Cap	---
	M114MW003	---	706662.3	1203400.5	4329.62	11-13-1995	MW	UNK	UNK	184.4	4.0	PVC	none	Ogallala	Active	3	Good	Steel w/locking lid	Slip Cap	---
	M114MW004	MWQ-16	706963.35	1203578.69	4324.99	11-06-1995	MW	UNK	UNK	184	4.0	PVC	none	Ogallala	Active	3	Good	Steel w/locking lid	Slip Cap	---
	MAO1MW001	---	702193.7	1205363.35	4344.68	10-17-1995	MW	UNK	UNK	162.4	4.0	PVC	none	Ogallala	Active	3	Good	Steel w/locking lid	Slip Cap	---
	MAO1MW002	---	702321.76	1205536.48	4343.58	10-18-1995	MW	UNK	UNK	157.0	4.0	PVC	none	Ogallala	Active	3	Good	Steel w/locking lid	Slip Cap	---
	MAO1MW003	MWQ-17	702047.46	1205516.57	4345.33	10-17-1995	MW	UNK	UNK	161.6	4.0	PVC	none	Ogallala	Active	3	Good	Steel w/locking lid	Slip Cap	---
	MAO1MW004	---	702257.89	1205963.87	4342.91	10-25-1995	MW	UNK	UNK	162.30	4.0	PVC	none	Ogallala	Active	3	1 Knocked Over	Steel w/locking lid	Slip Cap	---
	MAO2MW001D	MWQ-15	706656.33	1199306.69	4355.90	UNK	MW	UNK	UNK	184.5	4.0	PVC	none	Ogallala	Active	4	Good	Steel w/locking lid	Slip Cap	---
	MWQ-24		To be determined			8/15/2013	MW	42.8	20	63.12	4.0	PVC	none	Ogallala	Active	4	Good	Steel w/locking lid	Slip Cap	---
Annual GW Quality Well Network	MWQ-2	---	720370.93	1196505.43	4293.72	UNK	MW	UNK	UNK	241	2.0	PVC	none	Chinle	Active	4	Good	Steel w/ locking lid	J-Plug	---
	MWQ-14	EOD Pit	706871.58	1193064.56	4382.11	UNK	MW	UNK	UNK	124.9	2.0	PVC	UNK	Ogallala	Active	3	Good	Steel w/ locking lid	Slip Cap	
	MWQ-18	---	694417.52	1215441.23	4290.17	UNK	MW	UNK	UNK	152	2.0	PVC	none	Ogallala	Active	4	Knocked Over	Steel w/ locking lid	Slip Cap	Nested with MWQ-19
	MWQ-19	---	694417.52	1215441	4290.13	UNK	MW	UNK	UNK	230	2.0	PVC	none	Chinle	Active					Nested with MWQ-18
	MWQ-20	---	694399.63	1215417.04	4290.26	UNK	MW	UNK	UNK	299.1	2.0	PVC	none	Chinle	Active	4	Knocked Over	Steel w/ locking lid	J-Plug	---
	MWQ-21	---	720195.67	1217791.91	4209.26	UNK	MW	UNK	UNK	66.3	2.0	PVC	none	Ogallala	Active	4	Good	Steel w/ locking lid	J-Plug	Nested with MWQ-22
	MWQ-22	---	720195.9	1217791.8	4209.1	UNK	MW	UNK	UNK	154.7	2.0	PVC	none	Chinle	Active					Nested with MWQ-21
Water Level Only	MWQ-1	---	720367.74	1196501.97	4293.60	UNK	MW	UNK	UNK	136.5	2.0	PVC	none	Ogallala	Active	0	NA	Steel w/ locking lid	J-Plug	Dry
	MWQ-8	Below Golf Ball	692464.5	1197219.55	4469.71	UNK	Supply	UNK	UNK	117	4.0	Steel	none	Ogallala	Inactive	0	NA	Concrete	None	Old windmill.
	MWQ 9	Hand Dug	696653.6	1186441.0	4490.6	UNK	Supply	UNK	UNK	UNK	~4 ft	none	none	Ogallala	Inactive	0	NA	None	Cap	Eroded hand dug well.
	MWQ-11	Parker House	693783.8	1175090.6	4666.1	UNK	Supply	UNK	UNK	UNK	6.0	Steel	DSP	Ogallala	Active	0	NA	None	Bolted	---
	MWQ-12	Eroded Tank	712235.1	1172236.0	4405.8	UNK	Supply	UNK	UNK	UNK	6.0	UNK	UNK	Ogallala	UNK	0	NA	None	Slip Cap	---
	MWQ-13	Hidden Mill	736665.3	1180908.5	4280.5	UNK	Supply	UNK	UNK	UNK	6.0	UNK	UNK	Ogallala	UNK	0	NA	None	Cap	---
	MWQ-15	MAO2MW001D	MWQ-15 designation was used by USGS (2004). This is the same well identified as MA02MW001D.																	
	MWQ-16	M114MW004	MWQ-16 designation was used by USGS (2004) This is the same well identified as SWMU114MW004.																	
	MWQ-17	MAO1MW003	MWQ-17 designation was used by USGS (2004). This is the same well identified as MA01MW003.																	
	MWL-4	Firebreak Fence	715033.16	1218237.91	4220.77	UNK	Supply	UNK	UNK	59.8	4.0	Steel	none	Ogallala	Inactive	0	NA	None	none	Cattle hair & feces in well
	MWL-5	Glass Log PVC	714597.21	1224854.49	4196.32	UNK	Supply	UNK	UNK	35.0	6.0	PVC	none	Ogallala	Inactive	0	NA	None	none	PVC stickup with no protection
	MWL-6	Brackish Mill	697695.65	1212918.66	4304.8	UNK	Supply	UNK	UNK	136	6.0	Steel	none	Ogallala	Inactive	4	NA	None	Slip Cap	Old windmill; redeveloped May 2011
	MWL-7	Fence Line Dip	702121.36	1216423.71	4258.43	UNK	Supply	UNK	UNK	108.90	6.0	Steel	none	Ogallala	Inactive	0	NA	None	Steel Slip Cap	Old windmill
	MWL-8	Davis Trap Mill	697907.88	1218188.04	4262.06	UNK	Supply	UNK	UNK	114	6.0	Steel	DSP	Ogallala	Inactive	0	NA	None	Pump	Cattle hair & feces in well
	MWL-9	Northern End	701865.19	1225896.35	4241.74	UNK	Supply	UNK	UNK	49.6	6.0	Steel	none	Ogallala	Inactive	0	NA	None	none	Old windmill
	MWL-10	Three Mills	689066.6	1187189.7	4573.5	UNK	Supply	UNK	UNK	UNK	6.0	Steel	UNK	Ogallala	Inactive	0	NA	None	Jack Pump	Old windmill
	MWL-11	Luce 480 Mill	684248.9	1169768.4	4579.8	UNK	Supply	UNK	UNK	UNK	6.0	Steel	UNK	Ogallala	Inactive	0	NA	None	Jack Pump	---
	MWL-12	County Road	707038.7	1169558.1	4446.9	UNK	Supply	UNK	UNK	UNK	6.0	Steel	UNK	Ogallala	Inactive	0	NA	None	UNK	---

[1] All wells were surveyed or resurveyed by Lydick, Inc. between December 4, 2012 and January 2, 2013. Land surveying was completed using the New Mexico East State Plane North American Datum (NAD) 83 and North American Vertical Datum (NAVD) 88 (adjusted) in decimal feet. All horizontal coordinates were measured to the nearest fiftieth of a foot. All vertical coordinates were measured to the nearest tenth of a foot.

Wells in gray scale are not sampled as part of the Annual or Semiannual Ground Water Quality Network. These wells are utilized for ground water levels.

DSP = dedicated submersible pump; MW = monitoring well; NA = not applicable; UNK=unknown

TABLE 2
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO

WELL ID	TOC [3] (ft NAVD)	SCREENED INTERVAL (ft BTOC)	DEPTH TO WATER (ft BTOC)										
			1/1/2003 [1]	1/12/2004	7/19/2004	7/18/2005	6/18/2007	1/14/2009	1/26/2010	10/24/2010	5/3/2011	9/26/2011	11/8/2012
M114MW001	4,327.21	UNK	ND	ND	ND	ND	ND	150.07	150.30	150.87	151.03	151.71	151.92
M114MW002	4,328.11	UNK	ND	ND	ND	ND	ND	150.56	150.45	150.60	150.74	151.05	150.96
M114MW003	4,329.62	UNK	ND	ND	ND	ND	ND	151.70	151.60	151.95	151.77	151.99	151.82
M114MW004 (MWQ-16)	4,324.99	UNK	148.78	149.50	148.62	148.73	148.48	149.15	149.00	149.09	149.54	150.04	149.95
M117MW001	4,359.75	UNK	ND	ND	ND	ND	ND	42.71	42.65	ND	abandoned	abandoned	abandoned
M117MW002	4,357.67	UNK	ND	ND	ND	ND	ND	40.68	41.65	ND	abandoned	abandoned	abandoned
M117MW003	4,355.55	UNK	ND	ND	ND	ND	ND	42.47	42.60	ND	abandoned	abandoned	abandoned
M117MW004	4,353.88	UNK	ND	ND	ND	ND	ND	Dry	Dry	ND	abandoned	abandoned	abandoned
MAO1MW001	4,344.68	UNK	ND	ND	ND	ND	ND	143.49	143.20	143.42	142.58	142.87	142.69
MAO1MW002	4,343.58	UNK	ND	ND	ND	ND	ND	142.65	142.40	142.75	142.44	142.49	142.70
MAO1MW003 (MWQ-17)	4,345.33	UNK	144.11	144.83	ND	ND	ND	144.20	143.90	144.03	143.43	143.72	143.63
MAO1MW004	4,342.91	UNK	ND	ND	ND	ND	ND	142.92	142.85	143.13	142.78	143.11	146.40
MAO2MW001D (MWQ-15)	4,355.90	UNK	105.20	105.62	105.28	100.66	103.83	105.53	105.72	106.29	104.56	105.63	105.57
MAO2MW001S	4,355.78	UNK	ND	ND	ND	ND	ND	Dry	Dry	Dry	abandoned	abandoned	abandoned
MAO3MW001	4,350.11	UNK	ND	ND	ND	ND	ND	42.00	ND	ND	abandoned	abandoned	abandoned
MWQ-1	4,293.60	UNK	ND	ND	ND	ND	ND	Dry	ND	Dry	Dry	Dry	Dry
MWQ-2	4,293.72	UNK	122.68	122.41	122.26	122.14	122.07	122.05	122.03	121.96	121.96	121.98	121.85
MWQ-3	4,270.78	UNK	124.04	128.31	ND	ND	ND	ND	ND	ND	ND	ND	ND
MWQ-4	4,202.69	UNK	23.10	ND	ND	ND	39.85	ND	ND	41.78	25.09	26.12	25.86
MWQ-5	4,234.22	UNK	56.32	56.07	55.66	ND	56.33	ND	ND	ND	ND	ND	ND
MWQ-6	4,273.00	UNK	84.88	ND	ND	ND	84.51	ND	ND	ND	ND	ND	ND
MWQ-7	4,262.68	UNK	68.61	68.92	68.99	70.28	ND	ND	ND	ND	ND	ND	ND
MWQ-8	4,469.71	UNK	109.43	ND	ND	110.39	109.59	Dry	Dry	111.10	108.96	110.42	108.64
MWQ-9	4,490.64	UNK	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	Dry
MWQ-10	4,642.32	UNK	46.83	46.63	ND	41.33	ND	ND	ND	ND	ND	ND	ND
MWQ-11	4,666.10	UNK	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MWQ-12	4,405.77	UNK	ND	ND	ND	ND	ND	ND	ND	ND	ND	52.08	52.72
MWQ-13	4,280.51	UNK	ND	ND	ND	ND	ND	ND	ND	ND	151.83	151.41	151.56
MWQ-14	4,382.11	UNK	65.87	66.97	66.19	65.79	65.54	65.81	65.50	ND	ND	65.66	ND
MWQ-18	4,290.17	UNK	ND	ND	ND	ND	100.50	101.33	124.75	101.29	101.19	101.46	101.89
MWQ-19	4,290.13	UNK	ND	ND	ND	ND	ND	101.05	100.80	102.82	99.41	ND	111.77
MWQ-20	4,290.26	UNK	ND	ND	ND	ND	83.15	83.33	106.75	83.30	83.28	83.58	83.33
MWQ-21	4,209.26	UNK	ND	ND	ND	ND	42.82	44.75	45.08	45.20	45.24	45.36	45.52
MWQ-22	4,209.12	UNK	ND	ND	ND	ND	40.02	41.90	65.88	42.34	42.41	42.49	42.63
MWQ-23	4,498.43	UNK	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MWL-1	4,226.02	UNK	112.01	110.89	110.90	110.88	112.30	114.00	ND	130.90 [2]	131.50 [2]	ND	ND
MWL-2	4,291.95	UNK	128.23	128.16	128.22	ND	128.37	ND	ND	ND	128.37	ND	Inaccessible
MWL-3	4,226.98	UNK	57.98	58.45	58.47	ND	58.77	59.90	ND	ND	ND	ND	Inaccessible
MWL-4	4,220.77	UNK	49.88	49.83	49.85	49.89	49.99	50.00	ND	50.51	50.60	50.78	51.01
MWL-5	4,196.32	UNK	12.42	ND	ND	ND	11.85	12.21	ND	13.50	12.68	14.08	13.94
MWL-6	4,304.80	UNK	116.61	116.94	117.03	117.24	117.37	118.42	118.60	118.60	118.59	118.68	118.68
MWL-7	4,258.43	UNK	74.30	74.69	74.75	74.79	74.89	74.75	ND	75.00	75.03	75.14	75.24
MWL-8	4,262.06	UNK	74.06	74.65	74.65	74.24	74.15	73.88	ND	74.10	ND	74.23	74.45
MWL-9	4,241.74	UNK	43.81	ND	ND	ND	ND	44.70	ND	45.10	45.19	45.29	45.55
MWL-10	4,573.45	UNK	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	silted up
MWL-11	4,579.80	UNK	ND	ND	ND	ND	ND	ND	ND	ND	58.79	58.64	58.73
MWL-12	4,446.85	UNK	ND	ND	ND	ND	ND	ND	ND	ND	51.78	37.18	39.05

[1] The January 2003 ground water flow data is the "median altitude of water table" between 2002 and 2003 (Langman, 2004).
[2] Pump running during measurement of water level
[3] Survey conducted by Lydick Engineers & Surveyors, Inc. December 2012. Abandoned wells and MWQ-3 were not resurveyed.

ND	No Data
NSD	No Survey Data
UNK	Unknown
4,165.24	Data is considered anamolous due to its departure from the norm. Data is not included in plots.

TABLE 2
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO

Well ID	TOC [3] (ft NAVD)	SCREENED INTERVAL (ft NAVD)	WATER LEVEL (ft NAVD)										
			1/1/2003 [1]	1/12/2004	7/19/2004	7/18/2005	6/18/2007	1/14/2009	1/26/2010	10/24/2010	5/3/2011	9/26/2011	11/8/2012
M114MW001	4,327.21	TBD	ND	ND	ND	ND	ND	4,177.14	4,176.91	4,176.34	4,176.18	4,175.50	4,175.29
M114MW002	4,328.11	TBD	ND	ND	ND	ND	ND	4,177.55	4,177.66	4,177.51	4,177.37	4,177.06	4,177.15
M114MW003	4,329.62	TBD	ND	ND	ND	ND	ND	4,177.92	4,178.02	4,177.67	4,177.85	4,177.63	4,177.80
M114MW004 (MWQ-16)	4,324.99	TBD	4,176.21	4,175.49	4,176.37	4,176.26	4,176.51	4,175.84	4,175.99	4,175.90	4,175.45	4,174.95	4,175.04
M117MW001	4,359.75	TBD	ND	ND	ND	ND	ND	4,317.04	4,317.10	ND	abandoned	abandoned	abandoned
M117MW002	4,357.67	TBD	ND	ND	ND	ND	ND	4,316.99	4,316.02	ND	abandoned	abandoned	abandoned
M117MW003	4,355.55	TBD	ND	ND	ND	ND	ND	4,313.08	4,312.95	ND	abandoned	abandoned	abandoned
M117MW004	4,353.88	TBD	ND	ND	ND	ND	ND	Dry	Dry	ND	abandoned	abandoned	abandoned
MAO1MW001	4,344.68	TBD	ND	ND	ND	ND	ND	4,201.19	4,201.48	4,201.26	4,202.10	4,201.81	4,201.99
MAO1MW002	4,343.58	TBD	ND	ND	ND	ND	ND	4,200.93	4,201.18	4,200.83	4,201.14	4,201.09	4,200.88
MAO1MW003 (MWQ-17)	4,345.33	TBD	4,201.22	4,200.50	ND	ND	ND	4,201.13	4,201.43	4,201.30	4,201.90	4,201.61	4,201.70
MAO1MW004	4,342.91	TBD	ND	ND	ND	ND	ND	4,199.99	4,200.06	4,199.78	4,200.13	4,199.80	4,196.51
MAO2MW001D (MWQ-15)	4,355.90	TBD	4,250.70	4,250.28	4,250.62	4,255.24	4,252.07	4,250.37	4,250.18	4,249.61	4,251.34	4,250.27	4,250.33
MAO2MW001S	4,355.78	TBD	ND	ND	ND	ND	ND	Dry	Dry	Dry	abandoned	abandoned	abandoned
MAO3MW001	4,350.11	TBD	ND	ND	ND	ND	ND	4,308.11	ND	ND	abandoned	abandoned	abandoned
MWQ-1	4,293.60	TBD	ND	ND	ND	ND	ND	Dry	ND	Dry	Dry	Dry	Dry
MWQ-2	4,293.72	TBD	4,171.04	4,171.31	4,171.46	4,171.58	4,171.65	4,171.67	4,171.69	4,171.76	4,171.76	4,171.74	4,171.87
MWQ-3	4,270.78	UNK	4,146.74	4,142.47	ND	ND	ND	ND	ND	ND	ND	ND	ND
MWQ-4	4,202.69	UNK	4,179.59	ND	ND	ND	4,162.84	ND	ND	4,160.91	4,177.60	4,176.57	4,176.83
MWQ-5	4,234.22	UNK	4,177.90	4,178.15	4,178.56	ND	4,177.89	ND	ND	ND	ND	ND	ND
MWQ-6	4,273.00	UNK	4,188.12	ND	ND	ND	4,188.49	ND	ND	ND	ND	ND	ND
MWQ-7	4,262.68	UNK	4,194.07	4,193.76	4,193.69	4,192.40	ND	ND	ND	ND	ND	ND	ND
MWQ-8	4,469.71	UNK	4,360.28	ND	ND	4,359.32	4,360.12	Dry	Dry	4,358.61	4,360.75	4,359.29	4,361.07
MWQ-9	4,490.64	UNK	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	Dry
MWQ-10	4,642.32	UNK	4,595.49	4,595.69	ND	4,600.99	ND	ND	ND	ND	ND	ND	ND
MWQ-11	4,666.10	UNK	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MWQ-12	4,405.77	UNK	ND	ND	ND	ND	ND	ND	ND	ND	ND	4,353.69	4,353.05
MWQ-13	4,280.51	UNK	ND	ND	ND	ND	ND	ND	ND	ND	4,128.68	4,129.10	4,128.95
MWQ-14	4,382.11	UNK	4,316.24	4,315.14	4,315.92	4,316.32	4,316.57	4,316.30	4,316.61	ND	ND	4,316.45	ND
MWQ-18	4,290.17	TBD	ND	ND	ND	ND	4,189.67	4,188.84	4,165.42	4,188.88	4,188.98	4,188.71	4,188.28
MWQ-19	4,290.13	TBD	ND	ND	ND	ND	ND	4,189.08	4,189.33	4,187.31	4,190.72	ND	4,178.36
MWQ-20	4,290.26	TBD	ND	ND	ND	ND	4,207.11	4,206.93	4,183.51	4,206.96	4,206.98	4,206.68	4,206.93
MWQ-21	4,209.26	TBD	ND	ND	ND	ND	4,166.44	4,164.51	4,164.18	4,164.06	4,164.02	4,163.90	4,163.74
MWQ-22	4,209.12	TBD	ND	ND	ND	ND	4,169.10	4,167.22	4,143.24	4,166.78	4,166.71	4,166.63	4,166.49
MWQ-23	4,498.43	UNK	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MWL-1	4,226.02	UNK	4,114.01	4,115.13	4,115.12	4,115.14	4,113.72	4,112.02	ND	4,095.12	4,094.52	ND	ND
MWL-2	4,291.95	UNK	4,163.72	4,163.79	4,163.73	ND	4,163.58	ND	ND	ND	4,163.58	ND	Inaccessible
MWL-3	4,226.98	UNK	4,169.00	4,168.53	4,168.51	ND	4,168.21	4,167.08	ND	ND	ND	ND	Inaccessible
MWL-4	4,220.77	UNK	4,170.89	4,170.94	4,170.92	4,170.88	4,170.78	4,170.77	ND	4,170.26	4,170.17	4,169.99	4,169.76
MWL-5	4,196.32	UNK	4,183.90	ND	ND	ND	4,184.47	4,184.11	ND	4,182.82	4,183.64	4,182.24	4,182.38
MWL-6	4,304.80	UNK	4,188.19	4,187.86	4,187.77	4,187.56	4,187.43	4,186.38	4,186.20	4,186.20	4,186.21	4,186.12	4,186.12
MWL-7	4,258.43	UNK	4,184.13	4,183.74	4,183.68	4,183.64	4,183.54	4,183.68	ND	4,183.43	4,183.40	4,183.29	4,183.19
MWL-8	4,262.06	UNK	4,188.00	4,187.41	4,187.41	4,187.82	4,187.91	4,188.18	ND	4,187.96	ND	4,187.83	4,187.61
MWL-9	4,241.74	UNK	4,197.93	ND	ND	ND	ND	4,197.04	ND	4,196.64	4,196.55	4,196.45	4,196.19
MWL-10	4,573.45	UNK	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	silted up
MWL-11	4,579.80	UNK	ND	ND	ND	ND	ND	ND	ND	ND	4,521.01	4,521.16	4,521.07
MWL-12	4,446.85	UNK	ND	ND	ND	ND	ND	ND	ND	ND	4,395.07	4,409.67	4,407.80

[1] The January 2003 ground water flow data is the "median altitude of water table" between 2002 and 2003 (Langman, 2004).
[2] Pump running during measurement of water level
[3] Survey conducted by Lydick Engineers & Surveyors, Inc. December 2012. Abandoned wells and MWQ-3 were not resurveyed.

ND	No Data
NSD	No Survey Data
UNK	Unknown
4,165.24	Data is considered anamolous due to its departure from the norm. Data is not included in plots.

TABLE 2
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO

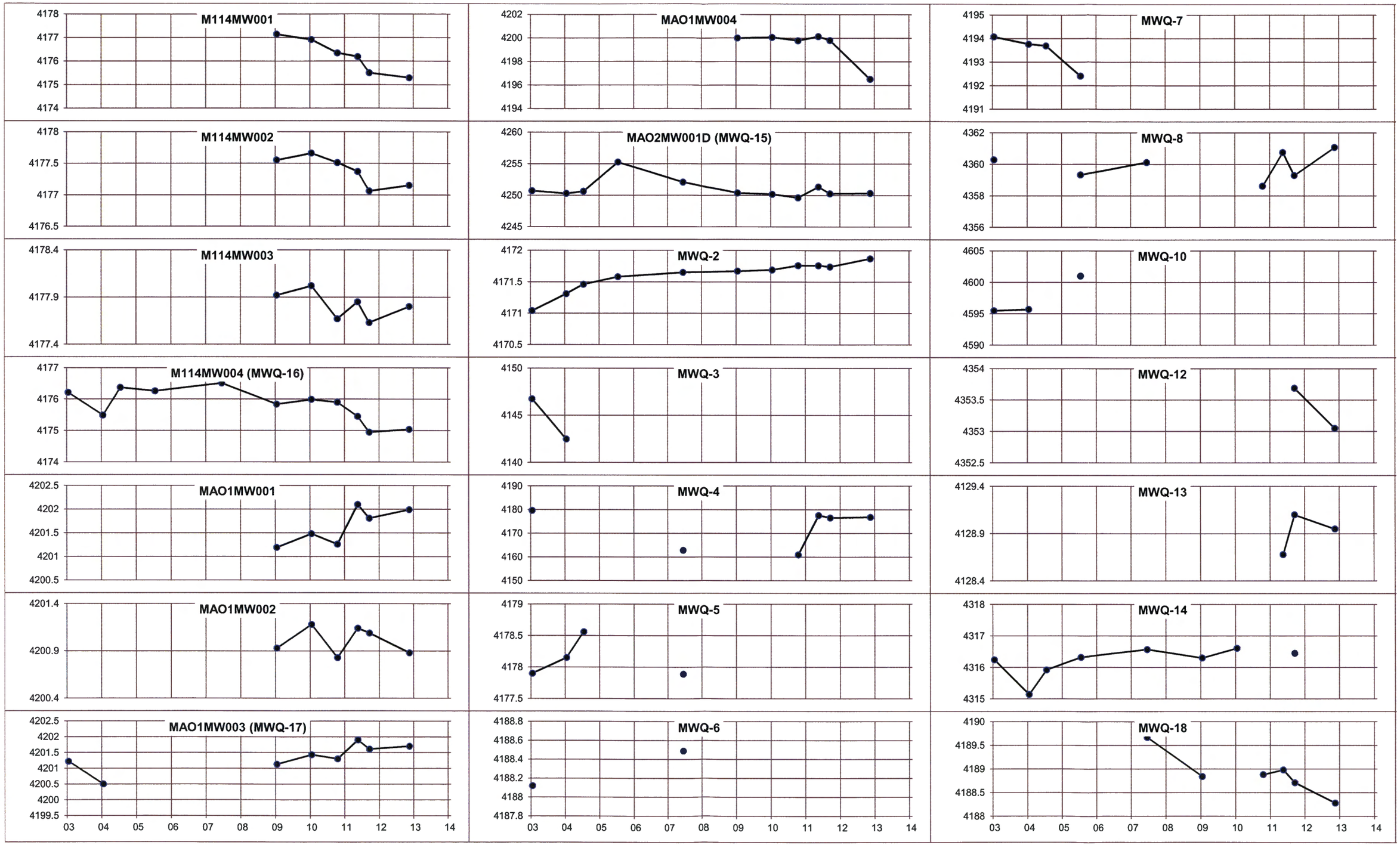


TABLE 2
SUMMARY OF GROUNDWATER ELEVATION AND DEPTH TO GROUNDWATER DATA

TABLE 2
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO

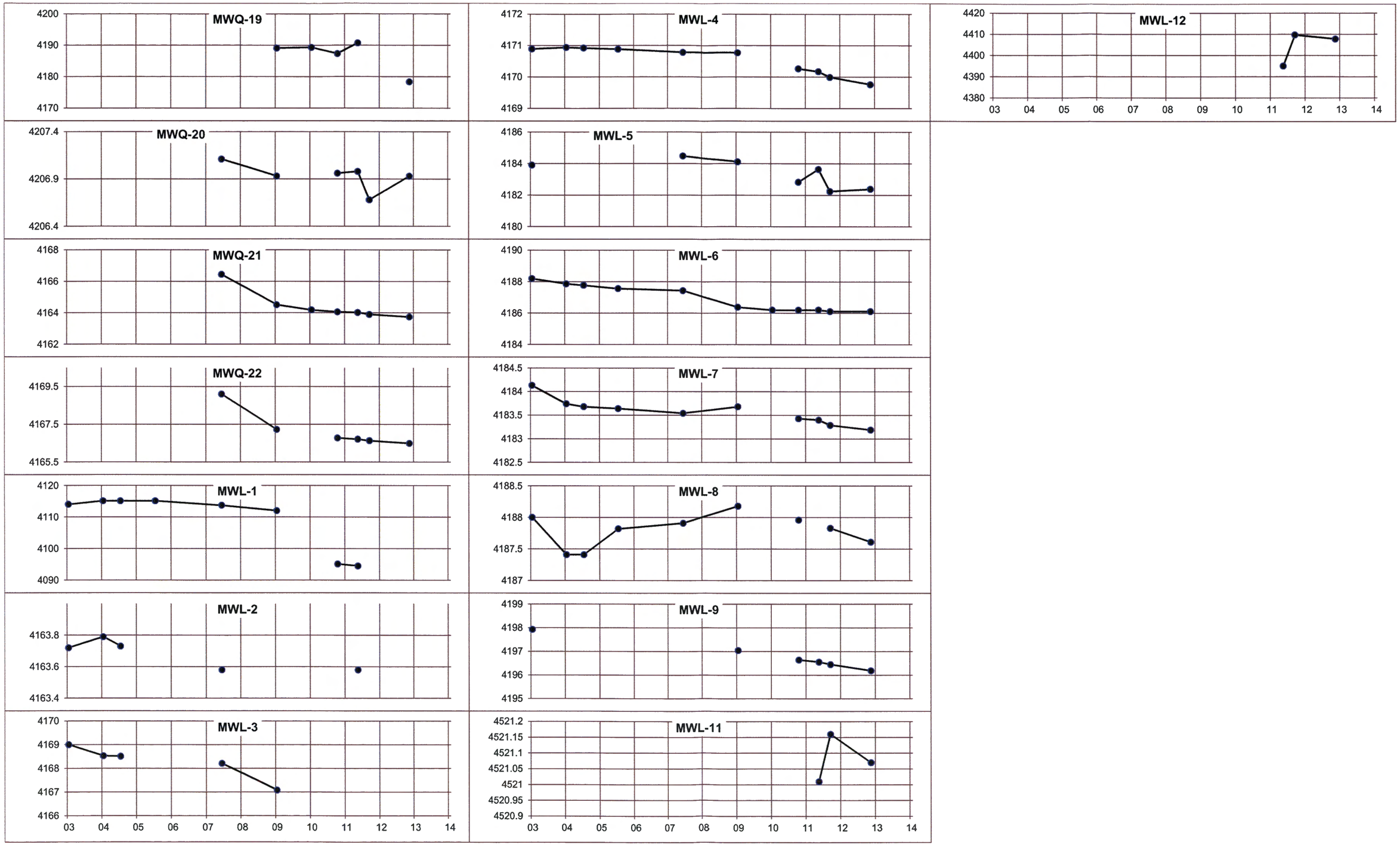


TABLE 2
SUMMARY OF GROUNDWATER ELEVATION AND DEPTH TO GROUNDWATER DATA

TABLE 3
MELROSE AIR FORCE RANGE
ROOSEVELY AND CURRY COUNTIES, NEW MEXICO

			Semiannual																			
	Test Site ID		M114MW001		M114MW002		M114MW003		M114MW004		MA01MW001		MA01MW002		MA01MW003		MA01MW004		MA02 MW001D		MA02 MW001D	
LAB INFO		Lab Sample No.	21211071203		21211081702		21211081703		21211071202		21211030601		21211071201		21211091501		21211081701		21211091503		21211060401	
		Sample Date	11/16/2012		11/7/2012		11/7/2012		11/6/2012		11/2/2012		11/6/2012		11/18/2012		11/7/2012		11/5/2012		11/5/2012	
		Sample Time	1330		1206		1401		1041		1126		900		1015		1030		1306		1045	
	Parameter	Unit	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
FIELD PARAMETERS	Dissolved oxygen	mg/L	1.86		4.11		3.27		1.41		6.26		5.78		6.26		6.39		0.15		6.51	
	ORP	mV	108.0		115.9		107.2		155.1		93.9		158.1		187.6		55.4		143.3		97.6	
	pH	SU	7.78		8.02		8.08		7.87		8.18		8.18		7.95		7.99		8.05		7.95	
	Specific Conductance	umhos/cm	11.64		11.41		13.42		13.18		3.27		2.749		2.856		1.740		8.94		0.538	
	Temperature	deg C	21.68		20.84		20.53		20.42		22.13		21.05		20.56		21.49		19.75		17.18	
	Turbidity	NTU	5.49		8.04		5.29		8.16		4.19		8.06		3.06		4.24		4.01		0.35	
	Water Level	ft btoc	151.92		150.96		151.82		149.95		142.69		142.70		143.63		146.40		105.57		NA	

TABLE 3
SUMMARY OF RECENT (FALL 2012) FIELD MEASUREMENTS OF WATER QUALITY

TABLE 4a
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO

DATE	Semiannual Network									
	SWMU 114				SWMU 130				SWMU 131	Background
	M114MW001	M114MW002	M114MW003	M114MW004	MAO1MW001	MAO1MW002	MAO1MW003	MAO1MW004	MAO2MW001D	MWQ-23
Jan-04										
Jul-04										
Jul-05										
Jun-07										
Jan-09	13.910	13.350	14.130	13.830	3.561	3.082	3.124	1.966	10.510	
Jan-10	13.0	13.2	16.2	14.9	3.84	3.21	3.43	2.10	9.15	
Oct-10	11.25	10.16	13.16	12.63	2.9	2.51	2.53	1.75	7.06	
May-11	12.30	13.05	15.8	14.2	3.387	3.174	2.741	1.834	10.60	2.442
Sep-11	10.95	10.53	12.88	12.61	2.90	2.57	2.65	1.681	8.99	1.87
Nov-12	11.64	11.41	13.42	13.18	3.27	2.749	2.856	1.740	8.94	0.538
Min	11.0	10.2	12.9	12.6	2.9	2.5	2.5	1.7	7.1	0.5
Max	13.9	13.4	16.2	14.9	3.8	3.2	3.4	2.1	10.6	2.4
Average	12.2	12.0	14.3	13.6	3.3	2.9	2.9	1.8	9.2	1.6

Notes:

Data in mS/cm

NMED SSL Tapwater Screening Level: n/a

Red indicates exceedance

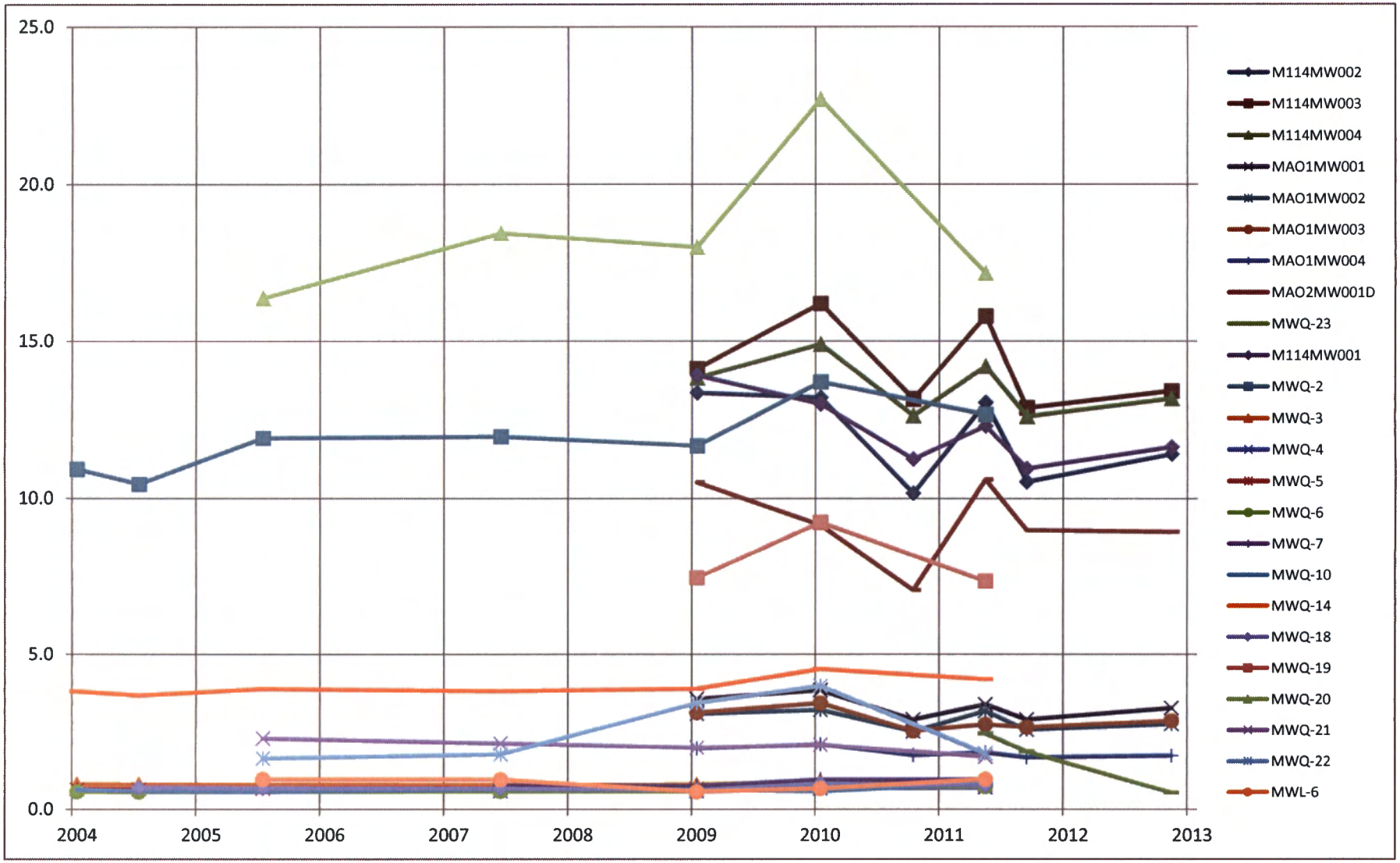
Blank cells indicate no data

Wells MWQ-3, -4, -5, -6, -7, -10, -23, and MWL-6 not sampled after spring 2011

DATE	Annual Network													
						Background	Background							
	MWQ-2	MWQ-3	MWQ-4	MWQ-5	MWQ-6	MWQ-7	MWQ-10	MWQ-14	MWQ-18	MWQ-19	MWQ-20	MWQ-21	MWQ-22	MWL-6
Jan-04	10.92	0.819		0.654	0.572		0.636	3.80						
Jul-04	10.45	0.812		0.656	0.560		0.574	3.67	0.699					
Jul-05	11.91	0.8		0.683			0.558	3.880	0.681		16.370	2.290	1.646	0.979
Jun-07	11.960	0.796	0.584	0.679	0.578	0.769	0.639	3.810	0.667		18.440	2.130	1.777	0.971
Jan-09	11.670	0.807	0.580	0.665	0.576	0.764	0.631	3.890	0.618	7.459	18.000	1.991	3.431	0.566
Jan-10	13.7	0.910	0.674	0.766	0.697	0.969	0.579	4.52	0.836	9.24	22.7	2.08	3.980	0.672
Oct-10														
May-11	12.67	0.979	0.702	0.793	0.726	0.971	0.846	4.197	0.763	7.353	17.17	1.706	1.809	0.981
Sep-11														
Nov-12														
Min	10.5	0.8	0.6	0.7	0.6	0.8	0.6	3.7	0.6	7.4	16.4	1.7	1.6	0.6
Max	13.7	1.0	0.7	0.8	0.7	1.0	0.8	4.5	0.8	9.2	22.7	2.3	4.0	1.0
Average	11.9	0.8	0.6	0.7	0.6	0.87	0.64	4.0	0.7	8.0	18.5	2.0	2.5	0.8

TABLE 4a
SPECIFIC CONDUCTANCE

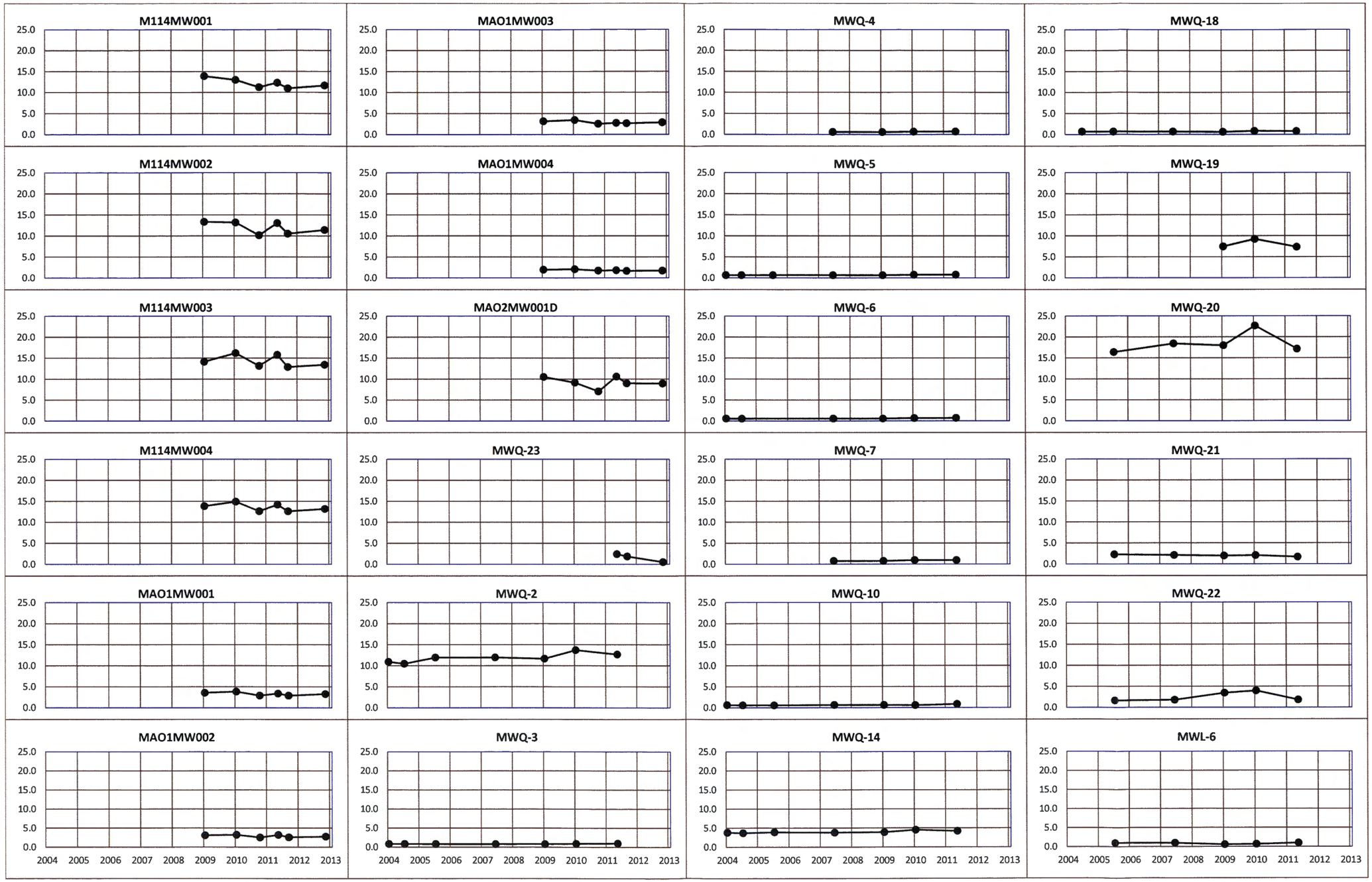
TABLE 4a
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO



Notes:
Data in mS/cm

TABLE 4a
SPECIFIC CONDUCTANCE

TABLE 4a
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO



Notes:
Data in mS/cm

TABLE 4a
SPECIFIC CONDUCTANCE

TABLE 4b
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO

DATE	Semiannual Network									
	SWMU 114				SWMU 130				SWMU 131	
	M114MW001	M114MW002	M114MW003	M114MW004	MAO1MW001	MAO1MW002	MAO1MW003	MAO1MW004	MAO2MW001D	MWQ-23
Jan-04										
Jul-04										
Jul-05										
Jun-07										
Jan-09	0.37	0.40	2.57	0.43	4.56	2.46	4.06	6.49	0.35	
Jan-10	8.18	8.81	5.47	7.98	7.38	9.59	10.23	9.39	2.28	
Oct-10	0.86	5.13	3.37	1.60	7.08	5.43	7.43	8.31	0.57	
May-11	3.02	3.44	2.57	3.03	5.98	4.77	5.66	7.1	0.16	0.12
Sep-11	4.19	4.00	2.22	1.57	6.15	5.86	5.67	6.51	0.29	0.23
Nov-12	1.86	4.11	3.27	1.41	6.18	5.78	6.26	6.39	0.15	6.51
Min	0.37	0.40	2.22	0.43	4.56	2.46	4.06	6.39	0.15	0.12
Max	8.18	8.81	5.47	7.98	7.38	9.59	10.23	9.39	2.28	6.51
Average	3.08	4.32	3.25	2.67	6.22	5.65	6.55	7.37	0.63	2.29

Notes:

Data in mg/L

NMED SSL Tapwater Screening Level: n/a

Red indicates exceedance

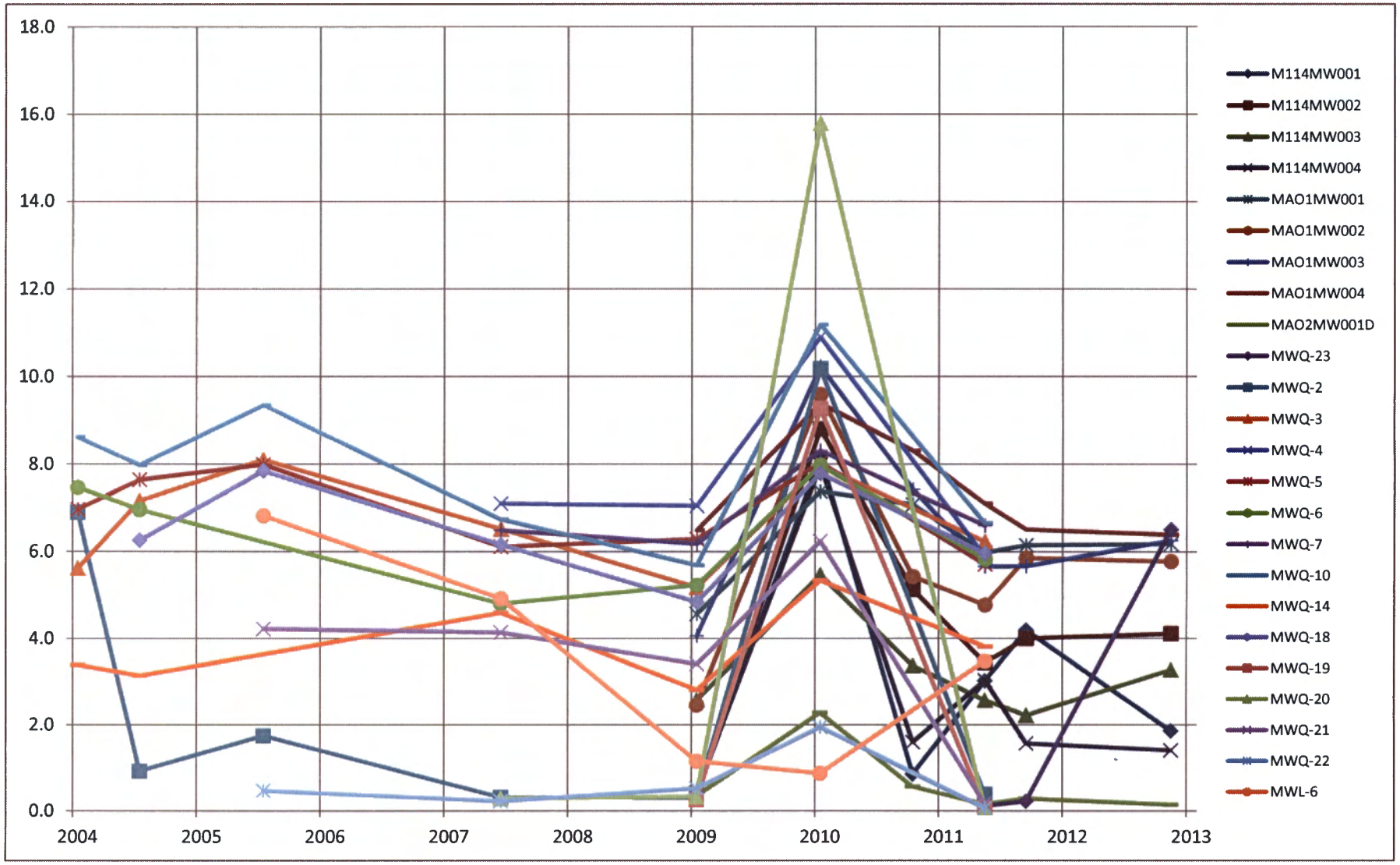
Blank cells indicate no data

Wells MWQ-3, -4, -5, -6, -7, -10, -23, and MWL-6 not sampled after spring 2011

DATE	Annual Network													
						Background	Background							
	MWQ-2	MWQ-3	MWQ-4	MWQ-5	MWQ-6	MWQ-7	MWQ-10	MWQ-14	MWQ-18	MWQ-19	MWQ-20	MWQ-21	MWQ-22	MWL-6
Jan-04	6.90	5.62		6.97	7.47		8.62	3.39						
Jul-04	0.93	7.16		7.64	6.96		7.98	3.14	6.26					
Jul-05	1.75	8.10		7.99			9.35		7.84			4.22	0.47	6.82
Jun-07	0.32	6.52	7.10	6.11	4.80	6.49	6.74	4.59	6.16		0.29	4.14	0.23	4.92
Jan-09	0.31	5.18	7.05	6.29	5.23	6.18	5.69	2.81	4.84	0.26	0.34	3.41	0.53	1.16
Jan-10	10.18	7.97	10.90	8.03	7.97	8.31	11.19	5.34	7.79	9.27	15.79	6.24	1.95	0.88
Oct-10														
May-11	0.39	6.23	5.89	5.71	5.83	6.6	6.65	3.81	5.96	0.08	0.08	0.17	0.07	3.48
Sep-11														
Nov-12														
Min	0.31	5.18	5.89	5.71	4.80	6.18	5.69	2.81	4.84	0.08	0.08	0.17	0.07	0.88
Max	10.18	8.10	10.90	8.03	7.97	8.31	11.19	5.34	7.84	9.27	15.79	6.24	1.95	6.82
Average	2.97	6.68	7.74	6.96	6.38	6.90	8.03	3.85	6.48	3.20	4.13	3.64	0.65	3.45

TABLE 4b
DISSOLVED OXYGEN

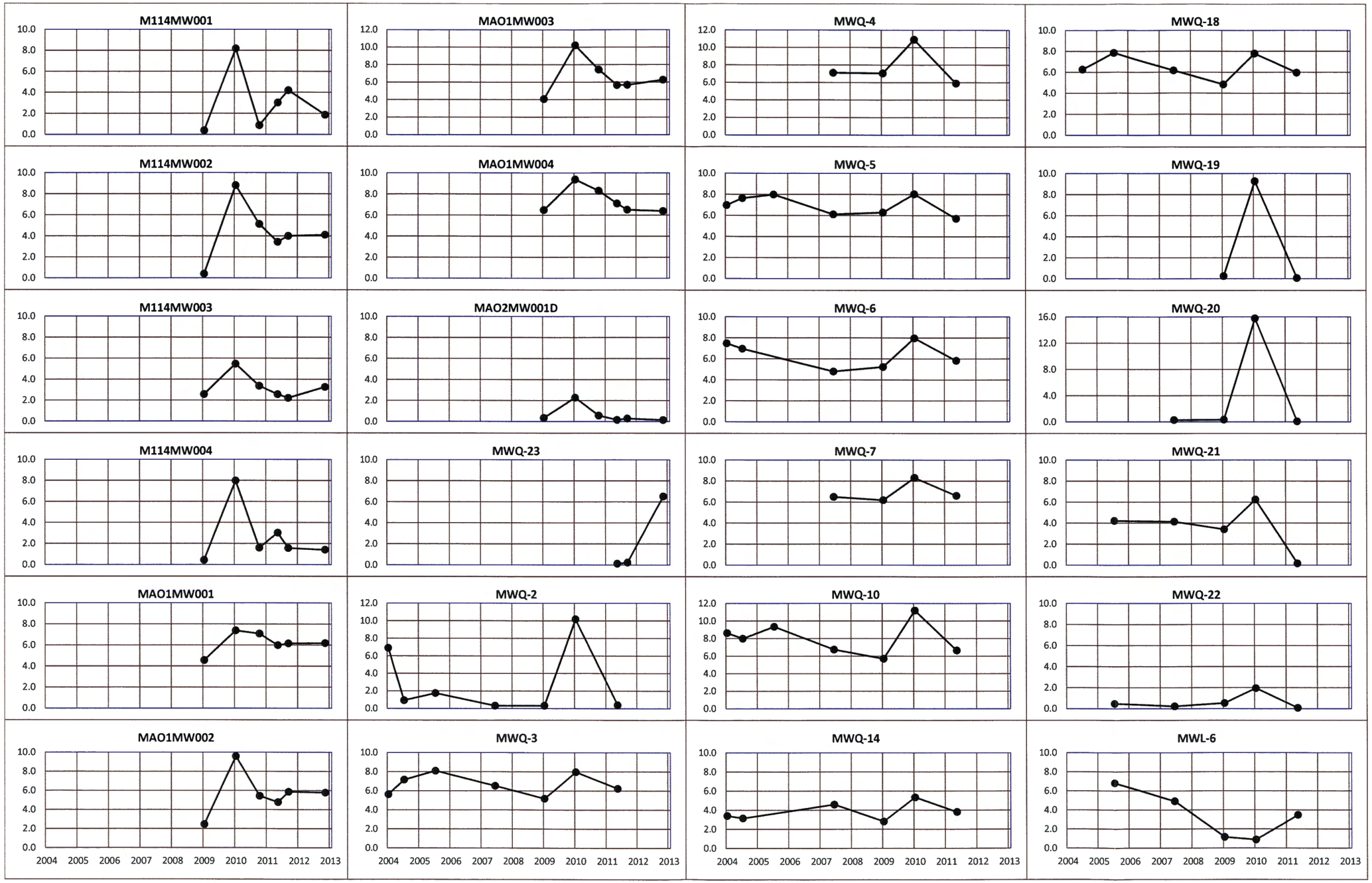
TABLE 4b
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO



Notes:
Data in mg/L

TABLE 4b
DISSOLVED OXYGEN

TABLE 4b
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO



Notes:
Data in mg/L

TABLE 4c
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO

DATE	Semiannual Network									
	SWMU 114				SWMU 130				SWMU 131	
	M114MW001	M114MW002	M114MW003	M114MW004	MAO1MW001	MAO1MW002	MAO1MW003	MAO1MW004	MAO2MW001D	MWQ-23
Jan-04										
Jul-04										
Jul-05										
Jun-07										
Jan-09	7.80	7.80	7.92	7.70	7.81	7.99	7.81	7.87	7.72	
Jan-10	5.64	5.58	5.65	5.58	5.61	8.92	8.36	8.32	8.12	
Oct-10	7.48	7.71	7.47	7.63	7.79	7.83	7.64	7.59	7.43	
May-11	7.73	7.52	7.62	7.95	7.73	8.07	7.09	7.08	7.92	7.88
Sep-11	8.11	7.98	8.13	8.04	8.11	8.33	8.07	8.11	8.01	8.30
Nov-12	7.78	8.02	8.08	7.87	8.18	8.18	7.95	7.99	8.05	7.95
Min	5.64	5.58	5.65	5.58	5.61	7.83	7.09	7.08	7.43	7.88
Max	8.11	8.02	8.13	8.04	8.18	8.92	8.36	8.32	8.12	8.30
Average	7.42	7.44	7.48	7.46	7.54	8.22	7.82	7.83	7.88	8.04

Notes:

Data in std units

NMED SSL Tapwater Screening Level: n/a

Red indicates exceedance

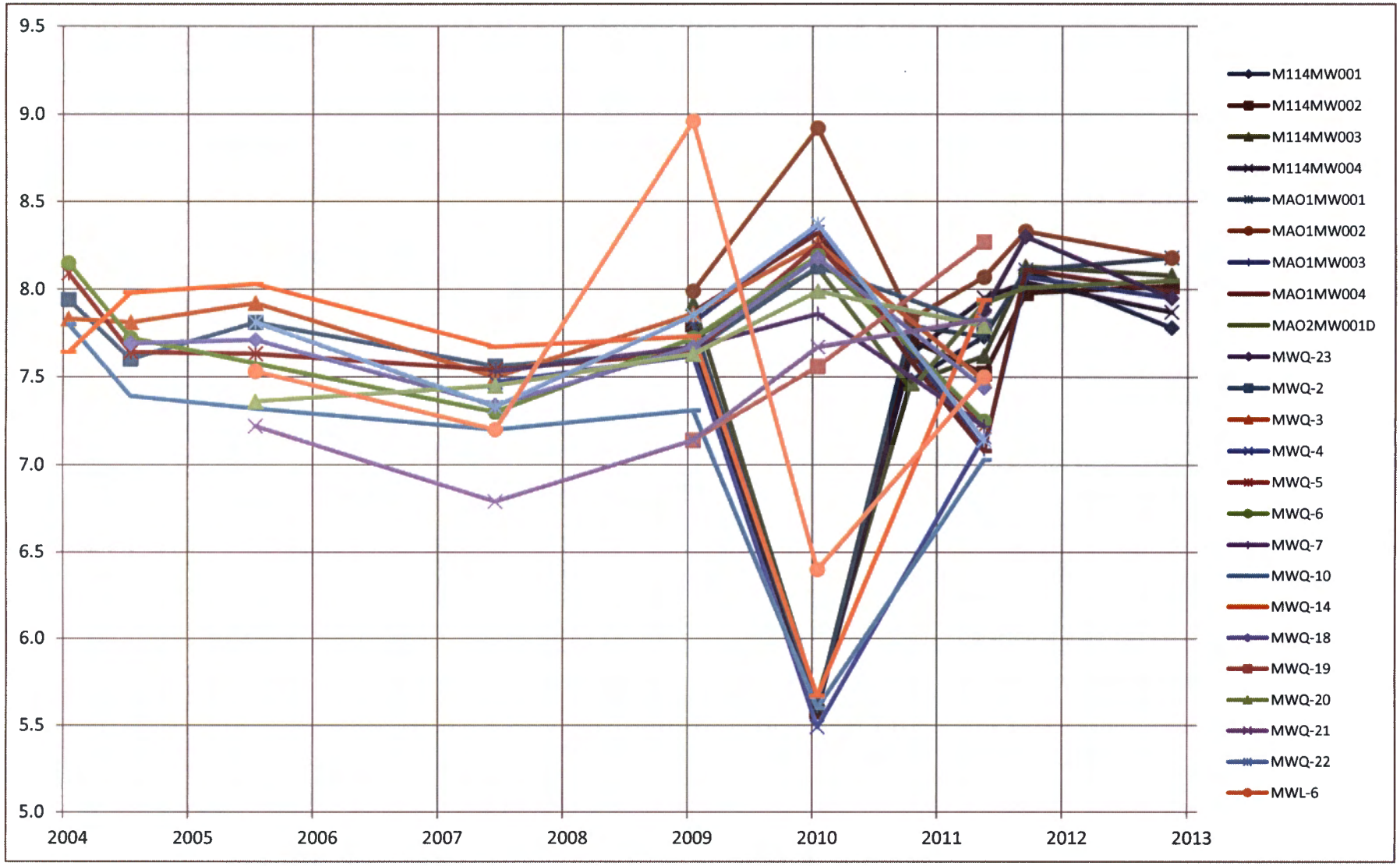
Blank cells indicate no data

Wells MWQ-3, -4, -5, -6, -7, -10, -23, and MWL-6 not sampled after spring 2011

DATE	Annual Network													
						Background	Background							
	MWQ-2	MWQ-3	MWQ-4	MWQ-5	MWQ-6	MWQ-7	MWQ-10	MWQ-14	MWQ-18	MWQ-19	MWQ-20	MWQ-21	MWQ-22	MWL-6
Jan-04	7.94	7.83		8.09	8.15		7.80	7.64						
Jul-04	7.60	7.81		7.64	7.72		7.39	7.98	7.69					
Jul-05	7.81	7.92		7.63			7.32	8.03	7.71		7.360	7.22	7.81	7.53
Jun-07	7.56	7.50	7.47	7.54	7.30	7.53	7.20	7.67	7.34		7.45	6.79	7.33	7.20
Jan-09	7.65	7.86	7.62	7.64	7.72	7.67	7.31	7.73	7.67	7.14	7.63	7.14	7.85	8.96
Jan-10	8.13	8.26	5.49	8.25	8.19	7.86	5.60	5.67	8.18	7.56	7.99	7.67	8.37	6.40
Oct-10														
May-11	7.79	7.48	7.16	7.22	7.25	7.22	7.03	7.94	7.44	8.27	7.79	7.83	7.14	7.5
Sep-11														
Nov-12														
Min	7.56	7.48	5.49	7.22	7.25	7.22	5.60	5.67	7.34	7.14	7.36	6.79	7.14	6.40
Max	8.13	8.26	7.62	8.25	8.19	7.86	7.80	8.03	8.18	8.27	7.99	7.83	8.37	8.96
Average	7.78	7.81	6.94	7.72	7.72	7.57	7.09	7.52	7.67	7.66	7.64	7.33	7.70	7.52

TABLE 4c
pH

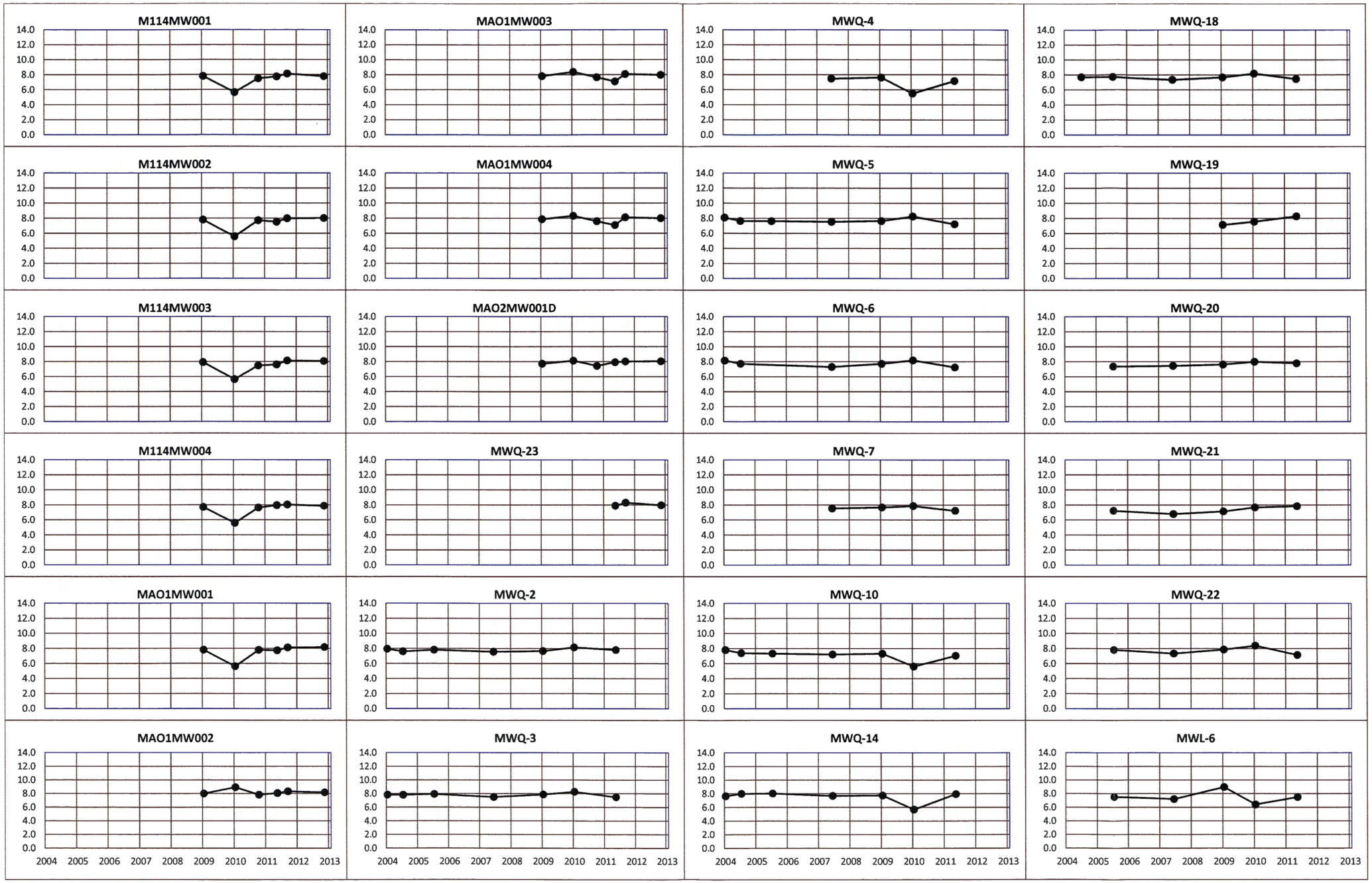
TABLE 4c
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO



Notes:
Data in std units

TABLE 4c
pH

TABLE 4c
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO



Notes:
Data in mS/cm

TABLE 4c
pH

TABLE 4d
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO

DATE	Semiannual Network									
	SWMU 114				SWMU 130				SWMU 131	
	M114MW001	M114MW002	M114MW003	M114MW004	MAO1MW001	MAO1MW002	MAO1MW003	MAO1MW004	MAO2MW001D	MWQ-23
Jan-04										
Jul-04										
Jul-05										
Jun-07										
Jan-09	16.19	15.29	16.44	12.15	17.03	17.60	17.67	17.06	16.52	
Jan-10	17.90	18.00	16.40	17.40	17.30	15.72	16.71	15.66	14.77	
Oct-10	19.77	18.5	20.72	18.51	20.4	20.88	20.98	19.71	20.19	
May-11	23.56	22.4	21.67	22.51	22.95	21.94	22.69	21.43	19.88	19.45
Sep-11	23.03	21.64	22.06	21.61	20.91	22.58	23.27	21.76	20.92	19.97
Nov-12	21.68	20.84	20.53	20.42	22.13	21.05	20.56	21.49	19.75	17.18
Min	16.19	15.29	16.40	12.15	17.03	15.72	16.71	15.66	14.77	
Max	23.56	22.40	22.06	22.51	22.95	22.58	23.27	21.76	20.92	
Average	20.36	19.45	19.64	18.77	20.12	19.96	20.31	19.52	18.67	

Notes:

Data in degrees Celsius

NMED SSL Tapwater Screening Level: n/a

Red indicates exceedance

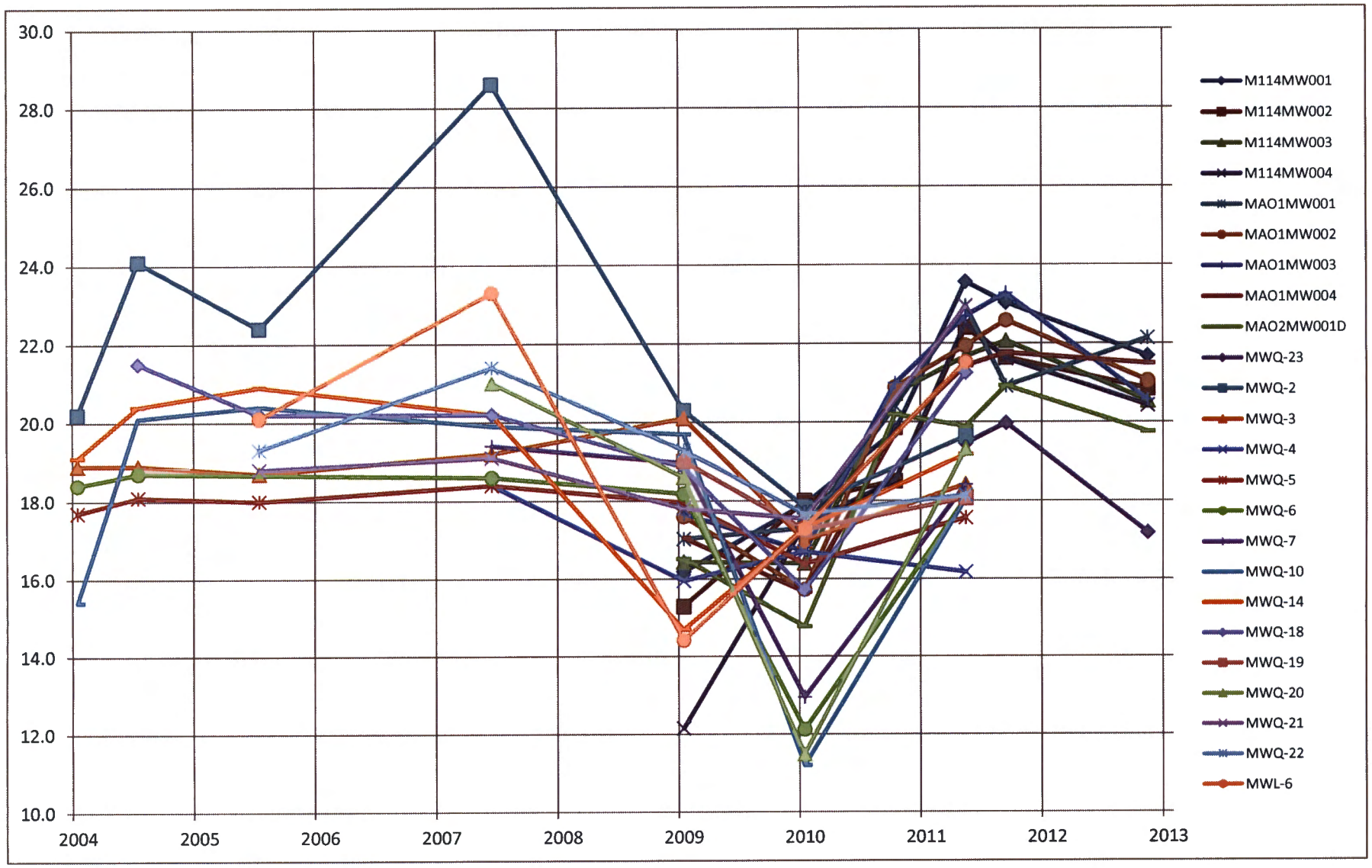
Blank cells indicate no data

Wells MWQ-3, -4, -5, -6, -7, -10, -23, and MWL-6 not sampled after spring 2011

DATE	Annual Network													
						Background	Background							
	MWQ-2	MWQ-3	MWQ-4	MWQ-5	MWQ-6	MWQ-7	MWQ-10	MWQ-14	MWQ-18	MWQ-19	MWQ-20	MWQ-21	MWQ-22	MWL-6
Jan-04	20.20	18.90		17.70	18.40		15.40	19.10						
Jul-04	24.10	18.90		18.10	18.70		20.10	20.40	21.50					
Jul-05	22.40	18.70		18.00			20.40	20.90	20.20			18.80	19.30	20.10
Jun-07	28.60	19.20	18.40	18.40	18.60	19.40	19.90	20.20	20.20		21.00	19.10	21.40	23.30
Jan-09	20.30	20.10	15.95	17.96	18.18	18.96	19.69	14.69	18.85	19.01	18.60	17.80	19.28	14.42
Jan-10	17.84	16.98	16.70	16.39	12.12	12.95	11.20	17.30	15.71	17.26	11.49	17.54	17.67	17.30
Oct-10														
May-11	19.63	18.42	16.17	17.56	18.05	18.41	18.05	19.18	21.25	18.06	19.31	22.93	18.14	21.53
Sep-11														
Nov-12														
Min	17.84	16.98	15.95	16.39	12.12	12.95	11.20	14.69	15.71	17.26	11.49	17.54	17.67	14.42
Max	28.60	20.10	18.40	18.40	18.70	19.40	20.40	20.90	21.50	19.01	21.00	22.93	21.40	23.30
Average	21.87	18.74	16.81	17.73	17.34	17.43	17.82	18.82	19.62	18.11	17.60	19.23	19.16	19.33

TABLE 4d
TEMPERATURE

TABLE 4d
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO

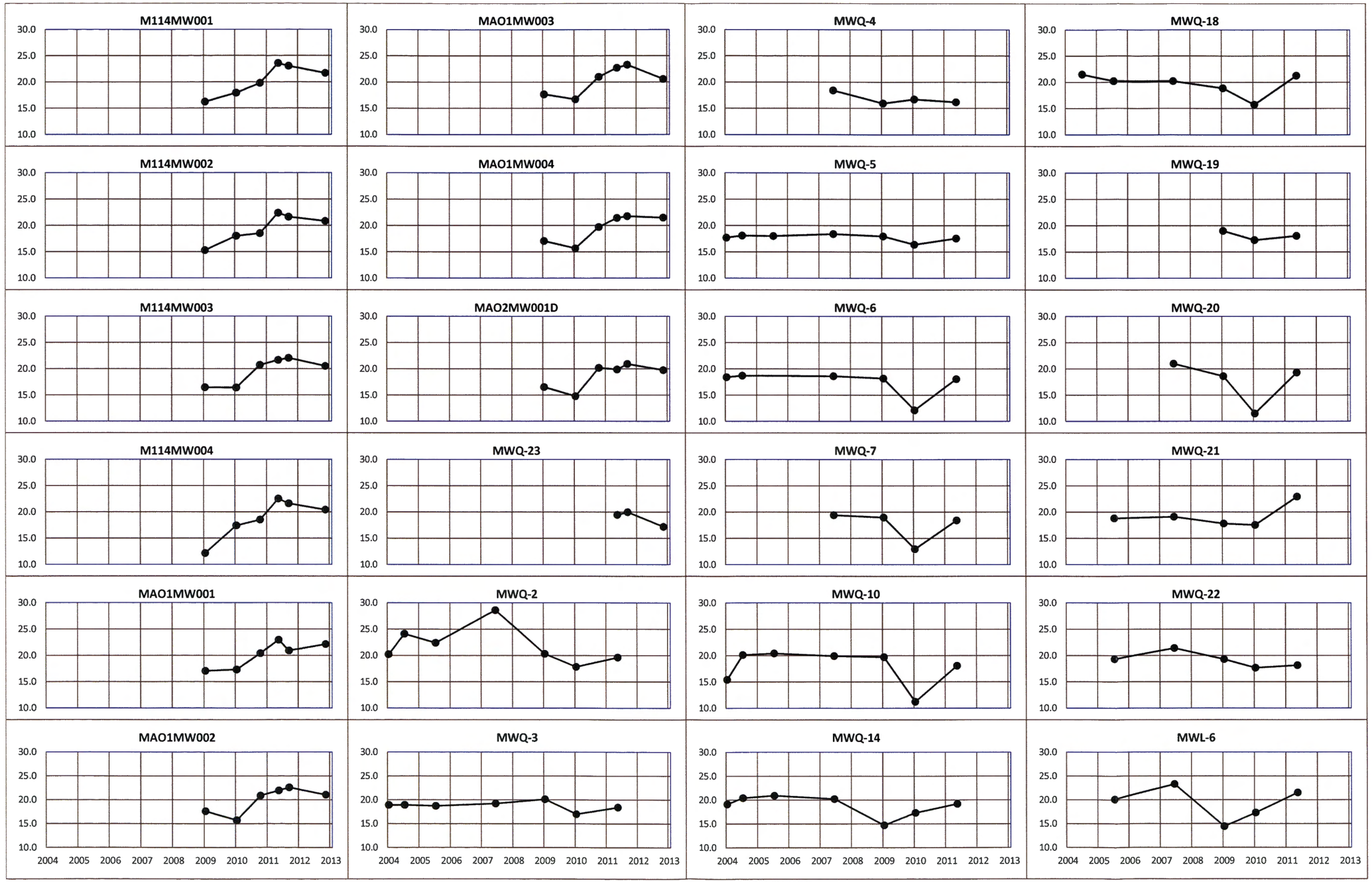


Notes:

Data in degrees Celsius

TABLE 4d
TEMPERATURE

TABLE 4d
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO



Notes:
Data in mS/cm

TABLE 4d
TEMPERATURE

TABLE 4e
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO

DATE	Semiannual Network									
	SWMU 114				SWMU 130				SWMU 131	
	M114MW001	M114MW002	M114MW003	M114MW004	MAO1MW001	MAO1MW002	MAO1MW003	MAO1MW004	MAO2MW001D	MWQ-23
Jan-04										
Jul-04										
Jul-05										
Jun-07										
Jan-09	5.20	33.00	13.00	5.00	14.00	3.10	8.80	6.00	6.10	
Jan-10	26.20	70.70	55.80	93.60	80.60	165.00	0.00	12.70	53.80	
Oct-10	1.08	10.8	7.11	0.84	3.84	3.76	15.9	6.54	1.97	
May-11	3.4	9.96	14.2	3.03	10.1	1.13	2.21	4.82	4.8	0.99
Sep-11	5.1	8.06	23.5	8.05	6.02	4.25	1.39	2.22	2.96	2.13
Nov-12	5.49	8.04	5.29	8.16	4.19	8.06	3.06	4.24	4.01	0.35
Min	1.08	8.04	5.29	0.84	3.84	1.13	0.00	2.22	1.97	
Max	26.20	70.70	55.80	93.60	80.60	165.00	15.90	12.70	53.80	
Average	7.75	23.43	19.82	19.78	19.79	30.88	5.23	6.09	12.27	

Notes:

Data in NTUs

NMED SSL Tapwater Screening Level: n/a

Red indicates exceedance

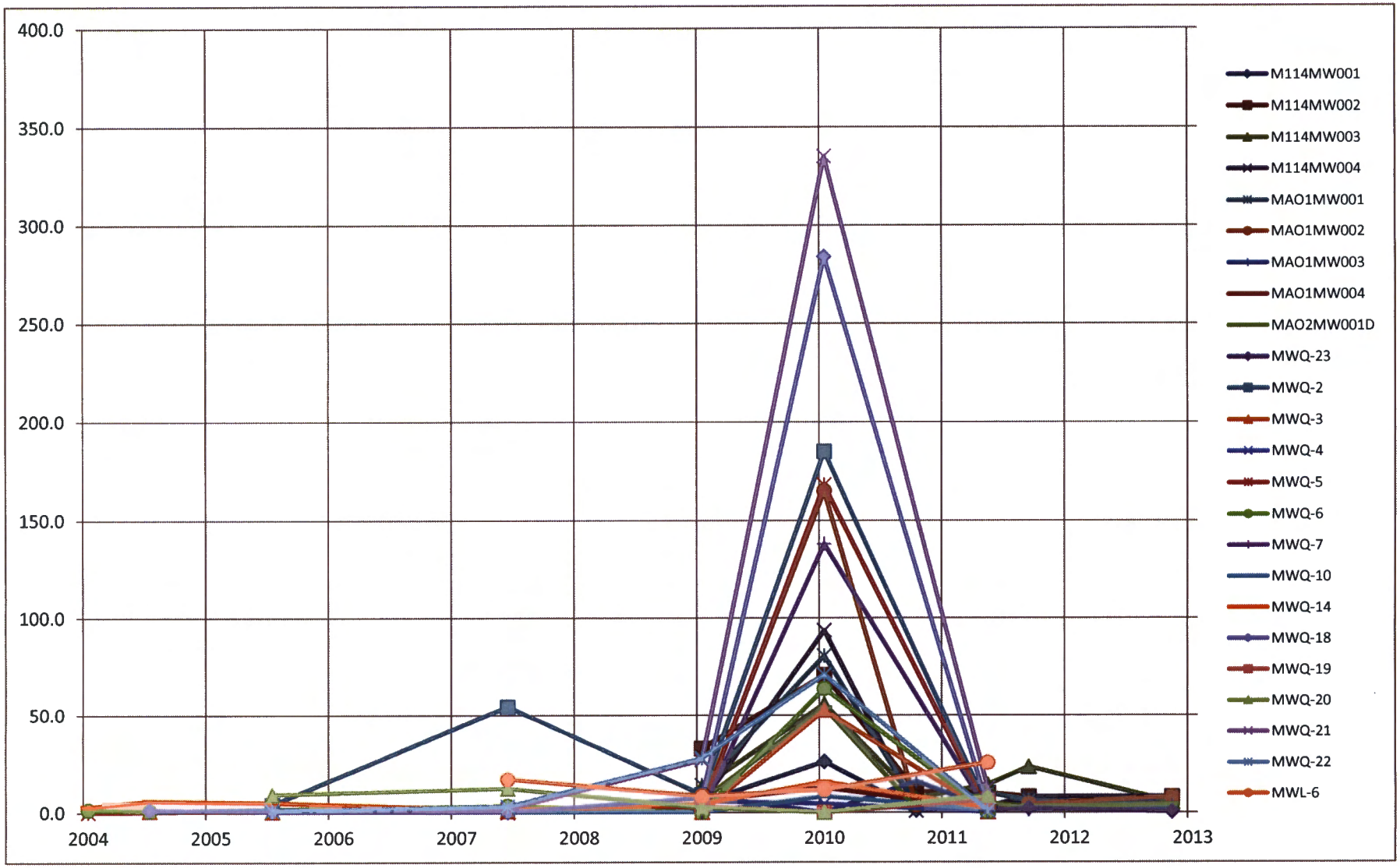
Blank cells indicate no data

Wells MWQ-3, -4, -5, -6, -7, -10, -23, and MWL-6 not sampled after spring 2011

DATE	Annual Network													
						Background	Background							
	MWQ-2	MWQ-3	MWQ-4	MWQ-5	MWQ-6	MWQ-7	MWQ-10	MWQ-14	MWQ-18	MWQ-19	MWQ-20	MWQ-21	MWQ-22	MWL-6
Jan-04				0.20	1.54			3.15						
Jul-04		0.92			0.90		0.79	6.12	1.49					
Jul-05	4.06	0.57		1.21			1.76	5.21	0.52		9.320	1.26	1.07	
Jun-07	54.50	0.79		0.07	3.50	0.35	0.09	1.44	0.39		12.40	1.98	3.29	17.20
Jan-09	9.10	0.25	5.90	1.80	0.18	0.15	0.25	4.40	7.50	3.20	2.60	27.00	28.00	8.50
Jan-10	185.00	52.60	4.50	168.00	63.80	138.00	8.30	15.70	284.00	0.00	0.00	335.00	70.90	11.70
Oct-10														
May-11	2.02	0.17	0.26	0.2	0.27	0.17	1.32	2.29	2.5	6.46	8.71	12.4	0.87	25.7
Sep-11														
Nov-12														
Min	2.02	0.17	0.26	0.07	0.18	0.15	0.09	1.44	0.39	0.00	0.00	1.26	0.87	8.50
Max	185.00	52.60	5.90	168.00	63.80	138.00	8.30	15.70	284.00	6.46	12.40	335.00	70.90	25.70
Average	50.94	9.22	3.55	28.58	11.70	34.67	2.09	5.47	49.40	3.22	6.61	75.53	20.83	15.78

TABLE 4e
TURBIDITY

TABLE 4e
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO

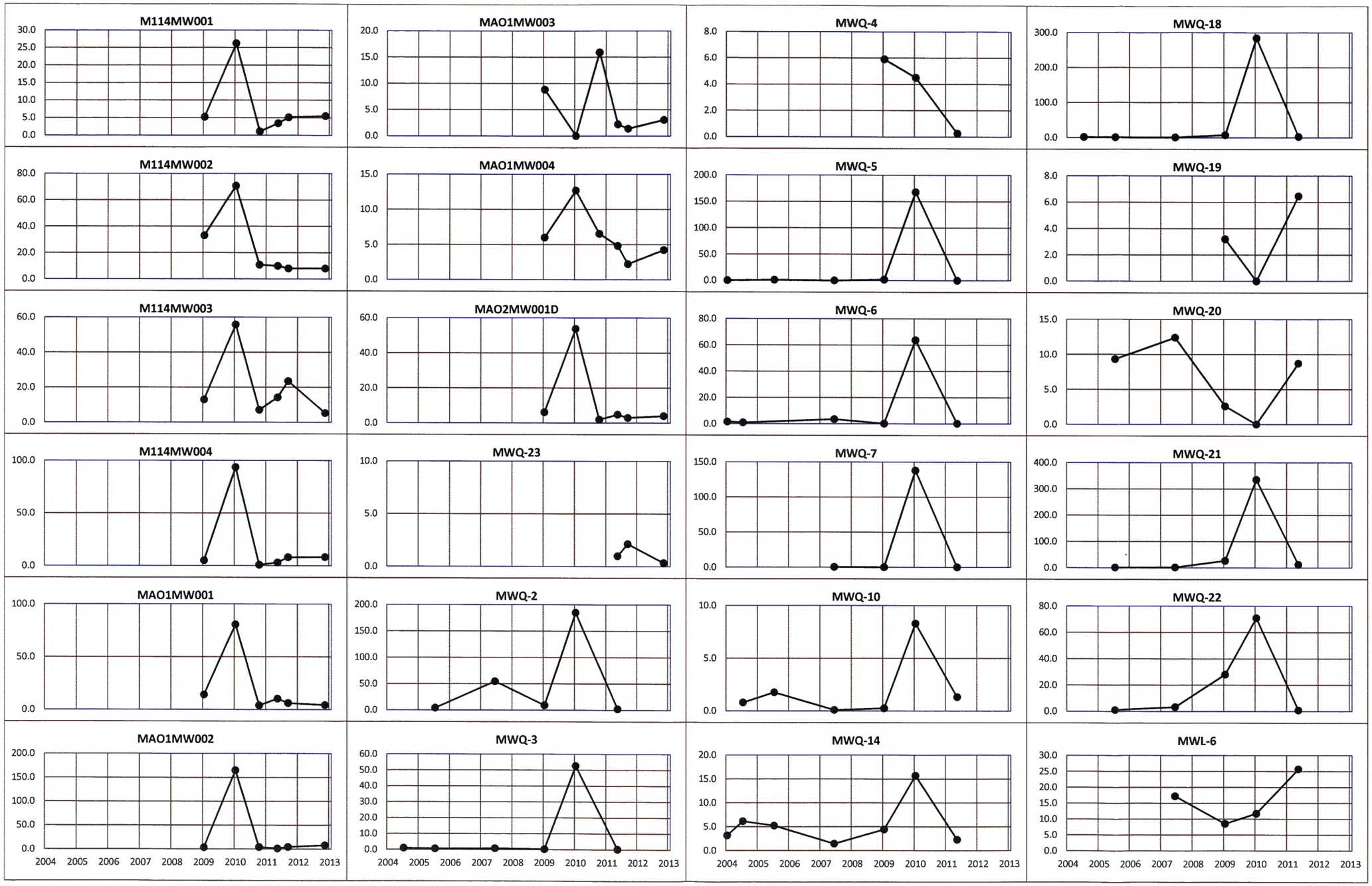


Notes:

Data in NTUs

TABLE 4e
TURBIDITY

TABLE 4e
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO



Notes:
Data in mS/cm

TABLE 4e
TURBIDITY

TABLE 5
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO

					Semiannual																	
				Test Site ID	M114MW001		M114MW002		M114MW003		M114MW004		MA01MW001		MA01MW002		MA01MW003		MA01-MW004		MA02 MW001D	
LAB INF				Sample Date	11/6/2012		11/7/2012		11/7/2012		11/6/2012		11/2/2012		11/6/2012		11/8/2012		11/7/2012		11/8/2012	
				Sample Time	1330		1206		1401		1041		1126		0900		1015		1030		1306	
	Parameter	Method	Unit	NMED SSLs - Tapwater Screening Levels February 2012)	Result	Lab Qualifier	Result	Lab Qualifier	Result	Lab Qualifier	Result	Lab Qualifier	Result	Lab Qualifier	Result	Lab Qualifier	Result	Lab Qualifier	Result	Lab Qualifier	Result	Lab Qualifier
GENERAL PARAMETERS	Alkalinity	2320B	mg/L	---	94.3		78.7		48.6		72.9		166		180		166		192		157	
	Chloride	300.0	mg/L	---	3320		3610		4590		4400		501		511		531		276		1780	
	Cyanide (Total)	9012B	ug/L	21.9	0.0012	U	0.0012	U	0.0012	U	0.0012	U	0.0012	U	0.0012	U	0.0012	U	0.0012	U	0.0012	U
	Nitrate as N	353.2	mg/L	58.4	1.19		0.528		0.988		0.825		0.29		0.443		0.214		0.732		5.05	
	Nitrite	353.2	mg/L	3.65	0.016		0.019		0.018		0.020		*0.009*	*J*	0.002	U	0.011		0.011		0.015	
	Sulfate	300.0	mg/L	---	2200		2200		2460		2290		506		589		599		364		2080	
	TDS	2540C	mg/L	---	7810		7830		9310		9300		1990		1750		1780		1050		5670	
INORGANICS	Aluminum (Total)	6010C	ug/L	36500	446		231		2790		*106*	*J*	502		437		*81.6*	*J*	279		*68.2*	*J*
	(Dissolved)	6010C	ug/L	36500	60	U	60	U	60	U	60	U	60	U	60	U	60	U	60	U	60	U
	Antimony (Total)	6010C	ug/L	14.6	*6.43*	*J*	*4.27*	*J*	3.11	U	3.11	U	3.11	U	*3.66*	*J*	3.11	U	3.11	U	*4.69*	*J*
	(Dissolved)	6010C	ug/L	14.6	3.11	U	3.11	U	*4.85*	*J*	*5.71*	*J*	3.11	U	3.11	U	3.11	U	3.11	U	*4.38*	*J*
	Arsenic (Total)	6010C	ug/L	0.448	3.59	U	3.59	U	3.59	U	3.59	U	3.59	U	3.59	U	3.59	U	3.59	U	3.59	U
	(Dissolved)	6010C	ug/L	0.448	*3.97*	*J*	3.59	U	3.59	U	3.59	U	3.59	U	3.59	U	3.59	U	3.59	U	3.59	U
	Barium (Total)	6010C	ug/L	7300	28.2		15.6		46.3		14.4		21.6		21.2		19.8		25.4		10.2	
	(Dissolved)	6010C	ug/L	7300	16.9		14.8		11.3		13.7		15.1		14.9		19.2		21.8		*9*	*J*
	Beryllium (Total)	6010C	ug/L	73.0	0.1	U	*1.62*	*J*	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	*0.92*	*J*	0.1	U
	(Dissolved)	6010C	ug/L	73.0	0.1	U	*0.23*	*J*	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
	Cadmium (Total)	6010C	ug/L	18.3	*1.08*	*J*	*0.75*	*J*	*2.32*	*J*	*1.24*	*J*	*0.36*	*J*	0.2	U	*0.63*	*J*	*0.64*	*J*	*0.37*	*J*
	(Dissolved)	6010C	ug/L	18.3	*2.09*	*J*	*1.14*	*J*	*1.11*	*J*	*2.31*	*J*	0.2	U	*0.52*	*J*	*0.64*	*J*	*0.26*	*J*	*0.32*	*J*
	Calcium (Total)	6010C	ug/L	---	273000		263000		342000		312000		47400		38900		59800		38300		110000	
	(Dissolved)	6010C	ug/L	---	263000		271000		333000		373000		49100		37600		61300		34400		107000	
	Chromium (Total)	6010C	ug/L	54800	41.7		13.1		70.7		*6.81*	*J*	15.5		14.2		13.0		*5.63*	*J*	*5.11*	*J*
	(Dissolved)	6010C	ug/L	54800	*4.87*	*J*	*4.67*	*J*	*1.55*	*J*	*4.00*	*J*	*1.61*	*J*	*1.51*	*J*	*1.12*	*J*	1	U	1	U
	Chromium, VI	7196A	ug/L	0.431	4	U	4	U	4	U	4	U	4	U	4	U	4	U	4	U	4	U
	Cobalt (Total)	6010C	ug/L	---	*1.38*	*J*	1	U	*2.23*	*J*	1	U	1	U	1	U	*1.46*	*J*	1	U	*1.89*	*J*
	(Dissolved)	6010C	ug/L	---	1	U	*1.24*	*J*	1	U	1	U	1	U	1	U	1	U	*1.11*	*J*	*1.48*	*J*
	Copper (Total)	6010C	ug/L	1460	14.8		1200		11.8		*8.62*	*J*	11.7		13.3		11.6		1330		20.8	
	(Dissolved)	6010C	ug/L	1460	*7*	*J*	500		10		*5.12*	*J*	10.7		*9.01*	*J*	11.6		93.5		18.8	
	Iron (Total)	6010C	ug/L	25600	511		193		1940		*44.2*	*J*	312		345		*79.6*	*J*	189		40	U
	(Dissolved)	6010C	ug/L	25600	40	U	40	U	40	U	40	U	40	U	40	U	40	U	40	U	40	U
	Lead (Total)	6010C	ug/L	---	1.96	U	1.96	U	*2.55*	*J*	1.96	U	1.96	U	1.96	U	1.96	U	1.96	U	1.96	U
	(Dissolved)	6010C	ug/L	---	1.96	U	1.96	U	1.96	U	1.96	U	1.96	U	1.96	U	1.96	U	1.96	U	1.96	U
	Magnesium (Total)	6010C	ug/L	---	241000		243000		276000		283000		46900		37900		60100		34900		64300	
	(Dissolved)	6010C	ug/L	---	227000		253000		261000		314000		48800		33700		61900		32500		62400	
	Manganese (Total)	6010C	ug/L	876	33.5		*4.73*	*J*	56.7		2	U	*9.26*	*J*	17.5		2	U	25.7		214	
	(Dissolved)	6010C	ug/L	876	*7.45*	*J*	2	U	2	U	2	U	2	U	*8.05*	*J*	2	U	2	U	193	
	Mercury (Total)	7470A	ug/L	0.626	0.068	U	0.068	U	0.068	U	0.068	U	0.068	U	0.068	U	0.068	U	0.068	U	0.068	U
	(Dissolved)	7470A	ug/L	0.626	0.068	U	0.068	U	0.068	U	0.068	U	0.068	U	0.068	U	0.068	U	0.068	U	0.068	U
	Molybdenum	6010C	ug/L	183	*18.9*	*J*	*30.4*	*J*	*12.9*	*J*	*14.2*	*J*	*5.74*	*J*	*7.7*	*J*	*5.45*	*J*	*19.7*	*J*	*17.8*	*J*
	(Dissolved)	6010C	ug/L	183	*19.1*	*J*	*27.6*	*J*	*11*	*J*	*15.7*	*J*	*6.51*	*J*	*7.09*	*J*	*5.53*	*J*	*11.2*	*J*	*16.2*	*J*
	Nickel (Total)	6010C	ug/L	730	*26.3*	*J*	*27.4*	*J*	*29.9*	*J*	1.13	U	*7.89*	*J*	*13.3*	*J*	*8.51*	*J*	*4.08*	*J*	*6.24*	*J*
	(Dissolved)	6010C	ug/L	730	*7.24*	*J*	*28.1*	*J*	*1.64*	*J*	1.13	U	1.13	U	*2.69*	*J*	*1.44*	*J*	*1.79*	*J*	*4.02*	*J*
	Potassium (Total)	6010C	ug/L	---	18900		17900		20500		19000		8680		7440		8440		6040		9780	
	(Dissolved)	6010C	ug/L	---	17500		19200		19200		21200		7870		6770		8450		5950		9460	
	Selenium (Total)	6010C	ug/L	183	*33.2*	*J*	*25.4*	*J*	*37.3*	*J*	*24.5*	*J*	*7.2*	*J*	4.42	U	4.42	U	*5.9*	*J*	113	
	(Dissolved)	6010C	ug/L	183	*33.5*	*J*	*27*	*J*	*29.7*	*J*	*25.4*	*J*	*7.07*	*J*	4.42	U	4.42	U	4.42	U	106	
	Silver (Total)	6010C	ug/L	183	0.7	U	*0.98*	*J*	0.7	U	0.7	U	0.7	U	*1.03*	*J*	0.7	U	0.7	U	0.7	U
	(Dissolved)	6010C	ug/L	183	0.7	U	0.7	U	0.7	U	0.7	U	0.7	U	*1.1*	*J*	0.7	U	0.7	U	0.7	U
	Sodium (Total)	6010C	ug/L	---	2060000		2110000		2790000		2240000		589000		554000		480000		317000		2060000	
	(Dissolved)	6010C	ug/L	---	1970000		1800000		2750000		2560000		602000		510000		475000		325000		1710000	
	Thallium (Total)	6010C	ug/L	0.365	*3.04*	*J*	3.04	U	*3.61*	*J*	3.04	U	3.04	U	3.04	U	3.04	U	3.04	U	3.04	U
	(Dissolved)	6010C	ug/L	0.365	*5.18*	*J*	3.04	U	3.04	U	*5.45*	*J*	3.04	U	*4.91*	*J*	3.04	U	3.04	U	3.04	U
	Titanium (Total)	6010C	ug/L	---	*7.87*	*J*	*2.59*	*J*	*65.1*	*J*	1.2	U	*8.07*	*J*	*5.42*	*J*	*1.4*	*J*	*2.68*	*J*	1.2	U
	(Dissolved)	6010C	ug/L	---	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U
	Vanadium (Total)	6010C	ug/L	183	20.2		*13*	*J*	*16.6*	*J*	*14.2*	*J*	30.6		23.9		36.4		27.3		32.8	
	(Dissolved)	6010C	ug/L	183	*11.8*	*J*	22.3		21.1		*8.78*	*J*	27.2		20.7		35.5		32.2		30.4	
	Zinc (Total)	6010C	ug/L	11,000	45.6		154		33.1		29.6		*18.6*	*J*	32.6		*13.1*	*J*	196		140	
	(Dissolved)	6010C	ug/L	11,000	29.2		78		20.5		34.1		*17.8*	*J*	24.9		26.5		77.7		114	
misc	Perchlorate	6860	ug/L	25.6	3.13		28.2		3.92		2.92		0.409		1.40		0.395		13.1		21.5	
	Acetone	8260B	ug/L	21800	0.193	U	25.6		0.193	U	0.193	U	0.193	U	46.6		0.193	U	290		0.193	U
	Benzene	8260B	ug/L	4.13	0.111	U	*0.244*	*J*	0.111	U	0.111	U	0.111	U	0.111	U	0.111	U	*0.883*	*J*	0.111	U
	Chloromethane	8260B	ug/L	188	0.144	U	2.21		0.144	U	0.144	U	0.144	U	0.144	U	0.144	U	7.74		0.144	U
	Explosives	8330			Explosives were not detected in any ground water samples collected																	

Notes: **Red** indicates exceedance, not necessarily a water quality violation; *italicized* value indicates estimated result between MDL and RL; Greyscale indicates value below detection limit (MDL tabulated); Laboratory: Gulf Coast Analytical Laboratory, Baton Rogue, LA; Sampling performed by Trinity Analysis & Development Corp.

J - Indicates the result is between the MDL and RDL

U - Indicates the compound was analyzed for but not detected

TABLE 6a
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO

DATE	Semiannual Network																			
	SWMU 114								SWMU 130								SWMU 131			
	M114MW001		M114MW002		M114MW003		M114MW004		MAO1MW001		MAO1MW002		MAO1MW003		MAO1MW004		MAO2MW001D		MWQ-23	
	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss
Jan-04																				
Jul-04																				
Jul-05																				
Jun-07																				
Jan-09																				
Jan-10	<D.L.	<D.L.	280	<D.L.	180	<D.L.	<D.L.	<D.L.	410	<D.L.	820	<D.L.	350	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.		
Oct-10	<D.L.	<D.L.	359	<D.L.	<D.L.	<D.L.	45.3	46.7	128	85.2	69.8	<D.L.	334	<D.L.	283	100	<D.L.	<D.L.		
May-11	<D.L.	77.6	78.8	<D.L.	63.6	67.3	<D.L.	<D.L.	276	105	<D.L.	164	111	<D.L.	<D.L.	<D.L.	79.6	<D.L.	<D.L.	<D.L.
Sep-11	100	<D.L.	85.3	<D.L.	200	<D.L.	110	<D.L.	84.3	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.
Nov-12	446	<D.L.	231.0	<D.L.	2790	<D.L.	106	<D.L.	502.0	<D.L.	437.0	<D.L.	81.6	<D.L.	279.0	<D.L.	68.2	<D.L.	92.5	<D.L.
Min	0.0	0.0	78.8	0.0	0.0	0.0	0.0	0.0	84.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max	446.0	77.6	359.0	0.0	2790.0	67.3	110.0	46.7	502.0	105.0	820.0	164.0	350.0	0.0	283.0	100.0	79.6	0.0	92.5	0.0
Avg	109.2	15.5	206.8	0.0	646.7	13.5	52.3	9.3	280.1	38.0	265.4	32.8	175.3	0.0	112.4	20.0	29.6	0.0	30.8	0.0

Notes:

Data in µg/L

NMED SSL Tapwater Screening Level: 36500

Red indicates exceedance

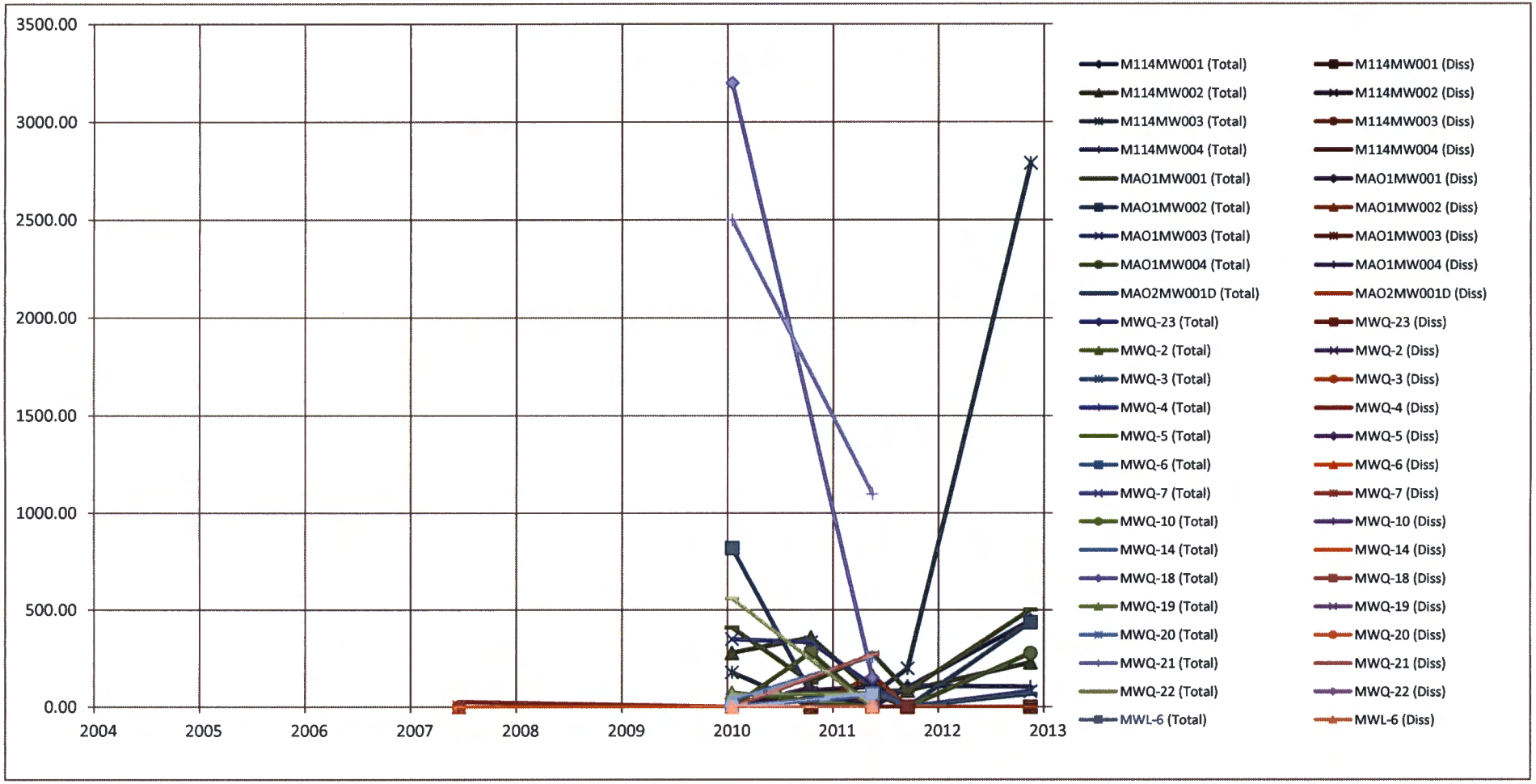
Blank cells indicate no data

Wells MWQ-3, -4, -5, -6, -7, -10, -23, and MWL-6 not sampled after spring 2011

DATE	Annual Network																											
											Background		Background															
	MWQ-2		MWQ-3		MWQ-4		MWQ-5		MWQ-6		MWQ-7		MWQ-10		MWQ-14		MWQ-18		MWQ-19		MWQ-20		MWQ-21		MWQ-22		MWL-6	
	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss
Jan-04																												
Jul-04																												
Jul-05																												
Jun-07		<D.L.		<D.L.		27.0		<D.L.		<D.L.		<D.L.		<D.L.		<D.L.												
Jan-09																												
Jan-10	75	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	3200	<D.L.	64	<D.L.	38	<D.L.	2500	<D.L.	560	<D.L.	<D.L.	<D.L.
Oct-10																												
May-11	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	60.6	<D.L.	153	<D.L.	72.4	<D.L.	261	<D.L.	1100	272	<D.L.	<D.L.	69.7	<D.L.
Sep-11																												
Nov-12																												
Min	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	153.0	0.0	64.0	0.0	38.0	0.0	1100.0	0.0	0.0	0.0	0.0	0.0
Max	75.0	0.0	0.0	0.0	0.0	27.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	60.6	0.0	3200.0	0.0	72.4	0.0	261.0	0.0	2500.0	272.0	560.0	0.0	69.7	0.0
Avg	37.5	0.0	0.0	0.0	0.0	9.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.3	0.0	1676.5	0.0	68.2	0.0	149.5	0.0	1800.0	136.0	280.0	0.0	34.9	0.0

TABLE 6a
ALUMINUM

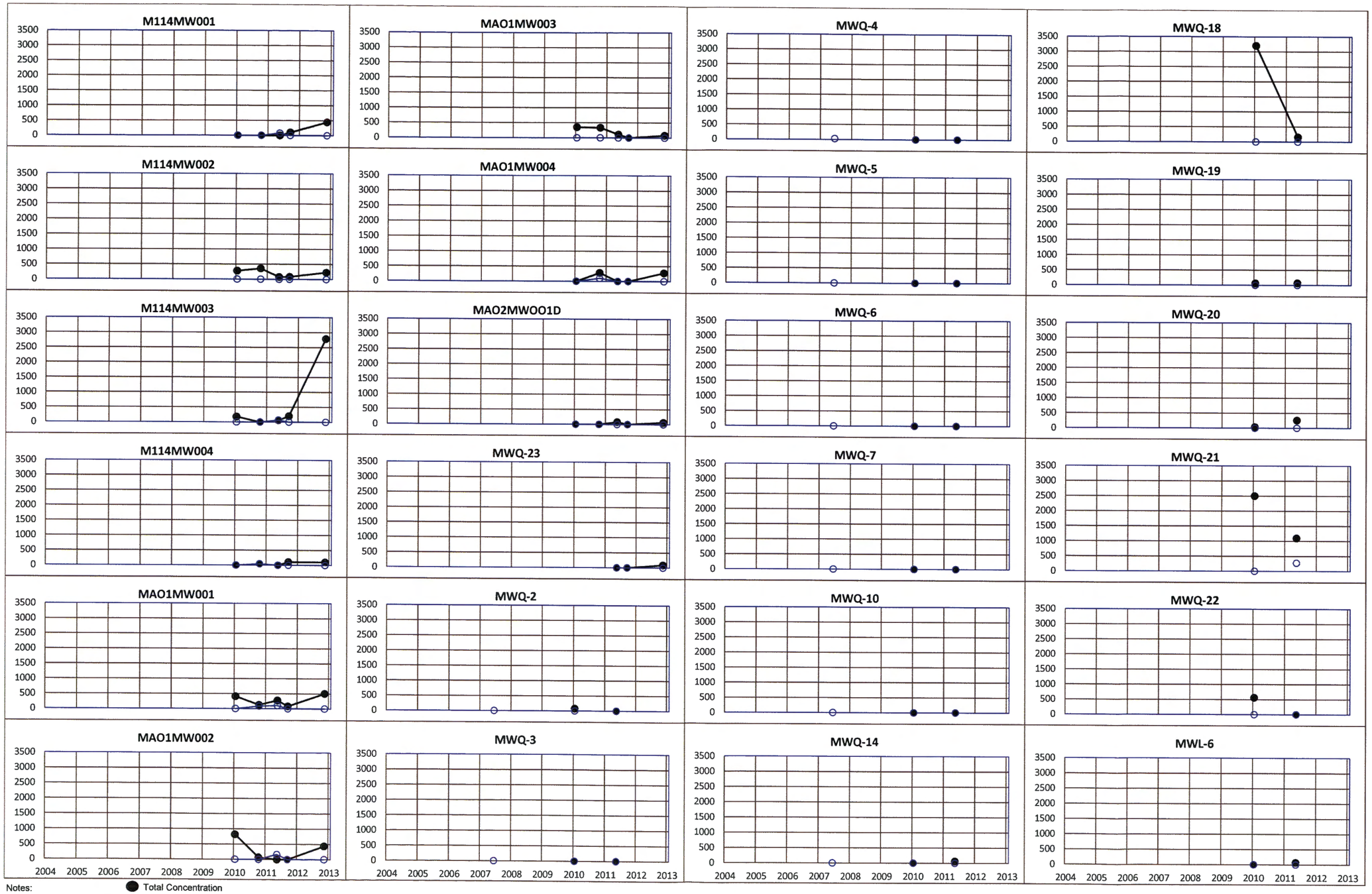
TABLE 6a
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO



Notes:
Data in µg/L

TABLE 6a
ALUMINUM

TABLE 6a
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO



Notes:
Data in µg/L

● Total Concentration
○ Dissolved Concentration

TABLE 6a
ALUMINUM

TABLE 6b
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO

DATE	Semiannual Network																			
	SWMU 114								SWMU 130								SWMU 131			
	M114MW001		M114MW002		M114MW003		M114MW004		MAO1MW001		MAO1MW002		MAO1MW003		MAO1MW004		MAO2MW001D		MWQ-23	
	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss
Jan-04																				
Jul-04																				
Jul-05																				
Jun-07																				
Jan-09		0.59		<D.L.		<D.L.		0.65		0.16		<D.L.		<D.L.		<D.L.		0.89		
Jan-10	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.		
Oct-10	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	6.82	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.		
May-11	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	4.59	<D.L.	<D.L.	102	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.
Sep-11	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	5.29	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.
Nov-12	6.43	<D.L.	4.27	<D.L.	<D.L.	4.85	<D.L.	5.71	<D.L.	<D.L.	3.66	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	4.69	4.38	3.90	<D.L.
Min	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max	6.4	0.6	4.3	0.0	0.0	4.9	6.8	5.7	0.0	0.2	102.0	0.0	5.3	0.0	0.0	0.0	4.7	4.4	3.9	0.0
Avg	1.3	0.1	0.9	0.0	0.0	0.8	1.4	1.8	0.0	0.0	21.1	0.0	1.1	0.0	0.0	0.0	0.9	0.9	1.3	0.0

Notes:
Data in µg/L
NMED SSL Tapwater Screening Level: 14.6
Red indicates exceedance
Blank cells indicate no data
Wells MWQ-3, -4, -5, -6, -7, -10, -23, and MWL-6 not sampled after spring 2011

Due to a preponderance of no detects trends are not plotted

DATE	Annual Network																											
											Background		Background															
	MWQ-2		MWQ-3		MWQ-4		MWQ-5		MWQ-6		MWQ-7		MWQ-10		MWQ-14		MWQ-18		MWQ-19		MWQ-20		MWQ-21		MWQ-22		MWL-6	
	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss
Jan-04		1.9		<D.L.				0.084		0.068				0.056		0.26												
Jul-04		<D.L.		<D.L.				0.16		<D.L.				<D.L.		<D.L.		<D.L.										
Jul-05		<D.L.		<D.L.				0.091						<D.L.		0.36		0.082				0.360		0.11		0.048		<D.L.
Jun-07		0.22		<D.L.		<D.L.		0.11		<D.L.		<D.L.		<D.L.		0.11		0.071				0.500		0.099		0.23		
Jan-09		2.00		<D.L.		<D.L.		<D.L.		<D.L.		<D.L.		<D.L.		<D.L.		<D.L.		<D.L.		0.63		0.88		1.00		0.053
Jan-10	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.
Oct-10																												
May-11	<D.L.	<D.L.	5.7	<D.L.	<D.L.	5.07	<D.L.	4.74	<D.L.	<D.L.	<D.L.	5.98	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	20.3	6	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.
Sep-11																												
Nov-12																												
Min	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max	0.0	2.0	5.7	0.0	0.0	5.1	0.0	4.7	0.0	0.1	0.0	6.0	0.0	0.1	0.0	0.4	0.0	0.1	0.0	0.0	20.3	6.0	0.0	0.9	0.0	1.0	0.0	0.1
Avg	0.0	0.6	2.9	0.0	0.0	1.3	0.0	0.7	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	10.2	1.5	0.0	0.2	0.0	0.3	0.0	0.0

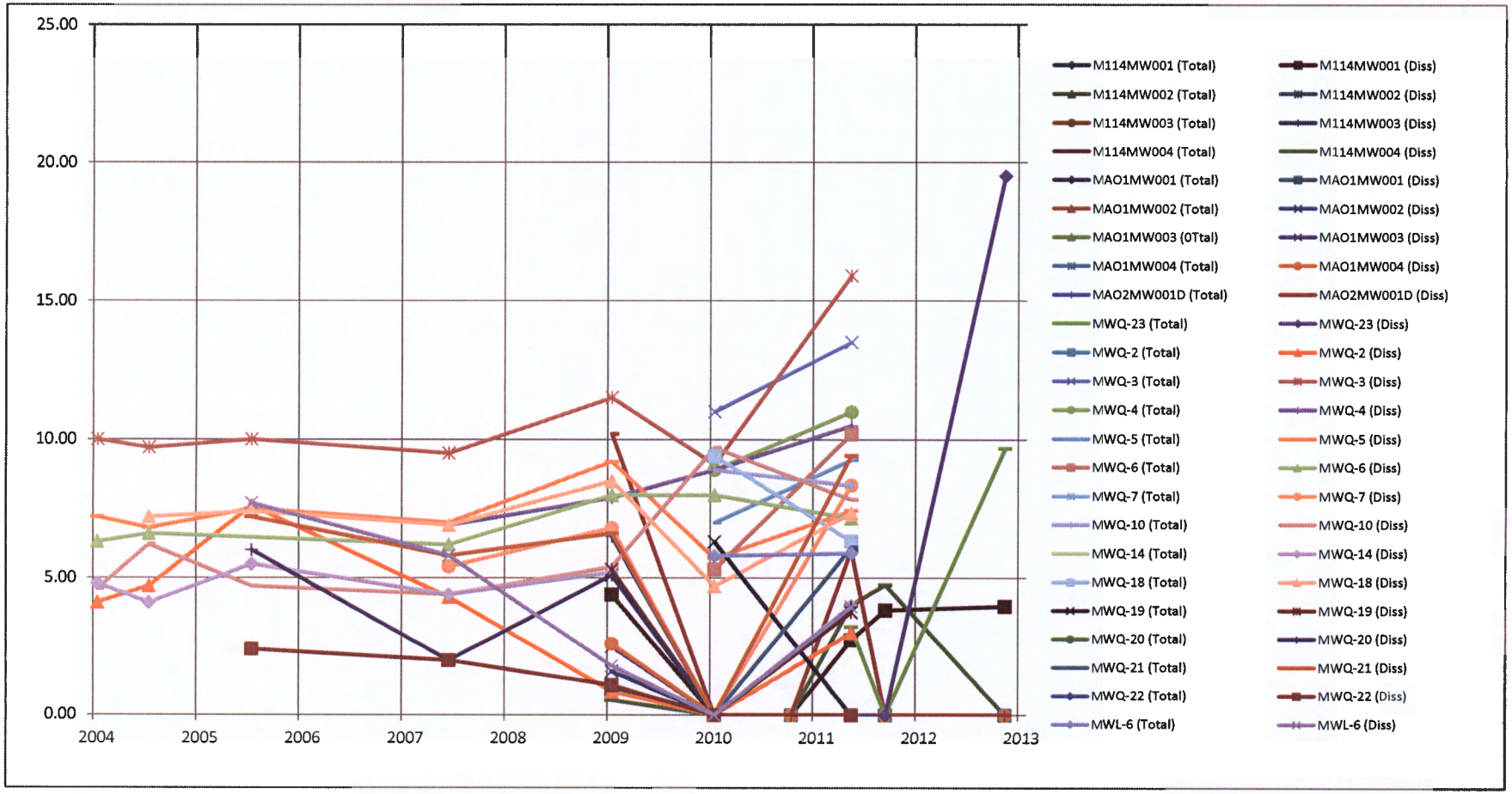
TABLE 6c
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO

DATE	Semiannual Network																			
	SWMU 114								SWMU 130								SWMU 131			
	M114MW001		M114MW002		M114MW003		M114MW004		MAO1MW001		MAO1MW002		MAO1MW003		MAO1MW004		MAO2MW001D		MWQ-23	
	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss
Jan-04																				
Jul-04																				
Jul-05																				
Jun-07																				
Jan-09		4.4		5.1		6.5		0.55		0.96		1.6		2.5		2.6		10.2		
Jan-10	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.		
Oct-10	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.		
May-11	<D.L.	2.74	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	4.01	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	5.99	3.23	<D.L.
Sep-11	<D.L.	3.83	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	4.75	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.
Nov-12	<D.L.	3.97	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	9.68	19.5
Min	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max	0.0	4.4	0.0	5.1	0.0	6.5	0.0	4.8	0.0	1.0	0.0	1.6	0.0	2.5	0.0	2.6	0.0	10.2	9.7	19.5
Avg	0.0	2.5	0.0	0.9	0.0	1.1	0.0	1.6	0.0	0.2	0.0	0.3	0.0	0.4	0.0	0.4	0.0	2.7	4.3	6.5

Notes:
Data in µg/L
NMED SSL Tapwater Screening Level: 0.448
Red indicates exceedance
Blank cells indicate no data
Wells MWQ-3, -4, -5, -6, -7, -10, -23, and MWL-6 not sampled after spring 2011

DATE	Annual Network																											
											Background		Background															
	MWQ-2		MWQ-3		MWQ-4		MWQ-5		MWQ-6		MWQ-7		MWQ-10		MWQ-14		MWQ-18		MWQ-19		MWQ-20		MWQ-21		MWQ-22		MWL-6	
	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss
Jan-04		4.10		10.0				7.20		6.30				4.60		4.80												
Jul-04		4.7		9.7				6.8		6.6				6.2		4.1		7.2										
Jul-05		7.6		10.0				7.5						4.7		5.5		7.4				6.0		7.2		2.4		7.7
Jun-07		4.3		9.5		6.9		7.0		6.2		5.4		4.4		4.4		6.9				2.0		5.8		2.0		5.8
Jan-09		0.87		11.5		7.9		9.2		8.0		6.8		5.4		5.2		8.5		5.3		5.1		6.6		1.1		1.8
Jan-10	<D.L.	<D.L.	11	9.1	8.9	8.9	7.0	5.7	5.3	8	<D.L.	<D.L.	8.9	9.7	<D.L.	<D.L.	9.4	4.7	6.3	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	5.800	<D.L.
Oct-10																												
May-11	<D.L.	3	13.5	15.9	11	10.5	9.27	7.43	10.2	7.16	3.8	8.35	8.34	7.83	<D.L.	3.99	6.33	7.34	<D.L.	3.75	<D.L.	3.95	6.1	9.41	<D.L.	<D.L.	5.89	3.95
Sep-11																												
Nov-12																												
Min	0.0	0.0	11.0	9.1	8.9	6.9	7.0	5.7	5.3	6.2	0.0	0.0	8.3	4.4	0.0	0.0	6.3	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.8	0.0
Max	0.0	7.6	13.5	15.9	11.0	10.5	9.3	9.2	10.2	8.0	3.8	8.4	8.9	9.7	0.0	5.5	9.4	8.5	6.3	5.3	0.0	6.0	6.1	9.4	0.0	2.4	5.9	7.7
Avg	0.0	3.5	12.3	10.8	10.0	8.6	8.1	7.3	7.8	7.0	1.9	5.1	8.6	6.1	0.0	4.0	7.9	7.0	3.2	3.0	0.0	3.4	3.1	5.8	0.0	1.1	5.8	3.9

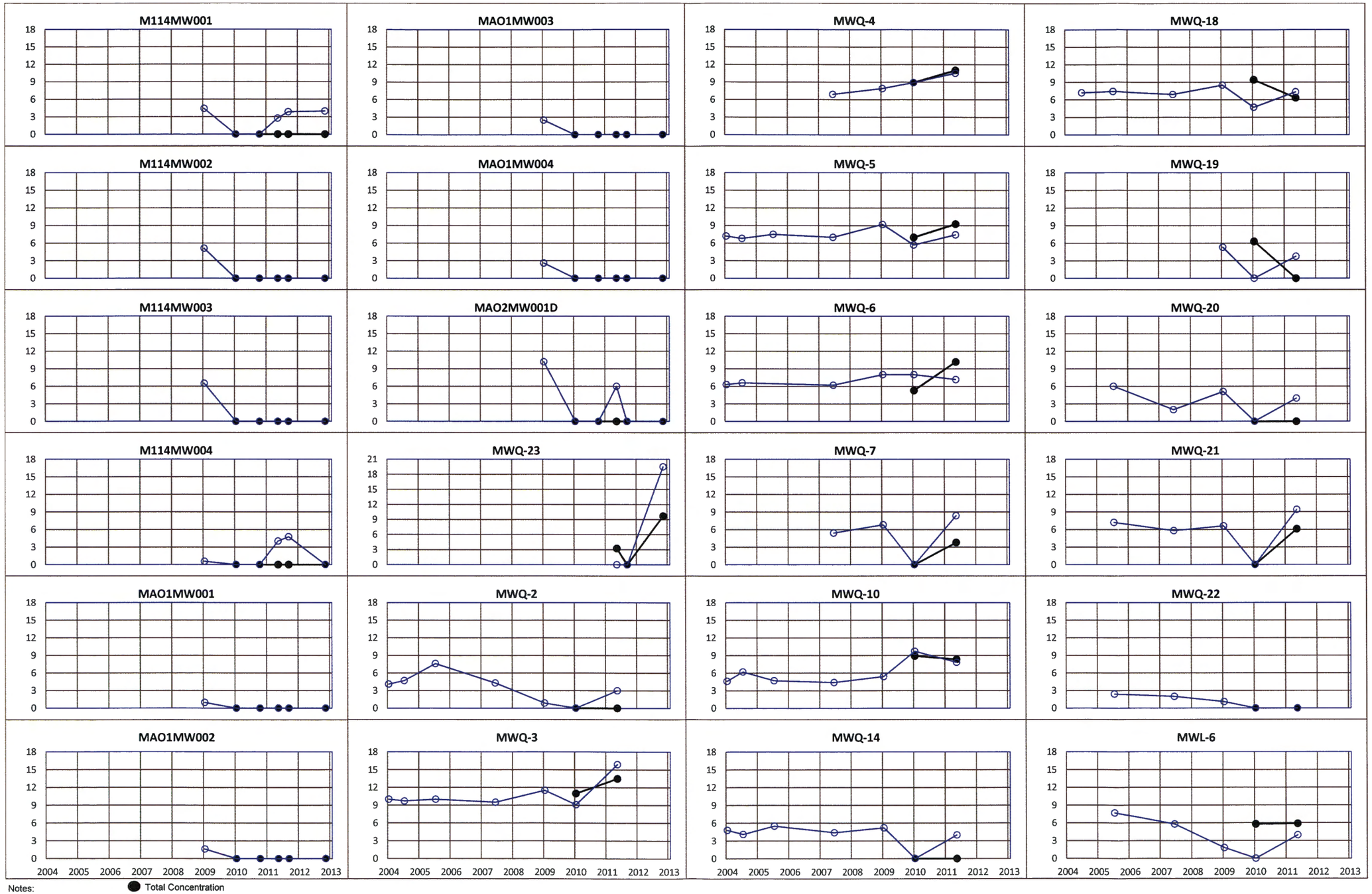
TABLE 6c
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO



Notes:
Data in µg/L

TABLE 6c
ARSENIC

TABLE 6c
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO



Notes:
Data in µg/L

● Total Concentration
○ Dissolved Concentration

TABLE 6c
ARSENIC

TABLE 6d
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO

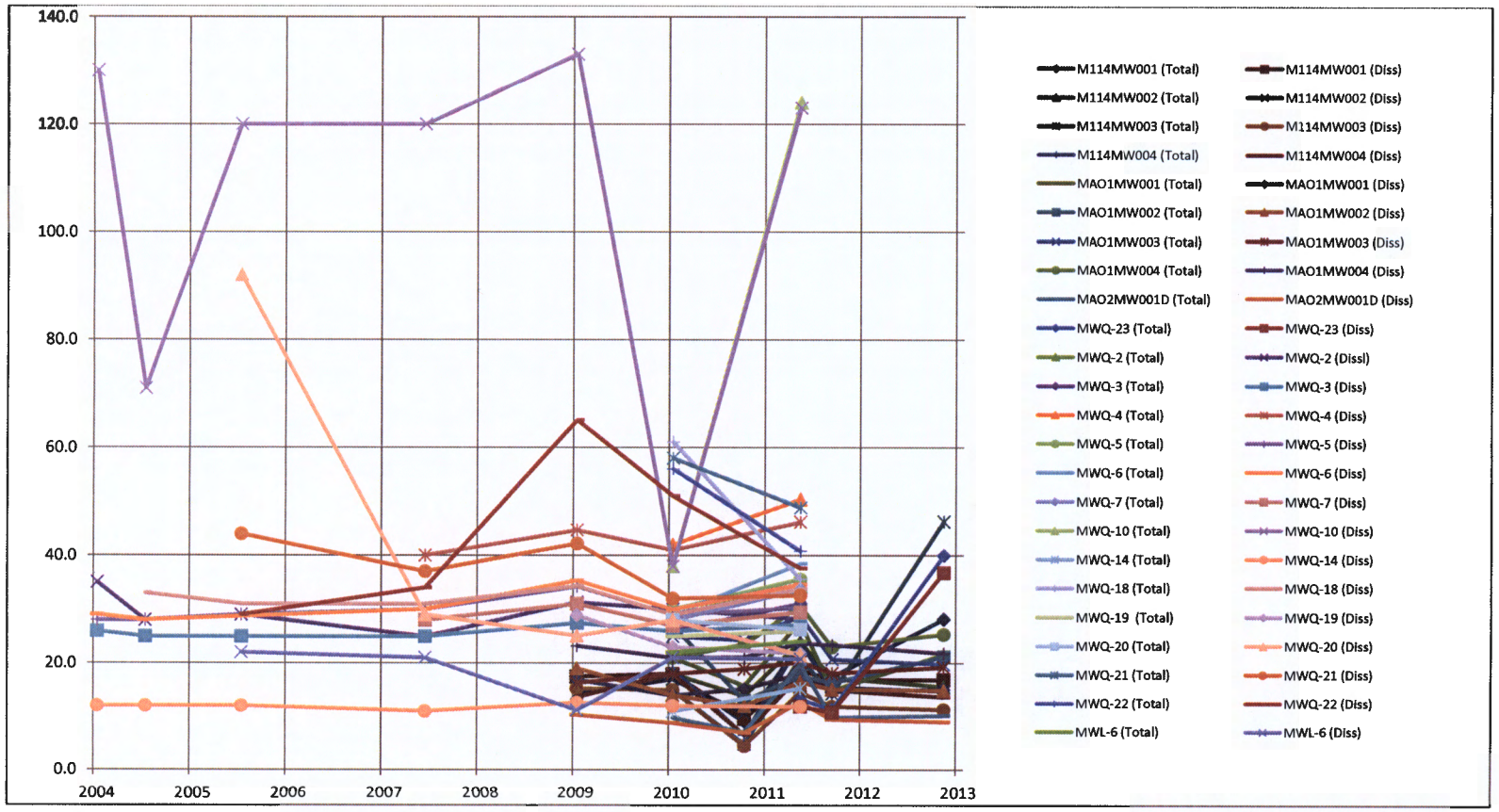
DATE	Semiannual Network																			
	SWMU 114								SWMU 130								SWMU 131			
	M114MW001		M114MW002		M114MW003		M114MW004		MAO1MW001		MAO1MW002		MAO1MW003		MAO1MW004		MAO2MW001D		MWQ-23	
	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss
Jan-04																				
Jul-04																				
Jul-05																				
Jun-07																				
Jan-09		17.5		14.3		15.3		13.7		16.9		19.0		16.3		23.2		10.3		
Jan-10	18	18	18	17	15	15	19	18	21	14	27	14	25	18	21	21	9.8	8.8		
Oct-10	9.01	9.58	13.9	10.6	4.82	4.49	6.49	6.58	15.8	15.2	13	12	24.3	18.9	23.5	21.1	7.06	6.97		
May-11	23.7	18.7	23.9	17.5	20.9	14.6	23.8	17.8	27.8	18.0	17.6	16.5	28.8	20.2	30.7	23.7	19.8	12.7	13.3	11.9
Sep-11	17.4	16.9	17.3	15.5	14.3	11.9	15.2	15.0	14.9	14.7	16.3	15.1	20.7	18.1	23.0	23.4	9.8	9.4	11.3	10.8
Nov-12	28.2	16.9	15.6	14.8	46.3	11.3	14.4	13.7	21.6	15.1	21.2	14.9	19.8	19.2	25.4	21.8	10.2	9.0	40.0	36.8
Min	9.0	9.6	13.9	10.6	4.8	4.5	6.5	6.6	14.9	14.0	13.0	12.0	19.8	16.3	21.0	21.0	7.1	7.0	11.3	10.8
Max	28.2	18.7	23.9	17.5	46.3	15.3	23.8	18.0	27.8	18.0	27.0	19.0	28.8	20.2	30.7	23.7	19.8	12.7	40.0	36.8
Avg	19.3	16.3	17.7	15.0	20.3	12.1	15.8	14.1	20.2	15.7	19.0	15.3	23.7	18.5	24.7	22.4	11.3	9.5	21.5	19.8

Notes:
Data in µg/L
NMED SSL Tapwater Screening Level: 7300
Red indicates exceedance
Blank cells indicate no data
Wells MWQ-3, -4, -5, -6, -7, -10, -23, and MWL-6 not sampled after spring 2011

DATE	Annual Network																											
											Background		Background															
	MWQ-2		MWQ-3		MWQ-4		MWQ-5		MWQ-6		MWQ-7		MWQ-10		MWQ-14		MWQ-18		MWQ-19		MWQ-20		MWQ-21		MWQ-22		MWL-6	
	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss
Jan-04		35		26				28		29				130		12												
Jul-04		28		25				28		28				71		12		33										
Jul-05		29		25				29						120		12		31				92		44		29		22
Jun-07		25		25		40		30		30		28		120		11		31				29		37		34		21
Jan-09		31.3		27.5		44.7		34.2		35.3		31.0		133		12.6		34.3		28.9		25.1		42.2		65.1		11.2
Jan-10	30	30	26	26	42	41.0	30	29	29	30	28	27	38	38	11	12	61	29	25	23	28	28	58	32	56	51	22	21
Oct-10																												
May-11	34.3	28.2	31.1	27.2	50.4	46.2	35.6	30.3	38.5	34.6	33.7	29.5	124	123	15.3	11.9	35.6	33.8	26.0	21.8	26.3	21.5	48.9	32.6	40.8	37.6	24.1	20.8
Sep-11																												
Nov-12																												
Min	30.0	25.0	26.0	25.0	42.0	40.0	30.0	28.0	29.0	28.0	28.0	27.0	38.0	38.0	11.0	11.0	35.6	29.0	25.0	21.8	26.3	21.5	48.9	32.0	40.8	29.0	22.0	11.2
Max	34.3	35.0	31.1	27.5	50.4	46.2	35.6	34.2	38.5	35.3	33.7	31.0	124.0	133.0	15.3	12.6	61.0	34.3	26.0	28.9	28.0	92.0	58.0	44.0	56.0	65.1	24.1	22.0
Avg	32.2	29.5	28.6	26.0	46.2	43.0	32.8	29.8	33.8	31.2	30.9	28.9	81.0	105.0	13.2	11.9	48.3	32.0	25.5	24.6	27.2	39.1	53.5	37.6	48.4	43.3	23.1	19.2

TABLE 6d
BARIUM

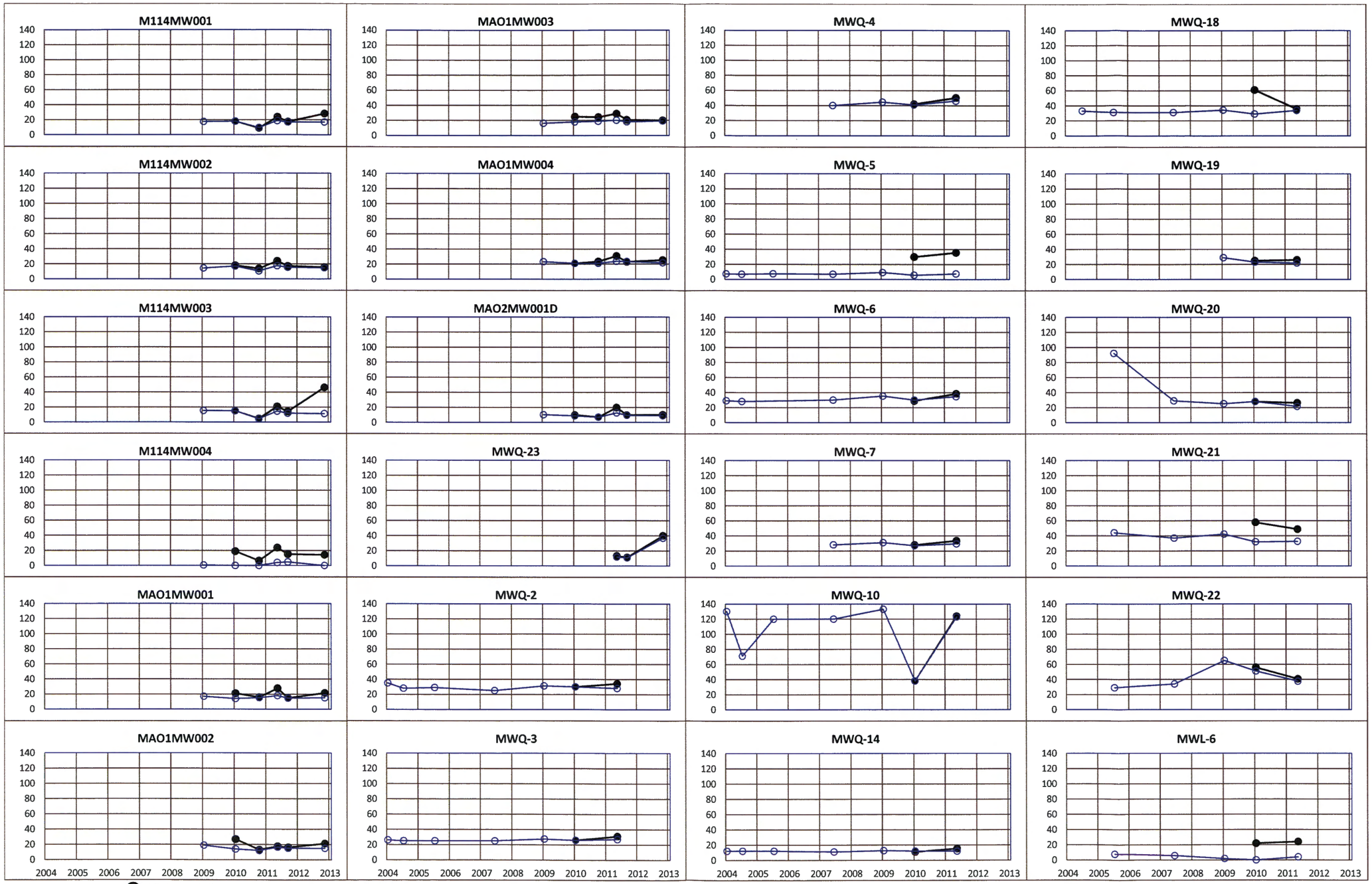
TABLE 6d
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO



Notes:
Data in µg/L

TABLE 6d
BARIUM

TABLE 6d
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO



Notes:
Data in µg/L

● Total Concentration
○ Dissolved Concentration

TABLE 6d
BARIUM

TABLE 6e
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO

DATE	Semiannual Network																			
	SWMU 114								SWMU 130								SWMU 131			
	M114MW001		M114MW002		M114MW003		M114MW004		MAO1MW001		MAO1MW002		MAO1MW003		MAO1MW004		MAO2MW001D		MWQ-23	
	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss
Jan-04																				
Jul-04																				
Jul-05																				
Jun-11																				
Jan-09				0.054		0.051														
Jan-10	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.		
Oct-10	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.		
May-11	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.
Sep-11	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.
Nov-12	<D.L.	<D.L.	1.6	0.2	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	0.9	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.
Min	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max	0.0	0.0	1.6	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0
Avg	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0

Data in µg/L

NMED SSL Tapwater Screening Level: 73

Red indicates exceedance

Blank cells indicate no data

Wells MWQ-3, -4, -5, -6, -7, -10, -23, and MWL-6 not sampled after spring 2011

Due to a preponderance of no detects trends are not plotted

DATE	Annual Network																											
											Background		Background															
	MWQ-2		MWQ-3		MWQ-4		MWQ-5		MWQ-6		MWQ-7		MWQ-10		MWQ-14		MWQ-18		MWQ-19		MWQ-20		MWQ-21		MWQ-22		MWL-6	
	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss
Jan-04		0.33		<D.L.				<D.L.		<D.L.				<D.L.		<D.L.												
Jul-04		<D.L.		<D.L.				<D.L.		<D.L.				<D.L.		<D.L.		<D.L.										
Jul-05		<D.L.		<D.L.				<D.L.						<D.L.		<D.L.		<D.L.				<D.L.		<D.L.		<D.L.		<D.L.
Jun-11																												
Jan-09		0.044		0.051						<D.L.		<D.L.		<D.L.		0.041		<D.L.		0.048		<D.L.		<D.L.		<D.L.		<D.L.
Jan-10	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.
Oct-10																												
May-11	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.
Sep-11																												
Nov-12																												
Min	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max	0.0	0.3	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Avg	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TABLE 6e
BERYLLIUM

TABLE 6f
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO

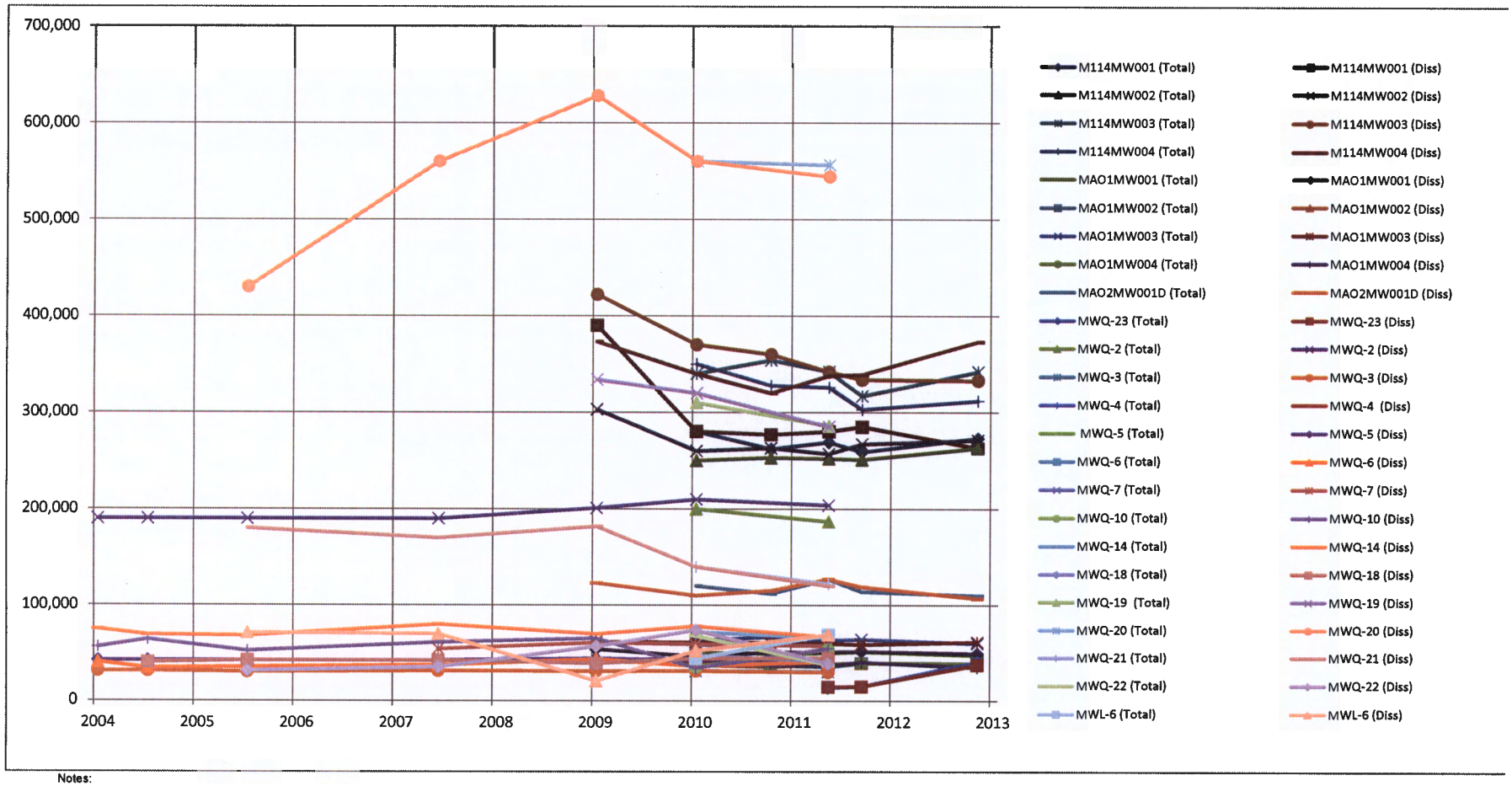
DATE	Semiannual Network																			
	SWMU 114								SWMU 130								SWMU 131			
	M114MW001		M114MW002		M114MW003		M114MW004		MAO1MW001		MAO1MW002		MAO1MW003		MAO1MW004		MAO2MW001D		MWQ-23	
	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss
Jan-04																				
Jul-04																				
Jul-05																				
Jun-07																				
Jan-09		390,000		303,000		422,000		373,000		53,500		44,000		61,200		44,000		123,000		
Jan-10	280,000	280,000	250,000	260,000	340,000	370,000	350,000	340,000	50,000	46,000	41,000	37,000	63,000	61,000	41,000	42,000	120,000	110,000		
Oct-10	262,000	277,000	253,000	263,000	354,000	360,000	328,000	320,000	49,100	50,300	36,900	35,200	66,600	60,700	37,400	36,600	111,900	115,000		
May-11	269,000	280,000	252,000	257,000	342,000	342,000	326,000	338,000	49,700	50,800	35,100	37,400	63,100	59,600	38,200	36,800	127,000	127,000	13,600	14,400
Sep-11	259,000	285,000	251,000	267,000	317,000	334,000	303,000	339,000	51,000	51,300	39,000	39,100	64,100	58,600	39,300	39,900	114,000	119,000	14,700	14,700
Nov-12	273,000	263,000	263,000	271,000	342,000	333,000	312,000	373,000	47,400	49,100	38,900	37,600	59,800	61,300	38,300	34,400	110,000	107,000	40,400	37,200
Min	259000	263000	250000	257000	317000	333000	303000	320000	47400	46000	35100	35200	59800	58600	37400	34400	110000	107000	13600	14400
Max	280000	390000	263000	303000	354000	422000	350000	373000	51000	53500	41000	44000	66600	61300	41000	44000	127000	127000	40400	37200
Avg	268600	295833	253800	270167	339000	360167	323800	347167	49440	50167	38180	38383	63320	60400	38840	38950	116580	116833	22900	22100

Notes:
Data in µg/L
NMED SSL Tapwater Screening Level: —
Red indicates exceedance
Blank cells indicate no data
Wells MWQ-3, -4, -5, -6, -7, -10, -23, and MWL-6 not sampled after spring 2011

DATE	Annual Network																											
											Background		Background															
	MWQ-2		MWQ-3		MWQ-4		MWQ-5		MWQ-6		MWQ-7		MWQ-10		MWQ-14		MWQ-18		MWQ-19		MWQ-20		MWQ-21		MWQ-22		MWL-6	
	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss
Jan-04		190,000		31,000				42,000		40,000				56,000		75,000												
Jul-04		190,000		31,000				42,000		34,000				64,000		69,000		40,000										
Jul-05		190,000		30,000				42,000						52,000		68,000		42,000				430,000		180,000		31,000		71,000
Jun-07		190,000		31,000		42,000		42,000		37,000		54,000		61,000		80,000		42,000				560,000		170,000		35,000		70,000
Jan-09		201,000		30,700		39,800		43,800		42,900		60,500		65,300		69,900		38,800		334,000		628,000		182,000		56,600		20,500
Jan-10	200,000	210,000	31,000	31,000	42,000	41,000	43,000	42,000	36,000	36,000	58,000	59,000	35,000	34,000	72,000	78,000	47,000	44,000	310,000	320,000	560,000	560,000	140,000	140,000	68,000	74,000	44,000	52,000
Oct-10																												
May-11	187,000	204,000	30,200	29,600	42,300	42,300	42,500	40,800	40,800	40,600	57,600	57,200	53,600	54,300	65,900	66,700	41,200	44,400	286,000	285,000	556,000	544,000	122,000	120,000	37,300	38,500	69,200	69,200
Sep-11																												
Nov-12																												
Min	187000	190000	30200	29600	42000	39800	42500	40800	36000	34000	57600	54000	35000	34000	65900	66700	41200	38800	286000	285000	556000	430000	122000	120000	37300	31000	44000	20500
Max	200000	210000	31000	31000	42300	42300	43000	43800	40800	42900	58000	60500	53600	65300	72000	80000	47000	44400	310000	334000	560000	628000	140000	182000	68000	74000	69200	71000
Avg	193500	196429	30600	30614	42150	41275	42750	42086	38400	38417	57800	57675	44300	55229	68950	72371	44100	41867	298000	313000	558000	544400	131000	158400	52650	47020	56600	56540

TABLE 6f
CALCIUM

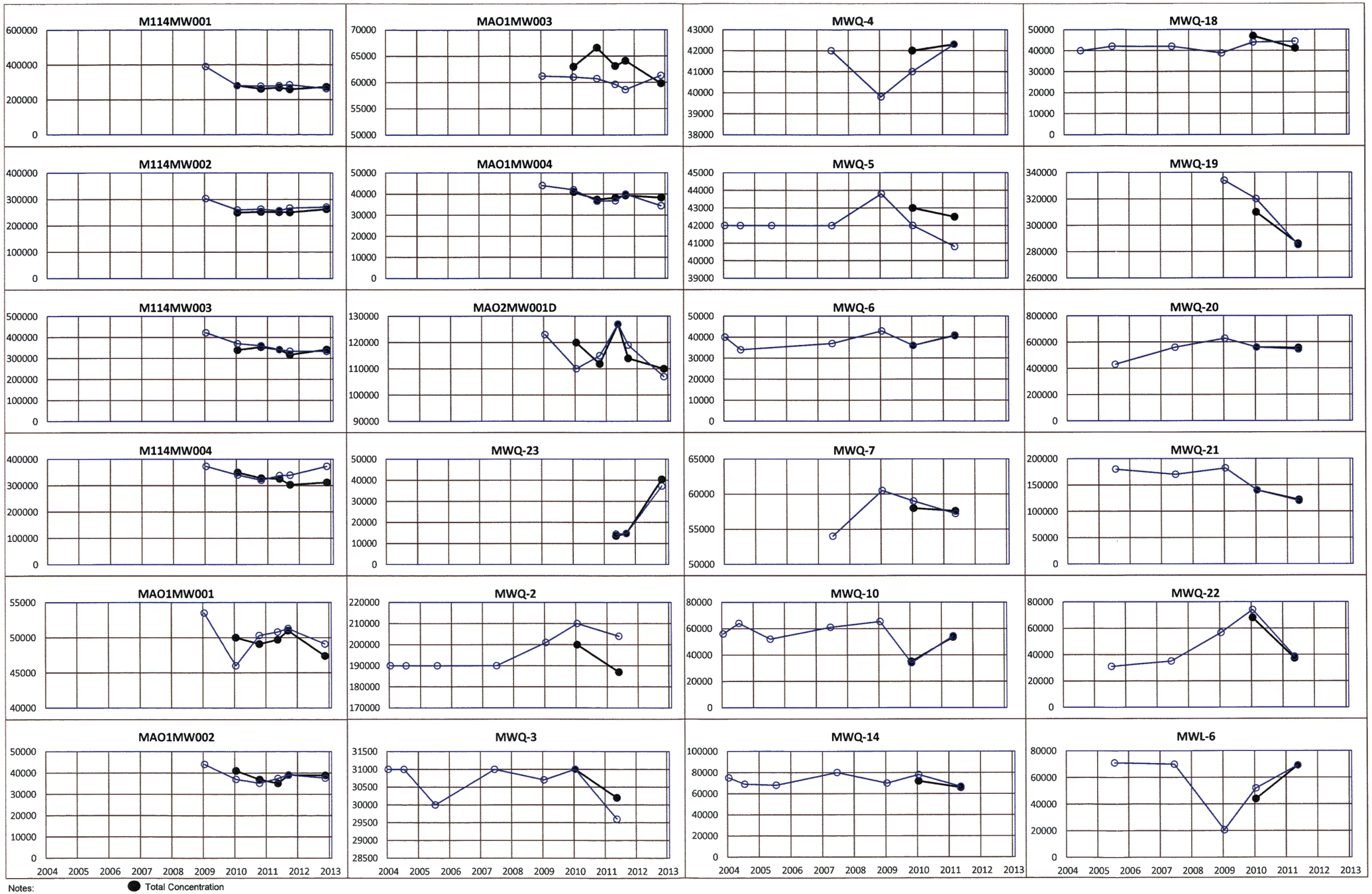
TABLE 6f
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO



Notes:
Data in µg/L

TABLE 6f
CALCIUM

TABLE 6f
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO



Notes:
Data in µg/L

● Total Concentration
○ Dissolved Concentration

TABLE 6f
CALCIUM

TABLE 6g
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES NEW MEXICO

DATE	Semiannual Network																			
	SWMU 114								SWMU 130								SWMU 131			
	M114MW001		M114MW002		M114MW003		M114MW004		MAO1MW001		MAO1MW002		MAO1MW003		MAO1MW004		MAO2MW001D		MWQ-23	
	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss
Jan-04																				
Jul-04																				
Jul-05																				
Jun-07																				
Jan-09		2.80		5.30		0.13		5.60		0.92		3.20		0.16		1.40				
Jan-10	1.0	1.1	0.95	0.96	1.2	1.4	1.3	1.0	0.47	<D.L.	<D.L.	<D.L.	0.53	0.50	<D.L.	<D.L.	0.69	0.58		
Oct-10	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.		
May-11	0.31	0.88	<D.L.	0.69	<D.L.	0.81	0.35	0.90	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.
Sep-11	1.16	1.19	1.37	1.12	1.53	1.23	1.58	1.40	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.
Nov-12	1.08	2.09	0.75	1.14	2.32	1.11	1.24	2.31	0.36	<D.L.	<D.L.	0.52	0.63	0.64	0.64	0.26	0.37	0.32	1.49	1.21
Min	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max	1.2	2.8	1.4	5.3	2.3	1.4	1.6	5.6	0.5	0.9	0.0	3.2	0.6	0.6	0.6	1.4	0.7	0.6	1.5	1.2
Avg	0.7	1.3	0.6	1.5	1.0	0.8	0.9	1.9	0.2	0.2	0.0	0.6	0.2	0.2	0.1	0.3	0.2	0.2	0.5	0.4

Notes:

Data in µg/L

NMED SSL Tapwater Screening Level: 18.3

Red indicates exceedance

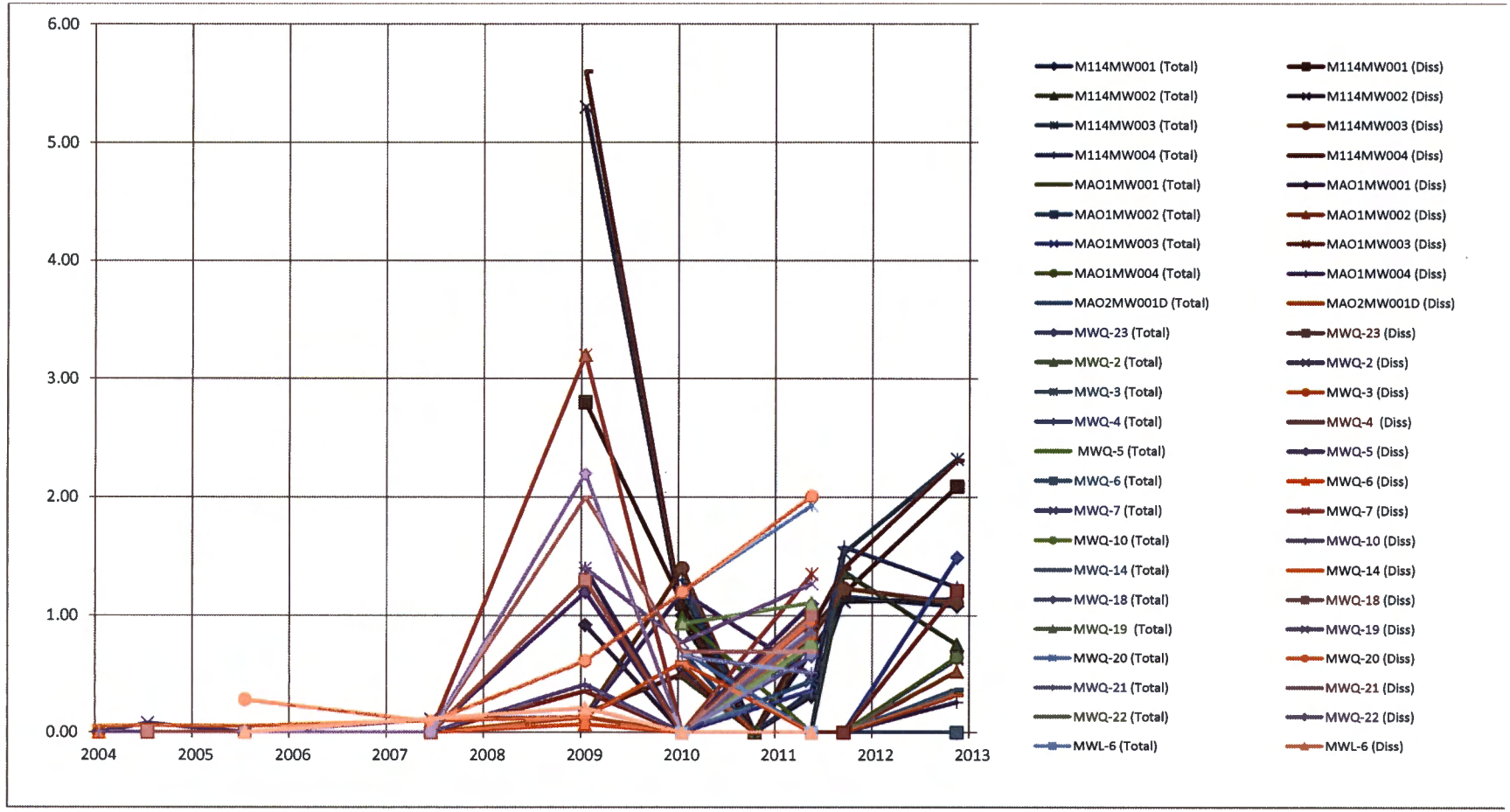
Blank cells indicate no data

Wells MWQ-3, -4, -5, -6, -7, -10, -23, and MWL-6 not sampled after spring 2011

DATE	Annual Network																											
											Background		Background															
	MWQ-2		MWQ-3		MWQ-4		MWQ-5		MWQ-6		MWQ-7		MWQ-10		MWQ-14		MWQ-18		MWQ-19		MWQ-20		MWQ-21		MWQ-22		MWL-6	
	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss
Jan-04		<D.L.		<D.L.				<D.L.		<D.L.				<D.L.		0.053												
Jul-04		0.078		<D.L.				<D.L.		<D.L.				<D.L.		0.059		<D.L.										
Jul-05		<D.L.		<D.L.				<D.L.						<D.L.		0.053		<D.L.				0.28		<D.L.		<D.L.		<D.L.
Jun-07		0.11		<D.L.		<D.L.		<D.L.		<D.L.		<D.L.		<D.L.		0.10		<D.L.				0.091		<D.L.		<D.L.		
Jan-09		0.13		0.13		0.35		1.20		0.07		3.20		0.41		0.13		1.30		1.40		0.61		2.00		2.20		0.21
Jan-10	0.98	1.2	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	0.70	0.60	<D.L.	<D.L.	0.93	0.77	1.2	1.2	0.65	0.69	<D.L.	<D.L.	<D.L.	<D.L.
Oct-10																												
May-11	<D.L.	0.49	0.44	0.83	0.36	0.94	0.76	1.1	0.72	0.96	0.87	1.35	0.73	0.86	<D.L.	<D.L.	0.65	1.01	1.11	1.27	1.93	2.01	0.51	0.69	<D.L.	<D.L.	<D.L.	<D.L.
Sep-11																												
Nov-12																												
Min	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.8	1.2	0.1	0.5	0.0	0.0	0.0	0.0	0.0
Max	1.0	1.2	0.4	0.8	0.4	0.9	0.8	1.2	0.7	1.0	0.9	3.2	0.7	0.9	0.7	0.6	0.7	1.3	1.1	1.4	1.9	2.0	0.7	2.0	0.0	2.2	0.0	0.2
Avg	0.5	0.3	0.2	0.1	0.2	0.3	0.4	0.3	0.4	0.2	0.4	1.1	0.4	0.2	0.4	0.1	0.3	0.4	1.0	1.1	1.6	0.8	0.6	0.7	0.0	0.4	0.0	0.1

TABLE 6g
CADMIUM

TABLE 6g
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES NEW MEXICO

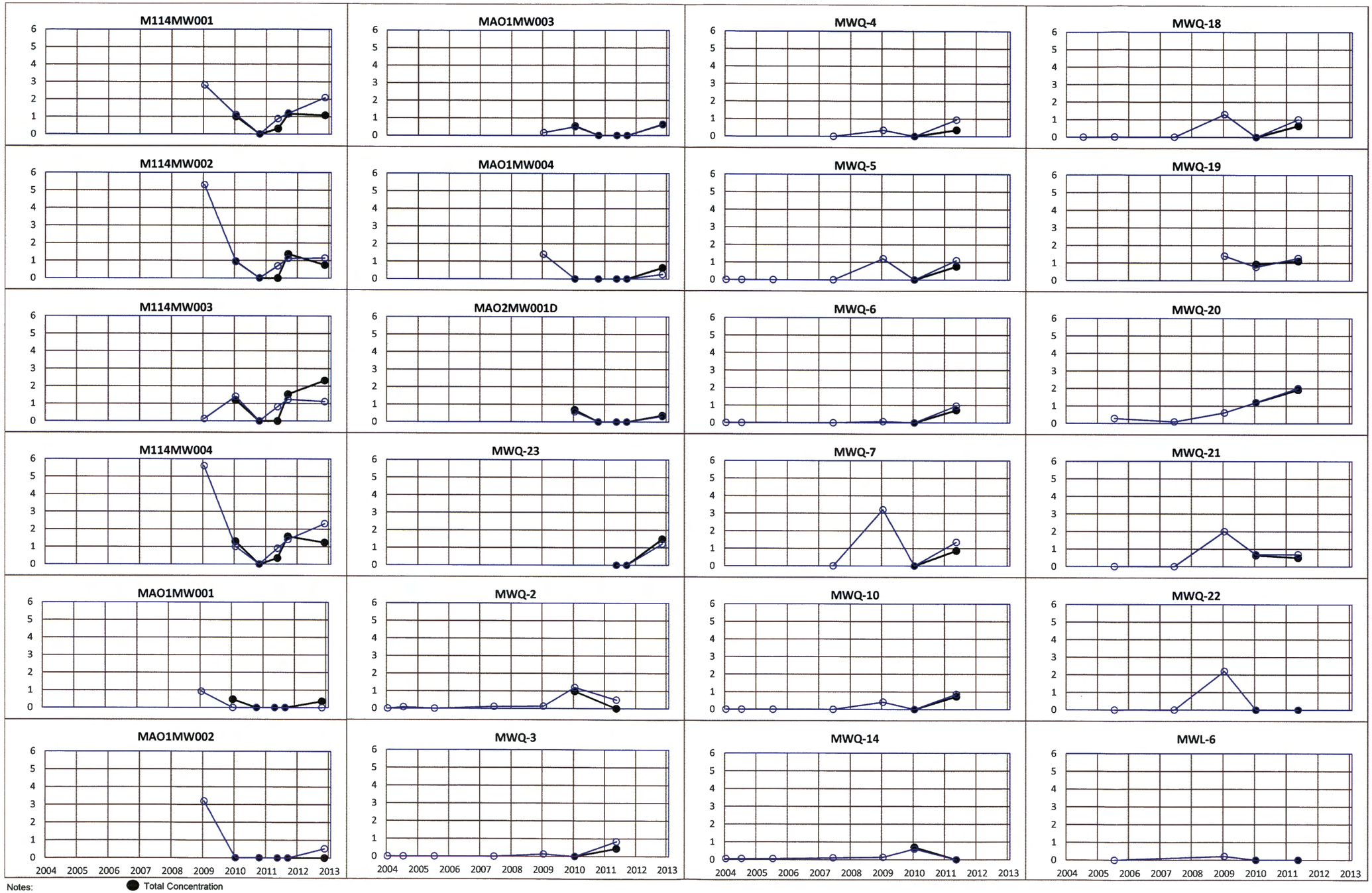


Notes:

Data in µg/L

TABLE 6g
CADMIUM

TABLE 6g
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO



Notes:
Data in µg/L

● Total Concentration
○ Dissolved Concentration

TABLE 6g
CADMIUM

TABLE 6h
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO

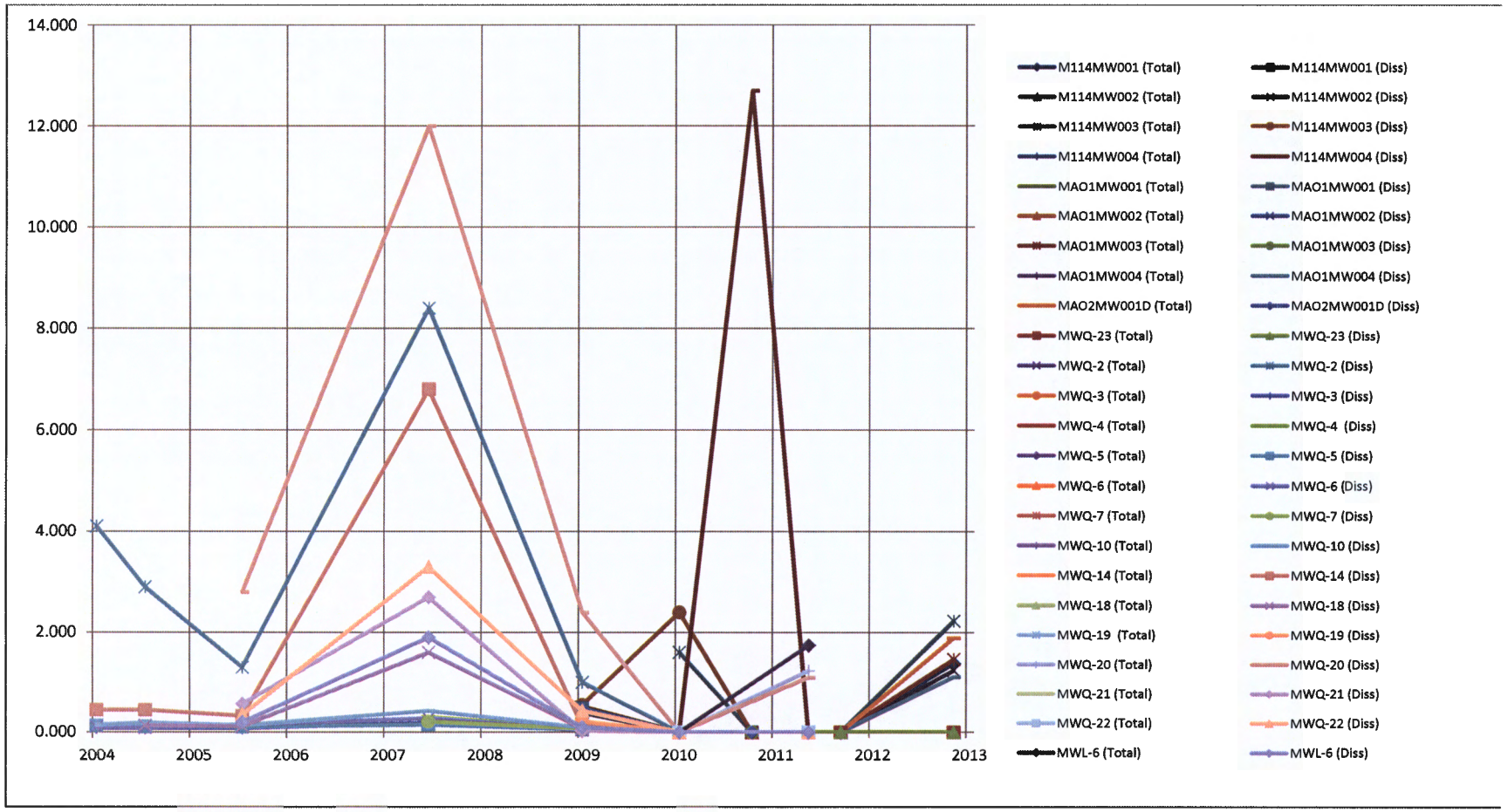
DATE	Semiannual Network																			
	SWMU 114								SWMU 130								SWMU 131			
	M114MW001		M114MW002		M114MW003		M114MW004		MAO1MW001		MAO1MW002		MAO1MW003		MAO1MW004		MAO2MW001D		MWQ-23	
	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss
Jan-04																				
Jul-04																				
Jul-05																				
Jun-07																				
Jan-09		0.50		0.39		0.55		0.52		0.48		0.18		0.077		0.12		0.46		
Jan-10	<D.L.	<D.L.	<D.L.	<D.L.	1.6	2.4	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.		
Oct-10	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	12.7	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.		
May-11	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.
Sep-11	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.
Nov-12	1.38	<D.L.	<D.L.	1.24	2.23	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	1.46	<D.L.	<D.L.	1.11	1.89	1.48	<D.L.	<D.L.
Min	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max	1.4	0.5	0.0	1.2	2.2	2.4	0.0	12.7	0.0	0.5	0.0	0.2	1.5	0.1	0.0	1.1	1.9	1.5	0.0	0.0
Avg	0.3	0.1	0.0	0.3	0.8	0.5	0.0	2.2	0.0	0.1	0.0	0.0	0.3	0.0	0.0	0.2	0.4	0.3	0.0	0.0

Notes:
Data in µg/L
NMED SSL Tapwater Screening Level: —
Red indicates exceedance
Blank cells indicate no data
Wells MWQ-3, -4, -5, -6, -7, -10, -23, and MWL-6 not sampled after spring 2011

DATE	Annual Network																											
											Background		Background															
	MWQ-2		MWQ-3		MWQ-4		MWQ-5		MWQ-6		MWQ-7		MWQ-10		MWQ-14		MWQ-18		MWQ-19		MWQ-20		MWQ-21		MWQ-22		MWL-6	
	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss
Jan-04		4.1		0.084				0.13		0.11				0.15		0.45												
Jul-04		2.9		0.082				0.11		0.09				0.19		0.45		0.14										
Jul-05		1.3		0.082				0.11						0.14		0.33		0.120				2.80		0.57		0.35		0.20
Jun-07		8.4		0.19		0.30		0.15		0.28		0.21		0.43		6.8		1.6				12		2.7		3.3		1.9
Jan-09		1.0		0.043		0.07		0.052		0.047		0.072		0.091		0.13		0.071		0.220		2.4		0.03		0.43		0.097
Jan-10	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.
Oct-10																												
May-11	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	1.23	1.10	<D.L.	<D.L.	<D.L.	<D.L.	1.74	<D.L.
Sep-11																												
Nov-12																												
Min	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max	0.0	8.4	0.0	0.2	0.0	0.3	0.0	0.2	0.0	0.3	0.0	0.2	0.0	0.4	0.0	6.8	0.0	1.6	0.0	0.2	1.2	12.0	0.0	2.7	0.0	3.3	1.7	1.9
Avg	0.0	2.5	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.0	1.2	0.0	0.3	0.0	0.1	0.6	3.7	0.0	0.7	0.0	0.8	0.9	0.4

TABLE 6h
COBALT

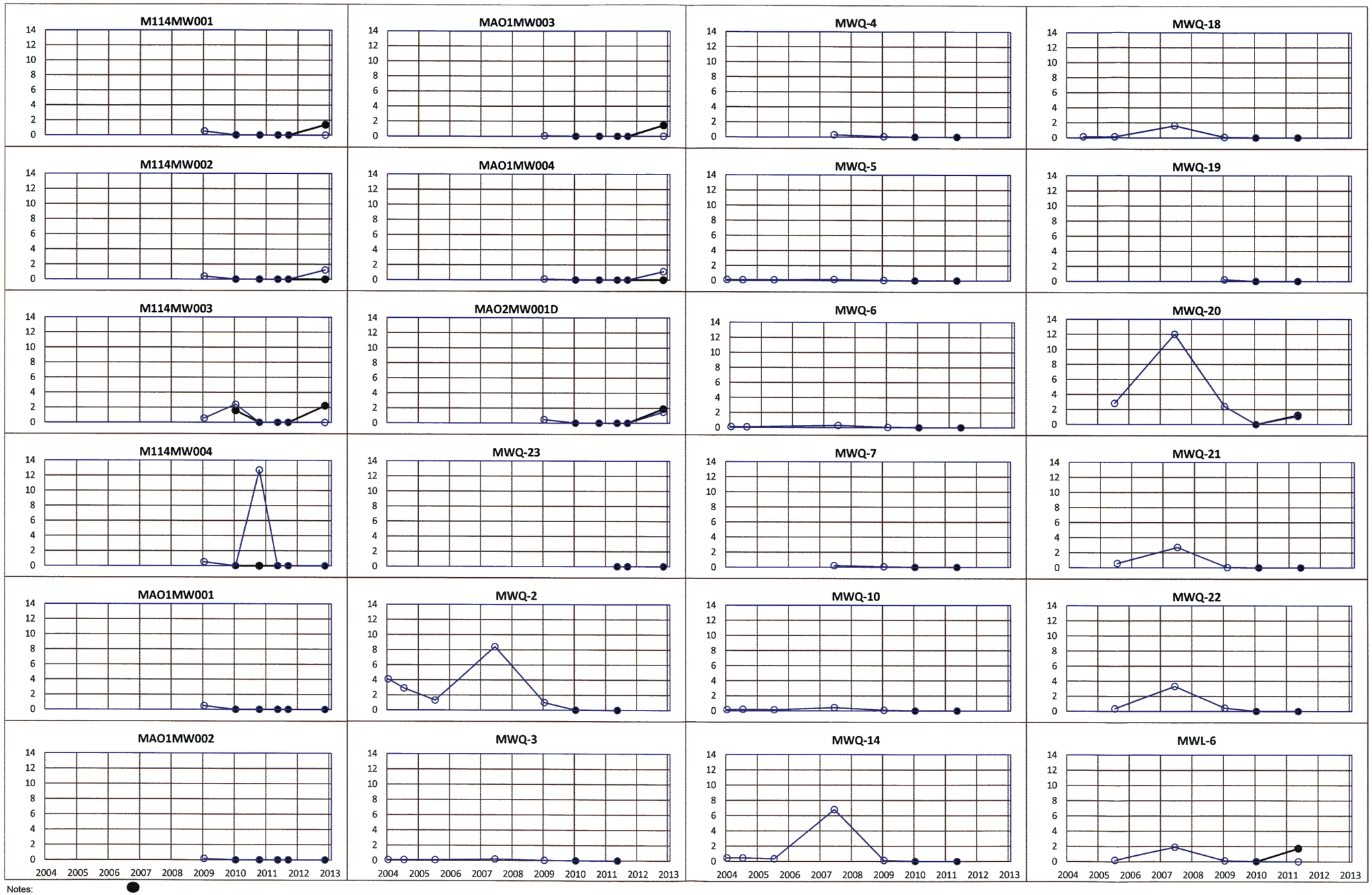
TABLE 6h
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO



Notes:
Data in µg/L

TABLE 6h
COBALT

TABLE 6h
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO



Notes: ● ○
Data in µg/L

TABLE 6h
COLBALT

TABLE 6i
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO

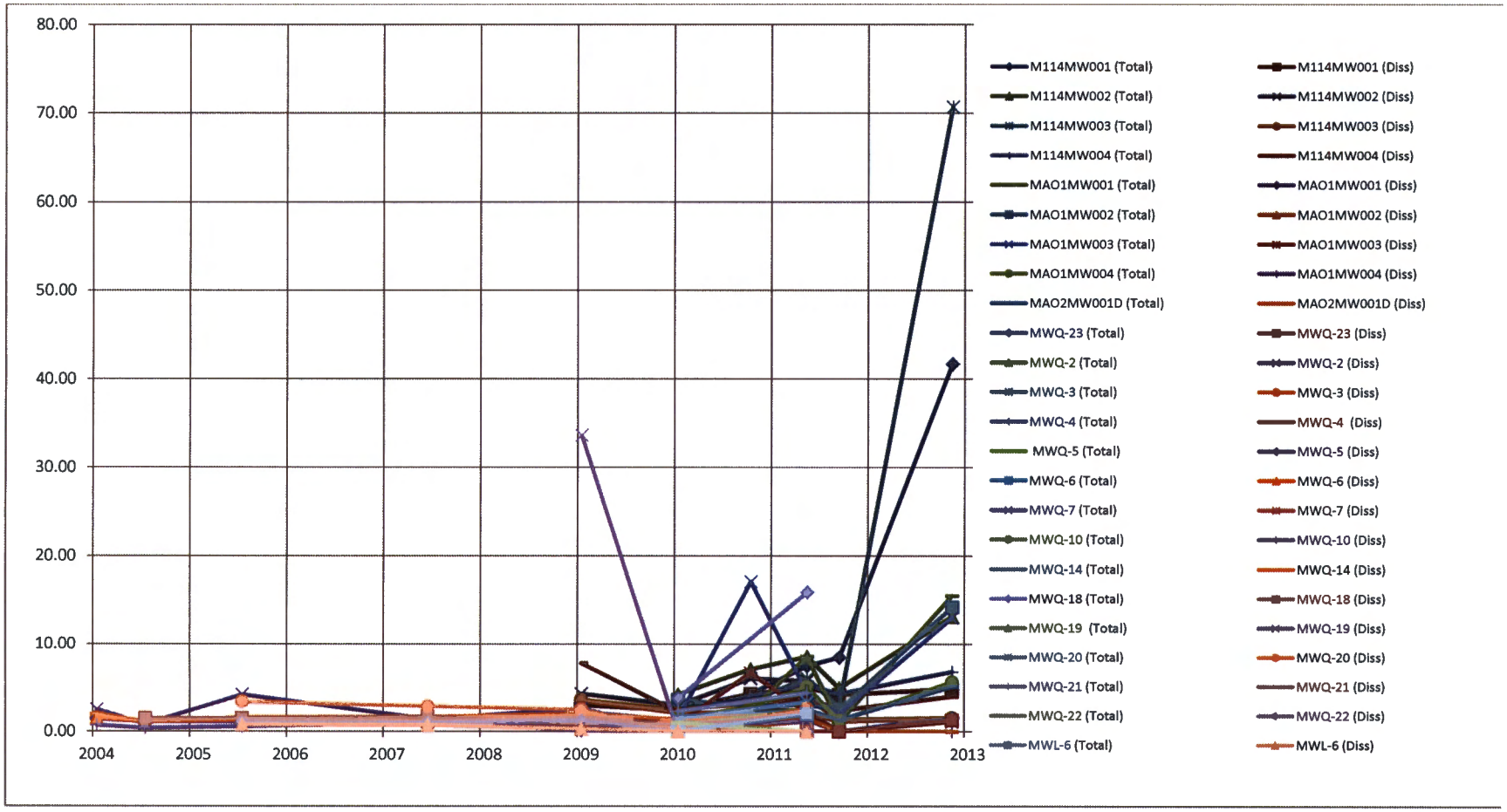
DATE	Semiannual Network																			
	SWMU 114								SWMU 130								SWMU 131			
	M114MW001		M114MW002		M114MW003		M114MW004		MAO1MW001		MAO1MW002		MAO1MW003		MAO1MW004		MAO2MW001D		MWQ-23	
	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss
Jan-04																				
Jul-04																				
Jul-05																				
Jun-07																				
Jan-09		3.00		4.30		3.60		7.80		2.20		3.50		1.90		2.20		1.20		
Jan-10	2.60	2.40	4.20	3.00	2.70	2.50	2.10	2.20	1.80	0.87	3.60	2.10	1.40	0.84	1.40	1.30	<D.L.	<D.L.		
Oct-10	4.27	4.27	7.10	6.04	3.52	3.20	4.03	2.04	2.43	2.72	2.93	2.11	17.10	6.68	2.81	1.20	1.71	1.74		
May-11	7.48	5.00	8.55	5.75	6.04	3.89	5.33	4.02	8.54	2.24	3.05	2.09	4.46	2.19	5.09	1.30	2.52	1.46	<D.L.	<D.L.
Sep-11	8.46	4.17	4.92	3.73	2.88	1.33	4.29	2.38	1.06	<D.L.	2.47	1.12	1.96	<D.L.	1.21	<D.L.	1.31	<D.L.	<D.L.	<D.L.
Nov-12	41.70	4.87	13.10	4.67	70.70	1.55	6.81	4.00	15.50	1.61	14.20	1.51	13.00	1.12	5.63	<D.L.	5.11	<D.L.	1.45	1.31
Min	2.6	2.4	4.2	3.0	2.7	1.3	2.1	2.0	1.1	0.0	2.5	1.1	1.4	0.0	1.2	0.0	0.0	0.0	0.0	0.0
Max	41.7	5.0	13.1	6.0	70.7	3.9	6.8	7.8	15.5	2.7	14.2	3.5	17.1	6.7	5.6	2.2	5.1	1.7	1.5	1.3
Avg	12.9	4.0	7.6	4.6	17.2	2.7	4.5	3.7	5.9	1.6	5.3	2.1	7.6	2.1	3.2	1.0	2.1	0.7	0.5	0.4

Notes:
Data in µg/L
NMED SSL Tapwater Screening Level: 54800
Red indicates exceedance
Blank cells indicate no data
Wells MWQ-3, -4, -5, -6, -7, -10, -23, and MWL-6 not sampled after spring 2011

DATE	Annual Network																											
											Background		Background															
	MWQ-2		MWQ-3		MWQ-4		MWQ-5		MWQ-6		MWQ-7		MWQ-10		MWQ-14		MWQ-18		MWQ-19		MWQ-20		MWQ-21		MWQ-22		MWL-6	
	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss
Jan-04		2.50		1.50				1.40		1.50				0.69		2.00												
Jul-04		0.81		1.20				1.10		1.10				0.37		1.10		1.50										
Jul-05		4.20		1.30				1.10						0.56		1.60		1.50				3.40		1.40		0.98		0.77
Jun-07		1.40		1.40		1.10		1.10		1.70		1.10		0.96		1.70		1.70				2.90		1.10		0.94		0.70
Jan-09		2.60		1.00		0.61		0.13		0.93		0.85		0.35		2.00		0.88		33.60		2.50		1.60		1.20		0.31
Jan-10	1.40	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	0.75	<D.L.	0.99	1.00	1.00	0.77	0.90	0.83	1.70	1.40	3.80	0.80	0.77	<D.L.	1.50	<D.L.	2.30	0.70	0.99	<D.L.	<D.L.	<D.L.
Oct-10																												
May-11	2.53	2.25	1.65	1.15	<D.L.	<D.L.	1.48	<D.L.	1.42	<D.L.	<D.L.	1.34	<D.L.	1.07	2.31	1.98	15.90	<D.L.	2.38	2.18	3.38	2.58	4.41	1.95	<D.L.	<D.L.	2.02	<D.L.
Sep-11																												
Nov-12																												
Min	1.4	0.0	0.0	0.0	0.0	0.0	0.8	0.0	1.0	0.0	0.0	0.8	0.0	0.4	1.7	1.1	3.8	0.0	0.8	0.0	1.5	0.0	2.3	0.7	0.0	0.0	0.0	0.0
Max	2.5	4.2	1.7	1.5	0.0	1.1	1.5	1.4	1.4	1.7	1.0	1.3	0.9	1.1	2.3	2.0	15.9	1.7	2.4	33.6	3.4	3.4	4.4	2.0	1.0	1.2	2.0	0.8
Avg	2.0	2.0	0.8	1.1	0.0	0.4	1.1	0.7	1.2	1.0	0.5	1.0	0.5	0.7	2.0	1.7	9.9	1.1	1.6	11.9	2.4	2.3	3.4	1.4	0.5	0.6	1.0	0.4

TABLE 6i
CHROMIUM

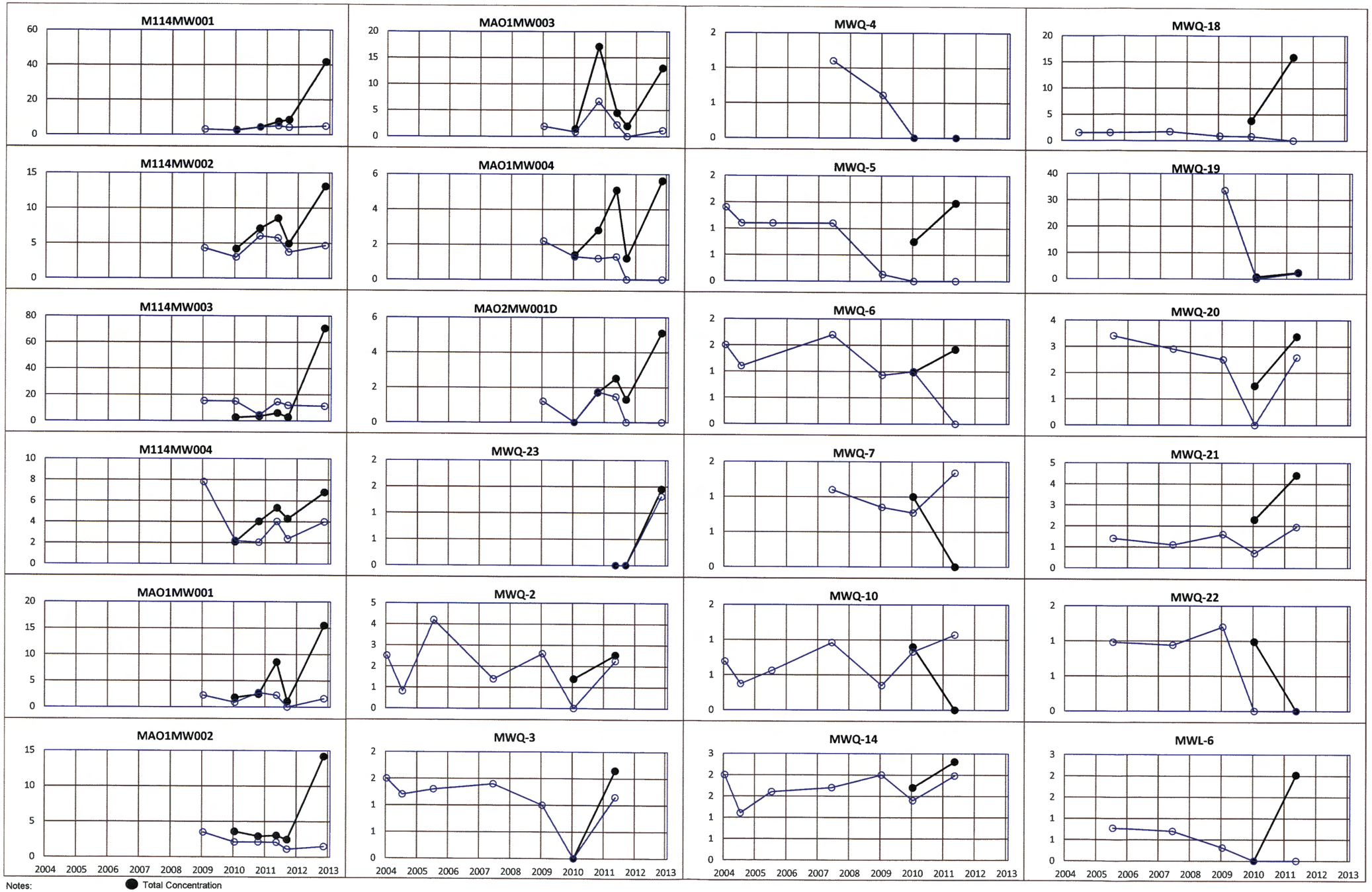
TABLE 6i
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO



Notes:
Data in µg/L

TABLE 6i
CHROMIUM

TABLE 6i
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO



Notes:
Data in µg/L

● Total Concentration
○ Dissolved Concentration

TABLE 6i
CHROMIUM

TABLE 6j
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRRY COUNTIES, NEW MEXICO

DATE	Semiannual Network																			
	SWMU 114								SWMU 130								SWMU 131			
	M114MW001		M114MW002		M114MW003		M114MW004		MAO1MW001		MAO1MW002		MAO1MW003		MAO1MW004		MAO2MW001D		MWQ-23	
	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss
Jan-04																				
Jul-04																				
Jul-05																				
Jun-07																				
Jan-09																				
Jan-10	21	7.0	47	7.0	9.6	6.1	7.0	10.0	5.2	7.8	13.0	6.4	8.3	<D.L.	<D.L.		<D.L.	<D.L.		
Oct-10	28	3	8	20	21	10	12	<D.L.	6		6		6	6	15	7	14	<D.L.		
May-11	<D.L.		<D.L.		<D.L.		<D.L.		<D.L.		<D.L.		18		7		<D.L.		<D.L.	
Sep-11	<D.L.		<D.L.		<D.L.		<D.L.		<D.L.		<D.L.		<D.L.		<D.L.		<D.L.		<D.L.	
Nov-12	<D.L.		<D.L.		<D.L.		<D.L.		<D.L.		<D.L.		<D.L.		<D.L.		<D.L.		<D.L.	
Min	0.0	3.0	0.0	7.0	0.0	6.1	0.0	0.0	0.0	7.8	0.0	6.4	0.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0
Max	28.0	7.0	47.0	20.0	21.0	10.0	12.0	10.0	6.0	7.8	13.0	6.4	18.0	6.0	15.0	7.0	14.0	0.0	0.0	0.0
Avg	9.8	5.0	11.0	13.5	6.1	8.1	3.8	5.0	2.2	7.8	3.8	6.4	6.5	3.0	4.4	7.0	2.8	0.0	0.0	0.0

Notes:
Data in µg/L
NMED SSL Tapwater Screening Level: 0.431
Red indicates exceedance
Blank cells indicate no data
Wells MWQ-3, -4, -5, -6, -7, -10, -23, and MWL-6 not sampled after spring 2011

Due to a preponderance of no detects trends are not plotted

DATE	Annual Network																											
											Background		Background															
	MWQ-2		MWQ-3		MWQ-4		MWQ-5		MWQ-6		MWQ-7		MWQ-10		MWQ-14		MWQ-18		MWQ-19		MWQ-20		MWQ-21		MWQ-22		MWL-6	
	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss
Jan-04																												
Jul-04																												
Jul-05																												
Jun-07																												
Jan-09																												
Jan-10	<D.L.	<D.L.	<D.L.	<D.L.	7.0	7.0	<D.L.	<D.L.	4.5	<D.L.	<D.L.	4.5	7.8	7.8	7.8	7.0	26.0	4.4	13.0	6.4	<D.L.	<D.L.	22.0	6.4	6.4	4.5	7.0	7.0
Oct-10																												
May-11	3		<D.L.		<D.L.		<D.L.		<D.L.		<D.L.		5.00		<D.L.		<D.L.		<D.L.		<D.L.		32.0		<D.L.		<D.L.	
Sep-11																												
Nov-12																												
Min	0.0	0.0	0.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0	0.0	4.5	5.0	7.8	0.0	7.0	0.0	4.4	0.0	6.4	0.0	0.0	22.0	6.4	0.0	4.5	0.0	7.0
Max	3.0	0.0	0.0	0.0	7.0	7.0	0.0	0.0	4.5	0.0	0.0	4.5	7.8	7.8	7.8	7.0	26.0	4.4	13.0	6.4	0.0	0.0	32.0	6.4	6.4	4.5	7.0	7.0
Avg	1.5	0.0	0.0	0.0	3.5	7.0	0.0	0.0	2.3	0.0	0.0	4.5	6.4	7.8	3.9	7.0	13.0	4.4	6.5	6.4	0.0	0.0	27.0	6.4	3.2	4.5	3.5	7.0

TABLE 6j
HEXAVALENT CHROMIUM

TABLE 6k
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO

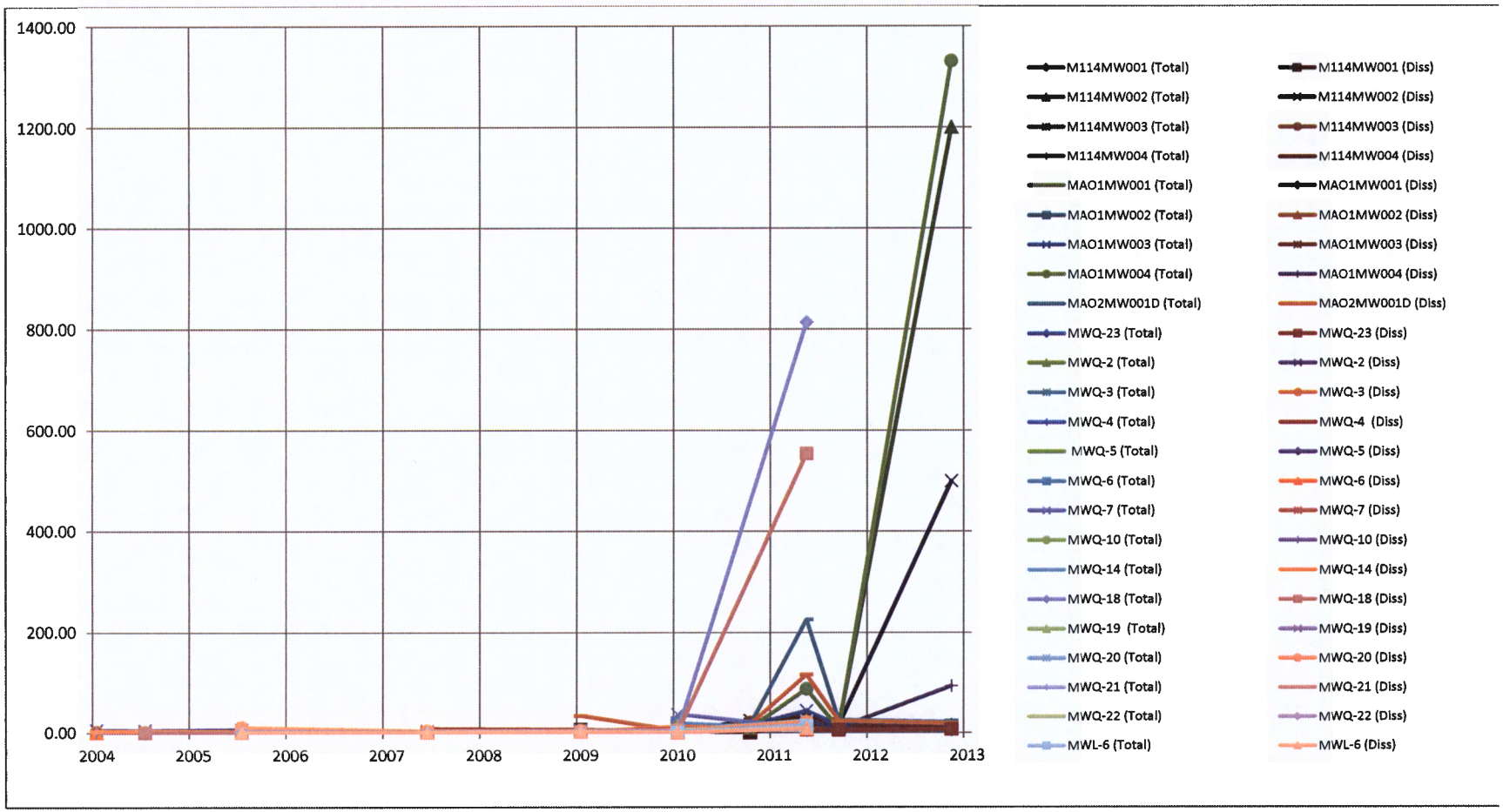
DATE	Semiannual Network																			
	SWMU 114								SWMU 130								SWMU 131			
	M114MW001		M114MW002		M114MW003		M114MW004		MAO1MW001		MAO1MW002		MAO1MW003		MAO1MW004		MAO2MW001D		MWQ-23	
	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss
Jan-04																				
Jul-04																				
Jul-05																				
Jun-07																				
Jan-09		6.30		5.90		5.70		5.8		2.7		2.3		2.2		1.9		33.8		
Jan-10	1.7	3.7	<D.L.	2.50	<D.L.	2.90	1.9	1.4	1.6	2.8	2.8	2.5	2.2	2.5	2.1	2.0	4.6	4.6		
Oct-10	14.1	<D.L.	19.5	24.2	17.3	20	12.7	12.6	11.6	12.3	9.79	9.72	14.5	13.2	8.95	8.47	16.4	17.1		
May-11	22.5	21.0	29.8	25.1	23.7	22.0	36.9	35.2	14.3	13.4	11.0	11.6	44.0	17.7	87.7	23.0	226.0	116.0	4.95	5.49
Sep-11	15.8	15.6	13.8	15.8	13.3	15.1	13.8	17.6	10.6	11.7	10.2	10.6	13.7	12.7	8.2	9.6	25.3	23.8	5.68	5.1
Nov-12	14.8	7.0	1200.0	500.0	11.8	10.0	8.6	5.1	11.7	10.7	13.3	9.0	11.6	11.6	1330.0	93.5	20.8	18.8	5.98	6.49
Min	1.7	0.0	0.0	2.5	0.0	2.9	1.9	1.4	1.6	2.7	2.8	2.3	2.2	2.2	2.1	1.9	4.6	4.6	5.0	5.1
Max	22.5	21.0	1200.0	500.0	23.7	22.0	36.9	35.2	14.3	13.4	13.3	11.6	44.0	17.7	1330.0	93.5	226.0	116.0	6.0	6.5
Avg	13.8	8.9	252.6	95.6	13.2	12.6	14.8	13.0	10.0	8.9	9.4	7.6	17.2	10.0	287.4	23.1	58.6	35.7	5.5	5.7

Notes:
Data in µg/L
NMED SSL Tapwater Screening Level: 1460
Red indicates exceedance
Blank cells indicate no data
Wells MWQ-3, -4, -5, -6, -7, -10, -23, and MWL-6 not sampled after spring 2011

DATE	Annual Network																											
											Background		Background															
	MWQ-2		MWQ-3		MWQ-4		MWQ-5		MWQ-6		MWQ-7		MWQ-10		MWQ-14		MWQ-18		MWQ-19		MWQ-20		MWQ-21		MWQ-22		MWL-6	
	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss
Jan-04		5.9		2.4				2.2		1				1.7		3.5												
Jul-04		5.2		1.6				0.82		1				2.9		3.9		0.85										
Jul-05		6.8		1.8				1.5						1.6		2.5		0.58				11		4.3		1.7		0.76
Jun-07		3.3		2.4		8.3		1.2		1.3		3.9		1.7		4.0		0.9				3.9		2.7		1.4		0.87
Jan-09		3.5		2.5		6.4		4.5		2.6		4.2		4.7		3.1		2.2		4.8		4.0		4.3		2.3		1.8
Jan-10	4.7	4.2	3.3	3.4	4.7	3.0	6.0	3.7	19	12	37	8.3	6.7	1.6	2.0	2.2	3.8	2.3	4.7	2.4	4.8	4.5	3.2	2.8	5.0	2.7	<D L	<D.L.
Oct-10																												
May-11	23.9	22.2	10.4	10.8	11.8	9.8	9.6	8.6	7.09	7.2	8.9	8.8	12.3	12.2	16.1	14.5	814.0	554.0	20.1	18.0	23.2	21.3	15.0	13.3	7.7	6.97	13.3	9.01
Sep-11																												
Nov-12																												
Min	4.7	3.3	3.3	1.6	4.7	3.0	6.0	0.8	7.1	1.0	8.9	3.9	6.7	1.6	2.0	2.2	3.8	0.6	4.7	2.4	4.8	3.9	3.2	2.7	5.0	1.4	0.0	0.0
Max	23.9	22.2	10.4	10.8	11.8	9.8	9.6	8.6	19.0	12.0	37.0	8.8	12.3	12.2	16.1	14.5	814.0	554.0	20.1	18.0	23.2	21.3	15.0	13.3	7.7	7.0	13.3	9.0
Avg	14.3	7.3	6.9	3.6	8.3	6.9	7.8	3.2	13.0	4.2	23.0	6.3	9.5	3.8	9.1	4.8	408.9	93.5	12.4	8.4	14.0	8.9	9.1	5.5	6.4	3.0	6.7	2.5

TABLE 6k
COPPER

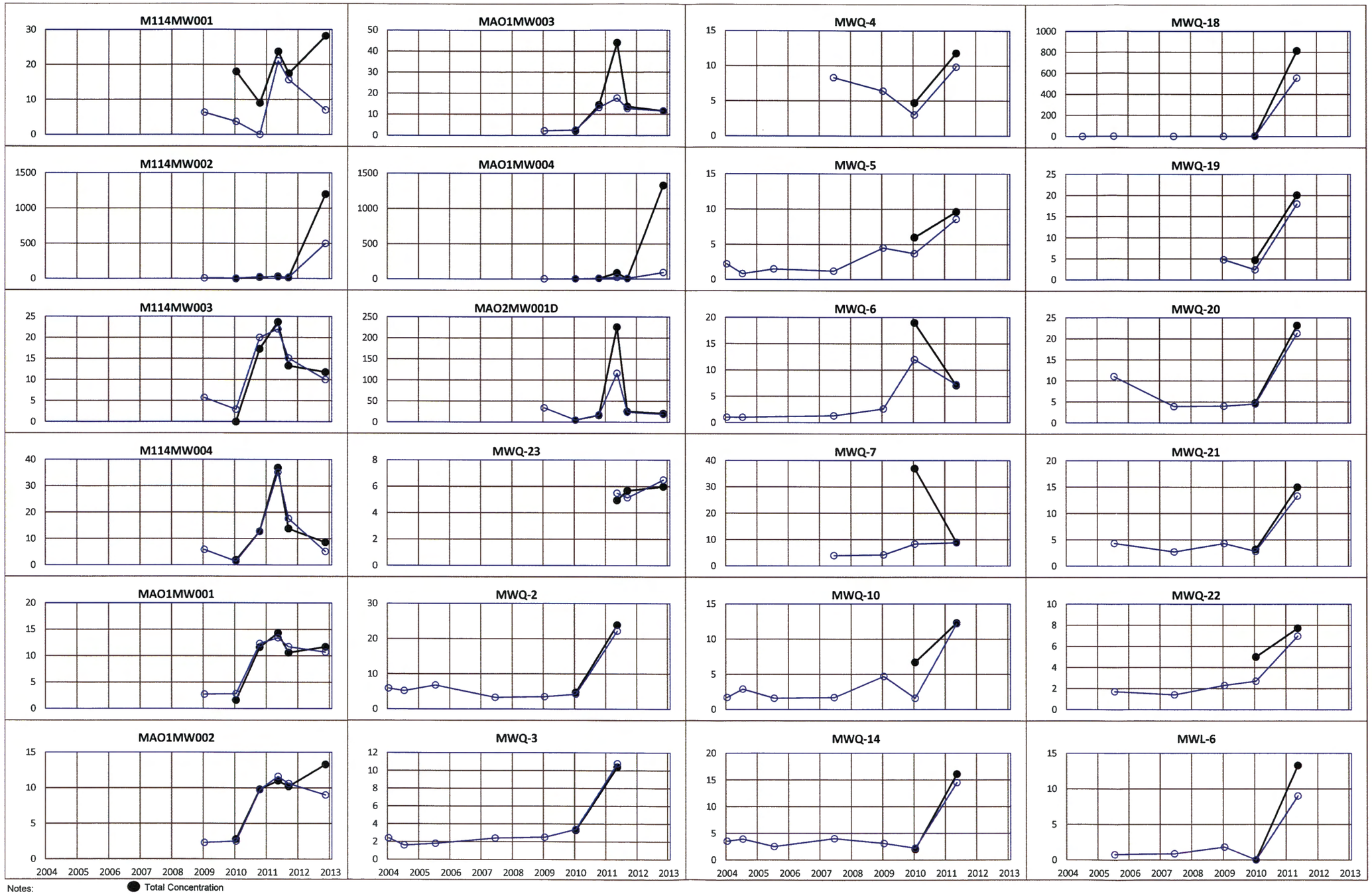
TABLE 6k
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO



Notes:
Data in µg/L

TABLE 6k
COPPER

TABLE 6k
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO



Notes:
Data in µg/L

● Total Concentration
○ Dissolved Concentration

TABLE 6k
COPPER

TABLE 6l
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO

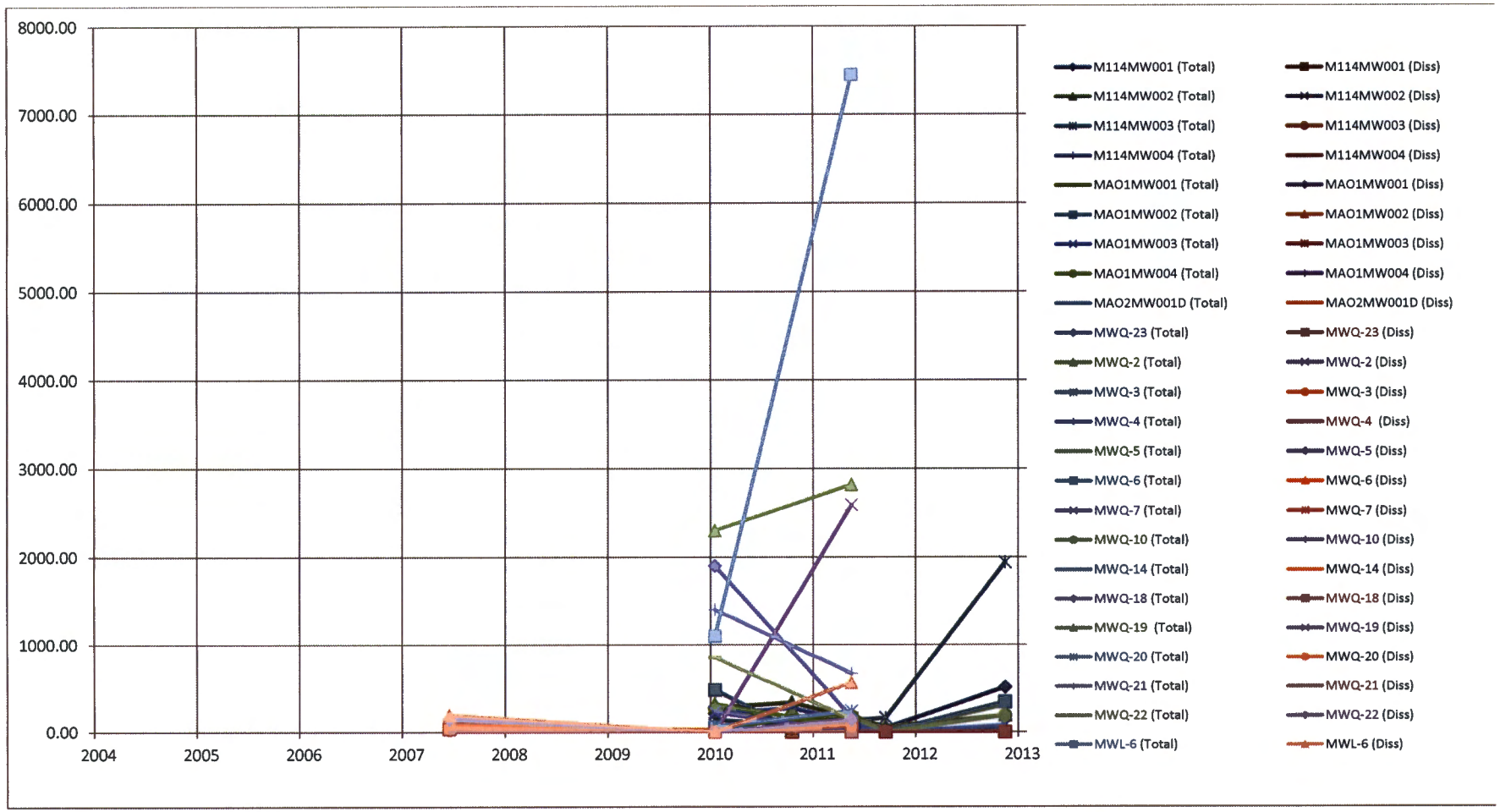
DATE	Semiannual Network																			
	SWMU 114								SWMU 130								SWMU 131			
	M114MW001		M114MW002		M114MW003		M114MW004		MAO1MW001		MAO1MW002		MAO1MW003		MAO1MW004		MAO2MW001D		MWQ-23	
	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss
Jan-04																				
Jul-04																				
Jul-05																				
Jun-07																				
Jan-09																				
Jan-10	<D.L.	<D.L.	280	<D.L.	140	<D.L.	<D.L.		280		480	<D.L.	210	<D.L.	<D.L.	<D.L.	26	<D.L.		
Oct-10	<D.L.	<D.L.	337	<D.L.	82.6	<D.L.	<D.L.	<D.L.	102	65.2	38.5	<D.L.	274	57.9	179	39.2	<D.L.	<D.L.		
May-11	79.9	<D.L.	160	<D.L.	130	<D.L.	<D.L.	<D.L.	204	46.6	<D.L.	<D.L.	116	<D.L.	176	<D.L.	<D.L.	<D.L.	43.8	<D.L.
Sep-11	47.1	<D.L.	60.5	<D.L.	162	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.
Nov-12	511	<D.L.	193	<D.L.	1940	<D.L.	44	<D.L.	312	<D.L.	345	<D.L.	79.6	<D.L.	189	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.
Min	0.0	0.0	60.5	0.0	82.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max	511.0	0.0	337.0	0.0	1940.0	0.0	44.2	0.0	312.0	65.2	480.0	0.0	274.0	57.9	189.0	39.2	26.0	0.0	43.8	0.0
Avg	127.6	0.0	206.1	0.0	490.9	0.0	8.8	0.0	179.6	28.0	172.7	0.0	135.9	11.6	108.8	7.8	5.2	0.0	14.6	0.0

Notes:
Data in µg/L
NMED SSL Tapwater Screening Level: 25600
Red indicates exceedance
Blank cells indicate no data
Wells MWQ-3, -4, -5, -6, -7, -10, -23, and MWL-6 not sampled after spring 2011

DATE	Annual Network																											
											Background		Background															
	MWQ-2		MWQ-3		MWQ-4		MWQ-5		MWQ-6		MWQ-7		MWQ-10		MWQ-14		MWQ-18		MWQ-19		MWQ-20		MWQ-21		MWQ-22		MWL-6	
	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss
Jan-04																												
Jul-04																												
Jul-05																												
Jun-07		38		29.0		100		88		83		50		24		43		36				56		<D.L.		150		200
Jan-09																												
Jan-10	320	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	56	25	230	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	1900	<D.L.	2300	<D.L.	63	<D.L.	1400	<D.L.	850	<D.L.	1100	<D.L.
Oct-10																												
May-11	52.8	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	168	<D.L.	2820	2590	241	71.1	669	127	147	142	7450	566
Sep-11																												
Nov-12																												
Min	52.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	168.0	0.0	2300.0	0.0	63.0	0.0	669.0	0.0	147.0	0.0	1100.0	0.0
Max	320.0	38.0	0.0	29.0	0.0	100.0	0.0	88.0	56.0	83.0	230.0	50.0	0.0	24.0	0.0	43.0	1900.0	36.0	2820.0	2590.0	241.0	71.1	1400.0	127.0	850.0	150.0	7450.0	566.0
Avg	186.4	12.7	0.0	9.7	0.0	33.3	0.0	29.3	28.0	36.0	115.0	16.7	0.0	8.0	0.0	14.3	1034.0	12.0	2560.0	1295.0	152.0	42.4	1034.5	42.3	498.5	97.3	4275.0	255.3

TABLE 6l
IRON

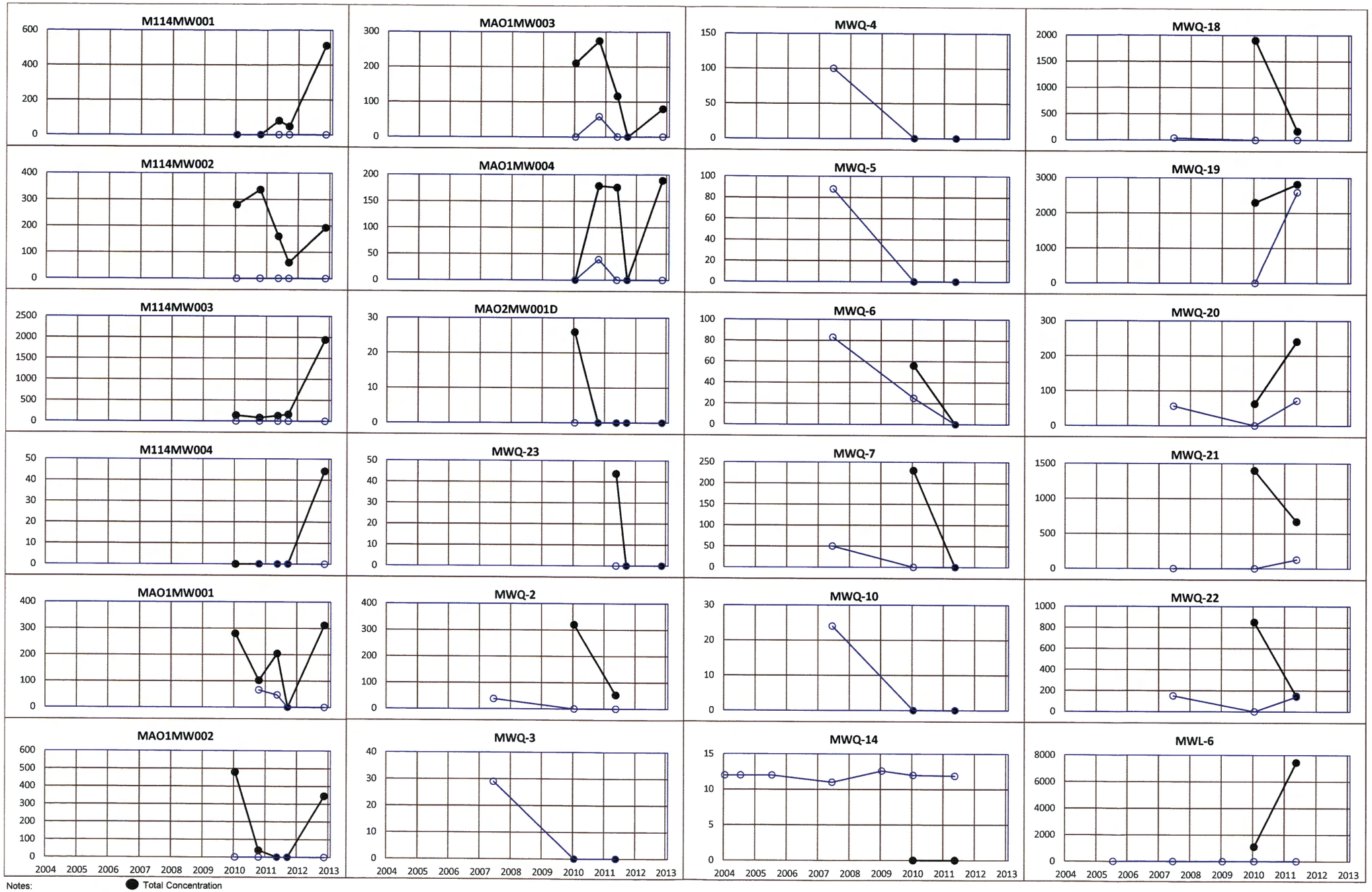
TABLE 6l
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO



Notes:
Data in µg/L

TABLE 6l
IRON

TABLE 6I
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO



Notes:
Data in µg/L

● Total Concentration
○ Dissolved Concentration

TABLE 6I
IRON

TABLE 6m
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO

DATE	Semiannual Network																			
	SWMU 114								SWMU 130								SWMU 131			
	M114MW001		M114MW002		M114MW003		M114MW004		MAO1MW001		MAO1MW002		MAO1MW003		MAO1MW004		MAO2MW001D		MWQ-23	
	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss
Jan-04																				
Jul-04																				
Jul-05																				
Jun-07																				
Jan-09		0.11		<D.L.		<D.L.		<D.L.		0.32		0.11		0.15		0.13		0.13		
Jan-10	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.		
Oct-10	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.		
May-11	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	2.3	<D.L.	<D.L.	<D.L.	1.92	<D.L.
Sep-11	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.
Nov-12	<D.L.	<D.L.	<D.L.	<D.L.	2.55	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.
Min	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max	0.0	0.1	0.0	0.0	2.6	0.0	0.0	0.0	0.0	0.3	0.0	0.1	0.0	0.2	2.3	0.1	0.0	0.1	1.9	0.0
Avg	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.6	0.0

Notes:

Data in µg/L

NMED SSL Tapwater Screening Level: ---

Red indicates exceedance

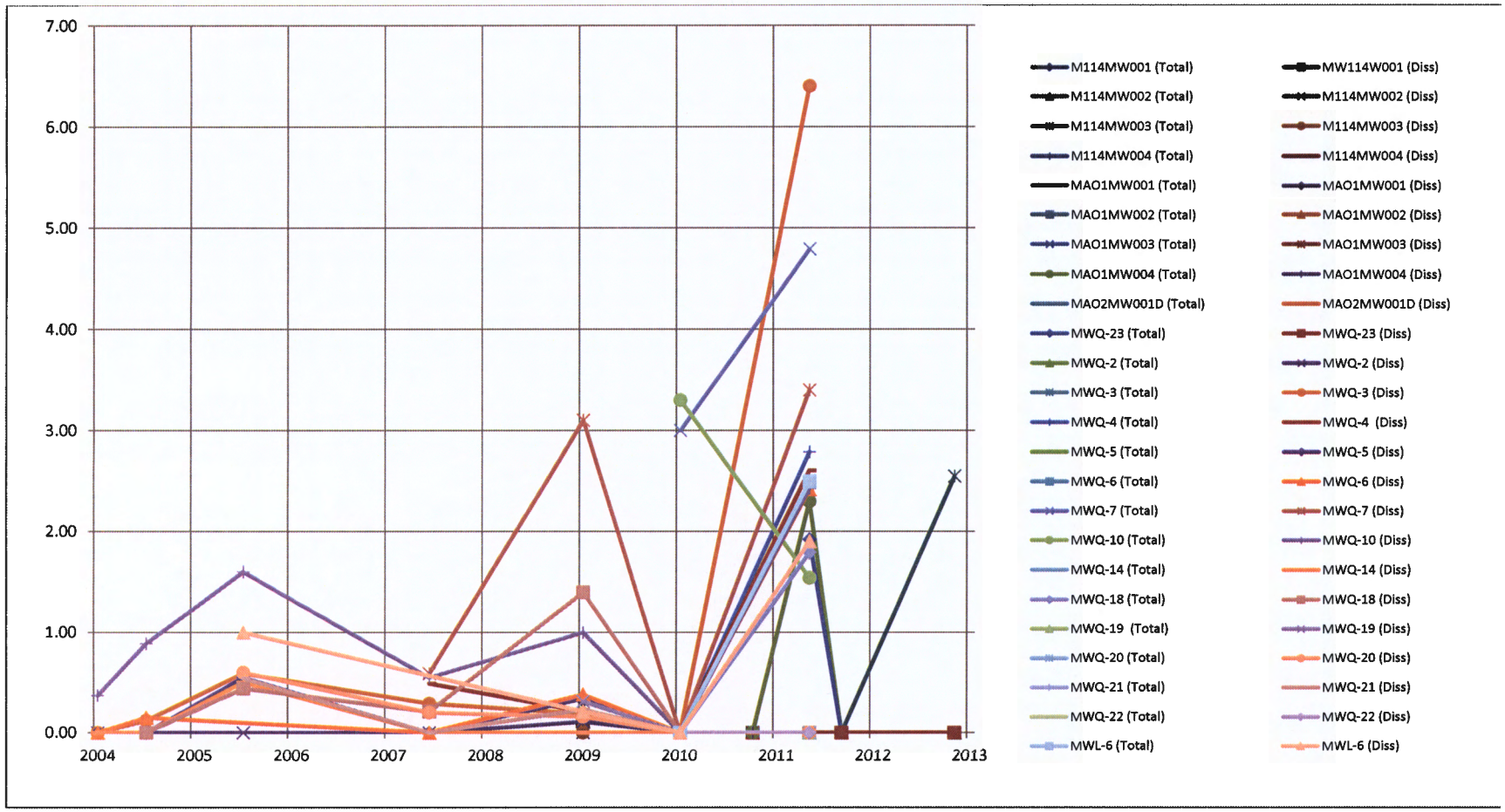
Blank cells indicate no data

Wells MWQ-3, -4, -5, -6, -7, -10, -23, and MWL-6 not sampled after spring 2011

DATE	Annual Network																											
											Background		Background															
	MWQ-2		MWQ-3		MWQ-4		MWQ-5		MWQ-6		MWQ-7		MWQ-10		MWQ-14		MWQ-18		MWQ-19		MWQ-20		MWQ-21		MWQ-22		MWL-6	
	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss
Jan-04		<D.L.		<D.L.				<D.L.		<D.L.				0.37		<D.L.												
Jul-04		<D.L.		0.12				<D.L.		0.15				0.89		<D.L.		<D.L.										
Jul-05		<D.L.		0.59				0.55						1.6		0.5		0.44				0.6		0.54		0.56		1
Jun-07		<D.L.		0.29		0.49		<D.L.		<D.L.		0.59		0.55		<D.L.		0.21				0.20		<D.L.		0.21		
Jan-09		0.11		0.19		0.21		0.34		0.38		3.10		1.00		<D.L.		1.40		0.31		0.16		0.23		<D.L.		0.21
Jan-10	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	3.0	<D.L.	3.3	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.
Oct-10																												
May-11	<D.L.	<D.L.	<D.L.	6.40	2.79	2.61	<D.L.	<D.L.	<D.L.	2.42	4.79	3.4	1.54	2.43	<D.L.	<D.L.	1.79	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	2.5	1.9
Sep-11																												
Nov-12																												
Min	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max	0.0	0.1	0.0	6.4	2.8	2.6	0.0	0.6	0.0	2.4	4.8	3.4	3.3	2.4	0.0	0.5	1.8	1.4	0.0	0.3	0.0	0.6	0.0	0.5	0.0	0.6	2.5	1.9
Avg	0.0	0.0	0.0	1.1	1.4	0.8	0.0	0.1	0.0	0.5	3.9	1.8	2.4	1.0	0.0	0.1	0.9	0.3	0.0	0.1	0.0	0.2	0.0	0.2	0.0	0.2	1.3	0.8

TABLE 6m
LEAD

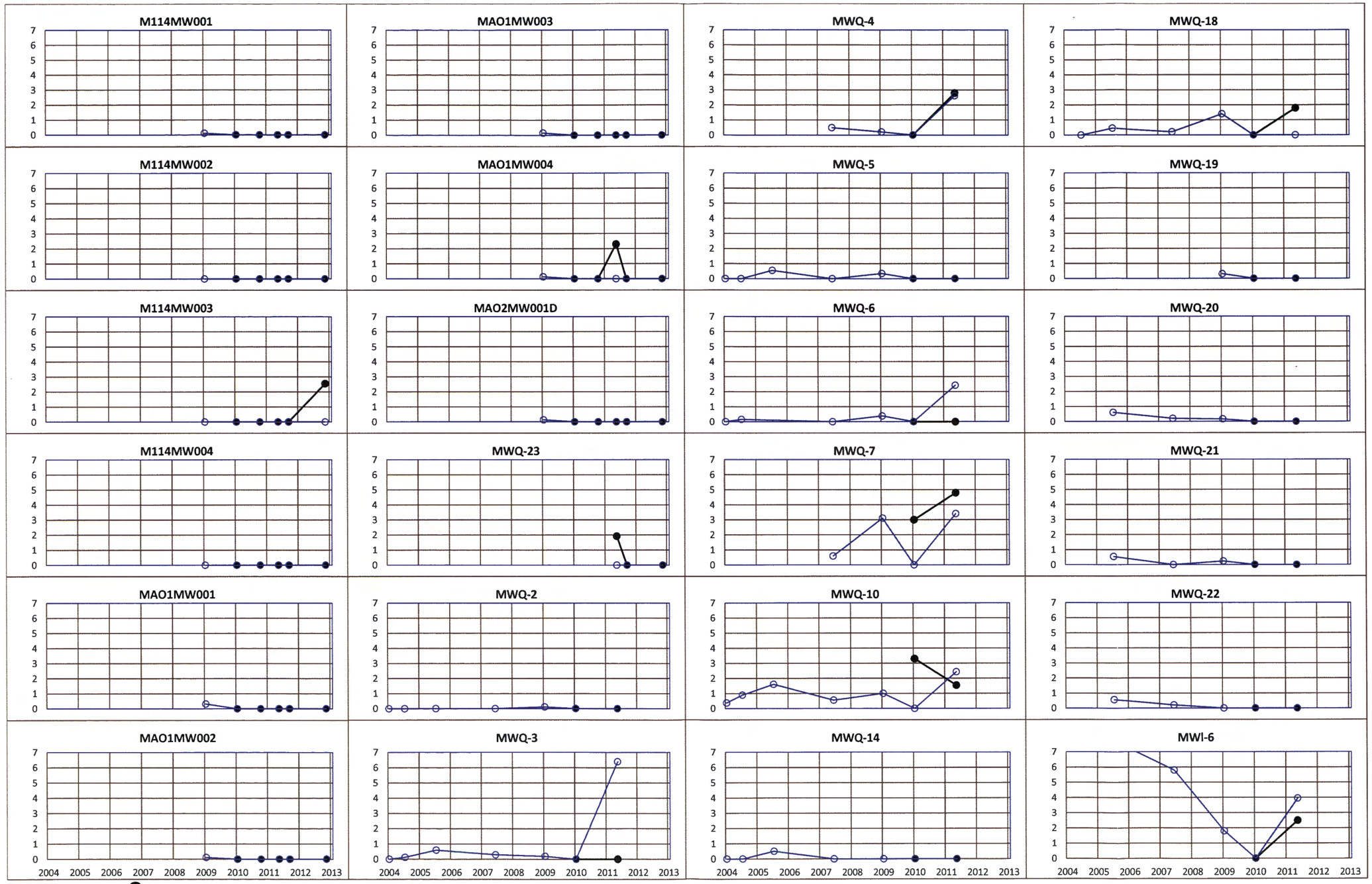
TABLE 6m
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO



Notes:
Data in µg/L

TABLE 6m
LEAD

TABLE 6m
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO



Notes:
Data in µg/L

● Total Concentration
○ Dissolved Concentration

TABLE 6m
LEAD

TABLE 6n
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO

DATE	Semiannual Network																			
	SWMU 114								SWMU 130								SWMU 131			
	M114MW001		M114MW002		M114MW003		M114MW004		MAO1MW001		MAO1MW002		MAO1MW003		MAO1MW004		MAO2MW001D		MWQ-23	
	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss
Jan-04																				
Jul-04																				
Jul-05																				
Jun-07																				
Jan-09		336,000		290,000		355,000		320,000		53,100		44,900		63,300		42,800		57,700		
Jan-10	260,000	260,000	280,000	250,000	290,000	290,000	320,000	300,000	48,000	44,000	36,000	35,000	60,000	59,000	38,000	39,000	80,000	73,000		
Oct-10	232,000	244,000	243,000	249,000	278,000	279,000	286,000	278,000	48,400	48,400	36,500	33,700	65,700	60,700	3,500	33,700	81,900	77,900		
May-11	239,000	250,000	238,000	244,000	270,000	271,000	285,000	295,000	48,700	50,100	34,200	36,700	63,400	60,300	36,600	35,000	71,800	73,500	9,350	9,750
Sep-11	236,000	257,000	255,000	258,000	270,000	272,000	283,000	283,000	48,000	51,400	35,800	36,100	61,200	58,700	35,500	36,100	67,600	73,300	9,550	9,680
Nov-12	241,000	227,000	243,000	253,000	276,000	261,000	283,000	314,000	46,900	48,800	37,900	33,700	60,100	61,900	34,900	32,500	64,300	62,400	19,500	17,700
Min	232000	227000	238000	244000	270000	261000	283000	278000	46900	44000	34200	33700	60000	58700	3500	32500	64300	57700	9350	9680
Max	260000	336000	280000	290000	290000	355000	320000	320000	48700	53100	37900	44900	65700	63300	38000	42800	81900	77900	19500	17700
Avg	241600	262333	251800	257333	276800	288000	291400	298333	48000	49300	36080	36683	62080	60650	29700	36517	73120	69633	12800	12377

Notes:

Data in µg/L

NMED SSL Tapwater Screening Level: —

Red indicates exceedance

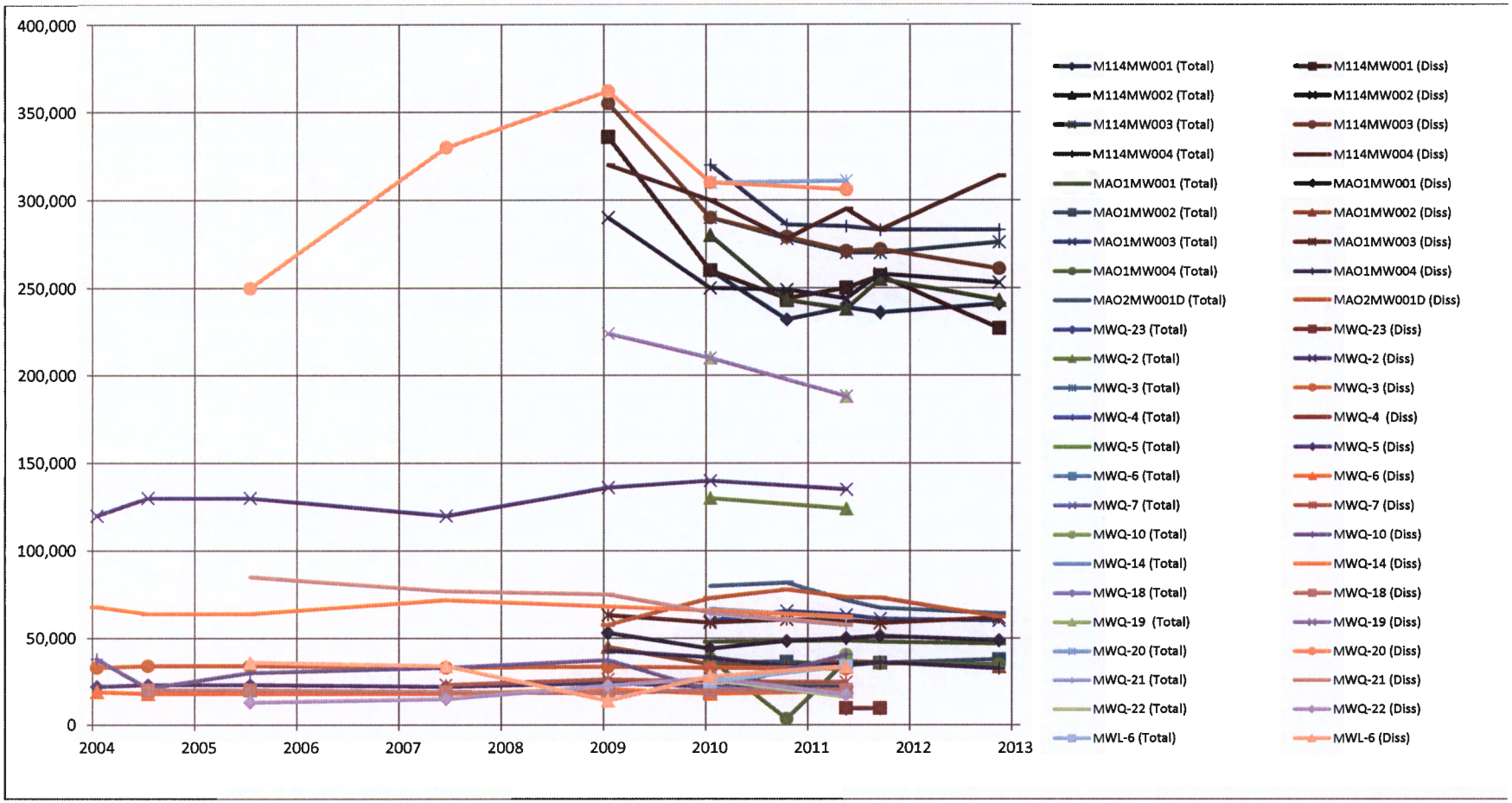
Blank cells indicate no data

Wells MWQ-3, -4, -5, -6, -7, -10, -23, and MWL-6 not sampled after spring 2011

DATE	Annual Network																											
											Background		Background															
	MWQ-2		MWQ-3		MWQ-4		MWQ-5		MWQ-6		MWQ-7		MWQ-10		MWQ-14		MWQ-18		MWQ-19		MWQ-20		MWQ-21		MWQ-22		MWL-6	
	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss
Jan-04		120,000		33,000				22,000		19,000				38,000		68,000												
Jul-04		130,000		34,000				23,000		18,000				21,000		64,000		20,000										
Jul-05		130,000		34,000				23,000						30,000		64,000		20,000				250,000		85,000		13,000		36,000
Jun-07		120,000		33,000		19,000		22,000		18,000		23,000		33,000		72,000		19,000				330,000		77,000		15,000		34,000
Jan-09		136,000		33,600		18,600		24,000		20,500		26,200		37,400		68,300		18,200		224,000		362,000		75,100		22,400		14,000
Jan-10	130,000	140,000	33,000	33,000	20,000	20,000	22,000	22,000	18,000	18,000	25,000	25,000	20,000	20,000	67,000	66,000	21,000	20,000	210,000	210,000	310,000	310,000	64,000	65,000	26,000	27,000	25,000	28,000
Oct-10																												
May-11	124,000	135,000	33,100	32,300	19,400	19,200	23,100	21,600	19,700	19,300	24,500	24,600	40,400	40,500	61,800	62,400	18,700	20,200	188,000	188,000	311,000	306,000	57,600	57,700	16,200	17,400	33,800	33,700
Sep-11																												
Nov-12																												
Min	124000	120000	33000	32300	19400	18600	22000	21600	18000	18000	24500	23000	20000	20000	61800	62400	18700	18200	188000	188000	310000	250000	57600	57700	16200	13000	25000	14000
Max	130000	140000	33100	34000	20000	20000	23100	24000	19700	20500	25000	26200	40400	40500	67000	72000	21000	20200	210000	224000	311000	362000	64000	85000	26000	27000	33800	36000
Avg	127000	130143	33050	33271	19700	19200	22550	22514	18850	18800	24750	24700	30200	31414	64400	66386	19850	19567	199000	207333	310500	311600	60800	71960	21100	18960	29400	29140

TABLE 6n
MAGNESIUM

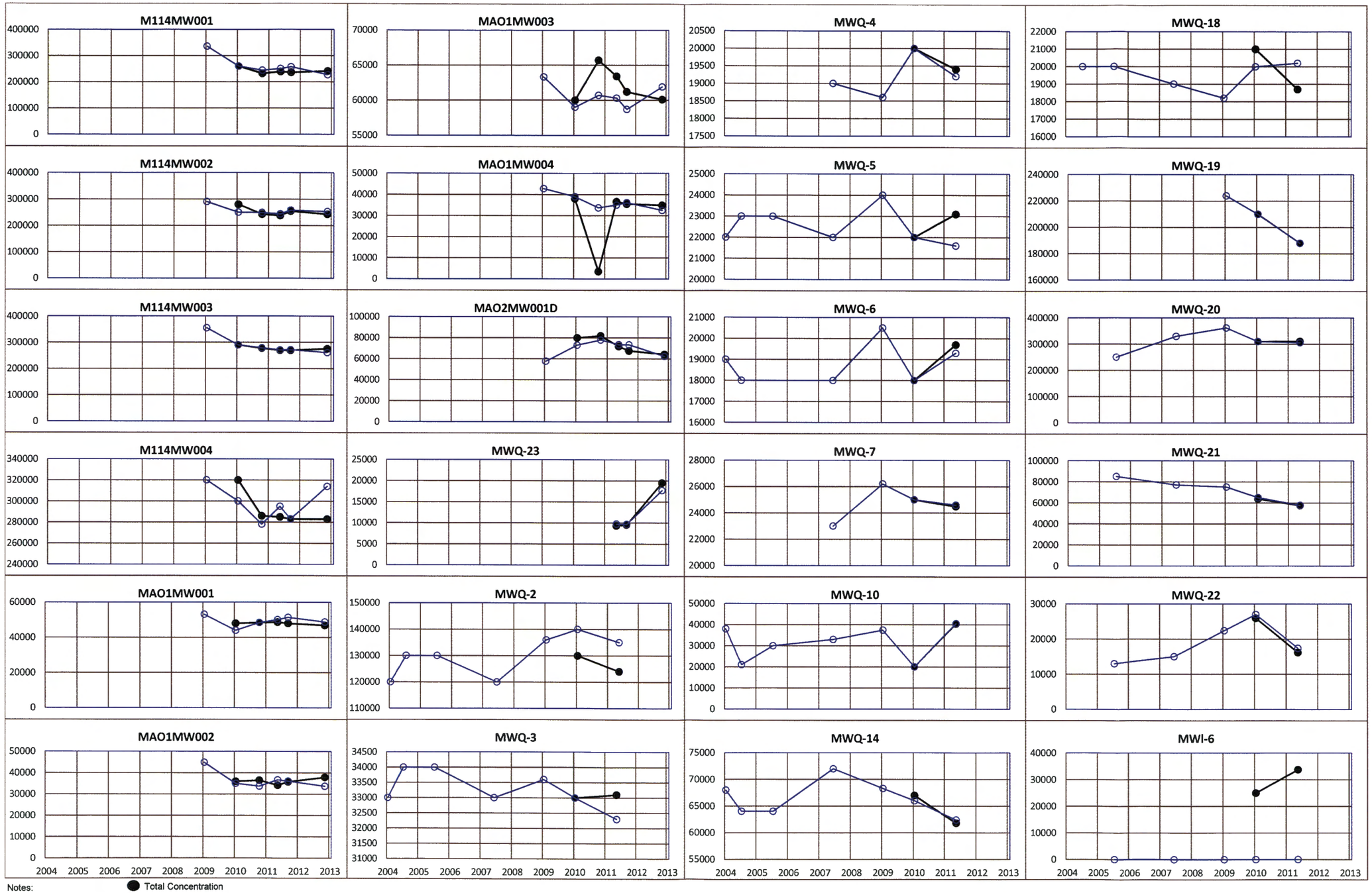
TABLE 6n
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO



Notes:
Data in µg/L

TABLE 6n
MAGNESIUM

TABLE 6n
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO



Notes:
Data in µg/L

● Total Concentration
○ Dissolved Concentration

TABLE 6n
MAGNESIUM

TABLE 6o
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO

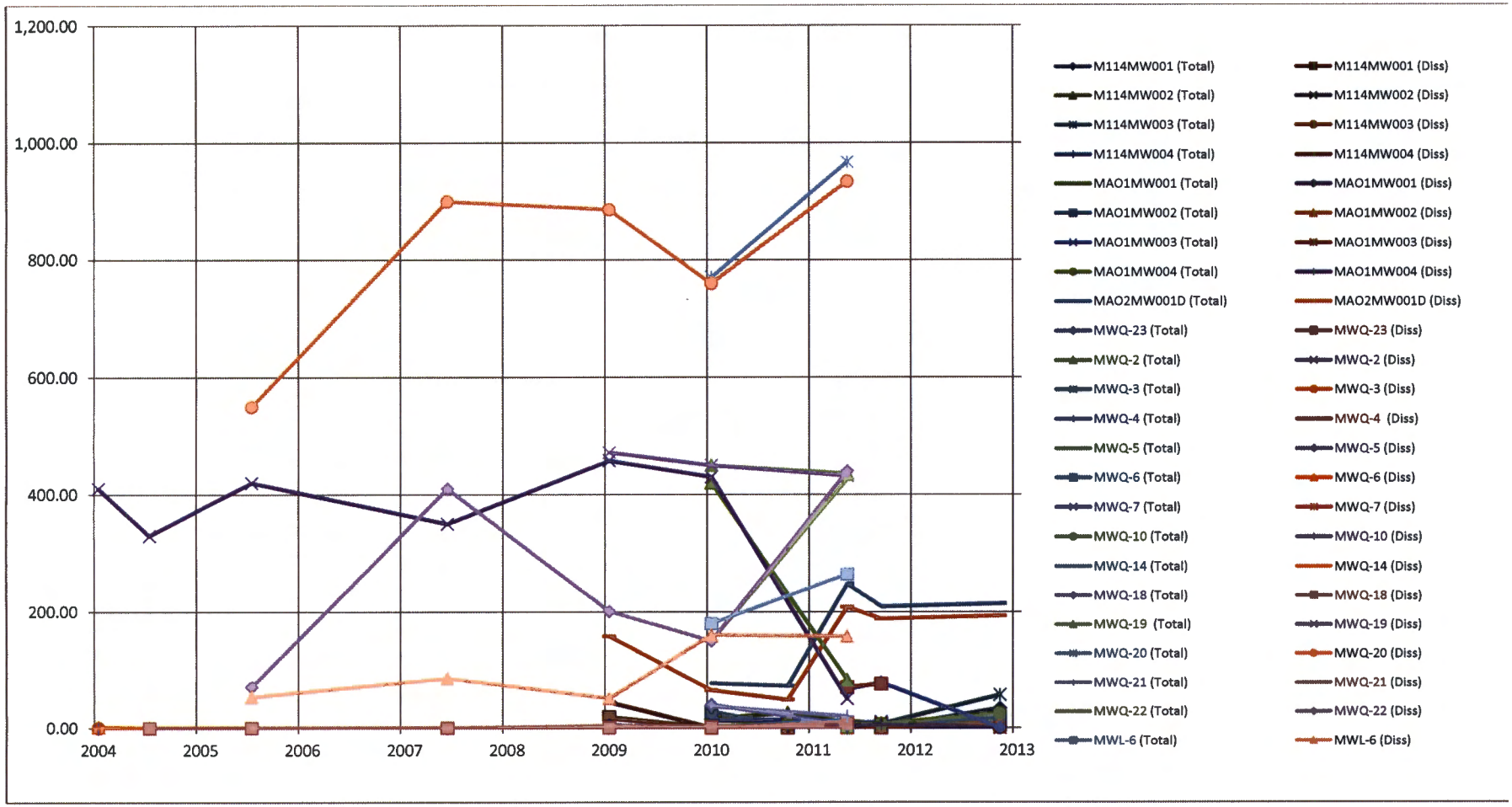
DATE	Semiannual Network																			
	SWMU 114								SWMU 130								SWMU 131			
	M114MW001		M114MW002		M114MW003		M114MW004		MAO1MW001		MAO1MW002		MAO1MW003		MAO1MW004		MAO2MW001D		MWQ-23	
	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss
Jan-04																				
Jul-04																				
Jul-05																				
Jun-07																				
Jan-09		18.80		2.50		16.40		44.30		5.10		0.84		0.67		1.20		158		
Jan-10	0.54	0.35	16	0.67	3.1	0.39	0.72	0.36	13	0.47	28	0.26	13	<D.L.	1.6	0.85	77	65		
Oct-10	1.27	<D.L.	25.5	8.84	2.52	2.31	<D.L.	<D.L.	9.19	3.98	2.64	<D.L.	14.2	6.08	7.45	1.31	72.3	48.6		
May-11	4.1	<D.L.	9.2	<D.L.	7.8	<D.L.	5.27	3.1	12.6	2.16	2.76	<D.L.	7.9	<D.L.	6.88	2.26	248	208	66.8	70.1
Sep-11	<D.L.	<D.L.	3.1	<D.L.	6.87	<D.L.	3.49	<D.L.	5.7	<D.L.	5.45	<D.L.	10.2	8.2	6.56	5.8	209	188	78.0	75.9
Nov-12	33.5	7.45	4.73	<D.L.	56.7	<D.L.	<D.L.	<D.L.	9.26	<D.L.	17.5	8.05	<D.L.	<D.L.	25.7	<D.L.	214	193	<D.L.	<D.L.
Min	0.0	0.0	3.1	0.0	2.5	0.0	0.0	0.0	5.7	0.0	2.6	0.0	0.0	0.0	1.6	0.0	72.3	48.6	0.0	0.0
Max	33.5	18.8	25.5	8.8	56.7	16.4	5.3	44.3	13.0	5.1	28.0	8.1	14.2	8.2	25.7	5.8	248.0	208.0	78.0	75.9
Avg	7.9	4.4	11.7	2.0	15.4	3.2	1.9	8.0	10.0	2.0	11.3	1.5	9.1	2.5	9.6	1.9	164.1	143.4	48.3	48.7

Notes:
Data in µg/L
NMED SSL Tapwater Screening Level: 876
Red indicates exceedance
Blank cells indicate no data
Wells MWQ-3, -4, -5, -6, -7, -10, -23, and MWL-6 not sampled after spring 2011

DATE	Annual Network																											
											Background		Background															
	MWQ-2		MWQ-3		MWQ-4		MWQ-5		MWQ-6		MWQ-7		MWQ-10		MWQ-14		MWQ-18		MWQ-19		MWQ-20		MWQ-21		MWQ-22		MWL-6	
	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss
Jan-04		410		0.3				0.36		2.4				0.21		0.91												
Jul-04		330		0.29				0.41		0.72				0.47		0.88		<D.L.										
Jul-05		420		0.36				0.49						0.74		1.2		0.59				550		1.1		71		54
Jun-07		350		0.63		1.0		<D.L.		1.1		0.46		<D.L.		0.57		0.37				900		0.73		410		86
Jan-09		458		0.20		0.58		1.70		0.63		1.4		0.69		0.73		0.51		472		886		3.8		201		51.2
Jan-10	420	430	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	0.91	1.0	1.6	0.92	1.3	1.2	0.75	<D.L.	40	1.3	450	450	770	760	37	2.6	150	150	180	160
Oct-10																												
May-11	82.9	50.1	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	13.8	<D.L.	5.27	9.28	436	432	967	934	19.9	<D.L.	426	440	265	158
Sep-11																												
Nov-12																												
Min	82.9	50.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	5.3	0.0	436.0	432.0	770.0	550.0	19.9	0.0	150.0	71.0	180.0	51.2
Max	420.0	458.0	0.0	0.6	0.0	1.0	0.0	1.7	0.9	2.4	1.6	1.4	1.3	1.2	13.8	1.2	40.0	9.3	450.0	472.0	967.0	934.0	37.0	3.8	426.0	440.0	265.0	160.0
Avg	251.5	349.7	0.0	0.3	0.0	0.4	0.0	0.4	0.5	1.0	0.8	0.7	0.7	0.5	7.3	0.6	22.6	2.0	443.0	451.3	868.5	806.0	28.5	1.6	288.0	254.4	222.5	101.8

TABLE 6o
MANGANESE

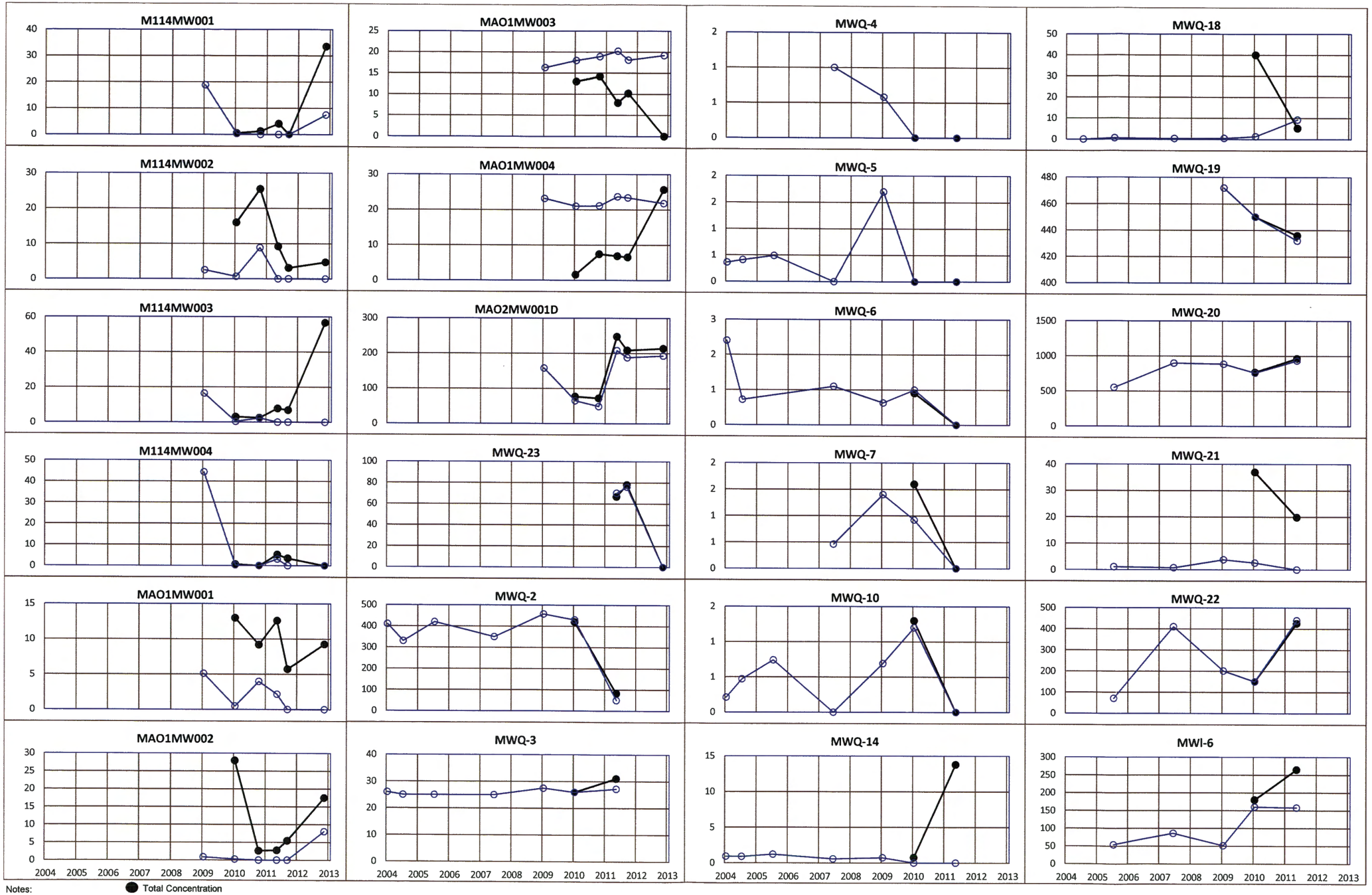
TABLE 6o
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO



Notes:
Data in µg/L

TABLE 6o
MANGANESE

TABLE 6o
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO



Notes:
Data in µg/L

● Total Concentration
○ Dissolved Concentration

TABLE 6o
MANGANESE

TABLE 6p
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO

DATE	Semiannual Network																			
	SWMU 114								SWMU 130								SWMU 131			
	M114MW001		M114MW002		M114MW003		M114MW004		MAO1MW001		MAO1MW002		MAO1MW003		MAO1MW004		MAO2MW001D		MWQ-23	
	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss
Jan-04																				
Jul-04																				
Jul-05																				
Jun-07																				
Jan-09		0.080		0.11		<D.L.		0.090		<D.L.		0.098		<D.L.		0.16		0.06		
Jan-10	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	0.030	0.034	0.048	0.033	0.034	0.035	0.035	0.033	0.035	0.036	<D.L.	<D.L.		
Oct-10	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.		
May-11	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.
Sep-11	<D.L.	0.08165	0.10199	<D.L.	<D.L.	0.09168	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	0.09305	0.09518	<D.L.	0.08023	0.08433	<D.L.	<D.L.	<D.L.	<D.L.
Nov-12	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.
Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Max	0.00	0.08	0.10	0.11	0.00	0.09	0.03	0.09	0.05	0.03	0.03	0.10	0.10	0.03	0.08	0.16	0.00	0.06	0.00	0.00
Avg	0.00	0.03	0.02	0.02	0.00	0.02	0.01	0.02	0.01	0.01	0.01	0.04	0.03	0.01	0.02	0.05	0.00	0.01	0.00	0.00

Notes:

Data in µg/L

NMED SSL Tapwater Screening Level: 0.626

Red indicates exceedance

Blank cells indicate no data

Wells MWQ-3, -4, -5, -6, -7, -10, -23, and MWL-6 not sampled after spring 2011

Due to a preponderance of no detects trends are not plotted

DATE	Annual Network																											
											Background		Background															
	MWQ-2		MWQ-3		MWQ-4		MWQ-5		MWQ-6		MWQ-7		MWQ-10		MWQ-14		MWQ-18		MWQ-19		MWQ-20		MWQ-21		MWQ-22		MWL-6	
	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss
Jan-04		<D.L.		<D.L.				<D.L.		<D.L.				<D.L.		<D.L.												
Jul-04		0.11		<D.L.				0.086		0.096				0.058		0.078		0.0690										
Jul-05																												
Jun-07																												
Jan-09		0.130		0.100		<D.L.		<D.L.		<D.L.		<D.L.		<D.L.		<D.L.		<D.L.		<D.L.		<D.L.		<D.L.		<D.L.		<D.L.
Jan-10	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	0.028	0.029	0.033	0.039	<D.L.	<D.L.	<D.L.	<D.L.	0.035	0.035	0.036	0.035	0.035	0.035	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.
Oct-10																												
May-11	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	0.0921	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.
Sep-11																												
Nov-12																												
Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Max	0.00	0.13	0.00	0.10	0.00	0.00	0.00	0.09	0.03	0.10	0.03	0.04	0.00	0.09	0.00	0.08	0.04	0.07	0.04	0.04	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00
Avg	0.00	0.05	0.00	0.02	0.00	0.00	0.00	0.02	0.01	0.03	0.02	0.01	0.00	0.03	0.00	0.02	0.02	0.03	0.02	0.01	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00

TABLE 6p
MERCURY

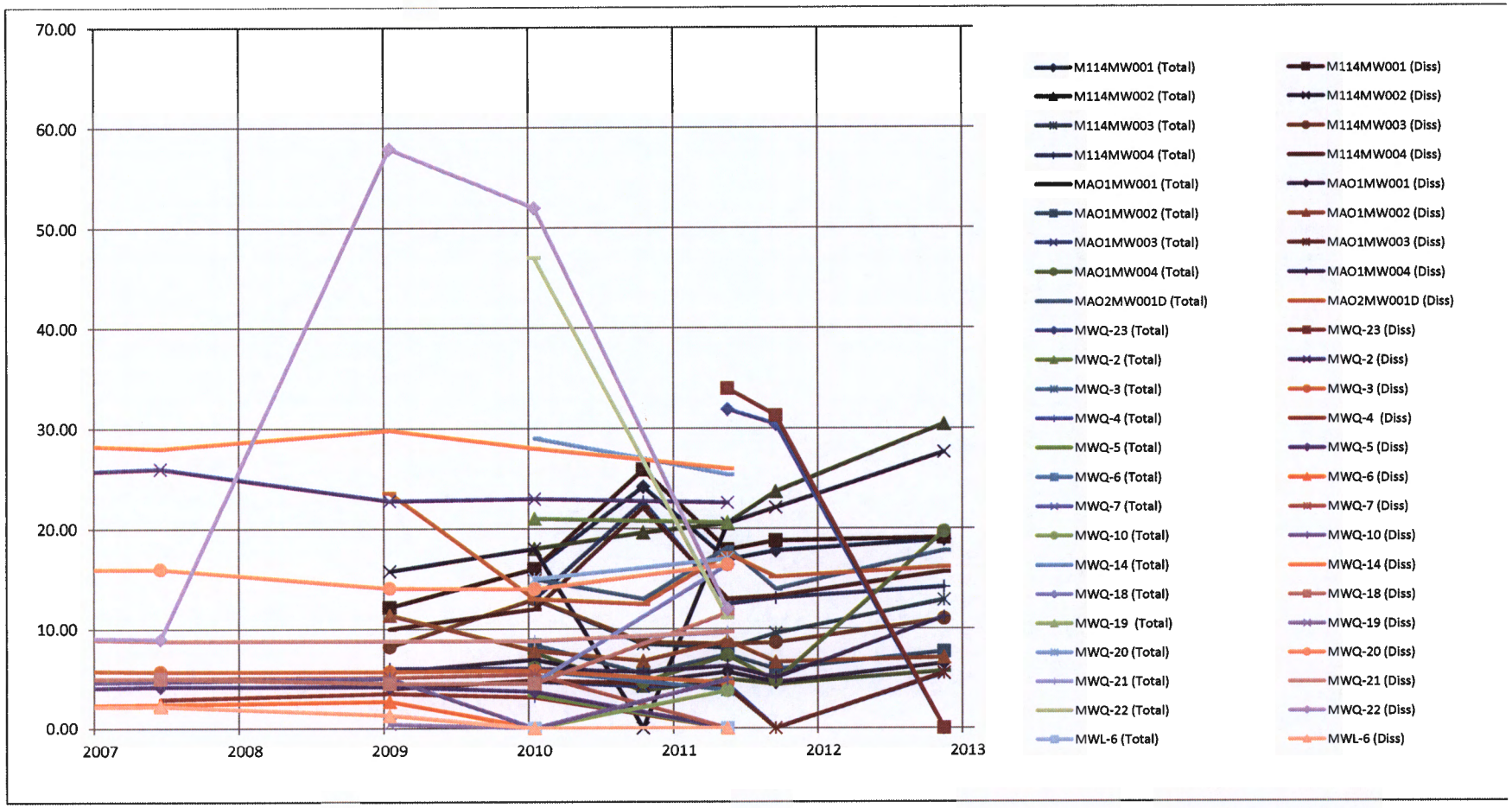
TABLE 6q
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO

DATE	Semiannual Network																			
	SWMU 114								SWMU 130								SWMU 131			
	M114MW001		M114MW002		M114MW003		M114MW004		MAO1MW001		MAO1MW002		MAO1MW003		MAO1MW004		MAO2MW001D		MWQ-23	
	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss
Jan-04																				
Jul-04																				
Jul-05																				
Jun-07																				
Jan-09		12.2		15.8		8.2		10.0		5.7		11.4		4.0		6.0		23.6		
Jan-10	16	16	18	18	13	13	13	12	7.6	6.9	8.4	7.8	4.7	4.8	6.1	6.0	15	13		
Oct-10	24.2	25.9	19.6	<D.L.	8.47	8.67	22.7	22.1	3.77	4.66	5.47	6.77	4.20	4.49	4.65	5.64	13.0	12.5		
May-11	16.9	17.9	20.5	20.5	8.07	8.48	12.5	13	4.94	5.66	7.44	8.79	4.39	4.09	7.31	6.27	18.1	17.5	31.9	34
Sep-11	17.8	18.8	23.7	22.1	9.56	8.6	13.1	13.3	4.42	4.61	5.93	6.66	<D.L.	<D.L.	4.78	5.07	14	15.2	30.4	31.3
Nov-12	18.9	19.1	30.4	27.6	12.9	11	14.2	15.7	5.74	6.51	7.7	7.09	5.45	5.53	19.7	11.2	17.8	16.2	<D.L.	<D.L.
Min	16.0	12.2	18.0	0.0	8.1	8.2	12.5	10.0	3.8	4.6	5.5	6.7	0.0	0.0	4.7	5.1	13.0	12.5	0.0	0.0
Max	24.2	25.9	30.4	27.6	13.0	13.0	22.7	22.1	7.6	6.9	8.4	11.4	5.5	5.5	19.7	11.2	18.1	23.6	31.9	34.0
Avg	18.8	18.3	22.4	17.3	10.4	9.7	15.1	14.4	5.3	5.7	7.0	8.1	3.7	3.8	8.5	6.7	15.6	16.3	20.8	21.8

Notes:
Data in µg/L
NMED SSL Tapwater Screening Level: 183
Red indicates exceedance
Blank cells indicate no data
Wells MWQ-3, -4, -5, -6, -7, -10, -23, and MWL-6 not sampled after spring 2011

DATE	Annual Network																											
											Background		Background															
	MWQ-2		MWQ-3		MWQ-4		MWQ-5		MWQ-6		MWQ-7		MWQ-10		MWQ-14		MWQ-18		MWQ-19		MWQ-20		MWQ-21		MWQ-22		MWL-6	
	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss
Jan-04		32		5.5				3.7		2.3				4		26												
Jul-04		21		5.7				3.7		2				3.6		26		5										
Jul-05		25		6				3.7						4.4		29		4.9				16		9.3		9.4		2.1
Jun-07		26.0		5.7		2.9		4.2		2.4		5.0		4.7		28		5.0				16.0		8.8		9.0		2.2
Jan-09		22.8		5.7		3.5		4.2		2.7		5.1		5.0		29.8		4.5		0.4		14.1		8.8		57.9		1.3
Jan-10	21	23	5.8	5.8	3.2	3.1	3.3	3.7	<D.L.	<D.L.	5.4	5.4	<D.L.	<D.L.	29	28	4.6	4.5	<D.L.	<D.L.	15	14	8.8	8.8	47	52	<D.L.	<D.L.
Oct-10																												
May-11	20.6	22.6	3.84	4.54	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	3.77	4.87	25.4	26	16.4	11.6	<D.L.	<D.L.	17	16.4	9.63	9.72	11.1	12	<D.L.	<D.L.
Sep-11																												
Nov-12																												
Min	20.6	21.0	3.8	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.4	26.0	4.6	4.5	0.0	0.0	15.0	14.0	8.8	8.8	11.1	9.0	0.0	0.0
Max	21.0	32.0	5.8	6.0	3.2	3.5	3.3	4.2	0.0	2.7	5.4	5.4	3.8	5.0	29.0	29.8	16.4	11.6	0.0	0.4	17.0	16.4	9.6	9.7	47.0	57.9	0.0	2.2
Avg	20.8	24.6	4.8	5.6	1.6	2.4	1.7	3.3	0.0	1.6	2.7	3.9	1.9	3.8	27.2	27.5	10.5	5.9	0.0	0.1	16.0	15.3	9.2	9.1	29.1	28.1	0.0	1.1

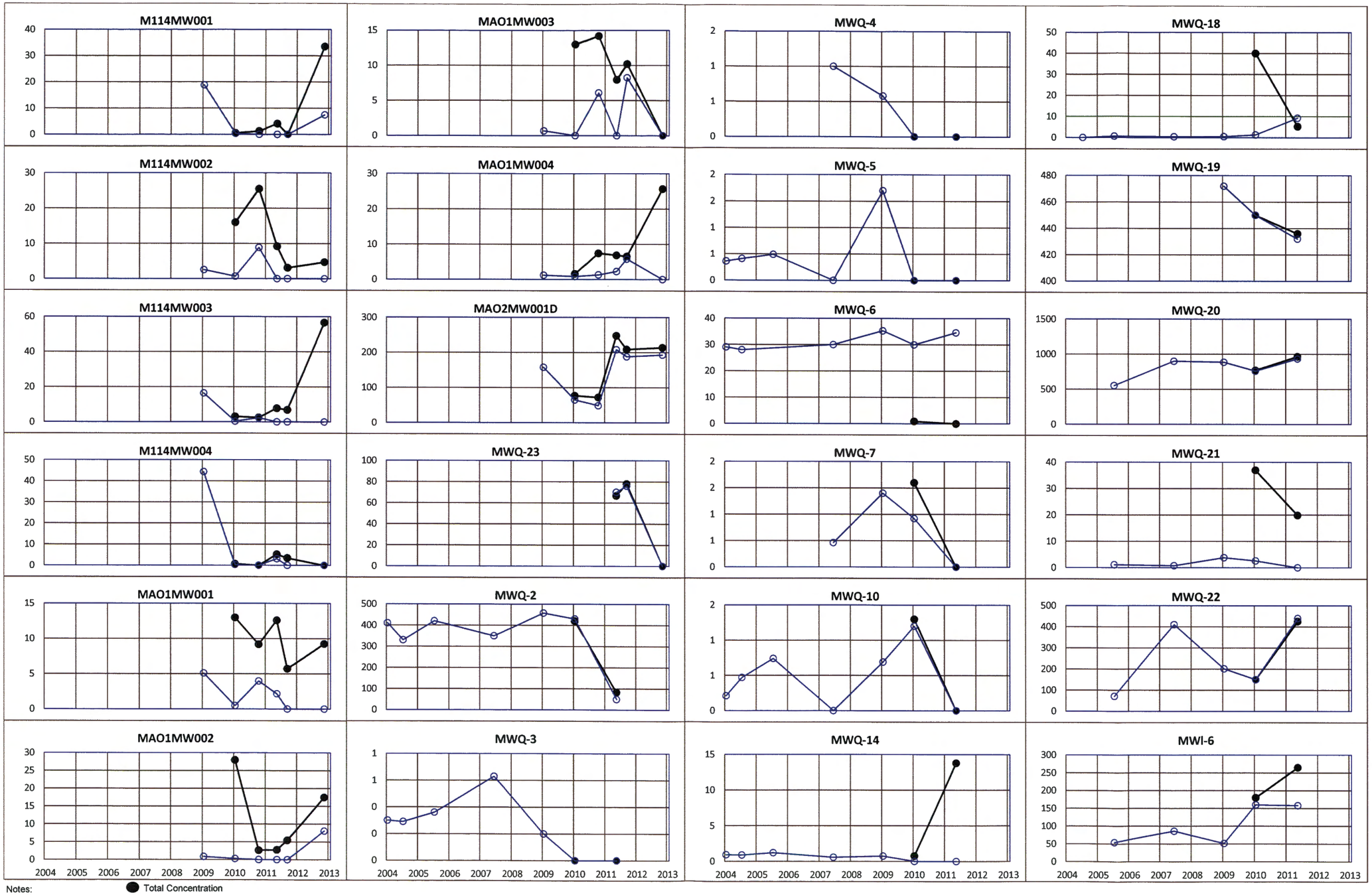
TABLE 6q
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO



Notes:
Data in µg/L

TABLE 6q
MOLYBENUM

TABLE 6q
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO



Notes:
Data in µg/L

● Total Concentration
○ Dissolved Concentration

TABLE 6q
MOLYBDENUM

TABLE 6r
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO

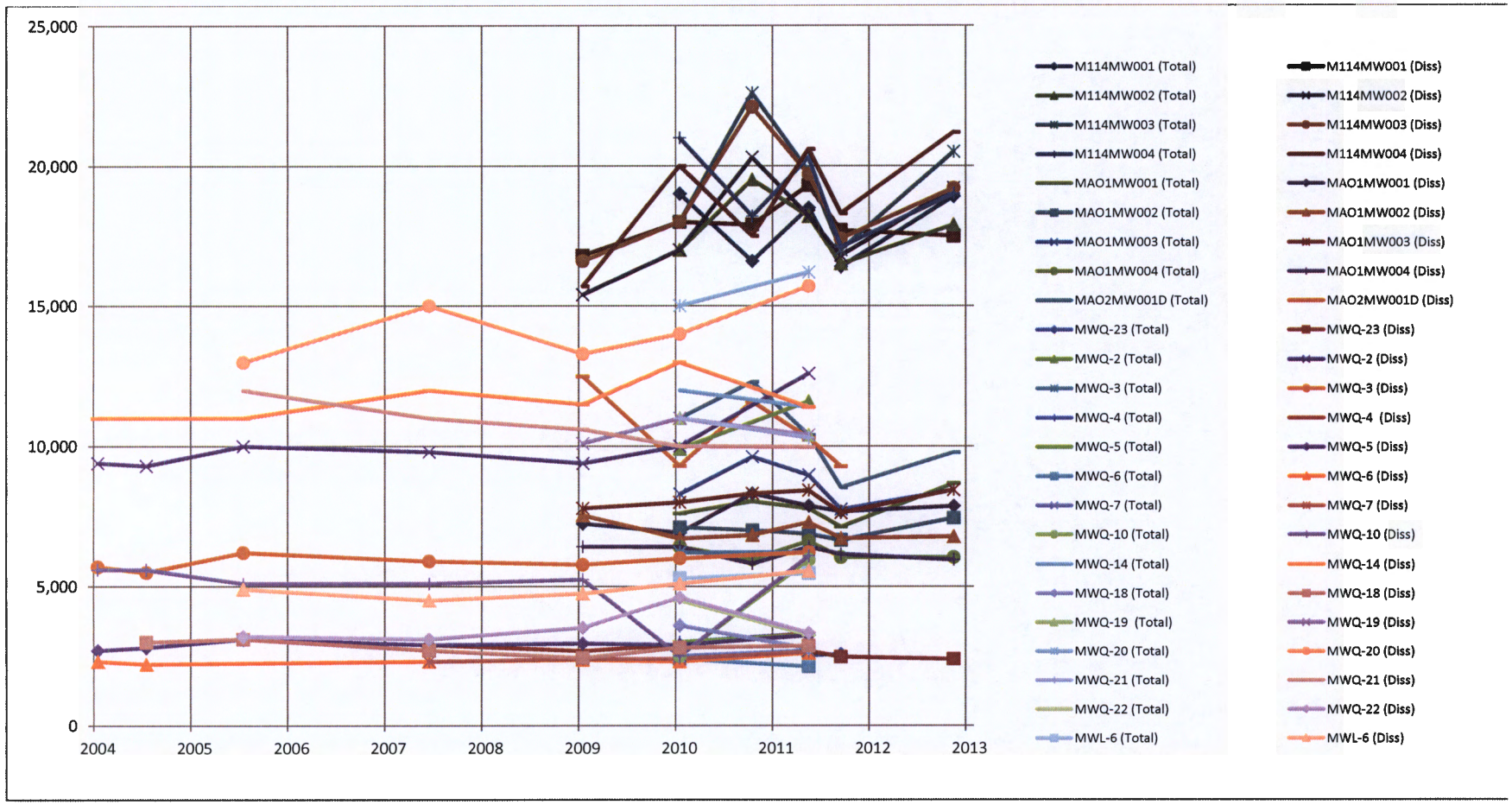
DATE	Semiannual Network																			
	SWMU 114								SWMU 130								SWMU 131			
	M114MW001		M114MW002		M114MW003		M114MW004		MAO1MW001		MAO1MW002		MAO1MW003		MAO1MW004		MAO2MW001D		MWQ-23	
	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss
Jan-04																				
Jul-04																				
Jul-05																				
Jun-07																				
Jan-09		16,800		15,400		16,600		15,700		7,230		7,530		7,790		6,410		12,500		
Jan-10	19,000	18,000	17,000	17,000	18,000	18,000	21,000	20,000	7,600	6,900	7,100	6,700	8,300	8,000	6,400	6,400	11,000	9,300		
Oct-10	16,600	17,900	19,500	20,300	22,600	22,100	18,200	17,500	8,040	8,320	6,990	6,820	9,620	8,320	5,960	5,810	12,300	11,600		
May-11	18,500	19,300	18,200	18,200	19,800	19,700	20,300	20,600	7,780	7,880	6,860	7,280	8,970	8,430	6,610	6,400	10,400	10,300	2,520	2,680
Sep-11	16,400	17,700	16,500	16,800	17,000	17,400	17,100	18,300	7,120	7,670	6,640	6,710	7,750	7,620	6,040	6,150	8,540	9,280	2,570	2,470
Nov-12	18,900	17,500	17,900	19,200	20,500	19,200	19,000	21,200	8,680	7,870	7,440	6,770	8,440	8,450	6,040	5,950	9,780	9,460	2,560	2,390
Min	16400	16800	16500	15400	17000	16600	17100	15700	7120	6900	6640	6700	7750	7620	5960	5810	8540	9280	2520	2390
Max	19000	19300	19500	20300	22600	22100	21000	21200	8680	8320	7440	7530	9620	8450	6610	6410	12300	12500	2570	2680
Avg	17880	17867	17820	17817	19580	18833	19120	18883	7844	7645	7006	6968	8616	8102	6210	6187	10404	10407	2550	2513

Notes:
Data in µg/L
NMED SSL Tapwater Screening Level: —
Red indicates exceedance
Blank cells indicate no data
Wells MWQ-3, -4, -5, -6, -7, -10, -23, and MWL-6 not sampled after spring 2011

DATE	Annual Network																											
											Background		Background															
	MWQ-2		MWQ-3		MWQ-4		MWQ-5		MWQ-6		MWQ-7		MWQ-10		MWQ-14		MWQ-18		MWQ-19		MWQ-20		MWQ-21		MWQ-22		MWL-6	
	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss
Jan-04		9,400		5,700				2,700		2,300				5,600		11,000												
Jul-04		9,300		5,500				2,800		2,200				5,600		11,000		3,000										
Jul-05		10,000		6,200				3,100						5,100		11,000		3,100				13,000		12,000		3,200		4,900
Jun-07		9,800		5,900		2,900		2,900		2,300		2,300		5,100		12,000		2,700				15,000		11,000		3,100		4,500
Jan-09		9,390		5,780		2,680		2,950		2,360		2,390		5,250		11,500		2,430		10,100		13,300		10,600		3,520		4,750
Jan-10	9,900	10,000	6,200	6,000	3,000	2,900	3,000	2,900	2,400	2,300	2,500	2,400	2,500	2,500	12,000	13,000	3,600	2,800	11,000	11,000	15,000	14,000	11,000	10,000	4,500	4,600	5,300	5,100
Oct-10																												
May-11	11,600	12,600	6,210	6,210	3,310	3,310	3,260	3,240	2,120	2,610	2,690	2,650	5,950	6,090	11,400	11,400	2,770	2,870	10,400	10,400	16,200	15,700	10,300	9,970	3,260	3,340	5,470	5,560
Sep-11																												
Nov-12																												
Min	9900	9300	6200	5500	3000	2680	3000	2700	2120	2200	2500	2300	2500	2500	11400	11000	2770	2430	10400	10100	15000	13000	10300	9970	3260	3100	5300	4500
Max	11600	12600	6210	6210	3310	3310	3260	3240	2400	2610	2690	2650	5950	6090	12000	13000	3600	3100	11000	11000	16200	15700	11000	12000	4500	4600	5470	5560
Avg	10750	10070	6205	5899	3155	2948	3130	2941	2260	2345	2595	2435	4225	5034	11700	11557	3185	2817	10700	10500	15600	14200	10650	10714	3880	3552	5385	4962

TABLE 6r
POTASSIUM

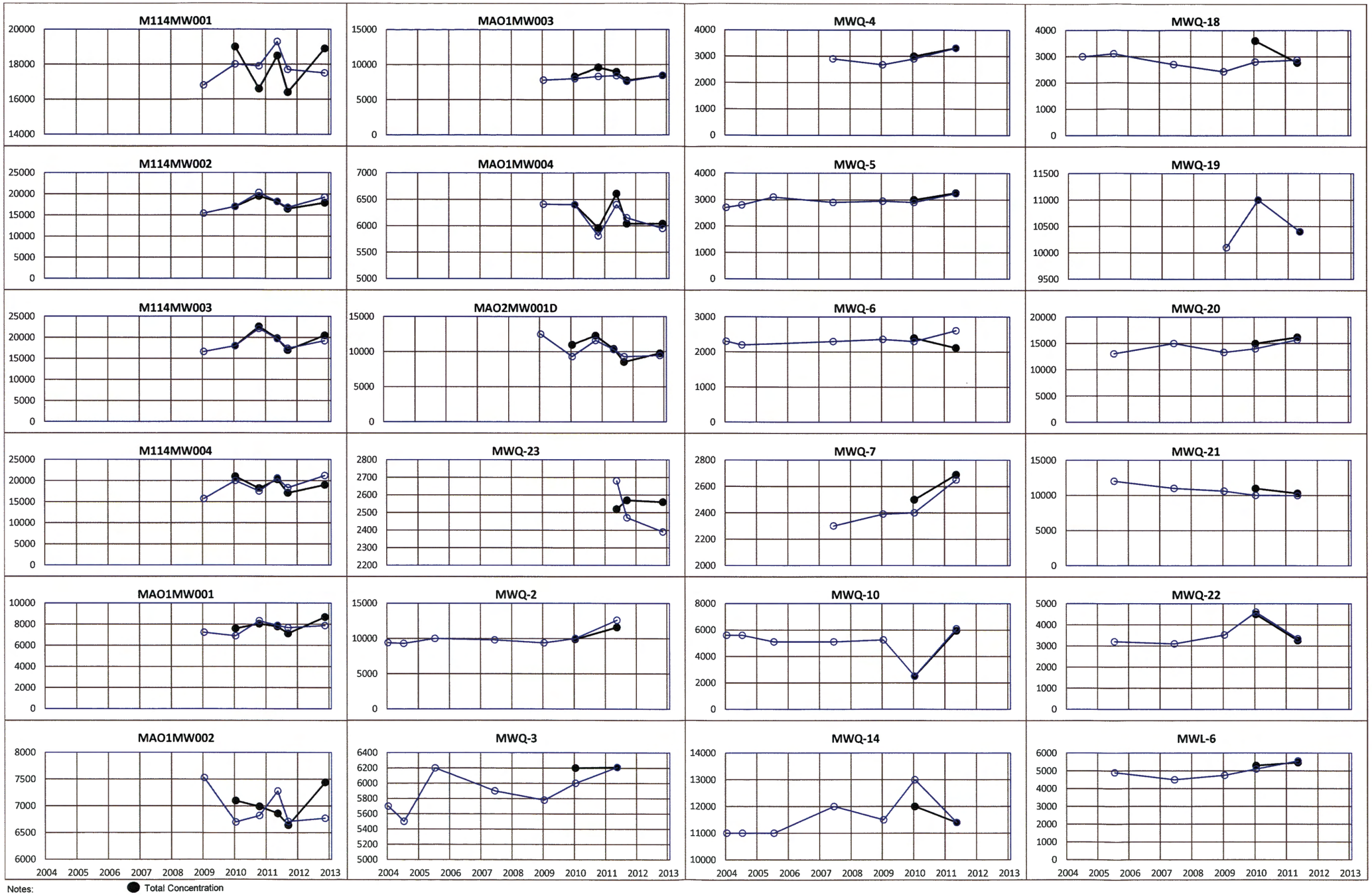
TABLE 6r
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO



Notes:
Data in µg/L

TABLE 6r
POTASSIUM

TABLE 6r
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO



Notes:
Data in µg/L

● Total Concentration
○ Dissolved Concentration

TABLE 6r
POTASSIUM

TABLE 6s
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO

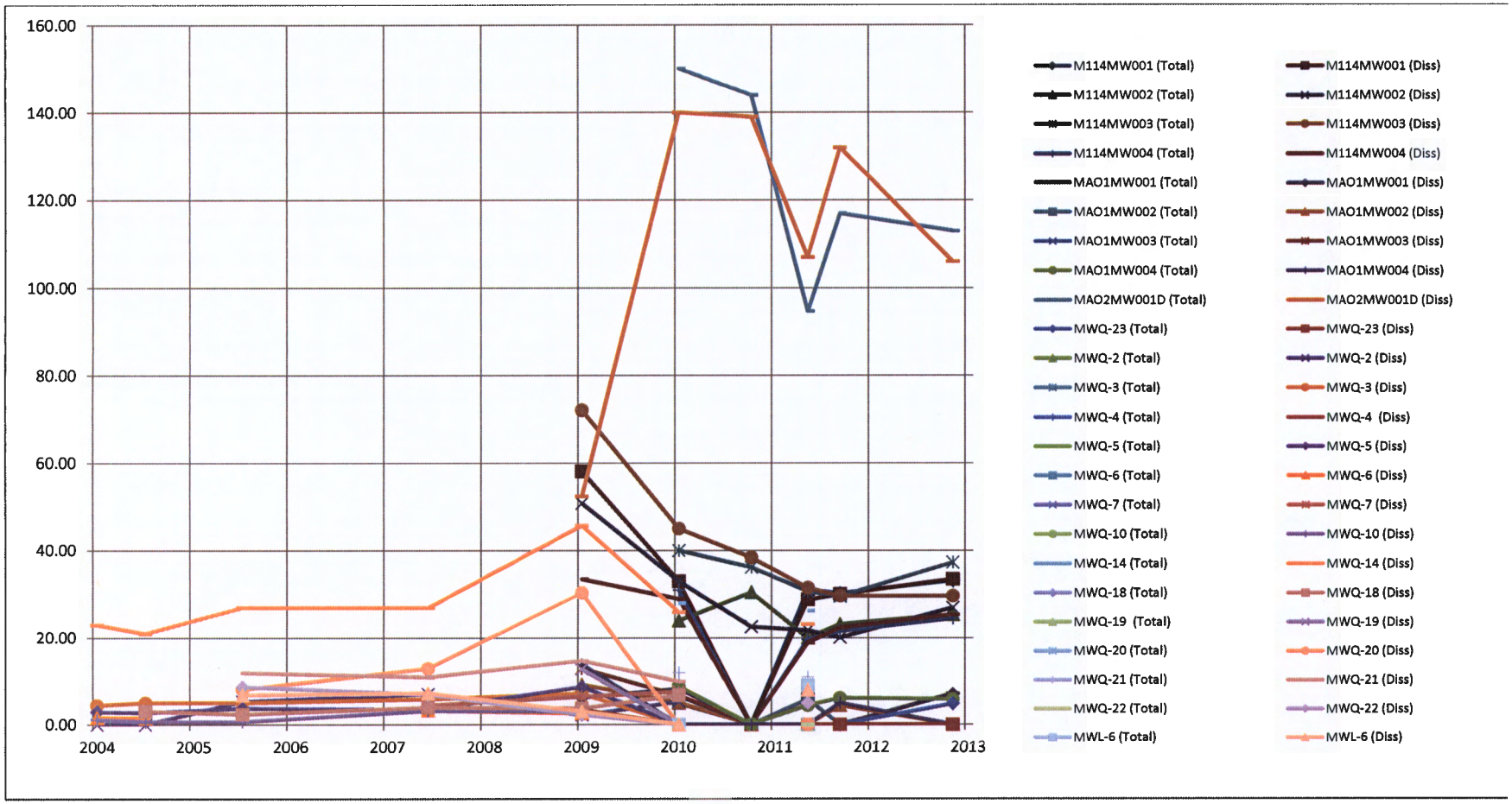
DATE	Semiannual Network																			
	SWMU 114								SWMU 130								SWMU 131			
	M114MW001		M114MW002		M114MW003		M114MW004		MAO1MW001		MAO1MW002		MAO1MW003		MAO1MW004		MAO2MW001D		MWQ-23	
	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss
Jan-04																				
Jul-04																				
Jul-05																				
Jun-07																				
Jan-09		58.1		50.8		72.1		33.5		6.3		9.3		13.0		13.9		52.4		
Jan-10	33	33	24	33	40	45	31	29	4.90	8.30	5.0	5.1	6.6	6.8	8.9	<D.L.	150	140		
Oct-10	<D.L	<D.L.	30.5	22.6	36.2	38.4	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	144	139		
May-11	31.1	28.8	20	21.8	30.7	31.5	19.6	18.9	<D.L.	<D.L.	5.87	<D.L.	<D.L.	<D.L.	4.44	<D.L.	94.7	107	<D.L.	<D.L.
Sep-11	30.3	30.1	23.2	20.1	29.6	29.7	21.6	22.4	<D.L.	<D.L.	<D.L.	4.49	<D.L.	<D.L.	6.15	5.03	117	132	<D.L.	<D.L.
Nov-12	33.2	33.5	25.4	27	37.3	29.7	24.5	25.4	7.2	7.07	<D.L.	<D.L.	<D.L.	<D.L.	5.9	<D.L.	113	106	4.84	<D.L.
Min	0.0	0.0	20.0	20.1	29.6	29.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	94.7	52.4	0.0	0.0
Max	33.2	58.1	30.5	50.8	40.0	72.1	31.0	33.5	7.2	8.3	5.9	9.3	6.6	13.0	8.9	13.9	150.0	140.0	4.8	0.0
Avg	25.5	30.6	24.6	29.2	34.8	41.1	19.3	21.5	2.4	3.6	2.2	3.1	1.3	3.3	5.1	3.2	123.7	112.7	1.6	0.0

Notes:
Data in µg/L
NMED SSL Tapwater Screening Level: 183
Red indicates exceedance
Blank cells indicate no data
Wells MWQ-3, -4, -5, -6, -7, -10, -23, and MWL-6 not sampled after spring 2011

DATE	Annual Network																											
											Background		Background															
	MWQ-2		MWQ-3		MWQ-4		MWQ-5		MWQ-6		MWQ-7		MWQ-10		MWQ-14		MWQ-18		MWQ-19		MWQ-20		MWQ-21		MWQ-22		MWL-6	
	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss
Jan-04		<D.L.		4.5				3		1.6				1.1		23												
Jul-04		<D.L.		5.1				2.8		1.5				0.64		21		3.1										
Jul-05		5.4		5.1				3.8						0.68		27		2.4				8.2		12		8.8		6.9
Jun-07		7.1		5.9		4.0		3.5		3.3		4.5		3.2		27		4.0				13		11		7.0		7.3
Jan-09		2.2		7.2		3.5		8.8		2.6		6.5		3.0		45.7		3.8		12.8		30.4		14.8		2.3		3.1
Jan-10	<D.L.	5.3	6.6	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	7.6	<D.L.	<D.L.	28	26	<D.L.	6.8	<D.L.	<D.L.	<D.L.	<D.L.	12	10	<D.L.	<D.L.	<D.L.	<D.L.
Oct-10																												
May-11	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	6.12	<D.L.	<D.L.	26.3	23.2	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	11	9.9	<D.L.	5	9.06	8.02
Sep-11																												
Nov-12																												
Min	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5	0.0	0.0	26.3	21.0	0.0	0.0	0.0	0.0	0.0	0.0	11.0	9.9	0.0	0.0	0.0	0.0
Max	0.0	7.1	6.6	7.2	0.0	4.0	0.0	8.8	0.0	3.3	0.0	7.6	0.0	3.2	28.0	45.7	0.0	6.8	0.0	12.8	0.0	30.4	12.0	14.8	0.0	8.8	9.1	8.0
Avg	0.0	2.9	3.3	4.0	0.0	1.9	0.0	3.1	0.0	1.5	0.0	6.2	0.0	1.2	27.2	27.6	0.0	3.4	0.0	4.3	0.0	10.3	11.5	11.5	0.0	4.6	4.5	5.1

TABLE 6s
SELENIUM

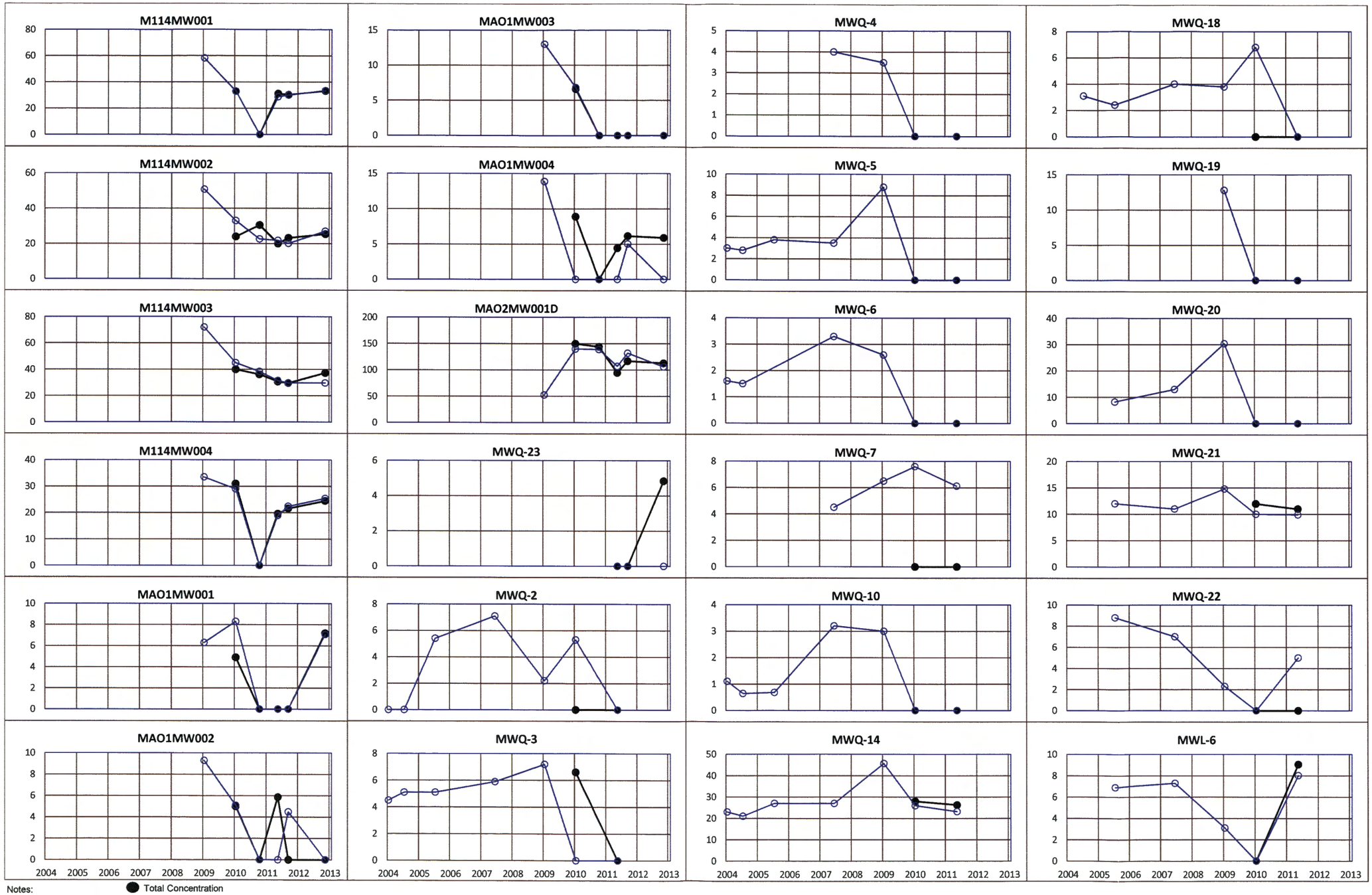
TABLE 6s
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO



Notes:
Data in µg/L

TABLE 6s
SELENIUM

TABLE 6s
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO



Notes:
Data in µg/L

● Total Concentration
○ Dissolved Concentration

TABLE 6s
SELENIUM

TABLE 6t
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO

DATE	Semiannual Network																			
	SWMU 114								SWMU 130								SWMU 131			
	M114MW001		M114MW002		M114MW003		M114MW004		MAO1MW001		MAO1MW002		MAO1MW003		MAO1MW004		MAO2MW001D		MWQ-23	
	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss
Jan-04																				
Jul-04																				
Jul-05																				
Jun-07																				
Jan-09																				
Jan-10	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.		
Oct-10	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.		
May-11	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.
Sep-11	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.
Nov-12	<D.L.	<D.L.	0.98	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	1.03	1.10	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.
Min	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Avg	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Notes:
Data in µg/L
NMED SSL Tapwater Screening Level: 183
Red indicates exceedance
Blank cells indicate no data
Wells MWQ-3, -4, -5, -6, -7, -10, -23, and MWL-6 not sampled after spring 2011

Due to a preponderance of no detects trends are not plotted

DATE	Annual Network																											
											Background		Background															
	MWQ-2		MWQ-3		MWQ-4		MWQ-5		MWQ-6		MWQ-7		MWQ-10		MWQ-14		MWQ-18		MWQ-19		MWQ-20		MWQ-21		MWQ-22		MWL-6	
	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss
Jan-04		<D.L.		<D.L.				<D.L.		<D.L.				<D.L.		<D.L.												
Jul-04		<D.L.		<D.L.				<D.L.		<D.L.				<D.L.		0.061		<D.L.										
Jul-05		<D.L.		<D.L.				<D.L.						<D.L.		<D.L.		<D.L.				<D.L.		<D.L.		<D.L.		<D.L.
Jun-07																												
Jan-09		<D.L.		<D.L.		0.03		<D.L.		<D.L.		<D.L.		<D.L.		<D.L.		<D.L.		<D.L.		<D.L.		<D.L.		<D.L.		0.078
Jan-10	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.
Oct-10																												
May-11	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.
Sep-11																												
Nov-12																												
Min	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Avg	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TABLE 6t
SILVER

TABLE 6u
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO

DATE	Semiannual Network																			
	SWMU 114								SWMU 130								SWMU 131			
	M114MW001		M114MW002		M114MW003		M114MW004		MAO1MW001		MAO1MW002		MAO1MW003		MAO1MW004		MAO2MW001D		MWQ-23	
	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss
Jan-04																				
Jul-04																				
Jul-05																				
Jun-07																				
Jan-09		2,910,000		2,610,000		3,270,000		2,780,000		732,000		645,000		655,000		401,000		1,880,000		
Jan-10	2,200,000	2,200,000	2,300,000	2,200,000	3,000,000	2,700,000	2,400,000	2,500,000	680,000	670,000	550,000	540,000	510,000	500,000	350,000	340,000	1,800,000	1,600,000		
Oct-10	1,950,000	2,130,000	2,030,000	2,170,000	2,600,000	2,660,000	2,250,000	2,260,000	582,000	599,000	548,000	491,000	591,000	463,000	315,000	301,000	1,570,000	1,580,000		
May-11	1,960,000	2,020,000	2,040,000	2,020,000	2,620,000	2,550,000	2,260,000	2,240,000	567,000	588,000	491,000	527,000	469,000	458,000	308,000	297,000	1,930,000	1,910,000	451,000	489,000
Sep-11	2,080,000	2,080,000	2,100,000	2,220,000	2,540,000	2,580,000	2,170,000	2,480,000	569,000	556,000	531,000	530,000	459,000	430,000	321,000	323,000	1,580,000	1,630,000	472,000	481,000
Nov-12	2,060,000	1,970,000	2,110,000	1,800,000	2,790,000	2,750,000	2,240,000	2,560,000	589,000	602,000	554,000	510,000	480,000	475,000	317,000	325,000	2,060,000	1,710,000	64,100	59,200
Min	1950000	1970000	2030000	1800000	2540000	2550000	2170000	2240000	567000	556000	491000	491000	459000	430000	308000	297000	1570000	1580000	64100	59200
Max	2200000	2910000	2300000	2610000	3000000	3270000	2400000	2780000	680000	732000	554000	645000	591000	655000	350000	401000	2060000	1910000	472000	489000
Avg	2050000	2218333	2116000	2170000	2710000	2751667	2264000	2470000	597400	624500	534800	540500	501800	496833	322200	331167	1788000	1718333	329033	343067

Notes:

Data in µg/L

NMED SSL Tapwater Screening Level: ---

Red indicates exceedance

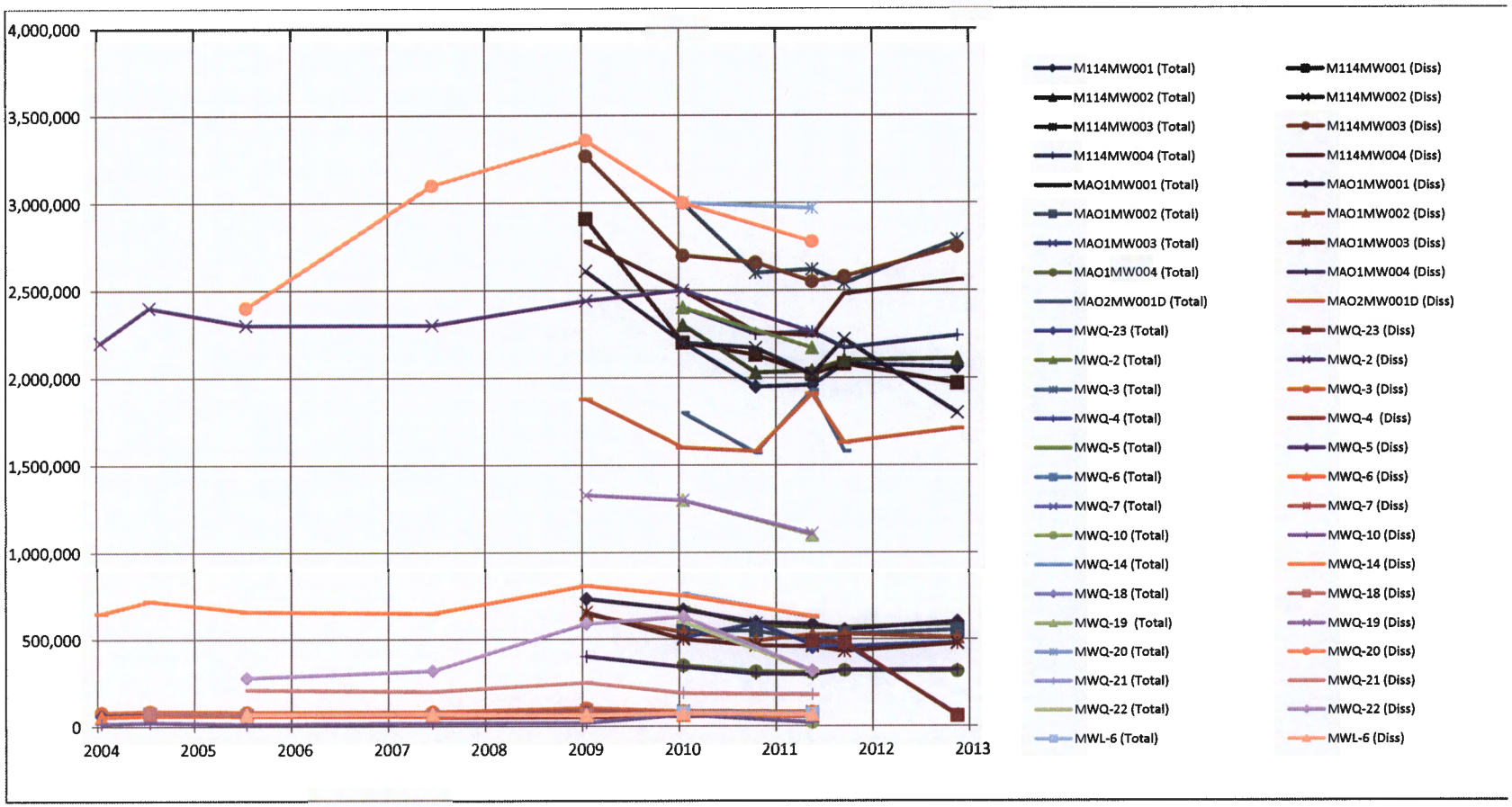
Blank cells indicate no data

Wells MWQ-3, -4, -5, -6, -7, -10, -23, and MWL-6 not sampled after spring 2011

DATE	Annual Network																											
											Background		Background															
	MWQ-2		MWQ-3		MWQ-4		MWQ-5		MWQ-6		MWQ-7		MWQ-10		MWQ-14		MWQ-18		MWQ-19		MWQ-20		MWQ-21		MWQ-22		MWL-6	
	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss
Jan-04		2,200,000		79,000				61,000		54,000				15,000		650,000												
Jul-04		2,400,000		86,000				67,000		61,000				22,000		720,000		76,000										
Jul-05		2,300,000		81,000				63,000						13,000		660,000		67,000				2,400,000		210,000		280,000		69,000
Jun-07		2,300,000		82,000		52,000		64,000		56,000		67,000		18,000		650,000		65,000				3,100,000		200,000		320,000		71,000
Jan-09		2,440,000		103,000		51,500		83,600		72,800		92,300		19,100		806,000		63,900		1,330,000		3,360,000		251,000		590,000		62,200
Jan-10	2,400,000	2,500,000	87,000	85,000	59,000	58,000	68,000	64,000	63,000	62,000	78,000	75,000	66,000	65,000	760,000	750,000	73,000	71,000	1,300,000	1,300,000	3,000,000	3,000,000	190,000	190,000	600,000	630,000	76,000	73,000
Oct-10																												
May-11	2,170,000	2,260,000	81,700	80,300	55,900	56,400	65,200	63,600	57,900	57,900	72,000	72,700	21,100	21,500	628,000	633,000	65,500	68,800	1,100,000	1,110,000	2,970,000	2,780,000	184,000	181,000	315,000	319,000	69,600	67,800
Sep-11																												
Nov-12																												
Min	2170000	2200000	81700	79000	55900	51500	65200	61000	57900	54000	72000	67000	21100	13000	628000	633000	65500	63900	1100000	1110000	2970000	2400000	184000	181000	315000	280000	69600	62200
Max	2400000	2500000	87000	103000	59000	58000	68000	83600	63000	72800	78000	92300	66000	65000	760000	806000	73000	76000	1300000	1330000	3000000	3360000	190000	251000	600000	630000	76000	73000
Avg	2285000	2342857	84350	85186	57450	54475	66600	66600	60450	60617	75000	76750	43550	24800	694000	695571	69250	68617	1200000	1246667	2985000	2928000	187000	206400	457500	427800	72800	68600

TABLE 6u
SODIUM

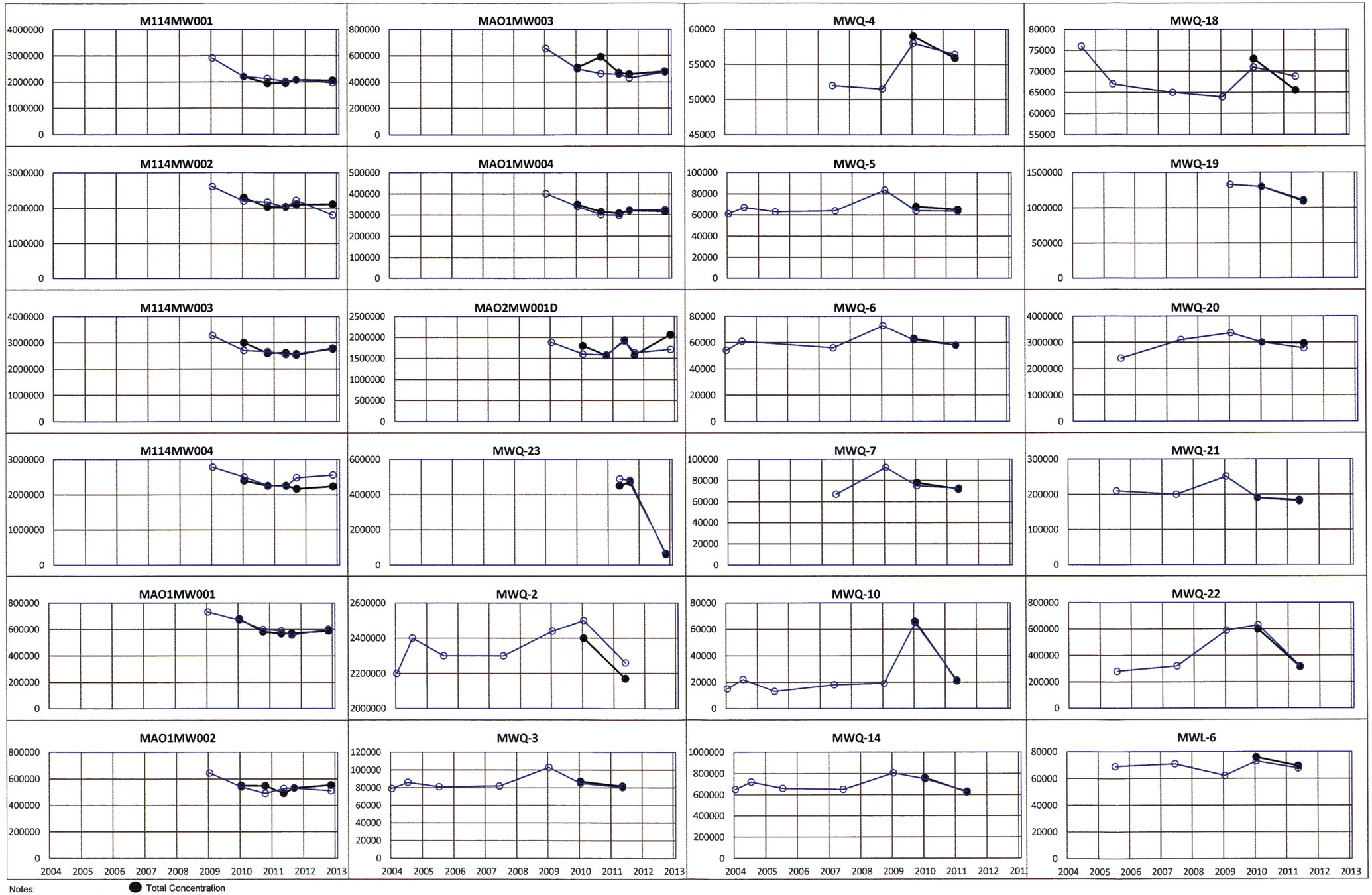
TABLE 6u
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO



Notes:
Data in µg/L

TABLE 6u
SODIUM

TABLE 6u
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO



Notes:
Data in µg/L

● Total Concentration
○ Dissolved Concentration

TABLE 6u
SODIUM

TABLE 6v
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO

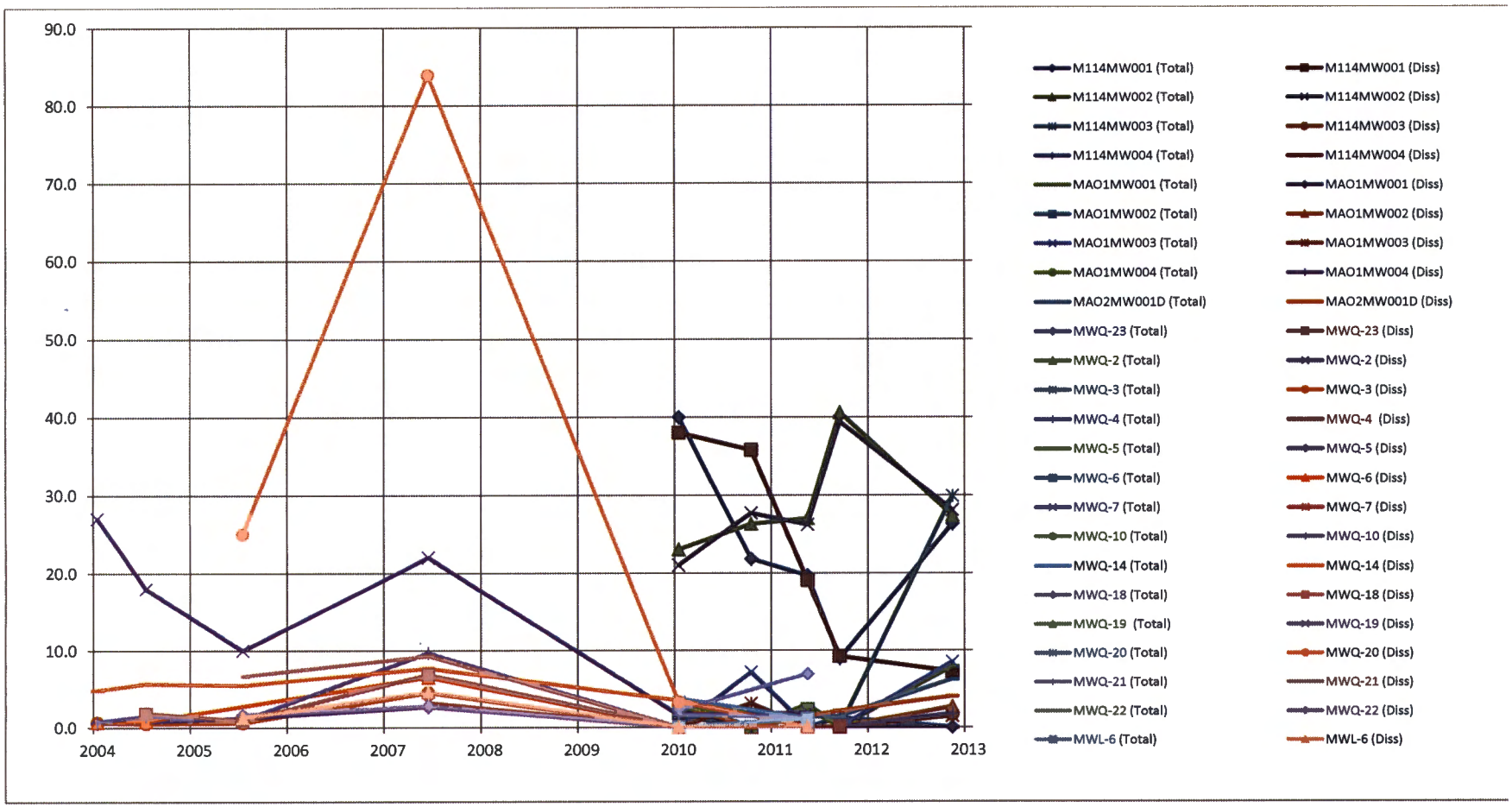
DATE	Semiannual Network																			
	SWMU 114								SWMU 130								SWMU 131			
	M114MW001		M114MW002		M114MW003		M114MW004		MAO1MW001		MAO1MW002		MAO1MW003		MAO1MW004		MAO2MW001D		MWQ-23	
	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss
Jan-04																				
Jul-04																				
Jul-05																				
Jun-07																				
Jan-09																				
Jan-10	40	38	23	21	2.3	2.9	<D.L.	<D.L.	<D.L.	<D.L.	1.4	<D.L.	<D.L.	<D.L.	2.6	2.4	3.2	2.9		
Oct-10	21.8	35.8	26.3	27.7	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	7.17	3.09	<D.L.	<D.L.	<D.L.	<D.L.		
May-11	19.7	19.1	27.0	26.2	<D.L.	<D.L.	<D.L.	<D.L.	2.96	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	2.29	<D.L.	1.3	1.4	<D.L.	<D.L.
Sep-11	8.97	9.2	40.6	39.4	<D.L.	<D.L.	1.2	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	1.4	2.1	<D.L.	<D.L.
Nov-12	26.30	7.24	27.4	28.1	29.9	1.64	<D.L.	<D.L.	7.89	<D.L.	13.3	2.69	8.51	1.44	4.08	1.79	6.24	4.02		
Min	9.0	7.2	23.0	21.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max	40.0	38.0	40.6	39.4	29.9	2.9	1.2	0.0	7.9	0.0	13.3	2.7	8.5	3.1	4.1	2.4	6.2	4.0	0.0	0.0
Avg	23.4	21.9	28.9	28.5	6.4	0.9	0.2	0.0	2.2	0.0	2.9	0.5	3.1	0.9	1.8	0.8	2.4	2.1	0.0	0.0

Notes:
Data in µg/L
NMED SSL Tapwater Screening Level: 730
Red indicates exceedance
Blank cells indicate no data
Wells MWQ-3, -4, -5, -6, -7, -10, -23, and MWL-6 not sampled after spring 2011

DATE	Annual Network																											
											Background		Background															
	MWQ-2		MWQ-3		MWQ-4		MWQ-5		MWQ-6		MWQ-7		MWQ-10		MWQ-14		MWQ-18		MWQ-19		MWQ-20		MWQ-21		MWQ-22		MWL-6	
	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss
Jan-04		27		0.65				0.61		0.71				0.74		4.9												
Jul-04		18.0		0.55				0.78		0.85				1.5		5.7		1.9										
Jul-05		10		0.62				1.2						1		5.5		0.90				25.0		6.7		1.7		1.3
Jun-07		22		4.5		6.5		2.7		6.5		3.2		9.7		7.7		6.9				84		9.3		2.8		4.6
Jan-09																												
Jan-10	2.5	1.6	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	3.7	3.5	2.2	<D.L.	<D.L.	<D.L.	3.3	3.3	1.6	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.
Oct-10																												
May-11	1.6	1.89	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	1.18	<D.L.	6.9	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	1.27	<D.L.	<D.L.	<D.L.	1.09	<D.L.
Sep-11																												
Nov-12																												
Min	1.6	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	2.2	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0
Max	2.5	27.0	0.0	4.5	0.0	6.5	0.0	2.7	0.0	6.5	0.0	3.2	0.0	9.7	3.7	7.7	6.9	6.9	0.0	0.0	3.3	84.0	1.6	9.3	0.0	2.8	1.1	4.6
Avg	2.1	13.4	0.0	1.1	0.0	2.2	0.0	0.9	0.0	1.6	0.0	1.1	0.0	2.2	2.4	4.6	4.6	1.9	0.0	0.0	1.7	28.1	1.4	4.0	0.0	1.1	0.5	1.5

TABLE 6v
NICKEL

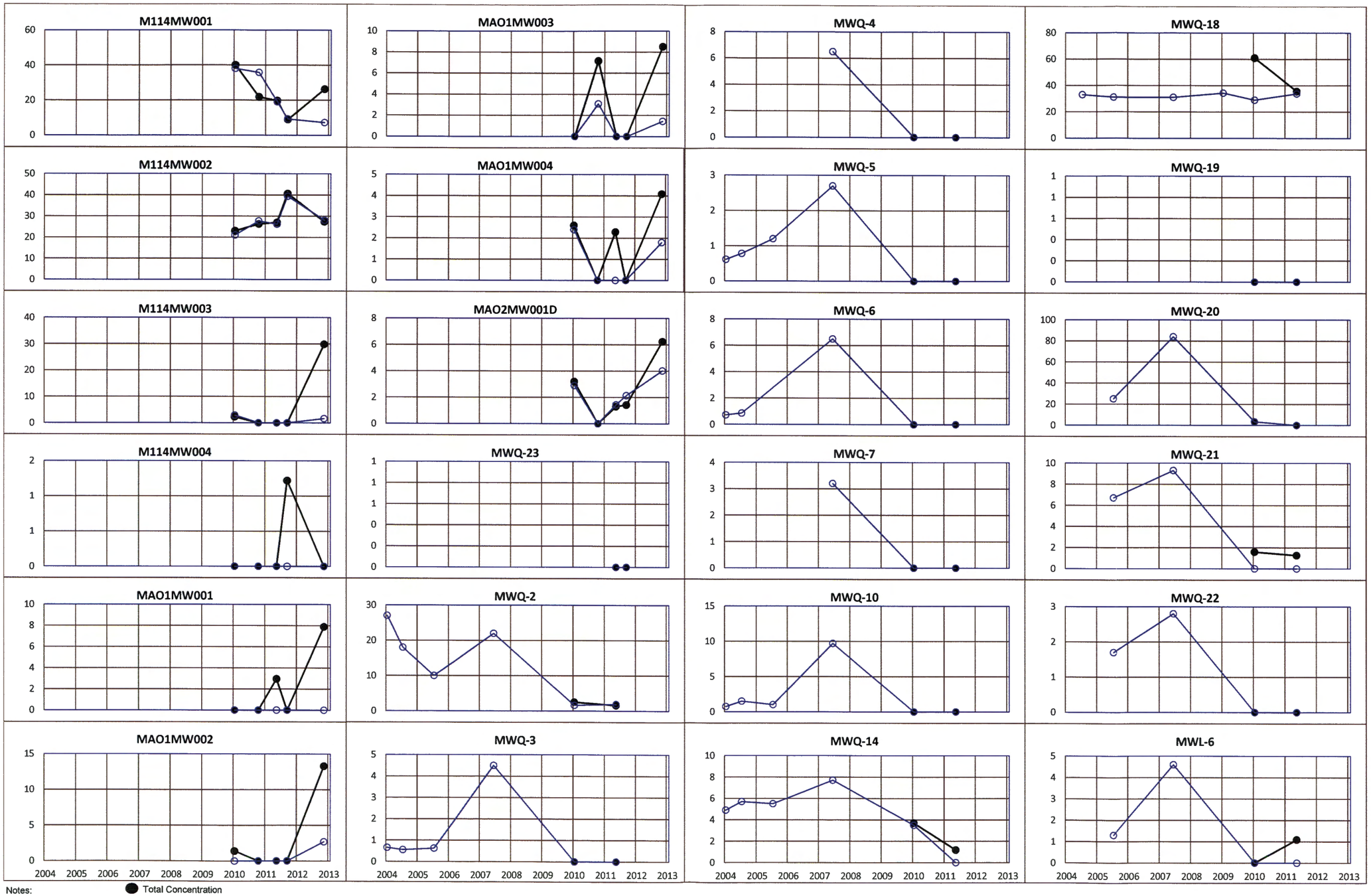
TABLE 6v
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO



Notes:
Data in µg/L

TABLE 6v
NICKEL

TABLE 6v
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO



Notes:
Data in µg/L

● Total Concentration
○ Dissolved Concentration

TABLE 6v
NICKEL

TABLE 6w
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO

DATE	Semiannual Network																			
	SWMU 114								SWMU 130								SWMU 131			
	M114MW001		M114MW002		M114MW003		M114MW004		MAO1MW001		MAO1MW002		MAO1MW003		MAO1MW004		MAO2MW001D		MWQ-23	
	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss
Jan-04																				
Jul-04																				
Jul-05																				
Jun-07																				
Jan-09																				
Jan-10	<D.L.	<D.L.	<D.L.	<D.L.	8.4	11.0	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.		
Oct-10	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	2.88	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L	<D.L.		
May-11	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.
Sep-11	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.
Nov-12	3.04	5.18	<D.L.	<D.L.	3.61	<D.L.	<D.L.	5.45	<D.L.	<D.L.	<D.L.	4.91	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.
Min	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max	3.0	5.2	0.0	0.0	8.4	11.0	0.0	5.5	0.0	0.0	0.0	4.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Avg	0.6	1.0	0.0	0.0	2.4	2.8	0.0	1.1	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Notes:
Data in µg/L
NMED SSL Tapwater Screening Level: 0.365
Red indicates exceedance
Blank cells indicate no data
Wells MWQ-3, -4, -5, -6, -7, -10, -23, and MWL-6 not sampled after spring 2011

Due to a preponderance of no detects trends are not plotted

DATE	Annual Network																											
											Background		Background															
	MWQ-2		MWQ-3		MWQ-4		MWQ-5		MWQ-6		MWQ-7		MWQ-10		MWQ-14		MWQ-18		MWQ-19		MWQ-20		MWQ-21		MWQ-22		MWL-6	
	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss
Jan-04																												
Jul-04																												
Jul-05																												
Jun-07																		<D.L.				0.037		<D.L.		0.026		
Jan-09																												
Jan-10	<D.L.	<D.L.	<D.L	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.
Oct-10																												
May-11	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.
Sep-11																												
Nov-12																												
Min	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Avg	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TABLE 6w
THALLIUM

TABLE 6x
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO

DATE	Semiannual Network																			
	SWMU 114								SWMU 130								SWMU 131			
	M114MW001		M114MW002		M114MW003		M114MW004		MAO1MW001		MAO1MW002		MAO1MW003		MAO1MW004		MAO2MW001D		MWQ-23	
	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss
Jan-04																				
Jul-04																				
Jul-05																				
Jun-07																				
Jan-09																				
Jan-10	2.0	2.2	6.5	2.2	5.6	3.3	3.2	3.0	13	1.50	13	<D.L.	5.4	<D.L.	<D.L.	<D.L.	<D.L.	0.63		
Oct-10	<D.L.	<D.L.	4.49	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	1.93	0.79	<D.L.	<D.L.	6.81	0.43	<D.L.	2.4	<D.L.	<D.L.		
May-11	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L	<D.L.	3.16	1.53	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.
Sep-11	<D.L.	<D.L.	2.01	<D.L.	2.45	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	1.37	1.24	<D.L.	<D.L.	1.52	<D.L.	<D.L.	<D.L.	2.51
Nov-12	7.87	<D.L.	2.59	<D.L.	65.1	<D.L.	<D.L.	<D.L.	8.07	<D.L.	5.42	<D.L.	1.4	<D.L.	2.68	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.
Min	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max	7.9	2.2	6.5	2.2	65.1	3.3	3.2	3.0	13.0	1.5	13.0	1.4	6.8	0.4	2.7	2.4	0.0	0.6	0.0	2.5
Avg	2.0	0.4	3.1	0.4	14.6	0.7	0.6	0.6	5.2	0.8	3.7	0.3	3.0	0.1	0.5	0.8	0.0	0.1	0.0	0.8

Notes:
Data in µg/L
NMED SSL Tapwater Screening Level: ---
Red indicates exceedance
Blank cells indicate no data
Wells MWQ-3, -4, -5, -6, -7, -10, -23, and MWL-6 not sampled after spring 2011

Due to a preponderance of no detects trends are not plotted

DATE	Annual Network																											
											Background		Background															
	MWQ-2		MWQ-3		MWQ-4		MWQ-5		MWQ-6		MWQ-7		MWQ-10		MWQ-14		MWQ-18		MWQ-19		MWQ-20		MWQ-21		MWQ-22		MWL-6	
	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss
Jan-04		<D.L.		<D.L.				<D.L.		<D.L.				<D.L.		<D.L.												
Jul-04		<D.L.		<D.L.				<D.L.		<D.L.				<D.L.		<D.L.		<D.L.										
Jul-05																												
Jun-07																												
Jan-09																												
Jan-10	3.6	2.0	<D.L	1.1	0.75	<D.L.	0.85	0.70	<D.L.	<D.L.	<D.L.	<D.L.	0.71	0.68	1.5	1.2	29	<D.L.	3.7	2.1	3.5	2.8	29	0.97	9.0	0.74	0.86	0.60
Oct-10																												
May-11	<D.L.	<D.L.	<D.L	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	1.42	<D.L.	10.6	5.29	<D.L.	<D.L.	<D.L.	<D.L.
Sep-11																												
Nov-12																												
Min	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	10.6	1.0	0.0	0.0	0.0	0.0
Max	3.6	2.0	0.0	1.1	0.8	0.0	0.9	0.7	0.0	0.0	0.0	0.0	0.7	0.7	1.5	1.2	29.0	0.0	3.7	2.1	3.5	2.8	29.0	5.3	9.0	0.7	0.9	0.6
Avg	1.8	0.5	0.0	0.3	0.4	0.0	0.4	0.2	0.0	0.0	0.0	0.0	0.4	0.2	0.8	0.3	14.5	0.0	1.9	1.1	2.5	1.4	19.8	3.1	4.5	0.4	0.4	0.3

TABLE 6x
TITANIUM

TABLE 6y
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO

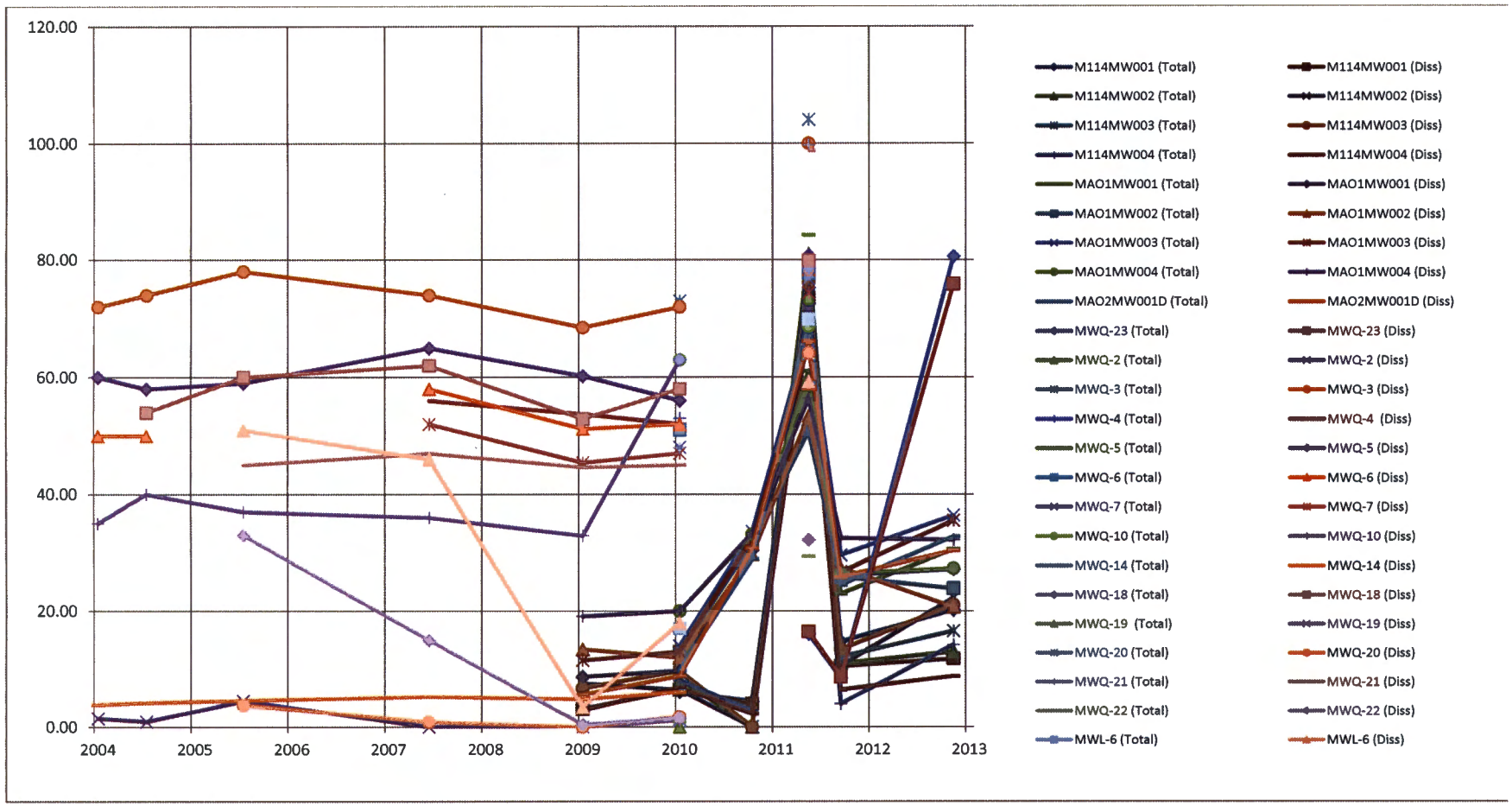
DATE	Semiannual Network																			
	SWMU 114								SWMU 130								SWMU 131			
	M114MW001		M114MW002		M114MW003		M114MW004		MAO1MW001		MAO1MW002		MAO1MW003		MAO1MW004		MAO2MW001D		MWQ-23	
	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss
Jan-04																				
Jul-04																				
Jul-05																				
Jun-07																				
Jan-09		3.1		7.5		6.7		2.9		8.7		13.4		11.5		19.1		5.6		
Jan-10	6	6.4	8.2	6.4	9.4	9.7	8	6.8	11	9.7	13	12	14	13	20	20	9.8	8.8		
Oct-10	4.4	3.99	<D.L.	<D.L.	<D.L.	<D.L.	2.86	2.27	28.9	30.4	31.6	29.7	33.6	32.5	33.1	33.4	28.9	30.8		
May-11	75.3	73.5	81	74.3	79.7	76.2	74.9	68.9	61.1	58.3	50.8	53.4	68.2	65.5	58.8	56.4	69.9	66.2	16.1	16.5
Sep-11	14.8	10.5	11	10.6	12.1	13.4	4	6.46	23	26.1	25.9	27.4	29.6	26.7	26.4	32.5	24.5	25.9	8.39	8.64
Nov-12	20.2	11.8	13	22.3	16.6	21.1	14.2	8.78	30.6	27.2	23.9	20.7	36.4	35.5	27.3	32.2	32.8	30.4	80.6	75.9
Min	4.4	3.1	0.0	0.0	0.0	0.0	2.9	2.3	11.0	8.7	13.0	12.0	14.0	11.5	20.0	19.1	9.8	5.6	8.4	8.6
Max	75.3	73.5	81.0	74.3	79.7	76.2	74.9	68.9	61.1	58.3	50.8	53.4	68.2	65.5	58.8	56.4	69.9	66.2	80.6	75.9
Avg	24.1	18.2	22.6	20.2	23.6	21.2	20.8	16.0	30.9	26.7	29.0	26.1	36.4	30.8	33.1	32.3	33.2	28.0	35.0	33.7

Notes:
Data in µg/L
NMED SSL Tapwater Screening Level: 183
Red indicates exceedance
Blank cells indicate no data
Wells MWQ-3, -4, -5, -6, -7, -10, -23, and MWL-6 not sampled after spring 2011

DATE	Annual Network																											
											Background		Background															
	MWQ-2		MWQ-3		MWQ-4		MWQ-5		MWQ-6		MWQ-7		MWQ-10		MWQ-14		MWQ-18		MWQ-19		MWQ-20		MWQ-21		MWQ-22		MWL-6	
	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss
Jan-04		1.5		72				60		50				35		3.9												
Jul-04		0.94		74				58		50				40		4.2		54										
Jul-05		4.5		78				59						37		4.6		60				3.8		45		33		51
Jun-07		<D.L.		74		56		65		58		52		36		5.2		62				0.87		47		15		46
Jan-09		<D.L.		68.5		53.7		60.2		51.2		45.4		32.9		4.8		52.9		<D.L.		<D.L.		44.6		0.42		3.4
Jan-10	<D.L.	1.2	73	72	53	52	58	56	51	52	48	47	63	63	6.2	6.0	63	58	1.8	1.3	1.1	1.8	48	45	1.3	1.5	17	18
Oct-10																												
May-11	73.5	71.6	104	100	79.8	78.8	84.3	80.8	77.7	78.4	76.8	74.4	68.8	69.8	59	58.1	78.6	79.9	64.3	64.6	64	64.1	99.7	98.8	29.4	32.2	69.9	59.3
Sep-11																												
Nov-12																												
Min	0.0	0.0	73.0	68.5	53.0	52.0	58.0	56.0	51.0	50.0	48.0	45.4	63.0	32.9	6.2	3.9	63.0	52.9	1.8	0.0	1.1	0.0	48.0	44.6	1.3	0.4	17.0	3.4
Max	73.5	71.6	104.0	100.0	79.8	78.8	84.3	80.8	77.7	78.4	76.8	74.4	68.8	69.8	59.0	58.1	78.6	79.9	64.3	64.6	64.0	64.1	99.7	98.8	29.4	33.0	69.9	59.3
Avg	36.8	11.4	88.5	76.9	66.4	60.1	71.2	62.7	64.4	56.6	62.4	54.7	65.9	44.8	32.6	12.4	70.8	61.1	33.1	22.0	32.6	14.1	73.9	56.1	15.4	16.4	43.5	35.5

TABLE 6y
VANADIUM

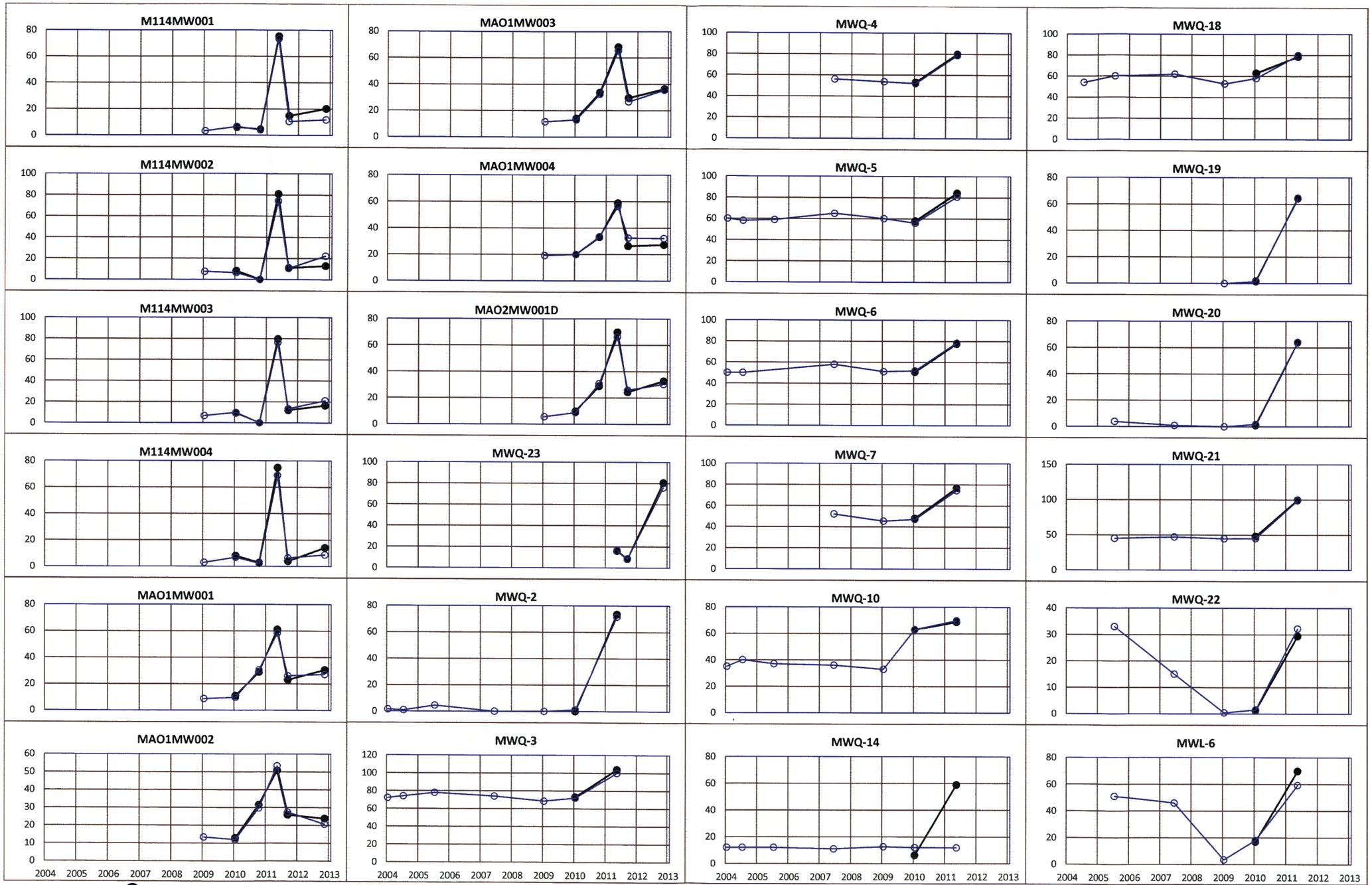
TABLE 6y
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO



Notes:
Data in µg/L

TABLE 6y
VANADIUM

TABLE 6y
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO



Notes:
Data in µg/L

● Total Concentration
○ Dissolved Concentration

TABLE 6y
VANADIUM

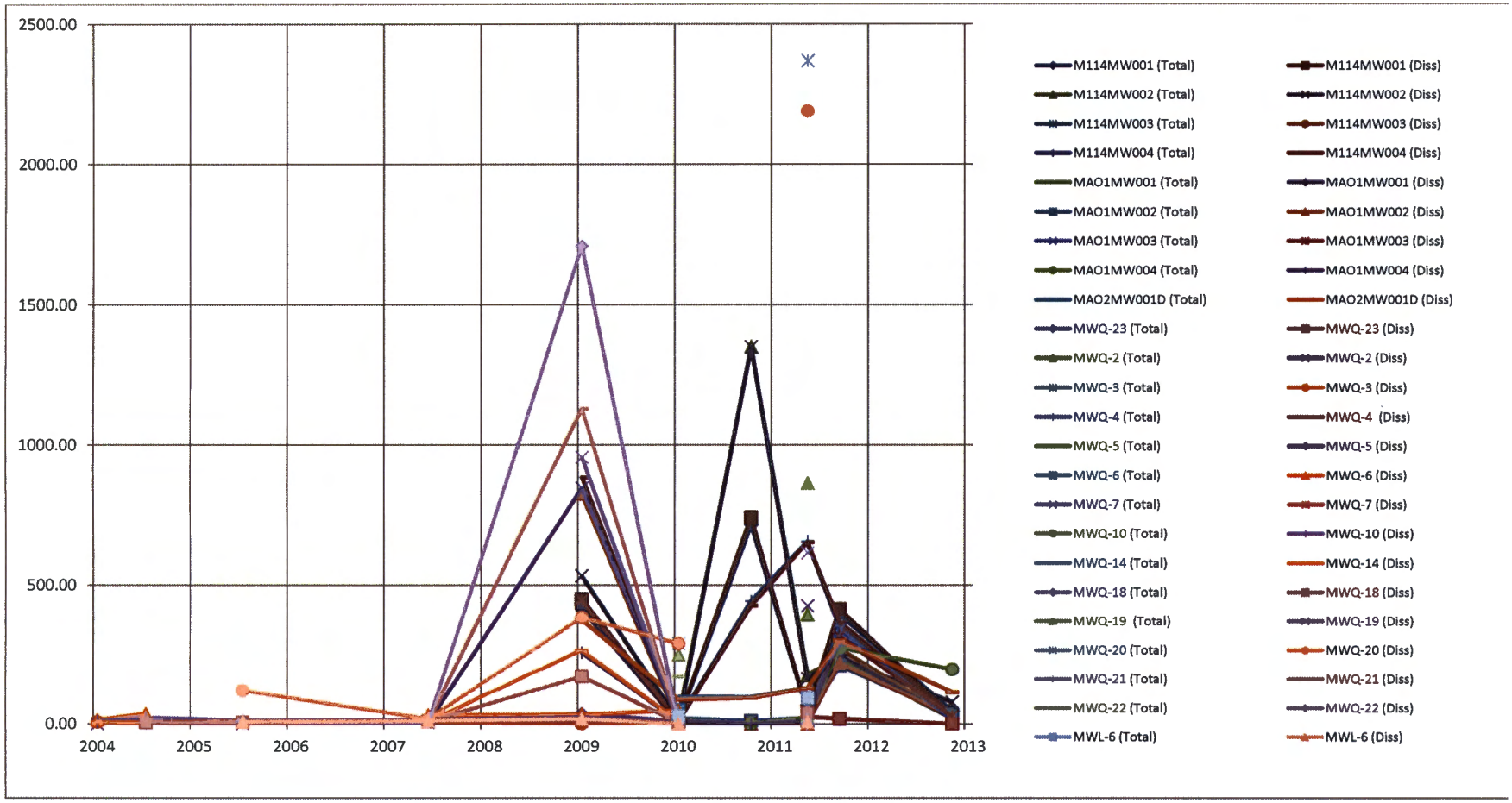
TABLE 6z
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO

DATE	Semiannual Network																			
	SWMU 114								SWMU 130								SWMU 131			
	M114MW001		M114MW002		M114MW003		M114MW004		MAO1MW001		MAO1MW002		MAO1MW003		MAO1MW004		MAO2MW001D		MWQ-23	
	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss
Jan-04																				
Jul-04																				
Jul-05																				
Jun-07																				
Jan-09		450		533		421		885		415		826		447		257		375		
Jan-10	12	11	18	13	9.4	9.2	12	9.9	6.4	4.5	19	10	7.0	6.0	5.3	8.4	97	87		
Oct-10	715	741	1,350	1,350	<D.L.	<D.L.	443	427	<D.L.	<D.L.	11	<D.L.	11	<D.L.	<D.L.	<D.L.	96.5	92.9		
May-11	47.2	46.8	175	163	17.5	14.2	655	653	2.74	<D.L.	20.1	<D.L.	13.4	4.16	22.3	9.8	129	128	24.7	25
Sep-11	394	413	239	234	276	271	347	366	229	248	210	219	339	316	276	305	288	301	18.4	18.4
Nov-12	45.6	29.2	154	78	33.1	20.5	29.6	34.1	18.6	17.8	32.6	24.9	13.1	26.5	196	77.7	140	114	<D.L.	<D.L.
Min	12.0	11.0	18.0	13.0	0.0	0.0	12.0	9.9	0.0	0.0	11.0	0.0	7.0	0.0	0.0	0.0	96.5	87.0	0.0	0.0
Max	715.0	741.0	1350.0	1350.0	276.0	421.0	655.0	885.0	229.0	415.0	210.0	826.0	339.0	447.0	276.0	305.0	288.0	375.0	24.7	25.0
Avg	242.8	281.8	387.2	395.2	67.2	122.7	297.3	395.8	51.3	114.2	58.5	180.0	76.7	133.3	99.9	109.7	150.1	183.0	14.4	14.5

Notes:
Data in µg/L
NMED SSL Tapwater Screening Level: 11000
Red indicates exceedance
Blank cells indicate no data
Wells MWQ-3, -4, -5, -6, -7, -10, -23, and MWL-6 not sampled after spring 2011

DATE	Annual Network																											
											Background		Background															
	MWQ-2		MWQ-3		MWQ-4		MWQ-5		MWQ-6		MWQ-7		MWQ-10		MWQ-14		MWQ-18		MWQ-19		MWQ-20		MWQ-21		MWQ-22		MWL-6	
	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss
Jan-04		<D.L.		6.2				9.7		14				9.9		6												
Jul-04		3.8		3.3				13		37				22		4.6		3.9										
Jul-05		<D.L.		5.4				7.5						12		9.4		5.6				120		9.9		7.6		7.1
Jun-07		5.0		7.8		14		8.4		31		11		15		8.3		8.0				18		7.8		6.4		11
Jan-09		846		<D.L.		11.6		36.2		33		8.8		22.8		266		171		956		384		1130		1710		17.9
Jan-10	250	14	6.4	7.2	7.8	6.6	9.4	8.7	50	48	18	13	6.0	4.5	7.5	9.0	14	4.5	250	11	290	290	44	8.5	170	<D.L.	29	<D.L.
Oct-10																												
May-11	394	426	<D.L.	<D.L.	7.24	7.38	2.88	<D.L.	7.87	5.61	<D.L.	<D.L.	3.30	4.86	<D.L.	<D.L.	52.40	38.20	865	615	2370	2190	15.6	<D.L.	7.64	<D.L.	93.6	4.65
Sep-11																												
Nov-12																												
Min	250.0	0.0	0.0	0.0	7.2	6.6	2.9	0.0	7.9	5.6	0.0	0.0	3.3	4.5	0.0	0.0	14.0	3.9	250.0	11.0	290.0	18.0	15.6	0.0	7.6	0.0	29.0	0.0
Max	394.0	846.0	6.4	7.8	7.8	14.0	9.4	36.2	50.0	48.0	18.0	13.0	6.0	22.8	7.5	266.0	52.4	171.0	865.0	956.0	2370.0	2190.0	44.0	1130.0	170.0	1710.0	93.6	17.9
Avg	322.0	185.0	3.2	4.3	7.5	9.9	6.1	11.9	28.9	28.1	9.0	8.2	4.7	13.0	3.8	43.3	33.2	38.5	557.5	527.3	1330.0	600.4	29.8	231.2	88.8	344.8	61.3	8.1

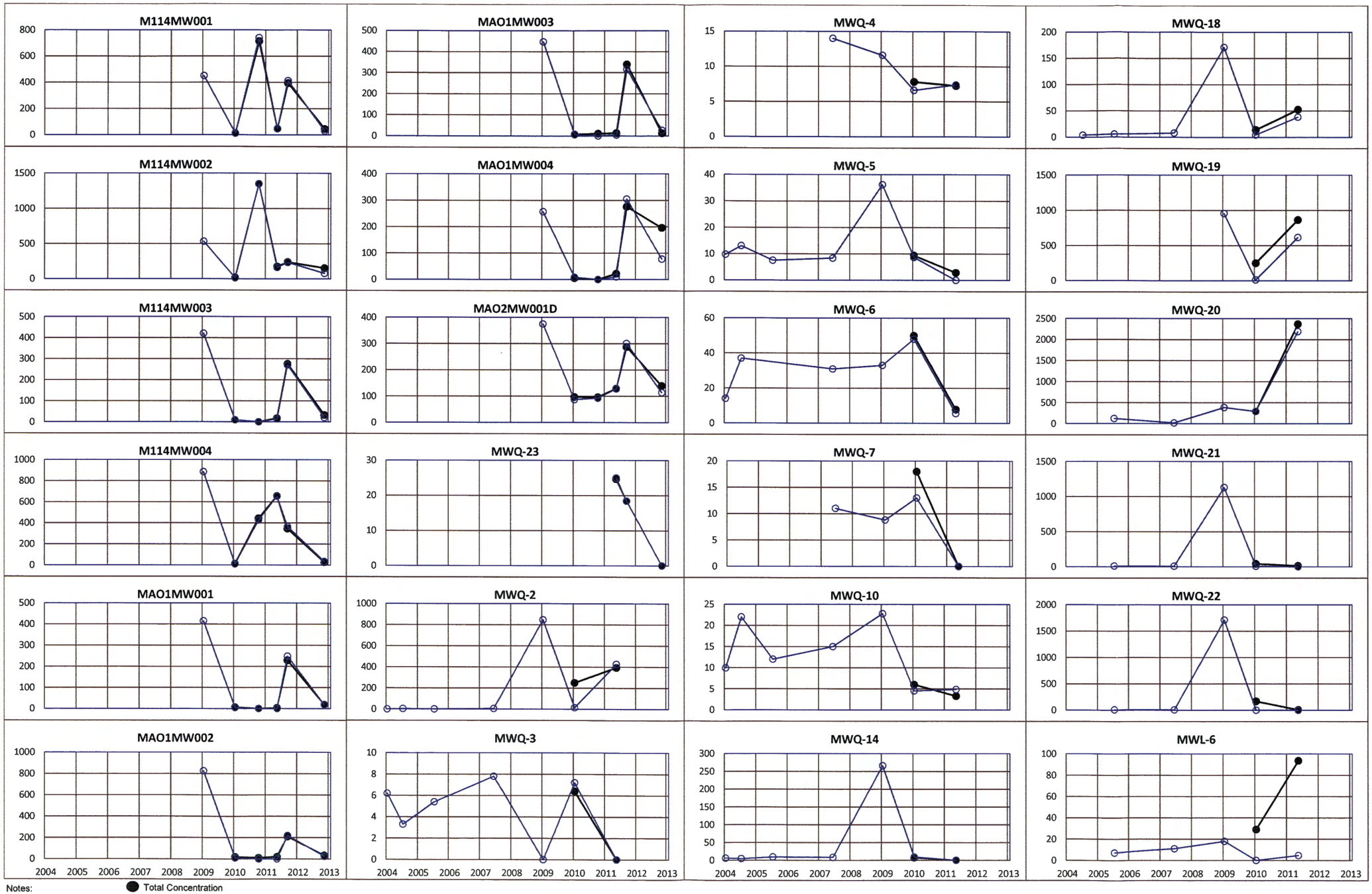
TABLE 6z
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO



Notes:
Data in µg/L

TABLE 6z
ZINC

TABLE 6z
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO



Notes:
Data in µg/L

● Total Concentration
○ Dissolved Concentration

TABLE 6z
ZINC

TABLE 6aa
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO

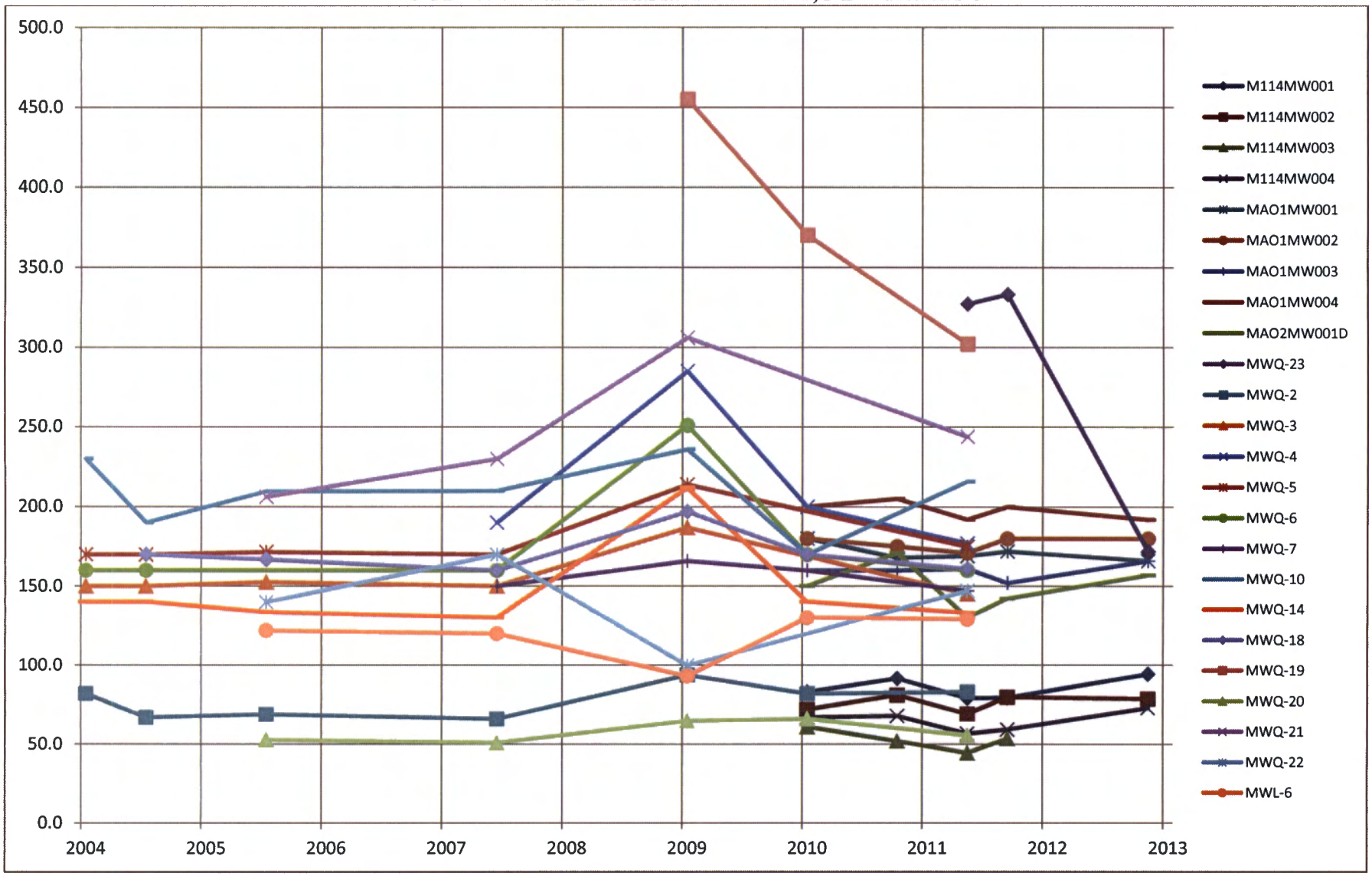
DATE	Semiannual Network									
	SWMU 114				SWMU 130				SWMU 131	
	M114MW001	M114MW002	M114MW003	M114MW004	MAO1MW001	MAO1MW002	MAO1MW003	MAO1MW004	MAO2MW001D	MWQ-23
Jan-04										
Jul-04										
Jul-05										
Jun-07										
Jan-09										
Jan-10	83	72	61	67	180	180	160	200	150	
Oct-10	91.5	81	52	67.9	168	175	160	205	171	
May-11	79.1	69.2	44.5	56.6	169	171	161	192	130	327
Sep-11	79.4	79.8	53.5	59.3	172	180	152	200	142	333
Nov-12	94.3	78.7	48.6	72.9	166	180	166	192	157	172
Min	79	69	45	57	166	171	152	192	130	172
Max	94	81	61	73	180	180	166	205	171	333
Average	85	76	52	65	171	177	160	198	150	277

Notes:
Data in mg/L
NMED SSL Tapwater Screening Level: —
Red indicates exceedance
Blank cells indicate no data
Wells MWQ-3, -4, -5, -6, -7, -10, -23, and MWL-6 not sampled after spring 2011

DATE	Annual Network													
						Background	Background							
	MWQ-2	MWQ-3	MWQ-4	MWQ-5	MWQ-6	MWQ-7	MWQ-10	MWQ-14	MWQ-18	MWQ-19	MWQ-20	MWQ-21	MWQ-22	MWL-6
Jan-04	82	150		170	160		230	140						
Jul-04	67	150		170	160		190	140	170					
Jul-05	68.9	152.5		171.5			209.6	133.5	166.9		52.7	206.2	139.9	121.9
Jun-07	66	150	190	170	160	150	210	130	160		51	230	170	120
Jan-09	93.7	187	285	214	251	166	236	212	197	455	64.8	306	99.8	93
Jan-10	82		200		170	160	170	140	170	370	66			130
Oct-10														
May-11	83.1	145	177	175	160	147	216	133	161	302	55.7	244	147	129
Sep-11														
Nov-12														
Min	66	145	177	170	160	147	170	130	160	302	51	206	100	93
Max	94	187	285	214	251	166	236	212	197	455	66	306	170	130
Average	78	156	213	178	177	156	209	147	171	376	58	247	139	119

TABLE 6aa
ALKALINITY

TABLE 6aa
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO

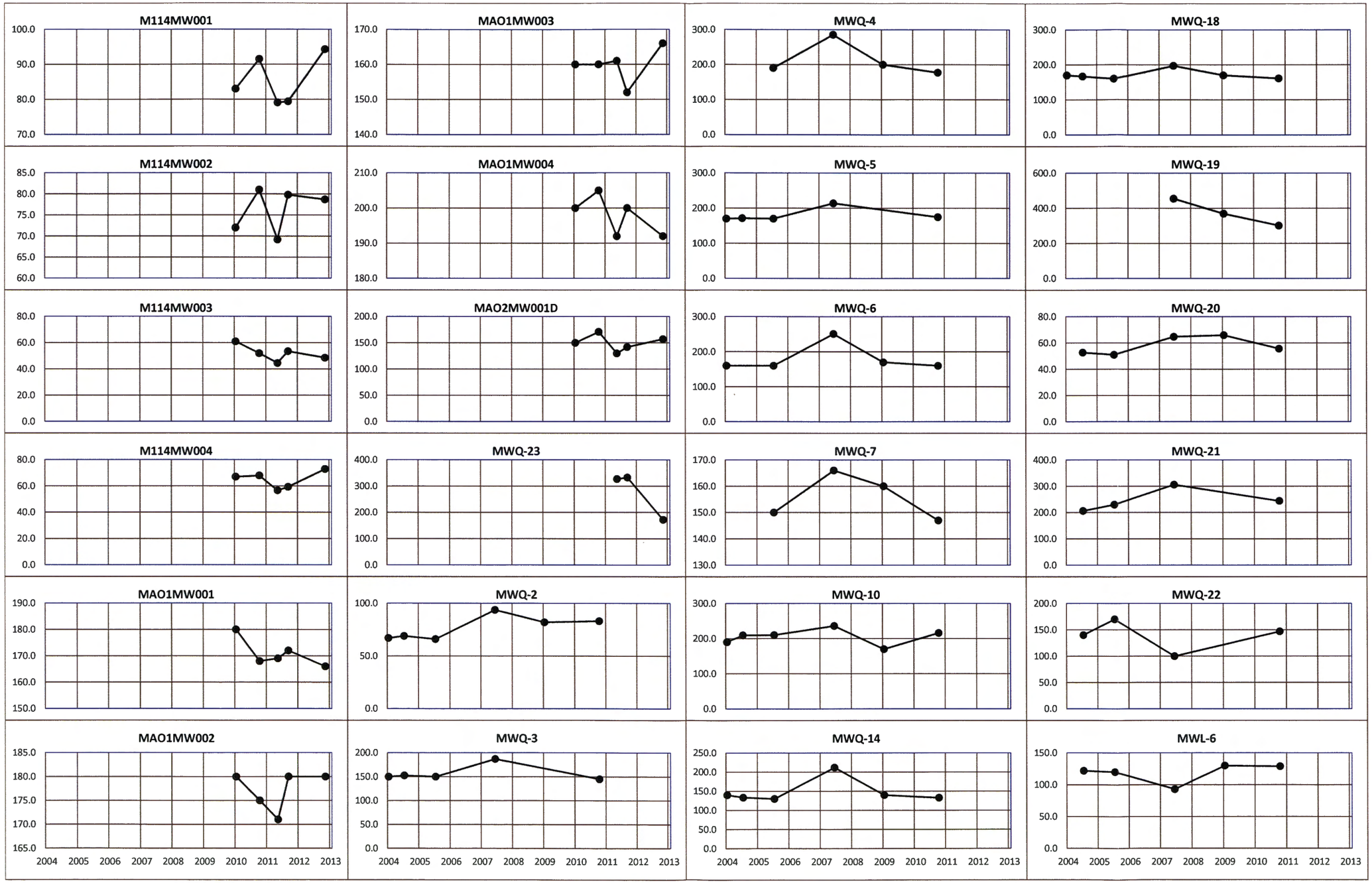


Notes:

Data in mg/L

TABLE 6aa
ALKALINITY

TABLE 6aa
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO



Notes:
Data in mg/L

TABLE 6aa
ALKALINITY

TABLE 6ab
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO

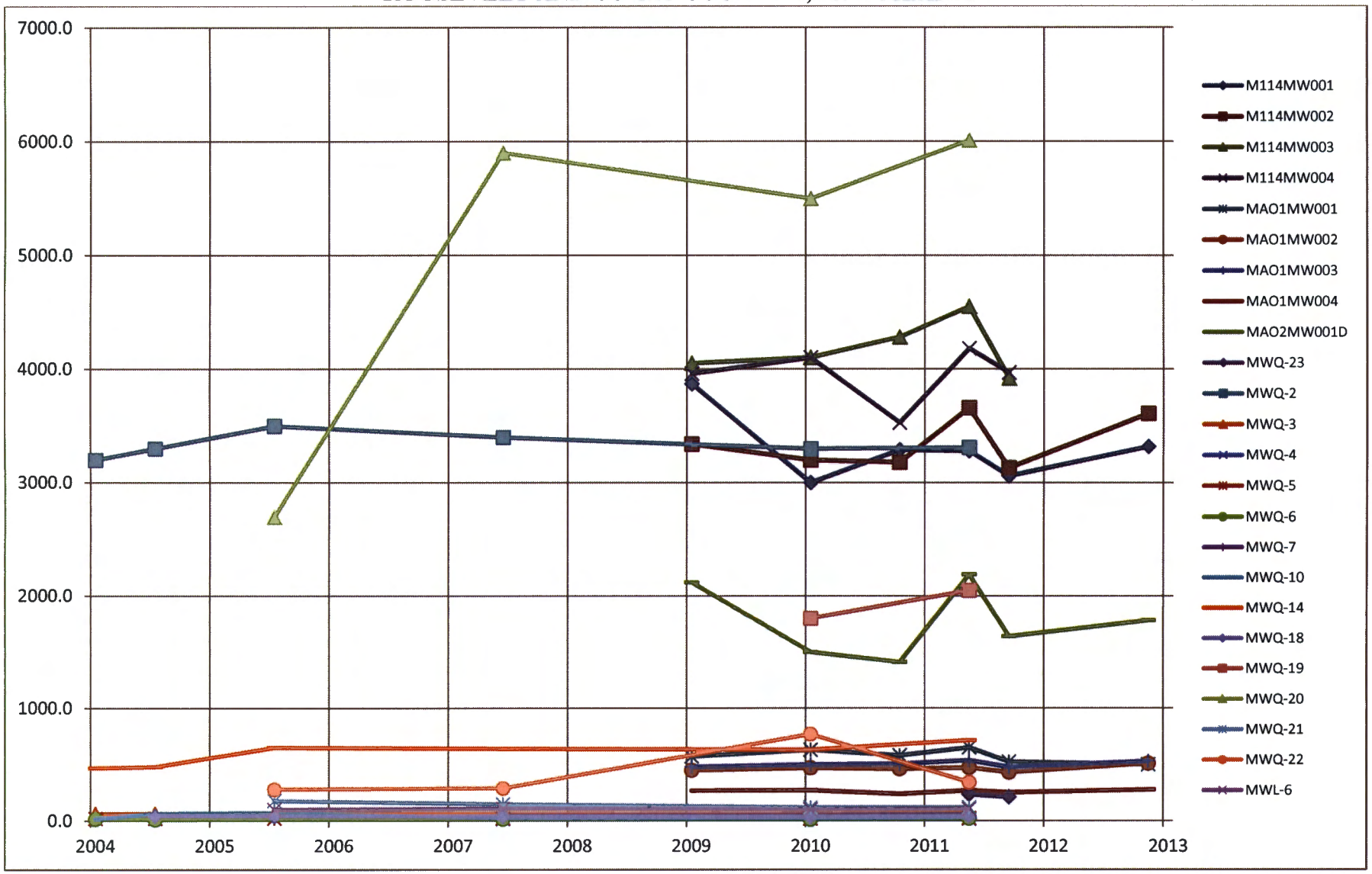
DATE	Semiannual Network									
	SWMU 114				SWMU 130				SWMU 131	
	M114MW001	M114MW002	M114MW003	M114MW004	MAO1MW001	MAO1MW002	MAO1MW003	MAO1MW004	MAO2MW001D	MWQ-23
Jan-04										
Jul-04										
Jul-05										
Jun-07										
Jan-09	3,870	3,340	4,050	3,960	571	449	480	267	2,120	
Jan-10	3,000	3,200	4,100	4,100	630	470	500	270	1,500	
Oct-10	3,290	3,180	4,280	3,530	581	461	506	238	1,410	
May-11	3,280	3,660	4,550	4,180	651	473	537	269	2,190	235
Sep-11	3,060	3,130	3,920	3,970	525	431	477	251	1,640	212
Nov-12	3,320	3,610	4,590	4,400	501	511	531	276	1,780	17
Min	3000	3130	3920	3530	501	431	477	238	1410	17
Max	3870	3660	4590	4400	651	511	537	276	2190	235
Average	3303	3353	4248	4023	577	466	505	262	1773	155

Notes:
Data in mg/L
NMED SSL Tapwater Screening Level: —
Red indicates exceedance
Blank cells indicate no data
Wells MWQ-3, -4, -5, -6, -7, -10, -23, and MWL-6 not sampled after spring 2011

DATE	Annual Network													
						Background	Background							
	MWQ-2	MWQ-3	MWQ-4	MWQ-5	MWQ-6	MWQ-7	MWQ-10	MWQ-14	MWQ-18	MWQ-19	MWQ-20	MWQ-21	MWQ-22	MWL-6
Jan-04	3,200	64		22	17		18	470						
Jul-04	3,300	65		22	12		66	480	45					
Jul-05	3,500	63		24			71	650	41		2,700	180	280	100
Jun-07	3,400	65	19	24	17	50	23	640	39		5,900	150	290	110
Jan-09														
Jan-10	3,300	59	20	19	13	51	20	630	35	1,800	5,500	120	770	100
Oct-10														
May-11	3,310	68.3	17.6	21.8	21.4	59.3	29.3	715	40.3	2,050	6,010	121	342	107
Sep-11														
Nov-12														
Min	3200	59	18	19	12	50	18	470	35	1800	2700	120	280	100
Max	3500	68	20	24	21	59	71	715	45	2050	6010	180	770	110
Average	3335	64	19	22	16	53	38	598	40	1925	5028	143	421	104

TABLE 6ab
CHLORIDE

TABLE 6ab
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO

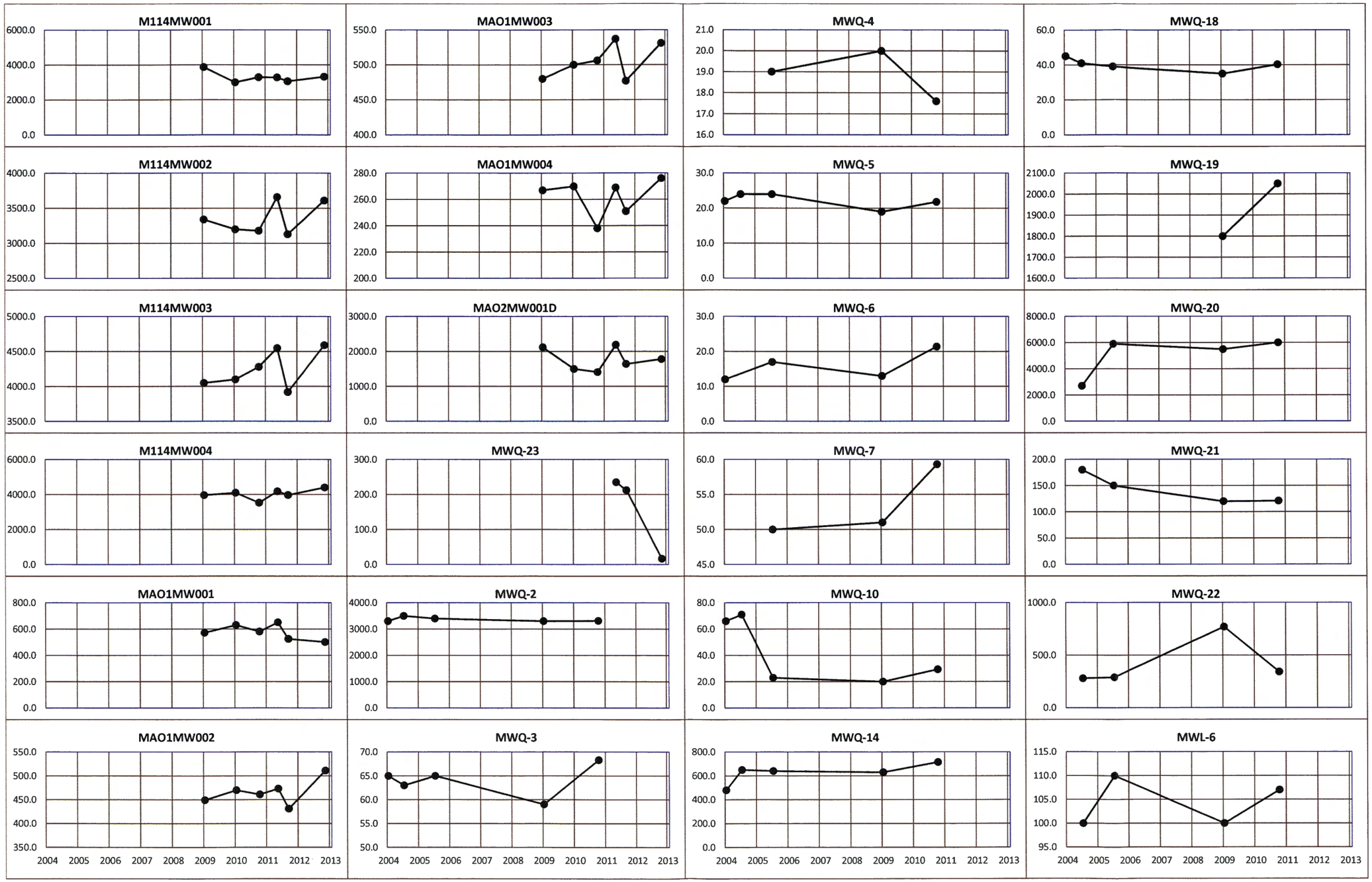


Notes:

Data in mg/L

TABLE 6ab
CHLORIDE

TABLE 6ab
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO



Notes:
Data in mg/L

TABLE 6ab
CHLORIDE

TABLE 6ac
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO

DATE	Semiannual Network									
	SWMU 114				SWMU 130				SWMU 131	
	M114MW001	M114MW002	M114MW003	M114MW004	MAO1MW001	MAO1MW002	MAO1MW003	MAO1MW004	MAO2MW001D	MWQ-23
Jan-04										
Jul-04										
Jul-05										
Jun-07										
Jan-09										
Jan-10	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	
Oct-10	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	
May-11	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	0.0013	<D.L.	<D.L.
Sep-11	<D.L.	<D.L.	0.0009	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.
Nov-12	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.
Min	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Max	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.001	0.000	0.000
Average	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Notes:
Data in mg/L
NMED SSL Tapwater Screening Level: 21.9
Red indicates exceedance
Blank cells indicate no data
Wells MWQ-3, -4, -5, -6, -7, -10, -23, and MWL-6 not sampled after spring 2011

Due to a preponderance of no detects trends are not plotted

DATE	Annual Network													
						Background	Background							
	MWQ-2	MWQ-3	MWQ-4	MWQ-5	MWQ-6	MWQ-7	MWQ-10	MWQ-14	MWQ-18	MWQ-19	MWQ-20	MWQ-21	MWQ-22	MWL-6
Jan-04														
Jul-04														
Jul-05														
Jun-07														
Jan-09														
Jan-10	<D.L	<D.L.	0.0024	0.0037	0.0040	0.0038	0.0031	0.0026	0.0051	0.0067	0.0041	0.0024	0.0029	0.0028
Oct-10														
May-11	<D.L.	<D.L.	<D.L.	<D.L.	<D.L	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.
Sep-11														
Nov-12														
Min	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Max	0.000	0.000	0.002	0.004	0.004	0.004	0.003	0.003	0.005	0.007	0.004	0.002	0.003	0.003
Average	0.000	0.000	0.001	0.002	0.002	0.002	0.002	0.001	0.003	0.003	0.002	0.001	0.001	0.001

TABLE 6ac
CYANIDE

TABLE 6ad
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO

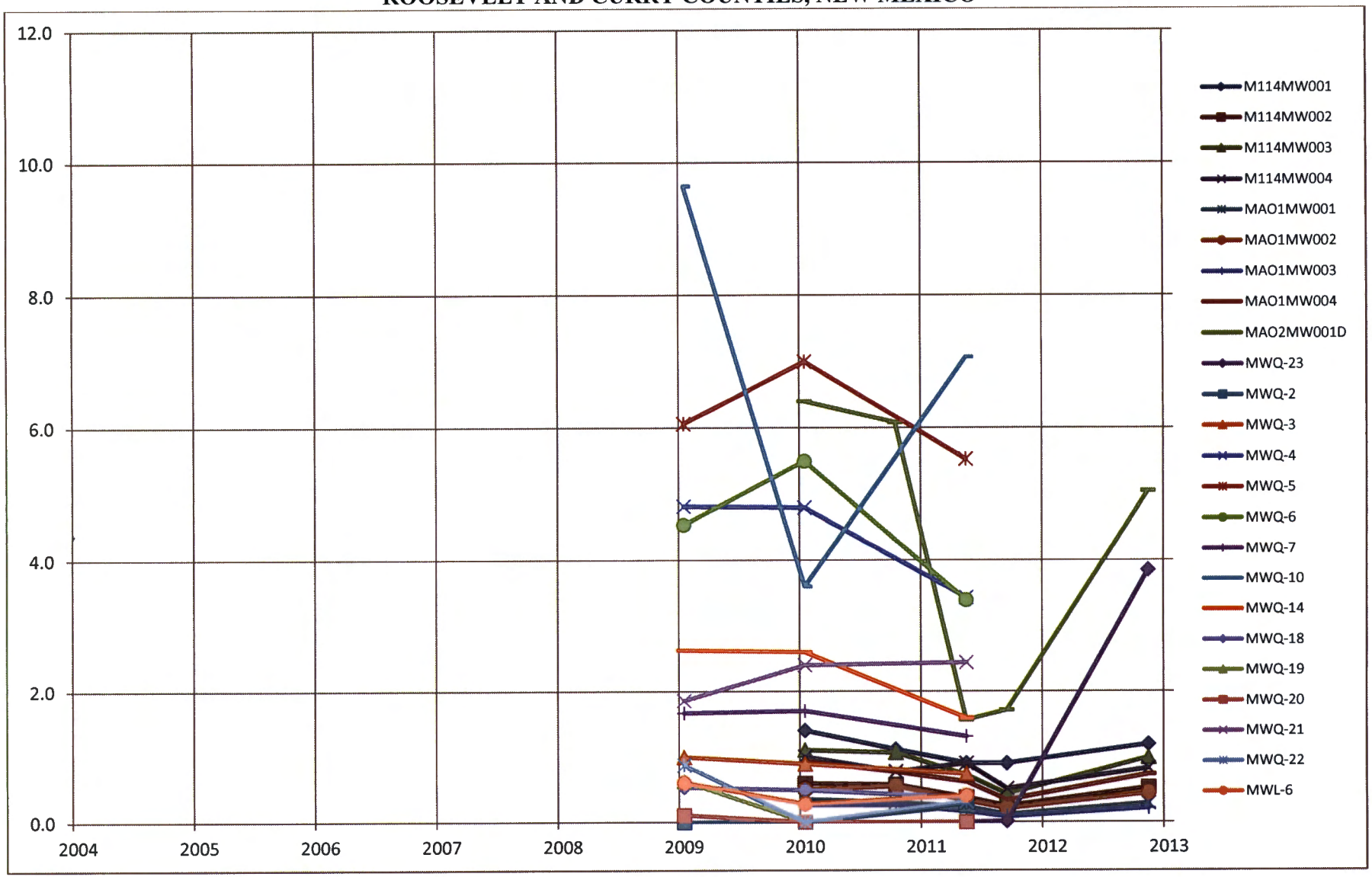
DATE	Semiannual Network									
	SWMU 114				SWMU 130				SWMU 131	
	M114MW001	M114MW002	M114MW003	M114MW004	MAO1MW001	MAO1MW002	MAO1MW003	MAO1MW004	MAO2MW001D	MWQ-23
Jan-04										
Jul-04										
Jul-05										
Jun-07										
Jan-09										
Jan-10	1.4	0.59	1.1	1.0	0.35	0.50	0.26	0.93	6.4	
Oct-10	1.11	0.569	1.06	0.772	0.306	0.545	0.258	0.768	6.08	
May-11	0.901	0.375	0.719	0.90	0.233	0.325	0.163	0.615	1.560	<D.L.
Sep-11	0.899	0.245	0.430	0.511	0.116	0.207	0.085	0.339	1.71	0.013
Nov-12	1.190	0.528	0.988	0.825	0.290	0.443	0.214	0.732	5.05	3.85
Min	0.90	0.25	0.43	0.51	0.12	0.21	0.09	0.34	1.56	0.00
Max	1.40	0.59	1.10	1.00	0.35	0.55	0.26	0.93	6.40	3.85
Average	1.10	0.46	0.86	0.80	0.26	0.40	0.20	0.68	4.16	1.29

Notes:
Data in mg/L
NMED SSL Tapwater Screening Level: 58.4
Red indicates exceedance
Blank cells indicate no data
Wells MWQ-3, -4, -5, -6, -7, -10, -23, and MWL-6 not sampled after spring 2011

DATE	Annual Network													
						Background	Background							
	MWQ-2	MWQ-3	MWQ-4	MWQ-5	MWQ-6	MWQ-7	MWQ-10	MWQ-14	MWQ-18	MWQ-19	MWQ-20	MWQ-21	MWQ-22	MWL-6
Jan-04														
Jul-04														
Jul-05														
Jun-07														
Jan-09	<D.L.	0.997	4.82	6.060	4.540	1.670	9.650	2.630	0.534	0.627	0.110	1.860	0.873	0.608
Jan-10	<D.L.	0.890	4.80	7.0	5.5	1.7	3.6	2.6	0.49	<D.L.	<D.L.	2.4	<D.L.	0.28
Oct-10														
May-11	0.244	0.738	3.430	5.53	3.390	1.31	7.070	1.59	0.372	<D.L.	<D.L.	2.44	0.309	0.408
Sep-11														
Nov-12														
Min	0.00	0.74	3.43	5.53	3.39	1.31	3.60	1.59	0.37	0.00	0.00	1.86	0.00	0.28
Max	0.24	1.00	4.82	7.00	5.50	1.70	9.65	2.63	0.53	0.63	0.11	2.44	0.87	0.61
Average	0.08	0.88	4.35	6.20	4.48	1.56	6.77	2.27	0.47	0.21	0.04	2.23	0.39	0.43

TABLE 6ad
NITRATE

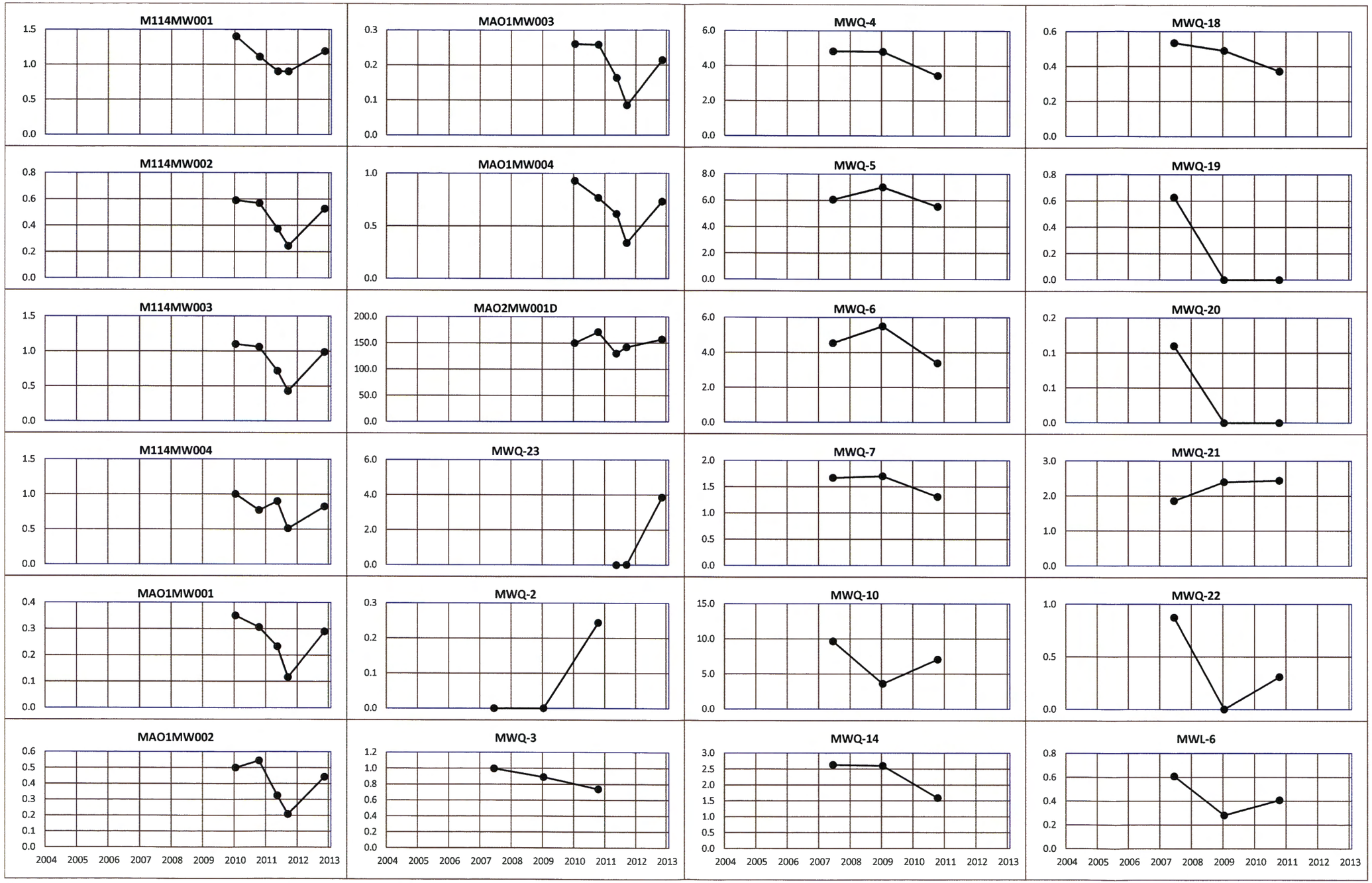
TABLE 6ad
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO



Notes:
Data in mg/L

TABLE 6ad
NITRATE

TABLE 6ad
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO



Notes:
Data in mg/L

TABLE 6ad
NITRATE

TABLE 6ae
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO

DATE	Semiannual Network									
	SWMU 114				SWMU 130				SWMU 131	
	M114MW001	M114MW002	M114MW003	M114MW004	MAO1MW001	MAO1MW002	MAO1MW003	MAO1MW004	MAO2MW001D	MWQ-23
Jan-04										
Jul-04										
Jul-05										
Jun-07										
Jan-09										
Jan-10	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	
Oct-10	0.015	0.006	<D.L.	0.017	<D.L.	<D.L.	0.004	<D.L.	0.047	
May-11	<D.L.	0.004	0.004	0.004	0.004	<D.L.	<D.L.	<D.L.	0.004	<D.L.
Sep-11	<D.L.	<D.L.	0.005	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	0.035	<D.L.
Nov-12	0.016	0.019	0.018	0.020	0.009	<D.L.	0.011	0.011	0.015	<D.L.
Min	0	0	0	0	0	0	0	0	0	0
Max	0	0	0	0	0	0	0	0	0	0
Average	0	0	0	0	0	0	0	0	0	0

Notes:
Data in mg/L
NMED SSL Tapwater Screening Level: 3.65
Red indicates exceedance
Blank cells indicate no data
Wells MWQ-3, -4, -5, -6, -7, -10, -23, and MWL-6 not sampled after spring 2011

Due to a preponderance of no detects trends are not plotted

DATE	Annual Network													
						Background	Background							
	MWQ-2	MWQ-3	MWQ-4	MWQ-5	MWQ-6	MWQ-7	MWQ-10	MWQ-14	MWQ-18	MWQ-19	MWQ-20	MWQ-21	MWQ-22	MWL-6
Jan-04														
Jul-04														
Jul-05														
Jun-07														
Jan-09														
Jan-10	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.
Oct-10														
May-11	<D.L.	<D.L.	<D.L.	0.004	<D.L.	<D.L.	<D.L.	<D.L.	<D.L.	0.007	0.006	0.008	0.011	0.013
Sep-11														
Nov-12														
Min	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Average	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TABLE 6ae
NITRITE

TABLE 6af
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO

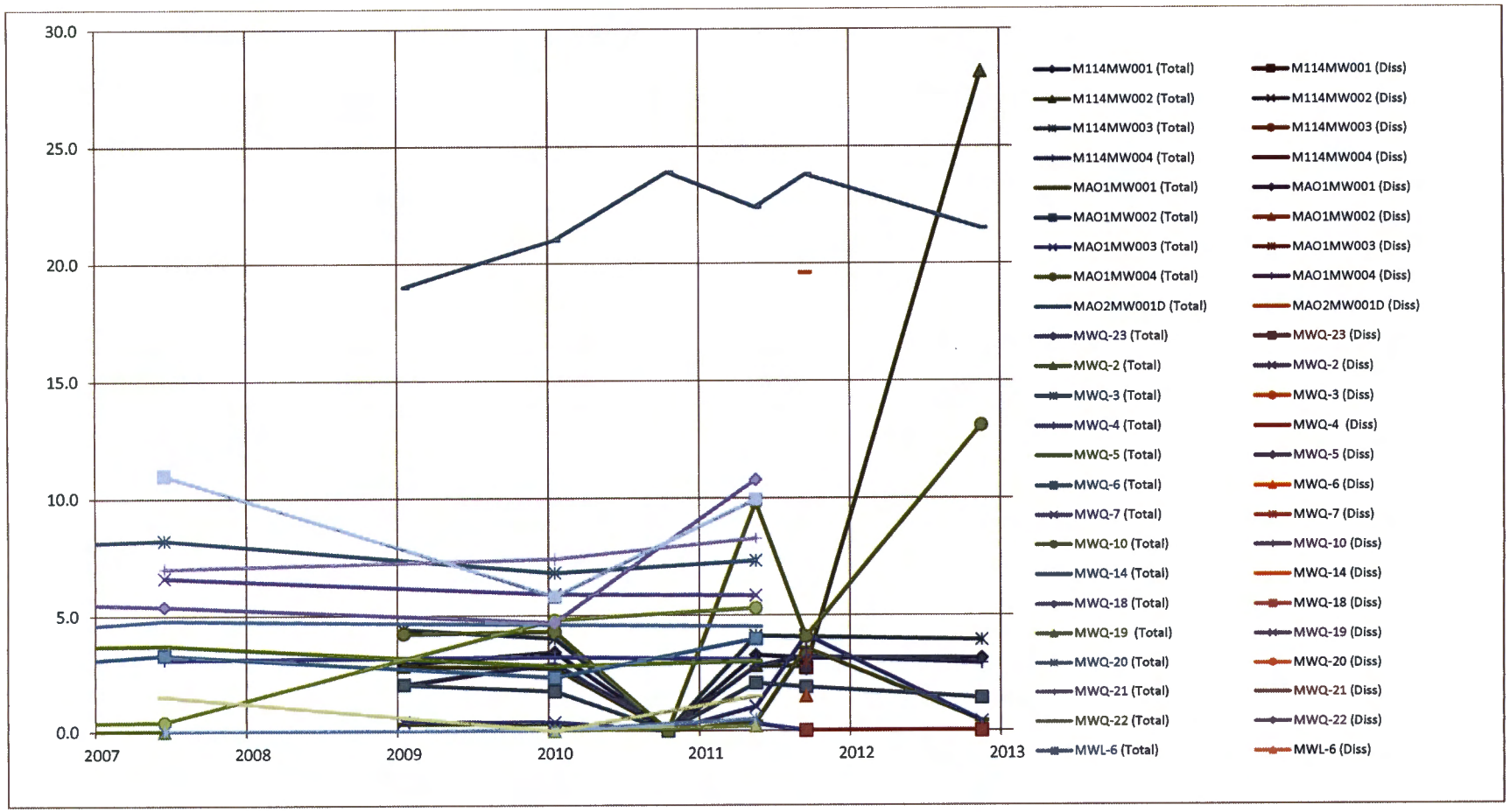
DATE	Semiannual Network																			
	SWMU 114								SWMU 130								SWMU 131			
	M114MW001		M114MW002		M114MW003		M114MW004		MAO1MW001		MAO1MW002		MAO1MW003		MAO1MW004		MAO2MW001D		MWQ-23	
	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss
Jan-04																				
Jul-04																				
Jul-05																				
Jun-07																				
Jan-09	2.9		2.8		4.4		2.0		0.3		2.0		0.4		4.2		19.0			
Jan-10	3.4		2.7		4.0		2.9		0.30		1.7		0.37		4.3		21			
Oct-10	<D.L.		<D.L.		<D.L.		<D.L.		<D.L.		<D.L.		<D.L.		<D.L.		23.9			
May-11	3.27		2.80		4.10		2.79		0.369		2.05		1.03		9.8		22.4		0.3	
Sep-11	3.14	2.70	2.78	2.77	4.06	3.29	3.21	2.54	3.57	2.66	1.88	1.49	4.13	2.98	4.07	3.53	23.8	19.6	<D.L.	<D.L.
Nov-12	3.13		28.2		3.92		2.92		0.409		1.40		0.395		13.10		21.5		<D.L.	<D.L.
Min	0.0	2.7	0.0	2.8	0.0	3.3	0.0	2.5	0.0	2.7	0.0	1.5	0.0	3.0	0.0	3.5	19.0	19.6	0.0	0.0
Max	3.4	2.7	28.2	2.8	4.4	3.3	3.2	2.5	3.6	2.7	2.1	1.5	4.1	3.0	13.1	3.5	23.9	19.6	0.3	0.0
Avg	2.6	2.7	6.5	2.8	3.4	3.3	2.3	2.5	0.8	2.7	1.5	1.5	1.1	3.0	5.9	3.5	21.9	19.6	0.1	0.0

Notes:
Data in mg/L
NMED SSL Tapwater Screening Level: 25.6
Red indicates exceedance
Blank cells indicate no data
Wells MWQ-3, -4, -5, -6, -7, -10, -23, and MWL-6 not sampled after spring 2011

DATE	Annual Network																											
											Background		Background															
	MWQ-2		MWQ-3		MWQ-4		MWQ-5		MWQ-6		MWQ-7		MWQ-10		MWQ-14		MWQ-18		MWQ-19		MWQ-20		MWQ-21		MWQ-22		MWL-6	
	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss
Jan-04	<D.L.		8.3				3.9		3.7				0.44		4.3													
Jul-04	<D.L.		7.6				3.5		2				0.17		3.5		5.9											
Jul-05																												
Jun-07	<D.L.		8.2		3.1		3.7		3.3		6.6		0.40		4.8		5.4				<D.L.		7.0		1.5		11	
Jan-09																												
Jan-10	<D.L.		6.8		3.2		2.8		2.3		5.9		4.8		4.6		4.7		<D.L.		0.033		7.4		<D.L.		5.8	
Oct-10																												
May-11	0.198		7.31		3.08		3.00		3.98		5.84		5.30		4.52		10.8		0.198		0.495		8.27		1.48		9.94	
Sep-11																												
Nov-12																												
Min	0.0		6.8		3.1		2.8		2.0		5.8		0.2		3.5		4.7		0.0		0.0		7.0		0.0		5.8	
Max	0.2		8.3		3.2		3.9		4.0		6.6		5.3		4.8		10.8		0.2		0.5		8.3		1.5		11.0	
Avg	0.0		7.6		3.1		3.4		3.1		6.1		2.2		4.3		6.7		0.1		0.2		7.6		1.0		8.9	

TABLE 6af
PERCHLORATE

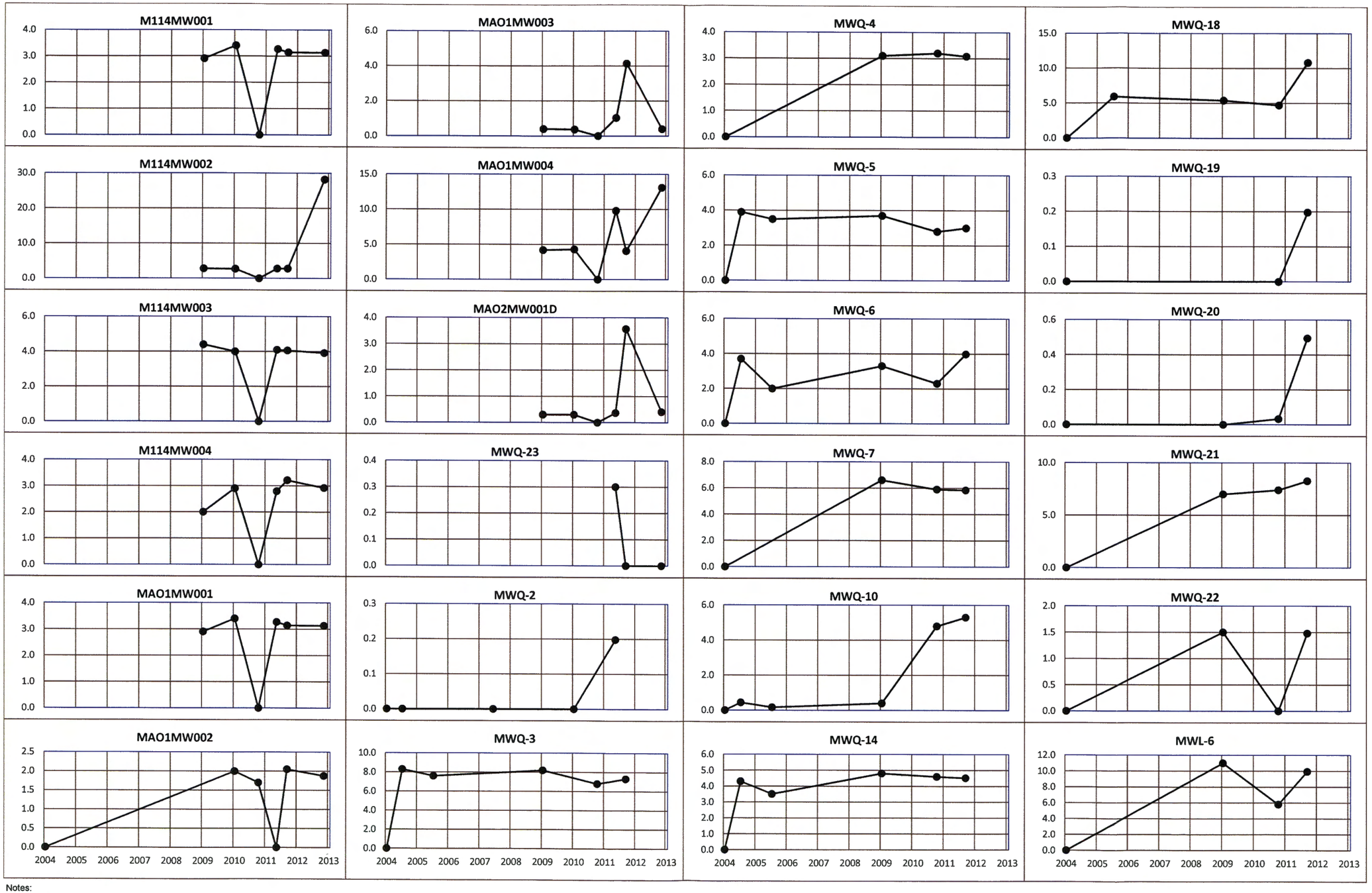
TABLE 6af
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO



Notes:
Data in mg/L

TABLE 6af
PERCHLORATE

TABLE 6af
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO



Notes:
Data in mg/L

TABLE 6af
PERCHLORATE

TABLE 6ag
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO

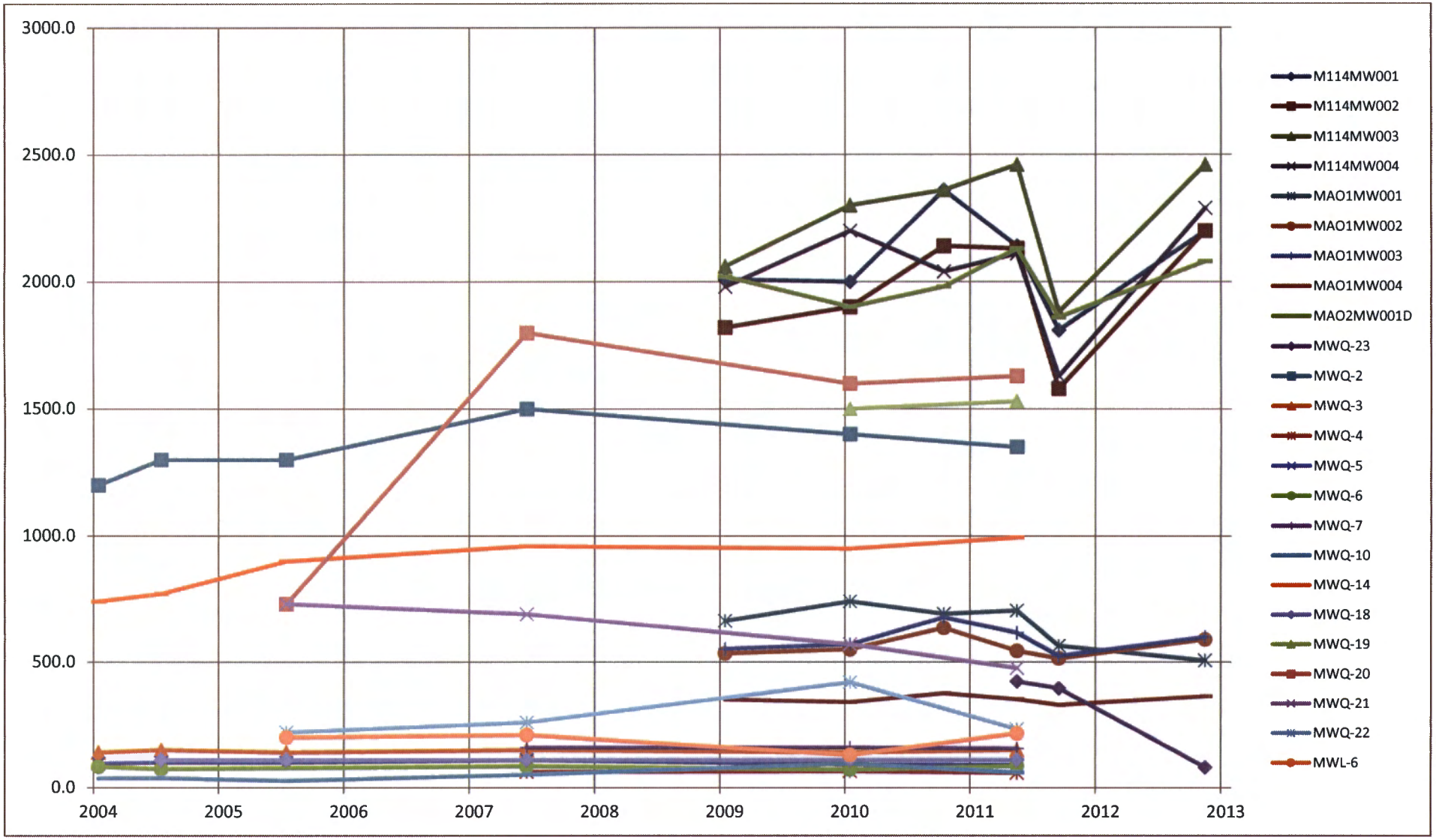
DATE	Semiannual Network									
	SWMU 114				SWMU 130				SWMU 131	
	M114MW001	M114MW002	M114MW003	M114MW004	MAO1MW001	MAO1MW002	MAO1MW003	MAO1MW004	MAO2MW001D	MWQ-23
Jan-04										
Jul-04										
Jul-05										
Jun-07										
Jan-09	2,010	1,820	2,060	1,980	663	534	552	351	2,020	
Jan-10	2,000	1,900	2,300	2,200	740	550	570	340	1,900	
Oct-10	2,360	2,140	2,360	2,040	691	635	677	376	1,980	
May-11	2,140	2,130	2,460	2,110	704	544	616	352	2,130	423
Sep-11	1,810	1,580	1,880	1,630	564	514	524	329	1,860	396
Nov-12	2,200	2,200	2,460	2,290	506	589	599	364	2,080	81.7
Min	1810	1580	1880	1630	506	514	524	329	1860	82
Max	2360	2200	2460	2290	740	635	677	376	2130	423
Average	2087	1962	2253	2042	645	561	590	352	1995	300

Notes:
Data in mg/L
NMED SSL Tapwater Screening Level: —
Red indicates exceedance
Blank cells indicate no data
Wells MWQ-3, -4, -5, -6, -7, -10, -23, and MWL-6 not sampled after spring 2011

DATE	Annual Network													
						Background	Background							
	MWQ-2	MWQ-3	MWQ-4	MWQ-5	MWQ-6	MWQ-7	MWQ-10	MWQ-14	MWQ-18	MWQ-19	MWQ-20	MWQ-21	MWQ-22	MWL-6
Jan-04	1,200	140		96	83		37	740						
Jul-04	1,300	150		100	74		38	770	110					
Jul-05	1,300	140		100			27	900	110		730	730	220	200
Jun-07	1,500	150	63	110	85	160	52	960	110		1,800	690	260	210
Jan-09														
Jan-10	1,400	140	66	92	72	160	96	950	110	1,500	1,600	570	420	130
Oct-10														
May-11	1,350	150	59	90.8	85.5	156	60.6	994	110	1,530	1,630	476	233	216
Sep-11														
Nov-12														
Min	1200	140	59	91	72	156	27	740	110	1500	730	476	220	130
Max	1500	150	66	110	86	160	96	994	110	1530	1800	730	420	216
Average	1342	145	63	98	80	159	52	886	110	1515	1440	617	283	189

TABLE 6ag
SULFATE

TABLE 6ag
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO

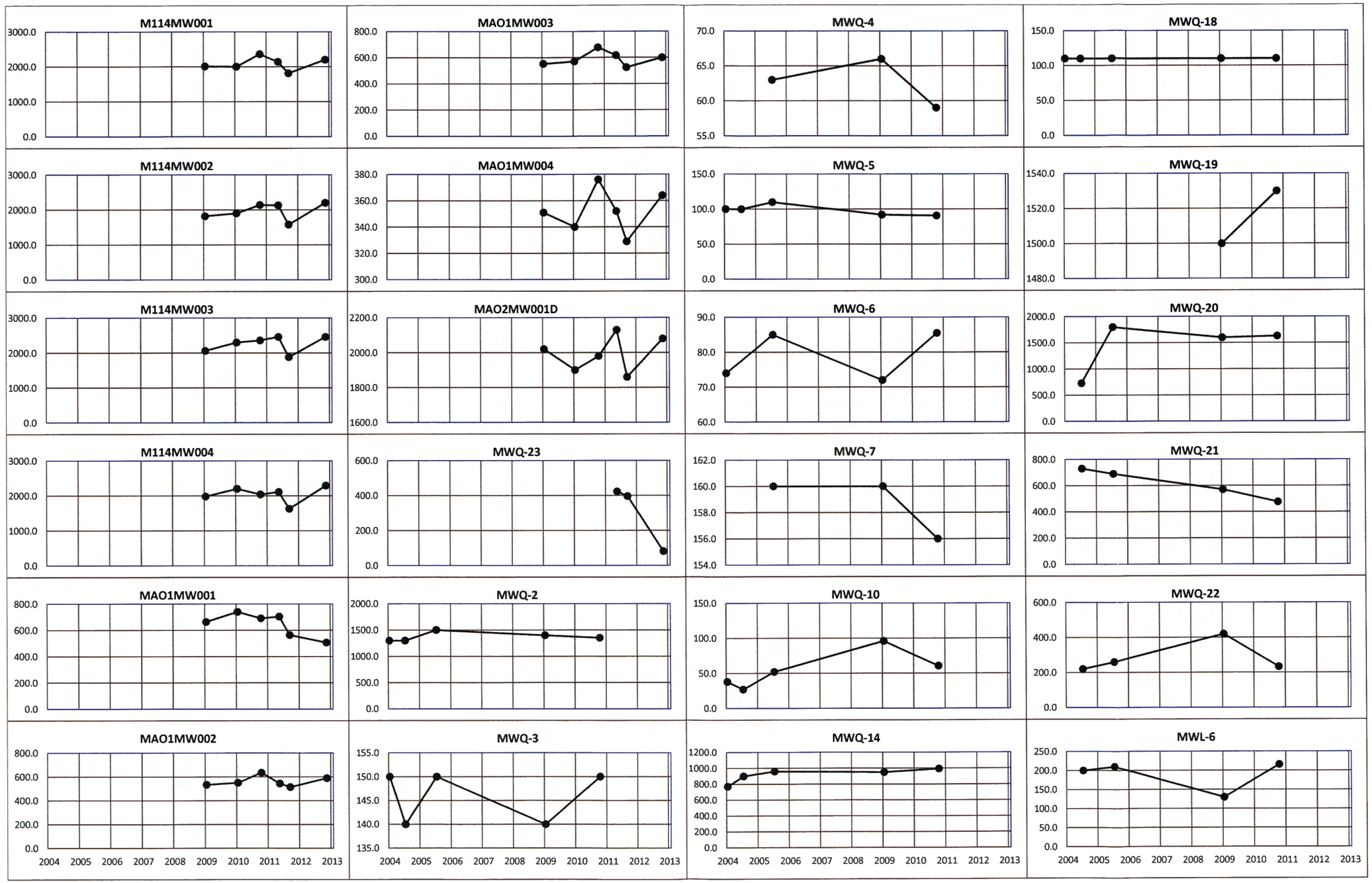


Notes:

Data in mg/L

TABLE 6ag
SULFATE

TABLE 6ag
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO



Notes:
Data in mg/L

TABLE 6ag
SULFATE

TABLE 6ah
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO

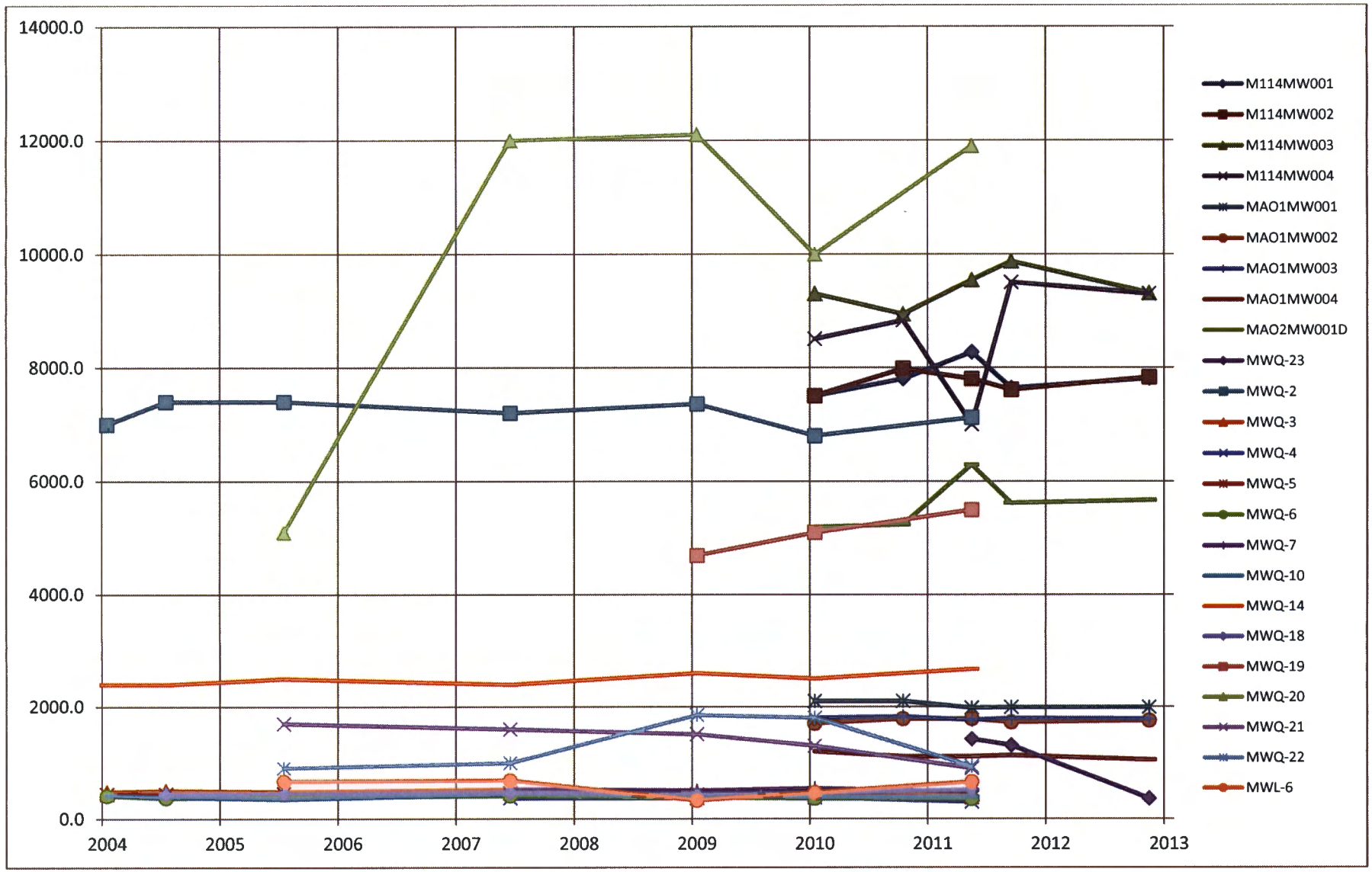
DATE	Semiannual Network									
	SWMU 114				SWMU 130				SWMU 131	
	M114MW001	M114MW002	M114MW003	M114MW004	MAO1MW001	MAO1MW002	MAO1MW003	MAO1MW004	MAO2MW001D	MWQ-23
Jan-04										
Jul-04										
Jul-05										
Jun-07										
Jan-09										
Jan-10	7,500	7,500	9,300	8,500	2,100	1,700	1,800	1,200	5,200	
Oct-10	7,800	7,980	8,940	8,830	2,100	1,780	1,820	1,110	5,240	
May-11	8,270	7,800	9,540	7,000	1,980	1,780	1,760	1,110	6,290	1,420
Sep-11	7,640	7,610	9,870	9,500	1,990	1,720	1,790	1,130	5,620	1,310
Nov-12	7,810	7,830	9,310	9,300	1,990	1,750	1,780	1,050	5,670	360
Min	7500	7500	8940	7000	1980	1700	1760	1050	5200	360
Max	8270	7980	9870	9500	2100	1780	1820	1200	6290	1420
Average	7804	7744	9392	8626	2032	1746	1790	1120	5604	1030

Notes:
Data in mg/L
NMED SSL Tapwater Screening Level: ---
Red indicates exceedance
Blank cells indicate no data
Wells MWQ-3, -4, -5, -6, -7, -10, -23, and MWL-6 not sampled after spring 2011

DATE	Annual Network													
						Background	Background							
	MWQ-2	MWQ-3	MWQ-4	MWQ-5	MWQ-6	MWQ-7	MWQ-10	MWQ-14	MWQ-18	MWQ-19	MWQ-20	MWQ-21	MWQ-22	MWL-6
Jan-04	7,000	480		440	410		420	2,400						
Jul-04	7,400	500		440	370		390	2,400	440					
Jul-05	7,400	480		450			350	2,500	450		5,100	1,700	910	670
Jun-07	7,200	520	370	460	410	530	440	2,400	470		12,000	1,600	1,000	690
Jan-09	7,360	471	368	428	376	504	412	2,600	445	4,700	12,100	1,510	1,850	324
Jan-10	6,800	470	380	420	360	540	380	2,500	460	5,100	10,000	1,300	1,800	470
Oct-10														
May-11	7,120	430	300	374	352	480	390	2,670	520	5,500	11,900	900	936	658
Sep-11														
Nov-12														
Min	6800	430	300	374	352	480	350	2400	440	4700	5100	900	910	324
Max	7400	520	380	460	410	540	440	2670	520	5500	12100	1700	1850	690
Average	7183	479	355	430	380	514	397	2496	464	5100	10220	1402	1299	562

TABLE 6ah
TDS

TABLE 6ah
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO

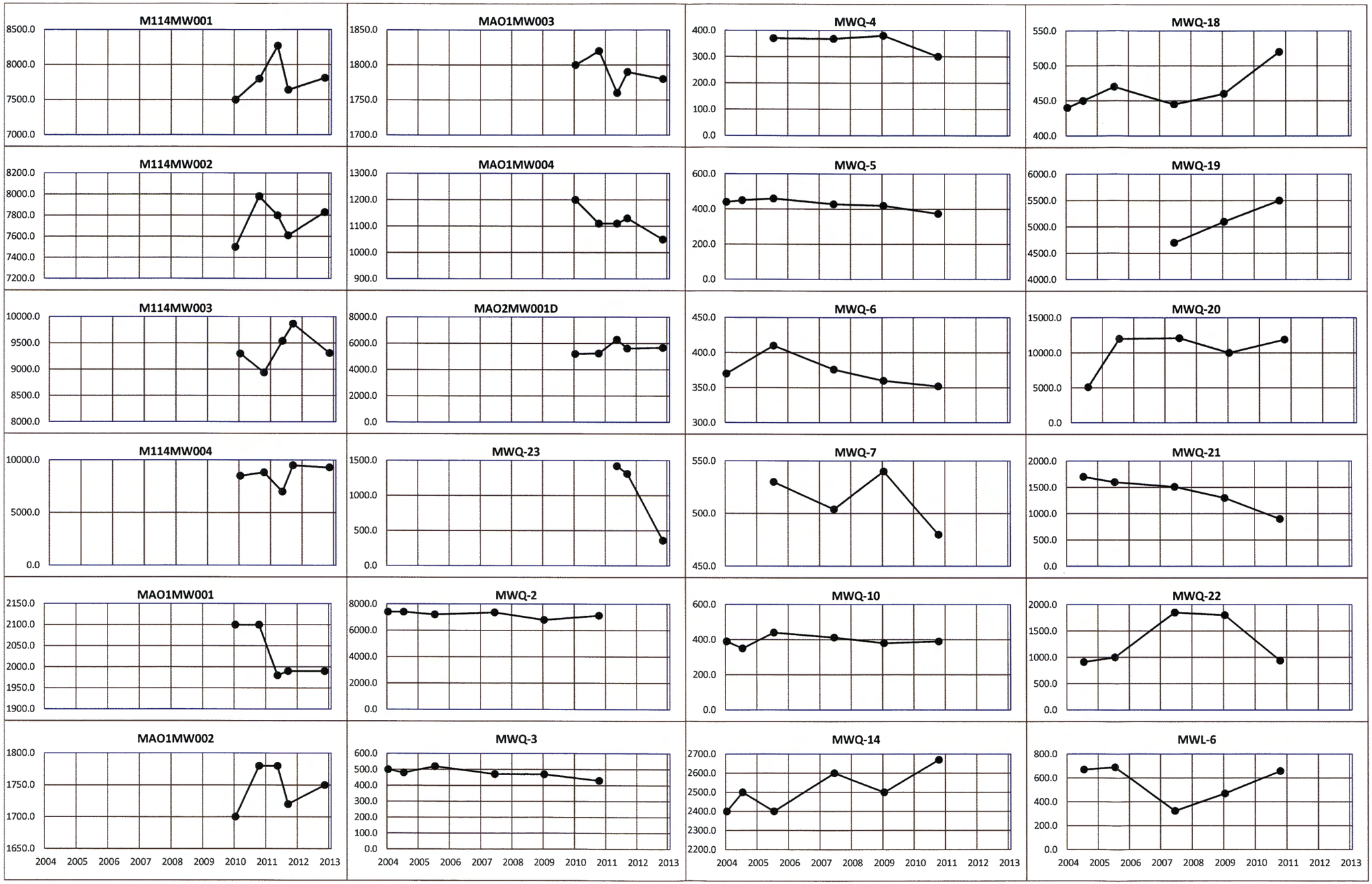


Notes:

Data in mg/L

TABLE 6ah
TDS

TABLE 6ah
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO



Notes:
Data in mg/L

TABLE 6ah
TOTAL DISOLVED SOLIDS

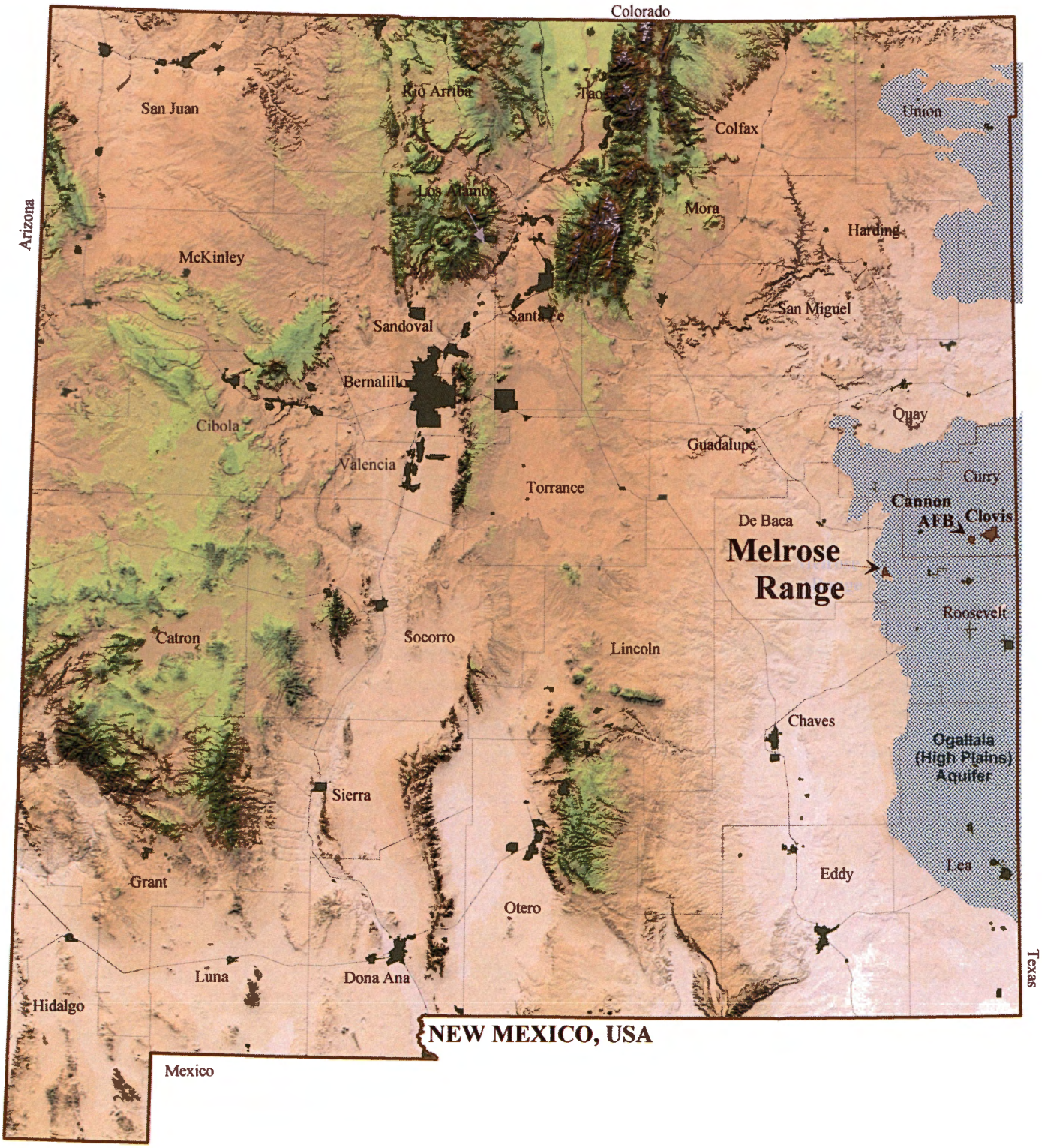
TABLE 6ai
MELROSE AIR FORCE RANGE
ROOSEVELT AND CURRY COUNTIES, NEW MEXICO

VOCs (µg/L)	NMED SSL Tapwater Screening Level (µg/L)		M114MW001	M114MW002	M114MW003	M114MW004	MAO1MW001	MAO1MW002	MAO1MW003	MAO1MW004	MAO2MW001D	MWQ-23	MWQ-2	MWQ-3	MWQ-4	MWQ-5	MWQ-6	MWQ-7	MWQ-10	MWQ-14	MWQ-18	MWQ-19	MWQ-20	MWQ-21	MWQ-22	MWL-6
Acetone	21,800	Oct-10			1.15	1.15					1.15															
		May-11							7.24	17.6																
		Sep-11	1.41	0.909	1.75	5.42																				
		Nov-12		25.6				46.6		290																
Benzene	4.13	Jun-07																		0.2			0.47			
		Nov-12		0.244						0.883																
Chloroform	1.93	Jun-07																					0.16			
Chloromethane	188	Nov-12		2.21						7.74																
1,2-Dichloroethane	1.49	Jun-07																					0.13			
Ethylbenzene	14.8	Jul-04																	0.29							
Methylene Chloride	48	Jul-04																	0.46							
		Jan-10						0.33	0.5	0.33	0.50															
		Sep-11	0.89		1.37																					
4-Methyl-2-pentanone	1,990	Jun-07																			6.9					
Toluene	2280	Jul-04																	1.3							
		Jun-07											0.39							0.55	2.4		0.6		0.33	0.25
		Jan-10	0.54	0.41	0.49	0.37	0.23		0.46	0.36	0.49															
		May-11	3.06	16.3	4.55	12.4	6.28	1.89			16															
1,2,4-Trimethylbenzene	---	Jul-04																	0.27							
Xylenes	203	Jul-04																	1.32							

VOC data shown has been summarized from available reports. Only detected compounds are summarized.

TABLE 6ai
VOCS

FIGURES



Source files: New Mexico Resource Geographic Information System Program

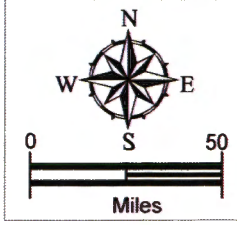
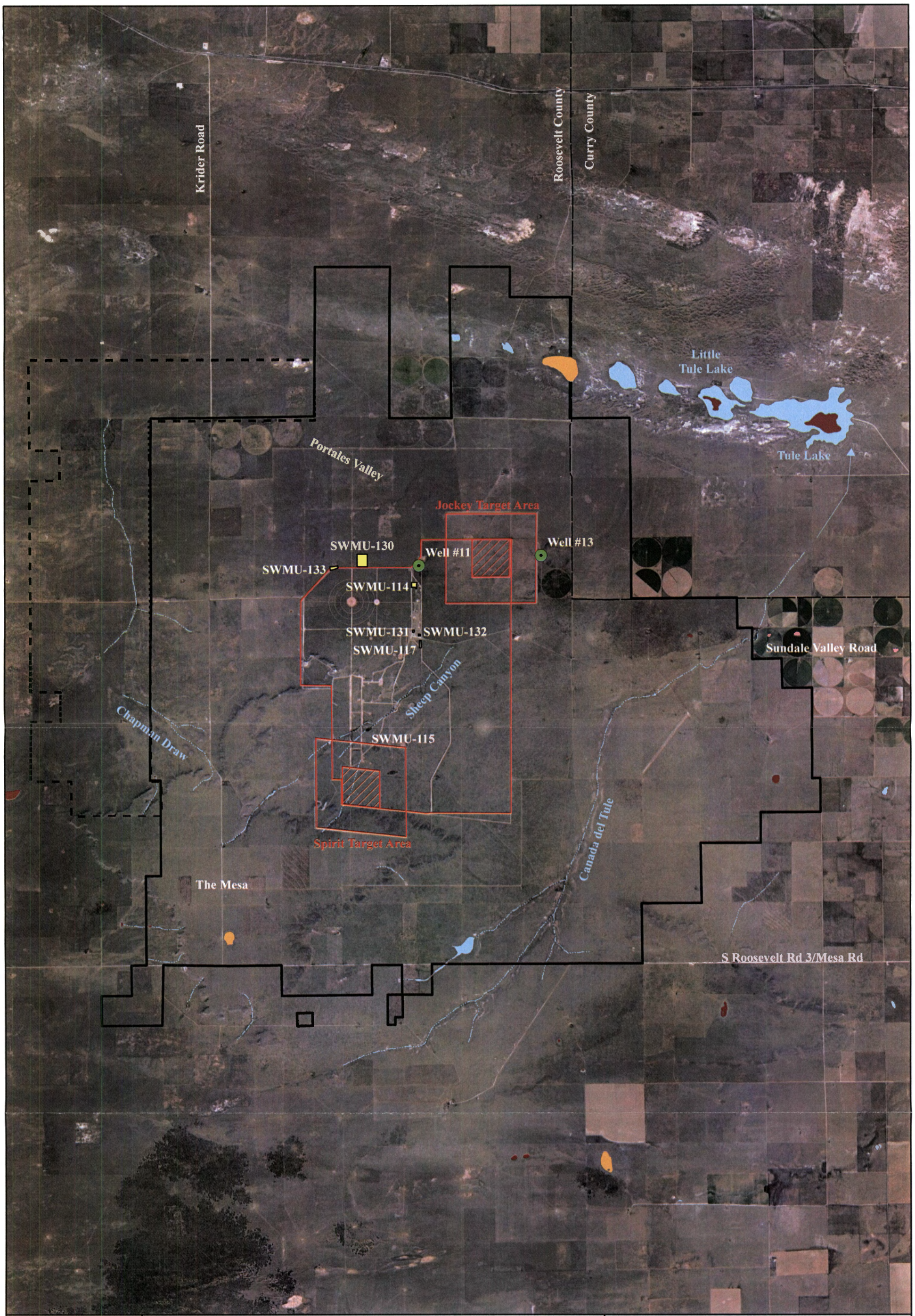


FIGURE 1
SITE LOCATION MAP
Melrose Air Force Range
Roosevelt and Curry Counties, New Mexico

Trinity Analysis and Development Corp.



N
W E
S
0 1.5
Miles

National Wetlands Inventory

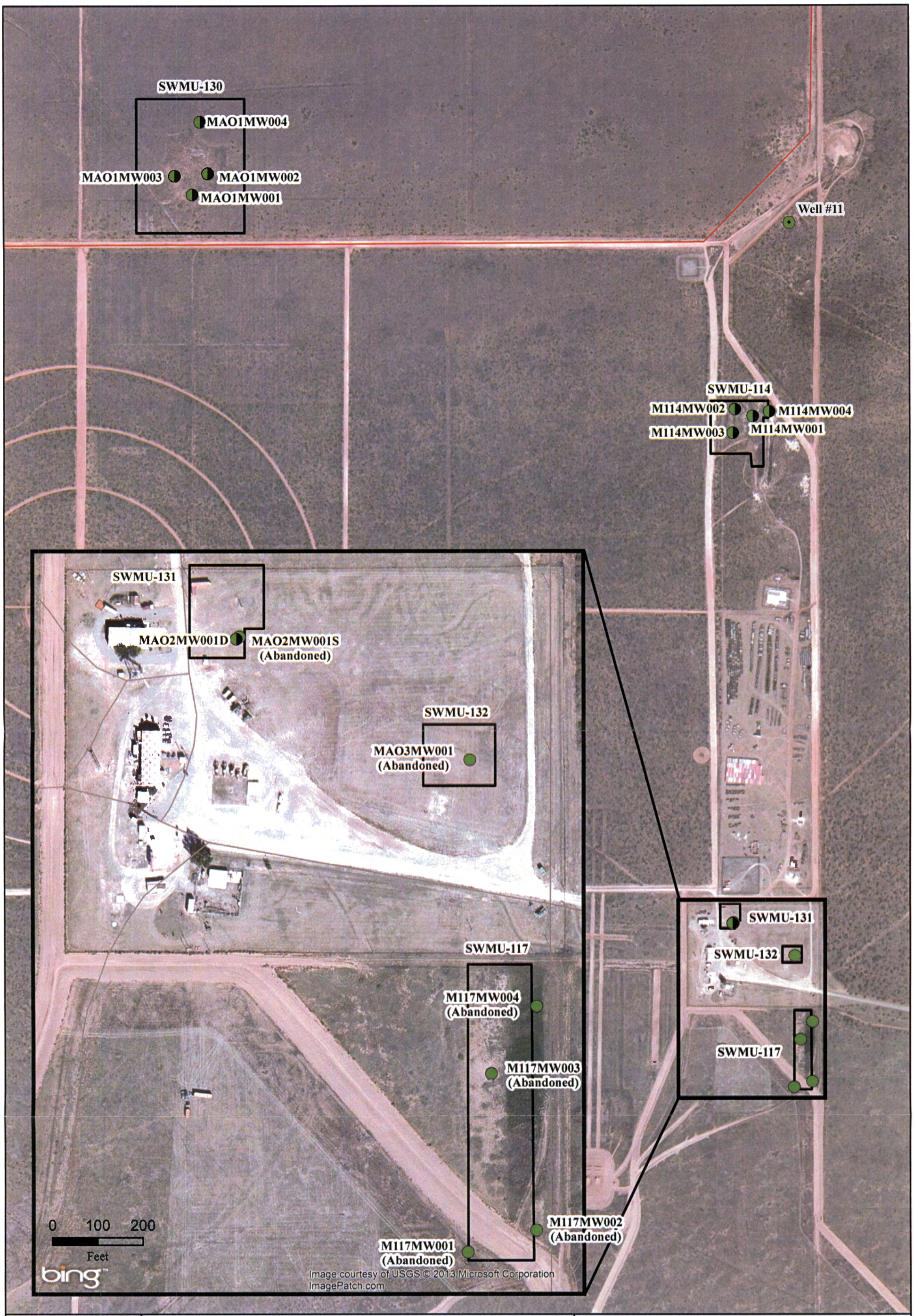
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

Legend

- Range Complex Supply Wells (non-potable)
- Solid Waste Management Unit
- Installation Area, New Mexico Trust Land
- Installation Area
- Target Area
- Impact Area
- Ephemeral Draw

FIGURE 2
AERIAL OVERVIEW
Melrose Air Force Range
Roosevelt and Curry Counties, New Mexico

Trinity Analysis & Development Corp.



N
W E
S
0 750
Feet

Legend

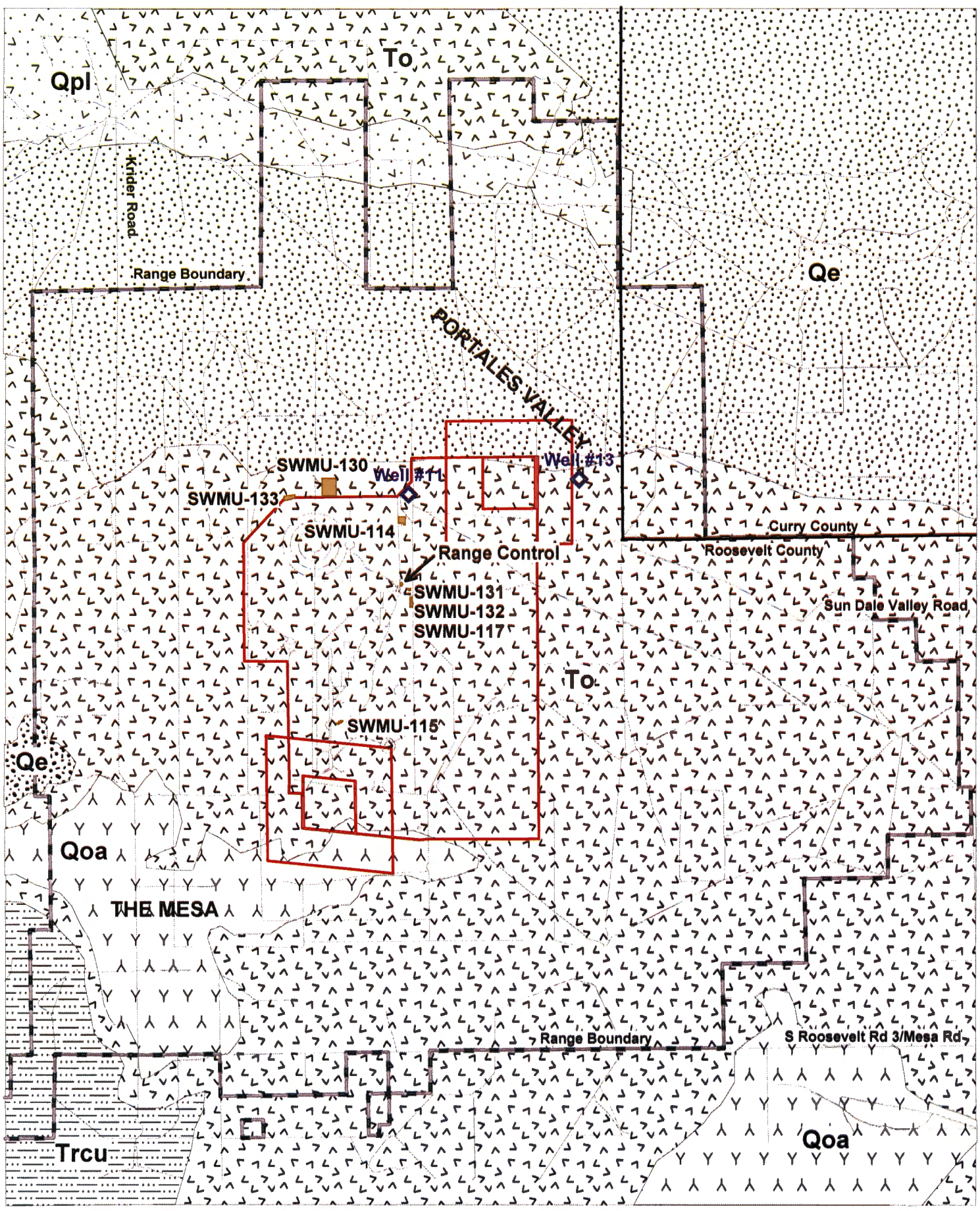
- Semiannual - Monitoring Well
- Abandoned - Monitoring Well
- Range Complex Supply Wells
- Impact Area

FIGURE 3
SEMIANNUAL SWMU MONITORING WELL NETWORK LOCATIONS
Melrose Air Force Range
Roosevelt and Curry Counties, New Mexico

Trinity Analysis & Development Corp.

LEGEND

- Qe - Eolian deposits, including Blackwater Draw Formation - Quaternary
- Qpl - Lacustrine and playa deposits, including Blackwater Draw Formation - Quaternary
- Qoa - Eolian deposits, including Blackwater Draw Formation - Quaternary
- To - Alluvial and eolian deposits, including Ogallala Formation - Tertiary
- Trcu - Chinle Formation, undivided - Triassic
- Current/Former Range Complex Supply Wells (non-potable)
- Solid Waste Management Unit
- Impact Area
- Range Boundary
- Road



Surface geology for recently acquired portions of the Range west of Krider Road are not available.

Sources: Digital data files; GeoBase/CAFB
Map is drawn after Figure 2 from USGS Scientific Investigations Report 2004-5158; Ground-Water Hydrology and Water Quality of the Southern High Plains Aquifer, Melrose Air Force Range, Cannon Air Force Base, Curry and Roosevelt Counties, New Mexico, 2002-03.

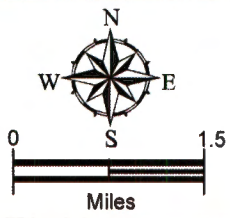


FIGURE 4
SURFACE GEOLOGY
OF MELROSE AFR

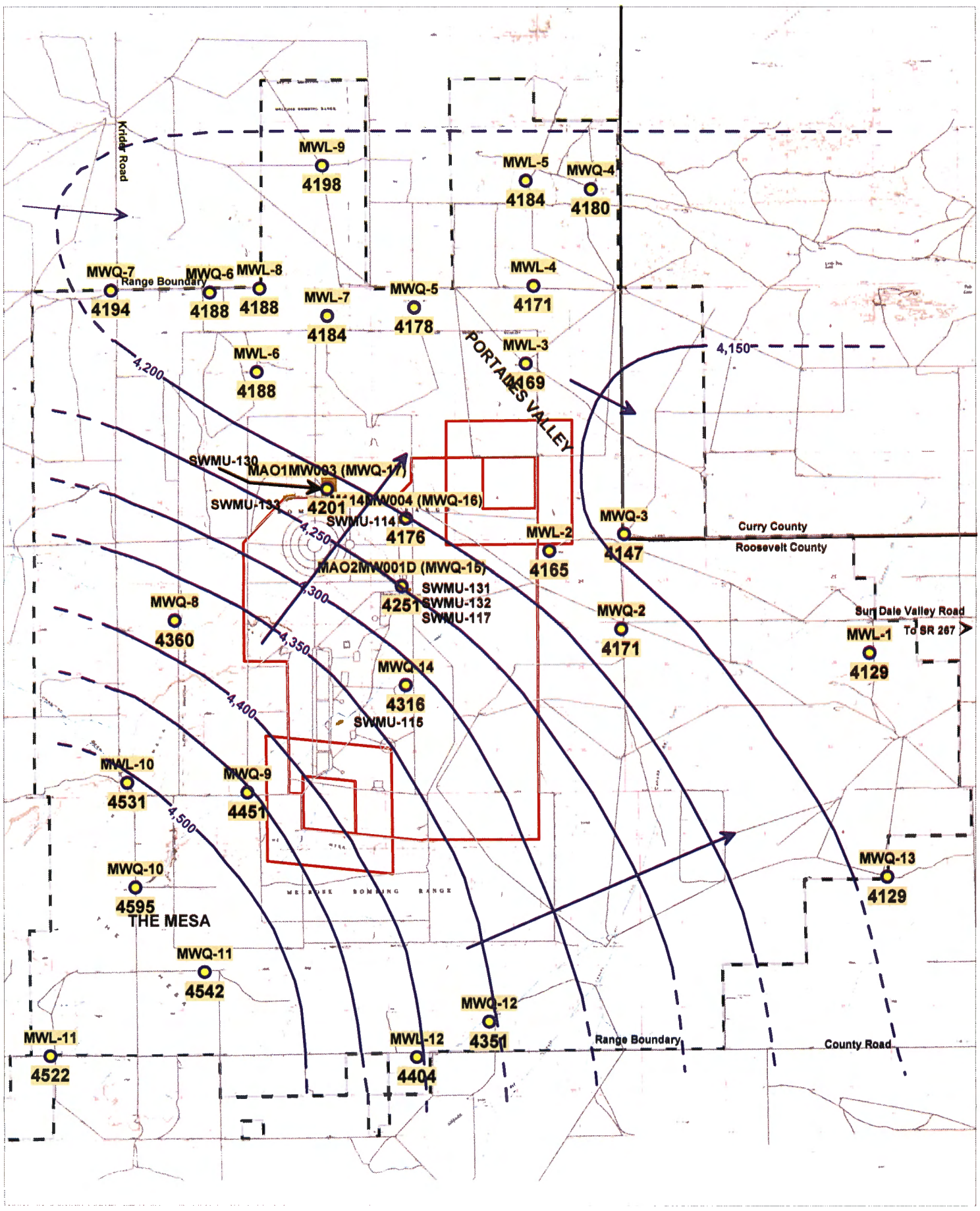
Melrose Air Force Range

Roosevelt and Curry Counties, New Mexico

Trinity Analysis and Development Corp.

Well ID	1/1/2003		Well ID	1/1/2003
M114MW004	4,176.00		MWQ-13	4,129.00
MAO1MW003	4,201.00		MWQ-14	4,316.00
MAO2MW001D	4,251.00		MWL-1	4,129.00
MWQ-2	4,171.00		MWL-2	4,165.00
MWQ-3	4,147.00		MWL-3	4,169.00
MWQ-4	4,180.00		MWL-4	4,171.00
MWQ-5	4,178.00		MWL-5	4,184.00
MWQ-6	4,188.00		MWL-6	4,188.00
MWQ-7	4,194.00		MWL-7	4,184.00
MWQ-8	4,360.00		MWL-8	4,188.00
MWQ-9	4,451.00		MWL-9	4,198.00
MWQ-10	4,595.00		MWL-10	4,531.00
MWQ-11	4,542.00		MWL-11	4,522.00
MWQ-12	4,351.00		MWL-12	4,404.00

As discussed in the text, limited to no well construction details, boring logs, well completion reports, etc. are available for the majority of the wells at Melrose AFR. Therefore, as has been pointed out by NMED, it is not possible to confirm that a well is screened entirely in the Ogallala Formation of the Southern High Plains Aquifer. Based on measured total depths (where available), water quality, and discussions by others (Langman, 2004) it appears that all but four wells are installed in the Ogallala Formation. However, with the exception of MWQ-2 for which construction details are available this has not been entirely confirmed.



Map is modeled after Figure 8 from USGS Scientific Investigations Report 2004-5158;
Ground-Water Hydrology and Water Quality of the Southern High Plains Aquifer,
Melrose Air Force Range, Cannon Air Force Base, Curry and Roosevelt Counties, New Mexico, 2002-03.
Ground water contours are in feet NAVD and reflect a median altitude of water table, 2002-2003

Line files from GeoBase/CAFB
USGS Topographic map from TerraServer

Solid Waste Management Unit

MWL-11 4522 — Water level measuring point, Elevation in feet above sea level (NAVD1988)

—4,500— Water Table Contour, Interval = 50 feet

Range Boundary

Road

Impact Area

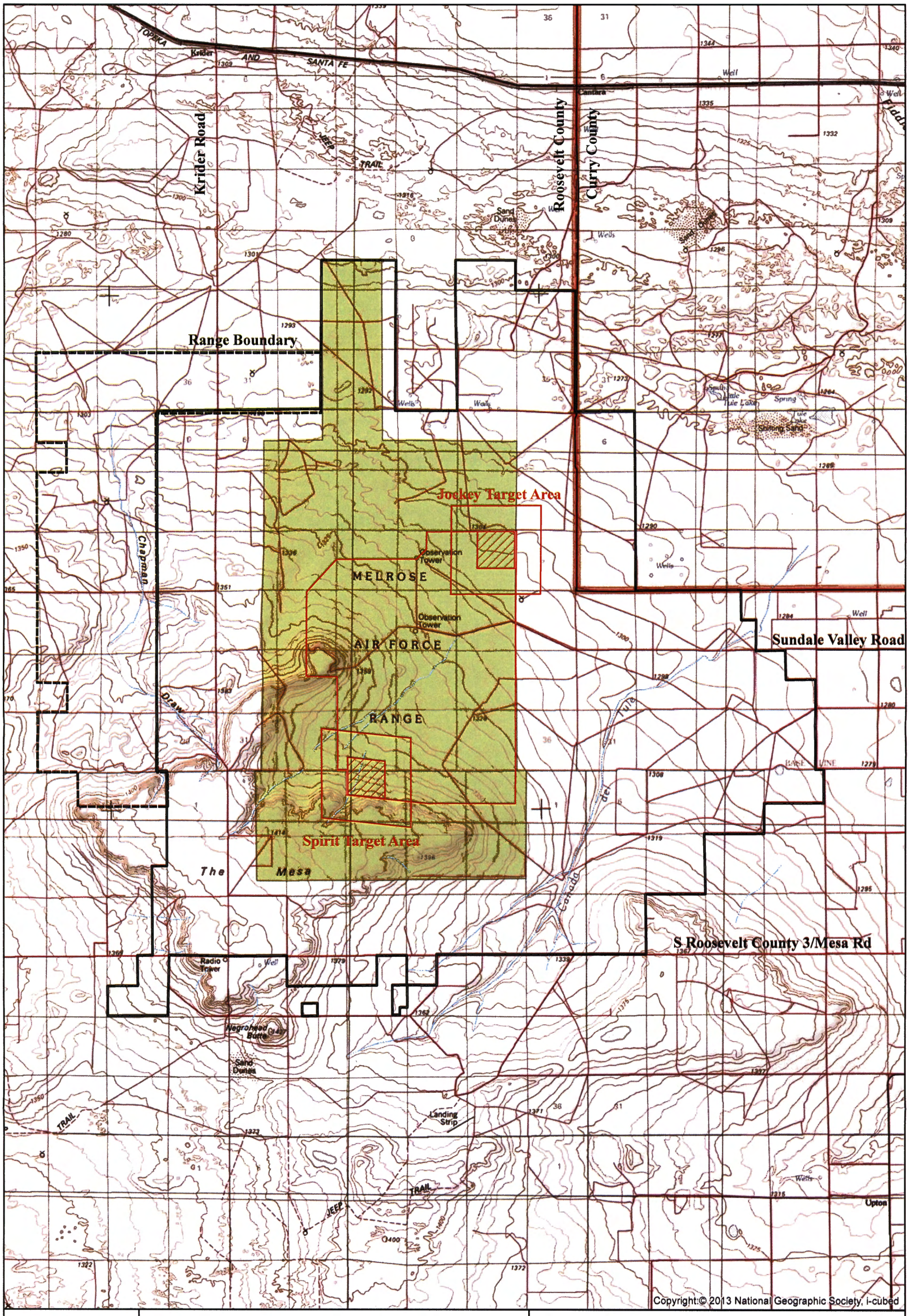
N W E S

0 1.5 Miles

FIGURE 5
MEDIAN GROUND WATER FLOW DIRECTION, 2002 to 2003 (USGS)

Melrose Air Force Range
Roosevelt and Curry Counties, New Mexico

Trinity Analysis and Development Corp.

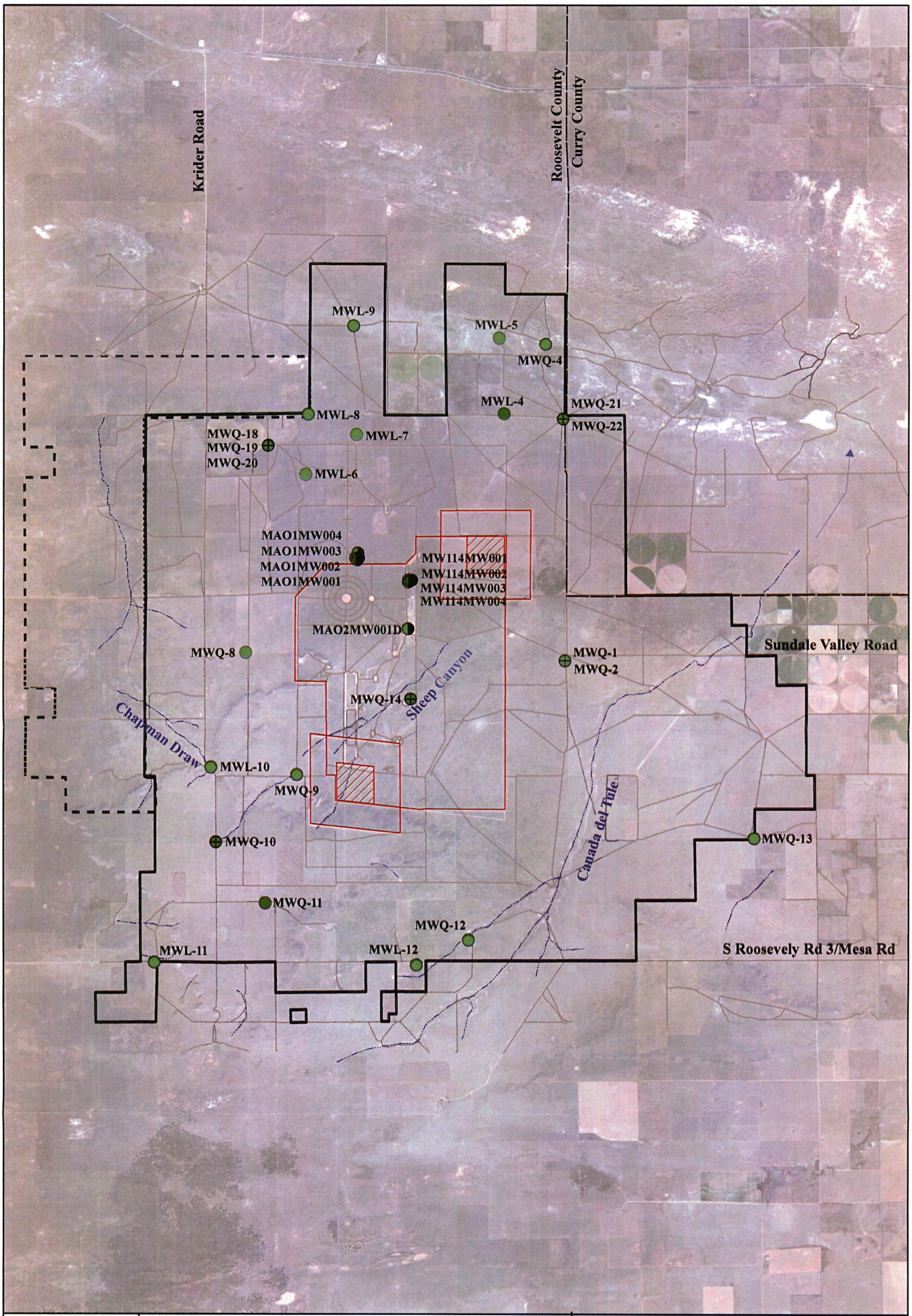


N
W E
S
0 1.5
Miles

Legend

- Target Area
- Impact Area
- Installation Area
- Installation Area, New Mexico Land Trust
- Ephmeral Draw

FIGURE 6
USGS TOPOGRAPHIC MAP OF SITE & VICINITY
OPERATION RANGE ASSESSMENT PROGRAM
Melrose Air Force Range
Roosevelt and Curry Counties, New Mexico

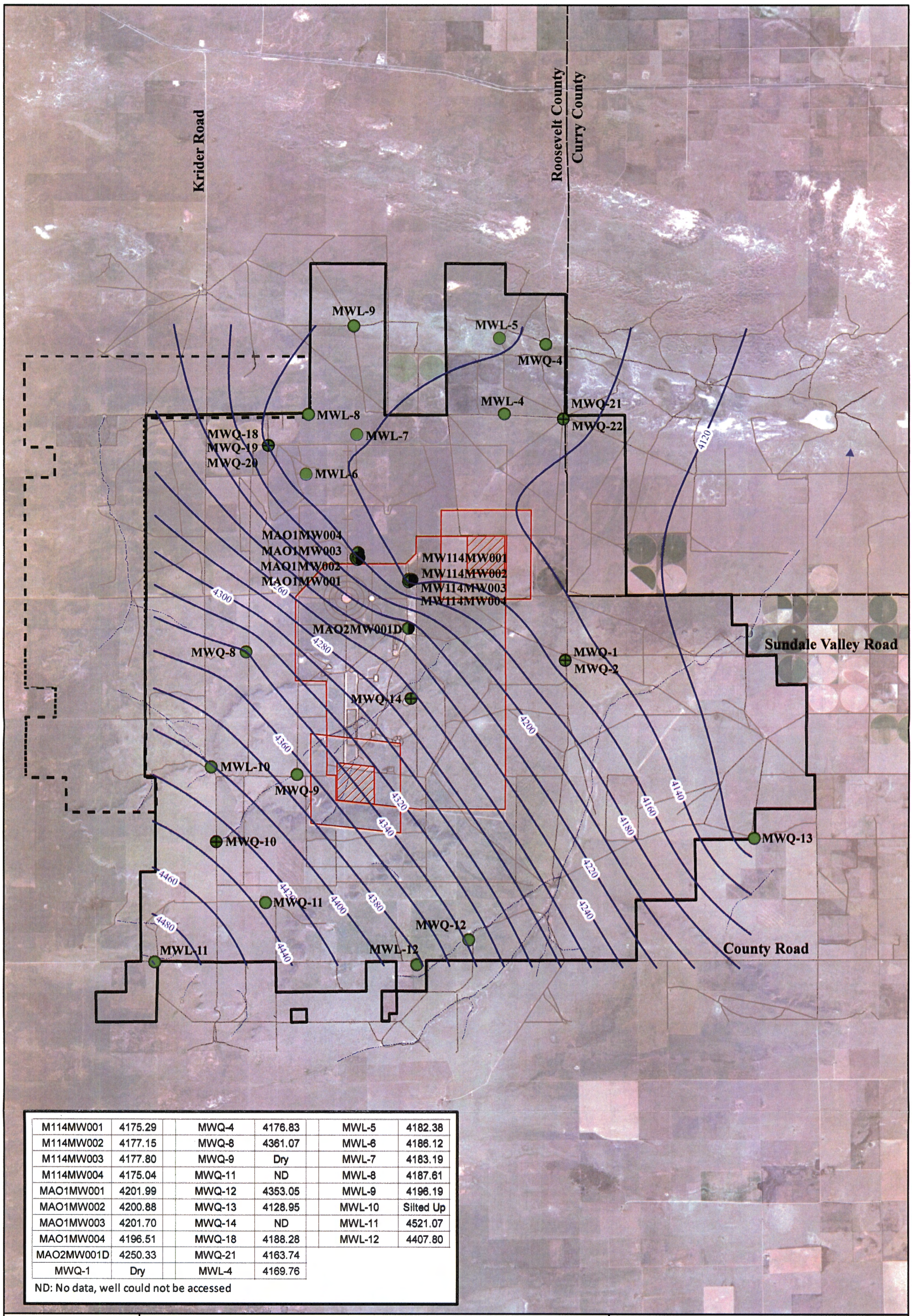


N
W E
S
0 1.5
Miles

Legend

- Annual Ground Water Quality Network
- Semiannual - SWMU Ground Water Quality Network
- Water Level Only
- Installation Area, New Mexico Trust Land (to be aquired)
- Installation Area
- Target Area
- Impact Area
- Ephmeral Draw

FIGURE 7
ANNUAL MONITORING WELL NETWORK
Melrose Air Force Range
Roosevelt and Curry Counties, New Mexico



M114MW001	4175.29		MWQ-4	4176.83	MWL-5	4182.38
M114MW002	4177.15		MWQ-8	4361.07	MWL-6	4186.12
M114MW003	4177.80		MWQ-9	Dry	MWL-7	4183.19
M114MW004	4175.04		MWQ-11	ND	MWL-8	4187.61
MAO1MW001	4201.99		MWQ-12	4353.05	MWL-9	4196.19
MAO1MW002	4200.88		MWQ-13	4128.95	MWL-10	Silted Up
MAO1MW003	4201.70		MWQ-14	ND	MWL-11	4521.07
MAO1MW004	4196.51		MWQ-18	4188.28	MWL-12	4407.80
MAO2MW001D	4250.33		MWQ-21	4163.74		
MWQ-1	Dry		MWL-4	4169.76		

ND: No data, well could not be accessed

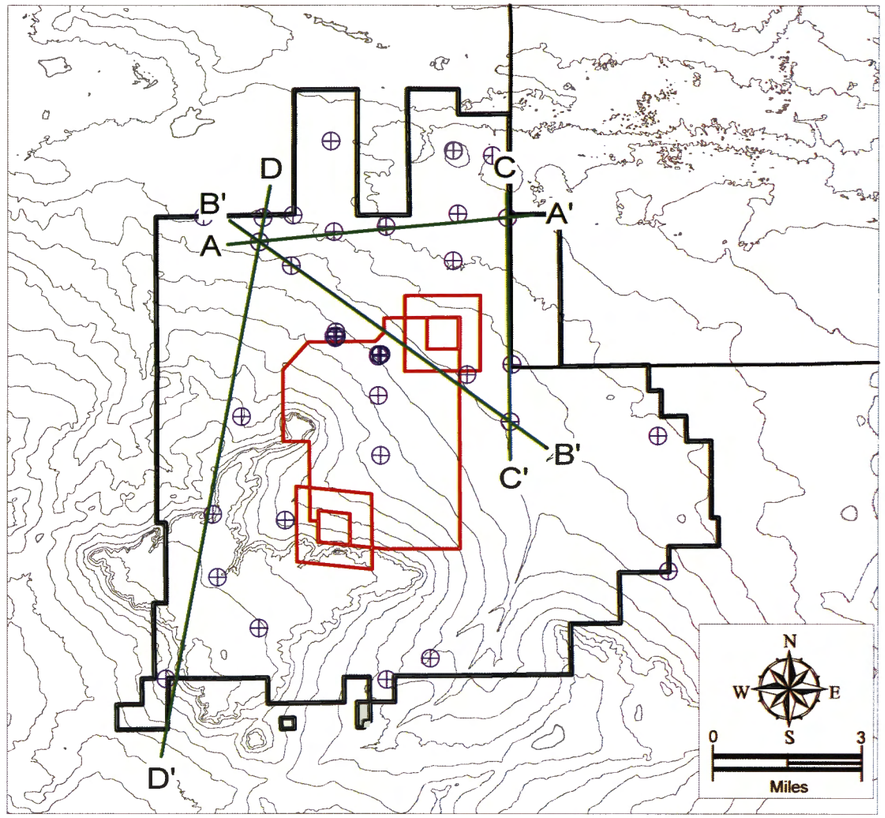
N
W E
S
0 1.5
Miles

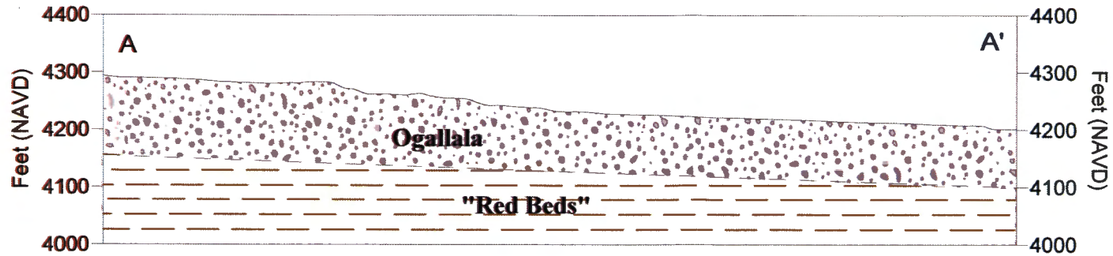
Legend

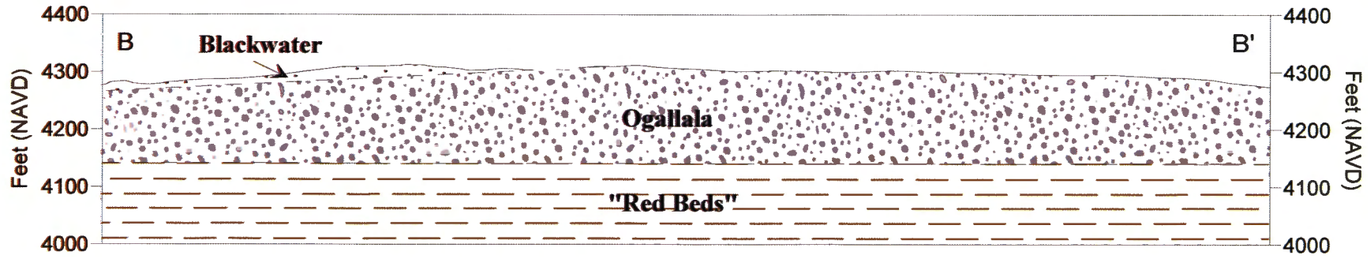
- Ephemeral Draw
- GW Flow 11-8-2012
- Annual Ground Water Quality Network
- Semiannual - SWMU Ground Water Quality Network
- Water Level Only
- Installation Area
- Installation Area, New Mexico Trust Land (to be aquired)
- Target Area
- Impact Area

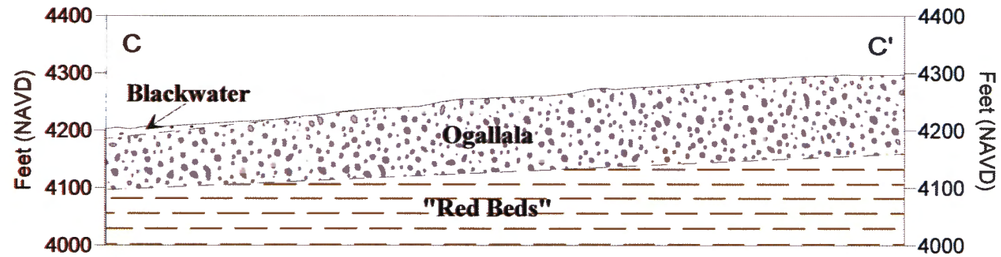
FIGURE 8
GROUND WATER FLOW MAP 11-8-2012
Melrose Air Force Range
Roosevelt and Curry Counties, New Mexico

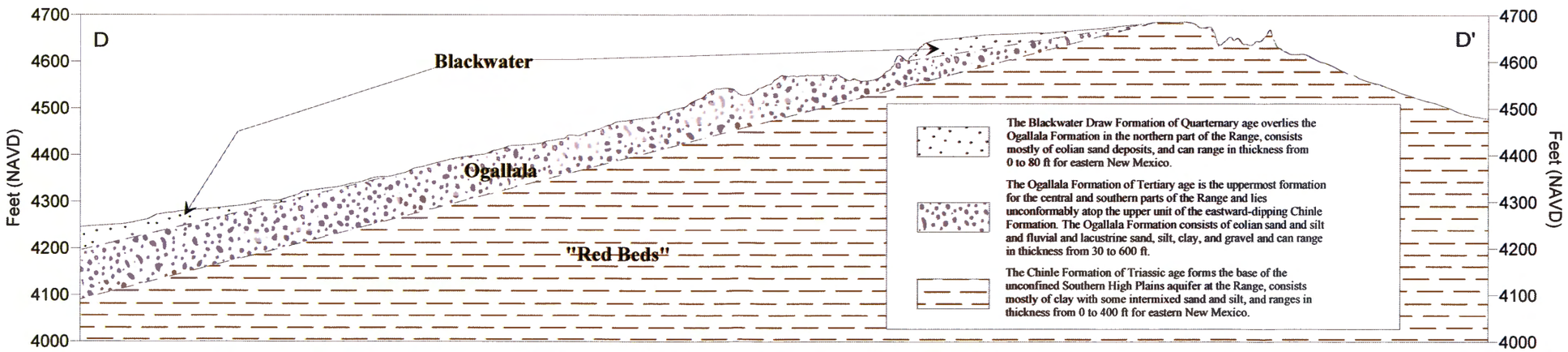
Trinity Analysis & Development Corp.











0 FEET 264 Vertical Scale

0 MILE 1
Horizontal Scale

Vertical Exaggeration: 20x

SOURCES:

Digital data files; GeoBase/CAFB
Map is drawn after Figure 2 from USGS Scientific Investigations Report 2004-5158; Ground-Water Hydrology and Water Quality of the Southern High Plains Aquifer, Melrose Air Force Range, Cannon Air Force Base, Curry and Roosevelt Counties, New Mexico, 2002-03.

NOTES:

The Chinle Formation has various accepted names: Chinle Formation, Chinle Formation of the Dockum Group, and Chinle Group. All three names have been used for geologic description of areas in east-central New Mexico with usage dependent on locally identified units. Given a lack of identified units in the Range area, although this upper unit is possibly the Redonda Formation of the Chinle Group,"Chinle Formation" is used in this report. Locally, this formation is known as the "red beds."

These generalized cross sections are based on limited data from three wells that have been geophysically logged by TRINITY and by the geologic surface interpertations in Langman (2004).

FIGURE 9
GENERALIZED CROSS SECTIONS
Melrose Air Force Range
Roosevelt and Curry Counties, New Mexico

Trinity Analysis and Development Corp.

APPENDIX A

Field Methods

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TRINITY Standard Operating Procedure Number 1.

1.0 WATER LEVEL MEASUREMENT

1.1. Objective

This section presents procedures and guidelines for measuring ground water in irrigation and monitoring wells at Melrose AFR. Consistent repeatable data should be obtained.

1.2. Procedure

Water level measurements used to define the water table in the High Plains Aquifer or Chinle Formation or a single potentiometric surface should be collected within the shortest time period at Melrose AFR possible. It should be possible to collect a complete round of water levels at Melrose AFR in two days.

Water level measurement equipment will be constructed of materials that are chemically inert and which are not prone to sorption or desorption.

When collecting water levels, measurements should be collected from wells in order of potentially least contaminated to potentially most contaminated. At Melrose AFR water levels should be measured at the Annual Ground Water Monitoring Network first, followed by the SWMU Ground Water Monitoring Network.

It is important to recheck water levels in all wells approximately 10 minutes after the initial measurement, to ensure the water levels have stabilized. If different readings are indicated, recheck the water levels until they have stabilized. Fluid level measurements will be recorded in the logbook and on the TRINITY Water Level Data Sheet.

The use of an electrical tape to measure fluid levels is mandatory at Melrose AFR, no other measurement method will be utilized. The device will consist of an electrode suspended by a pair of insulated wires. An ammeter, indicator light, or audible signal will be used to indicate when the electrode touches the water surface. Batteries supply the current. This method is also known as the electric sounder method.

The procedures for this method are as follows:

- Check batteries before going to the field and carry an ample supply of spares;
- Turn power switch "ON;"

- Decontaminate tape and probe upon arrival to a site and between measurement in different wells or piezometers, as outlined in TRINITY SOP No. 3;
- Lower probe into the well until a sharp deflection is noted on the meter, the indicator light is illuminated, or the audible tone is activated;
- Verify that the electrode is functioning properly and is indicating the water surface with the same depth each time by moving the probe up and down several times;
- Hold the probe cable at the measuring point location on the well pipe at the exact depth where the probe indicates the water surface to be. Record the reading to the nearest 0.01 foot;
- If there is no reference mark, the measurement will be from the north side of the casing;
- The total depth of the well will be measured in the same manner ; and
- Remove the probe from the well.

1.3. Reporting

All water level field data are to be entered in field log books or on an appropriate Water Level Data Summary form and will include the following information:

- Date (at top of page);
- Time recording is made;
- Station location (monitoring well or piezometer identification);
- General comments about condition; and
- Measuring point, usually.

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TRINITY Standard Operating Procedure Number 2.

1.0 GROUND WATER SAMPLING

1.1. Objective

The objective of this section is to provide procedures for the sampling of supply wells and ground water monitoring wells at Melrose AFR. These procedures were designed so that the ground water samples will be of verifiable and legally defensible quality. To ensure that this goal is achieved, sampling protocols must be strictly followed and sample collection and handling must be properly documented in field log books, ground water sampling logs, COC forms, and project files. This procedure applies to all personnel who are responsible, both directly and indirectly, for ground water sampling and the evaluation of analytical results from ground water samples collected at Melrose AFR.

1.2. Procedure

This section presents procedures to be followed for collection of ground water quality samples. All sampling personnel must be knowledgeable of ground water sampling procedures and the established protocols. Adequate preparations for sampling trips will be made by the Field Manager to ensure that sampling will be performed as efficiently and cost effectively as possible. Proper sampling protocol will be followed to ensure that representative samples of ground water are provided for analysis, and that the act of sampling and the specific equipment utilized to collect each specific sample is consistent.

1.3. Pre-Sampling Trip Preparation

The Field Manager is responsible for review of available information and preparation of equipment to ensure that the sampling trip is performed as efficiently as possible. Thorough preparation will reduce lost time during sampling episodes, and will ensure that the sampler has the

proper equipment available on site to follow established protocols. The following pre-sampling activities are recommended.

The sampling equipment will be inspected to confirm proper calibration and good repair. Equipment failing to operate within manufacturer's recommended specifications, must be properly repaired, adjusted, and calibrated prior to utilization. Documentation of equipment maintenance must be recorded in the field log book. Expendable field supplies will be checked to determine whether adequate quantities of all supplies are available. Monitoring well construction logs and available water level data for all wells to be sampled should be reviewed to evaluate the conditions that will be encountered and the approximate volume of water to be purged.

Sample bottles must be ordered from the laboratory at least 2 to 3 weeks prior to the sampling date and arrangements made for shipment to Clovis New, Mexico. Coolers will be shipped and held at the local FedEx office for pickup by the sampling team. When ordering sampling bottles, bottles for blanks and duplicates must be obtained, and the type of blanks to be obtained must be specified. Reagent grade water for equipment blanks must be provided by the laboratory or an appropriate vendor. Sample bottles obtained from the laboratory must be checked to ensure that all necessary sample bottles and associated preservatives have been provided.

The Annual Ground Water Monitoring Network will be sampled prior to the SWMU Ground Water Monitoring Network so that the potentially least contaminated wells at the site will be sampled first, progressing to the potentially most contaminated wells.

On the day of sampling, on-site weather conditions will be evaluated to determine whether they are suitable for sample collection. Upon arrival at the site, the location and access to wells will be verified. Wells will be inspected to determine the condition of the surface casings, surface seals, well identification, and condition of the casing. The general condition of the wells and any abnormalities noted must be recorded in the field log book and the TRINITY Monitoring Well Inspection Form.

1.4. Initial Activities

The fluid levels will be measured in the well using the electric tape method (TRINITY SOP No. 1).

The total depth of each well will NOT be measured before sampling to ensure that silt or sand is not mobilized in the well prior to sampling. The total depth recorded during previous sampling events

will be utilized and verified once sampling has been completed. If the total depth is unknown then the total depth of the well should be measured prior to ground water sampling. However, the well should be allowed 24 to 48 hours prior to sampling, when practical. The total depth measurement will be used to determine if silt is accumulating in the well or if the screen is possibly damaged.

1.5. Well Purging

All monitoring wells will be purged before collecting samples to assure that the ground water sample submitted for laboratory analyses is representative of ground water quality in the aquifer. During the purging process, field parameters (pH, specific conductivity, dissolved oxygen, temperature, ORP, and turbidity) will be measured. Two types of wells are currently being sampled at Melrose AFR and include:

- Supply wells with dedicated submersible pumps; and
- Monitoring wells.

1.5.1. Supply Wells with Dedicated Pumps

For supply wells with dedicated submersible pumps the following steps will ensure that a representative sample of ground water is collected:

- Select the spigot that is closest to the pump and before any pressure tank (if possible);
- Remove all hoses, aerators and filters (if possible);
- Open the spigot and purge at maximum flow;
    - If the pressure tank is located between the pump and the spigot, purge the volume of the pressure tank, lines and spigot;
    - If the spigot is before any storage tank, purge the stagnant water from the spigot and the tap line to the spigot;
- Measure the depth to ground water frequently while adjusting the flow rate to eliminate or minimize drawdown, where possible;
- Once the line, spigot, and associated pressure tank has been pumped, pump one well volume before collecting stabilization parameters. To determine the volume of water standing in the well, the following formula may be used:

$$V = 0.041\ d2h$$

Where: h = water column height (feet; well depth minus depth to water level)

d = diameter of well (inches)
V = volume of water standing in the well (gallons)

See **Section 1.6** below for stabilization details; and

- Reduce the flow rate to < 0.2 gpm before collecting samples.

1.5.2. Monitoring Wells

Only stainless steel submersible pumps will be used to collect ground water samples from monitoring wells.

- Do not lower the pump or intake hose (tubing) to the bottom of the well as this will mobilize silt and sand increasing the turbidity. Place the pump intake in the middle of the screened interval;
- Position fuel powered equipment downwind and at least 10 feet from the well head making sure that the exhaust faces downwind;
- Carefully position the decontaminated pump in the screened interval;
- The pump shall be turned on and the minimum flow rate possible shall be immediately attained. The objective is to have a flow rate low enough so that non-turbulent, rather than turbulent, flow is induced.
- Measure the depth to ground water frequently while adjusting the flow rate to eliminate or minimize drawdown, where possible; and
- Pump one equipment volume before collecting stabilization parameters. To determine the equipment volume calculate the total volume of the pump, associated tubing and container that is used for in situ measurements (flow container), if used, using the following equation:

$$V = p + ((0.041)\ d \times d \times l) + fc$$

Where:
V = volume in gallons
p = volume of pump in gallons
d = tubing diameter in inches
l = length of tubing in feet
fc = volume of flow cell in gallons

See **Section 1.6** below for stabilization details.

1.6. Stabilization

Use of a flow-through cell to measure the stabilization parameters, collecting stabilization readings at a minimum of five minutes apart. Well purging will continue until the following criteria have been met:

- Turbidity: ≤ 10 NTUs or ± 10% where > 10 NTUs;
- pH: ± 0.1 units;
- Specific Conductance: ± 3% of reading;
- DO: ± 0.3 mg/L of reading;
- ORP: ± 10 millivolts (mV);
- Temperature: ± 10% of reading.

If the stabilization parameters cannot be met, and all attempts have been made to minimize the drawdown, check the instrument condition and calibration, purging flow rate and all tubing connections to determine if they might be affecting the ability to achieve stable measurements. All measurements that were made during the attempt must be documented. The Field Manager may decide whether or not to collect a sample.

1.7. Sample Collection

Sampling personnel will wear a clean pair of new, non-powdered, disposable latex gloves at each different sampling location. These gloves will be donned immediately prior to sampling activities.

Samples will be collected in the following order (as applicable):

- VOCs
- Perchlorate
- Explosives
- Mercury
- Total metals
- Dissolved metals
- Hexavalent chromium
- Cyanide
- Alkalinity, chloride, nitrate, nitrite, sulfate, and TDS

1.8. Labeling and Handling Requirements

Prior to sample collection, samples will be labeled and handled in accordance with the FSP and QAPP.

1.9. Collection of Quality Control Samples

All QA/QC sampling activities must comply with the requirements of the FSP and QAPP.

1.10. Field Equipment Decontamination

Sampling and monitoring equipment will be decontaminated according to TRINITY SOP 3.

1.11. Field Documentation

A bound field log book must be maintained by sampling personnel to provide a daily record of sampling and events. The following information must be recorded into the log book using indelible, waterproof ink:

- Date
- Time
- Weather conditions
- Personnel present
- Signature of personnel making entry
- Well ID
- Total depth of well (if measured)
- Depth to water
- Well yield
- Purge volume and method
- Sample volume
- Sample withdrawal procedures
- Date and time of collection
- Well sampling sequence
- Field analyses performed
- Analyses requested
- Quality control activities

- Calibration procedures and results
- Problems encountered and corrective actions taken
- Sample distribution and transporter
- Field observations (e.g., unusual conditions, equipment malfunctions, and condition of monitoring well)

Pertinent data will also be recorded on the TRINITY Ground Water Sample Collection Field Sheet for that specific sampling location.

1.12. Shipping

Samples will be shipped in accordance with the FSP.

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TRINITY Standard Operating Procedure Number 3.

1.0 DECONTAMINATION PROCEDURES

1.1. Objective

The cleaning procedures outlined in this SOP represent standard decontamination procedures utilized by USEPA Region IV (EPA, 2001). If possible, sufficient clean equipment will be transported to Melrose AFR to minimize field decontamination activities. The only items that will require decontamination while at Melrose AFR are the water level tape and the submersible stainless steel pumps. Dedicated pump tubing is located in each monitoring well. The tubing will be replaced when necessary. Specific cleaning procedures are presented in the following sections. Disposable sampling equipment will be used as much as possible to minimize the need for decontamination. In addition, sample containers for laboratory analyses and coolers for storage and shipment will be provided by the laboratory and certified as clean. The ground water sample containers will not be reused.

Sampling and field equipment cleaned in accordance with these procedures meet the minimum requirements for the DQOs specified in the WP. Alternative field decontamination procedures must be justified and documented in the field records, and investigative reports.

1.2. Procedure

1.2.1. Cleaning Materials

The cleaning materials referred to in this SOP document are described in the following paragraphs.

The laboratory detergent will be a standard brand of phosphate-free laboratory detergent such as Liquinox®. The use of any other detergent must be justified, and documented in the field log books and inspection or investigative reports. This detergent must be kept in a clean plastic container until used.

Tap water may be used from any municipal water treatment system. The use of an untreated potable water supply is not an acceptable substitute for tap water. Tap water must be stored in clean tanks, sprayers or squeeze bottles, or may be applied directly from a tap water source.

Deionized water is defined as tap water that has been treated by passing through a standard deionizing resin column. Deionized water must be stored in clean glass, stainless steel, or plastic containers.

The detergent and rinse water baths may be reused, but new solutions must be prepared periodically, depending on the amount of equipment requiring decontamination.

1.2.2. Marking and Segregation of Used Field Equipment

Field or sampling equipment that needs to be repaired will be identified with a tag. Any equipment problems and repair requirements shall be noted on this tag. Field equipment needing cleaning or repairs will not be stored with clean equipment, sample tubing, or sample containers.

1.3. Water Level Tapes Used to Measure Ground Water Levels

The following procedures apply to cleaning water level tapes and tag lines both in the field and at the shop. The procedures shall be followed for all sounding equipment upon arriving at a site and before leaving it. Personnel shall clean tag lines in accordance with these procedures between each well. However, just the probe on water level tapes may simply be rinsed with deionized water between wells, if gross contamination does not exist.

- Wash with laboratory detergent and tap water;
- Rinse with tap water;
- Rinse with deionized water;
- Allow to air dry overnight (doesn't apply to field cleaning); and
- Wrap equipment in aluminum foil (with tab for easy removal), seal in plastic, and date (doesn't apply to field cleaning).

1.4. Submersible Pumps

CAUTION: To avoid damaging these pumps, the following precautions should be taken:

- Never run pumps under dry conditions.

1.4.1. Cleaning Procedure

- Pump a sufficient amount of soapy water through the pump to flush out any residual purge water;
- Using a brush, scrub the exterior of the electrical supply/control cables, and pump with soapy water. Rinse the soap from the outside of each with tap water. Next, rinse each with deionized water and recoil onto the spool;
- Pump a sufficient amount of tap water through the pump and associated hose to flush out soapy water;
- Pump or pour a sufficient amount of deionized water through the pump and hose to flush out the tap water;
- Rinse the outside of the pump, hose, and electrical supply control cables with deionized water; and
- Place the equipment in a polyethylene bag or wrapped with polyethylene film to prevent contamination during storage or transit. Insure that a set of rotors, fuses, and cables are attached to each cleaned pump.

1.5. References

U.S. Environmental Protection Agency, Region IV, *Environmental Investigations Standard Operating Procedures and Quality Assurance Manual, Environmental Services Division, November 2011.*

APPENDIX B

Field Data

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Groundwater Sampling Logs

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Modified FDEP Form FD 9000-24
(Added ORP column, Salinity column and Notes)

GROUNDWATER SAMPLING LOG

☐ SYSTEM ON ☐ SYSTEM OFF ☒ NOT APPLICABLE (NO SYSTEM)

SITE NAME: SWMU-131	SITE LOCATION: Melrose AFR		DATE: 11/5/17
WELL NO: MA02MW001D	SAMPLE ID: MA02MW001D	FREE PRODUCT: Y N DEPTH TO PRODUCT (ft BTOC):	FIELD DUPLICATE: Y N DUPLICATE ID: MA02MW001D-FD

PURGING DATA

WELL DIAMETER (inches): 4	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: 167 feet to 187 feet	STATIC DEPTH TO WATER (feet): 105.57	PURGE PUMP TYPE OR BAILER: ESP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (184.5 feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= .5 gallons + (.026 gallons/foot X 180 feet) + .5 gallons = 1.46 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 170	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 170	PURGING INITIATED AT: 1205	PURGING ENDED AT: 1320	TOTAL VOLUME PURGED (gallons): 13.5

Time	Volume Purged (gallons)	Cumul. Volume Purged (gallons)	Purge Rate (gpm)	Depth to Water (ft BTOC)	pH (standard units)	Temp. (°C)	Spec. Cond. mS/cm	Dissolved Oxygen mg/L	Salinity ‰	ORP (mV)	Color/ Odor (describe)	Turbidity (NTUs)
1215	1.8	1.8	.18	108.76	8.06	19.30	10.06	0.21	5.66	169.4	clear no odor	9.50
1220	0.9	2.7	.18	109.15	8.04	19.61	9.95	0.22	5.67	164.1	clear no odor	5.41
1225	0.9	3.6	.18	109.57	8.03	19.61	9.82	0.20	5.55	161.1	clear no odor	4.21
1230	0.9	4.5	.18	110.13	8.03	19.64	9.67	0.20	5.46	158.1	clear no odor	5.13
1235	0.9	5.4	.18	110.56	8.05	19.67	9.57	0.18	5.39	154.8	clear no odor	5.17
1240	0.9	6.3	.18	110.97	8.04	19.69	9.48	0.17	5.33	153.5	clear no odor	4.01
1245	0.9	7.2	.18	111.33	8.05	19.71	8.92	0.15	5.00	144.9	clear no odor	4.58
1250	0.9	8.1	.18	112.18	8.05	19.73	8.94	0.15	5.00	140.6	clear no odor	4.12
1255	0.9	9.00	.18	112.51	8.04	19.75	8.93	0.15	5.00	142.4	clear no odor	4.71
1300	0.9	9.90	.18	113.06	8.04	19.72	8.93	0.15	5.00	143.0	clear no odor	4.64
1305	0.9	10.8	.18	113.91	8.05	19.75	8.94	0.15	5.00	143.3	clear no odor	4.01

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Ben Stewart Golder Gibson Trinity	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1306	SAMPLING ENDED AT: 1320
PUMP OR TUBING DEPTH IN WELL (feet): 170	TUBING MATERIAL CODE: LDPE	FIELD-FILTERED: Y N Filtration Equipment Type: Inline	FILTER SIZE: .45 µm
FIELD DECONTAMINATION: PUMP Y N	TUBING Y N (replaced)	DUPLICATE: Y N	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40mL	HCl			VOCs	ESP	719
	2	AG	1L	—			Explosives	↓	↓
	2	PE	250mL	HNO_3			Metals (Total/Diss)		
	1	PE	1L	NaOH			CN		
	1	PE	500mL	—			$Cl^-/NO_2/NO_3$	↓	↓
	1	PE	500mL	—			Alk/TDS		

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: **1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

☐ well needs repair ND ☐ needs well tag ND ☐ locking cap: Yes ☐ other comment: NA
☐ DI Water Lot # NA ☐ MS / MSD ND ☐ Equip blk Yes (EB-01) ☐ Ambient blk ND ☐ Trip blk Yes (TB06)

1 PE 125mL — HClO4
1 PE 125mL — Cr(VI)

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Modified FDEP Form FD 9000-24
(Added ORP column, Salinity column and Notes)

GROUNDWATER SAMPLING LOG

☐ SYSTEM ON ☐ SYSTEM OFF ☑ NOT APPLICABLE (NO SYSTEM)

SITE NAME: SWMU 114	SITE LOCATION: Cannon AFB, NM		DATE: 11/6/12
WELL NO: M114 MW004	SAMPLE ID: M114MW004	FREE PRODUCT: Y (N) DEPTH TO PRODUCT (ft BTOC):	FIELD DUPLICATE: Y N DUPLICATE ID:

PURGING DATA

WELL DIAMETER (inches): 4	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH TO WATER (feet): 14.95	PURGE PUMP TYPE OR BAILER: ESP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (184 feet – feet) X 208 gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0.5 gallons + (0.0026 gallons/foot X ~~185~~ 180 feet) + 0.5 gallons = 1.48 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 180	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 180	PURGING INITIATED AT: 0945	PURGING ENDED AT: 1100	TOTAL VOLUME PURGED (gallons): 10.5

Time	Volume Purged (gallons)	Cumul. Volume Purged (gallons)	Purge Rate (gpm)	Depth to Water (ft BTOC)	pH (standard units)	Temp. (°C)	Spec. Cond. mS/cm	Dissolved Oxygen mg/L	Salinity ‰	ORP (mV)	Color/ Odor (describe)	Turbidity (NTUs)
1000	2.1	2.1	.14	155.26	8.00	20.17	13.30	1.26	7.69	167.1	clear no odor	13.0
1005	0.70	2.8	.14	155.15	7.89	20.21	13.23	0.49	7.65	169.9	clear no odor	12.7
1010	0.70	~~2~~3.5	.14	154.88	7.90	20.28	13.22	0.47	7.64	166.0	clear no odor	12.0
1015	0.70	4.20	.14	156.10	7.82	20.29	13.13	0.86	7.57	161.6	clear no odor	9.89
1020	0.70	4.90	.14	156.46	7.85	20.56	13.16	0.94	7.59	160.8	clear no odor	9.91
1025	0.70	5.60	.14	156.93	7.87	20.55	13.15	0.99	7.59	157.0	clear no odor	8.42
1030	0.70	6.30	.14	157.36	7.87	20.40	13.15	1.40	7.52	154.4	clear no odor	7.19
1035	0.70	7.00	.14	157.58	7.87	20.41	13.15	1.40	7.51	155.3	clear no odor	6.43
1040	0.70	7.70	.14	157.61	7.87	20.42	13.14	1.41	7.51	155.1	clear no odor	8.16

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: J. Gibson, B. Stewart / Trinity	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1041	SAMPLING ENDED AT: 1100
PUMP OR TUBING DEPTH IN WELL (feet): 180	TUBING MATERIAL CODE: PE	FIELD-FILTERED: (Y) N Filtration Equipment Type: In line	FILTER SIZE: .45 µm
FIELD DECONTAMINATION: PUMP (Y) N	TUBING (Y) N (replaced)	DUPLICATE: Y N	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40mL	HCl			VOCs	ESP	637
	2	AG	1L	—			Explosives		
	2	PE	250mL	HNO_3			Metals Pb (Total) (Dis)		
	1	PE	1L	NaOH			Cyanide		
	1	PE	500mL	—			$Cl^-/SO_4/NO_2/NO_3$		
	1	PE	500mL	—			Alk/TDS		

REMARKS: See

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

☐ well needs repair No ☐ needs well tag No ☐ locking cap: Yes ☐ other comment: NA
☐ DI Water Lot # NA ☐ MS / MSD ~~Yes~~ No ☐ Equip blk No ☐ Ambient blk No ☐ Trip blk Yes

1	PE	125mL	—	$HClO_4$	TB-03
1	PE	125mL	—	Cr(VI)	

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GROUNDWATER SAMPLING LOG

☐ SYSTEM ON ☐ SYSTEM OFF ☐ NOT APPLICABLE (NO SYSTEM)

SITE NAME: SWMU 114		SITE LOCATION: Melrose AFR	DATE: 11/7/12
WELL NO: M114MW007	SAMPLE ID: M114MW007	FREE PRODUCT: Y N DEPTH TO PRODUCT (ft BTOC):	FIELD DUPLICATE: Y N DUPLICATE ID: M114MW007 (Spl.7)

PURGING DATA

WELL DIAMETER (inches): 4	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: NA feet to NA feet	STATIC DEPTH TO WATER (feet): 150.96	PURGE PUMP TYPE OR BAILER: ESP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (183.3 ~~NA~~ feet – NA feet) X NA gallons/foot = NA gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0.5 gallons + (0.0026 gallons/foot X 183 feet) + 0.5 gallons = 1.47 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 180	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 180	PURGING INITIATED AT: 1115	PURGING ENDED AT: 1230	TOTAL VOLUME PURGED (gallons): 15.00

Time	Volume Purged (gallons)	Cumul. Volume Purged (gallons)	Purge Rate (gpm)	Depth to Water (ft BTOC)	pH (standard units)	Temp. (°C)	Spec. Cond. mS/cm	Dissolved Oxygen mg/L	Salinity ‰	ORP (mV)	Color/ Odor (describe)	Turbidity (NTUs)
1130	3.0	3.0	.20	154.70	8.02	20.42	12.03	2.22	6.89	122.7	clear no odor	23.8
1140	5.0	5.0	.20	155.31	8.02	20.81	11.73	2.93	6.71	119.6	clear no odor	18.4
1145	~~6.0~~	6.0	.20	156.21	8.01	20.85	11.55	3.23	6.55	116.3	clear no odor	11.9
1150	1.0	7.0	.20	157.81	8.02	20.86	11.47	4.21	6.51	114.3	clear no odor	9.41
1155	1.0	8.0	.20	158.31	8.01	20.81	11.41	4.10	6.51	115.2	clear no odor	8.12
1200	1.0	9.0	.20	159.12	8.02	20.81	11.41	4.11	6.51	116.3	clear no odor	8.16
1205	1.0	10.0	.20	160.40	8.02	20.84	11.41	4.11	6.51	115.9	clear no odor	8.04

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016
PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Ben Stewart Nealon Gibson	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1206	SAMPLING ENDED AT: 1230
PUMP OR TUBING DEPTH IN WELL (feet): 150	TUBING MATERIAL CODE: LDPE	FIELD FILTERED: Y N Filtration Equipment Type: None	FILTER SIZE: .45 µm
FIELD DECONTAMINATION: PUMP Y N	TUBING Y N (replaced)	DUPLICATE: Y N Spl.7	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40mL	HCl			VOCs	ESP	757
	2	AG	1L	—			Explosives		
	2	PE	250mL	HNO_3			Metals (Diss)		
	1	PE	1L	NaOH			CN		
	1	PE	500mL	—			Cl/NO2/NO3/SO4		
	1	PE	500mL	—			Alk/TDS		

REMARKS: collected Spl.7 to send to Accutest

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

☐ well needs repair_____ ☐ needs well tag _____ ☐ locking cap: _____ ☐ other comment: _____
☐ DI Water Lot # _____ ☐ MS / MSD _____ ☐ Equip blk _____ ☐ Ambient blk _____ ☐ Trip blk _____

1 PE 125mL — $HClO_4$
1 PE 125mL — Cr(VI)

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GROUNDWATER SAMPLING LOG

☐ SYSTEM ON ☐ SYSTEM OFF ☑ NOT APPLICABLE (NO SYSTEM)

SITE NAME: SWMU 114		SITE LOCATION: Cannon AFB, NM	DATE: 11/6/12
WELL NO: M114MW001	SAMPLE ID: M114MW001	FREE PRODUCT: Y (N) DEPTH TO PRODUCT (ft BTOC):	FIELD DUPLICATE: Y (N) DUPLICATE ID:

PURGING DATA

WELL DIAMETER (inches): 4	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: ~~178~~ NA feet to NA feet	STATIC DEPTH TO WATER (feet): 151.90	PURGE PUMP TYPE OR BAILER: ESP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (182 feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0.5 gallons + (0.0026 gallons/foot X 207.5 feet) + 0.5 gallons = 1.54 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 175	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 175	PURGING INITIATED AT: 11/6/12 ~~1130~~	PURGING ENDED AT: 1340	TOTAL VOLUME PURGED (gallons): 16.25

Time	Volume Purged (gallons)	Cumul. Volume Purged (gallons)	Purge Rate (gpm)	Depth to Water (ft BTOC)	pH (standard units)	Temp. (°C)	Spec. Cond. mS/cm	Dissolved Oxygen mg/L	Salinity ‰	ORP (mV)	Color/ Odor (describe)	Turbidity (NTUs)
1210	0	0	0.25	154.80	8.04	20.54	13.32	0.90	7.64	131.7	Cloudy/None	179.
1220	2.5	2.5	0.25	157.02	7.98	21.57	13.12	0.10	7.57	117.0	Cloudy/None	126
1221	Lost Flow											
1245	Regained Flow											
1250	1.25	~~2.25~~ 2.5	0.25	159.53	7.93	20.55	12.86	0.46	7.41	109.2	Slightly Cloudy	68.9
1300	2.5	~~3.75~~ 5.0	0.25	162.23	7.88	21.77	12.55	0.55	7.28	106.6	Clear	28.7
1310	2.5	8.75	0.25	163.98	7.81	21.66	11.94	1.47	6.87	107.6	Clear	9.83
1315	1.25	10.00	0.25	164.60	7.80	21.69	11.68	1.70	6.71	107.6	Clear	8.79
1320	1.25	11.25	0.25	165.21	7.79	21.56	11.53	1.94	6.59	108.0	Clear	6.33
1325	1.25	12.50	0.25	166.77	7.78	21.68	11.64	1.86	6.63	108.0	Clear	5.49

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: J. Gibson, B. Stewart / Trinity	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1330	SAMPLING ENDED AT: 1340
PUMP OR TUBING DEPTH IN WELL (feet): 175	TUBING MATERIAL CODE: PE	FIELD-FILTERED: (Y) N Filtration Equipment Type:	FILTER SIZE: .45 µm
FIELD DECONTAMINATION: PUMP (Y) N	TUBING (Y) N (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40mL	HCl			VOCs	ESP	719
	2	AG	1L	—			Explosives	↓	↓
	2	PE	250mL	HNO_3			Metals Hg (Total/Diss)		
	1	PE	500mL	—			Alk/TDS		
	1	PE	500mL	—			Cl/SO_4/NO_2/NO_3		
	1	PE	1L	NaOH			Cyanide		

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

☐ well needs repair No ☐ needs well tag No ☐ locking cap: Yes ☐ other comment: NA
☐ DI Water Lot # NA ☐ MS / MSD No ☐ Equip blk No ☐ Ambient blk No ☐ Trip blk Yes (TB-03)

1	PE	125mL	—	$HClO_4$	
1	PE	125mL	—	Cr(VI)	

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GROUNDWATER SAMPLING LOG

☐ SYSTEM ON ☐ SYSTEM OFF ☑ NOT APPLICABLE (NO SYSTEM)

SITE NAME: SWMU 130	SITE LOCATION: Melrose AFR, NM		DATE: 11/8/17
WELL NO: MR01MW003	SAMPLE ID: MR01MW003	FREE PRODUCT: Y (N) DEPTH TO PRODUCT (ft BTOC):	FIELD DUPLICATE: Y (N) DUPLICATE ID:

PURGING DATA

WELL DIAMETER (inches): 4	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: NA feet to NA feet	STATIC DEPTH TO WATER (feet): 143.63	PURGE PUMP TYPE OR BAILER: ESP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (161.60 feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0.5 gallons + (0.0026 gallons/foot X 175 feet) + 0.5 gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 160	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 160	PURGING INITIATED AT: 0930	PURGING ENDED AT: 1025	TOTAL VOLUME PURGED (gallons): 7.7

Time	Volume Purged (gallons)	Cumul. Volume Purged (gallons)	Purge Rate (gpm)	Depth to Water (ft BTOC)	pH (standard units)	Temp. (°C)	Spec. Cond. mS/cm	Dissolved Oxygen mg/L	Salinity ‰	ORP (mV)	Color/ Odor (describe)	Turbidity (NTUs)
0945	2.1	2.1	0.14	145.87	7.84	20.03	2.887	6.42	1.50	191.6	Clear/ None	9.42
0950	0.7	2.8	0.14	146.90	7.94	20.50	2.865	6.22	1.49	191.5	Clear/None	6.08
0955	0.7	3.5	0.14	147.65	7.94	20.46	2.858	6.24	1.49	185.1	Clear/None	4.45
1000	0.7	4.2	0.14	148.50	7.94	20.53	2.855	6.20	1.49	187.1	Clear/None	4.65
1005	0.7	4.9	0.14	149.30	7.94	20.52	2.855	6.23	1.49	186.6	Clear/None	3.82
1010	0.7	5.6	0.14	150.50	7.95	20.56	2.856	6.26	1.49	187.6	Clear/None	3.06

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: J. Gibson, B Stewart/Trinity	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1015	SAMPLING ENDED AT: 1025
PUMP OR TUBING DEPTH IN WELL (feet): 160	TUBING MATERIAL CODE:	FIELD-FILTERED: (Y) N Filtration Equipment Type: In Line	FILTER SIZE: 0.5 µm
FIELD DECONTAMINATION: PUMP (Y) N	TUBING (Y) N (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40mL	HCl			VOCs	ESP	530
	2	AG	1L	—			Explosives		
	2	PE	250mL	HNO3			Metals (Total/Dis)		
	1	PE	1L	NaOH			Cyanide		
	1	PE	~~500mL~~	—			Cl/Nor/Nitr/Nitr/SO4/ADS		
	~~1~~	~~PE~~	~~500mL~~	~~—~~			~~Alk/TDS~~		

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

☐ well needs repair No ☐ needs well tag No ☐ locking cap: Yes ☐ other comment: NA
☐ DI Water Lot # NA ☐ MS / MSD No ☐ Equip blk ___ ☐ Ambient blk No ☐ Trip blk Yes (TB-OC)

1 PE 125mL — HClO4
1 PE 125mL — Ce (01)

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GROUNDWATER SAMPLING LOG

☐ SYSTEM ON ☐ SYSTEM OFF ☑ NOT APPLICABLE (NO SYSTEM)

SITE NAME: SWMU 130 (MA01)		SITE LOCATION: Melrose AFR, NM	DATE: 11/7/12
WELL NO: MA01MW004	SAMPLE ID: MA01MW004	FREE PRODUCT: Y (N) DEPTH TO PRODUCT (ft BTOC):	FIELD DUPLICATE: Y (N) DUPLICATE ID:

PURGING DATA

WELL DIAMETER (inches): 4	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: ~~149~~ NA feet to ~~NA~~ NA feet	STATIC DEPTH TO WATER (feet): 146.40	PURGE PUMP TYPE OR BAILER: ESP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (162.3 feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0.5 gallons + (0.0026 gallons/foot X 170 feet) + 0.5 gallons = 1.442 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 160	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 160	PURGING INITIATED AT: 825	PURGING ENDED AT: 1040	TOTAL VOLUME PURGED (gallons): 8.4

Time	Volume Purged (gallons)	Cumul. Volume Purged (gallons)	Purge Rate (gpm)	Depth to Water (ft BTOC)	pH (standard units)	Temp. (°C)	Spec. Cond. mS/cm	Dissolved Oxygen mg/L	Salinity ‰	ORP (mV)	Color/ Odor (describe)	Turbidity (NTUs)
0840	2.1	2.1	0.14	~~147.33~~ 148	Lost Flow						Clear/None	
0955					Regained Flow							
1000	0.7	2.8	0.14	147.08	8.00	21.23	1.833	5.88	0.47	39.7	Clear/None	9.84
1005	0.7	3.5	0.14	147.63	8.02	22.63	1.766	6.04	0.46	47.8	Clear/None	6.22
1010	0.7	4.2	0.14	148.71	8.01	21.43	1.744	6.31	0.47	51.2	Clear/None	4.78
1015	0.7	4.9	0.14	149.43	7.99	21.56	1.739	6.29	0.47	51.3	Clear/None	4.03
1020	0.7	5.6	0.14	149.99	7.99	21.49	1.740	6.39	0.47	55.4	Clear/None	4.24

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016
PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: J. Crisson, B. Stewart Trinity	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1030	SAMPLING ENDED AT: 1040
PUMP OR TUBING DEPTH IN WELL (feet): 160	TUBING MATERIAL CODE: PE	FIELD-FILTERED: (Y) N Filtration Equipment Type: In Line	FILTER SIZE: .45 µm
FIELD DECONTAMINATION: PUMP (Y) N	TUBING (Y) N (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40mL	HCl			VOCs	ESP	530
	2	AG	1L	—			Explosives	↓	↓
	2	PE	250mL	HNO_3			Metal		
	1	PE	1L	NaOH					
	1	PE	500mL	—				↓	↓
	1	PE	500mL	—					

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

☐ well needs repair No ☐ needs well tag No ☐ locking cap: Yes ☑ other comment: Split Sample
☐ DI Water Lot # NA ☐ MS / MSD No ☐ Equip blk No ☐ Ambient blk No ☐ Trip blk Yes

1	PE	125mL	—	$HClO_4$		(TB-04)
1	PE	125mL	—	Cr(IV)	✓	✗

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Modified FDEP Form FD 9000-24
(Added ORP column, Salinity column and Notes)

GROUNDWATER SAMPLING LOG

☐ SYSTEM ON ☐ SYSTEM OFF ☑ NOT APPLICABLE (NO SYSTEM)

SITE NAME: SWMU 130		SITE LOCATION: Melrose AFR	DATE: 11/6/12
WELL NO: MA01MW002	SAMPLE ID: MA01MW002	FREE PRODUCT: Y (N) DEPTH TO PRODUCT (ft BTOC):	FIELD DUPLICATE: Y (N) DUPLICATE ID:

PURGING DATA

WELL DIAMETER (inches): 4	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: NA feet to NA feet	STATIC DEPTH TO WATER (feet): 142.70	PURGE PUMP TYPE OR BAILER: ESP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (157 feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0.5 gallons + (0.0026 gallons/foot X 182 feet) + 0.5 gallons = 1.47 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 160	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 160	PURGING INITIATED AT: 0800	PURGING ENDED AT: 0910	TOTAL VOLUME PURGED (gallons): 13.3

Time	Volume Purged (gallons)	Cumul. Volume Purged (gallons)	Purge Rate (gpm)	Depth to Water (ft BTOC)	pH (standard units)	Temp. (°C)	Spec. Cond. mS/cm	Dissolved Oxygen mg/L	Salinity ‰	ORP (mV)	Color/ Odor (describe)	Turbidity (NTUs)
0830	5.7	5.7	0.19	147.60	7.92	20.47	2.742	6.39	1.43	185.4	clear no odor	12.9
0835	0.95	6.65	0.19	149.31	8.14	20.85	2.746	5.86	1.42	173.4	clear no odor	11.3
0845	1.90	8.55	0.19	150.10	8.21	20.92	2.750	5.81	1.43	161.3	clear no odor	9.33
0850	0.95	9.50	0.19	151.32	8.19	21.01	2.751	5.79	1.43	159.2	clear no odor	8.77
0855	0.95	10.45	0.19	151.79	8.18	21.05	2.749	5.78	1.43	158.1	clear no odor	8.06

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Trinity Ben Stewart Jordan Gibson	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 0900	SAMPLING ENDED AT: 0910
PUMP OR TUBING DEPTH IN WELL (feet): 160	TUBING MATERIAL CODE: LDPE	FIELD-FILTERED: (Y) N Filtration Equipment Type: in line	FILTER SIZE: .45 µm
FIELD DECONTAMINATION: PUMP (Y) N	TUBING (Y) N (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40mL	HCL			VOCs	ESP	719
	2	AG	1L	—			Explosives		
	2	PE	250mL	HNO_3			Metals, Hg + Total Diss		
	1	PE	1L	NaOH			Cyanide		
	1	PE	500mL	—			Cl/SO_4/NO_2/NO_3		
	1	PE	500mL	—			Alk/TDS		

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

☐ well needs repair No ☐ needs well tag No ☐ locking cap: Yes ☐ other comment: None
☐ DI Water Lot # NA ☐ MS / MSD No ☐ Equip blk No ☐ Ambient blk No ☑ Trip blk TB-03

1	PE	125 mL	$HClO_4$	ESP	719 mLpm
1	PE	125 mL	Cr(VI)	ESP	719 mLpm

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(Added ORP column, Salinity column and Notes)

GROUNDWATER SAMPLING LOG

☐ SYSTEM ON ☐ SYSTEM OFF ☑ NOT APPLICABLE (NO SYSTEM)

SITE NAME: SWMU 130		SITE LOCATION: Melrose AFR	DATE: 11/2/12
WELL NO: MA01MW001	SAMPLE ID: MA01MW001	FREE PRODUCT: Y (N) DEPTH TO PRODUCT (ft BTOC):	FIELD DUPLICATE: Y (N) DUPLICATE ID:

PURGING DATA

WELL DIAMETER (inches): 4	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: 149.40 feet to 69.40 feet	STATIC DEPTH TO WATER (feet): 142.67	PURGE PUMP TYPE OR BAILER: ESP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (~~162.60~~ 169.40 feet – 142.67 feet) X 0.65 gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= ~~0.75~~ 0.5 gallons + (0.002 gallons/foot X 166 feet) + ~~0.25~~ 0.5 gallons = 1.43 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 158	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 158	PURGING INITIATED AT: 1000	PURGING ENDED AT: 1138	TOTAL VOLUME PURGED (gallons): 7.74

Time	Volume Purged (gallons)	Cumul. Volume Purged (gallons)	Purge Rate (gpm)	Depth to Water (ft BTOC)	pH (standard units)	Temp. (°C)	Spec. Cond. mS/cm	Dissolved Oxygen mg/L	Salinity ‰	ORP (mV)	Color/ Odor (describe)	Turbidity (NTUs)
1045	4.05	4.05	0.09	144.43	8.18	21.82	3.37	6.26	1.77	104.1	clear no odor	9.25
1100	1.35	5.40	0.09	145.74	8.16	22.13	3.34	6.17	1.75	99.9	clear no odor	6.41
1105	0.45	5.85	0.09	146.14	8.16	22.13	3.31	6.19	1.74	98.8	clear no odor	5.98
1110	0.45	6.30	0.09	146.62	8.17	22.25	3.28	6.17	1.72	96.6	clear no odor	6.12
1115	0.45	6.75	0.09	146.71	8.18	22.10	3.26	6.18	1.70	93.7	clear no odor	5.45
1120	0.45	7.20	0.09	146.75	8.18	22.11	3.26	6.19	1.70	94.3	clear no odor	4.02
1125	0.45	7.65	0.09	146.75	8.18	22.13	3.27	6.18	1.71	93.9	clear no odor	4.19

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Ben Stewart Trinity ADC	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1126	SAMPLING ENDED AT: 1138
PUMP OR TUBING DEPTH IN WELL (feet): 158	TUBING MATERIAL CODE: LDPE	FIELD-FILTERED: (Y) N Filtration Equipment Type: in line	FILTER SIZE: 0.45 µm
FIELD DECONTAMINATION: PUMP (Y) N	TUBING (Y) N (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40mL	HCl			VOCs	ESP	341
	2	AG	1L	—			Explosives		
	2	PE	250mL	HNO_3			Metals (Hg)		
	1	PE	1L	NaOH			CN		
	1	PE	500mL	—			$Cl^-/NO_2/NO_3/SO_4$		
	1	PE	500mL	—			Alk/TDS		

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

☐ well needs repair No ☐ needs well tag No ☐ locking cap: Yes ☐ other comment: NA
☐ DI Water Lot # NA ☐ MS / MSD No ☐ Equip blk No ☐ Ambient blk No ☐ Trip blk Yes (TB-01)

) PE 125mL — $HClO_4$
) PE 125mL — Cr(VI)

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GROUNDWATER SAMPLING LOG

☐ SYSTEM ON ☐ SYSTEM OFF ☒ NOT APPLICABLE (NO SYSTEM)

SITE NAME: Melrose AFR		SITE LOCATION: Melrose AFR	DATE: 11/5/12
WELL NO: MWQ-23	SAMPLE ID: MWQ-23	FREE PRODUCT: Y (N) DEPTH TO PRODUCT (ft BTOC):	FIELD DUPLICATE: Y (N) DUPLICATE ID:

PURGING DATA

WELL DIAMETER (inches): 6	TUBING DIAMETER (inches): NA	WELL SCREEN INTERVAL DEPTH: NA feet to NA feet	STATIC DEPTH TO WATER (feet): NA	PURGE PUMP TYPE OR BAILER: ESP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (NA feet – NA feet) X NA gallons/foot = NA gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= NA gallons + (NA gallons/foot X NA feet) + NA gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): NA	FINAL PUMP OR TUBING DEPTH IN WELL (feet): NA	PURGING INITIATED AT: 0945	PURGING ENDED AT: 1050 ~~1040~~	TOTAL VOLUME PURGED (gallons): ~~57.5~~ ~~57.75~~ 68.25

Time	Volume Purged (gallons)	Cumul. Volume Purged (gallons)	Purge Rate (gpm)	Depth to Water (ft BTOC)	pH (standard units)	Temp. (°C)	Spec. Cond. mS/cm	Dissolved Oxygen mg/L	Salinity ‰	ORP (mV)	Color/ Odor (describe)	Turbidity (NTUs)
0945	0	0	1.05									
1013	29.4	29.4	1.05		7.87	17.28	0.537	6.89	0.26	126.6	Clear/None	3.25
1023	10.5	39.9	1.05		7.88	17.26	0.537	7.03	0.26	112.7	Clear/None	2.62
1033	10.5	50.4	1.05		7.90	17.10	0.540	6.42	0.26	102.0	Clear/None	0.64
1038	5.25	55.65	1.05		7.91	17.08	0.538	6.33	0.26	100.3	Clear/None	0.33
1043	5.25	60.90	1.05		7.95	17.13	0.538	6.51	0.26	97.6	Clear/None	0.35

← Supply Well, unable ~~to take~~ take water level

Changed D.O. Sensor

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: J. Gibson, B. Stewart / Trinity	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1045 ~~1035~~	SAMPLING ENDED AT: 1050 ~~1040~~
PUMP OR TUBING DEPTH IN WELL (feet): NA	TUBING MATERIAL CODE: NA	FIELD FILTERED: (Y) N Filtration Equipment Type: In line	FILTER SIZE: .45 µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	2	AG	1L	—			Explosives	ESP	4000
	3	CG	40mL	HCl			VOCs		
	1	PE	500mL	—			NO_3, NO_2, Sulfate, Cl,		
	1	PE	500mL	—			Alk, TDS		
	1	PE	1L	NaOH			Cyanide		
	1	PE	1L	—			$HClO_4$		

REMARKS: Dedicated submersible, livestock supply well

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

☐ well needs repair No ☐ needs well tag No ☐ locking cap: NA ☐ other comment: No

☐ DI Water Lot # NA ☐ MS / MSD NA ☐ Equip blk No ☐ Ambient blk No ☐ Trip blk ~~No~~ TB-2

1 PE 1L — Cr+6
2 PE 250mL HNO_3 Total/Dis Metals + Hg

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GROUNDWATER SAMPLING LOG

☐ SYSTEM ON ☐ SYSTEM OFF ☑ NOT APPLICABLE (NO SYSTEM)

SITE NAME: SWMU 114	SITE LOCATION: Melrose AFR, NM		DATE: 11/7/12
WELL NO: M114MW003	SAMPLE ID: M114M003	FREE PRODUCT: Y (N) DEPTH TO PRODUCT (ft BTOC):	FIELD DUPLICATE: Y (N) DUPLICATE ID:

PURGING DATA

WELL DIAMETER (inches): 4	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: NA feet to NA feet	STATIC DEPTH TO WATER (feet): 151.81	PURGE PUMP TYPE OR BAILER: ESP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (184.4 feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0.5 gallons + (0.0026 gallons/foot X 182 feet) + 0.5 gallons = 1.48 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 180	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 180	PURGING INITIATED AT: 1310	PURGING ENDED AT: 1411	TOTAL VOLUME PURGED (gallons): 12.2

Time	Volume Purged (gallons)	Cumul. Volume Purged (gallons)	Purge Rate (gpm)	Depth to Water (ft BTOC)	pH (standard units)	Temp. (°C)	Spec. Cond. mS/cm	Dissolved Oxygen mg/L	Salinity ‰	ORP (mV)	Color/ Odor (describe)	Turbidity (NTUs)
1330	4.00	4.00	.20	154.61	8.09	20.46	13.54	4.11	7.83	112.3	clear no odor	28.2
1335	1.00	5.00	.20	155.17	8.08	20.48	13.50	3.55	7.81	108.1	clear no odor	18.4
1340	1.00	6.00	.20	156.01	8.09	20.50	13.45	3.31	7.82	105.7	clear no odor	12.1
1345	1.00	7.00	.20	159.42	8.08	20.51	13.41	3.30	7.87	105.2	clear no odor	8.71
1350	1.00	8.00	.20	161.71	8.08	20.51	13.41	3.28	7.57	106.1	clear no odor	7.13
1355	1.00	9.00	.20	162.01	8.07	20.53	13.42	3.28	7.88	107.2	clear no odor	5.15
1400	1.00	10.00	.20	162.54	8.08	20.53	13.42	3.27	7.88	107.2	clear no odor	5.29

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: J. Gibson, B. Stewart Trinity	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1401	SAMPLING ENDED AT: 1411
PUMP OR TUBING DEPTH IN WELL (feet): 180	TUBING MATERIAL CODE: PE (T-lined)	FIELD-FILTERED: (Y) N Filtration Equipment Type: In-Line	FILTER SIZE: 0.45µm
FIELD DECONTAMINATION: PUMP (Y) N	TUBING (Y) N (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40mL	HCl			VOC	ESP	757
	2	AG	1L	—			Explosives		
	2	PE	250mL	HNO_3			Metals Hg (Total/Diss)		
	1	PE	1L	NaOH			CN		
	1	PE	500mL	—			O-NO_2/NO_3 SO_4		
	1	PE	500mL	—			Alk/TDS		

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

☐ well needs repair No ☐ needs well tag No ☐ locking cap: Yes ☐ other comment: NA
☐ DI Water Lot # NA ☐ MS / MSD Yes ☐ Equip blk No ☐ Ambient blk No ☐ Trip blk Yes (TB-01)

1 PE (M114MW003-MS) M114MW003-MSD) $HClO_4$
1 PE 125mL 125mL — Cr(VI)

Chain of Custodies

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GCAL

7979 GSRI Avenue, Baton Rouge, Louisiana 70820-7402
Phone 225.769.4900 • Fax 225.767.5717

Chain of Custody Record

Lab use only

Client Name	Client #	Workorder #	Due Date

Report to:
Client: Trinity ADC
Address: 1002 W Eglin Pkwy
Shalimar FL 32459
Contact: Tom Stewart
Phone: 850 218 8955
Fax:

Bill to:
Client: Same as report to.
Address:
Contact:
Phone:
Fax:

P.O. Number:
Project Name/Number: Melrose AFR A003-006
Sampled By: Ben Stewart Jordan Gibson

Analytical Requests & Method

Matrix[1]	Date	Time (2400)	Comp	Grab	Sample Description	Preservatives	No Containers	VOCs (8260B) (HCL)	Extractables (8270)	Total metals 6010C HNO3	Dissolved metals 6010C HNO3	Chromium (VI) 7196A	Cyanide 9010A NaOH	Mercury 7470A HNO3	NO3/NO2, Chloride, Sulfate 300	Perchlorate 6850	Alkalinity 310.B	TDS 160.C	Remarks:	Lab ID
WG	11/7/12	1030			MA01 MW004	yes	12	X	X	X	X	X	X	X	X	X	X	X		
WG	11/7/12	1206			M114MW002	yes	12	X	X	X	X	X	X	X	X	X	X	X		
WG	11/7/12	1401			M114MW003	yes	12	X	X	X	X	X	X	X	X	X	X	X		
WG	11/7/12	1401			M114 MW003-MS	yes	12	X	X	X	X	X	X	X	X	X	X	X		
WG	11/7/12	1401			M114 MW003-MSD	yes	12	X	X	X	X	X	X	X	X	X	X	X		
WQ	11/7/12	1030			TB-04	yes	3	X												

Lab use only:
Custody Seal used ☐ yes ☐ no
intact ☐ yes ☐ no
Temperature °C

Turn Around Time: ☐ 24-48 hrs. ☐ 3 days ☐ 1 week ☑ Standard ☐ Other

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
		11/7/12	1700
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

Note: Dissolved metals were field filtered

By submitting these samples, you agree to the terms and conditions contained in our most recent schedule of services.

WHITE: CLIENT FINAL REPORT — CANARY: LABORATORY — PINK: CLIENT

GCAL-06 11/98

[1] Matrix: Water, Soil, Solid, Liquid, Sludge, Air, CTO, Coal, WA = a... We ca... accep... bal c... s. Pl... fax w... chan... p (22... -571...

GCAL

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Chain of Custody Record

Lab use only

Client Name	Client #	Workorder #	Due Date

Report to:
Client: Tetra Tech ADC
Address: 1002 N Eglin Parkway
Shalimar FL 32459
Contact: Ben Stewart
Phone: 850 315 8958
Fax:

Bill to:
Client: Same as report to
Address:
Contact:
Phone:
Fax:

P.O. Number:
Project Name/Number: Melrose AFR A003-006
Sampled By: Ben Stewart Jordan Gibson

Analytical Requests & Method

Lab use only:
Custody Seal
used ☐ yes ☐ no
intact ☐ yes ☐ no
Temperature °C

Matrix[1]	Date	Time (2400)	Comp	Grab	Sample Description	Preservatives	No Containers	VOCs (8260B) HCl	Explosives (8330)	Total Metals (6010C HNO3)	Dissolved Metals (6010C HNO3)	Chromium (VI) 7196A	Cyanide 9012A NaOH	Mercury 7470A HNO3	NO3/NO2 (Chloride Sulfate) 300.0	Perchlorate 6860	Alkalinity 2320B	TDS 2540C	Remarks:	Lab ID
WG	11/5/12	1015		✓	MA01MW003	ufz	11	X	X	X	X	X	X	X	X	X	X	X		
WQ	11/8/12	1015			TB-06	ufz	3	X												
WG	11/5/12	1306		✓	MA02MW001D	ufz	11	X	X	X	X	X	X	X	X	X	X	X		
WG	11/4/12	1306		✓	MA02MW001D-FD	ufz	11	X	X	X	X	X	X	X	X	X	X	X		
WQ	11/9/12	1145			EB-01	ufz	12	X	X	X	X	X	X	X	X	X	X	X		

Turn Around Time: ☐ 24-48 hrs. ☐ 3 days ☐ 1 week ☒ Standard ☐ Other

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
		11/9/12	1600
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

Note: [illegible]

By submitting these samples, you agree to the terms and conditions contained in our most recent schedule of services.

Matrix: W = water, S = soil, SD = solid, L = liquid, SL = sludge, O = oil, CT = charcoal tube, A = air bag. We cannot accept verbal changes. Please fax written changes to (225) [illegible]-5717.

WHITE: CLIENT FINAL REPORT — CANARY: LABORATORY — PINK: CLIENT

3CAL-06 11/98

GCAL

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Phone 225.769.4900 • Fax 225.767.5717

CHAIN OF CUSTODY RECORD

Lab use only

Client Name	Client #	Workorder #	Due Date

Report to:
Client: Trinity ADC
Address: 1607 N Eglin Parkway
Shalimar FL 32459
Contact: Jonathan Kramer
Phone: 850 613 6900
Fax:

Bill to:
Client: Same as report to
Address:
Contact:
Phone:
Fax:

P.O. Number:
Project Name/Number: Melrose AFR A003-006
Sampled By: Ben Stewart Jordan Gibson

Analytical Requests & Method

Matrix[1]	Date	Time (2400)	Comp	Grab	Sample Description	Preservatives	No Containers	BTEX (8260B)	Explosives (8330)	Total metals (6010C)	Dissolved metals (6010C)	Chromium (VI) 7196A	Cyanide (9012A)	Mercury (7470A)	Nitrate Nitrite (300.0)	Perchlorate (6860)	Alkalinity (2320B)	TDS (2540C)	Remarks:	Lab ID
WG	11/2/17	1126		x	MA01MW001	HCl	12	x	x	x	x	x	x	x	x	x	x	x		1
WQ	11/2/17	1126			TB-1	HCl	3	x												

Lab use only:
Custody Seal used ☐ yes ☐ no
intact ☐ yes ☐ no
Temperature °C

Turn Around Time: ☐ 24-48 hrs. ☐ 3 days ☐ 1 week ☑ Standard ☐ Other

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
		11/2/17	1600
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

Note: Diss metals were field filtered

By submitting these samples, you agree to the terms and conditions contained in our most recent schedule of services.

WHITE: CLIENT FINAL REPORT — CANARY: LABORATORY — PINK: CLIENT

GCAL-06 11/98

Matrix[1] Water Soil, S Solid, Liquid, S Sludge Oil, CT Charcoal A = [illegible] We ca accep bal c ps. Pl fax w chan o (22[illegible]-5717

GCAL

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Phone 225.769.4900 • Fax 225.767.5717

CHAIN OF CUSTODY RECORD

Lab use only

Client Name	Client #	Workorder #	Due Date

Report to:
Client: Trinity ADC
Address: 1003 N Eglin Parkway
Shalimar FL 32459
Contact: Ben Stewart
Phone: 850 218 5955
Fax:

Bill to:
Client: Same as Report to.
Address:
Contact:
Phone:
Fax:

P.O. Number:
Project Name/Number: Melrose AFR A003-006

Sampled By: Ben Stewart Jordan Gibson

Analytical Requests & Method

Matrix[1]	Date	Time (2400)	Comp	Grab	Sample Description	Preservatives	No Containers	624GC (HCl)	Ex Metals	Total Metals (Cu, Fe, Mn)	Dissolved Metals (Cu, Fe, Mn)	7196A Chromium (VI)	Cyanide Total (NaOH)	Mercury 7470A (HNO3)	NO2/NO3 Chloride Sulfate (6056)	Phosphate (6056)	Alkalinity 310.2B	TDS 2540C	Remarks:	Lab ID
WG	11/5/19	1045		✓	MWQ-23	yes	12	X	X	X	X	X	X	X	X	X	X	X		/
WQ	11/5/19	1045			TB-02	yes	3	X												

Lab use only:
Custody Seal
used ☐ yes ☐ no
intact ☐ yes ☐ no
Temperature °C

Turn Around Time: ☐ 24-48 hrs. ☐ 3 days ☐ 1 week ☑ Standard ☐ Other

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
[signature]		11/5/19	1315
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

Note: Dissolved metals were field filtered

By submitting these samples, you agree to the terms and conditions contained in our most recent schedule of services.

Matrix[1]: W – water, S – soil, SD – solid, L – liquid, SL – sludge, O – oil, CT – charcoal tube, A = air bag

We cannot accept verbal changes. Please fax written changes to (225) 767-5717

WHITE: CLIENT FINAL REPORT — CANARY: LABORATORY — PINK: CLIENT

GCAL-06 11/98

GCAL

7979 GSRI Avenue, Baton Rouge, Louisiana 70820-7402
Phone 225.769.4900 • Fax 225.767.5717

CHAIN OF CUSTODY RECORD

Lab use only

Client Name	Client #	Workorder #	Due Date

Report to:
Client: Trinity ADC
Address: 1003 N Eglin Parkway
Shalimar, FL 32579
Contact: Ben Stewart
Phone: 850 218 8955
Fax:

Bill to:
Client: Same as Report to
Address:
Contact:
Phone:
Fax:

P.O. Number:
Project Name/Number: Melrose AFR, A003-006
Sampled By: Ben Stewart Jordan Gibson

Analytical Requests & Method

Matrix[1]	Date	Time (2400)	Comp	Grab	Sample Description	Preservatives	No Containers	8260B (HCL)	Acetones 8330	Tuna Binders (Lab)	Explosives Binders (Lab)	Chromium (VI) 7196A	Cyanide 9012A (NaOH)	Mercury (7470A) (HNO3)	Cyanide (Lab)	Perchlorate (Lab)	Nitrate/Nitrite 353.2	TOC 9060	Remarks:	Lab ID
WG	11/6/12	0900		✓	MA01 MW002	ice	12	X	X	X	X	X	X	X	X	X	X	X		
WG	11/6/12	1041		✓	M114 MW004	ice	12	X	X	X	X	X	X	X	X	X	X	X		
WG	11/6/12	1330		✓	M114 MW001	ice	12	X	X	X	X	X	X	X	X	X	X	X		
WG	11/6/12	0900			TB-03	ice	3	X												

Lab use only:
Custody Seal used ☐ yes ☐ no
intact ☐ yes ☐ no
Temperature °C

Turn Around Time: ☐ 24-48 hrs. ☐ 3 days ☐ 1 week ☑ Standard ☐ Other

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
[signature]		11/6/12	[illegible]
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

Note: Please filter M114MW004 in lab for Dissolved metals.
MA01MW002 & M114MW001 were filtered in the field.

By submitting these samples, you agree to the terms and conditions contained in our most recent schedule of services.

WHITE: CLIENT FINAL REPORT — CANARY: LABORATORY — PINK: CLIENT

GCAL-06 11/98

[1] Matrix: W = water, O = oil, S = solid, L = liquid, SL = sludge, A = air, CT = tissue, C = coal

We can accept verbal changes. Please fax with changes to (225) 767-5717

GCAL

7979 GSRI Avenue, Baton Rouge, Louisiana 70820-7402
Phone 225.769.4900 • Fax 225.767.5717

Chain of Custody Record

Lab use only

Client Name	Client #	Workorder #	Due Date

Report to:

Client: TRINITY
Address: 1607 N. Eglin Parkway
Shalimar, FL 32579
Contact: Jonathan Kramer
Phone: 850 613 6800
Fax:

Bill to:

Client: TRINITY
Address: 1607 N Eglin Parkway
Shalimar, FL 32579
Contact: Jonathan Kramer
Phone: 850 613 6800
Fax:

P.O. Number:

Project Name/Number: Melrose AFR / AC03-006

Sampled By: Jonathan Kramer

Analytical Requests & Method

Lab use only:
Custody Seal
used ☐ yes ☐ no
intact ☐ yes ☐ no
Temperature °C

Matrix[1]	Date	Time (2400)	Comp	Grab	Sample Description	Preservatives	No Containers	FP-W, PH-W	TX1005-W (HCL)	Remarks:	Lab ID
WG	10/19/10	1002			Melrose AFR IDW		5	X	X		
WQ	10/19/10	1007			TB-01		3		X		
WQ					Temp Blank		1				

Turn Around Time: ☐ 24-48 hrs. ☐ 3 days ☑ 1 week ☐ Standard ☐ Other

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
[signature]		10/19/10	1600
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

Note:

By submitting these samples, you agree to the terms and conditions contained in our most recent schedule of services.

Matrix[1]: W = water, S = soil, SD = solid, L = liquid, SL = sludge, O = oil, CT = charcoal tube, A = air bag

We cannot accept verbal changes. Please fax written changes to (225) 767-5717

WHITE: CLIENT FINAL REPORT — CANARY: LABORATORY — PINK: CLIENT

GCAL-06 11/98

Accutest Laboratories Southeast
Chain of Custody

ACCUTEST LABORATORIES

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

Accutest JOB # PAGE_____OF_____

Accutest Quote # SKIFF#

Client / Reporting Information

Company Name: Trinity ADC
Address: 1002 N Eola Parkway
City: Shalimar State: FL Zip: 32579
Project Contact: [illegible] E-mail: [illegible]
Phone#: 850 215 5900
Sampler(s) Name(s) (Printed): Ben Stewart

Project Information

Project Name: Melrose AFB
Street:
City: State:
Project #: A003 006
Fax #:
Client Purchase Order #:

Analytical Information

Matrix Codes

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

Accutest Sample #	Field ID / Point of Collection	Collection: Date	Time	Sampled By:	Matrix	Total # of Bottles	Container Information: Other	None	HCl	NaOH	HNO3	H2SO4	NaOH+ZnAc	DI Water	MeOH	VOCs 8260B	Explosives 8330	Total Metals (Lead)	Dissolved Metals (Lead)	Chromium VI 7196A	Cyanide 9012B	Mercury 7470A	BOD/COD Chloride Sulfate Bromide	Perchlorate 6850	Alkalinity 310.2	TDS 2540C	Matrix Codes / LAB USE ONLY
	M114MW002	11/7/12	1206	[illegible]	WG	10			✓	✓	✓					X	X	X	X	X	X	X	X	X	X	X	
	TB-05	[illegible]	1200	[illegible]	WQ	2			✓					✓		X											

TURNAROUND TIME (Business Days)

Approved By: / Rush Code

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

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

Data Deliverable Information

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

Comments / Remarks

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

Relinquished by Sampler:	Date Time:	Received By:	Relinquished by :	Date Time:	Received By:
1 [signature]	11/7/12 1200	2	3		4
Relinquished by:	**Date Time:**	**Received By:**	**Relinquished by:**	**Date Time:**	**Received By:**
5		6	7		8

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

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NELAP CERTIFICATE NUMBER 01955
DOD ELAP CERTIFICATE NUMBER ADE - 1482

ANALYTICAL RESULTS

PERFORMED BY

GULF COAST ANALYTICAL LABORATORIES, INC.

7979 GSRI Avenue

Baton Rouge, LA 70820

Report Date 11/20/2012

GCAL Report 212110306

Deliver To	TRINITY Analysis & Development Corp. 1002 N Eglin Pkwy Shalimar, FL 32579 850-613-6800
Attn	Jonathan Kramer

Project Melrose

CASE NARRATIVE

Client: TRINITY Analysis & Development Corp. **Report:** 212110306

Gulf Coast Analytical Laboratories received and analyzed the sample(s) listed on the sample cross-reference page of this report. Receipt of the sample(s) is documented by the attached chain of custody. This applies only to the sample(s) listed in this report. No sample integrity or quality control exceptions were identified unless noted below.

METALS

In the SW-846 6010C analysis for prep batch 493963, the MS/MSD recoveries are not applicable for Calcium, Magnesium, and Sodium because the sample concentration is greater than four times the spike concentration. Calcium was detected in the method blank. The concentration was insignificant as compared to the concentration detected in the associated sample(s).

In the SW-846 6010C Dissolved analysis, sample 21211030601 (MA01MW001) had to be diluted in order to bracket the concentration of a target analyte within the linear dynamic range of the instrument.

In the SW-846 7470A analysis for prep batch 493884, the MS and/or MSD recovery is outside the control limits for Mercury. The LCS recovery is within the control limits. This indicates the analysis is in control and the sample is affected by matrix interference.

In the SW-846 6010C Dissolved analysis for prep batch 493962, the MS recovery is not applicable for Calcium because the sample concentration is greater than four times the spike concentration. The MS/MSD recoveries are not applicable for Sodium because the sample concentration is greater than four times the spike concentration.

Several Dissolved Metals concentration is greater than the Total concentration for several elements in several samples. This is attributed to separate aliquots of sample.

CONVENTIONALS

In the EPA 300.0 analysis, sample 21211030601 (MA01MW001) had to be diluted in order to bracket the concentration within the calibration range of the instrument.

MISCELLANEOUS

See Subcontract report for any case narrative.

Laboratory Endorsement

Sample analysis was performed in accordance with approved methodologies provided by the Environmental Protection Agency or other recognized agencies. The samples and their corresponding extracts will be maintained for a period of 30 days unless otherwise arranged. Following this retention period the samples will be disposed in accordance with GCAL's Standard Operating Procedures.

Common Abbreviations Utilized in this Report

ND	Indicates the result was Not Detected at the specified RDL
DO	Indicates the result was Diluted Out
MI	Indicates the result was subject to Matrix Interference
TNTC	Indicates the result was Too Numerous To Count
SUBC	Indicates the analysis was Sub-Contracted
FLD	Indicates the analysis was performed in the Field
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
RDL	Reporting Detection Limit
00:00	Reported as a time equivalent to 12:00 AM

Reporting Flags Utilized in this Report

J	Indicates the result is between the MDL and RDL
U	Indicates the compound was analyzed for but not detected
B	Indicates the analyte was detected in the associated Method Blank

Sample receipt at GCAL is documented through the attached chain of custody. In accordance with NELAC, this report shall be reproduced only in full and with the written permission of GCAL. The results contained within this report relate only to the samples reported. The documented results are presented within this report.

This report pertains only to the samples listed in the Report Sample Summary and should be retained as a permanent record thereof. The results contained within this report are intended for the use of the client. Any unauthorized use of the information contained in this report is prohibited.

I certify that this data package is in compliance with the NELAC standard and terms and conditions of the contract and Statement of Work both technically and for completeness, for other than the conditions in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted has been authorized by the Quality Assurance Manager or his/her designee, as verified by the following signature.

Estimated uncertainty of measurement is available upon request. This report is in compliance with the DOD QSM as specified in the contract if applicable.

_____

Robyn Migues
Technical Director
GCAL REPORT 212110306

THIS REPORT CONTAINS _____ PAGES.

Report Sample Summary

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211030601	MA01MW001	Water	11/02/2012 11:26	11/03/2012 09:40
21211030602	TB-1	Water	11/02/2012 11:26	11/03/2012 09:40

Summary of Compounds Detected

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211030601	**MA01MW001**	Water	11/02/2012 11:26	11/03/2012 09:40

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7440-39-3	Barium	15.1	10.0	0.71	ug/L
7440-70-2	Calcium	49100	100	50.0	ug/L
7440-47-3	Chromium	1.61J	10.0	1.00	ug/L
7440-50-8	Copper	10.7	10.0	1.01	ug/L
7439-95-4	Magnesium	48800	100	50.0	ug/L
7439-98-7	Molybdenum	6.51J	50.0	3.75	ug/L
7440-09-7	Potassium	7870	500	100	ug/L
7782-49-2	Selenium	7.07J	40.0	4.42	ug/L
7440-62-2	Vanadium	27.2	20.0	3.75	ug/L
7440-66-6	Zinc	17.8J	20.0	4.51	ug/L

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7440-23-5	Sodium	602000	2000	400	ug/L

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	502	200	60.0	ug/L
7440-39-3	Barium	21.6	10.0	0.71	ug/L
7440-43-9	Cadmium	0.36J	5.00	0.20	ug/L
7440-70-2	Calcium	47400	100	50.0	ug/L
7440-47-3	Chromium	15.5	10.0	1.00	ug/L
7440-50-8	Copper	11.7	10.0	1.01	ug/L
7439-89-6	Iron	312	100	40.0	ug/L
7439-95-4	Magnesium	46900	100	50.0	ug/L
7439-96-5	Manganese	9.26J	15.0	2.00	ug/L
7439-98-7	Molybdenum	5.74J	50.0	3.75	ug/L
7440-02-0	Nickel	7.89J	40.0	1.13	ug/L
7440-09-7	Potassium	8680	500	100	ug/L
7782-49-2	Selenium	7.20J	40.0	4.42	ug/L
7440-23-5	Sodium	589000	1000	200	ug/L
7440-32-6	Titanium	8.07J	100	1.20	ug/L
7440-62-2	Vanadium	30.6	20.0	3.75	ug/L
7440-66-6	Zinc	18.6J	20.0	4.51	ug/L

EPA 300.0

CAS#	Parameter	Result	RDL	MDL	Units
16887-00-6	Chloride	501	50.0	31.5	mg/L
14808-79-8	Sulfate	506	100	57.5	mg/L

SM 2540C TDS

CAS#	Parameter	Result	RDL	MDL	Units
WET-035	Total Dissolved Solids(TDS)	1990	10.0		mg/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211030601	**MA01MW001**	Water	11/02/2012 11:26	11/03/2012 09:40

SM 2320B Alkalinity

CAS#	Parameter	Result	RDL	MDL	Units
000000-00-5	Total Alkalinity	166	1.0	0.19	mg/L CaCO3

EPA 353.2 Nitrite

CAS#	Parameter	Result	RDL	MDL	Units
14797-65-0	Nitrite	0.009J	0.010	0.002	mg/L-N

EPA 353.2 Nitrate

CAS#	Parameter	Result	RDL	MDL	Units
14797-55-8	Nitrate	0.290	0.010	0.005	mg/L-N

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211030601	**MA01MW001**	Water	11/02/2012 11:26	11/03/2012 09:40

Subcontract Work

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/20/2012 08:15	BJM	

CAS#	Parameter	Result	RDL	MDL	Units
SHIP-001	Ship Result	*			mg/L

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/07/2012 16:51	EDS	494067

CAS#	Parameter	Result	RDL	MDL	Units
630-20-6	1,1,1,2-Tetrachloroethane	0.120U	1.00	0.120	ug/L
71-55-6	1,1,1-Trichloroethane	0.123U	1.00	0.123	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.109U	1.00	0.109	ug/L
79-00-5	1,1,2-Trichloroethane	0.159U	1.00	0.159	ug/L
75-34-3	1,1-Dichloroethane	0.171U	1.00	0.171	ug/L
75-35-4	1,1-Dichloroethene	0.208U	1.00	0.208	ug/L
563-58-6	1,1-Dichloropropene	0.052U	1.00	0.052	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.079U	1.00	0.079	ug/L
96-18-4	1,2,3-Trichloropropane	0.065U	1.00	0.065	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.105U	1.00	0.105	ug/L
95-63-6	1,2,4-Trimethylbenzene	0.084U	1.00	0.084	ug/L
96-12-8	1,2-Dibromo-3-chloropropane	0.194U	1.00	0.194	ug/L
106-93-4	1,2-Dibromoethane	0.102U	1.00	0.102	ug/L
95-50-1	1,2-Dichlorobenzene	0.135U	1.00	0.135	ug/L
107-06-2	1,2-Dichloroethane	0.116U	1.00	0.116	ug/L
78-87-5	1,2-Dichloropropane	0.150U	1.00	0.150	ug/L
108-67-8	1,3,5-Trimethylbenzene	0.066U	1.00	0.066	ug/L
541-73-1	1,3-Dichlorobenzene	0.138U	1.00	0.138	ug/L
142-28-9	1,3-Dichloropropane	0.059U	1.00	0.059	ug/L
106-46-7	1,4-Dichlorobenzene	0.083U	1.00	0.083	ug/L
594-20-7	2,2-Dichloropropane	0.170U	1.00	0.170	ug/L
78-93-3	2-Butanone	0.142U	5.00	0.142	ug/L
95-49-8	2-Chlorotoluene	0.080U	1.00	0.080	ug/L
591-78-6	2-Hexanone	0.122U	5.00	0.122	ug/L
106-43-4	4-Chlorotoluene	0.124U	1.00	0.124	ug/L
99-87-6	4-Isopropyltoluene	0.070U	1.00	0.070	ug/L
108-10-1	4-Methyl-2-pentanone	0.120U	5.00	0.120	ug/L
67-64-1	Acetone	0.193U	5.00	0.193	ug/L
71-43-2	Benzene	0.111U	1.00	0.111	ug/L
108-86-1	Bromobenzene	0.145U	1.00	0.145	ug/L
74-97-5	Bromochloromethane	0.127U	1.00	0.127	ug/L
75-27-4	Bromodichloromethane	0.083U	1.00	0.083	ug/L
75-25-2	Bromoform	0.215U	1.00	0.215	ug/L
74-83-9	Bromomethane	0.427U	1.00	0.427	ug/L
75-15-0	Carbon disulfide	0.190U	1.00	0.190	ug/L
56-23-5	Carbon tetrachloride	0.248U	1.00	0.248	ug/L
108-90-7	Chlorobenzene	0.083U	1.00	0.083	ug/L
75-00-3	Chloroethane	0.235U	1.00	0.235	ug/L
67-66-3	Chloroform	0.155U	1.00	0.155	ug/L
74-87-3	Chloromethane	0.144U	1.00	0.144	ug/L
74-95-3	Dibromomethane	0.211U	1.00	0.211	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211030601	**MA01MW001**	Water	11/02/2012 11:26	11/03/2012 09:40

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/07/2012 16:51	EDS	494067

CAS#	Parameter	Result	RDL	MDL	Units
75-71-8	Dichlorodifluoromethane	0.145U	1.00	0.145	ug/L
100-41-4	Ethylbenzene	0.109U	1.00	0.109	ug/L
87-68-3	Hexachlorobutadiene	0.265U	1.00	0.265	ug/L
98-82-8	Isopropylbenzene (Cumene)	0.130U	1.00	0.130	ug/L
75-09-2	Methylene chloride	0.149U	5.00	0.149	ug/L
91-20-3	Naphthalene	0.176U	1.00	0.176	ug/L
100-42-5	Styrene	0.089U	1.00	0.089	ug/L
127-18-4	Tetrachloroethene	0.193U	1.00	0.193	ug/L
108-88-3	Toluene	0.122U	1.00	0.122	ug/L
79-01-6	Trichloroethene	0.161U	1.00	0.161	ug/L
75-69-4	Trichlorofluoromethane	0.157U	1.00	0.157	ug/L
75-01-4	Vinyl chloride	0.127U	1.00	0.127	ug/L
156-59-2	cis-1,2-Dichloroethene	0.103U	1.00	0.103	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.124U	1.00	0.124	ug/L
136777-61-2	m,p-Xylene	0.123U	2.00	0.123	ug/L
104-51-8	n-Butylbenzene	0.123U	1.00	0.123	ug/L
103-65-1	n-Propylbenzene	0.727U	1.00	0.727	ug/L
95-47-6	o-Xylene	0.055U	1.00	0.055	ug/L
135-98-8	sec-Butylbenzene	0.107U	1.00	0.107	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.078U	5.00	0.078	ug/L
98-06-6	tert-Butylbenzene	0.087U	1.00	0.087	ug/L
156-60-5	trans-1,2-Dichloroethene	0.077U	1.00	0.077	ug/L
10061-02-6	trans-1,3-Dichloropropene	0.128U	1.00	0.128	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	48.9	ug/L	98	75 - 120
1868-53-7	Dibromofluoromethane	50	49.8	ug/L	100	85 - 115
2037-26-5	Toluene d8	50	50.4	ug/L	101	85 - 120
17060-07-0	1,2-Dichloroethane-d4	50	48.9	ug/L	98	70 - 120

SW-846 8330A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/05/2012 05:30	493831	SW-846 8330A	1	11/08/2012 18:21	BMR	494099

CAS#	Parameter	Result	RDL	MDL	Units
99-35-4	1,3,5-Trinitrobenzene	0.240U	0.500	0.240	ug/L
99-65-0	1,3-Dinitrobenzene	0.167U	0.500	0.167	ug/L
118-96-7	2,4,6-Trinitrotoluene	0.483U	1.00	0.483	ug/L
121-14-2	2,4-Dinitrotoluene	0.501U	1.00	0.501	ug/L
606-20-2	2,6-Dinitrotoluene	0.283U	1.00	0.283	ug/L
355-72-78-2	2-Amino-4,6-dinitrotoluene	0.576U	1.00	0.576	ug/L
88-72-2	2-Nitrotoluene	0.120U	0.500	0.120	ug/L
99-08-1	3-Nitrotoluene	0.369U	1.00	0.369	ug/L
1946-51-0	4-Amino-2,6-dinitrotoluene	0.489U	1.00	0.489	ug/L
99-99-0	4-Nitrotoluene	0.417U	1.00	0.417	ug/L
2691-41-0	HMX	0.212U	0.500	0.212	ug/L
98-95-3	Nitrobenzene	0.267U	0.500	0.267	ug/L
121-82-4	RDX	0.189U	0.500	0.189	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211030601	**MA01MW001**	Water	11/02/2012 11:26	11/03/2012 09:40

SW-846 8330A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/05/2012 05:30	493831	SW-846 8330A	1	11/08/2012 18:21	BMR	494099

CAS#	Parameter	Result	RDL	MDL	Units
479-45-8	Tetryl	0.241U	0.500	0.241	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
528-29-0	1,2-Dinitrobenzene	2	2.06	ug/L	103	70 - 130

SW-846 7470A Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/06/2012 10:20	493884	SW-846 7470A Dissolved	1	11/08/2012 12:58	CLB	494170

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	0.068U	0.20	0.068	ug/L

SW-846 7470A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/06/2012 10:20	493884	SW-846 7470A	1	11/08/2012 13:07	CLB	494170

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	0.068U	0.20	0.068	ug/L

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/06/2012 16:10	493963	SW-846 3010A	1	11/08/2012 19:22	BNB	494196

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	**Aluminum**	**502**	**200**	**60.0**	**ug/L**
7440-36-0	Antimony	3.11U	60.0	3.11	ug/L
7440-38-2	Arsenic	3.59U	10.0	3.59	ug/L
7440-39-3	**Barium**	**21.6**	**10.0**	**0.71**	**ug/L**
7440-41-7	Beryllium	0.10U	5.00	0.10	ug/L
7440-43-9	**Cadmium**	**0.36J**	**5.00**	**0.20**	**ug/L**
7440-70-2	**Calcium**	**47400**	**100**	**50.0**	**ug/L**
7440-47-3	**Chromium**	**15.5**	**10.0**	**1.00**	**ug/L**
7440-48-4	Cobalt	1.00U	10.0	1.00	ug/L
7440-50-8	**Copper**	**11.7**	**10.0**	**1.01**	**ug/L**
7439-89-6	**Iron**	**312**	**100**	**40.0**	**ug/L**
7439-92-1	Lead	1.96U	15.0	1.96	ug/L
7439-95-4	**Magnesium**	**46900**	**100**	**50.0**	**ug/L**
7439-96-5	**Manganese**	**9.26J**	**15.0**	**2.00**	**ug/L**
7439-98-7	**Molybdenum**	**5.74J**	**50.0**	**3.75**	**ug/L**
7440-02-0	**Nickel**	**7.89J**	**40.0**	**1.13**	**ug/L**
7440-09-7	**Potassium**	**8680**	**500**	**100**	**ug/L**
7782-49-2	**Selenium**	**7.20J**	**40.0**	**4.42**	**ug/L**
7440-22-4	Silver	0.70U	10.0	0.70	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211030601	**MA01MW001**	Water	11/02/2012 11:26	11/03/2012 09:40

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/06/2012 16:10	493963	SW-846 3010A	1	11/08/2012 19:22	BNB	494196

CAS#	Parameter	Result	RDL	MDL	Units
7440-23-5	**Sodium**	**589000**	**1000**	**200**	**ug/L**
7440-28-0	Thallium	3.04U	20.0	3.04	ug/L
7440-32-6	**Titanium**	**8.07J**	**100**	**1.20**	**ug/L**
7440-62-2	**Vanadium**	**30.6**	**20.0**	**3.75**	**ug/L**
7440-66-6	**Zinc**	**18.6J**	**20.0**	**4.51**	**ug/L**

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/06/2012 16:10	493962	SW-846 3005 Dissolved	1	11/08/2012 18:09	BNB	494196

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	60.0U	200	60.0	ug/L
7440-36-0	Antimony	3.11U	60.0	3.11	ug/L
7440-38-2	Arsenic	3.59U	10.0	3.59	ug/L
7440-39-3	**Barium**	**15.1**	**10.0**	**0.71**	**ug/L**
7440-41-7	Beryllium	0.10U	5.00	0.10	ug/L
7440-43-9	Cadmium	0.20U	5.00	0.20	ug/L
7440-70-2	**Calcium**	**49100**	**100**	**50.0**	**ug/L**
7440-47-3	**Chromium**	**1.61J**	**10.0**	**1.00**	**ug/L**
7440-48-4	Cobalt	1.00U	10.0	1.00	ug/L
7440-50-8	**Copper**	**10.7**	**10.0**	**1.01**	**ug/L**
7439-89-6	Iron	40.0U	100	40.0	ug/L
7439-92-1	Lead	1.96U	15.0	1.96	ug/L
7439-95-4	**Magnesium**	**48800**	**100**	**50.0**	**ug/L**
7439-96-5	Manganese	2.00U	15.0	2.00	ug/L
7439-98-7	**Molybdenum**	**6.51J**	**50.0**	**3.75**	**ug/L**
7440-02-0	Nickel	1.13U	40.0	1.13	ug/L
7440-09-7	**Potassium**	**7870**	**500**	**100**	**ug/L**
7782-49-2	**Selenium**	**7.07J**	**40.0**	**4.42**	**ug/L**
7440-22-4	Silver	0.70U	10.0	0.70	ug/L
7440-28-0	Thallium	3.04U	20.0	3.04	ug/L
7440-32-6	Titanium	1.20U	100	1.20	ug/L
7440-62-2	**Vanadium**	**27.2**	**20.0**	**3.75**	**ug/L**
7440-66-6	**Zinc**	**17.8J**	**20.0**	**4.51**	**ug/L**

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/06/2012 16:10	493962	SW-846 3005 Dissolved	2	11/10/2012 14:47	CLB	494351

CAS#	Parameter	Result	RDL	MDL	Units
7440-23-5	**Sodium**	**602000**	**2000**	**400**	**ug/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211030601	**MA01MW001**	Water	11/02/2012 11:26	11/03/2012 09:40

SM 2540C TDS

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/05/2012 12:55	DJH	493891

CAS#	Parameter	Result	RDL	MDL	Units
WET-035	**Total Dissolved Solids(TDS)**	**1990**	**10.0**		**mg/L**

EPA 353.2 Nitrite

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/03/2012 13:11	JEM	493802

CAS#	Parameter	Result	RDL	MDL	Units
14797-65-0	**Nitrite**	**0.009J**	**0.010**	**0.002**	**mg/L-N**

EPA 353.2 Nitrate

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/03/2012 13:28	JEM	493801

CAS#	Parameter	Result	RDL	MDL	Units
14797-55-8	**Nitrate**	**0.290**	**0.010**	**0.005**	**mg/L-N**

EPA 300.0

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			500	11/06/2012 11:02	AEL	493896

CAS#	Parameter	Result	RDL	MDL	Units
16887-00-6	**Chloride**	**501**	**50.0**	**31.5**	**mg/L**
14808-79-8	**Sulfate**	**506**	**100**	**57.5**	**mg/L**

SM 2320B Alkalinity

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/05/2012 09:23	JEM	493872

CAS#	Parameter	Result	RDL	MDL	Units
000000-00-5	**Total Alkalinity**	**166**	**1.0**	**0.19**	**mg/L CaCO3**

SW-846 7196A Chromium VI

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/03/2012 10:05	JEM	493794

CAS#	Parameter	Result	RDL	MDL	Units
18540-29-9	Chromium VI	4.00U	10.0	4.00	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211030601	**MA01MW001**	Water	11/02/2012 11:26	11/03/2012 09:40

SW-846 9012A Cyanide

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/06/2012 05:00	493931	SW-846 9012A	1	11/07/2012 10:17	AEL	494038

CAS#	Parameter	Result	RDL	MDL	Units
57-12-5	Total Cyanide	0.0012U	0.0050	0.0012	mg/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211030602	**TB-1**	Water	11/02/2012 11:26	11/03/2012 09:40

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/07/2012 16:30	EDS	494067

CAS#	Parameter	Result	RDL	MDL	Units
630-20-6	1,1,1,2-Tetrachloroethane	0.120U	1.00	0.120	ug/L
71-55-6	1,1,1-Trichloroethane	0.123U	1.00	0.123	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.109U	1.00	0.109	ug/L
79-00-5	1,1,2-Trichloroethane	0.159U	1.00	0.159	ug/L
75-34-3	1,1-Dichloroethane	0.171U	1.00	0.171	ug/L
75-35-4	1,1-Dichloroethene	0.208U	1.00	0.208	ug/L
563-58-6	1,1-Dichloropropene	0.052U	1.00	0.052	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.079U	1.00	0.079	ug/L
96-18-4	1,2,3-Trichloropropane	0.065U	1.00	0.065	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.105U	1.00	0.105	ug/L
95-63-6	1,2,4-Trimethylbenzene	0.084U	1.00	0.084	ug/L
96-12-8	1,2-Dibromo-3-chloropropane	0.194U	1.00	0.194	ug/L
106-93-4	1,2-Dibromoethane	0.102U	1.00	0.102	ug/L
95-50-1	1,2-Dichlorobenzene	0.135U	1.00	0.135	ug/L
107-06-2	1,2-Dichloroethane	0.116U	1.00	0.116	ug/L
78-87-5	1,2-Dichloropropane	0.150U	1.00	0.150	ug/L
108-67-8	1,3,5-Trimethylbenzene	0.066U	1.00	0.066	ug/L
541-73-1	1,3-Dichlorobenzene	0.138U	1.00	0.138	ug/L
142-28-9	1,3-Dichloropropane	0.059U	1.00	0.059	ug/L
106-46-7	1,4-Dichlorobenzene	0.083U	1.00	0.083	ug/L
594-20-7	2,2-Dichloropropane	0.170U	1.00	0.170	ug/L
78-93-3	2-Butanone	0.142U	5.00	0.142	ug/L
95-49-8	2-Chlorotoluene	0.080U	1.00	0.080	ug/L
591-78-6	2-Hexanone	0.122U	5.00	0.122	ug/L
106-43-4	4-Chlorotoluene	0.124U	1.00	0.124	ug/L
99-87-6	4-Isopropyltoluene	0.070U	1.00	0.070	ug/L
108-10-1	4-Methyl-2-pentanone	0.120U	5.00	0.120	ug/L
67-64-1	Acetone	0.193U	5.00	0.193	ug/L
71-43-2	Benzene	0.111U	1.00	0.111	ug/L
108-86-1	Bromobenzene	0.145U	1.00	0.145	ug/L
74-97-5	Bromochloromethane	0.127U	1.00	0.127	ug/L
75-27-4	Bromodichloromethane	0.083U	1.00	0.083	ug/L
75-25-2	Bromoform	0.215U	1.00	0.215	ug/L
74-83-9	Bromomethane	0.427U	1.00	0.427	ug/L
75-15-0	Carbon disulfide	0.190U	1.00	0.190	ug/L
56-23-5	Carbon tetrachloride	0.248U	1.00	0.248	ug/L
108-90-7	Chlorobenzene	0.083U	1.00	0.083	ug/L
75-00-3	Chloroethane	0.235U	1.00	0.235	ug/L
67-66-3	Chloroform	0.155U	1.00	0.155	ug/L
74-87-3	Chloromethane	0.144U	1.00	0.144	ug/L
74-95-3	Dibromomethane	0.211U	1.00	0.211	ug/L
75-71-8	Dichlorodifluoromethane	0.145U	1.00	0.145	ug/L
100-41-4	Ethylbenzene	0.109U	1.00	0.109	ug/L
87-68-3	Hexachlorobutadiene	0.265U	1.00	0.265	ug/L
98-82-8	Isopropylbenzene (Cumene)	0.130U	1.00	0.130	ug/L
75-09-2	Methylene chloride	0.149U	5.00	0.149	ug/L
91-20-3	Naphthalene	0.176U	1.00	0.176	ug/L
100-42-5	Styrene	0.089U	1.00	0.089	ug/L
127-18-4	Tetrachloroethene	0.193U	1.00	0.193	ug/L
108-88-3	Toluene	0.122U	1.00	0.122	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211030602	**TB-1**	Water	11/02/2012 11:26	11/03/2012 09:40

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/07/2012 16:30	EDS	494067

CAS#	Parameter	Result	RDL	MDL	Units
79-01-6	Trichloroethene	0.161U	1.00	0.161	ug/L
75-69-4	Trichlorofluoromethane	0.157U	1.00	0.157	ug/L
75-01-4	Vinyl chloride	0.127U	1.00	0.127	ug/L
156-59-2	cis-1,2-Dichloroethene	0.103U	1.00	0.103	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.124U	1.00	0.124	ug/L
136777-61-2	m,p-Xylene	0.123U	2.00	0.123	ug/L
104-51-8	n-Butylbenzene	0.123U	1.00	0.123	ug/L
103-65-1	n-Propylbenzene	0.727U	1.00	0.727	ug/L
95-47-6	o-Xylene	0.055U	1.00	0.055	ug/L
135-98-8	sec-Butylbenzene	0.107U	1.00	0.107	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.078U	5.00	0.078	ug/L
98-06-6	tert-Butylbenzene	0.087U	1.00	0.087	ug/L
156-60-5	trans-1,2-Dichloroethene	0.077U	1.00	0.077	ug/L
10061-02-6	trans-1,3-Dichloropropene	0.128U	1.00	0.128	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	49.9	ug/L	100	75 - 120
1868-53-7	Dibromofluoromethane	50	49.3	ug/L	99	85 - 115
2037-26-5	Toluene d8	50	50.5	ug/L	101	85 - 120
17060-07-0	1,2-Dichloroethane-d4	50	49.6	ug/L	99	70 - 120

GC/MS Volatiles Quality Control Summary

Analytical Batch 494067		**Client ID**	MB494067			LCS494067			LCSD494067		
Prep Batch N/A		**GCAL ID**	1125789			1125790			1125791		
		Sample Type	Method Blank			LCS			LCSD		
		Analytical Date	11/07/2012 11:52			11/07/2012 10:25			11/07/2012 10:48		
		Matrix	Water			Water			Water		
SW-846 8260B		**Units**	**Result**	ug/L **RDL**	**Spike Added**	**Result**	**% R**	**Control Limits % R**	**Result**	**% R**	**RPD**	**RPD Limit**
67-64-1	Acetone		0.193U	0.193	50.0	41.8	84	40 - 140	38.1	76	9	30
74-97-5	Bromochloromethane		0.127U	0.127	50.0	53.2	106	65 - 130	49.6	99	7	30
75-27-4	Bromodichloromethane		0.083U	0.083	50.0	53.6	107	75 - 120	50.2	100	7	30
75-25-2	Bromoform		0.215U	0.215	50.0	50.0	100	70 - 130	46.5	93	7	30
74-83-9	Bromomethane		0.427U	0.427	50.0	44.4	89	30 - 145	43.3	87	3	30
75-15-0	Carbon disulfide		0.190U	0.190	50.0	52.9	106	35 - 160	48.0	96	10	30
56-23-5	Carbon tetrachloride		0.248U	0.248	50.0	53.2	106	65 - 140	50.3	101	6	30
75-00-3	Chloroethane		0.235U	0.235	50.0	56.4	113	60 - 135	45.0	90	22	30
136777-61-2	m,p-Xylene		0.123U	0.123	100	99.8	100	75 - 130	95.0	95	5	30
67-66-3	Chloroform		0.155U	0.155	50.0	49.7	99	65 - 135	46.3	93	7	30
74-87-3	Chloromethane		0.144U	0.144	50.0	44.4	89	40 - 125	45.6	91	3	30
74-95-3	Dibromomethane		0.211U	0.211	50.0	51.9	104	75 - 125	48.7	97	6	30
75-71-8	Dichlorodifluoromethane		0.145U	0.145	50.0	50.8	102	30 - 155	47.7	95	6	30
75-34-3	1,1-Dichloroethane		0.171U	0.171	50.0	51.4	103	70 - 135	48.6	97	6	30
107-06-2	1,2-Dichloroethane		0.116U	0.116	50.0	51.3	103	70 - 130	48.5	97	6	30
156-59-2	cis-1,2-Dichloroethene		0.103U	0.103	50.0	51.2	102	70 - 125	47.9	96	7	30
156-60-5	trans-1,2-Dichloroethene		0.077U	0.077	50.0	51.1	102	60 - 140	48.2	96	6	30
75-09-2	Methylene chloride		0.149U	0.149	50.0	49.3	99	55 - 140	46.0	92	7	30
78-87-5	1,2-Dichloropropane		0.150U	0.150	50.0	51.6	103	75 - 125	49.0	98	5	30
10061-01-5	cis-1,3-Dichloropropene		0.124U	0.124	50.0	52.3	105	70 - 130	49.3	99	6	30
10061-02-6	trans-1,3-Dichloropropene		0.128U	0.128	50.0	50.9	102	55 - 140	48.2	96	5	30
100-41-4	Ethylbenzene		0.109U	0.109	50.0	51.5	103	75 - 125	48.1	96	7	30
591-78-6	2-Hexanone		0.122U	0.122	50.0	42.0	84	55 - 130	38.2	76	9	30
98-82-8	Isopropylbenzene (Cumene)		0.130U	0.130	50.0	50.3	101	75 - 125	47.7	95	5	30
78-93-3	2-Butanone		0.142U	0.142	50.0	40.9	82	30 - 150	37.6	75	8	30
108-10-1	4-Methyl-2-pentanone		0.120U	0.120	50.0	44.0	88	60 - 135	40.6	81	8	30
103-65-1	n-Propylbenzene		0.727U	0.727	50.0	50.9	102	70 - 130	49.6	99	3	30
100-42-5	Styrene		0.089U	0.089	50.0	50.1	100	65 - 135	47.1	94	6	30
127-18-4	Tetrachloroethene		0.193U	0.193	50.0	51.0	102	45 - 150	48.7	97	5	30
630-20-6	1,1,1,2-Tetrachloroethane		0.120U	0.120	50.0	54.0	108	80 - 130	49.9	100	8	30
79-34-5	1,1,2,2-Tetrachloroethane		0.109U	0.109	50.0	48.1	96	65 - 130	45.2	90	6	30
120-82-1	1,2,4-Trichlorobenzene		0.105U	0.105	50.0	51.3	103	65 - 135	49.8	100	3	30
71-55-6	1,1,1-Trichloroethane		0.123U	0.123	50.0	53.3	107	65 - 130	49.8	100	7	30

GC/MS Volatiles Quality Control Summary

Analytical Batch 494067		**Client ID**	MB494067			LCS494067			LCSD494067		
Prep Batch N/A		**GCAL ID**	1125789			1125790			1125791		
		Sample Type	Method Blank			LCS			LCSD		
		Analytical Date	11/07/2012 11:52			11/07/2012 10:25			11/07/2012 10:48		
		Matrix	Water			Water			Water		
SW-846 8260B		**Units**	ug/L		**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**		**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
79-00-5	1,1,2-Trichloroethane	0.159U	0.159		50.0	51.2	102	75 - 125	47.8	96	7	30
75-69-4	Trichlorofluoromethane	0.157U	0.157		50.0	52.5	105	60 - 145	50.2	100	4	30
96-18-4	1,2,3-Trichloropropane	0.065U	0.065		50.0	47.6	95	75 - 125	44.6	89	7	30
95-63-6	1,2,4-Trimethylbenzene	0.084U	0.084		50.0	50.8	102	75 - 130	49.1	98	3	30
108-67-8	1,3,5-Trimethylbenzene	0.066U	0.066		50.0	49.4	99	75 - 130	47.8	96	3	30
75-01-4	Vinyl chloride	0.127U	0.127		50.0	42.2	84	50 - 145	42.0	84	0.5	30
95-47-6	o-Xylene	0.055U	0.055		50.0	49.9	100	80 - 120	47.1	94	6	30
96-12-8	1,2-Dibromo-3-chloropropane	0.194U	0.194		50.0	46.7	93	50 - 130	42.9	86	8	30
106-93-4	1,2-Dibromoethane	0.102U	0.102		50.0	50.9	102	80 - 120	46.9	94	8	30
1634-04-4	tert-Butyl methyl ether (MTBE)	0.078U	0.078		50.0	49.2	98	65 - 125	46.0	92	7	30
99-87-6	4-Isopropyltoluene	0.070U	0.070		50.0	51.3	103	75 - 130	50.7	101	1	30
594-20-7	2,2-Dichloropropane	0.170U	0.170		50.0	52.8	106	70 - 135	49.8	100	6	30
563-58-6	1,1-Dichloropropene	0.052U	0.052		50.0	52.3	105	75 - 130	49.7	99	5	30
142-28-9	1,3-Dichloropropane	0.059U	0.059		50.0	49.3	99	75 - 125	45.5	91	8	30
108-86-1	Bromobenzene	0.145U	0.145		50.0	49.2	98	75 - 125	47.2	94	4	30
95-49-8	2-Chlorotoluene	0.080U	0.080		50.0	48.1	96	75 - 125	46.5	93	3	30
106-43-4	4-Chlorotoluene	0.124U	0.124		50.0	49.4	99	75 - 130	48.2	96	2	30
98-06-6	tert-Butylbenzene	0.087U	0.087		50.0	49.1	98	70 - 130	47.7	95	3	30
135-98-8	sec-Butylbenzene	0.107U	0.107		50.0	51.2	102	70 - 125	50.2	100	2	30
541-73-1	1,3-Dichlorobenzene	0.138U	0.138		50.0	50.2	100	75 - 125	48.8	98	3	30
106-46-7	1,4-Dichlorobenzene	0.083U	0.083		50.0	51.1	102	75 - 125	48.7	97	5	30
104-51-8	n-Butylbenzene	0.123U	0.123		50.0	51.1	102	70 - 135	51.0	102	0.2	30
95-50-1	1,2-Dichlorobenzene	0.135U	0.135		50.0	50.4	101	70 - 120	48.6	97	4	30
87-68-3	Hexachlorobutadiene	0.265U	0.265		50.0	52.3	105	50 - 140	52.5	105	0.4	30
91-20-3	Naphthalene	0.176U	0.176		50.0	49.0	98	55 - 140	46.2	92	6	30
87-61-6	1,2,3-Trichlorobenzene	0.079U	0.079		50.0	51.1	102	55 - 140	49.7	99	3	30
75-35-4	1,1-Dichloroethene	0.208U	0.208		50.0	52.8	106	70 - 130	46.4	93	13	30
71-43-2	Benzene	0.111U	0.111		50.0	50.5	101	80 - 120	47.4	95	6	30
79-01-6	Trichloroethene	0.161U	0.161		50.0	49.9	100	70 - 125	47.5	95	5	30
108-88-3	Toluene	0.122U	0.122		50.0	50.6	101	75 - 120	47.2	94	7	30
108-90-7	Chlorobenzene	0.083U	0.083		50.0	50.0	100	80 - 120	46.8	94	7	30
Surrogate												
460-00-4	4-Bromofluorobenzene	50.1	100		50	50.5	101	75 - 120	49.8	100		

GC/MS Volatiles Quality Control Summary

Analytical Batch	494067	**Client ID**	MB494067			LCS494067			LCSD494067		
Prep Batch	N/A	**GCAL ID**	1125789			1125790			1125791		
		Sample Type	Method Blank			LCS			LCSD		
		Analytical Date	11/07/2012 11:52			11/07/2012 10:25			11/07/2012 10:48		
		Matrix	Water			Water			Water		
SW-846 8260B		**Units**	**Result**	ug/L **RDL**	**Spike Added**	**Result**	**% R**	**Control Limits % R**	**Result**	**% R**	**RPD**	**RPD Limit**
1868-53-7	Dibromofluoromethane		49.3	99	50	50.1	100	85 - 115	49.9	100		
2037-26-5	Toluene d8		50.7	101	50	49.9	100	85 - 120	49.3	99		
17060-07-0	1,2-Dichloroethane-d4		49.1	98	50	49.8	100	70 - 120	48.3	97		

General Chromatography Quality Control Summary

Analytical Batch	494099	**Client ID**	MB493831	LCS493831	LCSD493831
Prep Batch	493831	**GCAL ID**	1124743	1124744	1124745
Prep Method	SW-846	**Sample Type**	Method Blank	LCS	LCSD
	8330A	**Prep Date**	11/05/2012 05:30	11/05/2012 05:30	11/05/2012 05:30
		Analytical Date	11/08/2012 15:32	11/08/2012 17:13	11/08/2012 18:55
		Matrix	Water	Water	Water

SW-846 8330A		**Units**	ug/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
2691-41-0	HMX	0.212U	0.212	2.00	1.81	91	80 - 115	1.91	96	5	30
121-82-4	RDX	0.189U	0.189	2.00	2.40	120	50 - 160	2.32	116	3	30
99-35-4	1,3,5-Trinitrobenzene	0.240U	0.240	2.00	1.80	90	65 - 140	1.74	87	3	30
99-65-0	1,3-Dinitrobenzene	0.167U	0.167	2.00	1.96	98	45 - 160	1.89	95	4	30
479-45-8	Tetryl	0.241U	0.241	2.00	0.563	28	20 - 175	0.535	27	5	30
98-95-3	Nitrobenzene	0.267U	0.267	2.00	1.51	76	50 - 140	1.62	81	7	30
118-96-7	2,4,6-Trinitrotoluene	0.483U	0.483	2.00	1.04	52	50 - 145	1.11	56	7	30
1946-51-0	4-Amino-2,6-dinitrotoluene	0.489U	0.489	2.00	1.84	92	55 - 155	1.46	73	23	30
355-72-78-2	2-Amino-4,6-dinitrotoluene	0.576U	0.576	2.00	1.87	94	50 - 155	1.72	86	8	30
121-14-2	2,4-Dinitrotoluene	0.501U	0.501	2.00	1.87	94	60 - 135	1.97	99	5	30
606-20-2	2,6-Dinitrotoluene	0.283U	0.283	2.00	2.32	116	60 - 135	1.99	100	15	30
88-72-2	2-Nitrotoluene	0.120U	0.120	2.00	1.71	86	45 - 135	1.66	83	3	30
99-08-1	3-Nitrotoluene	0.369U	0.369	2.00	1.58	79	50 - 130	1.59	80	0.6	30
99-99-0	4-Nitrotoluene	0.417U	0.417	2.00	1.96	98	50 - 130	1.89	95	4	30
Surrogate											
528-29-0	1,2-Dinitrobenzene	1.81	91	2	1.72	86	70 - 130	1.41	71		

Inorganics Quality Control Summary

Analytical Batch	494170	**Client ID**	MB493884			LCS493884		
Prep Batch	493884	**GCAL ID**	1124918			1124919		
Prep Method	SW-846	**Sample Type**	Method Blank			LCS		
	7470A	**Prep Date**	11/06/2012 10:20			11/06/2012 10:20		
		Analytical Date	11/08/2012 12:54			11/08/2012 12:56		
		Matrix	Water			Water		
SW-846 7470A			**Units**	ug/L	**Spike**	**Result**		**Control**
			Result	**RDL**	**Added**		**% R**	**Limits % R**
7439-97-6	Mercury		0.068U	0.068	5.00	4.70	94	80 - 120

Analytical Batch	494170	**Client ID**	MA01MW001			1124540MS			1124540MSD			
Prep Batch	493884	**GCAL ID**	21211030601			1124920			1124921			
Prep Method	SW-846	**Sample Type**	SAMPLE			MS			MSD			
	7470A	**Prep Date**	11/06/2012 10:20			11/06/2012 10:20			11/06/2012 10:20			
		Analytical Date	11/08/2012 13:07			11/08/2012 13:03			11/08/2012 13:04			
		Matrix	Water			Water			Water			
SW-846 7470A			**Units**	ug/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
			Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
7439-97-6	Mercury		0.00000	0.068	5.00	3.82	76	75 - 125	3.95	79	3	30

Inorganics Quality Control Summary

Analytical Batch	494170	**Client ID**	MB493884			LCS493884		
Prep Batch	493884	**GCAL ID**	1124918			1124919		
Prep Method	SW-846	**Sample Type**	Method Blank			LCS		
	7470A	**Prep Date**	11/06/2012 10:20			11/06/2012 10:20		
		Analytical Date	11/08/2012 12:54			11/08/2012 12:56		
		Matrix	Water			Water		
SW-846 7470A			**Units**	ug/L	**Spike**	**Result**		**Control**
			Result	**RDL**	**Added**		**% R**	**Limits % R**
7439-97-6	Mercury		0.068U	0.068	5.00	4.70	94	80 - 120

Analytical Batch	494170	**Client ID**	MA01MW001			1124540MS			1124540MSD			
Prep Batch	493884	**GCAL ID**	21211030601			1124920			1124921			
Prep Method	SW-846	**Sample Type**	SAMPLE			MS			MSD			
	7470A	**Prep Date**	11/06/2012 10:20			11/06/2012 10:20			11/06/2012 10:20			
		Analytical Date	11/08/2012 13:07			11/08/2012 13:03			11/08/2012 13:04			
		Matrix	Water			Water			Water			
SW-846 7470A			**Units**	ug/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
			Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
7439-97-6	Mercury		0.00000	0.068	5.00	3.82	**76***	80 - 120	3.95	**79***	3	30

Inorganics Quality Control Summary

Analytical Batch	494196	**Client ID**	MB493963	LCS493963
Prep Batch	493963	**GCAL ID**	1125288	1125289
Prep Method	SW-846	**Sample Type**	Method Blank	LCS
	3010A	**Prep Date**	11/06/2012 16:10	11/06/2012 16:10
		Analytical Date	11/08/2012 19:08	11/08/2012 19:16
		Matrix	Water	Water

SW-846 6010C		**Units**	ug/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
7429-90-5	Aluminum	60.0U	60.0	5000	4850	97	80 - 120
7440-36-0	Antimony	3.11U	3.11	500	474	95	80 - 120
7440-38-2	Arsenic	3.59U	3.59	500	508	102	80 - 120
7440-39-3	Barium	0.71U	0.71	500	481	96	80 - 120
7440-41-7	Beryllium	0.10U	0.10	500	484	97	80 - 120
7440-43-9	Cadmium	0.20U	0.20	500	474	95	80 - 120
7440-70-2	Calcium	91.2J	50.0	5000	4840	97	80 - 120
7440-47-3	Chromium	1.00U	1.00	500	484	97	80 - 120
7440-48-4	Cobalt	1.00U	1.00	500	484	97	80 - 120
7440-50-8	Copper	1.01U	1.01	500	479	96	80 - 120
7439-89-6	Iron	40.0U	40.0	5000	4740	95	80 - 120
7439-92-1	Lead	1.96U	1.96	500	491	98	80 - 120
7439-95-4	Magnesium	50.0U	50.0	5000	4760	95	80 - 120
7439-96-5	Manganese	2.00U	2.00	500	477	95	80 - 120
7439-98-7	Molybdenum	3.75U	3.75	500	486	97	80 - 120
7440-02-0	Nickel	1.13U	1.13	500	496	99	80 - 120
7440-09-7	Potassium	100U	100	10000	9690	97	80 - 120
7782-49-2	Selenium	4.42U	4.42	500	484	97	80 - 120
7440-22-4	Silver	0.70U	0.70	500	477	95	80 - 120
7440-23-5	Sodium	200U	200	20000	19100	95	80 - 120
7440-28-0	Thallium	3.04U	3.04	500	490	98	80 - 120
7440-62-2	Vanadium	3.75U	3.75	500	480	96	80 - 120
7440-66-6	Zinc	4.51U	4.51	500	475	95	80 - 120
7440-32-6	Titanium	1.20U	1.20	500	484	97	80 - 120

Inorganics Quality Control Summary

Analytical Batch	494196	**Client ID**	MA01MW001	1124540MS	1124540MSD
Prep Batch	493963	**GCAL ID**	21211030601	1125290	1125291
Prep Method	SW-846	**Sample Type**	SAMPLE	MS	MSD
	3010A	**Prep Date**	11/06/2012 16:10	11/06/2012 16:10	11/06/2012 16:10
		Analytical Date	11/08/2012 19:22	11/08/2012 19:30	11/08/2012 19:37
		Matrix	Water	Water	Water

SW-846 6010C		**Units**	ug/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
7429-90-5	Aluminum	502	60.0	5000	5290	96	80 - 120	5680	104	7	30
7440-36-0	Antimony	0.0	3.11	500	505	101	80 - 120	527	105	4	30
7440-38-2	Arsenic	0.0	3.59	500	515	103	80 - 120	544	109	5	30
7440-39-3	Barium	21.6	0.71	500	495	95	80 - 120	519	99	5	30
7440-41-7	Beryllium	0.0	0.10	500	492	98	80 - 120	519	104	5	30
7440-43-9	Cadmium	0.36	0.20	500	469	94	80 - 120	492	98	5	30
7440-70-2	Calcium	47400	50.0	5000	50300	**59***	80 - 120	52500	103	4	30
7440-47-3	Chromium	15.5	1.00	500	476	92	80 - 120	496	96	4	30
7440-48-4	Cobalt	0.0	1.00	500	485	97	80 - 120	510	102	5	30
7440-50-8	Copper	11.7	1.01	500	522	102	80 - 120	549	107	5	30
7439-89-6	Iron	312	40.0	5000	4950	93	80 - 120	5320	100	7	30
7439-92-1	Lead	0.0	1.96	500	476	95	80 - 120	497	99	4	30
7439-95-4	Magnesium	46900	50.0	5000	49000	**42***	80 - 120	52100	104	6	30
7439-96-5	Manganese	9.26	2.00	500	488	96	80 - 120	512	101	5	30
7439-98-7	Molybdenum	5.74	3.75	500	498	98	80 - 120	527	104	6	30
7440-02-0	Nickel	7.89	1.13	500	492	97	80 - 120	517	102	5	30
7440-09-7	Potassium	8680	100	10000	18500	98	80 - 120	19800	112	7	30
7782-49-2	Selenium	7.20	4.42	500	498	98	80 - 120	523	103	5	30
7440-22-4	Silver	0.0	0.70	500	484	97	80 - 120	511	102	5	30
7440-23-5	Sodium	589000	200	20000	583000	**-30***	80 - 120	617000	**140***	6	30
7440-28-0	Thallium	0.0	3.04	500	492	98	80 - 120	521	104	6	30
7440-62-2	Vanadium	30.6	3.75	500	521	98	80 - 120	547	103	5	30
7440-66-6	Zinc	18.6	4.51	500	526	102	80 - 120	547	106	4	30
7440-32-6	Titanium	8.07	1.20	500	488	96	80 - 120	511	100	5	30

Inorganics Quality Control Summary

Analytical Batch	494196	**Client ID**	MB493962	LCS493962
Prep Batch	493962	**GCAL ID**	1125284	1125285
Prep Method	SW-846 3005	**Sample Type**	Method Blank	LCS
	Dissolved	**Prep Date**	11/06/2012 16:10	11/06/2012 16:10
		Analytical Date	11/08/2012 17:55	11/08/2012 18:03
		Matrix	Water	Water

SW-846 6010C Dissolved		**Units**	ug/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
7429-90-5	Aluminum	60.0U	60.0	5000	4630	93	80 - 120
7440-36-0	Antimony	3.11U	3.11	500	447	89	80 - 120
7440-38-2	Arsenic	3.59U	3.59	500	476	95	80 - 120
7440-39-3	Barium	0.71U	0.71	500	445	89	80 - 120
7440-41-7	Beryllium	0.10U	0.10	500	460	92	80 - 120
7440-43-9	Cadmium	0.20U	0.20	500	448	90	80 - 120
7440-70-2	Calcium	50.0U	50.0	5000	4530	91	80 - 120
7440-47-3	Chromium	1.00U	1.00	500	441	88	80 - 120
7440-48-4	Cobalt	1.00U	1.00	500	452	90	80 - 120
7440-50-8	Copper	1.01U	1.01	500	442	88	80 - 120
7439-89-6	Iron	40.0U	40.0	5000	4500	90	80 - 120
7439-92-1	Lead	1.96U	1.96	500	462	92	80 - 120
7439-95-4	Magnesium	50.0U	50.0	5000	4500	90	80 - 120
7439-96-5	Manganese	2.00U	2.00	500	444	89	80 - 120
7439-98-7	Molybdenum	3.75U	3.75	500	448	90	80 - 120
7440-02-0	Nickel	1.13U	1.13	500	464	93	80 - 120
7440-09-7	Potassium	100U	100	10000	9270	93	80 - 120
7782-49-2	Selenium	4.42U	4.42	500	463	93	80 - 120
7440-22-4	Silver	0.70U	0.70	500	452	90	80 - 120
7440-23-5	Sodium	200U	200	20000	18500	92	80 - 120
7440-28-0	Thallium	3.04J	3.04	500	456	91	80 - 120
7440-62-2	Vanadium	3.75U	3.75	500	441	88	80 - 120
7440-66-6	Zinc	4.51U	4.51	500	453	91	80 - 120
7440-32-6	Titanium	1.20U	1.20	500	447	89	80 - 120

Inorganics Quality Control Summary

Analytical Batch	494196	**Client ID**	MA01MW001	1124540MS	1124540MSD
Prep Batch	493962	**GCAL ID**	21211030601	1125286	1125287
Prep Method	SW-846 3005	**Sample Type**	SAMPLE	MS	MSD
	Dissolved	**Prep Date**	11/06/2012 16:10	11/06/2012 16:10	11/06/2012 16:10
		Analytical Date	11/08/2012 18:09	11/08/2012 18:17	11/08/2012 18:24
		Matrix	Water	Water	Water

SW-846 6010C Dissolved		**Units**	ug/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
7429-90-5	Aluminum	43.0	60.0	5000	4940	98	80 - 120	4830	96	2	30
7440-36-0	Antimony	0.0	3.11	500	542	108	80 - 120	525	105	3	30
7440-38-2	Arsenic	0.0	3.59	500	562	112	80 - 120	548	110	3	30
7440-39-3	Barium	15.0	0.71	500	516	100	80 - 120	505	98	2	30
7440-41-7	Beryllium	0.0	0.10	500	522	104	80 - 120	511	102	2	30
7440-43-9	Cadmium	0.0	0.20	500	502	100	80 - 120	492	98	2	30
7440-70-2	Calcium	49100	50.0	5000	53000	**77***	80 - 120	53400	86	0.9	30
7440-47-3	Chromium	1.60	1.00	500	489	97	80 - 120	480	96	2	30
7440-48-4	Cobalt	0.0	1.00	500	518	104	80 - 120	501	100	3	30
7440-50-8	Copper	11.0	1.01	500	542	106	80 - 120	529	104	2	30
7439-89-6	Iron	0.0	40.0	5000	4930	99	80 - 120	4830	97	2	30
7439-92-1	Lead	0.0	1.96	500	514	103	80 - 120	492	98	4	30
7439-95-4	Magnesium	48800	50.0	5000	53000	83	80 - 120	53700	96	1	30
7439-96-5	Manganese	0.0	2.00	500	505	101	80 - 120	493	99	2	30
7439-98-7	Molybdenum	6.51	3.75	500	530	105	80 - 120	515	102	3	30
7440-02-0	Nickel	0.0	1.13	500	524	105	80 - 120	506	101	4	30
7440-09-7	Potassium	7870	100	10000	18600	108	80 - 120	18300	104	2	30
7782-49-2	Selenium	7.10	4.42	500	551	109	80 - 120	531	105	4	30
7440-22-4	Silver	0.0	0.70	500	515	103	80 - 120	503	101	2	30
7440-28-0	Thallium	0.0	3.04	500	522	104	80 - 120	495	99	5	30
7440-62-2	Vanadium	27.0	3.75	500	547	104	80 - 120	536	102	2	30
7440-66-6	Zinc	18.0	4.51	500	551	107	80 - 120	539	104	2	30
7440-32-6	Titanium	0.0	1.20	500	502	100	80 - 120	491	98	2	30

Inorganics Quality Control Summary

Analytical Batch	494351	**Client ID**	MA01MW001			1124540MS			1124540MSD		
Prep Batch	493962	**GCAL ID**	21211030601			1125286			1125287		
Prep Method	SW-846 3005	**Sample Type**	SAMPLE			MS			MSD		
	Dissolved	**Prep Date**	11/06/2012 16:10			11/06/2012 16:10			11/06/2012 16:10		
		Analytical Date	11/10/2012 14:47			11/10/2012 14:55			11/10/2012 15:04		
		Matrix	Water			Water			Water		
SW-846 6010C Dissolved		**Units**	ug/L								
		Result	**RDL**	**Spike Added**	**Result**	**% R**	**Control Limits % R**	**Result**	**% R**	**RPD**	**RPD Limit**
7440-23-5	Sodium	602000	400	20000	632000	**152***	80 - 120	634000	**161***	0.3	30

General Chemistry Quality Control Summary

Analytical Batch 493891	**Client ID**	MB493891			LCS493891		
Prep Batch N/A	**GCAL ID**	1124984			1124985		
	Sample Type	Method Blank			LCS		
	Analytical Date	11/05/2012 12:55			11/05/2012 12:55		
	Matrix	Water			Water		
SM 2540C TDS		**Units**	mg/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
WET-035	Total Dissolved Solids(TDS)	0.00		1000	995	99.5	80 - 120

Analytical Batch 493891	**Client ID**	DEEPWELL SAMPLING		1124895DUP		
Prep Batch N/A	**GCAL ID**	21211051101		1124986		
	Sample Type	SAMPLE		DUP		
	Analytical Date	11/05/2012 12:55		11/05/2012 12:55		
	Matrix	Water		Water		
SM 2540C TDS		**Units**	mg/L	**Result**		**RPD**
		Result	**RDL**		**RPD**	**Limit**
WET-035	Total Dissolved Solids(TDS)	11200		10900	3.2	5

General Chemistry Quality Control Summary

Analytical Batch 493801	**Client ID**	MB493801			LCS493801		
Prep Batch N/A	**GCAL ID**	1124627			1124628		
	Sample Type	Method Blank			LCS		
	Analytical Date	11/03/2012 13:22			11/03/2012 13:24		
	Matrix	Water			Water		
EPA 353.2 Nitrate		**Units**	mg/L-N	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
14797-55-8 Nitrate		0.005U	0.005	0.500	0.453	91	89.5 -110.5

Analytical Batch 493801	**Client ID**	MA01MW001			1124540MS		
Prep Batch N/A	**GCAL ID**	21211030601			1124630		
	Sample Type	SAMPLE			MS		
	Analytical Date	11/03/2012 13:28			11/03/2012 13:31		
	Matrix	Water			Water		
EPA 353.2 Nitrate		**Units**	mg/L-N	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
14797-55-8 Nitrate		0.290	0.005	0.500	0.745	91	89.5 -110.5

Analytical Batch 493801	**Client ID**	MA01MW001		1124540DUP		
Prep Batch N/A	**GCAL ID**	21211030601		1124629		
	Sample Type	SAMPLE		DUP		
	Analytical Date	11/03/2012 13:28		11/03/2012 13:29		
	Matrix	Water		Water		
EPA 353.2 Nitrate		**Units**	mg/L-N	**Result**		**RPD**
		Result	**RDL**		**RPD**	**Limit**
14797-55-8 Nitrate		0.2902	0.005	0.282	3	25

Analytical Batch 493802	**Client ID**	MB493802			LCS493802		
Prep Batch N/A	**GCAL ID**	1124632			1124633		
	Sample Type	Method Blank			LCS		
	Analytical Date	11/03/2012 13:05			11/03/2012 13:06		
	Matrix	Water			Water		
EPA 353.2 Nitrite		**Units**	mg/L-N	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
14797-65-0 Nitrite		0.002U	0.002	0.500	0.460	92	89.5 -110.5

General Chemistry Quality Control Summary

Analytical Batch 493802	**Client ID**	MA01MW001			1124540MS		
Prep Batch N/A	**GCAL ID**	21211030601			1124635		
	Sample Type	SAMPLE			MS		
	Analytical Date	11/03/2012 13:11			11/03/2012 13:13		
	Matrix	Water			Water		
EPA 353.2 Nitrite		**Units**	mg/L-N	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
14797-65-0	Nitrite	0.009	0.002	0.500	0.460	90	89.5 -110.5

Analytical Batch 493802	**Client ID**	MA01MW001		1124540DUP		
Prep Batch N/A	**GCAL ID**	21211030601		1124634		
	Sample Type	SAMPLE		DUP		
	Analytical Date	11/03/2012 13:11		11/03/2012 13:12		
	Matrix	Water		Water		
EPA 353.2 Nitrite		**Units**	mg/L-N	**Result**		**RPD**
		Result	**RDL**		**RPD**	**Limit**
14797-65-0	Nitrite	0.0088	0.002	0.010	9	25

General Chemistry Quality Control Summary

Analytical Batch 493896	**Client ID**	MB493896			LCS493896		
Prep Batch N/A	**GCAL ID**	1125006			1125007		
	Sample Type	Method Blank			LCS		
	Analytical Date	11/06/2012 10:27			11/06/2012 10:44		
	Matrix	Water			Water		
EPA 300.0		**Units**	mg/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
16887-00-6	Chloride	0.063U	0.063	2.50	2.56	102	79 - 109
14808-79-8	Sulfate	0.115U	0.115	5.00	4.92	98.5	82 - 110

Analytical Batch 493896	**Client ID**	MA01MW001			1124540MS			1124540MSD				
Prep Batch N/A	**GCAL ID**	21211030601			1125008			1125009				
	Sample Type	SAMPLE			MS			MSD				
	Analytical Date	11/06/2012 11:02			11/06/2012 11:19			11/06/2012 11:37				
	Matrix	Water			Water			Water				
EPA 300.0		**Units**	mg/L	**Spike**	**Result**		**Control**	**Result**				**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**		**Limit**
16887-00-6	Chloride	501	31.5	1250	1820	105	79 - 109	1790	103	1.7		15
14808-79-8	Sulfate	506	57.5	2500	3220	108	82 - 110	3190	107	0.82		15

General Chemistry Quality Control Summary

Analytical Batch 493872	**Client ID**	LCS493872	
Prep Batch N/A	**GCAL ID**	1124868	
	Sample Type	LCS	
	Analytical Date	11/05/2012 09:23	
	Matrix	Water	

SM 2320B Alkalinity		**Spike Added**	**Result**	**% R**	**Control Limits % R**
000000-00-5	Total Alkalinity	200	219	110	80 - 120

Analytical Batch 493872	**Client ID**	MW-2-110212	1124347DUP
Prep Batch N/A	**GCAL ID**	21211025301	1124869
	Sample Type	SAMPLE	DUP
	Analytical Date	11/05/2012 09:23	11/05/2012 09:23
	Matrix	Water	Water

SM 2320B Alkalinity		**Units**	mg/L CaCO3	**Result**	**RPD**	**RPD Limit**
		Result	**RDL**			
000000-00-5	Total Alkalinity	350.02	0.19	361	3	11

General Chemistry Quality Control Summary

Analytical Batch 493794	**Client ID**	MB493794			LCS493794		
Prep Batch N/A	**GCAL ID**	1124542			1124543		
	Sample Type	Method Blank			LCS		
	Analytical Date	11/03/2012 10:03			11/03/2012 10:04		
	Matrix	Water			Water		
SW-846 7196A Chromium VI		**Units**	ug/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
18540-29-9 Chromium VI		4.00U	4.00	500	481	96	80 - 120

Analytical Batch 493794	**Client ID**	MA01MW001			1124540MS		
Prep Batch N/A	**GCAL ID**	21211030601			1124545		
	Sample Type	SAMPLE			MS		
	Analytical Date	11/03/2012 10:05			11/03/2012 10:06		
	Matrix	Water			Water		
SW-846 7196A Chromium VI		**Units**	ug/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
18540-29-9 Chromium VI		0.000	4.00	500	464	93	80 - 120

Analytical Batch 493794	**Client ID**	MA01MW001		1124540DUP		
Prep Batch N/A	**GCAL ID**	21211030601		1124544		
	Sample Type	SAMPLE		DUP		
	Analytical Date	11/03/2012 10:05		11/03/2012 10:05		
	Matrix	Water		Water		
SW-846 7196A Chromium VI		**Units**	ug/L	**Result**		**RPD**
		Result	**RDL**		**RPD**	**Limit**
18540-29-9 Chromium VI		0.000	4.00	0.000	0	25

General Chemistry Quality Control Summary

Analytical Batch	494038	**Client ID**	MB493931		LCS493931		
Prep Batch	493931	**GCAL ID**	1125190		1125191		
Prep Method	SW-846	**Sample Type**	Method Blank		LCS		
	9012A	**Prep Date**	11/06/2012 05:00		11/06/2012 05:00		
		Analytical Date	11/07/2012 10:11		11/07/2012 10:12		
		Matrix	Water		Water		
SW-846 9012A Cyanide		**Units**	mg/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
57-12-5	Total Cyanide	0.0012U	0.0012	0.020	0.019	96.5	80 - 120

Analytical Batch	494038	**Client ID**	MB493931		LCSHI493931			LCSDHI493931			
Prep Batch	493931	**GCAL ID**	1125190		1125192			1125193			
Prep Method	SW-846	**Sample Type**	Method Blank		LCSHI			LCSDHI			
	9012A	**Prep Date**	11/06/2012 05:00		11/06/2012 05:00			11/06/2012 05:00			
		Analytical Date	11/07/2012 10:11		11/07/2012 10:15			11/07/2012 10:16			
		Matrix	Water		Water			Water			
SW-846 9012A Cyanide		**Units**	mg/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
57-12-5	Total Cyanide	0.0012U	0.0012	0.10	0.092	92.2	80 - 120	0.092	92.1	0.11	20

GCAL

7979 GSRI Avenue, Baton Rouge, Louisiana 70820-7402
Phone 225.769.4900 • Fax 225.767.5717

Chain of Custody Record

Lab use only			
Trinity ADC	4747	212110306	11/09/12
Client Name	Client #	Workorder #	Due Date

Report to:
Client: Trinity ADC
Address: 1002 N Eglin Parkway
Shalimar FL 32459
Contact: Jonathan Kramer
Phone: 850 613 6800
Fax:

Bill to:
Client: Same as report to
Address:
Contact:
Phone:
Fax:

P.O. Number:
Project Name/Number: Melrose AFR A003-006
Sampled By: Ben Stewart Jordan Gibson

Lab use only:
Custody Seal used ☑ yes ☐ no
intact ☑ yes ☐ no
Temperature °C 3.6

Matrix[1]	Date	Time (2400)	Comp	Grab	Sample Description	Preservatives	No Containers	8260B (HCL)	Explosives (8330)	Total metals (6010C) HNO3	Diss Metals (6010C) HNO3	Chromium (VI) 7196A	Cyanide (9012A) NaOH	Mercury (7470A)	Nitrate Nitrite (300.0)	Perchlorate (6860)	Alkalinity (2320B)	TDS (2540C)	Remarks:	Lab ID 11/3
WG	11/2/12	1126		x	MA01MW001	ice	12	x	x	x	x	x	x	x	x	x	x	x		1
WQ	11/2/12	1126			TB-1	ice	3	x												2

Turn Around Time: ☐ 24-48 hrs. ☐ 3 days ☐ 1 week ☑ Standard ☐ Other

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
[signature]	[signature]	11/2/12	1600
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
[signature] 8728 2111 7400	[signature]	11/3/12	0940
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

Note: Diss metals were field filtered

By submitting these samples, you agree to the terms and conditions contained in our most recent schedule of services.

Matrix[1]: W = water, S = soil, SD = solid, L = liquid, SL = sludge, o = oil, CT = charcoal tube, A = air bag

We cannot accept verbal changes. Please fax written changes to (225) 767-5717

WHITE: CLIENT FINAL REPORT — CANARY: LABORATORY — PINK: CLIENT

GCAL-06 11/98

GCAL
GULF COAST ANALYTICAL LABORATORIES, INC

SAMPLE RECEIVING CHECKLIST

SAMPLE DELIVERY GROUP	212110306
Client 4747 - TRINITY Analysis & Development Corp.	**Transport Method** FEDEX
Profile 195817 - Melrose	**Received By** Pfeifer, Ben J.
Line Item(s) 1 - Waters	**Receive Date(s)** 11/03/12

CHECKLIST

	Yes	No	NA
Were all samples received using proper thermal preservation?	☑	☐	☐
When used, were all custody seals intact?	☑	☐	☐
Were all samples received in proper containers?	☑	☐	☐
Were all samples received using proper chemical preservation?	☑	☐	☐
Was preservative added to any container at the lab?	☐	☑	☐
Were all containers received in good condition?	☑	☐	☐
Were all VOA vials received with no head space?	☑	☐	☐
Do all sample labels match the Chain of Custody?	☑	☐	☐
Did the Chain of Custody list the sampling technician?	☑	☐	☐
Was the COC maintained i.e. all signatures, dates and time of receipt included?	☑	☐	☐

COOLERS

Airbill	Temp(oC)
8728 2111 7400	3.6

DISCREPANCIES

None

LABORATORY PRESERVATIONS

None

NOTES

November 19, 2012

Brenda Martinez
GCAL LAB
7979 GSRI AVENUE
BATON ROUGE, LA 70820
TEL: (225) 769-4900
FAX (225) 767-5717

Order No.: 1211069

RE: DoD Perchlorate

Dear Brenda Martinez:

DHL Analytical, Inc. received 1 sample(s) on 11/8/2012 for the analyses presented in the following report.

There were no problems with the analyses and all data met requirements of DoD QSM Ver 4.2 and NELAC except where noted in the Case Narrative. All non-NELAC methods will be identified accordingly in the case narrative and all estimated uncertainties of test results are within method or EPA specifications.

If you have any questions regarding these tests results, please feel free to call. This report shall not be reproduced except in full without the written approval of DHL Analytical, Inc. Thank you for using DHL Analytical.

Sincerely,

John DuPont
General Manager

This report was performed under the accreditation of the State of Texas & DoD Laboratory Certification Number: T104704211-12-8 & DoD ELAP #ADE-1416 v2

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GCAL

GULF COAST ANALYTICAL LABORATORIES, INC
7979 GSRI AVE, BATON ROUGE LA 70820-7402
(225) 769-4900 FAX (225) 767-5717

Chain of Custody Record

#1211069

Submitted by		Bill to	
Client:	Gulf Coast Analytical Labs	Client:	Gulf Coast Analytical Labs
Address:	7979 GSRI Avenue	Address:	7979 GSRI Avenue
	Baton Rouge, LA 70820		Baton Rouge, LA 70820
Contact:	Brenda Martinez	Contact:	Brenda Martinez
Phone:	(225)769-4900	Phone:	(225)769-4900
Fax:	(225)767-5717	Fax:	(225)767-5717

* Our P. O. Number must appear on the Invoice.
* Our Project Number must appear on the final report.

P.O. Number: 12-0954

Project Name/Number: 212110306

Sampled By:

	Matrix	Date	Time (2400)	Comp	Grab	Sample Description	Preservatives	No. Containers	PERCHLORATE (6860)	Remarks:	Lab ID
01	W	11/2/2012	11:26		X	MA01MW001		1	X	21211030601	

Turn Around Time: ___ 24 - 48 hrs ___ 3 days 1 week X standard other ___

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
[illegible]	Fed Ex	11/7/12	1700
Fedex	[illegible]	11/8/12	830

Note: Receiving temp 1.8° Therm #57 no custody seal

Please fax results to (225)767-5717

PLEASE RETURN ICE CHESTS TO 7979 GSRI AVE.

Matrix: W = water, S=Soil, SD=Solid, L=Liquid, SL=Sludge, O=Oil, CT=Charcoal Tube, OVM=Organic Vapor Monitor, XT=XAD Tube, A=Air Bag, SUM=Summa Canister

ORIGIN ID: OPLA (225) 769-4900
CHARLOTTE SAUCIER
GCAL
7979 GSRI RD

BATON ROUGE, LA 70802
UNITED STATES US

SHIP DATE: 07NOV12
ACTWGT: 30.0 LB MAN
CAD: 0924693/CAFE2605

BILL SENDER

TO

DHL
2300 DOUBLE CREEK

ROUND ROCK TX 78664
(225) 769-4900 REF:
INV:
PO: DEPT:

FedEx Express

J12131208160125

TRK# 0201 5443 0509 2997

THU - 08 NOV A1
PRIORITY OVERNIGHT

A8 BSMA

78664
TX-US AUS

Part # 156148-434 RITR 07/11

DHL Analytical, Inc.

Sample Receipt Checklist

Client Name GCAL LAB

Date Received: 11/8/2012

Work Order Number 1211069

Received by JB

Checklist completed by: Signature 11/8/2012 Date

Reviewed by Initials 11/8/2012 Date

Carrier name: FedEx 1day

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	1.8 °C
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Adjusted? _____ Checked by _____

Any No response must be detailed in the comments section below.

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

Page 1 of 1

DHL Analytical, Inc.

Laboratory Review Checklist: Reportable Data

Project Name: DoD Perchlorate	**Date:** 11/19/12
Reviewer Name: Carlos Castro	**Laboratory Work Order:** 1211069
Prep Batch Number(s): See Prep Dates Report	**Run Batch:** See Analytical Dates Report

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
R1	OI	**Chain-of-Custody (C-O-C)**					
		1) Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				R1-01
		2) Were all departures from standard conditions described in an exception report?			X		
R2	OI	**Sample and Quality Control (QC) Identification**					
		1) Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		2) Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	**Test Reports**					
		1) Were all samples prepared and analyzed within holding times?	X				
		2) Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		3) Were calculations checked by a peer or supervisor?	X				
		4) Were all analyte identifications checked by a peer or supervisor?	X				
		5) Were sample quantitation limits reported for all analytes not detected?	X				
		6) Were all results for soil and sediment samples reported on a dry weight basis?			X		
		7) Were % moisture (or solids) reported for all soil and sediment samples?			X		
		8) If required for the project, TICs reported?			X		
R4	O	**Surrogate Recovery Data**					
		1) Were surrogates added prior to extraction?			X		
		2) Were surrogate percent recoveries in all samples within the laboratory QC limits?			X		
R5	OI	**Test Reports/Summary Forms for Blank Samples**					
		1) Were appropriate type(s) of blanks analyzed?	X				
		2) Were blanks analyzed at the appropriate frequency?	X				
		3) Where method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		4) Were blank concentrations < MQL?	X				
R6	OI	**Laboratory Control Samples (LCS):**					
		1) Were all COCs included in the LCS?	X				
		2) Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		3) Were LCSs analyzed at the required frequency?	X				
		4) Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		5) Does the detectability data document the laboratory's capability to detect the COCs at te MDL used to calculate the SQLs?	X				
		6) Was the LCSD RPD within QC limits (if applicable)?	X				
R7	OI	**Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Data**					
		1) Were the project/method specified analytes included in the MS and MSD?	X				
		2) Were MS/MSD analyzed at the appropriate frequency?	X				
		3) Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?		X			R7-03
		4) Were MS/MSD RPDs within laboratory QC limits?	X				
R8	OI	**Analytical Duplicate Data**					
		1) Were appropriate analytical duplicates analyzed for each matrix?			X		
		2) Were analytical duplicates analyzed at the appropriate frequency?			X		
		3) Were RPDs or relative standard deviations within the laboratory QC limits?			X		
R9	OI	**Method Quantitation Limits (MQLs):**					
		1) Are the MQLs for each method analyte included in the laboratory data package?	X				
		2) Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		3) Are unadjusted MQLs included in the laboratory data package?	X				
R10	OI	**Other Problems/Anomalies**					
		1) Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		2) Were all necessary corrective actions performed for the reported data?	X				
		3) Was applicable and available technology used to lower the SQL minimize the matrix interference affects on the sample results?	X				

1 Items identified by the letter "R" should be included in the laboratory data package submitted to the TCEQ in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2 O = organic analyses; I = inorganic analyses (and general chemistry, when applicable).
3 NA = Not applicable.
4 NR = Not Reviewed.
5 ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

DHL Analytical, Inc.
Laboratory Review Checklist (continued): Supporting Data

Project Name: DoD Perchlorate | **Date:** 11/19/12

Reviewer Name: Carlos Castro | **Laboratory Work Order:** 1211069

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
S1	OI	**Initial Calibration (ICAL)**					
		1) Were response factors and/or relative response factors for each analyte within QC limits?	X				
		2) Were percent RSDs or correlation coefficient criteria met?	X				
		3) Was the number of standards recommended in the method used for all analytes?	X				
		4) Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		5) Are ICAL data available for all instruments used?	X				
		6) Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	**Initial and Continuing calibration Verification (ICCV and CCV) and Continuing Calibration blank (CCB)**					
		1) Was the CCV analyzed at the method-required frequency?	X				
		2) Were percent differences for each analyte within the method-required QC limits?	X				
		3) Was the ICAL curve verified for each analyte?	X				
		4) Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
S3	O	**Mass Spectral Tuning**					
		1) Was the appropriate compound for the method used for tuning?	X				
		2) Were ion abundance data within the method-required QC limits?	X				
S4	O	**Internal Standards (IS)**					
		1) Were IS area counts and retention times within the method-required QC limits?	X				
S5	OI	**Raw Data (NELAC section 1 appendix A glossary, and section 5.12)**					
		1) Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		2) Were data associated with manual integrations flagged on the raw data?	X				
S6	O	**Dual Column Confirmation**					
		1) Did dual column confirmation results meet the method-required QC?			X		
S7	O	**Tentatively Identified Compounds (TICs)**					
		1) If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	**Interference Check Sample (ICS) Results**					
		1) Were percent recoveries within method QC limits?			X		
S9	I	**Serial Dilutions, Post Digestion Spikes, and Method of Standard Additions**					
		1) Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X		
S10	OI	**Method Detection Limit (MDL) Studies**					
		1) Was a MDL study performed for each reported analyte?	X				
		2) Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S11	OI	**Proficiency Test Reports**					
		1) Was the lab's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	**Standards Documentation**					
		1) Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	**Compound/Analyte Identification Procedures**					
		1) Are the procedures for compound/analyte identification documented?	X				
S14	OI	**Demonstration of Analyst Competency (DOC)**					
		1) Was DOC conducted consistent with NELAC Chapter 5C?	X				
		2) Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	**Verification/Validation Documentation for Methods (NELAC Chap 5)**					
		1) Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	**Laboratory Standard Operating Procedures (SOPs)**					
		1) Are laboratory SOPs current and on file for each method performed?	X				

1 Items identified by the letter "R" should be included in the laboratory data package submitted to the TCEQ in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2 O = organic analyses; I = inorganic analyses (and general chemistry, when applicable).
3 NA = Not applicable.
4 NR = Not Reviewed.
5 ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Laboratory Data Package Signature Page

This data package consists of:

This signature page, the laboratory review checklist, and the following reportable data:

R1 Field chain-of-custody documentation;
R2 Sample identification cross-reference;
R3 Test reports (analytical data sheets) for each environmental sample that includes:
  a) Items consistent with NELAC 5.13
  b) dilution factors,
  c) preparation methods,
  d) cleanup methods, and
  e) if required for the project, tentatively identified compounds (TICs).
R4 Surrogate recovery data including:
  a) Calculated recovery (%R), and
  b) The laboratory's surrogate QC limits.
R5 Test reports/summary forms for blank samples;
R6 Test reports/summary forms for laboratory control samples (LCSs) including:
  a) LCS spiking amounts,
  b) Calculated %R for each analyte, and
  c) The laboratory's LCS QC limits.
R7 Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
  a) Samples associated with the MS/MSD clearly identified,
  b) MS/MSD spiking amounts,
  c) Concentration of each MS/MSD analyte measured in the parent and spiked samples,
  d) Calculated %Rs and relative percent differences (RPDs), and
  e) The laboratory's MS/MSD QC limits
R8 Laboratory analytical duplicate (if applicable) recovery and precision:
  a) the amount of analyte measured in the duplicate,
  b) the calculated RPD, and
  c) the laboratory's QC limits for analytical duplicates.
R9 List of method quantitation limits (MQLs) for each analyte for each method and matrix;
R10 Other problems or anomalies.

The Exception Report for every "No" or "Not Reviewed (NR)" item in laboratory review checklist.

Release Statement: I am responsible for the release of this laboratory data package. This data package has been reviewed by the laboratory and is complete and technically compliant with the requirements of the methods used, except where noted by the laboratory in the attached exception reports. By my signature below, I affirm to the best of my knowledge, all problems/anomalies, observed by the laboratory as having the potential to affect the quality of the data, have been identified by the laboratory in the Laboratory Review Checklist, and no information or data have been knowingly withheld that would affect the quality of the data.

John DuPont – General Manager

Scott Schroeder – Technical Director

Signature

11/19/12
Date

DHL Analytical, Inc. **Date:** *19-Nov-12*

CLIENT: GCAL LAB
Project: DoD Perchlorate
Lab Order: 1211069

CASE NARRATIVE

This case narrative describes abnormalities and deviations that may affect the results and summarizes all known issues that need to be highlighted for the data user to assess the results. This case narrative and the report contents are compliant with DoD QSM Ver 4.2 and NELAC. The "U" flag , in the Analytical Report, indicates the results for that sample are nondetect.

Samples were analyzed using the methods outlined in the following references:

Method E332.0 or SW6860 - Perchlorate Analysis (Parameter is ELAP Accredited but not NELAC Certified)

Exception Report R1-01

The sample was received on and log-in performed on 11/8/12. A total of 1 sample was received and it was analyzed. The sample arrived in good condition and was properly packaged.

Exception Report R7-03

For Perchlorate analysis performed on 11/9/12 the matrix spike and matrix spike duplicate recoveries were out of control limits. These are flagged accordingly in the QC summary report. The sample selected for the matrix spike and matrix spike duplicate was not from this work order. The LCS was within control limits. No further corrective actions were taken.

A summary of project communication follows:

Request for quote was sent to DHL Analytical from the client, via email on 5/5/11 and the quote was sent to client via email on 5/5/11. Email for work approved by both parties on 5/18/11 with P.O number 12-0931.

Client sent samples in own containers.

This sample delivery group arrived at DHL Analytical 11/8/12.

DHL Analytical, Inc.

Date: *19-Nov-12*

CLIENT: GCAL LAB
Project: DoD Perchlorate
Lab Order: 1211069

Work Order Sample Summary

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
1211069-01	MA01MW001		11/02/12 11:26 AM	11/8/2012

DHL Analytical, Inc.

19-Nov-12

Lab Order: 1211069
Client: GCAL LAB
Project: DoD Perchlorate

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1211069-01A	MA01MW001	11/02/12 11:26 AM	Aqueous	SW6860	Perchlorate Prep	11/09/12 10:27 AM	54622

DHL Analytical, Inc.

19-Nov-12

Lab Order: 1211069
Client: GCAL LAB
Project: DoD Perchlorate

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1211069-01A	MA01MW001	Aqueous	SW6860	Perchlorate - Water	54622	1	11/09/12 03:44 PM	ICMS_121109A

DHL Analytical, Inc.

Date: *19-Nov-12*

CLIENT:	GCAL LAB	**Client Sample ID:**	MA01MW001
Project:	DoD Perchlorate	**Lab ID:**	1211069-01
Project No:	212110306	**Collection Date:**	11/02/12 11:26 AM
Lab Order:	1211069	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
PERCHLORATE - WATER		**SW6860**					Analyst: **CZ**
Perchlorate	0.000409	0.000100	0.000300	N	mg/L	1	11/09/12 03:44 PM

Qualifiers:				
	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: *19-Nov-12*

CLIENT: GCAL LAB
Work Order: 1211069
Project: DoD Perchlorate

ANALYTICAL QC SUMMARY REPORT

RunID: **ICMS_121109A**

The QC data in batch 54622 applies to the following samples: 1211069-01A

Sample ID: **MB-54622** Batch ID: **54622** TestNo: **SW6860** Units: **mg/L**
SampType: **MBLK** Run ID: **ICMS_121109A** Analysis Date: **11/9/2012 11:11:00 AM** Prep Date: **11/9/2012**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.000100	0.000300								NU

Sample ID: **1211018-01AMS** Batch ID: **54622** TestNo: **SW6860** Units: **mg/L**
SampType: **MS** Run ID: **ICMS_121109A** Analysis Date: **11/9/2012 12:52:00 PM** Prep Date: **11/9/2012**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.00218	0.000300	0.000300	0.00198	69.1	85	115			SN

Sample ID: **1211018-01AMSD** Batch ID: **54622** TestNo: **SW6860** Units: **mg/L**
SampType: **MSD** Run ID: **ICMS_121109A** Analysis Date: **11/9/2012 1:04:00 PM** Prep Date: **11/9/2012**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.00233	0.000300	0.000300	0.00198	118	85	115	6.53	20	SN

Sample ID: **LCS-54622** Batch ID: **54622** TestNo: **SW6860** Units: **mg/L**
SampType: **LCS** Run ID: **ICMS_121109A** Analysis Date: **11/9/2012 1:16:00 PM** Prep Date: **11/9/2012**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.000312	0.000300	0.000300	0	104	85	115			N

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAC certified

CLIENT: GCAL LAB
Work Order: 1211069
Project: DoD Perchlorate

ANALYTICAL QC SUMMARY REPORT

RunID: ICMS_121109A

Sample ID: **ICV-121108** Batch ID: **R63403** TestNo: **SW6860** Units: **mg/L**
SampType: **ICV** Run ID: **ICMS_121109A** Analysis Date: **11/9/2012 9:50:00 AM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.00184	0.000300	0.00200	0	91.8	85	115			N

Sample ID: **ICS-121108** Batch ID: **R63403** TestNo: **SW6860** Units: **mg/L**
SampType: **ICS** Run ID: **ICMS_121109A** Analysis Date: **11/9/2012 10:02:00 AM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.000290	0.000300	0.000300	0	96.8	85	115			N

Sample ID: **LCVL-121108** Batch ID: **R63403** TestNo: **SW6860** Units: **mg/L**
SampType: **LCVL** Run ID: **ICMS_121109A** Analysis Date: **11/9/2012 10:44:00 AM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.000238	0.000300	0.000200	0	119	70	130			N

Sample ID: **CCV1-121108** Batch ID: **R63403** TestNo: **SW6860** Units: **mg/L**
SampType: **CCV** Run ID: **ICMS_121109A** Analysis Date: **11/9/2012 1:28:00 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.00500	0.000300	0.00500	0	100	85	115			N

Sample ID: **LCVL2-121108** Batch ID: **R63403** TestNo: **SW6860** Units: **mg/L**
SampType: **LCVL** Run ID: **ICMS_121109A** Analysis Date: **11/9/2012 1:53:00 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.000191	0.000300	0.000200	0	95.5	70	130			N

Sample ID: **CCV2-121108** Batch ID: **R63403** TestNo: **SW6860** Units: **mg/L**
SampType: **CCV** Run ID: **ICMS_121109A** Analysis Date: **11/9/2012 4:20:00 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.00461	0.000300	0.00500	0	92.3	85	115			N

Sample ID: **LCVL3-121108** Batch ID: **R63403** TestNo: **SW6860** Units: **mg/L**
SampType: **LCVL** Run ID: **ICMS_121109A** Analysis Date: **11/9/2012 4:59:00 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.000216	0.000300	0.000200	0	108	70	130			N

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAC certified

DHL Analytical, Inc.

19-Nov-12

Lab Order: 1211069
Client: GCAL LAB
Project: DoD Perchlorate

Sequence Report

Run ID: ICMS_121109A

Sample ID	Client Sample ID	Test Number	Batch ID	Dilution	Analysis Date	Prep Date	Matrix
INTIAL CALIBRATION SUMMARY	-----	SW6860	R63403	1	11/9/2012		A
INTERNAL STANDARD SUMMARY	-----	SW6860	R63403	1	11/9/2012		A
ICV-121108	-----	SW6860	R63403	1	11/9/2012 9:50:00 AM		A
ICS-121108	-----	SW6860	R63403	1	11/9/2012 10:02:00 AM		A
ICB-12108	-----	SW6860	R63403	1	11/9/2012 10:14:00 AM		A
LCVL-121108	-----	SW6860	R63403	1	11/9/2012 10:44:00 AM		A
MB-54622	-----	SW6860	54622	1	11/9/2012 11:11:00 AM	11/9/2012 10:27:48 AM	A
1211018-01AMS	-----	SW6860	54622	1	11/9/2012 12:52:00 PM	11/9/2012 10:27:48 AM	A
1211018-01AMSD	-----	SW6860	54622	1	11/9/2012 1:04:00 PM	11/9/2012 10:27:48 AM	A
LCS-54622	-----	SW6860	54622	1	11/9/2012 1:16:00 PM	11/9/2012 10:27:48 AM	A
CCV1-121108	-----	SW6860	R63403	1	11/9/2012 1:28:00 PM		A
CCB1-121108	-----	SW6860	R63403	1	11/9/2012 1:41:00 PM		A
LCVL2-121108	-----	SW6860	R63403	1	11/9/2012 1:53:00 PM		A
1211069-01A	MA01MW001	SW6860	54622	1	11/9/2012 3:44:00 PM	11/9/2012 10:27:48 AM	A
CCV2-121108	-----	SW6860	R63403	1	11/9/2012 4:20:00 PM		A
CCB2-121108	-----	SW6860	R63403	1	11/9/2012 4:33:00 PM		A
LCVL3-121108	-----	SW6860	R63403	1	11/9/2012 4:59:00 PM		A

Initial Calibration Summary

Control Program:	**ClO4PGM_120523**
Quantif. Method:	**ClO4_120523**
Recording Time:	**11/9/2012 9:50**
Injection Volume:	**200.0**
Test:	**Perchlorate**

Sample Name	Area counts*min Perchlorate_99 SIM_01B	Area counts*min Perchlorate_101 SIM_02B	Area counts*min ISTD_03 SIM_03B
ClO4_0.3_1	506.7150	217.961	1678.968
ClO4_0.5_1	938.3354	317.275	1642.060
ClO4_1.0_1	1858.8183	590.921	1651.572
ClO4_2.0_1	3430.4242	1065.045	1587.084
ClO4_5.0_1	8460.8517	2700.013	1442.137
ClO4_7.0_1	11820.8679	3799.330	1409.731
CLO4_10.0_1	16631.2688	5327.615	1396.272

Peak	Cal Type	Offset	Slope	Curve	Coeff. Det.
Perchlorate_99	XQOff	0.707	112.352	0.899	99.923
Perchlorate_101	XQOff	-1.155	37.952	0.045	99.764

Internal Standard Summary

Sequence Name:	**121108_CLO4**
Control Program:	**ClO4PGM_120523**
Quantif. Method:	**ClO4_120523**
Injection Volume:	**200.0**
Test:	**Perchlorate**

	Area Counts
ISTD 107 Cal Average	1544
Low Limit (50%)	772
High Limit (150%)	2316

Sample Name	**Area counts*min ISTD_03 SIM_03B**
LRB1-120523	1576.971
ClO4_0.3_1	1678.968
ClO4_0.5_1	1642.060
ClO4_1.0_1	1651.572
ClO4_2.0_1	1587.084
ClO4_5.0_1	1442.137
ClO4_7.0_1	1409.731
CLO4_10.0_1	1396.272
LRB2-120523	1616.530
SSCV-120523	1645.976
ICV-121108	1604.875
ICS-121108	1719.421
ICB-12108	1515.304
LCVL-121108	1463.643
LCS-54622	1404.505
MB-54622	1346.014
1211016-01A	1432.702
1211016-02A	1508.475
1211016-03A	1471.552
1211017-01A	1243.786
1211017-02A	1212.367
1211018-01A	1295.062
1211018-01AMS	1272.831
1211018-01AMSD	1199.633
LCS-54622	1341.589
CCV1-121108	938.043

CCB1-121108	1068.915
LCVL2-121108	1146.044
1211019-01A	1499.009
1211062-01A	1301.043
1211062-02A	1250.523
1211067-01A	1236.725
1211067-02A	1326.311
1211067-03A	1160.474
1211068-01A	1072.106
1211069-01A	1324.908
1211062-01A	1144.980
1211062-02A	1175.490
CCV2-121108	1034.212
CCB2-121108	1246.360
LCVL3-121108	2234.168

NELAP CERTIFICATE NUMBER 01955
DOD ELAP CERTIFICATE NUMBER ADE - 1482

ANALYTICAL RESULTS

PERFORMED BY

GULF COAST ANALYTICAL LABORATORIES, INC.

7979 GSRI Avenue

Baton Rouge, LA 70820

Report Date 11/20/2012

GCAL Report 212110712

Deliver To	TRINITY Analysis & Development Corp. 1002 N Eglin Pkwy Shalimar, FL 32579 850-613-6800
Attn	Jonathan Kramer

Project Melrose AFR A003-006

CASE NARRATIVE

Client: TRINITY Analysis & Development Corp. **Report:** 212110712

Gulf Coast Analytical Laboratories received and analyzed the sample(s) listed on the sample cross-reference page of this report. Receipt of the sample(s) is documented by the attached chain of custody. This applies only to the sample(s) listed in this report. No sample integrity or quality control exceptions were identified unless noted below.

HIGH PERFORMANCE LIQUID CHROMATOGRAPHY

In the SW-846 8330A analysis for prep batch 494270, the MS/MSD exhibited RPD failures; however, all compounds were recovered within quality control limits in the LCS. The LCS/LCSD exhibited RPD failures.

METALS

In the SW-846 6010C analysis, samples 21211071202 (M114 MW004) and 21211071203 (M114 MW001) had to be diluted in order to bracket the concentration of a target analyte within the linear dynamic range of the instrument.

In the SW-846 6010C Dissolved analysis, samples 21211071202 (M114 MW004) and 21211071203 (M114 MW001) had to be diluted in order to bracket the concentration of a target analyte within the linear dynamic range of the instrument.

In the SW-846 6010C Dissolved analysis for prep batch 494112, the MS/MSD recoveries are not applicable for Magnesium, Calcium and Sodium because the sample concentration is greater than four times the spike concentration.

Several Dissolved Metals concentration is greater than the Total concentration for several elements in several samples. This is attributed to separate aliquots of sample.

CONVENTIONALS

In the EPA 300.0 analysis, samples 21211071201 (MA01 MW002), 21211071202 (M114 MW004) and 21211071203 (M114 MW001) had to be diluted in order to bracket the concentration within the calibration range of the instrument.

In the EPA 353.2 analysis, sample 21211071203 (M114 MW001) had to be diluted in order to bracket the Nitrate + Nitrite and/or Nitrite concentrations within the calibration range of the instrument. The Nitrate is based on the difference between the Nitrate + Nitrite and the Nitrite. The dilution is reflected in the elevated reporting limit.

In the EPA 300.0 analysis for analytical batch 494190, the MS/MSD recovery was outside the control limits for Chloride. The LCS recovery was within control limits. This indicates the analysis is in control and the sample is affected by a matrix interference.

MISCELLANEOUS

Sample 21211071202 (M114 MW004) container ID 21211071202-5 had to be preserved at the laboratory with HNO3. This container was used to analyze SW-846 7470A Dissolved, SW-846 6010C and SW-846 6010C Dissolved.

Sample 21211071201 (MA01 MW002) was received outside of the prescribed holding time for one or more parameters. The analysis was still performed at the clients request.

Sample 21211071201 (MA01 MW002) was received outside of the prescribed holding time for one or more parameters. The analysis was still performed at the clients request.

Laboratory Endorsement

Sample analysis was performed in accordance with approved methodologies provided by the Environmental Protection Agency or other recognized agencies. The samples and their corresponding extracts will be maintained for a period of 30 days unless otherwise arranged. Following this retention period the samples will be disposed in accordance with GCAL's Standard Operating Procedures.

Common Abbreviations Utilized in this Report

ND	Indicates the result was Not Detected at the specified RDL
DO	Indicates the result was Diluted Out
MI	Indicates the result was subject to Matrix Interference
TNTC	Indicates the result was Too Numerous To Count
SUBC	Indicates the analysis was Sub-Contracted
FLD	Indicates the analysis was performed in the Field
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
RDL	Reporting Detection Limit
00:00	Reported as a time equivalent to 12:00 AM

Reporting Flags Utilized in this Report

J	Indicates the result is between the MDL and RDL
U	Indicates the compound was analyzed for but not detected
B	Indicates the analyte was detected in the associated Method Blank

Sample receipt at GCAL is documented through the attached chain of custody. In accordance with NELAC, this report shall be reproduced only in full and with the written permission of GCAL. The results contained within this report relate only to the samples reported. The documented results are presented within this report.

This report pertains only to the samples listed in the Report Sample Summary and should be retained as a permanent record thereof. The results contained within this report are intended for the use of the client. Any unauthorized use of the information contained in this report is prohibited.

I certify that this data package is in compliance with the NELAC standard and terms and conditions of the contract and Statement of Work both technically and for completeness, for other than the conditions in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted has been authorized by the Quality Assurance Manager or his/her designee, as verified by the following signature.

Estimated uncertainty of measurement is available upon request. This report is in compliance with the DOD QSM as specified in the contract if applicable.

_____

Robyn Migues
Technical Director
GCAL REPORT 212110712

THIS REPORT CONTAINS _____ PAGES.

Report Sample Summary

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211071201	MA01 MW002	Water	11/06/2012 09:00	11/07/2012 09:45
21211071202	M114 MW004	Water	11/06/2012 10:41	11/07/2012 09:45
21211071203	M114 MW001	Water	11/06/2012 13:30	11/07/2012 09:45
21211071204	TB-03	Water	11/06/2012 09:00	11/07/2012 09:45

Summary of Compounds Detected

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211071201	**MA01 MW002**	Water	11/06/2012 09:00	11/07/2012 09:45

EPA 300.0

CAS#	Parameter	Result	RDL	MDL	Units
16887-00-6	Chloride	511	20.0	12.6	mg/L
14808-79-8	Sulfate	589	40.0	23.0	mg/L

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	437	200	60.0	ug/L
7440-36-0	Antimony	3.66J	60.0	3.11	ug/L
7440-39-3	Barium	21.2	10.0	0.71	ug/L
7440-47-3	Chromium	14.2	10.0	1.00	ug/L
7440-50-8	Copper	13.3	10.0	1.01	ug/L
7439-89-6	Iron	345	100	40.0	ug/L
7439-95-4	Magnesium	37900	100	50.0	ug/L
7439-96-5	Manganese	17.5	15.0	2.00	ug/L
7439-98-7	Molybdenum	7.70J	50.0	3.75	ug/L
7440-02-0	Nickel	13.3J	40.0	1.13	ug/L
7440-09-7	Potassium	7440	500	100	ug/L
7440-22-4	Silver	1.03J	10.0	0.70	ug/L
7440-32-6	Titanium	5.42J	100	1.20	ug/L
7440-62-2	Vanadium	23.9	20.0	3.75	ug/L
7440-66-6	Zinc	32.6	20.0	4.51	ug/L

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7440-70-2	Calcium	38900	100	50.0	ug/L
7440-23-5	Sodium	554000	1000	200	ug/L

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7440-39-3	Barium	14.9	10.0	0.71	ug/L
7440-43-9	Cadmium	0.52J	5.00	0.20	ug/L
7440-47-3	Chromium	1.51J	10.0	1.00	ug/L
7440-50-8	Copper	9.01J	10.0	1.01	ug/L
7439-95-4	Magnesium	33700	100	50.0	ug/L
7439-96-5	Manganese	8.05J	15.0	2.00	ug/L
7439-98-7	Molybdenum	7.09J	50.0	3.75	ug/L
7440-02-0	Nickel	2.69J	40.0	1.13	ug/L
7440-09-7	Potassium	6770	500	100	ug/L
7440-22-4	Silver	1.10J	10.0	0.70	ug/L
7440-28-0	Thallium	4.91J	20.0	3.04	ug/L
7440-62-2	Vanadium	20.7	20.0	3.75	ug/L
7440-66-6	Zinc	24.9	20.0	4.51	ug/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211071201	**MA01 MW002**	Water	11/06/2012 09:00	11/07/2012 09:45

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7440-70-2	Calcium	37600	100	50.0	ug/L
7440-23-5	Sodium	510000	1000	200	ug/L

EPA 353.2 Nitrate

CAS#	Parameter	Result	RDL	MDL	Units
14797-55-8	Nitrate	0.443	0.010	0.005	mg/L-N

SM 2540C TDS

CAS#	Parameter	Result	RDL	MDL	Units
WET-035	Total Dissolved Solids(TDS)	1750	10.0		mg/L

SM 2320B Alkalinity

CAS#	Parameter	Result	RDL	MDL	Units
000000-00-5	Total Alkalinity	180	1.0	0.19	mg/L CaCO3

SW-846 8260B

CAS#	Parameter	Result	RDL	MDL	Units
67-64-1	Acetone	46.6	5.00	0.193	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211071202	**M114 MW004**	Water	11/06/2012 10:41	11/07/2012 09:45

EPA 300.0

CAS#	Parameter	Result	RDL	MDL	Units
16887-00-6	Chloride	4400	100	63.0	mg/L
14808-79-8	Sulfate	2290	200	115	mg/L

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	106J	200	60.0	ug/L
7440-39-3	Barium	14.4	10.0	0.71	ug/L
7440-43-9	Cadmium	1.24J	5.00	0.20	ug/L
7440-47-3	Chromium	6.81J	10.0	1.00	ug/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211071202	**M114 MW004**	Water	11/06/2012 10:41	11/07/2012 09:45

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7440-50-8	Copper	8.62J	10.0	1.01	ug/L
7439-89-6	Iron	44.2J	100	40.0	ug/L
7439-95-4	Magnesium	283000	100	50.0	ug/L
7439-98-7	Molybdenum	14.2J	50.0	3.75	ug/L
7440-09-7	Potassium	19000	500	100	ug/L
7782-49-2	Selenium	24.5J	40.0	4.42	ug/L
7440-62-2	Vanadium	14.2J	20.0	3.75	ug/L
7440-66-6	Zinc	29.6	20.0	4.51	ug/L

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7440-70-2	Calcium	312000	100	50.0	ug/L

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7440-23-5	Sodium	2240000	10000	2000	ug/L

EPA 353.2 Nitrate

CAS#	Parameter	Result	RDL	MDL	Units
14797-55-8	Nitrate	0.825	0.010	0.005	mg/L-N

SM 2320B Alkalinity

CAS#	Parameter	Result	RDL	MDL	Units
000000-00-5	Total Alkalinity	72.9	1.0	0.19	mg/L CaCO3

SM 2540C TDS

CAS#	Parameter	Result	RDL	MDL	Units
WET-035	Total Dissolved Solids(TDS)	9300	10.0		mg/L

EPA 353.2 Nitrite

CAS#	Parameter	Result	RDL	MDL	Units
14797-65-0	Nitrite	0.020	0.010	0.002	mg/L-N

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7440-36-0	Antimony	5.71J	60.0	3.11	ug/L
7440-39-3	Barium	13.7	10.0	0.71	ug/L
7440-43-9	Cadmium	2.31J	5.00	0.20	ug/L
7440-47-3	Chromium	4.00J	10.0	1.00	ug/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211071202	**M114 MW004**	Water	11/06/2012 10:41	11/07/2012 09:45

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7440-50-8	Copper	5.12J	10.0	1.01	ug/L
7439-95-4	Magnesium	314000	100	50.0	ug/L
7439-98-7	Molybdenum	15.7J	50.0	3.75	ug/L
7440-09-7	Potassium	21200	500	100	ug/L
7782-49-2	Selenium	25.4J	40.0	4.42	ug/L
7440-28-0	Thallium	5.45J	20.0	3.04	ug/L
7440-62-2	Vanadium	8.78J	20.0	3.75	ug/L
7440-66-6	Zinc	34.1	20.0	4.51	ug/L

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7440-70-2	Calcium	373000	100	50.0	ug/L

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7440-23-5	Sodium	2560000	10000	2000	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211071203	**M114 MW001**	Water	11/06/2012 13:30	11/07/2012 09:45

EPA 300.0

CAS#	Parameter	Result	RDL	MDL	Units
16887-00-6	Chloride	3320	200	126	mg/L
14808-79-8	Sulfate	2200	400	230	mg/L

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	446	200	60.0	ug/L
7440-36-0	Antimony	6.43J	60.0	3.11	ug/L
7440-39-3	Barium	28.2	10.0	0.71	ug/L
7440-43-9	Cadmium	1.08J	5.00	0.20	ug/L
7440-47-3	Chromium	41.7	10.0	1.00	ug/L
7440-48-4	Cobalt	1.38J	10.0	1.00	ug/L
7440-50-8	Copper	14.8	10.0	1.01	ug/L
7439-89-6	Iron	511	100	40.0	ug/L
7439-95-4	Magnesium	241000	100	50.0	ug/L
7439-96-5	Manganese	33.5	15.0	2.00	ug/L
7439-98-7	Molybdenum	18.9J	50.0	3.75	ug/L
7440-02-0	Nickel	26.3J	40.0	1.13	ug/L
7440-09-7	Potassium	18900	500	100	ug/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211071203	**M114 MW001**	Water	11/06/2012 13:30	11/07/2012 09:45

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7782-49-2	Selenium	33.2J	40.0	4.42	ug/L
7440-28-0	Thallium	3.04J	20.0	3.04	ug/L
7440-32-6	Titanium	7.87J	100	1.20	ug/L
7440-62-2	Vanadium	20.2	20.0	3.75	ug/L
7440-66-6	Zinc	45.6	20.0	4.51	ug/L

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7440-70-2	Calcium	273000	100	50.0	ug/L

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7440-23-5	Sodium	2060000	10000	2000	ug/L

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7440-38-2	Arsenic	3.97J	10.0	3.59	ug/L
7440-39-3	Barium	16.9	10.0	0.71	ug/L
7440-43-9	Cadmium	2.09J	5.00	0.20	ug/L
7440-47-3	Chromium	4.87J	10.0	1.00	ug/L
7440-50-8	Copper	7.00J	10.0	1.01	ug/L
7439-95-4	Magnesium	227000	100	50.0	ug/L
7439-96-5	Manganese	7.45J	15.0	2.00	ug/L
7439-98-7	Molybdenum	19.1J	50.0	3.75	ug/L
7440-02-0	Nickel	7.24J	40.0	1.13	ug/L
7440-09-7	Potassium	17500	500	100	ug/L
7782-49-2	Selenium	33.5J	40.0	4.42	ug/L
7440-28-0	Thallium	5.18J	20.0	3.04	ug/L
7440-62-2	Vanadium	11.8J	20.0	3.75	ug/L
7440-66-6	Zinc	29.2	20.0	4.51	ug/L

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7440-70-2	Calcium	263000	100	50.0	ug/L

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7440-23-5	Sodium	1970000	10000	2000	ug/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211071203	**M114 MW001**	Water	11/06/2012 13:30	11/07/2012 09:45

SM 2540C TDS

CAS#	Parameter	Result	RDL	MDL	Units
WET-035	**Total Dissolved Solids(TDS)**	**7810**	**10.0**		**mg/L**

EPA 353.2 Nitrate

CAS#	Parameter	Result	RDL	MDL	Units
14797-55-8	**Nitrate**	**1.19**	**0.020**	**0.010**	**mg/L-N**

EPA 353.2 Nitrite

CAS#	Parameter	Result	RDL	MDL	Units
14797-65-0	**Nitrite**	**0.016**	**0.010**	**0.002**	**mg/L-N**

SM 2320B Alkalinity

CAS#	Parameter	Result	RDL	MDL	Units
000000-00-5	**Total Alkalinity**	**94.3**	**1.0**	**0.19**	**mg/L CaCO3**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211071201	**MA01 MW002**	Water	11/06/2012 09:00	11/07/2012 09:45

Subcontract Work

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/20/2012 08:17	BJM	

CAS#	Parameter	Result	RDL	MDL	Units
SHIP-001	Ship Result	*			mg/L

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/10/2012 15:21	LBH	494340

CAS#	Parameter	Result	RDL	MDL	Units
630-20-6	1,1,1,2-Tetrachloroethane	0.120U	1.00	0.120	ug/L
71-55-6	1,1,1-Trichloroethane	0.123U	1.00	0.123	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.109U	1.00	0.109	ug/L
79-00-5	1,1,2-Trichloroethane	0.159U	1.00	0.159	ug/L
75-34-3	1,1-Dichloroethane	0.171U	1.00	0.171	ug/L
75-35-4	1,1-Dichloroethene	0.208U	1.00	0.208	ug/L
563-58-6	1,1-Dichloropropene	0.052U	1.00	0.052	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.079U	1.00	0.079	ug/L
96-18-4	1,2,3-Trichloropropane	0.065U	1.00	0.065	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.105U	1.00	0.105	ug/L
95-63-6	1,2,4-Trimethylbenzene	0.084U	1.00	0.084	ug/L
96-12-8	1,2-Dibromo-3-chloropropane	0.194U	1.00	0.194	ug/L
106-93-4	1,2-Dibromoethane	0.102U	1.00	0.102	ug/L
95-50-1	1,2-Dichlorobenzene	0.135U	1.00	0.135	ug/L
107-06-2	1,2-Dichloroethane	0.116U	1.00	0.116	ug/L
78-87-5	1,2-Dichloropropane	0.150U	1.00	0.150	ug/L
108-67-8	1,3,5-Trimethylbenzene	0.066U	1.00	0.066	ug/L
541-73-1	1,3-Dichlorobenzene	0.138U	1.00	0.138	ug/L
142-28-9	1,3-Dichloropropane	0.059U	1.00	0.059	ug/L
106-46-7	1,4-Dichlorobenzene	0.083U	1.00	0.083	ug/L
594-20-7	2,2-Dichloropropane	0.170U	1.00	0.170	ug/L
78-93-3	2-Butanone	0.142U	5.00	0.142	ug/L
95-49-8	2-Chlorotoluene	0.080U	1.00	0.080	ug/L
591-78-6	2-Hexanone	0.122U	5.00	0.122	ug/L
106-43-4	4-Chlorotoluene	0.124U	1.00	0.124	ug/L
99-87-6	4-Isopropyltoluene	0.070U	1.00	0.070	ug/L
108-10-1	4-Methyl-2-pentanone	0.120U	5.00	0.120	ug/L
67-64-1	**Acetone**	**46.6**	**5.00**	**0.193**	**ug/L**
71-43-2	Benzene	0.111U	1.00	0.111	ug/L
108-86-1	Bromobenzene	0.145U	1.00	0.145	ug/L
74-97-5	Bromochloromethane	0.127U	1.00	0.127	ug/L
75-27-4	Bromodichloromethane	0.083U	1.00	0.083	ug/L
75-25-2	Bromoform	0.215U	1.00	0.215	ug/L
74-83-9	Bromomethane	0.427U	1.00	0.427	ug/L
75-15-0	Carbon disulfide	0.190U	1.00	0.190	ug/L
56-23-5	Carbon tetrachloride	0.248U	1.00	0.248	ug/L
108-90-7	Chlorobenzene	0.083U	1.00	0.083	ug/L
75-00-3	Chloroethane	0.235U	1.00	0.235	ug/L
67-66-3	Chloroform	0.155U	1.00	0.155	ug/L
74-87-3	Chloromethane	0.144U	1.00	0.144	ug/L
74-95-3	Dibromomethane	0.211U	1.00	0.211	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211071201	**MA01 MW002**	Water	11/06/2012 09:00	11/07/2012 09:45

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/10/2012 15:21	LBH	494340

CAS#	Parameter	Result	RDL	MDL	Units
75-71-8	Dichlorodifluoromethane	0.145U	1.00	0.145	ug/L
100-41-4	Ethylbenzene	0.109U	1.00	0.109	ug/L
87-68-3	Hexachlorobutadiene	0.265U	1.00	0.265	ug/L
98-82-8	Isopropylbenzene (Cumene)	0.130U	1.00	0.130	ug/L
75-09-2	Methylene chloride	0.149U	5.00	0.149	ug/L
91-20-3	Naphthalene	0.176U	1.00	0.176	ug/L
100-42-5	Styrene	0.089U	1.00	0.089	ug/L
127-18-4	Tetrachloroethene	0.193U	1.00	0.193	ug/L
108-88-3	Toluene	0.122U	1.00	0.122	ug/L
79-01-6	Trichloroethene	0.161U	1.00	0.161	ug/L
75-69-4	Trichlorofluoromethane	0.157U	1.00	0.157	ug/L
75-01-4	Vinyl chloride	0.127U	1.00	0.127	ug/L
156-59-2	cis-1,2-Dichloroethene	0.103U	1.00	0.103	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.124U	1.00	0.124	ug/L
136777-61-2	m,p-Xylene	0.123U	2.00	0.123	ug/L
104-51-8	n-Butylbenzene	0.123U	1.00	0.123	ug/L
103-65-1	n-Propylbenzene	0.727U	1.00	0.727	ug/L
95-47-6	o-Xylene	0.055U	1.00	0.055	ug/L
135-98-8	sec-Butylbenzene	0.107U	1.00	0.107	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.078U	5.00	0.078	ug/L
98-06-6	tert-Butylbenzene	0.087U	1.00	0.087	ug/L
156-60-5	trans-1,2-Dichloroethene	0.077U	1.00	0.077	ug/L
10061-02-6	trans-1,3-Dichloropropene	0.128U	1.00	0.128	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	51.7	ug/L	103	75 - 120
1868-53-7	Dibromofluoromethane	50	50.5	ug/L	101	85 - 115
2037-26-5	Toluene d8	50	50.2	ug/L	100	85 - 120
17060-07-0	1,2-Dichloroethane-d4	50	51.8	ug/L	104	70 - 120

SW-846 8330A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/13/2012 04:30	494270	SW-846 8330A	1	11/14/2012 23:46	JWM	494679

CAS#	Parameter	Result	RDL	MDL	Units
99-35-4	1,3,5-Trinitrobenzene	0.240U	0.500	0.240	ug/L
99-65-0	1,3-Dinitrobenzene	0.167U	0.500	0.167	ug/L
118-96-7	2,4,6-Trinitrotoluene	0.483U	1.00	0.483	ug/L
121-14-2	2,4-Dinitrotoluene	0.501U	1.00	0.501	ug/L
606-20-2	2,6-Dinitrotoluene	0.283U	1.00	0.283	ug/L
355-72-78-2	2-Amino-4,6-dinitrotoluene	0.576U	1.00	0.576	ug/L
88-72-2	2-Nitrotoluene	0.120U	0.500	0.120	ug/L
99-08-1	3-Nitrotoluene	0.369U	1.00	0.369	ug/L
1946-51-0	4-Amino-2,6-dinitrotoluene	0.489U	1.00	0.489	ug/L
99-99-0	4-Nitrotoluene	0.417U	1.00	0.417	ug/L
2691-41-0	HMX	0.212U	0.500	0.212	ug/L
98-95-3	Nitrobenzene	0.267U	0.500	0.267	ug/L
121-82-4	RDX	0.189U	0.500	0.189	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211071201	**MA01 MW002**	Water	11/06/2012 09:00	11/07/2012 09:45

SW-846 8330A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/13/2012 04:30	494270	SW-846 8330A	1	11/14/2012 23:46	JWM	494679

CAS#	Parameter	Result	RDL	MDL	Units
479-45-8	Tetryl	0.241U	0.500	0.241	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
528-29-0	1,2-Dinitrobenzene	2	1.66	ug/L	83	70 - 130

SW-846 7470A Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 09:30	494114	SW-846 7470A Dissolved	1	11/10/2012 12:30	CLB	494344

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	0.068U	0.20	0.068	ug/L

SW-846 7470A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 09:30	494114	SW-846 7470A	1	11/10/2012 12:24	CLB	494344

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	0.068U	0.20	0.068	ug/L

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/07/2012 17:00	494111	SW-846 3010A	1	11/10/2012 16:44	CLB	494351

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	**Aluminum**	**437**	**200**	**60.0**	**ug/L**
7440-36-0	**Antimony**	**3.66J**	**60.0**	**3.11**	**ug/L**
7440-38-2	Arsenic	3.59U	10.0	3.59	ug/L
7440-39-3	**Barium**	**21.2**	**10.0**	**0.71**	**ug/L**
7440-41-7	Beryllium	0.10U	5.00	0.10	ug/L
7440-43-9	Cadmium	0.20U	5.00	0.20	ug/L
7440-47-3	**Chromium**	**14.2**	**10.0**	**1.00**	**ug/L**
7440-48-4	Cobalt	1.00U	10.0	1.00	ug/L
7440-50-8	**Copper**	**13.3**	**10.0**	**1.01**	**ug/L**
7439-89-6	**Iron**	**345**	**100**	**40.0**	**ug/L**
7439-92-1	Lead	1.96U	15.0	1.96	ug/L
7439-95-4	**Magnesium**	**37900**	**100**	**50.0**	**ug/L**
7439-96-5	**Manganese**	**17.5**	**15.0**	**2.00**	**ug/L**
7439-98-7	**Molybdenum**	**7.70J**	**50.0**	**3.75**	**ug/L**
7440-02-0	**Nickel**	**13.3J**	**40.0**	**1.13**	**ug/L**
7440-09-7	**Potassium**	**7440**	**500**	**100**	**ug/L**
7782-49-2	Selenium	4.42U	40.0	4.42	ug/L
7440-22-4	**Silver**	**1.03J**	**10.0**	**0.70**	**ug/L**
7440-28-0	Thallium	3.04U	20.0	3.04	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211071201	**MA01 MW002**	Water	11/06/2012 09:00	11/07/2012 09:45

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/07/2012 17:00	494111	SW-846 3010A	1	11/10/2012 16:44	CLB	494351

CAS#	Parameter	Result	RDL	MDL	Units
7440-32-6	**Titanium**	**5.42J**	**100**	**1.20**	**ug/L**
7440-62-2	**Vanadium**	**23.9**	**20.0**	**3.75**	**ug/L**
7440-66-6	**Zinc**	**32.6**	**20.0**	**4.51**	**ug/L**

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/07/2012 17:00	494111	SW-846 3010A	1	11/12/2012 15:23	BNB	494453

CAS#	Parameter	Result	RDL	MDL	Units
7440-70-2	**Calcium**	**38900**	**100**	**50.0**	**ug/L**
7440-23-5	**Sodium**	**554000**	**1000**	**200**	**ug/L**

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 09:00	494112	SW-846 3005 Dissolved	1	11/11/2012 02:07	CLB	494351

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	60.0U	200	60.0	ug/L
7440-36-0	Antimony	3.11U	60.0	3.11	ug/L
7440-38-2	Arsenic	3.59U	10.0	3.59	ug/L
7440-39-3	**Barium**	**14.9**	**10.0**	**0.71**	**ug/L**
7440-41-7	Beryllium	0.10U	5.00	0.10	ug/L
7440-43-9	**Cadmium**	**0.52J**	**5.00**	**0.20**	**ug/L**
7440-47-3	**Chromium**	**1.51J**	**10.0**	**1.00**	**ug/L**
7440-48-4	Cobalt	1.00U	10.0	1.00	ug/L
7440-50-8	**Copper**	**9.01J**	**10.0**	**1.01**	**ug/L**
7439-89-6	Iron	40.0U	100	40.0	ug/L
7439-92-1	Lead	1.96U	15.0	1.96	ug/L
7439-95-4	**Magnesium**	**33700**	**100**	**50.0**	**ug/L**
7439-96-5	**Manganese**	**8.05J**	**15.0**	**2.00**	**ug/L**
7439-98-7	**Molybdenum**	**7.09J**	**50.0**	**3.75**	**ug/L**
7440-02-0	**Nickel**	**2.69J**	**40.0**	**1.13**	**ug/L**
7440-09-7	**Potassium**	**6770**	**500**	**100**	**ug/L**
7782-49-2	Selenium	4.42U	40.0	4.42	ug/L
7440-22-4	**Silver**	**1.10J**	**10.0**	**0.70**	**ug/L**
7440-28-0	**Thallium**	**4.91J**	**20.0**	**3.04**	**ug/L**
7440-32-6	Titanium	1.20U	100	1.20	ug/L
7440-62-2	**Vanadium**	**20.7**	**20.0**	**3.75**	**ug/L**
7440-66-6	**Zinc**	**24.9**	**20.0**	**4.51**	**ug/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211071201	**MA01 MW002**	Water	11/06/2012 09:00	11/07/2012 09:45

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 09:00	494112	SW-846 3005 Dissolved	1	11/11/2012 14:54	BNB	494400

CAS#	Parameter	Result	RDL	MDL	Units
7440-70-2	**Calcium**	**37600**	**100**	**50.0**	**ug/L**
7440-23-5	**Sodium**	**510000**	**1000**	**200**	**ug/L**

SM 2540C TDS

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/07/2012 14:00	DJH	494089

CAS#	Parameter	Result	RDL	MDL	Units
WET-035	**Total Dissolved Solids(TDS)**	**1750**	**10.0**		**mg/L**

EPA 353.2 Nitrite

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/07/2012 15:28	AEL	494102

CAS#	Parameter	Result	RDL	MDL	Units
14797-65-0	Nitrite	0.002U	0.010	0.002	mg/L-N

EPA 353.2 Nitrate

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/07/2012 16:06	AEL	494100

CAS#	Parameter	Result	RDL	MDL	Units
14797-55-8	**Nitrate**	**0.443**	**0.010**	**0.005**	**mg/L-N**

EPA 300.0

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			200	11/13/2012 18:01	AEL	494190

CAS#	Parameter	Result	RDL	MDL	Units
16887-00-6	**Chloride**	**511**	**20.0**	**12.6**	**mg/L**
14808-79-8	**Sulfate**	**589**	**40.0**	**23.0**	**mg/L**

SM 2320B Alkalinity

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/08/2012 08:27	JEM	494159

CAS#	Parameter	Result	RDL	MDL	Units
000000-00-5	**Total Alkalinity**	**180**	**1.0**	**0.19**	**mg/L CaCO3**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211071201	**MA01 MW002**	Water	11/06/2012 09:00	11/07/2012 09:45

SW-846 7196A Chromium VI

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/07/2012 10:22	JEM	494061

CAS#	Parameter	Result	RDL	MDL	Units
18540-29-9	Chromium VI	4.00U	10.0	4.00	ug/L

SW-846 9012A Cyanide

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/10/2012 06:00	494328	SW-846 9012A	1	11/12/2012 15:54	AEL	494463

CAS#	Parameter	Result	RDL	MDL	Units
57-12-5	Total Cyanide	0.0012U	0.0050	0.0012	mg/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211071202	**M114 MW004**	Water	11/06/2012 10:41	11/07/2012 09:45

Subcontract Work

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/20/2012 08:17	BJM	

CAS#	Parameter	Result	RDL	MDL	Units
SHIP-001	Ship Result	*			mg/L

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/10/2012 15:41	LBH	494340

CAS#	Parameter	Result	RDL	MDL	Units
630-20-6	1,1,1,2-Tetrachloroethane	0.120U	1.00	0.120	ug/L
71-55-6	1,1,1-Trichloroethane	0.123U	1.00	0.123	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.109U	1.00	0.109	ug/L
79-00-5	1,1,2-Trichloroethane	0.159U	1.00	0.159	ug/L
75-34-3	1,1-Dichloroethane	0.171U	1.00	0.171	ug/L
75-35-4	1,1-Dichloroethene	0.208U	1.00	0.208	ug/L
563-58-6	1,1-Dichloropropene	0.052U	1.00	0.052	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.079U	1.00	0.079	ug/L
96-18-4	1,2,3-Trichloropropane	0.065U	1.00	0.065	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.105U	1.00	0.105	ug/L
95-63-6	1,2,4-Trimethylbenzene	0.084U	1.00	0.084	ug/L
96-12-8	1,2-Dibromo-3-chloropropane	0.194U	1.00	0.194	ug/L
106-93-4	1,2-Dibromoethane	0.102U	1.00	0.102	ug/L
95-50-1	1,2-Dichlorobenzene	0.135U	1.00	0.135	ug/L
107-06-2	1,2-Dichloroethane	0.116U	1.00	0.116	ug/L
78-87-5	1,2-Dichloropropane	0.150U	1.00	0.150	ug/L
108-67-8	1,3,5-Trimethylbenzene	0.066U	1.00	0.066	ug/L
541-73-1	1,3-Dichlorobenzene	0.138U	1.00	0.138	ug/L
142-28-9	1,3-Dichloropropane	0.059U	1.00	0.059	ug/L
106-46-7	1,4-Dichlorobenzene	0.083U	1.00	0.083	ug/L
594-20-7	2,2-Dichloropropane	0.170U	1.00	0.170	ug/L
78-93-3	2-Butanone	0.142U	5.00	0.142	ug/L
95-49-8	2-Chlorotoluene	0.080U	1.00	0.080	ug/L
591-78-6	2-Hexanone	0.122U	5.00	0.122	ug/L
106-43-4	4-Chlorotoluene	0.124U	1.00	0.124	ug/L
99-87-6	4-Isopropyltoluene	0.070U	1.00	0.070	ug/L
108-10-1	4-Methyl-2-pentanone	0.120U	5.00	0.120	ug/L
67-64-1	Acetone	0.193U	5.00	0.193	ug/L
71-43-2	Benzene	0.111U	1.00	0.111	ug/L
108-86-1	Bromobenzene	0.145U	1.00	0.145	ug/L
74-97-5	Bromochloromethane	0.127U	1.00	0.127	ug/L
75-27-4	Bromodichloromethane	0.083U	1.00	0.083	ug/L
75-25-2	Bromoform	0.215U	1.00	0.215	ug/L
74-83-9	Bromomethane	0.427U	1.00	0.427	ug/L
75-15-0	Carbon disulfide	0.190U	1.00	0.190	ug/L
56-23-5	Carbon tetrachloride	0.248U	1.00	0.248	ug/L
108-90-7	Chlorobenzene	0.083U	1.00	0.083	ug/L
75-00-3	Chloroethane	0.235U	1.00	0.235	ug/L
67-66-3	Chloroform	0.155U	1.00	0.155	ug/L
74-87-3	Chloromethane	0.144U	1.00	0.144	ug/L
74-95-3	Dibromomethane	0.211U	1.00	0.211	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211071202	**M114 MW004**	Water	11/06/2012 10:41	11/07/2012 09:45

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/10/2012 15:41	LBH	494340

CAS#	Parameter	Result	RDL	MDL	Units
75-71-8	Dichlorodifluoromethane	0.145U	1.00	0.145	ug/L
100-41-4	Ethylbenzene	0.109U	1.00	0.109	ug/L
87-68-3	Hexachlorobutadiene	0.265U	1.00	0.265	ug/L
98-82-8	Isopropylbenzene (Cumene)	0.130U	1.00	0.130	ug/L
75-09-2	Methylene chloride	0.149U	5.00	0.149	ug/L
91-20-3	Naphthalene	0.176U	1.00	0.176	ug/L
100-42-5	Styrene	0.089U	1.00	0.089	ug/L
127-18-4	Tetrachloroethene	0.193U	1.00	0.193	ug/L
108-88-3	Toluene	0.122U	1.00	0.122	ug/L
79-01-6	Trichloroethene	0.161U	1.00	0.161	ug/L
75-69-4	Trichlorofluoromethane	0.157U	1.00	0.157	ug/L
75-01-4	Vinyl chloride	0.127U	1.00	0.127	ug/L
156-59-2	cis-1,2-Dichloroethene	0.103U	1.00	0.103	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.124U	1.00	0.124	ug/L
136777-61-2	m,p-Xylene	0.123U	2.00	0.123	ug/L
104-51-8	n-Butylbenzene	0.123U	1.00	0.123	ug/L
103-65-1	n-Propylbenzene	0.727U	1.00	0.727	ug/L
95-47-6	o-Xylene	0.055U	1.00	0.055	ug/L
135-98-8	sec-Butylbenzene	0.107U	1.00	0.107	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.078U	5.00	0.078	ug/L
98-06-6	tert-Butylbenzene	0.087U	1.00	0.087	ug/L
156-60-5	trans-1,2-Dichloroethene	0.077U	1.00	0.077	ug/L
10061-02-6	trans-1,3-Dichloropropene	0.128U	1.00	0.128	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	51	ug/L	102	75 - 120
1868-53-7	Dibromofluoromethane	50	50.5	ug/L	101	85 - 115
2037-26-5	Toluene d8	50	49.5	ug/L	99	85 - 120
17060-07-0	1,2-Dichloroethane-d4	50	52.2	ug/L	104	70 - 120

SW-846 8330A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/13/2012 04:30	494270	SW-846 8330A	1	11/15/2012 00:20	JWM	494679

CAS#	Parameter	Result	RDL	MDL	Units
99-35-4	1,3,5-Trinitrobenzene	0.240U	0.500	0.240	ug/L
99-65-0	1,3-Dinitrobenzene	0.167U	0.500	0.167	ug/L
118-96-7	2,4,6-Trinitrotoluene	0.483U	1.00	0.483	ug/L
121-14-2	2,4-Dinitrotoluene	0.501U	1.00	0.501	ug/L
606-20-2	2,6-Dinitrotoluene	0.283U	1.00	0.283	ug/L
355-72-78-2	2-Amino-4,6-dinitrotoluene	0.576U	1.00	0.576	ug/L
88-72-2	2-Nitrotoluene	0.120U	0.500	0.120	ug/L
99-08-1	3-Nitrotoluene	0.369U	1.00	0.369	ug/L
1946-51-0	4-Amino-2,6-dinitrotoluene	0.489U	1.00	0.489	ug/L
99-99-0	4-Nitrotoluene	0.417U	1.00	0.417	ug/L
2691-41-0	HMX	0.212U	0.500	0.212	ug/L
98-95-3	Nitrobenzene	0.267U	0.500	0.267	ug/L
121-82-4	RDX	0.189U	0.500	0.189	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211071202	**M114 MW004**	Water	11/06/2012 10:41	11/07/2012 09:45

SW-846 8330A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/13/2012 04:30	494270	SW-846 8330A	1	11/15/2012 00:20	JWM	494679

CAS#	Parameter	Result	RDL	MDL	Units
479-45-8	Tetryl	0.241U	0.500	0.241	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
528-29-0	1,2-Dinitrobenzene	2	1.78	ug/L	89	70 - 130

SW-846 7470A Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 09:30	494114	SW-846 7470A Dissolved	1	11/10/2012 12:35	CLB	494344

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	0.068U	0.20	0.068	ug/L

SW-846 7470A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 09:30	494114	SW-846 7470A	1	11/10/2012 12:40	CLB	494344

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	0.068U	0.20	0.068	ug/L

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/07/2012 17:00	494111	SW-846 3010A	1	11/10/2012 16:52	CLB	494351

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	**Aluminum**	**106J**	**200**	**60.0**	**ug/L**
7440-36-0	Antimony	3.11U	60.0	3.11	ug/L
7440-38-2	Arsenic	3.59U	10.0	3.59	ug/L
7440-39-3	**Barium**	**14.4**	**10.0**	**0.71**	**ug/L**
7440-41-7	Beryllium	0.10U	5.00	0.10	ug/L
7440-43-9	**Cadmium**	**1.24J**	**5.00**	**0.20**	**ug/L**
7440-47-3	**Chromium**	**6.81J**	**10.0**	**1.00**	**ug/L**
7440-48-4	Cobalt	1.00U	10.0	1.00	ug/L
7440-50-8	**Copper**	**8.62J**	**10.0**	**1.01**	**ug/L**
7439-89-6	**Iron**	**44.2J**	**100**	**40.0**	**ug/L**
7439-92-1	Lead	1.96U	15.0	1.96	ug/L
7439-95-4	**Magnesium**	**283000**	**100**	**50.0**	**ug/L**
7439-96-5	Manganese	2.00U	15.0	2.00	ug/L
7439-98-7	**Molybdenum**	**14.2J**	**50.0**	**3.75**	**ug/L**
7440-02-0	Nickel	1.13U	40.0	1.13	ug/L
7440-09-7	**Potassium**	**19000**	**500**	**100**	**ug/L**
7782-49-2	**Selenium**	**24.5J**	**40.0**	**4.42**	**ug/L**
7440-22-4	Silver	0.70U	10.0	0.70	ug/L
7440-28-0	Thallium	3.04U	20.0	3.04	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211071202	**M114 MW004**	Water	11/06/2012 10:41	11/07/2012 09:45

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/07/2012 17:00	494111	SW-846 3010A	1	11/10/2012 16:52	CLB	494351

CAS#	Parameter	Result	RDL	MDL	Units
7440-32-6	Titanium	1.20U	100	1.20	ug/L
7440-62-2	**Vanadium**	**14.2J**	**20.0**	**3.75**	**ug/L**
7440-66-6	**Zinc**	**29.6**	**20.0**	**4.51**	**ug/L**

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/07/2012 17:00	494111	SW-846 3010A	10	11/12/2012 15:31	BNB	494453

CAS#	Parameter	Result	RDL	MDL	Units
7440-23-5	**Sodium**	**2240000**	**10000**	**2000**	**ug/L**

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/07/2012 17:00	494111	SW-846 3010A	1	11/12/2012 15:39	BNB	494453

CAS#	Parameter	Result	RDL	MDL	Units
7440-70-2	**Calcium**	**312000**	**100**	**50.0**	**ug/L**

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 09:00	494112	SW-846 3005 Dissolved	1	11/11/2012 02:43	CLB	494351

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	60.0U	200	60.0	ug/L
7440-36-0	**Antimony**	**5.71J**	**60.0**	**3.11**	**ug/L**
7440-38-2	Arsenic	3.59U	10.0	3.59	ug/L
7440-39-3	**Barium**	**13.7**	**10.0**	**0.71**	**ug/L**
7440-41-7	Beryllium	0.10U	5.00	0.10	ug/L
7440-43-9	**Cadmium**	**2.31J**	**5.00**	**0.20**	**ug/L**
7440-47-3	**Chromium**	**4.00J**	**10.0**	**1.00**	**ug/L**
7440-48-4	Cobalt	1.00U	10.0	1.00	ug/L
7440-50-8	**Copper**	**5.12J**	**10.0**	**1.01**	**ug/L**
7439-89-6	Iron	40.0U	100	40.0	ug/L
7439-92-1	Lead	1.96U	15.0	1.96	ug/L
7439-95-4	**Magnesium**	**314000**	**100**	**50.0**	**ug/L**
7439-96-5	Manganese	2.00U	15.0	2.00	ug/L
7439-98-7	**Molybdenum**	**15.7J**	**50.0**	**3.75**	**ug/L**
7440-02-0	Nickel	1.13U	40.0	1.13	ug/L
7440-09-7	**Potassium**	**21200**	**500**	**100**	**ug/L**
7782-49-2	**Selenium**	**25.4J**	**40.0**	**4.42**	**ug/L**
7440-22-4	Silver	0.70U	10.0	0.70	ug/L
7440-28-0	**Thallium**	**5.45J**	**20.0**	**3.04**	**ug/L**
7440-32-6	Titanium	1.20U	100	1.20	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211071202	**M114 MW004**	Water	11/06/2012 10:41	11/07/2012 09:45

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 09:00	494112	SW-846 3005 Dissolved	1	11/11/2012 02:43	CLB	494351

CAS#	Parameter	Result	RDL	MDL	Units
7440-62-2	**Vanadium**	**8.78J**	**20.0**	**3.75**	**ug/L**
7440-66-6	**Zinc**	**34.1**	**20.0**	**4.51**	**ug/L**

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 09:00	494112	SW-846 3005 Dissolved	10	11/11/2012 15:33	BNB	494400

CAS#	Parameter	Result	RDL	MDL	Units
7440-23-5	**Sodium**	**2560000**	**10000**	**2000**	**ug/L**

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 09:00	494112	SW-846 3005 Dissolved	1	11/11/2012 15:40	BNB	494400

CAS#	Parameter	Result	RDL	MDL	Units
7440-70-2	**Calcium**	**373000**	**100**	**50.0**	**ug/L**

SM 2540C TDS

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/07/2012 14:00	DJH	494089

CAS#	Parameter	Result	RDL	MDL	Units
WET-035	**Total Dissolved Solids(TDS)**	**9300**	**10.0**		**mg/L**

EPA 353.2 Nitrite

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/07/2012 15:32	AEL	494102

CAS#	Parameter	Result	RDL	MDL	Units
14797-65-0	**Nitrite**	**0.020**	**0.010**	**0.002**	**mg/L-N**

EPA 353.2 Nitrate

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/07/2012 16:10	AEL	494100

CAS#	Parameter	Result	RDL	MDL	Units
14797-55-8	**Nitrate**	**0.825**	**0.010**	**0.005**	**mg/L-N**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211071202	**M114 MW004**	Water	11/06/2012 10:41	11/07/2012 09:45

EPA 300.0

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1000	11/13/2012 18:18	AEL	494190

CAS#	Parameter	Result	RDL	MDL	Units
16887-00-6	**Chloride**	**4400**	**100**	**63.0**	**mg/L**
14808-79-8	**Sulfate**	**2290**	**200**	**115**	**mg/L**

SM 2320B Alkalinity

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/08/2012 08:27	JEM	494159

CAS#	Parameter	Result	RDL	MDL	Units
000000-00-5	**Total Alkalinity**	**72.9**	**1.0**	**0.19**	**mg/L CaCO3**

SW-846 7196A Chromium VI

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/07/2012 10:23	JEM	494061

CAS#	Parameter	Result	RDL	MDL	Units
18540-29-9	Chromium VI	4.00U	10.0	4.00	ug/L

SW-846 9012A Cyanide

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/10/2012 06:00	494328	SW-846 9012A	1	11/12/2012 15:55	AEL	494463

CAS#	Parameter	Result	RDL	MDL	Units
57-12-5	Total Cyanide	0.0012U	0.0050	0.0012	mg/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211071203	**M114 MW001**	Water	11/06/2012 13:30	11/07/2012 09:45

Subcontract Work

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/20/2012 08:18	BJM	

CAS#	Parameter	Result	RDL	MDL	Units
SHIP-001	Ship Result	*			mg/L

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/10/2012 16:03	LBH	494340

CAS#	Parameter	Result	RDL	MDL	Units
630-20-6	1,1,1,2-Tetrachloroethane	0.120U	1.00	0.120	ug/L
71-55-6	1,1,1-Trichloroethane	0.123U	1.00	0.123	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.109U	1.00	0.109	ug/L
79-00-5	1,1,2-Trichloroethane	0.159U	1.00	0.159	ug/L
75-34-3	1,1-Dichloroethane	0.171U	1.00	0.171	ug/L
75-35-4	1,1-Dichloroethene	0.208U	1.00	0.208	ug/L
563-58-6	1,1-Dichloropropene	0.052U	1.00	0.052	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.079U	1.00	0.079	ug/L
96-18-4	1,2,3-Trichloropropane	0.065U	1.00	0.065	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.105U	1.00	0.105	ug/L
95-63-6	1,2,4-Trimethylbenzene	0.084U	1.00	0.084	ug/L
96-12-8	1,2-Dibromo-3-chloropropane	0.194U	1.00	0.194	ug/L
106-93-4	1,2-Dibromoethane	0.102U	1.00	0.102	ug/L
95-50-1	1,2-Dichlorobenzene	0.135U	1.00	0.135	ug/L
107-06-2	1,2-Dichloroethane	0.116U	1.00	0.116	ug/L
78-87-5	1,2-Dichloropropane	0.150U	1.00	0.150	ug/L
108-67-8	1,3,5-Trimethylbenzene	0.066U	1.00	0.066	ug/L
541-73-1	1,3-Dichlorobenzene	0.138U	1.00	0.138	ug/L
142-28-9	1,3-Dichloropropane	0.059U	1.00	0.059	ug/L
106-46-7	1,4-Dichlorobenzene	0.083U	1.00	0.083	ug/L
594-20-7	2,2-Dichloropropane	0.170U	1.00	0.170	ug/L
78-93-3	2-Butanone	0.142U	5.00	0.142	ug/L
95-49-8	2-Chlorotoluene	0.080U	1.00	0.080	ug/L
591-78-6	2-Hexanone	0.122U	5.00	0.122	ug/L
106-43-4	4-Chlorotoluene	0.124U	1.00	0.124	ug/L
99-87-6	4-Isopropyltoluene	0.070U	1.00	0.070	ug/L
108-10-1	4-Methyl-2-pentanone	0.120U	5.00	0.120	ug/L
67-64-1	Acetone	0.193U	5.00	0.193	ug/L
71-43-2	Benzene	0.111U	1.00	0.111	ug/L
108-86-1	Bromobenzene	0.145U	1.00	0.145	ug/L
74-97-5	Bromochloromethane	0.127U	1.00	0.127	ug/L
75-27-4	Bromodichloromethane	0.083U	1.00	0.083	ug/L
75-25-2	Bromoform	0.215U	1.00	0.215	ug/L
74-83-9	Bromomethane	0.427U	1.00	0.427	ug/L
75-15-0	Carbon disulfide	0.190U	1.00	0.190	ug/L
56-23-5	Carbon tetrachloride	0.248U	1.00	0.248	ug/L
108-90-7	Chlorobenzene	0.083U	1.00	0.083	ug/L
75-00-3	Chloroethane	0.235U	1.00	0.235	ug/L
67-66-3	Chloroform	0.155U	1.00	0.155	ug/L
74-87-3	Chloromethane	0.144U	1.00	0.144	ug/L
74-95-3	Dibromomethane	0.211U	1.00	0.211	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211071203	**M114 MW001**	Water	11/06/2012 13:30	11/07/2012 09:45

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/10/2012 16:03	LBH	494340

CAS#	Parameter	Result	RDL	MDL	Units
75-71-8	Dichlorodifluoromethane	0.145U	1.00	0.145	ug/L
100-41-4	Ethylbenzene	0.109U	1.00	0.109	ug/L
87-68-3	Hexachlorobutadiene	0.265U	1.00	0.265	ug/L
98-82-8	Isopropylbenzene (Cumene)	0.130U	1.00	0.130	ug/L
75-09-2	Methylene chloride	0.149U	5.00	0.149	ug/L
91-20-3	Naphthalene	0.176U	1.00	0.176	ug/L
100-42-5	Styrene	0.089U	1.00	0.089	ug/L
127-18-4	Tetrachloroethene	0.193U	1.00	0.193	ug/L
108-88-3	Toluene	0.122U	1.00	0.122	ug/L
79-01-6	Trichloroethene	0.161U	1.00	0.161	ug/L
75-69-4	Trichlorofluoromethane	0.157U	1.00	0.157	ug/L
75-01-4	Vinyl chloride	0.127U	1.00	0.127	ug/L
156-59-2	cis-1,2-Dichloroethene	0.103U	1.00	0.103	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.124U	1.00	0.124	ug/L
136777-61-2	m,p-Xylene	0.123U	2.00	0.123	ug/L
104-51-8	n-Butylbenzene	0.123U	1.00	0.123	ug/L
103-65-1	n-Propylbenzene	0.727U	1.00	0.727	ug/L
95-47-6	o-Xylene	0.055U	1.00	0.055	ug/L
135-98-8	sec-Butylbenzene	0.107U	1.00	0.107	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.078U	5.00	0.078	ug/L
98-06-6	tert-Butylbenzene	0.087U	1.00	0.087	ug/L
156-60-5	trans-1,2-Dichloroethene	0.077U	1.00	0.077	ug/L
10061-02-6	trans-1,3-Dichloropropene	0.128U	1.00	0.128	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	52.4	ug/L	105	75 - 120
1868-53-7	Dibromofluoromethane	50	50.1	ug/L	100	85 - 115
2037-26-5	Toluene d8	50	50	ug/L	100	85 - 120
17060-07-0	1,2-Dichloroethane-d4	50	51.2	ug/L	102	70 - 120

SW-846 8330A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/13/2012 04:30	494270	SW-846 8330A	1	11/15/2012 00:54	JWM	494679

CAS#	Parameter	Result	RDL	MDL	Units
99-35-4	1,3,5-Trinitrobenzene	0.240U	0.500	0.240	ug/L
99-65-0	1,3-Dinitrobenzene	0.167U	0.500	0.167	ug/L
118-96-7	2,4,6-Trinitrotoluene	0.483U	1.00	0.483	ug/L
121-14-2	2,4-Dinitrotoluene	0.501U	1.00	0.501	ug/L
606-20-2	2,6-Dinitrotoluene	0.283U	1.00	0.283	ug/L
355-72-78-2	2-Amino-4,6-dinitrotoluene	0.576U	1.00	0.576	ug/L
88-72-2	2-Nitrotoluene	0.120U	0.500	0.120	ug/L
99-08-1	3-Nitrotoluene	0.369U	1.00	0.369	ug/L
1946-51-0	4-Amino-2,6-dinitrotoluene	0.489U	1.00	0.489	ug/L
99-99-0	4-Nitrotoluene	0.417U	1.00	0.417	ug/L
2691-41-0	HMX	0.212U	0.500	0.212	ug/L
98-95-3	Nitrobenzene	0.267U	0.500	0.267	ug/L
121-82-4	RDX	0.189U	0.500	0.189	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211071203	**M114 MW001**	Water	11/06/2012 13:30	11/07/2012 09:45

SW-846 8330A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/13/2012 04:30	494270	SW-846 8330A	1	11/15/2012 00:54	JWM	494679

CAS#	Parameter	Result	RDL	MDL	Units
479-45-8	Tetryl	0.241U	0.500	0.241	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
528-29-0	1,2-Dinitrobenzene	2	1.57	ug/L	79	70 - 130

SW-846 7470A Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 09:30	494114	SW-846 7470A Dissolved	1	11/10/2012 12:41	CLB	494344

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	0.068U	0.20	0.068	ug/L

SW-846 7470A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 09:30	494114	SW-846 7470A	1	11/10/2012 12:43	CLB	494344

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	0.068U	0.20	0.068	ug/L

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/07/2012 17:00	494111	SW-846 3010A	1	11/10/2012 16:59	CLB	494351

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	**Aluminum**	**446**	**200**	**60.0**	**ug/L**
7440-36-0	**Antimony**	**6.43J**	**60.0**	**3.11**	**ug/L**
7440-38-2	Arsenic	3.59U	10.0	3.59	ug/L
7440-39-3	**Barium**	**28.2**	**10.0**	**0.71**	**ug/L**
7440-41-7	Beryllium	0.10U	5.00	0.10	ug/L
7440-43-9	**Cadmium**	**1.08J**	**5.00**	**0.20**	**ug/L**
7440-47-3	**Chromium**	**41.7**	**10.0**	**1.00**	**ug/L**
7440-48-4	**Cobalt**	**1.38J**	**10.0**	**1.00**	**ug/L**
7440-50-8	**Copper**	**14.8**	**10.0**	**1.01**	**ug/L**
7439-89-6	**Iron**	**511**	**100**	**40.0**	**ug/L**
7439-92-1	Lead	1.96U	15.0	1.96	ug/L
7439-95-4	**Magnesium**	**241000**	**100**	**50.0**	**ug/L**
7439-96-5	**Manganese**	**33.5**	**15.0**	**2.00**	**ug/L**
7439-98-7	**Molybdenum**	**18.9J**	**50.0**	**3.75**	**ug/L**
7440-02-0	**Nickel**	**26.3J**	**40.0**	**1.13**	**ug/L**
7440-09-7	**Potassium**	**18900**	**500**	**100**	**ug/L**
7782-49-2	**Selenium**	**33.2J**	**40.0**	**4.42**	**ug/L**
7440-22-4	Silver	0.70U	10.0	0.70	ug/L
7440-28-0	**Thallium**	**3.04J**	**20.0**	**3.04**	**ug/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211071203	**M114 MW001**	Water	11/06/2012 13:30	11/07/2012 09:45

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/07/2012 17:00	494111	SW-846 3010A	1	11/10/2012 16:59	CLB	494351

CAS#	Parameter	Result	RDL	MDL	Units
7440-32-6	**Titanium**	**7.87J**	**100**	**1.20**	**ug/L**
7440-62-2	**Vanadium**	**20.2**	**20.0**	**3.75**	**ug/L**
7440-66-6	**Zinc**	**45.6**	**20.0**	**4.51**	**ug/L**

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/07/2012 17:00	494111	SW-846 3010A	10	11/12/2012 16:00	BNB	494453

CAS#	Parameter	Result	RDL	MDL	Units
7440-23-5	**Sodium**	**2060000**	**10000**	**2000**	**ug/L**

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/07/2012 17:00	494111	SW-846 3010A	1	11/12/2012 16:08	BNB	494453

CAS#	Parameter	Result	RDL	MDL	Units
7440-70-2	**Calcium**	**273000**	**100**	**50.0**	**ug/L**

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 09:00	494112	SW-846 3005 Dissolved	1	11/11/2012 02:50	CLB	494351

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	60.0U	200	60.0	ug/L
7440-36-0	Antimony	3.11U	60.0	3.11	ug/L
7440-38-2	**Arsenic**	**3.97J**	**10.0**	**3.59**	**ug/L**
7440-39-3	**Barium**	**16.9**	**10.0**	**0.71**	**ug/L**
7440-41-7	Beryllium	0.10U	5.00	0.10	ug/L
7440-43-9	**Cadmium**	**2.09J**	**5.00**	**0.20**	**ug/L**
7440-47-3	**Chromium**	**4.87J**	**10.0**	**1.00**	**ug/L**
7440-48-4	Cobalt	1.00U	10.0	1.00	ug/L
7440-50-8	**Copper**	**7.00J**	**10.0**	**1.01**	**ug/L**
7439-89-6	Iron	40.0U	100	40.0	ug/L
7439-92-1	Lead	1.96U	15.0	1.96	ug/L
7439-95-4	**Magnesium**	**227000**	**100**	**50.0**	**ug/L**
7439-96-5	**Manganese**	**7.45J**	**15.0**	**2.00**	**ug/L**
7439-98-7	**Molybdenum**	**19.1J**	**50.0**	**3.75**	**ug/L**
7440-02-0	**Nickel**	**7.24J**	**40.0**	**1.13**	**ug/L**
7440-09-7	**Potassium**	**17500**	**500**	**100**	**ug/L**
7782-49-2	**Selenium**	**33.5J**	**40.0**	**4.42**	**ug/L**
7440-22-4	Silver	0.70U	10.0	0.70	ug/L
7440-28-0	**Thallium**	**5.18J**	**20.0**	**3.04**	**ug/L**
7440-32-6	Titanium	1.20U	100	1.20	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211071203	**M114 MW001**	Water	11/06/2012 13:30	11/07/2012 09:45

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 09:00	494112	SW-846 3005 Dissolved	1	11/11/2012 02:50	CLB	494351

CAS#	Parameter	Result	RDL	MDL	Units
7440-62-2	**Vanadium**	**11.8J**	**20.0**	**3.75**	**ug/L**
7440-66-6	**Zinc**	**29.2**	**20.0**	**4.51**	**ug/L**

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 09:00	494112	SW-846 3005 Dissolved	10	11/11/2012 15:47	BNB	494400

CAS#	Parameter	Result	RDL	MDL	Units
7440-23-5	**Sodium**	**1970000**	**10000**	**2000**	**ug/L**

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 09:00	494112	SW-846 3005 Dissolved	1	11/11/2012 15:55	BNB	494400

CAS#	Parameter	Result	RDL	MDL	Units
7440-70-2	**Calcium**	**263000**	**100**	**50.0**	**ug/L**

SM 2540C TDS

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/07/2012 14:00	DJH	494089

CAS#	Parameter	Result	RDL	MDL	Units
WET-035	**Total Dissolved Solids(TDS)**	**7810**	**10.0**		**mg/L**

EPA 353.2 Nitrite

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/07/2012 15:33	AEL	494102

CAS#	Parameter	Result	RDL	MDL	Units
14797-65-0	**Nitrite**	**0.016**	**0.010**	**0.002**	**mg/L-N**

EPA 353.2 Nitrate

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			2	11/07/2012 16:22	AEL	494100

CAS#	Parameter	Result	RDL	MDL	Units
14797-55-8	**Nitrate**	**1.19**	**0.020**	**0.010**	**mg/L-N**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211071203	**M114 MW001**	Water	11/06/2012 13:30	11/07/2012 09:45

EPA 300.0

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			2000	11/13/2012 18:36	AEL	494190

CAS#	Parameter	Result	RDL	MDL	Units
16887-00-6	**Chloride**	**3320**	**200**	**126**	**mg/L**
14808-79-8	**Sulfate**	**2200**	**400**	**230**	**mg/L**

SM 2320B Alkalinity

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/08/2012 08:27	JEM	494159

CAS#	Parameter	Result	RDL	MDL	Units
000000-00-5	**Total Alkalinity**	**94.3**	**1.0**	**0.19**	**mg/L CaCO3**

SW-846 7196A Chromium VI

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/07/2012 10:21	JEM	494061

CAS#	Parameter	Result	RDL	MDL	Units
18540-29-9	Chromium VI	4.00U	10.0	4.00	ug/L

SW-846 9012A Cyanide

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/10/2012 06:00	494328	SW-846 9012A	1	11/12/2012 15:56	AEL	494463

CAS#	Parameter	Result	RDL	MDL	Units
57-12-5	Total Cyanide	0.0012U	0.0050	0.0012	mg/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211071204	**TB-03**	Water	11/06/2012 09:00	11/07/2012 09:45

SW-846 8260B DOD Water

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/10/2012 16:22	LBH	494340

CAS#	Parameter	Result	RDL	MDL	Units
630-20-6	1,1,1,2-Tetrachloroethane	0.120U	1.00	0.120	ug/L
71-55-6	1,1,1-Trichloroethane	0.123U	1.00	0.123	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.109U	1.00	0.109	ug/L
79-00-5	1,1,2-Trichloroethane	0.159U	1.00	0.159	ug/L
75-34-3	1,1-Dichloroethane	0.171U	1.00	0.171	ug/L
75-35-4	1,1-Dichloroethene	0.208U	1.00	0.208	ug/L
563-58-6	1,1-Dichloropropene	0.052U	1.00	0.052	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.079U	1.00	0.079	ug/L
96-18-4	1,2,3-Trichloropropane	0.065U	1.00	0.065	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.105U	1.00	0.105	ug/L
95-63-6	1,2,4-Trimethylbenzene	0.084U	1.00	0.084	ug/L
96-12-8	1,2-Dibromo-3-chloropropane	0.194U	1.00	0.194	ug/L
106-93-4	1,2-Dibromoethane	0.102U	1.00	0.102	ug/L
95-50-1	1,2-Dichlorobenzene	0.135U	1.00	0.135	ug/L
107-06-2	1,2-Dichloroethane	0.116U	1.00	0.116	ug/L
78-87-5	1,2-Dichloropropane	0.150U	1.00	0.150	ug/L
108-67-8	1,3,5-Trimethylbenzene	0.066U	1.00	0.066	ug/L
541-73-1	1,3-Dichlorobenzene	0.138U	1.00	0.138	ug/L
142-28-9	1,3-Dichloropropane	0.059U	1.00	0.059	ug/L
106-46-7	1,4-Dichlorobenzene	0.083U	1.00	0.083	ug/L
594-20-7	2,2-Dichloropropane	0.170U	1.00	0.170	ug/L
78-93-3	2-Butanone	0.142U	5.00	0.142	ug/L
95-49-8	2-Chlorotoluene	0.080U	1.00	0.080	ug/L
591-78-6	2-Hexanone	0.122U	5.00	0.122	ug/L
106-43-4	4-Chlorotoluene	0.124U	1.00	0.124	ug/L
99-87-6	4-Isopropyltoluene	0.070U	1.00	0.070	ug/L
108-10-1	4-Methyl-2-pentanone	0.120U	5.00	0.120	ug/L
67-64-1	Acetone	0.193U	5.00	0.193	ug/L
71-43-2	Benzene	0.111U	1.00	0.111	ug/L
108-86-1	Bromobenzene	0.145U	1.00	0.145	ug/L
74-97-5	Bromochloromethane	0.127U	1.00	0.127	ug/L
75-27-4	Bromodichloromethane	0.083U	1.00	0.083	ug/L
75-25-2	Bromoform	0.215U	1.00	0.215	ug/L
74-83-9	Bromomethane	0.427U	1.00	0.427	ug/L
75-15-0	Carbon disulfide	0.190U	1.00	0.190	ug/L
56-23-5	Carbon tetrachloride	0.248U	1.00	0.248	ug/L
108-90-7	Chlorobenzene	0.083U	1.00	0.083	ug/L
75-00-3	Chloroethane	0.235U	1.00	0.235	ug/L
67-66-3	Chloroform	0.155U	1.00	0.155	ug/L
74-87-3	Chloromethane	0.144U	1.00	0.144	ug/L
74-95-3	Dibromomethane	0.211U	1.00	0.211	ug/L
75-71-8	Dichlorodifluoromethane	0.145U	1.00	0.145	ug/L
100-41-4	Ethylbenzene	0.109U	1.00	0.109	ug/L
87-68-3	Hexachlorobutadiene	0.265U	1.00	0.265	ug/L
98-82-8	Isopropylbenzene (Cumene)	0.130U	1.00	0.130	ug/L
75-09-2	Methylene chloride	0.149U	5.00	0.149	ug/L
91-20-3	Naphthalene	0.176U	1.00	0.176	ug/L
100-42-5	Styrene	0.089U	1.00	0.089	ug/L
127-18-4	Tetrachloroethene	0.193U	1.00	0.193	ug/L
108-88-3	Toluene	0.122U	1.00	0.122	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211071204	**TB-03**	Water	11/06/2012 09:00	11/07/2012 09:45

SW-846 8260B DOD Water

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/10/2012 16:22	LBH	494340

CAS#	Parameter	Result	RDL	MDL	Units
79-01-6	Trichloroethene	0.161U	1.00	0.161	ug/L
75-69-4	Trichlorofluoromethane	0.157U	1.00	0.157	ug/L
75-01-4	Vinyl chloride	0.127U	1.00	0.127	ug/L
156-59-2	cis-1,2-Dichloroethene	0.103U	1.00	0.103	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.124U	1.00	0.124	ug/L
136777-61-2	m,p-Xylene	0.123U	2.00	0.123	ug/L
104-51-8	n-Butylbenzene	0.123U	1.00	0.123	ug/L
103-65-1	n-Propylbenzene	0.727U	1.00	0.727	ug/L
95-47-6	o-Xylene	0.055U	1.00	0.055	ug/L
135-98-8	sec-Butylbenzene	0.107U	1.00	0.107	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.078U	5.00	0.078	ug/L
98-06-6	tert-Butylbenzene	0.087U	1.00	0.087	ug/L
156-60-5	trans-1,2-Dichloroethene	0.077U	1.00	0.077	ug/L
10061-02-6	trans-1,3-Dichloropropene	0.128U	1.00	0.128	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	52	ug/L	104	75 - 120
1868-53-7	Dibromofluoromethane	50	50.5	ug/L	101	85 - 115
2037-26-5	Toluene d8	50	49.5	ug/L	99	85 - 120
17060-07-0	1,2-Dichloroethane-d4	50	51.3	ug/L	103	70 - 120

GC/MS Volatiles Quality Control Summary

Analytical Batch 494340		**Client ID**	MB494340			LCS494340			LCSD494340		
Prep Batch N/A		**GCAL ID**	1127274			1127275			1127276		
		Sample Type	Method Blank			LCS			LCSD		
		Analytical Date	11/10/2012 09:31			11/10/2012 08:10			11/10/2012 08:32		
		Matrix	Water			Water			Water		
SW-846 8260B		**Units**	**Result**	ug/L **RDL**	**Spike Added**	**Result**	**% R**	**Control Limits % R**	**Result**	**% R**	**RPD**	**RPD Limit**
67-64-1	Acetone		0.193U	0.193	50.0	43.1	86	40 - 140	40.4	81	6	30
74-97-5	Bromochloromethane		0.127U	0.127	50.0	52.7	105	65 - 130	50.2	100	5	30
75-27-4	Bromodichloromethane		0.083U	0.083	50.0	51.8	104	75 - 120	49.3	99	5	30
75-25-2	Bromoform		0.215U	0.215	50.0	51.3	103	70 - 130	49.6	99	3	30
74-83-9	Bromomethane		0.427U	0.427	50.0	52.6	105	30 - 145	51.0	102	3	30
75-15-0	Carbon disulfide		0.190U	0.190	50.0	51.1	102	35 - 160	51.5	103	0.8	30
56-23-5	Carbon tetrachloride		0.248U	0.248	50.0	57.2	114	65 - 140	56.5	113	1	30
75-00-3	Chloroethane		0.235U	0.235	50.0	49.6	99	60 - 135	48.4	97	2	30
136777-61-2	m,p-Xylene		0.123U	0.123	100	103	103	75 - 130	102	102	1	30
67-66-3	Chloroform		0.155U	0.155	50.0	50.6	101	65 - 135	49.8	100	2	30
74-87-3	Chloromethane		0.144U	0.144	50.0	49.7	99	40 - 125	47.5	95	5	30
74-95-3	Dibromomethane		0.211U	0.211	50.0	49.6	99	75 - 125	49.4	99	0.4	30
75-71-8	Dichlorodifluoromethane		0.145U	0.145	50.0	51.6	103	30 - 155	50.9	102	1	30
75-34-3	1,1-Dichloroethane		0.171U	0.171	50.0	50.5	101	70 - 135	49.2	98	3	30
107-06-2	1,2-Dichloroethane		0.116U	0.116	50.0	49.2	98	70 - 130	47.7	95	3	30
156-59-2	cis-1,2-Dichloroethene		0.103U	0.103	50.0	51.6	103	70 - 125	50.1	100	3	30
156-60-5	trans-1,2-Dichloroethene		0.077U	0.077	50.0	52.1	104	60 - 140	51.6	103	1	30
75-09-2	Methylene chloride		0.149U	0.149	50.0	49.7	99	55 - 140	48.2	96	3	30
78-87-5	1,2-Dichloropropane		0.150U	0.150	50.0	50.8	102	75 - 125	48.6	97	4	30
10061-01-5	cis-1,3-Dichloropropene		0.124U	0.124	50.0	53.1	106	70 - 130	51.7	103	3	30
10061-02-6	trans-1,3-Dichloropropene		0.128U	0.128	50.0	52.8	106	55 - 140	50.7	101	4	30
100-41-4	Ethylbenzene		0.109U	0.109	50.0	50.7	101	75 - 125	49.9	100	2	30
591-78-6	2-Hexanone		0.122U	0.122	50.0	50.1	100	55 - 130	48.2	96	4	30
98-82-8	Isopropylbenzene (Cumene)		0.130U	0.130	50.0	52.2	104	75 - 125	52.3	105	0.2	30
78-93-3	2-Butanone		0.142U	0.142	50.0	44.7	89	30 - 150	47.6	95	6	30
108-10-1	4-Methyl-2-pentanone		0.120U	0.120	50.0	50.9	102	60 - 135	50.5	101	0.8	30
103-65-1	n-Propylbenzene		0.727U	0.727	50.0	50.2	100	70 - 130	50.6	101	0.8	30
100-42-5	Styrene		0.089U	0.089	50.0	52.3	105	65 - 135	50.3	101	4	30
127-18-4	Tetrachloroethene		0.193U	0.193	50.0	54.1	108	45 - 150	53.2	106	2	30
630-20-6	1,1,1,2-Tetrachloroethane		0.120U	0.120	50.0	52.6	105	80 - 130	50.3	101	4	30
79-34-5	1,1,2,2-Tetrachloroethane		0.109U	0.109	50.0	48.7	97	65 - 130	46.7	93	4	30
120-82-1	1,2,4-Trichlorobenzene		0.105U	0.105	50.0	51.8	104	65 - 135	54.3	109	5	30
71-55-6	1,1,1-Trichloroethane		0.123U	0.123	50.0	51.0	102	65 - 130	50.1	100	2	30

GC/MS Volatiles Quality Control Summary

Analytical Batch 494340		**Client ID**	MB494340			LCS494340			LCSD494340		
Prep Batch N/A		**GCAL ID**	1127274			1127275			1127276		
		Sample Type	Method Blank			LCS			LCSD		
		Analytical Date	11/10/2012 09:31			11/10/2012 08:10			11/10/2012 08:32		
		Matrix	Water			Water			Water		
SW-846 8260B		**Units**	ug/L								
		Result	**RDL**	**Spike Added**	**Result**	**% R**	**Control Limits % R**	**Result**	**% R**	**RPD**	**RPD Limit**
79-00-5	1,1,2-Trichloroethane	0.159U	0.159	50.0	48.0	96	75 - 125	46.6	93	3	30
75-69-4	Trichlorofluoromethane	0.157U	0.157	50.0	52.8	106	60 - 145	54.5	109	3	30
96-18-4	1,2,3-Trichloropropane	0.065U	0.065	50.0	46.2	92	75 - 125	44.9	90	3	30
95-63-6	1,2,4-Trimethylbenzene	0.084U	0.084	50.0	50.7	101	75 - 130	50.5	101	0.4	30
108-67-8	1,3,5-Trimethylbenzene	0.066U	0.066	50.0	51.0	102	75 - 130	51.1	102	0.2	30
75-01-4	Vinyl chloride	0.127U	0.127	50.0	52.5	105	50 - 145	51.9	104	1	30
95-47-6	o-Xylene	0.055U	0.055	50.0	52.9	106	80 - 120	51.2	102	3	30
96-12-8	1,2-Dibromo-3-chloropropane	0.194U	0.194	50.0	50.4	101	50 - 130	48.8	98	3	30
106-93-4	1,2-Dibromoethane	0.102U	0.102	50.0	50.4	101	80 - 120	48.7	97	3	30
1634-04-4	tert-Butyl methyl ether (MTBE)	0.078U	0.078	50.0	50.2	100	65 - 125	48.9	98	3	30
99-87-6	4-Isopropyltoluene	0.070U	0.070	50.0	50.1	100	75 - 130	51.4	103	3	30
594-20-7	2,2-Dichloropropane	0.170U	0.170	50.0	54.2	108	70 - 135	53.9	108	0.6	30
563-58-6	1,1-Dichloropropene	0.052U	0.052	50.0	52.9	106	75 - 130	52.5	105	0.8	30
142-28-9	1,3-Dichloropropane	0.059U	0.059	50.0	49.5	99	75 - 125	46.7	93	6	30
108-86-1	Bromobenzene	0.145U	0.145	50.0	47.2	94	75 - 125	45.7	91	3	30
95-49-8	2-Chlorotoluene	0.080U	0.080	50.0	49.4	99	75 - 125	49.6	99	0.4	30
106-43-4	4-Chlorotoluene	0.124U	0.124	50.0	50.5	101	75 - 130	48.6	97	4	30
98-06-6	tert-Butylbenzene	0.087U	0.087	50.0	50.0	100	70 - 130	51.4	103	3	30
135-98-8	sec-Butylbenzene	0.107U	0.107	50.0	49.7	99	70 - 125	51.0	102	3	30
541-73-1	1,3-Dichlorobenzene	0.138U	0.138	50.0	49.0	98	75 - 125	48.8	98	0.4	30
106-46-7	1,4-Dichlorobenzene	0.083U	0.083	50.0	49.1	98	75 - 125	48.5	97	1	30
104-51-8	n-Butylbenzene	0.123U	0.123	50.0	49.9	100	70 - 135	51.6	103	3	30
95-50-1	1,2-Dichlorobenzene	0.135U	0.135	50.0	48.5	97	70 - 120	47.5	95	2	30
87-68-3	Hexachlorobutadiene	0.265U	0.265	50.0	51.0	102	50 - 140	54.7	109	7	30
91-20-3	Naphthalene	0.176U	0.176	50.0	47.8	96	55 - 140	48.7	97	2	30
87-61-6	1,2,3-Trichlorobenzene	0.079U	0.079	50.0	50.9	102	55 - 140	53.3	107	5	30
75-35-4	1,1-Dichloroethene	0.208U	0.208	50.0	51.3	103	70 - 130	50.0	100	3	30
71-43-2	Benzene	0.111U	0.111	50.0	50.6	101	80 - 120	49.3	99	3	30
79-01-6	Trichloroethene	0.161U	0.161	50.0	52.0	104	70 - 125	51.1	102	2	30
108-88-3	Toluene	0.122U	0.122	50.0	50.6	101	75 - 120	48.5	97	4	30
108-90-7	Chlorobenzene	0.083U	0.083	50.0	49.4	99	80 - 120	47.8	96	3	30
Surrogate											
460-00-4	4-Bromofluorobenzene	52.4	105	50	52.9	106	75 - 120	54	108		

GC/MS Volatiles Quality Control Summary

Analytical Batch 494340		**Client ID**	MB494340			LCS494340			LCSD494340		
Prep Batch N/A		**GCAL ID**	1127274			1127275			1127276		
		Sample Type	Method Blank			LCS			LCSD		
		Analytical Date	11/10/2012 09:31			11/10/2012 08:10			11/10/2012 08:32		
		Matrix	Water			Water			Water		
SW-846 8260B		**Units**	**Result**	ug/L **RDL**	**Spike Added**	**Result**	**% R**	**Control Limits % R**	**Result**	**% R**	**RPD**	**RPD Limit**
1868-53-7	Dibromofluoromethane		50.3	101	50	50.7	101	85 - 115	50.6	101		
2037-26-5	Toluene d8		50	100	50	49.7	99	85 - 120	49.5	99		
17060-07-0	1,2-Dichloroethane-d4		50	100	50	50	100	70 - 120	50.5	101		

Analytical Batch 494340		**Client ID**	M114MW003			M114MW003-MS			M114MW003-MSD		
Prep Batch N/A		**GCAL ID**	21211081703			21211081704			21211081705		
		Sample Type	SAMPLE			MS			MSD		
		Analytical Date	11/10/2012 11:56			11/10/2012 13:40			11/10/2012 14:00		
		Matrix	Water			Water			Water		
SW-846 8260B		**Units**	**Result**	ug/L **RDL**	**Spike Added**	**Result**	**% R**	**Control Limits % R**	**Result**	**% R**	**RPD**	**RPD Limit**
67-64-1	Acetone		0.00	0.193	50.0	33.7	67	40 - 140	31.8	64	6	30
74-97-5	Bromochloromethane		0.00	0.127	50.0	50.0	100	65 - 130	47.0	94	6	30
75-27-4	Bromodichloromethane		0.00	0.083	50.0	49.2	98	75 - 120	46.6	93	5	30
75-25-2	Bromoform		0.00	0.215	50.0	49.2	98	70 - 130	49.3	99	0.2	30
74-83-9	Bromomethane		0.00	0.427	50.0	47.6	95	30 - 145	46.3	93	3	30
75-15-0	Carbon disulfide		0.00	0.190	50.0	45.3	91	35 - 160	44.3	89	2	30
56-23-5	Carbon tetrachloride		0.00	0.248	50.0	51.5	103	65 - 140	49.4	99	4	30
75-00-3	Chloroethane		0.00	0.235	50.0	47.7	95	60 - 135	45.1	90	6	30
136777-61-2	m,p-Xylene		0.00	0.123	100	91.2	91	75 - 130	90.1	90	1	30
67-66-3	Chloroform		0.00	0.155	50.0	48.2	96	65 - 135	45.4	91	6	30
74-87-3	Chloromethane		0.00	0.144	50.0	45.3	91	40 - 125	44.5	89	2	30
74-95-3	Dibromomethane		0.00	0.211	50.0	49.3	99	75 - 125	46.5	93	6	30
75-71-8	Dichlorodifluoromethane		0.00	0.145	50.0	46.2	92	30 - 155	42.8	86	8	30
75-34-3	1,1-Dichloroethane		0.00	0.171	50.0	47.6	95	70 - 135	44.9	90	6	30
107-06-2	1,2-Dichloroethane		0.00	0.116	50.0	48.1	96	70 - 130	45.9	92	5	30
156-59-2	cis-1,2-Dichloroethene		0.00	0.103	50.0	48.4	97	70 - 125	45.8	92	6	30
156-60-5	trans-1,2-Dichloroethene		0.00	0.077	50.0	48.4	97	60 - 140	45.4	91	6	30
75-09-2	Methylene chloride		0.00	0.149	50.0	46.5	93	55 - 140	44.6	89	4	30
78-87-5	1,2-Dichloropropane		0.00	0.150	50.0	48.2	96	75 - 125	46.0	92	5	30
10061-01-5	cis-1,3-Dichloropropene		0.00	0.124	50.0	48.3	97	70 - 130	47.2	94	2	30
10061-02-6	trans-1,3-Dichloropropene		0.00	0.128	50.0	49.7	99	55 - 140	47.8	96	4	30

GC/MS Volatiles Quality Control Summary

Analytical Batch 494340		**Client ID**	M114MW003			M114MW003-MS			M114MW003-MSD		
Prep Batch N/A		**GCAL ID**	21211081703			21211081704			21211081705		
		Sample Type	SAMPLE			MS			MSD		
		Analytical Date	11/10/2012 11:56			11/10/2012 13:40			11/10/2012 14:00		
		Matrix	Water			Water			Water		
SW-846 8260B		**Units**	**Result**	ug/L **RDL**	**Spike Added**	**Result**	**% R**	**Control Limits % R**	**Result**	**% R**	**RPD**	**RPD Limit**
100-41-4	Ethylbenzene		0.00	0.109	50.0	44.5	89	75 - 125	44.1	88	0.9	30
591-78-6	2-Hexanone		0.00	0.122	50.0	48.2	96	55 - 130	46.6	93	3	30
98-82-8	Isopropylbenzene (Cumene)		0.00	0.130	50.0	45.0	90	75 - 125	44.7	89	0.7	30
78-93-3	2-Butanone		0.00	0.142	50.0	41.8	84	30 - 150	40.7	81	3	30
108-10-1	4-Methyl-2-pentanone		0.00	0.120	50.0	54.4	109	60 - 135	51.6	103	5	30
103-65-1	n-Propylbenzene		0.00	0.727	50.0	44.5	89	70 - 130	42.8	86	4	30
100-42-5	Styrene		0.00	0.089	50.0	45.4	91	65 - 135	44.7	89	2	30
127-18-4	Tetrachloroethene		0.00	0.193	50.0	47.0	94	45 - 150	45.3	91	4	30
630-20-6	1,1,1,2-Tetrachloroethane		0.00	0.120	50.0	46.3	93	80 - 130	45.2	90	2	30
79-34-5	1,1,2,2-Tetrachloroethane		0.00	0.109	50.0	48.4	97	65 - 130	47.1	94	3	30
120-82-1	1,2,4-Trichlorobenzene		0.00	0.105	50.0	43.8	88	65 - 135	44.6	89	2	30
71-55-6	1,1,1-Trichloroethane		0.00	0.123	50.0	46.7	93	65 - 130	44.1	88	6	30
79-00-5	1,1,2-Trichloroethane		0.00	0.159	50.0	46.3	93	75 - 125	45.7	91	1	30
75-69-4	Trichlorofluoromethane		0.00	0.157	50.0	44.8	90	60 - 145	41.7	83	7	30
96-18-4	1,2,3-Trichloropropane		0.00	0.065	50.0	46.1	92	75 - 125	43.7	87	5	30
95-63-6	1,2,4-Trimethylbenzene		0.00	0.084	50.0	44.8	90	75 - 130	43.6	87	3	30
108-67-8	1,3,5-Trimethylbenzene		0.00	0.066	50.0	45.0	90	75 - 130	43.4	87	4	30
75-01-4	Vinyl chloride		0.00	0.127	50.0	48.1	96	50 - 145	45.7	91	5	30
95-47-6	o-Xylene		0.00	0.055	50.0	46.3	93	80 - 120	45.8	92	1	30
96-12-8	1,2-Dibromo-3-chloropropane		0.00	0.194	50.0	48.2	96	50 - 130	49.4	99	2	30
106-93-4	1,2-Dibromoethane		0.00	0.102	50.0	46.8	94	80 - 120	46.5	93	0.6	30
1634-04-4	tert-Butyl methyl ether (MTBE)		0.00	0.078	50.0	50.1	100	65 - 125	48.1	96	4	30
99-87-6	4-Isopropyltoluene		0.00	0.070	50.0	43.2	86	75 - 130	42.5	85	2	30
594-20-7	2,2-Dichloropropane		0.00	0.170	50.0	50.0	100	70 - 135	47.5	95	5	30
563-58-6	1,1-Dichloropropene		0.00	0.052	50.0	48.9	98	75 - 130	45.4	91	7	30
142-28-9	1,3-Dichloropropane		0.00	0.059	50.0	45.6	91	75 - 125	45.7	91	0.2	30
108-86-1	Bromobenzene		0.00	0.145	50.0	43.7	87	75 - 125	42.1	84	4	30
95-49-8	2-Chlorotoluene		0.00	0.080	50.0	44.9	90	75 - 125	43.5	87	3	30
106-43-4	4-Chlorotoluene		0.00	0.124	50.0	44.7	89	75 - 130	42.7	85	5	30
98-06-6	tert-Butylbenzene		0.00	0.087	50.0	44.0	88	70 - 130	42.8	86	3	30
135-98-8	sec-Butylbenzene		0.00	0.107	50.0	42.8	86	70 - 125	41.9	84	2	30
541-73-1	1,3-Dichlorobenzene		0.00	0.138	50.0	44.2	88	65 - 130	43.1	86	3	30
106-46-7	1,4-Dichlorobenzene		0.00	0.083	50.0	43.3	87	65 - 130	43.0	86	0.7	30

GC/MS Volatiles Quality Control Summary

Analytical Batch 494340		**Client ID**	M114MW003			M114MW003-MS			M114MW003-MSD		
Prep Batch N/A		**GCAL ID**	21211081703			21211081704			21211081705		
		Sample Type	SAMPLE			MS			MSD		
		Analytical Date	11/10/2012 11:56			11/10/2012 13:40			11/10/2012 14:00		
		Matrix	Water			Water			Water		
SW-846 8260B		**Units**	**Result**	ug/L **RDL**	**Spike Added**	**Result**	**% R**	**Control Limits % R**	**Result**	**% R**	**RPD**	**RPD Limit**
104-51-8	n-Butylbenzene		0.00	0.123	50.0	42.0	84	70 - 135	41.3	83	2	30
95-50-1	1,2-Dichlorobenzene		0.00	0.135	50.0	43.5	87	70 - 120	42.3	85	3	30
87-68-3	Hexachlorobutadiene		0.00	0.265	50.0	41.7	83	50 - 140	43.9	88	5	30
91-20-3	Naphthalene		0.00	0.176	50.0	41.7	83	55 - 140	43.0	86	3	30
87-61-6	1,2,3-Trichlorobenzene		0.00	0.079	50.0	43.7	87	55 - 140	45.0	90	3	30
75-35-4	1,1-Dichloroethene		0.00	0.208	50.0	46.0	92	70 - 130	43.8	88	5	30
71-43-2	Benzene		0.00	0.111	50.0	47.0	94	80 - 120	44.4	89	6	30
79-01-6	Trichloroethene		0.00	0.161	50.0	46.7	93	70 - 125	44.9	90	4	30
108-88-3	Toluene		0.00	0.122	50.0	44.9	90	75 - 120	44.1	88	2	30
108-90-7	Chlorobenzene		0.00	0.083	50.0	44.4	89	80 - 120	43.3	87	3	30
Surrogate												
460-00-4	4-Bromofluorobenzene				50	52.3	105	75 - 120	53.6	107		
1868-53-7	Dibromofluoromethane				50	50.9	102	85 - 115	51.2	102		
2037-26-5	Toluene d8				50	47.6	95	85 - 120	49.4	99		
17060-07-0	1,2-Dichloroethane-d4				50	51.7	103	70 - 120	49.6	99		

General Chromatography Quality Control Summary

Analytical Batch	494679	**Client ID**	MB494270	LCS494270	LCSD494270
Prep Batch	494270	**GCAL ID**	1126930	1126931	1126932
Prep Method	SW-846	**Sample Type**	Method Blank	LCS	LCSD
	8330A	**Prep Date**	11/13/2012 04:30	11/13/2012 04:30	11/13/2012 04:30
		Analytical Date	11/14/2012 22:05	11/15/2012 12:45	11/15/2012 13:19
		Matrix	Water	Water	Water

SW-846 8330A		**Units**	ug/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
2691-41-0	HMX	0.212U	0.212	2.00	1.63	82	80 - 115	1.81	91	10	30
121-82-4	RDX	0.189U	0.189	2.00	1.49	75	50 - 160	1.58	79	6	30
99-35-4	1,3,5-Trinitrobenzene	0.240U	0.240	2.00	1.29	65	65 - 140	1.53	77	17	30
99-65-0	1,3-Dinitrobenzene	0.167U	0.167	2.00	1.55	78	45 - 160	2.12	106	**31***	30
479-45-8	Tetryl	0.241U	0.241	2.00	0.816	41	20 - 175	0.619	31	27	30
98-95-3	Nitrobenzene	0.267U	0.267	2.00	1.53	77	50 - 140	1.64	82	7	30
118-96-7	2,4,6-Trinitrotoluene	0.483U	0.483	2.00	1.53	77	50 - 145	1.57	79	3	30
1946-51-0	4-Amino-2,6-dinitrotoluene	0.489U	0.489	2.00	1.41	71	55 - 155	1.88	94	29	30
355-72-78-2	2-Amino-4,6-dinitrotoluene	0.576U	0.576	2.00	1.58	79	50 - 155	1.69	85	7	30
121-14-2	2,4-Dinitrotoluene	0.501U	0.501	2.00	1.73	87	60 - 135	1.91	96	10	30
606-20-2	2,6-Dinitrotoluene	0.283U	0.283	2.00	1.50	75	60 - 135	1.58	79	5	30
88-72-2	2-Nitrotoluene	0.120U	0.120	2.00	1.41	71	45 - 135	1.82	91	25	30
99-08-1	3-Nitrotoluene	0.369U	0.369	2.00	1.50	75	50 - 130	1.46	73	3	30
99-99-0	4-Nitrotoluene	0.417U	0.417	2.00	1.54	77	50 - 130	1.96	98	24	30
Surrogate											
528-29-0	1,2-Dinitrobenzene	1.54	77	2	1.51	76	70 - 130	1.51	76		

Analytical Batch	494679	**Client ID**	M114MW003	M114MW003-MS	M114MW003-MSD
Prep Batch	494270	**GCAL ID**	21211081703	21211081704	21211081705
Prep Method	SW-846	**Sample Type**	SAMPLE	MS	MSD
	8330A	**Prep Date**	11/13/2012 04:30	11/13/2012 04:30	11/13/2012 04:30
		Analytical Date	11/15/2012 02:35	11/15/2012 03:09	11/15/2012 16:41
		Matrix	Water	Water	Water

SW-846 8330A		**Units**	ug/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
2691-41-0	HMX	0.00	0.212	2.00	1.80	90	80 - 115	1.90	95	5	30
121-82-4	RDX	0.00	0.189	2.00	1.74	87	50 - 160	1.77	89	2	30
99-35-4	1,3,5-Trinitrobenzene	0.00	0.240	2.00	1.56	78	65 - 140	1.62	81	4	30
99-65-0	1,3-Dinitrobenzene	0.00	0.167	2.00	1.73	87	45 - 160	2.16	108	22	30
479-45-8	Tetryl	0.00	0.241	2.00	0.861	43	20 - 175	0.560	28	**42***	30
98-95-3	Nitrobenzene	0.00	0.267	2.00	1.91	96	50 - 140	1.69	85	12	30

General Chromatography Quality Control Summary

Analytical Batch	494679	**Client ID**	M114MW003	M114MW003-MS	M114MW003-MSD
Prep Batch	494270	**GCAL ID**	21211081703	21211081704	21211081705
Prep Method	SW-846	**Sample Type**	SAMPLE	MS	MSD
	8330A	**Prep Date**	11/13/2012 04:30	11/13/2012 04:30	11/13/2012 04:30
		Analytical Date	11/15/2012 02:35	11/15/2012 03:09	11/15/2012 16:41
		Matrix	Water	Water	Water

SW-846 8330A		**Units**	ug/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
118-96-7	2,4,6-Trinitrotoluene	0.00	0.483	2.00	1.71	86	50 - 145	1.40	70	20	30
1946-51-0	4-Amino-2,6-dinitrotoluene	0.00	0.489	2.00	1.48	74	55 - 155	1.49	75	0.7	30
355-72-78-2	2-Amino-4,6-dinitrotoluene	0.00	0.576	2.00	1.79	90	50 - 155	1.69	85	6	30
121-14-2	2,4-Dinitrotoluene	0.00	0.501	2.00	1.91	96	60 - 135	2.03	102	6	30
606-20-2	2,6-Dinitrotoluene	0.00	0.283	2.00	1.79	90	60 - 135	1.84	92	3	30
88-72-2	2-Nitrotoluene	0.00	0.120	2.00	1.84	92	45 - 135	1.73	87	6	30
99-08-1	3-Nitrotoluene	0.00	0.369	2.00	1.82	91	50 - 130	1.69	85	7	30
99-99-0	4-Nitrotoluene	0.00	0.417	2.00	1.98	99	50 - 130	2.20	110	11	30
Surrogate											
528-29-0	1,2-Dinitrobenzene			2	1.5	75	70 - 130	1.72	86		

Inorganics Quality Control Summary

Analytical Batch	494344	**Client ID**	MB494114			LCS494114		
Prep Batch	494114	**GCAL ID**	1126003			1126004		
Prep Method	SW-846	**Sample Type**	Method Blank			LCS		
	7470A	**Prep Date**	11/08/2012 09:30			11/08/2012 09:30		
		Analytical Date	11/10/2012 12:21			11/10/2012 12:22		
		Matrix	Water			Water		
SW-846 7470A		**Units**	**Result**	ug/L **RDL**	**Spike Added**	**Result**	**% R**	**Control Limits % R**
7439-97-6	Mercury		0.068U	0.068	5.00	4.56	91	80 - 120

Analytical Batch	494344	**Client ID**	MA01 MW002			1125750MS			1125750MSD			
Prep Batch	494114	**GCAL ID**	21211071201			1126005			1126006			
Prep Method	SW-846	**Sample Type**	SAMPLE			MS			MSD			
	7470A	**Prep Date**	11/08/2012 09:30			11/08/2012 09:30			11/08/2012 09:30			
		Analytical Date	11/10/2012 12:30			11/10/2012 12:25			11/10/2012 12:27			
		Matrix	Water			Water			Water			
SW-846 7470A		**Units**	**Result**	ug/L **RDL**	**Spike Added**	**Result**	**% R**	**Control Limits % R**	**Result**	**% R**	**RPD**	**RPD Limit**
7439-97-6	Mercury		0.00000	0.068	5.00	4.44	89	75 - 125	4.20	84	6	30

Inorganics Quality Control Summary

Analytical Batch	494344	**Client ID**	MB494114		LCS494114		
Prep Batch	494114	**GCAL ID**	1126003		1126004		
Prep Method	SW-846	**Sample Type**	Method Blank		LCS		
	7470A	**Prep Date**	11/08/2012 09:30		11/08/2012 09:30		
		Analytical Date	11/10/2012 12:21		11/10/2012 12:22		
		Matrix	Water		Water		
SW-846 7470A		**Units**	ug/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
7439-97-6	Mercury	0.068U	0.068	5.00	4.56	91	80 - 120

Analytical Batch	494344	**Client ID**	MA01 MW002		1125750MS			1125750MSD			
Prep Batch	494114	**GCAL ID**	21211071201		1126005			1126006			
Prep Method	SW-846	**Sample Type**	SAMPLE		MS			MSD			
	7470A	**Prep Date**	11/08/2012 09:30		11/08/2012 09:30			11/08/2012 09:30			
		Analytical Date	11/10/2012 12:30		11/10/2012 12:25			11/10/2012 12:27			
		Matrix	Water		Water			Water			
SW-846 7470A		**Units**	ug/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
7439-97-6	Mercury	0.00000	0.068	5.00	4.44	89	80 - 120	4.20	84	6	30

Inorganics Quality Control Summary

Analytical Batch	494351	**Client ID**	MB494111	LCS494111
Prep Batch	494111	**GCAL ID**	1125993	1125994
Prep Method	SW-846	**Sample Type**	Method Blank	LCS
	3010A	**Prep Date**	11/07/2012 17:00	11/07/2012 17:00
		Analytical Date	11/10/2012 13:34	11/10/2012 13:41
		Matrix	Water	Water

SW-846 6010C		**Units**	ug/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
7429-90-5	Aluminum	60.0U	60.0	5000	4820	96	80 - 120
7440-36-0	Antimony	3.11U	3.11	500	479	96	80 - 120
7440-38-2	Arsenic	3.72J	3.59	500	501	100	80 - 120
7440-39-3	Barium	0.71U	0.71	500	479	96	80 - 120
7440-41-7	Beryllium	0.10U	0.10	500	490	98	80 - 120
7440-43-9	Cadmium	0.20U	0.20	500	483	97	80 - 120
7440-70-2	Calcium	50.0U	50.0	5000	4620	92	80 - 120
7440-47-3	Chromium	1.00U	1.00	500	480	96	80 - 120
7440-48-4	Cobalt	1.00U	1.00	500	484	97	80 - 120
7440-50-8	Copper	1.01U	1.01	500	470	94	80 - 120
7439-89-6	Iron	40.0U	40.0	5000	4580	92	80 - 120
7439-92-1	Lead	1.96U	1.96	500	492	98	80 - 120
7439-95-4	Magnesium	50.0U	50.0	5000	4870	97	80 - 120
7439-96-5	Manganese	2.00U	2.00	500	478	96	80 - 120
7439-98-7	Molybdenum	3.75U	3.75	500	475	95	80 - 120
7440-02-0	Nickel	1.13U	1.13	500	497	99	80 - 120
7440-09-7	Potassium	100U	100	10000	9630	96	80 - 120
7782-49-2	Selenium	4.42U	4.42	500	493	99	80 - 120
7440-22-4	Silver	0.82J	0.70	500	478	96	80 - 120
7440-23-5	Sodium	200U	200	20000	19300	97	80 - 120
7440-28-0	Thallium	3.75J	3.04	500	483	97	80 - 120
7440-62-2	Vanadium	3.75U	3.75	500	476	95	80 - 120
7440-66-6	Zinc	4.51U	4.51	500	484	97	80 - 120
7440-32-6	Titanium	1.20U	1.20	500	479	96	80 - 120

Inorganics Quality Control Summary

Analytical Batch	494453	**Client ID**	LF005-MW19_1112			LF005-MW19_1112-ms			LF005-MW19_1112-sd		
Prep Batch	494111	**GCAL ID**	21211073205			21211073206			21211073207		
Prep Method	SW-846	**Sample Type**	SAMPLE			MS			MSD		
	3010A	**Prep Date**	11/07/2012 17:00			11/07/2012 17:00			11/07/2012 17:00		
		Analytical Date	11/12/2012 14:50			11/12/2012 14:57			11/12/2012 15:03		
		Matrix	Water			Water			Water		
SW-846 6010C		**Units**	ug/L		**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**		**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
7439-89-6	Iron	0.0	40.0		5000	4700	94	80 - 120	4730	95	0.6	30

Inorganics Quality Control Summary

Analytical Batch	494351	**Client ID**	MB494112	LCS494112
Prep Batch	494112	**GCAL ID**	1125995	1125996
Prep Method	SW-846 3005	**Sample Type**	Method Blank	LCS
	Dissolved	**Prep Date**	11/08/2012 09:00	11/08/2012 09:00
		Analytical Date	11/11/2012 01:39	11/11/2012 01:47
		Matrix	Water	Water

SW-846 6010C Dissolved		**Units**	ug/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
7429-90-5	Aluminum	60.0U	60.0	5000	5070	101	80 - 120
7440-36-0	Antimony	3.11U	3.11	500	498	100	80 - 120
7440-38-2	Arsenic	4.18J	3.59	500	518	104	80 - 120
7440-39-3	Barium	0.71U	0.71	500	494	99	80 - 120
7440-41-7	Beryllium	0.10U	0.10	500	512	102	80 - 120
7440-43-9	Cadmium	0.25J	0.20	500	496	99	80 - 120
7440-70-2	Calcium	50.0U	50.0	5000	4960	99	80 - 120
7440-47-3	Chromium	1.00U	1.00	500	495	99	80 - 120
7440-48-4	Cobalt	1.00U	1.00	500	496	99	80 - 120
7440-50-8	Copper	1.01U	1.01	500	491	98	80 - 120
7439-89-6	Iron	40.0U	40.0	5000	4940	99	80 - 120
7439-92-1	Lead	2.02J	1.96	500	501	100	80 - 120
7439-95-4	Magnesium	50.0U	50.0	5000	4920	98	80 - 120
7439-96-5	Manganese	2.00U	2.00	500	493	99	80 - 120
7439-98-7	Molybdenum	3.75U	3.75	500	490	98	80 - 120
7440-02-0	Nickel	1.13U	1.13	500	511	102	80 - 120
7440-09-7	Potassium	100U	100	10000	10300	103	80 - 120
7782-49-2	Selenium	4.42U	4.42	500	511	102	80 - 120
7440-22-4	Silver	0.91J	0.70	500	504	101	80 - 120
7440-23-5	Sodium	200U	200	20000	19500	98	80 - 120
7440-28-0	Thallium	3.04U	3.04	500	497	99	80 - 120
7440-62-2	Vanadium	3.75U	3.75	500	492	98	80 - 120
7440-66-6	Zinc	4.51U	4.51	500	511	102	80 - 120
7440-32-6	Titanium	1.20U	1.20	500	497	99	80 - 120

Inorganics Quality Control Summary

Analytical Batch	494351	**Client ID**	MA01 MW002	1125750MS	1125750MSD
Prep Batch	494112	**GCAL ID**	21211071201	1125997	1125998
Prep Method	SW-846 3005	**Sample Type**	SAMPLE	MS	MSD
	Dissolved	**Prep Date**	11/08/2012 09:00	11/08/2012 09:00	11/08/2012 09:00
		Analytical Date	11/11/2012 02:07	11/11/2012 02:15	11/11/2012 02:22
		Matrix	Water	Water	Water

SW-846 6010C Dissolved		**Units**	ug/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
7429-90-5	Aluminum	0.0	60.0	5000	4740	95	80 - 120	5040	101	6	30
7440-36-0	Antimony	0.0	3.11	500	483	97	80 - 120	535	107	10	30
7440-38-2	Arsenic	0.0	3.59	500	492	98	80 - 120	552	110	12	30
7440-39-3	Barium	14.9	0.71	500	465	90	80 - 120	515	100	10	30
7440-41-7	Beryllium	0.0	0.10	500	472	94	80 - 120	518	104	9	30
7440-43-9	Cadmium	0.52	0.20	500	445	89	80 - 120	498	99	11	30
7440-47-3	Chromium	1.51	1.00	500	442	88	80 - 120	486	97	10	30
7440-48-4	Cobalt	0.0	1.00	500	457	91	80 - 120	510	102	11	30
7440-50-8	Copper	9.01	1.01	500	485	95	80 - 120	533	105	9	30
7439-89-6	Iron	13.8	40.0	5000	4650	93	80 - 120	5030	100	8	30
7439-92-1	Lead	0.0	1.96	500	450	90	80 - 120	507	101	12	30
7439-95-4	Magnesium	33700	50.0	5000	38100	88	80 - 120	42000	**167***	10	30
7439-96-5	Manganese	8.05	2.00	500	453	89	80 - 120	499	98	10	30
7439-98-7	Molybdenum	7.09	3.75	500	467	92	80 - 120	522	103	11	30
7440-02-0	Nickel	2.69	1.13	500	468	93	80 - 120	521	104	11	30
7440-09-7	Potassium	6770	100	10000	16300	95	80 - 120	18000	112	10	30
7782-49-2	Selenium	0.0	4.42	500	482	96	80 - 120	540	108	11	30
7440-22-4	Silver	1.10	0.70	500	466	93	80 - 120	509	102	9	30
7440-28-0	Thallium	4.91	3.04	500	453	90	80 - 120	502	99	10	30
7440-62-2	Vanadium	20.7	3.75	500	484	93	80 - 120	531	102	9	30
7440-66-6	Zinc	24.9	4.51	500	496	94	80 - 120	549	105	10	30
7440-32-6	Titanium	0.0	1.20	500	457	91	80 - 120	502	100	9	30

Inorganics Quality Control Summary

Analytical Batch	494400	**Client ID**	MA01 MW002	1125750MS	1125750MSD
Prep Batch	494112	**GCAL ID**	21211071201	1125997	1125998
Prep Method	SW-846 3005	**Sample Type**	SAMPLE	MS	MSD
	Dissolved	**Prep Date**	11/08/2012 09:00	11/08/2012 09:00	11/08/2012 09:00
		Analytical Date	11/11/2012 14:54	11/11/2012 15:04	11/11/2012 15:11
		Matrix	Water	Water	Water

SW-846 6010C Dissolved		**Units**	ug/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
7440-70-2	Calcium	37600	50.0	5000	40700	**62***	80 - 120	45500	**159***	11	30
7440-23-5	Sodium	510000	200	20000	513000	**14***	80 - 120	566000	**282***	10	30

General Chemistry Quality Control Summary

Analytical Batch 494089	**Client ID**	MB494089			LCS494089		
Prep Batch N/A	**GCAL ID**	1125902			1125903		
	Sample Type	Method Blank			LCS		
	Analytical Date	11/07/2012 14:00			11/07/2012 14:00		
	Matrix	Water			Water		
SM 2540C TDS		**Units**	mg/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
WET-035	Total Dissolved Solids(TDS)	0.00		1000	969	96.9	80 - 120

Analytical Batch 494089	**Client ID**	TK-470		1125429DUP		
Prep Batch N/A	**GCAL ID**	21211062901		1125904		
	Sample Type	SAMPLE		DUP		
	Analytical Date	11/07/2012 14:00		11/07/2012 14:00		
	Matrix	Water		Water		
SM 2540C TDS		**Units**	mg/L	**Result**		**RPD**
		Result	**RDL**		**RPD**	**Limit**
WET-035	Total Dissolved Solids(TDS)	325		335	3	5

General Chemistry Quality Control Summary

Analytical Batch 494100	**Client ID**	MB494100			LCS494100		
Prep Batch N/A	**GCAL ID**	1125961			1125962		
	Sample Type	Method Blank			LCS		
	Analytical Date	11/07/2012 16:03			11/07/2012 16:04		
	Matrix	Water			Water		
EPA 353.2 Nitrate		**Units**	mg/L-N	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
14797-55-8 Nitrate		0.005U	0.005	0.500	0.496	99	89.5 -110.5

Analytical Batch 494100	**Client ID**	MA01 MW002			1125750MS			1125750MSD			
Prep Batch N/A	**GCAL ID**	21211071201			1125963			1125964			
	Sample Type	SAMPLE			MS			MSD			
	Analytical Date	11/07/2012 16:06			11/07/2012 16:08			11/07/2012 16:09			
	Matrix	Water			Water			Water			
EPA 353.2 Nitrate		**Units**	mg/L-N	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
14797-55-8 Nitrate		0.443	0.005	0.500	0.919	95	89.5 -110.5	0.920	95	0.05	25

Analytical Batch 494102	**Client ID**	MB494102			LCS494102		
Prep Batch N/A	**GCAL ID**	1125967			1125968		
	Sample Type	Method Blank			LCS		
	Analytical Date	11/07/2012 15:26			11/07/2012 15:27		
	Matrix	Water			Water		
EPA 353.2 Nitrite		**Units**	mg/L-N	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
14797-65-0 Nitrite		0.005J	0.002	0.500	0.517	103	89.5 -110.5

Analytical Batch 494102	**Client ID**	MA01 MW002			1125750MS			1125750MSD			
Prep Batch N/A	**GCAL ID**	21211071201			1125969			1125970			
	Sample Type	SAMPLE			MS			MSD			
	Analytical Date	11/07/2012 15:28			11/07/2012 15:29			11/07/2012 15:30			
	Matrix	Water			Water			Water			
EPA 353.2 Nitrite		**Units**	mg/L-N	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
14797-65-0 Nitrite		0.000	0.002	0.500	0.497	99	89.5 -110.5	0.497	99	0.1	25

General Chemistry Quality Control Summary

Analytical Batch 494190	**Client ID**	MB494190			LCS494190		
Prep Batch N/A	**GCAL ID**	1126446			1126447		
	Sample Type	Method Blank			LCS		
	Analytical Date	11/13/2012 10:58			11/13/2012 11:16		
	Matrix	Water			Water		
EPA 300.0		**Units**	mg/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
16887-00-6	Chloride	0.063U	0.063	2.50	2.47	99	79 - 109
14808-79-8	Sulfate	0.115U	0.115	5.00	5.02	100	82 - 110

Analytical Batch 494190	**Client ID**	M114 MW001			1125752MS			1125752MSD			
Prep Batch N/A	**GCAL ID**	21211071203			1126450			1126451			
	Sample Type	SAMPLE			MS			MSD			
	Analytical Date	11/13/2012 18:36			11/13/2012 18:54			11/13/2012 19:11			
	Matrix	Water			Water			Water			
EPA 300.0		**Units**	mg/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
16887-00-6	Chloride	3320	126	5000	9060	**115***	79 - 109	8870	**111***	2.1	15
14808-79-8	Sulfate	2200	230	10000	13000	108	82 - 110	12800	106	1.5	15

General Chemistry Quality Control Summary

Analytical Batch 494159	**Client ID**	LCS494159	
Prep Batch N/A	**GCAL ID**	1126283	
	Sample Type	LCS	
	Analytical Date	11/08/2012 08:27	
	Matrix	Water	

SM 2320B Alkalinity	**Spike Added**	**Result**	**% R**	**Control Limits % R**
000000-00-5 Total Alkalinity	200	201	100	80 - 120

Analytical Batch 494159	**Client ID**	TK-471	1125430DUP
Prep Batch N/A	**GCAL ID**	21211062902	1126284
	Sample Type	SAMPLE	DUP
	Analytical Date	11/08/2012 08:27	11/08/2012 08:27
	Matrix	Water	Water

SM 2320B Alkalinity	**Units**	mg/L CaCO3	**Result**	**RPD**	**RPD Limit**
	Result	**RDL**			
000000-00-5 Total Alkalinity	212.65	0.19	215	1	11

General Chemistry Quality Control Summary

Analytical Batch 494061	**Client ID**	MB494061			LCS494061		
Prep Batch N/A	**GCAL ID**	1125754			1125755		
	Sample Type	Method Blank			LCS		
	Analytical Date	11/07/2012 10:20			11/07/2012 10:20		
	Matrix	Water			Water		
SW-846 7196A Chromium VI		**Units**	ug/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
18540-29-9	Chromium VI	4.00U	4.00	500	497	99	80 - 120

Analytical Batch 494061	**Client ID**	M114 MW004			1125751MS		
Prep Batch N/A	**GCAL ID**	21211071202			1125757		
	Sample Type	SAMPLE			MS		
	Analytical Date	11/07/2012 10:23			11/07/2012 10:23		
	Matrix	Water			Water		
SW-846 7196A Chromium VI		**Units**	ug/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
18540-29-9	Chromium VI	0.000	4.00	500	490	98	80 - 120

Analytical Batch 494061	**Client ID**	M114 MW004		1125751DUP		
Prep Batch N/A	**GCAL ID**	21211071202		1125756		
	Sample Type	SAMPLE		DUP		
	Analytical Date	11/07/2012 10:23		11/07/2012 10:23		
	Matrix	Water		Water		
SW-846 7196A Chromium VI		**Units**	ug/L	**Result**		**RPD**
		Result	**RDL**		**RPD**	**Limit**
18540-29-9	Chromium VI	0.000	4.00	0.000	0	25

General Chemistry Quality Control Summary

Analytical Batch	494463	**Client ID**	MB494328			LCS494328		
Prep Batch	494328	**GCAL ID**	1127229			1127230		
Prep Method	SW-846	**Sample Type**	Method Blank			LCS		
	9012A	**Prep Date**	11/10/2012 06:00			11/10/2012 06:00		
		Analytical Date	11/12/2012 15:51			11/12/2012 15:52		
		Matrix	Water			Water		
SW-846 9012A Cyanide			**Units**	mg/L	**Spike**	**Result**		**Control**
			Result	**RDL**	**Added**		**% R**	**Limits % R**
57-12-5	Total Cyanide		0.0012U	0.0012	0.020	0.019	94.5	80 - 120

Analytical Batch	494463	**Client ID**	MB494328			LCSHI494328		
Prep Batch	494328	**GCAL ID**	1127229			1127231		
Prep Method	SW-846	**Sample Type**	Method Blank			LCSHI		
	9012A	**Prep Date**	11/10/2012 06:00			11/10/2012 06:00		
		Analytical Date	11/12/2012 15:51			11/12/2012 15:53		
		Matrix	Water			Water		
SW-846 9012A Cyanide			**Units**	mg/L	**Spike**	**Result**		**Control**
			Result	**RDL**	**Added**		**% R**	**Limits % R**
57-12-5	Total Cyanide		0.0012U	0.0012	0.10	0.091	90.8	80 - 120

Analytical Batch	494463	**Client ID**	M114MW003			M114MW003-MS			M114MW003-MSD			
Prep Batch	494328	**GCAL ID**	21211081703			21211081704			21211081705			
Prep Method	SW-846	**Sample Type**	SAMPLE			MS			MSD			
	9012A	**Prep Date**	11/10/2012 06:00			11/10/2012 06:00			11/10/2012 06:00			
		Analytical Date	11/12/2012 15:59			11/12/2012 16:00			11/12/2012 16:02			
		Matrix	Water			Water			Water			
SW-846 9012A Cyanide			**Units**	mg/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
			Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
57-12-5	Total Cyanide		0.0	0.0012	0.050	0.040	80.4	80 - 120	0.040	80.2	0.25	20

GCAL

7979 GSRI Avenue, Baton Rouge, Louisiana 70820-7402
Phone 225.769.4900 • Fax 225.767.5717

CHAIN OF CUSTODY RECORD

Lab use only:

Client Name	Client #	Workorder #	Due Date
Trinity	4747	212110712	11/14/12

Report to:
Client: Trinity ADC
Address: 1007 N Eglin Parkway
Shalimar, FL 32459
Contact: Ben Stewart
Phone: 850 218 8955
Fax:

Bill to:
Client: Same as Report to
Address:
Contact:
Phone:
Fax:

P.O. Number:
Project Name/Number: Melrose AFR, A003-006
Sampled By: Ben Stewart Jordan Gibson

Lab use only:
Custody Seal used ☑ yes ☐ no
intact ☐ yes ☐ no
Temperature °C 2.3 3.2 2.1

Analytical Requests & Method

Matrix[1]	Date	Time (2400)	Comp	Grab	Sample Description	Preservatives	No Containers	8260B (HCL)	Explosives 8330	Total Metals 6010C (HNO3)	Dissolved Metals 6010B (HNO3)	Chromium (VI) 7196A	Cyanide 9012A (NaOH)	Mercury (7470A) (HNO3)	NO2/NO3, Chloride, Sulfate (300.0)	Perchlorate (6860)	Alkalinity 2320B	TDS 2540C	Remarks:	Lab ID
WG	11/6/12	0900		✓	MA01MW002	yes	12	X	X	X	X	X	X	X	X	X	X	X		1
WG	11/6/12	1041		✓	M114MW004	yes	12	X	X	X	X	X	X	X	X	X	X	X		2
WG	11/6/12	1330		✓	M114MW001	yes	12	X	X	X	X	X	X	X	X	X	X	X		3
WQ	11/6/12	0900			TB-03	yes	3	X												4

Turn Around Time: ☐ 24-48 hrs. ☐ 3 days ☐ 1 week ☑ Standard ☐ Other

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
[signature]	Fed Ex	11/6/12	1600
Fed Ex	[signature]	11/7/12	945

Note: Please filter M114MW004 in lab for Dissolved metals.
MA01MW002 + M114MW001 were filtered in the field.
8728 2111 9046

By submitting these samples, you agree to the terms and conditions contained in our most recent schedule of services.

Matrix[1]: W = water, S = soil, SD = solid, L = liquid, SL = sludge, o = oil, CT = charcoal tube, A = air bag

We cannot accept verbal changes. Please fax written changes to (225) 767-5717

WHITE: CLIENT FINAL REPORT — CANARY: LABORATORY — PINK: CLIENT

GCAL-06 11/98

GCAL
GULF COAST ANALYTICAL LABORATORIES, INC

SAMPLE RECEIVING CHECKLIST

SAMPLE DELIVERY GROUP	212110712
Client 4747 - TRINITY Analysis & Development Corp.	**Transport Method** FEDEX
Profile 195817 - Melrose	**Received By** Saucier, Charlotte
Line Item(s) 1 - Waters	**Receive Date(s)** 11/07/12

CHECKLIST

	Yes	No	NA
Were all samples received using proper thermal preservation?	☑	☐	☐
When used, were all custody seals intact?	☑	☐	☐
Were all samples received in proper containers?	☑	☐	☐
Were all samples received using proper chemical preservation?	☑	☐	☐
Was preservative added to any container at the lab?	☐	☑	☐
Were all containers received in good condition?	☑	☐	☐
Were all VOA vials received with no head space?	☑	☐	☐
Do all sample labels match the Chain of Custody?	☑	☐	☐
Did the Chain of Custody list the sampling technician?	☑	☐	☐
Was the COC maintained i.e. all signatures, dates and time of receipt included?	☑	☐	☐

COOLERS

Airbill	Temp(oC)
8728 2111 9046	2.3
	3.2
	2.1

DISCREPANCIES

21211071201 - MA01 MW002
- Sample received expired

LABORATORY PRESERVATIONS

None

NOTES	MA01 MW002-CHROMIUM (VI) WAS RECEIVED EXPIRED

November 19, 2012

Brenda Martinez
GCAL LAB
7979 GSRI AVENUE
BATON ROUGE, LA 70820
TEL: (225) 769-4900
FAX (225) 767-5717

Order No.: 1211067

RE: DoD Perchlorate

Dear Brenda Martinez:

DHL Analytical, Inc. received 3 sample(s) on 11/8/2012 for the analyses presented in the following report.

There were no problems with the analyses and all data met requirements of DoD QSM Ver 4.2 and NELAC except where noted in the Case Narrative. All non-NELAC methods will be identified accordingly in the case narrative and all estimated uncertainties of test results are within method or EPA specifications.

If you have any questions regarding these tests results, please feel free to call. This report shall not be reproduced except in full without the written approval of DHL Analytical, Inc. Thank you for using DHL Analytical.

Sincerely,

John DuPont
General Manager

This report was performed under the accreditation of the State of Texas & DoD Laboratory Certification Number: T104704211-12-8 & DoD ELAP #ADE-1416 v2

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GCAL

GULF COAST ANALYTICAL LABORATORIES, INC
7979 GSRI AVE, BATON ROUGE LA 70820-7402
(225) 769-4900 FAX (225) 767-5717

#1211067

Chain of Custody Record

Submitted by
Client: Gulf Coast Analytical Labs
Address: 7979 GSRI Avenue
Baton Rouge, LA 70820
Contact: Brenda Martinez
Phone: (225)769-4900
Fax: (225)767-5717

Bill to
Client: Gulf Coast Analytical Labs
Address: 7979 GSRI Avenue
Baton Rouge, LA 70820
Contact: Brenda Martinez
Phone: (225)769-4900
Fax: (225)767-5717

Analysis Requested

* Our P. O. Number must appear on the Invoice.
* Our Project Number must appear on the final report.

P.O. Number: 12-0956
Project Name/Number: 212110712
Sampled By:

	Matrix	Date	Time (2400)	Comp	Grab	Sample Description	Pre-servatives	No. Containers	PERCHLORATE (6860)	Remarks:	Lab ID
01	W	11/6/2012	9:00		X	MA01 MW002		1	X	21211071201	
02	W	11/6/2012	10:41		X	M114 MW004		1	X	21211071202	
03	W	11/6/2012	13:30		X	M114 MW001		1	X	21211071203	

Turn Around Time: ___ 24 - 48 hrs ___ 3 days 1 week X standard other ___

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
[signature]	FedEx	11/7/12	1700
[signature]	[signature]	11/8/12	830

Note: Receiving temp 1.8 Therm #67 no custody seals

Please fax results to (225)767-5717
PLEASE RETURN ICE CHESTS TO 7979 GSRI AVE.

Matrix: W = water, S=Soil, SD=Solid, L=Liquid, SL=Sludge, O=Oil, CT=Charcoal Tube, OVM=Organic Vapor Monitor, XT=XAD Tube, A=Air Bag, SUM=Summa Canister

ORIGIN ID: OPLA (225) 769-4900
CHARLOTTE SAUCIER
GCAL
7979 GSRI RD

BATON ROUGE, LA 70802
UNITED STATES US

SHIP DATE: 07NOV12
ACTWGT: 30.0 LB MAN
CAD: 0924693/CAFE2605

BILL SENDER

TO

DHL
2300 DOUBLE CREEK

ROUND ROCK TX 78664
(226) 769-4900 REF:
INV:
PO: DEPT:

FedEx Express

J12131208160125

THU - 08 NOV A1
PRIORITY OVERNIGHT

TRK# 0201 **5443 0509 2997**

A8 BSMA

78664
TX-US **AUS**

Part # 156148-434 RIT2 07/11

DHL Analytical, Inc.

Sample Receipt Checklist

Client Name GCAL LAB

Date Received: 11/8/2012

Work Order Number 1211067

Received by JB

Checklist completed by: Signature | 11/8/2012 Date

Reviewed by Initials | 11/8/2012 Date

Carrier name: FedEx 1day

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	1.8 °C
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Adjusted? _____ Checked by _____

Any No response must be detailed in the comments section below.

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

Page 1 of 1

DHL Analytical, Inc.

Laboratory Review Checklist: Reportable Data

Project Name: DoD Perchlorate	**Date: 11/19/2012**
Reviewer Name: Angie O'Donnell	**Laboratory Work Order: 1211067**
Prep Batch Number(s): See Prep Dates Report	**Run Batch:** See Analytical Dates Report

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
R1	OI	**Chain-of-Custody (C-O-C)**					
		1) Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				R1-01
		2) Were all departures from standard conditions described in an exception report?			X		
R2	OI	**Sample and Quality Control (QC) Identification**					
		1) Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		2) Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	**Test Reports**					
		1) Were all samples prepared and analyzed within holding times?	X				
		2) Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		3) Were calculations checked by a peer or supervisor?	X				
		4) Were all analyte identifications checked by a peer or supervisor?	X				
		5) Were sample quantitation limits reported for all analytes not detected?	X				
		6) Were all results for soil and sediment samples reported on a dry weight basis?			X		
		7) Were % moisture (or solids) reported for all soil and sediment samples?			X		
		8) If required for the project, TICs reported?			X		
R4	O	**Surrogate Recovery Data**					
		1) Were surrogates added prior to extraction?			X		
		2) Were surrogate percent recoveries in all samples within the laboratory QC limits?			X		
R5	OI	**Test Reports/Summary Forms for Blank Samples**					
		1) Were appropriate type(s) of blanks analyzed?	X				
		2) Were blanks analyzed at the appropriate frequency?	X				
		3) Where method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		4) Were blank concentrations < MQL?	X				
R6	OI	**Laboratory Control Samples (LCS):**					
		1) Were all COCs included in the LCS?	X				
		2) Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		3) Were LCSs analyzed at the required frequency?	X				
		4) Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		5) Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SQLs?	X				
		6) Was the LCSD RPD within QC limits (if applicable)?			X		
R7	OI	**Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Data**					
		1) Were the project/method specified analytes included in the MS and MSD?	X				
		2) Were MS/MSD analyzed at the appropriate frequency?	X				
		3) Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?		X			R7-03
		4) Were MS/MSD RPDs within laboratory QC limits?	X				
R8	OI	**Analytical Duplicate Data**					
		1) Were appropriate analytical duplicates analyzed for each matrix?					
		2) Were analytical duplicates analyzed at the appropriate frequency?	X				
		3) Were RPDs or relative standard deviations within the laboratory QC limits?	X				
R9	OI	**Method Quantitation Limits (MQLs):**					
		1) Are the MQLs for each method analyte included in the laboratory data package?	X				
		2) Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		3) Are unadjusted MQLs included in the laboratory data package?	X				
R10	OI	**Other Problems/Anomalies**					
		1) Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		2) Were all necessary corrective actions performed for the reported data?	X				
		3) Was applicable and available technology used to lower the SQL minimize the matrix interference affects on the sample results?	X				

1 Items identified by the letter "R" should be included in the laboratory data package submitted to the TCEQ in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2 O = organic analyses; I = inorganic analyses (and general chemistry, when applicable).
3 NA = Not applicable.
4 NR = Not Reviewed.
5 ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

DHL Analytical, Inc.
Laboratory Review Checklist (continued): Supporting Data

Project Name: DoD Perchlorate	**Date: 11/19/2012**
Reviewer Name: Angie O'Donnell	**Laboratory Work Order: 1211067**

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
S1	OI	**Initial Calibration (ICAL)**					
		1) Were response factors and/or relative response factors for each analyte within QC limits?	X				
		2) Were percent RSDs or correlation coefficient criteria met?	X				
		3) Was the number of standards recommended in the method used for all analytes?	X				
		4) Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		5) Are ICAL data available for all instruments used?	X				
		6) Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	**Initial and Continuing calibration Verification (ICCV and CCV) and Continuing Calibration blank (CCB)**					
		1) Was the CCV analyzed at the method-required frequency?	X				
		2) Were percent differences for each analyte within the method-required QC limits?	X				
		3) Was the ICAL curve verified for each analyte?	X				
		4) Was the absolute value of the analyte concentration in the inorganic CCB < MDL?			X		
S3	O	**Mass Spectral Tuning**					
		1) Was the appropriate compound for the method used for tuning?	X				
		2) Were ion abundance data within the method-required QC limits?	X				
S4	O	**Internal Standards (IS)**					
		1) Were IS area counts and retention times within the method-required QC limits?	X				
S5	OI	**Raw Data (NELAC section 1 appendix A glossary, and section 5.12)**					
		1) Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		2) Were data associated with manual integrations flagged on the raw data?	X				
S6	O	**Dual Column Confirmation**					
		1) Did dual column confirmation results meet the method-required QC?			X		
S7	O	**Tentatively Identified Compounds (TICs)**					
		1) If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	**Interference Check Sample (ICS) Results**					
		1) Were percent recoveries within method QC limits?			X		
S9	I	**Serial Dilutions, Post Digestion Spikes, and Method of Standard Additions**					
		1) Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X		
S10	OI	**Method Detection Limit (MDL) Studies**					
		1) Was a MDL study performed for each reported analyte?	X				
		2) Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S11	OI	**Proficiency Test Reports**					
		1) Was the lab's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	**Standards Documentation**					
		1) Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	**Compound/Analyte Identification Procedures**					
		1) Are the procedures for compound/analyte identification documented?	X				
S14	OI	**Demonstration of Analyst Competency (DOC)**					
		1) Was DOC conducted consistent with NELAC Chapter 5C?	X				
		2) Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	**Verification/Validation Documentation for Methods (NELAC Chap 5)**					
		1) Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	**Laboratory Standard Operating Procedures (SOPs)**					
		1) Are laboratory SOPs current and on file for each method performed?	X				

1 Items identified by the letter "R" should be included in the laboratory data package submitted to the TCEQ in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2 O = organic analyses; I = inorganic analyses (and general chemistry, when applicable).
3 NA = Not applicable.
4 NR = Not Reviewed.
5 ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Laboratory Data Package Signature Page

This data package consists of:

This signature page, the laboratory review checklist, and the following reportable data:

R1 Field chain-of-custody documentation;
R2 Sample identification cross-reference;
R3 Test reports (analytical data sheets) for each environmental sample that includes:
  a) Items consistent with NELAC 5.13
  b) dilution factors,
  c) preparation methods,
  d) cleanup methods, and
  e) if required for the project, tentatively identified compounds (TICs).
R4 Surrogate recovery data including:
  a) Calculated recovery (%R), and
  b) The laboratory's surrogate QC limits.
R5 Test reports/summary forms for blank samples;
R6 Test reports/summary forms for laboratory control samples (LCSs) including:
  a) LCS spiking amounts,
  b) Calculated %R for each analyte, and
  c) The laboratory's LCS QC limits.
R7 Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
  a) Samples associated with the MS/MSD clearly identified,
  b) MS/MSD spiking amounts,
  c) Concentration of each MS/MSD analyte measured in the parent and spiked samples,
  d) Calculated %Rs and relative percent differences (RPDs), and
  e) The laboratory's MS/MSD QC limits
R8 Laboratory analytical duplicate (if applicable) recovery and precision:
  a) the amount of analyte measured in the duplicate,
  b) the calculated RPD, and
  c) the laboratory's QC limits for analytical duplicates.
R9 List of method quantitation limits (MQLs) for each analyte for each method and matrix;
R10 Other problems or anomalies.

The Exception Report for every "No" or "Not Reviewed (NR)" item in laboratory review checklist.

Release Statement: I am responsible for the release of this laboratory data package. This data package has been reviewed by the laboratory and is complete and technically compliant with the requirements of the methods used, except where noted by the laboratory in the attached exception reports. By my signature below, I affirm to the best of my knowledge, all problems/anomalies, observed by the laboratory as having the potential to affect the quality of the data, have been identified by the laboratory in the Laboratory Review Checklist, and no information or data have been knowingly withheld that would affect the quality of the data.

John DuPont – General Manager

Scott Schroeder – Technical Director

Signature

11/19/12
Date

DHL Analytical, Inc. **Date:** *19-Nov-12*

CLIENT: GCAL LAB
Project: DoD Perchlorate
Lab Order: 1211067

CASE NARRATIVE

This case narrative describes abnormalities and deviations that may affect the results and summarizes all known issues that need to be highlighted for the data user to assess the results. This case narrative and the report contents are compliant with DoD QSM Ver 4.2 and NELAC. The "U" flag , in the Analytical Report, indicates the results for that sample are nondetect.

Samples were analyzed using the methods outlined in the following references:

Method E332.0 or SW6860 - Perchlorate Analysis (Parameter is ELAP Accredited but not NELAC Certified)

Exception Report R1-01

The sample was received on and log-in performed on 11/18/2012. A total of 3 samples were received and analyzed. The samples arrived in good condition and were properly packaged.

Exception Report R7-03

For Perchlorate Analysis, the recoveries of the Matrix Spike and Matrix Spike Duplicate (1211018-01 MS/MSD) were outside of the method control limits. These are flagged accordingly in the QC Summary report. The associated LCS was within method control limits. The sample selected for the matrix spike and matrix spike duplicate was not from this work order. No further corrective actions were taken.

A summary of project communication follows:

Request for quote was sent to DHL Analytical from the client, via email on 5/5/11 and the quote was sent to client via email on 5/5/11. Email for work approved by both parties on 5/18/11 with P.O number 12-0931.

Client sent samples in own containers.

This sample delivery group arrived at DHL Analytical 11/18/12.

DHL Analytical, Inc.

Date: *19-Nov-12*

CLIENT: GCAL LAB
Project: DoD Perchlorate
Lab Order: 1211067

Work Order Sample Summary

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
1211067-01	MA01 MW002		11/06/12 09:00 AM	11/8/2012
1211067-02	M114 MW004		11/06/12 10:41 AM	11/8/2012
1211067-03	M114 MW001		11/06/12 01:30 PM	11/8/2012

DHL Analytical, Inc.

19-Nov-12

Lab Order: 1211067
Client: GCAL LAB
Project: DoD Perchlorate

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1211067-01A	MA01 MW002	11/06/12 09:00 AM	Aqueous	SW6860	Perchlorate Prep	11/09/12 10:27 AM	54622
1211067-02A	M114 MW004	11/06/12 10:41 AM	Aqueous	SW6860	Perchlorate Prep	11/09/12 10:27 AM	54622
1211067-03A	M114 MW001	11/06/12 01:30 PM	Aqueous	SW6860	Perchlorate Prep	11/09/12 10:27 AM	54622

DHL Analytical, Inc.

19-Nov-12

Lab Order: 1211067
Client: GCAL LAB
Project: DoD Perchlorate

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1211067-01A	MA01 MW002	Aqueous	SW6860	Perchlorate - Water	54622	1	11/09/12 02:55 PM	ICMS_121109A
1211067-02A	M114 MW004	Aqueous	SW6860	Perchlorate - Water	54622	1	11/09/12 03:07 PM	ICMS_121109A
1211067-03A	M114 MW001	Aqueous	SW6860	Perchlorate - Water	54622	1	11/09/12 03:19 PM	ICMS_121109A

DHL Analytical, Inc.

Date: *19-Nov-12*

CLIENT:	GCAL LAB	**Client Sample ID:**	MA01 MW002
Project:	DoD Perchlorate	**Lab ID:**	1211067-01
Project No:	212110712	**Collection Date:**	11/06/12 09:00 AM
Lab Order:	1211067	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
PERCHLORATE - WATER		**SW6860**					Analyst: **CZ**
Perchlorate	0.00140	0.000100	0.000300	N	mg/L	1	11/09/12 02:55 PM
IS: Perchlorate_107	80.1	0	50-150	N	%REC	1	11/09/12 02:55 PM

Qualifiers:

*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
RL	Reporting Limit	S	Spike Recovery outside control limits
N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: *19-Nov-12*

CLIENT:	GCAL LAB	**Client Sample ID:**	M114 MW004
Project:	DoD Perchlorate	**Lab ID:**	1211067-02
Project No:	212110712	**Collection Date:**	11/06/12 10:41 AM
Lab Order:	1211067	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
PERCHLORATE - WATER		**SW6860**					Analyst: **CZ**
Perchlorate	0.00292	0.000495	0.00149	N	mg/L	1	11/09/12 03:07 PM
IS: Perchlorate_107	85.9	0	50-150	N	%REC	1	11/09/12 03:07 PM

Qualifiers:

*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
RL	Reporting Limit	S	Spike Recovery outside control limits
N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: *19-Nov-12*

CLIENT:	GCAL LAB	**Client Sample ID:**	M114 MW001
Project:	DoD Perchlorate	**Lab ID:**	1211067-03
Project No:	212110712	**Collection Date:**	11/06/12 01:30 PM
Lab Order:	1211067	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
PERCHLORATE - WATER		**SW6860**					Analyst: **CZ**
Perchlorate	0.00313	0.000495	0.00149	N	mg/L	1	11/09/12 03:19 PM
IS: Perchlorate_107	75.2	0	50-150	N	%REC	1	11/09/12 03:19 PM

Qualifiers:

*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
RL	Reporting Limit	S	Spike Recovery outside control limits
N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: *19-Nov-12*

CLIENT: GCAL LAB
Work Order: 1211067
Project: DoD Perchlorate

ANALYTICAL QC SUMMARY REPORT

RunID: **ICMS_121109A**

The QC data in batch 54622 applies to the following samples: 1211067-01A, 1211067-02A, 1211067-03A

Sample ID: **MB-54622** Batch ID: **54622** TestNo: **SW6860** Units: **mg/L**
SampType: **MBLK** Run ID: **ICMS_121109A** Analysis Date: **11/9/2012 11:11:00 AM** Prep Date: **11/9/2012**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.000100	0.000300								NU
IS: Perchlorate_107	0.00101		0.00100		87.2	50	150			N

Sample ID: **1211018-01AMS** Batch ID: **54622** TestNo: **SW6860** Units: **mg/L**
SampType: **MS** Run ID: **ICMS_121109A** Analysis Date: **11/9/2012 12:52:00 PM** Prep Date: **11/9/2012**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.00218	0.000300	0.000300	0.00198	69.1	85	115			SN
IS: Perchlorate_107	0.00101		0.00100		82.4	50	150			N

Sample ID: **1211018-01AMSD** Batch ID: **54622** TestNo: **SW6860** Units: **mg/L**
SampType: **MSD** Run ID: **ICMS_121109A** Analysis Date: **11/9/2012 1:04:00 PM** Prep Date: **11/9/2012**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.00233	0.000300	0.000300	0.00198	118	85	115	6.53	20	SN
IS: Perchlorate_107	0.00101		0.00100		77.7	50	150	0	0	N

Sample ID: **LCS-54622** Batch ID: **54622** TestNo: **SW6860** Units: **mg/L**
SampType: **LCS** Run ID: **ICMS_121109A** Analysis Date: **11/9/2012 1:16:00 PM** Prep Date: **11/9/2012**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.000312	0.000300	0.000300	0	104	85	115			N
IS: Perchlorate_107	0.00101		0.00100		86.9	50	150			N

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAC certified

CLIENT: GCAL LAB
Work Order: 1211067
Project: DoD Perchlorate

ANALYTICAL QC SUMMARY REPORT

RunID: ICMS_121109A

Sample ID: **ICV-121108** Batch ID: **R63403** TestNo: **SW6860** Units: **mg/L**
SampType: **ICV** Run ID: **ICMS_121109A** Analysis Date: **11/9/2012 9:50:00 AM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.00184	0.000300	0.00200	0	91.8	85	115			N
IS: Perchlorate_107	0.00100		0.00100		104	50	150			N

Sample ID: **ICS-121108** Batch ID: **R63403** TestNo: **SW6860** Units: **mg/L**
SampType: **ICS** Run ID: **ICMS_121109A** Analysis Date: **11/9/2012 10:02:00 AM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.000290	0.000300	0.000300	0	96.8	85	115			N
IS: Perchlorate_107	0.00100		0.00100		111	50	150			N

Sample ID: **LCVL-121108** Batch ID: **R63403** TestNo: **SW6860** Units: **mg/L**
SampType: **LCVL** Run ID: **ICMS_121109A** Analysis Date: **11/9/2012 10:44:00 AM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.000238	0.000300	0.000200	0	119	70	130			N
IS: Perchlorate_107	0.00100		0.00100		94.8	50	150			N

Sample ID: **CCV1-121108** Batch ID: **R63403** TestNo: **SW6860** Units: **mg/L**
SampType: **CCV** Run ID: **ICMS_121109A** Analysis Date: **11/9/2012 1:28:00 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.00500	0.000300	0.00500	0	100	85	115			N
IS: Perchlorate_107	0.00100		0.00100		60.8	50	150			N

Sample ID: **LCVL2-121108** Batch ID: **R63403** TestNo: **SW6860** Units: **mg/L**
SampType: **LCVL** Run ID: **ICMS_121109A** Analysis Date: **11/9/2012 1:53:00 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.000191	0.000300	0.000200	0	95.5	70	130			N
IS: Perchlorate_107	0.00100		0.00100		74.2	50	150			N

Sample ID: **CCV2-121108** Batch ID: **R63403** TestNo: **SW6860** Units: **mg/L**
SampType: **CCV** Run ID: **ICMS_121109A** Analysis Date: **11/9/2012 4:20:00 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.00461	0.000300	0.00500	0	92.3	85	115			N
IS: Perchlorate_107	0.00100		0.00100		67.0	50	150			N

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAC certified

CLIENT: GCAL LAB
Work Order: 1211067
Project: DoD Perchlorate

ANALYTICAL QC SUMMARY REPORT

RunID: ICMS_121109A

Sample ID: **LCVL3-121108**	Batch ID: **R63403**	TestNo: **SW6860**	Units: **mg/L**
SampType: **LCVL**	Run ID: **ICMS_121109A**	Analysis Date: **11/9/2012 4:59:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.000216	0.000300	0.000200	0	108	70	130			N
IS: Perchlorate_107	0.00100		0.00100		145	50	150			N

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAC certified

DHL Analytical, Inc.

19-Nov-12

Lab Order: 1211067
Client: GCAL LAB
Project: DoD Perchlorate

Sequence Report

Run ID: ICMS_121109A

Sample ID	Client Sample ID	Test Number	Batch ID	Dilution	Analysis Date	Prep Date	Matrix
INTIAL CALIBRATION SUMMARY	-----	SW6860	R63403	1	11/9/2012		A
INTERNAL STANDARD SUMMARY	-----	SW6860	R63403	1	11/9/2012		A
ICV-121108	-----	SW6860	R63403	1	11/9/2012 9:50:00 AM		A
ICS-121108	-----	SW6860	R63403	1	11/9/2012 10:02:00 AM		A
ICB-12108	-----	SW6860	R63403	1	11/9/2012 10:14:00 AM		A
LCVL-121108	-----	SW6860	R63403	1	11/9/2012 10:44:00 AM		A
LCS-54622	-----	SW6860	54622	1	11/9/2012 10:58:00 AM	11/9/2012 10:27:48 AM	A
MB-54622	-----	SW6860	54622	1	11/9/2012 11:11:00 AM	11/9/2012 10:27:48 AM	A
1211018-01AMS	-----	SW6860	54622	1	11/9/2012 12:52:00 PM	11/9/2012 10:27:48 AM	A
1211018-01AMSD	-----	SW6860	54622	1	11/9/2012 1:04:00 PM	11/9/2012 10:27:48 AM	A
LCS-54622	-----	SW6860	54622	1	11/9/2012 1:16:00 PM	11/9/2012 10:27:48 AM	A
CCV1-121108	-----	SW6860	R63403	1	11/9/2012 1:28:00 PM		A
CCB1-121108	-----	SW6860	R63403	1	11/9/2012 1:41:00 PM		A
LCVL2-121108	-----	SW6860	R63403	1	11/9/2012 1:53:00 PM		A
1211067-01A	MA01 MW002	SW6860	54622	1	11/9/2012 2:55:00 PM	11/9/2012 10:27:48 AM	A
1211067-02A	M114 MW004	SW6860	54622	1	11/9/2012 3:07:00 PM	11/9/2012 10:27:48 AM	A
1211067-03A	M114 MW001	SW6860	54622	1	11/9/2012 3:19:00 PM	11/9/2012 10:27:48 AM	A
CCV2-121108	-----	SW6860	R63403	1	11/9/2012 4:20:00 PM		A
CCB2-121108	-----	SW6860	R63403	1	11/9/2012 4:33:00 PM		A
LCVL3-121108	-----	SW6860	R63403	1	11/9/2012 4:59:00 PM		A

Initial Calibration Summary

Control Program:	**ClO4PGM_120523**
Quantif. Method:	**ClO4_120523**
Recording Time:	**11/9/2012 9:50**
Injection Volume:	**200.0**
Test:	**Perchlorate**

Sample Name	Area counts*min Perchlorate_99 SIM_01B	Area counts*min Perchlorate_101 SIM_02B	Area counts*min ISTD_03 SIM_03B
ClO4_0.3_1	506.7150	217.961	1678.968
ClO4_0.5_1	938.3354	317.275	1642.060
ClO4_1.0_1	1858.8183	590.921	1651.572
ClO4_2.0_1	3430.4242	1065.045	1587.084
ClO4_5.0_1	8460.8517	2700.013	1442.137
ClO4_7.0_1	11820.8679	3799.330	1409.731
CLO4_10.0_1	16631.2688	5327.615	1396.272

Peak	Cal Type	Offset	Slope	Curve	Coeff. Det.
Perchlorate_99	XQOff	0.707	112.352	0.899	99.923
Perchlorate_101	XQOff	-1.155	37.952	0.045	99.764

Internal Standard Summary

Sequence Name:	**121108_CLO4**
Control Program:	**ClO4PGM_120523**
Quantif. Method:	**ClO4_120523**
Injection Volume:	**200.0**
Test:	**Perchlorate**

	Area Counts
ISTD 107 Cal Average	1544
Low Limit (50%)	772
High Limit (150%)	2316

Sample Name	**Area counts*min ISTD_03 SIM_03B**
LRB1-120523	1576.971
ClO4_0.3_1	1678.968
ClO4_0.5_1	1642.060
ClO4_1.0_1	1651.572
ClO4_2.0_1	1587.084
ClO4_5.0_1	1442.137
ClO4_7.0_1	1409.731
CLO4_10.0_1	1396.272
LRB2-120523	1616.530
SSCV-120523	1645.976
ICV-121108	1604.875
ICS-121108	1719.421
ICB-12108	1515.304
LCVL-121108	1463.643
LCS-54622	1404.505
MB-54622	1346.014
1211016-01A	1432.702
1211016-02A	1508.475
1211016-03A	1471.552
1211017-01A	1243.786
1211017-02A	1212.367
1211018-01A	1295.062
1211018-01AMS	1272.831
1211018-01AMSD	1199.633
LCS-54622	1341.589
CCV1-121108	938.043

CCB1-121108	1068.915
LCVL2-121108	1146.044
1211019-01A	1499.009
1211062-01A	1301.043
1211062-02A	1250.523
1211067-01A	1236.725
1211067-02A	1326.311
1211067-03A	1160.474
1211068-01A	1072.106
1211069-01A	1324.908
1211062-01A	1144.980
1211062-02A	1175.490
CCV2-121108	1034.212
CCB2-121108	1246.360
LCVL3-121108	2234.168

NELAP CERTIFICATE NUMBER 01955
DOD ELAP CERTIFICATE NUMBER ADE - 1482

ANALYTICAL RESULTS

PERFORMED BY

GULF COAST ANALYTICAL LABORATORIES, INC.

7979 GSRI Avenue

Baton Rouge, LA 70820

Report Date 11/28/2012

GCAL Report 212110817

Deliver To	TRINITY Analysis & Development Corp. 1002 N Eglin Pkwy Shalimar, FL 32579 850-613-6800
Attn	Jonathan Kramer

Project Melrose AFR A003-006

CASE NARRATIVE

Client: TRINITY Analysis & Development Corp. **Report:** 212110817

Gulf Coast Analytical Laboratories received and analyzed the sample(s) listed on the sample cross-reference page of this report. Receipt of the sample(s) is documented by the attached chain of custody. This applies only to the sample(s) listed in this report. No sample integrity or quality control exceptions were identified unless noted below.

HIGH PERFORMANCE LIQUID CHROMATOGRAPHY

In the SW-846 8330A analysis for prep batch 494270, the MS/MSD exhibited RPD failures; however, all compounds were recovered within quality control limits in the LCS. The LCS/LCSD exhibited RPD failures.
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METALS

In the SW-846 6010C analysis, samples 21211081703 (M114MW003), 21211081704 (M114MW003-MS), 21211081705 (M114MW003-MSD) and 21211081702 (M114MW002) had to be diluted in order to bracket the concentration of a target analyte within the linear dynamic range of the instrument.

In the SW-846 6010C Dissolved analysis, samples 21211081703 (M114MW003) and 21211081702 (M114MW002) had to be diluted in order to bracket the concentration of a target analyte within the linear dynamic range of the instrument.

In the SW-846 6010C analysis for prep batch 494178, the MS and/or MSD recovery is outside the control limits for Aluminum. The LCS recovery is within control limits. This indicates the analysis is in control and the sample is affected by matrix interference. A post-digestion spike was performed on the QC sample for this batch with a recovery of 105%. The MS/MSD recoveries are not applicable for Magnesium, Sodium and Calcium because the sample concentration is greater than four times the spike concentration.

In the SW-846 6010C Dissolved analysis for prep batch 494177, the MS and/or MSD recovery is outside the control limits for Potassium. The LCS recovery is within control limits. This indicates the analysis is in control and the sample is affected by matrix interference. A post-digestion spike was performed on the QC sample for this batch with a recovery of 120%. The MS/MSD recoveries are not applicable for Calcium, Magnesium and Sodium because the sample concentration is greater than four times the spike concentration.

In the SW-846 7470A Dissolved and SW-846 7470A analysis for prep batch 494179, the MS and/or MSD recovery is outside the control limits for Mercury. The LCS recovery is within the control limits. This indicates the analysis is in control and the sample is affected by matrix interference.

Several Dissolved Metals concentration is greater than the Total concentration for several elements in several samples. This is attributed to separate aliquots of sample.

CONVENTIONALS

In the EPA 300.0 analysis, samples 21211081701 (MA01MW004), 21211081702 (M114MW002), 21211081703 (M114MW003), 21211081704 (M114MW003-MS) and 21211081705 (M114MW003-MSD) had to be diluted in order to bracket the concentration within the calibration range of the instrument.

In the EPA 353.2 analysis, samples 21211081703 (M114MW003), 21211081704 (M114MW003-MS) and 21211081705 (M114MW003-MSD) had to be diluted in order to bracket the Nitrate + Nitrite and/or Nitrite

concentrations within the calibration range of the instrument. The Nitrate is based on the difference between the Nitrate + Nitrite and the Nitrite. The dilution is reflected in the elevated reporting limit.

MISCELLANEOUS

Sample 21211081701 (MA01MW004) was received outside of the prescribed holding time for one or more parameters. The analysis was still performed at the clients request.

See Subcontract report for any case narrative.

Laboratory Endorsement

Sample analysis was performed in accordance with approved methodologies provided by the Environmental Protection Agency or other recognized agencies. The samples and their corresponding extracts will be maintained for a period of 30 days unless otherwise arranged. Following this retention period the samples will be disposed in accordance with GCAL's Standard Operating Procedures.

Common Abbreviations Utilized in this Report

ND	Indicates the result was Not Detected at the specified RDL
DO	Indicates the result was Diluted Out
MI	Indicates the result was subject to Matrix Interference
TNTC	Indicates the result was Too Numerous To Count
SUBC	Indicates the analysis was Sub-Contracted
FLD	Indicates the analysis was performed in the Field
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
RDL	Reporting Detection Limit
00:00	Reported as a time equivalent to 12:00 AM

Reporting Flags Utilized in this Report

J	Indicates the result is between the MDL and RDL
U	Indicates the compound was analyzed for but not detected
B	Indicates the analyte was detected in the associated Method Blank

Sample receipt at GCAL is documented through the attached chain of custody. In accordance with NELAC, this report shall be reproduced only in full and with the written permission of GCAL. The results contained within this report relate only to the samples reported. The documented results are presented within this report.

This report pertains only to the samples listed in the Report Sample Summary and should be retained as a permanent record thereof. The results contained within this report are intended for the use of the client. Any unauthorized use of the information contained in this report is prohibited.

I certify that this data package is in compliance with the NELAC standard and terms and conditions of the contract and Statement of Work both technically and for completeness, for other than the conditions in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted has been authorized by the Quality Assurance Manager or his/her designee, as verified by the following signature.

Estimated uncertainty of measurement is available upon request. This report is in compliance with the DOD QSM as specified in the contract if applicable.

_____

Robyn Migues
Technical Director
GCAL REPORT 212110817

THIS REPORT CONTAINS _____ PAGES.

Report Sample Summary

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211081701	MA01MW004	Water	11/07/2012 10:30	11/08/2012 10:30
21211081702	M114MW002	Water	11/07/2012 12:06	11/08/2012 10:30
21211081703	M114MW003	Water	11/07/2012 14:01	11/08/2012 10:30
21211081704	M114MW003-MS	Water	11/07/2012 14:01	11/08/2012 10:30
21211081705	M114MW003-MSD	Water	11/07/2012 14:01	11/08/2012 10:30
21211081706	TB-04	Water	11/07/2012 10:30	11/08/2012 10:30

Summary of Compounds Detected

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211081701	**MA01MW004**	Water	11/07/2012 10:30	11/08/2012 10:30

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7440-39-3	Barium	21.8	10.0	0.71	ug/L
7440-43-9	Cadmium	0.26J	5.00	0.20	ug/L
7440-70-2	Calcium	34400	100	50.0	ug/L
7440-48-4	Cobalt	1.11J	10.0	1.00	ug/L
7440-50-8	Copper	93.5	10.0	1.01	ug/L
7439-95-4	Magnesium	32500	100	50.0	ug/L
7439-98-7	Molybdenum	11.2J	50.0	3.75	ug/L
7440-02-0	Nickel	1.79J	40.0	1.13	ug/L
7440-09-7	Potassium	5950	500	100	ug/L
7440-62-2	Vanadium	32.2	20.0	3.75	ug/L
7440-66-6	Zinc	77.7	20.0	4.51	ug/L

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7440-23-5	Sodium	325000	1000	200	ug/L

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	279	200	60.0	ug/L
7440-39-3	Barium	25.4	10.0	0.71	ug/L
7440-41-7	Beryllium	0.92J	5.00	0.10	ug/L
7440-43-9	Cadmium	0.64J	5.00	0.20	ug/L
7440-50-8	Copper	1330	10.0	1.01	ug/L
7439-89-6	Iron	189	100	40.0	ug/L
7439-95-4	Magnesium	34900	100	50.0	ug/L
7439-96-5	Manganese	25.7	15.0	2.00	ug/L
7439-98-7	Molybdenum	19.7J	50.0	3.75	ug/L
7440-02-0	Nickel	4.08J	40.0	1.13	ug/L
7440-09-7	Potassium	6040	500	100	ug/L
7782-49-2	Selenium	5.90J	40.0	4.42	ug/L
7440-23-5	Sodium	317000	1000	200	ug/L
7440-32-6	Titanium	2.68J	100	1.20	ug/L
7440-62-2	Vanadium	27.3	20.0	3.75	ug/L
7440-66-6	Zinc	196	20.0	4.51	ug/L

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7440-70-2	Calcium	38300	100	50.0	ug/L
7440-47-3	Chromium	5.63J	10.0	1.00	ug/L

EPA 300.0

CAS#	Parameter	Result	RDL	MDL	Units
16887-00-6	Chloride	276	20.0	12.6	mg/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211081701	**MA01MW004**	Water	11/07/2012 10:30	11/08/2012 10:30

EPA 300.0

CAS#	Parameter	Result	RDL	MDL	Units
14808-79-8	Sulfate	364	40.0	23.0	mg/L

EPA 353.2 Nitrite

CAS#	Parameter	Result	RDL	MDL	Units
14797-65-0	Nitrite	0.011	0.010	0.002	mg/L-N

EPA 353.2 Nitrate

CAS#	Parameter	Result	RDL	MDL	Units
14797-55-8	Nitrate	0.732	0.010	0.005	mg/L-N

SM 2540C TDS

CAS#	Parameter	Result	RDL	MDL	Units
WET-035	Total Dissolved Solids(TDS)	1050	10.0		mg/L

SM 2320B Alkalinity

CAS#	Parameter	Result	RDL	MDL	Units
000000-00-5	Total Alkalinity	192	1.0	0.19	mg/L CaCO3

SW-846 8260B

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	0.883J	1.00	0.111	ug/L
74-87-3	Chloromethane	7.74	1.00	0.144	ug/L

SW-846 8260B

CAS#	Parameter	Result	RDL	MDL	Units
67-64-1	Acetone	290	10.0	0.387	ug/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211081702	**M114MW002**	Water	11/07/2012 12:06	11/08/2012 10:30

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7440-39-3	Barium	14.8	10.0	0.71	ug/L
7440-41-7	Beryllium	0.23J	5.00	0.10	ug/L
7440-43-9	Cadmium	1.14J	5.00	0.20	ug/L
7440-70-2	Calcium	271000	100	50.0	ug/L
7440-47-3	Chromium	4.67J	10.0	1.00	ug/L
7440-48-4	Cobalt	1.24J	10.0	1.00	ug/L
7440-50-8	Copper	500	10.0	1.01	ug/L
7439-95-4	Magnesium	253000	100	50.0	ug/L
7439-98-7	Molybdenum	27.6J	50.0	3.75	ug/L
7440-02-0	Nickel	28.1J	40.0	1.13	ug/L
7440-09-7	Potassium	19200	500	100	ug/L
7782-49-2	Selenium	27.0J	40.0	4.42	ug/L
7440-62-2	Vanadium	22.3	20.0	3.75	ug/L
7440-66-6	Zinc	78.0	20.0	4.51	ug/L

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7440-23-5	Sodium	1800000	10000	2000	ug/L

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	231	200	60.0	ug/L
7440-36-0	Antimony	4.27J	60.0	3.11	ug/L
7440-39-3	Barium	15.6	10.0	0.71	ug/L
7440-41-7	Beryllium	1.62J	5.00	0.10	ug/L
7440-43-9	Cadmium	0.75J	5.00	0.20	ug/L
7440-50-8	Copper	1200	10.0	1.01	ug/L
7439-89-6	Iron	193	100	40.0	ug/L
7439-95-4	Magnesium	243000	100	50.0	ug/L
7439-96-5	Manganese	4.73J	15.0	2.00	ug/L
7439-98-7	Molybdenum	30.4J	50.0	3.75	ug/L
7440-02-0	Nickel	27.4J	40.0	1.13	ug/L
7440-09-7	Potassium	17900	500	100	ug/L
7782-49-2	Selenium	25.4J	40.0	4.42	ug/L
7440-22-4	Silver	0.98J	10.0	0.70	ug/L
7440-32-6	Titanium	2.59J	100	1.20	ug/L
7440-62-2	Vanadium	13.0J	20.0	3.75	ug/L
7440-66-6	Zinc	154	20.0	4.51	ug/L

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7440-70-2	Calcium	263000	100	50.0	ug/L
7440-47-3	Chromium	13.1	10.0	1.00	ug/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211081702	**M114MW002**	Water	11/07/2012 12:06	11/08/2012 10:30

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7440-23-5	Sodium	2110000	10000	2000	ug/L

EPA 353.2 Nitrite

CAS#	Parameter	Result	RDL	MDL	Units
14797-65-0	Nitrite	0.019	0.010	0.002	mg/L-N

EPA 300.0

CAS#	Parameter	Result	RDL	MDL	Units
16887-00-6	Chloride	3610	200	126	mg/L
14808-79-8	Sulfate	2200	400	230	mg/L

SM 2540C TDS

CAS#	Parameter	Result	RDL	MDL	Units
WET-035	Total Dissolved Solids(TDS)	7830	10.0		mg/L

EPA 353.2 Nitrate

CAS#	Parameter	Result	RDL	MDL	Units
14797-55-8	Nitrate	0.528	0.010	0.005	mg/L-N

SM 2320B Alkalinity

CAS#	Parameter	Result	RDL	MDL	Units
000000-00-5	Total Alkalinity	78.7	1.0	0.19	mg/L CaCO3

SW-846 8260B

CAS#	Parameter	Result	RDL	MDL	Units
67-64-1	Acetone	25.6	5.00	0.193	ug/L
71-43-2	Benzene	0.244J	1.00	0.111	ug/L
74-87-3	Chloromethane	2.21	1.00	0.144	ug/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211081703	**M114MW003**	Water	11/07/2012 14:01	11/08/2012 10:30

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	2790	200	60.0	ug/L
7440-39-3	Barium	46.3	10.0	0.71	ug/L
7440-43-9	Cadmium	2.32J	5.00	0.20	ug/L
7440-48-4	Cobalt	2.23J	10.0	1.00	ug/L
7440-50-8	Copper	11.8	10.0	1.01	ug/L
7439-89-6	Iron	1940	100	40.0	ug/L
7439-92-1	Lead	2.55J	15.0	1.96	ug/L
7439-95-4	Magnesium	276000	100	50.0	ug/L
7439-96-5	Manganese	56.7	15.0	2.00	ug/L
7439-98-7	Molybdenum	12.9J	50.0	3.75	ug/L
7440-02-0	Nickel	29.9J	40.0	1.13	ug/L
7440-09-7	Potassium	20500	500	100	ug/L
7782-49-2	Selenium	37.3J	40.0	4.42	ug/L
7440-28-0	Thallium	3.61J	20.0	3.04	ug/L
7440-32-6	Titanium	65.1J	100	1.20	ug/L
7440-62-2	Vanadium	16.6J	20.0	3.75	ug/L
7440-66-6	Zinc	33.1	20.0	4.51	ug/L

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7440-70-2	Calcium	342000	100	50.0	ug/L
7440-47-3	Chromium	70.7	10.0	1.00	ug/L

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7440-23-5	Sodium	2790000	10000	2000	ug/L

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7440-36-0	Antimony	4.85J	60.0	3.11	ug/L
7440-39-3	Barium	11.3	10.0	0.71	ug/L
7440-43-9	Cadmium	1.11J	5.00	0.20	ug/L
7440-70-2	Calcium	333000	100	50.0	ug/L
7440-47-3	Chromium	1.55J	10.0	1.00	ug/L
7440-50-8	Copper	10.0	10.0	1.01	ug/L
7439-95-4	Magnesium	261000	100	50.0	ug/L
7439-98-7	Molybdenum	11.0J	50.0	3.75	ug/L
7440-02-0	Nickel	1.64J	40.0	1.13	ug/L
7440-09-7	Potassium	19200	500	100	ug/L
7782-49-2	Selenium	29.7J	40.0	4.42	ug/L
7440-62-2	Vanadium	21.1	20.0	3.75	ug/L
7440-66-6	Zinc	20.5	20.0	4.51	ug/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211081703	**M114MW003**	Water	11/07/2012 14:01	11/08/2012 10:30

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7440-23-5	Sodium	2750000	10000	2000	ug/L

SM 2540C TDS

CAS#	Parameter	Result	RDL	MDL	Units
WET-035	Total Dissolved Solids(TDS)	9310	10.0		mg/L

EPA 353.2 Nitrite

CAS#	Parameter	Result	RDL	MDL	Units
14797-65-0	Nitrite	0.018	0.010	0.002	mg/L-N

EPA 300.0

CAS#	Parameter	Result	RDL	MDL	Units
16887-00-6	Chloride	4590	500	315	mg/L
14808-79-8	Sulfate	2460	1000	575	mg/L

EPA 353.2 Nitrate

CAS#	Parameter	Result	RDL	MDL	Units
14797-55-8	Nitrate	0.988	0.020	0.010	mg/L-N

SM 2320B Alkalinity

CAS#	Parameter	Result	RDL	MDL	Units
000000-00-5	Total Alkalinity	48.6	1.0	0.19	mg/L CaCO3

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211081704	**M114MW003-MS**	Water	11/07/2012 14:01	11/08/2012 10:30

SW-846 9012A Cyanide

CAS#	Parameter	Result	RDL	MDL	Units
57-12-5	Total Cyanide	0.040	0.0050	0.0012	mg/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211081704	**M114MW003-MS**	Water	11/07/2012 14:01	11/08/2012 10:30

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	8580	200	60.0	ug/L
7440-36-0	Antimony	524	60.0	3.11	ug/L
7440-39-3	Barium	517	10.0	0.71	ug/L
7440-41-7	Beryllium	476	5.00	0.10	ug/L
7440-43-9	Cadmium	465	5.00	0.20	ug/L
7440-48-4	Cobalt	466	10.0	1.00	ug/L
7440-50-8	Copper	530	10.0	1.01	ug/L
7439-89-6	Iron	6740	100	40.0	ug/L
7439-92-1	Lead	469	15.0	1.96	ug/L
7439-95-4	Magnesium	264000	100	50.0	ug/L
7439-96-5	Manganese	528	15.0	2.00	ug/L
7439-98-7	Molybdenum	504	50.0	3.75	ug/L
7440-02-0	Nickel	496	40.0	1.13	ug/L
7440-09-7	Potassium	30800	500	100	ug/L
7782-49-2	Selenium	571	40.0	4.42	ug/L
7440-22-4	Silver	524	10.0	0.70	ug/L
7440-28-0	Thallium	465	20.0	3.04	ug/L
7440-32-6	Titanium	519	100	1.20	ug/L
7440-62-2	Vanadium	516	20.0	3.75	ug/L
7440-66-6	Zinc	541	20.0	4.51	ug/L

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7440-38-2	Arsenic	538	10.0	3.59	ug/L
7440-70-2	Calcium	332000	100	50.0	ug/L
7440-47-3	Chromium	495	10.0	1.00	ug/L

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7440-23-5	Sodium	2560000	10000	2000	ug/L

SW-846 7470A Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	2.45	0.20	0.068	ug/L

SW-846 7470A

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	2.90	0.20	0.068	ug/L

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	5250	200	60.0	ug/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211081704	**M114MW003-MS**	Water	11/07/2012 14:01	11/08/2012 10:30

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7440-36-0	Antimony	569	60.0	3.11	ug/L
7440-38-2	Arsenic	559	10.0	3.59	ug/L
7440-39-3	Barium	516	10.0	0.71	ug/L
7440-41-7	Beryllium	504	5.00	0.10	ug/L
7440-43-9	Cadmium	469	5.00	0.20	ug/L
7440-70-2	Calcium	349000	100	50.0	ug/L
7440-47-3	Chromium	495	10.0	1.00	ug/L
7440-48-4	Cobalt	493	10.0	1.00	ug/L
7440-50-8	Copper	581	10.0	1.01	ug/L
7439-89-6	Iron	4890	100	40.0	ug/L
7439-95-4	Magnesium	275000	100	50.0	ug/L
7439-96-5	Manganese	498	15.0	2.00	ug/L
7439-98-7	Molybdenum	547	50.0	3.75	ug/L
7440-02-0	Nickel	496	40.0	1.13	ug/L
7440-09-7	Potassium	33300	500	100	ug/L
7782-49-2	Selenium	578	40.0	4.42	ug/L
7440-22-4	Silver	567	10.0	0.70	ug/L
7440-28-0	Thallium	476	20.0	3.04	ug/L
7440-32-6	Titanium	516	100	1.20	ug/L
7440-62-2	Vanadium	557	20.0	3.75	ug/L
7440-66-6	Zinc	552	20.0	4.51	ug/L

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7439-92-1	Lead	508	15.0	1.96	ug/L

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7440-23-5	Sodium	2730000	10000	2000	ug/L

EPA 353.2 Nitrate

CAS#	Parameter	Result	RDL	MDL	Units
14797-55-8	Nitrate	1.91	0.020	0.010	mg/L-N

SW-846 8330A

CAS#	Parameter	Result	RDL	MDL	Units
99-35-4	1,3,5-Trinitrobenzene	1.56	0.500	0.240	ug/L
99-65-0	1,3-Dinitrobenzene	1.73	0.500	0.167	ug/L
118-96-7	2,4,6-Trinitrotoluene	1.71	1.00	0.483	ug/L
121-14-2	2,4-Dinitrotoluene	1.91	1.00	0.501	ug/L
606-20-2	2,6-Dinitrotoluene	1.79	1.00	0.283	ug/L
355-72-78-2	2-Amino-4,6-dinitrotoluene	1.79	1.00	0.576	ug/L
88-72-2	2-Nitrotoluene	1.84	0.500	0.120	ug/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211081704	**M114MW003-MS**	Water	11/07/2012 14:01	11/08/2012 10:30

SW-846 8330A

CAS#	Parameter	Result	RDL	MDL	Units
99-08-1	3-Nitrotoluene	1.82	1.00	0.369	ug/L
1946-51-0	4-Amino-2,6-dinitrotoluene	1.48	1.00	0.489	ug/L
99-99-0	4-Nitrotoluene	1.98	1.00	0.417	ug/L
2691-41-0	HMX	1.80	0.500	0.212	ug/L
98-95-3	Nitrobenzene	1.91	0.500	0.267	ug/L
121-82-4	RDX	1.74	0.500	0.189	ug/L
479-45-8	Tetryl	0.861	0.500	0.241	ug/L

EPA 353.2 Nitrite

CAS#	Parameter	Result	RDL	MDL	Units
14797-65-0	Nitrite	0.477	0.010	0.002	mg/L-N

EPA 300.0

CAS#	Parameter	Result	RDL	MDL	Units
16887-00-6	Chloride	17700	500	315	mg/L
14808-79-8	Sulfate	28000	1000	575	mg/L

SW-846 7196A Chromium VI

CAS#	Parameter	Result	RDL	MDL	Units
18540-29-9	Chromium VI	483	10.0	4.00	ug/L

SW-846 8260B

CAS#	Parameter	Result	RDL	MDL	Units
630-20-6	1,1,1,2-Tetrachloroethane	46.3	1.00	0.120	ug/L
71-55-6	1,1,1-Trichloroethane	46.7	1.00	0.123	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	48.4	1.00	0.109	ug/L
79-00-5	1,1,2-Trichloroethane	46.3	1.00	0.159	ug/L
75-34-3	1,1-Dichloroethane	47.6	1.00	0.171	ug/L
75-35-4	1,1-Dichloroethene	46.0	1.00	0.208	ug/L
563-58-6	1,1-Dichloropropene	48.9	1.00	0.052	ug/L
87-61-6	1,2,3-Trichlorobenzene	43.7	1.00	0.079	ug/L
96-18-4	1,2,3-Trichloropropane	46.1	1.00	0.065	ug/L
120-82-1	1,2,4-Trichlorobenzene	43.8	1.00	0.105	ug/L
95-63-6	1,2,4-Trimethylbenzene	44.8	1.00	0.084	ug/L
96-12-8	1,2-Dibromo-3-chloropropane	48.2	1.00	0.194	ug/L
106-93-4	1,2-Dibromoethane	46.8	1.00	0.102	ug/L
95-50-1	1,2-Dichlorobenzene	43.5	1.00	0.135	ug/L
107-06-2	1,2-Dichloroethane	48.1	1.00	0.116	ug/L
78-87-5	1,2-Dichloropropane	48.2	1.00	0.150	ug/L
108-67-8	1,3,5-Trimethylbenzene	45.0	1.00	0.066	ug/L
541-73-1	1,3-Dichlorobenzene	44.2	1.00	0.138	ug/L
142-28-9	1,3-Dichloropropane	45.6	1.00	0.059	ug/L
106-46-7	1,4-Dichlorobenzene	43.3	1.00	0.083	ug/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211081704	**M114MW003-MS**	Water	11/07/2012 14:01	11/08/2012 10:30

SW-846 8260B

CAS#	Parameter	Result	RDL	MDL	Units
594-20-7	2,2-Dichloropropane	50.0	1.00	0.170	ug/L
78-93-3	2-Butanone	41.8	5.00	0.142	ug/L
95-49-8	2-Chlorotoluene	44.9	1.00	0.080	ug/L
591-78-6	2-Hexanone	48.2	5.00	0.122	ug/L
106-43-4	4-Chlorotoluene	44.7	1.00	0.124	ug/L
99-87-6	4-Isopropyltoluene	43.2	1.00	0.070	ug/L
108-10-1	4-Methyl-2-pentanone	54.4	5.00	0.120	ug/L
67-64-1	Acetone	33.7	5.00	0.193	ug/L
71-43-2	Benzene	47.0	1.00	0.111	ug/L
108-86-1	Bromobenzene	43.7	1.00	0.145	ug/L
74-97-5	Bromochloromethane	50.0	1.00	0.127	ug/L
75-27-4	Bromodichloromethane	49.2	1.00	0.083	ug/L
75-25-2	Bromoform	49.2	1.00	0.215	ug/L
74-83-9	Bromomethane	47.6	1.00	0.427	ug/L
75-15-0	Carbon disulfide	45.3	1.00	0.190	ug/L
56-23-5	Carbon tetrachloride	51.5	1.00	0.248	ug/L
108-90-7	Chlorobenzene	44.4	1.00	0.083	ug/L
75-00-3	Chloroethane	47.7	1.00	0.235	ug/L
67-66-3	Chloroform	48.2	1.00	0.155	ug/L
74-87-3	Chloromethane	45.3	1.00	0.144	ug/L
74-95-3	Dibromomethane	49.3	1.00	0.211	ug/L
75-71-8	Dichlorodifluoromethane	46.2	1.00	0.145	ug/L
100-41-4	Ethylbenzene	44.5	1.00	0.109	ug/L
87-68-3	Hexachlorobutadiene	41.7	1.00	0.265	ug/L
98-82-8	Isopropylbenzene (Cumene)	45.0	1.00	0.130	ug/L
75-09-2	Methylene chloride	46.5	5.00	0.149	ug/L
91-20-3	Naphthalene	41.7	1.00	0.176	ug/L
100-42-5	Styrene	45.4	1.00	0.089	ug/L
127-18-4	Tetrachloroethene	47.0	1.00	0.193	ug/L
108-88-3	Toluene	44.9	1.00	0.122	ug/L
79-01-6	Trichloroethene	46.7	1.00	0.161	ug/L
75-69-4	Trichlorofluoromethane	44.8	1.00	0.157	ug/L
75-01-4	Vinyl chloride	48.1	1.00	0.127	ug/L
156-59-2	cis-1,2-Dichloroethene	48.4	1.00	0.103	ug/L
10061-01-5	cis-1,3-Dichloropropene	48.3	1.00	0.124	ug/L
136777-61-2	m,p-Xylene	91.2	2.00	0.123	ug/L
104-51-8	n-Butylbenzene	42.0	1.00	0.123	ug/L
103-65-1	n-Propylbenzene	44.5	1.00	0.727	ug/L
95-47-6	o-Xylene	46.3	1.00	0.055	ug/L
135-98-8	sec-Butylbenzene	42.8	1.00	0.107	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	50.1	5.00	0.078	ug/L
98-06-6	tert-Butylbenzene	44.0	1.00	0.087	ug/L
156-60-5	trans-1,2-Dichloroethene	48.4	1.00	0.077	ug/L
10061-02-6	trans-1,3-Dichloropropene	49.7	1.00	0.128	ug/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211081705	**M114MW003-MSD**	Water	11/07/2012 14:01	11/08/2012 10:30

SW-846 9012A Cyanide

CAS#	Parameter	Result	RDL	MDL	Units
57-12-5	Total Cyanide	0.040	0.0050	0.0012	mg/L

SW-846 7470A Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	2.81	0.20	0.068	ug/L

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	4680	200	60.0	ug/L
7440-36-0	Antimony	494	60.0	3.11	ug/L
7440-38-2	Arsenic	489	10.0	3.59	ug/L
7440-39-3	Barium	456	10.0	0.71	ug/L
7440-41-7	Beryllium	448	5.00	0.10	ug/L
7440-43-9	Cadmium	412	5.00	0.20	ug/L
7440-70-2	Calcium	329000	100	50.0	ug/L
7440-47-3	Chromium	438	10.0	1.00	ug/L
7440-48-4	Cobalt	437	10.0	1.00	ug/L
7440-50-8	Copper	516	10.0	1.01	ug/L
7439-89-6	Iron	4350	100	40.0	ug/L
7439-95-4	Magnesium	252000	100	50.0	ug/L
7439-96-5	Manganese	440	15.0	2.00	ug/L
7439-98-7	Molybdenum	485	50.0	3.75	ug/L
7440-02-0	Nickel	440	40.0	1.13	ug/L
7440-09-7	Potassium	29800	500	100	ug/L
7782-49-2	Selenium	509	40.0	4.42	ug/L
7440-22-4	Silver	503	10.0	0.70	ug/L
7440-28-0	Thallium	419	20.0	3.04	ug/L
7440-32-6	Titanium	458	100	1.20	ug/L
7440-62-2	Vanadium	496	20.0	3.75	ug/L
7440-66-6	Zinc	485	20.0	4.51	ug/L

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7439-92-1	Lead	457	15.0	1.96	ug/L

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7440-23-5	Sodium	2480000	10000	2000	ug/L

SW-846 7470A

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	2.21	0.20	0.068	ug/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211081705	**M114MW003-MSD**	Water	11/07/2012 14:01	11/08/2012 10:30

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	8920	200	60.0	ug/L
7440-36-0	Antimony	545	60.0	3.11	ug/L
7440-39-3	Barium	541	10.0	0.71	ug/L
7440-41-7	Beryllium	497	5.00	0.10	ug/L
7440-43-9	Cadmium	492	5.00	0.20	ug/L
7440-48-4	Cobalt	488	10.0	1.00	ug/L
7440-50-8	Copper	551	10.0	1.01	ug/L
7439-89-6	Iron	7090	100	40.0	ug/L
7439-92-1	Lead	488	15.0	1.96	ug/L
7439-95-4	Magnesium	272000	100	50.0	ug/L
7439-96-5	Manganese	549	15.0	2.00	ug/L
7439-98-7	Molybdenum	526	50.0	3.75	ug/L
7440-02-0	Nickel	520	40.0	1.13	ug/L
7440-09-7	Potassium	32000	500	100	ug/L
7782-49-2	Selenium	599	40.0	4.42	ug/L
7440-22-4	Silver	543	10.0	0.70	ug/L
7440-28-0	Thallium	490	20.0	3.04	ug/L
7440-32-6	Titanium	534	100	1.20	ug/L
7440-62-2	Vanadium	535	20.0	3.75	ug/L
7440-66-6	Zinc	569	20.0	4.51	ug/L

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7440-38-2	Arsenic	561	10.0	3.59	ug/L
7440-70-2	Calcium	339000	100	50.0	ug/L
7440-47-3	Chromium	509	10.0	1.00	ug/L

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7440-23-5	Sodium	2700000	10000	2000	ug/L

SW-846 8330A

CAS#	Parameter	Result	RDL	MDL	Units
99-35-4	1,3,5-Trinitrobenzene	1.62	0.500	0.240	ug/L
99-65-0	1,3-Dinitrobenzene	2.16	0.500	0.167	ug/L
118-96-7	2,4,6-Trinitrotoluene	1.40	1.00	0.483	ug/L
121-14-2	2,4-Dinitrotoluene	2.03	1.00	0.501	ug/L
606-20-2	2,6-Dinitrotoluene	1.84	1.00	0.283	ug/L
355-72-78-2	2-Amino-4,6-dinitrotoluene	1.69	1.00	0.576	ug/L
88-72-2	2-Nitrotoluene	1.73	0.500	0.120	ug/L
99-08-1	3-Nitrotoluene	1.69	1.00	0.369	ug/L
1946-51-0	4-Amino-2,6-dinitrotoluene	1.49	1.00	0.489	ug/L
99-99-0	4-Nitrotoluene	2.20	1.00	0.417	ug/L
2691-41-0	HMX	1.90	0.500	0.212	ug/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211081705	**M114MW003-MSD**	Water	11/07/2012 14:01	11/08/2012 10:30

SW-846 8330A

CAS#	Parameter	Result	RDL	MDL	Units
98-95-3	Nitrobenzene	1.69	0.500	0.267	ug/L
121-82-4	RDX	1.77	0.500	0.189	ug/L
479-45-8	Tetryl	0.560	0.500	0.241	ug/L

EPA 353.2 Nitrite

CAS#	Parameter	Result	RDL	MDL	Units
14797-65-0	Nitrite	0.476	0.010	0.002	mg/L-N

EPA 353.2 Nitrate

CAS#	Parameter	Result	RDL	MDL	Units
14797-55-8	Nitrate	1.90	0.020	0.010	mg/L-N

EPA 300.0

CAS#	Parameter	Result	RDL	MDL	Units
16887-00-6	Chloride	17600	500	315	mg/L
14808-79-8	Sulfate	28200	1000	575	mg/L

SW-846 7196A Chromium VI

CAS#	Parameter	Result	RDL	MDL	Units
18540-29-9	Chromium VI	476	10.0	4.00	ug/L

SW-846 8260B

CAS#	Parameter	Result	RDL	MDL	Units
630-20-6	1,1,1,2-Tetrachloroethane	45.2	1.00	0.120	ug/L
71-55-6	1,1,1-Trichloroethane	44.1	1.00	0.123	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	47.1	1.00	0.109	ug/L
79-00-5	1,1,2-Trichloroethane	45.7	1.00	0.159	ug/L
75-34-3	1,1-Dichloroethane	44.9	1.00	0.171	ug/L
75-35-4	1,1-Dichloroethene	43.8	1.00	0.208	ug/L
563-58-6	1,1-Dichloropropene	45.4	1.00	0.052	ug/L
87-61-6	1,2,3-Trichlorobenzene	45.0	1.00	0.079	ug/L
96-18-4	1,2,3-Trichloropropane	43.7	1.00	0.065	ug/L
120-82-1	1,2,4-Trichlorobenzene	44.6	1.00	0.105	ug/L
95-63-6	1,2,4-Trimethylbenzene	43.6	1.00	0.084	ug/L
96-12-8	1,2-Dibromo-3-chloropropane	49.4	1.00	0.194	ug/L
106-93-4	1,2-Dibromoethane	46.5	1.00	0.102	ug/L
95-50-1	1,2-Dichlorobenzene	42.3	1.00	0.135	ug/L
107-06-2	1,2-Dichloroethane	45.9	1.00	0.116	ug/L
78-87-5	1,2-Dichloropropane	46.0	1.00	0.150	ug/L
108-67-8	1,3,5-Trimethylbenzene	43.4	1.00	0.066	ug/L
541-73-1	1,3-Dichlorobenzene	43.1	1.00	0.138	ug/L
142-28-9	1,3-Dichloropropane	45.7	1.00	0.059	ug/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211081705	**M114MW003-MSD**	Water	11/07/2012 14:01	11/08/2012 10:30

SW-846 8260B

CAS#	Parameter	Result	RDL	MDL	Units
106-46-7	1,4-Dichlorobenzene	43.0	1.00	0.083	ug/L
594-20-7	2,2-Dichloropropane	47.5	1.00	0.170	ug/L
78-93-3	2-Butanone	40.7	5.00	0.142	ug/L
95-49-8	2-Chlorotoluene	43.5	1.00	0.080	ug/L
591-78-6	2-Hexanone	46.6	5.00	0.122	ug/L
106-43-4	4-Chlorotoluene	42.7	1.00	0.124	ug/L
99-87-6	4-Isopropyltoluene	42.5	1.00	0.070	ug/L
108-10-1	4-Methyl-2-pentanone	51.6	5.00	0.120	ug/L
67-64-1	Acetone	31.8	5.00	0.193	ug/L
71-43-2	Benzene	44.4	1.00	0.111	ug/L
108-86-1	Bromobenzene	42.1	1.00	0.145	ug/L
74-97-5	Bromochloromethane	47.0	1.00	0.127	ug/L
75-27-4	Bromodichloromethane	46.6	1.00	0.083	ug/L
75-25-2	Bromoform	49.3	1.00	0.215	ug/L
74-83-9	Bromomethane	46.3	1.00	0.427	ug/L
75-15-0	Carbon disulfide	44.3	1.00	0.190	ug/L
56-23-5	Carbon tetrachloride	49.4	1.00	0.248	ug/L
108-90-7	Chlorobenzene	43.3	1.00	0.083	ug/L
75-00-3	Chloroethane	45.1	1.00	0.235	ug/L
67-66-3	Chloroform	45.4	1.00	0.155	ug/L
74-87-3	Chloromethane	44.5	1.00	0.144	ug/L
74-95-3	Dibromomethane	46.5	1.00	0.211	ug/L
75-71-8	Dichlorodifluoromethane	42.8	1.00	0.145	ug/L
100-41-4	Ethylbenzene	44.1	1.00	0.109	ug/L
87-68-3	Hexachlorobutadiene	43.9	1.00	0.265	ug/L
98-82-8	Isopropylbenzene (Cumene)	44.7	1.00	0.130	ug/L
75-09-2	Methylene chloride	44.6	5.00	0.149	ug/L
91-20-3	Naphthalene	43.0	1.00	0.176	ug/L
100-42-5	Styrene	44.7	1.00	0.089	ug/L
127-18-4	Tetrachloroethene	45.3	1.00	0.193	ug/L
108-88-3	Toluene	44.1	1.00	0.122	ug/L
79-01-6	Trichloroethene	44.9	1.00	0.161	ug/L
75-69-4	Trichlorofluoromethane	41.7	1.00	0.157	ug/L
75-01-4	Vinyl chloride	45.7	1.00	0.127	ug/L
156-59-2	cis-1,2-Dichloroethene	45.8	1.00	0.103	ug/L
10061-01-5	cis-1,3-Dichloropropene	47.2	1.00	0.124	ug/L
136777-61-2	m,p-Xylene	90.1	2.00	0.123	ug/L
104-51-8	n-Butylbenzene	41.3	1.00	0.123	ug/L
103-65-1	n-Propylbenzene	42.8	1.00	0.727	ug/L
95-47-6	o-Xylene	45.8	1.00	0.055	ug/L
135-98-8	sec-Butylbenzene	41.9	1.00	0.107	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	48.1	5.00	0.078	ug/L
98-06-6	tert-Butylbenzene	42.8	1.00	0.087	ug/L
156-60-5	trans-1,2-Dichloroethene	45.4	1.00	0.077	ug/L
10061-02-6	trans-1,3-Dichloropropene	47.8	1.00	0.128	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211081701	**MA01MW004**	Water	11/07/2012 10:30	11/08/2012 10:30

Subcontract Work

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/28/2012 08:53	BJM	

CAS#	Parameter	Result	RDL	MDL	Units
SHIP-001	Ship Result	*			mg/L

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/10/2012 12:16	LBH	494340

CAS#	Parameter	Result	RDL	MDL	Units
630-20-6	1,1,1,2-Tetrachloroethane	0.120U	1.00	0.120	ug/L
71-55-6	1,1,1-Trichloroethane	0.123U	1.00	0.123	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.109U	1.00	0.109	ug/L
79-00-5	1,1,2-Trichloroethane	0.159U	1.00	0.159	ug/L
75-34-3	1,1-Dichloroethane	0.171U	1.00	0.171	ug/L
75-35-4	1,1-Dichloroethene	0.208U	1.00	0.208	ug/L
563-58-6	1,1-Dichloropropene	0.052U	1.00	0.052	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.079U	1.00	0.079	ug/L
96-18-4	1,2,3-Trichloropropane	0.065U	1.00	0.065	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.105U	1.00	0.105	ug/L
95-63-6	1,2,4-Trimethylbenzene	0.084U	1.00	0.084	ug/L
96-12-8	1,2-Dibromo-3-chloropropane	0.194U	1.00	0.194	ug/L
106-93-4	1,2-Dibromoethane	0.102U	1.00	0.102	ug/L
95-50-1	1,2-Dichlorobenzene	0.135U	1.00	0.135	ug/L
107-06-2	1,2-Dichloroethane	0.116U	1.00	0.116	ug/L
78-87-5	1,2-Dichloropropane	0.150U	1.00	0.150	ug/L
108-67-8	1,3,5-Trimethylbenzene	0.066U	1.00	0.066	ug/L
541-73-1	1,3-Dichlorobenzene	0.138U	1.00	0.138	ug/L
142-28-9	1,3-Dichloropropane	0.059U	1.00	0.059	ug/L
106-46-7	1,4-Dichlorobenzene	0.083U	1.00	0.083	ug/L
594-20-7	2,2-Dichloropropane	0.170U	1.00	0.170	ug/L
78-93-3	2-Butanone	0.142U	5.00	0.142	ug/L
95-49-8	2-Chlorotoluene	0.080U	1.00	0.080	ug/L
591-78-6	2-Hexanone	0.122U	5.00	0.122	ug/L
106-43-4	4-Chlorotoluene	0.124U	1.00	0.124	ug/L
99-87-6	4-Isopropyltoluene	0.070U	1.00	0.070	ug/L
108-10-1	4-Methyl-2-pentanone	0.120U	5.00	0.120	ug/L
71-43-2	**Benzene**	**0.883J**	**1.00**	**0.111**	**ug/L**
108-86-1	Bromobenzene	0.145U	1.00	0.145	ug/L
74-97-5	Bromochloromethane	0.127U	1.00	0.127	ug/L
75-27-4	Bromodichloromethane	0.083U	1.00	0.083	ug/L
75-25-2	Bromoform	0.215U	1.00	0.215	ug/L
74-83-9	Bromomethane	0.427U	1.00	0.427	ug/L
75-15-0	Carbon disulfide	0.190U	1.00	0.190	ug/L
56-23-5	Carbon tetrachloride	0.248U	1.00	0.248	ug/L
108-90-7	Chlorobenzene	0.083U	1.00	0.083	ug/L
75-00-3	Chloroethane	0.235U	1.00	0.235	ug/L
67-66-3	Chloroform	0.155U	1.00	0.155	ug/L
74-87-3	**Chloromethane**	**7.74**	**1.00**	**0.144**	**ug/L**
74-95-3	Dibromomethane	0.211U	1.00	0.211	ug/L
75-71-8	Dichlorodifluoromethane	0.145U	1.00	0.145	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211081701	**MA01MW004**	Water	11/07/2012 10:30	11/08/2012 10:30

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/10/2012 12:16	LBH	494340

CAS#	Parameter	Result	RDL	MDL	Units
100-41-4	Ethylbenzene	0.109U	1.00	0.109	ug/L
87-68-3	Hexachlorobutadiene	0.265U	1.00	0.265	ug/L
98-82-8	Isopropylbenzene (Cumene)	0.130U	1.00	0.130	ug/L
75-09-2	Methylene chloride	0.149U	5.00	0.149	ug/L
91-20-3	Naphthalene	0.176U	1.00	0.176	ug/L
100-42-5	Styrene	0.089U	1.00	0.089	ug/L
127-18-4	Tetrachloroethene	0.193U	1.00	0.193	ug/L
108-88-3	Toluene	0.122U	1.00	0.122	ug/L
79-01-6	Trichloroethene	0.161U	1.00	0.161	ug/L
75-69-4	Trichlorofluoromethane	0.157U	1.00	0.157	ug/L
75-01-4	Vinyl chloride	0.127U	1.00	0.127	ug/L
156-59-2	cis-1,2-Dichloroethene	0.103U	1.00	0.103	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.124U	1.00	0.124	ug/L
136777-61-2	m,p-Xylene	0.123U	2.00	0.123	ug/L
104-51-8	n-Butylbenzene	0.123U	1.00	0.123	ug/L
103-65-1	n-Propylbenzene	0.727U	1.00	0.727	ug/L
95-47-6	o-Xylene	0.055U	1.00	0.055	ug/L
135-98-8	sec-Butylbenzene	0.107U	1.00	0.107	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.078U	5.00	0.078	ug/L
98-06-6	tert-Butylbenzene	0.087U	1.00	0.087	ug/L
156-60-5	trans-1,2-Dichloroethene	0.077U	1.00	0.077	ug/L
10061-02-6	trans-1,3-Dichloropropene	0.128U	1.00	0.128	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	51.6	ug/L	103	75 - 120
1868-53-7	Dibromofluoromethane	50	50.4	ug/L	101	85 - 115
2037-26-5	Toluene d8	50	50	ug/L	100	85 - 120
17060-07-0	1,2-Dichloroethane-d4	50	51.3	ug/L	103	70 - 120

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			2	11/10/2012 14:41	LBH	494340

CAS#	Parameter	Result	RDL	MDL	Units
67-64-1	**Acetone**	**290**	**10.0**	**0.387**	**ug/L**

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	100	103	ug/L	103	75 - 120
1868-53-7	Dibromofluoromethane	100	101	ug/L	101	85 - 115
2037-26-5	Toluene d8	100	99.4	ug/L	99	85 - 120
17060-07-0	1,2-Dichloroethane-d4	100	104	ug/L	104	70 - 120

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211081701	**MA01MW004**	Water	11/07/2012 10:30	11/08/2012 10:30

SW-846 8330A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/13/2012 04:30	494270	SW-846 8330A	1	11/15/2012 01:28	JWM	494679

CAS#	Parameter	Result	RDL	MDL	Units
99-35-4	1,3,5-Trinitrobenzene	0.240U	0.500	0.240	ug/L
99-65-0	1,3-Dinitrobenzene	0.167U	0.500	0.167	ug/L
118-96-7	2,4,6-Trinitrotoluene	0.483U	1.00	0.483	ug/L
121-14-2	2,4-Dinitrotoluene	0.501U	1.00	0.501	ug/L
606-20-2	2,6-Dinitrotoluene	0.283U	1.00	0.283	ug/L
355-72-78-2	2-Amino-4,6-dinitrotoluene	0.576U	1.00	0.576	ug/L
88-72-2	2-Nitrotoluene	0.120U	0.500	0.120	ug/L
99-08-1	3-Nitrotoluene	0.369U	1.00	0.369	ug/L
1946-51-0	4-Amino-2,6-dinitrotoluene	0.489U	1.00	0.489	ug/L
99-99-0	4-Nitrotoluene	0.417U	1.00	0.417	ug/L
2691-41-0	HMX	0.212U	0.500	0.212	ug/L
98-95-3	Nitrobenzene	0.267U	0.500	0.267	ug/L
121-82-4	RDX	0.189U	0.500	0.189	ug/L
479-45-8	Tetryl	0.241U	0.500	0.241	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
528-29-0	1,2-Dinitrobenzene	2	1.92	ug/L	96	70 - 130

SW-846 7470A Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 15:35	494179	SW-846 7470A Dissolved	1	11/10/2012 13:05	CLB	494344

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	0.068U	0.20	0.068	ug/L

SW-846 7470A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 15:35	494179	SW-846 7470A	1	11/10/2012 13:07	CLB	494344

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	0.068U	0.20	0.068	ug/L

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 15:35	494178	SW-846 3010A	1	11/11/2012 14:50	BNB	494383

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	**Aluminum**	**279**	**200**	**60.0**	**ug/L**
7440-36-0	Antimony	3.11U	60.0	3.11	ug/L
7440-39-3	**Barium**	**25.4**	**10.0**	**0.71**	**ug/L**
7440-41-7	**Beryllium**	**0.92J**	**5.00**	**0.10**	**ug/L**
7440-43-9	**Cadmium**	**0.64J**	**5.00**	**0.20**	**ug/L**
7440-48-4	Cobalt	1.00U	10.0	1.00	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211081701	**MA01MW004**	Water	11/07/2012 10:30	11/08/2012 10:30

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 15:35	494178	SW-846 3010A	1	11/11/2012 14:50	BNB	494383

CAS#	Parameter	Result	RDL	MDL	Units
7440-50-8	**Copper**	**1330**	**10.0**	**1.01**	**ug/L**
7439-89-6	**Iron**	**189**	**100**	**40.0**	**ug/L**
7439-92-1	Lead	1.96U	15.0	1.96	ug/L
7439-95-4	**Magnesium**	**34900**	**100**	**50.0**	**ug/L**
7439-96-5	**Manganese**	**25.7**	**15.0**	**2.00**	**ug/L**
7439-98-7	**Molybdenum**	**19.7J**	**50.0**	**3.75**	**ug/L**
7440-02-0	**Nickel**	**4.08J**	**40.0**	**1.13**	**ug/L**
7440-09-7	**Potassium**	**6040**	**500**	**100**	**ug/L**
7782-49-2	**Selenium**	**5.90J**	**40.0**	**4.42**	**ug/L**
7440-22-4	Silver	0.70U	10.0	0.70	ug/L
7440-23-5	**Sodium**	**317000**	**1000**	**200**	**ug/L**
7440-28-0	Thallium	3.04U	20.0	3.04	ug/L
7440-32-6	**Titanium**	**2.68J**	**100**	**1.20**	**ug/L**
7440-62-2	**Vanadium**	**27.3**	**20.0**	**3.75**	**ug/L**
7440-66-6	**Zinc**	**196**	**20.0**	**4.51**	**ug/L**

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 15:35	494178	SW-846 3010A	1	11/13/2012 16:38	BNB	494546

CAS#	Parameter	Result	RDL	MDL	Units
7440-38-2	Arsenic	3.59U	10.0	3.59	ug/L
7440-70-2	**Calcium**	**38300**	**100**	**50.0**	**ug/L**
7440-47-3	**Chromium**	**5.63J**	**10.0**	**1.00**	**ug/L**

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 15:35	494177	SW-846 3005 Dissolved	1	11/13/2012 18:12	BNB	494546

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	60.0U	200	60.0	ug/L
7440-36-0	Antimony	3.11U	60.0	3.11	ug/L
7440-38-2	Arsenic	3.59U	10.0	3.59	ug/L
7440-39-3	**Barium**	**21.8**	**10.0**	**0.71**	**ug/L**
7440-41-7	Beryllium	0.10U	5.00	0.10	ug/L
7440-43-9	**Cadmium**	**0.26J**	**5.00**	**0.20**	**ug/L**
7440-70-2	**Calcium**	**34400**	**100**	**50.0**	**ug/L**
7440-47-3	Chromium	1.00U	10.0	1.00	ug/L
7440-48-4	**Cobalt**	**1.11J**	**10.0**	**1.00**	**ug/L**
7440-50-8	**Copper**	**93.5**	**10.0**	**1.01**	**ug/L**
7439-89-6	Iron	40.0U	100	40.0	ug/L
7439-95-4	**Magnesium**	**32500**	**100**	**50.0**	**ug/L**
7439-96-5	Manganese	2.00U	15.0	2.00	ug/L
7439-98-7	**Molybdenum**	**11.2J**	**50.0**	**3.75**	**ug/L**
7440-02-0	**Nickel**	**1.79J**	**40.0**	**1.13**	**ug/L**
7440-09-7	**Potassium**	**5950**	**500**	**100**	**ug/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211081701	**MA01MW004**	Water	11/07/2012 10:30	11/08/2012 10:30

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 15:35	494177	SW-846 3005 Dissolved	1	11/13/2012 18:12	BNB	494546

CAS#	Parameter	Result	RDL	MDL	Units
7782-49-2	Selenium	4.42U	40.0	4.42	ug/L
7440-22-4	Silver	0.70U	10.0	0.70	ug/L
7440-28-0	Thallium	3.04U	20.0	3.04	ug/L
7440-32-6	Titanium	1.20U	100	1.20	ug/L
7440-62-2	**Vanadium**	**32.2**	**20.0**	**3.75**	**ug/L**
7440-66-6	**Zinc**	**77.7**	**20.0**	**4.51**	**ug/L**

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 15:35	494177	SW-846 3005 Dissolved	1	11/14/2012 15:41	BNB	494810

CAS#	Parameter	Result	RDL	MDL	Units
7439-92-1	Lead	1.96U	15.0	1.96	ug/L
7440-23-5	**Sodium**	**325000**	**1000**	**200**	**ug/L**

SM 2540C TDS

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/08/2012 14:35	DJH	494201

CAS#	Parameter	Result	RDL	MDL	Units
WET-035	**Total Dissolved Solids(TDS)**	**1050**	**10.0**		**mg/L**

EPA 353.2 Nitrite

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/08/2012 15:55	AEL	494207

CAS#	Parameter	Result	RDL	MDL	Units
14797-65-0	**Nitrite**	**0.011**	**0.010**	**0.002**	**mg/L-N**

EPA 353.2 Nitrate

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/08/2012 16:18	AEL	494206

CAS#	Parameter	Result	RDL	MDL	Units
14797-55-8	**Nitrate**	**0.732**	**0.010**	**0.005**	**mg/L-N**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211081701	**MA01MW004**	Water	11/07/2012 10:30	11/08/2012 10:30

EPA 300.0

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			200	11/14/2012 12:18	AEL	494605

CAS#	Parameter	Result	RDL	MDL	Units
16887-00-6	**Chloride**	**276**	**20.0**	**12.6**	**mg/L**
14808-79-8	**Sulfate**	**364**	**40.0**	**23.0**	**mg/L**

SM 2320B Alkalinity

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/09/2012 11:15	DNM	494276

CAS#	Parameter	Result	RDL	MDL	Units
000000-00-5	**Total Alkalinity**	**192**	**1.0**	**0.19**	**mg/L CaCO3**

SW-846 7196A Chromium VI

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/08/2012 11:42	JEM	494173

CAS#	Parameter	Result	RDL	MDL	Units
18540-29-9	Chromium VI	4.00U	10.0	4.00	ug/L

SW-846 9012A Cyanide

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/10/2012 06:00	494328	SW-846 9012A	1	11/12/2012 15:57	AEL	494463

CAS#	Parameter	Result	RDL	MDL	Units
57-12-5	Total Cyanide	0.0012U	0.0050	0.0012	mg/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211081702	**M114MW002**	Water	11/07/2012 12:06	11/08/2012 10:30

Subcontract Work

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/28/2012 08:54	BJM	

CAS#	Parameter	Result	RDL	MDL	Units
SHIP-001	Ship Result	*			mg/L

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/10/2012 15:01	LBH	494340

CAS#	Parameter	Result	RDL	MDL	Units
630-20-6	1,1,1,2-Tetrachloroethane	0.120U	1.00	0.120	ug/L
71-55-6	1,1,1-Trichloroethane	0.123U	1.00	0.123	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.109U	1.00	0.109	ug/L
79-00-5	1,1,2-Trichloroethane	0.159U	1.00	0.159	ug/L
75-34-3	1,1-Dichloroethane	0.171U	1.00	0.171	ug/L
75-35-4	1,1-Dichloroethene	0.208U	1.00	0.208	ug/L
563-58-6	1,1-Dichloropropene	0.052U	1.00	0.052	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.079U	1.00	0.079	ug/L
96-18-4	1,2,3-Trichloropropane	0.065U	1.00	0.065	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.105U	1.00	0.105	ug/L
95-63-6	1,2,4-Trimethylbenzene	0.084U	1.00	0.084	ug/L
96-12-8	1,2-Dibromo-3-chloropropane	0.194U	1.00	0.194	ug/L
106-93-4	1,2-Dibromoethane	0.102U	1.00	0.102	ug/L
95-50-1	1,2-Dichlorobenzene	0.135U	1.00	0.135	ug/L
107-06-2	1,2-Dichloroethane	0.116U	1.00	0.116	ug/L
78-87-5	1,2-Dichloropropane	0.150U	1.00	0.150	ug/L
108-67-8	1,3,5-Trimethylbenzene	0.066U	1.00	0.066	ug/L
541-73-1	1,3-Dichlorobenzene	0.138U	1.00	0.138	ug/L
142-28-9	1,3-Dichloropropane	0.059U	1.00	0.059	ug/L
106-46-7	1,4-Dichlorobenzene	0.083U	1.00	0.083	ug/L
594-20-7	2,2-Dichloropropane	0.170U	1.00	0.170	ug/L
78-93-3	2-Butanone	0.142U	5.00	0.142	ug/L
95-49-8	2-Chlorotoluene	0.080U	1.00	0.080	ug/L
591-78-6	2-Hexanone	0.122U	5.00	0.122	ug/L
106-43-4	4-Chlorotoluene	0.124U	1.00	0.124	ug/L
99-87-6	4-Isopropyltoluene	0.070U	1.00	0.070	ug/L
108-10-1	4-Methyl-2-pentanone	0.120U	5.00	0.120	ug/L
67-64-1	**Acetone**	**25.6**	**5.00**	**0.193**	**ug/L**
71-43-2	**Benzene**	**0.244J**	**1.00**	**0.111**	**ug/L**
108-86-1	Bromobenzene	0.145U	1.00	0.145	ug/L
74-97-5	Bromochloromethane	0.127U	1.00	0.127	ug/L
75-27-4	Bromodichloromethane	0.083U	1.00	0.083	ug/L
75-25-2	Bromoform	0.215U	1.00	0.215	ug/L
74-83-9	Bromomethane	0.427U	1.00	0.427	ug/L
75-15-0	Carbon disulfide	0.190U	1.00	0.190	ug/L
56-23-5	Carbon tetrachloride	0.248U	1.00	0.248	ug/L
108-90-7	Chlorobenzene	0.083U	1.00	0.083	ug/L
75-00-3	Chloroethane	0.235U	1.00	0.235	ug/L
67-66-3	Chloroform	0.155U	1.00	0.155	ug/L
74-87-3	**Chloromethane**	**2.21**	**1.00**	**0.144**	**ug/L**
74-95-3	Dibromomethane	0.211U	1.00	0.211	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211081702	**M114MW002**	Water	11/07/2012 12:06	11/08/2012 10:30

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/10/2012 15:01	LBH	494340

CAS#	Parameter	Result	RDL	MDL	Units
75-71-8	Dichlorodifluoromethane	0.145U	1.00	0.145	ug/L
100-41-4	Ethylbenzene	0.109U	1.00	0.109	ug/L
87-68-3	Hexachlorobutadiene	0.265U	1.00	0.265	ug/L
98-82-8	Isopropylbenzene (Cumene)	0.130U	1.00	0.130	ug/L
75-09-2	Methylene chloride	0.149U	5.00	0.149	ug/L
91-20-3	Naphthalene	0.176U	1.00	0.176	ug/L
100-42-5	Styrene	0.089U	1.00	0.089	ug/L
127-18-4	Tetrachloroethene	0.193U	1.00	0.193	ug/L
108-88-3	Toluene	0.122U	1.00	0.122	ug/L
79-01-6	Trichloroethene	0.161U	1.00	0.161	ug/L
75-69-4	Trichlorofluoromethane	0.157U	1.00	0.157	ug/L
75-01-4	Vinyl chloride	0.127U	1.00	0.127	ug/L
156-59-2	cis-1,2-Dichloroethene	0.103U	1.00	0.103	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.124U	1.00	0.124	ug/L
136777-61-2	m,p-Xylene	0.123U	2.00	0.123	ug/L
104-51-8	n-Butylbenzene	0.123U	1.00	0.123	ug/L
103-65-1	n-Propylbenzene	0.727U	1.00	0.727	ug/L
95-47-6	o-Xylene	0.055U	1.00	0.055	ug/L
135-98-8	sec-Butylbenzene	0.107U	1.00	0.107	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.078U	5.00	0.078	ug/L
98-06-6	tert-Butylbenzene	0.087U	1.00	0.087	ug/L
156-60-5	trans-1,2-Dichloroethene	0.077U	1.00	0.077	ug/L
10061-02-6	trans-1,3-Dichloropropene	0.128U	1.00	0.128	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	51.7	ug/L	103	75 - 120
1868-53-7	Dibromofluoromethane	50	49.8	ug/L	100	85 - 115
2037-26-5	Toluene d8	50	49.3	ug/L	99	85 - 120
17060-07-0	1,2-Dichloroethane-d4	50	52.2	ug/L	104	70 - 120

SW-846 8330A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/13/2012 04:30	494270	SW-846 8330A	1	11/15/2012 02:01	JWM	494679

CAS#	Parameter	Result	RDL	MDL	Units
99-35-4	1,3,5-Trinitrobenzene	0.244U	0.510	0.244	ug/L
99-65-0	1,3-Dinitrobenzene	0.171U	0.510	0.171	ug/L
118-96-7	2,4,6-Trinitrotoluene	0.493U	1.02	0.493	ug/L
121-14-2	2,4-Dinitrotoluene	0.512U	1.02	0.512	ug/L
606-20-2	2,6-Dinitrotoluene	0.289U	1.02	0.289	ug/L
355-72-78-2	2-Amino-4,6-dinitrotoluene	0.588U	1.02	0.588	ug/L
88-72-2	2-Nitrotoluene	0.122U	0.510	0.122	ug/L
99-08-1	3-Nitrotoluene	0.376U	1.02	0.376	ug/L
1946-51-0	4-Amino-2,6-dinitrotoluene	0.499U	1.02	0.499	ug/L
99-99-0	4-Nitrotoluene	0.426U	1.02	0.426	ug/L
2691-41-0	HMX	0.216U	0.510	0.216	ug/L
98-95-3	Nitrobenzene	0.272U	0.510	0.272	ug/L
121-82-4	RDX	0.193U	0.510	0.193	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211081702	**M114MW002**	Water	11/07/2012 12:06	11/08/2012 10:30

SW-846 8330A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/13/2012 04:30	494270	SW-846 8330A	1	11/15/2012 02:01	JWM	494679

CAS#	Parameter	Result	RDL	MDL	Units
479-45-8	Tetryl	0.246U	0.510	0.246	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
528-29-0	1,2-Dinitrobenzene	2.04	1.67	ug/L	82	70 - 130

SW-846 7470A Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 15:35	494179	SW-846 7470A Dissolved	1	11/10/2012 13:08	CLB	494344

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	0.068U	0.20	0.068	ug/L

SW-846 7470A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 15:35	494179	SW-846 7470A	1	11/10/2012 13:10	CLB	494344

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	0.068U	0.20	0.068	ug/L

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 15:35	494178	SW-846 3010A	1	11/11/2012 15:17	BNB	494383

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	**Aluminum**	**231**	**200**	**60.0**	**ug/L**
7440-36-0	**Antimony**	**4.27J**	**60.0**	**3.11**	**ug/L**
7440-39-3	**Barium**	**15.6**	**10.0**	**0.71**	**ug/L**
7440-41-7	**Beryllium**	**1.62J**	**5.00**	**0.10**	**ug/L**
7440-43-9	**Cadmium**	**0.75J**	**5.00**	**0.20**	**ug/L**
7440-48-4	Cobalt	1.00U	10.0	1.00	ug/L
7440-50-8	**Copper**	**1200**	**10.0**	**1.01**	**ug/L**
7439-89-6	**Iron**	**193**	**100**	**40.0**	**ug/L**
7439-92-1	Lead	1.96U	15.0	1.96	ug/L
7439-95-4	**Magnesium**	**243000**	**100**	**50.0**	**ug/L**
7439-96-5	**Manganese**	**4.73J**	**15.0**	**2.00**	**ug/L**
7439-98-7	**Molybdenum**	**30.4J**	**50.0**	**3.75**	**ug/L**
7440-02-0	**Nickel**	**27.4J**	**40.0**	**1.13**	**ug/L**
7440-09-7	**Potassium**	**17900**	**500**	**100**	**ug/L**
7782-49-2	**Selenium**	**25.4J**	**40.0**	**4.42**	**ug/L**
7440-22-4	**Silver**	**0.98J**	**10.0**	**0.70**	**ug/L**
7440-28-0	Thallium	3.04U	20.0	3.04	ug/L
7440-32-6	**Titanium**	**2.59J**	**100**	**1.20**	**ug/L**
7440-62-2	**Vanadium**	**13.0J**	**20.0**	**3.75**	**ug/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211081702	**M114MW002**	Water	11/07/2012 12:06	11/08/2012 10:30

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 15:35	494178	SW-846 3010A	1	11/11/2012 15:17	BNB	494383

CAS#	Parameter	Result	RDL	MDL	Units
7440-66-6	**Zinc**	**154**	**20.0**	**4.51**	**ug/L**

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 15:35	494178	SW-846 3010A	1	11/13/2012 16:56	BNB	494546

CAS#	Parameter	Result	RDL	MDL	Units
7440-38-2	Arsenic	3.59U	10.0	3.59	ug/L
7440-70-2	**Calcium**	**263000**	**100**	**50.0**	**ug/L**
7440-47-3	**Chromium**	**13.1**	**10.0**	**1.00**	**ug/L**

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 15:35	494178	SW-846 3010A	10	11/16/2012 11:45	CLB	494786

CAS#	Parameter	Result	RDL	MDL	Units
7440-23-5	**Sodium**	**2110000**	**10000**	**2000**	**ug/L**

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 15:35	494177	SW-846 3005 Dissolved	1	11/13/2012 18:20	BNB	494546

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	60.0U	200	60.0	ug/L
7440-36-0	Antimony	3.11U	60.0	3.11	ug/L
7440-38-2	Arsenic	3.59U	10.0	3.59	ug/L
7440-39-3	**Barium**	**14.8**	**10.0**	**0.71**	**ug/L**
7440-41-7	**Beryllium**	**0.23J**	**5.00**	**0.10**	**ug/L**
7440-43-9	**Cadmium**	**1.14J**	**5.00**	**0.20**	**ug/L**
7440-70-2	**Calcium**	**271000**	**100**	**50.0**	**ug/L**
7440-47-3	**Chromium**	**4.67J**	**10.0**	**1.00**	**ug/L**
7440-48-4	**Cobalt**	**1.24J**	**10.0**	**1.00**	**ug/L**
7440-50-8	**Copper**	**500**	**10.0**	**1.01**	**ug/L**
7439-89-6	Iron	40.0U	100	40.0	ug/L
7439-95-4	**Magnesium**	**253000**	**100**	**50.0**	**ug/L**
7439-96-5	Manganese	2.00U	15.0	2.00	ug/L
7439-98-7	**Molybdenum**	**27.6J**	**50.0**	**3.75**	**ug/L**
7440-02-0	**Nickel**	**28.1J**	**40.0**	**1.13**	**ug/L**
7440-09-7	**Potassium**	**19200**	**500**	**100**	**ug/L**
7782-49-2	**Selenium**	**27.0J**	**40.0**	**4.42**	**ug/L**
7440-22-4	Silver	0.70U	10.0	0.70	ug/L
7440-28-0	Thallium	3.04U	20.0	3.04	ug/L
7440-32-6	Titanium	1.20U	100	1.20	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211081702	**M114MW002**	Water	11/07/2012 12:06	11/08/2012 10:30

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 15:35	494177	SW-846 3005 Dissolved	1	11/13/2012 18:20	BNB	494546

CAS#	Parameter	Result	RDL	MDL	Units
7440-62-2	**Vanadium**	**22.3**	**20.0**	**3.75**	**ug/L**
7440-66-6	**Zinc**	**78.0**	**20.0**	**4.51**	**ug/L**

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 15:35	494177	SW-846 3005 Dissolved	10	11/14/2012 15:48	BNB	494810

CAS#	Parameter	Result	RDL	MDL	Units
7440-23-5	**Sodium**	**1800000**	**10000**	**2000**	**ug/L**

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 15:35	494177	SW-846 3005 Dissolved	1	11/14/2012 15:55	BNB	494810

CAS#	Parameter	Result	RDL	MDL	Units
7439-92-1	Lead	1.96U	15.0	1.96	ug/L

SM 2540C TDS

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/08/2012 14:35	DJH	494201

CAS#	Parameter	Result	RDL	MDL	Units
WET-035	**Total Dissolved Solids(TDS)**	**7830**	**10.0**		**mg/L**

EPA 353.2 Nitrite

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/08/2012 15:56	AEL	494207

CAS#	Parameter	Result	RDL	MDL	Units
14797-65-0	**Nitrite**	**0.019**	**0.010**	**0.002**	**mg/L-N**

EPA 353.2 Nitrate

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/08/2012 16:19	AEL	494206

CAS#	Parameter	Result	RDL	MDL	Units
14797-55-8	**Nitrate**	**0.528**	**0.010**	**0.005**	**mg/L-N**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211081702	**M114MW002**	Water	11/07/2012 12:06	11/08/2012 10:30

EPA 300.0

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			2000	11/14/2012 12:35	AEL	494605

CAS#	Parameter	Result	RDL	MDL	Units
16887-00-6	**Chloride**	**3610**	**200**	**126**	**mg/L**
14808-79-8	**Sulfate**	**2200**	**400**	**230**	**mg/L**

SM 2320B Alkalinity

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/09/2012 11:15	DNM	494276

CAS#	Parameter	Result	RDL	MDL	Units
000000-00-5	**Total Alkalinity**	**78.7**	**1.0**	**0.19**	**mg/L CaCO3**

SW-846 7196A Chromium VI

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/08/2012 11:43	JEM	494173

CAS#	Parameter	Result	RDL	MDL	Units
18540-29-9	Chromium VI	4.00U	10.0	4.00	ug/L

SW-846 9012A Cyanide

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/10/2012 06:00	494328	SW-846 9012A	1	11/12/2012 15:58	AEL	494463

CAS#	Parameter	Result	RDL	MDL	Units
57-12-5	Total Cyanide	0.0012U	0.0050	0.0012	mg/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211081703	**M114MW003**	Water	11/07/2012 14:01	11/08/2012 10:30

Subcontract Work

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/28/2012 08:54	BJM	

CAS#	Parameter	Result	RDL	MDL	Units
SHIP-001	Ship Result	*			mg/L

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/10/2012 11:56	LBH	494340

CAS#	Parameter	Result	RDL	MDL	Units
630-20-6	1,1,1,2-Tetrachloroethane	0.120U	1.00	0.120	ug/L
71-55-6	1,1,1-Trichloroethane	0.123U	1.00	0.123	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.109U	1.00	0.109	ug/L
79-00-5	1,1,2-Trichloroethane	0.159U	1.00	0.159	ug/L
75-34-3	1,1-Dichloroethane	0.171U	1.00	0.171	ug/L
75-35-4	1,1-Dichloroethene	0.208U	1.00	0.208	ug/L
563-58-6	1,1-Dichloropropene	0.052U	1.00	0.052	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.079U	1.00	0.079	ug/L
96-18-4	1,2,3-Trichloropropane	0.065U	1.00	0.065	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.105U	1.00	0.105	ug/L
95-63-6	1,2,4-Trimethylbenzene	0.084U	1.00	0.084	ug/L
96-12-8	1,2-Dibromo-3-chloropropane	0.194U	1.00	0.194	ug/L
106-93-4	1,2-Dibromoethane	0.102U	1.00	0.102	ug/L
95-50-1	1,2-Dichlorobenzene	0.135U	1.00	0.135	ug/L
107-06-2	1,2-Dichloroethane	0.116U	1.00	0.116	ug/L
78-87-5	1,2-Dichloropropane	0.150U	1.00	0.150	ug/L
108-67-8	1,3,5-Trimethylbenzene	0.066U	1.00	0.066	ug/L
541-73-1	1,3-Dichlorobenzene	0.138U	1.00	0.138	ug/L
142-28-9	1,3-Dichloropropane	0.059U	1.00	0.059	ug/L
106-46-7	1,4-Dichlorobenzene	0.083U	1.00	0.083	ug/L
594-20-7	2,2-Dichloropropane	0.170U	1.00	0.170	ug/L
78-93-3	2-Butanone	0.142U	5.00	0.142	ug/L
95-49-8	2-Chlorotoluene	0.080U	1.00	0.080	ug/L
591-78-6	2-Hexanone	0.122U	5.00	0.122	ug/L
106-43-4	4-Chlorotoluene	0.124U	1.00	0.124	ug/L
99-87-6	4-Isopropyltoluene	0.070U	1.00	0.070	ug/L
108-10-1	4-Methyl-2-pentanone	0.120U	5.00	0.120	ug/L
67-64-1	Acetone	0.193U	5.00	0.193	ug/L
71-43-2	Benzene	0.111U	1.00	0.111	ug/L
108-86-1	Bromobenzene	0.145U	1.00	0.145	ug/L
74-97-5	Bromochloromethane	0.127U	1.00	0.127	ug/L
75-27-4	Bromodichloromethane	0.083U	1.00	0.083	ug/L
75-25-2	Bromoform	0.215U	1.00	0.215	ug/L
74-83-9	Bromomethane	0.427U	1.00	0.427	ug/L
75-15-0	Carbon disulfide	0.190U	1.00	0.190	ug/L
56-23-5	Carbon tetrachloride	0.248U	1.00	0.248	ug/L
108-90-7	Chlorobenzene	0.083U	1.00	0.083	ug/L
75-00-3	Chloroethane	0.235U	1.00	0.235	ug/L
67-66-3	Chloroform	0.155U	1.00	0.155	ug/L
74-87-3	Chloromethane	0.144U	1.00	0.144	ug/L
74-95-3	Dibromomethane	0.211U	1.00	0.211	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211081703	**M114MW003**	Water	11/07/2012 14:01	11/08/2012 10:30

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/10/2012 11:56	LBH	494340

CAS#	Parameter	Result	RDL	MDL	Units
75-71-8	Dichlorodifluoromethane	0.145U	1.00	0.145	ug/L
100-41-4	Ethylbenzene	0.109U	1.00	0.109	ug/L
87-68-3	Hexachlorobutadiene	0.265U	1.00	0.265	ug/L
98-82-8	Isopropylbenzene (Cumene)	0.130U	1.00	0.130	ug/L
75-09-2	Methylene chloride	0.149U	5.00	0.149	ug/L
91-20-3	Naphthalene	0.176U	1.00	0.176	ug/L
100-42-5	Styrene	0.089U	1.00	0.089	ug/L
127-18-4	Tetrachloroethene	0.193U	1.00	0.193	ug/L
108-88-3	Toluene	0.122U	1.00	0.122	ug/L
79-01-6	Trichloroethene	0.161U	1.00	0.161	ug/L
75-69-4	Trichlorofluoromethane	0.157U	1.00	0.157	ug/L
75-01-4	Vinyl chloride	0.127U	1.00	0.127	ug/L
156-59-2	cis-1,2-Dichloroethene	0.103U	1.00	0.103	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.124U	1.00	0.124	ug/L
136777-61-2	m,p-Xylene	0.123U	2.00	0.123	ug/L
104-51-8	n-Butylbenzene	0.123U	1.00	0.123	ug/L
103-65-1	n-Propylbenzene	0.727U	1.00	0.727	ug/L
95-47-6	o-Xylene	0.055U	1.00	0.055	ug/L
135-98-8	sec-Butylbenzene	0.107U	1.00	0.107	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.078U	5.00	0.078	ug/L
98-06-6	tert-Butylbenzene	0.087U	1.00	0.087	ug/L
156-60-5	trans-1,2-Dichloroethene	0.077U	1.00	0.077	ug/L
10061-02-6	trans-1,3-Dichloropropene	0.128U	1.00	0.128	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	53.6	ug/L	107	75 - 120
1868-53-7	Dibromofluoromethane	50	50.9	ug/L	102	85 - 115
2037-26-5	Toluene d8	50	49.8	ug/L	100	85 - 120
17060-07-0	1,2-Dichloroethane-d4	50	51.2	ug/L	102	70 - 120

SW-846 8330A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/13/2012 04:30	494270	SW-846 8330A	1	11/15/2012 02:35	JWM	494679

CAS#	Parameter	Result	RDL	MDL	Units
99-35-4	1,3,5-Trinitrobenzene	0.240U	0.500	0.240	ug/L
99-65-0	1,3-Dinitrobenzene	0.167U	0.500	0.167	ug/L
118-96-7	2,4,6-Trinitrotoluene	0.483U	1.00	0.483	ug/L
121-14-2	2,4-Dinitrotoluene	0.501U	1.00	0.501	ug/L
606-20-2	2,6-Dinitrotoluene	0.283U	1.00	0.283	ug/L
355-72-78-2	2-Amino-4,6-dinitrotoluene	0.576U	1.00	0.576	ug/L
88-72-2	2-Nitrotoluene	0.120U	0.500	0.120	ug/L
99-08-1	3-Nitrotoluene	0.369U	1.00	0.369	ug/L
1946-51-0	4-Amino-2,6-dinitrotoluene	0.489U	1.00	0.489	ug/L
99-99-0	4-Nitrotoluene	0.417U	1.00	0.417	ug/L
2691-41-0	HMX	0.212U	0.500	0.212	ug/L
98-95-3	Nitrobenzene	0.267U	0.500	0.267	ug/L
121-82-4	RDX	0.189U	0.500	0.189	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211081703	**M114MW003**	Water	11/07/2012 14:01	11/08/2012 10:30

SW-846 8330A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/13/2012 04:30	494270	SW-846 8330A	1	11/15/2012 02:35	JWM	494679

CAS#	Parameter	Result	RDL	MDL	Units
479-45-8	Tetryl	0.241U	0.500	0.241	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
528-29-0	1,2-Dinitrobenzene	2	1.54	ug/L	77	70 - 130

SW-846 7470A Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 15:35	494179	SW-846 7470A Dissolved	1	11/10/2012 12:57	CLB	494344

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	0.068U	0.20	0.068	ug/L

SW-846 7470A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 15:35	494179	SW-846 7470A	1	11/10/2012 12:48	CLB	494344

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	0.068U	0.20	0.068	ug/L

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 15:35	494178	SW-846 3010A	1	11/11/2012 14:16	BNB	494383

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	**Aluminum**	**2790**	**200**	**60.0**	**ug/L**
7440-36-0	Antimony	3.11U	60.0	3.11	ug/L
7440-39-3	**Barium**	**46.3**	**10.0**	**0.71**	**ug/L**
7440-41-7	Beryllium	0.10U	5.00	0.10	ug/L
7440-43-9	**Cadmium**	**2.32J**	**5.00**	**0.20**	**ug/L**
7440-48-4	**Cobalt**	**2.23J**	**10.0**	**1.00**	**ug/L**
7440-50-8	**Copper**	**11.8**	**10.0**	**1.01**	**ug/L**
7439-89-6	**Iron**	**1940**	**100**	**40.0**	**ug/L**
7439-92-1	**Lead**	**2.55J**	**15.0**	**1.96**	**ug/L**
7439-95-4	**Magnesium**	**276000**	**100**	**50.0**	**ug/L**
7439-96-5	**Manganese**	**56.7**	**15.0**	**2.00**	**ug/L**
7439-98-7	**Molybdenum**	**12.9J**	**50.0**	**3.75**	**ug/L**
7440-02-0	**Nickel**	**29.9J**	**40.0**	**1.13**	**ug/L**
7440-09-7	**Potassium**	**20500**	**500**	**100**	**ug/L**
7782-49-2	**Selenium**	**37.3J**	**40.0**	**4.42**	**ug/L**
7440-22-4	Silver	0.70U	10.0	0.70	ug/L
7440-28-0	**Thallium**	**3.61J**	**20.0**	**3.04**	**ug/L**
7440-32-6	**Titanium**	**65.1J**	**100**	**1.20**	**ug/L**
7440-62-2	**Vanadium**	**16.6J**	**20.0**	**3.75**	**ug/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211081703	**M114MW003**	Water	11/07/2012 14:01	11/08/2012 10:30

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 15:35	494178	SW-846 3010A	1	11/11/2012 14:16	BNB	494383

CAS#	Parameter	Result	RDL	MDL	Units
7440-66-6	**Zinc**	**33.1**	**20.0**	**4.51**	**ug/L**

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 15:35	494178	SW-846 3010A	10	11/13/2012 14:55	BNB	494546

CAS#	Parameter	Result	RDL	MDL	Units
7440-23-5	**Sodium**	**2790000**	**10000**	**2000**	**ug/L**

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 15:35	494178	SW-846 3010A	1	11/13/2012 15:34	BNB	494546

CAS#	Parameter	Result	RDL	MDL	Units
7440-38-2	Arsenic	3.59U	10.0	3.59	ug/L
7440-70-2	**Calcium**	**342000**	**100**	**50.0**	**ug/L**
7440-47-3	**Chromium**	**70.7**	**10.0**	**1.00**	**ug/L**

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 15:35	494177	SW-846 3005 Dissolved	1	11/13/2012 17:25	BNB	494546

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	60.0U	200	60.0	ug/L
7440-36-0	**Antimony**	**4.85J**	**60.0**	**3.11**	**ug/L**
7440-38-2	Arsenic	3.59U	10.0	3.59	ug/L
7440-39-3	**Barium**	**11.3**	**10.0**	**0.71**	**ug/L**
7440-41-7	Beryllium	0.10U	5.00	0.10	ug/L
7440-43-9	**Cadmium**	**1.11J**	**5.00**	**0.20**	**ug/L**
7440-70-2	**Calcium**	**333000**	**100**	**50.0**	**ug/L**
7440-47-3	**Chromium**	**1.55J**	**10.0**	**1.00**	**ug/L**
7440-48-4	Cobalt	1.00U	10.0	1.00	ug/L
7440-50-8	**Copper**	**10.0**	**10.0**	**1.01**	**ug/L**
7439-89-6	Iron	40.0U	100	40.0	ug/L
7439-95-4	**Magnesium**	**261000**	**100**	**50.0**	**ug/L**
7439-96-5	Manganese	2.00U	15.0	2.00	ug/L
7439-98-7	**Molybdenum**	**11.0J**	**50.0**	**3.75**	**ug/L**
7440-02-0	**Nickel**	**1.64J**	**40.0**	**1.13**	**ug/L**
7440-09-7	**Potassium**	**19200**	**500**	**100**	**ug/L**
7782-49-2	**Selenium**	**29.7J**	**40.0**	**4.42**	**ug/L**
7440-22-4	Silver	0.70U	10.0	0.70	ug/L
7440-28-0	Thallium	3.04U	20.0	3.04	ug/L
7440-32-6	Titanium	1.20U	100	1.20	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211081703	**M114MW003**	Water	11/07/2012 14:01	11/08/2012 10:30

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 15:35	494177	SW-846 3005 Dissolved	1	11/13/2012 17:25	BNB	494546

CAS#	Parameter	Result	RDL	MDL	Units
7440-62-2	**Vanadium**	**21.1**	**20.0**	**3.75**	**ug/L**
7440-66-6	**Zinc**	**20.5**	**20.0**	**4.51**	**ug/L**

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 15:35	494177	SW-846 3005 Dissolved	10	11/14/2012 14:17	BNB	494810

CAS#	Parameter	Result	RDL	MDL	Units
7440-23-5	**Sodium**	**2750000**	**10000**	**2000**	**ug/L**

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 15:35	494177	SW-846 3005 Dissolved	1	11/14/2012 14:52	BNB	494810

CAS#	Parameter	Result	RDL	MDL	Units
7439-92-1	Lead	1.96U	15.0	1.96	ug/L

SM 2540C TDS

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/08/2012 14:35	DJH	494201

CAS#	Parameter	Result	RDL	MDL	Units
WET-035	**Total Dissolved Solids(TDS)**	**9310**	**10.0**		**mg/L**

EPA 353.2 Nitrite

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/08/2012 15:58	AEL	494207

CAS#	Parameter	Result	RDL	MDL	Units
14797-65-0	**Nitrite**	**0.018**	**0.010**	**0.002**	**mg/L-N**

EPA 353.2 Nitrate

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			2	11/08/2012 16:26	AEL	494206

CAS#	Parameter	Result	RDL	MDL	Units
14797-55-8	**Nitrate**	**0.988**	**0.020**	**0.010**	**mg/L-N**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211081703	**M114MW003**	Water	11/07/2012 14:01	11/08/2012 10:30

EPA 300.0

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			5000	11/14/2012 12:53	AEL	494605

CAS#	Parameter	Result	RDL	MDL	Units
16887-00-6	**Chloride**	**4590**	**500**	**315**	**mg/L**
14808-79-8	**Sulfate**	**2460**	**1000**	**575**	**mg/L**

SM 2320B Alkalinity

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/09/2012 11:15	DNM	494276

CAS#	Parameter	Result	RDL	MDL	Units
000000-00-5	**Total Alkalinity**	**48.6**	**1.0**	**0.19**	**mg/L CaCO3**

SW-846 7196A Chromium VI

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/08/2012 11:44	JEM	494173

CAS#	Parameter	Result	RDL	MDL	Units
18540-29-9	Chromium VI	4.00U	10.0	4.00	ug/L

SW-846 9012A Cyanide

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/10/2012 06:00	494328	SW-846 9012A	1	11/12/2012 15:59	AEL	494463

CAS#	Parameter	Result	RDL	MDL	Units
57-12-5	Total Cyanide	0.0012U	0.0050	0.0012	mg/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211081704	**M114MW003-MS**	Water	11/07/2012 14:01	11/08/2012 10:30

Subcontract Work

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/28/2012 08:54	BJM	

CAS#	Parameter	Result	RDL	MDL	Units
SHIP-001	Ship Result	*			mg/L

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/10/2012 13:40	LBH	494340

CAS#	Parameter	Result	RDL	MDL	Units
630-20-6	1,1,1,2-Tetrachloroethane	46.3	1.00	0.120	ug/L
71-55-6	1,1,1-Trichloroethane	46.7	1.00	0.123	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	48.4	1.00	0.109	ug/L
79-00-5	1,1,2-Trichloroethane	46.3	1.00	0.159	ug/L
75-34-3	1,1-Dichloroethane	47.6	1.00	0.171	ug/L
75-35-4	1,1-Dichloroethene	46.0	1.00	0.208	ug/L
563-58-6	1,1-Dichloropropene	48.9	1.00	0.052	ug/L
87-61-6	1,2,3-Trichlorobenzene	43.7	1.00	0.079	ug/L
96-18-4	1,2,3-Trichloropropane	46.1	1.00	0.065	ug/L
120-82-1	1,2,4-Trichlorobenzene	43.8	1.00	0.105	ug/L
95-63-6	1,2,4-Trimethylbenzene	44.8	1.00	0.084	ug/L
96-12-8	1,2-Dibromo-3-chloropropane	48.2	1.00	0.194	ug/L
106-93-4	1,2-Dibromoethane	46.8	1.00	0.102	ug/L
95-50-1	1,2-Dichlorobenzene	43.5	1.00	0.135	ug/L
107-06-2	1,2-Dichloroethane	48.1	1.00	0.116	ug/L
78-87-5	1,2-Dichloropropane	48.2	1.00	0.150	ug/L
108-67-8	1,3,5-Trimethylbenzene	45.0	1.00	0.066	ug/L
541-73-1	1,3-Dichlorobenzene	44.2	1.00	0.138	ug/L
142-28-9	1,3-Dichloropropane	45.6	1.00	0.059	ug/L
106-46-7	1,4-Dichlorobenzene	43.3	1.00	0.083	ug/L
594-20-7	2,2-Dichloropropane	50.0	1.00	0.170	ug/L
78-93-3	2-Butanone	41.8	5.00	0.142	ug/L
95-49-8	2-Chlorotoluene	44.9	1.00	0.080	ug/L
591-78-6	2-Hexanone	48.2	5.00	0.122	ug/L
106-43-4	4-Chlorotoluene	44.7	1.00	0.124	ug/L
99-87-6	4-Isopropyltoluene	43.2	1.00	0.070	ug/L
108-10-1	4-Methyl-2-pentanone	54.4	5.00	0.120	ug/L
67-64-1	Acetone	33.7	5.00	0.193	ug/L
71-43-2	Benzene	47.0	1.00	0.111	ug/L
108-86-1	Bromobenzene	43.7	1.00	0.145	ug/L
74-97-5	Bromochloromethane	50.0	1.00	0.127	ug/L
75-27-4	Bromodichloromethane	49.2	1.00	0.083	ug/L
75-25-2	Bromoform	49.2	1.00	0.215	ug/L
74-83-9	Bromomethane	47.6	1.00	0.427	ug/L
75-15-0	Carbon disulfide	45.3	1.00	0.190	ug/L
56-23-5	Carbon tetrachloride	51.5	1.00	0.248	ug/L
108-90-7	Chlorobenzene	44.4	1.00	0.083	ug/L
75-00-3	Chloroethane	47.7	1.00	0.235	ug/L
67-66-3	Chloroform	48.2	1.00	0.155	ug/L
74-87-3	Chloromethane	45.3	1.00	0.144	ug/L
74-95-3	Dibromomethane	49.3	1.00	0.211	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211081704	**M114MW003-MS**	Water	11/07/2012 14:01	11/08/2012 10:30

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/10/2012 13:40	LBH	494340

CAS#	Parameter	Result	RDL	MDL	Units
75-71-8	**Dichlorodifluoromethane**	**46.2**	**1.00**	**0.145**	**ug/L**
100-41-4	**Ethylbenzene**	**44.5**	**1.00**	**0.109**	**ug/L**
87-68-3	**Hexachlorobutadiene**	**41.7**	**1.00**	**0.265**	**ug/L**
98-82-8	**Isopropylbenzene (Cumene)**	**45.0**	**1.00**	**0.130**	**ug/L**
75-09-2	**Methylene chloride**	**46.5**	**5.00**	**0.149**	**ug/L**
91-20-3	**Naphthalene**	**41.7**	**1.00**	**0.176**	**ug/L**
100-42-5	**Styrene**	**45.4**	**1.00**	**0.089**	**ug/L**
127-18-4	**Tetrachloroethene**	**47.0**	**1.00**	**0.193**	**ug/L**
108-88-3	**Toluene**	**44.9**	**1.00**	**0.122**	**ug/L**
79-01-6	**Trichloroethene**	**46.7**	**1.00**	**0.161**	**ug/L**
75-69-4	**Trichlorofluoromethane**	**44.8**	**1.00**	**0.157**	**ug/L**
75-01-4	**Vinyl chloride**	**48.1**	**1.00**	**0.127**	**ug/L**
156-59-2	**cis-1,2-Dichloroethene**	**48.4**	**1.00**	**0.103**	**ug/L**
10061-01-5	**cis-1,3-Dichloropropene**	**48.3**	**1.00**	**0.124**	**ug/L**
136777-61-2	**m,p-Xylene**	**91.2**	**2.00**	**0.123**	**ug/L**
104-51-8	**n-Butylbenzene**	**42.0**	**1.00**	**0.123**	**ug/L**
103-65-1	**n-Propylbenzene**	**44.5**	**1.00**	**0.727**	**ug/L**
95-47-6	**o-Xylene**	**46.3**	**1.00**	**0.055**	**ug/L**
135-98-8	**sec-Butylbenzene**	**42.8**	**1.00**	**0.107**	**ug/L**
1634-04-4	**tert-Butyl methyl ether (MTBE)**	**50.1**	**5.00**	**0.078**	**ug/L**
98-06-6	**tert-Butylbenzene**	**44.0**	**1.00**	**0.087**	**ug/L**
156-60-5	**trans-1,2-Dichloroethene**	**48.4**	**1.00**	**0.077**	**ug/L**
10061-02-6	**trans-1,3-Dichloropropene**	**49.7**	**1.00**	**0.128**	**ug/L**

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	52.3	ug/L	105	75 - 120
1868-53-7	Dibromofluoromethane	50	50.9	ug/L	102	85 - 115
2037-26-5	Toluene d8	50	47.6	ug/L	95	85 - 120
17060-07-0	1,2-Dichloroethane-d4	50	51.7	ug/L	103	70 - 120

SW-846 8330A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/13/2012 04:30	494270	SW-846 8330A	1	11/15/2012 03:09	JWM	494679

CAS#	Parameter	Result	RDL	MDL	Units
99-35-4	**1,3,5-Trinitrobenzene**	**1.56**	**0.500**	**0.240**	**ug/L**
99-65-0	**1,3-Dinitrobenzene**	**1.73**	**0.500**	**0.167**	**ug/L**
118-96-7	**2,4,6-Trinitrotoluene**	**1.71**	**1.00**	**0.483**	**ug/L**
121-14-2	**2,4-Dinitrotoluene**	**1.91**	**1.00**	**0.501**	**ug/L**
606-20-2	**2,6-Dinitrotoluene**	**1.79**	**1.00**	**0.283**	**ug/L**
355-72-78-2	**2-Amino-4,6-dinitrotoluene**	**1.79**	**1.00**	**0.576**	**ug/L**
88-72-2	**2-Nitrotoluene**	**1.84**	**0.500**	**0.120**	**ug/L**
99-08-1	**3-Nitrotoluene**	**1.82**	**1.00**	**0.369**	**ug/L**
1946-51-0	**4-Amino-2,6-dinitrotoluene**	**1.48**	**1.00**	**0.489**	**ug/L**
99-99-0	**4-Nitrotoluene**	**1.98**	**1.00**	**0.417**	**ug/L**
2691-41-0	**HMX**	**1.80**	**0.500**	**0.212**	**ug/L**
98-95-3	**Nitrobenzene**	**1.91**	**0.500**	**0.267**	**ug/L**
121-82-4	**RDX**	**1.74**	**0.500**	**0.189**	**ug/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211081704	**M114MW003-MS**	Water	11/07/2012 14:01	11/08/2012 10:30

SW-846 8330A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/13/2012 04:30	494270	SW-846 8330A	1	11/15/2012 03:09	JWM	494679

CAS#	Parameter	Result	RDL	MDL	Units
479-45-8	**Tetryl**	**0.861**	**0.500**	**0.241**	**ug/L**

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
528-29-0	1,2-Dinitrobenzene	2	1.5	ug/L	75	70 - 130

SW-846 7470A Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 15:35	494179	SW-846 7470A Dissolved	1	11/10/2012 13:02	CLB	494344

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	**Mercury**	**2.45**	**0.20**	**0.068**	**ug/L**

SW-846 7470A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 15:35	494179	SW-846 7470A	1	11/10/2012 15:34	CLB	494344

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	**Mercury**	**2.90**	**0.20**	**0.068**	**ug/L**

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 15:35	494178	SW-846 3010A	1	11/11/2012 14:23	BNB	494383

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	**Aluminum**	**8580**	**200**	**60.0**	**ug/L**
7440-36-0	**Antimony**	**524**	**60.0**	**3.11**	**ug/L**
7440-39-3	**Barium**	**517**	**10.0**	**0.71**	**ug/L**
7440-41-7	**Beryllium**	**476**	**5.00**	**0.10**	**ug/L**
7440-43-9	**Cadmium**	**465**	**5.00**	**0.20**	**ug/L**
7440-48-4	**Cobalt**	**466**	**10.0**	**1.00**	**ug/L**
7440-50-8	**Copper**	**530**	**10.0**	**1.01**	**ug/L**
7439-89-6	**Iron**	**6740**	**100**	**40.0**	**ug/L**
7439-92-1	**Lead**	**469**	**15.0**	**1.96**	**ug/L**
7439-95-4	**Magnesium**	**264000**	**100**	**50.0**	**ug/L**
7439-96-5	**Manganese**	**528**	**15.0**	**2.00**	**ug/L**
7439-98-7	**Molybdenum**	**504**	**50.0**	**3.75**	**ug/L**
7440-02-0	**Nickel**	**496**	**40.0**	**1.13**	**ug/L**
7440-09-7	**Potassium**	**30800**	**500**	**100**	**ug/L**
7782-49-2	**Selenium**	**571**	**40.0**	**4.42**	**ug/L**
7440-22-4	**Silver**	**524**	**10.0**	**0.70**	**ug/L**
7440-28-0	**Thallium**	**465**	**20.0**	**3.04**	**ug/L**
7440-32-6	**Titanium**	**519**	**100**	**1.20**	**ug/L**
7440-62-2	**Vanadium**	**516**	**20.0**	**3.75**	**ug/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211081704	**M114MW003-MS**	Water	11/07/2012 14:01	11/08/2012 10:30

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 15:35	494178	SW-846 3010A	1	11/11/2012 14:23	BNB	494383

CAS#	Parameter	Result	RDL	MDL	Units
7440-66-6	Zinc	541	20.0	4.51	ug/L

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 15:35	494178	SW-846 3010A	10	11/13/2012 15:03	BNB	494546

CAS#	Parameter	Result	RDL	MDL	Units
7440-23-5	Sodium	2560000	10000	2000	ug/L

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 15:35	494178	SW-846 3010A	1	11/13/2012 15:40	BNB	494546

CAS#	Parameter	Result	RDL	MDL	Units
7440-38-2	Arsenic	538	10.0	3.59	ug/L
7440-70-2	Calcium	332000	100	50.0	ug/L
7440-47-3	Chromium	495	10.0	1.00	ug/L

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 15:35	494177	SW-846 3005 Dissolved	1	11/13/2012 17:31	BNB	494546

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	5250	200	60.0	ug/L
7440-36-0	Antimony	569	60.0	3.11	ug/L
7440-38-2	Arsenic	559	10.0	3.59	ug/L
7440-39-3	Barium	516	10.0	0.71	ug/L
7440-41-7	Beryllium	504	5.00	0.10	ug/L
7440-43-9	Cadmium	469	5.00	0.20	ug/L
7440-70-2	Calcium	349000	100	50.0	ug/L
7440-47-3	Chromium	495	10.0	1.00	ug/L
7440-48-4	Cobalt	493	10.0	1.00	ug/L
7440-50-8	Copper	581	10.0	1.01	ug/L
7439-89-6	Iron	4890	100	40.0	ug/L
7439-95-4	Magnesium	275000	100	50.0	ug/L
7439-96-5	Manganese	498	15.0	2.00	ug/L
7439-98-7	Molybdenum	547	50.0	3.75	ug/L
7440-02-0	Nickel	496	40.0	1.13	ug/L
7440-09-7	Potassium	33300	500	100	ug/L
7782-49-2	Selenium	578	40.0	4.42	ug/L
7440-22-4	Silver	567	10.0	0.70	ug/L
7440-28-0	Thallium	476	20.0	3.04	ug/L
7440-32-6	Titanium	516	100	1.20	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211081704	**M114MW003-MS**	Water	11/07/2012 14:01	11/08/2012 10:30

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 15:35	494177	SW-846 3005 Dissolved	1	11/13/2012 17:31	BNB	494546

CAS#	Parameter	Result	RDL	MDL	Units
7440-62-2	**Vanadium**	**557**	**20.0**	**3.75**	**ug/L**
7440-66-6	**Zinc**	**552**	**20.0**	**4.51**	**ug/L**

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 15:35	494177	SW-846 3005 Dissolved	10	11/14/2012 14:25	BNB	494810

CAS#	Parameter	Result	RDL	MDL	Units
7440-23-5	**Sodium**	**2730000**	**10000**	**2000**	**ug/L**

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 15:35	494177	SW-846 3005 Dissolved	1	11/14/2012 15:00	BNB	494810

CAS#	Parameter	Result	RDL	MDL	Units
7439-92-1	**Lead**	**508**	**15.0**	**1.96**	**ug/L**

EPA 353.2 Nitrite

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/08/2012 15:59	AEL	494207

CAS#	Parameter	Result	RDL	MDL	Units
14797-65-0	**Nitrite**	**0.477**	**0.010**	**0.002**	**mg/L-N**

EPA 353.2 Nitrate

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			2	11/08/2012 16:27	AEL	494206

CAS#	Parameter	Result	RDL	MDL	Units
14797-55-8	**Nitrate**	**1.91**	**0.020**	**0.010**	**mg/L-N**

EPA 300.0

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			5000	11/14/2012 13:10	AEL	494605

CAS#	Parameter	Result	RDL	MDL	Units
16887-00-6	**Chloride**	**17700**	**500**	**315**	**mg/L**
14808-79-8	**Sulfate**	**28000**	**1000**	**575**	**mg/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211081704	**M114MW003-MS**	Water	11/07/2012 14:01	11/08/2012 10:30

SW-846 7196A Chromium VI

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/08/2012 11:44	JEM	494173

CAS#	Parameter	Result	RDL	MDL	Units
18540-29-9	**Chromium VI**	**483**	**10.0**	**4.00**	**ug/L**

SW-846 9012A Cyanide

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/10/2012 06:00	494328	SW-846 9012A	1	11/12/2012 16:00	AEL	494463

CAS#	Parameter	Result	RDL	MDL	Units
57-12-5	**Total Cyanide**	**0.040**	**0.0050**	**0.0012**	**mg/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211081705	**M114MW003-MSD**	Water	11/07/2012 14:01	11/08/2012 10:30

Subcontract Work

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/28/2012 08:54	BJM	

CAS#	Parameter	Result	RDL	MDL	Units
SHIP-001	Ship Result	*			mg/L

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/10/2012 14:00	LBH	494340

CAS#	Parameter	Result	RDL	MDL	Units
630-20-6	1,1,1,2-Tetrachloroethane	45.2	1.00	0.120	ug/L
71-55-6	1,1,1-Trichloroethane	44.1	1.00	0.123	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	47.1	1.00	0.109	ug/L
79-00-5	1,1,2-Trichloroethane	45.7	1.00	0.159	ug/L
75-34-3	1,1-Dichloroethane	44.9	1.00	0.171	ug/L
75-35-4	1,1-Dichloroethene	43.8	1.00	0.208	ug/L
563-58-6	1,1-Dichloropropene	45.4	1.00	0.052	ug/L
87-61-6	1,2,3-Trichlorobenzene	45.0	1.00	0.079	ug/L
96-18-4	1,2,3-Trichloropropane	43.7	1.00	0.065	ug/L
120-82-1	1,2,4-Trichlorobenzene	44.6	1.00	0.105	ug/L
95-63-6	1,2,4-Trimethylbenzene	43.6	1.00	0.084	ug/L
96-12-8	1,2-Dibromo-3-chloropropane	49.4	1.00	0.194	ug/L
106-93-4	1,2-Dibromoethane	46.5	1.00	0.102	ug/L
95-50-1	1,2-Dichlorobenzene	42.3	1.00	0.135	ug/L
107-06-2	1,2-Dichloroethane	45.9	1.00	0.116	ug/L
78-87-5	1,2-Dichloropropane	46.0	1.00	0.150	ug/L
108-67-8	1,3,5-Trimethylbenzene	43.4	1.00	0.066	ug/L
541-73-1	1,3-Dichlorobenzene	43.1	1.00	0.138	ug/L
142-28-9	1,3-Dichloropropane	45.7	1.00	0.059	ug/L
106-46-7	1,4-Dichlorobenzene	43.0	1.00	0.083	ug/L
594-20-7	2,2-Dichloropropane	47.5	1.00	0.170	ug/L
78-93-3	2-Butanone	40.7	5.00	0.142	ug/L
95-49-8	2-Chlorotoluene	43.5	1.00	0.080	ug/L
591-78-6	2-Hexanone	46.6	5.00	0.122	ug/L
106-43-4	4-Chlorotoluene	42.7	1.00	0.124	ug/L
99-87-6	4-Isopropyltoluene	42.5	1.00	0.070	ug/L
108-10-1	4-Methyl-2-pentanone	51.6	5.00	0.120	ug/L
67-64-1	Acetone	31.8	5.00	0.193	ug/L
71-43-2	Benzene	44.4	1.00	0.111	ug/L
108-86-1	Bromobenzene	42.1	1.00	0.145	ug/L
74-97-5	Bromochloromethane	47.0	1.00	0.127	ug/L
75-27-4	Bromodichloromethane	46.6	1.00	0.083	ug/L
75-25-2	Bromoform	49.3	1.00	0.215	ug/L
74-83-9	Bromomethane	46.3	1.00	0.427	ug/L
75-15-0	Carbon disulfide	44.3	1.00	0.190	ug/L
56-23-5	Carbon tetrachloride	49.4	1.00	0.248	ug/L
108-90-7	Chlorobenzene	43.3	1.00	0.083	ug/L
75-00-3	Chloroethane	45.1	1.00	0.235	ug/L
67-66-3	Chloroform	45.4	1.00	0.155	ug/L
74-87-3	Chloromethane	44.5	1.00	0.144	ug/L
74-95-3	Dibromomethane	46.5	1.00	0.211	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211081705	**M114MW003-MSD**	Water	11/07/2012 14:01	11/08/2012 10:30

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/10/2012 14:00	LBH	494340

CAS#	Parameter	Result	RDL	MDL	Units
75-71-8	**Dichlorodifluoromethane**	**42.8**	**1.00**	**0.145**	**ug/L**
100-41-4	**Ethylbenzene**	**44.1**	**1.00**	**0.109**	**ug/L**
87-68-3	**Hexachlorobutadiene**	**43.9**	**1.00**	**0.265**	**ug/L**
98-82-8	**Isopropylbenzene (Cumene)**	**44.7**	**1.00**	**0.130**	**ug/L**
75-09-2	**Methylene chloride**	**44.6**	**5.00**	**0.149**	**ug/L**
91-20-3	**Naphthalene**	**43.0**	**1.00**	**0.176**	**ug/L**
100-42-5	**Styrene**	**44.7**	**1.00**	**0.089**	**ug/L**
127-18-4	**Tetrachloroethene**	**45.3**	**1.00**	**0.193**	**ug/L**
108-88-3	**Toluene**	**44.1**	**1.00**	**0.122**	**ug/L**
79-01-6	**Trichloroethene**	**44.9**	**1.00**	**0.161**	**ug/L**
75-69-4	**Trichlorofluoromethane**	**41.7**	**1.00**	**0.157**	**ug/L**
75-01-4	**Vinyl chloride**	**45.7**	**1.00**	**0.127**	**ug/L**
156-59-2	**cis-1,2-Dichloroethene**	**45.8**	**1.00**	**0.103**	**ug/L**
10061-01-5	**cis-1,3-Dichloropropene**	**47.2**	**1.00**	**0.124**	**ug/L**
136777-61-2	**m,p-Xylene**	**90.1**	**2.00**	**0.123**	**ug/L**
104-51-8	**n-Butylbenzene**	**41.3**	**1.00**	**0.123**	**ug/L**
103-65-1	**n-Propylbenzene**	**42.8**	**1.00**	**0.727**	**ug/L**
95-47-6	**o-Xylene**	**45.8**	**1.00**	**0.055**	**ug/L**
135-98-8	**sec-Butylbenzene**	**41.9**	**1.00**	**0.107**	**ug/L**
1634-04-4	**tert-Butyl methyl ether (MTBE)**	**48.1**	**5.00**	**0.078**	**ug/L**
98-06-6	**tert-Butylbenzene**	**42.8**	**1.00**	**0.087**	**ug/L**
156-60-5	**trans-1,2-Dichloroethene**	**45.4**	**1.00**	**0.077**	**ug/L**
10061-02-6	**trans-1,3-Dichloropropene**	**47.8**	**1.00**	**0.128**	**ug/L**

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	53.6	ug/L	107	75 - 120
1868-53-7	Dibromofluoromethane	50	51.2	ug/L	102	85 - 115
2037-26-5	Toluene d8	50	49.4	ug/L	99	85 - 120
17060-07-0	1,2-Dichloroethane-d4	50	49.6	ug/L	99	70 - 120

SW-846 8330A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/13/2012 04:30	494270	SW-846 8330A	1	11/15/2012 16:41	JWM	494679

CAS#	Parameter	Result	RDL	MDL	Units
99-35-4	**1,3,5-Trinitrobenzene**	**1.62**	**0.500**	**0.240**	**ug/L**
99-65-0	**1,3-Dinitrobenzene**	**2.16**	**0.500**	**0.167**	**ug/L**
118-96-7	**2,4,6-Trinitrotoluene**	**1.40**	**1.00**	**0.483**	**ug/L**
121-14-2	**2,4-Dinitrotoluene**	**2.03**	**1.00**	**0.501**	**ug/L**
606-20-2	**2,6-Dinitrotoluene**	**1.84**	**1.00**	**0.283**	**ug/L**
355-72-78-2	**2-Amino-4,6-dinitrotoluene**	**1.69**	**1.00**	**0.576**	**ug/L**
88-72-2	**2-Nitrotoluene**	**1.73**	**0.500**	**0.120**	**ug/L**
99-08-1	**3-Nitrotoluene**	**1.69**	**1.00**	**0.369**	**ug/L**
1946-51-0	**4-Amino-2,6-dinitrotoluene**	**1.49**	**1.00**	**0.489**	**ug/L**
99-99-0	**4-Nitrotoluene**	**2.20**	**1.00**	**0.417**	**ug/L**
2691-41-0	**HMX**	**1.90**	**0.500**	**0.212**	**ug/L**
98-95-3	**Nitrobenzene**	**1.69**	**0.500**	**0.267**	**ug/L**
121-82-4	**RDX**	**1.77**	**0.500**	**0.189**	**ug/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211081705	**M114MW003-MSD**	Water	11/07/2012 14:01	11/08/2012 10:30

SW-846 8330A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/13/2012 04:30	494270	SW-846 8330A	1	11/15/2012 16:41	JWM	494679

CAS#	Parameter	Result	RDL	MDL	Units
479-45-8	**Tetryl**	**0.560**	**0.500**	**0.241**	**ug/L**

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
528-29-0	1,2-Dinitrobenzene	2	1.72	ug/L	86	70 - 130

SW-846 7470A Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 15:35	494179	SW-846 7470A Dissolved	1	11/10/2012 13:04	CLB	494344

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	**Mercury**	**2.81**	**0.20**	**0.068**	**ug/L**

SW-846 7470A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 15:35	494179	SW-846 7470A	1	11/10/2012 15:36	CLB	494344

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	**Mercury**	**2.21**	**0.20**	**0.068**	**ug/L**

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 15:35	494178	SW-846 3010A	1	11/11/2012 14:30	BNB	494383

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	**Aluminum**	**8920**	**200**	**60.0**	**ug/L**
7440-36-0	**Antimony**	**545**	**60.0**	**3.11**	**ug/L**
7440-39-3	**Barium**	**541**	**10.0**	**0.71**	**ug/L**
7440-41-7	**Beryllium**	**497**	**5.00**	**0.10**	**ug/L**
7440-43-9	**Cadmium**	**492**	**5.00**	**0.20**	**ug/L**
7440-48-4	**Cobalt**	**488**	**10.0**	**1.00**	**ug/L**
7440-50-8	**Copper**	**551**	**10.0**	**1.01**	**ug/L**
7439-89-6	**Iron**	**7090**	**100**	**40.0**	**ug/L**
7439-92-1	**Lead**	**488**	**15.0**	**1.96**	**ug/L**
7439-95-4	**Magnesium**	**272000**	**100**	**50.0**	**ug/L**
7439-96-5	**Manganese**	**549**	**15.0**	**2.00**	**ug/L**
7439-98-7	**Molybdenum**	**526**	**50.0**	**3.75**	**ug/L**
7440-02-0	**Nickel**	**520**	**40.0**	**1.13**	**ug/L**
7440-09-7	**Potassium**	**32000**	**500**	**100**	**ug/L**
7782-49-2	**Selenium**	**599**	**40.0**	**4.42**	**ug/L**
7440-22-4	**Silver**	**543**	**10.0**	**0.70**	**ug/L**
7440-28-0	**Thallium**	**490**	**20.0**	**3.04**	**ug/L**
7440-32-6	**Titanium**	**534**	**100**	**1.20**	**ug/L**
7440-62-2	**Vanadium**	**535**	**20.0**	**3.75**	**ug/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211081705	**M114MW003-MSD**	Water	11/07/2012 14:01	11/08/2012 10:30

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 15:35	494178	SW-846 3010A	1	11/11/2012 14:30	BNB	494383

CAS#	Parameter	Result	RDL	MDL	Units
7440-66-6	Zinc	569	20.0	4.51	ug/L

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 15:35	494178	SW-846 3010A	10	11/13/2012 15:11	BNB	494546

CAS#	Parameter	Result	RDL	MDL	Units
7440-23-5	Sodium	2700000	10000	2000	ug/L

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 15:35	494178	SW-846 3010A	1	11/13/2012 15:46	BNB	494546

CAS#	Parameter	Result	RDL	MDL	Units
7440-38-2	Arsenic	561	10.0	3.59	ug/L
7440-70-2	Calcium	339000	100	50.0	ug/L
7440-47-3	Chromium	509	10.0	1.00	ug/L

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 15:35	494177	SW-846 3005 Dissolved	1	11/13/2012 17:51	BNB	494546

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	4680	200	60.0	ug/L
7440-36-0	Antimony	494	60.0	3.11	ug/L
7440-38-2	Arsenic	489	10.0	3.59	ug/L
7440-39-3	Barium	456	10.0	0.71	ug/L
7440-41-7	Beryllium	448	5.00	0.10	ug/L
7440-43-9	Cadmium	412	5.00	0.20	ug/L
7440-70-2	Calcium	329000	100	50.0	ug/L
7440-47-3	Chromium	438	10.0	1.00	ug/L
7440-48-4	Cobalt	437	10.0	1.00	ug/L
7440-50-8	Copper	516	10.0	1.01	ug/L
7439-89-6	Iron	4350	100	40.0	ug/L
7439-95-4	Magnesium	252000	100	50.0	ug/L
7439-96-5	Manganese	440	15.0	2.00	ug/L
7439-98-7	Molybdenum	485	50.0	3.75	ug/L
7440-02-0	Nickel	440	40.0	1.13	ug/L
7440-09-7	Potassium	29800	500	100	ug/L
7782-49-2	Selenium	509	40.0	4.42	ug/L
7440-22-4	Silver	503	10.0	0.70	ug/L
7440-28-0	Thallium	419	20.0	3.04	ug/L
7440-32-6	Titanium	458	100	1.20	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211081705	**M114MW003-MSD**	Water	11/07/2012 14:01	11/08/2012 10:30

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 15:35	494177	SW-846 3005 Dissolved	1	11/13/2012 17:51	BNB	494546

CAS#	Parameter	Result	RDL	MDL	Units
7440-62-2	**Vanadium**	**496**	**20.0**	**3.75**	**ug/L**
7440-66-6	**Zinc**	**485**	**20.0**	**4.51**	**ug/L**

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 15:35	494177	SW-846 3005 Dissolved	10	11/14/2012 14:32	BNB	494810

CAS#	Parameter	Result	RDL	MDL	Units
7440-23-5	**Sodium**	**2480000**	**10000**	**2000**	**ug/L**

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/08/2012 15:35	494177	SW-846 3005 Dissolved	1	11/14/2012 15:07	BNB	494810

CAS#	Parameter	Result	RDL	MDL	Units
7439-92-1	**Lead**	**457**	**15.0**	**1.96**	**ug/L**

EPA 353.2 Nitrite

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/08/2012 16:00	AEL	494207

CAS#	Parameter	Result	RDL	MDL	Units
14797-65-0	**Nitrite**	**0.476**	**0.010**	**0.002**	**mg/L-N**

EPA 353.2 Nitrate

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			2	11/08/2012 16:29	AEL	494206

CAS#	Parameter	Result	RDL	MDL	Units
14797-55-8	**Nitrate**	**1.90**	**0.020**	**0.010**	**mg/L-N**

EPA 300.0

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			5000	11/14/2012 13:28	AEL	494605

CAS#	Parameter	Result	RDL	MDL	Units
16887-00-6	**Chloride**	**17600**	**500**	**315**	**mg/L**
14808-79-8	**Sulfate**	**28200**	**1000**	**575**	**mg/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211081705	**M114MW003-MSD**	Water	11/07/2012 14:01	11/08/2012 10:30

SW-846 7196A Chromium VI

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/08/2012 11:45	JEM	494173

CAS#	Parameter	Result	RDL	MDL	Units
18540-29-9	**Chromium VI**	**476**	**10.0**	**4.00**	**ug/L**

SW-846 9012A Cyanide

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/10/2012 06:00	494328	SW-846 9012A	1	11/12/2012 16:02	AEL	494463

CAS#	Parameter	Result	RDL	MDL	Units
57-12-5	**Total Cyanide**	**0.040**	**0.0050**	**0.0012**	**mg/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211081706	**TB-04**	Water	11/07/2012 10:30	11/08/2012 10:30

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/10/2012 12:58	LBH	494340

CAS#	Parameter	Result	RDL	MDL	Units
630-20-6	1,1,1,2-Tetrachloroethane	0.120U	1.00	0.120	ug/L
71-55-6	1,1,1-Trichloroethane	0.123U	1.00	0.123	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.109U	1.00	0.109	ug/L
79-00-5	1,1,2-Trichloroethane	0.159U	1.00	0.159	ug/L
75-34-3	1,1-Dichloroethane	0.171U	1.00	0.171	ug/L
75-35-4	1,1-Dichloroethene	0.208U	1.00	0.208	ug/L
563-58-6	1,1-Dichloropropene	0.052U	1.00	0.052	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.079U	1.00	0.079	ug/L
96-18-4	1,2,3-Trichloropropane	0.065U	1.00	0.065	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.105U	1.00	0.105	ug/L
95-63-6	1,2,4-Trimethylbenzene	0.084U	1.00	0.084	ug/L
96-12-8	1,2-Dibromo-3-chloropropane	0.194U	1.00	0.194	ug/L
106-93-4	1,2-Dibromoethane	0.102U	1.00	0.102	ug/L
95-50-1	1,2-Dichlorobenzene	0.135U	1.00	0.135	ug/L
107-06-2	1,2-Dichloroethane	0.116U	1.00	0.116	ug/L
78-87-5	1,2-Dichloropropane	0.150U	1.00	0.150	ug/L
108-67-8	1,3,5-Trimethylbenzene	0.066U	1.00	0.066	ug/L
541-73-1	1,3-Dichlorobenzene	0.138U	1.00	0.138	ug/L
142-28-9	1,3-Dichloropropane	0.059U	1.00	0.059	ug/L
106-46-7	1,4-Dichlorobenzene	0.083U	1.00	0.083	ug/L
594-20-7	2,2-Dichloropropane	0.170U	1.00	0.170	ug/L
78-93-3	2-Butanone	0.142U	5.00	0.142	ug/L
95-49-8	2-Chlorotoluene	0.080U	1.00	0.080	ug/L
591-78-6	2-Hexanone	0.122U	5.00	0.122	ug/L
106-43-4	4-Chlorotoluene	0.124U	1.00	0.124	ug/L
99-87-6	4-Isopropyltoluene	0.070U	1.00	0.070	ug/L
108-10-1	4-Methyl-2-pentanone	0.120U	5.00	0.120	ug/L
67-64-1	Acetone	0.193U	5.00	0.193	ug/L
71-43-2	Benzene	0.111U	1.00	0.111	ug/L
108-86-1	Bromobenzene	0.145U	1.00	0.145	ug/L
74-97-5	Bromochloromethane	0.127U	1.00	0.127	ug/L
75-27-4	Bromodichloromethane	0.083U	1.00	0.083	ug/L
75-25-2	Bromoform	0.215U	1.00	0.215	ug/L
74-83-9	Bromomethane	0.427U	1.00	0.427	ug/L
75-15-0	Carbon disulfide	0.190U	1.00	0.190	ug/L
56-23-5	Carbon tetrachloride	0.248U	1.00	0.248	ug/L
108-90-7	Chlorobenzene	0.083U	1.00	0.083	ug/L
75-00-3	Chloroethane	0.235U	1.00	0.235	ug/L
67-66-3	Chloroform	0.155U	1.00	0.155	ug/L
74-87-3	Chloromethane	0.144U	1.00	0.144	ug/L
74-95-3	Dibromomethane	0.211U	1.00	0.211	ug/L
75-71-8	Dichlorodifluoromethane	0.145U	1.00	0.145	ug/L
100-41-4	Ethylbenzene	0.109U	1.00	0.109	ug/L
87-68-3	Hexachlorobutadiene	0.265U	1.00	0.265	ug/L
98-82-8	Isopropylbenzene (Cumene)	0.130U	1.00	0.130	ug/L
75-09-2	Methylene chloride	0.149U	5.00	0.149	ug/L
91-20-3	Naphthalene	0.176U	1.00	0.176	ug/L
100-42-5	Styrene	0.089U	1.00	0.089	ug/L
127-18-4	Tetrachloroethene	0.193U	1.00	0.193	ug/L
108-88-3	Toluene	0.122U	1.00	0.122	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211081706	**TB-04**	Water	11/07/2012 10:30	11/08/2012 10:30

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/10/2012 12:58	LBH	494340

CAS#	Parameter	Result	RDL	MDL	Units
79-01-6	Trichloroethene	0.161U	1.00	0.161	ug/L
75-69-4	Trichlorofluoromethane	0.157U	1.00	0.157	ug/L
75-01-4	Vinyl chloride	0.127U	1.00	0.127	ug/L
156-59-2	cis-1,2-Dichloroethene	0.103U	1.00	0.103	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.124U	1.00	0.124	ug/L
136777-61-2	m,p-Xylene	0.123U	2.00	0.123	ug/L
104-51-8	n-Butylbenzene	0.123U	1.00	0.123	ug/L
103-65-1	n-Propylbenzene	0.727U	1.00	0.727	ug/L
95-47-6	o-Xylene	0.055U	1.00	0.055	ug/L
135-98-8	sec-Butylbenzene	0.107U	1.00	0.107	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.078U	5.00	0.078	ug/L
98-06-6	tert-Butylbenzene	0.087U	1.00	0.087	ug/L
156-60-5	trans-1,2-Dichloroethene	0.077U	1.00	0.077	ug/L
10061-02-6	trans-1,3-Dichloropropene	0.128U	1.00	0.128	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	51.5	ug/L	103	75 - 120
1868-53-7	Dibromofluoromethane	50	50.3	ug/L	101	85 - 115
2037-26-5	Toluene d8	50	49.8	ug/L	100	85 - 120
17060-07-0	1,2-Dichloroethane-d4	50	51.8	ug/L	104	70 - 120

GC/MS Volatiles Quality Control Summary

Analytical Batch 494340		**Client ID**	MB494340			LCS494340			LCSD494340		
Prep Batch N/A		**GCAL ID**	1127274			1127275			1127276		
		Sample Type	Method Blank			LCS			LCSD		
		Analytical Date	11/10/2012 09:31			11/10/2012 08:10			11/10/2012 08:32		
		Matrix	Water			Water			Water		
SW-846 8260B		**Units**	**Result**	ug/L **RDL**	**Spike Added**	**Result**	**% R**	**Control Limits % R**	**Result**	**% R**	**RPD**	**RPD Limit**
67-64-1	Acetone		0.193U	0.193	50.0	43.1	86	40 - 140	40.4	81	6	30
74-97-5	Bromochloromethane		0.127U	0.127	50.0	52.7	105	65 - 130	50.2	100	5	30
75-27-4	Bromodichloromethane		0.083U	0.083	50.0	51.8	104	75 - 120	49.3	99	5	30
75-25-2	Bromoform		0.215U	0.215	50.0	51.3	103	70 - 130	49.6	99	3	30
74-83-9	Bromomethane		0.427U	0.427	50.0	52.6	105	30 - 145	51.0	102	3	30
75-15-0	Carbon disulfide		0.190U	0.190	50.0	51.1	102	35 - 160	51.5	103	0.8	30
56-23-5	Carbon tetrachloride		0.248U	0.248	50.0	57.2	114	65 - 140	56.5	113	1	30
75-00-3	Chloroethane		0.235U	0.235	50.0	49.6	99	60 - 135	48.4	97	2	30
136777-61-2	m,p-Xylene		0.123U	0.123	100	103	103	75 - 130	102	102	1	30
67-66-3	Chloroform		0.155U	0.155	50.0	50.6	101	65 - 135	49.8	100	2	30
74-87-3	Chloromethane		0.144U	0.144	50.0	49.7	99	40 - 125	47.5	95	5	30
74-95-3	Dibromomethane		0.211U	0.211	50.0	49.6	99	75 - 125	49.4	99	0.4	30
75-71-8	Dichlorodifluoromethane		0.145U	0.145	50.0	51.6	103	30 - 155	50.9	102	1	30
75-34-3	1,1-Dichloroethane		0.171U	0.171	50.0	50.5	101	70 - 135	49.2	98	3	30
107-06-2	1,2-Dichloroethane		0.116U	0.116	50.0	49.2	98	70 - 130	47.7	95	3	30
156-59-2	cis-1,2-Dichloroethene		0.103U	0.103	50.0	51.6	103	70 - 125	50.1	100	3	30
156-60-5	trans-1,2-Dichloroethene		0.077U	0.077	50.0	52.1	104	60 - 140	51.6	103	1	30
75-09-2	Methylene chloride		0.149U	0.149	50.0	49.7	99	55 - 140	48.2	96	3	30
78-87-5	1,2-Dichloropropane		0.150U	0.150	50.0	50.8	102	75 - 125	48.6	97	4	30
10061-01-5	cis-1,3-Dichloropropene		0.124U	0.124	50.0	53.1	106	70 - 130	51.7	103	3	30
10061-02-6	trans-1,3-Dichloropropene		0.128U	0.128	50.0	52.8	106	55 - 140	50.7	101	4	30
100-41-4	Ethylbenzene		0.109U	0.109	50.0	50.7	101	75 - 125	49.9	100	2	30
591-78-6	2-Hexanone		0.122U	0.122	50.0	50.1	100	55 - 130	48.2	96	4	30
98-82-8	Isopropylbenzene (Cumene)		0.130U	0.130	50.0	52.2	104	75 - 125	52.3	105	0.2	30
78-93-3	2-Butanone		0.142U	0.142	50.0	44.7	89	30 - 150	47.6	95	6	30
108-10-1	4-Methyl-2-pentanone		0.120U	0.120	50.0	50.9	102	60 - 135	50.5	101	0.8	30
103-65-1	n-Propylbenzene		0.727U	0.727	50.0	50.2	100	70 - 130	50.6	101	0.8	30
100-42-5	Styrene		0.089U	0.089	50.0	52.3	105	65 - 135	50.3	101	4	30
127-18-4	Tetrachloroethene		0.193U	0.193	50.0	54.1	108	45 - 150	53.2	106	2	30
630-20-6	1,1,1,2-Tetrachloroethane		0.120U	0.120	50.0	52.6	105	80 - 130	50.3	101	4	30
79-34-5	1,1,2,2-Tetrachloroethane		0.109U	0.109	50.0	48.7	97	65 - 130	46.7	93	4	30
120-82-1	1,2,4-Trichlorobenzene		0.105U	0.105	50.0	51.8	104	65 - 135	54.3	109	5	30
71-55-6	1,1,1-Trichloroethane		0.123U	0.123	50.0	51.0	102	65 - 130	50.1	100	2	30

GC/MS Volatiles Quality Control Summary

Analytical Batch 494340		**Client ID**	MB494340			LCS494340			LCSD494340		
Prep Batch N/A		**GCAL ID**	1127274			1127275			1127276		
		Sample Type	Method Blank			LCS			LCSD		
		Analytical Date	11/10/2012 09:31			11/10/2012 08:10			11/10/2012 08:32		
		Matrix	Water			Water			Water		
SW-846 8260B		**Units**	ug/L								
		Result	**RDL**	**Spike Added**	**Result**	**% R**	**Control Limits % R**	**Result**	**% R**	**RPD**	**RPD Limit**
79-00-5	1,1,2-Trichloroethane	0.159U	0.159	50.0	48.0	96	75 - 125	46.6	93	3	30
75-69-4	Trichlorofluoromethane	0.157U	0.157	50.0	52.8	106	60 - 145	54.5	109	3	30
96-18-4	1,2,3-Trichloropropane	0.065U	0.065	50.0	46.2	92	75 - 125	44.9	90	3	30
95-63-6	1,2,4-Trimethylbenzene	0.084U	0.084	50.0	50.7	101	75 - 130	50.5	101	0.4	30
108-67-8	1,3,5-Trimethylbenzene	0.066U	0.066	50.0	51.0	102	75 - 130	51.1	102	0.2	30
75-01-4	Vinyl chloride	0.127U	0.127	50.0	52.5	105	50 - 145	51.9	104	1	30
95-47-6	o-Xylene	0.055U	0.055	50.0	52.9	106	80 - 120	51.2	102	3	30
96-12-8	1,2-Dibromo-3-chloropropane	0.194U	0.194	50.0	50.4	101	50 - 130	48.8	98	3	30
106-93-4	1,2-Dibromoethane	0.102U	0.102	50.0	50.4	101	80 - 120	48.7	97	3	30
1634-04-4	tert-Butyl methyl ether (MTBE)	0.078U	0.078	50.0	50.2	100	65 - 125	48.9	98	3	30
99-87-6	4-Isopropyltoluene	0.070U	0.070	50.0	50.1	100	75 - 130	51.4	103	3	30
594-20-7	2,2-Dichloropropane	0.170U	0.170	50.0	54.2	108	70 - 135	53.9	108	0.6	30
563-58-6	1,1-Dichloropropene	0.052U	0.052	50.0	52.9	106	75 - 130	52.5	105	0.8	30
142-28-9	1,3-Dichloropropane	0.059U	0.059	50.0	49.5	99	75 - 125	46.7	93	6	30
108-86-1	Bromobenzene	0.145U	0.145	50.0	47.2	94	75 - 125	45.7	91	3	30
95-49-8	2-Chlorotoluene	0.080U	0.080	50.0	49.4	99	75 - 125	49.6	99	0.4	30
106-43-4	4-Chlorotoluene	0.124U	0.124	50.0	50.5	101	75 - 130	48.6	97	4	30
98-06-6	tert-Butylbenzene	0.087U	0.087	50.0	50.0	100	70 - 130	51.4	103	3	30
135-98-8	sec-Butylbenzene	0.107U	0.107	50.0	49.7	99	70 - 125	51.0	102	3	30
541-73-1	1,3-Dichlorobenzene	0.138U	0.138	50.0	49.0	98	75 - 125	48.8	98	0.4	30
106-46-7	1,4-Dichlorobenzene	0.083U	0.083	50.0	49.1	98	75 - 125	48.5	97	1	30
104-51-8	n-Butylbenzene	0.123U	0.123	50.0	49.9	100	70 - 135	51.6	103	3	30
95-50-1	1,2-Dichlorobenzene	0.135U	0.135	50.0	48.5	97	70 - 120	47.5	95	2	30
87-68-3	Hexachlorobutadiene	0.265U	0.265	50.0	51.0	102	50 - 140	54.7	109	7	30
91-20-3	Naphthalene	0.176U	0.176	50.0	47.8	96	55 - 140	48.7	97	2	30
87-61-6	1,2,3-Trichlorobenzene	0.079U	0.079	50.0	50.9	102	55 - 140	53.3	107	5	30
75-35-4	1,1-Dichloroethene	0.208U	0.208	50.0	51.3	103	70 - 130	50.0	100	3	30
71-43-2	Benzene	0.111U	0.111	50.0	50.6	101	80 - 120	49.3	99	3	30
79-01-6	Trichloroethene	0.161U	0.161	50.0	52.0	104	70 - 125	51.1	102	2	30
108-88-3	Toluene	0.122U	0.122	50.0	50.6	101	75 - 120	48.5	97	4	30
108-90-7	Chlorobenzene	0.083U	0.083	50.0	49.4	99	80 - 120	47.8	96	3	30
Surrogate											
460-00-4	4-Bromofluorobenzene	52.4	105	50	52.9	106	75 - 120	54	108		

GC/MS Volatiles Quality Control Summary

Analytical Batch 494340		**Client ID**	MB494340			LCS494340			LCSD494340		
Prep Batch N/A		**GCAL ID**	1127274			1127275			1127276		
		Sample Type	Method Blank			LCS			LCSD		
		Analytical Date	11/10/2012 09:31			11/10/2012 08:10			11/10/2012 08:32		
		Matrix	Water			Water			Water		
SW-846 8260B		**Units**	**Result**	ug/L **RDL**	**Spike Added**	**Result**	**% R**	**Control Limits % R**	**Result**	**% R**	**RPD**	**RPD Limit**
1868-53-7	Dibromofluoromethane		50.3	101	50	50.7	101	85 - 115	50.6	101		
2037-26-5	Toluene d8		50	100	50	49.7	99	85 - 120	49.5	99		
17060-07-0	1,2-Dichloroethane-d4		50	100	50	50	100	70 - 120	50.5	101		

Analytical Batch 494340		**Client ID**	M114MW003			M114MW003-MS			M114MW003-MSD		
Prep Batch N/A		**GCAL ID**	21211081703			21211081704			21211081705		
		Sample Type	SAMPLE			MS			MSD		
		Analytical Date	11/10/2012 11:56			11/10/2012 13:40			11/10/2012 14:00		
		Matrix	Water			Water			Water		
SW-846 8260B		**Units**	**Result**	ug/L **RDL**	**Spike Added**	**Result**	**% R**	**Control Limits % R**	**Result**	**% R**	**RPD**	**RPD Limit**
630-20-6	1,1,1,2-Tetrachloroethane		0.00	0.120	50.0	46.3	93	80 - 130	45.2	90	2	30
71-55-6	1,1,1-Trichloroethane		0.00	0.123	50.0	46.7	93	65 - 130	44.1	88	6	30
79-34-5	1,1,2,2-Tetrachloroethane		0.00	0.109	50.0	48.4	97	65 - 130	47.1	94	3	30
79-00-5	1,1,2-Trichloroethane		0.00	0.159	50.0	46.3	93	75 - 125	45.7	91	1	30
75-34-3	1,1-Dichloroethane		0.00	0.171	50.0	47.6	95	70 - 135	44.9	90	6	30
75-35-4	1,1-Dichloroethene		0.00	0.208	50.0	46.0	92	70 - 130	43.8	88	5	30
563-58-6	1,1-Dichloropropene		0.00	0.052	50.0	48.9	98	75 - 130	45.4	91	7	30
87-61-6	1,2,3-Trichlorobenzene		0.00	0.079	50.0	43.7	87	55 - 140	45.0	90	3	30
96-18-4	1,2,3-Trichloropropane		0.00	0.065	50.0	46.1	92	75 - 125	43.7	87	5	30
120-82-1	1,2,4-Trichlorobenzene		0.00	0.105	50.0	43.8	88	65 - 135	44.6	89	2	30
95-63-6	1,2,4-Trimethylbenzene		0.00	0.084	50.0	44.8	90	75 - 130	43.6	87	3	30
96-12-8	1,2-Dibromo-3-chloropropane		0.00	0.194	50.0	48.2	96	50 - 130	49.4	99	2	30
106-93-4	1,2-Dibromoethane		0.00	0.102	50.0	46.8	94	80 - 120	46.5	93	0.6	30
95-50-1	1,2-Dichlorobenzene		0.00	0.135	50.0	43.5	87	70 - 120	42.3	85	3	30
107-06-2	1,2-Dichloroethane		0.00	0.116	50.0	48.1	96	70 - 130	45.9	92	5	30
78-87-5	1,2-Dichloropropane		0.00	0.150	50.0	48.2	96	75 - 125	46.0	92	5	30
108-67-8	1,3,5-Trimethylbenzene		0.00	0.066	50.0	45.0	90	75 - 130	43.4	87	4	30
541-73-1	1,3-Dichlorobenzene		0.00	0.138	50.0	44.2	88	65 - 130	43.1	86	3	30
142-28-9	1,3-Dichloropropane		0.00	0.059	50.0	45.6	91	75 - 125	45.7	91	0.2	30
106-46-7	1,4-Dichlorobenzene		0.00	0.083	50.0	43.3	87	65 - 130	43.0	86	0.7	30
594-20-7	2,2-Dichloropropane		0.00	0.170	50.0	50.0	100	70 - 135	47.5	95	5	30

GC/MS Volatiles Quality Control Summary

Analytical Batch 494340		**Client ID**	M114MW003			M114MW003-MS			M114MW003-MSD		
Prep Batch N/A		**GCAL ID**	21211081703			21211081704			21211081705		
		Sample Type	SAMPLE			MS			MSD		
		Analytical Date	11/10/2012 11:56			11/10/2012 13:40			11/10/2012 14:00		
		Matrix	Water			Water			Water		
SW-846 8260B		**Units**	**Result**	ug/L **RDL**	**Spike Added**	**Result**	**% R**	**Control Limits % R**	**Result**	**% R**	**RPD**	**RPD Limit**
78-93-3	2-Butanone		0.00	0.142	50.0	41.8	84	30 - 150	40.7	81	3	30
95-49-8	2-Chlorotoluene		0.00	0.080	50.0	44.9	90	75 - 125	43.5	87	3	30
591-78-6	2-Hexanone		0.00	0.122	50.0	48.2	96	55 - 130	46.6	93	3	30
106-43-4	4-Chlorotoluene		0.00	0.124	50.0	44.7	89	75 - 130	42.7	85	5	30
99-87-6	4-Isopropyltoluene		0.00	0.070	50.0	43.2	86	75 - 130	42.5	85	2	30
108-10-1	4-Methyl-2-pentanone		0.00	0.120	50.0	54.4	109	60 - 135	51.6	103	5	30
67-64-1	Acetone		0.00	0.193	50.0	33.7	67	40 - 140	31.8	64	6	30
71-43-2	Benzene		0.00	0.111	50.0	47.0	94	80 - 120	44.4	89	6	30
108-86-1	Bromobenzene		0.00	0.145	50.0	43.7	87	75 - 125	42.1	84	4	30
74-97-5	Bromochloromethane		0.00	0.127	50.0	50.0	100	65 - 130	47.0	94	6	30
75-27-4	Bromodichloromethane		0.00	0.083	50.0	49.2	98	75 - 120	46.6	93	5	30
75-25-2	Bromoform		0.00	0.215	50.0	49.2	98	70 - 130	49.3	99	0.2	30
74-83-9	Bromomethane		0.00	0.427	50.0	47.6	95	30 - 145	46.3	93	3	30
75-15-0	Carbon disulfide		0.00	0.190	50.0	45.3	91	35 - 160	44.3	89	2	30
56-23-5	Carbon tetrachloride		0.00	0.248	50.0	51.5	103	65 - 140	49.4	99	4	30
108-90-7	Chlorobenzene		0.00	0.083	50.0	44.4	89	80 - 120	43.3	87	3	30
75-00-3	Chloroethane		0.00	0.235	50.0	47.7	95	60 - 135	45.1	90	6	30
67-66-3	Chloroform		0.00	0.155	50.0	48.2	96	65 - 135	45.4	91	6	30
74-87-3	Chloromethane		0.00	0.144	50.0	45.3	91	40 - 125	44.5	89	2	30
74-95-3	Dibromomethane		0.00	0.211	50.0	49.3	99	75 - 125	46.5	93	6	30
75-71-8	Dichlorodifluoromethane		0.00	0.145	50.0	46.2	92	30 - 155	42.8	86	8	30
100-41-4	Ethylbenzene		0.00	0.109	50.0	44.5	89	75 - 125	44.1	88	0.9	30
87-68-3	Hexachlorobutadiene		0.00	0.265	50.0	41.7	83	50 - 140	43.9	88	5	30
98-82-8	Isopropylbenzene (Cumene)		0.00	0.130	50.0	45.0	90	75 - 125	44.7	89	0.7	30
75-09-2	Methylene chloride		0.00	0.149	50.0	46.5	93	55 - 140	44.6	89	4	30
91-20-3	Naphthalene		0.00	0.176	50.0	41.7	83	55 - 140	43.0	86	3	30
100-42-5	Styrene		0.00	0.089	50.0	45.4	91	65 - 135	44.7	89	2	30
127-18-4	Tetrachloroethene		0.00	0.193	50.0	47.0	94	45 - 150	45.3	91	4	30
108-88-3	Toluene		0.00	0.122	50.0	44.9	90	75 - 120	44.1	88	2	30
79-01-6	Trichloroethene		0.00	0.161	50.0	46.7	93	70 - 125	44.9	90	4	30
75-69-4	Trichlorofluoromethane		0.00	0.157	50.0	44.8	90	60 - 145	41.7	83	7	30
75-01-4	Vinyl chloride		0.00	0.127	50.0	48.1	96	50 - 145	45.7	91	5	30
156-59-2	cis-1,2-Dichloroethene		0.00	0.103	50.0	48.4	97	70 - 125	45.8	92	6	30

GC/MS Volatiles Quality Control Summary

Analytical Batch	494340	**Client ID**	M114MW003		M114MW003-MS			M114MW003-MSD			
Prep Batch	N/A	**GCAL ID**	21211081703		21211081704			21211081705			
		Sample Type	SAMPLE		MS			MSD			
		Analytical Date	11/10/2012 11:56		11/10/2012 13:40			11/10/2012 14:00			
		Matrix	Water		Water			Water			
SW-846 8260B		**Units**	ug/L								
		Result	**RDL**	**Spike Added**	**Result**	**% R**	**Control Limits % R**	**Result**	**% R**	**RPD**	**RPD Limit**
10061-01-5	cis-1,3-Dichloropropene	0.00	0.124	50.0	48.3	97	70 - 130	47.2	94	2	30
136777-61-2	m,p-Xylene	0.00	0.123	100	91.2	91	75 - 130	90.1	90	1	30
104-51-8	n-Butylbenzene	0.00	0.123	50.0	42.0	84	70 - 135	41.3	83	2	30
103-65-1	n-Propylbenzene	0.00	0.727	50.0	44.5	89	70 - 130	42.8	86	4	30
95-47-6	o-Xylene	0.00	0.055	50.0	46.3	93	80 - 120	45.8	92	1	30
135-98-8	sec-Butylbenzene	0.00	0.107	50.0	42.8	86	70 - 125	41.9	84	2	30
1634-04-4	tert-Butyl methyl ether (MTBE)	0.00	0.078	50.0	50.1	100	65 - 125	48.1	96	4	30
98-06-6	tert-Butylbenzene	0.00	0.087	50.0	44.0	88	70 - 130	42.8	86	3	30
156-60-5	trans-1,2-Dichloroethene	0.00	0.077	50.0	48.4	97	60 - 140	45.4	91	6	30
10061-02-6	trans-1,3-Dichloropropene	0.00	0.128	50.0	49.7	99	55 - 140	47.8	96	4	30
Surrogate											
460-00-4	4-Bromofluorobenzene	53.6	107	50	52.3	105	75 - 120	53.6	107		
1868-53-7	Dibromofluoromethane	50.9	102	50	50.9	102	85 - 115	51.2	102		
2037-26-5	Toluene d8	49.8	100	50	47.6	95	85 - 120	49.4	99		
17060-07-0	1,2-Dichloroethane-d4	51.2	102	50	51.7	103	70 - 120	49.6	99		

General Chromatography Quality Control Summary

Analytical Batch	494679	**Client ID**	MB494270	LCS494270	LCSD494270
Prep Batch	494270	**GCAL ID**	1126930	1126931	1126932
Prep Method	SW-846	**Sample Type**	Method Blank	LCS	LCSD
	8330A	**Prep Date**	11/13/2012 04:30	11/13/2012 04:30	11/13/2012 04:30
		Analytical Date	11/14/2012 22:05	11/15/2012 12:45	11/15/2012 13:19
		Matrix	Water	Water	Water

SW-846 8330A		**Units**	ug/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
2691-41-0	HMX	0.212U	0.212	2.00	1.63	82	80 - 115	1.81	91	10	30
121-82-4	RDX	0.189U	0.189	2.00	1.49	75	50 - 160	1.58	79	6	30
99-35-4	1,3,5-Trinitrobenzene	0.240U	0.240	2.00	1.29	65	65 - 140	1.53	77	17	30
99-65-0	1,3-Dinitrobenzene	0.167U	0.167	2.00	1.55	78	45 - 160	2.12	106	**31***	30
479-45-8	Tetryl	0.241U	0.241	2.00	0.816	41	20 - 175	0.619	31	27	30
98-95-3	Nitrobenzene	0.267U	0.267	2.00	1.53	77	50 - 140	1.64	82	7	30
118-96-7	2,4,6-Trinitrotoluene	0.483U	0.483	2.00	1.53	77	50 - 145	1.57	79	3	30
1946-51-0	4-Amino-2,6-dinitrotoluene	0.489U	0.489	2.00	1.41	71	55 - 155	1.88	94	29	30
355-72-78-2	2-Amino-4,6-dinitrotoluene	0.576U	0.576	2.00	1.58	79	50 - 155	1.69	85	7	30
121-14-2	2,4-Dinitrotoluene	0.501U	0.501	2.00	1.73	87	60 - 135	1.91	96	10	30
606-20-2	2,6-Dinitrotoluene	0.283U	0.283	2.00	1.50	75	60 - 135	1.58	79	5	30
88-72-2	2-Nitrotoluene	0.120U	0.120	2.00	1.41	71	45 - 135	1.82	91	25	30
99-08-1	3-Nitrotoluene	0.369U	0.369	2.00	1.50	75	50 - 130	1.46	73	3	30
99-99-0	4-Nitrotoluene	0.417U	0.417	2.00	1.54	77	50 - 130	1.96	98	24	30
Surrogate											
528-29-0	1,2-Dinitrobenzene	1.54	77	2	1.51	76	70 - 130	1.51	76		

Analytical Batch	494679	**Client ID**	M114MW003	M114MW003-MS	M114MW003-MSD
Prep Batch	494270	**GCAL ID**	21211081703	21211081704	21211081705
Prep Method	SW-846	**Sample Type**	SAMPLE	MS	MSD
	8330A	**Prep Date**	11/13/2012 04:30	11/13/2012 04:30	11/13/2012 04:30
		Analytical Date	11/15/2012 02:35	11/15/2012 03:09	11/15/2012 16:41
		Matrix	Water	Water	Water

SW-846 8330A		**Units**	ug/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
99-35-4	1,3,5-Trinitrobenzene	0.00	0.240	2.00	1.56	78	65 - 140	1.62	81	4	30
99-65-0	1,3-Dinitrobenzene	0.00	0.167	2.00	1.73	87	45 - 160	2.16	108	22	30
118-96-7	2,4,6-Trinitrotoluene	0.00	0.483	2.00	1.71	86	50 - 145	1.40	70	20	30
121-14-2	2,4-Dinitrotoluene	0.00	0.501	2.00	1.91	96	60 - 135	2.03	102	6	30
606-20-2	2,6-Dinitrotoluene	0.00	0.283	2.00	1.79	90	60 - 135	1.84	92	3	30
355-72-78-2	2-Amino-4,6-dinitrotoluene	0.00	0.576	2.00	1.79	90	50 - 155	1.69	85	6	30

General Chromatography Quality Control Summary

Analytical Batch	494679	**Client ID**	M114MW003	M114MW003-MS	M114MW003-MSD
Prep Batch	494270	**GCAL ID**	21211081703	21211081704	21211081705
Prep Method	SW-846	**Sample Type**	SAMPLE	MS	MSD
	8330A	**Prep Date**	11/13/2012 04:30	11/13/2012 04:30	11/13/2012 04:30
		Analytical Date	11/15/2012 02:35	11/15/2012 03:09	11/15/2012 16:41
		Matrix	Water	Water	Water

SW-846 8330A		**Units**	ug/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
88-72-2	2-Nitrotoluene	0.00	0.120	2.00	1.84	92	45 - 135	1.73	87	6	30
99-08-1	3-Nitrotoluene	0.00	0.369	2.00	1.82	91	50 - 130	1.69	85	7	30
1946-51-0	4-Amino-2,6-dinitrotoluene	0.00	0.489	2.00	1.48	74	55 - 155	1.49	75	0.7	30
99-99-0	4-Nitrotoluene	0.00	0.417	2.00	1.98	99	50 - 130	2.20	110	11	30
2691-41-0	HMX	0.00	0.212	2.00	1.80	90	80 - 115	1.90	95	5	30
98-95-3	Nitrobenzene	0.00	0.267	2.00	1.91	96	50 - 140	1.69	85	12	30
121-82-4	RDX	0.00	0.189	2.00	1.74	87	50 - 160	1.77	89	2	30
479-45-8	Tetryl	0.00	0.241	2.00	0.861	43	20 - 175	0.560	28	**42***	30
Surrogate											
528-29-0	1,2-Dinitrobenzene	1.54	77	2	1.5	75	70 - 130	1.72	86		

Inorganics Quality Control Summary

Analytical Batch	494344	**Client ID**	MB494179		LCS494179		
Prep Batch	494179	**GCAL ID**	1126391		1126392		
Prep Method	SW-846	**Sample Type**	Method Blank		LCS		
	7470A	**Prep Date**	11/08/2012 15:35		11/08/2012 15:35		
		Analytical Date	11/10/2012 12:45		11/10/2012 12:46		
		Matrix	Water		Water		
SW-846 7470A		**Units**	ug/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
7439-97-6	Mercury	0.068U	0.068	5.00	4.67	93	80 - 120

Analytical Batch	494344	**Client ID**	M114MW003		M114MW003-MS		
Prep Batch	494179	**GCAL ID**	21211081703		21211081704		
Prep Method	SW-846	**Sample Type**	SAMPLE		MS		
	7470A	**Prep Date**	11/08/2012 15:35		11/08/2012 15:35		
	Dissolved	**Analytical Date**	11/10/2012 12:48		11/10/2012 13:02		
		Matrix	Water		Water		
SW-846 7470A Dissolved		**Units**	ug/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
7439-97-6	Mercury	0.00000	0.068	5.00	2.45	**49***	80 - 120

Inorganics Quality Control Summary

Analytical Batch	494344	**Client ID**	MB494179		LCS494179		
Prep Batch	494179	**GCAL ID**	1126391		1126392		
Prep Method	SW-846	**Sample Type**	Method Blank		LCS		
	7470A	**Prep Date**	11/08/2012 15:35		11/08/2012 15:35		
		Analytical Date	11/10/2012 12:45		11/10/2012 12:46		
		Matrix	Water		Water		
SW-846 7470A		**Units**	ug/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
7439-97-6	Mercury	0.068U	0.068	5.00	4.67	93	80 - 120

Analytical Batch	494344	**Client ID**	M114MW003		M114MW003-MS		
Prep Batch	494179	**GCAL ID**	21211081703		21211081704		
Prep Method	SW-846	**Sample Type**	SAMPLE		MS		
	7470A	**Prep Date**	11/08/2012 15:35		11/08/2012 15:35		
		Analytical Date	11/10/2012 12:57		11/10/2012 15:34		
		Matrix	Water		Water		
SW-846 7470A		**Units**	ug/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
7439-97-6	Mercury	0.00000	0.068	5.00	2.90	**58***	80 - 120

Inorganics Quality Control Summary

Analytical Batch	494383	**Client ID**	LCS494178
Prep Batch	494178	**GCAL ID**	1127874
Prep Method	SW-846	**Sample Type**	LCS
	3010A	**Prep Date**	11/08/2012 15:35
		Analytical Date	11/11/2012 14:10
		Matrix	Water

SW-846 6010C		**Spike Added**	**Result**	**% R**	**Control Limits % R**
7429-90-5	Aluminum	5000	4700	94	80 - 120
7440-36-0	Antimony	500	460	92	80 - 120
7440-39-3	Barium	500	471	94	80 - 120
7440-41-7	Beryllium	500	471	94	80 - 120
7440-43-9	Cadmium	500	475	95	80 - 120
7440-48-4	Cobalt	500	464	93	80 - 120
7440-50-8	Copper	500	464	93	80 - 120
7439-89-6	Iron	5000	4670	93	80 - 120
7439-92-1	Lead	500	473	95	80 - 120
7439-95-4	Magnesium	5000	4750	95	80 - 120
7439-96-5	Manganese	500	468	94	80 - 120
7439-98-7	Molybdenum	500	463	93	80 - 120
7440-02-0	Nickel	500	483	97	80 - 120
7440-09-7	Potassium	10000	9450	94	80 - 120
7782-49-2	Selenium	500	475	95	80 - 120
7440-22-4	Silver	500	469	94	80 - 120
7440-23-5	Sodium	20000	19000	95	80 - 120
7440-28-0	Thallium	500	470	94	80 - 120
7440-62-2	Vanadium	500	467	93	80 - 120
7440-66-6	Zinc	500	477	95	80 - 120
7440-32-6	Titanium	500	472	94	80 - 120

Analytical Batch	494383	**Client ID**	M114MW003	M114MW003-MS	M114MW003-MSD
Prep Batch	494178	**GCAL ID**	21211081703	21211081704	21211081705
Prep Method	SW-846	**Sample Type**	SAMPLE	MS	MSD
	3010A	**Prep Date**	11/08/2012 15:35	11/08/2012 15:35	11/08/2012 15:35
		Analytical Date	11/11/2012 14:16	11/11/2012 14:23	11/11/2012 14:30
		Matrix	Water	Water	Water

SW-846 6010C		**Units**	ug/L								
		Result	**RDL**	**Spike Added**	**Result**	**% R**	**Control Limits % R**	**Result**	**% R**	**RPD**	**RPD Limit**
7429-90-5	Aluminum	2790	60.0	5000	8580	116	80 - 120	8920	**123***	4	30

Inorganics Quality Control Summary

Analytical Batch	494383	**Client ID**	M114MW003	M114MW003-MS	M114MW003-MSD
Prep Batch	494178	**GCAL ID**	21211081703	21211081704	21211081705
Prep Method	SW-846	**Sample Type**	SAMPLE	MS	MSD
	3010A	**Prep Date**	11/08/2012 15:35	11/08/2012 15:35	11/08/2012 15:35
		Analytical Date	11/11/2012 14:16	11/11/2012 14:23	11/11/2012 14:30
		Matrix	Water	Water	Water

SW-846 6010C		**Units**	ug/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
7440-36-0	Antimony	0.0	3.11	500	524	105	80 - 120	545	109	4	30
7440-39-3	Barium	46.3	0.71	500	517	94	80 - 120	541	99	5	30
7440-41-7	Beryllium	0.0	0.10	500	476	95	80 - 120	497	99	4	30
7440-43-9	Cadmium	2.32	0.20	500	465	93	80 - 120	492	98	6	30
7440-48-4	Cobalt	2.23	1.00	500	466	93	80 - 120	488	97	5	30
7440-50-8	Copper	11.8	1.01	500	530	104	80 - 120	551	108	4	30
7439-89-6	Iron	1940	40.0	5000	6740	96	80 - 120	7090	103	5	30
7439-92-1	Lead	2.55	1.96	500	469	93	80 - 120	488	97	4	30
7439-95-4	Magnesium	276000	50.0	5000	264000	**-200***	80 - 120	272000	**-80***	3	30
7439-96-5	Manganese	56.7	2.00	500	528	94	80 - 120	549	98	4	30
7439-98-7	Molybdenum	12.9	3.75	500	504	98	80 - 120	526	103	4	30
7440-02-0	Nickel	29.9	1.13	500	496	93	80 - 120	520	98	5	30
7440-09-7	Potassium	20500	100	10000	30800	103	80 - 120	32000	115	4	30
7782-49-2	Selenium	37.3	4.42	500	571	107	80 - 120	599	112	5	30
7440-22-4	Silver	0.0	0.70	500	524	105	80 - 120	543	109	4	30
7440-28-0	Thallium	3.61	3.04	500	465	92	80 - 120	490	97	5	30
7440-32-6	Titanium	65.1	1.20	500	519	91	80 - 120	534	94	3	30
7440-62-2	Vanadium	16.6	3.75	500	516	100	80 - 120	535	104	4	30
7440-66-6	Zinc	33.1	4.51	500	541	102	80 - 120	569	107	5	30

Analytical Batch	494546	**Client ID**	M114MW003	M114MW003-MS	M114MW003-MSD
Prep Batch	494178	**GCAL ID**	21211081703	21211081704	21211081705
Prep Method	SW-846	**Sample Type**	SAMPLE	MS	MSD
	3010A	**Prep Date**	11/08/2012 15:35	11/08/2012 15:35	11/08/2012 15:35
		Analytical Date	11/13/2012 15:34	11/13/2012 15:40	11/13/2012 15:46
		Matrix	Water	Water	Water

SW-846 6010C		**Units**	ug/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
7440-38-2	Arsenic	0.0	3.59	500	538	108	80 - 120	561	112	4	30
7440-70-2	Calcium	342000	50.0	5000	332000	**-200***	80 - 120	339000	**-50***	2	30
7440-47-3	Chromium	70.7	1.00	500	495	85	80 - 120	509	88	3	30

Inorganics Quality Control Summary

Analytical Batch	494546	**Client ID**	M114MW003			M114MW003-MS			M114MW003-MSD			
Prep Batch	494178	**GCAL ID**	21211081703			21211081704			21211081705			
Prep Method	SW-846	**Sample Type**	SAMPLE			MS			MSD			
	3010A	**Prep Date**	11/08/2012 15:35			11/08/2012 15:35			11/08/2012 15:35			
		Analytical Date	11/13/2012 14:55			11/13/2012 15:03			11/13/2012 15:11			
		Matrix	Water			Water			Water			
SW-846 6010C			**Units**	ug/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
			Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
7440-23-5	Sodium		2790000	2000	20000	2560000	**-1000***	80 - 120	2700000	**-500***	5	30

Inorganics Quality Control Summary

Analytical Batch	494546	**Client ID**	MB494177	LCS494177
Prep Batch	494177	**GCAL ID**	1126385	1126386
Prep Method	SW-846 3005	**Sample Type**	Method Blank	LCS
	Dissolved	**Prep Date**	11/08/2012 15:35	11/08/2012 15:35
		Analytical Date	11/13/2012 17:11	11/13/2012 17:19
		Matrix	Water	Water

SW-846 6010C Dissolved		**Units**	ug/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
7429-90-5	Aluminum	60.0U	60.0	5000	4810	96	80 - 120
7440-36-0	Antimony	3.11U	3.11	500	466	93	80 - 120
7440-38-2	Arsenic	3.59U	3.59	500	475	95	80 - 120
7440-39-3	Barium	0.71U	0.71	500	474	95	80 - 120
7440-41-7	Beryllium	0.10U	0.10	500	482	96	80 - 120
7440-43-9	Cadmium	0.20U	0.20	500	472	94	80 - 120
7440-70-2	Calcium	50.0U	50.0	5000	4670	93	80 - 120
7440-47-3	Chromium	1.00U	1.00	500	471	94	80 - 120
7440-48-4	Cobalt	1.00U	1.00	500	472	94	80 - 120
7440-50-8	Copper	1.82J	1.01	500	474	95	80 - 120
7439-89-6	Iron	40.0U	40.0	5000	4700	94	80 - 120
7439-92-1	Lead	2.10J	1.96	500	481	96	80 - 120
7439-95-4	Magnesium	50.0U	50.0	5000	4680	94	80 - 120
7439-96-5	Manganese	2.00U	2.00	500	469	94	80 - 120
7439-98-7	Molybdenum	3.75U	3.75	500	475	95	80 - 120
7440-02-0	Nickel	1.13U	1.13	500	483	97	80 - 120
7440-09-7	Potassium	100U	100	10000	9830	98	80 - 120
7782-49-2	Selenium	4.42U	4.42	500	477	95	80 - 120
7440-22-4	Silver	0.70U	0.70	500	483	97	80 - 120
7440-23-5	Sodium	200U	200	20000	20400	102	80 - 120
7440-28-0	Thallium	3.04U	3.04	500	472	94	80 - 120
7440-62-2	Vanadium	3.75U	3.75	500	473	95	80 - 120
7440-66-6	Zinc	4.51U	4.51	500	477	95	80 - 120
7440-32-6	Titanium	1.20U	1.20	500	481	96	80 - 120

Inorganics Quality Control Summary

Analytical Batch	494546	**Client ID**	M114MW003	M114MW003-MS	M114MW003-MSD
Prep Batch	494177	**GCAL ID**	21211081703	21211081704	21211081705
Prep Method	SW-846 3005	**Sample Type**	SAMPLE	MS	MSD
	Dissolved	**Prep Date**	11/08/2012 15:35	11/08/2012 15:35	11/08/2012 15:35
		Analytical Date	11/13/2012 17:25	11/13/2012 17:31	11/13/2012 17:51
		Matrix	Water	Water	Water

SW-846 6010C Dissolved		**Units**	ug/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
7429-90-5	Aluminum	0.0	60.0	5000	5250	105	80 - 120	4680	94	12	30
7440-36-0	Antimony	4.85	3.11	500	569	113	80 - 120	494	98	14	30
7440-38-2	Arsenic	0.0	3.59	500	559	112	80 - 120	489	98	13	30
7440-39-3	Barium	11.3	0.71	500	516	101	80 - 120	456	89	12	30
7440-41-7	Beryllium	0.0	0.10	500	504	101	80 - 120	448	90	12	30
7440-43-9	Cadmium	1.11	0.20	500	469	94	80 - 120	412	82	13	30
7440-70-2	Calcium	333000	50.0	5000	349000	**318***	80 - 120	329000	**-80***	6	30
7440-47-3	Chromium	1.55	1.00	500	495	99	80 - 120	438	87	12	30
7440-48-4	Cobalt	0.67	1.00	500	493	98	80 - 120	437	87	12	30
7440-50-8	Copper	10.0	1.01	500	581	114	80 - 120	516	101	12	30
7439-89-6	Iron	0.0	40.0	5000	4890	98	80 - 120	4350	87	12	30
7439-95-4	Magnesium	261000	50.0	5000	275000	**275***	80 - 120	252000	**-200***	9	30
7439-96-5	Manganese	0.0	2.00	500	498	100	80 - 120	440	88	12	30
7439-98-7	Molybdenum	11.0	3.75	500	547	107	80 - 120	485	95	12	30
7440-02-0	Nickel	1.64	1.13	500	496	99	80 - 120	440	88	12	30
7440-09-7	Potassium	19200	100	10000	33300	**140***	80 - 120	29800	106	11	30
7782-49-2	Selenium	29.7	4.42	500	578	110	80 - 120	509	96	13	30
7440-22-4	Silver	0.0	0.70	500	567	113	80 - 120	503	101	12	30
7440-28-0	Thallium	0.0	3.04	500	476	95	80 - 120	419	84	13	30
7440-32-6	Titanium	0.0	1.20	500	516	103	80 - 120	458	92	12	30
7440-62-2	Vanadium	21.1	3.75	500	557	107	80 - 120	496	95	12	30
7440-66-6	Zinc	20.5	4.51	500	552	106	80 - 120	485	93	13	30

Inorganics Quality Control Summary

Analytical Batch	494810	**Client ID**	M114MW003			M114MW003-MS			M114MW003-MSD		
Prep Batch	494177	**GCAL ID**	21211081703			21211081704			21211081705		
Prep Method	SW-846 3005	**Sample Type**	SAMPLE			MS			MSD		
	Dissolved	**Prep Date**	11/08/2012 15:35			11/08/2012 15:35			11/08/2012 15:35		
		Analytical Date	11/14/2012 14:52			11/14/2012 15:00			11/14/2012 15:07		
		Matrix	Water			Water			Water		
SW-846 6010C Dissolved			**Units**	ug/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
			Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
7439-92-1	Lead		0.0	1.96	500	508	102	80 - 120	457	91	11	30

Analytical Batch	494810	**Client ID**	M114MW003			M114MW003-MS			M114MW003-MSD		
Prep Batch	494177	**GCAL ID**	21211081703			21211081704			21211081705		
Prep Method	SW-846 3005	**Sample Type**	SAMPLE			MS			MSD		
	Dissolved	**Prep Date**	11/08/2012 15:35			11/08/2012 15:35			11/08/2012 15:35		
		Analytical Date	11/14/2012 14:17			11/14/2012 14:25			11/14/2012 14:32		
		Matrix	Water			Water			Water		
SW-846 6010C Dissolved			**Units**	ug/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
			Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
7440-23-5	Sodium		2750000	2000	20000	2730000	**-100***	80 - 120	2480000	**-1000***	10	30

General Chemistry Quality Control Summary

Analytical Batch 494201	**Client ID**	MB494201		LCS494201			
Prep Batch N/A	**GCAL ID**	1126491		1126492			
	Sample Type	Method Blank		LCS			
	Analytical Date	11/08/2012 14:35		11/08/2012 14:35			
	Matrix	Water		Water			
SM 2540C TDS		**Units**	mg/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
WET-035	Total Dissolved Solids(TDS)	0.00		1000	931	93.1	80 - 120

Analytical Batch 494201	**Client ID**	MA01MW004		1126318DUP		
Prep Batch N/A	**GCAL ID**	21211081701		1126493		
	Sample Type	SAMPLE		DUP		
	Analytical Date	11/08/2012 14:35		11/08/2012 14:35		
	Matrix	Water		Water		
SM 2540C TDS		**Units**	mg/L	**Result**		**RPD**
		Result	**RDL**		**RPD**	**Limit**
WET-035	Total Dissolved Solids(TDS)	1049		1050	0.29	5

General Chemistry Quality Control Summary

Analytical Batch 494206	**Client ID**	MB494206			LCS494206		
Prep Batch N/A	**GCAL ID**	1126547			1126548		
	Sample Type	Method Blank			LCS		
	Analytical Date	11/08/2012 16:14			11/08/2012 16:15		
	Matrix	Water			Water		
EPA 353.2 Nitrate		**Units**	mg/L-N	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
14797-55-8 Nitrate		0.005U	0.005	0.500	0.465	93	89.5 -110.5

Analytical Batch 494206	**Client ID**	M114MW003			M114MW003-MS			M114MW003-MSD			
Prep Batch N/A	**GCAL ID**	21211081703			21211081704			21211081705			
	Sample Type	SAMPLE			MS			MSD			
	Analytical Date	11/08/2012 16:26			11/08/2012 16:27			11/08/2012 16:29			
	Matrix	Water			Water			Water			
EPA 353.2 Nitrate		**Units**	mg/L-N	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
14797-55-8 Nitrate		0.988	0.010	1.00	1.91	92	89.5 -110.5	1.90	92	0.09	25

Analytical Batch 494207	**Client ID**	MB494207			LCS494207		
Prep Batch N/A	**GCAL ID**	1126552			1126553		
	Sample Type	Method Blank			LCS		
	Analytical Date	11/08/2012 15:53			11/08/2012 15:54		
	Matrix	Water			Water		
EPA 353.2 Nitrite		**Units**	mg/L-N	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
14797-65-0 Nitrite		0.004J	0.002	0.500	0.483	97	89.5 -110.5

Analytical Batch 494207	**Client ID**	M114MW003			M114MW003-MS			M114MW003-MSD			
Prep Batch N/A	**GCAL ID**	21211081703			21211081704			21211081705			
	Sample Type	SAMPLE			MS			MSD			
	Analytical Date	11/08/2012 15:58			11/08/2012 15:59			11/08/2012 16:00			
	Matrix	Water			Water			Water			
EPA 353.2 Nitrite		**Units**	mg/L-N	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
14797-65-0 Nitrite		0.018	0.002	0.500	0.477	92	89.5 -110.5	0.476	91	0.3	25

General Chemistry Quality Control Summary

Analytical Batch 494605	**Client ID**	MB494605			LCS494605		
Prep Batch N/A	**GCAL ID**	1128388			1128389		
	Sample Type	Method Blank			LCS		
	Analytical Date	11/14/2012 11:42			11/14/2012 12:00		
	Matrix	Water			Water		
EPA 300.0		**Units**	mg/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
16887-00-6	Chloride	0.063U	0.063	2.50	2.44	97.8	79 - 109
14808-79-8	Sulfate	0.115U	0.115	5.00	4.95	99	82 - 110

Analytical Batch 494605	**Client ID**	M114MW003			M114MW003-MS			M114MW003-MSD			
Prep Batch N/A	**GCAL ID**	21211081703			21211081704			21211081705			
	Sample Type	SAMPLE			MS			MSD			
	Analytical Date	11/14/2012 12:53			11/14/2012 13:10			11/14/2012 13:28			
	Matrix	Water			Water			Water			
EPA 300.0		**Units**	mg/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
16887-00-6	Chloride	4590	315	12500	17700	105	79 - 109	17600	104	0.39	15
14808-79-8	Sulfate	2460	575	25000	28000	102	82 - 110	28200	103	0.77	15

General Chemistry Quality Control Summary

Analytical Batch 494276	**Client ID**	LCS494276	
Prep Batch N/A	**GCAL ID**	1126973	
	Sample Type	LCS	
	Analytical Date	11/09/2012 11:15	
	Matrix	Water	

SM 2320B Alkalinity		**Spike Added**	**Result**	**% R**	**Control Limits % R**
000000-00-5	Total Alkalinity	200	197	99	80 - 120

Analytical Batch 494276	**Client ID**	MA01MW004	1126318DUP
Prep Batch N/A	**GCAL ID**	21211081701	1126974
	Sample Type	SAMPLE	DUP
	Analytical Date	11/09/2012 11:15	11/09/2012 11:15
	Matrix	Water	Water

SM 2320B Alkalinity		**Units**	mg/L CaCO3	**Result**	**RPD**	**RPD Limit**
		Result	**RDL**			
000000-00-5	Total Alkalinity	192.48	0.19	192	0	11

General Chemistry Quality Control Summary

Analytical Batch 494173	**Client ID**	MB494173			LCS494173		
Prep Batch N/A	**GCAL ID**	1126324			1126325		
	Sample Type	Method Blank			LCS		
	Analytical Date	11/08/2012 11:41			11/08/2012 11:41		
	Matrix	Water			Water		
SW-846 7196A Chromium VI		**Units**	ug/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
18540-29-9 Chromium VI		4.00U	4.00	500	482	96	80 - 120

Analytical Batch 494173	**Client ID**	M114MW003			M114MW003-MS			M114MW003-MSD			
Prep Batch N/A	**GCAL ID**	21211081703			21211081704			21211081705			
	Sample Type	SAMPLE			MS			MSD			
	Analytical Date	11/08/2012 11:44			11/08/2012 11:44			11/08/2012 11:45			
	Matrix	Water			Water			Water			
SW-846 7196A Chromium VI		**Units**	ug/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
18540-29-9 Chromium VI		0.000	4.00	500	483	97	80 - 120	476	95	1	20

General Chemistry Quality Control Summary

Analytical Batch	494463	**Client ID**	MB494328		LCS494328		
Prep Batch	494328	**GCAL ID**	1127229		1127230		
Prep Method	SW-846 9012A	**Sample Type**	Method Blank		LCS		
		Prep Date	11/10/2012 06:00		11/10/2012 06:00		
		Analytical Date	11/12/2012 15:51		11/12/2012 15:52		
		Matrix	Water		Water		
SW-846 9012A Cyanide		**Units**	mg/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
57-12-5	Total Cyanide	0.0012U	0.0012	0.020	0.019	94.5	80 - 120

Analytical Batch	494463	**Client ID**	MB494328		LCSHI494328		
Prep Batch	494328	**GCAL ID**	1127229		1127231		
Prep Method	SW-846 9012A	**Sample Type**	Method Blank		LCSHI		
		Prep Date	11/10/2012 06:00		11/10/2012 06:00		
		Analytical Date	11/12/2012 15:51		11/12/2012 15:53		
		Matrix	Water		Water		
SW-846 9012A Cyanide		**Units**	mg/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
57-12-5	Total Cyanide	0.0012U	0.0012	0.10	0.091	90.8	80 - 120

Analytical Batch	494463	**Client ID**	M114MW003		M114MW003-MS			M114MW003-MSD			
Prep Batch	494328	**GCAL ID**	21211081703		21211081704			21211081705			
Prep Method	SW-846 9012A	**Sample Type**	SAMPLE		MS			MSD			
		Prep Date	11/10/2012 06:00		11/10/2012 06:00			11/10/2012 06:00			
		Analytical Date	11/12/2012 15:59		11/12/2012 16:00			11/12/2012 16:02			
		Matrix	Water		Water			Water			
SW-846 9012A Cyanide		**Units**	mg/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
57-12-5	Total Cyanide	0.0	0.0012	0.050	0.040	80.4	80 - 120	0.040	80.2	0.25	20

GCAL

7979 GSRI Avenue, Baton Rouge, Louisiana 70820-7402
Phone 225.769.4900 • Fax 225.767.5717

CHAIN OF CUSTODY RECORD

Lab use only	Client Name	Client #	Workorder #	Due Date
	Trinity	4767	212110817	11/15/12

Report to:
Client: Trinity ADC
Address: 1002 W Eglin Pkwy
Shalimar FL 32459
Contact: Ben Stewart
Phone: 850 218 8955
Fax:

Bill to:
Client: Same as report to
Address:
Contact:
Phone:
Fax:

P.O. Number:
Project Name/Number: Melrose AFR A003-006
Sampled By: Ben Stewart Jordan Gibson

Lab use only:
Custody Seal used ☑ yes ☐ no
intact ☑ yes ☐ no
Temperature °C

Matrix[1]	Date	Time (2400)	Comp	Grab	Sample Description	Preservatives	No Containers	VOCs (8260B) (HCL)	Explosives (8330)	Total Metals 6010C HNO3	Dissolved metals 6010C HNO3	Chromium (VI) 7196A	Cyanide 9010A NaOH	Mercury 7470A HNO3	ABS/NO3, Chloride, Sulfate 300.0	Perchlorate 6850	Alkalinity 2320B	TDS 2540C	Remarks:	Lab ID
WG	11/7/12	1030			MA01 MW004	yes	12	X	X	X	X	X	X	X	X	X	X	X		1
WG	11/7/12	1206			M114MW002	yes	12	X	X	X	X	X	X	X	X	X	X	X		2
WG	11/7/12	1401			M114MW003	yes	12	X	X	X	X	X	X	X	X	X	X	X		3
WG	11/7/12	1401			M114MW003-MS	yes	12	X	X	X	X	X	X	X	X	X	X	X	bgm 11.8.12	4
WG	11/7/12	1401			M114MW003-MSD	yes	12	X	X	X	X	X	X	X	X	X	X	X	bgm	5
WQ	11/7/12	1030			TB-04	yes	3	X												6

Turn Around Time: ☐ 24-48 hrs. ☐ 3 days ☐ 1 week ☑ Standard ☐ Other

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
[signature]	Fedex	11/7/12	1700
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Fedex	[signature]	11/8/12	10:30
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

Note: Dissolved metals were field filtered
3.5, 1.5, 3.2, 4.0, 2.4
8728, 2111, 9090

By submitting these samples, you agree to the terms and conditions contained in our most recent schedule of services.

Matrix[1]: W = water, S = soil, SD = solid, L = liquid, SL = sludge, o = oil, CT = charcoal tube, A = air bag

We cannot accept verbal changes. Please fax written changes to (225) 767-5717

WHITE: CLIENT FINAL REPORT — CANARY: LABORATORY — PINK: CLIENT

GCAL-06 11/98

GCAL
GULF COAST ANALYTICAL LABORATORIES, INC

SAMPLE RECEIVING CHECKLIST

SAMPLE DELIVERY GROUP	212110817
Client 4747 - TRINITY Analysis & Development Corp.	**Transport Method** FEDEX
Profile 195817 - Melrose	**Received By** Kinchen, Anna M.
Line Item(s) 1 - Waters	**Receive Date(s)** 11/08/12

CHECKLIST			
Were all samples received using proper thermal preservation?	☑ Yes	☐ No	☐ NA
When used, were all custody seals intact?	☑ Yes	☐ No	☐ NA
Were all samples received in proper containers?	☑ Yes	☐ No	☐ NA
Were all samples received using proper chemical preservation?	☑ Yes	☐ No	☐ NA
Was preservative added to any container at the lab?	☐ Yes	☑ No	☐ NA
Were all containers received in good condition?	☑ Yes	☐ No	☐ NA
Were all VOA vials received with no head space?	☑ Yes	☐ No	☐ NA
Do all sample labels match the Chain of Custody?	☑ Yes	☐ No	☐ NA
Did the Chain of Custody list the sampling technician?	☑ Yes	☐ No	☐ NA
Was the COC maintained i.e. all signatures, dates and time of receipt included?	☑ Yes	☐ No	☐ NA

COOLERS

Airbill	Temp(oC)
872821119090	3.5
	1.5
	3.2
	4.0
	2.4

DISCREPANCIES

21211081701 - MA01MW004
- Sample received expired

LABORATORY PRESERVATIONS

None

NOTES

Revision 1.3

November 27, 2012

Brenda Martinez
GCAL LAB
7979 GSRI AVENUE
BATON ROUGE, LA 70820
TEL: (225) 769-4900
FAX (225) 767-5717

Order No.: 1211104

RE: DoD Perchlorate

Dear Brenda Martinez:

DHL Analytical, Inc. received 3 sample(s) on 11/13/2012 for the analyses presented in the following report.

There were no problems with the analyses and all data met requirements of DoD QSM Ver 4.2 and NELAC except where noted in the Case Narrative. All non-NELAC methods will be identified accordingly in the case narrative and all estimated uncertainties of test results are within method or EPA specifications.

If you have any questions regarding these tests results, please feel free to call. This report shall not be reproduced except in full without the written approval of DHL Analytical, Inc. Thank you for using DHL Analytical.

Sincerely,

John DuPont
General Manager

This report was performed under the accreditation of the State of Texas & DoD Laboratory Certification Number: T104704211-12-8 & DoD ELAP #ADE-1416 v2

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GCAL
GULF COAST ANALYTICAL LABORATORIES, INC
7979 GSRI AVE, BATON ROUGE LA 70820-7402
(225) 769-4900 FAX (225) 767-5717

Chain of Custody Record

#121104

Submitted by
Client: Gulf Coast Analytical Labs
Address: 7979 GSRI Avenue
Baton Rouge, LA 70820
Contact: Brenda Martinez
Phone: (225)769-4900
Fax: (225)767-5717

Bill to
Client: Gulf Coast Analytical Labs
Address: 7979 GSRI Avenue
Baton Rouge, LA 70820
Contact: Brenda Martinez
Phone: (225)769-4900
Fax: (225)767-5717

Analysis Requested

* Our P. O. Number must appear on the Invoice.
* Our Project Number must appear on the final report.

P.O. Number: 12-0970
Project Name/Number: 212110817
Sampled By:

	Matrix	Date	Time (2400)	Comp	Grab	Sample Description	Preservatives	No. Containers	PERCHLORATE (6860)	Remarks:	Lab ID
01	W	11/7/2012	10:30		X	MA01 MW004		1	X	21211081701	
02	W	11/7/2012	12:06		X	M114MW002		1	X	21211081702	
03	W	11/7/2012	14:01		X	M114MW003		1	X	21211081703	
	W	11/7/2012	14:01		X	M114MW003-MS		1	X	21211081704	
	W	11/7/2012	14:01		X	M114MW003MSD		1	X	21211081705	

Turn Around Time: ___ 24 - 48 hrs ___ 3 days 1 week X standard other ___

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
[signature]	FedEx	11/12/12	1700
[signature]	[signature]	11/13/12	830

Note: Receiving temp 1.20 Cooler #57 Custody seal intact

Please fax results to (225)767-5717
PLEASE RETURN ICE CHESTS TO 7979 GSRI AVE.

Matrix: W = water, S=Soil, SD=Solid, L=Liquid, SL=Sludge, O=Oil, CT=Charcoal Tube, OVM=Organic Vapor Monitor, XT=XAD Tube, A=Air Bag, SUM=Summa Canister

ORIGIN ID: OPLA (225) 214-7049
KELLY LOTT
GCAL LLC
7979 GSRI

BATON ROUGE, LA 70820
UNITED STATES US

SHI:
ACTWG:
CAD: 0106S... ...E2606

BILL SENDER

TO SAMPLE RECEIVING
DHL
2300 DOUBLE CREEK

ROUND ROCK TX 78664
(226) 769-4900
INV:
PO: REF:
DEPT:

FedEx Express

J1213121005012S

TRK# 0201 5475 7636 5381

TUE - 13 NOV A1
PRIORITY OVERNIGHT

A8 BSMA

78664
TX-US AUS

Part # 156146-434 RITP 07/11

GCAL

CUSTODY SEAL

Date Sealed: 11-12-12

Sealed By: [illegible]

GCAL-17

This package confirms to the conditions and limitations specified in 49 CFR 173.4

DHL Analytical, Inc.

Sample Receipt Checklist

Client Name GCAL LAB

Date Received: 11/13/2012

Work Order Number 1211104

Received by JB

Checklist completed by: Signature 11/13/2012 Date

Reviewed by JD Initials 11/13/2012 Date

Carrier name: FedEx 1day

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shippping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	1.2 °C
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Adjusted? _____ Checked by _____

Any No response must be detailed in the comments section below.

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

Page 1 of 1

DHL Analytical, Inc.

Laboratory Review Checklist: Reportable Data

Project Name: DoD Perchlorate	**Date:** 11/27/12
Reviewer Name: Carlos Castro	**Laboratory Work Order:** 1211104
Prep Batch Number(s): See Prep Dates Report	**Run Batch:** See Analytical Dates Report

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
R1	OI	**Chain-of-Custody (C-O-C)**					
		1) Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				R1-01
		2) Were all departures from standard conditions described in an exception report?			X		
R2	OI	**Sample and Quality Control (QC) Identification**					
		1) Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		2) Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	**Test Reports**					
		1) Were all samples prepared and analyzed within holding times?	X				
		2) Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		3) Were calculations checked by a peer or supervisor?	X				
		4) Were all analyte identifications checked by a peer or supervisor?	X				
		5) Were sample quantitation limits reported for all analytes not detected?	X				
		6) Were all results for soil and sediment samples reported on a dry weight basis?			X		
		7) Were % moisture (or solids) reported for all soil and sediment samples?			X		
		8) If required for the project, TICs reported?			X		
R4	O	**Surrogate Recovery Data**					
		1) Were surrogates added prior to extraction?			X		
		2) Were surrogate percent recoveries in all samples within the laboratory QC limits?			X		
R5	OI	**Test Reports/Summary Forms for Blank Samples**					
		1) Were appropriate type(s) of blanks analyzed?	X				
		2) Were blanks analyzed at the appropriate frequency?	X				
		3) Where method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		4) Were blank concentrations < MQL?	X				
R6	OI	**Laboratory Control Samples (LCS):**					
		1) Were all COCs included in the LCS?	X				
		2) Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		3) Were LCSs analyzed at the required frequency?	X				
		4) Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		5) Does the detectability data document the laboratory's capability to detect the COCs at te MDL used to calculate the SQLs?	X				
		6) Was the LCSD RPD within QC limits (if applicable)?	X				
R7	OI	**Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Data**					
		1) Were the project/method specified analytes included in the MS and MSD?	X				
		2) Were MS/MSD analyzed at the appropriate frequency?	X				
		3) Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?		X			R7-03
		4) Were MS/MSD RPDs within laboratory QC limits?	X				
R8	OI	**Analytical Duplicate Data**					
		1) Were appropriate analytical duplicates analyzed for each matrix?			X		
		2) Were analytical duplicates analyzed at the appropriate frequency?			X		
		3) Were RPDs or relative standard deviations within the laboratory QC limits?			X		
R9	OI	**Method Quantitation Limits (MQLs):**					
		1) Are the MQLs for each method analyte included in the laboratory data package?	X				
		2) Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		3) Are unadjusted MQLs included in the laboratory data package?	X				
R10	OI	**Other Problems/Anomalies**					
		1) Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		2) Were all necessary corrective actions performed for the reported data?	X				
		3) Was applicable and available technology used to lower the SQL minimize the matrix interference affects on the sample results?	X				

1 Items identified by the letter "R" should be included in the laboratory data package submitted to the TCEQ in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2 O = organic analyses; I = inorganic analyses (and general chemistry, when applicable).
3 NA = Not applicable.
4 NR = Not Reviewed.
5 ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

DHL Analytical, Inc.
Laboratory Review Checklist (continued): Supporting Data

Project Name: DoD Perchlorate	**Date:** 11/27/12
Reviewer Name: Carlos Castro	**Laboratory Work Order:** 1211104

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
S1	OI	**Initial Calibration (ICAL)**					
		1) Were response factors and/or relative response factors for each analyte within QC limits?	X				
		2) Were percent RSDs or correlation coefficient criteria met?	X				
		3) Was the number of standards recommended in the method used for all analytes?	X				
		4) Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		5) Are ICAL data available for all instruments used?	X				
		6) Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	**Initial and Continuing calibration Verification (ICCV and CCV) and Continuing Calibration blank (CCB)**					
		1) Was the CCV analyzed at the method-required frequency?	X				
		2) Were percent differences for each analyte within the method-required QC limits?	X				
		3) Was the ICAL curve verified for each analyte?	X				
		4) Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
S3	O	**Mass Spectral Tuning**					
		1) Was the appropriate compound for the method used for tuning?	X				
		2) Were ion abundance data within the method-required QC limits?	X				
S4	O	**Internal Standards (IS)**					
		1) Were IS area counts and retention times within the method-required QC limits?	X				
S5	OI	**Raw Data (NELAC section 1 appendix A glossary, and section 5.12)**					
		1) Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		2) Were data associated with manual integrations flagged on the raw data?	X				
S6	O	**Dual Column Confirmation**					
		1) Did dual column confirmation results meet the method-required QC?			X		
S7	O	**Tentatively Identified Compounds (TICs)**					
		1) If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	**Interference Check Sample (ICS) Results**					
		1) Were percent recoveries within method QC limits?			X		
S9	I	**Serial Dilutions, Post Digestion Spikes, and Method of Standard Additions**					
		1) Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X		
S10	OI	**Method Detection Limit (MDL) Studies**					
		1) Was a MDL study performed for each reported analyte?	X				
		2) Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S11	OI	**Proficiency Test Reports**					
		1) Was the lab's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	**Standards Documentation**					
		1) Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	**Compound/Analyte Identification Procedures**					
		1) Are the procedures for compound/analyte identification documented?	X				
S14	OI	**Demonstration of Analyst Competency (DOC)**					
		1) Was DOC conducted consistent with NELAC Chapter 5C?	X				
		2) Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	**Verification/Validation Documentation for Methods (NELAC Chap 5)**					
		1) Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	**Laboratory Standard Operating Procedures (SOPs)**					
		1) Are laboratory SOPs current and on file for each method performed?	X				

1 Items identified by the letter "R" should be included in the laboratory data package submitted to the TCEQ in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2 O = organic analyses; I = inorganic analyses (and general chemistry, when applicable).
3 NA = Not applicable.
4 NR = Not Reviewed.
5 ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Laboratory Data Package Signature Page

This data package consists of:

This signature page, the laboratory review checklist, and the following reportable data:

R1 Field chain-of-custody documentation;
R2 Sample identification cross-reference;
R3 Test reports (analytical data sheets) for each environmental sample that includes:
  a) Items consistent with NELAC 5.13
  b) dilution factors,
  c) preparation methods,
  d) cleanup methods, and
  e) if required for the project, tentatively identified compounds (TICs).
R4 Surrogate recovery data including:
  a) Calculated recovery (%R), and
  b) The laboratory's surrogate QC limits.
R5 Test reports/summary forms for blank samples;
R6 Test reports/summary forms for laboratory control samples (LCSs) including:
  a) LCS spiking amounts,
  b) Calculated %R for each analyte, and
  c) The laboratory's LCS QC limits.
R7 Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
  a) Samples associated with the MS/MSD clearly identified,
  b) MS/MSD spiking amounts,
  c) Concentration of each MS/MSD analyte measured in the parent and spiked samples,
  d) Calculated %Rs and relative percent differences (RPDs), and
  e) The laboratory's MS/MSD QC limits
R8 Laboratory analytical duplicate (if applicable) recovery and precision:
  a) the amount of analyte measured in the duplicate,
  b) the calculated RPD, and
  c) the laboratory's QC limits for analytical duplicates.
R9 List of method quantitation limits (MQLs) for each analyte for each method and matrix;
R10 Other problems or anomalies.

The Exception Report for every "No" or "Not Reviewed (NR)" item in laboratory review checklist.

Release Statement: I am responsible for the release of this laboratory data package. This data package has been reviewed by the laboratory and is complete and technically compliant with the requirements of the methods used, except where noted by the laboratory in the attached exception reports. By my signature below, I affirm to the best of my knowledge, all problems/anomalies, observed by the laboratory as having the potential to affect the quality of the data, have been identified by the laboratory in the Laboratory Review Checklist, and no information or data have been knowingly withheld that would affect the quality of the data.

John DuPont – General Manager

Scott Schroeder – Technical Director

Signature

11/27/12
Date

DHL Analytical, Inc. **Date:** *27-Nov-12*

CLIENT: GCAL LAB
Project: DoD Perchlorate
Lab Order: 1211104

CASE NARRATIVE

This case narrative describes abnormalities and deviations that may affect the results and summarizes all known issues that need to be highlighted for the data user to assess the results. This case narrative and the report contents are compliant with DoD QSM Ver 4.2 and NELAC. The "U" flag , in the Analytical Report, indicates the results for that sample are nondetect.

Samples were analyzed using the methods outlined in the following references:

Method E332.0 or SW6860 - Perchlorate Analysis (Parameter is ELAP Accredited but not NELAC Certified)

Exception Report R1-01

The samples were received on and log-in performed on 11/13/12. A total of 3 samples were received and all were analyzed. The samples arrived in good condition and were properly packaged.

Exception Report R7-03

For Perchlorate analysis performed on 11/26/12 the matrix spike and matrix spike duplicate recoveries were slightly above control limits. These are flagged accordingly in the QC summary report. The sample selected for the matrix spike and matrix spike duplicate was from this work order. The LCS was within control limits. No further corrective actions were taken.

A summary of project communication follows:

Request for quote was sent to DHL Analytical from the client, via email on 5/5/11 and the quote was sent to client via email on 5/5/11. Email for work approved by both parties on 5/18/11 with P.O number 12-0970.

Client sent samples in own containers.

This sample delivery group arrived at DHL Analytical 11/13/12.

DHL Analytical, Inc.

Date: *27-Nov-12*

CLIENT: GCAL LAB
Project: DoD Perchlorate
Lab Order: 1211104

Work Order Sample Summary

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
1211104-01	MA01 MW004		11/07/12 10:30 AM	11/13/2012
1211104-02	M114MW002		11/07/12 12:06 PM	11/13/2012
1211104-03	M114MW003		11/07/12 02:01 PM	11/13/2012

DHL Analytical, Inc.

27-Nov-12

Lab Order: 1211104
Client: GCAL LAB
Project: DoD Perchlorate

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1211104-01A	MA01 MW004	11/07/12 10:30 AM	Aqueous	SW6860	Perchlorate Prep	11/26/12 08:32 AM	54851
1211104-02A	M114MW002	11/07/12 12:06 PM	Aqueous	SW6860	Perchlorate Prep	11/26/12 08:32 AM	54851
1211104-03A	M114MW003	11/07/12 02:01 PM	Aqueous	SW6860	Perchlorate Prep	11/26/12 08:32 AM	54851

DHL Analytical, Inc.

27-Nov-12

Lab Order: 1211104
Client: GCAL LAB
Project: DoD Perchlorate

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1211104-01A	MA01 MW004	Aqueous	SW6860	Perchlorate - Water	54851	1	11/26/12 12:12 PM	ICMS_121126A
1211104-02A	M114MW002	Aqueous	SW6860	Perchlorate - Water	54851	1	11/26/12 11:11 AM	ICMS_121126A
1211104-03A	M114MW003	Aqueous	SW6860	Perchlorate - Water	54851	1	11/26/12 11:23 AM	ICMS_121126A

DHL Analytical, Inc.

Date: *27-Nov-12*

CLIENT:	GCAL LAB	**Client Sample ID:**	MA01 MW004
Project:	DoD Perchlorate	**Lab ID:**	1211104-01
Project No:	212110817	**Collection Date:**	11/07/12 10:30 AM
Lab Order:	1211104	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
PERCHLORATE - WATER		**SW6860**					Analyst: **CZ**
Perchlorate	0.0131	0.000495	0.00149	N	mg/L	1	11/26/12 12:12 PM

Qualifiers:				
	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: *27-Nov-12*

CLIENT:	GCAL LAB	**Client Sample ID:**	M114MW002
Project:	DoD Perchlorate	**Lab ID:**	1211104-02
Project No:	212110817	**Collection Date:**	11/07/12 12:06 PM
Lab Order:	1211104	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
PERCHLORATE - WATER		**SW6860**					Analyst: **CZ**
Perchlorate	0.0282	0.000495	0.00149	N	mg/L	1	11/26/12 11:11 AM

Qualifiers:				
	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: *27-Nov-12*

CLIENT:	GCAL LAB	**Client Sample ID:**	M114MW003
Project:	DoD Perchlorate	**Lab ID:**	1211104-03
Project No:	212110817	**Collection Date:**	11/07/12 02:01 PM
Lab Order:	1211104	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
PERCHLORATE - WATER		**SW6860**					Analyst: **CZ**
Perchlorate	0.00392	0.000495	0.00149	N	mg/L	1	11/26/12 11:23 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: *27-Nov-12*

CLIENT: GCAL LAB
Work Order: 1211104
Project: DoD Perchlorate

ANALYTICAL QC SUMMARY REPORT

RunID: **ICMS_121126A**

The QC data in batch 54851 applies to the following samples: 1211104-01A, 1211104-02A, 1211104-03A

Sample ID: **MB-54851** Batch ID: **54851** TestNo: **SW6860** Units: **mg/L**
SampType: **MBLK** Run ID: **ICMS_121126A** Analysis Date: **11/26/2012 10:34:00 A** Prep Date: **11/26/2012**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.000100	0.000300								NU

Sample ID: **1211104-03AMS** Batch ID: **54851** TestNo: **SW6860** Units: **mg/L**
SampType: **MS** Run ID: **ICMS_121126A** Analysis Date: **11/26/2012 12:49:00 P** Prep Date: **11/26/2012**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.00568	0.00149	0.00149	0.00392	119	85	115			SN

Sample ID: **1211104-03AMSD** Batch ID: **54851** TestNo: **SW6860** Units: **mg/L**
SampType: **MSD** Run ID: **ICMS_121126A** Analysis Date: **11/26/2012 1:01:00 PM** Prep Date: **11/26/2012**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.00572	0.00149	0.00149	0.00392	121	85	115	0.649	20	SN

Sample ID: **LCS-54851** Batch ID: **54851** TestNo: **SW6860** Units: **mg/L**
SampType: **LCS** Run ID: **ICMS_121126A** Analysis Date: **11/26/2012 1:13:00 PM** Prep Date: **11/26/2012**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.000327	0.000300	0.000300	0	109	85	115			N

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAC certified

CLIENT: GCAL LAB
Work Order: 1211104
Project: DoD Perchlorate

ANALYTICAL QC SUMMARY REPORT

RunID: ICMS_121126A

Sample ID: **ICV-121126** Batch ID: **R63620** TestNo: **SW6860** Units: **mg/L**
SampType: **ICV** Run ID: **ICMS_121126A** Analysis Date: **11/26/2012 9:17:00 AM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.00207	0.000300	0.00200	0	103	85	115			N

Sample ID: **LCVL1-121126** Batch ID: **R63620** TestNo: **SW6860** Units: **mg/L**
SampType: **LCVL** Run ID: **ICMS_121126A** Analysis Date: **11/26/2012 9:53:00 AM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.000222	0.000300	0.000200	0	111	70	130			N

Sample ID: **ICS-121126** Batch ID: **R63620** TestNo: **SW6860** Units: **mg/L**
SampType: **ICS** Run ID: **ICMS_121126A** Analysis Date: **11/26/2012 10:05:00 A** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.000322	0.000300	0.000300	0	107	85	115			N

Sample ID: **CCV1-121126** Batch ID: **R63620** TestNo: **SW6860** Units: **mg/L**
SampType: **CCV** Run ID: **ICMS_121126A** Analysis Date: **11/26/2012 1:27:00 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.00515	0.000300	0.00500	0	103	85	115			N

Sample ID: **LCVL2-121126** Batch ID: **R63620** TestNo: **SW6860** Units: **mg/L**
SampType: **LCVL** Run ID: **ICMS_121126A** Analysis Date: **11/26/2012 1:51:00 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.000240	0.000300	0.000200	0	120	70	130			N

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAC certified

DHL Analytical, Inc.

27-Nov-12

Lab Order: 1211104
Client: GCAL LAB
Project: DoD Perchlorate

Sequence Report

Run ID: ICMS_121126A

Sample ID	Client Sample ID	Test Number	Batch ID	Dilution	Analysis Date	Prep Date	Matrix
INTIAL CALIBRATION SUMMARY	-----	SW6860	R63620	1	11/26/2012		A
INTERNAL STANDARD SUMMARY	-----	SW6860	R63620	1	11/26/2012		A
ICV-121126	-----	SW6860	R63620	1	11/26/2012 9:17:00 AM		A
ICB-121126	-----	SW6860	R63620	1	11/26/2012 9:41:00 AM		A
LCVL1-121126	-----	SW6860	R63620	1	11/26/2012 9:53:00 AM		A
ICS-121126	-----	SW6860	R63620	1	11/26/2012 10:05:00 AM		A
MB-54851	-----	SW6860	54851	1	11/26/2012 10:34:00 AM	11/26/2012 8:32:43 AM	A
1211104-02A	M114MW002	SW6860	54851	1	11/26/2012 11:11:00 AM	11/26/2012 8:32:43 AM	A
1211104-03A	MW114MW003	SW6860	54851	1	11/26/2012 11:23:00 AM	11/26/2012 8:32:43 AM	A
1211104-01A	MA01 MW004	SW6860	54851	1	11/26/2012 12:12:00 PM	11/26/2012 8:32:43 AM	A
1211104-03AMS	MW114MW003MS	SW6860	54851	1	11/26/2012 12:49:00 PM	11/26/2012 8:32:43 AM	A
1211104-03AMSD	MW114MW003MSD	SW6860	54851	1	11/26/2012 1:01:00 PM	11/26/2012 8:32:43 AM	A
LCS-54851	-----	SW6860	54851	1	11/26/2012 1:13:00 PM	11/26/2012 8:32:43 AM	A
CCV1-121126	-----	SW6860	R63620	1	11/26/2012 1:27:00 PM		A
CCB1-121126	-----	SW6860	R63620	1	11/26/2012 1:39:00 PM		A
LCVL2-121126	-----	SW6860	R63620	1	11/26/2012 1:51:00 PM		A

Initial Calibration Summary

Control Program:	**ClO4PGM_120523**
Quantif. Method:	**ClO4_120523**
Recording Time:	**11/26/2012 9:17**
Injection Volume:	**200.0**
Test:	**Perchlorate**

Sample Name	Area counts*min Perchlorate_99 SIM_01B	Area counts*min Perchlorate_101 SIM_02B	Area counts*min ISTD_03 SIM_03B
ClO4_0.3_1	506.7150	217.961	1678.968
ClO4_0.5_1	938.3354	317.275	1642.060
ClO4_1.0_1	1858.8183	590.921	1651.572
ClO4_2.0_1	3430.4242	1065.045	1587.084
ClO4_5.0_1	8460.8517	2700.013	1442.137
ClO4_7.0_1	11820.8679	3799.330	1409.731
CLO4_10.0_1	16631.2688	5327.615	1396.272

Peak	Cal Type	Offset	Slope	Curve	Coeff. Det.
Perchlorate_99	XQOff	0.707	112.352	0.899	99.923
Perchlorate_101	XQOff	-1.155	37.952	0.045	99.764

Internal Standard Summary

Sequence Name:	**121126_CLO4**
Control Program:	**ClO4PGM_120523**
Quantif. Method:	**ClO4_120523**
Injection Volume:	**200.0**
Test:	**Perchlorate**

	Area Counts
ISTD 107 Cal Average	1544
Low Limit (50%)	772
High Limit (150%)	2316

Sample Name	**Area counts*min ISTD_03 SIM_03B**
LRB1-120523	1576.971
ClO4_0.3_1	1678.968
ClO4_0.5_1	1642.060
ClO4_1.0_1	1651.572
ClO4_2.0_1	1587.084
ClO4_5.0_1	1442.137
ClO4_7.0_1	1409.731
CLO4_10.0_1	1396.272
LRB2-120523	1616.530
SSCV-120523	1645.976
ICV-121126	1179.468
ICB-121126	1431.669
LCVL1-121126	1245.975
ICS-121126	1659.666
MB-54851	1306.378
1211105-04A	1628.509
1211104-02A	1571.452
1211104-03A	1743.440
1211105-01A	1916.014
1211104-01A	1476.146
1211105-02A	1334.960
1211105-03A	1463.967
1211104-03AMS	1632.409
1211104-03AMSD	1849.168
LCS-54851	1681.542
CCV1-121126	1409.685

CCB1-121126	1736.055
LCVL2-121126	1859.512

NELAP CERTIFICATE NUMBER 01955
DOD ELAP CERTIFICATE NUMBER ADE - 1482

ANALYTICAL RESULTS

PERFORMED BY

GULF COAST ANALYTICAL LABORATORIES, INC.

7979 GSRI Avenue

Baton Rouge, LA 70820

Report Date 11/28/2012

GCAL Report 212110915

Deliver To	TRINITY Analysis & Development Corp. 1002 N Eglin Pkwy Shalimar, FL 32579 850-613-6800
Attn	Jonathan Kramer

Project Melrose AFR A003-006

CASE NARRATIVE

Client: TRINITY Analysis & Development Corp. **Report:** 212110915

Gulf Coast Analytical Laboratories received and analyzed the sample(s) listed on the sample cross-reference page of this report. Receipt of the sample(s) is documented by the attached chain of custody. This applies only to the sample(s) listed in this report. No sample integrity or quality control exceptions were identified unless noted below.

HIGH PERFORMANCE LIQUID CHROMATOGRAPHY

In the SW-846 8330A analysis for prep batch 494270, the LCS/LCSD exhibited RPD failures.

METALS

In the SW-846 6010C Dissolved analysis, samples 21211091503 (MA02MW001D) and 21211091504 (MA02MW001D-FD) had to be diluted in order to bracket the concentration of a target analyte within the linear dynamic range of the instrument.

In the SW-846 6010C analysis, samples 21211091503 (MA02MW001D) and 21211091504 (MA02MW001D-FD) had to be diluted in order to bracket the concentration of a target analyte within the linear dynamic range of the instrument.

In the SW-846 7470A analysis for prep batch 494316, the MS and/or MSD recovery is outside the control limits for Mercury. The LCS recovery is within the control limits. This indicates the analysis is in control and the sample is affected by matrix interference.

In the SW-846 6010C Dissolved analysis for prep batch 494317, the MS/MSD recoveries are not applicable for Calcium, Magnesium and Sodium because the sample concentration is greater than four times the spike concentration.

Several Dissolved Metals concentration is greater than the Total concentration for several elements in several samples. This is attributed to separate aliquots of sample.

CONVENTIONALS

In the EPA 300.0 analysis, samples 21211091501 (MA01MW003), 21211091503 (MA02MW001D), 21211091504 (MA02MW001D-FD) and 21211091505 (EB-01) had to be diluted in order to bracket the concentration within the calibration range of the instrument.

In the EPA 353.2 analysis, samples 21211091503 (MA02MW001D) and 21211091504 (MA02MW001D-FD) had to be diluted in order to bracket the Nitrate + Nitrite and/or Nitrite concentrations within the calibration range of the instrument. The Nitrate is based on the difference between the Nitrate + Nitrite and the Nitrite. The dilution is reflected in the elevated reporting limit.

MISCELLANEOUS

See Subcontract report for any case narrative.

Laboratory Endorsement

Sample analysis was performed in accordance with approved methodologies provided by the Environmental Protection Agency or other recognized agencies. The samples and their corresponding extracts will be maintained for a period of 30 days unless otherwise arranged. Following this retention period the samples will be disposed in accordance with GCAL's Standard Operating Procedures.

Common Abbreviations Utilized in this Report

ND	Indicates the result was Not Detected at the specified RDL
DO	Indicates the result was Diluted Out
MI	Indicates the result was subject to Matrix Interference
TNTC	Indicates the result was Too Numerous To Count
SUBC	Indicates the analysis was Sub-Contracted
FLD	Indicates the analysis was performed in the Field
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
RDL	Reporting Detection Limit
00:00	Reported as a time equivalent to 12:00 AM

Reporting Flags Utilized in this Report

J	Indicates the result is between the MDL and RDL
U	Indicates the compound was analyzed for but not detected
B	Indicates the analyte was detected in the associated Method Blank

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This report pertains only to the samples listed in the Report Sample Summary and should be retained as a permanent record thereof. The results contained within this report are intended for the use of the client. Any unauthorized use of the information contained in this report is prohibited.

I certify that this data package is in compliance with the NELAC standard and terms and conditions of the contract and Statement of Work both technically and for completeness, for other than the conditions in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted has been authorized by the Quality Assurance Manager or his/her designee, as verified by the following signature.

Estimated uncertainty of measurement is available upon request. This report is in compliance with the DOD QSM as specified in the contract if applicable.

_____

Robyn Migues
Technical Director
GCAL REPORT 212110915

THIS REPORT CONTAINS _____ PAGES.

Report Sample Summary

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211091501	MA01MW003	Water	11/08/2012 10:15	11/09/2012 09:40
21211091502	TB-06	Water	11/08/2012 10:15	11/09/2012 09:40
21211091503	MA02MW001D	Water	11/08/2012 13:06	11/09/2012 09:40
21211091504	MA02MW001D-FD	Water	11/08/2012 13:06	11/09/2012 09:40
21211091505	EB-01	Water	11/08/2012 11:45	11/09/2012 09:40

Summary of Compounds Detected

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211091501	**MA01MW003**	Water	11/08/2012 10:15	11/09/2012 09:40

EPA 300.0

CAS#	Parameter	Result	RDL	MDL	Units
16887-00-6	Chloride	531	50.0	31.5	mg/L
14808-79-8	Sulfate	599	100	57.5	mg/L

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7440-39-3	Barium	19.2	10.0	0.71	ug/L
7440-43-9	Cadmium	0.64J	5.00	0.20	ug/L
7440-70-2	Calcium	61300	100	50.0	ug/L
7440-47-3	Chromium	1.12J	10.0	1.00	ug/L
7440-50-8	Copper	11.6	10.0	1.01	ug/L
7439-95-4	Magnesium	61900	100	50.0	ug/L
7439-98-7	Molybdenum	5.53J	50.0	3.75	ug/L
7440-02-0	Nickel	1.44J	40.0	1.13	ug/L
7440-09-7	Potassium	8450	500	100	ug/L
7440-62-2	Vanadium	35.5	20.0	3.75	ug/L
7440-66-6	Zinc	26.5	20.0	4.51	ug/L

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7440-23-5	Sodium	475000	1000	200	ug/L

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	81.6J	200	60.0	ug/L
7440-39-3	Barium	19.8	10.0	0.71	ug/L
7440-43-9	Cadmium	0.63J	5.00	0.20	ug/L
7440-70-2	Calcium	59800	100	50.0	ug/L
7440-47-3	Chromium	13.0	10.0	1.00	ug/L
7440-48-4	Cobalt	1.46J	10.0	1.00	ug/L
7440-50-8	Copper	11.6	10.0	1.01	ug/L
7439-89-6	Iron	79.6J	100	40.0	ug/L
7439-95-4	Magnesium	60100	100	50.0	ug/L
7439-98-7	Molybdenum	5.45J	50.0	3.75	ug/L
7440-02-0	Nickel	8.51J	40.0	1.13	ug/L
7440-09-7	Potassium	8440	500	100	ug/L
7440-32-6	Titanium	1.40J	100	1.20	ug/L
7440-62-2	Vanadium	36.4	20.0	3.75	ug/L
7440-66-6	Zinc	13.1J	20.0	4.51	ug/L

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7440-23-5	Sodium	480000	1000	200	ug/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211091501	**MA01MW003**	Water	11/08/2012 10:15	11/09/2012 09:40

EPA 353.2 Nitrite

CAS#	Parameter	Result	RDL	MDL	Units
14797-65-0	Nitrite	0.011	0.010	0.002	mg/L-N

EPA 353.2 Nitrate

CAS#	Parameter	Result	RDL	MDL	Units
14797-55-8	Nitrate	0.214	0.010	0.005	mg/L-N

SM 2540C TDS

CAS#	Parameter	Result	RDL	MDL	Units
WET-035	Total Dissolved Solids(TDS)	1780	10.0		mg/L

SM 2320B Alkalinity

CAS#	Parameter	Result	RDL	MDL	Units
000000-00-5	Total Alkalinity	166	1.0	0.19	mg/L CaCO3

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211091503	**MA02MW001D**	Water	11/08/2012 13:06	11/09/2012 09:40

EPA 300.0

CAS#	Parameter	Result	RDL	MDL	Units
16887-00-6	Chloride	1780	100	63.0	mg/L
14808-79-8	Sulfate	2080	200	115	mg/L

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	68.2J	200	60.0	ug/L
7440-36-0	Antimony	4.69J	60.0	3.11	ug/L
7440-39-3	Barium	10.2	10.0	0.71	ug/L
7440-43-9	Cadmium	0.37J	5.00	0.20	ug/L
7440-70-2	Calcium	110000	100	50.0	ug/L
7440-47-3	Chromium	5.11J	10.0	1.00	ug/L
7440-48-4	Cobalt	1.89J	10.0	1.00	ug/L
7440-50-8	Copper	20.8	10.0	1.01	ug/L
7439-95-4	Magnesium	64300	100	50.0	ug/L
7439-96-5	Manganese	214	15.0	2.00	ug/L
7439-98-7	Molybdenum	17.8J	50.0	3.75	ug/L
7440-02-0	Nickel	6.24J	40.0	1.13	ug/L
7440-09-7	Potassium	9780	500	100	ug/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211091503	**MA02MW001D**	Water	11/08/2012 13:06	11/09/2012 09:40

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7782-49-2	Selenium	113	40.0	4.42	ug/L
7440-62-2	Vanadium	32.8	20.0	3.75	ug/L
7440-66-6	Zinc	140	20.0	4.51	ug/L

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7440-23-5	Sodium	2060000	10000	2000	ug/L

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7440-36-0	Antimony	4.38J	60.0	3.11	ug/L
7440-39-3	Barium	9.00J	10.0	0.71	ug/L
7440-43-9	Cadmium	0.32J	5.00	0.20	ug/L
7440-70-2	Calcium	107000	100	50.0	ug/L
7440-48-4	Cobalt	1.48J	10.0	1.00	ug/L
7440-50-8	Copper	18.8	10.0	1.01	ug/L
7439-95-4	Magnesium	62400	100	50.0	ug/L
7439-96-5	Manganese	193	15.0	2.00	ug/L
7439-98-7	Molybdenum	16.2J	50.0	3.75	ug/L
7440-02-0	Nickel	4.02J	40.0	1.13	ug/L
7440-09-7	Potassium	9460	500	100	ug/L
7782-49-2	Selenium	106	40.0	4.42	ug/L
7440-62-2	Vanadium	30.4	20.0	3.75	ug/L
7440-66-6	Zinc	114	20.0	4.51	ug/L

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7440-23-5	Sodium	1710000	10000	2000	ug/L

EPA 353.2 Nitrite

CAS#	Parameter	Result	RDL	MDL	Units
14797-65-0	Nitrite	0.015	0.010	0.002	mg/L-N

SM 2540C TDS

CAS#	Parameter	Result	RDL	MDL	Units
WET-035	Total Dissolved Solids(TDS)	5670	10.0		mg/L

EPA 353.2 Nitrate

CAS#	Parameter	Result	RDL	MDL	Units
14797-55-8	Nitrate	5.05	0.100	0.049	mg/L-N

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211091503	**MA02MW001D**	Water	11/08/2012 13:06	11/09/2012 09:40

SM 2320B Alkalinity

CAS#	Parameter	Result	RDL	MDL	Units
000000-00-5	Total Alkalinity	157	1.0	0.19	mg/L CaCO3

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211091504	**MA02MW001D-FD**	Water	11/08/2012 13:06	11/09/2012 09:40

EPA 300.0

CAS#	Parameter	Result	RDL	MDL	Units
16887-00-6	Chloride	1820	100	63.0	mg/L
14808-79-8	Sulfate	2110	200	115	mg/L

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	90.6J	200	60.0	ug/L
7440-36-0	Antimony	3.71J	60.0	3.11	ug/L
7440-39-3	Barium	10.2	10.0	0.71	ug/L
7440-43-9	Cadmium	0.57J	5.00	0.20	ug/L
7440-70-2	Calcium	113000	100	50.0	ug/L
7440-47-3	Chromium	5.30J	10.0	1.00	ug/L
7440-48-4	Cobalt	2.10J	10.0	1.00	ug/L
7440-50-8	Copper	20.9	10.0	1.01	ug/L
7439-95-4	Magnesium	66100	100	50.0	ug/L
7439-96-5	Manganese	221	15.0	2.00	ug/L
7439-98-7	Molybdenum	19.1J	50.0	3.75	ug/L
7440-02-0	Nickel	7.14J	40.0	1.13	ug/L
7440-09-7	Potassium	10200	500	100	ug/L
7782-49-2	Selenium	126	40.0	4.42	ug/L
7440-62-2	Vanadium	32.2	20.0	3.75	ug/L
7440-66-6	Zinc	125	20.0	4.51	ug/L

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7440-23-5	Sodium	2000000	10000	2000	ug/L

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7440-39-3	Barium	9.14J	10.0	0.71	ug/L
7440-43-9	Cadmium	0.79J	5.00	0.20	ug/L
7440-70-2	Calcium	110000	100	50.0	ug/L
7440-48-4	Cobalt	1.77J	10.0	1.00	ug/L
7440-50-8	Copper	17.8	10.0	1.01	ug/L
7439-95-4	Magnesium	64000	100	50.0	ug/L
7439-96-5	Manganese	198	15.0	2.00	ug/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211091504	**MA02MW001D-FD**	Water	11/08/2012 13:06	11/09/2012 09:40

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7439-98-7	Molybdenum	17.2J	50.0	3.75	ug/L
7440-02-0	Nickel	3.95J	40.0	1.13	ug/L
7440-09-7	Potassium	9720	500	100	ug/L
7782-49-2	Selenium	109	40.0	4.42	ug/L
7440-62-2	Vanadium	30.2	20.0	3.75	ug/L
7440-66-6	Zinc	116	20.0	4.51	ug/L

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7440-23-5	Sodium	1880000	10000	2000	ug/L

EPA 353.2 Nitrite

CAS#	Parameter	Result	RDL	MDL	Units
14797-65-0	Nitrite	0.021	0.010	0.002	mg/L-N

EPA 353.2 Nitrate

CAS#	Parameter	Result	RDL	MDL	Units
14797-55-8	Nitrate	4.90	0.100	0.049	mg/L-N

SM 2320B Alkalinity

CAS#	Parameter	Result	RDL	MDL	Units
000000-00-5	Total Alkalinity	158	1.0	0.19	mg/L CaCO3

SM 2540C TDS

CAS#	Parameter	Result	RDL	MDL	Units
WET-035	Total Dissolved Solids(TDS)	5590	10.0		mg/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211091505	**EB-01**	Water	11/08/2012 11:45	11/09/2012 09:40

EPA 300.0

CAS#	Parameter	Result	RDL	MDL	Units
16887-00-6	Chloride	10.8	2.00	1.26	mg/L
14808-79-8	Sulfate	11.5	4.00	2.30	mg/L

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7440-39-3	Barium	11.3	10.0	0.71	ug/L
7440-43-9	Cadmium	0.90J	5.00	0.20	ug/L
7440-70-2	Calcium	1210	100	50.0	ug/L
7440-48-4	Cobalt	1.03J	10.0	1.00	ug/L
7440-50-8	Copper	2.37J	10.0	1.01	ug/L
7439-95-4	Magnesium	78.6J	100	50.0	ug/L
7439-96-5	Manganese	2.46J	15.0	2.00	ug/L
7440-09-7	Potassium	388J	500	100	ug/L

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7440-23-5	Sodium	76100	1000	200	ug/L

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7440-39-3	Barium	12.6	10.0	0.71	ug/L
7440-43-9	Cadmium	0.51J	5.00	0.20	ug/L
7440-70-2	Calcium	1380	100	50.0	ug/L
7440-48-4	Cobalt	1.32J	10.0	1.00	ug/L
7440-50-8	Copper	2.40J	10.0	1.01	ug/L
7439-95-4	Magnesium	75.7J	100	50.0	ug/L
7439-96-5	Manganese	3.72J	15.0	2.00	ug/L
7440-09-7	Potassium	415J	500	100	ug/L
7440-32-6	Titanium	1.46J	100	1.20	ug/L

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7440-23-5	Sodium	83200	1000	200	ug/L

EPA 353.2 Nitrate

CAS#	Parameter	Result	RDL	MDL	Units
14797-55-8	Nitrate	0.345	0.010	0.005	mg/L-N

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211091505	**EB-01**	Water	11/08/2012 11:45	11/09/2012 09:40

SM 2540C TDS

CAS#	Parameter	Result	RDL	MDL	Units
WET-035	**Total Dissolved Solids(TDS)**	**216**	**10.0**		**mg/L**

EPA 353.2 Nitrite

CAS#	Parameter	Result	RDL	MDL	Units
14797-65-0	**Nitrite**	**0.004J**	**0.010**	**0.002**	**mg/L-N**

SM 2320B Alkalinity

CAS#	Parameter	Result	RDL	MDL	Units
000000-00-5	**Total Alkalinity**	**147**	**1.0**	**0.19**	**mg/L CaCO3**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211091501	**MA01MW003**	Water	11/08/2012 10:15	11/09/2012 09:40

Subcontract Work

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/28/2012 08:49	BJM	

CAS#	Parameter	Result	RDL	MDL	Units
SHIP-001	Ship Result	*			mg/L

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/11/2012 13:50	JCK	494370

CAS#	Parameter	Result	RDL	MDL	Units
630-20-6	1,1,1,2-Tetrachloroethane	0.120U	1.00	0.120	ug/L
71-55-6	1,1,1-Trichloroethane	0.123U	1.00	0.123	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.109U	1.00	0.109	ug/L
79-00-5	1,1,2-Trichloroethane	0.159U	1.00	0.159	ug/L
75-34-3	1,1-Dichloroethane	0.171U	1.00	0.171	ug/L
75-35-4	1,1-Dichloroethene	0.208U	1.00	0.208	ug/L
563-58-6	1,1-Dichloropropene	0.052U	1.00	0.052	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.079U	1.00	0.079	ug/L
96-18-4	1,2,3-Trichloropropane	0.065U	1.00	0.065	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.105U	1.00	0.105	ug/L
95-63-6	1,2,4-Trimethylbenzene	0.084U	1.00	0.084	ug/L
96-12-8	1,2-Dibromo-3-chloropropane	0.194U	1.00	0.194	ug/L
106-93-4	1,2-Dibromoethane	0.102U	1.00	0.102	ug/L
95-50-1	1,2-Dichlorobenzene	0.135U	1.00	0.135	ug/L
107-06-2	1,2-Dichloroethane	0.116U	1.00	0.116	ug/L
78-87-5	1,2-Dichloropropane	0.150U	1.00	0.150	ug/L
108-67-8	1,3,5-Trimethylbenzene	0.066U	1.00	0.066	ug/L
541-73-1	1,3-Dichlorobenzene	0.138U	1.00	0.138	ug/L
142-28-9	1,3-Dichloropropane	0.059U	1.00	0.059	ug/L
106-46-7	1,4-Dichlorobenzene	0.083U	1.00	0.083	ug/L
594-20-7	2,2-Dichloropropane	0.170U	1.00	0.170	ug/L
78-93-3	2-Butanone	0.142U	5.00	0.142	ug/L
95-49-8	2-Chlorotoluene	0.080U	1.00	0.080	ug/L
591-78-6	2-Hexanone	0.122U	5.00	0.122	ug/L
106-43-4	4-Chlorotoluene	0.124U	1.00	0.124	ug/L
99-87-6	4-Isopropyltoluene	0.070U	1.00	0.070	ug/L
108-10-1	4-Methyl-2-pentanone	0.120U	5.00	0.120	ug/L
67-64-1	Acetone	0.193U	5.00	0.193	ug/L
71-43-2	Benzene	0.111U	1.00	0.111	ug/L
108-86-1	Bromobenzene	0.145U	1.00	0.145	ug/L
74-97-5	Bromochloromethane	0.127U	1.00	0.127	ug/L
75-27-4	Bromodichloromethane	0.083U	1.00	0.083	ug/L
75-25-2	Bromoform	0.215U	1.00	0.215	ug/L
74-83-9	Bromomethane	0.427U	1.00	0.427	ug/L
75-15-0	Carbon disulfide	0.190U	1.00	0.190	ug/L
56-23-5	Carbon tetrachloride	0.248U	1.00	0.248	ug/L
108-90-7	Chlorobenzene	0.083U	1.00	0.083	ug/L
75-00-3	Chloroethane	0.235U	1.00	0.235	ug/L
67-66-3	Chloroform	0.155U	1.00	0.155	ug/L
74-87-3	Chloromethane	0.144U	1.00	0.144	ug/L
74-95-3	Dibromomethane	0.211U	1.00	0.211	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211091501	**MA01MW003**	Water	11/08/2012 10:15	11/09/2012 09:40

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/11/2012 13:50	JCK	494370

CAS#	Parameter	Result	RDL	MDL	Units
75-71-8	Dichlorodifluoromethane	0.145U	1.00	0.145	ug/L
100-41-4	Ethylbenzene	0.109U	1.00	0.109	ug/L
87-68-3	Hexachlorobutadiene	0.265U	1.00	0.265	ug/L
98-82-8	Isopropylbenzene (Cumene)	0.130U	1.00	0.130	ug/L
75-09-2	Methylene chloride	0.149U	5.00	0.149	ug/L
91-20-3	Naphthalene	0.176U	1.00	0.176	ug/L
100-42-5	Styrene	0.089U	1.00	0.089	ug/L
127-18-4	Tetrachloroethene	0.193U	1.00	0.193	ug/L
108-88-3	Toluene	0.122U	1.00	0.122	ug/L
79-01-6	Trichloroethene	0.161U	1.00	0.161	ug/L
75-69-4	Trichlorofluoromethane	0.157U	1.00	0.157	ug/L
75-01-4	Vinyl chloride	0.127U	1.00	0.127	ug/L
156-59-2	cis-1,2-Dichloroethene	0.103U	1.00	0.103	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.124U	1.00	0.124	ug/L
136777-61-2	m,p-Xylene	0.123U	2.00	0.123	ug/L
104-51-8	n-Butylbenzene	0.123U	1.00	0.123	ug/L
103-65-1	n-Propylbenzene	0.727U	1.00	0.727	ug/L
95-47-6	o-Xylene	0.055U	1.00	0.055	ug/L
135-98-8	sec-Butylbenzene	0.107U	1.00	0.107	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.078U	5.00	0.078	ug/L
98-06-6	tert-Butylbenzene	0.087U	1.00	0.087	ug/L
156-60-5	trans-1,2-Dichloroethene	0.077U	1.00	0.077	ug/L
10061-02-6	trans-1,3-Dichloropropene	0.128U	1.00	0.128	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	49.9	ug/L	100	75 - 120
1868-53-7	Dibromofluoromethane	50	50.6	ug/L	101	85 - 115
2037-26-5	Toluene d8	50	48.7	ug/L	97	85 - 120
17060-07-0	1,2-Dichloroethane-d4	50	52.7	ug/L	105	70 - 120

SW-846 8330A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/13/2012 04:30	494270	SW-846 8330A	1	11/15/2012 17:15	JWM	494679

CAS#	Parameter	Result	RDL	MDL	Units
99-35-4	1,3,5-Trinitrobenzene	0.240U	0.500	0.240	ug/L
99-65-0	1,3-Dinitrobenzene	0.167U	0.500	0.167	ug/L
118-96-7	2,4,6-Trinitrotoluene	0.483U	1.00	0.483	ug/L
121-14-2	2,4-Dinitrotoluene	0.501U	1.00	0.501	ug/L
606-20-2	2,6-Dinitrotoluene	0.283U	1.00	0.283	ug/L
355-72-78-2	2-Amino-4,6-dinitrotoluene	0.576U	1.00	0.576	ug/L
88-72-2	2-Nitrotoluene	0.120U	0.500	0.120	ug/L
99-08-1	3-Nitrotoluene	0.369U	1.00	0.369	ug/L
1946-51-0	4-Amino-2,6-dinitrotoluene	0.489U	1.00	0.489	ug/L
99-99-0	4-Nitrotoluene	0.417U	1.00	0.417	ug/L
2691-41-0	HMX	0.212U	0.500	0.212	ug/L
98-95-3	Nitrobenzene	0.267U	0.500	0.267	ug/L
121-82-4	RDX	0.189U	0.500	0.189	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211091501	**MA01MW003**	Water	11/08/2012 10:15	11/09/2012 09:40

SW-846 8330A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/13/2012 04:30	494270	SW-846 8330A	1	11/15/2012 17:15	JWM	494679

CAS#	Parameter	Result	RDL	MDL	Units
479-45-8	Tetryl	0.241U	0.500	0.241	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
528-29-0	1,2-Dinitrobenzene	2	1.55	ug/L	78	70 - 130

SW-846 7470A Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/10/2012 12:35	494316	SW-846 7470A Dissolved	1	11/14/2012 12:44	CLB	494561

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	0.068U	0.20	0.068	ug/L

SW-846 7470A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/10/2012 12:35	494316	SW-846 7470A	1	11/14/2012 12:37	CLB	494561

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	0.068U	0.20	0.068	ug/L

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/10/2012 12:35	494315	SW-846 3010A	1	11/13/2012 20:52	BNB	494546

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	**Aluminum**	**81.6J**	**200**	**60.0**	**ug/L**
7440-36-0	Antimony	3.11U	60.0	3.11	ug/L
7440-38-2	Arsenic	3.59U	10.0	3.59	ug/L
7440-39-3	**Barium**	**19.8**	**10.0**	**0.71**	**ug/L**
7440-41-7	Beryllium	0.10U	5.00	0.10	ug/L
7440-43-9	**Cadmium**	**0.63J**	**5.00**	**0.20**	**ug/L**
7440-70-2	**Calcium**	**59800**	**100**	**50.0**	**ug/L**
7440-47-3	**Chromium**	**13.0**	**10.0**	**1.00**	**ug/L**
7440-48-4	**Cobalt**	**1.46J**	**10.0**	**1.00**	**ug/L**
7440-50-8	**Copper**	**11.6**	**10.0**	**1.01**	**ug/L**
7439-89-6	**Iron**	**79.6J**	**100**	**40.0**	**ug/L**
7439-95-4	**Magnesium**	**60100**	**100**	**50.0**	**ug/L**
7439-96-5	Manganese	2.00U	15.0	2.00	ug/L
7439-98-7	**Molybdenum**	**5.45J**	**50.0**	**3.75**	**ug/L**
7440-02-0	**Nickel**	**8.51J**	**40.0**	**1.13**	**ug/L**
7440-09-7	**Potassium**	**8440**	**500**	**100**	**ug/L**
7782-49-2	Selenium	4.42U	40.0	4.42	ug/L
7440-22-4	Silver	0.70U	10.0	0.70	ug/L
7440-28-0	Thallium	3.04U	20.0	3.04	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211091501	**MA01MW003**	Water	11/08/2012 10:15	11/09/2012 09:40

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/10/2012 12:35	494315	SW-846 3010A	1	11/13/2012 20:52	BNB	494546

CAS#	Parameter	Result	RDL	MDL	Units
7440-32-6	**Titanium**	**1.40J**	**100**	**1.20**	**ug/L**
7440-62-2	**Vanadium**	**36.4**	**20.0**	**3.75**	**ug/L**
7440-66-6	**Zinc**	**13.1J**	**20.0**	**4.51**	**ug/L**

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/10/2012 12:35	494315	SW-846 3010A	1	11/16/2012 18:49	CLB	494786

CAS#	Parameter	Result	RDL	MDL	Units
7439-92-1	Lead	1.96U	15.0	1.96	ug/L
7440-23-5	**Sodium**	**480000**	**1000**	**200**	**ug/L**

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/10/2012 12:35	494317	SW-846 3005 Dissolved	1	11/13/2012 18:40	BNB	494546

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	60.0U	200	60.0	ug/L
7440-36-0	Antimony	3.11U	60.0	3.11	ug/L
7440-38-2	Arsenic	3.59U	10.0	3.59	ug/L
7440-39-3	**Barium**	**19.2**	**10.0**	**0.71**	**ug/L**
7440-41-7	Beryllium	0.10U	5.00	0.10	ug/L
7440-43-9	**Cadmium**	**0.64J**	**5.00**	**0.20**	**ug/L**
7440-70-2	**Calcium**	**61300**	**100**	**50.0**	**ug/L**
7440-47-3	**Chromium**	**1.12J**	**10.0**	**1.00**	**ug/L**
7440-48-4	Cobalt	1.00U	10.0	1.00	ug/L
7440-50-8	**Copper**	**11.6**	**10.0**	**1.01**	**ug/L**
7439-89-6	Iron	40.0U	100	40.0	ug/L
7439-95-4	**Magnesium**	**61900**	**100**	**50.0**	**ug/L**
7439-96-5	Manganese	2.00U	15.0	2.00	ug/L
7439-98-7	**Molybdenum**	**5.53J**	**50.0**	**3.75**	**ug/L**
7440-02-0	**Nickel**	**1.44J**	**40.0**	**1.13**	**ug/L**
7440-09-7	**Potassium**	**8450**	**500**	**100**	**ug/L**
7782-49-2	Selenium	4.42U	40.0	4.42	ug/L
7440-22-4	Silver	0.70U	10.0	0.70	ug/L
7440-28-0	Thallium	3.04U	20.0	3.04	ug/L
7440-32-6	Titanium	1.20U	100	1.20	ug/L
7440-62-2	**Vanadium**	**35.5**	**20.0**	**3.75**	**ug/L**
7440-66-6	**Zinc**	**26.5**	**20.0**	**4.51**	**ug/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211091501	**MA01MW003**	Water	11/08/2012 10:15	11/09/2012 09:40

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/10/2012 12:35	494317	SW-846 3005 Dissolved	1	11/16/2012 15:58	CLB	494786

CAS#	Parameter	Result	RDL	MDL	Units
7439-92-1	Lead	1.96U	15.0	1.96	ug/L
7440-23-5	**Sodium**	**475000**	**1000**	**200**	**ug/L**

SM 2540C TDS

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/12/2012 08:30	DJH	494398

CAS#	Parameter	Result	RDL	MDL	Units
WET-035	**Total Dissolved Solids(TDS)**	**1780**	**10.0**		**mg/L**

EPA 353.2 Nitrite

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/09/2012 15:49	AEL	494283

CAS#	Parameter	Result	RDL	MDL	Units
14797-65-0	**Nitrite**	**0.011**	**0.010**	**0.002**	**mg/L-N**

EPA 353.2 Nitrate

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/09/2012 16:08	AEL	494282

CAS#	Parameter	Result	RDL	MDL	Units
14797-55-8	**Nitrate**	**0.214**	**0.010**	**0.005**	**mg/L-N**

EPA 300.0

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			500	11/14/2012 13:46	AEL	494605

CAS#	Parameter	Result	RDL	MDL	Units
16887-00-6	**Chloride**	**531**	**50.0**	**31.5**	**mg/L**
14808-79-8	**Sulfate**	**599**	**100**	**57.5**	**mg/L**

SM 2320B Alkalinity

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/09/2012 11:15	DNM	494276

CAS#	Parameter	Result	RDL	MDL	Units
000000-00-5	**Total Alkalinity**	**166**	**1.0**	**0.19**	**mg/L CaCO3**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211091501	**MA01MW003**	Water	11/08/2012 10:15	11/09/2012 09:40

SW-846 7196A Chromium VI

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/09/2012 10:17	JEM	494263

CAS#	Parameter	Result	RDL	MDL	Units
18540-29-9	Chromium VI	4.00U	10.0	4.00	ug/L

SW-846 9012A Cyanide

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/10/2012 06:00	494328	SW-846 9012A	1	11/12/2012 16:03	AEL	494463

CAS#	Parameter	Result	RDL	MDL	Units
57-12-5	Total Cyanide	0.0012U	0.0050	0.0012	mg/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211091502	**TB-06**	Water	11/08/2012 10:15	11/09/2012 09:40

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/11/2012 14:10	LBH	494370

CAS#	Parameter	Result	RDL	MDL	Units
630-20-6	1,1,1,2-Tetrachloroethane	0.120U	1.00	0.120	ug/L
71-55-6	1,1,1-Trichloroethane	0.123U	1.00	0.123	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.109U	1.00	0.109	ug/L
79-00-5	1,1,2-Trichloroethane	0.159U	1.00	0.159	ug/L
75-34-3	1,1-Dichloroethane	0.171U	1.00	0.171	ug/L
75-35-4	1,1-Dichloroethene	0.208U	1.00	0.208	ug/L
563-58-6	1,1-Dichloropropene	0.052U	1.00	0.052	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.079U	1.00	0.079	ug/L
96-18-4	1,2,3-Trichloropropane	0.065U	1.00	0.065	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.105U	1.00	0.105	ug/L
95-63-6	1,2,4-Trimethylbenzene	0.084U	1.00	0.084	ug/L
96-12-8	1,2-Dibromo-3-chloropropane	0.194U	1.00	0.194	ug/L
106-93-4	1,2-Dibromoethane	0.102U	1.00	0.102	ug/L
95-50-1	1,2-Dichlorobenzene	0.135U	1.00	0.135	ug/L
107-06-2	1,2-Dichloroethane	0.116U	1.00	0.116	ug/L
78-87-5	1,2-Dichloropropane	0.150U	1.00	0.150	ug/L
108-67-8	1,3,5-Trimethylbenzene	0.066U	1.00	0.066	ug/L
541-73-1	1,3-Dichlorobenzene	0.138U	1.00	0.138	ug/L
142-28-9	1,3-Dichloropropane	0.059U	1.00	0.059	ug/L
106-46-7	1,4-Dichlorobenzene	0.083U	1.00	0.083	ug/L
594-20-7	2,2-Dichloropropane	0.170U	1.00	0.170	ug/L
78-93-3	2-Butanone	0.142U	5.00	0.142	ug/L
95-49-8	2-Chlorotoluene	0.080U	1.00	0.080	ug/L
591-78-6	2-Hexanone	0.122U	5.00	0.122	ug/L
106-43-4	4-Chlorotoluene	0.124U	1.00	0.124	ug/L
99-87-6	4-Isopropyltoluene	0.070U	1.00	0.070	ug/L
108-10-1	4-Methyl-2-pentanone	0.120U	5.00	0.120	ug/L
67-64-1	Acetone	0.193U	5.00	0.193	ug/L
71-43-2	Benzene	0.111U	1.00	0.111	ug/L
108-86-1	Bromobenzene	0.145U	1.00	0.145	ug/L
74-97-5	Bromochloromethane	0.127U	1.00	0.127	ug/L
75-27-4	Bromodichloromethane	0.083U	1.00	0.083	ug/L
75-25-2	Bromoform	0.215U	1.00	0.215	ug/L
74-83-9	Bromomethane	0.427U	1.00	0.427	ug/L
75-15-0	Carbon disulfide	0.190U	1.00	0.190	ug/L
56-23-5	Carbon tetrachloride	0.248U	1.00	0.248	ug/L
108-90-7	Chlorobenzene	0.083U	1.00	0.083	ug/L
75-00-3	Chloroethane	0.235U	1.00	0.235	ug/L
67-66-3	Chloroform	0.155U	1.00	0.155	ug/L
74-87-3	Chloromethane	0.144U	1.00	0.144	ug/L
74-95-3	Dibromomethane	0.211U	1.00	0.211	ug/L
75-71-8	Dichlorodifluoromethane	0.145U	1.00	0.145	ug/L
100-41-4	Ethylbenzene	0.109U	1.00	0.109	ug/L
87-68-3	Hexachlorobutadiene	0.265U	1.00	0.265	ug/L
98-82-8	Isopropylbenzene (Cumene)	0.130U	1.00	0.130	ug/L
75-09-2	Methylene chloride	0.149U	5.00	0.149	ug/L
91-20-3	Naphthalene	0.176U	1.00	0.176	ug/L
100-42-5	Styrene	0.089U	1.00	0.089	ug/L
127-18-4	Tetrachloroethene	0.193U	1.00	0.193	ug/L
108-88-3	Toluene	0.122U	1.00	0.122	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211091502	**TB-06**	Water	11/08/2012 10:15	11/09/2012 09:40

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/11/2012 14:10	LBH	494370

CAS#	Parameter	Result	RDL	MDL	Units
79-01-6	Trichloroethene	0.161U	1.00	0.161	ug/L
75-69-4	Trichlorofluoromethane	0.157U	1.00	0.157	ug/L
75-01-4	Vinyl chloride	0.127U	1.00	0.127	ug/L
156-59-2	cis-1,2-Dichloroethene	0.103U	1.00	0.103	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.124U	1.00	0.124	ug/L
136777-61-2	m,p-Xylene	0.123U	2.00	0.123	ug/L
104-51-8	n-Butylbenzene	0.123U	1.00	0.123	ug/L
103-65-1	n-Propylbenzene	0.727U	1.00	0.727	ug/L
95-47-6	o-Xylene	0.055U	1.00	0.055	ug/L
135-98-8	sec-Butylbenzene	0.107U	1.00	0.107	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.078U	5.00	0.078	ug/L
98-06-6	tert-Butylbenzene	0.087U	1.00	0.087	ug/L
156-60-5	trans-1,2-Dichloroethene	0.077U	1.00	0.077	ug/L
10061-02-6	trans-1,3-Dichloropropene	0.128U	1.00	0.128	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	51.1	ug/L	102	75 - 120
1868-53-7	Dibromofluoromethane	50	50.5	ug/L	101	85 - 115
2037-26-5	Toluene d8	50	49.3	ug/L	99	85 - 120
17060-07-0	1,2-Dichloroethane-d4	50	52.9	ug/L	106	70 - 120

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211091503	**MA02MW001D**	Water	11/08/2012 13:06	11/09/2012 09:40

Subcontract Work

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/28/2012 08:50	BJM	

CAS#	Parameter	Result	RDL	MDL	Units
SHIP-001	Ship Result	*			mg/L

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/11/2012 03:36	LBH	494361

CAS#	Parameter	Result	RDL	MDL	Units
630-20-6	1,1,1,2-Tetrachloroethane	0.120U	1.00	0.120	ug/L
71-55-6	1,1,1-Trichloroethane	0.123U	1.00	0.123	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.109U	1.00	0.109	ug/L
79-00-5	1,1,2-Trichloroethane	0.159U	1.00	0.159	ug/L
75-34-3	1,1-Dichloroethane	0.171U	1.00	0.171	ug/L
75-35-4	1,1-Dichloroethene	0.208U	1.00	0.208	ug/L
563-58-6	1,1-Dichloropropene	0.052U	1.00	0.052	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.079U	1.00	0.079	ug/L
96-18-4	1,2,3-Trichloropropane	0.065U	1.00	0.065	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.105U	1.00	0.105	ug/L
95-63-6	1,2,4-Trimethylbenzene	0.084U	1.00	0.084	ug/L
96-12-8	1,2-Dibromo-3-chloropropane	0.194U	1.00	0.194	ug/L
106-93-4	1,2-Dibromoethane	0.102U	1.00	0.102	ug/L
95-50-1	1,2-Dichlorobenzene	0.135U	1.00	0.135	ug/L
107-06-2	1,2-Dichloroethane	0.116U	1.00	0.116	ug/L
78-87-5	1,2-Dichloropropane	0.150U	1.00	0.150	ug/L
108-67-8	1,3,5-Trimethylbenzene	0.066U	1.00	0.066	ug/L
541-73-1	1,3-Dichlorobenzene	0.138U	1.00	0.138	ug/L
142-28-9	1,3-Dichloropropane	0.059U	1.00	0.059	ug/L
106-46-7	1,4-Dichlorobenzene	0.083U	1.00	0.083	ug/L
594-20-7	2,2-Dichloropropane	0.170U	1.00	0.170	ug/L
78-93-3	2-Butanone	0.142U	5.00	0.142	ug/L
95-49-8	2-Chlorotoluene	0.080U	1.00	0.080	ug/L
591-78-6	2-Hexanone	0.122U	5.00	0.122	ug/L
106-43-4	4-Chlorotoluene	0.124U	1.00	0.124	ug/L
99-87-6	4-Isopropyltoluene	0.070U	1.00	0.070	ug/L
108-10-1	4-Methyl-2-pentanone	0.120U	5.00	0.120	ug/L
67-64-1	Acetone	0.193U	5.00	0.193	ug/L
71-43-2	Benzene	0.111U	1.00	0.111	ug/L
108-86-1	Bromobenzene	0.145U	1.00	0.145	ug/L
74-97-5	Bromochloromethane	0.127U	1.00	0.127	ug/L
75-27-4	Bromodichloromethane	0.083U	1.00	0.083	ug/L
75-25-2	Bromoform	0.215U	1.00	0.215	ug/L
74-83-9	Bromomethane	0.427U	1.00	0.427	ug/L
75-15-0	Carbon disulfide	0.190U	1.00	0.190	ug/L
56-23-5	Carbon tetrachloride	0.248U	1.00	0.248	ug/L
108-90-7	Chlorobenzene	0.083U	1.00	0.083	ug/L
75-00-3	Chloroethane	0.235U	1.00	0.235	ug/L
67-66-3	Chloroform	0.155U	1.00	0.155	ug/L
74-87-3	Chloromethane	0.144U	1.00	0.144	ug/L
74-95-3	Dibromomethane	0.211U	1.00	0.211	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211091503	**MA02MW001D**	Water	11/08/2012 13:06	11/09/2012 09:40

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/11/2012 03:36	LBH	494361

CAS#	Parameter	Result	RDL	MDL	Units
75-71-8	Dichlorodifluoromethane	0.145U	1.00	0.145	ug/L
100-41-4	Ethylbenzene	0.109U	1.00	0.109	ug/L
87-68-3	Hexachlorobutadiene	0.265U	1.00	0.265	ug/L
98-82-8	Isopropylbenzene (Cumene)	0.130U	1.00	0.130	ug/L
75-09-2	Methylene chloride	0.149U	5.00	0.149	ug/L
91-20-3	Naphthalene	0.176U	1.00	0.176	ug/L
100-42-5	Styrene	0.089U	1.00	0.089	ug/L
127-18-4	Tetrachloroethene	0.193U	1.00	0.193	ug/L
108-88-3	Toluene	0.122U	1.00	0.122	ug/L
79-01-6	Trichloroethene	0.161U	1.00	0.161	ug/L
75-69-4	Trichlorofluoromethane	0.157U	1.00	0.157	ug/L
75-01-4	Vinyl chloride	0.127U	1.00	0.127	ug/L
156-59-2	cis-1,2-Dichloroethene	0.103U	1.00	0.103	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.124U	1.00	0.124	ug/L
136777-61-2	m,p-Xylene	0.123U	2.00	0.123	ug/L
104-51-8	n-Butylbenzene	0.123U	1.00	0.123	ug/L
103-65-1	n-Propylbenzene	0.727U	1.00	0.727	ug/L
95-47-6	o-Xylene	0.055U	1.00	0.055	ug/L
135-98-8	sec-Butylbenzene	0.107U	1.00	0.107	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.078U	5.00	0.078	ug/L
98-06-6	tert-Butylbenzene	0.087U	1.00	0.087	ug/L
156-60-5	trans-1,2-Dichloroethene	0.077U	1.00	0.077	ug/L
10061-02-6	trans-1,3-Dichloropropene	0.128U	1.00	0.128	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	51.2	ug/L	102	75 - 120
1868-53-7	Dibromofluoromethane	50	50.4	ug/L	101	85 - 115
2037-26-5	Toluene d8	50	49.6	ug/L	99	85 - 120
17060-07-0	1,2-Dichloroethane-d4	50	52.1	ug/L	104	70 - 120

SW-846 8330A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/13/2012 04:30	494270	SW-846 8330A	1	11/15/2012 13:52	JWM	494679

CAS#	Parameter	Result	RDL	MDL	Units
99-35-4	1,3,5-Trinitrobenzene	0.240U	0.500	0.240	ug/L
99-65-0	1,3-Dinitrobenzene	0.167U	0.500	0.167	ug/L
118-96-7	2,4,6-Trinitrotoluene	0.483U	1.00	0.483	ug/L
121-14-2	2,4-Dinitrotoluene	0.501U	1.00	0.501	ug/L
606-20-2	2,6-Dinitrotoluene	0.283U	1.00	0.283	ug/L
355-72-78-2	2-Amino-4,6-dinitrotoluene	0.576U	1.00	0.576	ug/L
88-72-2	2-Nitrotoluene	0.120U	0.500	0.120	ug/L
99-08-1	3-Nitrotoluene	0.369U	1.00	0.369	ug/L
1946-51-0	4-Amino-2,6-dinitrotoluene	0.489U	1.00	0.489	ug/L
99-99-0	4-Nitrotoluene	0.417U	1.00	0.417	ug/L
2691-41-0	HMX	0.212U	0.500	0.212	ug/L
98-95-3	Nitrobenzene	0.267U	0.500	0.267	ug/L
121-82-4	RDX	0.189U	0.500	0.189	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211091503	**MA02MW001D**	Water	11/08/2012 13:06	11/09/2012 09:40

SW-846 8330A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/13/2012 04:30	494270	SW-846 8330A	1	11/15/2012 13:52	JWM	494679

CAS#	Parameter	Result	RDL	MDL	Units
479-45-8	Tetryl	0.241U	0.500	0.241	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
528-29-0	1,2-Dinitrobenzene	2	1.92	ug/L	96	70 - 130

SW-846 7470A Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/10/2012 12:35	494316	SW-846 7470A Dissolved	1	11/14/2012 12:45	CLB	494561

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	0.068U	0.20	0.068	ug/L

SW-846 7470A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/10/2012 12:35	494316	SW-846 7470A	1	11/14/2012 12:50	CLB	494561

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	0.068U	0.20	0.068	ug/L

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/10/2012 12:35	494315	SW-846 3010A	1	11/13/2012 21:00	BNB	494546

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	**Aluminum**	**68.2J**	**200**	**60.0**	**ug/L**
7440-36-0	**Antimony**	**4.69J**	**60.0**	**3.11**	**ug/L**
7440-38-2	Arsenic	3.59U	10.0	3.59	ug/L
7440-39-3	**Barium**	**10.2**	**10.0**	**0.71**	**ug/L**
7440-41-7	Beryllium	0.10U	5.00	0.10	ug/L
7440-43-9	**Cadmium**	**0.37J**	**5.00**	**0.20**	**ug/L**
7440-70-2	**Calcium**	**110000**	**100**	**50.0**	**ug/L**
7440-47-3	**Chromium**	**5.11J**	**10.0**	**1.00**	**ug/L**
7440-48-4	**Cobalt**	**1.89J**	**10.0**	**1.00**	**ug/L**
7440-50-8	**Copper**	**20.8**	**10.0**	**1.01**	**ug/L**
7439-89-6	Iron	40.0U	100	40.0	ug/L
7439-95-4	**Magnesium**	**64300**	**100**	**50.0**	**ug/L**
7439-96-5	**Manganese**	**214**	**15.0**	**2.00**	**ug/L**
7439-98-7	**Molybdenum**	**17.8J**	**50.0**	**3.75**	**ug/L**
7440-02-0	**Nickel**	**6.24J**	**40.0**	**1.13**	**ug/L**
7440-09-7	**Potassium**	**9780**	**500**	**100**	**ug/L**
7782-49-2	**Selenium**	**113**	**40.0**	**4.42**	**ug/L**
7440-22-4	Silver	0.70U	10.0	0.70	ug/L
7440-28-0	Thallium	3.04U	20.0	3.04	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211091503	**MA02MW001D**	Water	11/08/2012 13:06	11/09/2012 09:40

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/10/2012 12:35	494315	SW-846 3010A	1	11/13/2012 21:00	BNB	494546

CAS#	Parameter	Result	RDL	MDL	Units
7440-32-6	Titanium	1.20U	100	1.20	ug/L
7440-62-2	**Vanadium**	**32.8**	**20.0**	**3.75**	**ug/L**
7440-66-6	**Zinc**	**140**	**20.0**	**4.51**	**ug/L**

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/10/2012 12:35	494315	SW-846 3010A	10	11/14/2012 18:15	BNB	494810

CAS#	Parameter	Result	RDL	MDL	Units
7440-23-5	**Sodium**	**2060000**	**10000**	**2000**	**ug/L**

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/10/2012 12:35	494315	SW-846 3010A	1	11/16/2012 18:56	CLB	494786

CAS#	Parameter	Result	RDL	MDL	Units
7439-92-1	Lead	1.96U	15.0	1.96	ug/L

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/10/2012 12:35	494317	SW-846 3005 Dissolved	1	11/13/2012 19:29	BNB	494546

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	60.0U	200	60.0	ug/L
7440-36-0	**Antimony**	**4.38J**	**60.0**	**3.11**	**ug/L**
7440-38-2	Arsenic	3.59U	10.0	3.59	ug/L
7440-39-3	**Barium**	**9.00J**	**10.0**	**0.71**	**ug/L**
7440-41-7	Beryllium	0.10U	5.00	0.10	ug/L
7440-43-9	**Cadmium**	**0.32J**	**5.00**	**0.20**	**ug/L**
7440-70-2	**Calcium**	**107000**	**100**	**50.0**	**ug/L**
7440-47-3	Chromium	1.00U	10.0	1.00	ug/L
7440-48-4	**Cobalt**	**1.48J**	**10.0**	**1.00**	**ug/L**
7440-50-8	**Copper**	**18.8**	**10.0**	**1.01**	**ug/L**
7439-89-6	Iron	40.0U	100	40.0	ug/L
7439-95-4	**Magnesium**	**62400**	**100**	**50.0**	**ug/L**
7439-96-5	**Manganese**	**193**	**15.0**	**2.00**	**ug/L**
7439-98-7	**Molybdenum**	**16.2J**	**50.0**	**3.75**	**ug/L**
7440-02-0	**Nickel**	**4.02J**	**40.0**	**1.13**	**ug/L**
7440-09-7	**Potassium**	**9460**	**500**	**100**	**ug/L**
7782-49-2	**Selenium**	**106**	**40.0**	**4.42**	**ug/L**
7440-22-4	Silver	0.70U	10.0	0.70	ug/L
7440-28-0	Thallium	3.04U	20.0	3.04	ug/L
7440-32-6	Titanium	1.20U	100	1.20	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211091503	**MA02MW001D**	Water	11/08/2012 13:06	11/09/2012 09:40

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/10/2012 12:35	494317	SW-846 3005 Dissolved	1	11/13/2012 19:29	BNB	494546

CAS#	Parameter	Result	RDL	MDL	Units
7440-62-2	**Vanadium**	**30.4**	**20.0**	**3.75**	**ug/L**
7440-66-6	**Zinc**	**114**	**20.0**	**4.51**	**ug/L**

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/10/2012 12:35	494317	SW-846 3005 Dissolved	10	11/14/2012 17:03	BNB	494810

CAS#	Parameter	Result	RDL	MDL	Units
7440-23-5	**Sodium**	**1710000**	**10000**	**2000**	**ug/L**

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/10/2012 12:35	494317	SW-846 3005 Dissolved	1	11/16/2012 16:18	CLB	494786

CAS#	Parameter	Result	RDL	MDL	Units
7439-92-1	Lead	1.96U	15.0	1.96	ug/L

SM 2540C TDS

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/12/2012 08:30	DJH	494398

CAS#	Parameter	Result	RDL	MDL	Units
WET-035	**Total Dissolved Solids(TDS)**	**5670**	**10.0**		**mg/L**

EPA 353.2 Nitrite

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/09/2012 15:53	AEL	494283

CAS#	Parameter	Result	RDL	MDL	Units
14797-65-0	**Nitrite**	**0.015**	**0.010**	**0.002**	**mg/L-N**

EPA 353.2 Nitrate

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			10	11/09/2012 16:28	AEL	494282

CAS#	Parameter	Result	RDL	MDL	Units
14797-55-8	**Nitrate**	**5.05**	**0.100**	**0.049**	**mg/L-N**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211091503	**MA02MW001D**	Water	11/08/2012 13:06	11/09/2012 09:40

EPA 300.0

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1000	11/14/2012 14:03	AEL	494605

CAS#	Parameter	Result	RDL	MDL	Units
16887-00-6	**Chloride**	**1780**	**100**	**63.0**	**mg/L**
14808-79-8	**Sulfate**	**2080**	**200**	**115**	**mg/L**

SM 2320B Alkalinity

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/09/2012 11:15	DNM	494276

CAS#	Parameter	Result	RDL	MDL	Units
000000-00-5	**Total Alkalinity**	**157**	**1.0**	**0.19**	**mg/L CaCO3**

SW-846 7196A Chromium VI

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/09/2012 11:01	JEM	494263

CAS#	Parameter	Result	RDL	MDL	Units
18540-29-9	Chromium VI	4.00U	10.0	4.00	ug/L

SW-846 9012A Cyanide

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/10/2012 06:00	494328	SW-846 9012A	1	11/12/2012 16:04	AEL	494463

CAS#	Parameter	Result	RDL	MDL	Units
57-12-5	Total Cyanide	0.0012U	0.0050	0.0012	mg/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211091504	**MA02MW001D-FD**	Water	11/08/2012 13:06	11/09/2012 09:40

Subcontract Work

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/28/2012 08:50	BJM	

CAS#	Parameter	Result	RDL	MDL	Units
SHIP-001	Ship Result	*			mg/L

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/11/2012 03:55	LBH	494361

CAS#	Parameter	Result	RDL	MDL	Units
630-20-6	1,1,1,2-Tetrachloroethane	0.120U	1.00	0.120	ug/L
71-55-6	1,1,1-Trichloroethane	0.123U	1.00	0.123	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.109U	1.00	0.109	ug/L
79-00-5	1,1,2-Trichloroethane	0.159U	1.00	0.159	ug/L
75-34-3	1,1-Dichloroethane	0.171U	1.00	0.171	ug/L
75-35-4	1,1-Dichloroethene	0.208U	1.00	0.208	ug/L
563-58-6	1,1-Dichloropropene	0.052U	1.00	0.052	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.079U	1.00	0.079	ug/L
96-18-4	1,2,3-Trichloropropane	0.065U	1.00	0.065	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.105U	1.00	0.105	ug/L
95-63-6	1,2,4-Trimethylbenzene	0.084U	1.00	0.084	ug/L
96-12-8	1,2-Dibromo-3-chloropropane	0.194U	1.00	0.194	ug/L
106-93-4	1,2-Dibromoethane	0.102U	1.00	0.102	ug/L
95-50-1	1,2-Dichlorobenzene	0.135U	1.00	0.135	ug/L
107-06-2	1,2-Dichloroethane	0.116U	1.00	0.116	ug/L
78-87-5	1,2-Dichloropropane	0.150U	1.00	0.150	ug/L
108-67-8	1,3,5-Trimethylbenzene	0.066U	1.00	0.066	ug/L
541-73-1	1,3-Dichlorobenzene	0.138U	1.00	0.138	ug/L
142-28-9	1,3-Dichloropropane	0.059U	1.00	0.059	ug/L
106-46-7	1,4-Dichlorobenzene	0.083U	1.00	0.083	ug/L
594-20-7	2,2-Dichloropropane	0.170U	1.00	0.170	ug/L
78-93-3	2-Butanone	0.142U	5.00	0.142	ug/L
95-49-8	2-Chlorotoluene	0.080U	1.00	0.080	ug/L
591-78-6	2-Hexanone	0.122U	5.00	0.122	ug/L
106-43-4	4-Chlorotoluene	0.124U	1.00	0.124	ug/L
99-87-6	4-Isopropyltoluene	0.070U	1.00	0.070	ug/L
108-10-1	4-Methyl-2-pentanone	0.120U	5.00	0.120	ug/L
67-64-1	Acetone	0.193U	5.00	0.193	ug/L
71-43-2	Benzene	0.111U	1.00	0.111	ug/L
108-86-1	Bromobenzene	0.145U	1.00	0.145	ug/L
74-97-5	Bromochloromethane	0.127U	1.00	0.127	ug/L
75-27-4	Bromodichloromethane	0.083U	1.00	0.083	ug/L
75-25-2	Bromoform	0.215U	1.00	0.215	ug/L
74-83-9	Bromomethane	0.427U	1.00	0.427	ug/L
75-15-0	Carbon disulfide	0.190U	1.00	0.190	ug/L
56-23-5	Carbon tetrachloride	0.248U	1.00	0.248	ug/L
108-90-7	Chlorobenzene	0.083U	1.00	0.083	ug/L
75-00-3	Chloroethane	0.235U	1.00	0.235	ug/L
67-66-3	Chloroform	0.155U	1.00	0.155	ug/L
74-87-3	Chloromethane	0.144U	1.00	0.144	ug/L
74-95-3	Dibromomethane	0.211U	1.00	0.211	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211091504	**MA02MW001D-FD**	Water	11/08/2012 13:06	11/09/2012 09:40

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/11/2012 03:55	LBH	494361

CAS#	Parameter	Result	RDL	MDL	Units
75-71-8	Dichlorodifluoromethane	0.145U	1.00	0.145	ug/L
100-41-4	Ethylbenzene	0.109U	1.00	0.109	ug/L
87-68-3	Hexachlorobutadiene	0.265U	1.00	0.265	ug/L
98-82-8	Isopropylbenzene (Cumene)	0.130U	1.00	0.130	ug/L
75-09-2	Methylene chloride	0.149U	5.00	0.149	ug/L
91-20-3	Naphthalene	0.176U	1.00	0.176	ug/L
100-42-5	Styrene	0.089U	1.00	0.089	ug/L
127-18-4	Tetrachloroethene	0.193U	1.00	0.193	ug/L
108-88-3	Toluene	0.122U	1.00	0.122	ug/L
79-01-6	Trichloroethene	0.161U	1.00	0.161	ug/L
75-69-4	Trichlorofluoromethane	0.157U	1.00	0.157	ug/L
75-01-4	Vinyl chloride	0.127U	1.00	0.127	ug/L
156-59-2	cis-1,2-Dichloroethene	0.103U	1.00	0.103	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.124U	1.00	0.124	ug/L
136777-61-2	m,p-Xylene	0.123U	2.00	0.123	ug/L
104-51-8	n-Butylbenzene	0.123U	1.00	0.123	ug/L
103-65-1	n-Propylbenzene	0.727U	1.00	0.727	ug/L
95-47-6	o-Xylene	0.055U	1.00	0.055	ug/L
135-98-8	sec-Butylbenzene	0.107U	1.00	0.107	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.078U	5.00	0.078	ug/L
98-06-6	tert-Butylbenzene	0.087U	1.00	0.087	ug/L
156-60-5	trans-1,2-Dichloroethene	0.077U	1.00	0.077	ug/L
10061-02-6	trans-1,3-Dichloropropene	0.128U	1.00	0.128	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	50.8	ug/L	102	75 - 120
1868-53-7	Dibromofluoromethane	50	49.8	ug/L	100	85 - 115
2037-26-5	Toluene d8	50	48.3	ug/L	97	85 - 120
17060-07-0	1,2-Dichloroethane-d4	50	53.2	ug/L	106	70 - 120

SW-846 8330A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/13/2012 04:30	494270	SW-846 8330A	1	11/15/2012 14:26	JWM	494679

CAS#	Parameter	Result	RDL	MDL	Units
99-35-4	1,3,5-Trinitrobenzene	0.240U	0.500	0.240	ug/L
99-65-0	1,3-Dinitrobenzene	0.167U	0.500	0.167	ug/L
118-96-7	2,4,6-Trinitrotoluene	0.483U	1.00	0.483	ug/L
121-14-2	2,4-Dinitrotoluene	0.501U	1.00	0.501	ug/L
606-20-2	2,6-Dinitrotoluene	0.283U	1.00	0.283	ug/L
355-72-78-2	2-Amino-4,6-dinitrotoluene	0.576U	1.00	0.576	ug/L
88-72-2	2-Nitrotoluene	0.120U	0.500	0.120	ug/L
99-08-1	3-Nitrotoluene	0.369U	1.00	0.369	ug/L
1946-51-0	4-Amino-2,6-dinitrotoluene	0.489U	1.00	0.489	ug/L
99-99-0	4-Nitrotoluene	0.417U	1.00	0.417	ug/L
2691-41-0	HMX	0.212U	0.500	0.212	ug/L
98-95-3	Nitrobenzene	0.267U	0.500	0.267	ug/L
121-82-4	RDX	0.189U	0.500	0.189	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211091504	**MA02MW001D-FD**	Water	11/08/2012 13:06	11/09/2012 09:40

SW-846 8330A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/13/2012 04:30	494270	SW-846 8330A	1	11/15/2012 14:26	JWM	494679

CAS#	Parameter	Result	RDL	MDL	Units
479-45-8	Tetryl	0.241U	0.500	0.241	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
528-29-0	1,2-Dinitrobenzene	2	1.48	ug/L	74	70 - 130

SW-846 7470A Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/10/2012 12:35	494316	SW-846 7470A Dissolved	1	11/14/2012 12:52	CLB	494561

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	0.068U	0.20	0.068	ug/L

SW-846 7470A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/10/2012 12:35	494316	SW-846 7470A	1	11/14/2012 12:53	CLB	494561

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	0.068U	0.20	0.068	ug/L

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/10/2012 12:35	494315	SW-846 3010A	1	11/13/2012 21:07	BNB	494546

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	**Aluminum**	**90.6J**	**200**	**60.0**	**ug/L**
7440-36-0	**Antimony**	**3.71J**	**60.0**	**3.11**	**ug/L**
7440-38-2	Arsenic	3.59U	10.0	3.59	ug/L
7440-39-3	**Barium**	**10.2**	**10.0**	**0.71**	**ug/L**
7440-41-7	Beryllium	0.10U	5.00	0.10	ug/L
7440-43-9	**Cadmium**	**0.57J**	**5.00**	**0.20**	**ug/L**
7440-70-2	**Calcium**	**113000**	**100**	**50.0**	**ug/L**
7440-47-3	**Chromium**	**5.30J**	**10.0**	**1.00**	**ug/L**
7440-48-4	**Cobalt**	**2.10J**	**10.0**	**1.00**	**ug/L**
7440-50-8	**Copper**	**20.9**	**10.0**	**1.01**	**ug/L**
7439-89-6	Iron	40.0U	100	40.0	ug/L
7439-95-4	**Magnesium**	**66100**	**100**	**50.0**	**ug/L**
7439-96-5	**Manganese**	**221**	**15.0**	**2.00**	**ug/L**
7439-98-7	**Molybdenum**	**19.1J**	**50.0**	**3.75**	**ug/L**
7440-02-0	**Nickel**	**7.14J**	**40.0**	**1.13**	**ug/L**
7440-09-7	**Potassium**	**10200**	**500**	**100**	**ug/L**
7782-49-2	**Selenium**	**126**	**40.0**	**4.42**	**ug/L**
7440-22-4	Silver	0.70U	10.0	0.70	ug/L
7440-28-0	Thallium	3.04U	20.0	3.04	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211091504	**MA02MW001D-FD**	Water	11/08/2012 13:06	11/09/2012 09:40

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/10/2012 12:35	494315	SW-846 3010A	1	11/13/2012 21:07	BNB	494546

CAS#	Parameter	Result	RDL	MDL	Units
7440-32-6	Titanium	1.20U	100	1.20	ug/L
7440-62-2	**Vanadium**	**32.2**	**20.0**	**3.75**	**ug/L**
7440-66-6	**Zinc**	**125**	**20.0**	**4.51**	**ug/L**

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/10/2012 12:35	494315	SW-846 3010A	10	11/14/2012 18:29	BNB	494810

CAS#	Parameter	Result	RDL	MDL	Units
7440-23-5	**Sodium**	**2000000**	**10000**	**2000**	**ug/L**

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/10/2012 12:35	494315	SW-846 3010A	1	11/16/2012 19:03	CLB	494786

CAS#	Parameter	Result	RDL	MDL	Units
7439-92-1	Lead	1.96U	15.0	1.96	ug/L

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/10/2012 12:35	494317	SW-846 3005 Dissolved	1	11/13/2012 19:37	BNB	494546

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	60.0U	200	60.0	ug/L
7440-36-0	Antimony	3.11U	60.0	3.11	ug/L
7440-38-2	Arsenic	3.59U	10.0	3.59	ug/L
7440-39-3	**Barium**	**9.14J**	**10.0**	**0.71**	**ug/L**
7440-41-7	Beryllium	0.10U	5.00	0.10	ug/L
7440-43-9	**Cadmium**	**0.79J**	**5.00**	**0.20**	**ug/L**
7440-70-2	**Calcium**	**110000**	**100**	**50.0**	**ug/L**
7440-47-3	Chromium	1.00U	10.0	1.00	ug/L
7440-48-4	**Cobalt**	**1.77J**	**10.0**	**1.00**	**ug/L**
7440-50-8	**Copper**	**17.8**	**10.0**	**1.01**	**ug/L**
7439-89-6	Iron	40.0U	100	40.0	ug/L
7439-95-4	**Magnesium**	**64000**	**100**	**50.0**	**ug/L**
7439-96-5	**Manganese**	**198**	**15.0**	**2.00**	**ug/L**
7439-98-7	**Molybdenum**	**17.2J**	**50.0**	**3.75**	**ug/L**
7440-02-0	**Nickel**	**3.95J**	**40.0**	**1.13**	**ug/L**
7440-09-7	**Potassium**	**9720**	**500**	**100**	**ug/L**
7782-49-2	**Selenium**	**109**	**40.0**	**4.42**	**ug/L**
7440-22-4	Silver	0.70U	10.0	0.70	ug/L
7440-28-0	Thallium	3.04U	20.0	3.04	ug/L
7440-32-6	Titanium	1.20U	100	1.20	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211091504	**MA02MW001D-FD**	Water	11/08/2012 13:06	11/09/2012 09:40

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/10/2012 12:35	494317	SW-846 3005 Dissolved	1	11/13/2012 19:37	BNB	494546

CAS#	Parameter	Result	RDL	MDL	Units
7440-62-2	**Vanadium**	**30.2**	**20.0**	**3.75**	**ug/L**
7440-66-6	**Zinc**	**116**	**20.0**	**4.51**	**ug/L**

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/10/2012 12:35	494317	SW-846 3005 Dissolved	10	11/14/2012 17:17	BNB	494810

CAS#	Parameter	Result	RDL	MDL	Units
7440-23-5	**Sodium**	**1880000**	**10000**	**2000**	**ug/L**

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/10/2012 12:35	494317	SW-846 3005 Dissolved	1	11/16/2012 16:25	CLB	494786

CAS#	Parameter	Result	RDL	MDL	Units
7439-92-1	Lead	1.96U	15.0	1.96	ug/L

SM 2540C TDS

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/12/2012 08:30	DJH	494398

CAS#	Parameter	Result	RDL	MDL	Units
WET-035	**Total Dissolved Solids(TDS)**	**5590**	**10.0**		**mg/L**

EPA 353.2 Nitrite

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/09/2012 15:54	AEL	494283

CAS#	Parameter	Result	RDL	MDL	Units
14797-65-0	**Nitrite**	**0.021**	**0.010**	**0.002**	**mg/L-N**

EPA 353.2 Nitrate

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			10	11/09/2012 16:29	AEL	494282

CAS#	Parameter	Result	RDL	MDL	Units
14797-55-8	**Nitrate**	**4.90**	**0.100**	**0.049**	**mg/L-N**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211091504	**MA02MW001D-FD**	Water	11/08/2012 13:06	11/09/2012 09:40

EPA 300.0

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1000	11/14/2012 14:21	AEL	494605

CAS#	Parameter	Result	RDL	MDL	Units
16887-00-6	**Chloride**	**1820**	**100**	**63.0**	**mg/L**
14808-79-8	**Sulfate**	**2110**	**200**	**115**	**mg/L**

SM 2320B Alkalinity

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/09/2012 11:15	DNM	494276

CAS#	Parameter	Result	RDL	MDL	Units
000000-00-5	**Total Alkalinity**	**158**	**1.0**	**0.19**	**mg/L CaCO3**

SW-846 7196A Chromium VI

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/09/2012 11:02	JEM	494263

CAS#	Parameter	Result	RDL	MDL	Units
18540-29-9	Chromium VI	4.00U	10.0	4.00	ug/L

SW-846 9012A Cyanide

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/10/2012 06:00	494328	SW-846 9012A	1	11/12/2012 16:05	AEL	494463

CAS#	Parameter	Result	RDL	MDL	Units
57-12-5	Total Cyanide	0.0012U	0.0050	0.0012	mg/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211091505	**EB-01**	Water	11/08/2012 11:45	11/09/2012 09:40

Subcontract Work

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/28/2012 08:50	BJM	

CAS#	Parameter	Result	RDL	MDL	Units
SHIP-001	Ship Result	*			mg/L

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/11/2012 14:30	LBH	494370

CAS#	Parameter	Result	RDL	MDL	Units
630-20-6	1,1,1,2-Tetrachloroethane	0.120U	1.00	0.120	ug/L
71-55-6	1,1,1-Trichloroethane	0.123U	1.00	0.123	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.109U	1.00	0.109	ug/L
79-00-5	1,1,2-Trichloroethane	0.159U	1.00	0.159	ug/L
75-34-3	1,1-Dichloroethane	0.171U	1.00	0.171	ug/L
75-35-4	1,1-Dichloroethene	0.208U	1.00	0.208	ug/L
563-58-6	1,1-Dichloropropene	0.052U	1.00	0.052	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.079U	1.00	0.079	ug/L
96-18-4	1,2,3-Trichloropropane	0.065U	1.00	0.065	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.105U	1.00	0.105	ug/L
95-63-6	1,2,4-Trimethylbenzene	0.084U	1.00	0.084	ug/L
96-12-8	1,2-Dibromo-3-chloropropane	0.194U	1.00	0.194	ug/L
106-93-4	1,2-Dibromoethane	0.102U	1.00	0.102	ug/L
95-50-1	1,2-Dichlorobenzene	0.135U	1.00	0.135	ug/L
107-06-2	1,2-Dichloroethane	0.116U	1.00	0.116	ug/L
78-87-5	1,2-Dichloropropane	0.150U	1.00	0.150	ug/L
108-67-8	1,3,5-Trimethylbenzene	0.066U	1.00	0.066	ug/L
541-73-1	1,3-Dichlorobenzene	0.138U	1.00	0.138	ug/L
142-28-9	1,3-Dichloropropane	0.059U	1.00	0.059	ug/L
106-46-7	1,4-Dichlorobenzene	0.083U	1.00	0.083	ug/L
594-20-7	2,2-Dichloropropane	0.170U	1.00	0.170	ug/L
78-93-3	2-Butanone	0.142U	5.00	0.142	ug/L
95-49-8	2-Chlorotoluene	0.080U	1.00	0.080	ug/L
591-78-6	2-Hexanone	0.122U	5.00	0.122	ug/L
106-43-4	4-Chlorotoluene	0.124U	1.00	0.124	ug/L
99-87-6	4-Isopropyltoluene	0.070U	1.00	0.070	ug/L
108-10-1	4-Methyl-2-pentanone	0.120U	5.00	0.120	ug/L
67-64-1	Acetone	0.193U	5.00	0.193	ug/L
71-43-2	Benzene	0.111U	1.00	0.111	ug/L
108-86-1	Bromobenzene	0.145U	1.00	0.145	ug/L
74-97-5	Bromochloromethane	0.127U	1.00	0.127	ug/L
75-27-4	Bromodichloromethane	0.083U	1.00	0.083	ug/L
75-25-2	Bromoform	0.215U	1.00	0.215	ug/L
74-83-9	Bromomethane	0.427U	1.00	0.427	ug/L
75-15-0	Carbon disulfide	0.190U	1.00	0.190	ug/L
56-23-5	Carbon tetrachloride	0.248U	1.00	0.248	ug/L
108-90-7	Chlorobenzene	0.083U	1.00	0.083	ug/L
75-00-3	Chloroethane	0.235U	1.00	0.235	ug/L
67-66-3	Chloroform	0.155U	1.00	0.155	ug/L
74-87-3	Chloromethane	0.144U	1.00	0.144	ug/L
74-95-3	Dibromomethane	0.211U	1.00	0.211	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211091505	**EB-01**	Water	11/08/2012 11:45	11/09/2012 09:40

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/11/2012 14:30	LBH	494370

CAS#	Parameter	Result	RDL	MDL	Units
75-71-8	Dichlorodifluoromethane	0.145U	1.00	0.145	ug/L
100-41-4	Ethylbenzene	0.109U	1.00	0.109	ug/L
87-68-3	Hexachlorobutadiene	0.265U	1.00	0.265	ug/L
98-82-8	Isopropylbenzene (Cumene)	0.130U	1.00	0.130	ug/L
75-09-2	Methylene chloride	0.149U	5.00	0.149	ug/L
91-20-3	Naphthalene	0.176U	1.00	0.176	ug/L
100-42-5	Styrene	0.089U	1.00	0.089	ug/L
127-18-4	Tetrachloroethene	0.193U	1.00	0.193	ug/L
108-88-3	Toluene	0.122U	1.00	0.122	ug/L
79-01-6	Trichloroethene	0.161U	1.00	0.161	ug/L
75-69-4	Trichlorofluoromethane	0.157U	1.00	0.157	ug/L
75-01-4	Vinyl chloride	0.127U	1.00	0.127	ug/L
156-59-2	cis-1,2-Dichloroethene	0.103U	1.00	0.103	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.124U	1.00	0.124	ug/L
136777-61-2	m,p-Xylene	0.123U	2.00	0.123	ug/L
104-51-8	n-Butylbenzene	0.123U	1.00	0.123	ug/L
103-65-1	n-Propylbenzene	0.727U	1.00	0.727	ug/L
95-47-6	o-Xylene	0.055U	1.00	0.055	ug/L
135-98-8	sec-Butylbenzene	0.107U	1.00	0.107	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.078U	5.00	0.078	ug/L
98-06-6	tert-Butylbenzene	0.087U	1.00	0.087	ug/L
156-60-5	trans-1,2-Dichloroethene	0.077U	1.00	0.077	ug/L
10061-02-6	trans-1,3-Dichloropropene	0.128U	1.00	0.128	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	51.4	ug/L	103	75 - 120
1868-53-7	Dibromofluoromethane	50	51.1	ug/L	102	85 - 115
2037-26-5	Toluene d8	50	48.7	ug/L	97	85 - 120
17060-07-0	1,2-Dichloroethane-d4	50	52.7	ug/L	105	70 - 120

SW-846 8330A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/13/2012 04:30	494270	SW-846 8330A	1	11/15/2012 15:00	JWM	494679

CAS#	Parameter	Result	RDL	MDL	Units
99-35-4	1,3,5-Trinitrobenzene	0.240U	0.500	0.240	ug/L
99-65-0	1,3-Dinitrobenzene	0.167U	0.500	0.167	ug/L
118-96-7	2,4,6-Trinitrotoluene	0.483U	1.00	0.483	ug/L
121-14-2	2,4-Dinitrotoluene	0.501U	1.00	0.501	ug/L
606-20-2	2,6-Dinitrotoluene	0.283U	1.00	0.283	ug/L
355-72-78-2	2-Amino-4,6-dinitrotoluene	0.576U	1.00	0.576	ug/L
88-72-2	2-Nitrotoluene	0.120U	0.500	0.120	ug/L
99-08-1	3-Nitrotoluene	0.369U	1.00	0.369	ug/L
1946-51-0	4-Amino-2,6-dinitrotoluene	0.489U	1.00	0.489	ug/L
99-99-0	4-Nitrotoluene	0.417U	1.00	0.417	ug/L
2691-41-0	HMX	0.212U	0.500	0.212	ug/L
98-95-3	Nitrobenzene	0.267U	0.500	0.267	ug/L
121-82-4	RDX	0.189U	0.500	0.189	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211091505	**EB-01**	Water	11/08/2012 11:45	11/09/2012 09:40

SW-846 8330A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/13/2012 04:30	494270	SW-846 8330A	1	11/15/2012 15:00	JWM	494679

CAS#	Parameter	Result	RDL	MDL	Units
479-45-8	Tetryl	0.241U	0.500	0.241	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
528-29-0	1,2-Dinitrobenzene	2	1.77	ug/L	89	70 - 130

SW-846 7470A Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/10/2012 12:35	494316	SW-846 7470A Dissolved	1	11/14/2012 12:55	CLB	494561

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	0.068U	0.20	0.068	ug/L

SW-846 7470A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/10/2012 12:35	494316	SW-846 7470A	1	11/14/2012 12:56	CLB	494561

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	0.068U	0.20	0.068	ug/L

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/10/2012 12:35	494315	SW-846 3010A	1	11/13/2012 21:14	BNB	494546

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	60.0U	200	60.0	ug/L
7440-36-0	Antimony	3.11U	60.0	3.11	ug/L
7440-38-2	Arsenic	3.59U	10.0	3.59	ug/L
7440-39-3	**Barium**	**12.6**	**10.0**	**0.71**	**ug/L**
7440-41-7	Beryllium	0.10U	5.00	0.10	ug/L
7440-43-9	**Cadmium**	**0.51J**	**5.00**	**0.20**	**ug/L**
7440-70-2	**Calcium**	**1380**	**100**	**50.0**	**ug/L**
7440-47-3	Chromium	1.00U	10.0	1.00	ug/L
7440-48-4	**Cobalt**	**1.32J**	**10.0**	**1.00**	**ug/L**
7440-50-8	**Copper**	**2.40J**	**10.0**	**1.01**	**ug/L**
7439-89-6	Iron	40.0U	100	40.0	ug/L
7439-95-4	**Magnesium**	**75.7J**	**100**	**50.0**	**ug/L**
7439-96-5	**Manganese**	**3.72J**	**15.0**	**2.00**	**ug/L**
7439-98-7	Molybdenum	3.75U	50.0	3.75	ug/L
7440-02-0	Nickel	1.13U	40.0	1.13	ug/L
7440-09-7	**Potassium**	**415J**	**500**	**100**	**ug/L**
7782-49-2	Selenium	4.42U	40.0	4.42	ug/L
7440-22-4	Silver	0.70U	10.0	0.70	ug/L
7440-28-0	Thallium	3.04U	20.0	3.04	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211091505	**EB-01**	Water	11/08/2012 11:45	11/09/2012 09:40

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/10/2012 12:35	494315	SW-846 3010A	1	11/13/2012 21:14	BNB	494546

CAS#	Parameter	Result	RDL	MDL	Units
7440-32-6	**Titanium**	**1.46J**	**100**	**1.20**	**ug/L**
7440-62-2	Vanadium	3.75U	20.0	3.75	ug/L
7440-66-6	Zinc	4.51U	20.0	4.51	ug/L

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/10/2012 12:35	494315	SW-846 3010A	1	11/16/2012 19:09	CLB	494786

CAS#	Parameter	Result	RDL	MDL	Units
7439-92-1	Lead	1.96U	15.0	1.96	ug/L
7440-23-5	**Sodium**	**83200**	**1000**	**200**	**ug/L**

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/10/2012 12:35	494317	SW-846 3005 Dissolved	1	11/13/2012 19:43	BNB	494546

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	60.0U	200	60.0	ug/L
7440-36-0	Antimony	3.11U	60.0	3.11	ug/L
7440-38-2	Arsenic	3.59U	10.0	3.59	ug/L
7440-39-3	**Barium**	**11.3**	**10.0**	**0.71**	**ug/L**
7440-41-7	Beryllium	0.10U	5.00	0.10	ug/L
7440-43-9	**Cadmium**	**0.90J**	**5.00**	**0.20**	**ug/L**
7440-70-2	**Calcium**	**1210**	**100**	**50.0**	**ug/L**
7440-47-3	Chromium	1.00U	10.0	1.00	ug/L
7440-48-4	**Cobalt**	**1.03J**	**10.0**	**1.00**	**ug/L**
7440-50-8	**Copper**	**2.37J**	**10.0**	**1.01**	**ug/L**
7439-89-6	Iron	40.0U	100	40.0	ug/L
7439-95-4	**Magnesium**	**78.6J**	**100**	**50.0**	**ug/L**
7439-96-5	**Manganese**	**2.46J**	**15.0**	**2.00**	**ug/L**
7439-98-7	Molybdenum	3.75U	50.0	3.75	ug/L
7440-02-0	Nickel	1.13U	40.0	1.13	ug/L
7440-09-7	**Potassium**	**388J**	**500**	**100**	**ug/L**
7782-49-2	Selenium	4.42U	40.0	4.42	ug/L
7440-22-4	Silver	0.70U	10.0	0.70	ug/L
7440-28-0	Thallium	3.04U	20.0	3.04	ug/L
7440-32-6	Titanium	1.20U	100	1.20	ug/L
7440-62-2	Vanadium	3.75U	20.0	3.75	ug/L
7440-66-6	Zinc	4.51U	20.0	4.51	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211091505	**EB-01**	Water	11/08/2012 11:45	11/09/2012 09:40

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/10/2012 12:35	494317	SW-846 3005 Dissolved	1	11/16/2012 16:32	CLB	494786

CAS#	Parameter	Result	RDL	MDL	Units
7439-92-1	Lead	1.96U	15.0	1.96	ug/L
7440-23-5	**Sodium**	**76100**	**1000**	**200**	**ug/L**

SM 2540C TDS

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/12/2012 08:30	DJH	494398

CAS#	Parameter	Result	RDL	MDL	Units
WET-035	**Total Dissolved Solids(TDS)**	**216**	**10.0**		**mg/L**

EPA 353.2 Nitrite

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/09/2012 15:55	AEL	494283

CAS#	Parameter	Result	RDL	MDL	Units
14797-65-0	**Nitrite**	**0.004J**	**0.010**	**0.002**	**mg/L-N**

EPA 353.2 Nitrate

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/09/2012 16:14	AEL	494282

CAS#	Parameter	Result	RDL	MDL	Units
14797-55-8	**Nitrate**	**0.345**	**0.010**	**0.005**	**mg/L-N**

EPA 300.0

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			20	11/14/2012 15:31	AEL	494605

CAS#	Parameter	Result	RDL	MDL	Units
16887-00-6	**Chloride**	**10.8**	**2.00**	**1.26**	**mg/L**
14808-79-8	**Sulfate**	**11.5**	**4.00**	**2.30**	**mg/L**

SM 2320B Alkalinity

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/09/2012 11:15	DNM	494276

CAS#	Parameter	Result	RDL	MDL	Units
000000-00-5	**Total Alkalinity**	**147**	**1.0**	**0.19**	**mg/L CaCO3**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21211091505	**EB-01**	Water	11/08/2012 11:45	11/09/2012 09:40

SW-846 7196A Chromium VI

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/09/2012 11:00	JEM	494263

CAS#	Parameter	Result	RDL	MDL	Units
18540-29-9	Chromium VI	4.00U	10.0	4.00	ug/L

SW-846 9012A Cyanide

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/10/2012 06:00	494328	SW-846 9012A	1	11/12/2012 16:06	AEL	494463

CAS#	Parameter	Result	RDL	MDL	Units
57-12-5	Total Cyanide	0.0012U	0.0050	0.0012	mg/L

GC/MS Volatiles Quality Control Summary

Analytical Batch 494361		**Client ID**	MB494361			LCS494361			LCSD494361		
Prep Batch N/A		**GCAL ID**	1127435			1127436			1127437		
		Sample Type	Method Blank			LCS			LCSD		
		Analytical Date	11/10/2012 20:54			11/10/2012 18:55			11/10/2012 19:50		
		Matrix	Water			Water			Water		
SW-846 8260B		**Units**	ug/L		**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**		**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
67-64-1	Acetone	0.193U	0.193		50.0	55.7	111	40 - 140	44.5	89	22	30
74-97-5	Bromochloromethane	0.127U	0.127		50.0	56.7	113	65 - 130	48.5	97	16	30
75-27-4	Bromodichloromethane	0.083U	0.083		50.0	56.4	113	75 - 120	49.0	98	14	30
75-25-2	Bromoform	0.215U	0.215		50.0	54.8	110	70 - 130	47.5	95	14	30
74-83-9	Bromomethane	0.427U	0.427		50.0	57.7	115	30 - 145	49.5	99	15	30
75-15-0	Carbon disulfide	0.190U	0.190		50.0	53.0	106	35 - 160	49.6	99	7	30
56-23-5	Carbon tetrachloride	0.248U	0.248		50.0	58.4	117	65 - 140	51.5	103	13	30
75-00-3	Chloroethane	0.235U	0.235		50.0	52.9	106	60 - 135	47.8	96	10	30
136777-61-2	m,p-Xylene	0.123U	0.123		100	105	105	75 - 130	95.8	96	9	30
67-66-3	Chloroform	0.155U	0.155		50.0	54.5	109	65 - 135	48.4	97	12	30
74-87-3	Chloromethane	0.144U	0.144		50.0	53.3	107	40 - 125	47.6	95	11	30
74-95-3	Dibromomethane	0.211U	0.211		50.0	55.4	111	75 - 125	48.2	96	14	30
75-71-8	Dichlorodifluoromethane	0.145U	0.145		50.0	52.1	104	30 - 155	45.3	91	14	30
75-34-3	1,1-Dichloroethane	0.171U	0.171		50.0	54.9	110	70 - 135	48.1	96	13	30
107-06-2	1,2-Dichloroethane	0.116U	0.116		50.0	55.1	110	70 - 130	47.1	94	16	30
156-59-2	cis-1,2-Dichloroethene	0.103U	0.103		50.0	55.3	111	70 - 125	49.4	99	11	30
156-60-5	trans-1,2-Dichloroethene	0.077U	0.077		50.0	55.3	111	60 - 140	50.3	101	9	30
75-09-2	Methylene chloride	0.149U	0.149		50.0	53.7	107	55 - 140	48.2	96	11	30
78-87-5	1,2-Dichloropropane	0.150U	0.150		50.0	55.7	111	75 - 125	49.3	99	12	30
10061-01-5	cis-1,3-Dichloropropene	0.124U	0.124		50.0	57.1	114	70 - 130	50.0	100	13	30
10061-02-6	trans-1,3-Dichloropropene	0.128U	0.128		50.0	56.5	113	55 - 140	49.6	99	13	30
100-41-4	Ethylbenzene	0.109U	0.109		50.0	51.3	103	75 - 125	45.8	92	11	30
591-78-6	2-Hexanone	0.122U	0.122		50.0	58.7	117	55 - 130	49.2	98	18	30
98-82-8	Isopropylbenzene (Cumene)	0.130U	0.130		50.0	52.7	105	75 - 125	48.5	97	8	30
78-93-3	2-Butanone	0.142U	0.142		50.0	56.8	114	30 - 150	44.9	90	23	30
108-10-1	4-Methyl-2-pentanone	0.120U	0.120		50.0	60.7	121	60 - 135	52.3	105	15	30
103-65-1	n-Propylbenzene	0.727U	0.727		50.0	51.3	103	70 - 130	48.0	96	7	30
100-42-5	Styrene	0.089U	0.089		50.0	53.3	107	65 - 135	48.1	96	10	30
127-18-4	Tetrachloroethene	0.193U	0.193		50.0	52.9	106	45 - 150	47.4	95	11	30
630-20-6	1,1,1,2-Tetrachloroethane	0.120U	0.120		50.0	53.5	107	80 - 130	46.9	94	13	30
79-34-5	1,1,2,2-Tetrachloroethane	0.109U	0.109		50.0	52.6	105	65 - 130	45.1	90	15	30
120-82-1	1,2,4-Trichlorobenzene	0.105U	0.105		50.0	55.3	111	65 - 135	52.7	105	5	30
71-55-6	1,1,1-Trichloroethane	0.123U	0.123		50.0	52.9	106	65 - 130	46.2	92	14	30

GC/MS Volatiles Quality Control Summary

Analytical Batch 494361		**Client ID**	MB494361			LCS494361			LCSD494361		
Prep Batch N/A		**GCAL ID**	1127435			1127436			1127437		
		Sample Type	Method Blank			LCS			LCSD		
		Analytical Date	11/10/2012 20:54			11/10/2012 18:55			11/10/2012 19:50		
		Matrix	Water			Water			Water		
SW-846 8260B		**Units**	ug/L		**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**		**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
79-00-5	1,1,2-Trichloroethane	0.159U	0.159		50.0	51.8	104	75 - 125	44.6	89	15	30
75-69-4	Trichlorofluoromethane	0.157U	0.157		50.0	54.8	110	60 - 145	44.6	89	21	30
96-18-4	1,2,3-Trichloropropane	0.065U	0.065		50.0	49.7	99	75 - 125	44.0	88	12	30
95-63-6	1,2,4-Trimethylbenzene	0.084U	0.084		50.0	52.1	104	75 - 130	48.4	97	7	30
108-67-8	1,3,5-Trimethylbenzene	0.066U	0.066		50.0	52.1	104	75 - 130	48.7	97	7	30
75-01-4	Vinyl chloride	0.127U	0.127		50.0	53.8	108	50 - 145	48.7	97	10	30
95-47-6	o-Xylene	0.055U	0.055		50.0	53.9	108	80 - 120	48.2	96	11	30
96-12-8	1,2-Dibromo-3-chloropropane	0.194U	0.194		50.0	53.8	108	50 - 130	47.0	94	13	30
106-93-4	1,2-Dibromoethane	0.102U	0.102		50.0	52.9	106	80 - 120	45.9	92	14	30
1634-04-4	tert-Butyl methyl ether (MTBE)	0.078U	0.078		50.0	56.2	112	65 - 125	48.6	97	15	30
99-87-6	4-Isopropyltoluene	0.070U	0.070		50.0	51.2	102	75 - 130	48.5	97	5	30
594-20-7	2,2-Dichloropropane	0.170U	0.170		50.0	56.5	113	70 - 135	49.1	98	14	30
563-58-6	1,1-Dichloropropene	0.052U	0.052		50.0	55.4	111	75 - 130	49.2	98	12	30
142-28-9	1,3-Dichloropropane	0.059U	0.059		50.0	52.6	105	75 - 125	44.7	89	16	30
108-86-1	Bromobenzene	0.145U	0.145		50.0	49.9	100	75 - 125	45.4	91	9	30
95-49-8	2-Chlorotoluene	0.080U	0.080		50.0	52.3	105	75 - 125	48.6	97	7	30
106-43-4	4-Chlorotoluene	0.124U	0.124		50.0	51.9	104	75 - 130	48.1	96	8	30
98-06-6	tert-Butylbenzene	0.087U	0.087		50.0	50.6	101	70 - 130	48.2	96	5	30
135-98-8	sec-Butylbenzene	0.107U	0.107		50.0	50.0	100	70 - 125	48.0	96	4	30
541-73-1	1,3-Dichlorobenzene	0.138U	0.138		50.0	51.0	102	75 - 125	48.2	96	6	30
106-46-7	1,4-Dichlorobenzene	0.083U	0.083		50.0	51.1	102	75 - 125	46.7	93	9	30
104-51-8	n-Butylbenzene	0.123U	0.123		50.0	50.5	101	70 - 135	48.8	98	3	30
95-50-1	1,2-Dichlorobenzene	0.135U	0.135		50.0	51.2	102	70 - 120	46.5	93	10	30
87-68-3	Hexachlorobutadiene	0.265U	0.265		50.0	52.1	104	50 - 140	51.3	103	2	30
91-20-3	Naphthalene	0.176U	0.176		50.0	51.8	104	55 - 140	47.1	94	10	30
87-61-6	1,2,3-Trichlorobenzene	0.079U	0.079		50.0	54.2	108	55 - 140	52.1	104	4	30
75-35-4	1,1-Dichloroethene	0.208U	0.208		50.0	52.0	104	70 - 130	46.1	92	12	30
71-43-2	Benzene	0.111U	0.111		50.0	54.1	108	80 - 120	47.7	95	13	30
79-01-6	Trichloroethene	0.161U	0.161		50.0	54.8	110	70 - 125	48.1	96	13	30
108-88-3	Toluene	0.122U	0.122		50.0	51.6	103	75 - 120	45.4	91	13	30
108-90-7	Chlorobenzene	0.083U	0.083		50.0	51.0	102	80 - 120	45.2	90	12	30
Surrogate												
460-00-4	4-Bromofluorobenzene	52.1	104		50	53.4	107	75 - 120	51.8	104		

GC/MS Volatiles Quality Control Summary

Analytical Batch 494361		**Client ID**	MB494361			LCS494361			LCSD494361		
Prep Batch N/A		**GCAL ID**	1127435			1127436			1127437		
		Sample Type	Method Blank			LCS			LCSD		
		Analytical Date	11/10/2012 20:54			11/10/2012 18:55			11/10/2012 19:50		
		Matrix	Water			Water			Water		
SW-846 8260B		**Units**	**Result**	ug/L **RDL**	**Spike Added**	**Result**	**% R**	**Control Limits % R**	**Result**	**% R**	**RPD**	**RPD Limit**
1868-53-7	Dibromofluoromethane		49.8	100	50	51.5	103	85 - 115	51	102		
2037-26-5	Toluene d8		49.8	100	50	48.2	96	85 - 120	48.1	96		
17060-07-0	1,2-Dichloroethane-d4		50.7	101	50	51.6	103	70 - 120	50.9	102		

Analytical Batch 494361		**Client ID**	LF005-MW19_1112			LF005-MW19_1112-ms			LF005-MW19_1112-sd		
Prep Batch N/A		**GCAL ID**	21211073205			21211073206			21211073207		
		Sample Type	SAMPLE			MS			MSD		
		Analytical Date	11/10/2012 21:14			11/10/2012 21:54			11/10/2012 22:14		
		Matrix	Water			Water			Water		
SW-846 8260B		**Units**	**Result**	ug/L **RDL**	**Spike Added**	**Result**	**% R**	**Control Limits % R**	**Result**	**% R**	**RPD**	**RPD Limit**
75-27-4	Bromodichloromethane		0.00	0.083	50.0	47.1	94	75 - 120	46.3	93	2	30
56-23-5	Carbon tetrachloride		0.00	0.248	50.0	50.8	102	65 - 140	48.3	97	5	30
75-00-3	Chloroethane		0.00	0.235	50.0	45.1	90	60 - 135	43.3	87	4	30
136777-61-2	m,p-Xylene		0.00	0.123	100	90.0	90	75 - 130	87.5	88	3	30
67-66-3	Chloroform		0.00	0.155	50.0	47.3	95	65 - 135	45.6	91	4	30
75-34-3	1,1-Dichloroethane		0.00	0.171	50.0	46.8	94	70 - 135	44.8	90	4	30
107-06-2	1,2-Dichloroethane		0.00	0.116	50.0	46.8	94	70 - 130	45.7	91	2	30
156-59-2	cis-1,2-Dichloroethene		0.00	0.103	50.0	48.1	96	70 - 125	45.7	91	5	30
156-60-5	trans-1,2-Dichloroethene		0.00	0.077	50.0	47.9	96	60 - 140	45.4	91	5	30
75-09-2	Methylene chloride		0.00	0.149	50.0	46.4	93	55 - 140	44.0	88	5	30
78-87-5	1,2-Dichloropropane		0.00	0.150	50.0	47.6	95	75 - 125	44.8	90	6	30
100-41-4	Ethylbenzene		0.00	0.109	50.0	43.9	88	75 - 125	42.4	85	3	30
127-18-4	Tetrachloroethene		0.00	0.193	50.0	45.0	90	45 - 150	44.2	88	2	30
79-34-5	1,1,2,2-Tetrachloroethane		0.00	0.109	50.0	44.9	90	65 - 130	44.4	89	1	30
71-55-6	1,1,1-Trichloroethane		0.00	0.123	50.0	45.2	90	65 - 130	43.6	87	4	30
79-00-5	1,1,2-Trichloroethane		0.00	0.159	50.0	44.5	89	75 - 125	43.9	88	1	30
75-01-4	Vinyl chloride		0.00	0.127	50.0	46.2	92	50 - 145	43.5	87	6	30
95-47-6	o-Xylene		0.00	0.055	50.0	45.3	91	80 - 120	45.1	90	0.4	30
541-73-1	1,3-Dichlorobenzene		0.00	0.138	50.0	43.4	87	65 - 130	42.3	85	3	30
106-46-7	1,4-Dichlorobenzene		0.00	0.083	50.0	42.7	85	65 - 130	42.2	84	1	30
95-50-1	1,2-Dichlorobenzene		0.00	0.135	50.0	42.5	85	70 - 120	41.8	84	2	30

GC/MS Volatiles Quality Control Summary

Analytical Batch 494361		**Client ID**	LF005-MW19_1112			LF005-MW19_1112-ms			LF005-MW19_1112-sd		
Prep Batch N/A		**GCAL ID**	21211073205			21211073206			21211073207		
		Sample Type	SAMPLE			MS			MSD		
		Analytical Date	11/10/2012 21:14			11/10/2012 21:54			11/10/2012 22:14		
		Matrix	Water			Water			Water		
SW-846 8260B		**Units**	**Result**	ug/L **RDL**	**Spike Added**	**Result**	**% R**	**Control Limits % R**	**Result**	**% R**	**RPD**	**RPD Limit**
75-35-4	1,1-Dichloroethene		0.00	0.208	50.0	45.6	91	70 - 130	44.0	88	4	30
71-43-2	Benzene		0.00	0.111	50.0	46.1	92	80 - 120	44.7	89	3	30
79-01-6	Trichloroethene		0.00	0.161	50.0	46.7	93	70 - 125	44.5	89	5	30
108-88-3	Toluene		0.00	0.122	50.0	44.2	88	75 - 120	42.3	85	4	30
108-90-7	Chlorobenzene		0.00	0.083	50.0	43.2	86	80 - 120	42.0	84	3	30
Surrogate												
460-00-4	4-Bromofluorobenzene				50	51.9	104	75 - 120	53.2	106		
1868-53-7	Dibromofluoromethane				50	51.9	104	85 - 115	50.8	102		
2037-26-5	Toluene d8				50	48.3	97	85 - 120	48.9	98		
17060-07-0	1,2-Dichloroethane-d4				50	51.1	102	70 - 120	51.8	104		

Analytical Batch 494361		**Client ID**	LF005-MW22_1112			LF005-MW22_1112-ms			LF005-MW22_1112-sd		
Prep Batch N/A		**GCAL ID**	21211085310			21211085311			21211085312		
		Sample Type	SAMPLE			MS			MSD		
		Analytical Date	11/10/2012 21:34			11/10/2012 22:34			11/10/2012 22:53		
		Matrix	Water			Water			Water		
SW-846 8260B		**Units**	**Result**	ug/L **RDL**	**Spike Added**	**Result**	**% R**	**Control Limits % R**	**Result**	**% R**	**RPD**	**RPD Limit**
75-27-4	Bromodichloromethane		0.00	0.083	50.0	48.9	98	75 - 120	47.8	96	2	30
56-23-5	Carbon tetrachloride		0.00	0.248	50.0	53.1	106	65 - 140	51.8	104	2	30
75-00-3	Chloroethane		0.00	0.235	50.0	48.0	96	60 - 135	44.8	90	7	30
136777-61-2	m,p-Xylene		0.00	0.123	100	95.5	96	75 - 130	92.8	93	3	30
67-66-3	Chloroform		0.00	0.155	50.0	48.9	98	65 - 135	47.6	95	3	30
75-34-3	1,1-Dichloroethane		0.00	0.171	50.0	49.2	98	70 - 135	46.9	94	5	30
107-06-2	1,2-Dichloroethane		0.00	0.116	50.0	47.9	96	70 - 130	46.8	94	2	30
156-59-2	cis-1,2-Dichloroethene		0.00	0.103	50.0	50.7	101	70 - 125	48.0	96	5	30
156-60-5	trans-1,2-Dichloroethene		0.00	0.077	50.0	51.1	102	60 - 140	48.5	97	5	30
75-09-2	Methylene chloride		0.00	0.149	50.0	48.2	96	55 - 140	46.3	93	4	30
78-87-5	1,2-Dichloropropane		0.00	0.150	50.0	48.5	97	75 - 125	48.2	96	0.6	30
100-41-4	Ethylbenzene		0.00	0.109	50.0	46.7	93	75 - 125	45.1	90	3	30
127-18-4	Tetrachloroethene		0.00	0.193	50.0	49.0	98	45 - 150	47.1	94	4	30
79-34-5	1,1,2,2-Tetrachloroethane		0.00	0.109	50.0	46.5	93	65 - 130	45.8	92	2	30

GC/MS Volatiles Quality Control Summary

Analytical Batch 494361		**Client ID**	LF005-MW22_1112			LF005-MW22_1112-ms			LF005-MW22_1112-sd		
Prep Batch N/A		**GCAL ID**	21211085310			21211085311			21211085312		
		Sample Type	SAMPLE			MS			MSD		
		Analytical Date	11/10/2012 21:34			11/10/2012 22:34			11/10/2012 22:53		
		Matrix	Water			Water			Water		
SW-846 8260B		**Units**	**Result**	ug/L **RDL**	**Spike Added**	**Result**	**% R**	**Control Limits % R**	**Result**	**% R**	**RPD**	**RPD Limit**
71-55-6	1,1,1-Trichloroethane		0.00	0.123	50.0	47.9	96	65 - 130	45.9	92	4	30
79-00-5	1,1,2-Trichloroethane		0.00	0.159	50.0	46.5	93	75 - 125	45.2	90	3	30
75-01-4	Vinyl chloride		0.00	0.127	50.0	49.1	98	50 - 145	46.9	94	5	30
95-47-6	o-Xylene		0.00	0.055	50.0	49.1	98	80 - 120	46.7	93	5	30
541-73-1	1,3-Dichlorobenzene		0.00	0.138	50.0	45.3	91	65 - 130	43.8	88	3	30
106-46-7	1,4-Dichlorobenzene		0.00	0.083	50.0	45.2	90	65 - 130	43.8	88	3	30
95-50-1	1,2-Dichlorobenzene		0.00	0.135	50.0	44.7	89	70 - 120	43.0	86	4	30
75-35-4	1,1-Dichloroethene		0.00	0.208	50.0	47.8	96	70 - 130	45.9	92	4	30
71-43-2	Benzene		0.00	0.111	50.0	48.2	96	80 - 120	46.4	93	4	30
79-01-6	Trichloroethene		0.00	0.161	50.0	49.2	98	70 - 125	47.3	95	4	30
108-88-3	Toluene		0.00	0.122	50.0	46.9	94	75 - 120	45.1	90	4	30
108-90-7	Chlorobenzene		0.00	0.083	50.0	46.2	92	80 - 120	45.0	90	3	30
Surrogate												
460-00-4	4-Bromofluorobenzene				50	53.6	107	75 - 120	54	108		
1868-53-7	Dibromofluoromethane				50	50.9	102	85 - 115	51.3	103		
2037-26-5	Toluene d8				50	49	98	85 - 120	49	98		
17060-07-0	1,2-Dichloroethane-d4				50	50.1	100	70 - 120	50.6	101		

Analytical Batch 494370		**Client ID**	MB494370			LCS494370			LCSD494370		
Prep Batch N/A		**GCAL ID**	1127473			1127474			1127475		
		Sample Type	Method Blank			LCS			LCSD		
		Analytical Date	11/11/2012 10:31			11/11/2012 09:11			11/11/2012 09:31		
		Matrix	Water			Water			Water		
SW-846 8260B		**Units**	**Result**	ug/L **RDL**	**Spike Added**	**Result**	**% R**	**Control Limits % R**	**Result**	**% R**	**RPD**	**RPD Limit**
67-64-1	Acetone		0.193U	0.193	50.0	47.5	95	40 - 140	50.4	101	6	30
74-97-5	Bromochloromethane		0.127U	0.127	50.0	52.5	105	65 - 130	50.7	101	3	30
75-27-4	Bromodichloromethane		0.083U	0.083	50.0	52.5	105	75 - 120	50.9	102	3	30
75-25-2	Bromoform		0.215U	0.215	50.0	51.0	102	70 - 130	50.3	101	1	30
74-83-9	Bromomethane		0.427U	0.427	50.0	44.3	89	30 - 145	43.4	87	2	30
75-15-0	Carbon disulfide		0.190U	0.190	50.0	53.4	107	35 - 160	50.1	100	6	30
56-23-5	Carbon tetrachloride		0.248U	0.248	50.0	58.4	117	65 - 140	56.1	112	4	30

GC/MS Volatiles Quality Control Summary

Analytical Batch 494370		**Client ID**	MB494370			LCS494370			LCSD494370		
Prep Batch N/A		**GCAL ID**	1127473			1127474			1127475		
		Sample Type	Method Blank			LCS			LCSD		
		Analytical Date	11/11/2012 10:31			11/11/2012 09:11			11/11/2012 09:31		
		Matrix	Water			Water			Water		
SW-846 8260B		**Units**	**Result**	ug/L **RDL**	**Spike Added**	**Result**	**% R**	**Control Limits % R**	**Result**	**% R**	**RPD**	**RPD Limit**
75-00-3	Chloroethane		0.235U	0.235	50.0	51.6	103	60 - 135	47.8	96	8	30
136777-61-2	m,p-Xylene		0.123U	0.123	100	102	102	75 - 130	98.5	99	3	30
67-66-3	Chloroform		0.155U	0.155	50.0	52.8	106	65 - 135	51.4	103	3	30
74-87-3	Chloromethane		0.144U	0.144	50.0	43.7	87	40 - 125	40.8	82	7	30
74-95-3	Dibromomethane		0.211U	0.211	50.0	51.6	103	75 - 125	49.5	99	4	30
75-71-8	Dichlorodifluoromethane		0.145U	0.145	50.0	52.8	106	30 - 155	49.8	100	6	30
75-34-3	1,1-Dichloroethane		0.171U	0.171	50.0	53.2	106	70 - 135	51.0	102	4	30
107-06-2	1,2-Dichloroethane		0.116U	0.116	50.0	51.8	104	70 - 130	50.0	100	4	30
156-59-2	cis-1,2-Dichloroethene		0.103U	0.103	50.0	54.2	108	70 - 125	51.4	103	5	30
156-60-5	trans-1,2-Dichloroethene		0.077U	0.077	50.0	54.3	109	60 - 140	51.3	103	6	30
75-09-2	Methylene chloride		0.149U	0.149	50.0	51.5	103	55 - 140	48.4	97	6	30
78-87-5	1,2-Dichloropropane		0.150U	0.150	50.0	53.0	106	75 - 125	50.9	102	4	30
10061-01-5	cis-1,3-Dichloropropene		0.124U	0.124	50.0	52.8	106	70 - 130	50.8	102	4	30
10061-02-6	trans-1,3-Dichloropropene		0.128U	0.128	50.0	53.1	106	55 - 140	51.6	103	3	30
100-41-4	Ethylbenzene		0.109U	0.109	50.0	50.3	101	75 - 125	48.8	98	3	30
591-78-6	2-Hexanone		0.122U	0.122	50.0	54.2	108	55 - 130	54.2	108	0	30
98-82-8	Isopropylbenzene (Cumene)		0.130U	0.130	50.0	51.8	104	75 - 125	49.8	100	4	30
78-93-3	2-Butanone		0.142U	0.142	50.0	49.6	99	30 - 150	50.9	102	3	30
108-10-1	4-Methyl-2-pentanone		0.120U	0.120	50.0	54.4	109	60 - 135	55.9	112	3	30
103-65-1	n-Propylbenzene		0.727U	0.727	50.0	51.3	103	70 - 130	49.3	99	4	30
100-42-5	Styrene		0.089U	0.089	50.0	51.5	103	65 - 135	49.4	99	4	30
127-18-4	Tetrachloroethene		0.193U	0.193	50.0	52.8	106	45 - 150	50.0	100	5	30
630-20-6	1,1,1,2-Tetrachloroethane		0.120U	0.120	50.0	50.8	102	80 - 130	48.8	98	4	30
79-34-5	1,1,2,2-Tetrachloroethane		0.109U	0.109	50.0	49.5	99	65 - 130	48.3	97	2	30
120-82-1	1,2,4-Trichlorobenzene		0.105U	0.105	50.0	53.1	106	65 - 135	51.9	104	2	30
71-55-6	1,1,1-Trichloroethane		0.123U	0.123	50.0	51.7	103	65 - 130	49.6	99	4	30
79-00-5	1,1,2-Trichloroethane		0.159U	0.159	50.0	48.1	96	75 - 125	47.7	95	0.8	30
75-69-4	Trichlorofluoromethane		0.157U	0.157	50.0	50.9	102	60 - 145	47.4	95	7	30
96-18-4	1,2,3-Trichloropropane		0.065U	0.065	50.0	47.7	95	75 - 125	46.0	92	4	30
95-63-6	1,2,4-Trimethylbenzene		0.084U	0.084	50.0	51.1	102	75 - 130	49.5	99	3	30
108-67-8	1,3,5-Trimethylbenzene		0.066U	0.066	50.0	51.9	104	75 - 130	50.1	100	4	30
75-01-4	Vinyl chloride		0.127U	0.127	50.0	53.2	106	50 - 145	50.2	100	6	30
95-47-6	o-Xylene		0.055U	0.055	50.0	51.8	104	80 - 120	49.4	99	5	30

GC/MS Volatiles Quality Control Summary

Analytical Batch 494370		**Client ID**	MB494370			LCS494370			LCSD494370		
Prep Batch N/A		**GCAL ID**	1127473			1127474			1127475		
		Sample Type	Method Blank			LCS			LCSD		
		Analytical Date	11/11/2012 10:31			11/11/2012 09:11			11/11/2012 09:31		
		Matrix	Water			Water			Water		
SW-846 8260B		**Units**	ug/L								
		Result	**RDL**	**Spike Added**	**Result**	**% R**	**Control Limits % R**	**Result**	**% R**	**RPD**	**RPD Limit**
96-12-8	1,2-Dibromo-3-chloropropane	0.194U	0.194	50.0	49.5	99	50 - 130	50.1	100	1	30
106-93-4	1,2-Dibromoethane	0.102U	0.102	50.0	49.3	99	80 - 120	48.8	98	1	30
1634-04-4	tert-Butyl methyl ether (MTBE)	0.078U	0.078	50.0	52.1	104	65 - 125	51.1	102	2	30
99-87-6	4-Isopropyltoluene	0.070U	0.070	50.0	51.3	103	75 - 130	48.8	98	5	30
594-20-7	2,2-Dichloropropane	0.170U	0.170	50.0	55.7	111	70 - 135	54.1	108	3	30
563-58-6	1,1-Dichloropropene	0.052U	0.052	50.0	54.7	109	75 - 130	51.9	104	5	30
142-28-9	1,3-Dichloropropane	0.059U	0.059	50.0	48.9	98	75 - 125	47.7	95	2	30
108-86-1	Bromobenzene	0.145U	0.145	50.0	48.2	96	75 - 125	47.0	94	3	30
95-49-8	2-Chlorotoluene	0.080U	0.080	50.0	50.9	102	75 - 125	50.3	101	1	30
106-43-4	4-Chlorotoluene	0.124U	0.124	50.0	51.0	102	75 - 130	49.3	99	3	30
98-06-6	tert-Butylbenzene	0.087U	0.087	50.0	51.6	103	70 - 130	49.5	99	4	30
135-98-8	sec-Butylbenzene	0.107U	0.107	50.0	50.2	100	70 - 125	48.6	97	3	30
541-73-1	1,3-Dichlorobenzene	0.138U	0.138	50.0	50.2	100	75 - 125	48.2	96	4	30
106-46-7	1,4-Dichlorobenzene	0.083U	0.083	50.0	48.8	98	75 - 125	47.5	95	3	30
104-51-8	n-Butylbenzene	0.123U	0.123	50.0	50.6	101	70 - 135	48.7	97	4	30
95-50-1	1,2-Dichlorobenzene	0.135U	0.135	50.0	48.8	98	70 - 120	47.4	95	3	30
87-68-3	Hexachlorobutadiene	0.265U	0.265	50.0	54.3	109	50 - 140	50.6	101	7	30
91-20-3	Naphthalene	0.176U	0.176	50.0	48.7	97	55 - 140	49.1	98	0.8	30
87-61-6	1,2,3-Trichlorobenzene	0.079U	0.079	50.0	52.7	105	55 - 140	52.9	106	0.4	30
75-35-4	1,1-Dichloroethene	0.208U	0.208	50.0	52.7	105	70 - 130	50.0	100	5	30
71-43-2	Benzene	0.111U	0.111	50.0	51.5	103	80 - 120	49.6	99	4	30
79-01-6	Trichloroethene	0.161U	0.161	50.0	52.6	105	70 - 125	49.7	99	6	30
108-88-3	Toluene	0.122U	0.122	50.0	49.8	100	75 - 120	48.0	96	4	30
108-90-7	Chlorobenzene	0.083U	0.083	50.0	48.7	97	80 - 120	47.3	95	3	30
Surrogate											
460-00-4	4-Bromofluorobenzene	51.2	102	50	53.7	107	75 - 120	51.5	103		
1868-53-7	Dibromofluoromethane	49.7	99	50	51.2	102	85 - 115	49.9	100		
2037-26-5	Toluene d8	49	98	50	48.7	97	85 - 120	48.5	97		
17060-07-0	1,2-Dichloroethane-d4	50.9	102	50	52.1	104	70 - 120	51.9	104		

GC/MS Volatiles Quality Control Summary

Analytical Batch 494370		**Client ID**	BNP-TW-3			BNP-TW-3-MS			BNP-TW-3-SD		
Prep Batch N/A		**GCAL ID**	21211080313			21211080314			21211080315		
		Sample Type	SAMPLE			MS			MSD		
		Analytical Date	11/11/2012 12:11			11/11/2012 12:51			11/11/2012 13:10		
		Matrix	Water			Water			Water		
SW-846 8260B		**Units**	**Result**	ug/L **RDL**	**Spike Added**	**Result**	**% R**	**Control Limits % R**	**Result**	**% R**	**RPD**	**RPD Limit**
67-64-1	Acetone		0.00	0.193	50.0	37.9	76	40 - 140	37.7	75	0.5	30
74-97-5	Bromochloromethane		0.00	0.127	50.0	56.2	112	65 - 130	53.8	108	4	30
75-27-4	Bromodichloromethane		0.00	0.083	50.0	56.5	113	75 - 120	54.7	109	3	30
75-25-2	Bromoform		0.00	0.215	50.0	54.5	109	70 - 130	53.1	106	3	30
74-83-9	Bromomethane		0.00	0.427	50.0	47.3	95	30 - 145	46.7	93	1	30
75-15-0	Carbon disulfide		0.00	0.190	50.0	55.2	110	35 - 160	53.0	106	4	30
56-23-5	Carbon tetrachloride		0.00	0.248	50.0	61.5	123	65 - 140	58.8	118	4	30
136777-61-2	m,p-Xylene		0.00	0.123	100	107	107	75 - 130	102	102	5	30
75-00-3	Chloroethane		0.00	0.235	50.0	54.6	109	60 - 135	52.1	104	5	30
67-66-3	Chloroform		0.00	0.155	50.0	56.2	112	65 - 135	53.0	106	6	30
74-87-3	Chloromethane		0.00	0.144	50.0	48.9	98	40 - 125	45.9	92	6	30
75-71-8	Dichlorodifluoromethane		0.00	0.145	50.0	52.9	106	30 - 155	50.7	101	4	30
75-34-3	1,1-Dichloroethane		0.00	0.171	50.0	56.3	113	70 - 135	53.7	107	5	30
107-06-2	1,2-Dichloroethane		0.00	0.116	50.0	55.5	111	70 - 130	53.2	106	4	30
156-59-2	cis-1,2-Dichloroethene		0.00	0.103	50.0	56.9	114	70 - 125	55.2	110	3	30
156-60-5	trans-1,2-Dichloroethene		0.00	0.077	50.0	57.4	115	60 - 140	54.5	109	5	30
75-09-2	Methylene chloride		0.00	0.149	50.0	55.1	110	55 - 140	52.8	106	4	30
78-87-5	1,2-Dichloropropane		0.00	0.150	50.0	55.9	112	75 - 125	53.5	107	4	30
10061-01-5	cis-1,3-Dichloropropene		0.00	0.124	50.0	56.2	112	70 - 130	54.1	108	4	30
10061-02-6	trans-1,3-Dichloropropene		0.00	0.128	50.0	55.6	111	55 - 140	55.3	111	0.5	30
100-41-4	Ethylbenzene		0.00	0.109	50.0	52.0	104	75 - 125	50.8	102	2	30
591-78-6	2-Hexanone		0.00	0.122	50.0	53.9	108	55 - 130	55.0	110	2	30
98-82-8	Isopropylbenzene (Cumene)		0.00	0.130	50.0	53.0	106	75 - 125	51.0	102	4	30
78-93-3	2-Butanone		0.00	0.142	50.0	47.0	94	30 - 150	46.4	93	1	30
108-10-1	4-Methyl-2-pentanone		0.00	0.120	50.0	61.1	122	60 - 135	61.2	122	0.2	30
100-42-5	Styrene		0.00	0.089	50.0	53.5	107	65 - 135	51.5	103	4	30
127-18-4	Tetrachloroethene		0.00	0.193	50.0	54.0	108	45 - 150	51.2	102	5	30
79-34-5	1,1,2,2-Tetrachloroethane		0.00	0.109	50.0	53.5	107	65 - 130	52.5	105	2	30
120-82-1	1,2,4-Trichlorobenzene		0.00	0.105	50.0	50.7	101	65 - 135	50.2	100	1	30
71-55-6	1,1,1-Trichloroethane		0.00	0.123	50.0	54.5	109	65 - 130	52.2	104	4	30
79-00-5	1,1,2-Trichloroethane		0.00	0.159	50.0	51.3	103	75 - 125	51.3	103	0	30
75-69-4	Trichlorofluoromethane		0.00	0.157	50.0	50.9	102	60 - 145	54.0	108	6	30
95-47-6	o-Xylene		0.00	0.055	50.0	53.4	107	80 - 120	52.8	106	1	30

GC/MS Volatiles Quality Control Summary

Analytical Batch	494370	**Client ID**	BNP-TW-3			BNP-TW-3-MS			BNP-TW-3-SD		
Prep Batch	N/A	**GCAL ID**	21211080313			21211080314			21211080315		
		Sample Type	SAMPLE			MS			MSD		
		Analytical Date	11/11/2012 12:11			11/11/2012 12:51			11/11/2012 13:10		
		Matrix	Water			Water			Water		
SW-846 8260B		**Units**	**Result**	ug/L **RDL**	**Spike Added**	**Result**	**% R**	**Control Limits % R**	**Result**	**% R**	**RPD**	**RPD Limit**
75-01-4	Vinyl chloride		0.00	0.127	50.0	55.1	110	50 - 145	52.6	105	5	30
96-12-8	1,2-Dibromo-3-chloropropane		0.00	0.194	50.0	53.5	107	50 - 130	51.9	104	3	30
106-93-4	1,2-Dibromoethane		0.00	0.102	50.0	52.3	105	80 - 120	50.8	102	3	30
1634-04-4	tert-Butyl methyl ether (MTBE)		0.00	0.078	50.0	56.1	112	65 - 125	55.3	111	1	30
541-73-1	1,3-Dichlorobenzene		0.00	0.138	50.0	50.9	102	65 - 130	49.6	99	3	30
106-46-7	1,4-Dichlorobenzene		0.00	0.083	50.0	50.5	101	65 - 130	49.1	98	3	30
95-50-1	1,2-Dichlorobenzene		0.00	0.135	50.0	49.8	100	70 - 120	48.7	97	2	30
87-61-6	1,2,3-Trichlorobenzene		0.00	0.079	50.0	49.4	99	55 - 140	49.9	100	1	30
75-35-4	1,1-Dichloroethene		0.00	0.208	50.0	54.0	108	70 - 130	51.8	104	4	30
71-43-2	Benzene		0.00	0.111	50.0	54.8	110	80 - 120	52.7	105	4	30
79-01-6	Trichloroethene		0.00	0.161	50.0	55.1	110	70 - 125	53.0	106	4	30
108-88-3	Toluene		0.00	0.122	50.0	52.2	104	75 - 120	50.3	101	4	30
108-90-7	Chlorobenzene		0.00	0.083	50.0	50.8	102	80 - 120	49.1	98	3	30
Surrogate												
460-00-4	4-Bromofluorobenzene				50	52.5	105	75 - 120	52.4	105		
1868-53-7	Dibromofluoromethane				50	51.7	103	85 - 115	51.2	102		
2037-26-5	Toluene d8				50	48.3	97	85 - 120	48.4	97		
17060-07-0	1,2-Dichloroethane-d4				50	52	104	70 - 120	51.4	103		

General Chromatography Quality Control Summary

Analytical Batch	494679	**Client ID**	MB494270	LCS494270	LCSD494270
Prep Batch	494270	**GCAL ID**	1126930	1126931	1126932
Prep Method	SW-846	**Sample Type**	Method Blank	LCS	LCSD
	8330A	**Prep Date**	11/13/2012 04:30	11/13/2012 04:30	11/13/2012 04:30
		Analytical Date	11/14/2012 22:05	11/15/2012 12:45	11/15/2012 13:19
		Matrix	Water	Water	Water

SW-846 8330A		**Units**	ug/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
2691-41-0	HMX	0.212U	0.212	2.00	1.63	82	80 - 115	1.81	91	10	30
121-82-4	RDX	0.189U	0.189	2.00	1.49	75	50 - 160	1.58	79	6	30
99-35-4	1,3,5-Trinitrobenzene	0.240U	0.240	2.00	1.29	65	65 - 140	1.53	77	17	30
99-65-0	1,3-Dinitrobenzene	0.167U	0.167	2.00	1.55	78	45 - 160	2.12	106	**31***	30
479-45-8	Tetryl	0.241U	0.241	2.00	0.816	41	20 - 175	0.619	31	27	30
98-95-3	Nitrobenzene	0.267U	0.267	2.00	1.53	77	50 - 140	1.64	82	7	30
118-96-7	2,4,6-Trinitrotoluene	0.483U	0.483	2.00	1.53	77	50 - 145	1.57	79	3	30
1946-51-0	4-Amino-2,6-dinitrotoluene	0.489U	0.489	2.00	1.41	71	55 - 155	1.88	94	29	30
355-72-78-2	2-Amino-4,6-dinitrotoluene	0.576U	0.576	2.00	1.58	79	50 - 155	1.69	85	7	30
121-14-2	2,4-Dinitrotoluene	0.501U	0.501	2.00	1.73	87	60 - 135	1.91	96	10	30
606-20-2	2,6-Dinitrotoluene	0.283U	0.283	2.00	1.50	75	60 - 135	1.58	79	5	30
88-72-2	2-Nitrotoluene	0.120U	0.120	2.00	1.41	71	45 - 135	1.82	91	25	30
99-08-1	3-Nitrotoluene	0.369U	0.369	2.00	1.50	75	50 - 130	1.46	73	3	30
99-99-0	4-Nitrotoluene	0.417U	0.417	2.00	1.54	77	50 - 130	1.96	98	24	30
Surrogate											
528-29-0	1,2-Dinitrobenzene	1.54	77	2	1.51	76	70 - 130	1.51	76		

Analytical Batch	494679	**Client ID**	EOD-MW01	EOD-MW01 MS	EOD-MW01 MSD
Prep Batch	494270	**GCAL ID**	21211084207	21211084208	21211084209
Prep Method	SW-846	**Sample Type**	SAMPLE	MS	MSD
	8330A	**Prep Date**	11/13/2012 04:30	11/13/2012 04:30	11/13/2012 04:30
		Analytical Date	11/15/2012 04:51	11/15/2012 05:25	11/15/2012 05:58
		Matrix	Water	Water	Water

SW-846 8330A		**Units**	ug/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
2691-41-0	HMX	0.00	0.212	2.00	1.98	99	80 - 115	1.65	83	18	30
121-82-4	RDX	0.00	0.189	2.00	1.78	89	50 - 160	1.45	73	20	30
Surrogate											
528-29-0	1,2-Dinitrobenzene			2	1.69	85	70 - 130	1.39	70		

Inorganics Quality Control Summary

Analytical Batch	494561	**Client ID**	MB494316		LCS494316		
Prep Batch	494316	**GCAL ID**	1127184		1127185		
Prep Method	SW-846	**Sample Type**	Method Blank		LCS		
	7470A	**Prep Date**	11/10/2012 12:35		11/10/2012 12:35		
		Analytical Date	11/14/2012 12:34		11/14/2012 12:35		
		Matrix	Water		Water		
SW-846 7470A		**Units**	ug/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
7439-97-6	Mercury	0.068U	0.068	5.00	4.06	81	80 - 120

Analytical Batch	494561	**Client ID**	MA01MW003		1126790MS			1126790MSD			
Prep Batch	494316	**GCAL ID**	21211091501		1127186			1127187			
Prep Method	SW-846	**Sample Type**	SAMPLE		MS			MSD			
	7470A	**Prep Date**	11/10/2012 12:35		11/10/2012 12:35			11/10/2012 12:35			
		Analytical Date	11/14/2012 12:44		11/14/2012 12:39			11/14/2012 12:40			
		Matrix	Water		Water			Water			
SW-846 7470A		**Units**	ug/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
7439-97-6	Mercury	0.00000	0.068	5.00	3.71	**74***	75 - 125	4.09	82	10	30

Inorganics Quality Control Summary

Analytical Batch	494561	**Client ID**	MB494316		LCS494316		
Prep Batch	494316	**GCAL ID**	1127184		1127185		
Prep Method	SW-846	**Sample Type**	Method Blank		LCS		
	7470A	**Prep Date**	11/10/2012 12:35		11/10/2012 12:35		
		Analytical Date	11/14/2012 12:34		11/14/2012 12:35		
		Matrix	Water		Water		
SW-846 7470A		**Units**	ug/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
7439-97-6	Mercury	0.068U	0.068	5.00	4.06	81	80 - 120

Analytical Batch	494561	**Client ID**	MA01MW003		1126790MS			1126790MSD			
Prep Batch	494316	**GCAL ID**	21211091501		1127186			1127187			
Prep Method	SW-846	**Sample Type**	SAMPLE		MS			MSD			
	7470A	**Prep Date**	11/10/2012 12:35		11/10/2012 12:35			11/10/2012 12:35			
		Analytical Date	11/14/2012 12:44		11/14/2012 12:39			11/14/2012 12:40			
		Matrix	Water		Water			Water			
SW-846 7470A		**Units**	ug/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
7439-97-6	Mercury	0.00000	0.068	5.00	3.71	**74***	80 - 120	4.09	82	10	30

Inorganics Quality Control Summary

Analytical Batch	494546	**Client ID**	MB494315	LCS494315
Prep Batch	494315	**GCAL ID**	1127180	1127181
Prep Method	SW-846	**Sample Type**	Method Blank	LCS
	3010A	**Prep Date**	11/10/2012 12:35	11/10/2012 12:35
		Analytical Date	11/13/2012 19:51	11/13/2012 19:59
		Matrix	Water	Water

SW-846 6010C		**Units**	ug/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
7429-90-5	Aluminum	60.0U	60.0	5000	4930	99	80 - 120
7440-36-0	Antimony	3.11U	3.11	500	471	94	80 - 120
7440-38-2	Arsenic	3.59U	3.59	500	462	92	80 - 120
7440-39-3	Barium	0.71U	0.71	500	483	97	80 - 120
7440-41-7	Beryllium	0.10U	0.10	500	483	97	80 - 120
7440-43-9	Cadmium	0.20U	0.20	500	471	94	80 - 120
7440-70-2	Calcium	50.0U	50.0	5000	4770	95	80 - 120
7440-47-3	Chromium	1.00U	1.00	500	492	98	80 - 120
7440-48-4	Cobalt	1.00U	1.00	500	477	95	80 - 120
7440-50-8	Copper	1.31J	1.01	500	483	97	80 - 120
7439-89-6	Iron	40.0U	40.0	5000	4830	97	80 - 120
7439-92-1	Lead	1.96U	1.96	500	502	100	80 - 120
7439-95-4	Magnesium	50.0U	50.0	5000	4770	95	80 - 120
7439-96-5	Manganese	2.00U	2.00	500	476	95	80 - 120
7439-98-7	Molybdenum	3.75U	3.75	500	493	99	80 - 120
7440-02-0	Nickel	1.13U	1.13	500	495	99	80 - 120
7440-09-7	Potassium	100U	100	10000	10100	101	80 - 120
7782-49-2	Selenium	4.42U	4.42	500	464	93	80 - 120
7440-22-4	Silver	0.70U	0.70	500	482	96	80 - 120
7440-23-5	Sodium	200U	200	20000	20700	104	80 - 120
7440-28-0	Thallium	3.04U	3.04	500	471	94	80 - 120
7440-62-2	Vanadium	3.75U	3.75	500	485	97	80 - 120
7440-66-6	Zinc	4.51U	4.51	500	480	96	80 - 120
7440-32-6	Titanium	1.20U	1.20	500	497	99	80 - 120

Inorganics Quality Control Summary

Analytical Batch	494546	**Client ID**	LF005-MW01_1112	1126827MS	1126827MSD
Prep Batch	494315	**GCAL ID**	21211091901	1127182	1127183
Prep Method	SW-846	**Sample Type**	SAMPLE	MS	MSD
	3010A	**Prep Date**	11/10/2012 12:35	11/10/2012 12:35	11/10/2012 12:35
		Analytical Date	11/13/2012 20:05	11/13/2012 20:13	11/13/2012 20:19
		Matrix	Water	Water	Water

SW-846 6010C		**Units**	ug/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
7429-90-5	Aluminum	271	60.0	5000	5160	98	80 - 120	5440	103	5	30
7440-36-0	Antimony	0.0	3.11	500	474	95	80 - 120	503	101	6	30
7440-38-2	Arsenic	0.0	3.59	500	466	93	80 - 120	491	98	5	30
7440-39-3	Barium	3.72	0.71	500	488	97	80 - 120	509	101	4	30
7440-41-7	Beryllium	0.0	0.10	500	484	97	80 - 120	505	101	4	30
7440-43-9	Cadmium	0.29	0.20	500	471	94	80 - 120	491	98	4	30
7440-70-2	Calcium	571	50.0	5000	5140	91	80 - 120	5590	100	8	30
7440-47-3	Chromium	0.30	1.00	500	490	98	80 - 120	514	103	5	30
7440-48-4	Cobalt	1.21	1.00	500	476	95	80 - 120	505	101	6	30
7440-50-8	Copper	2.10	1.01	500	484	96	80 - 120	508	101	5	30
7439-89-6	Iron	155	40.0	5000	4860	94	80 - 120	5190	101	6	30
7439-92-1	Lead	0.0	1.96	500	464	93	80 - 120	490	98	6	30
7439-95-4	Magnesium	176	50.0	5000	4770	92	80 - 120	5100	98	7	30
7439-96-5	Manganese	0.0	2.00	500	478	96	80 - 120	500	100	4	30
7439-98-7	Molybdenum	0.0	3.75	500	493	99	80 - 120	518	104	5	30
7440-02-0	Nickel	0.0	1.13	500	486	97	80 - 120	508	102	4	30
7440-09-7	Potassium	0.0	100	10000	10100	101	80 - 120	10500	105	4	30
7782-49-2	Selenium	0.0	4.42	500	470	94	80 - 120	492	98	5	30
7440-22-4	Silver	0.0	0.70	500	481	96	80 - 120	503	101	4	30
7440-23-5	Sodium	4230	200	20000	24300	101	80 - 120	25700	107	5	30
7440-28-0	Thallium	0.0	3.04	500	468	94	80 - 120	495	99	6	30
7440-62-2	Vanadium	2.47	3.75	500	486	97	80 - 120	508	101	5	30
7440-66-6	Zinc	0.0	4.51	500	476	95	80 - 120	496	99	4	30
7440-32-6	Titanium	4.95	1.20	500	502	99	80 - 120	524	104	4	30

Inorganics Quality Control Summary

Analytical Batch	494546	**Client ID**	MB494317	LCS494317
Prep Batch	494317	**GCAL ID**	1127188	1127189
Prep Method	SW-846 3005	**Sample Type**	Method Blank	LCS
	Dissolved	**Prep Date**	11/10/2012 12:35	11/10/2012 12:35
		Analytical Date	11/13/2012 18:27	11/13/2012 18:34
		Matrix	Water	Water

SW-846 6010C Dissolved		**Units**	ug/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
7429-90-5	Aluminum	60.0U	60.0	5000	4890	98	80 - 120
7440-36-0	Antimony	3.11U	3.11	500	486	97	80 - 120
7440-38-2	Arsenic	3.59U	3.59	500	484	97	80 - 120
7440-39-3	Barium	0.71U	0.71	500	488	98	80 - 120
7440-41-7	Beryllium	0.10U	0.10	500	496	99	80 - 120
7440-43-9	Cadmium	0.22J	0.20	500	485	97	80 - 120
7440-70-2	Calcium	50.0U	50.0	5000	4740	95	80 - 120
7440-47-3	Chromium	1.00U	1.00	500	486	97	80 - 120
7440-48-4	Cobalt	1.00U	1.00	500	486	97	80 - 120
7440-50-8	Copper	1.85J	1.01	500	486	97	80 - 120
7439-89-6	Iron	40.0U	40.0	5000	4770	95	80 - 120
7439-92-1	Lead	2.20J	1.96	500	509	102	80 - 120
7439-95-4	Magnesium	50.0U	50.0	5000	4740	95	80 - 120
7439-96-5	Manganese	2.00U	2.00	500	482	96	80 - 120
7439-98-7	Molybdenum	3.75U	3.75	500	495	99	80 - 120
7440-02-0	Nickel	1.13U	1.13	500	494	99	80 - 120
7440-09-7	Potassium	100U	100	10000	10200	102	80 - 120
7782-49-2	Selenium	4.42U	4.42	500	491	98	80 - 120
7440-22-4	Silver	0.70U	0.70	500	492	98	80 - 120
7440-23-5	Sodium	200U	200	20000	20500	103	80 - 120
7440-28-0	Thallium	3.04U	3.04	500	479	96	80 - 120
7440-62-2	Vanadium	3.75U	3.75	500	486	97	80 - 120
7440-66-6	Zinc	4.51U	4.51	500	489	98	80 - 120
7440-32-6	Titanium	1.20U	1.20	500	495	99	80 - 120

Inorganics Quality Control Summary

Analytical Batch	494546	**Client ID**	MA01MW003	1126790MS	1126790MSD
Prep Batch	494317	**GCAL ID**	21211091501	1127190	1127191
Prep Method	SW-846 3005	**Sample Type**	SAMPLE	MS	MSD
	Dissolved	**Prep Date**	11/10/2012 12:35	11/10/2012 12:35	11/10/2012 12:35
		Analytical Date	11/13/2012 18:40	11/13/2012 18:48	11/13/2012 18:55
		Matrix	Water	Water	Water

SW-846 6010C Dissolved		**Units**	ug/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
7429-90-5	Aluminum	0.0	60.0	5000	4940	99	80 - 120	4560	91	8	30
7440-36-0	Antimony	0.0	3.11	500	516	103	80 - 120	477	95	8	30
7440-38-2	Arsenic	0.0	3.59	500	515	103	80 - 120	471	94	9	30
7440-39-3	Barium	19.2	0.71	500	507	98	80 - 120	461	88	10	30
7440-41-7	Beryllium	0.0	0.10	500	500	100	80 - 120	455	91	10	30
7440-43-9	Cadmium	0.64	0.20	500	478	95	80 - 120	435	87	9	30
7440-70-2	Calcium	61300	50.0	5000	66600	106	80 - 120	59100	**-40***	12	30
7440-47-3	Chromium	1.12	1.00	500	483	96	80 - 120	440	88	9	30
7440-48-4	Cobalt	1.00	1.00	500	483	96	80 - 120	446	89	8	30
7440-50-8	Copper	11.6	1.01	500	519	101	80 - 120	472	92	10	30
7439-89-6	Iron	0.0	40.0	5000	4850	97	80 - 120	4480	90	8	30
7439-95-4	Magnesium	61900	50.0	5000	68500	**132***	80 - 120	62100	**4***	10	30
7439-96-5	Manganese	0.0	2.00	500	486	97	80 - 120	442	88	10	30
7439-98-7	Molybdenum	5.53	3.75	500	511	101	80 - 120	475	94	7	30
7440-02-0	Nickel	1.44	1.13	500	491	98	80 - 120	456	91	8	30
7440-09-7	Potassium	8450	100	10000	19300	109	80 - 120	17400	90	10	30
7782-49-2	Selenium	0.0	4.42	500	513	103	80 - 120	466	93	10	30
7440-22-4	Silver	0.0	0.70	500	504	101	80 - 120	457	91	10	30
7440-28-0	Thallium	0.0	3.04	500	472	94	80 - 120	429	86	10	30
7440-62-2	Vanadium	35.5	3.75	500	539	101	80 - 120	491	91	9	30
7440-66-6	Zinc	26.5	4.51	500	511	97	80 - 120	463	87	10	30
7440-32-6	Titanium	0.0	1.20	500	498	100	80 - 120	456	91	9	30

Inorganics Quality Control Summary

Analytical Batch	494786	**Client ID**	MA01MW003	1126790MS	1126790MSD
Prep Batch	494317	**GCAL ID**	21211091501	1127190	1127191
Prep Method	SW-846 3005	**Sample Type**	SAMPLE	MS	MSD
	Dissolved	**Prep Date**	11/10/2012 12:35	11/10/2012 12:35	11/10/2012 12:35
		Analytical Date	11/16/2012 15:58	11/16/2012 16:05	11/16/2012 16:12
		Matrix	Water	Water	Water

SW-846 6010C Dissolved		**Units**	ug/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
7439-92-1	Lead	0.0	1.96	500	500	100	80 - 120	452	90	10	30
7440-23-5	Sodium	475000	200	20000	503000	**137***	80 - 120	450000	**-100***	11	30

General Chemistry Quality Control Summary

Analytical Batch 494398	**Client ID**	MB494398			LCS494398		
Prep Batch N/A	**GCAL ID**	1127536			1127537		
	Sample Type	Method Blank			LCS		
	Analytical Date	11/12/2012 08:30			11/12/2012 08:30		
	Matrix	Water			Water		
SM 2540C TDS		**Units**	mg/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
WET-035	Total Dissolved Solids(TDS)	0.00		1000	993	99.3	80 - 120

Analytical Batch 494398	**Client ID**	MA01MW003		1126790DUP		
Prep Batch N/A	**GCAL ID**	21211091501		1127538		
	Sample Type	SAMPLE		DUP		
	Analytical Date	11/12/2012 08:30		11/12/2012 08:30		
	Matrix	Water		Water		
SM 2540C TDS		**Units**	mg/L	**Result**		**RPD**
		Result	**RDL**		**RPD**	**Limit**
WET-035	Total Dissolved Solids(TDS)	1776		1790	0.56	5

General Chemistry Quality Control Summary

Analytical Batch 494282	**Client ID**	MB494282			LCS494282		
Prep Batch N/A	**GCAL ID**	1127021			1127022		
	Sample Type	Method Blank			LCS		
	Analytical Date	11/09/2012 16:04			11/09/2012 16:05		
	Matrix	Water			Water		
EPA 353.2 Nitrate		**Units**	mg/L-N	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
14797-55-8 Nitrate		0.005U	0.005	0.500	0.478	96	89.5 -110.5

Analytical Batch 494282	**Client ID**	MA01MW003			1126790MS			1126790MSD			
Prep Batch N/A	**GCAL ID**	21211091501			1127023			1127024			
	Sample Type	SAMPLE			MS			MSD			
	Analytical Date	11/09/2012 16:08			11/09/2012 16:09			11/09/2012 16:10			
	Matrix	Water			Water			Water			
EPA 353.2 Nitrate		**Units**	mg/L-N	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
14797-55-8 Nitrate		0.214	0.005	0.500	0.713	100	89.5 -110.5	0.711	100	0.2	25

Analytical Batch 494283	**Client ID**	MB494283			LCS494283		
Prep Batch N/A	**GCAL ID**	1127025			1127026		
	Sample Type	Method Blank			LCS		
	Analytical Date	11/09/2012 15:47			11/09/2012 15:48		
	Matrix	Water			Water		
EPA 353.2 Nitrite		**Units**	mg/L-N	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
14797-65-0 Nitrite		0.002U	0.002	0.500	0.495	99	89.5 -110.5

Analytical Batch 494283	**Client ID**	MA01MW003			1126790MS			1126790MSD			
Prep Batch N/A	**GCAL ID**	21211091501			1127027			1127028			
	Sample Type	SAMPLE			MS			MSD			
	Analytical Date	11/09/2012 15:49			11/09/2012 15:50			11/09/2012 15:52			
	Matrix	Water			Water			Water			
EPA 353.2 Nitrite		**Units**	mg/L-N	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
14797-65-0 Nitrite		0.011	0.002	0.500	0.510	100	89.5 -110.5	0.509	100	0.2	25

General Chemistry Quality Control Summary

Analytical Batch 494605	**Client ID**	MB494605			LCS494605		
Prep Batch N/A	**GCAL ID**	1128388			1128389		
	Sample Type	Method Blank			LCS		
	Analytical Date	11/14/2012 11:42			11/14/2012 12:00		
	Matrix	Water			Water		
EPA 300.0		**Units**	mg/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
16887-00-6	Chloride	0.063U	0.063	2.50	2.44	97.8	79 - 109
14808-79-8	Sulfate	0.115U	0.115	5.00	4.95	99	82 - 110

Analytical Batch 494605	**Client ID**	M114MW003			M114MW003-MS			M114MW003-MSD			
Prep Batch N/A	**GCAL ID**	21211081703			21211081704			21211081705			
	Sample Type	SAMPLE			MS			MSD			
	Analytical Date	11/14/2012 12:53			11/14/2012 13:10			11/14/2012 13:28			
	Matrix	Water			Water			Water			
EPA 300.0		**Units**	mg/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
16887-00-6	Chloride	4590	315	12500	17700	105	79 - 109	17600	104	0.39	15
14808-79-8	Sulfate	2460	575	25000	28000	102	82 - 110	28200	103	0.77	15

Analytical Batch 494605	**Client ID**	CH-15			1126588MS			1126588MSD			
Prep Batch N/A	**GCAL ID**	21211084805			1128390			1128391			
	Sample Type	SAMPLE			MS			MSD			
	Analytical Date	11/14/2012 16:59			11/14/2012 17:17			11/14/2012 17:35			
	Matrix	Water			Water			Water			
EPA 300.0		**Units**	mg/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
14808-79-8	Sulfate	200	11.5	500	720	104	82 - 110	719	104	0.018	15

General Chemistry Quality Control Summary

Analytical Batch 494276	**Client ID**	LCS494276	
Prep Batch N/A	**GCAL ID**	1126973	
	Sample Type	LCS	
	Analytical Date	11/09/2012 11:15	
	Matrix	Water	

SM 2320B Alkalinity		**Spike Added**	**Result**	**% R**	**Control Limits % R**
000000-00-5	Total Alkalinity	200	197	99	80 - 120

Analytical Batch 494276	**Client ID**	MA01MW004	1126318DUP
Prep Batch N/A	**GCAL ID**	21211081701	1126974
	Sample Type	SAMPLE	DUP
	Analytical Date	11/09/2012 11:15	11/09/2012 11:15
	Matrix	Water	Water

SM 2320B Alkalinity		**Units**	mg/L CaCO3			
		Result	**RDL**	**Result**	**RPD**	**RPD Limit**
000000-00-5	Total Alkalinity	192.48	0.19	192	0	11

General Chemistry Quality Control Summary

Analytical Batch 494263	**Client ID**	MB494263			LCS494263		
Prep Batch N/A	**GCAL ID**	1126798			1126799		
	Sample Type	Method Blank			LCS		
	Analytical Date	11/09/2012 10:16			11/09/2012 10:16		
	Matrix	Water			Water		
SW-846 7196A Chromium VI		**Units**	ug/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
18540-29-9 Chromium VI		4.00U	4.00	500	478	96	80 - 120

Analytical Batch 494263	**Client ID**	MA02MW001D			1126792MS		
Prep Batch N/A	**GCAL ID**	21211091503			1126801		
	Sample Type	SAMPLE			MS		
	Analytical Date	11/09/2012 11:01			11/09/2012 11:01		
	Matrix	Water			Water		
SW-846 7196A Chromium VI		**Units**	ug/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
18540-29-9 Chromium VI		0.000	4.00	500	504	101	80 - 120

Analytical Batch 494263	**Client ID**	MA02MW001D		1126792DUP		
Prep Batch N/A	**GCAL ID**	21211091503		1126800		
	Sample Type	SAMPLE		DUP		
	Analytical Date	11/09/2012 11:01		11/09/2012 11:01		
	Matrix	Water		Water		
SW-846 7196A Chromium VI		**Units**	ug/L	**Result**		**RPD**
		Result	**RDL**		**RPD**	**Limit**
18540-29-9 Chromium VI		0.000	4.00	0.000	0	25

General Chemistry Quality Control Summary

Analytical Batch	494463	**Client ID**	MB494328		LCS494328		
Prep Batch	494328	**GCAL ID**	1127229		1127230		
Prep Method	SW-846	**Sample Type**	Method Blank		LCS		
	9012A	**Prep Date**	11/10/2012 06:00		11/10/2012 06:00		
		Analytical Date	11/12/2012 15:51		11/12/2012 15:52		
		Matrix	Water		Water		
SW-846 9012A Cyanide		**Units**	mg/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
57-12-5	Total Cyanide	0.0012U	0.0012	0.020	0.019	94.5	80 - 120

Analytical Batch	494463	**Client ID**	MB494328		LCSHI494328		
Prep Batch	494328	**GCAL ID**	1127229		1127231		
Prep Method	SW-846	**Sample Type**	Method Blank		LCSHI		
	9012A	**Prep Date**	11/10/2012 06:00		11/10/2012 06:00		
		Analytical Date	11/12/2012 15:51		11/12/2012 15:53		
		Matrix	Water		Water		
SW-846 9012A Cyanide		**Units**	mg/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
57-12-5	Total Cyanide	0.0012U	0.0012	0.10	0.091	90.8	80 - 120

Analytical Batch	494463	**Client ID**	M114MW003		M114MW003-MS			M114MW003-MSD			
Prep Batch	494328	**GCAL ID**	21211081703		21211081704			21211081705			
Prep Method	SW-846	**Sample Type**	SAMPLE		MS			MSD			
	9012A	**Prep Date**	11/10/2012 06:00		11/10/2012 06:00			11/10/2012 06:00			
		Analytical Date	11/12/2012 15:59		11/12/2012 16:00			11/12/2012 16:02			
		Matrix	Water		Water			Water			
SW-846 9012A Cyanide		**Units**	mg/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
57-12-5	Total Cyanide	0.0	0.0012	0.050	0.040	80.4	80 - 120	0.040	80.2	0.25	20

GCAL

7979 GSRI Avenue, Baton Rouge, Louisiana 70820-7402
Phone 225.769.4900 • Fax 225.767.5717

Chain of Custody Record

Lab use only	Client Name	Client #	Workorder #	Due Date
	Trinity	4747	212110915	11/16/12

Report to:
Client: Trinity ADC
Address: 1002 N Eglin Parkway
Shalimar, FL 32459
Contact: Ben Stewart
Phone: 850 218 8155
Fax:

Bill to:
Client: Same as report to
Address:
Contact:
Phone:
Fax:

P.O. Number:
Project Name/Number: Melrose AFR A003-006
Sampled By: Ben Stewart Jordan Gibson

Analytical Requests & Method

Lab use only:
Custody Seal used ☑ yes ☐ no
intact ☑ yes ☐ no
Temperature °C 3.4 2.7 2.6 2.3

Matrix[1]	Date	Time (2400)	Comp	Grab	Sample Description	Preservatives	No Containers	VOCs (8260B) HCl	Explosives (8330)	Total Metals 6010C HNO3	Dissolved Metals 6010C HNO3	Chromium (VI) 7196A	Cyanide 9012A NaOH	Mercury 7470A HNO3	NO2/NO3, Chloride, Sulfate 300.0	Perchlorate 6860	Alkalinity 2320B	TDS 2540C	Remarks:	Lab ID 11/9
WG	11/8/12	1015		✓	MA01MW003	½	11	X	X	X	X	X	X	X	X	X	X	X		1
WQ	11/8/12	1015			TB-06	½	3	X												2
WG	11/8/12	1306		✓	MA02MW001D	½	11	X	X	X	X	X	X	X	X	X	X	X		3
WG	11/8/12	1306		✓	MA02 MW001D-FD	½	11	X	X	X	X	X	X	X	X	X	X	X		4
WQ	11/8/12	1145			EB-01	½	12	X	X	X	X	X	X	X	X	X	X	X		5

Turn Around Time: ☐ 24-48 hrs. ☐ 3 days ☐ 1 week ☒ Standard ☐ Other

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
[signature]	[signature]	11/8/12	1600
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Fedex	[signature]	11/9/12	940
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

Note: Dissolved metals were field filtered
8728 2111 9127

By submitting these samples, you agree to the terms and conditions contained in our most recent schedule of services.

Matrix[1]: W = water, S = soil, SD = solid, L = liquid, SL = sludge, o = oil, CT = charcoal tube, A = air bag

We cannot accept verbal changes. Please fax written changes to (225) 767-5717

WHITE: CLIENT FINAL REPORT — CANARY: LABORATORY — PINK: CLIENT

GCAL-06 11/98

GCAL
GULF COAST ANALYTICAL LABORATORIES, INC

SAMPLE RECEIVING CHECKLIST

SAMPLE DELIVERY GROUP	212110915
Client 4747 - TRINITY Analysis & Development Corp.	**Transport Method** FEDEX
Profile 195817 - Melrose	**Received By** Pfeifer, Ben J.
Line Item(s) 1 - Waters	**Receive Date(s)** 11/09/12

CHECKLIST

	Yes	No	NA
Were all samples received using proper thermal preservation?	☑	☐	☐
When used, were all custody seals intact?	☑	☐	☐
Were all samples received in proper containers?	☑	☐	☐
Were all samples received using proper chemical preservation?	☑	☐	☐
Was preservative added to any container at the lab?	☐	☑	☐
Were all containers received in good condition?	☑	☐	☐
Were all VOA vials received with no head space?	☑	☐	☐
Do all sample labels match the Chain of Custody?	☑	☐	☐
Did the Chain of Custody list the sampling technician?	☑	☐	☐
Was the COC maintained i.e. all signatures, dates and time of receipt included?	☑	☐	☐

COOLERS

Airbill	Temp(oC)
8728 2111 9127	3.4
	2.7
	2.6
	2.3

DISCREPANCIES

None

LABORATORY PRESERVATIONS

None

NOTES

November 27, 2012

Brenda Martinez
GCAL LAB
7979 GSRI AVENUE
BATON ROUGE, LA 70820
TEL: (225) 769-4900
FAX (225) 767-5717

Order No.: 1211105

RE: DoD Perchlorate

Dear Brenda Martinez:

DHL Analytical, Inc. received 4 sample(s) on 11/13/2012 for the analyses presented in the following report.

There were no problems with the analyses and all data met requirements of DoD QSM Ver 4.2 and NELAC except where noted in the Case Narrative. All non-NELAC methods will be identified accordingly in the case narrative and all estimated uncertainties of test results are within method or EPA specifications.

If you have any questions regarding these tests results, please feel free to call. This report shall not be reproduced except in full without the written approval of DHL Analytical, Inc. Thank you for using DHL Analytical.

Sincerely,

John DuPont
General Manager

This report was performed under the accreditation of the State of Texas & DoD Laboratory Certification Number: T104704211-12-8 & DoD ELAP #ADE-1416 v2

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GCAL

GULF COAST ANALYTICAL LABORATORIES, INC
7979 GSRI AVE, BATON ROUGE LA 70820-7402
(225) 769-4900 FAX (225) 767-5717

#1211105

Chain of Custody Record

Submitted by
Client: Gulf Coast Analytical Labs
Address: 7979 GSRI Avenue
Baton Rouge, LA 70820
Contact: Brenda Martinez
Phone: (225)769-4900
Fax: (225)767-5717

Bill to
Client: Gulf Coast Analytical Labs
Address: 7979 GSRI Avenue
Baton Rouge, LA 70820
Contact: Brenda Martinez
Phone: (225)769-4900
Fax: (225)767-5717

Analysis Requested

* Our P. O. Number must appear on the Invoice.
* Our Project Number must appear on the final report.

P.O. Number: 12-09169
Project Name/Number: 212110915
Sampled By:

	Matrix	Date	Time (2400)	Comp	Grab	Sample Description	Preservatives	No. Containers	PERCHLORATE (6860)	Remarks:	Lab ID
01	W	11/8/2012	10:15		X	MA01 MW003		1	X	21211091501	
02	W	11/8/2012	13:06		X	MA02 MW001D		1	X	21211091503	
03	W	11/8/2012	13:06		X	MA02 MW001D-FD		1	X	21211091504	
04	W	11/8/2012	11:45		X	EB-01		1	X	21211091505	

Turn Around Time: ___ 24 - 48 hrs ___ 3 days 1 week X standard other ___

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
[illegible]	FedEx	11/12/12	1700
[illegible]	[illegible]	11/13/12	830

Note: Receiving temp 1.20 Therm #57 Custody seal intact

Please fax results to (225)767-5717

PLEASE RETURN ICE CHESTS TO 7979 GSRI AVE.

Matrix: W = water, S=Soil, SD=Solid, L=Liquid, SL=Sludge, O=Oil, CT=Charcoal Tube, OVM=Organic Vapor Monitor, XT=XAD Tube, A=Air Bag, SUM=Summa Canister

ORIGIN ID: OPLA (225) 214-7049
KELLY LOTT
GCAL LLC
7979 GSRI

BATON ROUGE, LA 70820
UNITED STATES US

SHI:
ACTWG:
CAD: 0106[illegible]E2606

BILL SENDER

TO SAMPLE RECEIVING
DHL
2300 DOUBLE CREEK

ROUND ROCK TX 78664
(225) 769-4900
INV:
PO: REF:
DEPT:

FedEx Express

J121812100501 25

TRK# 0201 5475 7636 5381

TUE - 13 NOV A1
PRIORITY OVERNIGHT

A8 BSMA

78664
TX-US AUS

Part # 156146-434 RIT2 07/11

GCAL

CUSTODY SEAL

Date Sealed: 11-12-12

Sealed By: [illegible]

GCAL-17

This package confirms to the conditions and limitations specified in 49 CFR 173.4

DHL Analytical, Inc.

Sample Receipt Checklist

Client Name GCAL LAB

Date Received: 11/13/2012

Work Order Number 1211105

Received by JB

Checklist completed by: Signature 11/13/2012 Date

Reviewed by JD Initials 11/13/2012 Date

Carrier name: FedEx 1day

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shippping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	1.2 °C
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Adjusted? _____ Checked by _____

Any No response must be detailed in the comments section below.

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

Page 1 of 1

DHL Analytical, Inc.

Laboratory Review Checklist: Reportable Data

Project Name: DoD Perchlorate	**Date:** 11/27/12
Reviewer Name: Carlos Castro	**Laboratory Work Order:** 1211105
Prep Batch Number(s): See Prep Dates Report	**Run Batch:** See Analytical Dates Report

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
R1	OI	**Chain-of-Custody (C-O-C)**					
		1) Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				R1-01
		2) Were all departures from standard conditions described in an exception report?			X		
R2	OI	**Sample and Quality Control (QC) Identification**					
		1) Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		2) Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	**Test Reports**					
		1) Were all samples prepared and analyzed within holding times?	X				
		2) Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		3) Were calculations checked by a peer or supervisor?	X				
		4) Were all analyte identifications checked by a peer or supervisor?	X				
		5) Were sample quantitation limits reported for all analytes not detected?	X				
		6) Were all results for soil and sediment samples reported on a dry weight basis?			X		
		7) Were % moisture (or solids) reported for all soil and sediment samples?			X		
		8) If required for the project, TICs reported?			X		
R4	O	**Surrogate Recovery Data**					
		1) Were surrogates added prior to extraction?			X		
		2) Were surrogate percent recoveries in all samples within the laboratory QC limits?			X		
R5	OI	**Test Reports/Summary Forms for Blank Samples**					
		1) Were appropriate type(s) of blanks analyzed?	X				
		2) Were blanks analyzed at the appropriate frequency?	X				
		3) Where method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		4) Were blank concentrations < MQL?	X				
R6	OI	**Laboratory Control Samples (LCS):**					
		1) Were all COCs included in the LCS?	X				
		2) Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		3) Were LCSs analyzed at the required frequency?	X				
		4) Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		5) Does the detectability data document the laboratory's capability to detect the COCs at te MDL used to calculate the SQLs?	X				
		6) Was the LCSD RPD within QC limits (if applicable)?	X				
R7	OI	**Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Data**					
		1) Were the project/method specified analytes included in the MS and MSD?	X				
		2) Were MS/MSD analyzed at the appropriate frequency?	X				
		3) Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?		X			R7-03
		4) Were MS/MSD RPDs within laboratory QC limits?	X				
R8	OI	**Analytical Duplicate Data**					
		1) Were appropriate analytical duplicates analyzed for each matrix?			X		
		2) Were analytical duplicates analyzed at the appropriate frequency?			X		
		3) Were RPDs or relative standard deviations within the laboratory QC limits?			X		
R9	OI	**Method Quantitation Limits (MQLs):**					
		1) Are the MQLs for each method analyte included in the laboratory data package?	X				
		2) Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		3) Are unadjusted MQLs included in the laboratory data package?	X				
R10	OI	**Other Problems/Anomalies**					
		1) Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		2) Were all necessary corrective actions performed for the reported data?	X				
		3) Was applicable and available technology used to lower the SQL minimize the matrix interference affects on the sample results?	X				

1 Items identified by the letter "R" should be included in the laboratory data package submitted to the TCEQ in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2 O = organic analyses; I = inorganic analyses (and general chemistry, when applicable).
3 NA = Not applicable.
4 NR = Not Reviewed.
5 ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

DHL Analytical, Inc.
Laboratory Review Checklist (continued): Supporting Data

Project Name: DoD Perchlorate | **Date:** 11/27/12

Reviewer Name: Carlos Castro | **Laboratory Work Order:** 1211105

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
S1	OI	**Initial Calibration (ICAL)**					
		1) Were response factors and/or relative response factors for each analyte within QC limits?	X				
		2) Were percent RSDs or correlation coefficient criteria met?	X				
		3) Was the number of standards recommended in the method used for all analytes?	X				
		4) Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		5) Are ICAL data available for all instruments used?	X				
		6) Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	**Initial and Continuing calibration Verification (ICCV and CCV) and Continuing Calibration blank (CCB)**					
		1) Was the CCV analyzed at the method-required frequency?	X				
		2) Were percent differences for each analyte within the method-required QC limits?	X				
		3) Was the ICAL curve verified for each analyte?	X				
		4) Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
S3	O	**Mass Spectral Tuning**					
		1) Was the appropriate compound for the method used for tuning?	X				
		2) Were ion abundance data within the method-required QC limits?	X				
S4	O	**Internal Standards (IS)**					
		1) Were IS area counts and retention times within the method-required QC limits?	X				
S5	OI	**Raw Data (NELAC section 1 appendix A glossary, and section 5.12)**					
		1) Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		2) Were data associated with manual integrations flagged on the raw data?	X				
S6	O	**Dual Column Confirmation**					
		1) Did dual column confirmation results meet the method-required QC?			X		
S7	O	**Tentatively Identified Compounds (TICs)**					
		1) If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	**Interference Check Sample (ICS) Results**					
		1) Were percent recoveries within method QC limits?			X		
S9	I	**Serial Dilutions, Post Digestion Spikes, and Method of Standard Additions**					
		1) Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X		
S10	OI	**Method Detection Limit (MDL) Studies**					
		1) Was a MDL study performed for each reported analyte?	X				
		2) Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S11	OI	**Proficiency Test Reports**					
		1) Was the lab's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	**Standards Documentation**					
		1) Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	**Compound/Analyte Identification Procedures**					
		1) Are the procedures for compound/analyte identification documented?	X				
S14	OI	**Demonstration of Analyst Competency (DOC)**					
		1) Was DOC conducted consistent with NELAC Chapter 5C?	X				
		2) Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	**Verification/Validation Documentation for Methods (NELAC Chap 5)**					
		1) Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	**Laboratory Standard Operating Procedures (SOPs)**					
		1) Are laboratory SOPs current and on file for each method performed?	X				

1 Items identified by the letter "R" should be included in the laboratory data package submitted to the TCEQ in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2 O = organic analyses; I = inorganic analyses (and general chemistry, when applicable).
3 NA = Not applicable.
4 NR = Not Reviewed.
5 ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Laboratory Data Package Signature Page

This data package consists of:

This signature page, the laboratory review checklist, and the following reportable data:

R1 Field chain-of-custody documentation;
R2 Sample identification cross-reference;
R3 Test reports (analytical data sheets) for each environmental sample that includes:
  a) Items consistent with NELAC 5.13
  b) dilution factors,
  c) preparation methods,
  d) cleanup methods, and
  e) if required for the project, tentatively identified compounds (TICs).
R4 Surrogate recovery data including:
  a) Calculated recovery (%R), and
  b) The laboratory's surrogate QC limits.
R5 Test reports/summary forms for blank samples;
R6 Test reports/summary forms for laboratory control samples (LCSs) including:
  a) LCS spiking amounts,
  b) Calculated %R for each analyte, and
  c) The laboratory's LCS QC limits.
R7 Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
  a) Samples associated with the MS/MSD clearly identified,
  b) MS/MSD spiking amounts,
  c) Concentration of each MS/MSD analyte measured in the parent and spiked samples,
  d) Calculated %Rs and relative percent differences (RPDs), and
  e) The laboratory's MS/MSD QC limits
R8 Laboratory analytical duplicate (if applicable) recovery and precision:
  a) the amount of analyte measured in the duplicate,
  b) the calculated RPD, and
  c) the laboratory's QC limits for analytical duplicates.
R9 List of method quantitation limits (MQLs) for each analyte for each method and matrix;
R10 Other problems or anomalies.

The Exception Report for every "No" or "Not Reviewed (NR)" item in laboratory review checklist.

Release Statement: I am responsible for the release of this laboratory data package. This data package has been reviewed by the laboratory and is complete and technically compliant with the requirements of the methods used, except where noted by the laboratory in the attached exception reports. By my signature below, I affirm to the best of my knowledge, all problems/anomalies, observed by the laboratory as having the potential to affect the quality of the data, have been identified by the laboratory in the Laboratory Review Checklist, and no information or data have been knowingly withheld that would affect the quality of the data.

John DuPont – General Manager

Scott Schroeder – Technical Director

Signature

11/27/12

Date

DHL Analytical, Inc. **Date:** *27-Nov-12*

CLIENT: GCAL LAB
Project: DoD Perchlorate
Lab Order: 1211105

CASE NARRATIVE

This case narrative describes abnormalities and deviations that may affect the results and summarizes all known issues that need to be highlighted for the data user to assess the results. This case narrative and the report contents are compliant with DoD QSM Ver 4.2 and NELAC. The "U" flag , in the Analytical Report, indicates the results for that sample are nondetect.

Samples were analyzed using the methods outlined in the following references:

Method E332.0 or SW6860 - Perchlorate Analysis (Parameter is ELAP Accredited but not NELAC Certified)

Exception Report R1-01

The samples were received on and log-in performed on 11/13/12. A total of 4 samples were received and all were analyzed. The samples arrived in good condition and were properly packaged.

Exception Report R7-03

For Perchlorate analysis performed on 11/26/12 the matrix spike and matrix spike duplicate recoveries were slightly above control limits. These are flagged accordingly in the QC summary report. The sample selected for the matrix spike and matrix spike duplicate was not from this work order. The LCS was within control limits. No further corrective actions were taken.

A summary of project communication follows:

Request for quote was sent to DHL Analytical from the client, via email on 5/5/11 and the quote was sent to client via email on 5/5/11. Email for work approved by both parties on 5/18/11 with P.O number 12-0969.

Client sent samples in own containers.

This sample delivery group arrived at DHL Analytical 11/13/12.

DHL Analytical, Inc.

Date: *27-Nov-12*

CLIENT: GCAL LAB
Project: DoD Perchlorate
Lab Order: 1211105

Work Order Sample Summary

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
1211105-01	MA01 MW003		11/08/12 10:15 AM	11/13/2012
1211105-02	MA02 MW001D		11/08/12 01:06 PM	11/13/2012
1211105-03	MA02 MW001D-FD		11/08/12 01:06 PM	11/13/2012
1211105-04	EB-01		11/08/12 11:45 AM	11/13/2012

DHL Analytical, Inc.

27-Nov-12

Lab Order: 1211105
Client: GCAL LAB
Project: DoD Perchlorate

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1211105-01A	MA01 MW003	11/08/12 10:15 AM	Aqueous	SW6860	Perchlorate Prep	11/26/12 08:32 AM	54851
1211105-02A	MA02 MW001D	11/08/12 01:06 PM	Aqueous	SW6860	Perchlorate Prep	11/26/12 08:32 AM	54851
1211105-03A	MA02 MW001D-FD	11/08/12 01:06 PM	Aqueous	SW6860	Perchlorate Prep	11/26/12 08:32 AM	54851
1211105-04A	EB-01	11/08/12 11:45 AM	Equip Blank	SW6860	Perchlorate Prep	11/26/12 08:32 AM	54851

DHL Analytical, Inc.

27-Nov-12

Lab Order: 1211105
Client: GCAL LAB
Project: DoD Perchlorate

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1211105-01A	MA01 MW003	Aqueous	SW6860	Perchlorate - Water	54851	1	11/26/12 11:35 AM	ICMS_121126A
1211105-02A	MA02 MW001D	Aqueous	SW6860	Perchlorate - Water	54851	1	11/26/12 12:24 PM	ICMS_121126A
1211105-03A	MA02 MW001D-FD	Aqueous	SW6860	Perchlorate - Water	54851	1	11/26/12 12:36 PM	ICMS_121126A
1211105-04A	EB-01	Equip Blank	SW6860	Perchlorate - Water	54851	1	11/26/12 10:47 AM	ICMS_121126A

DHL Analytical, Inc.

Date: *27-Nov-12*

CLIENT:	GCAL LAB	**Client Sample ID:**	MA01 MW003
Project:	DoD Perchlorate	**Lab ID:**	1211105-01
Project No:	212110915	**Collection Date:**	11/08/12 10:15 AM
Lab Order:	1211105	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
PERCHLORATE - WATER		**SW6860**					Analyst: **CZ**
Perchlorate	0.000395	0.000100	0.000300	N	mg/L	1	11/26/12 11:35 AM

Qualifiers:				
	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: *27-Nov-12*

CLIENT:	GCAL LAB	**Client Sample ID:**	MA02 MW001D
Project:	DoD Perchlorate	**Lab ID:**	1211105-02
Project No:	212110915	**Collection Date:**	11/08/12 01:06 PM
Lab Order:	1211105	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
PERCHLORATE - WATER		**SW6860**					Analyst: **CZ**
Perchlorate	0.0215	0.000495	0.00149	N	mg/L	1	11/26/12 12:24 PM

Qualifiers:				
	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: *27-Nov-12*

CLIENT:	GCAL LAB	**Client Sample ID:**	MA02 MW001D-FD
Project:	DoD Perchlorate	**Lab ID:**	1211105-03
Project No:	212110915	**Collection Date:**	11/08/12 01:06 PM
Lab Order:	1211105	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
PERCHLORATE - WATER		**SW6860**					Analyst: **CZ**
Perchlorate	0.0228	0.000495	0.00149	N	mg/L	1	11/26/12 12:36 PM

Qualifiers:				
	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: *27-Nov-12*

CLIENT:	GCAL LAB	**Client Sample ID:**	EB-01
Project:	DoD Perchlorate	**Lab ID:**	1211105-04
Project No:	212110915	**Collection Date:**	11/08/12 11:45 AM
Lab Order:	1211105	**Matrix:**	EQUIP BLANK

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
PERCHLORATE - WATER		**SW6860**					Analyst: **CZ**
Perchlorate	0.000100	0.000100	0.000300	NU	mg/L	1	11/26/12 10:47 AM

Qualifiers:				
	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: *27-Nov-12*

CLIENT: GCAL LAB
Work Order: 1211105
Project: DoD Perchlorate

ANALYTICAL QC SUMMARY REPORT

RunID: **ICMS_121126A**

The QC data in batch 54851 applies to the following samples: 1211105-01A, 1211105-02A, 1211105-03A, 1211105-04A

Sample ID: **MB-54851** Batch ID: **54851** TestNo: **SW6860** Units: **mg/L**
SampType: **MBLK** Run ID: **ICMS_121126A** Analysis Date: **11/26/2012 10:34:00 A** Prep Date: **11/26/2012**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.000100	0.000300								NU

Sample ID: **1211104-03AMS** Batch ID: **54851** TestNo: **SW6860** Units: **mg/L**
SampType: **MS** Run ID: **ICMS_121126A** Analysis Date: **11/26/2012 12:49:00 P** Prep Date: **11/26/2012**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.00568	0.00149	0.00149	0.00392	119	85	115			SN

Sample ID: **1211104-03AMSD** Batch ID: **54851** TestNo: **SW6860** Units: **mg/L**
SampType: **MSD** Run ID: **ICMS_121126A** Analysis Date: **11/26/2012 1:01:00 PM** Prep Date: **11/26/2012**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.00572	0.00149	0.00149	0.00392	121	85	115	0.649	20	SN

Sample ID: **LCS-54851** Batch ID: **54851** TestNo: **SW6860** Units: **mg/L**
SampType: **LCS** Run ID: **ICMS_121126A** Analysis Date: **11/26/2012 1:13:00 PM** Prep Date: **11/26/2012**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.000327	0.000300	0.000300	0	109	85	115			N

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAC certified

CLIENT: GCAL LAB
Work Order: 1211105
Project: DoD Perchlorate

ANALYTICAL QC SUMMARY REPORT

RunID: ICMS_121126A

Sample ID: **ICV-121126** Batch ID: **R63620** TestNo: **SW6860** Units: **mg/L**
SampType: **ICV** Run ID: **ICMS_121126A** Analysis Date: **11/26/2012 9:17:00 AM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.00207	0.000300	0.00200	0	103	85	115			N

Sample ID: **LCVL1-121126** Batch ID: **R63620** TestNo: **SW6860** Units: **mg/L**
SampType: **LCVL** Run ID: **ICMS_121126A** Analysis Date: **11/26/2012 9:53:00 AM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.000222	0.000300	0.000200	0	111	70	130			N

Sample ID: **ICS-121126** Batch ID: **R63620** TestNo: **SW6860** Units: **mg/L**
SampType: **ICS** Run ID: **ICMS_121126A** Analysis Date: **11/26/2012 10:05:00 A** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.000322	0.000300	0.000300	0	107	85	115			N

Sample ID: **CCV1-121126** Batch ID: **R63620** TestNo: **SW6860** Units: **mg/L**
SampType: **CCV** Run ID: **ICMS_121126A** Analysis Date: **11/26/2012 1:27:00 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.00515	0.000300	0.00500	0	103	85	115			N

Sample ID: **LCVL2-121126** Batch ID: **R63620** TestNo: **SW6860** Units: **mg/L**
SampType: **LCVL** Run ID: **ICMS_121126A** Analysis Date: **11/26/2012 1:51:00 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.000240	0.000300	0.000200	0	120	70	130			N

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAC certified

DHL Analytical, Inc.

27-Nov-12

Lab Order: 1211105
Client: GCAL LAB
Project: DoD Perchlorate

Sequence Report

Run ID: ICMS_121126A

Sample ID	Client Sample ID	Test Number	Batch ID	Dilution	Analysis Date	Prep Date	Matrix
INTIAL CALIBRATION SUMMARY	-----	SW6860	R63620	1	11/26/2012		A
INTERNAL STANDARD SUMMARY	-----	SW6860	R63620	1	11/26/2012		A
ICV-121126	-----	SW6860	R63620	1	11/26/2012 9:17:00 AM		A
ICB-121126	-----	SW6860	R63620	1	11/26/2012 9:41:00 AM		A
LCVL1-121126	-----	SW6860	R63620	1	11/26/2012 9:53:00 AM		A
ICS-121126	-----	SW6860	R63620	1	11/26/2012 10:05:00 AM		A
MB-54851	-----	SW6860	54851	1	11/26/2012 10:34:00 AM	11/26/2012 8:32:43 AM	A
1211105-04A	EB-01	SW6860	54851	1	11/26/2012 10:47:00 AM	11/26/2012 8:32:43 AM	E
1211105-01A	MA01 MW003	SW6860	54851	1	11/26/2012 11:35:00 AM	11/26/2012 8:32:43 AM	A
1211105-02A	MA02 MW001D	SW6860	54851	1	11/26/2012 12:24:00 PM	11/26/2012 8:32:43 AM	A
1211105-03A	MW02 MW001D-FD	SW6860	54851	1	11/26/2012 12:36:00 PM	11/26/2012 8:32:43 AM	A
1211104-03AMS	-----	SW6860	54851	1	11/26/2012 12:49:00 PM	11/26/2012 8:32:43 AM	A
1211104-03AMSD	-----	SW6860	54851	1	11/26/2012 1:01:00 PM	11/26/2012 8:32:43 AM	A
LCS-54851	-----	SW6860	54851	1	11/26/2012 1:13:00 PM	11/26/2012 8:32:43 AM	A
CCV1-121126	-----	SW6860	R63620	1	11/26/2012 1:27:00 PM		A
CCB1-121126	-----	SW6860	R63620	1	11/26/2012 1:39:00 PM		A
LCVL2-121126	-----	SW6860	R63620	1	11/26/2012 1:51:00 PM		A

Initial Calibration Summary

Control Program:	**ClO4PGM_120523**
Quantif. Method:	**ClO4_120523**
Recording Time:	**11/26/2012 9:17**
Injection Volume:	**200.0**
Test:	**Perchlorate**

Sample Name	Area counts*min Perchlorate_99 SIM_01B	Area counts*min Perchlorate_101 SIM_02B	Area counts*min ISTD_03 SIM_03B
ClO4_0.3_1	506.7150	217.961	1678.968
ClO4_0.5_1	938.3354	317.275	1642.060
ClO4_1.0_1	1858.8183	590.921	1651.572
ClO4_2.0_1	3430.4242	1065.045	1587.084
ClO4_5.0_1	8460.8517	2700.013	1442.137
ClO4_7.0_1	11820.8679	3799.330	1409.731
CLO4_10.0_1	16631.2688	5327.615	1396.272

Peak	Cal Type	Offset	Slope	Curve	Coeff. Det.
Perchlorate_99	XQOff	0.707	112.352	0.899	99.923
Perchlorate_101	XQOff	-1.155	37.952	0.045	99.764

Internal Standard Summary

Sequence Name:	**121126_CLO4**
Control Program:	**ClO4PGM_120523**
Quantif. Method:	**ClO4_120523**
Injection Volume:	**200.0**
Test:	**Perchlorate**

	Area Counts
ISTD 107 Cal Average	1544
Low Limit (50%)	772
High Limit (150%)	2316

Sample Name	Area counts*min ISTD_03 SIM_03B
LRB1-120523	1576.971
ClO4_0.3_1	1678.968
ClO4_0.5_1	1642.060
ClO4_1.0_1	1651.572
ClO4_2.0_1	1587.084
ClO4_5.0_1	1442.137
ClO4_7.0_1	1409.731
CLO4_10.0_1	1396.272
LRB2-120523	1616.530
SSCV-120523	1645.976
ICV-121126	1179.468
ICB-121126	1431.669
LCVL1-121126	1245.975
ICS-121126	1659.666
MB-54851	1306.378
1211105-04A	1628.509
1211104-02A	1571.452
1211104-03A	1743.440
1211105-01A	1916.014
1211104-01A	1476.146
1211105-02A	1334.960
1211105-03A	1463.967
1211104-03AMS	1632.409
1211104-03AMSD	1849.168
LCS-54851	1681.542
CCV1-121126	1409.685

CCB1-121126	1736.055
LCVL2-121126	1859.512