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

ENTERED

JUL 26 2013

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

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 Biennial Groundwater Monitoring and Landfill Inspection Report."* If you have any questions regarding this submittal, please contact Mr. Ronald Lancaster, Chief, Installation Management Flight at (575) 784-1146 or Mr. Rick Crow, Environmental Element Chief at (575) 784-6383.

Sincerely,

Heather L. Buono

HEATHER L. BUONO, Colonel, USAF
Commander

Attachment:
2012 Biennial Groundwater Monitoring and Landfill Inspection Report.

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

RECEIVED

JUL 30 2013

NMED
Hazardous Waste Bureau

FINAL

2012 BIENNIAL GROUNDWATER MONITORING AND ANNUAL LANDFILL INSPECTION REPORT LANDFILLS LF-03, LF-04, LF-05, LF-25, AND FORMER SEWAGE LAGOONS CANNON AIR FORCE BASE, NEW MEXICO

Prepared for:

27 SOCES/CEAN
Cannon Air Force Base, New Mexico

Prepared by:

1608 13th Avenue South, Suite 300
Birmingham, Alabama 35205

and

1002 N. Eglin Parkway
Shalimar, Florida 32579

Contract No. FA8903-10-D-8594
Delivery Order Number: 0034

Bhate Project No.: 9110129

Revision 1

April 2013

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850-613-6800

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Ronald A Lancaster Chief, Asset Management Flt Cannon Air Force Base 506 N Air Commando Way Cannon AFB NM 88103-5003 (575) 784-1146 (office) Ronald.lancaster@cannon.af.mil	5 Hard
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2012 BIENNIAL GROUNDWATER MONITORING AND ANNUAL LANDFILL INSPECTION REPORT LANDFILLS LF-03, LF-04, LF-05, LF-25, AND FORMER SEWAGE LAGOONS CANNON AIR FORCE BASE, NEW MEXICO

REVIEW SHEET

		4-30-2013
Jonathan Kramer **Geologist** Trinity Analysis & Development Corp.	Sign	Date
Tracy R. Walker		4-30-2013
Tracy L. Walker, P.G. Sr. Project Manager Bhate Environmental Associates, Inc.	Sign	Date

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ABBREVIATIONS AND ACRONYMS

AFB	Air Force Base
AOC	areas of concern
btoc	below top of casing
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CMS	corrective measures study
DO	dissolved oxygen
ERP	environmental restoration program
HSWA	Hazardous and Solid Waste Amendments
IRP	installation restoration program
LF	landfill
LTM	long-term monitoring
MCL	maximum contaminant level
MDL	method detection limit
msl	mean sea level
MS/MSD	matrix spike/matrix spike duplicate
MW	monitoring well
NMAC	New Mexico Administrative Code
NMED	New Mexico Environment Department
ORP	oxidation reduction potential
QED	QED Environmental Systems
RCRA	Resource Conservation and Recovery Act
RFI	RCRA Facility Investigation
SMCL	secondary maximum contaminant level
SWMU	Solid Waste Management Unit
TOC	total organic carbon
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
VOCs	volatile organic compounds
WQCC	Water Quality Control Commission

EXECUTIVE SUMMARY

Biennial groundwater monitoring was performed in accordance with the New Mexico Environment Department (NMED) approved *Facility-Wide Long Term Groundwater Monitoring Plan* (AECOM, 2011). Monitoring activities included groundwater sampling and analyses for wells associated with five Environmental Restoration Program (ERP) sites as well as four perimeter wells on Cannon Air Force Base (AFB). Monitoring well inspections and water level gauging were activities incorporated into monitoring activities.

Ground water parameters analyzed in accordance with the approved work plan for the October 2012 biennial long-term monitoring (LTM) groundwater sampling event include: volatile organic compounds (VOCs), total and dissolved metals including mercury, trivalent and hexavalent chromium, perchlorate, nitrate and nitrite, ammonia, sulfate, chloride, and Total Organic Carbon (TOC). Analytical results from the October 2012 biennial LTM groundwater sampling event indicate no exceedances of screening levels for: VOCs, all metals with the exception of thallium, trivalent and hexavalent chromium, perchlorate, nitrite, ammonia, sulfate, chloride, and TOC. Slight exceedances of applicable groundwater screening levels in downgradient wells were reported for thallium at MW-Oa, MW-Pa, MW-Na, MW-A, MW-U, MW-C, and MW-T, and nitrate at MW-Oa.

Annual landfill vegetative cover inspections were performed at LF-03, LF-04, LF-25, and the former sewage lagoon in accordance with the approved *Facility-Wide Long Term Groundwater Monitoring Plan* (AECOM, 2011). Although absent from the plan, it was deemed appropriate to inspect the ground cover at LF-05 and to include a record of the inspection in this report. Inspections were performed October 2011 and October 2012 and findings for both inspections are included in this biennial report. In October 2011, the vegetative cover system at each site was observed to be in good to excellent condition with no noted deficiencies or required repairs. Vegetative coverage was generally estimated at 80 to 90 percent. In October 2012, landfill cap conditions at LF-05, LF-25, and the sewage lagoon were comparable to 2011 conditions. Landfill cap conditions at LF-03 and LF-04 were observed to be newly constructed earthen covers void of vegetative cover and without sufficient erosion control measures in place.

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1.0 INTRODUCTION

Groundwater monitoring and landfill vegetative cover inspections were conducted in accordance with the New Mexico Department of Environment (NMED) approved *Facility-Wide Long Term Groundwater Monitoring Plan* for Cannon Air Force Base (AFB), New Mexico (AECOM, 2011). This report represents the first biennial report submitted under this plan, which replaces the previous work plan, *Long-Term Monitoring and Maintenance Work Plan for Landfill No. 3 (LF-3/SWMU 105), Landfill No. 4, (LF-04/SWMU 104), Landfill No. 25 (LF-25/SWMU 97), and Sewage Lagoons (SWMU 101) Cannon Air Force Base, New Mexico* (Tetra Tech, 2009). The new plan includes 14 monitoring wells (MW) installed at five Solid Waste Management Units (SWMUs), and four wells (historically referred to as "perimeter wells") situated primarily along the Base boundary that are not associated with SWMUs. Three of these wells (MW-V, MW-X, and MW-W) are labeled as "background wells" in the new approved work plan. In addition to groundwater sampling, monitoring wells are to be inspected and water levels gauged. Inspection and maintenance of vegetative covers at Landfill (LF)-03, LF-04, and LF-25, and the former south Sewage Lagoon is an annual event under the plan. Although absent from the approved work plan, Cannon AFB deemed it prudent to include LF-05 in the annual inspections for ground cover and integrity, and to include a record of the inspection in this report.

The approved work plan was developed in accordance with the requirements of the Cannon AFB Hazardous and Solid Waste Amendments (HSWA) Permit (Environmental Protection Agency (EPA) ID No. NM7572124454-1 dated 14 October 2003) and is consistent with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), and the Environmental Impact Analysis Process (32 CFR Part 989). The Air Force is the lead agency and the NMED is the regulatory agency for environmental matters at Cannon AFB. The *Facility-Wide Long Term Groundwater Monitoring Plan* was approved by NMED letter dated February 18, 2011.

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2.0 SITE DESCRIPTION AND HISTORY

Cannon AFB (the "Base") is located in Curry County, New Mexico, approximately 7 miles west of the City of Clovis **(Figure 1)**. Cannon AFB occupies 4,320 acres, consisting primarily of the airfield and associated operations, maintenance, and support facilities that are located northwest of the airfield (**Figure 2**). Housing facilities are located in the northwestern portion of the Base, west of U.S. Highway 277 and north of U.S. Highway 60. Additional Base support facilities, such as the munitions storage area and current fire department training area, are located south and east of the airfield. The following sections describe the operational history of the sites and associated cover systems.

2.1 LF-03 (SWMU-105) Site Description and History

LF-03 is an inactive landfill, formerly used for burn and disposal trenching operations. The 9-acre site is an open field located in the east-central portion of Cannon AFB and is bound to the north by a road leading to a transmitter tower, to the south and east by barbed-wire fences and agricultural fields, and to the west by Perimeter Road (**Figure 3)**.

The landfill was operated from 1959 to 1967 and was reported to have received domestic and industrial wastes including solvents, paints, thinners, waste oils, and peroxide containers. Disposal activities consisted of placing collected waste material into a trench, burning the accumulated waste, and then covering the burned material with soil the following day. The disposal trench excavations were reported to be up to 16.5 feet deep and over 250 feet in length. The amount of waste material disposed within the landfill trenches has not been determined.

LF-03 was investigated along with LF-04 and reported on in *RCRA Facility Investigation Final Report, SWMU No. 105, Landfill No. 3, IRP Site LF-3* (Radian, 1994a). A detailed summary of the site's background and history, results of previous investigations, corrective measures, and status is presented in the *Petition for No Further Action for Landfill No. 3 (LF-03/SWMU 105), Landfill No. 4 (LF-04/SWMU 104), and Landfill No. 25 (LF-25/SWMU 97)* (HGL, 2006). Groundwater monitoring was initiated at LF-03 in 1996 with the installation of MW-O, (later replaced with MW-Oa). Quarterly monitoring was conducted in 1996, semiannual monitoring events were conducted in 1997, and annual monitoring events were performed from 1998 until 2006, at which time the current biennial sampling schedule was initiated (HGL, 2006).

2.2 LF-04 (SWMU-104) Site Description and History

LF-04 is an inactive landfill, formerly used for burn and disposal trenching operations. The 7-acre site is located in the east-central portion of Cannon AFB and lies approximately 800 feet west of the Munitions Storage Area. It is bound to the north and east by Perimeter Road, to the west by a barbed-wire fence, and to the south by Playa Lake (**Figure 3**).

The 6.3-acre landfill was operated for 1 year from 1967 to 1968. The landfill reportedly received domestic and industrial wastes including solvents, paints, thinners, waste oils, and peroxide containers. Disposal activities consisted of placing collected waste material into a trench, burning the accumulated waste, and then covering the burned material with soil the following day.

LF-04 was investigated along with LF-03 during the RCRA Facility Investigation *(RFI) Final Report, SWMU No. 104, Landfill No. 4, IRP Site LF-4* (Radian, 1994b). A detailed summary of the site's background and history, results of previous investigations, corrective measures, and status is presented in the *Petition for No Further Action for Landfill No. 3 (LF-03/SWMU 105), Landfill No. 4 (LF-04/SWMU 104), and Landfill No. 25 (LF-25/SWMU 97)* (HGL, 2006). Groundwater monitoring was initiated at LF-04 in 1996 with the installation of MW-N, (later replaced with MW-Na). Quarterly groundwater monitoring was conducted in 1996, semiannual monitoring events were conducted in 1997, and annual monitoring events were performed from 1996 until 2006, at which time the current biennial sampling schedule was initiated (HGL, 2006).

2.3 LF-05 (SWMU-113) Site Description and History

LF-05 is a 70-acre inactive landfill located in the southeastern area of Cannon AFB. Cell No. 3 of LF-05 is Resource Conservation and Recovery Act (RCRA) regulated because the cell received hazardous waste until mid-1981. From 1981 until the cell was closed in 1983, it did not receive additional hazardous waste (Bhate, 2011). Closure consisted of placing an impermeable cap over the cell in accordance with NMED and United States Environmental Protection Agency (USEPA) requirements.

The current regulatory status of LF-05 is that of a closed site. The site appears in Table 2 of the 2006 HSWA Permit modification - List of SWMUs and Areas of Concern (AOCs) not Currently

Requiring Corrective Action. Six monitoring wells (MW-A (upgradient), MW-B, MW-C, MW-S, MW-U (downgradient), and MW-D (side-gradient)) are associated with LF-05. The location of the landfill and monitoring wells are shown on **Figure 4.** A well construction summary is included as **Table 1.** In 2011, wells associated with LF-05 were added to the Cannon AFB *Facility-Wide Long-Term Ground Water Monitoring Plan* (AECOM, 2011).

Monitoring was initiated at LF-05 when MW-A (background), MW-B, MW-C, MW-D were installed and sampled during the IRP Phase II Stage I investigation in 1984 (Radian, 1986) to meet RCRA release detection monitoring requirements. Although first monitored in 1984, the historical schedule of sampling events at LF-05 is unclear prior to being reintroduced into the current approved work plan.

2.4 LF-25 (SWMU-97) Site Description and History

LF-25 is an inactive construction and demolition debris landfill located in the east-central portion of Cannon AFB. The former landfill covers a 32-acre area roughly trapezoidal in shape, located east of Perimeter Road and approximately 500 feet northwest of Playa Lake. The landfill location is shown in **Figure 3**.

The landfill was used as a waste disposal site from approximately 1945 into the 1980s, but the exact period of operation is unknown. After World War II, construction and demolition debris was disposed at the landfill. The debris consisted of concrete, wood, asbestos tiles, metal, transite and cement pipe, and asphalt mixed with soil. In 2001, exposed non-friable asbestos-containing material (ACM) was observed at the site. Remediation activities associated with asbestos removal were conducted in 2000 as documented in *Construction Completion Report for the Remedial Action at SWMU 97 – Landfill No. 25* (Foster Wheeler Environmental, 2001a)

The site encompasses multiple rubble piles that vary in height and reach a maximum of 15 feet in the northern portion of the unit. Topography of the LF-25 area slopes gently from north to south due to burial of construction and demolition material and the addition of the cover system.

In 2001, a 6-inch topsoil cover was installed using clean fill generated from site grading to minimize percolation through the landfill, leachate production, and potential impacts to groundwater. The cover system was revegetated by seeding and mulching with native grasses. A 2-foot high earthen berm was installed adjacent to the southern and eastern borders of the unit to

prevent stormwater runoff from leaving the site. Near the northeastern corner of the site, Base personnel have placed concrete slabs (rip-rap) to control erosion. A three-strand barbed-wire fence with gates and signage was installed around the site boundary. Cover construction activities are documented in *Construction Completion Report for the Remedial Action at SWMU 97 - Landfill No. 25* (Foster Wheeler Environmental, 2001a).

LF-25 was investigated during the *RFI Final Report, SWMU No. 97, Landfill No. 25, IRP Site LF-25* (Radian, 1994c). A detailed summary of the site's background and history, results of previous investigations, corrective measures, and status is presented in the *Petition for No Further Action for Landfill No. 3 (LF-03/SWMU 105), Landfill No. 4 (LF-04/SWMU 104), and Landfill No. 25 (LF-25/SWMU 97)* (HGL, 2006). Groundwater sampling and reporting was initiated at LF-25 in 1997 with the installation of MW-K which was abandoned after going dry. MW-K was replaced with MW-R which was constructed with a 15-foot stainless steel screen straddling the water table. MW-R was replaced with MW-Ra in December 2000, which was replaced by MW-Rb in 2012. MW-Rb was installed at a depth giving it an expected effective well life of approximately 6 years (three biennial events).

2.5 Former Sewage Lagoons (SWMU-101) Description and History

The former Sewage Lagoons were constructed in 1966. The lagoons consisted of two unlined surface impoundments (the north and south lagoons) that received combined sanitary and industrial wastewater from Base facilities **(Figure 3)**. The lagoons had concrete-lined banks and unlined earthen bottoms, operated in series, and had a combined surface area of approximately 39 acres. In 1998, a new wastewater treatment plant was placed into operation at Cannon AFB. Although sewage discharge to the lagoons stopped in 1998, the Base continued to discharge treated wastewater to the former lagoons in order to allow them to dry gradually.

SWMU 101 was investigated in 1992 during the Appendix I RFI (Woodward-Clyde, 1992). Based on the results, the lagoons were recommended for continued annual groundwater monitoring. A Corrective Measures Study (CMS) for closure identified potential corrective actions (Foster Wheeler Environmental, 2001b). Human health and ecological risk assessments (ERA) were conducted as part of the CMS to determine the requirements for contaminant containment and source control. The CMS recommended sludge removal from the former north

lagoon, in-place consolidation in the former south lagoon, and closure using an engineered cover with a biotic barrier as voluntary corrective actions for closing the lagoons. The same solution to close the lagoons permanently was identified in two separate reports, *Sludge Management, Compliance Evaluation, and Requirements Identification Phase III* (E&E, 1998) and *Sewage Lagoons Closure Final Specifications* (USACE, 2002). The solution involved dewatering, consolidation, and compaction of the contaminated material, followed by installation of a protective cover. The cover design assumed that the contaminated medium at the site consisted of approximately 2 feet of sludge overlying a 1 foot layer of soil.

In 2003, a voluntary corrective measure was implemented at SWMU-101 to construct an engineered earthen cover to minimize any potential threat to human health and the environment from contaminated material within the lagoons. Sludge and the underlying contaminated soil from the north lagoon were excavated and consolidated into the south lagoon. The south lagoon area was then graded and compacted to prepare a substrate. Finally, a 20-acre engineered earthen cover system with a biotic barrier of recycled, crushed concrete and a 6-inch erosion/vegetation layer was installed over the south lagoon area to reduce infiltration of moisture into the underlying layer of contaminated material. The *Final Construction Completion Report for the Remedial Action at SWMU 101 - Sewage Lagoons* (Foster Wheeler Environmental, 2006) documents the activities. Currently, a shallow earthen drainage swale surrounds the capped area which is surrounded by a five-strand barbed-wire fence to control access.

Monitoring wells MW-E, MW-F, MW-G, and MW-H were initially installed and monitored for groundwater field parameters on a quarterly basis. These wells were first sampled for laboratory parameters during the 1992 RFI investigation (Woodward-Clyde, 1992).

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3.0 VEGETATIVE COVER INSPECTION RESULTS

The 2011 and 2012 inspections were conducted on October 2, 2011, and October 15, 2012, respectively. Inspections for LF-03, LF-04, LF-25 and the former south Sewage Lagoon were performed in accordance with the approved *Facility-Wide Long Term Groundwater Monitoring Plan* for Cannon Air Force Base, New Mexico (AECOM, 2011). Additionally, LF-05 was inspected in similar fashion.

Annual vegetative cover inspections consisted of physically walking, observing, and documenting the current condition of cover systems at each of the three landfills and the former south lagoon area. Each landfill cover was thoroughly examined by field personnel walking side-by-side in successive swaths to ensure current conditions were observed over the entire cover and that all components were inspected. Vegetation types, abundance/scarcity, and general condition were noted. General conditions of drainage and erosion control features were also noted. Perimeter fences, gates, and signage were observed, if present at the site, for functionality and condition. Locations of the inspected sites are shown on **Figure 3** and **Figure 4**.

Field observations pertaining to the inspections were recorded on the Cover System Inspection Reports for LF-03, LF-04, LF-05, LF-25, and the south Sewage Lagoon. The 2011 and 2012 inspection reports are provided in **Appendix A** and photographic documentation is contained in **Appendix B.**

3.1 LF-03 (SWMU-105)

3.1.1. Cover System Inspection Results

During the October 2011 inspection event, the cover of LF-03 was observed to be in good condition. There were no gullies, areas of ponding, or erosional features observed. Previously measured and reported subsidence features were described as stable. Ground coverage (vegetation) was described as good and estimated at 80 to 90 percent. The 2011 and 2012 inspection reports are provided in **Appendix A**.

Through a separate contract and contractor, the Air Force approved the installation of a new earthen landfill cover which was installed in May 2012. The thickness of the new cover ranged from approximately 3 feet to 10 feet, with surface drainage directed toward the Playa Lake,

approximately 450 feet to the north. In October 2012, no signs of erosion or subsidence were observed, although the cover was completely devoid of vegetation (**Appendix B**).

3.1.2. Photographic Record

Photographs were taken to document the condition of the cover system during inspections in 2011 and 2012. Photographs of the cover system, including vegetation and topographic features are included in **Appendix B**.

3.1.3. Other Monitoring and Maintenance Activities

No excessive buildup of tumbleweed was noted.

3.1.4. Future Activities

It is unclear if the new cap was seeded prior to the time of inspection or if there are plans for a ground cover in the future. Additionally, no silt fencing or temporary erosion prevention measures were in place to minimize wind distribution of cover material or sediment migration due to stormwater.

Install a vegetative cover to maintain the integrity of the new soil cover and install erosion control measures until vegetative cover is mature. Continued annual inspections will verify that the cover system functions as designed and meets operational objectives. The need for routine maintenance or repair should be evaluated during these inspections.

No signage, fencing, or access gates were present at LF-03. At minimum, signage should be posted around the landfill.

3.2 LF-04 (SWMU-104)

3.2.1. Cover System Inspection Results

During the October 2011 inspection event, the cover of LF-04 was observed to be in good condition. No gullies, areas of ponding or erosional features were observed, and previously reported subsidence features were described as stable. Ground coverage was described as good and estimated at 90% to 95%. The 2011 and 2012 inspection reports are provided in **Appendix A**.

Through a separate contract and contractor, the Air Force approved the installation of a new earthen landfill cover which was installed in May 2012. The thickness of the new cover ranged from approximately 5 feet to 25 feet, with surface drainage directed toward the Playa Lake, approximately 250 feet to the south. In October 2012, signs of surface erosion were observed north of the rip-rap placed at the south end of the new cap where surface drainage is directed toward the Playa Lake (**Appendix B**).

3.2.2. Photographic Record

Photographs were taken to document the condition of the cover system during inspections in 2011 and 2012. Photographs of the cover system, including vegetation and topographic features are included in **Appendix B**.

3.2.3. Other Monitoring and Maintenance Activities

No excessive buildup of tumbleweed was noted.

3.2.4. Future Activities

It is unclear if the new cap was seeded prior to the time of inspection or if there are plans for a ground cover in the future. Additionally, no silt fencing or temporary erosion prevention measures were in place to minimize wind distribution of cover material or sediment migration due to stormwater.

Install a vegetative cover to maintain the integrity of the new soil cover and install erosion control measures until vegetative cover is mature. Continued annual inspections will verify that the cover system functions as designed and meets operational objectives. The need for routine maintenance or repair should be evaluated during these inspections.

No signage, fencing, or access gates were present at LF-03. At minimum, signage should be posted around the landfill.

3.3 LF-05 (SWMU-113)

3.3.1. Cover System Inspection Results

The cover system over LF-05 was observed to be in excellent condition during the 2011 and 2012 inspections. No visible signs of erosion or subsidence were observed at any location across the site. In 2012, the vegetative cover at LF-05 was estimated to be 90 percent, with a majority

of the vegetation being prairie grasses. A few small trees grow randomly at LF-05. The cover at LF-05 provides substantial and sufficient erosion control. The 2011 and 2012 inspection reports are provided in **Appendix A**.

3.3.2. Photographic Record

Photographs were taken to document the condition of the LF-05 cover in 2011 and 2012. The photographic record of the cover system, including vegetation and topographic features is included in **Appendix B**.

3.3.3. Other Monitoring and Maintenance Activities

No maintenance or repair of the cover system was required based on observed conditions at the time of the 2011 and 2012 inspections. The fence and access gate surrounding the landfill were in good condition. Appropriate signage was in place but requires updating to reflect the correct contact information for the Base Civil Engineer Environmental Office.

3.3.4. Future Activities

Continued annual inspections will verify that the cover system functions as designed and meets operational objectives. The need for routine maintenance or repair should be evaluated during these inspections.

3.4 LF-25 (SWMU-97)

3.4.1. Cover System Inspection Results

The LF-25 cover system was observed to be in generally good condition during the 2011 and 2012 inspections. Site topography appears to generally conform to the contours shown on the topographic survey map produced after cover construction. The final graded site topography in 2001 was reported to range from about 4,275 to 4,290 feet in elevation, reflecting 15 feet of relief across the site.

Vegetative cover was dominated by grasses, with small, scattered areas containing summer annuals and perennials typical of the Southern High Plains (Tetra Tech and Brown, Burdine, & Associates, LLC, 2008). The northernmost half of the landfill supported numerous trees of various sizes in addition to ground cover. Vegetation was estimated to cover approximately 60 to 70 percent of the landfill in 2012, providing generally sufficient erosion control. Small

amounts of exposed concrete, glass, and gravel were observed, but did not appear to be the result of active erosion.

Minor soil slumping was observed on a slope near the northern end of the landfill; however, no exposed waste or other adverse consequences of the slumping were observed. A constructed earthen berm designed to contain stormwater guards the eastern and southern boundaries of the site. The berm was observed to be in excellent condition and evidence of periodic pooling of stormwater against the berm confirmed its effectiveness. The condition of rip-rap placed at the northern end of the landfill appeared consistent with observations of previous inspections (**Appendix B)**. Cover System Inspection Reports for 2011 and 2012 are included in **Appendix A**.

3.4.2. Photographic Record

Photographs were taken to document the condition of LF-25 in 2011 and 2012. The photographs of cover system features, including vegetation, topographic features, and signage, is included in **Appendix B**.

3.4.3. Other Monitoring and Maintenance Activities

No maintenance or repair of the cover system was deemed required based on the conditions observed at the time of the 2011 and 2012 inspections. The area where soil slumping has been observed during previous inspections will be monitored for change.

3.4.4. Future Activities

Continued annual inspections will ensure the cover system functions as designed and meets operational objectives. The need for routine maintenance or repair should be evaluated during these inspections.

Appropriate signage was in place but requires updating to reflect the correct contact information for the Base Civil Engineer Environmental Office.

3.5 Former Sewage Lagoons (SWMU-101)

3.5.1. Cover System Inspection Results

The cover system over the former south Sewage Lagoon was observed to be in excellent condition during the 2011 and 2012 inspections. No visible signs of erosion were observed at

any location across the site. Vegetation consisted of primarily broadleaf annuals and grasses with scattered perennial varieties typical of the Southern High Plains (Tetra Tech and Brown, Burdine, & Associates, LLC, 2008). Vegetative cover was estimated to be 90 percent across the south lagoon area in 2012, providing substantial and sufficient erosion control. A few small trees were observed at the western end of the site.

Observed topography of the engineered cap was consistent with that documented following its construction in 2003. The cover is designed to direct stormwater off-site into a shallow swale located to the south of the former lagoon (near well MW-H). This stormwater ditch was observed to be in good condition and capable of conveying stormwater runoff. The condition of all cover system components was consistent with reports of the inspection in 2011. Cover System Inspection Reports for 2011 and 2012 are included in **Appendix A**.

3.5.2. Photographic Record

Photographs were taken to document current condition of the south lagoon area in October 2011 and October 2012. Photographs of the cover system features, including vegetation, topographic features, signage, and fencing, is included in **Appendix B**.

3.5.3. Other Monitoring and Maintenance Activities

No maintenance or repair of the cover system was required based on conditions observed at the time of the 2011 or 2012 inspections. Fences and access gates were in good condition. Appropriate signage was in place but requires updating to reflect the correct contact information for the Base Civil Engineer Environmental Office.

3.5.4. Future Activities

Continued annual inspections will ensure the cover system functions as designed and meets operational objectives. The need for routine maintenance or repair should be evaluated during these inspections.

4.0 GROUNDWATER OCCURRENCE

4.1 Background

Cannon AFB is situated within the Southern High Plains physiographic region of New Mexico and is underlain by Ogallala Formation deposits. The water-bearing sediments of the Ogallala comprise the unconfined Southern High Plains Aquifer, the principal potable water source for Cannon AFB and the surrounding area. All 18 monitoring wells in the long-term monitoring plan are screened in the unconfined Southern High Plains Aquifer (US Geological Survey, 2006).

4.2 Groundwater Elevations

Basewide groundwater levels were measured at 18 monitoring wells on October 15, 2012 **(Appendix C)**. Well construction and elevation data[1] for each well are presented in **Table 1**.

Calculated groundwater elevations ranged from 3984.4 feet above mean sea level (msl) at MW-V in the northwestern corner of the Base, to 3936.5 feet above msl at MW-C in the southeastern corner of the Base. Water levels were recorded in feet below top of casing (btoc) to the nearest 0.01 foot. A groundwater flow map for the Base is included as **Figure 5**. The map was developed using October 2012 water levels supplemented with interpreted local flow patterns. The groundwater flow direction in the area of the landfills investigated (southeast of the flightline), is generally in a southeasterly direction toward the southeast corner of the Base. However, there appears to be a southwesterly component to flow in the area as groundwater converges into a localized paleovalley (TRINITY, 2012).

Groundwater elevation data for each well from 1992 through 2012 is included in **Table 2**. The data was used to construct a hydrograph for the period from 1992 through 2012 **(Figure 6)**. Water level data from *Groundwater Hydrology and Water Quality of the Southern High Plains Aquifer, Cannon Air Force Base, Curry County, New Mexico* (USGS, 2006) and Base gauging data demonstrate a significantly declining water table beneath Cannon AFB (**Table 2** and **Figure 6**). As shown on the hydrograph, groundwater elevations measured in wells at LF-03, LF-04, LF-05, LF-25 and the Sewage Lagoons are declining at rates between 1.68 and 2.99 feet per

[1] Well construction details including data sources, available logs, survey data, etc. is documented in Trinity, 2012

year. Based on the 2012 water levels, the remaining saturated thickness is estimated to range between 18.9 and 56.6 feet in the 18 monitoring wells on Cannon AFB.

The estimated effective (useful) well life for each monitoring well in the LTM plan is calculated in **Table 3**. It should be noted that the LTM plan suggests that these wells may need to be replaced as their effective life is approached; however, many of these wells were installed with the bottom of the well at the base of the monitored aquifer (TRINITY, 2012). Also noteworthy, the well with the least projected well life remaining is the recently installed MW-Rb, with an expected effective well life of 5.7 years.

5.0 GROUNDWATER QUALITY

5.1 Regulator Criteria

Biennial groundwater monitoring was performed in accordance with the approved *Facility-Wide Long Term Groundwater Monitoring Plan* (AECOM, 2011). The work is required by the Cannon AFB HSWA Permit and is consistent with RCRA. The NMED is the lead agency overseeing this project. The New Mexico Water Quality Control Commission (WQCC) regulations (20.6.2.3103, New Mexico Administrative Code [NMAC]) were used as guidance to determine whether constituents detected in monitoring wells exceeded applicable groundwater standards. If no NMED standard for a particular constituent was established, then USEPA maximum contaminant level (MCLs) or secondary maximum contaminant level (SMCLs) were used as guidance.

5.2 Groundwater Sampling

5.2.1. Sampling Methodology and Equipment

Water levels were measured using a InSitu™ brand electronic water level indicator prior to initiation of purging and were recorded to the nearest 0.01 feet btoc.

Dedicated tubing and QED Environmental Systems® (QED) pumps were used at wells MW-Na, -Oa, and -Pa. A portable stainless-steel QED low-flow bladder pump and control unit was used for the sampling of all other wells. Dual-bonded low-density polyethylene tubing was affixed to the bladder pump and the control unit controls the timing and delivery of pressurized nitrogen gas to the pump, which in turn controls the flow rate of water to the surface. Low-flow/minimal-drawdown sampling methods were applied to ensure that representative samples of groundwater were collected. The polyethylene tubing was left dedicated to each well for future use, and the bladder pump was decontaminated prior to use at each well.

The pump was positioned within the screened interval and operated at a rate that induced negligible groundwater drawdown. As groundwater reached the surface, it was directed to a flow-through cell where water quality indicator parameters were recorded and observed for stability prior to sample collection. Groundwater indicator parameters were measured in the field using a YSI® multi-parameter meter, flow-through cell, and a Hannah® turbidity meter. Recorded parameters included temperature, specific conductance, pH, dissolved oxygen (DO),

oxidation-reduction potential (ORP), and turbidity. Once stability criteria was reached, proper sample containers (bottle type and appropriate preservatives as dictated by approved analytical methods) were filled directly from the tubing attached directly to the pump, i.e. not through the flow-through cell.

Groundwater sampling logs completed for each well are contained in **Appendix C**. The multi-parameter and turbidity meters were calibrated in the field to factory standards prior to sampling each day, and checked randomly to ensure accuracy. In addition, the beginning and ending purge times and cumulative volume of water purged from the system at each well sampled were recorded. Sampled wells were purged at low-flow rates of 0.41 to 0.52 liters per minute (0.11 to 0.14 gallons per minute) while indicator parameters were monitored for stabilization.

Samples collected for this biennial event include:

- Primary groundwater samples from wells MW-Oa, -Na, -A, -C, -U, -S, -T, -Pa, -Rb, -E, -F, -G, -H, -V, and -X
- Matrix spike/matrix spike duplicate (MS/MSD) samples from wells MW-Rb and MW-X
- Duplicate samples from wells MW-F and MW-G

Sample containers were properly labeled prior to sample collection. Samples were packed for shipment in an insulated cooler with wet ice to ensure a temperature below 4 degrees Celsius upon arrival at the laboratory. Gulf Coast Analytical Laboratories, Inc. of Baton Rouge, Louisiana (National Environmental Laboratory Accreditation Program (NELAP) No. 01955) performed all analyses for this sampling event.

5.2.2. Investigative-Derived Waste

Purge water derived from this sampling event was containerized in dedicated storage tanks located adjacent to each monitoring well. Waste characterization is performed by reviewing the groundwater sample analytical results for each well and comparing the detected constituents to New Mexico WQCC regulations. Disposal options are presented to NMED based on the analytical results of the groundwater samples. Cannon AFB will notify the NMED Groundwater Bureau of the wells that exceed the New Mexico WQCC criteria (if any) and the amount of purge water requiring disposal. All personal protective equipment and additional investigation

derived waste was placed in plastic trash bags and placed in dumpsters located on Base to be disposed of as solid waste.

5.3 Groundwater Sampling Results

5.3.1. Compliance with Monitoring Requirements

In 2006, Cannon AFB submitted *RCRA Facility Investigation Report for Landfill No. 3 (LF-03/SWMU 105), Landfill No. 4 (LF-04/SWMU 104), and Landfill No. 25 (LF-25/SWMU 97)* (HGL, 2006) to the NMED. The NMED approval letter for the RFI, dated December 5, 2007, requires biennial groundwater monitoring of the wells located at each of the three landfills. The first biennial sampling event for LF-03, LF-04, and LF-25 was conducted in October 2008 and reported in the *2008 Biennial Groundwater Monitoring and Annual Landfill Inspection Report Landfill No. 3 (LF-03/SWMU 105), Landfill No. 4 (LF-04/SWMU 104), and Landfill No. 25 (LF-25/SWMU97) Cannon Air Force Base, New Mexico* (Tetra Tech and Brown, Burdine, & Associates, LLC, 2008).

The approved *Facility-Wide Long Term Groundwater Monitoring Plan* (AECOM, 2011) outlines the specific landfill cover inspection, biennial sampling, and reporting actions required at LF-03, LF-04, LF-05, LF-25, and the Former Sewage Lagoons. The plan specifies submittal of a biennial report summarizing the sampling results at the five sites by December 31 of each monitoring year, beginning in 2012. Submission of this 2012 biennial report is in accordance with and satisfies the stated requirements of the NMED.

The *Facility-Wide Long Term Groundwater Monitoring Plan* (AECOM, 2011) outlines the analytical parameters and reporting requirements for the sites and includes the following:

- Volatile organic compounds (VOCs) - USEPA Method 8260C
- Total and dissolved metals including mercury - USEPA Method 6010C/7470B
- Trivalent and hexavalent chromium – USEPA Method 7199
- Perchlorate – USEPA Method 6860
- Nitrate and nitrite – USEPA Method 300.1
- Ammonia – Standard Method SM4500
- Sulfate – USEPA Method 300.1

- Chloride – USEPA Method 300.1
- Total Organic Carbon (TOC) – Standard Method SM5310B

The approved *Facility-Wide Long Term Groundwater Monitoring Plan* (AECOM, 2011) includes the use of Method 8260C to analyze for VOCs; however this method has not been fully promulgated and is not widely available. As such, during the 2012 biennial sampling event method 8260B was utilized. The status and availability of Method 8260C will be evaluated prior to the next sampling event, however until the method is officially promulgated and available, Method 8260B will continue to be used.

Thallium was analyzed using EPA Method 6010C resulting in a Method Detection Limit (MDL) of 3.04 µg/L, slightly higher than the Tapwater Screening Level of 2 µg/L.

Due to the remote sampling location and time demands for transporting samples to a laboratory, some samples to be analyzed for hexavalent chromium were received by the laboratory outside of the 24-hour holding time.

5.3.2. Compliance with Water Quality Standards

Analytical results for groundwater are provided in Table 4 and laboratory analytical reports are contained in **Appendix D**.

Two wells associated with LF-05, MW-B and MW-D, were not sampled due to excessive silt accumulation in the wells. Based on field measurements and well construction details, it is estimated that MW-B and MW-D have approximately 15 feet and 10 feet of silt accumulated in each well, respectively. With this amount of silt there was insufficient head or saturated thickness to collect a sample. It also wouldn't have been possible to place the pump in the screened interval.

Monitoring wells MW-V, MW-W, and MW-X were included in the 2012 biennial LTM sampling event to serve as background wells for the monitoring network. The sampling team relied on the approved *Facility-Wide Long Term Groundwater Monitoring Plan* (AECOM, 2011) as a guide in performing field activities.

Total depth recorded in the *Facility-Wide Long Term Groundwater Monitoring Plan* (AECOM, 2011) for MW-W was 336 feet. Based on that depth, only 3 feet of saturated thickness was

measured in the well (measured depth to water of 332.98 feet btoc (**Appendix C**)), which is an insufficient volume to allow effective sampling. As a result, sampling was not attempted. Subsequent to the 2012 sampling event, it was discovered that the total depth of MW-W provided by the *Facility-Wide Long Term Groundwater Monitoring Plan* (AECOM, 2011) was incorrect. The actual total depth of MW-W is 365 ft btoc, according to the *2010 Biennial Groundwater Monitoring and Annual Landfill Inspection Report Landfill No, 3 (LF-03/SWMU 105), Landfill No. 4 (LF-04/SWMU 104), Landfill No. 25 (LF-25/SWMU 97) and Sewage Lagoons (SWMU 101)* (Tetra-Tech, Inc. and Trinity, 2010). It should be noted that MW-W is a background well and does not monitor downgradient (affected) groundwater.

To comply with approved NMED requirements it is necessary to analyze hexavalent chromium by colorimetric method EPA 7196A which does not allow for preservative, necessitating a 24-hour hold time limitation. Instances of hold time exceedances are reported in the laboratory reports and are due to the practical aspects of overnight shipping of samples to a qualified laboratory.

5.3.3. Exceedances of Groundwater Screening Levels

Groundwater analytical results are summarized on **Table 4** (landfill wells), **Table 5** (sewage lagoon wells), and **Table 6** (background wells), all in the Tables section of this report. No reported exceedances of screening levels were identified in downgradient wells for: VOCs, all metals with the exception of thallium and arsenic, trivalent and hexavalent chromium, perchlorate, nitrite, ammonia, sulfate, chloride, and TOC.

Total thallium exceeded the EPA MCL of 2 µ/L in MW-Oa (4.58 µg/L) and MW-Pa (4.89 µg/L). Dissolved thallium exceeded the USEPA MCL criteria of 2 µg/L in MW-Oa (4.18 µg/L), -Na (5.06 µg/L), -A (5.77 µg/L), -C (3.51 µg/L), -U (3.4 µg/L), and -T (3.43 µg/L). Nitrate-nitrogen exceeded the USEPA MCL criteria of 10 mg/L in MW-Oa with a result of 11.8 mg/L. At background well MW-X, arsenic was reported at a concentration of 11.4 µg/L, slightly exceeding the 10 µg/L screening criteria. Reported exceedances of groundwater screening levels are posted on **Figure 7**.

5.3.4. Quality Assurance and Quality Control

Based on data validation of the 2012 biennial LTM sampling event, the data were determined to be valid and achieved greater than 99 percent data completeness. The Data Validation Summary Report is provided in **Appendix E.**

6.0 CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

The biennial LTM sampling event was conducted October 15 through October 30, 2012 in accordance with the approved *Facility-Wide Long Term Groundwater Monitoring Plan* (AECOM, 2011). Analytical results from the October 2012 biennial LTM groundwater sampling event indicate no exceedances of screening levels for: VOCs, all metals with the exception of thallium and arsenic, trivalent and hexavalent chromium, perchlorate, nitrite, ammonia, sulfate, chloride, and TOC.

Laboratory analyses indicate that nitrate-nitrogen in well MW-Oa slightly exceeded the USEPA MCL of 10 mg/L. Nitrate concentrations at Cannon AFB have a history of being sporadically problematic but are not necessarily attributable to the SWMUs. Several groundwater samples analyzed from downgradient wells slightly exceeded the USEPA MCL for thallium. It should be noted that thallium does not appear to be a historically problematic parameter at Cannon AFB, indicating an anomalous event with regard to thallium. Dissolved arsenic slightly exceeded the USEPA MCL standard of 10 µg/L in the sample collected from MW-X (background). Groundwater sample results from the 2012 biennial LTM sampling event do not indicate adverse impacts of groundwater quality at Cannon AFB from ERP sites LF-03, LF-04, LF-05, LF-25, and the former Sewage Lagoons.

Annual cover system inspections for LF-03, LF-04, LF-05, LF-25, and the south Sewage Lagoon were conducted on October 15, 2012. The cover systems on LF-25 and the former south Sewage Lagoon were determined to be in good to excellent condition with no repairs or preventive maintenance required. The cover systems on LF-03 and LF-04 were observed to be newly placed landfill caps of soil, completely void of a vegetative cover and without temporary erosion prevention measures applied (**Appendix B**).

6.2 Recommendations

The following recommendations are based on the exceptions from and errors found in the approved work plan (AECOM, 2011):

- Thallium was analyzed using EPA Method 6010C resulting in a MDL slightly higher than the screening guideline. The Tapwater Screening Level for thallium is 2 µg/L; the MDL was 3.04 µg/L. To achieve a lower MDL for thallium it is recommended that Method 6020A be used during the next biennial LTM sampling event in 2014.

- Monitoring wells MW-B and MW-D were not sampled due to excessive silt accumulation in the bottom of the wells. It is recommended that these two wells be re-developed and a determination made regarding their integrity and viability as groundwater quality sampling points. This work should be performed in advance of the October 2014 sampling event.

- Hexavalent chromium was analyzed by colorimetric method, EPA Method 7196A. This method does not typically allow for preservative; therefore, there is a 24-hour hold time. Due to the location of appropriately certified laboratories, etc., it is not possible to collect, pack, and ship samples and NOT exceed the 24-hour hold time. The hold time for hexavalent chromium is routinely exceeded; however, 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) and the data was determined to be valid. However, to avoid exceeding the hold time specified by EPA Method 7196A, TRINITY proposes utilizing alternative method EPA 218.6. The currently approved method has a method detection limit of 3.3 ug/L. The proposed method has a method detection limit as low as 0.005 ug/L (USEPA, 2013).

- The approved work plan should be updated to reflect the correct total depth of 367 feet btoc and MW-W should be sampled during the next biennial LTM sampling event.

The following recommendations are based on findings of the 2011 and 2012 cover inspections:

- It is recommended that signs similar to those at LF-05, LF-25, and the former sewage lagoons be erected at LF-03 and LF-04 where no signage currently exists. It is also recommended that the information on existing signs at LF-05, LF-25, and the former

sewage lagoons be updated to reflect the correct contact information for the Base Civil Engineer Environmental Office.

- It is recommended that a vegetative cover of targeted grass species be implemented at LF-03 and LF-04. If not, broadleaf weed species will likely be the dominant type of vegetation on the landfill cap in the future. These species provide the least amount of natural protection against erosion and demand the greatest amount of maintenance.

- Exposed soil at LF-03 and LF-04 was observed during the October 2012 inspection. The soil is vulnerable to erosion from wind and precipitation, and evidence of this occurring was visible at the southern end of LF-04, just north of Playa Lake. Measures should be taken to ensure that eroding sediments from the soil caps are not allowed to migrate into and impact Playa Lake. This may require temporary measures until such a time that a vegetative cover of 80 to 90 percent is reestablished. Temporary measures could consist of silt fencing, coir logs, filter strips, control blankets, grass seed starter mats, etc., as required to mitigate cap erosion.

- Consideration should be given to removal of the small trees growing at LF-05 and the former south Sewage Lagoon. Large trees may undermine and compromise the engineered cap, and may eventually host unwanted birds in close proximity to the airfield.

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FIGURES

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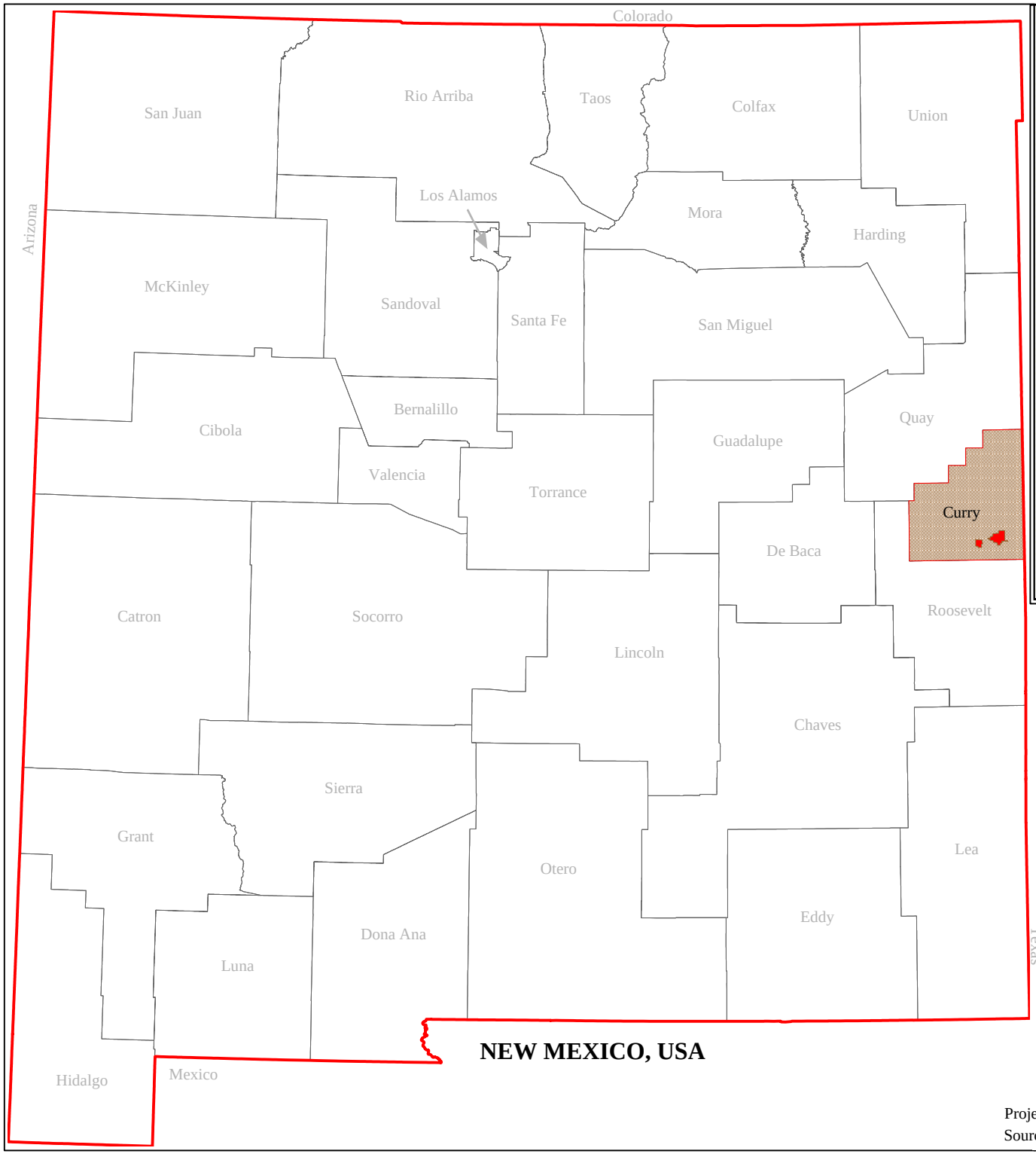


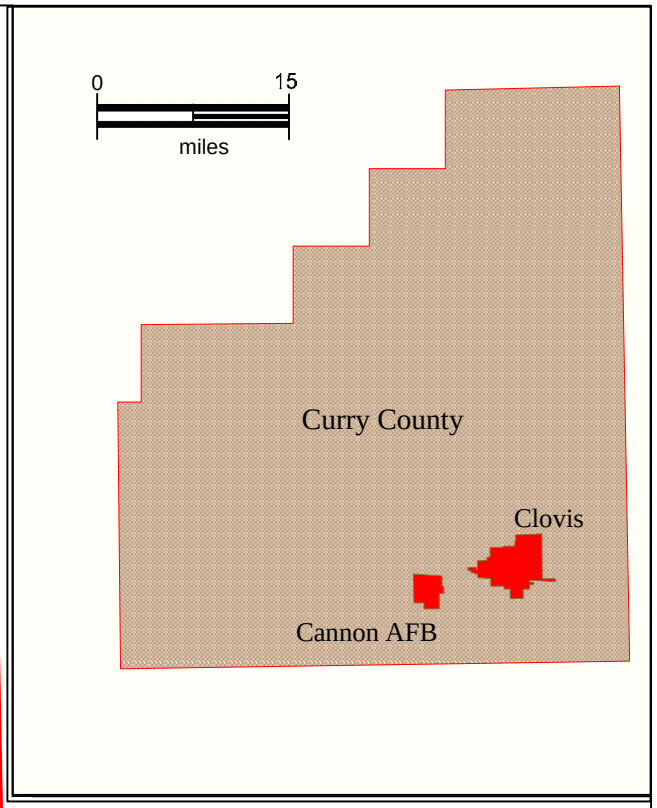
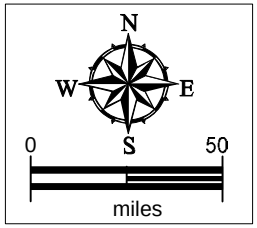


FIGURE 1.
Site Location

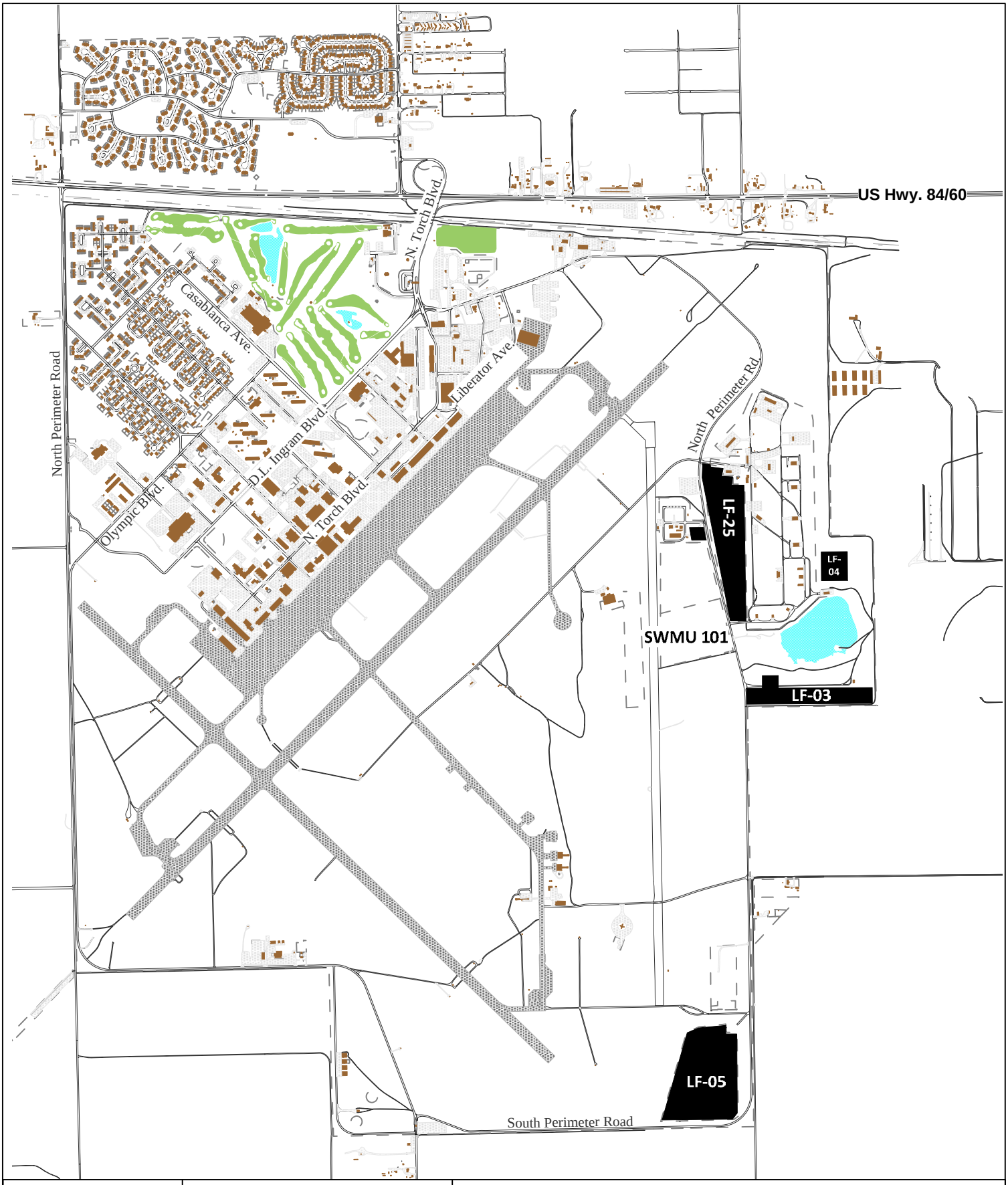
Cannon Air Force Base

Curry County, New Mexico



Projection: UTM meters, NAD 83
Source files: New Mexico Resource Geographic Information System Program

Trinity Analysis and Development Corp.



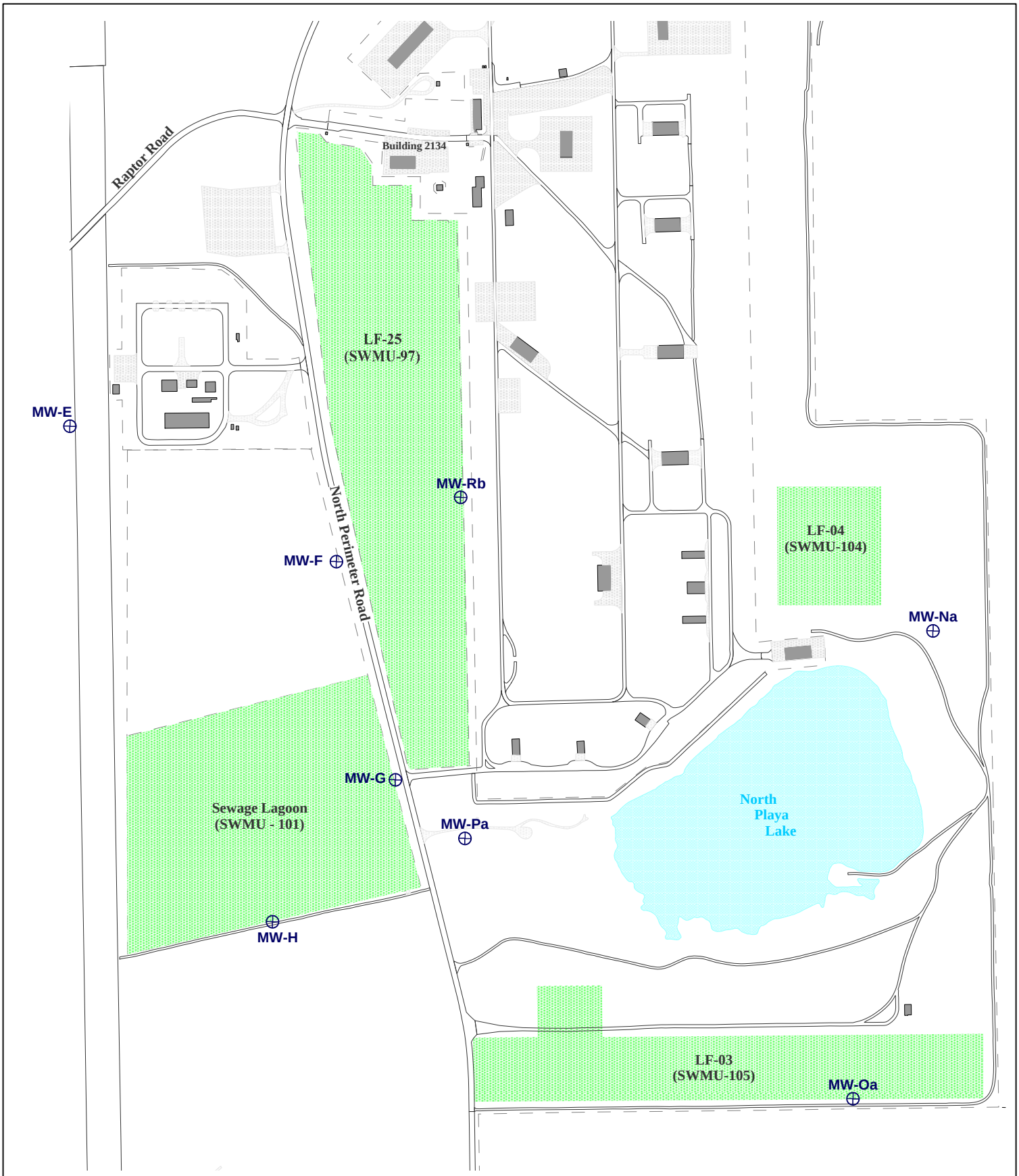
N
W E
S
0 2000
feet

NOTES

Digital data files provided by GeoBase/CAFB
Projection: UTM Zone 13N, NAD 83

FIGURE 2
PLAN VIEW MAP
Cannon Air Force Base
Curry County, New Mexico

Trinity Analysis & Development Corp.



N
W E
S
0 500
feet

NOTES

ERP Sites/SWMUs

Long-Term Monitoring Wells

Digital data files provided by GeoBase/CAFB

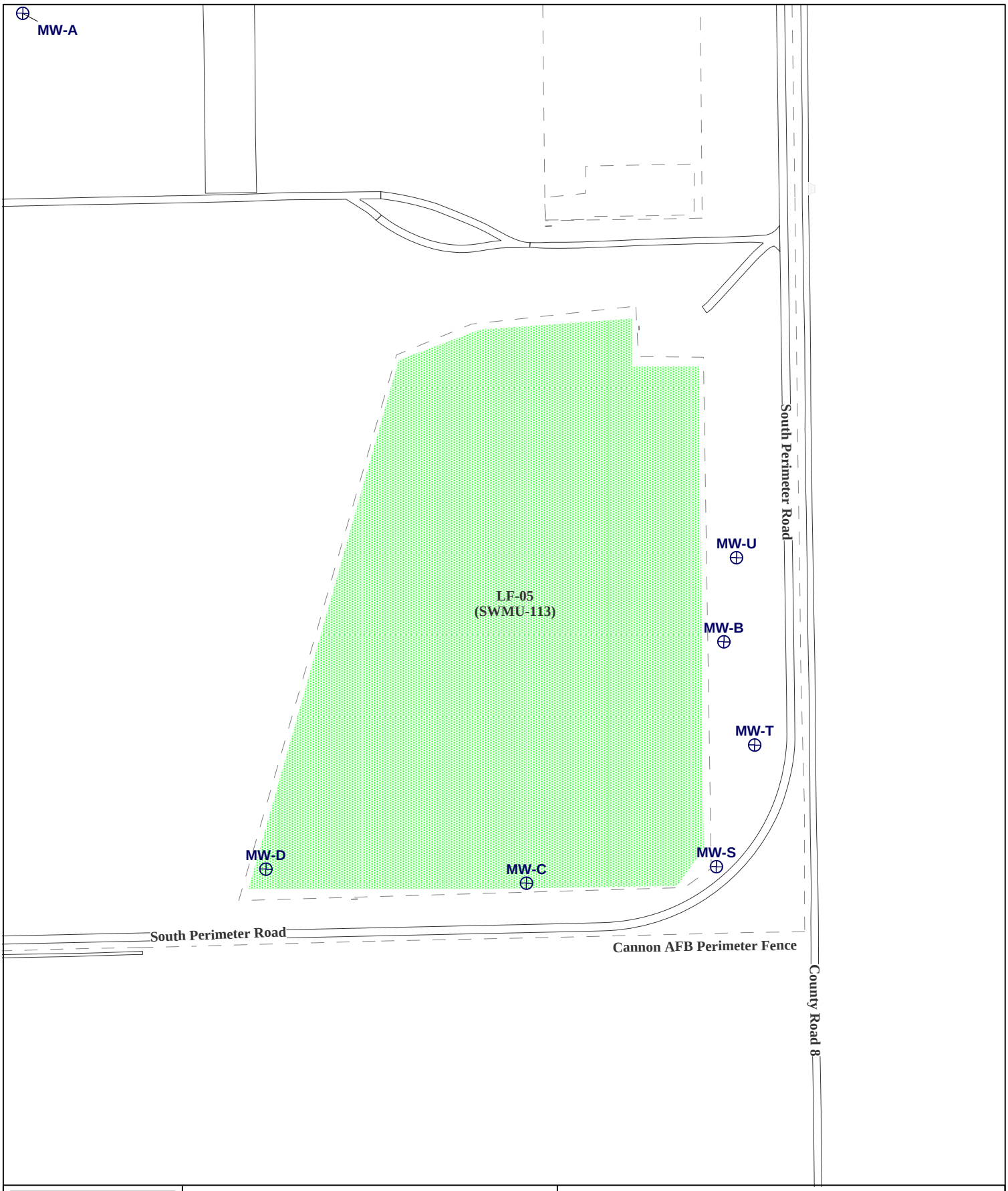
Projection: UTM Zone 13N, NAD 83

FIGURE 3.
LF-03, -04, -25, and Sewage Lagoon
(SWMU 105, 104, 97, and 101)

Cannon Air Force Base

Curry County, New Mexico

Trinity Analysis and Development Corp.



N
W E
S
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NOTES

ERP Sites/SWMUs

Long-Term Monitoring Wells

Digital data files provided by GeoBase/CAFB

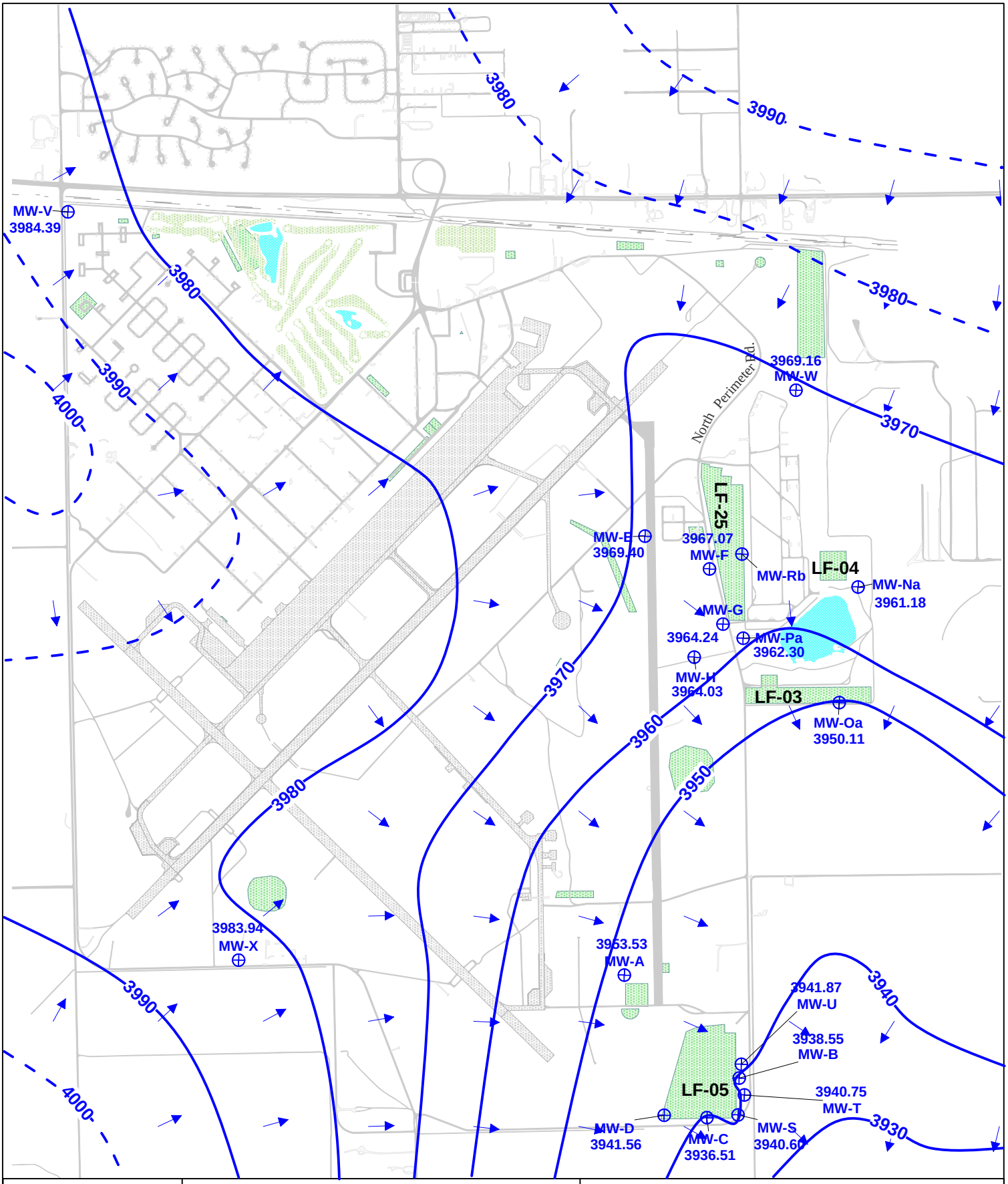
Projection: UTM Zone 13N, NAD 83

FIGURE 4.
LF-05
(SWMU 113)

Cannon Air Force Base

Curry County, New Mexico

Trinity Analysis and Development Corp.



N
W E
S
0 2000
feet

NOTES

3976 Water table elevation contours (feet NAVD 88)

Groundwater flow vector

Contours supplemented with interpreted local flow patterns
Top of casing elevations from TRINITY, 2012
Digital data files provided by GeoBase/CAFB
Projection: UTM Zone 13N, NAD 83

FIGURE 5.
Groundwater Flow Map
10-15-2012

Cannon Air Force Base

Curry County, New Mexico

Trinity Analysis and Development Corp.

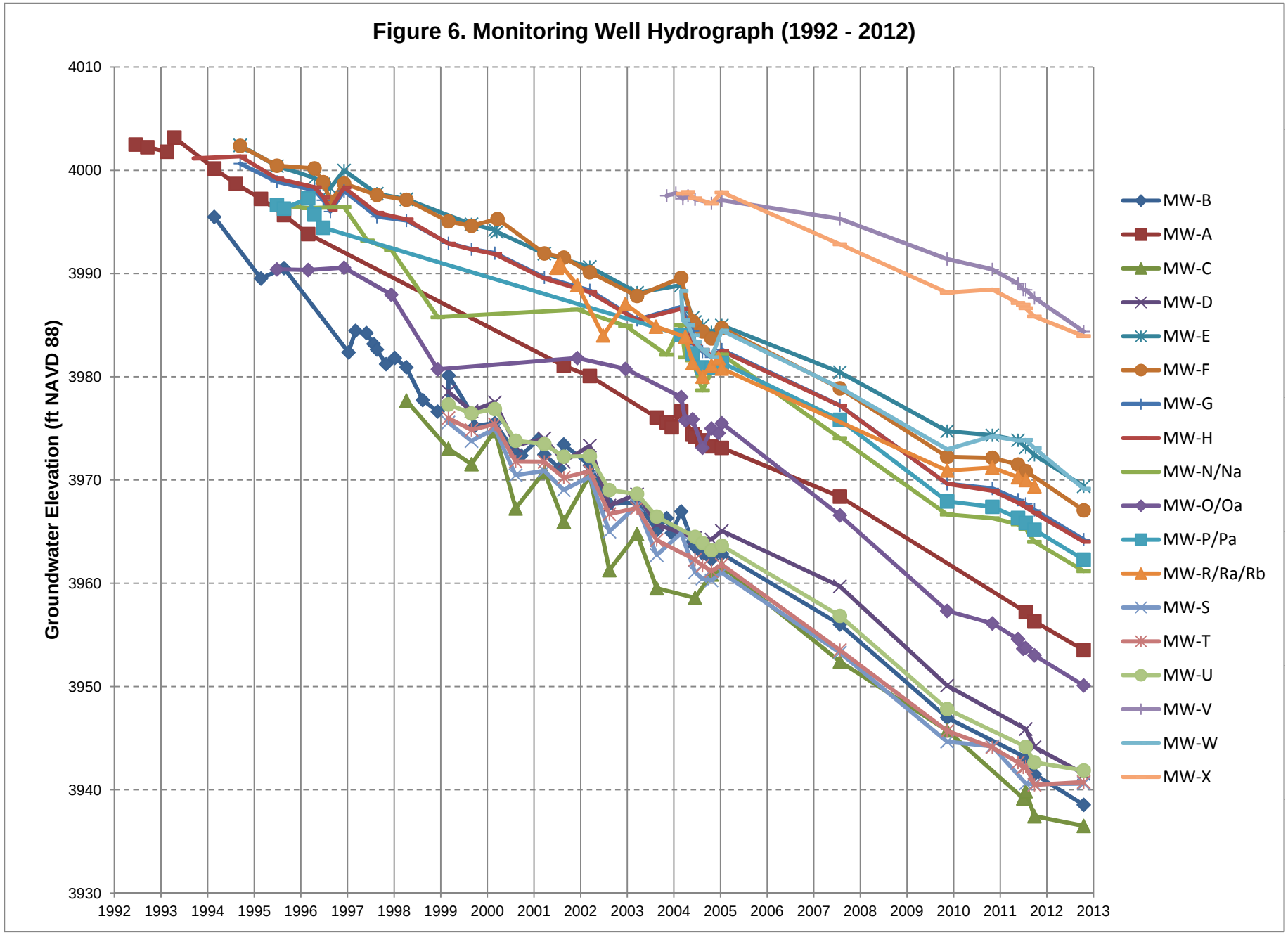


Figure 6. Monitoring Well Hydrograph (1992 - 2012)
Groundwater Elevation (ft NAVD 88)
4010
4000
3990
3980
3970
3960
3950
3940
3930
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
Year
MW-B
MW-A
MW-C
MW-D
MW-E
MW-F
MW-G
MW-H
MW-N/Na
MW-O/Oa
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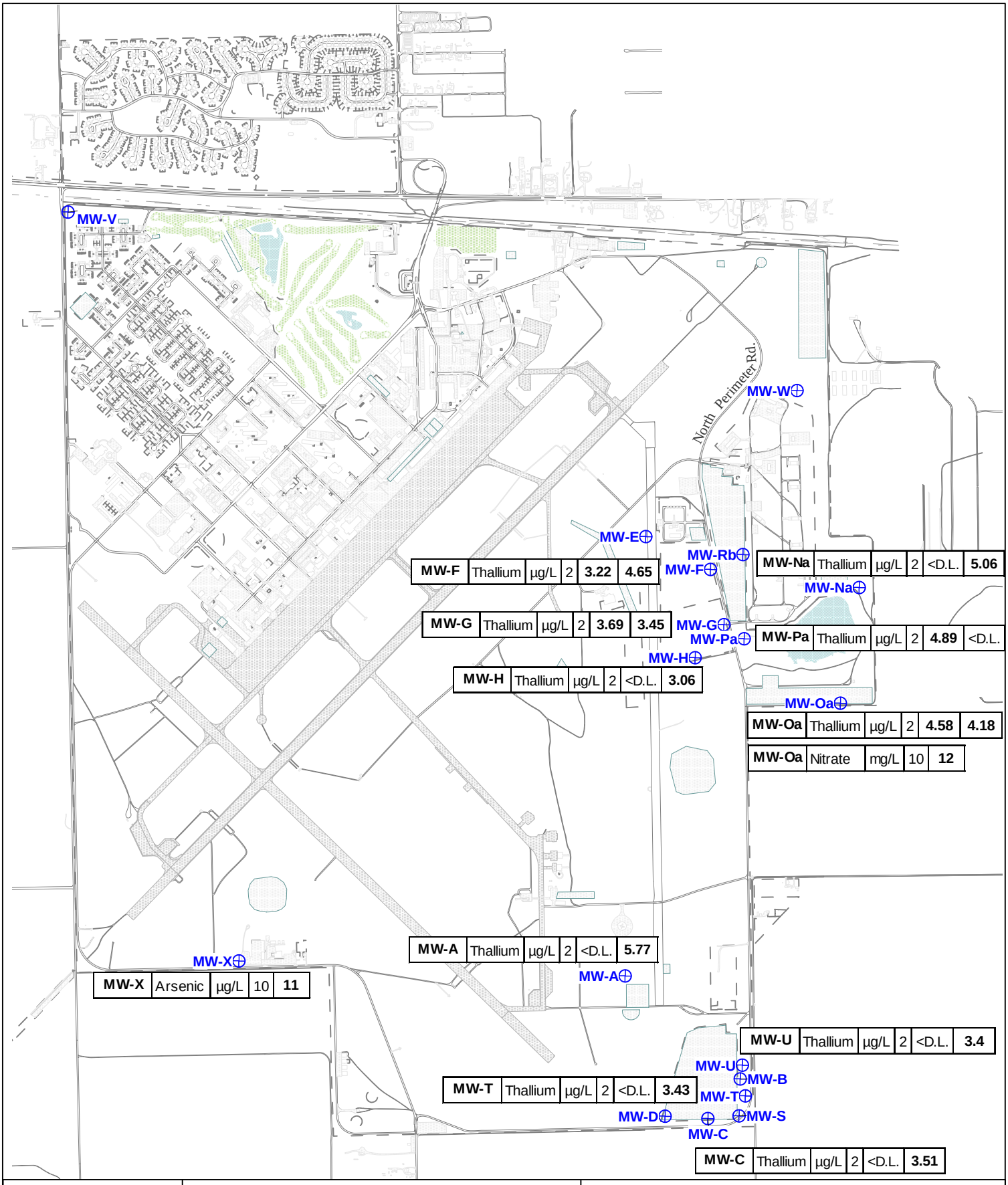
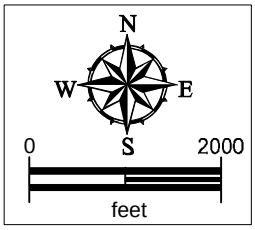
MW-U
MW-V
MW-W
MW-X





NOTES

Digital data files provided by GeoBase/CAFB

Only parameters with reported exceedances of respective screening levels are posted.

Posted results legend (dissolved applicable to thallium only)

Well ID	Analyte	Units	Screening Criteria	Result (Total)	Result (Dissolved)

FIGURE 7.
Groundwater Screening Level Exceedances, October 2012

Cannon Air Force Base

Curry County, New Mexico

Trinity Analysis and Development Corp.

TABLES

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Table 1. Monitoring Well Construction Summary

Well ID	Ground Elevation (ft, NAVD88)	Top of Casing (ft, NAVD88)	Screen Length (ft)	Top of Screen (ft, bls)	Bottom of Screen (ft, bls)	Sump Length (ft)	Top of Screen (ft, NAVD88)	Bottom of Screen (ft, NAVD88)
MW-A	4267.0	4269.2	15	328.0	343.0	0.0	3939.0	3924.0
MW-B	4265.8	4268.1	15	345.0	360.0	0.0	3920.8	3905.8
MW-C	4266.9	4269.2	15	346.8	361.8	0.0	3920.1	3905.1
MW-D	4265.8	4267.6	15	340.0	355.0	0.0	3925.8	3910.8
MW-E	4283.0	4285.9	15	352.1	367.1	0.0	3930.9	3915.9
MW-F	4279.4	4282.3	15	353.9	368.9	0.0	3925.5	3910.5
MW-G	4280.0	4283.1	15	353.9	368.9	0.0	3926.1	3911.1
MW-H	4279.6	4282.6	20	351.9	371.9	0.0	3927.7	3907.7
MW-Na	4269.8	4271.0	60	296.9	356.9	NRF	3972.9	3912.9
MW-Oa	4273.0	4273.7	60	304.5	364.5	0.0	3968.5	3908.5
MW-Pa	4274.0	4274.8	60	298.2	358.2	NRF	3975.9	3915.9
MW-Rb	4275.8	4278.4	30	301.0	331.0	0.0	3974.8	3944.8
MW-S	4264.7	4266.7	40	325.0	365.0	0.0	3939.7	3899.7
MW-T	4264.7	4266.6	40	325.1	365.1	0.0	3939.6	3899.6
MW-U	4266.0	4267.9	40	324.6	364.6	0.0	3941.4	3901.4
MW-V	4327.8	4329.8	60	308.9	368.9	0.0	4018.9	3958.9
MW-W	4299.8	4302.1	60	304.6	364.6	0.0	3995.2	3935.2
MW-X	4268.0	4269.2	60	275.7	335.7	0.0	3992.3	3932.3

Table 2 Long-Term Monitoring Program Groundwater Elevations

	MW-A	MW-B	MW-C	MW-D	MW-E	MW-F	MW-G	MW-H	MW-N/Na	MW-O/Oa	MW-P/Pa	MW-R/Ra/Rb	MW-S	MW-T	MW-U	MW-V	MW-W	MW-X
06-15-1992	4002.50	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
09-15-1992	4002.24	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
02-15-1993	4001.80	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
04-15-1993	4003.18	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
09-13-1993	NM	NM	NM	NM	NM	NM	NM	4001.16	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
02-21-1994	4000.18	3995.49	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
08-09-1994	3998.69	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
09-12-1994	NM	NM	NM	NM	4002.42	4002.37	4000.66	4001.35	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
02-22-1995	3997.24	3989.52	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
06-27-1995	NM	NM	NM	NM	4000.41	4000.45	3998.89	3999.21	3996.62	3990.41	3996.64	NM	NM	NM	NM	NM	NM	NM
08-21-1995	3995.67	3990.53	NM	NM	NM	NM	NM	NM	NM	NM	3996.29	NM	NM	NM	NM	NM	NM	NM
02-27-1996	3993.83	NM	NM	NM	NM	NM	NM	NM	3996.34	3990.35	3997.29	NM	NM	NM	NM	NM	NM	NM
04-16-1996	NM	NM	NM	NM	3999.27	4000.19	3998.08	3998.36	NM	NM	3995.71	NM	NM	NM	NM	NM	NM	NM
06-24-1996	NM	NM	NM	NM	3998.65	3998.86	3997.11	3997.41	NM	NM	3994.44	NM	NM	NM	NM	NM	NM	NM
08-19-1996	NM	NM	NM	NM	3998.29	3996.97	3996.01	3996.18	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
12-04-1996	NM	NM	NM	NM	3999.99	3998.72	3998.01	3998.34	3996.44	3990.57	NM	NM	NM	NM	NM	NM	NM	NM
01-08-1997	NM	3982.37	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
03-04-1997	NM	3984.46	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
05-28-1997	NM	3984.24	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
06-05-1997	NM	NM	NM	NM	NM	NM	NM	NM	3993.20	NM	NM	NM	NM	NM	NM	NM	NM	NM
07-23-1997	NM	3983.19	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
08-18-1997	NM	3982.65	NM	NM	3997.74	3997.61	3995.51	3995.88	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
10-29-1997	NM	3981.23	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
12-09-1997	NM	NM	NM	NM	NM	NM	NM	NM	3992.30	3987.96	NM	NM	NM	NM	NM	NM	NM	NM
01-05-1998	NM	3981.83	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
04-06-1998	NM	3980.93	3977.70	NM	3997.20	3997.15	3995.14	3995.25	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
08-12-1998	NM	3977.75	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
12-07-1998	NM	3976.64	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
12-08-1998	NM	NM	NM	NM	NM	NM	NM	NM	3985.77	3980.73	NM	NM	NM	NM	NM	NM	NM	NM
03-01-1999	NM	3977.33	3973.04	3978.55	NM	3995.06	3992.94	3992.90	NM	NM	NM	NM	3975.58	3976.00	3977.33	NM	NM	NM
03-03-1999	NM	3980.13	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
08-29-1999	NM	3976.48	3971.54	3976.69	3994.78	3994.62	3992.37	3992.34	NM	NM	NM	NM	3973.78	3974.86	3976.45	NM	NM	NM
09-22-1999	NM	3975.22	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
02-28-2000	NM	3975.53	3974.76	3977.54	3994.23	NM	3991.98	3991.88	NM	NM	NM	NM	3974.99	3975.41	3976.88	NM	NM	NM
03-15-2000	NM	NM	NM	NM	3994.04	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
03-20-2000	NM	NM	NM	NM	NM	3995.29	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
08-09-2000	NM	3972.60	3967.25	3973.33	NM	NM	NM	NM	NM	NM	NM	NM	3970.47	3971.80	3973.81	NM	NM	NM
09-22-2000	NM	3972.38	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
01-31-2001	NM	3973.91	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
03-22-2001	NM	3972.47	3970.82	3974.04	3991.93	3991.95	3989.63	3989.52	NM	NM	NM	NM	3970.90	3971.77	3973.49	NM	NM	NM
06-26-2001	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	3990.58	NM	NM	NM	NM	NM	NM
07-07-2001	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	3990.76	NM	NM	NM	NM	NM	NM
07-17-2001	NM	3971.16	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
07-24-2001	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	3990.90	NM	NM	NM	NM	NM	NM
08-21-2001	3981.07	3973.45	3965.96	3971.78	NM	3991.55	NM	NM	NM	NM	NM	NM	3969.04	3970.23	3972.26	NM	NM	NM
12-05-2001	NM	NM	NM	NM	NM	NM	NM	NM	3986.51	3981.82	NM	3988.89	NM	NM	NM	NM	NM	NM
03-13-2002	3980.08	3971.43	3970.47	3973.33	3990.64	3990.13	3988.38	3988.19	NM	NM	NM	NM	3970.33	3970.86	3972.32	NM	NM	NM
06-25-2002	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	3984.01	NM	NM	NM	NM	NM	NM
08-13-2002	NM	3967.68	3961.28	3967.53	NM	NM	NM	NM	NM	NM	NM	NM	3965.01	3966.71	3969.03	NM	NM	NM
12-17-2002	NM	NM	NM	NM	NM	NM	NM	NM	3984.94	3980.77	NM	3987.06	NM	NM	NM	NM	NM	NM
03-18-2003	NM	3967.83	3964.78	3968.63	3988.15	3987.83	3985.53	3985.49	NM	NM	NM	NM	3967.57	3967.30	3968.66	NM	NM	NM
04-02-2003	NM	NM	NM	NM	NM	NM	NM	3985.56	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
08-13-2003	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	3984.86	NM	NM	NM	NM	NM	NM

Table 2 Long-Term Monitoring Program Groundwater Elevations

	MW-A	MW-B	MW-C	MW-D	MW-E	MW-F	MW-G	MW-H	MW-N/Na	MW-O/Oa	MW-P/Pa	MW-R/Ra/Rb	MW-S	MW-T	MW-U	MW-V	MW-W	MW-X
08-19-2003	3976.06	3965.13	3959.53	3965.72	NM	NM	NM	NM	NM	NM	NM	NM	3962.72	3964.19	3966.46	NM	NM	NM
11-05-2003	3975.59	3966.31	NM	NM	NM	NM	NM	NM	3982.15	NM	NM	NM	NM	NM	NM	3997.54	NM	NM
12-15-2003	3975.11	3964.87	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
01-16-2004	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	3997.80	NM	NM
02-27-2004	3976.65	3966.96	NM	NM	3988.87	3989.58	3986.78	3986.58	3985.01	3978.04	3984.05	NM	3964.87	NM	NM	NM	3988.32	NM
03-11-2004	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	3997.25	3985.49	3997.74
03-30-2004	NM	NM	NM	NM	NM	NM	NM	NM	3981.89	3975.77	NM	3983.88	NM	NM	NM	NM	NM	NM
04-20-2004	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	3997.53	3985.00	3997.90
05-26-2004	3974.41	3964.02	NM	NM	3985.70	3985.37	3984.44	3983.34	3981.60	3975.89	3982.28	3981.35	NM	NM	NM	NM	3984.01	NM
06-14-2004	3974.18	3963.55	3958.59	3964.39	3985.31	3985.07	3983.10	3983.03	NM	NM	NM	NM	3961.08	3962.29	3964.50	3997.20	3983.37	3997.29
08-12-2004	3973.85	3962.88	NM	NM	3984.96	3984.40	3982.45	3982.62	3978.68	3973.13	3980.92	3980.02	3960.46	3961.71	3963.90	NM	3982.63	NM
10-21-2004	3973.27	3962.33	3960.85	3964.24	3984.31	3983.72	3981.90	3982.05	3980.46	3975.00	3980.85	3981.11	3960.28	3961.20	3963.20	3996.80	3981.90	3996.79
12-15-2004	NM	NM	NM	NM	NM	NM	NM	NM	NM	3974.55	NM	3981.81	NM	NM	NM	NM	NM	NM
01-10-2005	3973.12	3962.85	3961.64	3965.09	3984.98	3984.72	3982.64	3982.51	3982.17	3975.51	3981.37	3980.80	3961.02	3961.81	3963.65	3997.10	3984.48	3997.88
07-24-2007	3968.40	3956.02	3952.43	3959.71	3980.45	3978.88	3977.23	3977.21	3974.06	3966.59	3975.84	NM	3953.29	3953.54	3956.85	3995.31	3978.95	3992.84
11-10-2009	NM	3946.98	3945.75	3950.10	3974.74	3972.25	3969.64	3969.64	3966.67	3957.33	3967.94	3970.93	3944.66	3945.70	3947.82	3991.41	3972.97	3988.16
10-30-2010	NM	NM	NM	NM	3974.34	3972.16	3969.19	3968.96	3966.31	3956.12	3967.41	3971.21	3944.21	3944.11	NM	3990.41	3974.24	3988.45
05-19-2011	NM	NM	NM	NM	3973.86	3971.51	3968.11	3967.81	3965.73	3954.60	3966.33	3970.28	NM	3942.65	NM	3989.03	3973.83	3987.16
06-29-2011	NM	NM	3939.18	NM	NM	NM	NM	NM	NM	3953.67	NM	NM	NM	3942.17	NM	3988.46	NM	3986.98
07-19-2011	3957.22	3943.13	3939.87	3945.89	3973.17	3970.87	3967.70	3967.37	3965.27	3953.75	3965.85	3970.01	3940.62	3942.27	3944.17	3988.43	3973.89	3986.65
09-25-2011	3956.30	3941.52	3937.45	3944.14	3972.44	NM	3967.11	3966.80	3964.02	3953.03	3965.19	3969.41	3940.54	3940.48	3942.66	3987.64	3973.09	3985.84
10-15-2012	3953.53	3938.55	3936.51	3941.56	3969.40	3967.07	3964.24	3964.03	3961.18	3950.11	3962.30	3963.70	3940.60	3940.75	3941.87	3984.39	3969.16	3983.94

NM Not Measured

TBD Waiting for Survey Data for Top of Casing for MW-Rb

Table 3. Effective Well Life Summary

Well ID	Ground Elevation (ft, NAVD88)	Bottom of Screen (ft, NAVD88)	Groundwater Elevation 10-15-12 (ft, NAVD88)	Saturated Interval Remaining in Well (ft)	Avg. Annual Decline in Groundwater Elevation (ft/yr)	Projected Well Life (yr)	Estimated Effective Well Life (yr)
MW-A	4267.0	3924.0	3953.5	29.5	2.4	12.1	8.8
MW-B	4265.8	3905.8	3938.5	32.8	3.1	10.7	8.1
MW-C	4266.9	3905.1	3936.5	31.4	2.8	11.1	8.2
MW-D	4265.8	3910.8	3941.6	30.8	2.7	11.3	8.4
MW-E	4283.0	3915.9	3969.4	53.5	1.8	29.3	24.9
MW-F	4279.4	3910.5	3967.1	56.6	2.0	29.0	24.9
MW-G	4280.0	3911.1	3964.2	53.2	2.0	26.4	22.4
MW-H	4279.6	3907.7	3964.0	56.4	2.0	28.8	24.7
MW-Na	4269.8	3912.9	3961.2	48.3	2.0	23.6	19.7
MW-Oa	4273.0	3908.5	3950.1	41.6	2.3	17.8	14.4
MW-Pa	4274.0	3915.9	3962.3	46.4	2.0	23.0	19.0
MW-Rb	4275.8	3944.8	3963.7	18.9	1.9	10.0	5.7
MW-S	4264.7	3899.7	3940.6	40.9	2.6	15.9	12.8
MW-T	4264.7	3899.6	3940.7	41.1	2.6	15.8	12.7
MW-U	4266.0	3901.4	3941.9	40.4	2.6	15.5	12.5
MW-V	4327.8	3958.9	3984.4	25.5	1.5	17.0	11.6
MW-W	4299.8	3935.2	3969.2	33.9	2.2	15.3	11.7
MW-X	4268.0	3932.3	3983.9	51.6	1.6	31.8	26.9

TABLE 4
Summary of Groundwater Analytical Results
LF-03, LF-04, LF-05, and LF-25
Cannon AFB, New Mexico
Bhate Project no.: 9110129

			SAMPLE ID:	LF03-MW-Oa			
			DATE SAMPLED:	10/17/12			
			LAB SAMPLE ID:	21210180701			
				Total		Dissolved	
	Analyte	Units	Screening Criteria[1]	RESULT	Q	RESULT	Q
VOCs SW8260B	Dichlorodifluoromethane	µg/L	190	0.145	U	NA	
	Trichlorofluoromethane	µg/L	1,100	0.157	U	NA	
Total Metals SW6010C/7470A	Aluminum	µg/L	16,000	30.3	U	30.3	U
	Antimony	µg/L	6	3.11	U	3.11	U
	Arsenic	µg/L	10	3.59	U	3.59	U
	Barium	µg/L	2,000	**60.3**		**61.5**	
	Cadmium	µg/L	5	**0.78**	J	**0.61**	J
	Calcium	µg/L	NV	**71,100**		**71,500**	
	Chromium	µg/L	100	**1.78**	J	**1.91**	J
	Cobalt	µg/L	4.7	**1.12**	J	1.27	UB
	Copper	µg/L	1,300	**11.9**		**11.7**	
	Iron	µg/L	11,000	12.6	U	12.6	U
	Lead	µg/L	15	1.96	U	1.96	U
	Magnesium	µg/L	NV	**65,100**		**65,300**	
	Manganese	µg/L	320	1.31	U	1.31	U
	Mercury	µg/L	2	0.068	U	0.068	U
	Nickel	µg/L	300	1.13	U	**1.69**	J
	Potassium	µg/L	NV	**9,240**		**9,560**	
	Selenium	µg/L	50	**8**	J	**5.05**	J
	Sodium	µg/L	NV	**131,000**		**128,000**	
	Thallium	µg/L	2	**4.58**	J	**4.18**	J
	Vanadium	µg/L	NV	**32.3**		**35.1**	
	Zinc	µg/L	4,700	4.51	U	4.51	U
Other Parameters	Ammonia as N (SM 4500 NH3)	mg/L	NV	0.24	U	NA	
	Chloride (EPA 300.0)	mg/L	NV	**185**		NA	
	Hexavalent Chromium (SW7196A)	ug/L	NV	4	UJ	NA	
	Nitrate (300.0)	mg/L	10	**11.8**		NA	
	Nitrite (300.0)	mg/L	1	**0.01**		NA	
	Perchlorate (SW6860)	mg/L	0.015	**0.00147**		NA	
	Sulfate as SO_4 (EPA 300.0)	mg/L	NV	**199**		NA	
	Total Organic Carbon (TOC) (SM5310B)	mg/L	NV	**6.8**		NA	

[1]Screening criteria based on the US Environmental Protection Agency (USEPA)Maximum Contaminant Limit (MCL) or Regional Screening Levels for Tapwater(November 2012)

NOTES:
NA - not applicable,
NV - no MCL or RSL value available,
Q - validation qualifier,
SM - Standard Methods
µg/L - micrograms per liter,
mg/L - milligrams per liter;
Detections are bolded.
Detections above the screening criteria are bolded and shaded

QUALIFIERS:
U - analyte was analyzed for but not detected at or above the adjusted method detection limit (MDL)
UJ - analyte not detected, reported MDL may be inaccurate or imprecise due to quality assurance (QA) issue
J - analyte detected, estimated concentration
UB - analyte also found in associated laboratory or field blank, probable blank contaminant

TABLE 4
Summary of Groundwater Analytical Results
LF-03, LF-04, LF-05, and LF-25
Cannon AFB, New Mexico
Bhate Project no.: 9110129

			SAMPLE ID:	LF04-MW-Na			
			DATE SAMPLED:	10/17/12			
			LAB SAMPLE ID:	21210180703			
				Total		Dissolved	
	Analyte	Units	Screening Criteria[1]	RESULT	Q	RESULT	Q
VOCs SW8260B	Dichlorodifluoromethane	µg/L	190	0.145	U	NA	
	Trichlorofluoromethane	µg/L	1,100	0.157	U	NA	
Total Metals SW6010C/7470A	Aluminum	µg/L	16,000	**201**		30.3	U
	Antimony	µg/L	6	3.11	U	3.11	U
	Arsenic	µg/L	10	3.59	U	3.59	U
	Barium	µg/L	2,000	**44.4**		**37**	
	Cadmium	µg/L	5	**0.83**	J	**0.7**	J
	Calcium	µg/L	NV	**31,600**		**30,300**	
	Chromium	µg/L	100	**1.69**	J	**1.29**	J
	Cobalt	µg/L	4.7	**0.7**	J	0.79	UB
	Copper	µg/L	1,300	**13.6**		**11.3**	
	Iron	µg/L	11,000	**111**		12.6	U
	Lead	µg/L	15	1.96	U	1.96	U
	Magnesium	µg/L	NV	**28,100**		**27,500**	
	Manganese	µg/L	320	**10.5**	J	1.31	U
	Mercury	µg/L	2	0.068	U	0.068	U
	Nickel	µg/L	300	1.13	U	**1.21**	J
	Potassium	µg/L	NV	**6,910**		**6,900**	
	Selenium	µg/L	50	**5.5**	J	**5.07**	J
	Sodium	µg/L	NV	**43,700**		**44,500**	
	Thallium	µg/L	2	3.04	U	**5.06**	J
	Vanadium	µg/L	NV	**33.7**		**34.1**	
	Zinc	µg/L	4,700	**9.16**	J	4.51	U
Other Parameters	Ammonia as N (SM 4500 NH3)	mg/L	NV	0.24	U	NA	
	Chloride (EPA 300.0)	mg/L	NV	**38.9**		NA	
	Hexavalent Chromium (SW7196A)	ug/L	NV	4	U	NA	
	Nitrate (300.0)	mg/L	10	**1.41**		NA	
	Nitrite (300.0)	mg/L	1	**0.008**	J	NA	
	Perchlorate (SW6860)	mg/L	0.015	**0.00208**		NA	
	Sulfate as SO_4 (EPA 300.0)	mg/L	NV	**79.9**		NA	
	Total Organic Carbon (TOC) (SM5310B)	mg/L	NV	**5**		NA	

[1]Screening criteria based on the US Environmental Protection Agency (USEPA)Maximum Contaminant Limit (MCL) or Regional Screening Levels for Tapwater(November 2012)

NOTES:
NA - not applicable,
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Q - validation qualifier,
SM - Standard Methods
µg/L - micrograms per liter,
mg/L - milligrams per liter;
Detections are bolded.
Detections above the screening criteria are bolded and shaded

QUALIFIERS:
U - analyte was analyzed for but not detected at or above the adjusted method detection limit (MDL)
UJ - analyte not detected, reported MDL may be inaccurate or imprecise due to quality assurance (QA) issue
J - analyte detected, estimated concentration
UB - analyte also found in associated laboratory or field blank, probable blank contaminant

TABLE 4
Summary of Groundwater Analytical Results
LF-03, LF-04, LF-05, and LF-25
Cannon AFB, New Mexico
Bhate Project no.: 9110129

			SAMPLE ID:	LF05-MW-A				LF05-MW-C				LF05-MW-U				LF05-MW-S				LF05-MW-T			
			DATE SAMPLED:	10/19/12				10/29/12				10/30/12				10/30/12				10/25/12			
			LAB SAMPLE ID:	21210201001				21210300501				21210310801				21210310803				21210260704			
				Total		Dissolved		Total		Dissolved		Total		Dissolved		Total		Dissolved		Total		Dissolved	
	Analyte	Units	Screening Criteria[1]	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q
VOCs SW8260B	Dichlorodifluoromethane	µg/L	190	0.145	U	NA		0.145	U	NA		**0.832**	J	NA		0.145	U	NA		0.145	U	NA	
	Trichlorofluoromethane	µg/L	1,100	0.157	U	NA		0.157	U	NA		**0.559**	J	NA		0.157	U	NA		0.157	U	NA	
Total Metals SW6010C/7470A	Aluminum	µg/L	16,000	30.3	U	30.3	U	68.3	UB	58.4	UB	44.1	UB	41.7	UB	56.8	UB	45.5	UB	61	UB	30.5	UB
	Antimony	µg/L	6	3.11	U	3.11	U	3.11	U	3.11	U	3.11	U	3.11	U	3.11	U	3.11	U	3.11	U	3.11	U
	Arsenic	µg/L	10	3.59	U	**4.55**	J	3.59	U	3.59	U	3.59	U	3.59	U	**3.9**	J	3.59	U	**5.39**	J	**7.5**	J
	Barium	µg/L	2,000	**55.6**		**52.7**		**80.1**		**84**		**44**		**41.9**		**39**		**38**		33.8	UB	34.7	UB
	Cadmium	µg/L	5	1.07	UB	**0.78**	J	**0.81**	J	**0.78**	J	**0.84**	J	**0.65**	J	**0.97**	J	**0.59**	J	0.51	UB	**0.41**	J
	Calcium	µg/L	NV	**34,800**		**34,600**		**35,800**		**37,600**		**59,800**		**58,200**		**51,700**		**51,600**		**37,900**		**40,700**	
	Chromium	µg/L	100	**3.09**	J	**1.09**	J	**1.32**	J	**1**	J	**4.86**	J	**2.14**	J	**2.99**	J	**2.32**	J	**3.33**	J	**2.24**	J
	Cobalt	µg/L	4.7	**1.85**	J	**1.07**	J	0.58	U	0.58	U	0.58	U	0.58	U	0.58	U	0.58	U	0.58	U	0.58	U
	Copper	µg/L	1,300	**8.47**	J	**6.37**	J	**8.17**	J	**7.9**	J	**10.2**		**10.2**		**9.62**	J	**9.35**	J	**7.84**	J	**7.04**	J
	Iron	µg/L	11,000	**167**		12.6	U	**148**		12.6	U	12.6	U	12.6	U	12.6	U	12.6	U	**139**		12.6	U
	Lead	µg/L	15	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	1.96	U
	Magnesium	µg/L	NV	**31,900**		**30,700**		**34,600**		**37,600**		**54,700**		**54,200**		**48,500**		**49,000**		**35,100**		**37,700**	
	Manganese	µg/L	320	**31.6**		**7.1**	J	**24.9**		1.31	U	**20.4**		**16.6**		**4.45**	J	1.31	U	3.28	UB	1.31	U
	Mercury	µg/L	2	0.068	U	0.068	U	**0.06912**	J	**0.09491**	J	0.068	U	0.068	U	**0.0702**	J	**0.07702**	J	0.068	U	0.068	U
	Nickel	µg/L	300	2.8	UB	2.4	UB	1.13	U	1.13	U	**3.97**	J	**3.19**	J	1.13	U	1.13	U	**5.41**	J	**4.86**	J
	Potassium	µg/L	NV	**6,900**		**6,700**		**6,570**		**6,910**		**8,250**		**8,110**		**7,650**		**7,700**		**6,480**		**6,970**	
	Selenium	µg/L	50	**4.69**	J	**5.7**	J	4.42	U	**4.72**	J	**9.93**	J	**7.82**	J	**7.84**	J	**7.14**	J	4.42	U	4.42	U
	Sodium	µg/L	NV	**51,400**		**51,400**		**51,400**		**56,000**		**61,200**		**60,000**		**54,700**		**54,900**		53,700	UB	57,000	UB
	Thallium	µg/L	2	3.04	U	**5.77**	J	3.04	U	**3.51**	J	3.04	U	**3.4**	J	3.04	U	3.04	U	3.04	U	**3.43**	J
	Vanadium	µg/L	NV	**41.3**		**41.4**		**48.4**		**52.2**		**42.4**		**42.7**		**47.6**		**48.9**		**37.7**		**38**	
	Zinc	µg/L	4,700	**1,040**		**939**		**111**		**129**		**335**		**330**		**87.9**		**84.2**		**88.3**		**91**	
Other Parameters	Ammonia as N (SM 4500 NH3)	mg/L	NV	**0.86**	J	NA		0.24	U	NA		0.24	U	NA		0.24	U	NA		0.24	U	NA	
	Chloride (EPA 300.0)	mg/L	NV	**37.9**		NA		**19.7**		NA		**82.7**		NA		**66.4**		NA		48.5	UB	NA	
	Hexavalent Chromium (SW7196A)	ug/L	NV	4	UJ	NA		4	U	NA		4	UJ	NA		4	U	NA		4	U	NA	
	Nitrate (300.0)	mg/L	10	**1.55**		NA		**1.8**		NA		**1.57**		NA		**1.59**		NA		**1.2**		NA	
	Nitrite (300.0)	mg/L	1	**0.01**		NA		0.015	U	NA		0.015	U	NA		0.015	U	NA		0.015	U	NA	
	Perchlorate (SW6860)	mg/L	0.015	**0.00203**		NA		**0.000589**		NA		**0.00247**		NA		**0.0022**		NA		**0.00202**		NA	
	Sulfate as SO_4 (EPA 300.0)	mg/L	NV	**53.7**		NA		**38.5**		NA		**105**		NA		**103**		NA		**98.5**		NA	
	Total Organic Carbon (TOC) (SM5310B)	mg/L	NV	**4.6**		NA		**3.2**		NA		**1.3**		NA		0.3	U	NA		3.3	UB	NA	

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mg/L - milligrams per liter;
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TABLE 4
Summary of Groundwater Analytical Results
LF-03, LF-04, LF-05, and LF-25
Cannon AFB, New Mexico
Bhate Project no.: 9110129

			SAMPLE ID:	LF25-MW-Pa				LF25-MW-Rb			
			DATE SAMPLED:	10/16/12				10/26/12			
			LAB SAMPLE ID:	21210170701				21210270501			
				Total		Dissolved		Total		Dissolved	
	Analyte	Units	Screening Criteria[1]	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q
VOCs SW8260B	Dichlorodifluoromethane	µg/L	190	0.145	U	NA		0.145	U	NA	
	Trichlorofluoromethane	µg/L	1,100	0.157	U	NA		0.157	U	NA	
Total Metals SW6010C/7470A	Aluminum	µg/L	16,000	30.3	U	30.3	U	30.3	U	46.8	UB
	Antimony	µg/L	6	**3.25**	J	3.11	U	3.11	U	3.11	U
	Arsenic	µg/L	10	3.59	U	3.59	U	3.59	U	3.59	U
	Barium	µg/L	2,000	**30.9**		**29.9**		**35.1**		**34.6**	
	Cadmium	µg/L	5	0.79	UB	**0.63**	J	**0.53**	J	**0.38**	J
	Calcium	µg/L	NV	**44,000**		**44,400**		**42,000**	J	**42,200**	J
	Chromium	µg/L	100	**2.06**	J	**1.88**	J	**1.36**	J	**1.32**	J
	Cobalt	µg/L	4.7	1.05	UB	0.85	UB	**0.86**	J	0.58	U
	Copper	µg/L	1,300	**8.68**	J	**7.35**	J	**8.08**	J	**6.83**	J
	Iron	µg/L	11,000	12.6	U	12.6	U	12.6	U	12.6	U
	Lead	µg/L	15	1.96	U	1.96	U	1.96	U	1.96	U
	Magnesium	µg/L	NV	**41,100**		**42,700**		**40,800**	J	**41,000**	
	Manganese	µg/L	320	1.31	U	1.31	U	**1.98**	J	1.31	U
	Mercury	µg/L	2	0.0765	UB	0.08569	UB	0.068	U	0.068	U
	Nickel	µg/L	300	1.13	U	1.13	U	1.13	U	1.13	U
	Potassium	µg/L	NV	**6,890**		**7,080**		**7,070**		**7,290**	
	Selenium	µg/L	50	4.42	U	**9.72**	J	**7.75**	J	**11.2**	J
	Sodium	µg/L	NV	**39,000**		**39,200**		**41,400**		**41,800**	
	Thallium	µg/L	2	**4.89**	J	3.04	U	3.04	U	3.04	U
	Vanadium	µg/L	NV	**34.1**		**24.9**		**30.2**		**26.7**	
	Zinc	µg/L	4,700	4.51	U	4.51	U	**1,380**	J	**1,160**	
Other Parameters	Ammonia as N (SM 4500 NH3)	mg/L	NV	0.24	U	NA		0.24	U	NA	
	Chloride (EPA 300.0)	mg/L	NV	**73**		NA		**68.6**		NA	
	Hexavalent Chromium (SW7196A)	ug/L	NV	4	U	NA		4	UJ	NA	
	Nitrate (300.0)	mg/L	10	**1.37**		NA		**1.02**		NA	
	Nitrite (300.0)	mg/L	1	**0.01**		NA		0.015	U	NA	
	Perchlorate (SW6860)	mg/L	0.015	**0.00217**		NA		**0.00198**		NA	
	Sulfate as SO_4 (EPA 300.0)	mg/L	NV	**117**		NA		**101**		NA	
	Total Organic Carbon (TOC) (SM5310B)	mg/L	NV	**3.2**		NA		**5.2**		NA	

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TABLE 5
Summary of Groundwater Analytical Results
Former Sewage Lagoons
Cannon AFB, New Mexico
Bhate Project no.: 9110129

			SAMPLE ID:	MW-E				MW-F			
			DATE SAMPLED:	10/24/12				10/19/12			
			LAB SAMPLE ID:	21210250301				21210201003			
				Total		Dissolved		Total		Dissolved	
	Analyte	Units	Screening Criteria[1]	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q
VOCs SW8260B	Dichlorodifluoromethane	µg/L	190	0.145	U	NA		0.145	U	NA	
	Trichlorofluoromethane	µg/L	1,100	0.157	U	NA		0.157	U	NA	
Total Metals SW6010C/7470A	Aluminum	µg/L	16,000	43.3	UB	30.3	U	30.3	U	30.3	U
	Antimony	µg/L	6	3.11	U	3.11	U	3.11	U	3.11	U
	Arsenic	µg/L	10	**4.75**	J	**5.55**	J	3.59	U	3.59	U
	Barium	µg/L	2,000	33.9	UB	35.2	UB	**36**		**37.6**	
	Cadmium	µg/L	5	0.61	UB	0.64	UB	0.93	UB	**0.7**	J
	Calcium	µg/L	NV	**48,300**		**51,100**		**44,500**		**46,900**	
	Chromium	µg/L	100	**2.32**	J	1.71	UB	**1.68**	J	**1.05**	J
	Cobalt	µg/L	4.7	0.58	U	0.58	U	**0.61**	J	**1.06**	J
	Copper	µg/L	1,300	**7.53**	J	**7.93**	J	**7.64**	J	**8.62**	J
	Iron	µg/L	11,000	**77.5**	J	12.6	U	**55.6**	J	**25.1**	J
	Lead	µg/L	15	**3.76**	J	1.96	U	1.96	U	1.96	U
	Magnesium	µg/L	NV	**44,400**		**46,700**		**38,200**		**39,700**	
	Manganese	µg/L	320	6.39	UB	3.26	UB	1.31	U	1.31	U
	Mercury	µg/L	2	0.068	U	0.068	U	0.068	U	0.068	U
	Nickel	µg/L	300	1.13	U	1.13	U	1.51	UB	3.55	UB
	Potassium	µg/L	NV	**7,410**		**7,820**		**7,470**		**7,810**	
	Selenium	µg/L	50	**12.8**	J	**11.6**	J	**9.77**	J	**6.24**	J
	Sodium	µg/L	NV	57,900	UB	60,600	UB	**53,800**		**56,600**	
	Thallium	µg/L	2	3.04	U	3.04	U	**3.22**	J	**4.65**	J
	Vanadium	µg/L	NV	**28.1**		**28.4**		**26**		**26.6**	
	Zinc	µg/L	4,700	**276**		**285**		**170**		**254**	
Other Parameters	Ammonia as N (SM 4500 NH3)	mg/L	NV	0.24	U	NA		0.24	U	NA	
	Chloride (EPA 300.0)	mg/L	NV	61.6	UB	NA		**60.3**		NA	
	Hexavalent Chromium (SW7196A)	ug/L	NV	4	UJ	NA		4	U	NA	
	Nitrate (300.0)	mg/L	10	**1.29**		NA		**1.21**		NA	
	Nitrite (300.0)	mg/L	1	0.002	U	NA		0.002	U	NA	
	Perchlorate (SW6860)	mg/L	0.015	**0.00292**		NA		**0.00286**		NA	
	Sulfate as SO_4 (EPA 300.0)	mg/L	NV	**138**		NA		**138**		NA	
	Total Organic Carbon (TOC) (SM5310B)	mg/L	NV	3.1	UB	NA		**2.5**		NA	

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TABLE 5
Summary of Groundwater Analytical Results
Former Sewage Lagoons
Cannon AFB, New Mexico
Bhate Project no.: 9110129

			SAMPLE ID:	MW-G				MW-H			
			DATE SAMPLED:	10/23/12				10/22/12			
			LAB SAMPLE ID:	21210240701				21210230601			
				Total		Dissolved		Total		Dissolved	
	Analyte	Units	Screening Criteria[1]	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q
VOCs SW8260B	Dichlorodifluoromethane	µg/L	190	0.145	U	NA		0.145	U	NA	
	Trichlorofluoromethane	µg/L	1,100	0.157	U	NA		0.157	U	NA	
Total Metals SW6010C/7470A	Aluminum	µg/L	16,000	**32**	J	30.3	U	**34.6**	J	30.3	U
	Antimony	µg/L	6	3.11	U	**3.42**	J	3.11	U	3.11	U
	Arsenic	µg/L	10	3.59	U	3.59	U	3.59	U	3.59	U
	Barium	µg/L	2,000	**30.6**		**29.1**		**38.8**		**31.9**	
	Cadmium	µg/L	5	1.06	UB	**0.71**	J	1.03	UB	**0.68**	J
	Calcium	µg/L	NV	**44,100**		**44,800**		**47,300**		**44,800**	
	Chromium	µg/L	100	**2.23**	J	**1.04**	J	**7.55**	J	**1.06**	J
	Cobalt	µg/L	4.7	1.47	UB	**0.63**	J	**0.77**	J	**0.68**	J
	Copper	µg/L	1,300	**12**		**8.61**	J	**13.6**		**9.24**	J
	Iron	µg/L	11,000	**587**		12.6	U	**651**		12.6	U
	Lead	µg/L	15	1.96	U	1.96	U	1.96	U	1.96	U
	Magnesium	µg/L	NV	**40,900**		**40,900**		**40,300**		**35,500**	
	Manganese	µg/L	320	**16.3**		1.31	U	**12.9**	J	1.31	U
	Mercury	µg/L	2	0.068	U	0.068	U	0.068	U	0.068	U
	Nickel	µg/L	300	4.06	UB	**1.75**	J	**10.4**	J	5.3	UB
	Potassium	µg/L	NV	**7,200**		**7,310**		**7,310**		**6,840**	
	Selenium	µg/L	50	4.42	U	**7.99**	J	**8.63**	J	**7.96**	J
	Sodium	µg/L	NV	**49,900**		**51,000**		**58,300**		**55,400**	
	Thallium	µg/L	2	**3.69**	J	**3.45**	J	3.04	U	**3.06**	J
	Vanadium	µg/L	NV	**28.6**		**26.2**		**29.1**		**26.5**	
	Zinc	µg/L	4,700	**175**		**161**		**217**		**128**	
Other Parameters	Ammonia as N (SM 4500 NH3)	mg/L	NV	0.24	U	NA		0.24	U	NA	
	Chloride (EPA 300.0)	mg/L	NV	**69.7**		NA		**71.3**		NA	
	Hexavalent Chromium (SW7196A)	ug/L	NV	4	U	NA		4	UJ	NA	
	Nitrate (300.0)	mg/L	10	**1.02**		NA		**1.33**		NA	
	Nitrite (300.0)	mg/L	1	**0.007**	J	NA		0.01	UB	NA	
	Perchlorate (SW6860)	mg/L	0.015	**0.00248**		NA		**0.00285**		NA	
	Sulfate as SO_4 (EPA 300.0)	mg/L	NV	**132**		NA		**2,720**		NA	
	Total Organic Carbon (TOC) (SM5310B)	mg/L	NV	**1.8**	J	NA		**3.4**		NA	

[1]Screening criteria based on the US Environmental Protection Agency (USEPA)Maximum Contaminant Limit (MCL) or Regional Screening Levels for Tapwater(November 2012)

NOTES:
NA - not applicable,
NV - no MCL or RSL value available,
Q - validation qualifier,
SM - Standard Methods
µg/L - micrograms per liter,
mg/L - milligrams per liter;
Detections are bolded.
Detections above the screening criteria are bolded and shaded

QUALIFIERS:
U - analyte was analyzed for but not detected at or above the adjusted method detection limit (MDL)
UJ - analyte not detected, reported MDL may be inaccurate or imprecise due to quality assurance (QA) issue
J - analyte detected, estimated concentration
UB - analyte also found in associated laboratory or field blank, probable blank contaminant

TABLE 6
Summary of Groundwater Analytical Results
Background Wells
Cannon AFB, New Mexico
Bhate Project no.: 9110129

			SAMPLE ID:	MW-V				MW-X			
			DATE SAMPLED:	10/25/12				10/24/12			
			LAB SAMPLE ID:	21210260701				21210250303			
				Total		Dissolved		Total		Dissolved	
	Analyte	Units	Screening Criteria[1]	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q
VOCs SW8260B	Dichlorodifluoromethane	µg/L	190	0.145	U	NA		0.145	U	NA	
	Trichlorofluoromethane	µg/L	1,100	0.157	U	NA		0.157	U	NA	
Total Metals SW6010C/7470A	Aluminum	µg/L	16,000	30.3	U	35.8	UB	114	UB	38.7	UB
	Antimony	µg/L	6	3.11	U	3.11	U	3.11	U	3.11	U
	Arsenic	µg/L	10	3.59	U	**5.52**	J	**8.84**	J	**11.4**	
	Barium	µg/L	2,000	20.3	UB	19.8	UB	**62.4**		**62.9**	
	Cadmium	µg/L	5	0.46	UB	**0.41**	J	0.62	UB	0.63	UB
	Calcium	µg/L	NV	**96,400**		**94,100**		**27,900**	J	**29,200**	
	Chromium	µg/L	100	**1.26**	J	**1.28**	J	**1.64**	J	1.39	UB
	Cobalt	µg/L	4.7	0.58	U	0.58	U	0.58	U	0.58	U
	Copper	µg/L	1,300	**9.97**	J	**9.69**	J	**8.62**	J	6.52	UB
	Iron	µg/L	11,000	12.6	U	12.6	U	**58.3**	J	12.6	U
	Lead	µg/L	15	1.96	U	1.96	U	1.96	U	1.96	U
	Magnesium	µg/L	NV	**81,000**		**79,100**		**23,100**	J	**25,200**	
	Manganese	µg/L	320	1.31	U	1.31	U	4.15	UB	1.31	U
	Mercury	µg/L	2	0.068	U	0.068	U	0.068	U	0.068	U
	Nickel	µg/L	300	1.13	U	1.13	U	1.13	U	1.13	U
	Potassium	µg/L	NV	**9,790**		**9,470**		**5,700**		**6,100**	
	Selenium	µg/L	50	**24.1**	J	**24.3**	J	**7.89**	J	**7.34**	J
	Sodium	µg/L	NV	84,600	UB	81,200	UB	44,200	UB	46,900	UB
	Thallium	µg/L	2	3.04	U	3.04	U	3.04	U	3.04	U
	Vanadium	µg/L	NV	**34.4**		**33**		**53.3**		**59.9**	
	Zinc	µg/L	4,700	**529**		**549**		**221**		**248**	
Other Parameters	Ammonia as N (SM 4500 NH3)	mg/L	NV	0.24	U	NA		0.24	U	NA	
	Chloride (EPA 300.0)	mg/L	NV	**192**		NA		24.7	UB	NA	
	Hexavalent Chromium (SW7196A)	ug/L	NV	4	UJ	NA		4	U	NA	
	Nitrate (300.0)	mg/L	10	**8.35**		NA		**1.39**		NA	
	Nitrite (300.0)	mg/L	1	0.03	U	NA		0.007	UB	NA	
	Perchlorate (SW6860)	mg/L	0.015	**0.00682**		NA		**0.00151**		NA	
	Sulfate as SO_4 (EPA 300.0)	mg/L	NV	**261**		NA		**43.9**		NA	
	Total Organic Carbon (TOC) (SM5310B)	mg/L	NV	4.8	UB	NA		2	UB	NA	

[1]Screening criteria based on the US Environmental Protection Agency (USEPA)Maximum Contaminant Limit (MCL) or Regional Screening Levels for Tapwater(November 2012)

NOTES:
NA - not applicable,
NV - no MCL or RSL value available,
Q - validation qualifier,
SM - Standard Methods
µg/L - micrograms per liter,
mg/L - milligrams per liter;
Detections are bolded.
Detections above the screening criteria are bolded and shaded

QUALIFIERS:
U - analyte was analyzed for but not detected at or above the adjusted method detection limit (MDL)
UJ - analyte not detected, reported MDL may be inaccurate or imprecise due to quality assurance (QA) issue
J - analyte detected, estimated concentration
UB - analyte also found in associated laboratory or field blank, probable blank contaminant

APPENDICES

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APPENDIX A

ANNUAL LANDFILL COVER INSPECTION REPORTS

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2011 ANNUAL LANDFILL COVER INSPECTION REPORTS

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Cover System Inspection Report
Sewage Lagoon (South Area) (SWMU 101)
Cannon Air Force Base, Curry County, New Mexico

Inspector Name and Title: Jonathan Kramer / Ben Stewart
Date: 10-2-11
Days since last rain fall: 17
Amount of rainfall: 9-15-11 0.51 in
(Contact Base Weather Service)

Inspection Type	Check as Appropriate
Annual	✓
Other (Identify)	

	Sewage Lagoons	
1. Fences and Gates:	Yes	No
• Structural integrity?	✓	
• Gates locks in place?	✓	
• Signage in place?	✓	
• Tumbleweeds and silt built up?		✓

Problems observed with the fences/gates/signage:
None

Maintenance or repairs required:
None

Maintenance to be performed by (Subcontractor name and date):
None

	Sewage Lagoons	
2. Cover:	Yes	No
• Overall structural integrity maintained?	✓	
• Surface erosion present?		✓
• Gullies/washouts or areas of subsidence present?		✓
• Exposed buried waste?		✓
• As-constructed contours (topographic highs) intact?	✓	
• As-constructed contours (depressions) intact?	✓	
• Stormwater runoff contained within boundaries of site? (As designed)*		✓
• Evidence of drainage pathways/diverted runoff? (As designed)*	✓	
• Tumbleweeds or silt built up?		✓

Problems observed with the cover:
None

Maintenance or repair required:
None

* Site is designed for runoff to flow toward perimeter and offsite to the south adjacent to MW-4

Maintenance to be performed by (Subcontractor name and date):
None

	Sewage Lagoons	
3. Berms (Indicate NA if not present):	Yes	No
• Is any erosion present?	NA	
• Is any ponding present?	NA	
• Stormwater runoff contained onsite?	NA	

Describe location and condition:
NA
Problems observed with berms:
NA
Maintenance or repairs required:
NA
Maintenance to be performed by (Subcontractor name and date):

	Sewage Lagoons	
4. Drainage Ditches/Channels (Indicate NA if no channels are present):	Yes	No
• Is any erosion present?		✓
• Is buildup of sediment/silt debris present?		✓
• Is displaced crushed concrete present?		✓
• Is stormwater runoff contained onsite?		✓
• Excess accumulation of tumbleweeds present?		✓

Describe location and condition:
see footnote on previous page
Problems observed with channels:
No
Maintenance or repair required:
None
Maintenance to be performed by (Subcontractor name and date):
None

	Sewage Lagoons	
5. Vegetation:	Yes	No
• Vegetation native perennial? Annuals & perennials	✓	
• Vegetation in good condition?	✓	
• Bare/sparse areas? minimal / de minimus		✓

Describe overall condition: mature coverage / some small bushes trees
Estimate extent and type of vegetative cover: No change from last year 95% total coverage
Maintenance or repairs required: 80% annual / 20% perennials None
Maintenance to be performed by (Subcontractor name and date):

	Sewage Lagoons	
6. Monitoring Wells:	Yes	No
• Evidence of tampering?		✓
• Damage?		✓

Problems observed with the wells.

None

7. Changes required to the Monitoring and Maintenance Plan?

None

Jonathan Kramer

Inspector's Name

Inspector's Signature

10-2-2011

Date

Cover System Inspection Report

~~Landfill 3 (SWMU 105)~~ LF-05

Cannon Air Force Base, Curry County, New Mexico

Inspector Name and Title: Jonathan Kramer / Ben Stewart

Date: 10-2-11

Days since last rain fall: 17

Amount of rainfall: 0.51"

(Contact Base Weather Service)

Inspection Type	Check as Appropriate
Annual	X
Other (identify)	

	LF-03	
1. Cover:	Yes	No
• Overall structural integrity maintained?	X	
• Surface erosion present?		X
• Gullies/washouts or areas of subsidence present?		X
• Exposed buried waste?		X
• As-constructed contours (topographic highs) intact?	X	
• As-constructed contours (depressions) intact?	NA	
• Stormwater runoff contained within boundaries of site?		X
• Evidence of drainage pathways/diverted runoff?		X
• Tumbleweeds or silt built up?		X

Describe overall condition: Landfill consists of two parts. Majority of LF is graded cover small portion is capped w/ gas vents All in good condition.

Problems observed with the cover:

NO

Maintenance or repairs required:

NO

Maintenance to be performed by (Subcontractor name and date):

NO

	LF-03	
2. Vegetation:	Yes	No
• Vegetation native perennial? and annual	X	
• Vegetation in good condition?	X	
• Bare/sparse areas?		X

Describe overall condition: Good cover

Estimate extent and type of vegetative cover:

95%

Maintenance or repairs required:
NO
Maintenance to be performed by (Subcontractor name and date):
NO

	LF-03	
3. Berms (Indicate NA if no berms are present):	Yes	No
• Is any erosion present?	N	A
• Is any ponding present?	N	A
• Stormwater runoff contained onsite?	N	A

Describe location and condition:
NA
Problems observed with berms:
NA
Maintenance or repairs required:
NA
Maintenance to be performed by (Subcontractor name and date):
NA

	LF-03	
4. Drainage Ditches/Channels (Indicate NA if no channels are present):	Yes	No
• Is any erosion present?	N	A
• Is buildup of sediment/silt debris present?	N	A
• Stormwater runoff contained onsite?	N	A
• Excess accumulation of tumbleweeds present?	N	A

Describe location and condition:
NA
Problems observed with channels:
NA
Maintenance or repair required:
NA
Maintenance to be performed by (Subcontractor name and date):
NA

	LF-03	
5. Monitoring Wells:	Yes	No
• Evidence of tampering?		X
• Damage?		X

Problems observed with wells:

NONE

	LF-03	
6. Fences/Gates/Signage (Indicate NA if not present):	Yes	No
• Structural integrity?	X	
• Gate locks in place?	X	
• Signage in place? Signage faded	X	
• Tumbleweeds or silt built up?		

Problems observed with fencing/gates/signage:

Signage Needs replacing

Maintenance or repair required:

signage

Maintenance to be performed by (Subcontractor name and date):

signage

7. Changes required to the Monitoring and Maintenance Plan?

NO

Jonathan Kramer

Inspector's Name

Inspector's Signature

10-2-11

Date

Cover System Inspection Report

Landfill 3 (SWMU 105)

Cannon Air Force Base, Curry County, New Mexico

Inspector Name and Title: Jonathan Kramer / Ben Stewart

Date: 10-2-11

Days since last rain fall: 17

Amount of rainfall: 0.5"

(Contact Base Weather Service)

Inspection Type	Check as Appropriate
Annual	✓
Other (identify)	

	LF-03	
1. Cover:	Yes	No
• Overall structural integrity maintained?	✓	
• Surface erosion present?		✓
• Gullies/washouts or areas of subsidence present? SUBSIDENCE = historical	✓	
• Exposed buried waste?		✓
• As-~~constructed~~ contours (topographic highs) intact? } Not constructed	✓	
• As-~~constructed~~ contours (depressions) intact? } graded	✓	
• Stormwater runoff contained within boundaries of site?	✓	
• Evidence of drainage pathways/diverted runoff?		✓
• Tumbleweeds or silt built up?		✓

Describe overall condition: Good, no erosion, subsidence is stable and same as all previous inspections

Problems observed with the cover:

None

Maintenance or repairs required:

None

Maintenance to be performed by (Subcontractor name and date):

None

	LF-03	
2. Vegetation:	Yes	No
• Vegetation native perennial? perennial + annuals	✓	✓
• Vegetation in good condition?	✓	
• Bare/sparse areas?	✓	

Describe overall condition:

good cover. Very dry from min. rain

Estimate extent and type of vegetative cover:

80%-90% total cover

Maintenance or repairs required:
NONE
Maintenance to be performed by (Subcontractor name and date):
NONE

	LF-03	
3. Berms (Indicate NA if no berms are present):	Yes	No
• Is any erosion present?		✓
• Is any ponding present?		✓
• Stormwater runoff contained onsite?	✓	

Describe location and condition:
No berms assoc. w/site
Problems observed with berms:
NA
Maintenance or repairs required:
NA
Maintenance to be performed by (Subcontractor name and date):
NA

	LF-03	
4. Drainage Ditches/Channels (Indicate NA if no channels are present):	Yes	No
• Is any erosion present?		✓
• Is buildup of sediment/silt debris present?		✓
• Stormwater runoff contained onsite?	✓	
• Excess accumulation of tumbleweeds present?		✓

Describe location and condition:
None present NA
Problems observed with channels:
NA
Maintenance or repair required:
NA
Maintenance to be performed by (Subcontractor name and date):
NA

	LF-03	
5. Monitoring Wells:	Yes	No
• Evidence of tampering?		✓
• Damage?		✓

Problems observed with wells:

NONE

	LF-03	
6. Fences/Gates/Signage (Indicate NA if not present):	Yes	No
• Structural integrity?	NA	
• Gate locks in place?	NA	
• Signage in place?	NA	
• Tumbleweeds or silt built up?	NA	

Problems observed with fencing/gates/signage:

NA

Maintenance or repair required:

NA

Maintenance to be performed by (Subcontractor name and date):

NA

7. Changes required to the Monitoring and Maintenance Plan?

NONE

Jonathan Kramer

Inspector's Name

Inspector's Signature

10-2-11

Date

Cover System Inspection Report

Landfill 4 (SWMU 104)

Cannon Air Force Base, Curry County, New Mexico

Inspector Name and Title: Jonathan Kramer, Ben Stewart

Date: 10-2-11

Days since last rain fall: 17

Amount of rainfall: 0.5"

(Contact Base Weather Service)

Inspection Type	Check as Appropriate
Annual	X
Other (identify)	

	LF-04	
1. Cover:	Yes	No
• Overall structural integrity maintained?	✓	
• Surface erosion present?		✓
• Gullies/washouts or areas of subsidence present? subsidence = historical	✓	
• Exposed buried waste?		✓
• As-~~constructed~~ contours (topographic highs) intact? graded	✓	
• As-~~constructed~~ contours (depressions) intact?	✓	
• Stormwater runoff contained within boundaries of site?	✓	
• Evidence of drainage pathways/diverted runoff?		✓
• Tumbleweeds or silt built up?		✓

Describe overall condition:

Good, no erosion, subsidence stable and same

Problems observed with the cover: as previous inspections

None - cover good/stable

Maintenance or repairs required:

None

Maintenance to be performed by (Subcontractor name and date):

NONE

	LF-04	
2. Vegetation:	Yes	No
• Vegetation native perennial? perennial + annuals	✓	
• Vegetation in good condition?	✓	
• Bare/sparse areas?	✓	

Describe overall condition:

good cover, very dry from min. rain

Estimate extent and type of vegetative cover:

90-95%

Maintenance or repairs required:
NONE
Maintenance to be performed by (Subcontractor name and date):
NONE

	LF-04	
3. Berms (Indicate NA if no berms are present):	Yes	No
• Is any erosion present?		✓
• Is any ponding present?		✓
• Stormwater runoff contained onsite?	✓	

Describe location and condition:
Berms in good condition (N, E, W)
Problems observed with berms:
NONE
Maintenance or repairs required:
NONE
Maintenance to be performed by (Subcontractor name and date):
NONE

	LF-04	
4. Drainage Ditches/Channels (Indicate NA if no channels are present):	Yes	No
• Is any erosion present?	NA	
• Is buildup of sediment/silt debris present?	NA	
• Stormwater runoff contained onsite?	NA	
• Excess accumulation of tumbleweeds present?	NA	

Describe location and condition:
NA
Problems observed with channels:
NA
Maintenance or repair required:
NA
Maintenance to be performed by (Subcontractor name and date):
NA

	LF-04	
5. Monitoring Wells:	Yes	No
• Evidence of tampering?		✓
• Damage?		✓

Problems observed with wells:

NONE

	LF-04	
6. Fences/Gates/Signage (Indicate NA if not present):	Yes	No
• Structural integrity?	NA	
• Gate locks in place?	NA	
• Signage in place?	NA	
• Tumbleweeds or silt built up?	NA	

Problems observed with fencing/gates/signage:

NA

Maintenance or repair required:

NA

Maintenance to be performed by (Subcontractor name and date):

NA

7. Changes required to the Monitoring and Maintenance Plan?

NONE

Jonathan Kramer

Inspector's Name

Inspector's Signature

10-2-11

Date

Cover System Inspection Report
Landfill 25 (SWMU 97)
Cannon Air Force Base, Curry County, New Mexico

Inspector Name and Title: Ben Stewart, Jonathan Kroner Date: 10-2-11
Days since last rain fall: 17 Amount of rainfall: .51
(Contact Base Weather Service)

Inspection Type	Check as Appropriate
Annual	✓
Other (Identify)	

	LF-25	
1. Fences and Gates:	Yes	No
• Structural integrity?	✓	
• Gates locks in place?	✓	
• Signage in place?	✓	
• Tumbleweeds and silt built up?		✓

Problems observed with the fences/gates/signage:

None

Maintenance or repairs required:

None

Maintenance to be performed by (Subcontractor name and date):

None

	LF-25	
2. Cover:	Yes	No
• Overall structural integrity maintained?	✓	
• Surface erosion present? Very minor	✓	
• Gullies/washouts or areas of subsidence present?		✓
• Exposed buried waste? Minor amount of concrete visible		✓
• As-constructed contours (topographic highs) intact?	✓	
• As-constructed contours (depressions) intact?	✓	
• Stormwater runoff contained within boundaries of site?	✓	
• Evidence of drainage pathways/diverted runoff?		✓
• Tumbleweeds or silt built up?		✓

Problems observed with the cover:

None

Maintenance or repair required:

None

Maintenance to be performed by (Subcontractor name and date):

None

Z TD
151.05 183.3

	LF-25	
3. Berms (Indicate NA if not present):	Yes	No
• Is any erosion present?		✓
• Is any ponding present? (as designed)	✓	
• Stormwater runoff contained onsite?	✓	

Describe location and condition:

The berm along the east side remains in good condition.

Problems observed with berms:

None

Maintenance or repairs required:

None

Maintenance to be performed by (Subcontractor name and date):

None

	LF-25	
4. Rip-Rap (Indicate NA if not present):	Yes	No
• Is any erosion present?		✓
• Is buildup of sediment/silt debris present?		✓
• Is displaced concrete present?		✓
• Excess accumulation of tumble weeds present?		✓

Describe location and condition:

Location at north end in good condition.

Problems observed with rip-rap:

None

Maintenance or repairs required:

None

Maintenance to be performed by (Subcontractor name and date):

None

	LF-25	
5. Drainage Ditches/Channels (Indicate NA if no channels are present):	Yes	No
• Is any erosion present?	N	A
• Is buildup of sediment/silt debris present?	N	A
• Is displaced crushed concrete present?	N	A
• Is stormwater runoff contained onsite?	N	A
• Excess accumulation of tumbleweeds present?	N	A

Describe location and condition:

NA

Problems observed with channels:

NA

Maintenance or repair required:

None

Maintenance to be performed by (Subcontractor name and date):

None

	LF-25	
6. Vegetation:	Yes	No
• Vegetation native perennial?	✓	✓
• Vegetation in good condition?	✓	
• Bare/sparse areas?	✓	

Describe overall condition:

Due to lack of rain, some areas lack vegetation.

Estimate extent and type of vegetative cover:

30-60% cover, grass varieties

Maintenance or repairs required:

None

Maintenance to be performed by (Subcontractor name and date):

None

	LF-25	
7. Monitoring Wells:	Yes	No
• Evidence of tampering?		✓
• Damage?		✓

Problems observed with the wells.

None

8. Changes required to the Monitoring and Maintenance Plan?

None

Ben Stewart
Inspector's Name

Ben Stewart
Inspector's Signature

10-2-11
Date

2012 ANNUAL LANDFILL COVER INSPECTION REPORTS

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Cover System Inspection Report
Landfill-03 and Landfill-04
Cannon Air Force Base, Curry County, New Mexico

Inspector Name and Title: Ben Stewart Geologist
Date: 10/15/12
Days since last rain fall: 3
Amount of rainfall: 0.01 in
(Contact Base Weather Service)

Inspection Type	Check as Appropriate
Annual	✓
Other (identify)	

	LF-03		LF-04	
1. Cover:	Yes	No	Yes	No
• Overall structural integrity maintained?	✓		✓	✓
• Surface erosion present?		✓		✓
• Gullies/washouts present?		✓		✓
• Exposed buried waste?		✓		✓
• As-constructed contours (topographic highs) intact?	✓		✓	
• As-constructed contours (depressions) intact?	✓		✓	
• Stormwater runoff contained within boundaries of site?	✓		✓	
• Evidence of drainage pathways/diverted runoff?	✓		✓	
• Tumbleweeds or silt built up?		✓		✓

Describe overall condition: Good condition at LF-03 & LF-04. New cover installed on both LF-03 & LF-04 in May 2012.

Problems observed with the cover:

None

Maintenance or repairs required:

None

Maintenance to be performed by (Subcontractor name and date):

None

	LF-03		LF-04	
2. Vegetation:	Yes	No	Yes	No
• Vegetation native perennial?		✓		✓
• Vegetation in good condition?		✓		✓
• Bare/sparse areas?	✓		✓	

Describe overall condition:

No vegetation, cover is new.

Estimate extent and type of vegetative cover:

No vegetation, cover is new.

Maintenance or repairs required:

None

Maintenance to be performed by (Subcontractor name and date):

None

	LF-03		LF-04	
3. Berms (Indicate NA if no berms are present)	Yes	No	Yes	No
• Is any erosion present?				
• Is any ponding present?		NA		NA
• Stormwater runoff contained onsite?				

Describe location and condition:

NA

Problems observed with berms:

NA

Maintenance or repairs required:

NA

Maintenance to be performed by (Subcontractor name and date):

NA

	LF-3		LF-4	
4. Drainage Ditches/Channels (Indicate NA if no channels are present)	Yes	No	Yes	No
• Is any erosion present?		✓		✓
• Is buildup of sediment/silt debris present?		✓		✓
• Stormwater runoff contained onsite?	✓			✓
• Excess accumulation of tumbleweeds present?		✓		✓

Describe location and condition:

Stormwater channeled to Playa Lake.

Problems observed with channels:

None

Maintenance or repair required:

None

Maintenance to be performed by (Subcontractor name and date):

None

	LF-3		LF-4	
5. Monitoring Wells	Yes	No	Yes	No
• Evidence of tampering?		✓		✓
• Damage?		✓		✓

Problems observed with wells:

None

	LF-3		LF-4	
6. Fences/Gates/Signage (Indicate NA if not present)	Yes	No	Yes	No
• Structural integrity?				
• Gate locks in place?				
• Signage in place?				
• Tumbleweeds or silt built up?		NA		NA

Problems observed with fencing/gates/signage:

NA

Maintenance or repair required:

NA

Maintenance to be performed by (Subcontractor name and date):

NA

11. Changes required to the Monitoring and Maintenance Plan?

None

Ben Stewart
Inspector's Name

Inspector's Signature

10-15-12
Date

Cover System Inspection Report Landfill-05
Cannon Air Force Base, Curry County, New Mexico

Inspector Name and Title: Ben Stewart Geologist
Date: 10/15/12
Days since last rain fall: 3
Amount of rainfall: 0.01 in
(Contact Base Weather Service)

Inspection Type	Check as Appropriate
Annual	✓
Other (Identify)	

	LF-05	
1. Fences and Gates:	Yes	No
• Structural integrity?	✓	
• Gates locks in place?	✓	
• Signage in place?	✓	
• Tumbleweeds and silt built up?		✓

Problems observed with the fences/gates/signage: Signage is faded & the contact information is incorrect.

Maintenance or repairs required: Update signage

Maintenance to be performed by (Subcontractor name and date):
NA

	LF-05	
2. Cover:	Yes	No
• Overall structural integrity maintained?	✓	
• Surface erosion present?		✓
• Gullies/washouts present?		✓
• Exposed buried waste?		✓
• As-constructed contours (topographic highs) intact?	✓	
• As-constructed contours (depressions) intact?	N/A	
• Stormwater runoff contained within boundaries of site?		✓
• Evidence of drainage pathways/diverted runoff?		✓
• Tumbleweeds or silt built up?		✓

Problems observed with the cover: None. Landfill divided into two parts. Majority of the landfill is graded cover. Small, fenced in portion of landfill is capped & has gas vents.

Maintenance or repair required:
No

Maintenance to be performed by (Subcontractor name and date): NA

	LF-05	
3. Berms (Indicate NA if not present)	Yes	No
• Is any erosion present?		
• Is any ponding present?		
• Stormwater runoff contained onsite?		NA

Describe location and condition: NA
Problems observed with berms: NA
Maintenance or repairs required: NA
Maintenance to be performed by (Subcontractor name and date): NA

	LF-05	
4. Drainage Ditches/Channels (Indicate NA if no channels are present)	Yes	No
• Is any erosion present?		
• Is buildup of sediment/silt debris present?		
• Is displaced crushed concrete present?		
• Is stormwater runoff contained onsite?		
• Excess accumulation of tumbleweeds present?		NA

Describe location and condition: NA
Problems observed with channels: NA
Maintenance or repair required: NA
Maintenance to be performed by (Subcontractor name and date): NA

	LF-05	
5. Vegetation	Yes	No
• Vegetation native perennial?	✓	
• Vegetation in good condition?	✓	
• Bare/sparse areas?		✓

Describe overall condition: Good Cover
Estimate extent and type of vegetative cover: 90%
Maintenance or repairs required: None
Maintenance to be performed by (Subcontractor name and date): NA

	LF-05	
6. Monitoring Wells	Yes	No
Evidence of tampering?		✓
Damage?		✓

Problems observed with the wells. None
11. Changes required to the Monitoring and Maintenance Plan? None

Ben Stewart
Inspector's Name

Inspector's Signature

10/15/12
Date

Cover System Inspection Report Landfill-25 and Sewage Lagoon (South Area) Cannon Air Force Base, Curry County, New Mexico

Inspector Name and Title: Ben Stewart, Geologist
Date: 10/15/12
Days since last rain fall: 3
Amount of rainfall: 0.01 in
(Contact Base Weather Service)

Inspection Type	Check as Appropriate
Annual	✓
Other (Identify)	

	LF-25		Sewage Lagoon	
1. Fences and Gates:	Yes	No	Yes	No
• Structural integrity?	✓		✓	
• Gates locks in place?	✓		✓	
• Signage in place? update contact info	✓		✓	
• Tumbleweeds and silt built up?		✓		✓

Problems observed with the fences/gates/signage: The contact info on the signage is incorrect.

Maintenance or repairs required:

None

Maintenance to be performed by (Subcontractor name and date):

None

	LF-25		Sewage Lagoons	
2. Cover:	Yes	No	Yes	No
• Overall structural integrity maintained?	✓		✓	
• Surface erosion present? very minor (LF-25), no off-site diversion		✓		✓
• Gullies/washouts present?		✓		✓
• Exposed buried waste? Minor amount of concrete + gravel (LF-25)		✓		✓
• As-constructed contours (topographic highs) intact?	✓		✓	
• As-constructed contours (depressions) intact?	✓		✓	
• Stormwater runoff contained within boundaries of site? as designed	✓			✓
• Evidence of drainage pathways/diverted runoff?		✓	✓	
• Tumbleweeds or silt built up?		✓		✓

Problems observed with the cover: None. Site is designed for runoff to flow toward perimeter

Maintenance or repair required: None, dry in comparison to last inspection

Maintenance to be performed by (Subcontractor name and date):

None

	LF-25		Sewage Lagoons	
3. Berms (Indicate NA if not present)	Yes	No	Yes	No
• Is any erosion present?		✓	NA	
• Is any ponding present?		✓	NA	
• Stormwater runoff contained onsite?	✓		NA	

Describe location and condition: The berm at LF-25 is along the east side and remains in great condition.

Problems observed with berms: None

Maintenance or repairs required: None

Maintenance to be performed by (Subcontractor name and date): None

	LF-25		Sewage Lagoons	
4. Drainage Ditches/Channels (Indicate NA if no channels are present)	Yes	No	Yes	No
• Is any erosion present?	NA			✓
• Is buildup of sediment/silt debris present?	NA			✓
• Is displaced crushed concrete present?	NA			✓
• Is stormwater runoff contained onsite?	NA			✓
• Excess accumulation of tumbleweeds present?	NA			✓

Describe location and condition:

None

Problems observed with channels:

None

Maintenance or repair required:

None

Maintenance to be performed by (Subcontractor name and date):

None

	LF-25		Sewage Lagoons	
5. Vegetation	Yes	No	Yes	No
• Vegetation native perennial?	✓			✓
• Vegetation in good condition?	✓		✓	
• Bare/sparse areas?	✓			✓

Describe overall condition: Sewage Lagoon: Mature coverage
LF-25- No noticible change. Northern half contains trees and grass varieties
Southern half is a combination of annuals + perennials

Estimate extent and type of vegetative cover: Sewage Lagoon: 90% total coverage, 20% perennials
80% annuals. LF-25: 60-70% coverage, many grass varieties

Maintenance or repairs required:

None

Maintenance to be performed by (Subcontractor name and date):

None

	LF-25		Sewage Lagoon	
6. Monitoring Wells	Yes	No	Yes	No
Evidence of tampering?		✓		✓
Damage?		✓		✓

Problems observed with the wells.

None

11. Changes required to the Monitoring and Maintenance Plan?

None

Ben Stewart
Inspector's Name

Inspector's Signature

10/15/12
Date

APPENDIX B

PHOTOGRAPHIC RECORD OF LANDFILL COVER INSPECTIONS

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2011 PHOTOGRAPHIC RECORD OF

LANDFILL COVER INSPECTIONS

Site Photographs

Photo #23
LF-03—Typical photograph of landfill. Ground cover is generally very good. View is to the west.

Photo #24
LE-03—Photograph of MW-Oa near southeast corner of LF-03. The view is to the south-southwest.

Photo #25
LF-03—View is to the southwest. Note the minor subsidence in the background. The subsidence is stable and appears to be historic. Ongoing subsidence has not been noted during the previous four years of inspections conducted by Trinity.

Photo #26
LF-03—Minor bare spot. Ground cover is generally very good and does not currently require maintenance.

Photo #27
LF-03—View is to the southwest. Note the minor subsidence in the background. The subsidence is stable and appears to be historic. Ongoing subsidence has not been noted during the previous four years of inspections conducted by Trinity.

Photo #28
LF-04—Typical photograph of landfill. Ground cover is generally very good. Shallow subsidence is visible in the center of the photograph. View is to the south. Ongoing subsidence has not been noted during the previous four years of inspections.

Site Photographs

Photo #29
LF-04—Typical photograph of landfill. Ground cover is generally very good. View is to the southeast. Shallow subsidence is visible in the background. Ongoing subsidence has not been noted during the previous four years of inspections.

Photo #30
LF-04—Typical photograph of landfill. View is to the north. Ground cover is typically very good.

Photo #31
LF-04—Typical photograph of landfill. Ground cover is generally very good. Shallow subsidence is visible in the center of the photograph. View is to the north. Ongoing subsidence has not been noted during the previous four years of inspections.

Photo #32
LF-04—Minor bare spot. Ground cover is generally very good and does not currently require maintenance.

Photo #33
LF-04—Animal burrow. There appears to be a higher density of animal burrows at LF-04 when compared to other landfills. The burrows are commonly found in the bottom of shallow subsidence features.

Photo #34
LF-25—Photograph taken immediately inside gated entrance to LF-25. View is towards the west. Monitoring well MW-D is visible in the background.

Site Photographs

Photo #35
LF-05—Photograph taken immediately inside gated entrance to LF-05. View is towards the east. Monitoring well MW-C is visible in the background.

Photo #36
LF-05—Photograph taken immediately inside gated entrance to LF-05. View is towards the north.

Photo #37
LF-05—Typical photograph of landfill. Ground cover is generally very good. View is to the north. Shallow subsidence is not evident at LF-05.

Photo #38
LF-05—The site is enclosed by barb wire fencing. The portion of the landfill that has an engineered cap and gas vents is located near the center of LF-05 and is enclosed again by barb wire and chain link fencing. Photograph of interior fencing. View is to the south.

Photo #39
LF-05—Photograph of interior fencing surrounding capped portion of landfill. Fencing is in good condition; however, signage needs replacing.

Photo #40
LF-05—photograph of portion of LF-05 that has an engineered cap and gas vents. Note the increased elevation. Cover is good with no observed subsidence. The view is to th southeast.

Site Photographs

Photo #41
LF-05—Typical gas vent.

Photo #42
LF-25—Photograph of center portion of the landfill immediately inside gated entrance. View is to the north. On portions of LF-25, particularly near the center of the site ground cover is more sparse. However, cover is stable and in no need of maintenance.

Photo #43
LF-25—Photograph of center portion of the landfill immediately inside gated entrance. View is to the south. No subsidence is apparent at LF-25.

Photo #44
LF-25—Photograph of center portion of the landfill immediately inside gated entrance. View is to the east.

Photo #45
LF-25—Photograph of northern portion of the landfill. View is to the north from the highest point of LF-25. Ground cover is good. No subsidence is apparent at LF-25.

Photo #46
LF-25—Animal burrow.

Site Photographs

Photo #47
LF-25—Photograph of northern portion of the landfill. Ground cover is good. No subsidence is apparent at LF-25.

Photo #48
LF-25—Photograph of the northern most portion of LF-25. Rip-rap prevents erosion due to runoff.

Photo #49
LF-25—Photograph of the storm water berm along the eastern boundary of the landfill. The view is to the south. The berm is in good condition and in no need of maintenance.

Photo #50
LF-25—Photograph of the storm water berm along the eastern boundary of the landfill. The view is to the north. The berm is in good condition and in no need of maintenance.

Photo #51
LF-25—Photograph of southern portions of the landfill. Ground cover on southern portions of the landfill is good. No maintenance is necessary.

Photo #52
LF-25—Fencing and signage at the landfill are in good condition. However, all phone numbers are incorrect. Cannon AFB, Civil Engineering is scheduled to replace all signage at all landfills.

Site Photographs

Photo #53
SWMU-101—Photograph taken immediately inside gated entrance to SWMU-101. View is towards the west. Monitoring well MW-H is visible in the background. Ground cover is very good

Photo #54
SWMU-101—Photograph taken immediately inside gated entrance to SWMU-101. View is towards the north. Monitoring well MW-G is visible in the background. Ground cover is very good.

Photo #55
SWMU-101—Photograph taken in the northeast corner of SWMU -101. View is towards the west.

Photo #56
SWMU-101—Photograph taken in the northeast corner of SWMU -101. View is towards the southwest towards the center of the landfill.

Photo #57
SWMU-101—Minor bare spot. Ground cover is generally very good and does not currently require maintenance.

Photo #58
SWMU-101—Fencing and signage at the landfill are in good condition. However, all phone numbers are incorrect. Cannon AFB, Civil Engineering is scheduled to replace all signage at all landfills.

2012 PHOTOGRAPHIC RECORD OF

LANDFILL COVER INSPECTIONS

Site Photographs

Photograph #1
LF-03—Photograph of landfill. A new cover system was installed in May of 2012. The photograph was taken facing north-northeast.

Photograph #2
LF-03—Due to the recent installation of the system cover, there is currently little to no vegetation present at LF-03. The photograph was taken facing east.

Photograph #3
LF-03—The thickness of the landfill cover ranges from 10 ft. to 3 ft., maintaining drainage contours. The photograph was taken facing east-southeast.

Photograph #4
LF-04—A new cover system was installed over LF-04 in May of 2012. The photograph was taken facing east.

Photograph #5
LF-04—The new cover system tapers from 5 ft. to 25 ft. The drainage augmentation (rip-rap and swales) were reported to be in good condition. The photograph was taken facing south.

Photograph #6
LF-04—Photograph of the stormwater drainage augmentation at LF-04. The stormwater drains towards Playa Lake. The photograph was taken facing south-southeast.

Site Photographs

Photograph #7
LF-05— Typical photograph of landfill. Ground cover is very good. There is no evidence of shallow subsidence at LF-05. The photograph was taken facing north.

Photograph #8
LF-05—Cell No. 3 of LF-05 is surrounded by a four-strand barbed wire fence with signage. The photograph was taken facing north-northeast.

Photograph #9
LF-05—The vegetation at LF-05 covers approximately 90 percent of the surface. The photograph was taken facing east.

Photograph #10
LF-05—The vegetation is dominated by grasses and shrubs. The photograph was taken facing north-northwest.

Photograph #11
LF-05—Typical gas vent at LF-05.

Photograph #12
LF-05—There is signage present at LF-05; however the signage should be updated to reflect the correct contact information for the Base Civil Engineer Environmental Office.

Site Photographs

Photograph #13
LF-25—Photograph of the southern portion of the landfill. Ground cover is good and there is no evidence of subsidence. The photograph was taken facing north.

Photograph #14
LF-25—There is signage present at LF-25; however, the signs should be updated to reflect the appropriate contact information for the Base Civil Engineer Environmental Office.

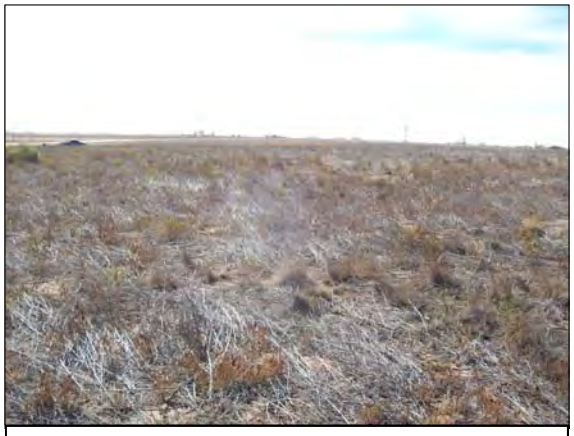
Photograph #15
LF-25—Photograph of the stormwater berm along the eastern border of the landfill. The berm was in good condition and requires no maintenance. The photograph was taken facing south.

Photograph #16
LF-25—Vegetative cover at LF-25 is dominated by grasses, with small, scattered areas containing summer annuals and perennials typical of the Southern High Plains.

Photograph #17
LF-25—Vegetation was estimated to cover approximately 60 to 70 percent of the landfill cover in 2012. The photograph was taken facing north.

Photograph #18
LF-25—Photograph of the rip-rap present at the northern most portion of LF-25. The rip-rap helps prevent erosion caused by stormwater runoff.

Site Photographs



Photograph #19
SWMU-101—The cover at SWMU-101 was reported to be in good condition.

Photograph #20
SWMU-101—Vegetative cover at SWMU-101 included approximately 80 percent annuals and 20 percent perennials.

Photograph #21
SWMU-101—Photgraph taken facing north-northeast.

Photograph #22
SWMU-101—The signage should be updated to reflect the correct contact information for the Base Civil Engineer Environmental Office.

Photograph #22
SWMU-101—Minor bare sport.

Photograph #22
SWMU-101— Photograph taken facing west.

APPENDIX C

FIELD FORMS

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GROUNDWATER SAMPLING LOGS

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TRINITY
ANALYSIS & DEVELOPMENT CORP.
Environmental & Engineering Services
www.trinityadc.com

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: SW Background Well	SITE LOCATION: Cannon AFB, NM		DATE: 10/24/12
WELL NO: MW-X	SAMPLE ID: MW-X-01	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: 305 feet to 365 feet	STATIC DEPTH TO WATER (feet): 285.23	PURGE PUMP TYPE OR BAILER: BP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (365 feet – 285.30 feet) X 0.65 gallons/foot = 51.805 gallons

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

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 315	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 315	PURGING INITIATED AT: 0930	PURGING ENDED AT: 1450	TOTAL VOLUME PURGED (gallons): 44.8

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)
1030	8.4	8.4	0.14	285.14	8.10	21.32	0.488	6.63	0.24	92.2	Clear / None	11.3
1050	2.8	11.2	0.14	285.35	8.12	21.54	0.488	6.54	0.24	94.8	Clear / None	12.2
1130	5.6	17.8	0.14	286.46	8.10	21.31	0.488	7.17	0.24	108.9	Clear / None	14.6
1150	2.8	20.6	0.14	286.51	8.10	21.30	0.487	6.75	0.24	117.9	Clear / None	13.1
1230	5.6	26.2	0.14	286.52	8.03	23.80	0.486	6.78	0.24	129.7	Clear / None	13.8
1310	~~2.6~~ 2.6	31.8	0.14	286.53	7.99	22.16	0.488	6.58	0.24	137.7	Clear / None	8.88
1330	2.8	33.6	0.14	286.93	8.02	24.13	0.487	5.62	0.24	133.7	Clear / None	8.35
1350	2.8	36.4	0.14	286.99	8.02	21.41	0.490	6.61	0.24	142.7	Clear / None	7.32
1410	2.8	39.2	0.14	287.01	7.99	21.37	0.486	6.78	0.24	153.2	Clear / None	9.31
1415	0.7	39.9	0.14	287.03	7.97	21.17	0.487	6.79	0.24	154.1	Clear / None	8.11
1420	0.7	40.6	0.14	287.04	8.01	21.37	0.489	6.75	0.24	154.3	Clear / None	9.03

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): [signature]	SAMPLING INITIATED AT: 1425	SAMPLING ENDED AT: 1450
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	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 ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
	3	CG	40mL	HCl			VOCs	BP	530
	2	AG	40mL	HCl			TOC		
	2	PE	250mL	HNO_3			Metals (Total/Dis)		
	1	PE	125mL	—			$HClO_4$		
	1	PE	500mL	H_2SO_4			NH_3		
	1	PE	1L	—			Cl/NO_2/NO_3/SO_4^{2-}/Cl-		

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 Yes ☐ Ambient blk NO ☐ Trip blk Yes

MW-X-01-MS EB-01 (TB-07)
MW-X-01-MSD

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Environmental & Engineering Services
www.trinityadc.com

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: LF-05		SITE LOCATION: Cannon AFB	DATE: 10/30/12
WELL NO: MW-U	SAMPLE ID: LF05-MW-U-01	FREE PRODUCT: Y (N) DEPTH TO PRODUCT (ft BTOC):	FIELD DUPLICATE: Y (N) DUPLICATE ID:

PURGING DATA

WELL DIAMETER (inches): 4	TUBING DIAMETER (inches): ~~3/8~~ 1/4	WELL SCREEN INTERVAL DEPTH: 325 feet to 365 feet	STATIC DEPTH TO WATER (feet): 326.05	PURGE PUMP TYPE OR BAILER: BP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (365 feet – 326.05 feet) X 0.65 gallons/foot = 25.32 gallons

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

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 346	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 346	PURGING INITIATED AT: 0700	PURGING ENDED AT: 1040	TOTAL VOLUME PURGED (gallons): 30.8

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)
0800	8.4	8.4	.14	329.89	7.87	15.63	0.851	5.49	0.42	101.5	Clear / None	2.45
0820	2.8	11.2	.14	331.63	7.83	16.24	0.849	5.45	0.42	104.9	Clear / None	2.52
0900	5.6	16.8	.14	334.21	7.86	17.52	0.853	5.37	0.42	113.8	Clear / None	4.16
0940	5.6	22.4	.14	335.72	7.88	20.38	0.858	5.02	0.42	120.3	Clear / None	4.22
1000	2.8	25.2	.14	336.45	7.89	21.52	0.858	4.76	0.42	123.7	Clear / None	3.06
1005	0.7	25.9	.14	336.46	7.89	21.67	0.858	4.83	0.42	124.0	Clear / None	3.00
1010	0.7	26.6	.14	336.46	7.89	21.72	0.859	4.75	0.42	123.8	Clear / None	2.83
1015	0.7	27.3	.14	336.46	7.88	21.63	0.859	4.92	0.42	123.9	Clear / None	2.49
1020	0.7	28.0	.14	336.46	7.88	21.78	0.857	4.92	0.42	123.7	Clear / None	1.76

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 Jordan Gibson Trinity	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1020	SAMPLING ENDED AT: 1040
PUMP OR TUBING DEPTH IN WELL (feet): 346	TUBING MATERIAL CODE: LD PE	FIELD-FILTERED: (Y) N Filtration Equipment Type: inline	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	—		8260C	BP	0.14 gpm
	3	AG	40mL	HCL			TOC	↓	↓
	2	PE	250mL	HNO_3			Total/Diss Metals		
	1	PE	125mL	—			Perchlorate		
	1	PE	500mL	H_2SO_4			Ammonia		
	~~2~~ 1	PE	~~500mL~~ 1L	—			Sulfate, NO_2/NO_3, Cl^-, $Cr^{3+,6+}$	↓	↓

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: No ☐ other comment: N/A

☐ DI Water Lot # NA ☐ MS / MSD NO ☐ Equip blk No ☐ Ambient blk — ☐ Trip blk yes

T8-11

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(Added ORP column, Salinity column and Notes)

GROUNDWATER SAMPLING LOG

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

SITE NAME: LF-05		SITE LOCATION: Cannon AFB	DATE: 10/30/12
WELL NO: MW-5	SAMPLE ID: LF05-MW-5-01	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: 325 feet to 365 feet	STATIC DEPTH TO WATER (feet): 326.12	PURGE PUMP TYPE OR BAILER: BP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (365 feet – 326.12 feet) X 0.65 gallons/foot = 25.27 gallons

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

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 346	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 346	PURGING INITIATED AT: 1115	PURGING ENDED AT: 1505	TOTAL VOLUME PURGED (gallons): 32.2

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)
1225	9.8	9.8	.14	327.65	8.05	23.41	0.855	8.55	0.42	74.1	Clear/None	6.61
1305	5.6	15.4	.14	330.95	8.32	23.38	0.757	5.59	0.37	47.3	Clear/None	2.97
1345	5.6	21.0	.14	333.70	8.35	23.49	0.763	5.86	0.37	39.1	Clear/None	3.47
1425	5.6	26.6	.14	333.72	8.36	23.47	0.759	5.73	0.37	40.9	Clear/None	4.39
1430	0.7	27.3	0.14	333.71	8.36	23.42	0.759	5.61	0.37	41.0	Clear/None	4.00
1435	0.7	28.0	0.14	333.71	8.36	23.51	0.760	5.70	0.37	42.7	Clear/None	3.19
1440	0.7	28.7	0.14	333.71	8.38	23.52	0.759	5.75	0.37	38.3	Clear/None	3.97

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 Jordan Gibson Trinity	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1445	SAMPLING ENDED AT: 1505
PUMP OR TUBING DEPTH IN WELL (feet): 346	TUBING MATERIAL CODE: LDPE	FIELD-FILTERED: (Y) N, Filtration Equipment Type: Nitrogen	FILTER SIZE: 0.45 µm
FIELD DECONTAMINATION: PUMP (Y) N	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
	3	CG	40mL	HCL	—		8260C	BP	0.14 gpm
	3	AG	40mL	HCL			TOC	↓	↓
	2	PE	250mL	HNO_3			Total/Diss Metals		
	1	PE	125mL	—			Perchlorate		
	1	PE	500mL	H_2SO_4			Ammonia		
	2	PE	500mL	—			Sulfate, Chloride, NO_2/NO_3		

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: No ☐ other comment: —
☐ DI Water Lot # NA ☐ MS / MSD No ☐ Equip blk No ☐ Ambient blk No ☐ Trip blk TB-11

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GROUNDWATER SAMPLING LOG

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

SITE NAME: LF-05		SITE LOCATION: Cannon AFB	DATE: 10/29/12
WELL NO: MW-C	SAMPLE ID: LF05-MW-C-01	FREE PRODUCT: Y (N) DEPTH TO PRODUCT (ft BTOC):	FIELD DUPLICATE: Y (N) DUPLICATE ID:

PURGING DATA

WELL DIAMETER (inches): 4	TUBING DIAMETER (inches): 3/8	WELL SCREEN INTERVAL DEPTH: 347 feet to 362 feet	STATIC DEPTH TO WATER (feet): 332.65	PURGE PUMP TYPE OR BAILER: BP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (362 feet – 332.65 feet) X 0.65 gallons/foot = 19.07 gallons

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

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 354	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 354	PURGING INITIATED AT: 1115	PURGING ENDED AT: 1300	TOTAL VOLUME PURGED (gallons): 14.7

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)
1135	2.8	2.8	0.14	~~321.95~~ 331.95	7.87	19.84	0.507	9.75	0.25	133.6	Clear/None	2.74
1155	2.8	5.6	0.14	321.95	7.69	19.94	0.639	5.73	0.31	132.6	Clear/None	30.0
1215	2.8	8.4	0.14	321.95	7.69	20.25	0.639	5.36	0.31	129.1	Clear/None	26.0
1225	1.4	9.8	0.14	321.95	7.69	20.56	0.639	5.31	0.31	126.5	Clear/None	31.4
1235	1.4	11.2	0.14	321.95	7.70	20.66	0.639	5.03	0.31	126.0	Clear/None	2.83
1240	0.7	11.9	0.14	321.95	7.70	20.61	0.637	4.90	0.31	124.9	Clear/None	3.30
1245	0.7	12.6	0.14	321.95	7.69	20.59	0.639	5.08	0.31	124.9	Clear/None	3.25

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 Jordan Gibson	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1250	SAMPLING ENDED AT: 1300
PUMP OR TUBING DEPTH IN WELL (feet): 354	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type: Inline	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	—		8260C	BP	0.14 gpm
	3	AG	40mL	HCL			TOC		
	2	PE	250mL	HNO_3			Total/Diss Metals		
	1	PE	125mL	—			Perchlorate		
	1	PE	500mL	H_2SO_4			Ammonia		
	2	PE	500mL	—			Sulfate, Cr3+, Cr6+, NO2/NO3, Cl-		

REMARKS: One Saturated Screen Volume = 9.75 gal

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: No ☐ other comment: —
☐ DI Water Lot # N/A ☐ MS / MSD No ☐ Equip blk No ☐ Ambient blk No ☐ Trip blk yes

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GROUNDWATER SAMPLING LOG

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

SITE NAME: SWMU 101		SITE LOCATION: Cannon AFB	DATE: 10/24/12
WELL NO: MW-E	SAMPLE ID: MW-E-01	FREE PRODUCT: Y (N) DEPTH TO PRODUCT (ft BTOC):	FIELD DUPLICATE: Y (N) DUPLICATE ID:

PURGING DATA

WELL DIAMETER (inches): 4	TUBING DIAMETER (inches): ~~3/8~~ 1/4	WELL SCREEN INTERVAL DEPTH: 358 feet to 373 feet	STATIC DEPTH TO WATER (feet): 316.49	PURGE PUMP TYPE OR BAILER: BP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (373 feet – 316.49 feet) X 0.65 gallons/foot = 36.7 gallons

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

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 365	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 365	PURGING INITIATED AT: 0530	PURGING ENDED AT: 0715	TOTAL VOLUME PURGED (gallons): 12.7

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)
0630	8.4	8.4	.14	316.63	7.43	17.03	0.774	4.90	0.38	127.3	Clear no odor	4.51
0640	1.4	9.8	.14	316.66	7.37	16.88	0.772	~~4.~~ 5.29	0.38	130.2	Clear no odor	2.46
0645	0.7	10.5	.14	316.66	7.39	16.76	0.770	5.44	0.38	130.9	Clear no odor	3.61
0650	0.7	11.2	.14	316.66	7.40	16.86	0.772	4.65	0.38	131.1	clear no odor	3.29
0655	0.7	11.9	.14	316.66	7.42	16.96	0.772	4.67	0.38	130.9	clear no odor	2.98
0700	0.7	12.6	.14	316.66	7.43	16.97	0.772	4.68	0.38	130.8	clear no odor	3.11

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 Jordan Gibson TRINITY	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 0701	SAMPLING ENDED AT: 0715
PUMP OR TUBING DEPTH IN WELL (feet): 365	TUBING MATERIAL CODE: LDPE	FIELD-FILTERED: (Y) N Filtration Equipment Type: inline	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	—		8260 C	BP	.14 gpm
	3	AG	40mL	HCL			~~Total TOC~~ TOC		
	2	PE	250mL	HNO3			Total/Diss Metals		
	1	PE	125mL	—			Perchlorate		
	1	PE	500mL	H2SO4			Ammonia		
	1	PE	1L	—			SO4, NO3, Cl		

REMARKS: One saturated screen volume = 9.75 gal

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 NA ☐ Trip blk yes

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GROUNDWATER SAMPLING LOG

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

SITE NAME: SWMU 101		SITE LOCATION: Cannon AFB	DATE: 10/22/12
WELL NO: MW-H	SAMPLE ID: MW-H-01	FREE PRODUCT: Y (N) DEPTH TO PRODUCT (ft BTOC):	FIELD DUPLICATE: Y (N) DUPLICATE ID:

PURGING DATA

WELL DIAMETER (inches): 4	TUBING DIAMETER (inches): 3/8	WELL SCREEN INTERVAL DEPTH: 360 feet to 375 feet	STATIC DEPTH TO WATER (feet): 318.59	PURGE PUMP TYPE OR BAILER: BP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (375 feet – 318.59 feet) X .65 gallons/foot = 36.66 gallons

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

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 367	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 367	PURGING INITIATED AT: 0530	PURGING ENDED AT: 0740	TOTAL VOLUME PURGED (gallons): 18.2

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)
0640	9.8	9.8	.14	318.89	7.10	16.29	0.775	5.42	0.09	102.1	Clear/ None	13.3
0645	0.7	10.5	.14	318.93	7.54	16.29	0.732	5.86	0.36	108.5	Clear/ None	11.8
0655	1.4	11.9	.14	318.83	7.56	16.30	0.746	5.52	0.37	109.4	Clear/ None	10.4
0700	0.7	12.6	.14	318.89	7.58	16.32	0.752	5.70	0.37	109.3	Clear/ None	9.86
0705	0.7	13.3	.14	318.89	7.59	16.34	0.755	5.73	0.37	109.7	Clear/ None	9.38
0710	0.7	14.0	.14	318.89	7.60	16.34	0.761	5.79	0.37	110.1	Clear/ None	8.83

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 Jordan Gibson / Trinity	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 0720	SAMPLING ENDED AT: 0735
PUMP OR TUBING DEPTH IN WELL (feet): 367	TUBING MATERIAL CODE: LDPE	FIELD-FILTERED: (Y) N Filtration Equipment Type: Tube	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	BP	546
	2	AG	40mL	HCl			TOC		
	2	PE	250mL	HNO_3			Metals (total & diss.)		
	1	PE	125mL	—			Perchlorate		
	1	PE	500mL	H_2SO_4			NH_3		
	1	PE	1L	—			Cr(+3+6)/NO_2/NO_3/Sulfate/Cl		

REMARKS: One saturated well screen volume = 9.75 gal

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 new cap ☐ 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 No

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Pg. 1 of 2

GROUNDWATER SAMPLING LOG

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

SITE NAME: LF-04		SITE LOCATION: Cannon AFB, NM	DATE: 10/17/12
WELL NO: MW-NA	SAMPLE ID: LF-04-MW-NA-01	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: 298 feet to 358 feet	STATIC DEPTH TO WATER (feet): 309.84	PURGE PUMP TYPE OR BAILER: BP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (358 feet – 309.84 feet) X 0.65 gallons/foot = 31.3 gallons

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

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 335	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 335	PURGING INITIATED AT: 1225	PURGING ENDED AT: 1630	TOTAL VOLUME PURGED (gallons): 33.6

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)
1310	6.3	6.3	0.14	309.60	8.07	20.41	0.613	4.92	0.29	-22.3	Clear/none	3.13
1330 ~~1338~~	2.8	9.1	0.14	309.60	7.65	20.98	0.588	7.64	0.29	-12.5	Clear/none	3.38
1350	2.8	11.9	0.14	309.61	7.74	21.01	0.587	7.40	0.28	-23.0	Clear/none	27.2
1410	2.8	14.7	0.14	309.66	7.75	20.95	0.587	6.89	0.29	-21.5	Clear/none	26.3
1430	2.8	17.5	0.14	309.61	8.02	22.68	0.589	5.42	0.29	-30.7	Clear/none	22.7
1510	5.6	23.1	0.14	309.61	7.91	20.40	0.589	4.60	0.29	-28.2	Clear/none	30.2
1530	2.8	25.9	0.14	309.61	7.92	20.31	0.588	4.39	0.29	-30.9	Clear/none	17.1
1550	2.8	28.7	0.14	309.61	7.86	19.86	0.591	4.32	0.29	-24.7	Clear/none	14.3
1600	1.4	30.1	0.14	309.61	7.90	19.73	0.590	4.50	0.29	-24.5	Clear/none	11.1
1605	0.7	30.8	0.14	309.61	7.87	19.79	0.590	4.56	0.29	-23.7	Clear/none	10.3
1610	0.7	31.5	0.14	309.61	7.89	19.76	0.590	4.63	0.29	-23.5	Clear/none	9.3

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./FL): **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: 1620	SAMPLING ENDED AT: 1630
PUMP OR TUBING DEPTH IN WELL (feet): 335	TUBING MATERIAL CODE: PE	FIELD-FILTERED: (Y) N Filtration Equipment Type: In line	FILTER SIZE: 0.45 µm
FIELD DECONTAMINATION: PUMP Y N Dedicated	TUBING (Y) N (replaced)	DUPLICATE: Y (N)	

SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
	3	CG	40mL	HCl			VOCs	BP	546
	2	AG	40mL	HCl			TOC		
	2	PE	250mL	HNO_3			Metals (Total/Diss.)		
	1	PE	125mL	—			Perchlorate		
	1	PE	500mL	H_2SO_4			NH_3		
	1	PE	1L	—			Cr(+6)/TKN/NO_2/NO_3/Sulfate/Cl-		

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 Yes ☐ locking cap: Yes ☐ other comment: NA
☐ DI Water Lot # NA ☐ MS / MSD No ☐ Equip blk No ☐ Ambient blk No ☐ Trip blk Yes
(TB-02)

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Pg. 2 of 2

GROUNDWATER SAMPLING LOG

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

SITE NAME:		SITE LOCATION: Cannon AFB, NM	DATE: 10/17/12
WELL NO:	SAMPLE ID: LF04-MW-NA-01	FREE PRODUCT: Y N DEPTH TO PRODUCT (ft BTOC):	FIELD DUPLICATE: Y N DUPLICATE ID:

PURGING DATA

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

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

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

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)
1615	0.7	32.2	0.14	309.61	7.96	19.65	0.590	4.61	0.29	-25.3	Clear/none	7.6
1620	0.7	32.9	0.14	309.61	7.91	19.62	0.590	4.59	0.29	-24.1	Clear/none	7.1

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:	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1615	SAMPLING ENDED AT:
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE: ____ 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			
				See Pg. 1					

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_____ ☐ needs well tag _____ ☐ locking cap: _____ ☐ other comment: _____

☐ DI Water Lot # _____ ☐ MS / MSD _____ ☐ Equip blk _____ ☐ Ambient blk _____ ☐ Trip blk _____

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GROUNDWATER SAMPLING LOG

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

SITE NAME: LF-03		SITE LOCATION: Cannon AFB	DATE: 10/17/12
WELL NO: MW-04	SAMPLE ID: LF-03-MW-04-01	FREE PRODUCT: Y (N) DEPTH TO PRODUCT (ft BTOC):	FIELD DUPLICATE: Y (N) DUPLICATE ID:

PURGING DATA

WELL DIAMETER (inches): 4	TUBING DIAMETER (inches): 3/8	WELL SCREEN INTERVAL DEPTH: 305 feet to 365 feet	STATIC DEPTH TO WATER (feet): 323.44	PURGE PUMP TYPE OR BAILER: Bladder

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (365 feet – 323.44 feet) X 0.65 gallons/foot = ~~27~~ 26.88 gallons

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

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 360	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 360	PURGING INITIATED AT: 0625	PURGING ENDED AT: 1055	TOTAL VOLUME PURGED (gallons): 34.3

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)	D.O.%
0705	5.6	5.6	0.14	323.44	7.38	15.99	1.414	3.83	0.71	132.4	Clear / None	2.02	39.0
0730	3.5	9.1	0.14	323.44	7.39	16.05	1.448	3.70	0.73	103.5	Clear / None	2.02	37.6
0750	2.8	11.9	0.14	323.48	7.44	16.08	1.457	3.61	0.74	80.7	Clear / None	1.52	37.5
0810	2.8	14.7	0.14	323.51	7.51	16.23	1.472	3.60	0.74	60.3	Clear / None	1.40	36.3
0830	2.8	17.5	0.14	323.53	7.50	16.35	1.492	3.54	0.75	42.1	Clear / None	2.05	35.9
0850	2.8	20.3	0.14	323.57	7.51	16.40	1.500	3.44	0.76	29.3	Clear / None	2.43	35.5
0910	Resume Pumping												
0930	2.8	23.1	0.14	323.57	7.57	16.70	1.502	3.41	0.76	13.1	Clear / None	1.94	35.6
0950	2.8	25.9	0.14	323.57	7.49	16.65	1.477	3.50	0.75	5.3	Clear / None	2.28	
1000	1.4	27.3	0.14	323.57	7.52	16.70	1.493	3.37	0.75	-2.5	Clear / None	1.73	

Changed N2 Tank

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: Jordan Gibson, Ben Stewart / Trinity	SAMPLER(S) SIGNATURE(S): [signature]	SAMPLING INITIATED AT: 1045	SAMPLING ENDED AT: 1055
PUMP OR TUBING DEPTH IN WELL (feet): 360	TUBING MATERIAL CODE: PE	FIELD-FILTERED: (Y) N Filtration Equipment Type: In Line	FILTER SIZE: ~~0.1~~ µm .45
FIELD DECONTAMINATION: PUMP Y N Dedicated Pump	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	BP	546
	2	AG	40mL	HCl			TOC		
	2	PE	250mL	HNO_3			Metals total/dis.		
	1	PE	125mL	—			Perchlorate		
	1	PE	500mL	H_2SO_4			Ammonia		
	1	PE	1L	—			Hex Chrome/NO2/NO3/Sulfate/Cl-		

REMARKS: Saturated screen volume is ~27 gal

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)

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GROUNDWATER SAMPLING LOG

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

SITE NAME:		SITE LOCATION: Cannon AFB.	DATE: 10/17/12
WELL NO: MW-OA	SAMPLE ID: LF03-MW-OA-01	FREE PRODUCT: Y N DEPTH TO PRODUCT (ft BTOC):	FIELD DUPLICATE: Y N DUPLICATE ID:

PURGING DATA

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

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

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

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)
1010	1.4	28.7	.14	323.57	7.54	16.83	1.491	3.40	0.75	-7.5	Clear / None	1.70
1015	0.7	29.4	.14	323.57	7.55	16.76	1.491	3.40	0.75	-11.0	Clear / None	1.43
1020	0.7	30.1	.14	323.57	7.54	16.82	1.500	3.46	0.76	-13.1	Clear / None	1.60
1025	0.7	30.8	.14	323.57	7.56	16.84	1.497	3.44	0.76	-15.2	Clear / None	1.26
1030	0.7	31.5	.14	323.57	7.53	16.92	1.491	3.46	0.75	-16.8	Clear / None	1.43
1040	0.7	32.2	.14	323.57	7.51	16.86	1.489	3.44	0.75	-18.2	Clear / None	1.89
1045	0.7	32.9	.14	323.57	7.52	16.89	1.494	3.42	0.75	-18.2	Clear / None	1.39

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:	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1045	SAMPLING ENDED AT: 1055
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE: ____ 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			
					See pg. 1				

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_____ ☐ needs well tag _____ ☐ locking cap: _____ ☐ other comment: _____

☐ DI Water Lot # _____ ☐ MS / MSD _____ ☐ Equip blk _____ ☐ Ambient blk _____ ☐ Trip blk _____

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(Added ORP column, Salinity column and Notes)

Pg. 1 of 2

GROUNDWATER SAMPLING LOG

JA 10/16/12

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

SITE NAME: Cannon AFB		SITE LOCATION: Cannon AFB	DATE: ~~10/15/12~~
WELL NO: MW-Pa	SAMPLE ID: MW-Pa	FREE PRODUCT: Y N DEPTH TO PRODUCT (ft BTOC): NA	FIELD DUPLICATE: Y (N) DUPLICATE ID:

PURGING DATA

WELL DIAMETER (inches): 4	TUBING DIAMETER (inches): 3/8	WELL SCREEN INTERVAL DEPTH: 300 feet to 360 feet	STATIC DEPTH TO WATER (feet): 312.49	PURGE PUMP TYPE OR BAILER: Bladder

WELL VOLUME PURGE: 1 **WELL VOLUME** = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (360 feet – 312.49 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)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 350	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 350	PURGING INITIATED AT: 1040	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):

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)
1110	4.2	4.2	.14	312.39	7.35	18.70	0.759	2.27	0.37	84.1	clear no odor	1.18
1130	2.8	7.00	.14	312.41	7.57	18.54	0.756	1.94	0.37	24.0	clear no odor	1.58
1150	2.8	9.80	.14	312.44	7.49	18.61	0.750	2.14	0.37	77.3	Clear no odor	1.93
1210	2.8	12.60	.14	312.38	7.35	18.61	0.752	2.04	0.37	-21.8	clear no odor	1.80
1230	2.8	15.4	.14	312.44	7.31	18.70	0.752	1.98	0.37	-33.7	clear no odor	1.40
1250	2.8	18.2	.14	312.34	7.35	18.75	0.752	1.47	0.37	-65.8	clear no odor	1.17
1310	2.8	21.0	.14	312.34	7.24	18.44	0.753	1.87	0.37	-62.2	clear none	1.76
1330	2.8	23.8	.14	312.34	7.49	18.58	0.749	2.01	0.37	-62.8	Clear none	1.98
1350	2.8	26.6	.14	312.34	7.04	18.56	0.750	2.20	0.37	-79.6	Clear none	1.98
1410	2.8	29.4	.14	312.34	7.66	20.95	0.751	1.97	0.37	-85.4	Clear none	1.82
1430	2.8	32.2	.14	312.34	7.74	18.62	0.748	1.86	0.37	-86.6	Clear none	2.40

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 / Jordan Gibson TRINITY	SAMPLER(S) SIGNATURE(S): [signature]	SAMPLING INITIATED AT: 1445	SAMPLING ENDED AT: 1455
PUMP OR TUBING DEPTH IN WELL (feet): 350	TUBING MATERIAL CODE: PE	FIELD-FILTERED: (Y) N Filtration Equipment Type: In Line	FILTER SIZE: 1 µm
FIELD DECONTAMINATION: PUMP Y N Dedicated 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			
	1	PE	1 L	—			Hex Chrome/NO_2/NO_3/Sulfate/Cl	BP	530
	1	PE	125mL	—			Perchlorate	BP	↓
	2	PE	250mL	HNO_3			Metals (Total/Dis.)	BP	↓
	2	AG	40mL	HCl			TOC	BP	↓
↓	1	PE	500mL	H_2SO_4			Ammonia	BP	↓
	3	CG	40mL	HCl			VOCs	BP	↓

REMARKS: Saturated well volume : 30.9 gal

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)

4500 mL = 0.104 gl ~~45~~ 395 mL = 0.104 gl 47.5 l = 30.9

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Pg 2 of 2

GROUNDWATER SAMPLING LOG

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

SITE NAME:		SITE LOCATION: Cannon AFB	DATE: 10/16/12
WELL NO: MW-Pa	SAMPLE ID: LF25-MW-Pa-01	FREE PRODUCT: Y N DEPTH TO PRODUCT (ft BTOC):	FIELD DUPLICATE: Y N DUPLICATE ID:

PURGING DATA

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

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

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT: 1455	TOTAL VOLUME PURGED (gallons):

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)
1435	0.7	32.9	.14	312.34	7.80	18.56	0.752	1.90	0.37	-109.4	Clear none	2.29
1440	0.7	33.6	.14	312.34	7.74	18.63	0.753	1.93	0.37	-102.4	Clear none	2.13

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: 1445	SAMPLING ENDED AT: 1455
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE: ____ 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			

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 ____ ☐ needs well tag ____ ☐ locking cap: ____ ☐ other comment: ____
☐ DI Water Lot # ____ ☐ MS / MSD ____ ☐ Equip blk ____ ☐ Ambient blk ____ ☑ Trip blk LF25-MW-Pa-01-C

45 sec

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GROUNDWATER SAMPLING LOG

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

SITE NAME: LF-05		SITE LOCATION: Camp HFB	DATE: 10/19/12
WELL NO: MW-A	SAMPLE ID: LF05-MW-A-01	FREE PRODUCT: Y (N) DEPTH TO PRODUCT (ft BTOC):	FIELD DUPLICATE: Y (N) DUPLICATE ID:

PURGING DATA

WELL DIAMETER (inches): 4	TUBING DIAMETER (inches): 3/8	WELL SCREEN INTERVAL DEPTH: 328 feet to 343 feet	STATIC DEPTH TO WATER (feet): 315.72	PURGE PUMP TYPE OR BAILER: BP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (343 feet – 315.72 feet) X 0.65 gallons/foot = 17.7 gallons

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

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 335	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 335	PURGING INITIATED AT: 0540	PURGING ENDED AT: 0730	TOTAL VOLUME PURGED (gallons): 13.06

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)
0610	4.2	4.2	0.14	315.83	8.03	14.76	0.651	4.15	0.32	254.6	Clear no odor	12.9
0612	Changed		0.11	purge	rate							
0630	2.26	6.46	0.11	316.02	8.01	16.36	0.636	5.40	0.31	189.1	clear no odor	7.31
0640	1.1	7.56	0.11	315.97	7.99	16.19	0.636	5.53	0.31	177.1	clear no odor	6.21
0650	1.1	8.66	0.11	315.95	7.97	15.75	0.636	~~5.15~~ 5.56	0.31	164.7	clear no odor	4.92
0700	1.1	9.76	0.11	315.95	7.96	14.43	0.638	5.06	0.31	160.1	clear no odor	3.21
0705	0.55	10.31	0.11	315.96	7.96	14.41	0.638	5.09	0.31	~~168~~ 158.1	clear no odor	2.98
0710	0.55	10.86	0.11	315.96	7.96	14.39	0.638	5.08	0.31	158.7	clear no odor	2.64

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 Jordan Gibson Trinity	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 0711	SAMPLING ENDED AT: 0730
PUMP OR TUBING DEPTH IN WELL (feet): 335	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: (Y) N Filtration Equipment Type: inline	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	—		8260C	BP	546
	2	AG	40mL	HCL			TOC		
	2	PE	250mL	HNO3			Metals Tot/Diss		
	1	PE	125mL	—			Perchlorate		
	1	PE	500mL	H2SO4			Ammonia		
	1	PE	1L	—			Cr3+, 6+, NO3, NO2, Sulfate, Cl⁻		

REMARKS: Saturated screen volume: 9.75 gal, Temp. rising due to sun rising

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:
☐ DI Water Lot # NA ☐ MS / MSD No ☐ Equip blk No ☐ Ambient blk No ☐ Trip blk No

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GROUNDWATER SAMPLING LOG

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

SITE NAME: SWMU-101		SITE LOCATION: Cannon AFB	DATE: 10/19/12
WELL NO: MW-F	SAMPLE ID: MW-F-01	FREE PRODUCT: Y (N) DEPTH TO PRODUCT (ft BTOC):	FIELD DUPLICATE: (Y) N DUPLICATE ID: MW-F-01-FD

PURGING DATA

WELL DIAMETER (inches): 4	TUBING DIAMETER (inches): 3/8	WELL SCREEN INTERVAL DEPTH: 360 feet to 375 feet	STATIC DEPTH TO WATER (feet): 315.25	PURGE PUMP TYPE OR BAILER: BP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (375 feet – 315.25 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)
~~= gallons + (gallons/foot X feet) + gallons = gallons~~

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 368	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 368	PURGING INITIATED AT: 1210	PURGING ENDED AT: 1445	TOTAL VOLUME PURGED (gallons): 15.95

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)
1240	3.3	3.3	0.11	315.29	8.13	18.94	0.785	5.68	0.39	64.4	clear/none	7.68
1300	2.2	5.5	0.11	315.31	8.15	19.27	0.783	5.76	0.38	55.6	clear/none	4.25
1320	2.2	7.7	0.11	315.33	8.17	18.97	0.783	5.57	0.38	43.2	clear/none	2.80
1340	2.2	9.9	0.11	315.26	8.16	19.02	0.781	5.30	0.38	40.2	clear/none	~~40.2~~ 2.11
1360	1.1	11.0	0.11	315.26	8.16	19.01	0.784	5.30	0.38	38.1	clear none	1.39
1400	1.1	12.1	0.11	315.26	8.16	19.12	0.781	5.32	0.38	37.3	clear/none	1.41
1410	1.1	13.2	0.11	315.26	8.16	19.10	0.782	5.33	0.38	35.4	clear/none	1.56
1420	1.1	14.3	0.11	315.26	8.16	19.15	0.781	5.32	0.38	35.1	clear/none	1.78

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 Jacobs Gibson Tetrick	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1421	SAMPLING ENDED AT: 1445
PUMP OR TUBING DEPTH IN WELL (feet): 368	TUBING MATERIAL CODE: CPE	FIELD-FILTERED: (Y) N Filtration Equipment Type: None	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			8260C	BP	.11 gpm
	2	AG	40mL	HCL			TOC		
	2	PE	250mL	HNO3			Metals Total & Diss		
	1	PE	125mL	—			Perchlorate		
	1	PE	500mL	H2SO4			Ammonia		
	1	PE	1L	—			Cr3+, Cr6+, NO2, NO3, Sulfate, Cl-		

REMARKS: 9.75 gal is one saturated screen volume

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 No

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GROUNDWATER SAMPLING LOG

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

SITE NAME: SWMU 101		SITE LOCATION: Cannon AFB	DATE: 10/23/12
WELL NO: MW-G	SAMPLE ID: MW-G-01	FREE PRODUCT: Y N DEPTH TO PRODUCT (ft BTOC):	FIELD DUPLICATE: Y N DUPLICATE ID: MW-G-01-FD

PURGING DATA

WELL DIAMETER (inches): 4	TUBING DIAMETER (inches): 3/8	WELL SCREEN INTERVAL DEPTH: 357 feet to 372 feet	STATIC DEPTH TO WATER (feet): 318.87	PURGE PUMP TYPE OR BAILER: BP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (372 feet – 318.87 feet) X 0.65 gallons/foot = 34.53 gallons

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

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 364	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 364	PURGING INITIATED AT: 1245	PURGING ENDED AT: 1515	TOTAL VOLUME PURGED (gallons): 21

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	6.3	6.3	.14	319.00	7.35	19.08	0.775	3.17	0.38	112.6	clear no odor	20.5
1340	1.4	7.7	.14	319.05	7.44	19.45	0.772	3.11	0.38	109.3	clear no odor	18.0
1400	2.8	10.5	.14	319.01	7.51	18.74	0.775	4.03	0.38	103.1	clear no odor	15.9
1420	2.8	13.3	.14	319.01	7.68	18.79	0.773	4.07	0.38	97.6	clear no odor	11.70
1425	0.70	14.0	.14	319.01	7.66	18.74	0.774	4.05	0.38	98.7	clear no odor	9.20
1430	0.70	14.70	.14	319.01	7.55	18.74	0.773	4.07	0.38	102.4	clear no odor	6.51
1435	0.70	15.40	.14	319.01	7.53	18.71	0.773	4.06	0.38	102.9	clear no odor	5.72
1440	0.70	16.1	.14	319.01	7.53	18.69	0.773	4.07	0.38	103.8	clear no odor	5.85
1445	0.70	16.8	.14	319.01	7.53	18.70	0.774	4.07	0.38	103.5	clear no odor	5.41

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 Jordan Gibson Trinity	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1446	SAMPLING ENDED AT: 1515
PUMP OR TUBING DEPTH IN WELL (feet): 364	TUBING MATERIAL CODE: PE	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			8260C	BP	.14 gpm
	2	AG	40mL	HCL			TOC		
	2	PE	250mL	HNO_3			Metals Total Diss		
	1	PE	125mL	—			Perchlorate		
	1	PE	500mL	H_2SO_4			Ammonia		
	1	PE	1L	—			Cr+6, Cr+6, NO_2/NO_3, Sulfate, Cl^-		

REMARKS: 1 Saturated well screen volume is 9.75 gal

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

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GROUNDWATER SAMPLING LOG

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

SITE NAME: LF-25		SITE LOCATION: Cannon AFB	DATE: 10/26/12
WELL NO: MW-R6	SAMPLE ID: LF25-MW-R6	FREE PRODUCT: Y (N) DEPTH TO PRODUCT (ft BTOC):	FIELD DUPLICATE: Y (N) DUPLICATE ID:

PURGING DATA

WELL DIAMETER (inches): 4	TUBING DIAMETER (inches): 3/8	WELL SCREEN INTERVAL DEPTH: 301 feet to 331 feet	STATIC DEPTH TO WATER (feet): 312.6	PURGE PUMP TYPE OR BAILER: BP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (331 feet – 312.10 feet) X 0.65 gallons/foot = 12.28 gallons

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

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 328	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 328	PURGING INITIATED AT: 0710	PURGING ENDED AT: 0920	TOTAL VOLUME PURGED (gallons): 18.2

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)
0800	~~8.4~~ 7.0	~~8.4~~ 7.0	0.14	312.58	8.19	14.98	0.643	7.74	0.31	127.2	Clear / None	4.20
0820	2.8	~~11.2~~ 9.8	0.14	312.58	8.21	15.11	0.647	7.83	0.32	123.6	Clear / None	6.66
0840	2.8	12.6	~~0.14~~ 0.14	312.59	8.17	15.00	0.646	7.79	0.31	123.9	Clear / None	5.29
0850	1.4	14.0	0.14	312.59	8.14	14.91	0.635	7.87	0.31	125.0	Clear / None	4.35
0855	0.7	14.7	0.14	312.59	8.14	15.05	0.642	7.72	0.31	125.4	Clear / None	2.74

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: Jordan Gibson, Ben Stewart / Trinity	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 0900	SAMPLING ENDED AT: 0920
PUMP OR TUBING DEPTH IN WELL (feet): 328	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	BP	546
	2	AG	40mL	HCl			TOC		
	2	PE	250mL	HNO_3			Metals (Total/Dis.)		
	1	PE	125mL	—			$HClO_4$		
	1	PE	500mL	H_2SO_4			NH_3		
	1	PE	1L	—			NO_2/NO_3, Cl^-, $Cr(3+,6+)$, SO_4^{2-}		

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 Yes ☑ locking cap: Yes ☑ other comment: NA
☑ DI Water Lot # NA ☑ MS / MSD NA ☑ Equip blk No ☑ Ambient blk No ☑ Trip blk Yes
LF25-MW-R6-MS
LF25-MW-R6-MSD
TB-09

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GROUNDWATER SAMPLING LOG

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

SITE NAME: LE05		SITE LOCATION: Cannon AFB	DATE: 10/25/12
WELL NO: MW-T	SAMPLE ID: LE05-MW-T-01	FREE PRODUCT: Y (N) DEPTH TO PRODUCT (ft BTOC):	FIELD DUPLICATE: Y (N) DUPLICATE ID:

PURGING DATA

WELL DIAMETER (inches): 4	TUBING DIAMETER (inches): 3/8	WELL SCREEN INTERVAL DEPTH: 325 feet to 365 feet	STATIC DEPTH TO WATER (feet): 325.87	PURGE PUMP TYPE OR BAILER: BP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (365 feet – 325.87 feet) X 0.65 gallons/foot = 25.43 gallons

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

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 345	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 345	PURGING INITIATED AT: 0900	PURGING ENDED AT: 1315	TOTAL VOLUME PURGED (gallons): 30.1

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)
1035	13.3	13.3	0.14	330.20	8.48	15.76	0.669	6.39	0.33	143.2	Clear / None	5.44
1105	5.6	18.9	0.14	330.61	8.47	15.07	0.670	6.13	0.33	141.7	Clear / None	4.72
1125	2.8	21.7	0.14	331.00	8.46	14.58	0.672	6.26	0.33	141.6	Clear / None	4.11
1130	Stopped Pumping, Busted Air Line											
1215	Resume Pumping											
1220	0.7	22.4	0.14	330.70	8.46	14.78	0.671	6.18	0.33	142.6	Clear / None	3.95
1240	2.8	25.2	0.14	330.81	8.49	14.75	0.663	6.32	0.33	144.7	Clear / None	4.43
1245	0.7	25.9	0.14	330.80	8.46	14.81	0.664	6.27	0.33	145.1	Clear / None	3.62
1250	0.7	26.6	0.14	330.82	8.48	14.83	0.669	6.22	0.33	145.3	Clear / None	4.01
1255	0.7	27.3	0.14	330.88	8.47	14.85	0.668	6.33	0.33	145.2	Clear / None	3.99

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 Jordan Gibson	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1300	SAMPLING ENDED AT: 1315
PUMP OR TUBING DEPTH IN WELL (feet): 345	TUBING MATERIAL CODE: LDPE	FIELD-FILTERED: (Y) N, Filtration Equipment Type: online	FILTER SIZE: 0.45 µm
FIELD DECONTAMINATION: PUMP (Y) N	TUBING Y (N) 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			8260C	BP	0.14 gpm
	3	AG	40mL	HCL			TOC		
	2	PE	250mL	HNO3			Total/Diss Metals		
	1	PE	~~125mL~~	None (125mL)			Perchlorate		
	1	PE	500mL	H2SO4			Ammonia		
	1	PE	1L				Cl-, Sulfate, NO2/NO3, Cr3+/6+		

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: No ☐ other comment: Needs 1.'d
☐ DI Water Lot # NA ☐ MS / MSD No ☐ Equip blk No ☐ Ambient blk No ☐ Trip blk No

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GROUNDWATER SAMPLING LOG

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

SITE NAME: Background		SITE LOCATION: Cannon AFB	DATE: 10/25/12
WELL NO: MW-V	SAMPLE ID: MW-V-01	FREE PRODUCT: Y (N) DEPTH TO PRODUCT (ft BTOC):	FIELD DUPLICATE: Y (N) DUPLICATE ID:

PURGING DATA

WELL DIAMETER (inches): 4	TUBING DIAMETER (inches): 3/8	WELL SCREEN INTERVAL DEPTH: 310 feet to ~~360~~ 370 feet	STATIC DEPTH TO WATER (feet): 345.37	PURGE PUMP TYPE OR BAILER: BP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (370 feet – 345.37 feet) X 0.65 gallons/foot = 16.00 gallons

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

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 360	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 360	PURGING INITIATED AT: 0530	PURGING ENDED AT: 0755	TOTAL VOLUME PURGED (gallons): 20.3

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)
0630	8.4	8.4	0.14	345.74	7.64	12.98	1.345	6.37	0.68	168.1	Clear/None	10.4
0700	4.2	12.6	0.14	345.76	7.73	11.97	1.341	6.15	0.68	169.1	Clear/None	8.84
0720	2.8	15.4	0.14	345.97	7.82	14.62	1.339	6.47	0.67	169.4	Clear/None	8.37
0730	1.4	16.8	0.14	345.96	7.83	14.69	1.341	6.24	0.68	170.9	Clear/None	3.26
0735	0.7	17.5	0.14	345.90	7.84	14.63	1.330	6.18	0.67	173.4	Clear/None	3.35
0740	0.7	18.2	0.14	345.92	7.85	14.78	1.340	6.25	0.67	174.3	Clear/None	3.74

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	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 0745	SAMPLING ENDED AT: 0755
PUMP OR TUBING DEPTH IN WELL (feet): 360	TUBING MATERIAL CODE: LDPE	FIELD-FILTERED: (Y) N, Filtration Equipment Type: inline	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			8260C	BP	.14 gpm
	3	AG	40mL	HCL			TOC		
	2	PE	250mL	HNO3			Total/Diss Metals		
	1	PE	125mL	—			Perchlorate		
	1	PE	500mL	H2SO4			Ammonia		
	1	PE	1L	—			Ca++, Cl, Sulfate, NO2/NO3, Cl-		

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

GROUNDWATER LEVEL MEASUREMENTS

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WATER-LEVEL DATA SUMMARY

Project Name/Number D020-001 Cannon AFB	**Date** 10/15/12
	Field Personnel #1 Ben Stewart
Site Name Cannon AFB	**Field Personnel #2** Jordan Gibson
Client Bhate	**Field Personnel #3**
Survey Datum (NGVD)	**Weather (previous 24 hours)** Clear, Sunny
Measuring Device In Situ	

Well Number	Time (hhmm)	Measuring Point		Depth to Water (ft, TOC)	Elevation of Water (ft, NGVD)
		Description	Elevation (ft, NGVD)		
MW-X	0900			285.23	
MW-V	0922			345.37	
MW-W	0948			322.98	
MW-Na	1002			309.84	
MW-Oa	1004			323.64	
MW-Pa	1010			312.49	
MW-Rb	1019			312.10	
MW-F	1035			315.25	
MW-E	1040			316.49	
MW-G	1050			318.87	
MW-H	1107			318.59	
MW-A	1120			315.72	
MW-U	1128			326.05	
MW-B	1135			329.52	
MW-T	1150			325.87	
MW-S	1158			326.12	

Notes: NGVD = National Geodetic Vertical Datum
TOC = Top of Well Casing

Comments/Observations

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Environmental & Engineering Services

WATER-LEVEL DATA SUMMARY

Project Name/Number	Date
	Field Personnel #1
Site Name	Field Personnel #2
Client	Field Personnel #3
Survey Datum (NGVD)	Weather (previous 24 hours)
Measuring Device	See page 1

Well Number	Time (hhmm)	Measuring Point		Depth to Water (ft, TOC)	Elevation of Water (ft, NGVD)
		Description	Elevation (ft, NGVD)		
MW-D	1205			326.04	
MW-C	1210			332.65	
OW-1	1400			345.78	Collected on 11/4/12

Notes: NGVD = National Geodetic Vertical Datum
TOC = Top of Well Casing

Comments/Observations

MONITORING WELL INSPECTION FORMS

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Fax: (850) 243-0045

WELL INSEPCTION FORM

DATE: 11/5/12 TIME: 1540

SITE LOCATION: Cannon AFB, FL PROJECT NUMBER: 0020

WELL ID: MW - 0a COMPLETED BY: Jordan Gibson

Well properly labeled? ID tag present? Yes

Type of well completion: Stick Up

Number of bollards and condition: 4, good

Type of protective casing and condition: Steel, good

Painted? If so, condition of paint: Yes, chipped

Condition of well pad: Good

Pad locked and secure? If so, condition of lock: Yes

Well cap type and condition (J-plug, slip cap): Plastic Bag

Is well cap vented? Yes

Additional Comments:

1' 2" Steel
1'0" Riser T.O.C.
2.5' x 2.5' Pad

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WELL INSEPCTION FORM

DATE: 11/5/12 TIME: 1545

SITE LOCATION: Cannon AFB, NM PROJECT NUMBER: D020-

WELL ID: MW-Na COMPLETED BY: Jordan Gibson

Well properly labeled? ID tag present? No

Type of well completion: Stick Up

Number of bollards and condition: No

Type of protective casing and condition: Steel, good

Painted? If so, condition of paint: Yes, good

Condition of well pad: Good

Pad locked and secure? If so, condition of lock: Yes, good

Well cap type and condition (J-plug, slip cap): Plastic Bag

Is well cap vented? Yes

Additional Comments:

2.5' x 2.5' Pad
1'6.5" Steel
8" Riser T.O.C.

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WELL INSEPCTION FORM

DATE: 11/5/12 TIME: 1515

SITE LOCATION: Cannon AFB, NM PROJECT NUMBER: D020-

WELL ID: MW COMPLETED BY: Jordan Gibson

Well properly labeled? ID tag present? Yes

Type of well completion: Stick up

Number of bollards and condition: 2, good

Type of protective casing and condition: ~~Good None~~ Steel, good

Painted? If so, condition of paint: Yes, good

Condition of well pad: Good

Pad locked and secure? If so, condition of lock: Yes

Well cap type and condition (J-plug, slip cap): Plastic Bag / PVC Cap

Is well cap vented? yes

Additional Comments:

3' 5" Stick up Riser
3' 1" Stick up T.O.C.
3' x 3' Pad

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WELL INSEPCTION FORM

DATE: 11/5/12 TIME: 1520

SITE LOCATION: Cannon AFB, NM PROJECT NUMBER: D020 -

WELL ID: MW-17 COMPLETED BY: Jordan Gibson

Well properly labeled? ID tag present? Yes

Type of well completion: Stick Up

Number of bollards and condition: 3, good

Type of protective casing and condition: Steel, good

Painted? If so, condition of paint: Yes, good

Condition of well pad: Good

Pad locked and secure? If so, condition of lock: No

Well cap type and condition (J-plug, slip cap): PVC, cracked, plastic bag

Is well cap vented? Yes

Additional Comments:

3' 2" Steel
3' 0" Riser
3'x2' Pad

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WELL INSEPCTION FORM

DATE: 11/5/12 TIME: 1530

SITE LOCATION: Cannon AFB, NM PROJECT NUMBER: D020-

WELL ID: MW-F COMPLETED BY: Jordan Gibson

Well properly labeled? ID tag present? Yes

Type of well completion: Stick Up

Number of bollards and condition: 2, good

Type of protective casing and condition: Steel, good

Painted? If so, condition of paint: Yes, chipped,

Condition of well pad: Cracked

Pad locked and secure? If so, condition of lock: Yes

Well cap type and condition (J-plug, slip cap): ~~Plas~~ Plastic Bag / PVC

Is well cap vented? Yes

Additional Comments:

3' 10.5" Steel
3' 7.5" Riser T.O.C.
2' x 2' Pad

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WELL INSEPCTION FORM

DATE: 11/5/12 TIME: 1530

SITE LOCATION: Cannon AFB, NM PROJECT NUMBER: D020-

WELL ID: MW-Rb COMPLETED BY: Jordan Gibson

Well properly labeled? ID tag present? ~~Y~~ No

Type of well completion: Stick Up

Number of bollards and condition: 4, good

Type of protective casing and condition: Steel good

Painted? If so, condition of paint: Yes, good

Condition of well pad: Good

Pad locked and secure? If so, condition of lock: ~~Yes~~ No

Well cap type and condition (J-plug, slip cap): Plug

Is well cap vented? No

Additional Comments:

2.5' x 2.5' Pad
2' 11.5" Steel
2' 4" Riser T.O.C.

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WELL INSEPCTION FORM

DATE: 11/5/12 TIME: 1550

SITE LOCATION: Cannon AFB - NM PROJECT NUMBER: D020-

WELL ID: MW-W COMPLETED BY: Jordan Gibson

Well properly labeled? ID tag present? Yes

Type of well completion: Stick up

Number of bollards and condition: 4, good

Type of protective casing and condition: Steel, good

Painted? If so, condition of paint: Yes, chipped

Condition of well pad: Good

Pad locked and secure? If so, condition of lock: Yes

Well cap type and condition (J-plug, slip cap): Plastic Bag

Is well cap vented? Yes

Additional Comments:

2' 7" Steel
2' 4.5" Riser
3' x 3' Pad

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WELL INSEPCTION FORM

DATE: 11/3/12 TIME: 1450

SITE LOCATION: Cannon AFB, FL PROJECT NUMBER: D020 -

WELL ID: MW-V COMPLETED BY: Jordan Gibson

Well properly labeled? ID tag present? Yes

Type of well completion: Stick Up

Number of bollards and condition: 4, good

Type of protective casing and condition: Steel, good

Painted? If so, condition of paint: Yes, good

Condition of well pad: Fair, eroded a little on one side

Pad locked and secure? If so, condition of lock: Yes

Well cap type and condition (J-plug, slip cap): Plastic Bag

Is well cap vented? Yes

Additional Comments:

4" Diameter Well Riser

3' x 3' Well Pad

2.7' Stick up (Protective Casing)

1.7' Stick up / riser

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WELL INSEPCTION FORM

DATE: 11/3/12 TIME: 1201

SITE LOCATION: Cannon AFB, NM PROJECT NUMBER: D020-

WELL ID: MW-C COMPLETED BY: Jordan Gibson

Well properly labeled? ID tag present? Yes

Type of well completion: Stick up

Number of bollards and condition: 3, good

Type of protective casing and condition: Steel good

Painted? If so, condition of paint: Yes, chipped

Condition of well pad: Bad, Busted, pieces missing

Pad locked and secure? If so, condition of lock: yes

Well cap type and condition (J-plug, slip cap): Plastic Bag

Is well cap vented? Yes

Additional Comments:

2'x2' Pad

2.9' Stick up

4' Diameter Well Riser

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WELL INSEPCTION FORM

DATE: 11/3/12 TIME: 1122

SITE LOCATION: PROJECT NUMBER: D020 -

WELL ID: MW-D COMPLETED BY: Jordan Gibson

Well properly labeled? ID tag present? Yes

Type of well completion: Stick Up

Number of bollards and condition: 3, good

Type of protective casing and condition: Steel, good

Painted? If so, condition of paint: Yes, chipped

Condition of well pad: Busted in half

Pad locked and secure? If so, condition of lock: Yes, good

Well cap type and condition (J-plug, slip cap): Plastic Bag

Is well cap vented? Yes

Additional Comments:

2' 9.5" Stick Up

2' x 2' Pad

4' Casing

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WELL INSEPCTION FORM

DATE: 11/3/12 TIME: 1044

SITE LOCATION: Cannon AFB, FL PROJECT NUMBER: D020-

WELL ID: MW-E COMPLETED BY: Jordan Gibson

Well properly labeled? ID tag present? Yes

Type of well completion: Stick Up

Number of bollards and condition: 3, good

Type of protective casing and condition: Steel, good

Painted? If so, condition of paint: Yes, chipped

Condition of well pad: good

Pad locked and secure? If so, condition of lock: No

Well cap type and condition (J-plug, slip cap): Slip Cap

Is well cap vented? NO

Additional Comments:

3' 2" Stick Up
6" Diameter Well
2.5' x 2.5' Pad

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WELL INSEPCTION FORM

DATE: 11/5/12 TIME: 1510

SITE LOCATION: Cannon AFB, NM PROJECT NUMBER: D020-

WELL ID: MW-A COMPLETED BY: Jordan Gibson

Well properly labeled? ID tag present? Yes

Type of well completion: Stick Up

Number of bollards and condition: ~~4~~ 3, good

Type of protective casing and condition: Steel, good

Painted? If so, condition of paint: Yes

Condition of well pad: None

Pad locked and secure? If so, condition of lock: Yes

Well cap type and condition (J-plug, slip cap): Plastic Bag

Is well cap vented? Yes

Additional Comments:

2' 5" Steel
2' 3" Riser

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WELL INSEPCTION FORM

DATE: 11/5/12 TIME: 1444

SITE LOCATION: Cannon AFB, FL PROJECT NUMBER: 0020-

WELL ID: MW-X COMPLETED BY: Jordan Gibson

Well properly labeled? ID tag present? Yes

Type of well completion: Stick up

Number of bollards and condition: 4, good

Type of protective casing and condition: Steel, good

Painted? If so, condition of paint: Yes, chipped

Condition of well pad: Good

Pad locked and secure? If so, condition of lock: Yes

Well cap type and condition (J-plug, slip cap): Slip

Is well cap vented?

Additional Comments:

1' 6.5" Protective Casing Stick up
1' 3.5" Well Riser Stick up
3' x 3' Pad

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WELL INSEPCTION FORM

DATE: 11/5/12 TIME: 1505

SITE LOCATION: Cannon AFB, FL PROJECT NUMBER: D020-

WELL ID: MW-21 COMPLETED BY: Jordan Gibson

Well properly labeled? ID tag present? Yes

Type of well completion: Stick up

Number of bollards and condition: 4, good

Type of protective casing and condition: Steel, good

Painted? If so, condition of paint: Yes, good

Condition of well pad: Good

Pad locked and secure? If so, condition of lock: Yes, good

Well cap type and condition (J-plug, slip cap): Plastic Bag

Is well cap vented? Yes

Additional Comments:

2' 4" Steel
1' 11' Riser

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WELL INSEPCTION FORM

DATE: 11/5/12 JD TIME: 1500

SITE LOCATION: Cannon AFB, ~~FL~~ NM PROJECT NUMBER: 0020 -

WELL ID: MW - T COMPLETED BY: Jordan Gibson

Well properly labeled? ID tag present? Yes

Type of well completion: Stick up

Number of bollards and condition: 4, good

Type of protective casing and condition: Steel, good

Painted? If so, condition of paint: Yes

Condition of well pad: Good

Pad locked and secure? If so, condition of lock: Yes

Well cap type and condition (J-plug, slip cap): Plas

Is well cap vented? Yes

Additional Comments:

3'x3' Pad
2'3" Steel Stick up
1'7.5" Riser Stick up

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WELL INSEPCTION FORM

DATE: 11/5/12 TIME: 1505

SITE LOCATION: Cannon AFB, FL PROJECT NUMBER: D020n

WELL ID: MW-B COMPLETED BY: Jordan Gibson

Well properly labeled? ID tag present? Yes

Type of well completion: Stick up

Number of bollards and condition: 4, good

Type of protective casing and condition: Steel, good

Painted? If so, condition of paint: ~~Yes~~ Yes good

Condition of well pad: None

Pad locked and secure? If so, condition of lock: Yes

Well cap type and condition (J-plug, slip cap): Plastic Bag

Is well cap vented? Yes

Additional Comments:

2'9.5" Steel Stick up
2'6" Riser Stick up

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WELL INSEPCTION FORM

DATE: 11/5/12 TIME: 1451

SITE LOCATION: Cannon AF-13, ~~EK~~ NW PROJECT NUMBER: D020 -

WELL ID: MW-5 COMPLETED BY: Jordan Gibson

Well properly labeled? ID tag present? Yes

Type of well completion: Stick Up

Number of bollards and condition:

Type of protective casing and condition: Steel good

Painted? If so, condition of paint: Painted, good

Condition of well pad: Good

Pad locked and secure? If so, condition of lock: Yes good

Well cap type and condition (J-plug, slip cap): Plastic Bag

Is well cap vented? Yes

Additional Comments:

2'5" Steel Casing Stick up
2'1" Well Riser stick up
3'X3' Pad

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WELL INSEPCTION FORM

DATE: 10/16/12 TIME: 1405

SITE LOCATION: Cannon AFB, Clovis, NM PROJECT NUMBER: D020 - 001

WELL ID: MW - Pa COMPLETED BY: Jordan Gibson

Well properly labeled? ID tag present? Yes

Type of well completion: Stick-up

Number of bollards and condition: Four, good

Type of protective casing and condition: Steel

Painted? If so, condition of paint: Yes, chipping

Condition of well pad: Good

Pad locked and secure? If so, condition of lock: Yes, good

Well cap type and condition (J-plug, slip cap): Plastic Bag, tubing prevents well cap

Is well cap vented? Yes

Additional Comments:

1 ft. stick up

APPENDIX D

LABORATORY ANALYTICAL REPORTS

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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 11/19/2012

GCAL Report 212102407

Deliver To	Bhate Environmental Associates, Inc. 1608 14th Ave South Birmingham, AL 35205 205-918-4024
Attn	David Badio

Project Cannon AFB D020001

CASE NARRATIVE

Client: Bhate Environmental Associates, Inc. **Report:** 212102407

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 493002, the Sample/Duplicate RPD for Aluminum, Chromium, Manganese, Nickel, and Thallium is not applicable because the sample and/or duplicate concentration is less than five times the reporting limit.

In the SW-846 6010C dissolved analysis for prep batch 493001, the MS recovery is not applicable for Calcium and Magnesium because the sample concentration is greater than four times the spike concentration. The Sample/Duplicate RPD for Antimony is not applicable because the sample and/or duplicate concentration is less than five times the reporting limit. The Sample/Duplicate RPD for Titanium is not applicable because the sample and/or duplicate concentration is less than five times the reporting limit.

In the SW-846 6010C total analysis for prep batch 493002, the Sample/Duplicate RPD for Iron is not applicable because the sample and/or duplicate concentration is less than five times the reporting limit.

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 21210240701 (MW-G-01) and 21210240702 (MW-G-01-FD) had to be diluted in order to bracket the concentration within the calibration range of the instrument.

In the EPA 353.2 analysis, samples 21210240701 (MW-G-01) and 21210240702 (MW-G-01-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

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 212102407

THIS REPORT CONTAINS _____ PAGES.

Report Sample Summary

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210240701	MW-G-01	Water	10/23/2012 14:46	10/24/2012 10:00
21210240702	MW-G-01-FD	Water	10/23/2012 14:46	10/24/2012 10:00
21210240703	TB-5	Water	10/23/2012 14:46	10/24/2012 10:00

Summary of Compounds Detected

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210240701	**MW-G-01**	Water	10/23/2012 14:46	10/24/2012 10:00

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7440-39-3	Barium	29.1	10.0	0.71	ug/L
7440-43-9	Cadmium	0.71J	5.00	0.16	ug/L
7440-47-3	Chromium	1.04J	10.0	0.26	ug/L
7440-48-4	Cobalt	0.63J	10.0	0.58	ug/L
7440-50-8	Copper	8.61J	10.0	1.01	ug/L
7440-02-0	Nickel	1.75J	40.0	1.13	ug/L
7440-09-7	Potassium	7310	500	3.46	ug/L
7782-49-2	Selenium	7.99J	40.0	4.42	ug/L
7440-23-5	Sodium	51000	1000	61.1	ug/L
7440-28-0	Thallium	3.45J	20.0	3.04	ug/L
7440-66-6	Zinc	161	20.0	4.51	ug/L

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7440-36-0	Antimony	3.42J	60.0	3.11	ug/L
7440-70-2	Calcium	44800	100	45.7	ug/L
7439-95-4	Magnesium	40900	100	16.5	ug/L
7440-62-2	Vanadium	26.2	20.0	1.25	ug/L

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	32.0J	200	30.3	ug/L
7440-39-3	Barium	30.6	10.0	0.71	ug/L
7440-43-9	Cadmium	1.06J	5.00	0.16	ug/L
7440-47-3	Chromium	2.23J	10.0	0.26	ug/L
7440-48-4	Cobalt	1.47J	10.0	0.58	ug/L
7440-50-8	Copper	12.0	10.0	1.01	ug/L
7439-96-5	Manganese	16.3	15.0	1.31	ug/L
7440-02-0	Nickel	4.06J	40.0	1.13	ug/L
7440-09-7	Potassium	7200	500	34.6	ug/L
7440-23-5	Sodium	49900	1000	61.1	ug/L
7440-28-0	Thallium	3.69J	20.0	3.04	ug/L
7440-66-6	Zinc	175	20.0	4.51	ug/L

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7440-70-2	Calcium	44100	100	45.7	ug/L
7439-89-6	Iron	587	100	12.6	ug/L
7439-95-4	Magnesium	40900	100	16.5	ug/L
7440-62-2	Vanadium	28.6	20.0	1.25	ug/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210240701	MW-G-01	Water	10/23/2012 14:46	10/24/2012 10:00

EPA 353.2 Nitrite

CAS#	Parameter	Result	RDL	MDL	Units
14797-65-0	Nitrite	0.007J	0.010	0.002	mg/L-N

EPA 353.2 Nitrate

CAS#	Parameter	Result	RDL	MDL	Units
14797-55-8	Nitrate	1.02	0.050	0.025	mg/L-N

EPA 300.0

CAS#	Parameter	Result	RDL	MDL	Units
16887-00-6	Chloride	69.7	5.00	3.15	mg/L
14808-79-8	Sulfate	132	10.0	5.75	mg/L

SM 5310B TOC

CAS#	Parameter	Result	RDL	MDL	Units
C-012	Total Organic Carbon	1.8	1.0	0.30	mg/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210240702	MW-G-01-FD	Water	10/23/2012 14:46	10/24/2012 10:00

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7440-39-3	Barium	28.6	10.0	0.71	ug/L
7440-43-9	Cadmium	0.85J	5.00	0.16	ug/L
7440-47-3	Chromium	1.12J	10.0	0.26	ug/L
7440-48-4	Cobalt	0.87J	10.0	0.58	ug/L
7440-50-8	Copper	8.28J	10.0	1.01	ug/L
7440-02-0	Nickel	1.62J	40.0	1.13	ug/L
7440-09-7	Potassium	7240	500	3.46	ug/L
7782-49-2	Selenium	7.01J	40.0	4.42	ug/L
7440-23-5	Sodium	50400	1000	61.1	ug/L
7440-28-0	Thallium	4.13J	20.0	3.04	ug/L
7440-66-6	Zinc	152	20.0	4.51	ug/L

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7440-36-0	Antimony	3.20J	60.0	3.11	ug/L
7440-70-2	Calcium	44100	100	45.7	ug/L
7439-95-4	Magnesium	40000	100	16.5	ug/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210240702	MW-G-01-FD	Water	10/23/2012 14:46	10/24/2012 10:00

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7440-62-2	Vanadium	24.9	20.0	1.25	ug/L

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	54.2J	200	30.3	ug/L
7440-39-3	Barium	33.2	10.0	0.71	ug/L
7440-43-9	Cadmium	1.05J	5.00	0.16	ug/L
7440-47-3	Chromium	2.42J	10.0	0.26	ug/L
7440-48-4	Cobalt	1.53J	10.0	0.58	ug/L
7440-50-8	Copper	11.7	10.0	1.01	ug/L
7439-96-5	Manganese	16.9	15.0	1.31	ug/L
7440-02-0	Nickel	4.26J	40.0	1.13	ug/L
7440-09-7	Potassium	7800	500	34.6	ug/L
7782-49-2	Selenium	5.38J	40.0	4.42	ug/L
7440-23-5	Sodium	54300	1000	61.1	ug/L
7440-66-6	Zinc	169	20.0	4.51	ug/L

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7440-70-2	Calcium	48000	100	45.7	ug/L
7439-89-6	Iron	581	100	12.6	ug/L
7439-95-4	Magnesium	44800	100	16.5	ug/L
7440-62-2	Vanadium	30.3	20.0	1.25	ug/L

EPA 353.2 Nitrate

CAS#	Parameter	Result	RDL	MDL	Units
14797-55-8	Nitrate	1.12	0.020	0.010	mg/L-N

EPA 353.2 Nitrite

CAS#	Parameter	Result	RDL	MDL	Units
14797-65-0	Nitrite	0.008J	0.010	0.002	mg/L-N

EPA 300.0

CAS#	Parameter	Result	RDL	MDL	Units
16887-00-6	Chloride	69.3	5.00	3.15	mg/L
14808-79-8	Sulfate	131	10.0	5.75	mg/L

SM 5310B TOC

CAS#	Parameter	Result	RDL	MDL	Units
C-012	Total Organic Carbon	3.6	1.0	0.30	mg/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210240701	**MW-G-01**	Water	10/23/2012 14:46	10/24/2012 10:00

Subcontract Work

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/06/2012 08:09	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	10/26/2012 18:10	CEK	493244

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
21210240701	**MW-G-01**	Water	10/23/2012 14:46	10/24/2012 10:00

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/26/2012 18:10	CEK	493244

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	48.5	ug/L	97	75 - 120
1868-53-7	Dibromofluoromethane	50	50.1	ug/L	100	85 - 115
2037-26-5	Toluene d8	50	51.6	ug/L	103	85 - 120
17060-07-0	1,2-Dichloroethane-d4	50	47.8	ug/L	96	70 - 120

SW-846 7470A Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/24/2012 11:40	493003	SW-846 7470A Dissolved	1	10/31/2012 11:38	BNB	493483

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
10/24/2012 11:40	493003	SW-846 7470A	1	10/31/2012 11:28	BNB	493483

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	0.068U	0.20	0.068	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210240701	**MW-G-01**	Water	10/23/2012 14:46	10/24/2012 10:00

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/24/2012 14:20	493002	SW-846 3010A	1	10/25/2012 19:55	CLB	493071

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	**Aluminum**	**32.0J**	**200**	**30.3**	**ug/L**
7440-39-3	**Barium**	**30.6**	**10.0**	**0.71**	**ug/L**
7440-41-7	Beryllium	0.10U	5.00	0.10	ug/L
7440-43-9	**Cadmium**	**1.06J**	**5.00**	**0.16**	**ug/L**
7440-47-3	**Chromium**	**2.23J**	**10.0**	**0.26**	**ug/L**
7440-48-4	**Cobalt**	**1.47J**	**10.0**	**0.58**	**ug/L**
7440-50-8	**Copper**	**12.0**	**10.0**	**1.01**	**ug/L**
7439-92-1	Lead	1.96U	15.0	1.96	ug/L
7439-96-5	**Manganese**	**16.3**	**15.0**	**1.31**	**ug/L**
7440-02-0	**Nickel**	**4.06J**	**40.0**	**1.13**	**ug/L**
7440-09-7	**Potassium**	**7200**	**500**	**34.6**	**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
7440-23-5	**Sodium**	**49900**	**1000**	**61.1**	**ug/L**
7440-28-0	**Thallium**	**3.69J**	**20.0**	**3.04**	**ug/L**
7440-66-6	**Zinc**	**175**	**20.0**	**4.51**	**ug/L**

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/24/2012 14:20	493002	SW-846 3010A	1	10/26/2012 17:55	CLB	493243

CAS#	Parameter	Result	RDL	MDL	Units
7440-36-0	Antimony	3.11U	60.0	3.11	ug/L
7440-38-2	Arsenic	3.59U	10.0	3.59	ug/L
7440-70-2	**Calcium**	**44100**	**100**	**45.7**	**ug/L**
7439-89-6	**Iron**	**587**	**100**	**12.6**	**ug/L**
7439-95-4	**Magnesium**	**40900**	**100**	**16.5**	**ug/L**
7440-62-2	**Vanadium**	**28.6**	**20.0**	**1.25**	**ug/L**

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/24/2012 11:40	493001	SW-846 3005 Dissolved	1	10/25/2012 18:39	CLB	493071

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	30.3U	200	30.3	ug/L
7440-39-3	**Barium**	**29.1**	**10.0**	**0.71**	**ug/L**
7440-41-7	Beryllium	0.10U	5.00	0.10	ug/L
7440-43-9	**Cadmium**	**0.71J**	**5.00**	**0.16**	**ug/L**
7440-47-3	**Chromium**	**1.04J**	**10.0**	**0.26**	**ug/L**
7440-48-4	**Cobalt**	**0.63J**	**10.0**	**0.58**	**ug/L**
7440-50-8	**Copper**	**8.61J**	**10.0**	**1.01**	**ug/L**
7439-92-1	Lead	1.96U	15.0	1.96	ug/L
7439-96-5	Manganese	1.31U	15.0	1.31	ug/L
7440-02-0	**Nickel**	**1.75J**	**40.0**	**1.13**	**ug/L**
7440-09-7	**Potassium**	**7310**	**500**	**3.46**	**ug/L**
7782-49-2	**Selenium**	**7.99J**	**40.0**	**4.42**	**ug/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210240701	**MW-G-01**	Water	10/23/2012 14:46	10/24/2012 10:00

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/24/2012 11:40	493001	SW-846 3005 Dissolved	1	10/25/2012 18:39	CLB	493071

CAS#	Parameter	Result	RDL	MDL	Units
7440-22-4	Silver	0.70U	10.0	0.70	ug/L
7440-23-5	**Sodium**	**51000**	**1000**	**61.1**	**ug/L**
7440-28-0	**Thallium**	**3.45J**	**20.0**	**3.04**	**ug/L**
7440-66-6	**Zinc**	**161**	**20.0**	**4.51**	**ug/L**

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/24/2012 11:40	493001	SW-846 3005 Dissolved	1	10/26/2012 16:23	CLB	493243

CAS#	Parameter	Result	RDL	MDL	Units
7440-36-0	**Antimony**	**3.42J**	**60.0**	**3.11**	**ug/L**
7440-38-2	Arsenic	3.59U	10.0	3.59	ug/L
7440-70-2	**Calcium**	**44800**	**100**	**45.7**	**ug/L**
7439-89-6	Iron	12.6U	100	12.6	ug/L
7439-95-4	**Magnesium**	**40900**	**100**	**16.5**	**ug/L**
7440-62-2	**Vanadium**	**26.2**	**20.0**	**1.25**	**ug/L**

EPA 353.2 Nitrite

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/24/2012 16:06	AEL	492998

CAS#	Parameter	Result	RDL	MDL	Units
14797-65-0	**Nitrite**	**0.007J**	**0.010**	**0.002**	**mg/L-N**

EPA 353.2 Nitrate

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			5	10/24/2012 17:01	AEL	492997

CAS#	Parameter	Result	RDL	MDL	Units
14797-55-8	**Nitrate**	**1.02**	**0.050**	**0.025**	**mg/L-N**

SM 4500 NH3 BE Ammonia

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/26/2012 05:30	493163	SM4500 NH3 BE TKN	1	10/27/2012 07:53	DJH	493273

CAS#	Parameter	Result	RDL	MDL	Units
7664-41-7	Ammonia	0.24U	1.0	0.24	mg/L-N

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210240701	**MW-G-01**	Water	10/23/2012 14:46	10/24/2012 10:00

EPA 300.0

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			50	11/01/2012 11:13	AEL	493575

CAS#	Parameter	Result	RDL	MDL	Units
16887-00-6	**Chloride**	**69.7**	**5.00**	**3.15**	**mg/L**
14808-79-8	**Sulfate**	**132**	**10.0**	**5.75**	**mg/L**

SM 5310B TOC

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/25/2012 19:31	DNM	493021

CAS#	Parameter	Result	RDL	MDL	Units
C-012	**Total Organic Carbon**	**1.8**	**1.0**	**0.30**	**mg/L**

SW-846 7196A Chromium VI

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/24/2012 10:41	JEM	492996

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
21210240702	**MW-G-01-FD**	Water	10/23/2012 14:46	10/24/2012 10:00

Subcontract Work

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/19/2012 10:07	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	10/26/2012 18:30	CEK	493244

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
21210240702	**MW-G-01-FD**	Water	10/23/2012 14:46	10/24/2012 10:00

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/26/2012 18:30	CEK	493244

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	49.2	ug/L	98	75 - 120
1868-53-7	Dibromofluoromethane	50	50	ug/L	100	85 - 115
2037-26-5	Toluene d8	50	51.8	ug/L	104	85 - 120
17060-07-0	1,2-Dichloroethane-d4	50	47.4	ug/L	95	70 - 120

SW-846 7470A Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/24/2012 11:40	493003	SW-846 7470A Dissolved	1	10/31/2012 11:41	BNB	493483

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
10/24/2012 11:40	493003	SW-846 7470A	1	10/31/2012 11:39	BNB	493483

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	0.068U	0.20	0.068	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210240702	**MW-G-01-FD**	Water	10/23/2012 14:46	10/24/2012 10:00

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/24/2012 14:20	493002	SW-846 3010A	1	10/25/2012 20:54	CLB	493071

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	**Aluminum**	**54.2J**	**200**	**30.3**	**ug/L**
7440-39-3	**Barium**	**33.2**	**10.0**	**0.71**	**ug/L**
7440-41-7	Beryllium	0.10U	5.00	0.10	ug/L
7440-43-9	**Cadmium**	**1.05J**	**5.00**	**0.16**	**ug/L**
7440-47-3	**Chromium**	**2.42J**	**10.0**	**0.26**	**ug/L**
7440-48-4	**Cobalt**	**1.53J**	**10.0**	**0.58**	**ug/L**
7440-50-8	**Copper**	**11.7**	**10.0**	**1.01**	**ug/L**
7439-92-1	Lead	1.96U	15.0	1.96	ug/L
7439-96-5	**Manganese**	**16.9**	**15.0**	**1.31**	**ug/L**
7440-02-0	**Nickel**	**4.26J**	**40.0**	**1.13**	**ug/L**
7440-09-7	**Potassium**	**7800**	**500**	**34.6**	**ug/L**
7782-49-2	**Selenium**	**5.38J**	**40.0**	**4.42**	**ug/L**
7440-22-4	Silver	0.70U	10.0	0.70	ug/L
7440-23-5	**Sodium**	**54300**	**1000**	**61.1**	**ug/L**
7440-28-0	Thallium	3.04U	20.0	3.04	ug/L
7440-66-6	**Zinc**	**169**	**20.0**	**4.51**	**ug/L**

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/24/2012 14:20	493002	SW-846 3010A	1	10/26/2012 18:31	CLB	493243

CAS#	Parameter	Result	RDL	MDL	Units
7440-36-0	Antimony	3.11U	60.0	3.11	ug/L
7440-38-2	Arsenic	3.59U	10.0	3.59	ug/L
7440-70-2	**Calcium**	**48000**	**100**	**45.7**	**ug/L**
7439-89-6	**Iron**	**581**	**100**	**12.6**	**ug/L**
7439-95-4	**Magnesium**	**44800**	**100**	**16.5**	**ug/L**
7440-62-2	**Vanadium**	**30.3**	**20.0**	**1.25**	**ug/L**

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/24/2012 11:40	493001	SW-846 3005 Dissolved	1	10/25/2012 19:17	CLB	493071

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	30.3U	200	30.3	ug/L
7440-39-3	**Barium**	**28.6**	**10.0**	**0.71**	**ug/L**
7440-41-7	Beryllium	0.10U	5.00	0.10	ug/L
7440-43-9	**Cadmium**	**0.85J**	**5.00**	**0.16**	**ug/L**
7440-47-3	**Chromium**	**1.12J**	**10.0**	**0.26**	**ug/L**
7440-48-4	**Cobalt**	**0.87J**	**10.0**	**0.58**	**ug/L**
7440-50-8	**Copper**	**8.28J**	**10.0**	**1.01**	**ug/L**
7439-92-1	Lead	1.96U	15.0	1.96	ug/L
7439-96-5	Manganese	1.31U	15.0	1.31	ug/L
7440-02-0	**Nickel**	**1.62J**	**40.0**	**1.13**	**ug/L**
7440-09-7	**Potassium**	**7240**	**500**	**3.46**	**ug/L**
7782-49-2	**Selenium**	**7.01J**	**40.0**	**4.42**	**ug/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210240702	**MW-G-01-FD**	Water	10/23/2012 14:46	10/24/2012 10:00

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/24/2012 11:40	493001	SW-846 3005 Dissolved	1	10/25/2012 19:17	CLB	493071

CAS#	Parameter	Result	RDL	MDL	Units
7440-22-4	Silver	0.70U	10.0	0.70	ug/L
7440-23-5	**Sodium**	**50400**	**1000**	**61.1**	**ug/L**
7440-28-0	**Thallium**	**4.13J**	**20.0**	**3.04**	**ug/L**
7440-66-6	**Zinc**	**152**	**20.0**	**4.51**	**ug/L**

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/24/2012 11:40	493001	SW-846 3005 Dissolved	1	10/26/2012 17:33	CLB	493243

CAS#	Parameter	Result	RDL	MDL	Units
7440-36-0	**Antimony**	**3.20J**	**60.0**	**3.11**	**ug/L**
7440-38-2	Arsenic	3.59U	10.0	3.59	ug/L
7440-70-2	**Calcium**	**44100**	**100**	**45.7**	**ug/L**
7439-89-6	Iron	12.6U	100	12.6	ug/L
7439-95-4	**Magnesium**	**40000**	**100**	**16.5**	**ug/L**
7440-62-2	**Vanadium**	**24.9**	**20.0**	**1.25**	**ug/L**

EPA 353.2 Nitrite

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/24/2012 16:10	AEL	492998

CAS#	Parameter	Result	RDL	MDL	Units
14797-65-0	**Nitrite**	**0.008J**	**0.010**	**0.002**	**mg/L-N**

EPA 353.2 Nitrate

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			2	10/24/2012 17:04	AEL	492997

CAS#	Parameter	Result	RDL	MDL	Units
14797-55-8	**Nitrate**	**1.12**	**0.020**	**0.010**	**mg/L-N**

SM 4500 NH3 BE Ammonia

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/26/2012 05:30	493163	SM4500 NH3 BE TKN	1	10/27/2012 07:53	DJH	493273

CAS#	Parameter	Result	RDL	MDL	Units
7664-41-7	Ammonia	0.24U	1.0	0.24	mg/L-N

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210240702	**MW-G-01-FD**	Water	10/23/2012 14:46	10/24/2012 10:00

EPA 300.0

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			50	11/01/2012 11:31	AEL	493575

CAS#	Parameter	Result	RDL	MDL	Units
16887-00-6	**Chloride**	**69.3**	**5.00**	**3.15**	**mg/L**
14808-79-8	**Sulfate**	**131**	**10.0**	**5.75**	**mg/L**

SM 5310B TOC

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/25/2012 19:50	DNM	493021

CAS#	Parameter	Result	RDL	MDL	Units
C-012	**Total Organic Carbon**	**3.6**	**1.0**	**0.30**	**mg/L**

SW-846 7196A Chromium VI

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/24/2012 10:42	JEM	492996

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
21210240703	**TB-5**	Water	10/23/2012 14:46	10/24/2012 10:00

SW-846 8260B DOD Water

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/26/2012 18:50	CEK	493244

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
21210240703	**TB-5**	Water	10/23/2012 14:46	10/24/2012 10:00

SW-846 8260B DOD Water

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/26/2012 18:50	CEK	493244

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	47.6	ug/L	95	75 - 120
1868-53-7	Dibromofluoromethane	50	48	ug/L	96	85 - 115
2037-26-5	Toluene d8	50	51.8	ug/L	104	85 - 120
17060-07-0	1,2-Dichloroethane-d4	50	45.7	ug/L	91	70 - 120

GC/MS Volatiles Quality Control Summary

Analytical Batch 493244		**Client ID**	MB493244			LCS493244			LCSD493244		
Prep Batch N/A		**GCAL ID**	1121818			1121819			1121820		
		Sample Type	Method Blank			LCS			LCSD		
		Analytical Date	10/26/2012 17:11			10/26/2012 15:46			10/26/2012 16:06		
		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	43.6	87	40 - 140	42.1	84	4	30
74-97-5	Bromochloromethane	0.127U	0.127		50.0	54.5	109	65 - 130	52.5	105	4	30
75-27-4	Bromodichloromethane	0.083U	0.083		50.0	53.1	106	75 - 120	51.7	103	3	30
75-25-2	Bromoform	0.215U	0.215		50.0	46.2	92	70 - 130	44.9	90	3	30
74-83-9	Bromomethane	0.427U	0.427		50.0	57.0	114	30 - 145	57.2	114	0.4	30
75-15-0	Carbon disulfide	0.190U	0.190		50.0	54.0	108	35 - 160	51.5	103	5	30
56-23-5	Carbon tetrachloride	0.248U	0.248		50.0	49.7	99	65 - 140	48.2	96	3	30
75-00-3	Chloroethane	0.235U	0.235		50.0	50.5	101	60 - 135	49.6	99	2	30
136777-61-2	m,p-Xylene	0.123U	0.123		100	105	105	75 - 130	103	103	2	30
67-66-3	Chloroform	0.155U	0.155		50.0	51.6	103	65 - 135	49.9	100	3	30
74-87-3	Chloromethane	0.144U	0.144		50.0	44.3	89	40 - 125	43.7	87	1	30
74-95-3	Dibromomethane	0.211U	0.211		50.0	50.9	102	75 - 125	50.5	101	0.8	30
75-71-8	Dichlorodifluoromethane	0.145U	0.145		50.0	51.1	102	30 - 155	49.6	99	3	30
75-34-3	1,1-Dichloroethane	0.171U	0.171		50.0	52.1	104	70 - 135	51.4	103	1	30
107-06-2	1,2-Dichloroethane	0.116U	0.116		50.0	50.5	101	70 - 130	49.4	99	2	30
156-59-2	cis-1,2-Dichloroethene	0.103U	0.103		50.0	51.8	104	70 - 125	50.1	100	3	30
156-60-5	trans-1,2-Dichloroethene	0.077U	0.077		50.0	51.6	103	60 - 140	51.0	102	1	30
75-09-2	Methylene chloride	0.149U	0.149		50.0	47.3	95	55 - 140	45.5	91	4	30
78-87-5	1,2-Dichloropropane	0.150U	0.150		50.0	52.8	106	75 - 125	51.2	102	3	30
10061-01-5	cis-1,3-Dichloropropene	0.124U	0.124		50.0	51.2	102	70 - 130	50.7	101	1	30
10061-02-6	trans-1,3-Dichloropropene	0.128U	0.128		50.0	53.6	107	55 - 140	51.7	103	4	30
100-41-4	Ethylbenzene	0.109U	0.109		50.0	51.0	102	75 - 125	50.0	100	2	30
591-78-6	2-Hexanone	0.122U	0.122		50.0	45.2	90	55 - 130	46.9	94	4	30
98-82-8	Isopropylbenzene (Cumene)	0.130U	0.130		50.0	51.8	104	75 - 125	50.1	100	3	30
78-93-3	2-Butanone	0.142U	0.142		50.0	45.3	91	30 - 150	42.5	85	6	30
108-10-1	4-Methyl-2-pentanone	0.120U	0.120		50.0	49.4	99	60 - 135	45.4	91	8	30
103-65-1	n-Propylbenzene	0.727U	0.727		50.0	52.6	105	70 - 130	50.2	100	5	30
100-42-5	Styrene	0.089U	0.089		50.0	52.7	105	65 - 135	50.9	102	3	30
127-18-4	Tetrachloroethene	0.193U	0.193		50.0	54.5	109	45 - 150	53.7	107	1	30
630-20-6	1,1,1,2-Tetrachloroethane	0.120U	0.120		50.0	55.5	111	80 - 130	54.6	109	2	30
79-34-5	1,1,2,2-Tetrachloroethane	0.109U	0.109		50.0	51.4	103	65 - 130	49.5	99	4	30
120-82-1	1,2,4-Trichlorobenzene	0.105U	0.105		50.0	55.2	110	65 - 135	53.3	107	4	30
71-55-6	1,1,1-Trichloroethane	0.123U	0.123		50.0	52.4	105	65 - 130	51.4	103	2	30

GC/MS Volatiles Quality Control Summary

Analytical Batch 493244		**Client ID**	MB493244			LCS493244			LCSD493244		
Prep Batch N/A		**GCAL ID**	1121818			1121819			1121820		
		Sample Type	Method Blank			LCS			LCSD		
		Analytical Date	10/26/2012 17:11			10/26/2012 15:46			10/26/2012 16:06		
		Matrix	Water			Water			Water		
SW-846 8260B		**Units**	**Result**	ug/L **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	50.6	101	75 - 125	51.1	102	1	30
75-69-4	Trichlorofluoromethane		0.157U	0.157	50.0	53.8	108	60 - 145	50.8	102	6	30
96-18-4	1,2,3-Trichloropropane		0.065U	0.065	50.0	48.7	97	75 - 125	47.3	95	3	30
95-63-6	1,2,4-Trimethylbenzene		0.084U	0.084	50.0	53.2	106	75 - 130	50.1	100	6	30
108-67-8	1,3,5-Trimethylbenzene		0.066U	0.066	50.0	52.7	105	75 - 130	50.1	100	5	30
75-01-4	Vinyl chloride		0.127U	0.127	50.0	54.3	109	50 - 145	53.3	107	2	30
95-47-6	o-Xylene		0.055U	0.055	50.0	52.2	104	80 - 120	50.8	102	3	30
96-12-8	1,2-Dibromo-3-chloropropane		0.194U	0.194	50.0	49.8	100	50 - 130	47.0	94	6	30
106-93-4	1,2-Dibromoethane		0.102U	0.102	50.0	53.0	106	80 - 120	52.1	104	2	30
1634-04-4	tert-Butyl methyl ether (MTBE)		0.078U	0.078	50.0	49.4	99	65 - 125	49.4	99	0	30
99-87-6	4-Isopropyltoluene		0.070U	0.070	50.0	54.5	109	75 - 130	50.6	101	7	30
594-20-7	2,2-Dichloropropane		0.170U	0.170	50.0	49.3	99	70 - 135	49.6	99	0.6	30
563-58-6	1,1-Dichloropropene		0.052U	0.052	50.0	54.0	108	75 - 130	52.6	105	3	30
142-28-9	1,3-Dichloropropane		0.059U	0.059	50.0	52.0	104	75 - 125	51.9	104	0.2	30
108-86-1	Bromobenzene		0.145U	0.145	50.0	53.0	106	75 - 125	50.8	102	4	30
95-49-8	2-Chlorotoluene		0.080U	0.080	50.0	52.9	106	75 - 125	49.5	99	7	30
106-43-4	4-Chlorotoluene		0.124U	0.124	50.0	51.4	103	75 - 130	49.0	98	5	30
98-06-6	tert-Butylbenzene		0.087U	0.087	50.0	51.8	104	70 - 130	50.0	100	4	30
135-98-8	sec-Butylbenzene		0.107U	0.107	50.0	53.5	107	70 - 125	50.8	102	5	30
541-73-1	1,3-Dichlorobenzene		0.138U	0.138	50.0	52.7	105	75 - 125	49.3	99	7	30
106-46-7	1,4-Dichlorobenzene		0.083U	0.083	50.0	52.0	104	75 - 125	48.9	98	6	30
104-51-8	n-Butylbenzene		0.123U	0.123	50.0	56.1	112	70 - 135	52.2	104	7	30
95-50-1	1,2-Dichlorobenzene		0.135U	0.135	50.0	52.2	104	70 - 120	48.6	97	7	30
87-68-3	Hexachlorobutadiene		0.265U	0.265	50.0	59.4	119	50 - 140	55.5	111	7	30
91-20-3	Naphthalene		0.176U	0.176	50.0	54.0	108	55 - 140	53.4	107	1	30
87-61-6	1,2,3-Trichlorobenzene		0.079U	0.079	50.0	56.8	114	55 - 140	54.8	110	4	30
75-35-4	1,1-Dichloroethene		0.208U	0.208	50.0	51.0	102	70 - 130	49.5	99	3	30
71-43-2	Benzene		0.111U	0.111	50.0	50.8	102	80 - 120	49.9	100	2	30
79-01-6	Trichloroethene		0.161U	0.161	50.0	52.1	104	70 - 125	51.2	102	2	30
108-88-3	Toluene		0.122U	0.122	50.0	51.6	103	75 - 120	51.6	103	0	30
108-90-7	Chlorobenzene		0.083U	0.083	50.0	52.1	104	80 - 120	51.7	103	0.8	30
Surrogate												
460-00-4	4-Bromofluorobenzene		48.4	97	50	49	98	75 - 120	49.5	99		

GC/MS Volatiles Quality Control Summary

Analytical Batch	493244	**Client ID**	MB493244			LCS493244			LCSD493244			
Prep Batch	N/A	**GCAL ID**	1121818			1121819			1121820			
		Sample Type	Method Blank			LCS			LCSD			
		Analytical Date	10/26/2012 17:11			10/26/2012 15:46			10/26/2012 16:06			
		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		50.1	100	50	49.4	99	85 - 115	51	102		
2037-26-5	Toluene d8		51.9	104	50	50.5	101	85 - 120	52.1	104		
17060-07-0	1,2-Dichloroethane-d4		48.3	97	50	49.9	100	70 - 120	49.7	99		

Inorganics Quality Control Summary

Analytical Batch	493483	**Client ID**	MB493003		LCS493003		
Prep Batch	493003	**GCAL ID**	1120619		1120620		
Prep Method	SW-846	**Sample Type**	Method Blank		LCS		
	7470A	**Prep Date**	10/24/2012 11:40		10/24/2012 11:40		
		Analytical Date	10/31/2012 11:25		10/31/2012 11:27		
		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	4.29	86	80 - 120

Analytical Batch	493483	**Client ID**	MW-G-01		1120572MS		
Prep Batch	493003	**GCAL ID**	21210240701		1120622		
Prep Method	SW-846	**Sample Type**	SAMPLE		MS		
	7470A	**Prep Date**	10/24/2012 11:40		10/24/2012 11:40		
		Analytical Date	10/31/2012 11:28		10/31/2012 11:31		
		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	4.38	88	75 - 125

Analytical Batch	493483	**Client ID**	MW-G-01		1120572DUP		
Prep Batch	493003	**GCAL ID**	21210240701		1120621		
Prep Method	SW-846	**Sample Type**	SAMPLE		DUP		
	7470A	**Prep Date**	10/24/2012 11:40		10/24/2012 11:40		
		Analytical Date	10/31/2012 11:28		10/31/2012 11:30		
		Matrix	Water		Water		
SW-846 7470A		**Units**	ug/L	**Result**		**RPD**	
		Result	**RDL**		**RPD**	**Limit**	
7439-97-6	Mercury	0.00000	0.068	0.00000	0	20	

Inorganics Quality Control Summary

Analytical Batch	493483	**Client ID**	MB493003		LCS493003		
Prep Batch	493003	**GCAL ID**	1120619		1120620		
Prep Method	SW-846	**Sample Type**	Method Blank		LCS		
	7470A	**Prep Date**	10/24/2012 11:40		10/24/2012 11:40		
		Analytical Date	10/31/2012 11:25		10/31/2012 11:27		
		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	4.29	86	80 - 120

Analytical Batch	493483	**Client ID**	MW-G-01		1120572MS		
Prep Batch	493003	**GCAL ID**	21210240701		1120622		
Prep Method	SW-846	**Sample Type**	SAMPLE		MS		
	7470A	**Prep Date**	10/24/2012 11:40		10/24/2012 11:40		
		Analytical Date	10/31/2012 11:28		10/31/2012 11:31		
		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	4.38	88	80 - 120

Analytical Batch	493483	**Client ID**	MW-G-01		1120572DUP		
Prep Batch	493003	**GCAL ID**	21210240701		1120621		
Prep Method	SW-846	**Sample Type**	SAMPLE		DUP		
	7470A	**Prep Date**	10/24/2012 11:40		10/24/2012 11:40		
		Analytical Date	10/31/2012 11:28		10/31/2012 11:30		
		Matrix	Water		Water		
SW-846 7470A		**Units**	ug/L		**Result**		**RPD**
		Result	**RDL**			**RPD**	**Limit**
7439-97-6	Mercury	0.00000	0.068		0.00000	0	20

Inorganics Quality Control Summary

Analytical Batch	493071	**Client ID**	MB493002	LCS493002
Prep Batch	493002	**GCAL ID**	1120615	1120616
Prep Method	SW-846	**Sample Type**	Method Blank	LCS
	3010A	**Prep Date**	10/24/2012 14:20	10/24/2012 14:20
		Analytical Date	10/25/2012 19:24	10/25/2012 19:47
		Matrix	Water	Water

SW-846 6010C		**Units**	ug/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
7429-90-5	Aluminum	30.3U	30.3	5000	4660	93	80 - 120
7440-36-0	Antimony	3.11U	3.11	500	480	96	80 - 120
7440-38-2	Arsenic	3.59U	3.59	500	484	97	80 - 120
7440-39-3	Barium	0.87J	0.71	500	468	94	80 - 120
7440-41-7	Beryllium	0.10U	0.10	500	471	94	80 - 120
7440-43-9	Cadmium	0.22J	0.16	500	445	89	80 - 120
7440-70-2	Calcium	51.6J	45.7	5000	4790	96	80 - 120
7440-47-3	Chromium	0.26U	0.26	500	484	97	80 - 120
7440-48-4	Cobalt	0.62J	0.58	500	456	91	80 - 120
7440-50-8	Copper	1.01U	1.01	500	487	97	80 - 120
7439-89-6	Iron	12.6U	12.6	5000	4740	95	80 - 120
7439-92-1	Lead	1.96U	1.96	500	441	88	80 - 120
7439-95-4	Magnesium	16.5U	16.5	5000	4740	95	80 - 120
7439-96-5	Manganese	1.31U	1.31	500	467	93	80 - 120
7440-02-0	Nickel	1.20J	1.13	500	467	93	80 - 120
7440-09-7	Potassium	34.6U	34.6	10000	9610	96	80 - 120
7782-49-2	Selenium	4.42U	4.42	500	439	88	80 - 120
7440-22-4	Silver	0.70U	0.70	500	470	94	80 - 120
7440-23-5	Sodium	98.1J	61.1	20000	19200	96	80 - 120
7440-28-0	Thallium	3.04U	3.04	500	462	92	80 - 120
7440-62-2	Vanadium	1.25U	1.25	500	504	101	80 - 120
7440-66-6	Zinc	4.51U	4.51	500	456	91	80 - 120

Inorganics Quality Control Summary

Analytical Batch	493071	**Client ID**	MW-G-01	1120572MS
Prep Batch	493002	**GCAL ID**	21210240701	1120618
Prep Method	SW-846	**Sample Type**	SAMPLE	MS
	3010A	**Prep Date**	10/24/2012 14:20	10/24/2012 14:20
		Analytical Date	10/25/2012 19:55	10/25/2012 20:10
		Matrix	Water	Water

SW-846 6010C		**Units**	ug/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
7429-90-5	Aluminum	32.0	30.3	5000	4830	96	80 - 120
7440-39-3	Barium	30.6	0.71	500	517	97	80 - 120
7440-41-7	Beryllium	0.0	0.10	500	489	98	80 - 120
7440-43-9	Cadmium	1.06	0.16	500	459	92	80 - 120
7440-47-3	Chromium	2.23	0.26	500	501	100	80 - 120
7440-48-4	Cobalt	1.47	0.58	500	441	88	80 - 120
7440-50-8	Copper	12.0	1.01	500	510	100	80 - 120
7439-92-1	Lead	0.0	1.96	500	448	90	80 - 120
7439-96-5	Manganese	16.3	1.31	500	511	99	80 - 120
7440-02-0	Nickel	4.06	1.13	500	449	89	80 - 120
7440-09-7	Potassium	7200	34.6	10000	16800	96	80 - 120
7782-49-2	Selenium	0.0	4.42	500	474	95	80 - 120
7440-22-4	Silver	0.0	0.70	500	489	98	80 - 120
7440-23-5	Sodium	49900	61.1	20000	68300	92	80 - 120
7440-28-0	Thallium	3.69	3.04	500	472	94	80 - 120
7440-66-6	Zinc	175	4.51	500	645	94	80 - 120

Analytical Batch	493071	**Client ID**	MW-G-01	1120572DUP
Prep Batch	493002	**GCAL ID**	21210240701	1120617
Prep Method	SW-846	**Sample Type**	SAMPLE	DUP
	3010A	**Prep Date**	10/24/2012 14:20	10/24/2012 14:20
		Analytical Date	10/25/2012 19:55	10/25/2012 20:02
		Matrix	Water	Water

SW-846 6010C		**Units**	ug/L	**Result**		**RPD**
		Result	**RDL**		**RPD**	**Limit**
7429-90-5	Aluminum	31.9605433	30.3	74.8	**80***	20
7440-39-3	Barium	30.6135995	0.71	32.0	4	20
7440-41-7	Beryllium	0.0	0.10	0.0	0	20
7440-43-9	Cadmium	1.05666274	0.16	0.99	6	20
7440-47-3	Chromium	2.23023834	0.26	3.26	**37***	20
7440-48-4	Cobalt	1.46945835	0.58	1.63	10	20

Inorganics Quality Control Summary

Analytical Batch	493071	**Client ID**	MW-G-01	1120572DUP
Prep Batch	493002	**GCAL ID**	21210240701	1120617
Prep Method	SW-846	**Sample Type**	SAMPLE	DUP
	3010A	**Prep Date**	10/24/2012 14:20	10/24/2012 14:20
		Analytical Date	10/25/2012 19:55	10/25/2012 20:02
		Matrix	Water	Water

SW-846 6010C		**Units**	ug/L	**Result**		**RPD**
		Result	**RDL**		**RPD**	**Limit**
7440-50-8	Copper	12.0325407	1.01	12.1	0.7	20
7439-92-1	Lead	0.0	1.96	0.0	0	20
7439-96-5	Manganese	16.273435	1.31	21.0	**25***	20
7440-02-0	Nickel	4.05898941	1.13	5.02	**21***	20
7440-09-7	Potassium	7198.36448	34.6	7400	3	20
7782-49-2	Selenium	0.0	4.42	0.0	0	20
7440-22-4	Silver	0.0	0.70	0.0	0	20
7440-23-5	Sodium	49876.5433	61.1	50700	2	20
7440-28-0	Thallium	3.6945415	3.04	0.0	**200***	20
7440-66-6	Zinc	174.892892	4.51	183	4	20

Analytical Batch	493243	**Client ID**	MW-G-01	1120572MS	
Prep Batch	493002	**GCAL ID**	21210240701	1120618	
Prep Method	SW-846	**Sample Type**	SAMPLE	MS	
	3010A	**Prep Date**	10/24/2012 14:20	10/24/2012 14:20	
		Analytical Date	10/26/2012 17:55	10/26/2012 18:11	
		Matrix	Water	Water	

SW-846 6010C		**Units**	ug/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
7440-36-0	Antimony	0.0	3.11	500	501	100	80 - 120
7440-38-2	Arsenic	0.0	3.59	500	511	102	80 - 120
7440-70-2	Calcium	44100	45.7	5000	48200	81	80 - 120
7439-89-6	Iron	587	12.6	5000	5640	101	80 - 120
7439-95-4	Magnesium	40900	16.5	5000	45700	96	80 - 120
7440-62-2	Vanadium	28.6	1.25	500	542	103	80 - 120

Inorganics Quality Control Summary

Analytical Batch	493243	**Client ID**	MW-G-01	1120572DUP
Prep Batch	493002	**GCAL ID**	21210240701	1120617
Prep Method	SW-846	**Sample Type**	SAMPLE	DUP
	3010A	**Prep Date**	10/24/2012 14:20	10/24/2012 14:20
		Analytical Date	10/26/2012 17:55	10/26/2012 18:03
		Matrix	Water	Water

SW-846 6010C		**Units**	ug/L			
		Result	**RDL**	**Result**	**RPD**	**RPD Limit**
7440-36-0	Antimony	0.0	3.11	0.0	0	20
7440-38-2	Arsenic	0.0	3.59	0.0	0	20
7440-70-2	Calcium	44127.9368	45.7	45700	3	20
7439-89-6	Iron	586.933042	12.6	739	**23***	20
7439-95-4	Magnesium	40930.3837	16.5	43100	5	20
7440-62-2	Vanadium	28.6004449	1.25	27.4	4	20

Inorganics Quality Control Summary

Analytical Batch	493071	**Client ID**	MB493001	LCS493001
Prep Batch	493001	**GCAL ID**	1120611	1120612
Prep Method	SW-846 3005	**Sample Type**	Method Blank	LCS
	Dissolved	**Prep Date**	10/24/2012 11:40	10/24/2012 11:40
		Analytical Date	10/25/2012 18:24	10/25/2012 18:32
		Matrix	Water	Water

SW-846 6010C Dissolved		**Units**	ug/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
7429-90-5	Aluminum	30.3U	30.3	5000	4560	91	80 - 120
7440-36-0	Antimony	3.11U	3.11	500	472	94	80 - 120
7440-38-2	Arsenic	3.59U	3.59	500	479	96	80 - 120
7440-39-3	Barium	0.71U	0.71	500	463	93	80 - 120
7440-41-7	Beryllium	0.10U	0.10	500	471	94	80 - 120
7440-43-9	Cadmium	0.16U	0.16	500	449	90	80 - 120
7440-70-2	Calcium	45.7U	45.7	5000	4780	96	80 - 120
7440-47-3	Chromium	0.26U	0.26	500	477	95	80 - 120
7440-48-4	Cobalt	0.58U	0.58	500	451	90	80 - 120
7440-50-8	Copper	1.01U	1.01	500	478	96	80 - 120
7439-89-6	Iron	12.6U	12.6	5000	4810	96	80 - 120
7439-92-1	Lead	1.96U	1.96	500	440	88	80 - 120
7439-95-4	Magnesium	16.5U	16.5	5000	4850	97	80 - 120
7439-96-5	Manganese	1.31U	1.31	500	462	92	80 - 120
7440-02-0	Nickel	1.13U	1.13	500	465	93	80 - 120
7440-09-7	Potassium	29.8J	3.46	10000	9500	95	80 - 120
7782-49-2	Selenium	4.42U	4.42	500	450	90	80 - 120
7440-22-4	Silver	0.70U	0.70	500	467	93	80 - 120
7440-23-5	Sodium	101J	61.1	20000	19200	96	80 - 120
7440-28-0	Thallium	3.04U	3.04	500	458	92	80 - 120
7440-62-2	Vanadium	1.25U	1.25	500	485	97	80 - 120
7440-66-6	Zinc	4.51U	4.51	500	461	92	80 - 120

Inorganics Quality Control Summary

Analytical Batch	493071	**Client ID**	MW-G-01	1120572MS
Prep Batch	493001	**GCAL ID**	21210240701	1120614
Prep Method	SW-846 3005	**Sample Type**	SAMPLE	MS
	Dissolved	**Prep Date**	10/24/2012 11:40	10/24/2012 11:40
		Analytical Date	10/25/2012 18:39	10/25/2012 18:54
		Matrix	Water	Water

SW-846 6010C Dissolved		**Units**	ug/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
7429-90-5	Aluminum	0.0	30.3	5000	4580	92	80 - 120
7440-39-3	Barium	29.1	0.71	500	490	92	80 - 120
7440-41-7	Beryllium	0.0	0.10	500	484	97	80 - 120
7440-43-9	Cadmium	0.71	0.16	500	439	88	80 - 120
7440-47-3	Chromium	1.04	0.26	500	475	95	80 - 120
7440-48-4	Cobalt	0.63	0.58	500	434	87	80 - 120
7440-50-8	Copper	8.61	1.01	500	484	95	80 - 120
7439-92-1	Lead	0.0	1.96	500	432	86	80 - 120
7439-96-5	Manganese	0.0	1.31	500	466	93	80 - 120
7440-02-0	Nickel	1.75	1.13	500	437	87	80 - 120
7440-09-7	Potassium	7310	3.46	10000	16600	93	80 - 120
7782-49-2	Selenium	7.99	4.42	500	468	92	80 - 120
7440-22-4	Silver	0.0	0.70	500	470	94	80 - 120
7440-23-5	Sodium	51000	61.1	20000	67400	82	80 - 120
7440-28-0	Thallium	3.45	3.04	500	457	91	80 - 120
7440-66-6	Zinc	161	4.51	500	607	89	80 - 120

Analytical Batch	493071	**Client ID**	MW-G-01	1120572DUP
Prep Batch	493001	**GCAL ID**	21210240701	1120613
Prep Method	SW-846 3005	**Sample Type**	SAMPLE	DUP
	Dissolved	**Prep Date**	10/24/2012 11:40	10/24/2012 11:40
		Analytical Date	10/25/2012 18:39	10/25/2012 18:47
		Matrix	Water	Water

SW-846 6010C Dissolved		**Units**	ug/L	**Result**		**RPD**
		Result	**RDL**		**RPD**	**Limit**
7429-90-5	Aluminum	0.0	30.3	0.0	0	30
7440-39-3	Barium	29.1338443	0.71	29.9	3	30
7440-41-7	Beryllium	0.0	0.10	0.0	0	30
7440-43-9	Cadmium	0.71392375	0.16	0.82	14	30
7440-47-3	Chromium	1.04335017	0.26	1.16	10	30
7440-48-4	Cobalt	0.63117706	0.58	0.65	3	30

Inorganics Quality Control Summary

Analytical Batch	493071	**Client ID**	MW-G-01	1120572DUP
Prep Batch	493001	**GCAL ID**	21210240701	1120613
Prep Method	SW-846 3005	**Sample Type**	SAMPLE	DUP
	Dissolved	**Prep Date**	10/24/2012 11:40	10/24/2012 11:40
		Analytical Date	10/25/2012 18:39	10/25/2012 18:47
		Matrix	Water	Water

SW-846 6010C Dissolved		**Units**	ug/L			
		Result	**RDL**	**Result**	**RPD**	**RPD Limit**
7440-50-8	Copper	8.61372196	1.01	8.59	0.3	30
7439-92-1	Lead	0.0	1.96	0.0	0	30
7439-96-5	Manganese	0.0	1.31	0.0	0	30
7440-02-0	Nickel	1.75158307	1.13	1.62	8	30
7440-09-7	Potassium	7307.18031	3.46	7380	1	30
7782-49-2	Selenium	7.98932437	4.42	7.21	10	30
7440-22-4	Silver	0.0	0.70	0.0	0	30
7440-23-5	Sodium	50977.5285	61.1	50800	0.3	30
7440-28-0	Thallium	3.44991226	3.04	3.90	12	30
7440-66-6	Zinc	161.467197	4.51	163	0.8	30

Analytical Batch	493243	**Client ID**	MW-G-01	1120572MS
Prep Batch	493001	**GCAL ID**	21210240701	1120614
Prep Method	SW-846 3005	**Sample Type**	SAMPLE	MS
	Dissolved	**Prep Date**	10/24/2012 11:40	10/24/2012 11:40
		Analytical Date	10/26/2012 16:23	10/26/2012 16:39
		Matrix	Water	Water

SW-846 6010C Dissolved		**Units**	ug/L				
		Result	**RDL**	**Spike Added**	**Result**	**% R**	**Control Limits % R**
7440-36-0	Antimony	3.42	3.11	500	505	100	80 - 120
7440-38-2	Arsenic	0.0	3.59	500	516	103	80 - 120
7440-70-2	Calcium	44800	45.7	5000	46600	**35***	80 - 120
7439-89-6	Iron	0.0	12.6	5000	4850	97	80 - 120
7439-95-4	Magnesium	40900	16.5	5000	44700	**77***	80 - 120
7440-62-2	Vanadium	26.2	1.25	500	534	102	80 - 120

Inorganics Quality Control Summary

Analytical Batch	493243	**Client ID**	MW-G-01	1120572DUP
Prep Batch	493001	**GCAL ID**	21210240701	1120613
Prep Method	SW-846 3005	**Sample Type**	SAMPLE	DUP
	Dissolved	**Prep Date**	10/24/2012 11:40	10/24/2012 11:40
		Analytical Date	10/26/2012 16:23	10/26/2012 16:31
		Matrix	Water	Water

SW-846 6010C Dissolved		**Units**	ug/L			
		Result	**RDL**	**Result**	**RPD**	**RPD Limit**
7440-36-0	Antimony	3.41746714	3.11	0.0	**200***	30
7440-38-2	Arsenic	0.0	3.59	0.0	0	30
7440-70-2	Calcium	44811.2403	45.7	45700	2	30
7439-89-6	Iron	0.0	12.6	0.0	0	30
7439-95-4	Magnesium	40878.6876	16.5	41600	2	30
7440-62-2	Vanadium	26.2207236	1.25	26.2	0.03	30

General Chemistry Quality Control Summary

Analytical Batch 492997	**Client ID**	MB492997			LCS492997		
Prep Batch N/A	**GCAL ID**	1120581			1120582		
	Sample Type	Method Blank			LCS		
	Analytical Date	10/24/2012 16:41			10/24/2012 16:42		
	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	0.492	98	89.5 -110.5

Analytical Batch 492997	**Client ID**	MW-G-01			1120572MS			1120572MSD			
Prep Batch N/A	**GCAL ID**	21210240701			1120583			1120584			
	Sample Type	SAMPLE			MS			MSD			
	Analytical Date	10/24/2012 17:01			10/24/2012 17:02			10/24/2012 17:03			
	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		1.02	0.025	2.50	3.63	104	89.5 -110.5	3.64	105	0.4	25

Analytical Batch 492998	**Client ID**	MB492998			LCS492998		
Prep Batch N/A	**GCAL ID**	1120587			1120588		
	Sample Type	Method Blank			LCS		
	Analytical Date	10/24/2012 16:04			10/24/2012 16:05		
	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	0.486	97	89.5 -110.5

Analytical Batch 492998	**Client ID**	MW-G-01			1120572MS			1120572MSD			
Prep Batch N/A	**GCAL ID**	21210240701			1120589			1120590			
	Sample Type	SAMPLE			MS			MSD			
	Analytical Date	10/24/2012 16:06			10/24/2012 16:07			10/24/2012 16:09			
	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		0.007	0.002	0.500	0.473	93	89.5 -110.5	0.461	91	3	25

General Chemistry Quality Control Summary

Analytical Batch	493273	**Client ID**	MB493163			LCS493163		
Prep Batch	493163	**GCAL ID**	1121352			1121353		
Prep Method	SM4500 NH3 BE TKN	**Sample Type**	Method Blank			LCS		
		Prep Date	10/26/2012 05:30			10/26/2012 05:30		
		Analytical Date	10/27/2012 07:53			10/27/2012 07:53		
		Matrix	Water			Water		
SM 4500 NH3 BE Ammonia			**Units**	mg/L-N	**Spike**	**Result**		**Control**
			Result	**RDL**	**Added**		**% R**	**Limits % R**
7664-41-7	Ammonia		0.24U	0.24	15.0	15.7	105	80 - 120

Analytical Batch	493273	**Client ID**	MW-X-01			MW-X-01-MS			MW-X-01-MSD			
Prep Batch	493163	**GCAL ID**	21210250303			21210250304			21210250305			
Prep Method	SM4500 NH3 BE TKN	**Sample Type**	SAMPLE			MS			MSD			
		Prep Date	10/26/2012 05:30			10/26/2012 05:30			10/26/2012 05:30			
		Analytical Date	10/27/2012 07:53			10/27/2012 07:53			10/27/2012 07:53			
		Matrix	Water			Water			Water			
SM 4500 NH3 BE Ammonia			**Units**	mg/L-N	**Spike**	**Result**		**Control**	**Result**			**RPD**
			Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
7664-41-7	Ammonia		0.00	0.24	15.0	14.1	94	74.6 - 125	13.9	93	1	25

Analytical Batch	493273	**Client ID**	MW-G-01		1120572DUP		
Prep Batch	493163	**GCAL ID**	21210240701		1121354		
Prep Method	SM4500 NH3 BE TKN	**Sample Type**	SAMPLE		DUP		
		Prep Date	10/26/2012 05:30		10/26/2012 05:30		
		Analytical Date	10/27/2012 07:53		10/27/2012 07:53		
		Matrix	Water		Water		
SM 4500 NH3 BE Ammonia			**Units**	mg/L-N	**Result**		**RPD**
			Result	**RDL**		**RPD**	**Limit**
7664-41-7	Ammonia		0.00	0.24	0.00	0	25

General Chemistry Quality Control Summary

Analytical Batch 493575	**Client ID**	MB493575			LCS493575		
Prep Batch N/A	**GCAL ID**	1123204			1123205		
	Sample Type	Method Blank			LCS		
	Analytical Date	10/31/2012 18:09			10/31/2012 18:26		
	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	98.7	79 - 109
14808-79-8	Sulfate	0.115U	0.115	5.00	4.81	96.2	82 - 110

Analytical Batch 493575	**Client ID**	MW-X-01			MW-X-01-MS			MW-X-01-MSD			
Prep Batch N/A	**GCAL ID**	21210250303			21210250304			21210250305			
	Sample Type	SAMPLE			MS			MSD			
	Analytical Date	11/01/2012 13:52			11/01/2012 14:09			11/01/2012 14:27			
	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	24.7	1.26	50.0	75.4	101	79 - 109	75.0	101	0.47	15
14808-79-8	Sulfate	43.9	2.30	100	146	103	82 - 110	145	102	0.72	15

Analytical Batch 493575	**Client ID**	LF05-MW-U-01			1122949MS			1122949MSD			
Prep Batch N/A	**GCAL ID**	21210310801			1123206			1123207			
	Sample Type	SAMPLE			MS			MSD			
	Analytical Date	11/01/2012 10:03			11/01/2012 10:20			11/01/2012 10:38			
	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	82.7	6.30	250	321	95.5	79 - 109	323	95.9	0.35	15
14808-79-8	Sulfate	105	11.5	500	610	101	82 - 110	615	102	0.91	15

General Chemistry Quality Control Summary

Analytical Batch 493021	**Client ID**	MB493021			LCS493021			LCSD493021			
Prep Batch N/A	**GCAL ID**	1120772			1120773			1120774			
	Sample Type	Method Blank			LCS			LCSD			
	Analytical Date	10/25/2012 15:18			10/25/2012 15:43			10/25/2012 16:07			
	Matrix	Water			Water			Water			
SM 5310B TOC		**Units**	mg/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
C-012	Total Organic Carbon	0.30U	0.30	50.0	55.0	110	80 - 120	54.6	109	0.8	25

Analytical Batch 493021	**Client ID**	SS086-MW04S_1012			SS086-MW04S_1012-MS			SS086-MW04S_1012-SD			
Prep Batch N/A	**GCAL ID**	21210200901			21210200902			21210200903			
	Sample Type	SAMPLE			MS			MSD			
	Analytical Date	10/25/2012 17:00			10/25/2012 17:25			10/25/2012 17:50			
	Matrix	Water			Water			Water			
SM 5310B TOC		**Units**	mg/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
C-012	Total Organic Carbon	5.0	0.30	50.0	58.5	107	75 - 125	61.8	114	6	25

Analytical Batch 493021	**Client ID**	WEEKLY 001A COMP			1119953MS			1119953MSD			
Prep Batch N/A	**GCAL ID**	21210223302			1120775			1120776			
	Sample Type	SAMPLE			MS			MSD			
	Analytical Date	10/25/2012 23:13			10/25/2012 23:33			10/25/2012 23:51			
	Matrix	Water			Water			Water			
SM 5310B TOC		**Units**	mg/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
C-012	Total Organic Carbon	12.2	1.5	250	297	114	75 - 125	294	113	1	25

General Chemistry Quality Control Summary

Analytical Batch 492996	**Client ID**	MB492996			LCS492996		
Prep Batch N/A	**GCAL ID**	1120576			1120577		
	Sample Type	Method Blank			LCS		
	Analytical Date	10/24/2012 10:40			10/24/2012 10:40		
	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	501	100	80 - 120

Analytical Batch 492996	**Client ID**	MW-G-01			1120572MS		
Prep Batch N/A	**GCAL ID**	21210240701			1120579		
	Sample Type	SAMPLE			MS		
	Analytical Date	10/24/2012 10:41			10/24/2012 10:41		
	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		0.000	4.00	500	448	90	80 - 120

Analytical Batch 492996	**Client ID**	MW-G-01		1120572DUP		
Prep Batch N/A	**GCAL ID**	21210240701		1120578		
	Sample Type	SAMPLE		DUP		
	Analytical Date	10/24/2012 10:41		10/24/2012 10:41		
	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

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
	Bhate	4760	212102407	10/31/12

Report to:
Client: Bhate Environmental Associates
Address: 1608 13th Ave S #300
Birmingham AL
Contact: Tracy Walker
Phone: 205 918 4000
Fax:

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

P.O. Number:
Project Name/Number: Cannon AFB D020001
Sampled By: Ben Stewart Jordan Gibson

Analytical Requests & Method

Matrix[1]	Date	Time (2400)	Comp	Grab	Sample Description	Preservatives	No Containers	8260C (HCL)	Total Metals (HNO3) 6010C 4760B	Diss Metals (HNO3) Field filtered 6010C E.Shewell-4760B	Cr (+3, +6) (7199)	Perchlorate (6860)	Nitrate/Nitrite (300.1)	Ammonia (SM4500) H2SO4	Sulfate (300.1)	Chloride (300.1)	TOC (SM5310B) (HCL)	Remarks:	Lab ID
WG	10/23/12	1446		X	MW-G-01		10	X	X	X	X	X	X	X	X	X	X		1
WG	10/23/12	1446		X	MW-G-01-FD		10	X	X	X	X	X	X	X	X	X	X		2
WQ	10/23/12	1446			TB-5		3	X											3

Lab use only:
Custody Seal used ☑ yes ☐ no
intact ☑ yes ☐ no
Temperature °C 2.3

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

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
[signature]	Fedex	10/25/12	1200
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Fedex	Dale McLime	10-24-12	1000
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
8003 4106 1962			

Note: Diss Metals 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	212102407
Client 4760 - Bhate Environmental Associates, Inc.	**Transport Method** COURIER
Profile 235531 - Cannon	**Received By** Saucier, Charlotte
Line Item(s) 1 - Waters	**Receive Date(s)** 10/24/12

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)
8003 4106 1962	2.3

DISCREPANCIES

None

LABORATORY PRESERVATIONS

None

NOTES

November 02, 2012

Brenda Martinez
GCAL LAB
7979 GSRI AVENUE
BATON ROUGE, LA 70820
TEL: (225) 769-4900
FAX (225) 767-5717

Order No.: 1210237

RE: 212102407

Dear Brenda Martinez:

DHL Analytical, Inc. received 2 sample(s) on 10/26/2012 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

#1210232

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: 12-0906

Project Name/Number: 212102407

Sampled By:

	Matrix	Date	Time (2400)	Comp	Grab	Sample Description	Preservatives	No. Containers	PERCHLORATE (6860)	Remarks:	Lab ID
01	W	10/23/2012	14:46		X	MW-G-01		1	X	21210240701	
02	W	10/23/2012	14:46		X	MW-G-01 FD		1	X	21210240702	

Turn Around Time: ___ 24 - 48 hrs ___ 3 days 1 week X standard other ___

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
[signature]	FedEx	10/25/12	1700
[signature]	[signature]	10/26/12	905

Note: Receiving temp 0.8 Therm #17 custody seals 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

Do Not Lift Using This Tag

ORIGIN ID: OPLA (225) 769-4900
CHARLOTTE SAUCTER
GCAL
7979 GSRI RD

BATON ROUGE, LA 70802
UNITED STATES US

SHIP DATE: 25OCT12
ACTWGT: 28.0 LB MAN
CAD: 0924693/CAFE2605

BILL SENDER

TO

DHL
2300 DOUBLE CREEK

ROUND ROCK TX 78664
(225) 769-4900
INV:
PO:
REF:
DEPT:

FedEx Express

TRK# 0201 5443 0509 2380

FRI - 26 OCT A1
PRIORITY OVERNIGHT

A8 BSMA

78664
TX-US AUS

Part # 156148-434 RIT2 07/11

GCAL

CUSTODY SEAL

Date Sealed: 10-25-12

Sealed By: JBH

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: 10/26/2012

Work Order Number 1210237

Received by JB

Checklist completed by: Signature 10/26/2012 Date

Reviewed by Initials 10/26/2012 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 ☐	0.8 °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: 212102407	**Date: 11/2/2012**
Reviewer Name: Angie O'Donnell	**Laboratory Work Order: 1210237**
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				
		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: 212102407	**Date: 11/2/2012**
Reviewer Name: Angie O'Donnell	**Laboratory Work Order: 1210237**

#[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

11/02/12

Date

DHL Analytical, Inc. **Date:** *02-Nov-12*

CLIENT: GCAL LAB
Project: 212102407
Lab Order: 1210237

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 10/26/2012. A total of 2 samples were received and analyzed. The samples arrived in good condition and were properly packaged.

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 12-0876.

Client sent samples in own containers.

This sample delivery group arrived at DHL Analytical 10/26/12.

DHL Analytical, Inc.

Date: *02-Nov-12*

CLIENT: GCAL LAB
Project: 212102407
Lab Order: 1210237

Work Order Sample Summary

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
1210237-01	MW-G-01		10/23/12 02:46 PM	10/26/2012
1210237-02	MW-G-01 FD		10/23/12 02:46 PM	10/26/2012

DHL Analytical, Inc.

02-Nov-12

Lab Order: 1210237
Client: GCAL LAB
Project: 212102407

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1210237-01A	MW-G-01	10/23/12 02:46 PM	Aqueous	SW6860	Perchlorate Prep	10/31/12 12:00 PM	54496
1210237-02A	MW-G-01 FD	10/23/12 02:46 PM	Aqueous	SW6860	Perchlorate Prep	10/31/12 12:00 PM	54496

DHL Analytical, Inc.

02-Nov-12

Lab Order: 1210237
Client: GCAL LAB
Project: 212102407

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1210237-01A	MW-G-01	Aqueous	SW6860	Perchlorate - Water	54496	1	11/01/12 02:13 PM	ICMS_121101A
1210237-02A	MW-G-01 FD	Aqueous	SW6860	Perchlorate - Water	54496	1	11/01/12 02:25 PM	ICMS_121101A

DHL Analytical, Inc.

Date: *02-Nov-12*

CLIENT:	GCAL LAB	**Client Sample ID:**	MW-G-01
Project:	212102407	**Lab ID:**	1210237-01
Project No:		**Collection Date:**	10/23/12 02:46 PM
Lab Order:	1210237	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
PERCHLORATE - WATER		**SW6860**					Analyst: **CZ**
Perchlorate	0.00248	0.000100	0.000300	N	mg/L	1	11/01/12 02:13 PM
IS: Perchlorate_107	127	0	50-150	N	%REC	1	11/01/12 02:13 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: *02-Nov-12*

CLIENT:	GCAL LAB	**Client Sample ID:**	MW-G-01 FD
Project:	212102407	**Lab ID:**	1210237-02
Project No:		**Collection Date:**	10/23/12 02:46 PM
Lab Order:	1210237	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
PERCHLORATE - WATER		**SW6860**					Analyst: **CZ**
Perchlorate	0.00252	0.000100	0.000300	N	mg/L	1	11/01/12 02:25 PM
IS: Perchlorate_107	126	0	50-150	N	%REC	1	11/01/12 02:25 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: *02-Nov-12*

CLIENT: GCAL LAB
Work Order: 1210237
Project: 212102407

ANALYTICAL QC SUMMARY REPORT

RunID: **ICMS_121101A**

The QC data in batch 54496 applies to the following samples: 1210237-01A, 1210237-02A

Sample ID: **LCS-54496** Batch ID: **54496** TestNo: **SW6860** Units: **mg/L**
SampType: **LCS** Run ID: **ICMS_121101A** Analysis Date: **11/1/2012 10:50:00 AM** Prep Date: **10/31/2012**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.000266	0.000300	0.000300	0	88.7	85	115			N
IS: Perchlorate_107	0.00101		0.00100		125	50	150			N

Sample ID: **MB-54496** Batch ID: **54496** TestNo: **SW6860** Units: **mg/L**
SampType: **MBLK** Run ID: **ICMS_121101A** Analysis Date: **11/1/2012 11:02:00 AM** Prep Date: **10/31/2012**

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		120	50	150			N

Sample ID: **1210238-03AMS** Batch ID: **54496** TestNo: **SW6860** Units: **mg/L**
SampType: **MS** Run ID: **ICMS_121101A** Analysis Date: **11/1/2012 3:02:00 PM** Prep Date: **10/31/2012**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.00177	0.000300	0.000300	0.00151	87.6	85	115			N
IS: Perchlorate_107	0.00101		0.00100		126	50	150			N

Sample ID: **1210238-03AMSD** Batch ID: **54496** TestNo: **SW6860** Units: **mg/L**
SampType: **MSD** Run ID: **ICMS_121101A** Analysis Date: **11/1/2012 3:14:00 PM** Prep Date: **10/31/2012**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.00182	0.000300	0.000300	0.00151	106	85	115	3.04	20	N
IS: Perchlorate_107	0.00101		0.00100		127	50	150	0	0	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: 1210237
Project: 212102407

ANALYTICAL QC SUMMARY REPORT

RunID: **ICMS_121101A**

Sample ID: **ICV-121031** Batch ID: **R63276** TestNo: **SW6860** Units: **mg/L**
SampType: **ICV** Run ID: **ICMS_121101A** Analysis Date: **11/1/2012 9:59:00 AM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.00179	0.000300	0.00200	0	89.4	85	115			N
IS: Perchlorate_107	0.00100		0.00100		115	50	150			N

Sample ID: **ICS-121031** Batch ID: **R63276** TestNo: **SW6860** Units: **mg/L**
SampType: **ICS** Run ID: **ICMS_121101A** Analysis Date: **11/1/2012 10:11:00 AM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.000308	0.000300	0.000300	0	103	85	115			N
IS: Perchlorate_107	0.00100		0.00100		118	50	150			N

Sample ID: **LCVL1-121031** Batch ID: **R63276** TestNo: **SW6860** Units: **mg/L**
SampType: **LCVL** Run ID: **ICMS_121101A** Analysis Date: **11/1/2012 10:36:00 AM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.000231	0.000300	0.000200	0	116	70	130			N
IS: Perchlorate_107	0.00100		0.00100		127	50	150			N

Sample ID: **CCV1-121031** Batch ID: **R63276** TestNo: **SW6860** Units: **mg/L**
SampType: **CCV** Run ID: **ICMS_121101A** Analysis Date: **11/1/2012 1:04:00 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.00504	0.000300	0.00500	0	101	85	115			N
IS: Perchlorate_107	0.00100		0.00100		108	50	150			N

Sample ID: **LCVL2-121031** Batch ID: **R63276** TestNo: **SW6860** Units: **mg/L**
SampType: **LCVL** Run ID: **ICMS_121101A** Analysis Date: **11/1/2012 1:28:00 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.000203	0.000300	0.000200	0	101	70	130			N
IS: Perchlorate_107	0.00100		0.00100		130	50	150			N

Sample ID: **CCV2-121031** Batch ID: **R63276** TestNo: **SW6860** Units: **mg/L**
SampType: **CCV** Run ID: **ICMS_121101A** Analysis Date: **11/1/2012 3:26:00 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.00495	0.000300	0.00500	0	98.9	85	115			N
IS: Perchlorate_107	0.00100		0.00100		117	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: 1210237
Project: 212102407

ANALYTICAL QC SUMMARY REPORT

RunID: **ICMS_121101A**

Sample ID: **LCVL3-121031** Batch ID: **R63276** TestNo: **SW6860** Units: **mg/L**
SampType: **LCVL** Run ID: **ICMS_121101A** Analysis Date: **11/1/2012 3:51:00 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.000203	0.000300	0.000200	0	102	70	130			N
IS: Perchlorate_107	0.00100		0.00100		133	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.

02-Nov-12

Lab Order: 1210237
Client: GCAL LAB
Project: 212102407

Sequence Report

Run ID: ICMS_121101A

Sample ID	Client Sample ID	Test Number	Batch ID	Dilution	Analysis Date	Prep Date	Matrix
INITIAL CALIBRATION SUMMARY	-----	SW6860	R63276	1	11/1/2012		A
INTERNAL STANDARD SUMMARY	-----	SW6860	R63276	1	11/1/2012		A
ICV-121031	-----	SW6860	R63276	1	11/1/2012 9:59:00 AM		A
ICS-121031	-----	SW6860	R63276	1	11/1/2012 10:11:00 AM		A
ICB-121031	-----	SW6860	R63276	1	11/1/2012 10:24:00 AM		A
LCVL1-121031	-----	SW6860	R63276	1	11/1/2012 10:36:00 AM		A
LCS-54496	-----	SW6860	54496	1	11/1/2012 10:50:00 AM	10/31/2012 12:00:50 PM	A
MB-54496	-----	SW6860	54496	1	11/1/2012 11:02:00 AM	10/31/2012 12:00:50 PM	A
LCS-54496	-----	SW6860	54496	1	11/1/2012 12:52:00 PM	10/31/2012 12:00:50 PM	A
CCV1-121031	-----	SW6860	R63276	1	11/1/2012 1:04:00 PM		A
CCB1-121031	-----	SW6860	R63276	1	11/1/2012 1:16:00 PM		A
LCVL2-121031	-----	SW6860	R63276	1	11/1/2012 1:28:00 PM		A
1210237-01A	MW-G-01	SW6860	54496	1	11/1/2012 2:13:00 PM	10/31/2012 12:00:50 PM	A
1210237-02A	MW-G-01 FD	SW6860	54496	1	11/1/2012 2:25:00 PM	10/31/2012 12:00:50 PM	A
1210238-03AMS	-----	SW6860	54496	1	11/1/2012 3:02:00 PM	10/31/2012 12:00:50 PM	A
1210238-03AMSD	-----	SW6860	54496	1	11/1/2012 3:14:00 PM	10/31/2012 12:00:50 PM	A
CCV2-121031	-----	SW6860	R63276	1	11/1/2012 3:26:00 PM		A
CCB2-121031	-----	SW6860	R63276	1	11/1/2012 3:39:00 PM		A
LCVL3-121031	-----	SW6860	R63276	1	11/1/2012 3:51:00 PM		A

Initial Calibration Summary

Control Program:	**ClO4PGM_120523**
Quantif. Method:	**ClO4_120523**
Recording Time:	**11/1/2012 9:59**
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:	**121101_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-121031	1781.118
ICS-121031	1817.903
ICB-121031	2067.945
LCVL1-121031	1959.828
LCS-54496	1931.893
MB-54496	1853.669
1210238-02A	2001.207
1210153-01A	2031.917
1210153-02A	1908.152
1210174-01A	1871.398
1210174-02A	1838.376
1210174-03A	1807.111
1210195-01A	1871.152
1210195-02A	2055.458
LCS-54496	2043.017
CCV1-121031	1673.664

CCB1-121031	2074.698
LCVL2-121031	2000.991
1210236-01A	1872.462
1210237-01A	1962.665
1210237-02A	1944.782
1210238-01A	1885.813
1210238-03A	1958.888
1210238-03AMS	1948.543
1210238-03AMSD	1959.027
CCV2-121031	1812.137
CCB2-121031	2207.158
LCVL3-121031	2056.953

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 11/09/2012

GCAL Report 212102503

Deliver To	Bhate Environmental Associates, Inc. 1608 14th Ave South Birmingham, AL 35205 205-918-4024
Attn	David Badio

Project Cannon

Case Narrative

Client: Bhate Environmental Associates, Inc. **Report:** 212102503

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

The dissolved concentration for some analytes is slightly greater than the total concentration of these analytes in all samples. This is attributed to variations in the different aliquots of the samples.

In the SW-846 6010C analysis for prep batches 493147 and 493147, the MS recoveries are not applicable for Calcium and Magnesium because the sample concentration is greater than four times the spike concentration.

CONVENTIONALS

In the EPA 300.0 analysis, all samples had to be diluted in order to bracket the concentration of target analytes within the calibration range of the instrument.

In the EPA 353.2 analysis, samples 21210250301 (MW-E-01), 21210250303 (MW-X-01), 21210250304 (MW-X-01-MS), and 21210250305 (MW-X-01-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.

Samples 21210250301 (MW-E-01) and 21210250302 (EB-01) were received outside the 24-holding time for Chromium VI.

MISCELLANEOUS

Sample 21210250302 (EB-01) was filtered and acid preserved at the laboratory for dissolved metals.

See subcontract laboratory 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 212102503

THIS REPORT CONTAINS _____ PAGES.

Report Sample Summary

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210250301	MW-E-01	Water	10/24/2012 07:01	10/25/2012 09:40
21210250302	EB-01	Water	10/24/2012 08:45	10/25/2012 09:40
21210250303	MW-X-01	Water	10/24/2012 14:25	10/25/2012 09:40
21210250304	MW-X-01-MS	Water	10/24/2012 14:25	10/25/2012 09:40
21210250305	MW-X-01-MSD	Water	10/24/2012 14:25	10/25/2012 09:40
21210250306	TB-06	Water	10/24/2012 07:01	10/25/2012 09:40
21210250307	TB-07	Water	10/24/2012 14:25	10/25/2012 09:40

Summary of Compounds Detected

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210250301	**MW-E-01**	Water	10/24/2012 07:01	10/25/2012 09:40

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7440-38-2	Arsenic	5.55J	10.0	3.59	ug/L
7440-39-3	Barium	35.2	10.0	0.71	ug/L
7440-41-7	Beryllium	0.15J	5.00	0.10	ug/L
7440-43-9	Cadmium	0.64J	5.00	0.16	ug/L
7440-70-2	Calcium	51100	100	45.7	ug/L
7440-47-3	Chromium	1.71J	10.0	0.26	ug/L
7440-50-8	Copper	7.93J	10.0	1.01	ug/L
7439-95-4	Magnesium	46700	100	16.5	ug/L
7439-96-5	Manganese	3.26J	15.0	1.31	ug/L
7782-49-2	Selenium	11.6J	40.0	4.42	ug/L
7440-22-4	Silver	0.87J	10.0	0.70	ug/L
7440-62-2	Vanadium	28.4	20.0	1.25	ug/L
7440-66-6	Zinc	285	20.0	4.51	ug/L

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7440-09-7	Potassium	7820	500	3.46	ug/L
7440-23-5	Sodium	60600	1000	61.1	ug/L

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	43.3J	200	30.3	ug/L
7440-38-2	Arsenic	4.75J	10.0	3.59	ug/L
7440-39-3	Barium	33.9	10.0	0.71	ug/L
7440-43-9	Cadmium	0.61J	5.00	0.16	ug/L
7440-70-2	Calcium	48300	100	45.7	ug/L
7440-47-3	Chromium	2.32J	10.0	0.26	ug/L
7440-50-8	Copper	7.53J	10.0	1.01	ug/L
7439-89-6	Iron	77.5J	100	12.6	ug/L
7439-92-1	Lead	3.76J	15.0	1.96	ug/L
7439-95-4	Magnesium	44400	100	16.5	ug/L
7439-96-5	Manganese	6.39J	15.0	1.31	ug/L
7782-49-2	Selenium	12.8J	40.0	4.42	ug/L
7440-62-2	Vanadium	28.1	20.0	1.25	ug/L
7440-66-6	Zinc	276	20.0	4.51	ug/L

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7440-09-7	Potassium	7410	500	34.6	ug/L
7440-23-5	Sodium	57900	1000	61.1	ug/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210250301	**MW-E-01**	Water	10/24/2012 07:01	10/25/2012 09:40

EPA 353.2 Nitrate

CAS#	Parameter	Result	RDL	MDL	Units
14797-55-8	Nitrate	1.29	0.020	0.010	mg/L-N

SM 5310B TOC

CAS#	Parameter	Result	RDL	MDL	Units
C-012	Total Organic Carbon	3.1	1.0	0.30	mg/L

EPA 300.0

CAS#	Parameter	Result	RDL	MDL	Units
16887-00-6	Chloride	61.6	5.00	3.15	mg/L
14808-79-8	Sulfate	138	10.0	5.75	mg/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210250302	**EB-01**	Water	10/24/2012 08:45	10/25/2012 09:40

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	63.4J	200	30.3	ug/L
7440-39-3	Barium	12.3	10.0	0.71	ug/L
7440-43-9	Cadmium	0.26J	5.00	0.16	ug/L
7440-70-2	Calcium	1420	100	45.7	ug/L
7440-50-8	Copper	1.38J	10.0	1.01	ug/L
7439-95-4	Magnesium	77.9J	100	16.5	ug/L
7439-96-5	Manganese	3.82J	15.0	1.31	ug/L
7440-22-4	Silver	0.84J	10.0	0.70	ug/L
7440-62-2	Vanadium	1.84J	20.0	1.25	ug/L

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7440-09-7	Potassium	412J	500	34.6	ug/L
7440-23-5	Sodium	72900	1000	61.1	ug/L

EPA 353.2 Nitrate

CAS#	Parameter	Result	RDL	MDL	Units
14797-55-8	Nitrate	0.014	0.010	0.005	mg/L-N

EPA 353.2 Nitrite

CAS#	Parameter	Result	RDL	MDL	Units
14797-65-0	Nitrite	0.053	0.010	0.002	mg/L-N

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210250302	**EB-01**	Water	10/24/2012 08:45	10/25/2012 09:40

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	54.3J	200	30.3	ug/L
7440-39-3	Barium	12.5	10.0	0.71	ug/L
7440-43-9	Cadmium	0.31J	5.00	0.16	ug/L
7440-70-2	Calcium	1630	100	45.7	ug/L
7440-47-3	Chromium	0.35J	10.0	0.26	ug/L
7440-50-8	Copper	1.52J	10.0	1.01	ug/L
7439-95-4	Magnesium	71.7J	100	16.5	ug/L
7439-96-5	Manganese	4.97J	15.0	1.31	ug/L
7440-62-2	Vanadium	2.11J	20.0	1.25	ug/L
7440-66-6	Zinc	8.43J	20.0	4.51	ug/L

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7440-09-7	Potassium	412J	500	3.46	ug/L
7440-23-5	Sodium	78500	1000	61.1	ug/L

SM 5310B TOC

CAS#	Parameter	Result	RDL	MDL	Units
C-012	Total Organic Carbon	2.6	1.0	0.30	mg/L

EPA 300.0

CAS#	Parameter	Result	RDL	MDL	Units
16887-00-6	Chloride	16.8	1.00	0.630	mg/L
14808-79-8	Sulfate	8.58	2.00	1.15	mg/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210250303	**MW-X-01**	Water	10/24/2012 14:25	10/25/2012 09:40

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	38.7J	200	30.3	ug/L
7440-38-2	Arsenic	11.4	10.0	3.59	ug/L
7440-39-3	Barium	62.9	10.0	0.71	ug/L
7440-41-7	Beryllium	0.12J	5.00	0.10	ug/L
7440-43-9	Cadmium	0.63J	5.00	0.16	ug/L
7440-70-2	Calcium	29200	100	45.7	ug/L
7440-47-3	Chromium	1.39J	10.0	0.26	ug/L
7440-50-8	Copper	6.52J	10.0	1.01	ug/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210250303	**MW-X-01**	Water	10/24/2012 14:25	10/25/2012 09:40

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7439-95-4	Magnesium	25200	100	16.5	ug/L
7782-49-2	Selenium	7.34J	40.0	4.42	ug/L
7440-62-2	Vanadium	59.9	20.0	1.25	ug/L
7440-66-6	Zinc	248	20.0	4.51	ug/L

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7440-09-7	Potassium	6100	500	3.46	ug/L
7440-23-5	Sodium	46900	1000	61.1	ug/L

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	114J	200	30.3	ug/L
7440-38-2	Arsenic	8.84J	10.0	3.59	ug/L
7440-39-3	Barium	62.4	10.0	0.71	ug/L
7440-43-9	Cadmium	0.62J	5.00	0.16	ug/L
7440-70-2	Calcium	27900	100	45.7	ug/L
7440-47-3	Chromium	1.64J	10.0	0.26	ug/L
7440-50-8	Copper	8.62J	10.0	1.01	ug/L
7439-89-6	Iron	58.3J	100	12.6	ug/L
7439-95-4	Magnesium	23100	100	16.5	ug/L
7439-96-5	Manganese	4.15J	15.0	1.31	ug/L
7782-49-2	Selenium	7.89J	40.0	4.42	ug/L
7440-22-4	Silver	0.84J	10.0	0.70	ug/L
7440-62-2	Vanadium	53.3	20.0	1.25	ug/L
7440-66-6	Zinc	221	20.0	4.51	ug/L

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7440-09-7	Potassium	5700	500	34.6	ug/L
7440-23-5	Sodium	44200	1000	61.1	ug/L

EPA 353.2 Nitrite

CAS#	Parameter	Result	RDL	MDL	Units
14797-65-0	Nitrite	0.007J	0.010	0.002	mg/L-N

EPA 353.2 Nitrate

CAS#	Parameter	Result	RDL	MDL	Units
14797-55-8	Nitrate	1.39	0.050	0.025	mg/L-N

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210250303	MW-X-01	Water	10/24/2012 14:25	10/25/2012 09:40

SM 5310B TOC

CAS#	Parameter	Result	RDL	MDL	Units
C-012	Total Organic Carbon	2.0	1.0	0.30	mg/L

EPA 300.0

CAS#	Parameter	Result	RDL	MDL	Units
16887-00-6	Chloride	24.7	2.00	1.26	mg/L
14808-79-8	Sulfate	43.9	4.00	2.30	mg/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210250304	MW-X-01-MS	Water	10/24/2012 14:25	10/25/2012 09:40

SM 4500 NH3 BE Ammonia Water

CAS#	Parameter	Result	RDL	MDL	Units
7664-41-7	Ammonia	14.1	1.0	0.24	mg/L-N

SW-846 7470A Water

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	4.97	0.20	0.068	ug/L

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	5610	200	30.3	ug/L
7440-36-0	Antimony	529	60.0	3.11	ug/L
7440-38-2	Arsenic	567	10.0	3.59	ug/L
7440-39-3	Barium	592	10.0	0.71	ug/L
7440-41-7	Beryllium	540	5.00	0.10	ug/L
7440-43-9	Cadmium	527	5.00	0.16	ug/L
7440-70-2	Calcium	34100	100	45.7	ug/L
7440-47-3	Chromium	516	10.0	0.26	ug/L
7440-48-4	Cobalt	519	10.0	0.58	ug/L
7440-50-8	Copper	517	10.0	1.01	ug/L
7439-89-6	Iron	5510	100	12.6	ug/L
7439-92-1	Lead	520	15.0	1.96	ug/L
7439-95-4	Magnesium	29900	100	16.5	ug/L
7439-96-5	Manganese	529	15.0	1.31	ug/L
7440-02-0	Nickel	508	40.0	1.13	ug/L
7782-49-2	Selenium	546	40.0	4.42	ug/L
7440-22-4	Silver	519	10.0	0.70	ug/L
7440-28-0	Thallium	524	20.0	3.04	ug/L
7440-62-2	Vanadium	586	20.0	1.25	ug/L
7440-66-6	Zinc	754	20.0	4.51	ug/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210250304	MW-X-01-MS	Water	10/24/2012 14:25	10/25/2012 09:40

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7440-09-7	Potassium	17000	500	34.6	ug/L
7440-23-5	Sodium	67300	1000	61.1	ug/L

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	5250	200	30.3	ug/L
7440-36-0	Antimony	533	60.0	3.11	ug/L
7440-38-2	Arsenic	572	10.0	3.59	ug/L
7440-39-3	Barium	578	10.0	0.71	ug/L
7440-41-7	Beryllium	542	5.00	0.10	ug/L
7440-43-9	Cadmium	522	5.00	0.16	ug/L
7440-70-2	Calcium	33400	100	45.7	ug/L
7440-47-3	Chromium	508	10.0	0.26	ug/L
7440-48-4	Cobalt	526	10.0	0.58	ug/L
7440-50-8	Copper	509	10.0	1.01	ug/L
7439-89-6	Iron	5210	100	12.6	ug/L
7439-92-1	Lead	519	15.0	1.96	ug/L
7439-95-4	Magnesium	29600	100	16.5	ug/L
7439-96-5	Manganese	516	15.0	1.31	ug/L
7440-02-0	Nickel	509	40.0	1.13	ug/L
7782-49-2	Selenium	562	40.0	4.42	ug/L
7440-22-4	Silver	517	10.0	0.70	ug/L
7440-28-0	Thallium	515	20.0	3.04	ug/L
7440-62-2	Vanadium	577	20.0	1.25	ug/L
7440-66-6	Zinc	761	20.0	4.51	ug/L

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7440-09-7	Potassium	16500	500	3.46	ug/L
7440-23-5	Sodium	67200	1000	61.1	ug/L

SW-846 7470A Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	4.47	0.20	0.068	ug/L

SW-846 7196A Chromium VI

CAS#	Parameter	Result	RDL	MDL	Units
18540-29-9	Chromium VI	490	10.0	4.00	ug/L

EPA 353.2 Nitrate

CAS#	Parameter	Result	RDL	MDL	Units
14797-55-8	Nitrate	3.84	0.050	0.025	mg/L-N

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210250304	MW-X-01-MS	Water	10/24/2012 14:25	10/25/2012 09:40

EPA 353.2 Nitrite

CAS#	Parameter	Result	RDL	MDL	Units
14797-65-0	Nitrite	0.460	0.010	0.002	mg/L-N

SW-846 8260B DOD Water

CAS#	Parameter	Result	RDL	MDL	Units
630-20-6	1,1,1,2-Tetrachloroethane	56.6	1.00	0.120	ug/L
71-55-6	1,1,1-Trichloroethane	52.4	1.00	0.123	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	47.5	1.00	0.109	ug/L
79-00-5	1,1,2-Trichloroethane	47.8	1.00	0.159	ug/L
75-34-3	1,1-Dichloroethane	50.5	1.00	0.171	ug/L
75-35-4	1,1-Dichloroethene	48.6	1.00	0.208	ug/L
563-58-6	1,1-Dichloropropene	52.3	1.00	0.052	ug/L
87-61-6	1,2,3-Trichlorobenzene	42.0	1.00	0.079	ug/L
96-18-4	1,2,3-Trichloropropane	42.5	1.00	0.065	ug/L
120-82-1	1,2,4-Trichlorobenzene	43.4	1.00	0.105	ug/L
95-63-6	1,2,4-Trimethylbenzene	48.7	1.00	0.084	ug/L
96-12-8	1,2-Dibromo-3-chloropropane	37.5	1.00	0.194	ug/L
106-93-4	1,2-Dibromoethane	49.6	1.00	0.102	ug/L
95-50-1	1,2-Dichlorobenzene	47.6	1.00	0.135	ug/L
107-06-2	1,2-Dichloroethane	47.7	1.00	0.116	ug/L
78-87-5	1,2-Dichloropropane	51.4	1.00	0.150	ug/L
108-67-8	1,3,5-Trimethylbenzene	49.5	1.00	0.066	ug/L
541-73-1	1,3-Dichlorobenzene	48.7	1.00	0.138	ug/L
142-28-9	1,3-Dichloropropane	49.3	1.00	0.059	ug/L
106-46-7	1,4-Dichlorobenzene	47.6	1.00	0.083	ug/L
594-20-7	2,2-Dichloropropane	47.2	1.00	0.170	ug/L
78-93-3	2-Butanone	30.9	5.00	0.142	ug/L
95-49-8	2-Chlorotoluene	47.6	1.00	0.080	ug/L
591-78-6	2-Hexanone	31.0	5.00	0.122	ug/L
106-43-4	4-Chlorotoluene	48.5	1.00	0.124	ug/L
99-87-6	4-Isopropyltoluene	50.8	1.00	0.070	ug/L
108-10-1	4-Methyl-2-pentanone	40.3	5.00	0.120	ug/L
67-64-1	Acetone	20.9	5.00	0.193	ug/L
71-43-2	Benzene	50.9	1.00	0.111	ug/L
108-86-1	Bromobenzene	48.7	1.00	0.145	ug/L
74-97-5	Bromochloromethane	52.5	1.00	0.127	ug/L
75-27-4	Bromodichloromethane	52.7	1.00	0.083	ug/L
75-25-2	Bromoform	46.3	1.00	0.215	ug/L
74-83-9	Bromomethane	49.2	1.00	0.427	ug/L
75-15-0	Carbon disulfide	51.8	1.00	0.190	ug/L
56-23-5	Carbon tetrachloride	51.9	1.00	0.248	ug/L
108-90-7	Chlorobenzene	51.9	1.00	0.083	ug/L
75-00-3	Chloroethane	52.9	1.00	0.235	ug/L
67-66-3	Chloroform	50.2	1.00	0.155	ug/L
74-87-3	Chloromethane	37.9	1.00	0.144	ug/L
74-95-3	Dibromomethane	49.7	1.00	0.211	ug/L
75-71-8	Dichlorodifluoromethane	47.0	1.00	0.145	ug/L
100-41-4	Ethylbenzene	51.3	1.00	0.109	ug/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210250304	MW-X-01-MS	Water	10/24/2012 14:25	10/25/2012 09:40

SW-846 8260B DOD Water

CAS#	Parameter	Result	RDL	MDL	Units
87-68-3	Hexachlorobutadiene	47.1	1.00	0.265	ug/L
98-82-8	Isopropylbenzene (Cumene)	51.7	1.00	0.130	ug/L
75-09-2	Methylene chloride	44.7	5.00	0.149	ug/L
91-20-3	Naphthalene	37.5	1.00	0.176	ug/L
100-42-5	Styrene	52.1	1.00	0.089	ug/L
127-18-4	Tetrachloroethene	52.6	1.00	0.193	ug/L
108-88-3	Toluene	50.6	1.00	0.122	ug/L
79-01-6	Trichloroethene	51.9	1.00	0.161	ug/L
75-69-4	Trichlorofluoromethane	49.4	1.00	0.157	ug/L
75-01-4	Vinyl chloride	53.2	1.00	0.127	ug/L
156-59-2	cis-1,2-Dichloroethene	49.2	1.00	0.103	ug/L
10061-01-5	cis-1,3-Dichloropropene	50.4	1.00	0.124	ug/L
136777-61-2	m,p-Xylene	105	2.00	0.123	ug/L
104-51-8	n-Butylbenzene	49.8	1.00	0.123	ug/L
103-65-1	n-Propylbenzene	49.2	1.00	0.727	ug/L
95-47-6	o-Xylene	52.8	1.00	0.055	ug/L
135-98-8	sec-Butylbenzene	50.1	1.00	0.107	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	46.0	5.00	0.078	ug/L
98-06-6	tert-Butylbenzene	48.5	1.00	0.087	ug/L
156-60-5	trans-1,2-Dichloroethene	49.4	1.00	0.077	ug/L
10061-02-6	trans-1,3-Dichloropropene	50.0	1.00	0.128	ug/L

SM 5310B TOC

CAS#	Parameter	Result	RDL	MDL	Units
C-012	Total Organic Carbon	54.0	1.0	0.30	mg/L

EPA 300.0 Inorganic Anions

CAS#	Parameter	Result	RDL	MDL	Units
16887-00-6	Chloride	75.4	2.00	1.26	mg/L
14808-79-8	Sulfate	146	4.00	2.30	mg/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210250305	MW-X-01-MSD	Water	10/24/2012 14:25	10/25/2012 09:40

SM 4500 NH3 BE Ammonia Water

CAS#	Parameter	Result	RDL	MDL	Units
7664-41-7	Ammonia	13.9	1.0	0.24	mg/L-N

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210250305	MW-X-01-MSD	Water	10/24/2012 14:25	10/25/2012 09:40

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	5260	200	30.3	ug/L
7440-36-0	Antimony	537	60.0	3.11	ug/L
7440-38-2	Arsenic	580	10.0	3.59	ug/L
7440-39-3	Barium	580	10.0	0.71	ug/L
7440-41-7	Beryllium	543	5.00	0.10	ug/L
7440-43-9	Cadmium	523	5.00	0.16	ug/L
7440-70-2	Calcium	33800	100	45.7	ug/L
7440-47-3	Chromium	509	10.0	0.26	ug/L
7440-48-4	Cobalt	527	10.0	0.58	ug/L
7440-50-8	Copper	511	10.0	1.01	ug/L
7439-89-6	Iron	5290	100	12.6	ug/L
7439-92-1	Lead	521	15.0	1.96	ug/L
7439-95-4	Magnesium	30400	100	16.5	ug/L
7439-96-5	Manganese	517	15.0	1.31	ug/L
7440-02-0	Nickel	509	40.0	1.13	ug/L
7782-49-2	Selenium	562	40.0	4.42	ug/L
7440-22-4	Silver	519	10.0	0.70	ug/L
7440-28-0	Thallium	516	20.0	3.04	ug/L
7440-62-2	Vanadium	579	20.0	1.25	ug/L
7440-66-6	Zinc	766	20.0	4.51	ug/L

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7440-09-7	Potassium	16700	500	3.46	ug/L
7440-23-5	Sodium	67300	1000	61.1	ug/L

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	5330	200	30.3	ug/L
7440-36-0	Antimony	502	60.0	3.11	ug/L
7440-38-2	Arsenic	542	10.0	3.59	ug/L
7440-39-3	Barium	561	10.0	0.71	ug/L
7440-41-7	Beryllium	507	5.00	0.10	ug/L
7440-43-9	Cadmium	493	5.00	0.16	ug/L
7440-70-2	Calcium	33200	100	45.7	ug/L
7440-47-3	Chromium	486	10.0	0.26	ug/L
7440-48-4	Cobalt	491	10.0	0.58	ug/L
7440-50-8	Copper	487	10.0	1.01	ug/L
7439-89-6	Iron	5170	100	12.6	ug/L
7439-92-1	Lead	494	15.0	1.96	ug/L
7439-95-4	Magnesium	28800	100	16.5	ug/L
7439-96-5	Manganese	498	15.0	1.31	ug/L
7440-02-0	Nickel	477	40.0	1.13	ug/L
7782-49-2	Selenium	525	40.0	4.42	ug/L
7440-22-4	Silver	488	10.0	0.70	ug/L
7440-28-0	Thallium	499	20.0	3.04	ug/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210250305	MW-X-01-MSD	Water	10/24/2012 14:25	10/25/2012 09:40

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7440-62-2	Vanadium	553	20.0	1.25	ug/L
7440-66-6	Zinc	720	20.0	4.51	ug/L

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7440-09-7	Potassium	16200	500	34.6	ug/L
7440-23-5	Sodium	65400	1000	61.1	ug/L

SW-846 7470A Water

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	4.67	0.20	0.068	ug/L

SW-846 7470A Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	4.63	0.20	0.068	ug/L

EPA 353.2 Nitrite

CAS#	Parameter	Result	RDL	MDL	Units
14797-65-0	Nitrite	0.457	0.010	0.002	mg/L-N

EPA 300.0 Inorganic Anions

CAS#	Parameter	Result	RDL	MDL	Units
16887-00-6	Chloride	75.0	2.00	1.26	mg/L
14808-79-8	Sulfate	145	4.00	2.30	mg/L

SW-846 7196A Chromium VI

CAS#	Parameter	Result	RDL	MDL	Units
18540-29-9	Chromium VI	490	10.0	4.00	ug/L

EPA 353.2 Nitrate

CAS#	Parameter	Result	RDL	MDL	Units
14797-55-8	Nitrate	3.85	0.050	0.025	mg/L-N

SW-846 8260B DOD Water

CAS#	Parameter	Result	RDL	MDL	Units
630-20-6	1,1,1,2-Tetrachloroethane	54.7	1.00	0.120	ug/L
71-55-6	1,1,1-Trichloroethane	50.5	1.00	0.123	ug/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210250305	MW-X-01-MSD	Water	10/24/2012 14:25	10/25/2012 09:40

SW-846 8260B DOD Water

CAS#	Parameter	Result	RDL	MDL	Units
79-34-5	1,1,2,2-Tetrachloroethane	48.3	1.00	0.109	ug/L
79-00-5	1,1,2-Trichloroethane	47.9	1.00	0.159	ug/L
75-34-3	1,1-Dichloroethane	50.6	1.00	0.171	ug/L
75-35-4	1,1-Dichloroethene	47.6	1.00	0.208	ug/L
563-58-6	1,1-Dichloropropene	50.7	1.00	0.052	ug/L
87-61-6	1,2,3-Trichlorobenzene	44.6	1.00	0.079	ug/L
96-18-4	1,2,3-Trichloropropane	44.5	1.00	0.065	ug/L
120-82-1	1,2,4-Trichlorobenzene	46.5	1.00	0.105	ug/L
95-63-6	1,2,4-Trimethylbenzene	49.3	1.00	0.084	ug/L
96-12-8	1,2-Dibromo-3-chloropropane	43.5	1.00	0.194	ug/L
106-93-4	1,2-Dibromoethane	49.5	1.00	0.102	ug/L
95-50-1	1,2-Dichlorobenzene	48.8	1.00	0.135	ug/L
107-06-2	1,2-Dichloroethane	46.7	1.00	0.116	ug/L
78-87-5	1,2-Dichloropropane	50.3	1.00	0.150	ug/L
108-67-8	1,3,5-Trimethylbenzene	48.6	1.00	0.066	ug/L
541-73-1	1,3-Dichlorobenzene	50.4	1.00	0.138	ug/L
142-28-9	1,3-Dichloropropane	48.1	1.00	0.059	ug/L
106-46-7	1,4-Dichlorobenzene	49.6	1.00	0.083	ug/L
594-20-7	2,2-Dichloropropane	46.2	1.00	0.170	ug/L
78-93-3	2-Butanone	29.1	5.00	0.142	ug/L
95-49-8	2-Chlorotoluene	48.0	1.00	0.080	ug/L
591-78-6	2-Hexanone	32.9	5.00	0.122	ug/L
106-43-4	4-Chlorotoluene	48.2	1.00	0.124	ug/L
99-87-6	4-Isopropyltoluene	50.1	1.00	0.070	ug/L
108-10-1	4-Methyl-2-pentanone	42.0	5.00	0.120	ug/L
67-64-1	Acetone	20.4	5.00	0.193	ug/L
71-43-2	Benzene	49.1	1.00	0.111	ug/L
108-86-1	Bromobenzene	49.9	1.00	0.145	ug/L
74-97-5	Bromochloromethane	52.5	1.00	0.127	ug/L
75-27-4	Bromodichloromethane	51.5	1.00	0.083	ug/L
75-25-2	Bromoform	44.8	1.00	0.215	ug/L
74-83-9	Bromomethane	55.7	1.00	0.427	ug/L
75-15-0	Carbon disulfide	50.0	1.00	0.190	ug/L
56-23-5	Carbon tetrachloride	49.6	1.00	0.248	ug/L
108-90-7	Chlorobenzene	50.7	1.00	0.083	ug/L
75-00-3	Chloroethane	50.6	1.00	0.235	ug/L
67-66-3	Chloroform	49.1	1.00	0.155	ug/L
74-87-3	Chloromethane	38.1	1.00	0.144	ug/L
74-95-3	Dibromomethane	47.9	1.00	0.211	ug/L
75-71-8	Dichlorodifluoromethane	46.4	1.00	0.145	ug/L
100-41-4	Ethylbenzene	49.4	1.00	0.109	ug/L
87-68-3	Hexachlorobutadiene	51.8	1.00	0.265	ug/L
98-82-8	Isopropylbenzene (Cumene)	49.2	1.00	0.130	ug/L
75-09-2	Methylene chloride	43.6	5.00	0.149	ug/L
91-20-3	Naphthalene	41.0	1.00	0.176	ug/L
100-42-5	Styrene	49.9	1.00	0.089	ug/L
127-18-4	Tetrachloroethene	50.5	1.00	0.193	ug/L
108-88-3	Toluene	49.0	1.00	0.122	ug/L
79-01-6	Trichloroethene	49.2	1.00	0.161	ug/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210250305	**MW-X-01-MSD**	Water	10/24/2012 14:25	10/25/2012 09:40

SW-846 8260B DOD Water

CAS#	Parameter	Result	RDL	MDL	Units
75-69-4	Trichlorofluoromethane	48.2	1.00	0.157	ug/L
75-01-4	Vinyl chloride	51.1	1.00	0.127	ug/L
156-59-2	cis-1,2-Dichloroethene	48.8	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	99.3	2.00	0.123	ug/L
104-51-8	n-Butylbenzene	50.6	1.00	0.123	ug/L
103-65-1	n-Propylbenzene	48.9	1.00	0.727	ug/L
95-47-6	o-Xylene	50.8	1.00	0.055	ug/L
135-98-8	sec-Butylbenzene	49.9	1.00	0.107	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	44.7	5.00	0.078	ug/L
98-06-6	tert-Butylbenzene	47.9	1.00	0.087	ug/L
156-60-5	trans-1,2-Dichloroethene	49.0	1.00	0.077	ug/L
10061-02-6	trans-1,3-Dichloropropene	49.7	1.00	0.128	ug/L

SM 5310B TOC

CAS#	Parameter	Result	RDL	MDL	Units
C-012	Total Organic Carbon	52.5	1.0	0.30	mg/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210250301	**MW-E-01**	Water	10/24/2012 07:01	10/25/2012 09:40

Subcontract Work

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/06/2012 08:14	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	10/26/2012 21:11	CEK	493244

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
21210250301	**MW-E-01**	Water	10/24/2012 07:01	10/25/2012 09:40

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/26/2012 21:11	CEK	493244

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	49.6	ug/L	99	85 - 115
2037-26-5	Toluene d8	50	53.3	ug/L	107	85 - 120
17060-07-0	1,2-Dichloroethane-d4	50	46.4	ug/L	93	70 - 120

SW-846 7470A Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/26/2012 11:20	493152	SW-846 7470A Dissolved	1	10/31/2012 12:08	BNB	493483

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
10/26/2012 11:20	493151	SW-846 7470A	1	10/31/2012 11:56	BNB	493483

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	0.068U	0.20	0.068	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210250301	**MW-E-01**	Water	10/24/2012 07:01	10/25/2012 09:40

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/26/2012 16:40	493147	SW-846 3010A	1	10/31/2012 13:36	CLB	493541

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	**Aluminum**	**43.3J**	**200**	**30.3**	**ug/L**
7440-36-0	Antimony	3.11U	60.0	3.11	ug/L
7440-38-2	**Arsenic**	**4.75J**	**10.0**	**3.59**	**ug/L**
7440-39-3	**Barium**	**33.9**	**10.0**	**0.71**	**ug/L**
7440-41-7	Beryllium	0.10U	5.00	0.10	ug/L
7440-43-9	**Cadmium**	**0.61J**	**5.00**	**0.16**	**ug/L**
7440-70-2	**Calcium**	**48300**	**100**	**45.7**	**ug/L**
7440-47-3	**Chromium**	**2.32J**	**10.0**	**0.26**	**ug/L**
7440-48-4	Cobalt	0.58U	10.0	0.58	ug/L
7440-50-8	**Copper**	**7.53J**	**10.0**	**1.01**	**ug/L**
7439-89-6	**Iron**	**77.5J**	**100**	**12.6**	**ug/L**
7439-92-1	**Lead**	**3.76J**	**15.0**	**1.96**	**ug/L**
7439-95-4	**Magnesium**	**44400**	**100**	**16.5**	**ug/L**
7439-96-5	**Manganese**	**6.39J**	**15.0**	**1.31**	**ug/L**
7440-02-0	Nickel	1.13U	40.0	1.13	ug/L
7782-49-2	**Selenium**	**12.8J**	**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
7440-62-2	**Vanadium**	**28.1**	**20.0**	**1.25**	**ug/L**
7440-66-6	**Zinc**	**276**	**20.0**	**4.51**	**ug/L**

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/26/2012 16:40	493147	SW-846 3010A	1	11/01/2012 13:23	CLB	493656

CAS#	Parameter	Result	RDL	MDL	Units
7440-09-7	**Potassium**	**7410**	**500**	**34.6**	**ug/L**
7440-23-5	**Sodium**	**57900**	**1000**	**61.1**	**ug/L**

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/26/2012 10:20	493146	SW-846 3005 Dissolved	1	10/31/2012 12:20	CLB	493541

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	30.3U	200	30.3	ug/L
7440-36-0	Antimony	3.11U	60.0	3.11	ug/L
7440-38-2	**Arsenic**	**5.55J**	**10.0**	**3.59**	**ug/L**
7440-39-3	**Barium**	**35.2**	**10.0**	**0.71**	**ug/L**
7440-41-7	**Beryllium**	**0.15J**	**5.00**	**0.10**	**ug/L**
7440-43-9	**Cadmium**	**0.64J**	**5.00**	**0.16**	**ug/L**
7440-70-2	**Calcium**	**51100**	**100**	**45.7**	**ug/L**
7440-47-3	**Chromium**	**1.71J**	**10.0**	**0.26**	**ug/L**
7440-48-4	Cobalt	0.58U	10.0	0.58	ug/L
7440-50-8	**Copper**	**7.93J**	**10.0**	**1.01**	**ug/L**
7439-89-6	Iron	12.6U	100	12.6	ug/L
7439-92-1	Lead	1.96U	15.0	1.96	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210250301	**MW-E-01**	Water	10/24/2012 07:01	10/25/2012 09:40

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/26/2012 10:20	493146	SW-846 3005 Dissolved	1	10/31/2012 12:20	CLB	493541

CAS#	Parameter	Result	RDL	MDL	Units
7439-95-4	**Magnesium**	**46700**	**100**	**16.5**	**ug/L**
7439-96-5	**Manganese**	**3.26J**	**15.0**	**1.31**	**ug/L**
7440-02-0	Nickel	1.13U	40.0	1.13	ug/L
7782-49-2	**Selenium**	**11.6J**	**40.0**	**4.42**	**ug/L**
7440-22-4	**Silver**	**0.87J**	**10.0**	**0.70**	**ug/L**
7440-28-0	Thallium	3.04U	20.0	3.04	ug/L
7440-62-2	**Vanadium**	**28.4**	**20.0**	**1.25**	**ug/L**
7440-66-6	**Zinc**	**285**	**20.0**	**4.51**	**ug/L**

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/26/2012 10:20	493146	SW-846 3005 Dissolved	1	11/01/2012 12:11	CLB	493656

CAS#	Parameter	Result	RDL	MDL	Units
7440-09-7	**Potassium**	**7820**	**500**	**3.46**	**ug/L**
7440-23-5	**Sodium**	**60600**	**1000**	**61.1**	**ug/L**

EPA 353.2 Nitrite

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/25/2012 16:55	AEL	493157

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
			2	10/25/2012 17:51	AEL	493156

CAS#	Parameter	Result	RDL	MDL	Units
14797-55-8	**Nitrate**	**1.29**	**0.020**	**0.010**	**mg/L-N**

SM 4500 NH3 BE Ammonia

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/26/2012 05:30	493163	SM4500 NH3 BE TKN	1	10/27/2012 07:53	DJH	493273

CAS#	Parameter	Result	RDL	MDL	Units
7664-41-7	Ammonia	0.24U	1.0	0.24	mg/L-N

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210250301	**MW-E-01**	Water	10/24/2012 07:01	10/25/2012 09:40

EPA 300.0

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			50	11/01/2012 13:34	AEL	493575

CAS#	Parameter	Result	RDL	MDL	Units
16887-00-6	**Chloride**	**61.6**	**5.00**	**3.15**	**mg/L**
14808-79-8	**Sulfate**	**138**	**10.0**	**5.75**	**mg/L**

SM 5310B TOC

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/31/2012 11:13	DNM	493469

CAS#	Parameter	Result	RDL	MDL	Units
C-012	**Total Organic Carbon**	**3.1**	**1.0**	**0.30**	**mg/L**

SW-846 7196A Chromium VI

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/25/2012 11:30	JEM	493096

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
21210250302	**EB-01**	Water	10/24/2012 08:45	10/25/2012 09:40

Subcontract Work

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/06/2012 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	10/26/2012 21:31	CEK	493244

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
21210250302	**EB-01**	Water	10/24/2012 08:45	10/25/2012 09:40

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/26/2012 21:31	CEK	493244

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	49.1	ug/L	98	75 - 120
1868-53-7	Dibromofluoromethane	50	49.4	ug/L	99	85 - 115
2037-26-5	Toluene d8	50	52.6	ug/L	105	85 - 120
17060-07-0	1,2-Dichloroethane-d4	50	46.6	ug/L	93	70 - 120

SW-846 7470A Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/26/2012 11:20	493152	SW-846 7470A Dissolved	1	10/31/2012 12:10	BNB	493483

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
10/26/2012 11:20	493151	SW-846 7470A	1	10/31/2012 11:57	BNB	493483

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	0.068U	0.20	0.068	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210250302	**EB-01**	Water	10/24/2012 08:45	10/25/2012 09:40

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/26/2012 16:40	493147	SW-846 3010A	1	10/31/2012 13:44	CLB	493541

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	**Aluminum**	**63.4J**	**200**	**30.3**	**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**	**12.3**	**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**	**0.16**	**ug/L**
7440-70-2	**Calcium**	**1420**	**100**	**45.7**	**ug/L**
7440-47-3	Chromium	0.26U	10.0	0.26	ug/L
7440-48-4	Cobalt	0.58U	10.0	0.58	ug/L
7440-50-8	**Copper**	**1.38J**	**10.0**	**1.01**	**ug/L**
7439-89-6	Iron	12.6U	100	12.6	ug/L
7439-92-1	Lead	1.96U	15.0	1.96	ug/L
7439-95-4	**Magnesium**	**77.9J**	**100**	**16.5**	**ug/L**
7439-96-5	**Manganese**	**3.82J**	**15.0**	**1.31**	**ug/L**
7440-02-0	Nickel	1.13U	40.0	1.13	ug/L
7782-49-2	Selenium	4.42U	40.0	4.42	ug/L
7440-22-4	**Silver**	**0.84J**	**10.0**	**0.70**	**ug/L**
7440-28-0	Thallium	3.04U	20.0	3.04	ug/L
7440-62-2	**Vanadium**	**1.84J**	**20.0**	**1.25**	**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
10/26/2012 16:40	493147	SW-846 3010A	1	11/01/2012 13:30	CLB	493656

CAS#	Parameter	Result	RDL	MDL	Units
7440-09-7	**Potassium**	**412J**	**500**	**34.6**	**ug/L**
7440-23-5	**Sodium**	**72900**	**1000**	**61.1**	**ug/L**

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/26/2012 10:20	493146	SW-846 3005 Dissolved	1	10/31/2012 12:27	CLB	493541

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	**Aluminum**	**54.3J**	**200**	**30.3**	**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**	**12.5**	**10.0**	**0.71**	**ug/L**
7440-41-7	Beryllium	0.10U	5.00	0.10	ug/L
7440-43-9	**Cadmium**	**0.31J**	**5.00**	**0.16**	**ug/L**
7440-70-2	**Calcium**	**1630**	**100**	**45.7**	**ug/L**
7440-47-3	**Chromium**	**0.35J**	**10.0**	**0.26**	**ug/L**
7440-48-4	Cobalt	0.58U	10.0	0.58	ug/L
7440-50-8	**Copper**	**1.52J**	**10.0**	**1.01**	**ug/L**
7439-89-6	Iron	12.6U	100	12.6	ug/L
7439-92-1	Lead	1.96U	15.0	1.96	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210250302	**EB-01**	Water	10/24/2012 08:45	10/25/2012 09:40

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/26/2012 10:20	493146	SW-846 3005 Dissolved	1	10/31/2012 12:27	CLB	493541

CAS#	Parameter	Result	RDL	MDL	Units
7439-95-4	**Magnesium**	**71.7J**	**100**	**16.5**	**ug/L**
7439-96-5	**Manganese**	**4.97J**	**15.0**	**1.31**	**ug/L**
7440-02-0	Nickel	1.13U	40.0	1.13	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
7440-62-2	**Vanadium**	**2.11J**	**20.0**	**1.25**	**ug/L**
7440-66-6	**Zinc**	**8.43J**	**20.0**	**4.51**	**ug/L**

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/26/2012 10:20	493146	SW-846 3005 Dissolved	1	11/01/2012 12:18	CLB	493656

CAS#	Parameter	Result	RDL	MDL	Units
7440-09-7	**Potassium**	**412J**	**500**	**3.46**	**ug/L**
7440-23-5	**Sodium**	**78500**	**1000**	**61.1**	**ug/L**

EPA 353.2 Nitrite

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/25/2012 16:56	AEL	493157

CAS#	Parameter	Result	RDL	MDL	Units
14797-65-0	**Nitrite**	**0.053**	**0.010**	**0.002**	**mg/L-N**

EPA 353.2 Nitrate

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/25/2012 17:36	AEL	493156

CAS#	Parameter	Result	RDL	MDL	Units
14797-55-8	**Nitrate**	**0.014**	**0.010**	**0.005**	**mg/L-N**

SM 4500 NH3 BE Ammonia

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/26/2012 05:30	493163	SM4500 NH3 BE TKN	1	10/27/2012 07:53	DJH	493273

CAS#	Parameter	Result	RDL	MDL	Units
7664-41-7	Ammonia	0.24U	1.0	0.24	mg/L-N

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210250302	**EB-01**	Water	10/24/2012 08:45	10/25/2012 09:40

EPA 300.0

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			10	11/01/2012 14:45	AEL	493575

CAS#	Parameter	Result	RDL	MDL	Units
16887-00-6	**Chloride**	**16.8**	**1.00**	**0.630**	**mg/L**
14808-79-8	**Sulfate**	**8.58**	**2.00**	**1.15**	**mg/L**

SM 5310B TOC

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/31/2012 11:30	DNM	493469

CAS#	Parameter	Result	RDL	MDL	Units
C-012	**Total Organic Carbon**	**2.6**	**1.0**	**0.30**	**mg/L**

SW-846 7196A Chromium VI

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/25/2012 11:31	JEM	493096

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
21210250303	**MW-X-01**	Water	10/24/2012 14:25	10/25/2012 09:40

Subcontract Work

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/06/2012 08:16	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	10/26/2012 22:33	CEK	493244

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
21210250303	**MW-X-01**	Water	10/24/2012 14:25	10/25/2012 09:40

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/26/2012 22:33	CEK	493244

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	50.1	ug/L	100	75 - 120
1868-53-7	Dibromofluoromethane	50	49.3	ug/L	99	85 - 115
2037-26-5	Toluene d8	50	51.2	ug/L	102	85 - 120
17060-07-0	1,2-Dichloroethane-d4	50	46.7	ug/L	93	70 - 120

SW-846 7470A Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/26/2012 11:20	493152	SW-846 7470A Dissolved	1	10/31/2012 12:02	BNB	493483

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
10/26/2012 11:20	493151	SW-846 7470A	1	10/31/2012 11:46	BNB	493483

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	0.068U	0.20	0.068	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210250303	**MW-X-01**	Water	10/24/2012 14:25	10/25/2012 09:40

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/26/2012 16:40	493147	SW-846 3010A	1	10/31/2012 13:02	CLB	493541

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	**Aluminum**	**114J**	**200**	**30.3**	**ug/L**
7440-36-0	Antimony	3.11U	60.0	3.11	ug/L
7440-38-2	**Arsenic**	**8.84J**	**10.0**	**3.59**	**ug/L**
7440-39-3	**Barium**	**62.4**	**10.0**	**0.71**	**ug/L**
7440-41-7	Beryllium	0.10U	5.00	0.10	ug/L
7440-43-9	**Cadmium**	**0.62J**	**5.00**	**0.16**	**ug/L**
7440-70-2	**Calcium**	**27900**	**100**	**45.7**	**ug/L**
7440-47-3	**Chromium**	**1.64J**	**10.0**	**0.26**	**ug/L**
7440-48-4	Cobalt	0.58U	10.0	0.58	ug/L
7440-50-8	**Copper**	**8.62J**	**10.0**	**1.01**	**ug/L**
7439-89-6	**Iron**	**58.3J**	**100**	**12.6**	**ug/L**
7439-92-1	Lead	1.96U	15.0	1.96	ug/L
7439-95-4	**Magnesium**	**23100**	**100**	**16.5**	**ug/L**
7439-96-5	**Manganese**	**4.15J**	**15.0**	**1.31**	**ug/L**
7440-02-0	Nickel	1.13U	40.0	1.13	ug/L
7782-49-2	**Selenium**	**7.89J**	**40.0**	**4.42**	**ug/L**
7440-22-4	**Silver**	**0.84J**	**10.0**	**0.70**	**ug/L**
7440-28-0	Thallium	3.04U	20.0	3.04	ug/L
7440-62-2	**Vanadium**	**53.3**	**20.0**	**1.25**	**ug/L**
7440-66-6	**Zinc**	**221**	**20.0**	**4.51**	**ug/L**

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/26/2012 16:40	493147	SW-846 3010A	1	11/01/2012 12:51	CLB	493656

CAS#	Parameter	Result	RDL	MDL	Units
7440-09-7	**Potassium**	**5700**	**500**	**34.6**	**ug/L**
7440-23-5	**Sodium**	**44200**	**1000**	**61.1**	**ug/L**

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/26/2012 10:20	493146	SW-846 3005 Dissolved	1	10/31/2012 11:45	CLB	493541

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	**Aluminum**	**38.7J**	**200**	**30.3**	**ug/L**
7440-36-0	Antimony	3.11U	60.0	3.11	ug/L
7440-38-2	**Arsenic**	**11.4**	**10.0**	**3.59**	**ug/L**
7440-39-3	**Barium**	**62.9**	**10.0**	**0.71**	**ug/L**
7440-41-7	**Beryllium**	**0.12J**	**5.00**	**0.10**	**ug/L**
7440-43-9	**Cadmium**	**0.63J**	**5.00**	**0.16**	**ug/L**
7440-70-2	**Calcium**	**29200**	**100**	**45.7**	**ug/L**
7440-47-3	**Chromium**	**1.39J**	**10.0**	**0.26**	**ug/L**
7440-48-4	Cobalt	0.58U	10.0	0.58	ug/L
7440-50-8	**Copper**	**6.52J**	**10.0**	**1.01**	**ug/L**
7439-89-6	Iron	12.6U	100	12.6	ug/L
7439-92-1	Lead	1.96U	15.0	1.96	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210250303	**MW-X-01**	Water	10/24/2012 14:25	10/25/2012 09:40

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/26/2012 10:20	493146	SW-846 3005 Dissolved	1	10/31/2012 11:45	CLB	493541

CAS#	Parameter	Result	RDL	MDL	Units
7439-95-4	**Magnesium**	**25200**	**100**	**16.5**	**ug/L**
7439-96-5	Manganese	1.31U	15.0	1.31	ug/L
7440-02-0	Nickel	1.13U	40.0	1.13	ug/L
7782-49-2	**Selenium**	**7.34J**	**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
7440-62-2	**Vanadium**	**59.9**	**20.0**	**1.25**	**ug/L**
7440-66-6	**Zinc**	**248**	**20.0**	**4.51**	**ug/L**

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/26/2012 10:20	493146	SW-846 3005 Dissolved	1	11/01/2012 11:38	CLB	493656

CAS#	Parameter	Result	RDL	MDL	Units
7440-09-7	**Potassium**	**6100**	**500**	**3.46**	**ug/L**
7440-23-5	**Sodium**	**46900**	**1000**	**61.1**	**ug/L**

EPA 353.2 Nitrite

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/25/2012 16:57	AEL	493157

CAS#	Parameter	Result	RDL	MDL	Units
14797-65-0	**Nitrite**	**0.007J**	**0.010**	**0.002**	**mg/L-N**

EPA 353.2 Nitrate

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			5	10/25/2012 17:52	AEL	493156

CAS#	Parameter	Result	RDL	MDL	Units
14797-55-8	**Nitrate**	**1.39**	**0.050**	**0.025**	**mg/L-N**

SM 4500 NH3 BE Ammonia

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/26/2012 05:30	493163	SM4500 NH3 BE TKN	1	10/27/2012 07:53	DJH	493273

CAS#	Parameter	Result	RDL	MDL	Units
7664-41-7	Ammonia	0.24U	1.0	0.24	mg/L-N

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210250303	**MW-X-01**	Water	10/24/2012 14:25	10/25/2012 09:40

EPA 300.0

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			20	11/01/2012 13:52	AEL	493575

CAS#	Parameter	Result	RDL	MDL	Units
16887-00-6	**Chloride**	**24.7**	**2.00**	**1.26**	**mg/L**
14808-79-8	**Sulfate**	**43.9**	**4.00**	**2.30**	**mg/L**

SM 5310B TOC

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/31/2012 11:50	DNM	493469

CAS#	Parameter	Result	RDL	MDL	Units
C-012	**Total Organic Carbon**	**2.0**	**1.0**	**0.30**	**mg/L**

SW-846 7196A Chromium VI

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/25/2012 11:32	JEM	493096

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
21210250304	**MW-X-01-MS**	Water	10/24/2012 14:25	10/25/2012 09:40

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/06/2012 08:22	BJM	

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

SW-846 8260B DOD Water

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/26/2012 22:53	CEK	493244

CAS#	Parameter	Result	RDL	MDL	Units
630-20-6	1,1,1,2-Tetrachloroethane	56.6	1.00	0.120	ug/L
71-55-6	1,1,1-Trichloroethane	52.4	1.00	0.123	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	47.5	1.00	0.109	ug/L
79-00-5	1,1,2-Trichloroethane	47.8	1.00	0.159	ug/L
75-34-3	1,1-Dichloroethane	50.5	1.00	0.171	ug/L
75-35-4	1,1-Dichloroethene	48.6	1.00	0.208	ug/L
563-58-6	1,1-Dichloropropene	52.3	1.00	0.052	ug/L
87-61-6	1,2,3-Trichlorobenzene	42.0	1.00	0.079	ug/L
96-18-4	1,2,3-Trichloropropane	42.5	1.00	0.065	ug/L
120-82-1	1,2,4-Trichlorobenzene	43.4	1.00	0.105	ug/L
95-63-6	1,2,4-Trimethylbenzene	48.7	1.00	0.084	ug/L
96-12-8	1,2-Dibromo-3-chloropropane	37.5	1.00	0.194	ug/L
106-93-4	1,2-Dibromoethane	49.6	1.00	0.102	ug/L
95-50-1	1,2-Dichlorobenzene	47.6	1.00	0.135	ug/L
107-06-2	1,2-Dichloroethane	47.7	1.00	0.116	ug/L
78-87-5	1,2-Dichloropropane	51.4	1.00	0.150	ug/L
108-67-8	1,3,5-Trimethylbenzene	49.5	1.00	0.066	ug/L
541-73-1	1,3-Dichlorobenzene	48.7	1.00	0.138	ug/L
142-28-9	1,3-Dichloropropane	49.3	1.00	0.059	ug/L
106-46-7	1,4-Dichlorobenzene	47.6	1.00	0.083	ug/L
594-20-7	2,2-Dichloropropane	47.2	1.00	0.170	ug/L
78-93-3	2-Butanone	30.9	5.00	0.142	ug/L
95-49-8	2-Chlorotoluene	47.6	1.00	0.080	ug/L
591-78-6	2-Hexanone	31.0	5.00	0.122	ug/L
106-43-4	4-Chlorotoluene	48.5	1.00	0.124	ug/L
99-87-6	4-Isopropyltoluene	50.8	1.00	0.070	ug/L
108-10-1	4-Methyl-2-pentanone	40.3	5.00	0.120	ug/L
67-64-1	Acetone	20.9	5.00	0.193	ug/L
71-43-2	Benzene	50.9	1.00	0.111	ug/L
108-86-1	Bromobenzene	48.7	1.00	0.145	ug/L
74-97-5	Bromochloromethane	52.5	1.00	0.127	ug/L
75-27-4	Bromodichloromethane	52.7	1.00	0.083	ug/L
75-25-2	Bromoform	46.3	1.00	0.215	ug/L
74-83-9	Bromomethane	49.2	1.00	0.427	ug/L
75-15-0	Carbon disulfide	51.8	1.00	0.190	ug/L
56-23-5	Carbon tetrachloride	51.9	1.00	0.248	ug/L
108-90-7	Chlorobenzene	51.9	1.00	0.083	ug/L
75-00-3	Chloroethane	52.9	1.00	0.235	ug/L
67-66-3	Chloroform	50.2	1.00	0.155	ug/L
74-87-3	Chloromethane	37.9	1.00	0.144	ug/L
74-95-3	Dibromomethane	49.7	1.00	0.211	ug/L
75-71-8	Dichlorodifluoromethane	47.0	1.00	0.145	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210250304	**MW-X-01-MS**	Water	10/24/2012 14:25	10/25/2012 09:40

SW-846 8260B DOD Water

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/26/2012 22:53	CEK	493244

CAS#	Parameter	Result	RDL	MDL	Units
100-41-4	**Ethylbenzene**	**51.3**	**1.00**	**0.109**	**ug/L**
87-68-3	**Hexachlorobutadiene**	**47.1**	**1.00**	**0.265**	**ug/L**
98-82-8	**Isopropylbenzene (Cumene)**	**51.7**	**1.00**	**0.130**	**ug/L**
75-09-2	**Methylene chloride**	**44.7**	**5.00**	**0.149**	**ug/L**
91-20-3	**Naphthalene**	**37.5**	**1.00**	**0.176**	**ug/L**
100-42-5	**Styrene**	**52.1**	**1.00**	**0.089**	**ug/L**
127-18-4	**Tetrachloroethene**	**52.6**	**1.00**	**0.193**	**ug/L**
108-88-3	**Toluene**	**50.6**	**1.00**	**0.122**	**ug/L**
79-01-6	**Trichloroethene**	**51.9**	**1.00**	**0.161**	**ug/L**
75-69-4	**Trichlorofluoromethane**	**49.4**	**1.00**	**0.157**	**ug/L**
75-01-4	**Vinyl chloride**	**53.2**	**1.00**	**0.127**	**ug/L**
156-59-2	**cis-1,2-Dichloroethene**	**49.2**	**1.00**	**0.103**	**ug/L**
10061-01-5	**cis-1,3-Dichloropropene**	**50.4**	**1.00**	**0.124**	**ug/L**
136777-61-2	**m,p-Xylene**	**105**	**2.00**	**0.123**	**ug/L**
104-51-8	**n-Butylbenzene**	**49.8**	**1.00**	**0.123**	**ug/L**
103-65-1	**n-Propylbenzene**	**49.2**	**1.00**	**0.727**	**ug/L**
95-47-6	**o-Xylene**	**52.8**	**1.00**	**0.055**	**ug/L**
135-98-8	**sec-Butylbenzene**	**50.1**	**1.00**	**0.107**	**ug/L**
1634-04-4	**tert-Butyl methyl ether (MTBE)**	**46.0**	**5.00**	**0.078**	**ug/L**
98-06-6	**tert-Butylbenzene**	**48.5**	**1.00**	**0.087**	**ug/L**
156-60-5	**trans-1,2-Dichloroethene**	**49.4**	**1.00**	**0.077**	**ug/L**
10061-02-6	**trans-1,3-Dichloropropene**	**50.0**	**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	50.5	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	48.1	ug/L	96	70 - 120

SW-846 7470A Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/26/2012 11:20	493152	SW-846 7470A Dissolved	1	10/31/2012 12:04	BNB	493483

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	**Mercury**	**4.47**	**0.20**	**0.068**	**ug/L**

SW-846 7470A Water

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/26/2012 11:20	493151	SW-846 7470A	1	10/31/2012 11:47	BNB	493483

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	**Mercury**	**4.97**	**0.20**	**0.068**	**ug/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210250304	**MW-X-01-MS**	Water	10/24/2012 14:25	10/25/2012 09:40

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/26/2012 16:40	493147	SW-846 3010A	1	10/31/2012 13:09	CLB	493541

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	5610	200	30.3	ug/L
7440-36-0	Antimony	529	60.0	3.11	ug/L
7440-38-2	Arsenic	567	10.0	3.59	ug/L
7440-39-3	Barium	592	10.0	0.71	ug/L
7440-41-7	Beryllium	540	5.00	0.10	ug/L
7440-43-9	Cadmium	527	5.00	0.16	ug/L
7440-70-2	Calcium	34100	100	45.7	ug/L
7440-47-3	Chromium	516	10.0	0.26	ug/L
7440-48-4	Cobalt	519	10.0	0.58	ug/L
7440-50-8	Copper	517	10.0	1.01	ug/L
7439-89-6	Iron	5510	100	12.6	ug/L
7439-92-1	Lead	520	15.0	1.96	ug/L
7439-95-4	Magnesium	29900	100	16.5	ug/L
7439-96-5	Manganese	529	15.0	1.31	ug/L
7440-02-0	Nickel	508	40.0	1.13	ug/L
7782-49-2	Selenium	546	40.0	4.42	ug/L
7440-22-4	Silver	519	10.0	0.70	ug/L
7440-28-0	Thallium	524	20.0	3.04	ug/L
7440-62-2	Vanadium	586	20.0	1.25	ug/L
7440-66-6	Zinc	754	20.0	4.51	ug/L

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/26/2012 16:40	493147	SW-846 3010A	1	11/01/2012 12:58	CLB	493656

CAS#	Parameter	Result	RDL	MDL	Units
7440-09-7	Potassium	17000	500	34.6	ug/L
7440-23-5	Sodium	67300	1000	61.1	ug/L

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/26/2012 10:20	493146	SW-846 3005 Dissolved	1	10/31/2012 11:53	CLB	493541

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	5250	200	30.3	ug/L
7440-36-0	Antimony	533	60.0	3.11	ug/L
7440-38-2	Arsenic	572	10.0	3.59	ug/L
7440-39-3	Barium	578	10.0	0.71	ug/L
7440-41-7	Beryllium	542	5.00	0.10	ug/L
7440-43-9	Cadmium	522	5.00	0.16	ug/L
7440-70-2	Calcium	33400	100	45.7	ug/L
7440-47-3	Chromium	508	10.0	0.26	ug/L
7440-48-4	Cobalt	526	10.0	0.58	ug/L
7440-50-8	Copper	509	10.0	1.01	ug/L
7439-89-6	Iron	5210	100	12.6	ug/L
7439-92-1	Lead	519	15.0	1.96	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210250304	**MW-X-01-MS**	Water	10/24/2012 14:25	10/25/2012 09:40

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/26/2012 10:20	493146	SW-846 3005 Dissolved	1	10/31/2012 11:53	CLB	493541

CAS#	Parameter	Result	RDL	MDL	Units
7439-95-4	**Magnesium**	**29600**	**100**	**16.5**	**ug/L**
7439-96-5	**Manganese**	**516**	**15.0**	**1.31**	**ug/L**
7440-02-0	**Nickel**	**509**	**40.0**	**1.13**	**ug/L**
7782-49-2	**Selenium**	**562**	**40.0**	**4.42**	**ug/L**
7440-22-4	**Silver**	**517**	**10.0**	**0.70**	**ug/L**
7440-28-0	**Thallium**	**515**	**20.0**	**3.04**	**ug/L**
7440-62-2	**Vanadium**	**577**	**20.0**	**1.25**	**ug/L**
7440-66-6	**Zinc**	**761**	**20.0**	**4.51**	**ug/L**

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/26/2012 10:20	493146	SW-846 3005 Dissolved	1	11/01/2012 11:45	CLB	493656

CAS#	Parameter	Result	RDL	MDL	Units
7440-09-7	**Potassium**	**16500**	**500**	**3.46**	**ug/L**
7440-23-5	**Sodium**	**67200**	**1000**	**61.1**	**ug/L**

EPA 353.2 Nitrite

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/25/2012 16:58	AEL	493157

CAS#	Parameter	Result	RDL	MDL	Units
14797-65-0	**Nitrite**	**0.460**	**0.010**	**0.002**	**mg/L-N**

EPA 353.2 Nitrate

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			5	10/25/2012 17:53	AEL	493156

CAS#	Parameter	Result	RDL	MDL	Units
14797-55-8	**Nitrate**	**3.84**	**0.050**	**0.025**	**mg/L-N**

SM 4500 NH3 BE Ammonia Water

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/26/2012 05:30	493163	SM4500 NH3 BE TKN	1	10/27/2012 07:53	DJH	493273

CAS#	Parameter	Result	RDL	MDL	Units
7664-41-7	**Ammonia**	**14.1**	**1.0**	**0.24**	**mg/L-N**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210250304	**MW-X-01-MS**	Water	10/24/2012 14:25	10/25/2012 09:40

EPA 300.0 Inorganic Anions

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			20	11/01/2012 14:09	AEL	493575

CAS#	Parameter	Result	RDL	MDL	Units
16887-00-6	**Chloride**	**75.4**	**2.00**	**1.26**	**mg/L**
14808-79-8	**Sulfate**	**146**	**4.00**	**2.30**	**mg/L**

SM 5310B TOC

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/31/2012 12:08	DNM	493469

CAS#	Parameter	Result	RDL	MDL	Units
C-012	**Total Organic Carbon**	**54.0**	**1.0**	**0.30**	**mg/L**

SW-846 7196A Chromium VI

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/25/2012 11:32	JEM	493096

CAS#	Parameter	Result	RDL	MDL	Units
18540-29-9	**Chromium VI**	**490**	**10.0**	**4.00**	**ug/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210250305	**MW-X-01-MSD**	Water	10/24/2012 14:25	10/25/2012 09:40

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/06/2012 08:24	BJM	

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

SW-846 8260B DOD Water

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/26/2012 23:12	CEK	493244

CAS#	Parameter	Result	RDL	MDL	Units
630-20-6	1,1,1,2-Tetrachloroethane	54.7	1.00	0.120	ug/L
71-55-6	1,1,1-Trichloroethane	50.5	1.00	0.123	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	48.3	1.00	0.109	ug/L
79-00-5	1,1,2-Trichloroethane	47.9	1.00	0.159	ug/L
75-34-3	1,1-Dichloroethane	50.6	1.00	0.171	ug/L
75-35-4	1,1-Dichloroethene	47.6	1.00	0.208	ug/L
563-58-6	1,1-Dichloropropene	50.7	1.00	0.052	ug/L
87-61-6	1,2,3-Trichlorobenzene	44.6	1.00	0.079	ug/L
96-18-4	1,2,3-Trichloropropane	44.5	1.00	0.065	ug/L
120-82-1	1,2,4-Trichlorobenzene	46.5	1.00	0.105	ug/L
95-63-6	1,2,4-Trimethylbenzene	49.3	1.00	0.084	ug/L
96-12-8	1,2-Dibromo-3-chloropropane	43.5	1.00	0.194	ug/L
106-93-4	1,2-Dibromoethane	49.5	1.00	0.102	ug/L
95-50-1	1,2-Dichlorobenzene	48.8	1.00	0.135	ug/L
107-06-2	1,2-Dichloroethane	46.7	1.00	0.116	ug/L
78-87-5	1,2-Dichloropropane	50.3	1.00	0.150	ug/L
108-67-8	1,3,5-Trimethylbenzene	48.6	1.00	0.066	ug/L
541-73-1	1,3-Dichlorobenzene	50.4	1.00	0.138	ug/L
142-28-9	1,3-Dichloropropane	48.1	1.00	0.059	ug/L
106-46-7	1,4-Dichlorobenzene	49.6	1.00	0.083	ug/L
594-20-7	2,2-Dichloropropane	46.2	1.00	0.170	ug/L
78-93-3	2-Butanone	29.1	5.00	0.142	ug/L
95-49-8	2-Chlorotoluene	48.0	1.00	0.080	ug/L
591-78-6	2-Hexanone	32.9	5.00	0.122	ug/L
106-43-4	4-Chlorotoluene	48.2	1.00	0.124	ug/L
99-87-6	4-Isopropyltoluene	50.1	1.00	0.070	ug/L
108-10-1	4-Methyl-2-pentanone	42.0	5.00	0.120	ug/L
67-64-1	Acetone	20.4	5.00	0.193	ug/L
71-43-2	Benzene	49.1	1.00	0.111	ug/L
108-86-1	Bromobenzene	49.9	1.00	0.145	ug/L
74-97-5	Bromochloromethane	52.5	1.00	0.127	ug/L
75-27-4	Bromodichloromethane	51.5	1.00	0.083	ug/L
75-25-2	Bromoform	44.8	1.00	0.215	ug/L
74-83-9	Bromomethane	55.7	1.00	0.427	ug/L
75-15-0	Carbon disulfide	50.0	1.00	0.190	ug/L
56-23-5	Carbon tetrachloride	49.6	1.00	0.248	ug/L
108-90-7	Chlorobenzene	50.7	1.00	0.083	ug/L
75-00-3	Chloroethane	50.6	1.00	0.235	ug/L
67-66-3	Chloroform	49.1	1.00	0.155	ug/L
74-87-3	Chloromethane	38.1	1.00	0.144	ug/L
74-95-3	Dibromomethane	47.9	1.00	0.211	ug/L
75-71-8	Dichlorodifluoromethane	46.4	1.00	0.145	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210250305	**MW-X-01-MSD**	Water	10/24/2012 14:25	10/25/2012 09:40

SW-846 8260B DOD Water

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/26/2012 23:12	CEK	493244

CAS#	Parameter	Result	RDL	MDL	Units
100-41-4	**Ethylbenzene**	**49.4**	**1.00**	**0.109**	**ug/L**
87-68-3	**Hexachlorobutadiene**	**51.8**	**1.00**	**0.265**	**ug/L**
98-82-8	**Isopropylbenzene (Cumene)**	**49.2**	**1.00**	**0.130**	**ug/L**
75-09-2	**Methylene chloride**	**43.6**	**5.00**	**0.149**	**ug/L**
91-20-3	**Naphthalene**	**41.0**	**1.00**	**0.176**	**ug/L**
100-42-5	**Styrene**	**49.9**	**1.00**	**0.089**	**ug/L**
127-18-4	**Tetrachloroethene**	**50.5**	**1.00**	**0.193**	**ug/L**
108-88-3	**Toluene**	**49.0**	**1.00**	**0.122**	**ug/L**
79-01-6	**Trichloroethene**	**49.2**	**1.00**	**0.161**	**ug/L**
75-69-4	**Trichlorofluoromethane**	**48.2**	**1.00**	**0.157**	**ug/L**
75-01-4	**Vinyl chloride**	**51.1**	**1.00**	**0.127**	**ug/L**
156-59-2	**cis-1,2-Dichloroethene**	**48.8**	**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**	**99.3**	**2.00**	**0.123**	**ug/L**
104-51-8	**n-Butylbenzene**	**50.6**	**1.00**	**0.123**	**ug/L**
103-65-1	**n-Propylbenzene**	**48.9**	**1.00**	**0.727**	**ug/L**
95-47-6	**o-Xylene**	**50.8**	**1.00**	**0.055**	**ug/L**
135-98-8	**sec-Butylbenzene**	**49.9**	**1.00**	**0.107**	**ug/L**
1634-04-4	**tert-Butyl methyl ether (MTBE)**	**44.7**	**5.00**	**0.078**	**ug/L**
98-06-6	**tert-Butylbenzene**	**47.9**	**1.00**	**0.087**	**ug/L**
156-60-5	**trans-1,2-Dichloroethene**	**49.0**	**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	50	ug/L	100	75 - 120
1868-53-7	Dibromofluoromethane	50	51.3	ug/L	103	85 - 115
2037-26-5	Toluene d8	50	51.1	ug/L	102	85 - 120
17060-07-0	1,2-Dichloroethane-d4	50	47.9	ug/L	96	70 - 120

SW-846 7470A Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/26/2012 11:20	493152	SW-846 7470A Dissolved	1	10/31/2012 12:05	BNB	493483

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	**Mercury**	**4.63**	**0.20**	**0.068**	**ug/L**

SW-846 7470A Water

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/26/2012 11:20	493151	SW-846 7470A	1	10/31/2012 11:49	BNB	493483

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	**Mercury**	**4.67**	**0.20**	**0.068**	**ug/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210250305	**MW-X-01-MSD**	Water	10/24/2012 14:25	10/25/2012 09:40

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/26/2012 16:40	493147	SW-846 3010A	1	10/31/2012 13:16	CLB	493541

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	5330	200	30.3	ug/L
7440-36-0	Antimony	502	60.0	3.11	ug/L
7440-38-2	Arsenic	542	10.0	3.59	ug/L
7440-39-3	Barium	561	10.0	0.71	ug/L
7440-41-7	Beryllium	507	5.00	0.10	ug/L
7440-43-9	Cadmium	493	5.00	0.16	ug/L
7440-70-2	Calcium	33200	100	45.7	ug/L
7440-47-3	Chromium	486	10.0	0.26	ug/L
7440-48-4	Cobalt	491	10.0	0.58	ug/L
7440-50-8	Copper	487	10.0	1.01	ug/L
7439-89-6	Iron	5170	100	12.6	ug/L
7439-92-1	Lead	494	15.0	1.96	ug/L
7439-95-4	Magnesium	28800	100	16.5	ug/L
7439-96-5	Manganese	498	15.0	1.31	ug/L
7440-02-0	Nickel	477	40.0	1.13	ug/L
7782-49-2	Selenium	525	40.0	4.42	ug/L
7440-22-4	Silver	488	10.0	0.70	ug/L
7440-28-0	Thallium	499	20.0	3.04	ug/L
7440-62-2	Vanadium	553	20.0	1.25	ug/L
7440-66-6	Zinc	720	20.0	4.51	ug/L

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/26/2012 16:40	493147	SW-846 3010A	1	11/01/2012 13:04	CLB	493656

CAS#	Parameter	Result	RDL	MDL	Units
7440-09-7	Potassium	16200	500	34.6	ug/L
7440-23-5	Sodium	65400	1000	61.1	ug/L

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/26/2012 10:20	493146	SW-846 3005 Dissolved	1	10/31/2012 11:59	CLB	493541

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	5260	200	30.3	ug/L
7440-36-0	Antimony	537	60.0	3.11	ug/L
7440-38-2	Arsenic	580	10.0	3.59	ug/L
7440-39-3	Barium	580	10.0	0.71	ug/L
7440-41-7	Beryllium	543	5.00	0.10	ug/L
7440-43-9	Cadmium	523	5.00	0.16	ug/L
7440-70-2	Calcium	33800	100	45.7	ug/L
7440-47-3	Chromium	509	10.0	0.26	ug/L
7440-48-4	Cobalt	527	10.0	0.58	ug/L
7440-50-8	Copper	511	10.0	1.01	ug/L
7439-89-6	Iron	5290	100	12.6	ug/L
7439-92-1	Lead	521	15.0	1.96	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210250305	**MW-X-01-MSD**	Water	10/24/2012 14:25	10/25/2012 09:40

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/26/2012 10:20	493146	SW-846 3005 Dissolved	1	10/31/2012 11:59	CLB	493541

CAS#	Parameter	Result	RDL	MDL	Units
7439-95-4	**Magnesium**	**30400**	**100**	**16.5**	**ug/L**
7439-96-5	**Manganese**	**517**	**15.0**	**1.31**	**ug/L**
7440-02-0	**Nickel**	**509**	**40.0**	**1.13**	**ug/L**
7782-49-2	**Selenium**	**562**	**40.0**	**4.42**	**ug/L**
7440-22-4	**Silver**	**519**	**10.0**	**0.70**	**ug/L**
7440-28-0	**Thallium**	**516**	**20.0**	**3.04**	**ug/L**
7440-62-2	**Vanadium**	**579**	**20.0**	**1.25**	**ug/L**
7440-66-6	**Zinc**	**766**	**20.0**	**4.51**	**ug/L**

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/26/2012 10:20	493146	SW-846 3005 Dissolved	1	11/01/2012 11:52	CLB	493656

CAS#	Parameter	Result	RDL	MDL	Units
7440-09-7	**Potassium**	**16700**	**500**	**3.46**	**ug/L**
7440-23-5	**Sodium**	**67300**	**1000**	**61.1**	**ug/L**

EPA 353.2 Nitrite

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/25/2012 16:59	AEL	493157

CAS#	Parameter	Result	RDL	MDL	Units
14797-65-0	**Nitrite**	**0.457**	**0.010**	**0.002**	**mg/L-N**

EPA 353.2 Nitrate

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			5	10/25/2012 17:54	AEL	493156

CAS#	Parameter	Result	RDL	MDL	Units
14797-55-8	**Nitrate**	**3.85**	**0.050**	**0.025**	**mg/L-N**

SM 4500 NH3 BE Ammonia Water

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/26/2012 05:30	493163	SM4500 NH3 BE TKN	1	10/27/2012 07:53	DJH	493273

CAS#	Parameter	Result	RDL	MDL	Units
7664-41-7	**Ammonia**	**13.9**	**1.0**	**0.24**	**mg/L-N**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210250305	**MW-X-01-MSD**	Water	10/24/2012 14:25	10/25/2012 09:40

EPA 300.0 Inorganic Anions

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			20	11/01/2012 14:27	AEL	493575

CAS#	Parameter	Result	RDL	MDL	Units
16887-00-6	**Chloride**	**75.0**	**2.00**	**1.26**	**mg/L**
14808-79-8	**Sulfate**	**145**	**4.00**	**2.30**	**mg/L**

SM 5310B TOC

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/31/2012 12:25	DNM	493469

CAS#	Parameter	Result	RDL	MDL	Units
C-012	**Total Organic Carbon**	**52.5**	**1.0**	**0.30**	**mg/L**

SW-846 7196A Chromium VI

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/25/2012 11:33	JEM	493096

CAS#	Parameter	Result	RDL	MDL	Units
18540-29-9	**Chromium VI**	**490**	**10.0**	**4.00**	**ug/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210250306	**TB-06**	Water	10/24/2012 07:01	10/25/2012 09:40

SW-846 8260B DOD Water

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/26/2012 21:53	CEK	493244

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
21210250306	**TB-06**	Water	10/24/2012 07:01	10/25/2012 09:40

SW-846 8260B DOD Water

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/26/2012 21:53	CEK	493244

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	48.2	ug/L	96	75 - 120
1868-53-7	Dibromofluoromethane	50	49.5	ug/L	99	85 - 115
2037-26-5	Toluene d8	50	51.9	ug/L	104	85 - 120
17060-07-0	1,2-Dichloroethane-d4	50	48.7	ug/L	97	70 - 120

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210250307	**TB-07**	Water	10/24/2012 14:25	10/25/2012 09:40

SW-846 8260B DOD Water

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/26/2012 22:13	CEK	493244

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
21210250307	**TB-07**	Water	10/24/2012 14:25	10/25/2012 09:40

SW-846 8260B DOD Water

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/26/2012 22:13	CEK	493244

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	48.5	ug/L	97	75 - 120
1868-53-7	Dibromofluoromethane	50	49.6	ug/L	99	85 - 115
2037-26-5	Toluene d8	50	52.7	ug/L	105	85 - 120
17060-07-0	1,2-Dichloroethane-d4	50	46.3	ug/L	93	70 - 120

GC/MS Volatiles Quality Control Summary

Analytical Batch 493244	**Client ID**	MB493244	LCS493244	LCSD493244
Prep Batch N/A	**GCAL ID**	1121818	1121819	1121820
	Sample Type	Method Blank	LCS	LCSD
	Analytical Date	10/26/2012 17:11	10/26/2012 15:46	10/26/2012 16:06
	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	43.6	87	40 - 140	42.1	84	4	30
74-97-5	Bromochloromethane	0.127U	0.127	50.0	54.5	109	65 - 130	52.5	105	4	30
75-27-4	Bromodichloromethane	0.083U	0.083	50.0	53.1	106	75 - 120	51.7	103	3	30
75-25-2	Bromoform	0.215U	0.215	50.0	46.2	92	70 - 130	44.9	90	3	30
74-83-9	Bromomethane	0.427U	0.427	50.0	57.0	114	30 - 145	57.2	114	0.4	30
75-15-0	Carbon disulfide	0.190U	0.190	50.0	54.0	108	35 - 160	51.5	103	5	30
56-23-5	Carbon tetrachloride	0.248U	0.248	50.0	49.7	99	65 - 140	48.2	96	3	30
75-00-3	Chloroethane	0.235U	0.235	50.0	50.5	101	60 - 135	49.6	99	2	30
136777-61-2	m,p-Xylene	0.123U	0.123	100	105	105	75 - 130	103	103	2	30
67-66-3	Chloroform	0.155U	0.155	50.0	51.6	103	65 - 135	49.9	100	3	30
74-87-3	Chloromethane	0.144U	0.144	50.0	44.3	89	40 - 125	43.7	87	1	30
74-95-3	Dibromomethane	0.211U	0.211	50.0	50.9	102	75 - 125	50.5	101	0.8	30
75-71-8	Dichlorodifluoromethane	0.145U	0.145	50.0	51.1	102	30 - 155	49.6	99	3	30
75-34-3	1,1-Dichloroethane	0.171U	0.171	50.0	52.1	104	70 - 135	51.4	103	1	30
107-06-2	1,2-Dichloroethane	0.116U	0.116	50.0	50.5	101	70 - 130	49.4	99	2	30
156-59-2	cis-1,2-Dichloroethene	0.103U	0.103	50.0	51.8	104	70 - 125	50.1	100	3	30
156-60-5	trans-1,2-Dichloroethene	0.077U	0.077	50.0	51.6	103	60 - 140	51.0	102	1	30
75-09-2	Methylene chloride	0.149U	0.149	50.0	47.3	95	55 - 140	45.5	91	4	30
78-87-5	1,2-Dichloropropane	0.150U	0.150	50.0	52.8	106	75 - 125	51.2	102	3	30
10061-01-5	cis-1,3-Dichloropropene	0.124U	0.124	50.0	51.2	102	70 - 130	50.7	101	1	30
10061-02-6	trans-1,3-Dichloropropene	0.128U	0.128	50.0	53.6	107	55 - 140	51.7	103	4	30
100-41-4	Ethylbenzene	0.109U	0.109	50.0	51.0	102	75 - 125	50.0	100	2	30
591-78-6	2-Hexanone	0.122U	0.122	50.0	45.2	90	55 - 130	46.9	94	4	30
98-82-8	Isopropylbenzene (Cumene)	0.130U	0.130	50.0	51.8	104	75 - 125	50.1	100	3	30
78-93-3	2-Butanone	0.142U	0.142	50.0	45.3	91	30 - 150	42.5	85	6	30
108-10-1	4-Methyl-2-pentanone	0.120U	0.120	50.0	49.4	99	60 - 135	45.4	91	8	30
103-65-1	n-Propylbenzene	0.727U	0.727	50.0	52.6	105	70 - 130	50.2	100	5	30
100-42-5	Styrene	0.089U	0.089	50.0	52.7	105	65 - 135	50.9	102	3	30
127-18-4	Tetrachloroethene	0.193U	0.193	50.0	54.5	109	45 - 150	53.7	107	1	30
630-20-6	1,1,1,2-Tetrachloroethane	0.120U	0.120	50.0	55.5	111	80 - 130	54.6	109	2	30
79-34-5	1,1,2,2-Tetrachloroethane	0.109U	0.109	50.0	51.4	103	65 - 130	49.5	99	4	30
120-82-1	1,2,4-Trichlorobenzene	0.105U	0.105	50.0	55.2	110	65 - 135	53.3	107	4	30
71-55-6	1,1,1-Trichloroethane	0.123U	0.123	50.0	52.4	105	65 - 130	51.4	103	2	30

GC/MS Volatiles Quality Control Summary

Analytical Batch 493244		**Client ID**	MB493244			LCS493244			LCSD493244		
Prep Batch N/A		**GCAL ID**	1121818			1121819			1121820		
		Sample Type	Method Blank			LCS			LCSD		
		Analytical Date	10/26/2012 17:11			10/26/2012 15:46			10/26/2012 16:06		
		Matrix	Water			Water			Water		
SW-846 8260B		**Units**	**Result**	ug/L **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	50.6	101	75 - 125	51.1	102	1	30
75-69-4	Trichlorofluoromethane		0.157U	0.157	50.0	53.8	108	60 - 145	50.8	102	6	30
96-18-4	1,2,3-Trichloropropane		0.065U	0.065	50.0	48.7	97	75 - 125	47.3	95	3	30
95-63-6	1,2,4-Trimethylbenzene		0.084U	0.084	50.0	53.2	106	75 - 130	50.1	100	6	30
108-67-8	1,3,5-Trimethylbenzene		0.066U	0.066	50.0	52.7	105	75 - 130	50.1	100	5	30
75-01-4	Vinyl chloride		0.127U	0.127	50.0	54.3	109	50 - 145	53.3	107	2	30
95-47-6	o-Xylene		0.055U	0.055	50.0	52.2	104	80 - 120	50.8	102	3	30
96-12-8	1,2-Dibromo-3-chloropropane		0.194U	0.194	50.0	49.8	100	50 - 130	47.0	94	6	30
106-93-4	1,2-Dibromoethane		0.102U	0.102	50.0	53.0	106	80 - 120	52.1	104	2	30
1634-04-4	tert-Butyl methyl ether (MTBE)		0.078U	0.078	50.0	49.4	99	65 - 125	49.4	99	0	30
99-87-6	4-Isopropyltoluene		0.070U	0.070	50.0	54.5	109	75 - 130	50.6	101	7	30
594-20-7	2,2-Dichloropropane		0.170U	0.170	50.0	49.3	99	70 - 135	49.6	99	0.6	30
563-58-6	1,1-Dichloropropene		0.052U	0.052	50.0	54.0	108	75 - 130	52.6	105	3	30
142-28-9	1,3-Dichloropropane		0.059U	0.059	50.0	52.0	104	75 - 125	51.9	104	0.2	30
108-86-1	Bromobenzene		0.145U	0.145	50.0	53.0	106	75 - 125	50.8	102	4	30
95-49-8	2-Chlorotoluene		0.080U	0.080	50.0	52.9	106	75 - 125	49.5	99	7	30
106-43-4	4-Chlorotoluene		0.124U	0.124	50.0	51.4	103	75 - 130	49.0	98	5	30
98-06-6	tert-Butylbenzene		0.087U	0.087	50.0	51.8	104	70 - 130	50.0	100	4	30
135-98-8	sec-Butylbenzene		0.107U	0.107	50.0	53.5	107	70 - 125	50.8	102	5	30
541-73-1	1,3-Dichlorobenzene		0.138U	0.138	50.0	52.7	105	75 - 125	49.3	99	7	30
106-46-7	1,4-Dichlorobenzene		0.083U	0.083	50.0	52.0	104	75 - 125	48.9	98	6	30
104-51-8	n-Butylbenzene		0.123U	0.123	50.0	56.1	112	70 - 135	52.2	104	7	30
95-50-1	1,2-Dichlorobenzene		0.135U	0.135	50.0	52.2	104	70 - 120	48.6	97	7	30
87-68-3	Hexachlorobutadiene		0.265U	0.265	50.0	59.4	119	50 - 140	55.5	111	7	30
91-20-3	Naphthalene		0.176U	0.176	50.0	54.0	108	55 - 140	53.4	107	1	30
87-61-6	1,2,3-Trichlorobenzene		0.079U	0.079	50.0	56.8	114	55 - 140	54.8	110	4	30
75-35-4	1,1-Dichloroethene		0.208U	0.208	50.0	51.0	102	70 - 130	49.5	99	3	30
71-43-2	Benzene		0.111U	0.111	50.0	50.8	102	80 - 120	49.9	100	2	30
79-01-6	Trichloroethene		0.161U	0.161	50.0	52.1	104	70 - 125	51.2	102	2	30
108-88-3	Toluene		0.122U	0.122	50.0	51.6	103	75 - 120	51.6	103	0	30
108-90-7	Chlorobenzene		0.083U	0.083	50.0	52.1	104	80 - 120	51.7	103	0.8	30
Surrogate												
460-00-4	4-Bromofluorobenzene		48.4	97	50	49	98	75 - 120	49.5	99		

GC/MS Volatiles Quality Control Summary

Analytical Batch 493244		**Client ID**	MB493244			LCS493244			LCSD493244		
Prep Batch N/A		**GCAL ID**	1121818			1121819			1121820		
		Sample Type	Method Blank			LCS			LCSD		
		Analytical Date	10/26/2012 17:11			10/26/2012 15:46			10/26/2012 16:06		
		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		50.1	100	50	49.4	99	85 - 115	51	102		
2037-26-5	Toluene d8		51.9	104	50	50.5	101	85 - 120	52.1	104		
17060-07-0	1,2-Dichloroethane-d4		48.3	97	50	49.9	100	70 - 120	49.7	99		

Analytical Batch 493244		**Client ID**	MW-X-01			MW-X-01-MS			MW-X-01-MSD		
Prep Batch N/A		**GCAL ID**	21210250303			21210250304			21210250305		
		Sample Type	SAMPLE			MS			MSD		
		Analytical Date	10/26/2012 22:33			10/26/2012 22:53			10/26/2012 23:12		
		Matrix	Water			Water			Water		
SW-846 8260B DOD Water		**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	56.6	113	80 - 130	54.7	109	3	30
71-55-6	1,1,1-Trichloroethane		0.00	0.123	50.0	52.4	105	65 - 130	50.5	101	4	30
79-34-5	1,1,2,2-Tetrachloroethane		0.00	0.109	50.0	47.5	95	65 - 130	48.3	97	2	30
79-00-5	1,1,2-Trichloroethane		0.00	0.159	50.0	47.8	96	75 - 125	47.9	96	0.2	30
75-34-3	1,1-Dichloroethane		0.00	0.171	50.0	50.5	101	70 - 135	50.6	101	0.2	30
75-35-4	1,1-Dichloroethene		0.00	0.208	50.0	48.6	97	70 - 130	47.6	95	2	30
563-58-6	1,1-Dichloropropene		0.00	0.052	50.0	52.3	105	75 - 130	50.7	101	3	30
87-61-6	1,2,3-Trichlorobenzene		0.00	0.079	50.0	42.0	84	55 - 140	44.6	89	6	30
96-18-4	1,2,3-Trichloropropane		0.00	0.065	50.0	42.5	85	75 - 125	44.5	89	5	30
120-82-1	1,2,4-Trichlorobenzene		0.00	0.105	50.0	43.4	87	65 - 135	46.5	93	7	30
95-63-6	1,2,4-Trimethylbenzene		0.00	0.084	50.0	48.7	97	75 - 130	49.3	99	1	30
96-12-8	1,2-Dibromo-3-chloropropane		0.00	0.194	50.0	37.5	75	50 - 130	43.5	87	15	30
106-93-4	1,2-Dibromoethane		0.00	0.102	50.0	49.6	99	80 - 120	49.5	99	0.2	30
95-50-1	1,2-Dichlorobenzene		0.00	0.135	50.0	47.6	95	70 - 120	48.8	98	2	30
107-06-2	1,2-Dichloroethane		0.00	0.116	50.0	47.7	95	70 - 130	46.7	93	2	30
78-87-5	1,2-Dichloropropane		0.00	0.150	50.0	51.4	103	75 - 125	50.3	101	2	30
108-67-8	1,3,5-Trimethylbenzene		0.00	0.066	50.0	49.5	99	75 - 130	48.6	97	2	30
541-73-1	1,3-Dichlorobenzene		0.00	0.138	50.0	48.7	97	65 - 130	50.4	101	3	30
142-28-9	1,3-Dichloropropane		0.00	0.059	50.0	49.3	99	75 - 125	48.1	96	2	30
106-46-7	1,4-Dichlorobenzene		0.00	0.083	50.0	47.6	95	65 - 130	49.6	99	4	30
594-20-7	2,2-Dichloropropane		0.00	0.170	50.0	47.2	94	70 - 135	46.2	92	2	30

GC/MS Volatiles Quality Control Summary

Analytical Batch 493244		**Client ID**	MW-X-01			MW-X-01-MS			MW-X-01-MSD		
Prep Batch N/A		**GCAL ID**	21210250303			21210250304			21210250305		
		Sample Type	SAMPLE			MS			MSD		
		Analytical Date	10/26/2012 22:33			10/26/2012 22:53			10/26/2012 23:12		
		Matrix	Water			Water			Water		
SW-846 8260B DOD Water			**Units**	ug/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
			Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
78-93-3	2-Butanone		0.00	0.142	50.0	30.9	62	30 - 150	29.1	58	6	30
95-49-8	2-Chlorotoluene		0.00	0.080	50.0	47.6	95	75 - 125	48.0	96	0.8	30
591-78-6	2-Hexanone		0.00	0.122	50.0	31.0	62	55 - 130	32.9	66	6	30
106-43-4	4-Chlorotoluene		0.00	0.124	50.0	48.5	97	75 - 130	48.2	96	0.6	30
99-87-6	4-Isopropyltoluene		0.00	0.070	50.0	50.8	102	75 - 130	50.1	100	1	30
108-10-1	4-Methyl-2-pentanone		0.00	0.120	50.0	40.3	81	60 - 135	42.0	84	4	30
67-64-1	Acetone		0.00	0.193	50.0	20.9	42	40 - 140	20.4	41	2	30
71-43-2	Benzene		0.00	0.111	50.0	50.9	102	80 - 120	49.1	98	4	30
108-86-1	Bromobenzene		0.00	0.145	50.0	48.7	97	75 - 125	49.9	100	2	30
74-97-5	Bromochloromethane		0.00	0.127	50.0	52.5	105	65 - 130	52.5	105	0	30
75-27-4	Bromodichloromethane		0.00	0.083	50.0	52.7	105	75 - 120	51.5	103	2	30
75-25-2	Bromoform		0.00	0.215	50.0	46.3	93	70 - 130	44.8	90	3	30
74-83-9	Bromomethane		0.00	0.427	50.0	49.2	98	30 - 145	55.7	111	12	30
75-15-0	Carbon disulfide		0.00	0.190	50.0	51.8	104	35 - 160	50.0	100	4	30
56-23-5	Carbon tetrachloride		0.00	0.248	50.0	51.9	104	65 - 140	49.6	99	5	30
108-90-7	Chlorobenzene		0.00	0.083	50.0	51.9	104	80 - 120	50.7	101	2	30
75-00-3	Chloroethane		0.00	0.235	50.0	52.9	106	60 - 135	50.6	101	4	30
67-66-3	Chloroform		0.00	0.155	50.0	50.2	100	65 - 135	49.1	98	2	30
74-87-3	Chloromethane		0.00	0.144	50.0	37.9	76	40 - 125	38.1	76	0.5	30
74-95-3	Dibromomethane		0.00	0.211	50.0	49.7	99	75 - 125	47.9	96	4	30
75-71-8	Dichlorodifluoromethane		0.00	0.145	50.0	47.0	94	30 - 155	46.4	93	1	30
100-41-4	Ethylbenzene		0.00	0.109	50.0	51.3	103	75 - 125	49.4	99	4	30
87-68-3	Hexachlorobutadiene		0.00	0.265	50.0	47.1	94	50 - 140	51.8	104	10	30
98-82-8	Isopropylbenzene (Cumene)		0.00	0.130	50.0	51.7	103	75 - 125	49.2	98	5	30
75-09-2	Methylene chloride		0.00	0.149	50.0	44.7	89	55 - 140	43.6	87	2	30
91-20-3	Naphthalene		0.00	0.176	50.0	37.5	75	55 - 140	41.0	82	9	30
100-42-5	Styrene		0.00	0.089	50.0	52.1	104	65 - 135	49.9	100	4	30
127-18-4	Tetrachloroethene		0.00	0.193	50.0	52.6	105	45 - 150	50.5	101	4	30
108-88-3	Toluene		0.00	0.122	50.0	50.6	101	75 - 120	49.0	98	3	30
79-01-6	Trichloroethene		0.00	0.161	50.0	51.9	104	70 - 125	49.2	98	5	30
75-69-4	Trichlorofluoromethane		0.00	0.157	50.0	49.4	99	60 - 145	48.2	96	2	30
75-01-4	Vinyl chloride		0.00	0.127	50.0	53.2	106	50 - 145	51.1	102	4	30
156-59-2	cis-1,2-Dichloroethene		0.00	0.103	50.0	49.2	98	70 - 125	48.8	98	0.8	30

GC/MS Volatiles Quality Control Summary

Analytical Batch	493244	**Client ID**	MW-X-01			MW-X-01-MS			MW-X-01-MSD		
Prep Batch	N/A	**GCAL ID**	21210250303			21210250304			21210250305		
		Sample Type	SAMPLE			MS			MSD		
		Analytical Date	10/26/2012 22:33			10/26/2012 22:53			10/26/2012 23:12		
		Matrix	Water			Water			Water		
SW-846 8260B DOD Water		**Units**	**Result**	ug/L **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	50.4	101	70 - 130	48.3	97	4	30
136777-61-2	m,p-Xylene		0.00	0.123	100	105	105	75 - 130	99.3	99	6	30
104-51-8	n-Butylbenzene		0.00	0.123	50.0	49.8	100	70 - 135	50.6	101	2	30
103-65-1	n-Propylbenzene		0.00	0.727	50.0	49.2	98	70 - 130	48.9	98	0.6	30
95-47-6	o-Xylene		0.00	0.055	50.0	52.8	106	80 - 120	50.8	102	4	30
135-98-8	sec-Butylbenzene		0.00	0.107	50.0	50.1	100	70 - 125	49.9	100	0.4	30
1634-04-4	tert-Butyl methyl ether (MTBE)		0.00	0.078	50.0	46.0	92	65 - 125	44.7	89	3	30
98-06-6	tert-Butylbenzene		0.00	0.087	50.0	48.5	97	70 - 130	47.9	96	1	30
156-60-5	trans-1,2-Dichloroethene		0.00	0.077	50.0	49.4	99	60 - 140	49.0	98	0.8	30
10061-02-6	trans-1,3-Dichloropropene		0.00	0.128	50.0	50.0	100	55 - 140	49.7	99	0.6	30
Surrogate												
460-00-4	4-Bromofluorobenzene		50.1	100	50	51.6	103	75 - 120	50	100		
1868-53-7	Dibromofluoromethane		49.3	99	50	50.5	101	85 - 115	51.3	103		
2037-26-5	Toluene d8		51.2	102	50	50	100	85 - 120	51.1	102		
17060-07-0	1,2-Dichloroethane-d4		46.7	93	50	48.1	96	70 - 120	47.9	96		

Inorganics Quality Control Summary

Analytical Batch	493483	**Client ID**	MB493152	LCS493152
Prep Batch	493152	**GCAL ID**	1121302	1121303
Prep Method	SW-846	**Sample Type**	Method Blank	LCS
	7470A	**Prep Date**	10/26/2012 11:20	10/26/2012 11:20
		Analytical Date	10/31/2012 11:59	10/31/2012 12:00
		Matrix	Water	Water

SW-846 7470A Dissolved		**Units**	ug/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
7439-97-6	Mercury	0.068U	0.068	5.00	4.54	91	80 - 120

Analytical Batch	493483	**Client ID**	MW-X-01	MW-X-01-MS	MW-X-01-MSD
Prep Batch	493152	**GCAL ID**	21210250303	21210250304	21210250305
Prep Method	SW-846	**Sample Type**	SAMPLE	MS	MSD
	7470A	**Prep Date**	10/26/2012 11:20	10/26/2012 11:20	10/26/2012 11:20
	Dissolved	**Analytical Date**	10/31/2012 12:02	10/31/2012 12:04	10/31/2012 12:05
		Matrix	Water	Water	Water

SW-846 7470A Dissolved		**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	4.47	89	80 - 120	4.63	93	4	30

Inorganics Quality Control Summary

Analytical Batch	493321	**Client ID**	MB493151			LCS493151		
Prep Batch	493151	**GCAL ID**	1121300			1121301		
Prep Method	SW-846	**Sample Type**	Method Blank			LCS		
	7470A	**Prep Date**	10/26/2012 11:20			10/26/2012 11:20		
		Analytical Date	10/29/2012 12:00			10/29/2012 12:01		
		Matrix	Water			Water		
SW-846 7470A			**Units**	ug/L	**Spike**	**Result**		**Control**
			Result	**RDL**	**Added**		**% R**	**Limits % R**
7439-97-6	Mercury		0.11875J	0.068	5.00	4.92	98	80 - 120

Analytical Batch	493483	**Client ID**	MW-X-01			MW-X-01-MS			MW-X-01-MSD			
Prep Batch	493151	**GCAL ID**	21210250303			21210250304			21210250305			
Prep Method	SW-846	**Sample Type**	SAMPLE			MS			MSD			
	7470A	**Prep Date**	10/26/2012 11:20			10/26/2012 11:20			10/26/2012 11:20			
		Analytical Date	10/31/2012 11:46			10/31/2012 11:47			10/31/2012 11:49			
		Matrix	Water			Water			Water			
SW-846 7470A Water			**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	4.97	99	80 - 120	4.67	93	6	30

Inorganics Quality Control Summary

Analytical Batch	493541	**Client ID**	MB493147	LCS493147
Prep Batch	493147	**GCAL ID**	1121286	1121287
Prep Method	SW-846	**Sample Type**	Method Blank	LCS
	3010A	**Prep Date**	10/26/2012 16:40	10/26/2012 16:40
		Analytical Date	10/31/2012 12:35	10/31/2012 12:55
		Matrix	Water	Water

SW-846 6010C		**Units**	ug/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
7429-90-5	Aluminum	30.3U	30.3	5000	4950	99	80 - 120
7440-36-0	Antimony	3.11U	3.11	500	481	96	80 - 120
7440-38-2	Arsenic	3.59U	3.59	500	513	103	80 - 120
7440-39-3	Barium	1.77J	0.71	500	493	99	80 - 120
7440-41-7	Beryllium	0.10U	0.10	500	496	99	80 - 120
7440-43-9	Cadmium	0.16U	0.16	500	497	99	80 - 120
7440-70-2	Calcium	45.7U	45.7	5000	4990	100	80 - 120
7440-47-3	Chromium	0.26U	0.26	500	487	97	80 - 120
7440-48-4	Cobalt	0.58U	0.58	500	514	103	80 - 120
7440-50-8	Copper	1.01U	1.01	500	481	96	80 - 120
7439-89-6	Iron	12.6U	12.6	5000	4930	99	80 - 120
7439-92-1	Lead	1.96U	1.96	500	498	100	80 - 120
7439-95-4	Magnesium	16.5U	16.5	5000	4970	99	80 - 120
7439-96-5	Manganese	1.31U	1.31	500	487	97	80 - 120
7440-02-0	Nickel	1.13U	1.13	500	504	101	80 - 120
7440-09-7	Potassium	83.1J	34.6	10000	9840	98	80 - 120
7782-49-2	Selenium	4.42U	4.42	500	511	102	80 - 120
7440-22-4	Silver	0.85J	0.70	500	482	96	80 - 120
7440-23-5	Sodium	315J	61.1	20000	20200	101	80 - 120
7440-28-0	Thallium	3.04U	3.04	500	496	99	80 - 120
7440-62-2	Vanadium	1.25U	1.25	500	487	97	80 - 120
7440-66-6	Zinc	4.51U	4.51	500	494	99	80 - 120

Inorganics Quality Control Summary

Analytical Batch	493541	**Client ID**	MW-X-01	MW-X-01-MS	MW-X-01-MSD
Prep Batch	493147	**GCAL ID**	21210250303	21210250304	21210250305
Prep Method	SW-846	**Sample Type**	SAMPLE	MS	MSD
	3010A	**Prep Date**	10/26/2012 16:40	10/26/2012 16:40	10/26/2012 16:40
		Analytical Date	10/31/2012 13:02	10/31/2012 13:09	10/31/2012 13:16
		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	114	30.3	5000	5610	110	75 - 125	5330	104	5	20
7440-36-0	Antimony	0.0	3.11	500	529	106	75 - 125	502	100	5	20
7440-38-2	Arsenic	8.84	3.59	500	567	112	75 - 125	542	107	4	20
7440-39-3	Barium	62.4	0.71	500	592	106	75 - 125	561	100	5	20
7440-41-7	Beryllium	0.0	0.10	500	540	108	75 - 125	507	101	6	20
7440-43-9	Cadmium	0.62	0.16	500	527	105	75 - 125	493	99	7	20
7440-70-2	Calcium	27900	45.7	5000	34100	124	75 - 125	33200	106	3	20
7440-47-3	Chromium	1.64	0.26	500	516	103	75 - 125	486	97	6	20
7440-48-4	Cobalt	0.0	0.58	500	519	104	75 - 125	491	98	6	20
7440-50-8	Copper	8.62	1.01	500	517	102	75 - 125	487	96	6	20
7439-89-6	Iron	58.3	12.6	5000	5510	109	75 - 125	5170	102	6	20
7439-92-1	Lead	0.0	1.96	500	520	104	75 - 125	494	99	5	20
7439-95-4	Magnesium	23100	16.5	5000	29900	**137***	75 - 125	28800	114	4	20
7439-96-5	Manganese	4.15	1.31	500	529	105	75 - 125	498	99	6	20
7440-02-0	Nickel	0.0	1.13	500	508	102	75 - 125	477	95	6	20
7782-49-2	Selenium	7.89	4.42	500	546	108	75 - 125	525	103	4	20
7440-22-4	Silver	0.84	0.70	500	519	104	75 - 125	488	97	6	20
7440-28-0	Thallium	0.0	3.04	500	524	105	75 - 125	499	100	5	20
7440-62-2	Vanadium	53.3	1.25	500	586	107	75 - 125	553	100	6	20
7440-66-6	Zinc	221	4.51	500	754	106	75 - 125	720	100	5	20

Analytical Batch	493656	**Client ID**	MW-X-01	MW-X-01-MS	MW-X-01-MSD
Prep Batch	493147	**GCAL ID**	21210250303	21210250304	21210250305
Prep Method	SW-846	**Sample Type**	SAMPLE	MS	MSD
	3010A	**Prep Date**	10/26/2012 16:40	10/26/2012 16:40	10/26/2012 16:40
		Analytical Date	11/01/2012 12:51	11/01/2012 12:58	11/01/2012 13:04
		Matrix	Water	Water	Water

SW-846 6010C		**Units**	ug/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
7440-09-7	Potassium	5700	34.6	10000	17000	113	75 - 125	16200	105	5	20
7440-23-5	Sodium	44200	61.1	20000	67300	116	75 - 125	65400	106	3	20

Inorganics Quality Control Summary

Analytical Batch	493541	**Client ID**	MB493146	LCS493146
Prep Batch	493146	**GCAL ID**	1121284	1121285
Prep Method	SW-846 3005	**Sample Type**	Method Blank	LCS
	Dissolved	**Prep Date**	10/26/2012 10:20	10/26/2012 10:20
		Analytical Date	10/31/2012 11:31	10/31/2012 11:39
		Matrix	Water	Water

SW-846 6010C Dissolved		**Units**	ug/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
7429-90-5	Aluminum	30.3U	30.3	5000	5220	104	80 - 120
7440-36-0	Antimony	3.11U	3.11	500	507	101	80 - 120
7440-38-2	Arsenic	3.59U	3.59	500	536	107	80 - 120
7440-39-3	Barium	0.71U	0.71	500	512	102	80 - 120
7440-41-7	Beryllium	0.11J	0.10	500	524	105	80 - 120
7440-43-9	Cadmium	0.16U	0.16	500	521	104	80 - 120
7440-70-2	Calcium	60.5J	45.7	5000	5310	106	80 - 120
7440-47-3	Chromium	0.26U	0.26	500	506	101	80 - 120
7440-48-4	Cobalt	0.58U	0.58	500	536	107	80 - 120
7440-50-8	Copper	1.01U	1.01	500	501	100	80 - 120
7439-89-6	Iron	12.6U	12.6	5000	5190	104	80 - 120
7439-92-1	Lead	1.96U	1.96	500	522	104	80 - 120
7439-95-4	Magnesium	16.5U	16.5	5000	5220	104	80 - 120
7439-96-5	Manganese	1.31U	1.31	500	508	102	80 - 120
7440-02-0	Nickel	1.13U	1.13	500	527	105	80 - 120
7440-09-7	Potassium	28.7J	3.46	10000	10200	102	80 - 120
7782-49-2	Selenium	4.42U	4.42	500	541	108	80 - 120
7440-22-4	Silver	0.92J	0.70	500	509	102	80 - 120
7440-23-5	Sodium	61.1U	61.1	20000	20700	103	80 - 120
7440-28-0	Thallium	3.04U	3.04	500	518	104	80 - 120
7440-62-2	Vanadium	2.44J	1.25	500	506	101	80 - 120
7440-66-6	Zinc	4.51U	4.51	500	525	105	80 - 120

Inorganics Quality Control Summary

Analytical Batch	493541	**Client ID**	MW-X-01	MW-X-01-MS	MW-X-01-MSD
Prep Batch	493146	**GCAL ID**	21210250303	21210250304	21210250305
Prep Method	SW-846 3005	**Sample Type**	SAMPLE	MS	MSD
	Dissolved	**Prep Date**	10/26/2012 10:20	10/26/2012 10:20	10/26/2012 10:20
		Analytical Date	10/31/2012 11:45	10/31/2012 11:53	10/31/2012 11:59
		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	38.7	30.3	5000	5250	104	80 - 120	5260	104	0.2	30
7440-36-0	Antimony	0.0	3.11	500	533	107	80 - 120	537	107	0.6	30
7440-38-2	Arsenic	11.4	3.59	500	572	112	80 - 120	580	114	1	30
7440-39-3	Barium	62.9	0.71	500	578	103	80 - 120	580	103	0.4	30
7440-41-7	Beryllium	0.12	0.10	500	542	108	80 - 120	543	108	0.2	30
7440-43-9	Cadmium	0.63	0.16	500	522	104	80 - 120	523	104	0.1	30
7440-70-2	Calcium	29200	45.7	5000	33400	84	80 - 120	33800	92	1	30
7440-47-3	Chromium	1.39	0.26	500	508	101	80 - 120	509	102	0.2	30
7440-48-4	Cobalt	0.0	0.58	500	526	105	80 - 120	527	105	0.2	30
7440-50-8	Copper	6.52	1.01	500	509	100	80 - 120	511	101	0.4	30
7439-89-6	Iron	0.0	12.6	5000	5210	104	80 - 120	5290	106	1	30
7439-92-1	Lead	0.0	1.96	500	519	104	80 - 120	521	104	0.4	30
7439-95-4	Magnesium	25200	16.5	5000	29600	88	80 - 120	30400	104	3	30
7439-96-5	Manganese	0.0	1.31	500	516	103	80 - 120	517	103	0.3	30
7440-02-0	Nickel	0.0	1.13	500	509	102	80 - 120	509	102	0.1	30
7782-49-2	Selenium	7.34	4.42	500	562	111	80 - 120	562	111	0.09	30
7440-22-4	Silver	0.0	0.70	500	517	103	80 - 120	519	104	0.4	30
7440-28-0	Thallium	0.0	3.04	500	515	103	80 - 120	516	103	0.1	30
7440-62-2	Vanadium	59.9	1.25	500	577	103	80 - 120	579	104	0.4	30
7440-66-6	Zinc	248	4.51	500	761	103	80 - 120	766	104	0.7	30

Analytical Batch	493656	**Client ID**	MW-X-01	MW-X-01-MS	MW-X-01-MSD
Prep Batch	493146	**GCAL ID**	21210250303	21210250304	21210250305
Prep Method	SW-846 3005	**Sample Type**	SAMPLE	MS	MSD
	Dissolved	**Prep Date**	10/26/2012 10:20	10/26/2012 10:20	10/26/2012 10:20
		Analytical Date	11/01/2012 11:38	11/01/2012 11:45	11/01/2012 11:52
		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**
7440-09-7	Potassium	6100	3.46	10000	16500	104	80 - 120	16700	106	1	30
7440-23-5	Sodium	46900	61.1	20000	67200	101	80 - 120	67300	102	0.2	30

General Chemistry Quality Control Summary

Analytical Batch 493156	**Client ID**	MB493156			LCS493156		
Prep Batch N/A	**GCAL ID**	1121313			1121314		
	Sample Type	Method Blank			LCS		
	Analytical Date	10/25/2012 17:31			10/25/2012 17:32		
	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	0.468	94	89.5 -110.5

Analytical Batch 493156	**Client ID**	MW-X-01			MW-X-01-MS			MW-X-01-MSD			
Prep Batch N/A	**GCAL ID**	21210250303			21210250304			21210250305			
	Sample Type	SAMPLE			MS			MSD			
	Analytical Date	10/25/2012 17:52			10/25/2012 17:53			10/25/2012 17:54			
	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		1.39	0.025	2.50	3.84	98	89.5 -110.5	3.85	99	0.5	25

Analytical Batch 493157	**Client ID**	MB493157			LCS493157		
Prep Batch N/A	**GCAL ID**	1121315			1121316		
	Sample Type	Method Blank			LCS		
	Analytical Date	10/25/2012 16:52			10/25/2012 16:53		
	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	0.482	96	89.5 -110.5

Analytical Batch 493157	**Client ID**	MW-X-01			MW-X-01-MS			MW-X-01-MSD			
Prep Batch N/A	**GCAL ID**	21210250303			21210250304			21210250305			
	Sample Type	SAMPLE			MS			MSD			
	Analytical Date	10/25/2012 16:57			10/25/2012 16:58			10/25/2012 16:59			
	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		0.007	0.002	0.500	0.460	91	89.5 -110.5	0.457	90	0.5	25

General Chemistry Quality Control Summary

Analytical Batch	493273	**Client ID**	MB493163			LCS493163		
Prep Batch	493163	**GCAL ID**	1121352			1121353		
Prep Method	SM4500 NH3 BE TKN	**Sample Type**	Method Blank			LCS		
		Prep Date	10/26/2012 05:30			10/26/2012 05:30		
		Analytical Date	10/27/2012 07:53			10/27/2012 07:53		
		Matrix	Water			Water		
SM 4500 NH3 BE Ammonia			**Units**	mg/L-N	**Spike**	**Result**		**Control**
			Result	**RDL**	**Added**		**% R**	**Limits % R**
7664-41-7	Ammonia		0.24U	0.24	15.0	15.7	105	80 - 120

Analytical Batch	493273	**Client ID**	MW-X-01			MW-X-01-MS			MW-X-01-MSD			
Prep Batch	493163	**GCAL ID**	21210250303			21210250304			21210250305			
Prep Method	SM4500 NH3 BE TKN	**Sample Type**	SAMPLE			MS			MSD			
		Prep Date	10/26/2012 05:30			10/26/2012 05:30			10/26/2012 05:30			
		Analytical Date	10/27/2012 07:53			10/27/2012 07:53			10/27/2012 07:53			
		Matrix	Water			Water			Water			
SM 4500 NH3 BE Ammonia Water			**Units**	mg/L-N	**Spike**	**Result**		**Control**	**Result**			**RPD**
			Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
7664-41-7	Ammonia		0.00	0.24	15.0	14.1	94	74.6 - 125	13.9	93	1	25

General Chemistry Quality Control Summary

Analytical Batch 493575	**Client ID**	MB493575			LCS493575		
Prep Batch N/A	**GCAL ID**	1123204			1123205		
	Sample Type	Method Blank			LCS		
	Analytical Date	10/31/2012 18:09			10/31/2012 18:26		
	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	98.7	79 - 109
14808-79-8	Sulfate	0.115U	0.115	5.00	4.81	96.2	82 - 110

Analytical Batch 493575	**Client ID**	MW-X-01			MW-X-01-MS			MW-X-01-MSD			
Prep Batch N/A	**GCAL ID**	21210250303			21210250304			21210250305			
	Sample Type	SAMPLE			MS			MSD			
	Analytical Date	11/01/2012 13:52			11/01/2012 14:09			11/01/2012 14:27			
	Matrix	Water			Water			Water			
EPA 300.0 Inorganic Anions		**Units**	mg/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
16887-00-6	Chloride	24.7	1.26	50.0	75.4	101	79 - 109	75.0	101	0.47	15
14808-79-8	Sulfate	43.9	2.30	100	146	103	82 - 110	145	102	0.72	15

General Chemistry Quality Control Summary

Analytical Batch 493469	**Client ID**	MB493469			LCS493469			LCSD493469			
Prep Batch N/A	**GCAL ID**	1122679			1122680			1122681			
	Sample Type	Method Blank			LCS			LCSD			
	Analytical Date	10/31/2012 09:56			10/31/2012 10:17			10/31/2012 10:36			
	Matrix	Water			Water			Water			
SM 5310B TOC		**Units**	mg/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
C-012	Total Organic Carbon	0.30U	0.30	50.0	49.5	99	80 - 120	49.7	99	0.4	25

Analytical Batch 493469	**Client ID**	MW-X-01			MW-X-01-MS			MW-X-01-MSD			
Prep Batch N/A	**GCAL ID**	21210250303			21210250304			21210250305			
	Sample Type	SAMPLE			MS			MSD			
	Analytical Date	10/31/2012 11:50			10/31/2012 12:08			10/31/2012 12:25			
	Matrix	Water			Water			Water			
SM 5310B TOC		**Units**	mg/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
C-012	Total Organic Carbon	2.0	0.30	50.0	54.0	104	75 - 125	52.5	101	3	25

General Chemistry Quality Control Summary

Analytical Batch 493096	**Client ID**	MB493096			LCS493096		
Prep Batch N/A	**GCAL ID**	1121009			1121010		
	Sample Type	Method Blank			LCS		
	Analytical Date	10/25/2012 11:28			10/25/2012 11:29		
	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	510	102	80 - 120

Analytical Batch 493096	**Client ID**	MW-X-01			MW-X-01-MS			MW-X-01-MSD			
Prep Batch N/A	**GCAL ID**	21210250303			21210250304			21210250305			
	Sample Type	SAMPLE			MS			MSD			
	Analytical Date	10/25/2012 11:32			10/25/2012 11:32			10/25/2012 11:33			
	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	490	98	80 - 120	490	98	0	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
Bhate Environmental	4760	8121025 03	11/1/12

Report to:

Client: Bhate Environmental Engineering
Address: 16th & 13th Ave S #300
Birmingham AL
Contact: Tracy Walker
Phone: 205-918-4000
Fax:

Bill to:

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

P.O. Number:
Project Name/Number: Cannon AFB D030-001
Sampled By: Ben Stewart Jordan Gibson

Analytical Requests & Method

Lab use only:
Custody Seal used ☑ yes ☐ no
intact ☑ yes ☐ no
Temperature °C 3.2

Matrix[1]	Date	Time (2400)	Comp	Grab	Sample Description	Preservatives	No Containers	8260C (HCL)	Total Metals (6010C) 7470A (HNO3)	Diss Metals (6010C) 7470A (HNO3)	Cr (+3, +6) 7196	Perchlorate 6850	NO3/NO2 (300.1)	Ammonia (SM4500) H2SO4	Sulfate 300.1	Chloride (300.1)	TOC SM5310B (HCL)	Remarks:	Lab ID
WG	10/24/12	0701		✓	MW-E-01	yes	10	X	X	X	X	X	X	X	X	X	X		1
WG	10/24/12	0945		✓	EB-01	yes	10	X	X	X	X	X	X	X	X	X	X		2
WG	10/24/12	1425		✓	MW-X-01	yes	10	X	X	X	X	X	X	X	X	X	X		3
WG	10/24/12	1425		✓	MW-X-01-MS	yes	10	X	X	X	X	X	X	X	X	X	X		4
WG	10/24/12	1425		✓	MW-X-01-MSD	yes	10	X	X	X	X	X	X	X	X	X	X		5
WG	10/24/12	0701			TB-06	yes	3	X											6
WG	10/24/12	1425			TB-07	yes	3	X											7

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

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
[signature]	FedEx	10/24/12	1700
FedEx	Odie McCune	10-25-12	9:40

Note: For EB-01, please filter Dissolved metals in Lab.

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

8011 2808 5286

GCAL
GULF COAST ANALYTICAL LABORATORIES, INC

SAMPLE RECEIVING CHECKLIST

SAMPLE DELIVERY GROUP	212102503
Client 4760 - Bhate Environmental Associates, Inc.	**Transport Method** FEDEX
Profile 235531 - Cannon	**Received By** Saucier, Charlotte
Line Item(s) 1 - Waters	**Receive Date(s)** 10/25/12

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)
8011 2808 5286	3.2

DISCREPANCIES

21210250302 - EB-01
- Sample received expired

21210250301 - MW-E-01
- Sample received expired

LABORATORY PRESERVATIONS

21210250302-5\ HNO3

NOTES	CHROMIUM VI RECEIVED EXPIRED FOR MW-E-01 & EB-01

November 02, 2012

Brenda Martinez
GCAL LAB
7979 GSRI AVENUE
BATON ROUGE, LA 70820
TEL: (225) 769-4900
FAX (225) 767-5717

Order No.: 1210238

RE: 212102503

Dear Brenda Martinez:

DHL Analytical, Inc. received 3 sample(s) on 10/26/2012 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

#1210238

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: 12-0907
Project Name/Number: 212102503
Sampled By:

	Matrix	Date	Time (2400)	Comp	Grab	Sample Description	Preservatives	No. Containers	PERCHLORATE (6860)	Remarks:	Lab ID
01	W	10/24/2012	7:01		X	MW-E-01		1	X	21210250301	
02	W	10/24/2012	8:45		X	EB-01		1	X	21210250302	
03	W	10/24/2012	14:25		X	MW-X-01		1	X	21210250303	
	W	10/24/2012	14:25		X	MW-X-01 MS		1	X	21210250304	
	W	10/24/2012	14:25		X	MW-X-01 MSD		1	X	21210250305	

Turn Around Time: ___ 24 - 48 hrs ___ 3 days ___ 1 week X standard other ___

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
[illegible]	[illegible]	10/25/12	1700
[illegible]	[illegible]	10/26/12	900

Note: Receiving temp 0.8
Please fax results to (225)767-5717 Return #57
PLEASE RETURN ICE CHESTS TO 7979 GSRI AVE.
Custody Seals intact

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

Do Not Lift Using This Tag

ORIGIN ID: OPLA (225) 769-4900
CHARLOTTE SAUCIER
GCAL
7979 GSRI RD

BATON ROUGE, LA 70802
UNITED STATES US

SHIP DATE: 25OCT12
ACTWGT: 28.0 LB MAN
CAD: 0924693/CAFE2805

BILL SENDER

TO

DHL
2300 DOUBLE CREEK

ROUND ROCK TX 78664
(225) 769-4900 REF:
INV:
PO: DEPT:

FedEx Express

TRK# 0201 5443 0509 2380

FRI - 26 OCT A1
PRIORITY OVERNIGHT

A8 BSMA

78664
TX-US AUS

Part # 156148-434 RIT2 07/11

GCAL

CUSTODY SEAL

Date Sealed: 10-25-12

Sealed By: JBH

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

Work Order Number 1210238

Date Received: 10/26/2012

Received by JB

Checklist completed by: _____ Signature | 10/26/2012 Date

Reviewed by 44 Initials | 10/26/2012 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 ☐	0.8 °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: 212102503	**Date: 11/2/2012**
Reviewer Name: Angie O'Donnell	**Laboratory Work Order: 1210238**
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				
		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: 212102503	**Date: 11/2/2012**
Reviewer Name: Angie O'Donnell	**Laboratory Work Order: 1210238**

#[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

11/02/12

Date

DHL Analytical, Inc. **Date:** *02-Nov-12*

CLIENT: GCAL LAB
Project: 212102503
Lab Order: 1210238

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 10/26/2012. A total of 3 samples were received and analyzed. The samples arrived in good condition and were properly packaged.

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 12-0876.

Client sent samples in own containers.

This sample delivery group arrived at DHL Analytical 10/26/12.

DHL Analytical, Inc.

Date: *02-Nov-12*

CLIENT: GCAL LAB
Project: 212102503
Lab Order: 1210238

Work Order Sample Summary

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
1210238-01	MW-E-01		10/24/12 07:01 AM	10/26/2012
1210238-02	EB-01		10/24/12 08:45 AM	10/26/2012
1210238-03	MW-X-01		10/24/12 02:25 PM	10/26/2012

DHL Analytical, Inc.

02-Nov-12

Lab Order: 1210238
Client: GCAL LAB
Project: 212102503

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1210238-01A	MW-E-01	10/24/12 07:01 AM	Aqueous	SW6860	Perchlorate Prep	10/31/12 12:00 PM	54496
1210238-02A	EB-01	10/24/12 08:45 AM	Aqueous	SW6860	Perchlorate Prep	10/31/12 12:00 PM	54496
1210238-03A	MW-X-01	10/24/12 02:25 PM	Aqueous	SW6860	Perchlorate Prep	10/31/12 12:00 PM	54496

DHL Analytical, Inc.

02-Nov-12

Lab Order: 1210238
Client: GCAL LAB
Project: 212102503

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1210238-01A	MW-E-01	Aqueous	SW6860	Perchlorate - Water	54496	1	11/01/12 02:38 PM	ICMS_121101A
1210238-02A	EB-01	Aqueous	SW6860	Perchlorate - Water	54496	1	11/01/12 11:14 AM	ICMS_121101A
1210238-03A	MW-X-01	Aqueous	SW6860	Perchlorate - Water	54496	1	11/01/12 02:50 PM	ICMS_121101A

DHL Analytical, Inc.

Date: *02-Nov-12*

CLIENT:	GCAL LAB	**Client Sample ID:**	MW-E-01
Project:	212102503	**Lab ID:**	1210238-01
Project No:		**Collection Date:**	10/24/12 07:01 AM
Lab Order:	1210238	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
PERCHLORATE - WATER		**SW6860**					Analyst: **CZ**
Perchlorate	0.00292	0.000100	0.000300	N	mg/L	1	11/01/12 02:38 PM
IS: Perchlorate_107	122	0	50-150	N	%REC	1	11/01/12 02:38 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: *02-Nov-12*

CLIENT:	GCAL LAB	**Client Sample ID:**	EB-01
Project:	212102503	**Lab ID:**	1210238-02
Project No:		**Collection Date:**	10/24/12 08:45 AM
Lab Order:	1210238	**Matrix:**	AQUEOUS

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	11/01/12 11:14 AM
IS: Perchlorate_107	130	0	50-150	N	%REC	1	11/01/12 11:14 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: *02-Nov-12*

CLIENT:	GCAL LAB	**Client Sample ID:**	MW-X-01
Project:	212102503	**Lab ID:**	1210238-03
Project No:		**Collection Date:**	10/24/12 02:25 PM
Lab Order:	1210238	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
PERCHLORATE - WATER		**SW6860**					Analyst: **CZ**
Perchlorate	0.00151	0.000100	0.000300	N	mg/L	1	11/01/12 02:50 PM
IS: Perchlorate_107	127	0	50-150	N	%REC	1	11/01/12 02:50 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: *02-Nov-12*

CLIENT: GCAL LAB
Work Order: 1210238
Project: 212102503

ANALYTICAL QC SUMMARY REPORT

RunID: **ICMS_121101A**

The QC data in batch 54496 applies to the following samples: 1210238-01A, 1210238-02A, 1210238-03A

Sample ID: **LCS-54496** Batch ID: **54496** TestNo: **SW6860** Units: **mg/L**
SampType: **LCS** Run ID: **ICMS_121101A** Analysis Date: **11/1/2012 10:50:00 AM** Prep Date: **10/31/2012**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.000266	0.000300	0.000300	0	88.7	85	115			N
IS: Perchlorate_107	0.00101		0.00100		125	50	150			N

Sample ID: **MB-54496** Batch ID: **54496** TestNo: **SW6860** Units: **mg/L**
SampType: **MBLK** Run ID: **ICMS_121101A** Analysis Date: **11/1/2012 11:02:00 AM** Prep Date: **10/31/2012**

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		120	50	150			N

Sample ID: **1210238-03AMS** Batch ID: **54496** TestNo: **SW6860** Units: **mg/L**
SampType: **MS** Run ID: **ICMS_121101A** Analysis Date: **11/1/2012 3:02:00 PM** Prep Date: **10/31/2012**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.00177	0.000300	0.000300	0.00151	87.6	85	115			N
IS: Perchlorate_107	0.00101		0.00100		126	50	150			N

Sample ID: **1210238-03AMSD** Batch ID: **54496** TestNo: **SW6860** Units: **mg/L**
SampType: **MSD** Run ID: **ICMS_121101A** Analysis Date: **11/1/2012 3:14:00 PM** Prep Date: **10/31/2012**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.00182	0.000300	0.000300	0.00151	106	85	115	3.04	20	N
IS: Perchlorate_107	0.00101		0.00100		127	50	150	0	0	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: 1210238
Project: 212102503

ANALYTICAL QC SUMMARY REPORT

RunID: **ICMS_121101A**

Sample ID: **ICV-121031** Batch ID: **R63276** TestNo: **SW6860** Units: **mg/L**
SampType: **ICV** Run ID: **ICMS_121101A** Analysis Date: **11/1/2012 9:59:00 AM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.00179	0.000300	0.00200	0	89.4	85	115			N
IS: Perchlorate_107	0.00100		0.00100		115	50	150			N

Sample ID: **ICS-121031** Batch ID: **R63276** TestNo: **SW6860** Units: **mg/L**
SampType: **ICS** Run ID: **ICMS_121101A** Analysis Date: **11/1/2012 10:11:00 AM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.000308	0.000300	0.000300	0	103	85	115			N
IS: Perchlorate_107	0.00100		0.00100		118	50	150			N

Sample ID: **LCVL1-121031** Batch ID: **R63276** TestNo: **SW6860** Units: **mg/L**
SampType: **LCVL** Run ID: **ICMS_121101A** Analysis Date: **11/1/2012 10:36:00 AM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.000231	0.000300	0.000200	0	116	70	130			N
IS: Perchlorate_107	0.00100		0.00100		127	50	150			N

Sample ID: **CCV1-121031** Batch ID: **R63276** TestNo: **SW6860** Units: **mg/L**
SampType: **CCV** Run ID: **ICMS_121101A** Analysis Date: **11/1/2012 1:04:00 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.00504	0.000300	0.00500	0	101	85	115			N
IS: Perchlorate_107	0.00100		0.00100		108	50	150			N

Sample ID: **LCVL2-121031** Batch ID: **R63276** TestNo: **SW6860** Units: **mg/L**
SampType: **LCVL** Run ID: **ICMS_121101A** Analysis Date: **11/1/2012 1:28:00 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.000203	0.000300	0.000200	0	101	70	130			N
IS: Perchlorate_107	0.00100		0.00100		130	50	150			N

Sample ID: **CCV2-121031** Batch ID: **R63276** TestNo: **SW6860** Units: **mg/L**
SampType: **CCV** Run ID: **ICMS_121101A** Analysis Date: **11/1/2012 3:26:00 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.00495	0.000300	0.00500	0	98.9	85	115			N
IS: Perchlorate_107	0.00100		0.00100		117	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: 1210238
Project: 212102503

ANALYTICAL QC SUMMARY REPORT

RunID: **ICMS_121101A**

Sample ID: **LCVL3-121031** Batch ID: **R63276** TestNo: **SW6860** Units: **mg/L**
SampType: **LCVL** Run ID: **ICMS_121101A** Analysis Date: **11/1/2012 3:51:00 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Perchlorate	0.000203	0.000300	0.000200	0	102	70	130			N
IS: Perchlorate_107	0.00100		0.00100		133	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.

02-Nov-12

Lab Order: 1210238
Client: GCAL LAB
Project: 212102503

Sequence Report

Run ID: ICMS_121101A

Sample ID	Client Sample ID	Test Number	Batch ID	Dilution	Analysis Date	Prep Date	Matrix
INITIAL CALIBRATION SUMMARY	-----	SW6860	R63276	1	11/1/2012		A
INTERNAL STANDARD SUMMARY	-----	SW6860	R63276	1	11/1/2012		A
ICV-121031	-----	SW6860	R63276	1	11/1/2012 9:59:00 AM		A
ICS-121031	-----	SW6860	R63276	1	11/1/2012 10:11:00 AM		A
ICB-121031	-----	SW6860	R63276	1	11/1/2012 10:24:00 AM		A
LCVL1-121031	-----	SW6860	R63276	1	11/1/2012 10:36:00 AM		A
LCS-54496	-----	SW6860	54496	1	11/1/2012 10:50:00 AM	10/31/2012 12:00:50 PM	A
MB-54496	-----	SW6860	54496	1	11/1/2012 11:02:00 AM	10/31/2012 12:00:50 PM	A
1210238-02A	EB-01	SW6860	54496	1	11/1/2012 11:14:00 AM	10/31/2012 12:00:50 PM	A
LCS-54496	-----	SW6860	54496	1	11/1/2012 12:52:00 PM	10/31/2012 12:00:50 PM	A
CCV1-121031	-----	SW6860	R63276	1	11/1/2012 1:04:00 PM		A
CCB1-121031	-----	SW6860	R63276	1	11/1/2012 1:16:00 PM		A
LCVL2-121031	-----	SW6860	R63276	1	11/1/2012 1:28:00 PM		A
1210238-01A	MW-E-01	SW6860	54496	1	11/1/2012 2:38:00 PM	10/31/2012 12:00:50 PM	A
1210238-03A	MW-X-01	SW6860	54496	1	11/1/2012 2:50:00 PM	10/31/2012 12:00:50 PM	A
1210238-03AMS	MW-X-01MS	SW6860	54496	1	11/1/2012 3:02:00 PM	10/31/2012 12:00:50 PM	A
1210238-03AMSD	MW-X-01MSD	SW6860	54496	1	11/1/2012 3:14:00 PM	10/31/2012 12:00:50 PM	A
CCV2-121031	-----	SW6860	R63276	1	11/1/2012 3:26:00 PM		A
CCB2-121031	-----	SW6860	R63276	1	11/1/2012 3:39:00 PM		A
LCVL3-121031	-----	SW6860	R63276	1	11/1/2012 3:51:00 PM		A

Initial Calibration Summary

Control Program:	**ClO4PGM_120523**
Quantif. Method:	**ClO4_120523**
Recording Time:	**11/1/2012 9:59**
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:	**121101_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-121031	1781.118
ICS-121031	1817.903
ICB-121031	2067.945
LCVL1-121031	1959.828
LCS-54496	1931.893
MB-54496	1853.669
1210238-02A	2001.207
1210153-01A	2031.917
1210153-02A	1908.152
1210174-01A	1871.398
1210174-02A	1838.376
1210174-03A	1807.111
1210195-01A	1871.152
1210195-02A	2055.458
LCS-54496	2043.017
CCV1-121031	1673.664

CCB1-121031	2074.698
LCVL2-121031	2000.991
1210236-01A	1872.462
1210237-01A	1962.665
1210237-02A	1944.782
1210238-01A	1885.813
1210238-03A	1958.888
1210238-03AMS	1948.543
1210238-03AMSD	1959.027
CCV2-121031	1812.137
CCB2-121031	2207.158
LCVL3-121031	2056.953

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 11/16/2012

GCAL Report 212102607

Deliver To	Bhate Environmental Associates, Inc. 1608 14th Ave South Birmingham, AL 35205 205-918-4024
Attn	David Badio

Project Cannon

CASE NARRATIVE

Client: Bhate Environmental Associates, Inc. **Report:** 212102607

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 total analysis for prep batch 493232, the MS and/or MSD recovery is outside the control limits for Potassium and Sodium. 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 107% Potassium and 106% Sodium. The MS/MSD recoveries are not applicable for Calcium and Magnesium because the sample concentration is greater than four times the spike concentration.

In the SW-846 6010C Dissolved analysis for prep batch 493231, the MS/MSD recoveries are not applicable for Calcium because the sample concentration is greater than four times the spike concentration.

CONVENTIONALS

In the EPA 300.0 analysis, sample 21210260701 (MW-V-01) had to be diluted in order to bracket the concentration within the calibration range of the instrument.

In the SW-846 9056A analysis, samples 21210260701 (MW-V-01), 21210260703 (EB-02) and 21210260704 (LF05-MW-T-01) had to be diluted in order to bracket the concentration within the calibration range of the instrument.

MISCELLANEOUS

Sample 21210260703 (EB-02) container ID 21210260703-5 had to be preserved at the laboratory with HNO3. This container was used to analyze SW-846 7470A Dissolved and SW-846 6010C.

Sample 21210260701 (MW-V-01) and 21210260703 (EB-02) were received outside of the prescribed holding time for one or more parameters. The analysis was still performed at the clients request.

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 212102607

THIS REPORT CONTAINS _____ PAGES.

Report Sample Summary

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210260701	MW-V-01	Water	10/25/2012 07:45	10/26/2012 10:15
21210260702	TB-02	Water	10/25/2012 07:45	10/26/2012 10:15
21210260703	EB-02	Water	10/25/2012 08:30	10/26/2012 10:15
21210260704	LF05-MW-T-01	Water	10/25/2012 13:00	10/26/2012 10:15

Summary of Compounds Detected

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210260701	**MW-V-01**	Water	10/25/2012 07:45	10/26/2012 10:15

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7440-39-3	Barium	20.3	10.0	0.71	ug/L
7440-43-9	Cadmium	0.46J	5.00	0.16	ug/L
7440-70-2	Calcium	96400	100	45.7	ug/L
7440-47-3	Chromium	1.26J	10.0	0.26	ug/L
7440-50-8	Copper	9.97J	10.0	1.01	ug/L
7439-95-4	Magnesium	81000	100	16.5	ug/L
7782-49-2	Selenium	24.1J	40.0	4.42	ug/L
7440-62-2	Vanadium	34.4	20.0	1.25	ug/L
7440-66-6	Zinc	529	20.0	4.51	ug/L

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7440-09-7	Potassium	9790	500	34.6	ug/L
7440-23-5	Sodium	84600	1000	61.1	ug/L

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	35.8J	200	30.3	ug/L
7440-38-2	Arsenic	5.52J	10.0	3.59	ug/L
7440-39-3	Barium	19.8	10.0	0.71	ug/L
7440-43-9	Cadmium	0.41J	5.00	0.16	ug/L
7440-70-2	Calcium	94100	100	45.7	ug/L
7440-47-3	Chromium	1.28J	10.0	0.26	ug/L
7440-50-8	Copper	9.69J	10.0	1.01	ug/L
7439-95-4	Magnesium	79100	100	16.5	ug/L
7782-49-2	Selenium	24.3J	40.0	4.42	ug/L
7440-62-2	Vanadium	33.0	20.0	1.25	ug/L
7440-66-6	Zinc	549	20.0	4.51	ug/L

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7440-09-7	Potassium	9470	500	34.6	ug/L
7440-23-5	Sodium	81200	1000	61.1	ug/L

SW-846 9056A Inorganic Anions

CAS#	Parameter	Result	RDL	MDL	Units
16887-00-6	Chloride	192	20.0	12.6	mg/L
14808-79-8	Sulfate	261	40.0	23.0	mg/L

SM 5310B TOC

CAS#	Parameter	Result	RDL	MDL	Units
C-012	Total Organic Carbon	4.8	1.0	0.30	mg/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210260701	**MW-V-01**	Water	10/25/2012 07:45	10/26/2012 10:15

EPA 300.0

CAS#	Parameter	Result	RDL	MDL	Units
14797-55-8	Nitrate	8.35	1.00	0.230	mg/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210260703	**EB-02**	Water	10/25/2012 08:30	10/26/2012 10:15

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	46.0J	200	30.3	ug/L
7440-39-3	Barium	12.9	10.0	0.71	ug/L
7440-43-9	Cadmium	0.39J	5.00	0.16	ug/L
7440-70-2	Calcium	1510	100	45.7	ug/L
7440-50-8	Copper	1.30J	10.0	1.01	ug/L
7439-95-4	Magnesium	83.6J	100	16.5	ug/L
7439-96-5	Manganese	3.86J	15.0	1.31	ug/L
7440-62-2	Vanadium	2.42J	20.0	1.25	ug/L

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7440-09-7	Potassium	444J	500	34.6	ug/L
7440-23-5	Sodium	79400	1000	61.1	ug/L

SW-846 9056A Inorganic Anions

CAS#	Parameter	Result	RDL	MDL	Units
16887-00-6	Chloride	12.4	0.500	0.315	mg/L
14808-79-8	Sulfate	8.78	1.00	0.575	mg/L

SM 5310B TOC

CAS#	Parameter	Result	RDL	MDL	Units
C-012	Total Organic Carbon	2.9	1.0	0.30	mg/L

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	43.5J	200	30.3	ug/L
7440-39-3	Barium	10.6	10.0	0.71	ug/L
7440-70-2	Calcium	1270	100	45.7	ug/L
7439-95-4	Magnesium	60.8J	100	16.5	ug/L
7439-96-5	Manganese	2.73J	15.0	1.31	ug/L
7440-62-2	Vanadium	2.49J	20.0	1.25	ug/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210260703	EB-02	Water	10/25/2012 08:30	10/26/2012 10:15

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7440-09-7	Potassium	354J	500	34.6	ug/L
7440-23-5	Sodium	71800	1000	61.1	ug/L

EPA 300.0

CAS#	Parameter	Result	RDL	MDL	Units
14797-65-0	Nitrite	0.099J	0.500	0.015	mg/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210260704	LF05-MW-T-01	Water	10/25/2012 13:00	10/26/2012 10:15

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	61.0J	200	30.3	ug/L
7440-38-2	Arsenic	5.39J	10.0	3.59	ug/L
7440-39-3	Barium	33.8	10.0	0.71	ug/L
7440-43-9	Cadmium	0.51J	5.00	0.16	ug/L
7440-70-2	Calcium	37900	100	45.7	ug/L
7440-47-3	Chromium	3.33J	10.0	0.26	ug/L
7440-50-8	Copper	7.84J	10.0	1.01	ug/L
7439-89-6	Iron	139	100	12.6	ug/L
7439-95-4	Magnesium	35100	100	16.5	ug/L
7439-96-5	Manganese	3.28J	15.0	1.31	ug/L
7440-02-0	Nickel	5.41J	40.0	1.13	ug/L
7440-62-2	Vanadium	37.7	20.0	1.25	ug/L
7440-66-6	Zinc	88.3	20.0	4.51	ug/L

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7440-09-7	Potassium	6480	500	34.6	ug/L
7440-23-5	Sodium	53700	1000	61.1	ug/L

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	30.5J	200	30.3	ug/L
7440-38-2	Arsenic	7.50J	10.0	3.59	ug/L
7440-39-3	Barium	34.7	10.0	0.71	ug/L
7440-43-9	Cadmium	0.41J	5.00	0.16	ug/L
7440-70-2	Calcium	40700	100	45.7	ug/L
7440-47-3	Chromium	2.24J	10.0	0.26	ug/L
7440-50-8	Copper	7.04J	10.0	1.01	ug/L
7439-95-4	Magnesium	37700	100	16.5	ug/L
7440-02-0	Nickel	4.86J	40.0	1.13	ug/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210260704	**LF05-MW-T-01**	Water	10/25/2012 13:00	10/26/2012 10:15

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7440-28-0	Thallium	3.43J	20.0	3.04	ug/L
7440-62-2	Vanadium	38.0	20.0	1.25	ug/L
7440-66-6	Zinc	91.0	20.0	4.51	ug/L

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7440-09-7	Potassium	6970	500	34.6	ug/L
7440-23-5	Sodium	57000	1000	61.1	ug/L

SW-846 9056A Inorganic Anions

CAS#	Parameter	Result	RDL	MDL	Units
16887-00-6	Chloride	48.5	5.00	3.15	mg/L
14808-79-8	Sulfate	98.5	10.0	5.75	mg/L

SM 5310B TOC

CAS#	Parameter	Result	RDL	MDL	Units
C-012	Total Organic Carbon	3.3	1.0	0.30	mg/L

EPA 300.0

CAS#	Parameter	Result	RDL	MDL	Units
14797-55-8	Nitrate	1.20	0.500	0.115	mg/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210260701	**MW-V-01**	Water	10/25/2012 07:45	10/26/2012 10:15

Subcontract Work

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/16/2012 11:34	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	10/29/2012 15:58	EDS	493347

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
21210260701	**MW-V-01**	Water	10/25/2012 07:45	10/26/2012 10:15

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/29/2012 15:58	EDS	493347

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	ug/L	96	75 - 120
1868-53-7	Dibromofluoromethane	50	50	ug/L	100	85 - 115
2037-26-5	Toluene d8	50	50.7	ug/L	101	85 - 120
17060-07-0	1,2-Dichloroethane-d4	50	50.3	ug/L	101	70 - 120

SW-846 7470A Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/26/2012 16:15	493229	SW-846 7470A Dissolved	1	10/31/2012 12:58	BNB	493483

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
10/26/2012 16:15	493229	SW-846 7470A	1	10/31/2012 12:56	BNB	493483

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	0.068U	0.20	0.068	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210260701	**MW-V-01**	Water	10/25/2012 07:45	10/26/2012 10:15

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/27/2012 09:30	493232	SW-846 3010A	1	10/31/2012 17:25	CLB	493541

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	30.3U	200	30.3	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**	**20.3**	**10.0**	**0.71**	**ug/L**
7440-41-7	Beryllium	0.10U	5.00	0.10	ug/L
7440-43-9	**Cadmium**	**0.46J**	**5.00**	**0.16**	**ug/L**
7440-70-2	**Calcium**	**96400**	**100**	**45.7**	**ug/L**
7440-47-3	**Chromium**	**1.26J**	**10.0**	**0.26**	**ug/L**
7440-48-4	Cobalt	0.58U	10.0	0.58	ug/L
7440-50-8	**Copper**	**9.97J**	**10.0**	**1.01**	**ug/L**
7439-89-6	Iron	12.6U	100	12.6	ug/L
7439-92-1	Lead	1.96U	15.0	1.96	ug/L
7439-95-4	**Magnesium**	**81000**	**100**	**16.5**	**ug/L**
7439-96-5	Manganese	1.31U	15.0	1.31	ug/L
7440-02-0	Nickel	1.13U	40.0	1.13	ug/L
7782-49-2	**Selenium**	**24.1J**	**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
7440-62-2	**Vanadium**	**34.4**	**20.0**	**1.25**	**ug/L**
7440-66-6	**Zinc**	**529**	**20.0**	**4.51**	**ug/L**

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/27/2012 09:30	493232	SW-846 3010A	1	11/01/2012 16:03	CLB	493656

CAS#	Parameter	Result	RDL	MDL	Units
7440-09-7	**Potassium**	**9790**	**500**	**34.6**	**ug/L**
7440-23-5	**Sodium**	**84600**	**1000**	**61.1**	**ug/L**

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/29/2012 11:40	493231	SW-846 3005 Dissolved	1	10/31/2012 16:00	CLB	493541

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	**Aluminum**	**35.8J**	**200**	**30.3**	**ug/L**
7440-36-0	Antimony	3.11U	60.0	3.11	ug/L
7440-38-2	**Arsenic**	**5.52J**	**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**	**0.41J**	**5.00**	**0.16**	**ug/L**
7440-70-2	**Calcium**	**94100**	**100**	**45.7**	**ug/L**
7440-47-3	**Chromium**	**1.28J**	**10.0**	**0.26**	**ug/L**
7440-48-4	Cobalt	0.58U	10.0	0.58	ug/L
7440-50-8	**Copper**	**9.69J**	**10.0**	**1.01**	**ug/L**
7439-89-6	Iron	12.6U	100	12.6	ug/L
7439-92-1	Lead	1.96U	15.0	1.96	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210260701	**MW-V-01**	Water	10/25/2012 07:45	10/26/2012 10:15

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/29/2012 11:40	493231	SW-846 3005 Dissolved	1	10/31/2012 16:00	CLB	493541

CAS#	Parameter	Result	RDL	MDL	Units
7439-95-4	**Magnesium**	**79100**	**100**	**16.5**	**ug/L**
7439-96-5	Manganese	1.31U	15.0	1.31	ug/L
7440-02-0	Nickel	1.13U	40.0	1.13	ug/L
7782-49-2	**Selenium**	**24.3J**	**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
7440-62-2	**Vanadium**	**33.0**	**20.0**	**1.25**	**ug/L**
7440-66-6	**Zinc**	**549**	**20.0**	**4.51**	**ug/L**

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/29/2012 11:40	493231	SW-846 3005 Dissolved	1	11/01/2012 14:37	CLB	493656

CAS#	Parameter	Result	RDL	MDL	Units
7440-09-7	**Potassium**	**9470**	**500**	**34.6**	**ug/L**
7440-23-5	**Sodium**	**81200**	**1000**	**61.1**	**ug/L**

SM 4500 NH3 BE Ammonia

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/26/2012 12:30	493163	SM4500 NH3 BE TKN	1	10/27/2012 07:53	DJH	493273

CAS#	Parameter	Result	RDL	MDL	Units
7664-41-7	Ammonia	0.24U	1.0	0.24	mg/L-N

EPA 300.0

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			2	10/26/2012 19:47	DJH	493292

CAS#	Parameter	Result	RDL	MDL	Units
14797-55-8	**Nitrate**	**8.35**	**1.00**	**0.230**	**mg/L**
14797-65-0	Nitrite	0.030U	1.00	0.030	mg/L

SM 5310B TOC

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/29/2012 23:24	DNM	493199

CAS#	Parameter	Result	RDL	MDL	Units
C-012	**Total Organic Carbon**	**4.8**	**1.0**	**0.30**	**mg/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210260701	**MW-V-01**	Water	10/25/2012 07:45	10/26/2012 10:15

SW-846 7196A Chromium VI

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/26/2012 10:57	JEM	493208

CAS#	Parameter	Result	RDL	MDL	Units
18540-29-9	Chromium VI	4.00U	10.0	4.00	ug/L

SW-846 9056A Inorganic Anions

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			200	11/02/2012 17:22	AEL	493727

CAS#	Parameter	Result	RDL	MDL	Units
16887-00-6	**Chloride**	**192**	**20.0**	**12.6**	**mg/L**
14808-79-8	**Sulfate**	**261**	**40.0**	**23.0**	**mg/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210260702	**TB-02**	Water	10/25/2012 07:45	10/26/2012 10:15

SW-846 8260B DOD Water

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/29/2012 16:20	EDS	493347

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
21210260702	**TB-02**	Water	10/25/2012 07:45	10/26/2012 10:15

SW-846 8260B DOD Water

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/29/2012 16:20	EDS	493347

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	47.8	ug/L	96	75 - 120
1868-53-7	Dibromofluoromethane	50	50.4	ug/L	101	85 - 115
2037-26-5	Toluene d8	50	50.5	ug/L	101	85 - 120
17060-07-0	1,2-Dichloroethane-d4	50	50.3	ug/L	101	70 - 120

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210260703	**EB-02**	Water	10/25/2012 08:30	10/26/2012 10:15

Subcontract Work

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/16/2012 11:35	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	10/29/2012 16:42	EDS	493347

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
21210260703	**EB-02**	Water	10/25/2012 08:30	10/26/2012 10:15

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/29/2012 16:42	EDS	493347

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	47.8	ug/L	96	75 - 120
1868-53-7	Dibromofluoromethane	50	50.5	ug/L	101	85 - 115
2037-26-5	Toluene d8	50	50.6	ug/L	101	85 - 120
17060-07-0	1,2-Dichloroethane-d4	50	50	ug/L	100	70 - 120

SW-846 7470A Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/29/2012 11:40	493285	SW-846 7470A Dissolved	1	10/31/2012 13:19	BNB	493483

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
10/27/2012 09:30	493229	SW-846 7470A	1	10/31/2012 12:59	BNB	493483

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	0.068U	0.20	0.068	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210260703	**EB-02**	Water	10/25/2012 08:30	10/26/2012 10:15

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/27/2012 09:30	493232	SW-846 3010A	1	10/31/2012 17:33	CLB	493541

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	**Aluminum**	**46.0J**	**200**	**30.3**	**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**	**12.9**	**10.0**	**0.71**	**ug/L**
7440-41-7	Beryllium	0.10U	5.00	0.10	ug/L
7440-43-9	**Cadmium**	**0.39J**	**5.00**	**0.16**	**ug/L**
7440-70-2	**Calcium**	**1510**	**100**	**45.7**	**ug/L**
7440-47-3	Chromium	0.26U	10.0	0.26	ug/L
7440-48-4	Cobalt	0.58U	10.0	0.58	ug/L
7440-50-8	**Copper**	**1.30J**	**10.0**	**1.01**	**ug/L**
7439-89-6	Iron	12.6U	100	12.6	ug/L
7439-92-1	Lead	1.96U	15.0	1.96	ug/L
7439-95-4	**Magnesium**	**83.6J**	**100**	**16.5**	**ug/L**
7439-96-5	**Manganese**	**3.86J**	**15.0**	**1.31**	**ug/L**
7440-02-0	Nickel	1.13U	40.0	1.13	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
7440-62-2	**Vanadium**	**2.42J**	**20.0**	**1.25**	**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
10/27/2012 09:30	493232	SW-846 3010A	1	11/01/2012 16:10	CLB	493656

CAS#	Parameter	Result	RDL	MDL	Units
7440-09-7	**Potassium**	**444J**	**500**	**34.6**	**ug/L**
7440-23-5	**Sodium**	**79400**	**1000**	**61.1**	**ug/L**

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/29/2012 11:40	493231	SW-846 3005 Dissolved	1	10/31/2012 16:08	CLB	493541

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	**Aluminum**	**43.5J**	**200**	**30.3**	**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**	**10.6**	**10.0**	**0.71**	**ug/L**
7440-41-7	Beryllium	0.10U	5.00	0.10	ug/L
7440-43-9	Cadmium	0.16U	5.00	0.16	ug/L
7440-70-2	**Calcium**	**1270**	**100**	**45.7**	**ug/L**
7440-47-3	Chromium	0.26U	10.0	0.26	ug/L
7440-48-4	Cobalt	0.58U	10.0	0.58	ug/L
7440-50-8	Copper	1.01U	10.0	1.01	ug/L
7439-89-6	Iron	12.6U	100	12.6	ug/L
7439-92-1	Lead	1.96U	15.0	1.96	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210260703	**EB-02**	Water	10/25/2012 08:30	10/26/2012 10:15

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/29/2012 11:40	493231	SW-846 3005 Dissolved	1	10/31/2012 16:08	CLB	493541

CAS#	Parameter	Result	RDL	MDL	Units
7439-95-4	**Magnesium**	**60.8J**	**100**	**16.5**	**ug/L**
7439-96-5	**Manganese**	**2.73J**	**15.0**	**1.31**	**ug/L**
7440-02-0	Nickel	1.13U	40.0	1.13	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
7440-62-2	**Vanadium**	**2.49J**	**20.0**	**1.25**	**ug/L**
7440-66-6	Zinc	4.51U	20.0	4.51	ug/L

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/29/2012 11:40	493231	SW-846 3005 Dissolved	1	11/01/2012 14:44	CLB	493656

CAS#	Parameter	Result	RDL	MDL	Units
7440-09-7	**Potassium**	**354J**	**500**	**34.6**	**ug/L**
7440-23-5	**Sodium**	**71800**	**1000**	**61.1**	**ug/L**

SM 4500 NH3 BE Ammonia

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/26/2012 12:30	493163	SM4500 NH3 BE TKN	1	10/27/2012 07:53	DJH	493273

CAS#	Parameter	Result	RDL	MDL	Units
7664-41-7	Ammonia	0.24U	1.0	0.24	mg/L-N

EPA 300.0

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/26/2012 20:22	DJH	493292

CAS#	Parameter	Result	RDL	MDL	Units
14797-55-8	Nitrate	0.115U	0.500	0.115	mg/L
14797-65-0	**Nitrite**	**0.099J**	**0.500**	**0.015**	**mg/L**

SM 5310B TOC

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/29/2012 23:45	DNM	493199

CAS#	Parameter	Result	RDL	MDL	Units
C-012	**Total Organic Carbon**	**2.9**	**1.0**	**0.30**	**mg/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210260703	**EB-02**	Water	10/25/2012 08:30	10/26/2012 10:15

SW-846 7196A Chromium VI

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/26/2012 10:58	JEM	493208

CAS#	Parameter	Result	RDL	MDL	Units
18540-29-9	Chromium VI	4.00U	10.0	4.00	ug/L

SW-846 9056A Inorganic Anions

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			5	11/02/2012 18:15	AEL	493727

CAS#	Parameter	Result	RDL	MDL	Units
16887-00-6	**Chloride**	**12.4**	**0.500**	**0.315**	**mg/L**
14808-79-8	**Sulfate**	**8.78**	**1.00**	**0.575**	**mg/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210260704	**LF05-MW-T-01**	Water	10/25/2012 13:00	10/26/2012 10:15

Subcontract Work

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/16/2012 11:35	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	10/29/2012 17:04	EDS	493347

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
21210260704	**LF05-MW-T-01**	Water	10/25/2012 13:00	10/26/2012 10:15

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/29/2012 17:04	EDS	493347

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	ug/L	96	75 - 120
1868-53-7	Dibromofluoromethane	50	50.2	ug/L	100	85 - 115
2037-26-5	Toluene d8	50	50.6	ug/L	101	85 - 120
17060-07-0	1,2-Dichloroethane-d4	50	49.9	ug/L	100	70 - 120

SW-846 7470A Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/26/2012 16:15	493229	SW-846 7470A Dissolved	1	10/31/2012 12:39	BNB	493483

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
10/26/2012 16:15	493229	SW-846 7470A	1	10/31/2012 12:29	BNB	493483

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	0.068U	0.20	0.068	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210260704	**LF05-MW-T-01**	Water	10/25/2012 13:00	10/26/2012 10:15

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/27/2012 09:30	493232	SW-846 3010A	1	10/31/2012 16:37	CLB	493541

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	**Aluminum**	**61.0J**	**200**	**30.3**	**ug/L**
7440-36-0	Antimony	3.11U	60.0	3.11	ug/L
7440-38-2	**Arsenic**	**5.39J**	**10.0**	**3.59**	**ug/L**
7440-39-3	**Barium**	**33.8**	**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**	**0.16**	**ug/L**
7440-70-2	**Calcium**	**37900**	**100**	**45.7**	**ug/L**
7440-47-3	**Chromium**	**3.33J**	**10.0**	**0.26**	**ug/L**
7440-48-4	Cobalt	0.58U	10.0	0.58	ug/L
7440-50-8	**Copper**	**7.84J**	**10.0**	**1.01**	**ug/L**
7439-89-6	**Iron**	**139**	**100**	**12.6**	**ug/L**
7439-92-1	Lead	1.96U	15.0	1.96	ug/L
7439-95-4	**Magnesium**	**35100**	**100**	**16.5**	**ug/L**
7439-96-5	**Manganese**	**3.28J**	**15.0**	**1.31**	**ug/L**
7440-02-0	**Nickel**	**5.41J**	**40.0**	**1.13**	**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
7440-62-2	**Vanadium**	**37.7**	**20.0**	**1.25**	**ug/L**
7440-66-6	**Zinc**	**88.3**	**20.0**	**4.51**	**ug/L**

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/27/2012 09:30	493232	SW-846 3010A	1	11/01/2012 15:31	CLB	493656

CAS#	Parameter	Result	RDL	MDL	Units
7440-09-7	**Potassium**	**6480**	**500**	**34.6**	**ug/L**
7440-23-5	**Sodium**	**53700**	**1000**	**61.1**	**ug/L**

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/29/2012 11:40	493231	SW-846 3005 Dissolved	1	10/31/2012 16:16	CLB	493541

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	**Aluminum**	**30.5J**	**200**	**30.3**	**ug/L**
7440-36-0	Antimony	3.11U	60.0	3.11	ug/L
7440-38-2	**Arsenic**	**7.50J**	**10.0**	**3.59**	**ug/L**
7440-39-3	**Barium**	**34.7**	**10.0**	**0.71**	**ug/L**
7440-41-7	Beryllium	0.10U	5.00	0.10	ug/L
7440-43-9	**Cadmium**	**0.41J**	**5.00**	**0.16**	**ug/L**
7440-70-2	**Calcium**	**40700**	**100**	**45.7**	**ug/L**
7440-47-3	**Chromium**	**2.24J**	**10.0**	**0.26**	**ug/L**
7440-48-4	Cobalt	0.58U	10.0	0.58	ug/L
7440-50-8	**Copper**	**7.04J**	**10.0**	**1.01**	**ug/L**
7439-89-6	Iron	12.6U	100	12.6	ug/L
7439-92-1	Lead	1.96U	15.0	1.96	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210260704	**LF05-MW-T-01**	Water	10/25/2012 13:00	10/26/2012 10:15

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/29/2012 11:40	493231	SW-846 3005 Dissolved	1	10/31/2012 16:16	CLB	493541

CAS#	Parameter	Result	RDL	MDL	Units
7439-95-4	**Magnesium**	**37700**	**100**	**16.5**	**ug/L**
7439-96-5	Manganese	1.31U	15.0	1.31	ug/L
7440-02-0	**Nickel**	**4.86J**	**40.0**	**1.13**	**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**	**3.43J**	**20.0**	**3.04**	**ug/L**
7440-62-2	**Vanadium**	**38.0**	**20.0**	**1.25**	**ug/L**
7440-66-6	**Zinc**	**91.0**	**20.0**	**4.51**	**ug/L**

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/29/2012 11:40	493231	SW-846 3005 Dissolved	1	11/01/2012 14:51	CLB	493656

CAS#	Parameter	Result	RDL	MDL	Units
7440-09-7	**Potassium**	**6970**	**500**	**34.6**	**ug/L**
7440-23-5	**Sodium**	**57000**	**1000**	**61.1**	**ug/L**

SM 4500 NH3 BE Ammonia

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/26/2012 12:30	493163	SM4500 NH3 BE TKN	1	10/27/2012 07:53	DJH	493273

CAS#	Parameter	Result	RDL	MDL	Units
7664-41-7	Ammonia	0.24U	1.0	0.24	mg/L-N

EPA 300.0

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/27/2012 11:51	DJH	493292

CAS#	Parameter	Result	RDL	MDL	Units
14797-55-8	**Nitrate**	**1.20**	**0.500**	**0.115**	**mg/L**
14797-65-0	Nitrite	0.015U	0.500	0.015	mg/L

SM 5310B TOC

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/30/2012 00:57	DNM	493199

CAS#	Parameter	Result	RDL	MDL	Units
C-012	**Total Organic Carbon**	**3.3**	**1.0**	**0.30**	**mg/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210260704	**LF05-MW-T-01**	Water	10/25/2012 13:00	10/26/2012 10:15

SW-846 7196A Chromium VI

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/26/2012 10:59	JEM	493208

CAS#	Parameter	Result	RDL	MDL	Units
18540-29-9	Chromium VI	4.00U	10.0	4.00	ug/L

SW-846 9056A Inorganic Anions

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			50	11/02/2012 18:32	AEL	493727

CAS#	Parameter	Result	RDL	MDL	Units
16887-00-6	**Chloride**	**48.5**	**5.00**	**3.15**	**mg/L**
14808-79-8	**Sulfate**	**98.5**	**10.0**	**5.75**	**mg/L**

GC/MS Volatiles Quality Control Summary

Analytical Batch 493347		**Client ID**	MB493347			LCS493347			LCSD493347		
Prep Batch N/A		**GCAL ID**	1122203			1122204			1122205		
		Sample Type	Method Blank			LCS			LCSD		
		Analytical Date	10/29/2012 12:16			10/29/2012 11:08			10/29/2012 11:30		
		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	50.2	100	40 - 140	54.1	108	7	30
74-97-5	Bromochloromethane		0.127U	0.127	50.0	50.8	102	65 - 130	51.4	103	1	30
75-27-4	Bromodichloromethane		0.083U	0.083	50.0	49.6	99	75 - 120	50.6	101	2	30
75-25-2	Bromoform		0.215U	0.215	50.0	45.8	92	70 - 130	47.8	96	4	30
74-83-9	Bromomethane		0.427U	0.427	50.0	49.8	100	30 - 145	53.2	106	7	30
75-15-0	Carbon disulfide		0.190U	0.190	50.0	55.5	111	35 - 160	53.3	107	4	30
56-23-5	Carbon tetrachloride		0.248U	0.248	50.0	54.1	108	65 - 140	53.4	107	1	30
75-00-3	Chloroethane		0.235U	0.235	50.0	54.5	109	60 - 135	54.4	109	0.2	30
136777-61-2	m,p-Xylene		0.123U	0.123	100	100	100	75 - 130	98.6	99	1	30
67-66-3	Chloroform		0.155U	0.155	50.0	49.5	99	65 - 135	49.8	100	0.6	30
74-87-3	Chloromethane		0.144U	0.144	50.0	50.3	101	40 - 125	51.0	102	1	30
74-95-3	Dibromomethane		0.211U	0.211	50.0	49.5	99	75 - 125	51.4	103	4	30
75-71-8	Dichlorodifluoromethane		0.145U	0.145	50.0	56.7	113	30 - 155	56.3	113	0.7	30
75-34-3	1,1-Dichloroethane		0.171U	0.171	50.0	50.7	101	70 - 135	51.8	104	2	30
107-06-2	1,2-Dichloroethane		0.116U	0.116	50.0	49.1	98	70 - 130	50.4	101	3	30
156-59-2	cis-1,2-Dichloroethene		0.103U	0.103	50.0	53.1	106	70 - 125	53.9	108	1	30
156-60-5	trans-1,2-Dichloroethene		0.077U	0.077	50.0	53.1	106	60 - 140	53.2	106	0.2	30
75-09-2	Methylene chloride		0.149U	0.149	50.0	48.0	96	55 - 140	48.7	97	1	30
78-87-5	1,2-Dichloropropane		0.150U	0.150	50.0	53.1	106	75 - 125	54.2	108	2	30
10061-01-5	cis-1,3-Dichloropropene		0.124U	0.124	50.0	53.9	108	70 - 130	55.4	111	3	30
10061-02-6	trans-1,3-Dichloropropene		0.128U	0.128	50.0	53.1	106	55 - 140	54.5	109	3	30
100-41-4	Ethylbenzene		0.109U	0.109	50.0	51.6	103	75 - 125	50.6	101	2	30
591-78-6	2-Hexanone		0.122U	0.122	50.0	54.1	108	55 - 130	60.3	121	11	30
98-82-8	Isopropylbenzene (Cumene)		0.130U	0.130	50.0	51.4	103	75 - 125	49.3	99	4	30
78-93-3	2-Butanone		0.142U	0.142	50.0	54.1	108	30 - 150	58.9	118	8	30
108-10-1	4-Methyl-2-pentanone		0.120U	0.120	50.0	48.0	96	60 - 135	52.6	105	9	30
103-65-1	n-Propylbenzene		0.727U	0.727	50.0	56.6	113	70 - 130	54.0	108	5	30
100-42-5	Styrene		0.089U	0.089	50.0	48.3	97	65 - 135	48.4	97	0.2	30
127-18-4	Tetrachloroethene		0.193U	0.193	50.0	55.8	112	45 - 150	53.7	107	4	30
630-20-6	1,1,1,2-Tetrachloroethane		0.120U	0.120	50.0	47.5	95	80 - 130	48.5	97	2	30
79-34-5	1,1,2,2-Tetrachloroethane		0.109U	0.109	50.0	47.5	95	65 - 130	50.6	101	6	30
120-82-1	1,2,4-Trichlorobenzene		0.105U	0.105	50.0	46.7	93	65 - 135	46.9	94	0.4	30
71-55-6	1,1,1-Trichloroethane		0.123U	0.123	50.0	52.7	105	65 - 130	52.9	106	0.4	30

GC/MS Volatiles Quality Control Summary

Analytical Batch 493347		**Client ID**	MB493347			LCS493347			LCSD493347		
Prep Batch N/A		**GCAL ID**	1122203			1122204			1122205		
		Sample Type	Method Blank			LCS			LCSD		
		Analytical Date	10/29/2012 12:16			10/29/2012 11:08			10/29/2012 11:30		
		Matrix	Water			Water			Water		
SW-846 8260B		**Units**	**Result**	ug/L **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	47.1	94	75 - 125	48.6	97	3	30
75-69-4	Trichlorofluoromethane		0.157U	0.157	50.0	54.2	108	60 - 145	53.0	106	2	30
96-18-4	1,2,3-Trichloropropane		0.065U	0.065	50.0	47.5	95	75 - 125	50.2	100	6	30
95-63-6	1,2,4-Trimethylbenzene		0.084U	0.084	50.0	51.7	103	75 - 130	50.2	100	3	30
108-67-8	1,3,5-Trimethylbenzene		0.066U	0.066	50.0	58.2	116	75 - 130	56.0	112	4	30
75-01-4	Vinyl chloride		0.127U	0.127	50.0	53.2	106	50 - 145	52.8	106	0.8	30
95-47-6	o-Xylene		0.055U	0.055	50.0	48.7	97	80 - 120	48.2	96	1	30
96-12-8	1,2-Dibromo-3-chloropropane		0.194U	0.194	50.0	42.8	86	50 - 130	47.4	95	10	30
106-93-4	1,2-Dibromoethane		0.102U	0.102	50.0	48.2	96	80 - 120	50.2	100	4	30
1634-04-4	tert-Butyl methyl ether (MTBE)		0.078U	0.078	50.0	51.2	102	65 - 125	54.2	108	6	30
99-87-6	4-Isopropyltoluene		0.070U	0.070	50.0	53.8	108	75 - 130	50.5	101	6	30
594-20-7	2,2-Dichloropropane		0.170U	0.170	50.0	54.7	109	70 - 135	55.1	110	0.7	30
563-58-6	1,1-Dichloropropene		0.052U	0.052	50.0	49.5	99	75 - 130	49.0	98	1	30
142-28-9	1,3-Dichloropropane		0.059U	0.059	50.0	49.0	98	75 - 125	51.2	102	4	30
108-86-1	Bromobenzene		0.145U	0.145	50.0	49.8	100	75 - 125	50.1	100	0.6	30
95-49-8	2-Chlorotoluene		0.080U	0.080	50.0	54.9	110	75 - 125	53.6	107	2	30
106-43-4	4-Chlorotoluene		0.124U	0.124	50.0	55.6	111	75 - 130	54.7	109	2	30
98-06-6	tert-Butylbenzene		0.087U	0.087	50.0	52.7	105	70 - 130	50.3	101	5	30
135-98-8	sec-Butylbenzene		0.107U	0.107	50.0	53.9	108	70 - 125	50.7	101	6	30
541-73-1	1,3-Dichlorobenzene		0.138U	0.138	50.0	52.2	104	75 - 125	51.4	103	2	30
106-46-7	1,4-Dichlorobenzene		0.083U	0.083	50.0	52.0	104	75 - 125	51.2	102	2	30
104-51-8	n-Butylbenzene		0.123U	0.123	50.0	53.7	107	70 - 135	50.3	101	7	30
95-50-1	1,2-Dichlorobenzene		0.135U	0.135	50.0	51.1	102	70 - 120	51.1	102	0	30
87-68-3	Hexachlorobutadiene		0.265U	0.265	50.0	50.5	101	50 - 140	49.3	99	2	30
91-20-3	Naphthalene		0.176U	0.176	50.0	43.4	87	55 - 140	47.7	95	9	30
87-61-6	1,2,3-Trichlorobenzene		0.079U	0.079	50.0	47.4	95	55 - 140	48.5	97	2	30
75-35-4	1,1-Dichloroethene		0.208U	0.208	50.0	53.8	108	70 - 130	54.7	109	2	30
71-43-2	Benzene		0.111U	0.111	50.0	51.6	103	80 - 120	52.3	105	1	30
79-01-6	Trichloroethene		0.161U	0.161	50.0	52.9	106	70 - 125	53.1	106	0.4	30
108-88-3	Toluene		0.122U	0.122	50.0	47.9	96	75 - 120	48.4	97	1	30
108-90-7	Chlorobenzene		0.083U	0.083	50.0	48.0	96	80 - 120	48.3	97	0.6	30
Surrogate												
460-00-4	4-Bromofluorobenzene		47.9	96	50	49.2	98	75 - 120	49.3	99		

GC/MS Volatiles Quality Control Summary

Analytical Batch	493347	**Client ID**	MB493347			LCS493347			LCSD493347			
Prep Batch	N/A	**GCAL ID**	1122203			1122204			1122205			
		Sample Type	Method Blank			LCS			LCSD			
		Analytical Date	10/29/2012 12:16			10/29/2012 11:08			10/29/2012 11:30			
		Matrix	Water			Water			Water			
SW-846 8260B		**Units**		ug/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result		**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
1868-53-7	Dibromofluoromethane		50.3	101	50	49.7	99	85 - 115	49.9	100		
2037-26-5	Toluene d8		50.6	101	50	48.5	97	85 - 120	49.2	98		
17060-07-0	1,2-Dichloroethane-d4		50.1	100	50	50.7	101	70 - 120	51.5	103		

Inorganics Quality Control Summary

Analytical Batch	493483	**Client ID**	MB493285		LCS493285		
Prep Batch	493285	**GCAL ID**	1122012		1122013		
Prep Method	SW-846	**Sample Type**	Method Blank		LCS		
	7470A	**Prep Date**	10/29/2012 11:40		10/29/2012 11:40		
		Analytical Date	10/31/2012 13:01		10/31/2012 13:03		
		Matrix	Water		Water		
SW-846 7470A Dissolved		**Units**	ug/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
7439-97-6	Mercury	0.068U	0.068	5.00	4.59	92	80 - 120

Analytical Batch	493483	**Client ID**	LF25-MW-RB-01		LF25-MW-RB-01-MS			LF25-MW-RB-01-MSD			
Prep Batch	493285	**GCAL ID**	21210270501		21210270502			21210270503			
Prep Method	SW-846	**Sample Type**	SAMPLE		MS			MSD			
	7470A	**Prep Date**	10/29/2012 11:40		10/29/2012 11:40			10/29/2012 11:40			
		Analytical Date	10/31/2012 13:04		10/31/2012 13:06			10/31/2012 13:07			
		Matrix	Water		Water			Water			
SW-846 7470A Dissolved		**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	4.43	89	75 - 125	4.58	92	3	30

Inorganics Quality Control Summary

Analytical Batch	493483	**Client ID**	MB493229		LCS493229		
Prep Batch	493229	**GCAL ID**	1121691		1121692		
Prep Method	SW-846	**Sample Type**	Method Blank		LCS		
	7470A	**Prep Date**	10/26/2012 16:15		10/26/2012 16:15		
		Analytical Date	10/31/2012 12:26		10/31/2012 12:28		
		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	4.66	93	80 - 120

Analytical Batch	493483	**Client ID**	LF05-MW-T-01		1121465MS			1121465MSD			
Prep Batch	493229	**GCAL ID**	21210260704		1121693			1121694			
Prep Method	SW-846	**Sample Type**	SAMPLE		MS			MSD			
	7470A	**Prep Date**	10/26/2012 16:15		10/26/2012 16:15			10/26/2012 16:15			
		Analytical Date	10/31/2012 12:29		10/31/2012 12:34			10/31/2012 12:35			
		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	4.36	87	80 - 120	4.35	87	0.3	30

Inorganics Quality Control Summary

Analytical Batch	493541	**Client ID**	MB493232	LCS493232
Prep Batch	493232	**GCAL ID**	1121706	1121707
Prep Method	SW-846	**Sample Type**	Method Blank	LCS
	3010A	**Prep Date**	10/27/2012 09:30	10/27/2012 09:30
		Analytical Date	10/31/2012 16:23	10/31/2012 16:31
		Matrix	Water	Water

SW-846 6010C		**Units**	ug/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
7429-90-5	Aluminum	30.3U	30.3	5000	5170	103	80 - 120
7440-36-0	Antimony	3.11U	3.11	500	490	98	80 - 120
7440-38-2	Arsenic	3.59U	3.59	500	512	102	80 - 120
7440-39-3	Barium	0.71U	0.71	500	511	102	80 - 120
7440-41-7	Beryllium	0.10U	0.10	500	511	102	80 - 120
7440-43-9	Cadmium	0.16U	0.16	500	510	102	80 - 120
7440-70-2	Calcium	45.7U	45.7	5000	5180	104	80 - 120
7440-47-3	Chromium	0.26U	0.26	500	504	101	80 - 120
7440-48-4	Cobalt	0.58U	0.58	500	522	104	80 - 120
7440-50-8	Copper	1.01U	1.01	500	498	100	80 - 120
7439-89-6	Iron	12.6U	12.6	5000	5110	102	80 - 120
7439-92-1	Lead	1.96U	1.96	500	504	101	80 - 120
7439-95-4	Magnesium	16.5U	16.5	5000	5180	104	80 - 120
7439-96-5	Manganese	1.31U	1.31	500	505	101	80 - 120
7440-02-0	Nickel	1.13U	1.13	500	517	103	80 - 120
7440-09-7	Potassium	46.8J	34.6	10000	10300	103	80 - 120
7782-49-2	Selenium	4.42U	4.42	500	511	102	80 - 120
7440-22-4	Silver	0.70U	0.70	500	495	99	80 - 120
7440-23-5	Sodium	154J	61.1	20000	21300	106	80 - 120
7440-28-0	Thallium	3.04U	3.04	500	503	101	80 - 120
7440-62-2	Vanadium	1.25U	1.25	500	505	101	80 - 120
7440-66-6	Zinc	4.51U	4.51	500	504	101	80 - 120

Inorganics Quality Control Summary

Analytical Batch	493541	**Client ID**	LF05-MW-T-01	1121465MS	1121465MSD
Prep Batch	493232	**GCAL ID**	21210260704	1121708	1121709
Prep Method	SW-846	**Sample Type**	SAMPLE	MS	MSD
	3010A	**Prep Date**	10/27/2012 09:30	10/27/2012 09:30	10/27/2012 09:30
		Analytical Date	10/31/2012 16:37	10/31/2012 16:45	10/31/2012 16:51
		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	61.0	30.3	5000	5580	110	80 - 120	5330	105	5	20
7440-36-0	Antimony	0.0	3.11	500	553	111	80 - 120	537	107	3	20
7440-38-2	Arsenic	5.39	3.59	500	593	118	80 - 120	573	113	4	20
7440-39-3	Barium	33.8	0.71	500	578	109	80 - 120	559	105	3	20
7440-41-7	Beryllium	0.0	0.10	500	555	111	80 - 120	537	107	3	20
7440-43-9	Cadmium	0.51	0.16	500	537	107	80 - 120	520	104	3	20
7440-70-2	Calcium	37900	45.7	5000	48500	**211***	80 - 120	46300	**168***	5	20
7440-47-3	Chromium	3.33	0.26	500	531	106	80 - 120	516	102	3	20
7440-48-4	Cobalt	0.0	0.58	500	532	106	80 - 120	513	103	4	20
7440-50-8	Copper	7.84	1.01	500	530	104	80 - 120	513	101	3	20
7439-89-6	Iron	139	12.6	5000	5760	113	80 - 120	5500	107	5	20
7439-92-1	Lead	0.0	1.96	500	532	106	80 - 120	515	103	3	20
7439-95-4	Magnesium	35100	16.5	5000	46100	**219***	80 - 120	43500	**168***	6	20
7439-96-5	Manganese	3.28	1.31	500	544	108	80 - 120	526	105	3	20
7440-02-0	Nickel	5.41	1.13	500	518	103	80 - 120	501	99	3	20
7782-49-2	Selenium	0.0	4.42	500	569	114	80 - 120	548	110	4	20
7440-22-4	Silver	0.0	0.70	500	528	106	80 - 120	512	102	3	20
7440-28-0	Thallium	0.0	3.04	500	541	108	80 - 120	522	104	4	20
7440-62-2	Vanadium	37.7	1.25	500	590	110	80 - 120	570	106	4	20
7440-66-6	Zinc	88.3	4.51	500	635	109	80 - 120	615	105	3	20

Analytical Batch	493656	**Client ID**	LF05-MW-T-01	1121465MS	1121465MSD
Prep Batch	493232	**GCAL ID**	21210260704	1121708	1121709
Prep Method	SW-846	**Sample Type**	SAMPLE	MS	MSD
	3010A	**Prep Date**	10/27/2012 09:30	10/27/2012 09:30	10/27/2012 09:30
		Analytical Date	11/01/2012 15:31	11/01/2012 15:38	11/01/2012 15:44
		Matrix	Water	Water	Water

SW-846 6010C		**Units**	ug/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
7440-09-7	Potassium	6480	34.6	10000	18900	**124***	80 - 120	18300	118	3	20
7440-23-5	Sodium	53700	61.1	20000	83900	**151***	80 - 120	79500	**129***	5	20

Inorganics Quality Control Summary

Analytical Batch	493541	**Client ID**	MB493231	LCS493231
Prep Batch	493231	**GCAL ID**	1121701	1121702
Prep Method	SW-846 3005	**Sample Type**	Method Blank	LCS
	Dissolved	**Prep Date**	10/29/2012 11:40	10/29/2012 11:40
		Analytical Date	10/31/2012 14:55	10/31/2012 15:03
		Matrix	Water	Water

SW-846 6010C Dissolved		**Units**	ug/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
7429-90-5	Aluminum	37.6J	30.3	5000	5130	103	80 - 120
7440-36-0	Antimony	3.11U	3.11	500	498	100	80 - 120
7440-38-2	Arsenic	3.59U	3.59	500	528	106	80 - 120
7440-39-3	Barium	0.71U	0.71	500	507	101	80 - 120
7440-41-7	Beryllium	0.10U	0.10	500	513	103	80 - 120
7440-43-9	Cadmium	0.16U	0.16	500	513	103	80 - 120
7440-70-2	Calcium	45.7U	45.7	5000	5130	103	80 - 120
7440-47-3	Chromium	0.26U	0.26	500	496	99	80 - 120
7440-48-4	Cobalt	0.58U	0.58	500	529	106	80 - 120
7440-50-8	Copper	1.01U	1.01	500	491	98	80 - 120
7439-89-6	Iron	12.6U	12.6	5000	5110	102	80 - 120
7439-92-1	Lead	1.96U	1.96	500	515	103	80 - 120
7439-95-4	Magnesium	16.5U	16.5	5000	5150	103	80 - 120
7439-96-5	Manganese	1.31U	1.31	500	501	100	80 - 120
7440-02-0	Nickel	1.13U	1.13	500	517	103	80 - 120
7440-09-7	Potassium	42.8J	34.6	10000	10100	101	80 - 120
7782-49-2	Selenium	4.42U	4.42	500	532	106	80 - 120
7440-22-4	Silver	0.70U	0.70	500	493	99	80 - 120
7440-23-5	Sodium	120J	61.1	20000	20400	102	80 - 120
7440-28-0	Thallium	3.04U	3.04	500	513	103	80 - 120
7440-62-2	Vanadium	1.25U	1.25	500	499	100	80 - 120
7440-66-6	Zinc	4.51U	4.51	500	510	102	80 - 120

Inorganics Quality Control Summary

Analytical Batch	493541	**Client ID**	LF25-MW-RB-01	LF25-MW-RB-01-MS	LF25-MW-RB-01-MSD
Prep Batch	493231	**GCAL ID**	21210270501	21210270502	21210270503
Prep Method	SW-846 3005	**Sample Type**	SAMPLE	MS	MSD
	Dissolved	**Prep Date**	10/29/2012 11:40	10/29/2012 11:40	10/29/2012 11:40
		Analytical Date	10/31/2012 15:09	10/31/2012 15:17	10/31/2012 15:23
		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	46.8	30.3	5000	5090	101	80 - 120	5030	100	1	20
7440-36-0	Antimony	0.0	3.11	500	511	102	80 - 120	503	101	2	20
7440-38-2	Arsenic	0.0	3.59	500	544	109	80 - 120	534	107	2	20
7440-39-3	Barium	34.6	0.71	500	533	100	80 - 120	524	98	2	20
7440-41-7	Beryllium	0.0	0.10	500	517	103	80 - 120	508	102	2	20
7440-43-9	Cadmium	0.38	0.16	500	499	100	80 - 120	490	98	2	20
7440-70-2	Calcium	42200	45.7	5000	46500	85	80 - 120	45800	**72***	1	20
7440-47-3	Chromium	1.32	0.26	500	486	97	80 - 120	477	95	2	20
7440-48-4	Cobalt	0.0	0.58	500	486	97	80 - 120	478	96	2	20
7440-50-8	Copper	6.83	1.01	500	485	96	80 - 120	479	94	1	20
7439-89-6	Iron	0.0	12.6	5000	5100	102	80 - 120	5050	101	0.8	20
7439-92-1	Lead	0.0	1.96	500	491	98	80 - 120	482	96	2	20
7439-95-4	Magnesium	41000	16.5	5000	45500	89	80 - 120	45100	81	0.9	20
7439-96-5	Manganese	0.0	1.31	500	500	100	80 - 120	492	98	2	20
7440-02-0	Nickel	0.0	1.13	500	474	95	80 - 120	467	93	2	20
7782-49-2	Selenium	11.2	4.42	500	535	105	80 - 120	528	103	1	20
7440-22-4	Silver	0.0	0.70	500	492	98	80 - 120	485	97	1	20
7440-28-0	Thallium	0.0	3.04	500	493	99	80 - 120	487	97	1	20
7440-62-2	Vanadium	26.7	1.25	500	530	101	80 - 120	522	99	2	20
7440-66-6	Zinc	1160	4.51	500	1650	99	80 - 120	1620	94	2	20

Analytical Batch	493656	**Client ID**	LF25-MW-RB-01	LF25-MW-RB-01-MS	LF25-MW-RB-01-MSD
Prep Batch	493231	**GCAL ID**	21210270501	21210270502	21210270503
Prep Method	SW-846 3005	**Sample Type**	SAMPLE	MS	MSD
	Dissolved	**Prep Date**	10/29/2012 11:40	10/29/2012 11:40	10/29/2012 11:40
		Analytical Date	11/01/2012 14:04	11/01/2012 14:11	11/01/2012 14:18
		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**
7440-09-7	Potassium	7290	34.6	10000	17800	105	80 - 120	17700	104	0.8	20
7440-23-5	Sodium	41800	61.1	20000	63800	110	80 - 120	63200	107	0.9	20

General Chemistry Quality Control Summary

Analytical Batch	493273	**Client ID**	MB493163		LCS493163		
Prep Batch	493163	**GCAL ID**	1121352		1121353		
Prep Method	SM4500 NH3 BE TKN	**Sample Type**	Method Blank		LCS		
		Prep Date	10/26/2012 05:30		10/26/2012 05:30		
		Analytical Date	10/27/2012 07:53		10/27/2012 07:53		
		Matrix	Water		Water		
SM 4500 NH3 BE Ammonia		**Units**	mg/L-N	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
7664-41-7	Ammonia	0.24U	0.24	15.0	15.7	105	80 - 120

Analytical Batch	493273	**Client ID**	MW-X-01		MW-X-01-MS			MW-X-01-MSD			
Prep Batch	493163	**GCAL ID**	21210250303		21210250304			21210250305			
Prep Method	SM4500 NH3 BE TKN	**Sample Type**	SAMPLE		MS			MSD			
		Prep Date	10/26/2012 05:30		10/26/2012 05:30			10/26/2012 05:30			
		Analytical Date	10/27/2012 07:53		10/27/2012 07:53			10/27/2012 07:53			
		Matrix	Water		Water			Water			
SM 4500 NH3 BE Ammonia		**Units**	mg/L-N	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
7664-41-7	Ammonia	0.00	0.24	15.0	14.1	94	74.6 - 125	13.9	93	1	25

Analytical Batch	493273	**Client ID**	MW-G-01	1120572DUP			
Prep Batch	493163	**GCAL ID**	21210240701	1121354			
Prep Method	SM4500 NH3 BE TKN	**Sample Type**	SAMPLE	DUP			
		Prep Date	10/26/2012 05:30	10/26/2012 05:30			
		Analytical Date	10/27/2012 07:53	10/27/2012 07:53			
		Matrix	Water	Water			
SM 4500 NH3 BE Ammonia		**Units**	mg/L-N	**Result**		**RPD**	
		Result	**RDL**			**Limit**	
7664-41-7	Ammonia	0.00	0.24	0.00	0	25	

General Chemistry Quality Control Summary

Analytical Batch 493292	**Client ID**	MB493292			LCS493292		
Prep Batch N/A	**GCAL ID**	1122033			1122034		
	Sample Type	Method Blank			LCS		
	Analytical Date	10/26/2012 18:01			10/26/2012 18:18		
	Matrix	Water			Water		
EPA 300.0		**Units**	mg/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
14797-65-0	Nitrite	0.015U	0.015	2.50	2.70	108	80 - 120
14797-55-8	Nitrate	0.115U	0.115	2.50	2.42	96.6	80 - 120

Analytical Batch 493292	**Client ID**	LF05-MW-T-01			1121465MS			1121465MSD			
Prep Batch N/A	**GCAL ID**	21210260704			1122035			1122036			
	Sample Type	SAMPLE			MS			MSD			
	Analytical Date	10/27/2012 11:51			10/27/2012 12:09			10/27/2012 12:26			
	Matrix	Water			Water			Water			
EPA 300.0		**Units**	mg/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
14797-65-0	Nitrite	0.000	0.015	2.50	2.74	110	75 - 125	2.77	111	1	15
14797-55-8	Nitrate	1.20	0.115	2.50	3.60	96.1	75 - 125	3.62	97.1	0.7	15

General Chemistry Quality Control Summary

Analytical Batch 493199	**Client ID**	MB493199			LCS493199			LCSD493199			
Prep Batch N/A	**GCAL ID**	1121440			1121441			1121442			
	Sample Type	Method Blank			LCS			LCSD			
	Analytical Date	10/29/2012 14:59			10/29/2012 15:20			10/29/2012 15:35			
	Matrix	Water			Water			Water			
SM 5310B TOC		**Units**	mg/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
C-012	Total Organic Carbon	0.30U	0.30	50.0	52.9	106	80 - 120	52.9	106	0.06	25

Analytical Batch 493199	**Client ID**	AVE H			1121164MS		
Prep Batch N/A	**GCAL ID**	21210252105			1121443		
	Sample Type	SAMPLE			MS		
	Analytical Date	10/29/2012 20:32			10/29/2012 20:49		
	Matrix	Water			Water		
SM 5310B TOC		**Units**	mg/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
C-012	Total Organic Carbon	7.3	0.30	50.0	60.4	106	75 - 125

General Chemistry Quality Control Summary

Analytical Batch 493208	**Client ID**	MB493208			LCS493208		
Prep Batch N/A	**GCAL ID**	1121491			1121492		
	Sample Type	Method Blank			LCS		
	Analytical Date	10/26/2012 10:55			10/26/2012 10:56		
	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	508	102	80 - 120

Analytical Batch 493208	**Client ID**	LF05-MW-T-01			1121465MS		
Prep Batch N/A	**GCAL ID**	21210260704			1121494		
	Sample Type	SAMPLE			MS		
	Analytical Date	10/26/2012 10:59			10/26/2012 10:59		
	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	501	100	80 - 120

Analytical Batch 493208	**Client ID**	LF05-MW-T-01		1121465DUP		
Prep Batch N/A	**GCAL ID**	21210260704		1121493		
	Sample Type	SAMPLE		DUP		
	Analytical Date	10/26/2012 10:59		10/26/2012 10:59		
	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 493727	**Client ID**	MB493727			LCS493727		
Prep Batch N/A	**GCAL ID**	1124038			1124039		
	Sample Type	Method Blank			LCS		
	Analytical Date	11/02/2012 16:46			11/02/2012 17:04		
	Matrix	Water			Water		
SW-846 9056A Inorganic Anions		**Units**	mg/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
16887-00-6	Chloride	0.063U	0.063	2.50	2.42	96.9	80 - 120
14808-79-8	Sulfate	0.115U	0.115	5.00	4.88	97.7	80 - 120

Analytical Batch 493727	**Client ID**	MW-08-06			MW-08-06-MS			MW-08-06-MSD			
Prep Batch N/A	**GCAL ID**	21210241305			21210241306			21210241307			
	Sample Type	SAMPLE			MS			MSD			
	Analytical Date	11/02/2012 22:56			11/02/2012 23:49			11/03/2012 00:07			
	Matrix	Water			Water			Water			
SW-846 9056A Inorganic Anions		**Units**	mg/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
16887-00-6	Chloride	5860	315	12500	18400	100	75 - 125	18500	101	0.64	15
14808-79-8	Sulfate	7070	575	25000	32500	102	75 - 125	32900	103	1.2	15

Analytical Batch 493727	**Client ID**	MW-V-01			1121462MS			1121462MSD			
Prep Batch N/A	**GCAL ID**	21210260701			1124040			1124041			
	Sample Type	SAMPLE			MS			MSD			
	Analytical Date	11/02/2012 17:22			11/02/2012 17:39			11/02/2012 17:57			
	Matrix	Water			Water			Water			
SW-846 9056A Inorganic Anions		**Units**	mg/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
16887-00-6	Chloride	192	12.6	500	703	102	75 - 125	701	102	0.15	15
14808-79-8	Sulfate	261	23.0	1000	1290	103	75 - 125	1290	103	0.18	15

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
	Bhate	4760	212102607	11/2/12

Report to:

Client: Bhate Environmental Associates
Address: 1608 13th Ave S #300
Birmingham, AL
Contact: Tracy Walker
Phone: 205 918 4000
Fax:

Bill to:

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

P.O. Number:
Project Name/Number: Cannon AFB 0020-001
Sampled By: Ben Stewart Jordan Gibson

Analytical Requests & Method

Lab use only:
Custody Seal used ☑ yes ☐ no
intact ☑ yes ☐ no
Temperature °C 4.7

Matrix[1]	Date	Time (2400)	Comp	Grab	Sample Description	Preservatives	No Containers	8260C (HCL)	Total Metals (6010C/7470B) HNO3	Diss Metals (6010C/7470B) (HNO3)	Cr(+3, +6) (7194)	Perchlorate (6860)	NO2/NO3 (300.1)	Ammonia (SM4500) H2SO4	Sulfate (300.1)	Chloride (300.1)	TOC (SM 5310B) (HCL)	Remarks:	Lab ID
WG	10/25/12	0745		✓	MW-V-01	yes	10	X	X	X	X	X	X	X	X	X	X		1
WQ	10/25/12	0745			TB-02	yes	3	X											2
WQ	10/25/12	0830			EB-02	yes	10	X	X	X	X	X	X	X	X	X	X		3
WG	10/25/12	1300		✓	LF05-MW-T-01	yes	10	X	X	X	X	X	X	X	X	X	X		4

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

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
[signature]		10/25/12	1645
Relinquished by: (Signature) Fedex	Received by: (Signature) [signature]	Date: 10/26/12	Time: 10:15
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

Note: For EB-02, please filter dissolved metals in lab. MW-V-01 & LF05-MW-T-01 were field filtered #8803 4106 3303

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	212102607
Client 4760 - Bhate Environmental Associates, Inc.	**Transport Method** FEDEX
Profile 235531 - Cannon	**Received By** Saucier, Charlotte
Line Item(s) 1 - Waters	**Receive Date(s)** 10/26/12

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)
8803 4106 3303	4.7

DISCREPANCIES

21210260703 - EB-02
- Sample received expired

21210260701 - MW-V-01
- Sample received expired

LABORATORY PRESERVATIONS

21210260703-5\ HNO3

NOTES	CR (+3,+6) RECEIVED EXPIRED FOR SAMPLES MW-V-01,EB-02

November 15, 2012

Brenda Martinez
GCAL LAB
7979 GSRI AVENUE
BATON ROUGE, LA 70820
TEL: (225) 769-4900
FAX (225) 767-5717

Order No.: 1211016

RE: DoD Perchlorate

Dear Brenda Martinez:

DHL Analytical, Inc. received 3 sample(s) on 11/2/2012 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

#1211016

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

Analysis Requested

* Our P. O. Number must appear on the Invoice.
* Our Project Number must appear on the final report.

P.O. Number: 12-0928

Project Name/Number: 212102607

Sampled By:

	Matrix	Date	Time (2400)	Comp	Grab	Sample Description	Pre-serva-tives	No. Con-tainers	PERCHLORATE (6860)	Remarks:	Lab ID
01	W	10/25/2012	7:45		X	MW-V-01		1	X	21210260701	
02	W	10/25/2012	8:30		X	EB-02		1	X	21210260703	
03	W	10/25/2012	13:00		X	LF05-MW-T-01		1	X	21210260704	

Turn Around Time: ___ 24 - 48 hrs ___ 3 days 1 week X standard other ___

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
[illegible]	Fed Ex	11/1/12	1700
Fedex	[illegible]	11/2/12	1020

Note: Receiving temp 0.9° 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

CHARLOTTE SAUCIER (225) 769-4900
GCAL
7979 GSRI RD

BATON ROUGE, LA 70802
UNITED STATES US

SHIP DATE: 01NOV12
ACTWGT: 14.0 LB MAN
CAD: 0924693/CAFE2605

BILL SENDER

TO

DHL
2300 DOUBLE CREEK

ROUND ROCK TX 78664
(225) 769-4900 REF:
INV:
PO: DEPT:

51201/9GCR/CFE0

FedEx Express

J12131208160125

FRI - 02 NOV A1
PRIORITY OVERNIGHT

TRK# 0201 5443 0509 2817

A8 BSMA

78664
TX-US AUS

Part # 156146-434 RIT2 07/11

GCAL

CUSTODY SEAL

Date Sealed: 11-1-12

Sealed By: JBH

This package confirms to the conditions and limitations specified in 49 CFR 173.4

GCAL-17

DHL Analytical, Inc.

Sample Receipt Checklist

Client Name GCAL LAB

Date Received: 11/2/2012

Work Order Number 1211016

Received by JB

Checklist completed by: Signature | 11/2/2012 Date

Reviewed by Initials | 11/2/2012 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 ☐	0.8 °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:** 11/15/12
Reviewer Name: Carlos Castro	**Laboratory Work Order:** 1211016
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:** 11/15/12

Reviewer Name: Carlos Castro | **Laboratory Work Order:** 1211016

#[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

11/15/12
Date

DHL Analytical, Inc. **Date:** *15-Nov-12*

CLIENT: GCAL LAB
Project: DoD Perchlorate
Lab Order: 1211016

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 11/2/12. 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 11/9/12 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 12-0928.

Client sent samples in own containers.

This sample delivery group arrived at DHL Analytical 11/2/12.

DHL Analytical, Inc.

Date: *15-Nov-12*

CLIENT: GCAL LAB
Project: DoD Perchlorate
Lab Order: 1211016

Work Order Sample Summary

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
1211016-01	MW-V-01		10/25/12 07:45 AM	11/2/2012
1211016-02	EB-02		10/25/12 08:30 AM	11/2/2012
1211016-03	LF05-MW-T-01		10/25/12 01:00 PM	11/2/2012

DHL Analytical, Inc.

15-Nov-12

Lab Order: 1211016
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
1211016-01A	MW-V-01	10/25/12 07:45 AM	Aqueous	SW6860	Perchlorate Prep	11/09/12 10:27 AM	54622
1211016-02A	EB-02	10/25/12 08:30 AM	Aqueous	SW6860	Perchlorate Prep	11/09/12 10:27 AM	54622
1211016-03A	LF05-MW-T-01	10/25/12 01:00 PM	Aqueous	SW6860	Perchlorate Prep	11/09/12 10:27 AM	54622

DHL Analytical, Inc.

15-Nov-12

Lab Order: 1211016
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
1211016-01A	MW-V-01	Aqueous	SW6860	Perchlorate - Water	54622	1	11/09/12 11:35 AM	ICMS_121109A
1211016-02A	EB-02	Aqueous	SW6860	Perchlorate - Water	54622	1	11/09/12 11:51 AM	ICMS_121109A
1211016-03A	LF05-MW-T-01	Aqueous	SW6860	Perchlorate - Water	54622	1	11/09/12 12:03 PM	ICMS_121109A

DHL Analytical, Inc.

Date: *15-Nov-12*

CLIENT:	GCAL LAB	**Client Sample ID:**	MW-V-01
Project:	DoD Perchlorate	**Lab ID:**	1211016-01
Project No:	212102607	**Collection Date:**	10/25/12 07:45 AM
Lab Order:	1211016	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
PERCHLORATE - WATER		**SW6860**					Analyst: **CZ**
Perchlorate	0.00682	0.000100	0.000300	N	mg/L	1	11/09/12 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: *15-Nov-12*

CLIENT:	GCAL LAB	**Client Sample ID:**	EB-02
Project:	DoD Perchlorate	**Lab ID:**	1211016-02
Project No:	212102607	**Collection Date:**	10/25/12 08:30 AM
Lab Order:	1211016	**Matrix:**	AQUEOUS

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	11/09/12 11:51 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: *15-Nov-12*

CLIENT:	GCAL LAB	**Client Sample ID:**	LF05-MW-T-01
Project:	DoD Perchlorate	**Lab ID:**	1211016-03
Project No:	212102607	**Collection Date:**	10/25/12 01:00 PM
Lab Order:	1211016	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
PERCHLORATE - WATER		**SW6860**					Analyst: **CZ**
Perchlorate	0.00202	0.000100	0.000300	N	mg/L	1	11/09/12 12:03 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: *15-Nov-12*

CLIENT: GCAL LAB
Work Order: 1211016
Project: DoD Perchlorate

ANALYTICAL QC SUMMARY REPORT

RunID: **ICMS_121109A**

The QC data in batch 54622 applies to the following samples: 1211016-01A, 1211016-02A, 1211016-03A

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

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: 1211016
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

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.

15-Nov-12

Lab Order: 1211016
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
1211016-01A	MW-V-01	SW6860	54622	1	11/9/2012 11:35:00 AM	11/9/2012 10:27:48 AM	A
1211016-02A	EB-02	SW6860	54622	1	11/9/2012 11:51:00 AM	11/9/2012 10:27:48 AM	A
1211016-03A	LF05-MW-T-01	SW6860	54622	1	11/9/2012 12:03:00 PM	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

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 11/16/2012

GCAL Report 212102705

Deliver To	Bhate Environmental Associates, Inc. 1608 14th Ave South Birmingham, AL 35205 205-918-4024
Attn	David Badio

Project Cannon

CASE NARRATIVE

Client: Bhate Environmental Associates, Inc. **Report:** 212102705

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 493286, the MS and/or MSD recovery is outside the control limits for Zinc. 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 96%. The MS/MSD recoveries are not applicable for Calcium and Magnesium because the sample concentration is greater than four times the spike concentration.

In the SW-846 6010C Dissolved analysis for prep batch 493231, the MS/MSD recoveries are not applicable for Calcium because the sample concentration is greater than four times the spike concentration.

CONVENTIONALS

In the EPA 300.0 analysis, samples 21210270501 (LF25-MW-RB-01), 21210270502 (LF25-MW-RB-01-MS) and 21210270503 (LF25-MW-RB-01-MSD) had to be diluted in order to bracket the concentration within the calibration range of the instrument.

MISCELLANEOUS

Sample 21210270501 (LF25-MW-RB-01) 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 212102705

THIS REPORT CONTAINS _____ PAGES.

Report Sample Summary

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210270501	LF25-MW-RB-01	Water	10/26/2012 09:00	10/27/2012 10:00
21210270502	LF25-MW-RB-01-MS	Water	10/26/2012 09:00	10/27/2012 10:00
21210270503	LF25-MW-RB-01-MSD	Water	10/26/2012 09:00	10/27/2012 10:00
21210270504	TB-09	Water	10/26/2012 09:00	10/27/2012 10:00

Summary of Compounds Detected

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210270501	**LF25-MW-RB-01**	Water	10/26/2012 09:00	10/27/2012 10:00

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7440-39-3	Barium	35.1	10.0	0.71	ug/L
7440-43-9	Cadmium	0.53J	5.00	0.16	ug/L
7440-70-2	Calcium	42000	100	45.7	ug/L
7440-47-3	Chromium	1.36J	10.0	0.26	ug/L
7440-48-4	Cobalt	0.86J	10.0	0.58	ug/L
7440-50-8	Copper	8.08J	10.0	1.01	ug/L
7439-95-4	Magnesium	40800	100	16.5	ug/L
7439-96-5	Manganese	1.98J	15.0	1.31	ug/L
7782-49-2	Selenium	7.75J	40.0	4.42	ug/L
7440-62-2	Vanadium	30.2	20.0	1.25	ug/L
7440-66-6	Zinc	1380	20.0	4.51	ug/L

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7440-09-7	Potassium	7070	500	34.6	ug/L
7440-23-5	Sodium	41400	1000	61.1	ug/L

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	46.8J	200	30.3	ug/L
7440-39-3	Barium	34.6	10.0	0.71	ug/L
7440-43-9	Cadmium	0.38J	5.00	0.16	ug/L
7440-70-2	Calcium	42200	100	45.7	ug/L
7440-47-3	Chromium	1.32J	10.0	0.26	ug/L
7440-50-8	Copper	6.83J	10.0	1.01	ug/L
7439-95-4	Magnesium	41000	100	16.5	ug/L
7782-49-2	Selenium	11.2J	40.0	4.42	ug/L
7440-62-2	Vanadium	26.7	20.0	1.25	ug/L
7440-66-6	Zinc	1160	20.0	4.51	ug/L

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7440-09-7	Potassium	7290	500	34.6	ug/L
7440-23-5	Sodium	41800	1000	61.1	ug/L

EPA 300.0

CAS#	Parameter	Result	RDL	MDL	Units
14797-55-8	Nitrate	1.02	0.500	0.115	mg/L

SM 5310B TOC

CAS#	Parameter	Result	RDL	MDL	Units
C-012	Total Organic Carbon	5.2	1.0	0.30	mg/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210270501	LF25-MW-RB-01	Water	10/26/2012 09:00	10/27/2012 10:00

EPA 300.0

CAS#	Parameter	Result	RDL	MDL	Units
16887-00-6	Chloride	68.6	10.0	6.30	mg/L
14808-79-8	Sulfate	101	20.0	11.5	mg/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210270502	LF25-MW-RB-01-MS	Water	10/26/2012 09:00	10/27/2012 10:00

SM 4500 NH3 BE Ammonia Water

CAS#	Parameter	Result	RDL	MDL	Units
7664-41-7	Ammonia	14.1	1.0	0.24	mg/L-N

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	5090	200	30.3	ug/L
7440-36-0	Antimony	511	60.0	3.11	ug/L
7440-38-2	Arsenic	544	10.0	3.59	ug/L
7440-39-3	Barium	533	10.0	0.71	ug/L
7440-41-7	Beryllium	517	5.00	0.10	ug/L
7440-43-9	Cadmium	499	5.00	0.16	ug/L
7440-70-2	Calcium	46500	100	45.7	ug/L
7440-47-3	Chromium	486	10.0	0.26	ug/L
7440-48-4	Cobalt	486	10.0	0.58	ug/L
7440-50-8	Copper	485	10.0	1.01	ug/L
7439-89-6	Iron	5100	100	12.6	ug/L
7439-92-1	Lead	491	15.0	1.96	ug/L
7439-95-4	Magnesium	45500	100	16.5	ug/L
7439-96-5	Manganese	500	15.0	1.31	ug/L
7440-02-0	Nickel	474	40.0	1.13	ug/L
7782-49-2	Selenium	535	40.0	4.42	ug/L
7440-22-4	Silver	492	10.0	0.70	ug/L
7440-28-0	Thallium	493	20.0	3.04	ug/L
7440-62-2	Vanadium	530	20.0	1.25	ug/L
7440-66-6	Zinc	1650	20.0	4.51	ug/L

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7440-09-7	Potassium	17800	500	34.6	ug/L
7440-23-5	Sodium	63800	1000	61.1	ug/L

SW-846 7470A Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	4.55	0.20	0.068	ug/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210270502	**LF25-MW-RB-01-MS**	Water	10/26/2012 09:00	10/27/2012 10:00

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	5140	200	30.3	ug/L
7440-36-0	Antimony	515	60.0	3.11	ug/L
7440-38-2	Arsenic	538	10.0	3.59	ug/L
7440-39-3	Barium	536	10.0	0.71	ug/L
7440-41-7	Beryllium	518	5.00	0.10	ug/L
7440-43-9	Cadmium	497	5.00	0.16	ug/L
7440-70-2	Calcium	45100	100	45.7	ug/L
7440-47-3	Chromium	498	10.0	0.26	ug/L
7440-48-4	Cobalt	488	10.0	0.58	ug/L
7440-50-8	Copper	492	10.0	1.01	ug/L
7439-89-6	Iron	5110	100	12.6	ug/L
7439-92-1	Lead	488	15.0	1.96	ug/L
7439-95-4	Magnesium	44300	100	16.5	ug/L
7439-96-5	Manganese	502	15.0	1.31	ug/L
7440-02-0	Nickel	474	40.0	1.13	ug/L
7782-49-2	Selenium	529	40.0	4.42	ug/L
7440-22-4	Silver	493	10.0	0.70	ug/L
7440-28-0	Thallium	502	20.0	3.04	ug/L
7440-62-2	Vanadium	538	20.0	1.25	ug/L
7440-66-6	Zinc	1810	20.0	4.51	ug/L

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7440-09-7	Potassium	17300	500	34.6	ug/L
7440-23-5	Sodium	60600	1000	61.1	ug/L

SW-846 7470A Water

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	4.43	0.20	0.068	ug/L

EPA 300.0 Inorganic Anions

CAS#	Parameter	Result	RDL	MDL	Units
14797-55-8	Nitrate	3.50	0.500	0.115	mg/L
14797-65-0	Nitrite	2.90	0.500	0.015	mg/L

SW-846 7196A Chromium VI

CAS#	Parameter	Result	RDL	MDL	Units
18540-29-9	Chromium VI	514	10.0	4.00	ug/L

SW-846 8260B DOD Water

CAS#	Parameter	Result	RDL	MDL	Units
630-20-6	1,1,1,2-Tetrachloroethane	53.2	1.00	0.120	ug/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210270502	LF25-MW-RB-01-MS	Water	10/26/2012 09:00	10/27/2012 10:00

SW-846 8260B DOD Water

CAS#	Parameter	Result	RDL	MDL	Units
71-55-6	1,1,1-Trichloroethane	57.2	1.00	0.123	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	54.2	1.00	0.109	ug/L
79-00-5	1,1,2-Trichloroethane	53.0	1.00	0.159	ug/L
75-34-3	1,1-Dichloroethane	56.3	1.00	0.171	ug/L
75-35-4	1,1-Dichloroethene	58.8	1.00	0.208	ug/L
563-58-6	1,1-Dichloropropene	52.8	1.00	0.052	ug/L
87-61-6	1,2,3-Trichlorobenzene	48.1	1.00	0.079	ug/L
96-18-4	1,2,3-Trichloropropane	53.7	1.00	0.065	ug/L
120-82-1	1,2,4-Trichlorobenzene	48.1	1.00	0.105	ug/L
95-63-6	1,2,4-Trimethylbenzene	53.6	1.00	0.084	ug/L
96-12-8	1,2-Dibromo-3-chloropropane	47.4	1.00	0.194	ug/L
106-93-4	1,2-Dibromoethane	53.2	1.00	0.102	ug/L
95-50-1	1,2-Dichlorobenzene	55.4	1.00	0.135	ug/L
107-06-2	1,2-Dichloroethane	53.5	1.00	0.116	ug/L
78-87-5	1,2-Dichloropropane	58.8	1.00	0.150	ug/L
108-67-8	1,3,5-Trimethylbenzene	60.0	1.00	0.066	ug/L
541-73-1	1,3-Dichlorobenzene	55.1	1.00	0.138	ug/L
142-28-9	1,3-Dichloropropane	54.4	1.00	0.059	ug/L
106-46-7	1,4-Dichlorobenzene	54.9	1.00	0.083	ug/L
594-20-7	2,2-Dichloropropane	59.0	1.00	0.170	ug/L
78-93-3	2-Butanone	43.9	5.00	0.142	ug/L
95-49-8	2-Chlorotoluene	58.0	1.00	0.080	ug/L
591-78-6	2-Hexanone	48.8	5.00	0.122	ug/L
106-43-4	4-Chlorotoluene	59.2	1.00	0.124	ug/L
99-87-6	4-Isopropyltoluene	53.6	1.00	0.070	ug/L
108-10-1	4-Methyl-2-pentanone	52.5	5.00	0.120	ug/L
67-64-1	Acetone	26.9	5.00	0.193	ug/L
71-43-2	Benzene	57.3	1.00	0.111	ug/L
108-86-1	Bromobenzene	54.4	1.00	0.145	ug/L
74-97-5	Bromochloromethane	55.2	1.00	0.127	ug/L
75-27-4	Bromodichloromethane	55.9	1.00	0.083	ug/L
75-25-2	Bromoform	51.5	1.00	0.215	ug/L
74-83-9	Bromomethane	58.8	1.00	0.427	ug/L
75-15-0	Carbon disulfide	58.5	1.00	0.190	ug/L
56-23-5	Carbon tetrachloride	57.6	1.00	0.248	ug/L
108-90-7	Chlorobenzene	52.7	1.00	0.083	ug/L
75-00-3	Chloroethane	58.9	1.00	0.235	ug/L
67-66-3	Chloroform	54.8	1.00	0.155	ug/L
74-87-3	Chloromethane	56.0	1.00	0.144	ug/L
74-95-3	Dibromomethane	54.8	1.00	0.211	ug/L
75-71-8	Dichlorodifluoromethane	57.6	1.00	0.145	ug/L
100-41-4	Ethylbenzene	55.1	1.00	0.109	ug/L
87-68-3	Hexachlorobutadiene	50.0	1.00	0.265	ug/L
98-82-8	Isopropylbenzene (Cumene)	53.1	1.00	0.130	ug/L
75-09-2	Methylene chloride	52.3	5.00	0.149	ug/L
91-20-3	Naphthalene	45.9	1.00	0.176	ug/L
100-42-5	Styrene	53.0	1.00	0.089	ug/L
127-18-4	Tetrachloroethene	57.5	1.00	0.193	ug/L
108-88-3	Toluene	52.8	1.00	0.122	ug/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210270502	LF25-MW-RB-01-MS	Water	10/26/2012 09:00	10/27/2012 10:00

SW-846 8260B DOD Water

CAS#	Parameter	Result	RDL	MDL	Units
79-01-6	Trichloroethene	57.7	1.00	0.161	ug/L
75-69-4	Trichlorofluoromethane	56.0	1.00	0.157	ug/L
75-01-4	Vinyl chloride	57.1	1.00	0.127	ug/L
156-59-2	cis-1,2-Dichloroethene	58.8	1.00	0.103	ug/L
10061-01-5	cis-1,3-Dichloropropene	58.1	1.00	0.124	ug/L
136777-61-2	m,p-Xylene	107	2.00	0.123	ug/L
104-51-8	n-Butylbenzene	53.0	1.00	0.123	ug/L
103-65-1	n-Propylbenzene	57.7	1.00	0.727	ug/L
95-47-6	o-Xylene	52.8	1.00	0.055	ug/L
135-98-8	sec-Butylbenzene	53.4	1.00	0.107	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	56.3	5.00	0.078	ug/L
98-06-6	tert-Butylbenzene	53.4	1.00	0.087	ug/L
156-60-5	trans-1,2-Dichloroethene	58.0	1.00	0.077	ug/L
10061-02-6	trans-1,3-Dichloropropene	58.8	1.00	0.128	ug/L

SM 5310B TOC

CAS#	Parameter	Result	RDL	MDL	Units
C-012	Total Organic Carbon	53.7	1.0	0.30	mg/L

EPA 300.0 Inorganic Anions

CAS#	Parameter	Result	RDL	MDL	Units
16887-00-6	Chloride	316	10.0	6.30	mg/L
14808-79-8	Sulfate	603	20.0	11.5	mg/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210270503	LF25-MW-RB-01-MSD	Water	10/26/2012 09:00	10/27/2012 10:00

SM 4500 NH3 BE Ammonia Water

CAS#	Parameter	Result	RDL	MDL	Units
7664-41-7	Ammonia	14.3	1.0	0.24	mg/L-N

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	5030	200	30.3	ug/L
7440-36-0	Antimony	503	60.0	3.11	ug/L
7440-38-2	Arsenic	534	10.0	3.59	ug/L
7440-39-3	Barium	524	10.0	0.71	ug/L
7440-41-7	Beryllium	508	5.00	0.10	ug/L
7440-43-9	Cadmium	490	5.00	0.16	ug/L
7440-70-2	Calcium	45800	100	45.7	ug/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210270503	LF25-MW-RB-01-MSD	Water	10/26/2012 09:00	10/27/2012 10:00

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7440-47-3	Chromium	477	10.0	0.26	ug/L
7440-48-4	Cobalt	478	10.0	0.58	ug/L
7440-50-8	Copper	479	10.0	1.01	ug/L
7439-89-6	Iron	5050	100	12.6	ug/L
7439-92-1	Lead	482	15.0	1.96	ug/L
7439-95-4	Magnesium	45100	100	16.5	ug/L
7439-96-5	Manganese	492	15.0	1.31	ug/L
7440-02-0	Nickel	467	40.0	1.13	ug/L
7782-49-2	Selenium	528	40.0	4.42	ug/L
7440-22-4	Silver	485	10.0	0.70	ug/L
7440-28-0	Thallium	487	20.0	3.04	ug/L
7440-62-2	Vanadium	522	20.0	1.25	ug/L
7440-66-6	Zinc	1620	20.0	4.51	ug/L

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7440-09-7	Potassium	17700	500	34.6	ug/L
7440-23-5	Sodium	63200	1000	61.1	ug/L

SW-846 7470A Water

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	4.58	0.20	0.068	ug/L

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	4960	200	30.3	ug/L
7440-36-0	Antimony	492	60.0	3.11	ug/L
7440-38-2	Arsenic	514	10.0	3.59	ug/L
7440-39-3	Barium	515	10.0	0.71	ug/L
7440-41-7	Beryllium	496	5.00	0.10	ug/L
7440-43-9	Cadmium	476	5.00	0.16	ug/L
7440-70-2	Calcium	43500	100	45.7	ug/L
7440-47-3	Chromium	478	10.0	0.26	ug/L
7440-48-4	Cobalt	466	10.0	0.58	ug/L
7440-50-8	Copper	473	10.0	1.01	ug/L
7439-89-6	Iron	4970	100	12.6	ug/L
7439-92-1	Lead	467	15.0	1.96	ug/L
7439-95-4	Magnesium	43200	100	16.5	ug/L
7439-96-5	Manganese	483	15.0	1.31	ug/L
7440-02-0	Nickel	462	40.0	1.13	ug/L
7782-49-2	Selenium	507	40.0	4.42	ug/L
7440-22-4	Silver	472	10.0	0.70	ug/L
7440-28-0	Thallium	483	20.0	3.04	ug/L
7440-62-2	Vanadium	519	20.0	1.25	ug/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210270503	LF25-MW-RB-01-MSD	Water	10/26/2012 09:00	10/27/2012 10:00

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7440-66-6	Zinc	1740	20.0	4.51	ug/L

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7440-09-7	Potassium	16400	500	34.6	ug/L
7440-23-5	Sodium	57700	1000	61.1	ug/L

SW-846 7470A Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	4.50	0.20	0.068	ug/L

EPA 300.0 Inorganic Anions

CAS#	Parameter	Result	RDL	MDL	Units
14797-55-8	Nitrate	3.52	0.500	0.115	mg/L
14797-65-0	Nitrite	2.91	0.500	0.015	mg/L

SW-846 7196A Chromium VI

CAS#	Parameter	Result	RDL	MDL	Units
18540-29-9	Chromium VI	481	10.0	4.00	ug/L

SM 5310B TOC

CAS#	Parameter	Result	RDL	MDL	Units
C-012	Total Organic Carbon	52.3	1.0	0.30	mg/L

SW-846 8260B DOD Water

CAS#	Parameter	Result	RDL	MDL	Units
630-20-6	1,1,1,2-Tetrachloroethane	47.5	1.00	0.120	ug/L
71-55-6	1,1,1-Trichloroethane	50.0	1.00	0.123	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	51.2	1.00	0.109	ug/L
79-00-5	1,1,2-Trichloroethane	48.4	1.00	0.159	ug/L
75-34-3	1,1-Dichloroethane	50.1	1.00	0.171	ug/L
75-35-4	1,1-Dichloroethene	52.3	1.00	0.208	ug/L
563-58-6	1,1-Dichloropropene	46.3	1.00	0.052	ug/L
87-61-6	1,2,3-Trichlorobenzene	46.6	1.00	0.079	ug/L
96-18-4	1,2,3-Trichloropropane	50.3	1.00	0.065	ug/L
120-82-1	1,2,4-Trichlorobenzene	45.6	1.00	0.105	ug/L
95-63-6	1,2,4-Trimethylbenzene	48.4	1.00	0.084	ug/L
96-12-8	1,2-Dibromo-3-chloropropane	46.9	1.00	0.194	ug/L
106-93-4	1,2-Dibromoethane	49.7	1.00	0.102	ug/L
95-50-1	1,2-Dichlorobenzene	50.6	1.00	0.135	ug/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210270503	LF25-MW-RB-01-MSD	Water	10/26/2012 09:00	10/27/2012 10:00

SW-846 8260B DOD Water

CAS#	Parameter	Result	RDL	MDL	Units
107-06-2	1,2-Dichloroethane	48.8	1.00	0.116	ug/L
78-87-5	1,2-Dichloropropane	52.3	1.00	0.150	ug/L
108-67-8	1,3,5-Trimethylbenzene	53.7	1.00	0.066	ug/L
541-73-1	1,3-Dichlorobenzene	50.4	1.00	0.138	ug/L
142-28-9	1,3-Dichloropropane	49.9	1.00	0.059	ug/L
106-46-7	1,4-Dichlorobenzene	50.3	1.00	0.083	ug/L
594-20-7	2,2-Dichloropropane	51.8	1.00	0.170	ug/L
78-93-3	2-Butanone	41.8	5.00	0.142	ug/L
95-49-8	2-Chlorotoluene	52.2	1.00	0.080	ug/L
591-78-6	2-Hexanone	47.3	5.00	0.122	ug/L
106-43-4	4-Chlorotoluene	53.1	1.00	0.124	ug/L
99-87-6	4-Isopropyltoluene	48.5	1.00	0.070	ug/L
108-10-1	4-Methyl-2-pentanone	50.2	5.00	0.120	ug/L
67-64-1	Acetone	26.2	5.00	0.193	ug/L
71-43-2	Benzene	50.3	1.00	0.111	ug/L
108-86-1	Bromobenzene	49.4	1.00	0.145	ug/L
74-97-5	Bromochloromethane	49.6	1.00	0.127	ug/L
75-27-4	Bromodichloromethane	49.5	1.00	0.083	ug/L
75-25-2	Bromoform	47.5	1.00	0.215	ug/L
74-83-9	Bromomethane	52.6	1.00	0.427	ug/L
75-15-0	Carbon disulfide	51.4	1.00	0.190	ug/L
56-23-5	Carbon tetrachloride	50.3	1.00	0.248	ug/L
108-90-7	Chlorobenzene	47.0	1.00	0.083	ug/L
75-00-3	Chloroethane	51.8	1.00	0.235	ug/L
67-66-3	Chloroform	48.8	1.00	0.155	ug/L
74-87-3	Chloromethane	51.2	1.00	0.144	ug/L
74-95-3	Dibromomethane	49.8	1.00	0.211	ug/L
75-71-8	Dichlorodifluoromethane	50.2	1.00	0.145	ug/L
100-41-4	Ethylbenzene	48.6	1.00	0.109	ug/L
87-68-3	Hexachlorobutadiene	46.6	1.00	0.265	ug/L
98-82-8	Isopropylbenzene (Cumene)	46.8	1.00	0.130	ug/L
75-09-2	Methylene chloride	46.7	5.00	0.149	ug/L
91-20-3	Naphthalene	46.1	1.00	0.176	ug/L
100-42-5	Styrene	47.1	1.00	0.089	ug/L
127-18-4	Tetrachloroethene	50.7	1.00	0.193	ug/L
108-88-3	Toluene	46.8	1.00	0.122	ug/L
79-01-6	Trichloroethene	49.9	1.00	0.161	ug/L
75-69-4	Trichlorofluoromethane	49.2	1.00	0.157	ug/L
75-01-4	Vinyl chloride	50.3	1.00	0.127	ug/L
156-59-2	cis-1,2-Dichloroethene	52.3	1.00	0.103	ug/L
10061-01-5	cis-1,3-Dichloropropene	52.1	1.00	0.124	ug/L
136777-61-2	m,p-Xylene	94.8	2.00	0.123	ug/L
104-51-8	n-Butylbenzene	48.2	1.00	0.123	ug/L
103-65-1	n-Propylbenzene	51.6	1.00	0.727	ug/L
95-47-6	o-Xylene	46.9	1.00	0.055	ug/L
135-98-8	sec-Butylbenzene	47.9	1.00	0.107	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	52.5	5.00	0.078	ug/L
98-06-6	tert-Butylbenzene	48.2	1.00	0.087	ug/L
156-60-5	trans-1,2-Dichloroethene	51.0	1.00	0.077	ug/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210270503	**LF25-MW-RB-01-MSD**	Water	10/26/2012 09:00	10/27/2012 10:00

SW-846 8260B DOD Water

CAS#	Parameter	Result	RDL	MDL	Units
10061-02-6	trans-1,3-Dichloropropene	53.0	1.00	0.128	ug/L

EPA 300.0 Inorganic Anions

CAS#	Parameter	Result	RDL	MDL	Units
16887-00-6	Chloride	317	10.0	6.30	mg/L
14808-79-8	Sulfate	602	20.0	11.5	mg/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210270501	**LF25-MW-RB-01**	Water	10/26/2012 09:00	10/27/2012 10:00

Subcontract Work

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/16/2012 11:32	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	10/29/2012 12:38	EDS	493347

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
21210270501	**LF25-MW-RB-01**	Water	10/26/2012 09:00	10/27/2012 10:00

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/29/2012 12:38	EDS	493347

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	ug/L	96	75 - 120
1868-53-7	Dibromofluoromethane	50	49.9	ug/L	100	85 - 115
2037-26-5	Toluene d8	50	50.6	ug/L	101	85 - 120
17060-07-0	1,2-Dichloroethane-d4	50	49.6	ug/L	99	70 - 120

SW-846 7470A Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/29/2012 11:40	493285	SW-846 7470A Dissolved	1	10/31/2012 13:14	BNB	493483

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
10/29/2012 11:40	493285	SW-846 7470A	1	10/31/2012 13:04	BNB	493483

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	0.068U	0.20	0.068	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210270501	**LF25-MW-RB-01**	Water	10/26/2012 09:00	10/27/2012 10:00

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/29/2012 11:40	493286	SW-846 3010A	1	10/31/2012 17:55	CLB	493541

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	30.3U	200	30.3	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**	**35.1**	**10.0**	**0.71**	**ug/L**
7440-41-7	Beryllium	0.10U	5.00	0.10	ug/L
7440-43-9	**Cadmium**	**0.53J**	**5.00**	**0.16**	**ug/L**
7440-70-2	**Calcium**	**42000**	**100**	**45.7**	**ug/L**
7440-47-3	**Chromium**	**1.36J**	**10.0**	**0.26**	**ug/L**
7440-48-4	**Cobalt**	**0.86J**	**10.0**	**0.58**	**ug/L**
7440-50-8	**Copper**	**8.08J**	**10.0**	**1.01**	**ug/L**
7439-89-6	Iron	12.6U	100	12.6	ug/L
7439-92-1	Lead	1.96U	15.0	1.96	ug/L
7439-95-4	**Magnesium**	**40800**	**100**	**16.5**	**ug/L**
7439-96-5	**Manganese**	**1.98J**	**15.0**	**1.31**	**ug/L**
7440-02-0	Nickel	1.13U	40.0	1.13	ug/L
7782-49-2	**Selenium**	**7.75J**	**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
7440-62-2	**Vanadium**	**30.2**	**20.0**	**1.25**	**ug/L**
7440-66-6	**Zinc**	**1380**	**20.0**	**4.51**	**ug/L**

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/29/2012 11:40	493286	SW-846 3010A	1	11/03/2012 12:31	CLB	493803

CAS#	Parameter	Result	RDL	MDL	Units
7440-09-7	**Potassium**	**7070**	**500**	**34.6**	**ug/L**
7440-23-5	**Sodium**	**41400**	**1000**	**61.1**	**ug/L**

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/29/2012 11:40	493231	SW-846 3005 Dissolved	1	10/31/2012 15:09	CLB	493541

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	**Aluminum**	**46.8J**	**200**	**30.3**	**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**	**34.6**	**10.0**	**0.71**	**ug/L**
7440-41-7	Beryllium	0.10U	5.00	0.10	ug/L
7440-43-9	**Cadmium**	**0.38J**	**5.00**	**0.16**	**ug/L**
7440-70-2	**Calcium**	**42200**	**100**	**45.7**	**ug/L**
7440-47-3	**Chromium**	**1.32J**	**10.0**	**0.26**	**ug/L**
7440-48-4	Cobalt	0.58U	10.0	0.58	ug/L
7440-50-8	**Copper**	**6.83J**	**10.0**	**1.01**	**ug/L**
7439-89-6	Iron	12.6U	100	12.6	ug/L
7439-92-1	Lead	1.96U	15.0	1.96	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210270501	**LF25-MW-RB-01**	Water	10/26/2012 09:00	10/27/2012 10:00

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/29/2012 11:40	493231	SW-846 3005 Dissolved	1	10/31/2012 15:09	CLB	493541

CAS#	Parameter	Result	RDL	MDL	Units
7439-95-4	**Magnesium**	**41000**	**100**	**16.5**	**ug/L**
7439-96-5	Manganese	1.31U	15.0	1.31	ug/L
7440-02-0	Nickel	1.13U	40.0	1.13	ug/L
7782-49-2	**Selenium**	**11.2J**	**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
7440-62-2	**Vanadium**	**26.7**	**20.0**	**1.25**	**ug/L**
7440-66-6	**Zinc**	**1160**	**20.0**	**4.51**	**ug/L**

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/29/2012 11:40	493231	SW-846 3005 Dissolved	1	11/01/2012 14:04	CLB	493656

CAS#	Parameter	Result	RDL	MDL	Units
7440-09-7	**Potassium**	**7290**	**500**	**34.6**	**ug/L**
7440-23-5	**Sodium**	**41800**	**1000**	**61.1**	**ug/L**

SM 4500 NH3 BE Ammonia

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/30/2012 15:00	493291	SM4500 NH3 BE TKN	1	10/31/2012 13:27	JEM	493580

CAS#	Parameter	Result	RDL	MDL	Units
7664-41-7	Ammonia	0.24U	1.0	0.24	mg/L-N

EPA 300.0

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/27/2012 15:59	DJH	493288

CAS#	Parameter	Result	RDL	MDL	Units
14797-55-8	**Nitrate**	**1.02**	**0.500**	**0.115**	**mg/L**
14797-65-0	Nitrite	0.015U	0.500	0.015	mg/L

EPA 300.0

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			100	10/28/2012 08:21	DJH	493288

CAS#	Parameter	Result	RDL	MDL	Units
16887-00-6	**Chloride**	**68.6**	**10.0**	**6.30**	**mg/L**
14808-79-8	**Sulfate**	**101**	**20.0**	**11.5**	**mg/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210270501	**LF25-MW-RB-01**	Water	10/26/2012 09:00	10/27/2012 10:00

SM 5310B TOC

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/30/2012 16:02	DNM	493413

CAS#	Parameter	Result	RDL	MDL	Units
C-012	**Total Organic Carbon**	**5.2**	**1.0**	**0.30**	**mg/L**

SW-846 7196A Chromium VI

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/27/2012 10:46	DJH	493279

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
21210270502	**LF25-MW-RB-01-MS**	Water	10/26/2012 09:00	10/27/2012 10:00

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/16/2012 11:33	BJM	

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

SW-846 8260B DOD Water

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/29/2012 13:00	EDS	493347

CAS#	Parameter	Result	RDL	MDL	Units
630-20-6	1,1,1,2-Tetrachloroethane	53.2	1.00	0.120	ug/L
71-55-6	1,1,1-Trichloroethane	57.2	1.00	0.123	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	54.2	1.00	0.109	ug/L
79-00-5	1,1,2-Trichloroethane	53.0	1.00	0.159	ug/L
75-34-3	1,1-Dichloroethane	56.3	1.00	0.171	ug/L
75-35-4	1,1-Dichloroethene	58.8	1.00	0.208	ug/L
563-58-6	1,1-Dichloropropene	52.8	1.00	0.052	ug/L
87-61-6	1,2,3-Trichlorobenzene	48.1	1.00	0.079	ug/L
96-18-4	1,2,3-Trichloropropane	53.7	1.00	0.065	ug/L
120-82-1	1,2,4-Trichlorobenzene	48.1	1.00	0.105	ug/L
95-63-6	1,2,4-Trimethylbenzene	53.6	1.00	0.084	ug/L
96-12-8	1,2-Dibromo-3-chloropropane	47.4	1.00	0.194	ug/L
106-93-4	1,2-Dibromoethane	53.2	1.00	0.102	ug/L
95-50-1	1,2-Dichlorobenzene	55.4	1.00	0.135	ug/L
107-06-2	1,2-Dichloroethane	53.5	1.00	0.116	ug/L
78-87-5	1,2-Dichloropropane	58.8	1.00	0.150	ug/L
108-67-8	1,3,5-Trimethylbenzene	60.0	1.00	0.066	ug/L
541-73-1	1,3-Dichlorobenzene	55.1	1.00	0.138	ug/L
142-28-9	1,3-Dichloropropane	54.4	1.00	0.059	ug/L
106-46-7	1,4-Dichlorobenzene	54.9	1.00	0.083	ug/L
594-20-7	2,2-Dichloropropane	59.0	1.00	0.170	ug/L
78-93-3	2-Butanone	43.9	5.00	0.142	ug/L
95-49-8	2-Chlorotoluene	58.0	1.00	0.080	ug/L
591-78-6	2-Hexanone	48.8	5.00	0.122	ug/L
106-43-4	4-Chlorotoluene	59.2	1.00	0.124	ug/L
99-87-6	4-Isopropyltoluene	53.6	1.00	0.070	ug/L
108-10-1	4-Methyl-2-pentanone	52.5	5.00	0.120	ug/L
67-64-1	Acetone	26.9	5.00	0.193	ug/L
71-43-2	Benzene	57.3	1.00	0.111	ug/L
108-86-1	Bromobenzene	54.4	1.00	0.145	ug/L
74-97-5	Bromochloromethane	55.2	1.00	0.127	ug/L
75-27-4	Bromodichloromethane	55.9	1.00	0.083	ug/L
75-25-2	Bromoform	51.5	1.00	0.215	ug/L
74-83-9	Bromomethane	58.8	1.00	0.427	ug/L
75-15-0	Carbon disulfide	58.5	1.00	0.190	ug/L
56-23-5	Carbon tetrachloride	57.6	1.00	0.248	ug/L
108-90-7	Chlorobenzene	52.7	1.00	0.083	ug/L
75-00-3	Chloroethane	58.9	1.00	0.235	ug/L
67-66-3	Chloroform	54.8	1.00	0.155	ug/L
74-87-3	Chloromethane	56.0	1.00	0.144	ug/L
74-95-3	Dibromomethane	54.8	1.00	0.211	ug/L
75-71-8	Dichlorodifluoromethane	57.6	1.00	0.145	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210270502	**LF25-MW-RB-01-MS**	Water	10/26/2012 09:00	10/27/2012 10:00

SW-846 8260B DOD Water

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/29/2012 13:00	EDS	493347

CAS#	Parameter	Result	RDL	MDL	Units
100-41-4	**Ethylbenzene**	**55.1**	**1.00**	**0.109**	**ug/L**
87-68-3	**Hexachlorobutadiene**	**50.0**	**1.00**	**0.265**	**ug/L**
98-82-8	**Isopropylbenzene (Cumene)**	**53.1**	**1.00**	**0.130**	**ug/L**
75-09-2	**Methylene chloride**	**52.3**	**5.00**	**0.149**	**ug/L**
91-20-3	**Naphthalene**	**45.9**	**1.00**	**0.176**	**ug/L**
100-42-5	**Styrene**	**53.0**	**1.00**	**0.089**	**ug/L**
127-18-4	**Tetrachloroethene**	**57.5**	**1.00**	**0.193**	**ug/L**
108-88-3	**Toluene**	**52.8**	**1.00**	**0.122**	**ug/L**
79-01-6	**Trichloroethene**	**57.7**	**1.00**	**0.161**	**ug/L**
75-69-4	**Trichlorofluoromethane**	**56.0**	**1.00**	**0.157**	**ug/L**
75-01-4	**Vinyl chloride**	**57.1**	**1.00**	**0.127**	**ug/L**
156-59-2	**cis-1,2-Dichloroethene**	**58.8**	**1.00**	**0.103**	**ug/L**
10061-01-5	**cis-1,3-Dichloropropene**	**58.1**	**1.00**	**0.124**	**ug/L**
136777-61-2	**m,p-Xylene**	**107**	**2.00**	**0.123**	**ug/L**
104-51-8	**n-Butylbenzene**	**53.0**	**1.00**	**0.123**	**ug/L**
103-65-1	**n-Propylbenzene**	**57.7**	**1.00**	**0.727**	**ug/L**
95-47-6	**o-Xylene**	**52.8**	**1.00**	**0.055**	**ug/L**
135-98-8	**sec-Butylbenzene**	**53.4**	**1.00**	**0.107**	**ug/L**
1634-04-4	**tert-Butyl methyl ether (MTBE)**	**56.3**	**5.00**	**0.078**	**ug/L**
98-06-6	**tert-Butylbenzene**	**53.4**	**1.00**	**0.087**	**ug/L**
156-60-5	**trans-1,2-Dichloroethene**	**58.0**	**1.00**	**0.077**	**ug/L**
10061-02-6	**trans-1,3-Dichloropropene**	**58.8**	**1.00**	**0.128**	**ug/L**

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	49.4	ug/L	99	75 - 120
1868-53-7	Dibromofluoromethane	50	49.9	ug/L	100	85 - 115
2037-26-5	Toluene d8	50	48.9	ug/L	98	85 - 120
17060-07-0	1,2-Dichloroethane-d4	50	50.9	ug/L	102	70 - 120

SW-846 7470A Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/29/2012 11:40	493285	SW-846 7470A Dissolved	1	10/31/2012 13:15	BNB	493483

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	**Mercury**	**4.55**	**0.20**	**0.068**	**ug/L**

SW-846 7470A Water

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/29/2012 11:40	493285	SW-846 7470A	1	10/31/2012 13:06	BNB	493483

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	**Mercury**	**4.43**	**0.20**	**0.068**	**ug/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210270502	**LF25-MW-RB-01-MS**	Water	10/26/2012 09:00	10/27/2012 10:00

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/29/2012 11:40	493286	SW-846 3010A	1	10/31/2012 18:03	CLB	493541

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	5140	200	30.3	ug/L
7440-36-0	Antimony	515	60.0	3.11	ug/L
7440-38-2	Arsenic	538	10.0	3.59	ug/L
7440-39-3	Barium	536	10.0	0.71	ug/L
7440-41-7	Beryllium	518	5.00	0.10	ug/L
7440-43-9	Cadmium	497	5.00	0.16	ug/L
7440-70-2	Calcium	45100	100	45.7	ug/L
7440-47-3	Chromium	498	10.0	0.26	ug/L
7440-48-4	Cobalt	488	10.0	0.58	ug/L
7440-50-8	Copper	492	10.0	1.01	ug/L
7439-89-6	Iron	5110	100	12.6	ug/L
7439-92-1	Lead	488	15.0	1.96	ug/L
7439-95-4	Magnesium	44300	100	16.5	ug/L
7439-96-5	Manganese	502	15.0	1.31	ug/L
7440-02-0	Nickel	474	40.0	1.13	ug/L
7782-49-2	Selenium	529	40.0	4.42	ug/L
7440-22-4	Silver	493	10.0	0.70	ug/L
7440-28-0	Thallium	502	20.0	3.04	ug/L
7440-62-2	Vanadium	538	20.0	1.25	ug/L
7440-66-6	Zinc	1810	20.0	4.51	ug/L

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/29/2012 11:40	493286	SW-846 3010A	1	11/03/2012 12:38	CLB	493803

CAS#	Parameter	Result	RDL	MDL	Units
7440-09-7	Potassium	17300	500	34.6	ug/L
7440-23-5	Sodium	60600	1000	61.1	ug/L

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/29/2012 11:40	493231	SW-846 3005 Dissolved	1	10/31/2012 15:17	CLB	493541

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	5090	200	30.3	ug/L
7440-36-0	Antimony	511	60.0	3.11	ug/L
7440-38-2	Arsenic	544	10.0	3.59	ug/L
7440-39-3	Barium	533	10.0	0.71	ug/L
7440-41-7	Beryllium	517	5.00	0.10	ug/L
7440-43-9	Cadmium	499	5.00	0.16	ug/L
7440-70-2	Calcium	46500	100	45.7	ug/L
7440-47-3	Chromium	486	10.0	0.26	ug/L
7440-48-4	Cobalt	486	10.0	0.58	ug/L
7440-50-8	Copper	485	10.0	1.01	ug/L
7439-89-6	Iron	5100	100	12.6	ug/L
7439-92-1	Lead	491	15.0	1.96	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210270502	**LF25-MW-RB-01-MS**	Water	10/26/2012 09:00	10/27/2012 10:00

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/29/2012 11:40	493231	SW-846 3005 Dissolved	1	10/31/2012 15:17	CLB	493541

CAS#	Parameter	Result	RDL	MDL	Units
7439-95-4	**Magnesium**	**45500**	**100**	**16.5**	**ug/L**
7439-96-5	**Manganese**	**500**	**15.0**	**1.31**	**ug/L**
7440-02-0	**Nickel**	**474**	**40.0**	**1.13**	**ug/L**
7782-49-2	**Selenium**	**535**	**40.0**	**4.42**	**ug/L**
7440-22-4	**Silver**	**492**	**10.0**	**0.70**	**ug/L**
7440-28-0	**Thallium**	**493**	**20.0**	**3.04**	**ug/L**
7440-62-2	**Vanadium**	**530**	**20.0**	**1.25**	**ug/L**
7440-66-6	**Zinc**	**1650**	**20.0**	**4.51**	**ug/L**

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/29/2012 11:40	493231	SW-846 3005 Dissolved	1	11/01/2012 14:11	CLB	493656

CAS#	Parameter	Result	RDL	MDL	Units
7440-09-7	**Potassium**	**17800**	**500**	**34.6**	**ug/L**
7440-23-5	**Sodium**	**63800**	**1000**	**61.1**	**ug/L**

SM 4500 NH3 BE Ammonia Water

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/30/2012 15:00	493291	SM4500 NH3 BE TKN	1	10/31/2012 13:27	JEM	493580

CAS#	Parameter	Result	RDL	MDL	Units
7664-41-7	**Ammonia**	**14.1**	**1.0**	**0.24**	**mg/L-N**

EPA 300.0 Inorganic Anions

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/27/2012 16:16	DJH	493288

CAS#	Parameter	Result	RDL	MDL	Units
14797-55-8	**Nitrate**	**3.50**	**0.500**	**0.115**	**mg/L**
14797-65-0	**Nitrite**	**2.90**	**0.500**	**0.015**	**mg/L**

EPA 300.0 Inorganic Anions

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			100	10/28/2012 08:39	DJH	493288

CAS#	Parameter	Result	RDL	MDL	Units
16887-00-6	**Chloride**	**316**	**10.0**	**6.30**	**mg/L**
14808-79-8	**Sulfate**	**603**	**20.0**	**11.5**	**mg/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210270502	**LF25-MW-RB-01-MS**	Water	10/26/2012 09:00	10/27/2012 10:00

SM 5310B TOC

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/30/2012 16:18	DNM	493413

CAS#	Parameter	Result	RDL	MDL	Units
C-012	**Total Organic Carbon**	**53.7**	**1.0**	**0.30**	**mg/L**

SW-846 7196A Chromium VI

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/27/2012 10:47	DJH	493279

CAS#	Parameter	Result	RDL	MDL	Units
18540-29-9	**Chromium VI**	**514**	**10.0**	**4.00**	**ug/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210270503	**LF25-MW-RB-01-MSD**	Water	10/26/2012 09:00	10/27/2012 10:00

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/16/2012 11:33	BJM	

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

SW-846 8260B DOD Water

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/29/2012 13:22	EDS	493347

CAS#	Parameter	Result	RDL	MDL	Units
630-20-6	1,1,1,2-Tetrachloroethane	47.5	1.00	0.120	ug/L
71-55-6	1,1,1-Trichloroethane	50.0	1.00	0.123	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	51.2	1.00	0.109	ug/L
79-00-5	1,1,2-Trichloroethane	48.4	1.00	0.159	ug/L
75-34-3	1,1-Dichloroethane	50.1	1.00	0.171	ug/L
75-35-4	1,1-Dichloroethene	52.3	1.00	0.208	ug/L
563-58-6	1,1-Dichloropropene	46.3	1.00	0.052	ug/L
87-61-6	1,2,3-Trichlorobenzene	46.6	1.00	0.079	ug/L
96-18-4	1,2,3-Trichloropropane	50.3	1.00	0.065	ug/L
120-82-1	1,2,4-Trichlorobenzene	45.6	1.00	0.105	ug/L
95-63-6	1,2,4-Trimethylbenzene	48.4	1.00	0.084	ug/L
96-12-8	1,2-Dibromo-3-chloropropane	46.9	1.00	0.194	ug/L
106-93-4	1,2-Dibromoethane	49.7	1.00	0.102	ug/L
95-50-1	1,2-Dichlorobenzene	50.6	1.00	0.135	ug/L
107-06-2	1,2-Dichloroethane	48.8	1.00	0.116	ug/L
78-87-5	1,2-Dichloropropane	52.3	1.00	0.150	ug/L
108-67-8	1,3,5-Trimethylbenzene	53.7	1.00	0.066	ug/L
541-73-1	1,3-Dichlorobenzene	50.4	1.00	0.138	ug/L
142-28-9	1,3-Dichloropropane	49.9	1.00	0.059	ug/L
106-46-7	1,4-Dichlorobenzene	50.3	1.00	0.083	ug/L
594-20-7	2,2-Dichloropropane	51.8	1.00	0.170	ug/L
78-93-3	2-Butanone	41.8	5.00	0.142	ug/L
95-49-8	2-Chlorotoluene	52.2	1.00	0.080	ug/L
591-78-6	2-Hexanone	47.3	5.00	0.122	ug/L
106-43-4	4-Chlorotoluene	53.1	1.00	0.124	ug/L
99-87-6	4-Isopropyltoluene	48.5	1.00	0.070	ug/L
108-10-1	4-Methyl-2-pentanone	50.2	5.00	0.120	ug/L
67-64-1	Acetone	26.2	5.00	0.193	ug/L
71-43-2	Benzene	50.3	1.00	0.111	ug/L
108-86-1	Bromobenzene	49.4	1.00	0.145	ug/L
74-97-5	Bromochloromethane	49.6	1.00	0.127	ug/L
75-27-4	Bromodichloromethane	49.5	1.00	0.083	ug/L
75-25-2	Bromoform	47.5	1.00	0.215	ug/L
74-83-9	Bromomethane	52.6	1.00	0.427	ug/L
75-15-0	Carbon disulfide	51.4	1.00	0.190	ug/L
56-23-5	Carbon tetrachloride	50.3	1.00	0.248	ug/L
108-90-7	Chlorobenzene	47.0	1.00	0.083	ug/L
75-00-3	Chloroethane	51.8	1.00	0.235	ug/L
67-66-3	Chloroform	48.8	1.00	0.155	ug/L
74-87-3	Chloromethane	51.2	1.00	0.144	ug/L
74-95-3	Dibromomethane	49.8	1.00	0.211	ug/L
75-71-8	Dichlorodifluoromethane	50.2	1.00	0.145	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210270503	**LF25-MW-RB-01-MSD**	Water	10/26/2012 09:00	10/27/2012 10:00

SW-846 8260B DOD Water

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/29/2012 13:22	EDS	493347

CAS#	Parameter	Result	RDL	MDL	Units
100-41-4	**Ethylbenzene**	**48.6**	**1.00**	**0.109**	**ug/L**
87-68-3	**Hexachlorobutadiene**	**46.6**	**1.00**	**0.265**	**ug/L**
98-82-8	**Isopropylbenzene (Cumene)**	**46.8**	**1.00**	**0.130**	**ug/L**
75-09-2	**Methylene chloride**	**46.7**	**5.00**	**0.149**	**ug/L**
91-20-3	**Naphthalene**	**46.1**	**1.00**	**0.176**	**ug/L**
100-42-5	**Styrene**	**47.1**	**1.00**	**0.089**	**ug/L**
127-18-4	**Tetrachloroethene**	**50.7**	**1.00**	**0.193**	**ug/L**
108-88-3	**Toluene**	**46.8**	**1.00**	**0.122**	**ug/L**
79-01-6	**Trichloroethene**	**49.9**	**1.00**	**0.161**	**ug/L**
75-69-4	**Trichlorofluoromethane**	**49.2**	**1.00**	**0.157**	**ug/L**
75-01-4	**Vinyl chloride**	**50.3**	**1.00**	**0.127**	**ug/L**
156-59-2	**cis-1,2-Dichloroethene**	**52.3**	**1.00**	**0.103**	**ug/L**
10061-01-5	**cis-1,3-Dichloropropene**	**52.1**	**1.00**	**0.124**	**ug/L**
136777-61-2	**m,p-Xylene**	**94.8**	**2.00**	**0.123**	**ug/L**
104-51-8	**n-Butylbenzene**	**48.2**	**1.00**	**0.123**	**ug/L**
103-65-1	**n-Propylbenzene**	**51.6**	**1.00**	**0.727**	**ug/L**
95-47-6	**o-Xylene**	**46.9**	**1.00**	**0.055**	**ug/L**
135-98-8	**sec-Butylbenzene**	**47.9**	**1.00**	**0.107**	**ug/L**
1634-04-4	**tert-Butyl methyl ether (MTBE)**	**52.5**	**5.00**	**0.078**	**ug/L**
98-06-6	**tert-Butylbenzene**	**48.2**	**1.00**	**0.087**	**ug/L**
156-60-5	**trans-1,2-Dichloroethene**	**51.0**	**1.00**	**0.077**	**ug/L**
10061-02-6	**trans-1,3-Dichloropropene**	**53.0**	**1.00**	**0.128**	**ug/L**

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	49.2	ug/L	98	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	50.3	ug/L	101	70 - 120

SW-846 7470A Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/29/2012 11:40	493285	SW-846 7470A Dissolved	1	10/31/2012 13:17	BNB	493483

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	**Mercury**	**4.50**	**0.20**	**0.068**	**ug/L**

SW-846 7470A Water

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/29/2012 11:40	493285	SW-846 7470A	1	10/31/2012 13:07	BNB	493483

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	**Mercury**	**4.58**	**0.20**	**0.068**	**ug/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210270503	**LF25-MW-RB-01-MSD**	Water	10/26/2012 09:00	10/27/2012 10:00

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/29/2012 11:40	493286	SW-846 3010A	1	10/31/2012 18:09	CLB	493541

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	4960	200	30.3	ug/L
7440-36-0	Antimony	492	60.0	3.11	ug/L
7440-38-2	Arsenic	514	10.0	3.59	ug/L
7440-39-3	Barium	515	10.0	0.71	ug/L
7440-41-7	Beryllium	496	5.00	0.10	ug/L
7440-43-9	Cadmium	476	5.00	0.16	ug/L
7440-70-2	Calcium	43500	100	45.7	ug/L
7440-47-3	Chromium	478	10.0	0.26	ug/L
7440-48-4	Cobalt	466	10.0	0.58	ug/L
7440-50-8	Copper	473	10.0	1.01	ug/L
7439-89-6	Iron	4970	100	12.6	ug/L
7439-92-1	Lead	467	15.0	1.96	ug/L
7439-95-4	Magnesium	43200	100	16.5	ug/L
7439-96-5	Manganese	483	15.0	1.31	ug/L
7440-02-0	Nickel	462	40.0	1.13	ug/L
7782-49-2	Selenium	507	40.0	4.42	ug/L
7440-22-4	Silver	472	10.0	0.70	ug/L
7440-28-0	Thallium	483	20.0	3.04	ug/L
7440-62-2	Vanadium	519	20.0	1.25	ug/L
7440-66-6	Zinc	1740	20.0	4.51	ug/L

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/29/2012 11:40	493286	SW-846 3010A	1	11/03/2012 12:44	CLB	493803

CAS#	Parameter	Result	RDL	MDL	Units
7440-09-7	Potassium	16400	500	34.6	ug/L
7440-23-5	Sodium	57700	1000	61.1	ug/L

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/29/2012 11:40	493231	SW-846 3005 Dissolved	1	10/31/2012 15:23	CLB	493541

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	5030	200	30.3	ug/L
7440-36-0	Antimony	503	60.0	3.11	ug/L
7440-38-2	Arsenic	534	10.0	3.59	ug/L
7440-39-3	Barium	524	10.0	0.71	ug/L
7440-41-7	Beryllium	508	5.00	0.10	ug/L
7440-43-9	Cadmium	490	5.00	0.16	ug/L
7440-70-2	Calcium	45800	100	45.7	ug/L
7440-47-3	Chromium	477	10.0	0.26	ug/L
7440-48-4	Cobalt	478	10.0	0.58	ug/L
7440-50-8	Copper	479	10.0	1.01	ug/L
7439-89-6	Iron	5050	100	12.6	ug/L
7439-92-1	Lead	482	15.0	1.96	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210270503	**LF25-MW-RB-01-MSD**	Water	10/26/2012 09:00	10/27/2012 10:00

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/29/2012 11:40	493231	SW-846 3005 Dissolved	1	10/31/2012 15:23	CLB	493541

CAS#	Parameter	Result	RDL	MDL	Units
7439-95-4	**Magnesium**	**45100**	**100**	**16.5**	**ug/L**
7439-96-5	**Manganese**	**492**	**15.0**	**1.31**	**ug/L**
7440-02-0	**Nickel**	**467**	**40.0**	**1.13**	**ug/L**
7782-49-2	**Selenium**	**528**	**40.0**	**4.42**	**ug/L**
7440-22-4	**Silver**	**485**	**10.0**	**0.70**	**ug/L**
7440-28-0	**Thallium**	**487**	**20.0**	**3.04**	**ug/L**
7440-62-2	**Vanadium**	**522**	**20.0**	**1.25**	**ug/L**
7440-66-6	**Zinc**	**1620**	**20.0**	**4.51**	**ug/L**

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/29/2012 11:40	493231	SW-846 3005 Dissolved	1	11/01/2012 14:18	CLB	493656

CAS#	Parameter	Result	RDL	MDL	Units
7440-09-7	**Potassium**	**17700**	**500**	**34.6**	**ug/L**
7440-23-5	**Sodium**	**63200**	**1000**	**61.1**	**ug/L**

SM 4500 NH3 BE Ammonia Water

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/30/2012 15:00	493291	SM4500 NH3 BE TKN	1	10/31/2012 13:27	JEM	493580

CAS#	Parameter	Result	RDL	MDL	Units
7664-41-7	**Ammonia**	**14.3**	**1.0**	**0.24**	**mg/L-N**

EPA 300.0 Inorganic Anions

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/27/2012 16:34	DJH	493288

CAS#	Parameter	Result	RDL	MDL	Units
14797-55-8	**Nitrate**	**3.52**	**0.500**	**0.115**	**mg/L**
14797-65-0	**Nitrite**	**2.91**	**0.500**	**0.015**	**mg/L**

EPA 300.0 Inorganic Anions

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			100	10/28/2012 08:56	DJH	493288

CAS#	Parameter	Result	RDL	MDL	Units
16887-00-6	**Chloride**	**317**	**10.0**	**6.30**	**mg/L**
14808-79-8	**Sulfate**	**602**	**20.0**	**11.5**	**mg/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210270503	**LF25-MW-RB-01-MSD**	Water	10/26/2012 09:00	10/27/2012 10:00

SM 5310B TOC

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/31/2012 09:51	DNM	493413

CAS#	Parameter	Result	RDL	MDL	Units
C-012	**Total Organic Carbon**	**52.3**	**1.0**	**0.30**	**mg/L**

SW-846 7196A Chromium VI

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/27/2012 10:47	DJH	493279

CAS#	Parameter	Result	RDL	MDL	Units
18540-29-9	**Chromium VI**	**481**	**10.0**	**4.00**	**ug/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210270504	**TB-09**	Water	10/26/2012 09:00	10/27/2012 10:00

SW-846 8260B DOD Water

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/29/2012 14:06	EDS	493347

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
21210270504	**TB-09**	Water	10/26/2012 09:00	10/27/2012 10:00

SW-846 8260B DOD Water

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/29/2012 14:06	EDS	493347

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	48.2	ug/L	96	75 - 120
1868-53-7	Dibromofluoromethane	50	49.8	ug/L	100	85 - 115
2037-26-5	Toluene d8	50	50.6	ug/L	101	85 - 120
17060-07-0	1,2-Dichloroethane-d4	50	50	ug/L	100	70 - 120

GC/MS Volatiles Quality Control Summary

Analytical Batch 493347		**Client ID**	MB493347			LCS493347			LCSD493347		
Prep Batch N/A		**GCAL ID**	1122203			1122204			1122205		
		Sample Type	Method Blank			LCS			LCSD		
		Analytical Date	10/29/2012 12:16			10/29/2012 11:08			10/29/2012 11:30		
		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	50.2	100	40 - 140	54.1	108	7	30
74-97-5	Bromochloromethane		0.127U	0.127	50.0	50.8	102	65 - 130	51.4	103	1	30
75-27-4	Bromodichloromethane		0.083U	0.083	50.0	49.6	99	75 - 120	50.6	101	2	30
75-25-2	Bromoform		0.215U	0.215	50.0	45.8	92	70 - 130	47.8	96	4	30
74-83-9	Bromomethane		0.427U	0.427	50.0	49.8	100	30 - 145	53.2	106	7	30
75-15-0	Carbon disulfide		0.190U	0.190	50.0	55.5	111	35 - 160	53.3	107	4	30
56-23-5	Carbon tetrachloride		0.248U	0.248	50.0	54.1	108	65 - 140	53.4	107	1	30
75-00-3	Chloroethane		0.235U	0.235	50.0	54.5	109	60 - 135	54.4	109	0.2	30
136777-61-2	m,p-Xylene		0.123U	0.123	100	100	100	75 - 130	98.6	99	1	30
67-66-3	Chloroform		0.155U	0.155	50.0	49.5	99	65 - 135	49.8	100	0.6	30
74-87-3	Chloromethane		0.144U	0.144	50.0	50.3	101	40 - 125	51.0	102	1	30
74-95-3	Dibromomethane		0.211U	0.211	50.0	49.5	99	75 - 125	51.4	103	4	30
75-71-8	Dichlorodifluoromethane		0.145U	0.145	50.0	56.7	113	30 - 155	56.3	113	0.7	30
75-34-3	1,1-Dichloroethane		0.171U	0.171	50.0	50.7	101	70 - 135	51.8	104	2	30
107-06-2	1,2-Dichloroethane		0.116U	0.116	50.0	49.1	98	70 - 130	50.4	101	3	30
156-59-2	cis-1,2-Dichloroethene		0.103U	0.103	50.0	53.1	106	70 - 125	53.9	108	1	30
156-60-5	trans-1,2-Dichloroethene		0.077U	0.077	50.0	53.1	106	60 - 140	53.2	106	0.2	30
75-09-2	Methylene chloride		0.149U	0.149	50.0	48.0	96	55 - 140	48.7	97	1	30
78-87-5	1,2-Dichloropropane		0.150U	0.150	50.0	53.1	106	75 - 125	54.2	108	2	30
10061-01-5	cis-1,3-Dichloropropene		0.124U	0.124	50.0	53.9	108	70 - 130	55.4	111	3	30
10061-02-6	trans-1,3-Dichloropropene		0.128U	0.128	50.0	53.1	106	55 - 140	54.5	109	3	30
100-41-4	Ethylbenzene		0.109U	0.109	50.0	51.6	103	75 - 125	50.6	101	2	30
591-78-6	2-Hexanone		0.122U	0.122	50.0	54.1	108	55 - 130	60.3	121	11	30
98-82-8	Isopropylbenzene (Cumene)		0.130U	0.130	50.0	51.4	103	75 - 125	49.3	99	4	30
78-93-3	2-Butanone		0.142U	0.142	50.0	54.1	108	30 - 150	58.9	118	8	30
108-10-1	4-Methyl-2-pentanone		0.120U	0.120	50.0	48.0	96	60 - 135	52.6	105	9	30
103-65-1	n-Propylbenzene		0.727U	0.727	50.0	56.6	113	70 - 130	54.0	108	5	30
100-42-5	Styrene		0.089U	0.089	50.0	48.3	97	65 - 135	48.4	97	0.2	30
127-18-4	Tetrachloroethene		0.193U	0.193	50.0	55.8	112	45 - 150	53.7	107	4	30
630-20-6	1,1,1,2-Tetrachloroethane		0.120U	0.120	50.0	47.5	95	80 - 130	48.5	97	2	30
79-34-5	1,1,2,2-Tetrachloroethane		0.109U	0.109	50.0	47.5	95	65 - 130	50.6	101	6	30
120-82-1	1,2,4-Trichlorobenzene		0.105U	0.105	50.0	46.7	93	65 - 135	46.9	94	0.4	30
71-55-6	1,1,1-Trichloroethane		0.123U	0.123	50.0	52.7	105	65 - 130	52.9	106	0.4	30

GC/MS Volatiles Quality Control Summary

Analytical Batch	493347	**Client ID**	MB493347			LCS493347			LCSD493347			
Prep Batch	N/A	**GCAL ID**	1122203			1122204			1122205			
		Sample Type	Method Blank			LCS			LCSD			
		Analytical Date	10/29/2012 12:16			10/29/2012 11:08			10/29/2012 11:30			
		Matrix	Water			Water			Water			
SW-846 8260B		**Units**	**Result**	ug/L **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	47.1	94	75 - 125	48.6	97	3	30
75-69-4	Trichlorofluoromethane		0.157U	0.157	50.0	54.2	108	60 - 145	53.0	106	2	30
96-18-4	1,2,3-Trichloropropane		0.065U	0.065	50.0	47.5	95	75 - 125	50.2	100	6	30
95-63-6	1,2,4-Trimethylbenzene		0.084U	0.084	50.0	51.7	103	75 - 130	50.2	100	3	30
108-67-8	1,3,5-Trimethylbenzene		0.066U	0.066	50.0	58.2	116	75 - 130	56.0	112	4	30
75-01-4	Vinyl chloride		0.127U	0.127	50.0	53.2	106	50 - 145	52.8	106	0.8	30
95-47-6	o-Xylene		0.055U	0.055	50.0	48.7	97	80 - 120	48.2	96	1	30
96-12-8	1,2-Dibromo-3-chloropropane		0.194U	0.194	50.0	42.8	86	50 - 130	47.4	95	10	30
106-93-4	1,2-Dibromoethane		0.102U	0.102	50.0	48.2	96	80 - 120	50.2	100	4	30
1634-04-4	tert-Butyl methyl ether (MTBE)		0.078U	0.078	50.0	51.2	102	65 - 125	54.2	108	6	30
99-87-6	4-Isopropyltoluene		0.070U	0.070	50.0	53.8	108	75 - 130	50.5	101	6	30
594-20-7	2,2-Dichloropropane		0.170U	0.170	50.0	54.7	109	70 - 135	55.1	110	0.7	30
563-58-6	1,1-Dichloropropene		0.052U	0.052	50.0	49.5	99	75 - 130	49.0	98	1	30
142-28-9	1,3-Dichloropropane		0.059U	0.059	50.0	49.0	98	75 - 125	51.2	102	4	30
108-86-1	Bromobenzene		0.145U	0.145	50.0	49.8	100	75 - 125	50.1	100	0.6	30
95-49-8	2-Chlorotoluene		0.080U	0.080	50.0	54.9	110	75 - 125	53.6	107	2	30
106-43-4	4-Chlorotoluene		0.124U	0.124	50.0	55.6	111	75 - 130	54.7	109	2	30
98-06-6	tert-Butylbenzene		0.087U	0.087	50.0	52.7	105	70 - 130	50.3	101	5	30
135-98-8	sec-Butylbenzene		0.107U	0.107	50.0	53.9	108	70 - 125	50.7	101	6	30
541-73-1	1,3-Dichlorobenzene		0.138U	0.138	50.0	52.2	104	75 - 125	51.4	103	2	30
106-46-7	1,4-Dichlorobenzene		0.083U	0.083	50.0	52.0	104	75 - 125	51.2	102	2	30
104-51-8	n-Butylbenzene		0.123U	0.123	50.0	53.7	107	70 - 135	50.3	101	7	30
95-50-1	1,2-Dichlorobenzene		0.135U	0.135	50.0	51.1	102	70 - 120	51.1	102	0	30
87-68-3	Hexachlorobutadiene		0.265U	0.265	50.0	50.5	101	50 - 140	49.3	99	2	30
91-20-3	Naphthalene		0.176U	0.176	50.0	43.4	87	55 - 140	47.7	95	9	30
87-61-6	1,2,3-Trichlorobenzene		0.079U	0.079	50.0	47.4	95	55 - 140	48.5	97	2	30
75-35-4	1,1-Dichloroethene		0.208U	0.208	50.0	53.8	108	70 - 130	54.7	109	2	30
71-43-2	Benzene		0.111U	0.111	50.0	51.6	103	80 - 120	52.3	105	1	30
79-01-6	Trichloroethene		0.161U	0.161	50.0	52.9	106	70 - 125	53.1	106	0.4	30
108-88-3	Toluene		0.122U	0.122	50.0	47.9	96	75 - 120	48.4	97	1	30
108-90-7	Chlorobenzene		0.083U	0.083	50.0	48.0	96	80 - 120	48.3	97	0.6	30
Surrogate												
460-00-4	4-Bromofluorobenzene		47.9	96	50	49.2	98	75 - 120	49.3	99		

GC/MS Volatiles Quality Control Summary

Analytical Batch 493347		**Client ID**	MB493347			LCS493347			LCSD493347		
Prep Batch N/A		**GCAL ID**	1122203			1122204			1122205		
		Sample Type	Method Blank			LCS			LCSD		
		Analytical Date	10/29/2012 12:16			10/29/2012 11:08			10/29/2012 11:30		
		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	49.7	99	85 - 115	49.9	100		
2037-26-5	Toluene d8		50.6	101	50	48.5	97	85 - 120	49.2	98		
17060-07-0	1,2-Dichloroethane-d4		50.1	100	50	50.7	101	70 - 120	51.5	103		

Analytical Batch 493347		**Client ID**	LF25-MW-RB-01			LF25-MW-RB-01-MS			LF25-MW-RB-01-MSD		
Prep Batch N/A		**GCAL ID**	21210270501			21210270502			21210270503		
		Sample Type	SAMPLE			MS			MSD		
		Analytical Date	10/29/2012 12:38			10/29/2012 13:00			10/29/2012 13:22		
		Matrix	Water			Water			Water		
SW-846 8260B DOD Water		**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	53.2	106	80 - 130	47.5	95	11	30
71-55-6	1,1,1-Trichloroethane		0.00	0.123	50.0	57.2	114	65 - 130	50.0	100	13	30
79-34-5	1,1,2,2-Tetrachloroethane		0.00	0.109	50.0	54.2	108	65 - 130	51.2	102	6	30
79-00-5	1,1,2-Trichloroethane		0.00	0.159	50.0	53.0	106	75 - 125	48.4	97	9	30
75-34-3	1,1-Dichloroethane		0.00	0.171	50.0	56.3	113	70 - 135	50.1	100	12	30
75-35-4	1,1-Dichloroethene		0.00	0.208	50.0	58.8	118	70 - 130	52.3	105	12	30
563-58-6	1,1-Dichloropropene		0.00	0.052	50.0	52.8	106	75 - 130	46.3	93	13	30
87-61-6	1,2,3-Trichlorobenzene		0.00	0.079	50.0	48.1	96	55 - 140	46.6	93	3	30
96-18-4	1,2,3-Trichloropropane		0.00	0.065	50.0	53.7	107	75 - 125	50.3	101	7	30
120-82-1	1,2,4-Trichlorobenzene		0.00	0.105	50.0	48.1	96	65 - 135	45.6	91	5	30
95-63-6	1,2,4-Trimethylbenzene		0.00	0.084	50.0	53.6	107	75 - 130	48.4	97	10	30
96-12-8	1,2-Dibromo-3-chloropropane		0.00	0.194	50.0	47.4	95	50 - 130	46.9	94	1	30
106-93-4	1,2-Dibromoethane		0.00	0.102	50.0	53.2	106	80 - 120	49.7	99	7	30
95-50-1	1,2-Dichlorobenzene		0.00	0.135	50.0	55.4	111	70 - 120	50.6	101	9	30
107-06-2	1,2-Dichloroethane		0.00	0.116	50.0	53.5	107	70 - 130	48.8	98	9	30
78-87-5	1,2-Dichloropropane		0.00	0.150	50.0	58.8	118	75 - 125	52.3	105	12	30
108-67-8	1,3,5-Trimethylbenzene		0.00	0.066	50.0	60.0	120	75 - 130	53.7	107	11	30
541-73-1	1,3-Dichlorobenzene		0.00	0.138	50.0	55.1	110	65 - 130	50.4	101	9	30
142-28-9	1,3-Dichloropropane		0.00	0.059	50.0	54.4	109	75 - 125	49.9	100	9	30
106-46-7	1,4-Dichlorobenzene		0.00	0.083	50.0	54.9	110	65 - 130	50.3	101	9	30
594-20-7	2,2-Dichloropropane		0.00	0.170	50.0	59.0	118	70 - 135	51.8	104	13	30

GC/MS Volatiles Quality Control Summary

Analytical Batch 493347		**Client ID**	LF25-MW-RB-01			LF25-MW-RB-01-MS			LF25-MW-RB-01-MSD		
Prep Batch N/A		**GCAL ID**	21210270501			21210270502			21210270503		
		Sample Type	SAMPLE			MS			MSD		
		Analytical Date	10/29/2012 12:38			10/29/2012 13:00			10/29/2012 13:22		
		Matrix	Water			Water			Water		
SW-846 8260B DOD Water		**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	43.9	88	30 - 150	41.8	84	5	30
95-49-8	2-Chlorotoluene		0.00	0.080	50.0	58.0	116	75 - 125	52.2	104	11	30
591-78-6	2-Hexanone		0.00	0.122	50.0	48.8	98	55 - 130	47.3	95	3	30
106-43-4	4-Chlorotoluene		0.00	0.124	50.0	59.2	118	75 - 130	53.1	106	11	30
99-87-6	4-Isopropyltoluene		0.00	0.070	50.0	53.6	107	75 - 130	48.5	97	10	30
108-10-1	4-Methyl-2-pentanone		0.00	0.120	50.0	52.5	105	60 - 135	50.2	100	4	30
67-64-1	Acetone		0.00	0.193	50.0	26.9	54	40 - 140	26.2	52	3	30
71-43-2	Benzene		0.00	0.111	50.0	57.3	115	80 - 120	50.3	101	13	30
108-86-1	Bromobenzene		0.00	0.145	50.0	54.4	109	75 - 125	49.4	99	10	30
74-97-5	Bromochloromethane		0.00	0.127	50.0	55.2	110	65 - 130	49.6	99	11	30
75-27-4	Bromodichloromethane		0.00	0.083	50.0	55.9	112	75 - 120	49.5	99	12	30
75-25-2	Bromoform		0.00	0.215	50.0	51.5	103	70 - 130	47.5	95	8	30
74-83-9	Bromomethane		0.00	0.427	50.0	58.8	118	30 - 145	52.6	105	11	30
75-15-0	Carbon disulfide		0.00	0.190	50.0	58.5	117	35 - 160	51.4	103	13	30
56-23-5	Carbon tetrachloride		0.00	0.248	50.0	57.6	115	65 - 140	50.3	101	14	30
108-90-7	Chlorobenzene		0.00	0.083	50.0	52.7	105	80 - 120	47.0	94	11	30
75-00-3	Chloroethane		0.00	0.235	50.0	58.9	118	60 - 135	51.8	104	13	30
67-66-3	Chloroform		0.00	0.155	50.0	54.8	110	65 - 135	48.8	98	12	30
74-87-3	Chloromethane		0.00	0.144	50.0	56.0	112	40 - 125	51.2	102	9	30
74-95-3	Dibromomethane		0.00	0.211	50.0	54.8	110	75 - 125	49.8	100	10	30
75-71-8	Dichlorodifluoromethane		0.00	0.145	50.0	57.6	115	30 - 155	50.2	100	14	30
100-41-4	Ethylbenzene		0.00	0.109	50.0	55.1	110	75 - 125	48.6	97	13	30
87-68-3	Hexachlorobutadiene		0.00	0.265	50.0	50.0	100	50 - 140	46.6	93	7	30
98-82-8	Isopropylbenzene (Cumene)		0.00	0.130	50.0	53.1	106	75 - 125	46.8	94	13	30
75-09-2	Methylene chloride		0.00	0.149	50.0	52.3	105	55 - 140	46.7	93	11	30
91-20-3	Naphthalene		0.00	0.176	50.0	45.9	92	55 - 140	46.1	92	0.4	30
100-42-5	Styrene		0.00	0.089	50.0	53.0	106	65 - 135	47.1	94	12	30
127-18-4	Tetrachloroethene		0.00	0.193	50.0	57.5	115	45 - 150	50.7	101	13	30
108-88-3	Toluene		0.00	0.122	50.0	52.8	106	75 - 120	46.8	94	12	30
79-01-6	Trichloroethene		0.00	0.161	50.0	57.7	115	70 - 125	49.9	100	14	30
75-69-4	Trichlorofluoromethane		0.00	0.157	50.0	56.0	112	60 - 145	49.2	98	13	30
75-01-4	Vinyl chloride		0.00	0.127	50.0	57.1	114	50 - 145	50.3	101	13	30
156-59-2	cis-1,2-Dichloroethene		0.00	0.103	50.0	58.8	118	70 - 125	52.3	105	12	30

GC/MS Volatiles Quality Control Summary

Analytical Batch	493347	**Client ID**	LF25-MW-RB-01			LF25-MW-RB-01-MS			LF25-MW-RB-01-MSD			
Prep Batch	N/A	**GCAL ID**	21210270501			21210270502			21210270503			
		Sample Type	SAMPLE			MS			MSD			
		Analytical Date	10/29/2012 12:38			10/29/2012 13:00			10/29/2012 13:22			
		Matrix	Water			Water			Water			
SW-846 8260B DOD Water		**Units**	**Result**	ug/L **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	58.1	116	70 - 130	52.1	104	11	30
136777-61-2	m,p-Xylene		0.00	0.123	100	107	107	75 - 130	94.8	95	12	30
104-51-8	n-Butylbenzene		0.00	0.123	50.0	53.0	106	70 - 135	48.2	96	9	30
103-65-1	n-Propylbenzene		0.00	0.727	50.0	57.7	115	70 - 130	51.6	103	11	30
95-47-6	o-Xylene		0.00	0.055	50.0	52.8	106	80 - 120	46.9	94	12	30
135-98-8	sec-Butylbenzene		0.00	0.107	50.0	53.4	107	70 - 125	47.9	96	11	30
1634-04-4	tert-Butyl methyl ether (MTBE)		0.00	0.078	50.0	56.3	113	65 - 125	52.5	105	7	30
98-06-6	tert-Butylbenzene		0.00	0.087	50.0	53.4	107	70 - 130	48.2	96	10	30
156-60-5	trans-1,2-Dichloroethene		0.00	0.077	50.0	58.0	116	60 - 140	51.0	102	13	30
10061-02-6	trans-1,3-Dichloropropene		0.00	0.128	50.0	58.8	118	55 - 140	53.0	106	10	30
Surrogate												
460-00-4	4-Bromofluorobenzene		48	96	50	49.4	99	75 - 120	49.2	98		
1868-53-7	Dibromofluoromethane		49.9	100	50	49.9	100	85 - 115	49.8	100		
2037-26-5	Toluene d8		50.6	101	50	48.9	98	85 - 120	49.3	99		
17060-07-0	1,2-Dichloroethane-d4		49.6	99	50	50.9	102	70 - 120	50.3	101		

Inorganics Quality Control Summary

Analytical Batch	493483	**Client ID**	LF25-MW-RB-01	LF25-MW-RB-01-MS	LF25-MW-RB-01-MSD
Prep Batch	493285	**GCAL ID**	21210270501	21210270502	21210270503
Prep Method	SW-846	**Sample Type**	SAMPLE	MS	MSD
	7470A	**Prep Date**	10/29/2012 11:40	10/29/2012 11:40	10/29/2012 11:40
	Dissolved	**Analytical Date**	10/31/2012 13:14	10/31/2012 13:15	10/31/2012 13:17
		Matrix	Water	Water	Water

SW-846 7470A Dissolved		**Units**	ug/L								
		Result	**RDL**	**Spike Added**	**Result**	**% R**	**Control Limits % R**	**Result**	**% R**	**RPD**	**RPD Limit**
7439-97-6	Mercury	0.00000	0.068	5.00	4.55	91	80 - 120	4.50	90	1	30

Inorganics Quality Control Summary

Analytical Batch	493483	**Client ID**	MB493285		LCS493285		
Prep Batch	493285	**GCAL ID**	1122012		1122013		
Prep Method	SW-846	**Sample Type**	Method Blank		LCS		
	7470A	**Prep Date**	10/29/2012 11:40		10/29/2012 11:40		
		Analytical Date	10/31/2012 13:01		10/31/2012 13:03		
		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	4.59	92	80 - 120

Analytical Batch	493483	**Client ID**	LF25-MW-RB-01		LF25-MW-RB-01-MS			LF25-MW-RB-01-MSD			
Prep Batch	493285	**GCAL ID**	21210270501		21210270502			21210270503			
Prep Method	SW-846	**Sample Type**	SAMPLE		MS			MSD			
	7470A	**Prep Date**	10/29/2012 11:40		10/29/2012 11:40			10/29/2012 11:40			
		Analytical Date	10/31/2012 13:04		10/31/2012 13:06			10/31/2012 13:07			
		Matrix	Water		Water			Water			
SW-846 7470A Water		**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	4.43	89	80 - 120	4.58	92	3	30

Inorganics Quality Control Summary

Analytical Batch	493541	**Client ID**	MB493286	LCS493286
Prep Batch	493286	**GCAL ID**	1122014	1122015
Prep Method	SW-846	**Sample Type**	Method Blank	LCS
	3010A	**Prep Date**	10/29/2012 11:40	10/29/2012 11:40
		Analytical Date	10/31/2012 17:41	10/31/2012 17:49
		Matrix	Water	Water

SW-846 6010C		**Units**	ug/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
7429-90-5	Aluminum	40.1J	30.3	5000	5300	106	80 - 120
7440-36-0	Antimony	3.11U	3.11	500	501	100	80 - 120
7440-38-2	Arsenic	3.59U	3.59	500	513	103	80 - 120
7440-39-3	Barium	0.71U	0.71	500	525	105	80 - 120
7440-41-7	Beryllium	0.10U	0.10	500	527	105	80 - 120
7440-43-9	Cadmium	0.16U	0.16	500	525	105	80 - 120
7440-70-2	Calcium	45.7U	45.7	5000	5310	106	80 - 120
7440-47-3	Chromium	0.26U	0.26	500	521	104	80 - 120
7440-48-4	Cobalt	0.58U	0.58	500	530	106	80 - 120
7440-50-8	Copper	1.01U	1.01	500	512	102	80 - 120
7439-89-6	Iron	12.6U	12.6	5000	5260	105	80 - 120
7439-92-1	Lead	1.96U	1.96	500	506	101	80 - 120
7439-95-4	Magnesium	16.5U	16.5	5000	5330	107	80 - 120
7439-96-5	Manganese	1.31U	1.31	500	519	104	80 - 120
7440-02-0	Nickel	1.13U	1.13	500	531	106	80 - 120
7440-09-7	Potassium	34.6U	34.6	10000	10100	101	80 - 120
7782-49-2	Selenium	4.42U	4.42	500	518	104	80 - 120
7440-22-4	Silver	0.70U	0.70	500	506	101	80 - 120
7440-23-5	Sodium	61.1U	61.1	20000	20300	101	80 - 120
7440-28-0	Thallium	3.04U	3.04	500	511	102	80 - 120
7440-62-2	Vanadium	1.25U	1.25	500	520	104	80 - 120
7440-66-6	Zinc	4.51U	4.51	500	518	104	80 - 120

Inorganics Quality Control Summary

Analytical Batch	493541	**Client ID**	LF25-MW-RB-01	LF25-MW-RB-01-MS	LF25-MW-RB-01-MSD
Prep Batch	493286	**GCAL ID**	21210270501	21210270502	21210270503
Prep Method	SW-846	**Sample Type**	SAMPLE	MS	MSD
	3010A	**Prep Date**	10/29/2012 11:40	10/29/2012 11:40	10/29/2012 11:40
		Analytical Date	10/31/2012 17:55	10/31/2012 18:03	10/31/2012 18:09
		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	0.0	30.3	5000	5140	103	80 - 120	4960	99	4	20
7440-36-0	Antimony	0.0	3.11	500	515	103	80 - 120	492	98	5	20
7440-38-2	Arsenic	0.0	3.59	500	538	108	80 - 120	514	103	5	20
7440-39-3	Barium	35.1	0.71	500	536	100	80 - 120	515	96	4	20
7440-41-7	Beryllium	0.0	0.10	500	518	104	80 - 120	496	99	4	20
7440-43-9	Cadmium	0.53	0.16	500	497	99	80 - 120	476	95	4	20
7440-70-2	Calcium	42000	45.7	5000	45100	**62***	80 - 120	43500	**30***	4	20
7440-47-3	Chromium	1.36	0.26	500	498	99	80 - 120	478	95	4	20
7440-48-4	Cobalt	0.86	0.58	500	488	97	80 - 120	466	93	5	20
7440-50-8	Copper	8.08	1.01	500	492	97	80 - 120	473	93	4	20
7439-89-6	Iron	0.0	12.6	5000	5110	102	80 - 120	4970	99	3	20
7439-92-1	Lead	0.0	1.96	500	488	98	80 - 120	467	93	4	20
7439-95-4	Magnesium	40800	16.5	5000	44300	**71***	80 - 120	43200	**48***	3	20
7439-96-5	Manganese	1.98	1.31	500	502	100	80 - 120	483	96	4	20
7440-02-0	Nickel	0.0	1.13	500	474	95	80 - 120	462	92	3	20
7782-49-2	Selenium	7.75	4.42	500	529	104	80 - 120	507	100	4	20
7440-22-4	Silver	0.0	0.70	500	493	99	80 - 120	472	94	4	20
7440-28-0	Thallium	0.0	3.04	500	502	100	80 - 120	483	97	4	20
7440-62-2	Vanadium	30.2	1.25	500	538	102	80 - 120	519	98	4	20
7440-66-6	Zinc	1380	4.51	500	1810	85	80 - 120	1740	**72***	4	20

Analytical Batch	493803	**Client ID**	LF25-MW-RB-01	LF25-MW-RB-01-MS	LF25-MW-RB-01-MSD
Prep Batch	493286	**GCAL ID**	21210270501	21210270502	21210270503
Prep Method	SW-846	**Sample Type**	SAMPLE	MS	MSD
	3010A	**Prep Date**	10/29/2012 11:40	10/29/2012 11:40	10/29/2012 11:40
		Analytical Date	11/03/2012 12:31	11/03/2012 12:38	11/03/2012 12:44
		Matrix	Water	Water	Water

SW-846 6010C		**Units**	ug/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
7440-09-7	Potassium	7070	34.6	10000	17300	102	80 - 120	16400	93	6	20
7440-23-5	Sodium	41400	61.1	20000	60600	96	80 - 120	57700	82	5	20

Inorganics Quality Control Summary

Analytical Batch	493541	**Client ID**	MB493231	LCS493231
Prep Batch	493231	**GCAL ID**	1121701	1121702
Prep Method	SW-846 3005	**Sample Type**	Method Blank	LCS
	Dissolved	**Prep Date**	10/29/2012 11:40	10/29/2012 11:40
		Analytical Date	10/31/2012 14:55	10/31/2012 15:03
		Matrix	Water	Water

SW-846 6010C Dissolved		**Units**	ug/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
7429-90-5	Aluminum	37.6J	30.3	5000	5130	103	80 - 120
7440-36-0	Antimony	3.11U	3.11	500	498	100	80 - 120
7440-38-2	Arsenic	3.59U	3.59	500	528	106	80 - 120
7440-39-3	Barium	0.71U	0.71	500	507	101	80 - 120
7440-41-7	Beryllium	0.10U	0.10	500	513	103	80 - 120
7440-43-9	Cadmium	0.16U	0.16	500	513	103	80 - 120
7440-70-2	Calcium	45.7U	45.7	5000	5130	103	80 - 120
7440-47-3	Chromium	0.26U	0.26	500	496	99	80 - 120
7440-48-4	Cobalt	0.58U	0.58	500	529	106	80 - 120
7440-50-8	Copper	1.01U	1.01	500	491	98	80 - 120
7439-89-6	Iron	12.6U	12.6	5000	5110	102	80 - 120
7439-92-1	Lead	1.96U	1.96	500	515	103	80 - 120
7439-95-4	Magnesium	16.5U	16.5	5000	5150	103	80 - 120
7439-96-5	Manganese	1.31U	1.31	500	501	100	80 - 120
7440-02-0	Nickel	1.13U	1.13	500	517	103	80 - 120
7440-09-7	Potassium	42.8J	34.6	10000	10100	101	80 - 120
7782-49-2	Selenium	4.42U	4.42	500	532	106	80 - 120
7440-22-4	Silver	0.70U	0.70	500	493	99	80 - 120
7440-23-5	Sodium	120J	61.1	20000	20400	102	80 - 120
7440-28-0	Thallium	3.04U	3.04	500	513	103	80 - 120
7440-62-2	Vanadium	1.25U	1.25	500	499	100	80 - 120
7440-66-6	Zinc	4.51U	4.51	500	510	102	80 - 120

Inorganics Quality Control Summary

Analytical Batch	493541	**Client ID**	LF25-MW-RB-01	LF25-MW-RB-01-MS	LF25-MW-RB-01-MSD
Prep Batch	493231	**GCAL ID**	21210270501	21210270502	21210270503
Prep Method	SW-846 3005	**Sample Type**	SAMPLE	MS	MSD
	Dissolved	**Prep Date**	10/29/2012 11:40	10/29/2012 11:40	10/29/2012 11:40
		Analytical Date	10/31/2012 15:09	10/31/2012 15:17	10/31/2012 15:23
		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	46.8	30.3	5000	5090	101	80 - 120	5030	100	1	20
7440-36-0	Antimony	0.0	3.11	500	511	102	80 - 120	503	101	2	20
7440-38-2	Arsenic	0.0	3.59	500	544	109	80 - 120	534	107	2	20
7440-39-3	Barium	34.6	0.71	500	533	100	80 - 120	524	98	2	20
7440-41-7	Beryllium	0.0	0.10	500	517	103	80 - 120	508	102	2	20
7440-43-9	Cadmium	0.38	0.16	500	499	100	80 - 120	490	98	2	20
7440-70-2	Calcium	42200	45.7	5000	46500	85	80 - 120	45800	**72***	1	20
7440-47-3	Chromium	1.32	0.26	500	486	97	80 - 120	477	95	2	20
7440-48-4	Cobalt	0.0	0.58	500	486	97	80 - 120	478	96	2	20
7440-50-8	Copper	6.83	1.01	500	485	96	80 - 120	479	94	1	20
7439-89-6	Iron	0.0	12.6	5000	5100	102	80 - 120	5050	101	0.8	20
7439-92-1	Lead	0.0	1.96	500	491	98	80 - 120	482	96	2	20
7439-95-4	Magnesium	41000	16.5	5000	45500	89	80 - 120	45100	81	0.9	20
7439-96-5	Manganese	0.0	1.31	500	500	100	80 - 120	492	98	2	20
7440-02-0	Nickel	0.0	1.13	500	474	95	80 - 120	467	93	2	20
7782-49-2	Selenium	11.2	4.42	500	535	105	80 - 120	528	103	1	20
7440-22-4	Silver	0.0	0.70	500	492	98	80 - 120	485	97	1	20
7440-28-0	Thallium	0.0	3.04	500	493	99	80 - 120	487	97	1	20
7440-62-2	Vanadium	26.7	1.25	500	530	101	80 - 120	522	99	2	20
7440-66-6	Zinc	1160	4.51	500	1650	99	80 - 120	1620	94	2	20

Analytical Batch	493656	**Client ID**	LF25-MW-RB-01	LF25-MW-RB-01-MS	LF25-MW-RB-01-MSD
Prep Batch	493231	**GCAL ID**	21210270501	21210270502	21210270503
Prep Method	SW-846 3005	**Sample Type**	SAMPLE	MS	MSD
	Dissolved	**Prep Date**	10/29/2012 11:40	10/29/2012 11:40	10/29/2012 11:40
		Analytical Date	11/01/2012 14:04	11/01/2012 14:11	11/01/2012 14:18
		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**
7440-09-7	Potassium	7290	34.6	10000	17800	105	80 - 120	17700	104	0.8	20
7440-23-5	Sodium	41800	61.1	20000	63800	110	80 - 120	63200	107	0.9	20

General Chemistry Quality Control Summary

Analytical Batch	493580	**Client ID**	MB493291		LCS493291		
Prep Batch	493291	**GCAL ID**	1122030		1122031		
Prep Method	SM4500 NH3 BE TKN	**Sample Type**	Method Blank		LCS		
		Prep Date	10/30/2012 15:00		10/30/2012 15:00		
		Analytical Date	10/31/2012 13:27		10/31/2012 13:27		
		Matrix	Water		Water		
SM 4500 NH3 BE Ammonia		**Units**	mg/L-N	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
7664-41-7	Ammonia	0.24U	0.24	15.0	14.0	93	80 - 120

Analytical Batch	493580	**Client ID**	LF25-MW-RB-01		LF25-MW-RB-01-MS			LF25-MW-RB-01-MSD			
Prep Batch	493291	**GCAL ID**	21210270501		21210270502			21210270503			
Prep Method	SM4500 NH3 BE TKN	**Sample Type**	SAMPLE		MS			MSD			
		Prep Date	10/30/2012 15:00		10/30/2012 15:00			10/30/2012 15:00			
		Analytical Date	10/31/2012 13:27		10/31/2012 13:27			10/31/2012 13:27			
		Matrix	Water		Water			Water			
SM 4500 NH3 BE Ammonia Water		**Units**	mg/L-N	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
7664-41-7	Ammonia	0.00	0.24	15.0	14.1	94	74.6 - 125	14.3	95	1	25

Analytical Batch	493580	**Client ID**	LF25-MW-RB-01	1121941DUP		
Prep Batch	493291	**GCAL ID**	21210270501	1122032		
Prep Method	SM4500 NH3 BE TKN	**Sample Type**	SAMPLE	DUP		
		Prep Date	10/30/2012 15:00	10/30/2012 15:00		
		Analytical Date	10/31/2012 13:27	10/31/2012 13:27		
		Matrix	Water	Water		
SM 4500 NH3 BE Ammonia		**Units**	mg/L-N	**Result**		**RPD**
		Result	**RDL**		**RPD**	**Limit**
7664-41-7	Ammonia	0.00	0.24	0.00	0	25

General Chemistry Quality Control Summary

Analytical Batch 493288	**Client ID**	MB493288			LCS493288		
Prep Batch N/A	**GCAL ID**	1122019			1122020		
	Sample Type	Method Blank			LCS		
	Analytical Date	10/27/2012 15:24			10/27/2012 15:41		
	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	2.38	95.4	79 - 109
14797-65-0	Nitrite	0.015U	0.015	2.50	2.65	106	80 - 120
14797-55-8	Nitrate	0.115U	0.115	2.50	2.40	95.9	80 - 120
14808-79-8	Sulfate	0.115U	0.115	5.00	4.88	97.5	82 - 110

Analytical Batch 493288	**Client ID**	LF25-MW-RB-01			LF25-MW-RB-01-MS			LF25-MW-RB-01-MSD				
Prep Batch N/A	**GCAL ID**	21210270501			21210270502			21210270503				
	Sample Type	SAMPLE			MS			MSD				
	Analytical Date	10/27/2012 15:59			10/27/2012 16:16			10/27/2012 16:34				
	Matrix	Water			Water			Water				
EPA 300.0 Inorganic Anions		**Units**	mg/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
14797-55-8	Nitrate	1.02	0.115	2.50	3.50	99	75 - 125	3.52	99.7	0.57	15
14797-65-0	Nitrite	0.000	0.015	2.50	2.90	116	75 - 125	2.91	116	0.25	15

Analytical Batch 493288	**Client ID**	LF25-MW-RB-01			LF25-MW-RB-01-MS			LF25-MW-RB-01-MSD				
Prep Batch N/A	**GCAL ID**	21210270501			21210270502			21210270503				
	Sample Type	SAMPLE			MS			MSD				
	Analytical Date	10/28/2012 08:21			10/28/2012 08:39			10/28/2012 08:56				
	Matrix	Water			Water			Water				
EPA 300.0 Inorganic Anions		**Units**	mg/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
16887-00-6	Chloride	68.6	6.30	250	316	99	79 - 109	317	99.5	0.4	15
14808-79-8	Sulfate	101	11.5	500	603	100	82 - 110	602	100	0.25	15

General Chemistry Quality Control Summary

Analytical Batch 493413	**Client ID**	MB493413			LCS493413			LCSD493413			
Prep Batch N/A	**GCAL ID**	1122443			1122444			1122445			
	Sample Type	Method Blank			LCS			LCSD			
	Analytical Date	10/30/2012 12:28			10/30/2012 12:55			10/30/2012 13:15			
	Matrix	Water			Water			Water			
SM 5310B TOC		**Units**	mg/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
C-012	Total Organic Carbon	0.30U	0.30	50.0	53.4	107	80 - 120	53.2	106	0.5	25

Analytical Batch 493413	**Client ID**	LF25-MW-RB-01			LF25-MW-RB-01-MS			LF25-MW-RB-01-MSD			
Prep Batch N/A	**GCAL ID**	21210270501			21210270502			21210270503			
	Sample Type	SAMPLE			MS			MSD			
	Analytical Date	10/30/2012 16:02			10/30/2012 16:18			10/31/2012 09:51			
	Matrix	Water			Water			Water			
SM 5310B TOC		**Units**	mg/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
C-012	Total Organic Carbon	5.2	0.30	50.0	53.7	97	75 - 125	52.3	94	3	25

General Chemistry Quality Control Summary

Analytical Batch 493279	**Client ID**	MB493279			LCS493279		
Prep Batch N/A	**GCAL ID**	1121986			1121987		
	Sample Type	Method Blank			LCS		
	Analytical Date	10/27/2012 10:44			10/27/2012 10:45		
	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	518	104	80 - 120

Analytical Batch 493279	**Client ID**	LF25-MW-RB-01			LF25-MW-RB-01-MS			LF25-MW-RB-01-MSD			
Prep Batch N/A	**GCAL ID**	21210270501			21210270502			21210270503			
	Sample Type	SAMPLE			MS			MSD			
	Analytical Date	10/27/2012 10:46			10/27/2012 10:47			10/27/2012 10:47			
	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	514	103	80 - 120	481	96	7	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
	Bhate	4760	212102705	11/02/12

Report to:
Client: Bhate Environmental Associates
Address: 1608 13th Ave S. #300
Birmingham AL
Contact: Tracy Walker
Phone: 205 918 4000
Fax:

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

P.O. Number:
Project Name/Number: Cannon AFB D020-001
Sampled By: Ben Stewart Jordan Gibson

Analytical Requests & Method

Lab use only:
Custody Seal used ☑ yes ☐ no
intact ☑ yes ☐ no
Temperature °C 2.7

Matrix[1]	Date	Time (2400)	Comp	Grab	Sample Description	Preservatives	No Containers	8260C (HCL)	Total Metals (6010C/7470B) HNO3	Diss. Metals (6010C/7470B) HNO3	Cr (3+,6+) 7199	Perchlorate 6860	Nitrate & Nitrite 300.1	Ammonia SM4500 (H2SO4)	Sulfate 300.1	Chloride 300.1	TOC SM5310B (HCL)		Remarks:	Lab ID
WG	10/26/12	0900		✓	LF25-MW-Rb-01	yz	10	x	x	x	x	x	x	x	x	x	x			1
WG	10/26/12	0900		✓	LF25-MW-Rb-01-MS	yz	10	x	x	x	x	x	x	x	x	x	x			2
WG	10/26/12	0900		✓	LF25-MW-Rb-01-MSD	yz	11	x	x	x	x	x	x	x	x	x	x			3
WQ	10/26/12	0900			TB-09	yz	3	x												4

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

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
[signature]		10/26/12	1100
Relinquished by: (Signature) [signature]	Received by: (Signature) [signature]	10/27/12	10:00
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

Note: Dissolved metals were filtered in field.
#8003 4106 3314

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	212102705
Client 4760 - Bhate Environmental Associates, Inc.	**Transport Method** FEDEX
Profile 235531 - Cannon	**Received By** Saucier, Charlotte
Line Item(s) 1 - Waters	**Receive Date(s)** 10/27/12

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)
8003 4106 3314	2.7

DISCREPANCIES

21210270501 - LF25-MW-RB-01
- Sample received expired

LABORATORY PRESERVATIONS

None

NOTES	CR (3+, 6+) WAS EXPIRED UPON RECEIPT FOR SAMPLE LF25-MW-RB-01

November 15, 2012

Brenda Martinez
GCAL LAB
7979 GSRI AVENUE
BATON ROUGE, LA 70820
TEL: (225) 769-4900
FAX (225) 767-5717

Order No.: 1211018

RE: DoD Perchlorate

Dear Brenda Martinez:

DHL Analytical, Inc. received 1 sample(s) on 11/2/2012 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

#121018

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: 12-0930
Project Name/Number: 212102705
Sampled By:

	Matrix	Date	Time (2400)	Comp	Grab	Sample Description	Pre-servatives	No. Containers	PERCHLORATE (6860)	Remarks:	Lab ID
01	W	10/26/2012	9:00		X	LF25-MW-RB-01		1	X	21210270501	
	W	10/26/2012	9:00		X	LF25-MW-RB-01 MS		1	X	21210270502	
	W	10/26/2012	9:00			LF25-MW-RB-01 MSD		1	X	21210270503	

Turn Around Time: ___ 24 - 48 hrs ___ 3 days 1 week X standard other ___

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
[signature]	Fed Ex	11/1/12	1700
[signature]	[signature]	11/2/12	1020

Note: Receiving temp 0.80 Therm A57 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

SHIP DATE: 01NOV12
ACTWGT: 14.0 LB MAN
CAD: 0924693/CAFE2605

BILL SENDER

CHARLOTTE SAUCIER
GCAL
7979 GSRI RD

BATON ROUGE, LA 70802
UNITED STATES US

TO

DHL
2300 DOUBLE CREEK

ROUND ROCK TX 78664
(225) 769-4900
INV:
PO: REF:
DEPT:

FedEx Express

J121312081601 26

FRI - 02 NOV A1
PRIORITY OVERNIGHT

TRK# 0201 5443 0509 2817

A8 BSMA

78664
TX-US AUS

Part # 156148-434 RITZ 07/11

GCAL

CUSTODY SEAL

Date Sealed: 11-1-12

Sealed By: JBH

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: 11/2/2012

Work Order Number 1211018

Received by JB

Checklist completed by: _____ Signature | 11/2/2012 Date

Reviewed by _____ Initials | 11/2/2012 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 ☐	0.8 °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:** 11/15/12
Reviewer Name: Carlos Castro	**Laboratory Work Order:** 1211018
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:** 11/15/12

Reviewer Name: Carlos Castro | **Laboratory Work Order:** 1211018

#[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

11/15/12
Date

DHL Analytical, Inc. **Date:** *15-Nov-12*

CLIENT: GCAL LAB
Project: DoD Perchlorate
Lab Order: 1211018

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 11/2/12. 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 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 12-0930.

Client sent samples in own containers.

This sample delivery group arrived at DHL Analytical 11/2/12.

DHL Analytical, Inc.

Date: *15-Nov-12*

CLIENT: GCAL LAB
Project: DoD Perchlorate
Lab Order: 1211018

Work Order Sample Summary

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
1211018-01	LF25-MW-RB -01		10/26/12 09:00 AM	11/2/2012

DHL Analytical, Inc.

15-Nov-12

Lab Order: 1211018
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
1211018-01A	LF25-MW-RB -01	10/26/12 09:00 AM	Aqueous	SW6860	Perchlorate Prep	11/09/12 10:27 AM	54622

DHL Analytical, Inc.

15-Nov-12

Lab Order: 1211018
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
1211018-01A	LF25-MW-RB -01	Aqueous	SW6860	Perchlorate - Water	54622	1	11/09/12 12:40 PM	ICMS_121109A

DHL Analytical, Inc.

Date: *15-Nov-12*

CLIENT:	GCAL LAB	**Client Sample ID:**	LF25-MW-RB -01
Project:	DoD Perchlorate	**Lab ID:**	1211018-01
Project No:	212102705	**Collection Date:**	10/26/12 09:00 AM
Lab Order:	1211018	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
PERCHLORATE - WATER		**SW6860**					Analyst: **CZ**
Perchlorate	0.00198	0.000100	0.000300	N	mg/L	1	11/09/12 12:40 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: *15-Nov-12*

CLIENT: GCAL LAB
Work Order: 1211018
Project: DoD Perchlorate

ANALYTICAL QC SUMMARY REPORT

RunID: **ICMS_121109A**

The QC data in batch 54622 applies to the following samples: 1211018-01A

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: 1211018
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

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.

15-Nov-12

Lab Order: 1211018
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
1211018-01A	LF25-MW-RB -01	SW6860	54622	1	11/9/2012 12:40:00 PM	11/9/2012 10:27:48 AM	A
1211018-01AMS	LF25-MW-RB -01MS	SW6860	54622	1	11/9/2012 12:52:00 PM	11/9/2012 10:27:48 AM	A
1211018-01AMSD	LF25-MW-RB -01MSD	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

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 11/19/2012

GCAL Report 212103005

Deliver To	Bhate Environmental Associates, Inc. 1608 14th Ave South Birmingham, AL 35205 205-918-4024
Attn	David Badio

Project CANNON AFB D020-001

CASE NARRATIVE

Client: Bhate Environmental Associates, Inc. **Report:** 212103005

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 493522, the MS and/or MSD recovery is outside the control limits for Sodium. 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 100%.

In the SW-846 6010C Dissolved analysis for prep batch 493519, the MS recovery is not applicable for Calcium and Magnesium because the sample concentration is greater than four times the spike concentration.

In the SW-846 6010C analysis for prep batch 493522, the MS/MSD recoveries are not applicable for Calcium and Magnesium 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).

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 21210300501 (LF05-MW-C-01) 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 212103005

THIS REPORT CONTAINS _____ PAGES.

Report Sample Summary

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210300501	LF05-MW-C-01	Water	10/29/2012 12:50	10/30/2012 10:30
21210300502	TB-10	Water	10/29/2012 12:50	10/30/2012 10:30

Summary of Compounds Detected

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210300501	**LF05-MW-C-01**	Water	10/29/2012 12:50	10/30/2012 10:30

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	68.3J	200	30.3	ug/L
7440-39-3	Barium	80.1	10.0	0.71	ug/L
7440-43-9	Cadmium	0.81J	5.00	0.16	ug/L
7440-70-2	Calcium	35800	100	45.7	ug/L
7440-47-3	Chromium	1.32J	10.0	0.26	ug/L
7440-50-8	Copper	8.17J	10.0	1.01	ug/L
7439-89-6	Iron	148	100	12.6	ug/L
7439-95-4	Magnesium	34600	100	16.5	ug/L
7439-96-5	Manganese	24.9	15.0	1.31	ug/L
7440-09-7	Potassium	6570	500	34.6	ug/L
7440-23-5	Sodium	51400	1000	61.1	ug/L
7440-62-2	Vanadium	48.4	20.0	1.25	ug/L
7440-66-6	Zinc	111	20.0	4.51	ug/L

SW-846 7470A

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	0.06912J	0.20	0.068	ug/L

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	58.4J	200	30.3	ug/L
7440-39-3	Barium	84.0	10.0	0.71	ug/L
7440-43-9	Cadmium	0.78J	5.00	0.16	ug/L
7440-70-2	Calcium	37600	100	45.7	ug/L
7440-47-3	Chromium	1.00J	10.0	0.26	ug/L
7440-50-8	Copper	7.90J	10.0	1.01	ug/L
7439-95-4	Magnesium	37600	100	16.5	ug/L
7440-09-7	Potassium	6910	500	34.6	ug/L
7782-49-2	Selenium	4.72J	40.0	4.42	ug/L
7440-23-5	Sodium	56000	1000	61.1	ug/L
7440-28-0	Thallium	3.51J	20.0	3.04	ug/L
7440-62-2	Vanadium	52.2	20.0	1.25	ug/L
7440-66-6	Zinc	129	20.0	4.51	ug/L

SW-846 7470A Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	0.09491J	0.20	0.068	ug/L

EPA 300.0

CAS#	Parameter	Result	RDL	MDL	Units
14797-55-8	Nitrate	1.80	0.500	0.115	mg/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210300501	**LF05-MW-C-01**	Water	10/29/2012 12:50	10/30/2012 10:30

SM 5310B TOC

CAS#	Parameter	Result	RDL	MDL	Units
C-012	Total Organic Carbon	3.2	1.0	0.30	mg/L

EPA 300.0

CAS#	Parameter	Result	RDL	MDL	Units
16887-00-6	Chloride	19.7	1.00	0.630	mg/L
14808-79-8	Sulfate	38.5	2.00	1.15	mg/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210300501	**LF05-MW-C-01**	Water	10/29/2012 12:50	10/30/2012 10:30

Subcontract Work

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/19/2012 10:01	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	11/05/2012 14:31	LBH	493892

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
21210300501	**LF05-MW-C-01**	Water	10/29/2012 12:50	10/30/2012 10:30

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/05/2012 14:31	LBH	493892

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	50.6	ug/L	101	75 - 120
1868-53-7	Dibromofluoromethane	50	49.5	ug/L	99	85 - 115
2037-26-5	Toluene d8	50	50.3	ug/L	101	85 - 120
17060-07-0	1,2-Dichloroethane-d4	50	49.2	ug/L	98	70 - 120

SW-846 7470A Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/31/2012 12:25	493521	SW-846 7470A Dissolved	1	11/01/2012 12:36	BNB	493620

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	**Mercury**	**0.09491J**	**0.20**	**0.068**	**ug/L**

SW-846 7470A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/31/2012 12:25	493521	SW-846 7470A	1	11/01/2012 12:30	BNB	493620

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	**Mercury**	**0.06912J**	**0.20**	**0.068**	**ug/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210300501	**LF05-MW-C-01**	Water	10/29/2012 12:50	10/30/2012 10:30

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/31/2012 12:25	493522	SW-846 3010A	1	11/08/2012 16:15	BNB	494196

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	**Aluminum**	**68.3J**	**200**	**30.3**	**ug/L**
7440-36-0	Antimony	3.11U	60.0	3.11	ug/L
7440-39-3	**Barium**	**80.1**	**10.0**	**0.71**	**ug/L**
7440-41-7	Beryllium	0.10U	5.00	0.10	ug/L
7440-43-9	**Cadmium**	**0.81J**	**5.00**	**0.16**	**ug/L**
7440-70-2	**Calcium**	**35800**	**100**	**45.7**	**ug/L**
7440-47-3	**Chromium**	**1.32J**	**10.0**	**0.26**	**ug/L**
7440-48-4	Cobalt	0.58U	10.0	0.58	ug/L
7440-50-8	**Copper**	**8.17J**	**10.0**	**1.01**	**ug/L**
7439-89-6	**Iron**	**148**	**100**	**12.6**	**ug/L**
7439-92-1	Lead	1.96U	15.0	1.96	ug/L
7439-95-4	**Magnesium**	**34600**	**100**	**16.5**	**ug/L**
7439-96-5	**Manganese**	**24.9**	**15.0**	**1.31**	**ug/L**
7440-02-0	Nickel	1.13U	40.0	1.13	ug/L
7440-09-7	**Potassium**	**6570**	**500**	**34.6**	**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
7440-23-5	**Sodium**	**51400**	**1000**	**61.1**	**ug/L**
7440-28-0	Thallium	3.04U	20.0	3.04	ug/L
7440-62-2	**Vanadium**	**48.4**	**20.0**	**1.25**	**ug/L**
7440-66-6	**Zinc**	**111**	**20.0**	**4.51**	**ug/L**

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/31/2012 12:25	493522	SW-846 3010A	1	11/09/2012 13:12	CLB	494287

CAS#	Parameter	Result	RDL	MDL	Units
7440-38-2	Arsenic	3.59U	10.0	3.59	ug/L

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/31/2012 12:25	493519	SW-846 3005 Dissolved	1	11/03/2012 17:43	CLB	493804

CAS#	Parameter	Result	RDL	MDL	Units
7440-38-2	Arsenic	3.59U	10.0	3.59	ug/L

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/31/2012 12:25	493519	SW-846 3005 Dissolved	1	11/08/2012 14:57	BNB	494196

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	**Aluminum**	**58.4J**	**200**	**30.3**	**ug/L**
7440-36-0	Antimony	3.11U	60.0	3.11	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210300501	**LF05-MW-C-01**	Water	10/29/2012 12:50	10/30/2012 10:30

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/31/2012 12:25	493519	SW-846 3005 Dissolved	1	11/08/2012 14:57	BNB	494196

CAS#	Parameter	Result	RDL	MDL	Units
7440-39-3	**Barium**	**84.0**	**10.0**	**0.71**	**ug/L**
7440-41-7	Beryllium	0.10U	5.00	0.10	ug/L
7440-43-9	**Cadmium**	**0.78J**	**5.00**	**0.16**	**ug/L**
7440-70-2	**Calcium**	**37600**	**100**	**45.7**	**ug/L**
7440-47-3	**Chromium**	**1.00J**	**10.0**	**0.26**	**ug/L**
7440-48-4	Cobalt	0.58U	10.0	0.58	ug/L
7440-50-8	**Copper**	**7.90J**	**10.0**	**1.01**	**ug/L**
7439-89-6	Iron	12.6U	100	12.6	ug/L
7439-92-1	Lead	1.96U	15.0	1.96	ug/L
7439-95-4	**Magnesium**	**37600**	**100**	**16.5**	**ug/L**
7439-96-5	Manganese	1.31U	15.0	1.31	ug/L
7440-02-0	Nickel	1.13U	40.0	1.13	ug/L
7440-09-7	**Potassium**	**6910**	**500**	**34.6**	**ug/L**
7782-49-2	**Selenium**	**4.72J**	**40.0**	**4.42**	**ug/L**
7440-22-4	Silver	0.70U	10.0	0.70	ug/L
7440-23-5	**Sodium**	**56000**	**1000**	**61.1**	**ug/L**
7440-28-0	**Thallium**	**3.51J**	**20.0**	**3.04**	**ug/L**
7440-62-2	**Vanadium**	**52.2**	**20.0**	**1.25**	**ug/L**
7440-66-6	**Zinc**	**129**	**20.0**	**4.51**	**ug/L**

SM 4500 NH3 BE Ammonia

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/31/2012 06:30	493508	SM4500 NH3 BE TKN	1	10/31/2012 13:35	JEM	493609

CAS#	Parameter	Result	RDL	MDL	Units
7664-41-7	Ammonia	0.24U	1.0	0.24	mg/L-N

EPA 300.0

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/30/2012 22:43	DJH	493510

CAS#	Parameter	Result	RDL	MDL	Units
14797-55-8	**Nitrate**	**1.80**	**0.500**	**0.115**	**mg/L**
14797-65-0	Nitrite	0.015U	0.500	0.015	mg/L

EPA 300.0

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			10	11/02/2012 18:50	AEL	493727

CAS#	Parameter	Result	RDL	MDL	Units
16887-00-6	**Chloride**	**19.7**	**1.00**	**0.630**	**mg/L**
14808-79-8	**Sulfate**	**38.5**	**2.00**	**1.15**	**mg/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210300501	**LF05-MW-C-01**	Water	10/29/2012 12:50	10/30/2012 10:30

SM 5310B TOC

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/31/2012 18:11	DNM	493469

CAS#	Parameter	Result	RDL	MDL	Units
C-012	**Total Organic Carbon**	**3.2**	**1.0**	**0.30**	**mg/L**

SW-846 7196A Chromium VI

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/30/2012 11:42	JEM	493432

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
21210300502	**TB-10**	Water	10/29/2012 12:50	10/30/2012 10:30

SW-846 8260B DOD Water

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/05/2012 14:52	LBH	493892

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
21210300502	**TB-10**	Water	10/29/2012 12:50	10/30/2012 10:30

SW-846 8260B DOD Water

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/05/2012 14:52	LBH	493892

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	50	ug/L	100	75 - 120
1868-53-7	Dibromofluoromethane	50	49.6	ug/L	99	85 - 115
2037-26-5	Toluene d8	50	50.1	ug/L	100	85 - 120
17060-07-0	1,2-Dichloroethane-d4	50	49.2	ug/L	98	70 - 120

GC/MS Volatiles Quality Control Summary

Analytical Batch	493892	**Client ID**	MB493892			LCS493892			LCSD493892			
Prep Batch	N/A	**GCAL ID**	1124987			1124988			1124989			
		Sample Type	Method Blank			LCS			LCSD			
		Analytical Date	11/05/2012 13:27			11/05/2012 12:02			11/05/2012 12:23			
		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	42.7	85	40 - 140	46.3	93	8	30
74-97-5	Bromochloromethane	0.127U		0.127	50.0	54.7	109	65 - 130	55.7	111	2	30
75-27-4	Bromodichloromethane	0.083U		0.083	50.0	56.5	113	75 - 120	55.1	110	3	30
75-25-2	Bromoform	0.215U		0.215	50.0	51.7	103	70 - 130	54.1	108	5	30
74-83-9	Bromomethane	0.427U		0.427	50.0	46.8	94	30 - 145	51.2	102	9	30
75-15-0	Carbon disulfide	0.190U		0.190	50.0	56.6	113	35 - 160	55.1	110	3	30
56-23-5	Carbon tetrachloride	0.248U		0.248	50.0	54.7	109	65 - 140	54.4	109	0.5	30
75-00-3	Chloroethane	0.235U		0.235	50.0	53.1	106	60 - 135	53.7	107	1	30
136777-61-2	m,p-Xylene	0.123U		0.123	100	107	107	75 - 130	107	107	0	30
67-66-3	Chloroform	0.155U		0.155	50.0	53.3	107	65 - 135	52.0	104	2	30
74-87-3	Chloromethane	0.144U		0.144	50.0	52.7	105	40 - 125	53.8	108	2	30
74-95-3	Dibromomethane	0.211U		0.211	50.0	55.0	110	75 - 125	55.6	111	1	30
75-71-8	Dichlorodifluoromethane	0.145U		0.145	50.0	52.5	105	30 - 155	51.3	103	2	30
75-34-3	1,1-Dichloroethane	0.171U		0.171	50.0	54.3	109	70 - 135	54.5	109	0.4	30
107-06-2	1,2-Dichloroethane	0.116U		0.116	50.0	53.8	108	70 - 130	54.1	108	0.6	30
156-59-2	cis-1,2-Dichloroethene	0.103U		0.103	50.0	53.8	108	70 - 125	54.0	108	0.4	30
156-60-5	trans-1,2-Dichloroethene	0.077U		0.077	50.0	53.9	108	60 - 140	53.5	107	0.7	30
75-09-2	Methylene chloride	0.149U		0.149	50.0	52.5	105	55 - 140	52.5	105	0	30
78-87-5	1,2-Dichloropropane	0.150U		0.150	50.0	55.0	110	75 - 125	55.0	110	0	30
10061-01-5	cis-1,3-Dichloropropene	0.124U		0.124	50.0	55.2	110	70 - 130	55.6	111	0.7	30
10061-02-6	trans-1,3-Dichloropropene	0.128U		0.128	50.0	53.8	108	55 - 140	54.2	108	0.7	30
100-41-4	Ethylbenzene	0.109U		0.109	50.0	53.5	107	75 - 125	54.0	108	0.9	30
591-78-6	2-Hexanone	0.122U		0.122	50.0	43.3	87	55 - 130	47.1	94	8	30
98-82-8	Isopropylbenzene (Cumene)	0.130U		0.130	50.0	51.9	104	75 - 125	52.4	105	1	30
78-93-3	2-Butanone	0.142U		0.142	50.0	43.5	87	30 - 150	46.5	93	7	30
108-10-1	4-Methyl-2-pentanone	0.120U		0.120	50.0	46.5	93	60 - 135	49.2	98	6	30
103-65-1	n-Propylbenzene	0.727U		0.727	50.0	53.3	107	70 - 130	53.3	107	0	30
100-42-5	Styrene	0.089U		0.089	50.0	51.9	104	65 - 135	52.5	105	1	30
127-18-4	Tetrachloroethene	0.193U		0.193	50.0	52.8	106	45 - 150	53.1	106	0.6	30
630-20-6	1,1,1,2-Tetrachloroethane	0.120U		0.120	50.0	55.9	112	80 - 130	57.1	114	2	30
79-34-5	1,1,2,2-Tetrachloroethane	0.109U		0.109	50.0	49.9	100	65 - 130	52.1	104	4	30
120-82-1	1,2,4-Trichlorobenzene	0.105U		0.105	50.0	52.8	106	65 - 135	53.7	107	2	30
71-55-6	1,1,1-Trichloroethane	0.123U		0.123	50.0	55.2	110	65 - 130	54.7	109	0.9	30

GC/MS Volatiles Quality Control Summary

Analytical Batch 493892		**Client ID**	MB493892			LCS493892			LCSD493892		
Prep Batch N/A		**GCAL ID**	1124987			1124988			1124989		
		Sample Type	Method Blank			LCS			LCSD		
		Analytical Date	11/05/2012 13:27			11/05/2012 12:02			11/05/2012 12:23		
		Matrix	Water			Water			Water		
SW-846 8260B		**Units**	**Result**	ug/L **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	53.2	106	75 - 125	54.0	108	1	30
75-69-4	Trichlorofluoromethane		0.157U	0.157	50.0	55.3	111	60 - 145	54.4	109	2	30
96-18-4	1,2,3-Trichloropropane		0.065U	0.065	50.0	49.9	100	75 - 125	52.0	104	4	30
95-63-6	1,2,4-Trimethylbenzene		0.084U	0.084	50.0	53.6	107	75 - 130	53.9	108	0.6	30
108-67-8	1,3,5-Trimethylbenzene		0.066U	0.066	50.0	51.6	103	75 - 130	51.3	103	0.6	30
75-01-4	Vinyl chloride		0.127U	0.127	50.0	54.7	109	50 - 145	53.2	106	3	30
95-47-6	o-Xylene		0.055U	0.055	50.0	52.3	105	80 - 120	53.4	107	2	30
96-12-8	1,2-Dibromo-3-chloropropane		0.194U	0.194	50.0	47.8	96	50 - 130	50.5	101	5	30
106-93-4	1,2-Dibromoethane		0.102U	0.102	50.0	52.3	105	80 - 120	54.0	108	3	30
1634-04-4	tert-Butyl methyl ether (MTBE)		0.078U	0.078	50.0	51.8	104	65 - 125	52.7	105	2	30
99-87-6	4-Isopropyltoluene		0.070U	0.070	50.0	54.1	108	75 - 130	53.2	106	2	30
594-20-7	2,2-Dichloropropane		0.170U	0.170	50.0	57.3	115	70 - 135	55.0	110	4	30
563-58-6	1,1-Dichloropropene		0.052U	0.052	50.0	54.4	109	75 - 130	54.1	108	0.6	30
142-28-9	1,3-Dichloropropane		0.059U	0.059	50.0	51.3	103	75 - 125	52.5	105	2	30
108-86-1	Bromobenzene		0.145U	0.145	50.0	51.3	103	75 - 125	52.4	105	2	30
95-49-8	2-Chlorotoluene		0.080U	0.080	50.0	51.0	102	75 - 125	50.8	102	0.4	30
106-43-4	4-Chlorotoluene		0.124U	0.124	50.0	52.5	105	75 - 130	53.0	106	0.9	30
98-06-6	tert-Butylbenzene		0.087U	0.087	50.0	51.2	102	70 - 130	50.6	101	1	30
135-98-8	sec-Butylbenzene		0.107U	0.107	50.0	53.4	107	70 - 125	52.7	105	1	30
541-73-1	1,3-Dichlorobenzene		0.138U	0.138	50.0	53.2	106	75 - 125	53.2	106	0	30
106-46-7	1,4-Dichlorobenzene		0.083U	0.083	50.0	52.6	105	75 - 125	54.4	109	3	30
104-51-8	n-Butylbenzene		0.123U	0.123	50.0	52.8	106	70 - 135	52.7	105	0.2	30
95-50-1	1,2-Dichlorobenzene		0.135U	0.135	50.0	52.6	105	70 - 120	53.4	107	2	30
87-68-3	Hexachlorobutadiene		0.265U	0.265	50.0	53.4	107	50 - 140	53.7	107	0.6	30
91-20-3	Naphthalene		0.176U	0.176	50.0	47.0	94	55 - 140	51.9	104	10	30
87-61-6	1,2,3-Trichlorobenzene		0.079U	0.079	50.0	52.0	104	55 - 140	54.4	109	5	30
75-35-4	1,1-Dichloroethene		0.208U	0.208	50.0	56.9	114	70 - 130	53.1	106	7	30
71-43-2	Benzene		0.111U	0.111	50.0	54.1	108	80 - 120	54.1	108	0	30
79-01-6	Trichloroethene		0.161U	0.161	50.0	52.3	105	70 - 125	52.7	105	0.8	30
108-88-3	Toluene		0.122U	0.122	50.0	53.5	107	75 - 120	53.9	108	0.7	30
108-90-7	Chlorobenzene		0.083U	0.083	50.0	51.8	104	80 - 120	52.6	105	2	30
Surrogate												
460-00-4	4-Bromofluorobenzene		50.7	101	50	50.7	101	75 - 120	50.4	101		

GC/MS Volatiles Quality Control Summary

Analytical Batch	493892	**Client ID**	MB493892			LCS493892			LCSD493892			
Prep Batch	N/A	**GCAL ID**	1124987			1124988			1124989			
		Sample Type	Method Blank			LCS			LCSD			
		Analytical Date	11/05/2012 13:27			11/05/2012 12:02			11/05/2012 12:23			
		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	98	50	50.2	100	85 - 115	50.5	101		
2037-26-5	Toluene d8		50.6	101	50	49.8	100	85 - 120	50.4	101		
17060-07-0	1,2-Dichloroethane-d4		49.7	99	50	49.1	98	70 - 120	49.4	99		

Inorganics Quality Control Summary

Analytical Batch	493620	**Client ID**	MB493521			LCS493521		
Prep Batch	493521	**GCAL ID**	1122911			1122912		
Prep Method	SW-846	**Sample Type**	Method Blank			LCS		
	7470A	**Prep Date**	10/31/2012 12:25			10/31/2012 12:25		
		Analytical Date	11/01/2012 12:23			11/01/2012 12:25		
		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	4.98	100	80 - 120

Analytical Batch	493620	**Client ID**	LF05-MW-C-01			1122464MS			1122464MSD			
Prep Batch	493521	**GCAL ID**	21210300501			1122913			1122914			
Prep Method	SW-846	**Sample Type**	SAMPLE			MS			MSD			
	7470A	**Prep Date**	10/31/2012 12:25			10/31/2012 12:25			10/31/2012 12:25			
		Analytical Date	11/01/2012 12:36			11/01/2012 12:31			11/01/2012 12:33			
		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		0.06912	0.068	5.00	5.57	110	80 - 120	5.27	104	6	30

Inorganics Quality Control Summary

Analytical Batch	494196	**Client ID**	MB493522	LCS493522
Prep Batch	493522	**GCAL ID**	1122917	1122918
Prep Method	SW-846	**Sample Type**	Method Blank	LCS
	3010A	**Prep Date**	10/31/2012 12:25	10/31/2012 12:25
		Analytical Date	11/08/2012 15:48	11/08/2012 16:09
		Matrix	Water	Water

SW-846 6010C		**Units**	ug/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
7429-90-5	Aluminum	41.9J	30.3	5000	4920	98	80 - 120
7440-36-0	Antimony	3.11U	3.11	500	483	97	80 - 120
7440-38-2	Arsenic	3.59U	3.59	500	502	100	80 - 120
7440-39-3	Barium	0.71U	0.71	500	484	97	80 - 120
7440-41-7	Beryllium	0.10U	0.10	500	491	98	80 - 120
7440-43-9	Cadmium	0.16U	0.16	500	487	97	80 - 120
7440-70-2	Calcium	80.4J	45.7	5000	4960	99	80 - 120
7440-47-3	Chromium	0.26U	0.26	500	482	96	80 - 120
7440-48-4	Cobalt	0.58U	0.58	500	492	98	80 - 120
7440-50-8	Copper	1.01U	1.01	500	480	96	80 - 120
7439-89-6	Iron	12.6U	12.6	5000	4840	97	80 - 120
7439-92-1	Lead	2.32J	1.96	500	504	101	80 - 120
7439-95-4	Magnesium	16.5U	16.5	5000	4940	99	80 - 120
7439-96-5	Manganese	1.31U	1.31	500	483	97	80 - 120
7440-02-0	Nickel	1.13U	1.13	500	502	100	80 - 120
7440-09-7	Potassium	34.6U	34.6	10000	9870	99	80 - 120
7782-49-2	Selenium	4.42U	4.42	500	500	100	80 - 120
7440-22-4	Silver	0.91J	0.70	500	486	97	80 - 120
7440-23-5	Sodium	61.1U	61.1	20000	19400	97	80 - 120
7440-28-0	Thallium	3.04U	3.04	500	496	99	80 - 120
7440-62-2	Vanadium	1.25U	1.25	500	481	96	80 - 120
7440-66-6	Zinc	4.51U	4.51	500	491	98	80 - 120

Inorganics Quality Control Summary

Analytical Batch	494196	**Client ID**	LF05-MW-C-01	1122464MS	1122464MSD
Prep Batch	493522	**GCAL ID**	21210300501	1122919	1122920
Prep Method	SW-846	**Sample Type**	SAMPLE	MS	MSD
	3010A	**Prep Date**	10/31/2012 12:25	10/31/2012 12:25	10/31/2012 12:25
		Analytical Date	11/08/2012 16:15	11/08/2012 16:24	11/08/2012 16:30
		Matrix	Water	Water	Water

SW-846 6010C		**Units**	ug/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
7429-90-5	Aluminum	68.3	30.3	5000	5290	104	80 - 120	5300	105	0.1	20
7440-36-0	Antimony	0.0	3.11	500	530	106	80 - 120	564	113	6	20
7440-39-3	Barium	80.1	0.71	500	608	106	80 - 120	622	108	2	20
7440-41-7	Beryllium	0.0	0.10	500	541	108	80 - 120	556	111	3	20
7440-43-9	Cadmium	0.81	0.16	500	521	104	80 - 120	534	107	2	20
7440-70-2	Calcium	35800	45.7	5000	44400	**172***	80 - 120	44800	**181***	1	20
7440-47-3	Chromium	1.32	0.26	500	517	103	80 - 120	532	106	3	20
7440-48-4	Cobalt	0.0	0.58	500	493	99	80 - 120	523	105	6	20
7440-50-8	Copper	8.17	1.01	500	516	102	80 - 120	529	104	3	20
7439-89-6	Iron	148	12.6	5000	5420	105	80 - 120	5480	107	1	20
7439-92-1	Lead	0.0	1.96	500	527	105	80 - 120	559	112	6	20
7439-95-4	Magnesium	34600	16.5	5000	43900	**186***	80 - 120	43700	**182***	0.4	20
7439-96-5	Manganese	24.9	1.31	500	551	105	80 - 120	564	108	2	20
7440-02-0	Nickel	0.0	1.13	500	495	99	80 - 120	528	106	6	20
7440-09-7	Potassium	6570	34.6	10000	18100	116	80 - 120	18300	118	1	20
7782-49-2	Selenium	0.0	4.42	500	541	108	80 - 120	580	116	7	20
7440-22-4	Silver	0.0	0.70	500	528	106	80 - 120	542	108	2	20
7440-23-5	Sodium	51400	61.1	20000	78100	**133***	80 - 120	79000	**138***	1	20
7440-28-0	Thallium	0.0	3.04	500	529	106	80 - 120	560	112	6	20
7440-62-2	Vanadium	48.4	1.25	500	583	107	80 - 120	599	110	3	20
7440-66-6	Zinc	111	4.51	500	648	107	80 - 120	663	110	2	20

Analytical Batch	494287	**Client ID**	LF05-MW-C-01	1122464MS	1122464MSD
Prep Batch	493522	**GCAL ID**	21210300501	1122919	1122920
Prep Method	SW-846	**Sample Type**	SAMPLE	MS	MSD
	3010A	**Prep Date**	10/31/2012 12:25	10/31/2012 12:25	10/31/2012 12:25
		Analytical Date	11/09/2012 13:12	11/09/2012 13:19	11/09/2012 13:26
		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	575	115	80 - 120	586	117	2	20

Inorganics Quality Control Summary

Analytical Batch	493804	**Client ID**	LF05-MW-C-01			1122464MS			1122464MSD		
Prep Batch	493519	**GCAL ID**	21210300501			1122905			1122906		
Prep Method	SW-846 3005	**Sample Type**	SAMPLE			MS			MSD		
	Dissolved	**Prep Date**	10/31/2012 12:25			10/31/2012 12:25			10/31/2012 12:25		
		Analytical Date	11/03/2012 17:43			11/03/2012 17:50			11/03/2012 17:56		
		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**
7440-38-2	Arsenic		0.0	3.59	500	568	114	80 - 120	567	113	0.2	20

Analytical Batch	494196	**Client ID**	MB493519			LCS493519		
Prep Batch	493519	**GCAL ID**	1122903			1122904		
Prep Method	SW-846 3005	**Sample Type**	Method Blank			LCS		
	Dissolved	**Prep Date**	10/31/2012 12:25			10/31/2012 12:25		
		Analytical Date	11/08/2012 14:43			11/08/2012 14:50		
		Matrix	Water			Water		
SW-846 6010C Dissolved			**Units**	ug/L	**Spike**	**Result**		**Control**
			Result	**RDL**	**Added**		**% R**	**Limits % R**
7429-90-5	Aluminum		46.1J	30.3	5000	4970	99	80 - 120
7440-36-0	Antimony		3.11U	3.11	500	507	101	80 - 120
7440-38-2	Arsenic		3.59U	3.59	500	526	105	80 - 120
7440-39-3	Barium		0.71U	0.71	500	501	100	80 - 120
7440-41-7	Beryllium		0.10U	0.10	500	515	103	80 - 120
7440-43-9	Cadmium		0.16U	0.16	500	510	102	80 - 120
7440-70-2	Calcium		45.7U	45.7	5000	5010	100	80 - 120
7440-47-3	Chromium		0.26U	0.26	500	496	99	80 - 120
7440-48-4	Cobalt		0.58U	0.58	500	513	103	80 - 120
7440-50-8	Copper		1.01U	1.01	500	495	99	80 - 120
7439-89-6	Iron		12.6U	12.6	5000	4950	99	80 - 120
7439-92-1	Lead		2.34J	1.96	500	528	106	80 - 120
7439-95-4	Magnesium		24.2J	16.5	5000	5000	100	80 - 120
7439-96-5	Manganese		1.31U	1.31	500	501	100	80 - 120
7440-02-0	Nickel		1.13U	1.13	500	525	105	80 - 120
7440-09-7	Potassium		34.6U	34.6	10000	10100	101	80 - 120
7782-49-2	Selenium		4.42U	4.42	500	537	107	80 - 120
7440-22-4	Silver		0.70U	0.70	500	506	101	80 - 120
7440-23-5	Sodium		61.1U	61.1	20000	20100	100	80 - 120
7440-28-0	Thallium		3.04U	3.04	500	519	104	80 - 120
7440-62-2	Vanadium		1.25U	1.25	500	497	99	80 - 120

Inorganics Quality Control Summary

Analytical Batch	494196	**Client ID**	MB493519		LCS493519		
Prep Batch	493519	**GCAL ID**	1122903		1122904		
Prep Method	SW-846 3005	**Sample Type**	Method Blank		LCS		
	Dissolved	**Prep Date**	10/31/2012 12:25		10/31/2012 12:25		
		Analytical Date	11/08/2012 14:43		11/08/2012 14:50		
		Matrix	Water		Water		
SW-846 6010C Dissolved		**Units**	ug/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
7440-66-6	Zinc	4.51U	4.51	500	513	103	80 - 120

Analytical Batch	494196	**Client ID**	LF05-MW-C-01			1122464MS			1122464MSD			
Prep Batch	493519	**GCAL ID**	21210300501			1122905			1122906			
Prep Method	SW-846 3005	**Sample Type**	SAMPLE			MS			MSD			
	Dissolved	**Prep Date**	10/31/2012 12:25			10/31/2012 12:25			10/31/2012 12:25			
		Analytical Date	11/08/2012 14:57			11/08/2012 15:04			11/08/2012 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**
7429-90-5	Aluminum	58.4	30.3	5000	5090	101	80 - 120	5030	100	1	20
7440-36-0	Antimony	0.0	3.11	500	537	107	80 - 120	538	108	0.07	20
7440-39-3	Barium	84.0	0.71	500	593	102	80 - 120	593	102	0.02	20
7440-41-7	Beryllium	0.0	0.10	500	540	108	80 - 120	536	107	0.6	20
7440-43-9	Cadmium	0.78	0.16	500	517	103	80 - 120	513	103	0.8	20
7440-70-2	Calcium	37600	45.7	5000	41500	**79***	80 - 120	43500	118	5	20
7440-47-3	Chromium	1.00	0.26	500	507	101	80 - 120	504	101	0.7	20
7440-48-4	Cobalt	0.0	0.58	500	503	101	80 - 120	499	100	0.7	20
7440-50-8	Copper	7.90	1.01	500	508	100	80 - 120	505	99	0.7	20
7439-89-6	Iron	0.0	12.6	5000	5050	101	80 - 120	5070	101	0.5	20
7439-92-1	Lead	0.0	1.96	500	531	106	80 - 120	528	106	0.5	20
7439-95-4	Magnesium	37600	16.5	5000	40900	**66***	80 - 120	43300	114	6	20
7439-96-5	Manganese	0.0	1.31	500	516	103	80 - 120	514	103	0.3	20
7440-02-0	Nickel	0.0	1.13	500	503	101	80 - 120	499	100	0.6	20
7440-09-7	Potassium	6910	34.6	10000	17200	103	80 - 120	17700	108	3	20
7782-49-2	Selenium	4.72	4.42	500	567	112	80 - 120	564	112	0.5	20
7440-22-4	Silver	0.0	0.70	500	523	105	80 - 120	521	104	0.4	20
7440-23-5	Sodium	56000	61.1	20000	73700	89	80 - 120	76600	103	4	20
7440-28-0	Thallium	3.51	3.04	500	529	105	80 - 120	527	105	0.4	20
7440-62-2	Vanadium	52.2	1.25	500	570	104	80 - 120	568	103	0.3	20
7440-66-6	Zinc	129	4.51	500	649	104	80 - 120	652	105	0.4	20

General Chemistry Quality Control Summary

Analytical Batch	493609	**Client ID**	MB493508			LCS493508		
Prep Batch	493508	**GCAL ID**	1122870			1122871		
Prep Method	SM4500 NH3 BE TKN	**Sample Type**	Method Blank			LCS		
		Prep Date	10/31/2012 06:30			10/31/2012 06:30		
		Analytical Date	10/31/2012 13:35			10/31/2012 13:35		
		Matrix	Water			Water		
SM 4500 NH3 BE Ammonia			**Units**	mg/L-N	**Spike**	**Result**		**Control**
			Result	**RDL**	**Added**		**% R**	**Limits % R**
7664-41-7	Ammonia		0.24U	0.24	15.0	13.5	90	80 - 120

Analytical Batch	493609	**Client ID**	PLANT EFF			1122615MS		
Prep Batch	493508	**GCAL ID**	21210301101			1122873		
Prep Method	SM4500 NH3 BE TKN	**Sample Type**	SAMPLE			MS		
		Prep Date	10/31/2012 06:30			10/31/2012 06:30		
		Analytical Date	10/31/2012 13:35			10/31/2012 13:35		
		Matrix	Water			Water		
SM 4500 NH3 BE Ammonia			**Units**	mg/L-N	**Spike**	**Result**		**Control**
			Result	**RDL**	**Added**		**% R**	**Limits % R**
7664-41-7	Ammonia		0.00	0.24	15.0	14.3	96	74.6 - 125

Analytical Batch	493609	**Client ID**	LF05-MW-C-01		1122464DUP		
Prep Batch	493508	**GCAL ID**	21210300501		1122872		
Prep Method	SM4500 NH3 BE TKN	**Sample Type**	SAMPLE		DUP		
		Prep Date	10/31/2012 06:30		10/31/2012 06:30		
		Analytical Date	10/31/2012 13:35		10/31/2012 13:35		
		Matrix	Water		Water		
SM 4500 NH3 BE Ammonia			**Units**	mg/L-N	**Result**		**RPD**
			Result	**RDL**		**RPD**	**Limit**
7664-41-7	Ammonia		0.00	0.24	0.00	0	25

General Chemistry Quality Control Summary

Analytical Batch 493510	**Client ID**	MB493510			LCS493510		
Prep Batch N/A	**GCAL ID**	1122882			1122883		
	Sample Type	Method Blank			LCS		
	Analytical Date	10/30/2012 22:08			10/30/2012 22:26		
	Matrix	Water			Water		
EPA 300.0		**Units**	mg/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
14797-65-0	Nitrite	0.015U	0.015	2.50	2.65	106	80 - 120
14797-55-8	Nitrate	0.115U	0.115	2.50	2.37	95	80 - 120

Analytical Batch 493510	**Client ID**	LF05-MW-C-01			1122464MS			1122464MSD				
Prep Batch N/A	**GCAL ID**	21210300501			1122884			1122885				
	Sample Type	SAMPLE			MS			MSD				
	Analytical Date	10/30/2012 22:43			10/30/2012 23:01			10/30/2012 23:19				
	Matrix	Water			Water			Water				
EPA 300.0		**Units**	mg/L	**Spike**	**Result**		**Control**	**Result**				**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**		**Limit**
14797-65-0	Nitrite	0.000	0.015	2.50	2.77	111	75 - 125	2.79	111	0.69		15
14797-55-8	Nitrate	1.80	0.115	2.50	4.33	101	75 - 125	4.34	102	0.3		15

Analytical Batch 493727	**Client ID**	MB493727			LCS493727		
Prep Batch N/A	**GCAL ID**	1124038			1124039		
	Sample Type	Method Blank			LCS		
	Analytical Date	11/02/2012 16:46			11/02/2012 17:04		
	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	2.42	96.9	79 - 109
14808-79-8	Sulfate	0.115U	0.115	5.00	4.88	97.7	82 - 110

General Chemistry Quality Control Summary

Analytical Batch 493727		**Client ID**	MW-08-06			MW-08-06-MS			MW-08-06-MSD		
Prep Batch N/A		**GCAL ID**	21210241305			21210241306			21210241307		
		Sample Type	SAMPLE			MS			MSD		
		Analytical Date	11/02/2012 22:56			11/02/2012 23:49			11/03/2012 00:07		
		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		5860	315	12500	18400	100	79 - 109	18500	101	0.64	15
14808-79-8	Sulfate		7070	575	25000	32500	102	82 - 110	32900	103	1.2	15

Analytical Batch 493727		**Client ID**	MW-V-01			1121462MS			1121462MSD		
Prep Batch N/A		**GCAL ID**	21210260701			1124040			1124041		
		Sample Type	SAMPLE			MS			MSD		
		Analytical Date	11/02/2012 17:22			11/02/2012 17:39			11/02/2012 17:57		
		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		192	12.6	500	703	102	79 - 109	701	102	0.15	15
14808-79-8	Sulfate		261	23.0	1000	1290	103	82 - 110	1290	103	0.18	15

General Chemistry Quality Control Summary

Analytical Batch 493469	**Client ID**	MB493469			LCS493469			LCSD493469			
Prep Batch N/A	**GCAL ID**	1122679			1122680			1122681			
	Sample Type	Method Blank			LCS			LCSD			
	Analytical Date	10/31/2012 09:56			10/31/2012 10:17			10/31/2012 10:36			
	Matrix	Water			Water			Water			
SM 5310B TOC		**Units**	mg/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
C-012	Total Organic Carbon	0.30U	0.30	50.0	49.5	99	80 - 120	49.7	99	0.4	25

Analytical Batch 493469	**Client ID**	MW-6B			1122284MS			1122284MSD			
Prep Batch N/A	**GCAL ID**	21210292709			1122682			1122683			
	Sample Type	SAMPLE			MS			MSD			
	Analytical Date	10/31/2012 16:14			10/31/2012 16:34			10/31/2012 16:50			
	Matrix	Water			Water			Water			
SM 5310B TOC		**Units**	mg/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
C-012	Total Organic Carbon	12.1	0.30	50.0	52.8	82	75 - 125	53.9	84	2	25

General Chemistry Quality Control Summary

Analytical Batch 493432	**Client ID**	MB493432			LCS493432		
Prep Batch N/A	**GCAL ID**	1122510			1122511		
	Sample Type	Method Blank			LCS		
	Analytical Date	10/30/2012 11:41			10/30/2012 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	493	99	80 - 120

Analytical Batch 493432	**Client ID**	LF05-MW-C-01			1122464MS		
Prep Batch N/A	**GCAL ID**	21210300501			1122513		
	Sample Type	SAMPLE			MS		
	Analytical Date	10/30/2012 11:42			10/30/2012 11:43		
	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	498	100	80 - 120

Analytical Batch 493432	**Client ID**	LF05-MW-C-01		1122464DUP		
Prep Batch N/A	**GCAL ID**	21210300501		1122512		
	Sample Type	SAMPLE		DUP		
	Analytical Date	10/30/2012 11:42		10/30/2012 11:43		
	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

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
	Bhate	4760	212103005	11/6/12

Report to:

Client: Bhate Environmental Associates
Address: 1608 13th Ave S. #300
Birmingham AL
Contact: Tracy Walker
Phone: 205 918 4660
Fax:

Bill to:

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

P.O. Number:
Project Name/Number: Common AFB D020-001

Sampled By: Ben Steward Jordan Gibson

Analytical Requests & Method

Lab use only:
Custody Seal used ☑ yes ☐ no
intact ☑ yes ☐ no
Temperature °C 3.2

Matrix[1]	Date	Time (2400)	Comp	Grab	Sample Description	Preservatives	No Containers	8260C (HCL)	Total Metals 6010C/7470B HNO3	Diss Metals 6010C/7470B HNO3	Cr (3+, 6+) 7199	Perchlorate (6860)	NO2/NO3 (300.1)	Ammonia (SM4500) (H2SO4)	Sulfate (300.1)	Chloride (300.1)	TOC (SM5310B) (HCL)		Remarks:	Lab ID
GW	10/29/12	1050		X	F05-MW-C-01	yes	11	X	X	X	X	X	X	X	X	X	X			1
WQ	10/29/12	1050			TB-10	yes	3	X												2

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

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
[signature]		10/29/12	1300
Relinquished by: (Signature) FEDEX	Received by: (Signature) [signature]	Date: 10-30-12	Time: 10:30
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

Note: Diss metals were filtered in field 8003 4106 3336

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	212103005
Client 4760 - Bhate Environmental Associates, Inc.	**Transport Method** FEDEX
Profile 235531 - Cannon	**Received By** Kinchen, Anna M.
Line Item(s) 1 - Waters	**Receive Date(s)** 10/30/12

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)
80030410603336	3.2

DISCREPANCIES

None

LABORATORY PRESERVATIONS

None

NOTES

Revision 1.3

November 16, 2012

Brenda Martinez
GCAL LAB
7979 GSRI AVENUE
BATON ROUGE, LA 70820
TEL: (225) 769-4900
FAX (225) 767-5717

Order No.: 1211019

RE: DoD Perchlorate

Dear Brenda Martinez:

DHL Analytical, Inc. received 1 sample(s) on 11/2/2012 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

#121105

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: 12-0931

Project Name/Number: 212103005

Sampled By:

	Matrix	Date	Time (2400)	Comp	Grab	Sample Description	Pre-serva-tives	No. Con-tainers	PERCHLORATE (6860)										Remarks:	Lab ID
01	W	10/29/2012	12:50		X	LF05-MW-C-01		1	X										21210300501	

Turn Around Time: ___ 24 - 48 hrs ___ 3 days ___ 1 week X standard other ___

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
[illegible]	[illegible]	11/1/12	1700
[illegible]	[illegible]	11/2/12	1020

Note: Receiving temp 0-80 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

CHARLOTTE SAUCIER (225) 769-4900
GCAL
7979 GSRI RD
BATON ROUGE, LA 70802
UNITED STATES US

SHIP DATE: 01NOV12
ACTWGT: 14.0 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

E

FRI - 02 NOV A1
PRIORITY OVERNIGHT

TRK# 0201 5443 0509 2817

A8 BSMA

78664
TX-US AUS

Part # 156145-434 RIT2 07/11

GCAL

CUSTODY SEAL

Date Sealed: 11-1-12

Sealed By: JBH

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: 11/2/2012

Work Order Number 1211019

Received by JB

Checklist completed by: Signature 11/2/2012 Date

Reviewed by Initials 11/2/2012 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 ☐	0.8 °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:** 11/16/12
Reviewer Name: Carlos Castro	**Laboratory Work Order:** 1211019
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:** 11/16/12

Reviewer Name: Carlos Castro | **Laboratory Work Order:** 1211019

#[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

11/16/12
Date

DHL Analytical, Inc. **Date:** *16-Nov-12*

CLIENT: GCAL LAB
Project: DoD Perchlorate
Lab Order: 1211019

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 11/2/12. 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 11/2/12.

DHL Analytical, Inc.

Date: *16-Nov-12*

CLIENT: GCAL LAB
Project: DoD Perchlorate
Lab Order: 1211019

Work Order Sample Summary

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
1211019-01	LF05-MW-C-01		10/29/12 12:50 PM	11/2/2012

DHL Analytical, Inc.

16-Nov-12

Lab Order: 1211019
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
1211019-01A	LF05-MW-C-01	10/29/12 12:50 PM	Aqueous	SW6860	Perchlorate Prep	11/09/12 10:27 AM	54622

DHL Analytical, Inc.

16-Nov-12

Lab Order: 1211019
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
1211019-01A	LF05-MW-C-01	Aqueous	SW6860	Perchlorate - Water	54622	1	11/09/12 02:18 PM	ICMS_121109A

DHL Analytical, Inc.

Date: *16-Nov-12*

CLIENT:	GCAL LAB	**Client Sample ID:**	LF05-MW-C-01
Project:	DoD Perchlorate	**Lab ID:**	1211019-01
Project No:	212103005	**Collection Date:**	10/29/12 12:50 PM
Lab Order:	1211019	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
PERCHLORATE - WATER		**SW6860**					Analyst: **CZ**
Perchlorate	0.000589	0.000100	0.000300	N	mg/L	1	11/09/12 02:18 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: *16-Nov-12*

CLIENT: GCAL LAB
Work Order: 1211019
Project: DoD Perchlorate

ANALYTICAL QC SUMMARY REPORT

RunID: **ICMS_121109A**

The QC data in batch 54622 applies to the following samples: 1211019-01A

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: 1211019
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.

16-Nov-12

Lab Order: 1211019
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
1211019-01A	LF05-MW-C-01	SW6860	54622	1	11/9/2012 2:18:00 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 11/16/2012

GCAL Report 212103108

Deliver To	Bhate Environmental Associates, Inc. 1608 14th Ave South Birmingham, AL 35205 205-918-4024
Attn	David Badio

Project Cannon AFB D020-001

Case Narrative

Client: Bhate Environmental Associates, Inc. **Report:** 212103108

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.

VOLATILES MASS SPECTROMETRY

In the SW-846 8260B analysis for QC batch 493799, the MS/MSD exhibited failures for the recoveries and/or RPDs. This is due to the high concentration of target analytes in the native sample. The LCS/LCSD recoveries are acceptable.

METALS

In the SW-846 6010C analysis for prep batch 493522, the MS and/or MSD recovery is outside the control limits for Sodium. 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 100%. The MS/MSD recoveries are not applicable for Calcium and Magnesium 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 samples.

In the SW-846 6010C Dissolved analysis for prep batch 493519, the MS/MSD recoveries are not applicable for Calcium and Magnesium because the sample concentration is greater than four times the spike concentration.

CONVENTIONALS

In the EPA 300.0 analysis, samples 21210310801 (LF05-MW-U-01) and 21210310803 (LF05-MW-S-01) 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 212103108

THIS REPORT CONTAINS _____ PAGES.

Report Sample Summary

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210310801	LF05-MW-U-01	Water	10/30/2012 10:20	10/31/2012 09:20
21210310802	TB-11	Water	10/30/2012 10:20	10/31/2012 09:20
21210310803	LF05-MW-S-01	Water	10/30/2012 14:45	10/31/2012 09:20

Summary of Compounds Detected

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210310801	**LF05-MW-U-01**	Water	10/30/2012 10:20	10/31/2012 09:20

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	41.7J	200	30.3	ug/L
7440-39-3	Barium	41.9	10.0	0.71	ug/L
7440-43-9	Cadmium	0.65J	5.00	0.16	ug/L
7440-70-2	Calcium	58200	100	45.7	ug/L
7440-47-3	Chromium	2.14J	10.0	0.26	ug/L
7440-50-8	Copper	10.2	10.0	1.01	ug/L
7439-95-4	Magnesium	54200	100	16.5	ug/L
7439-96-5	Manganese	16.6	15.0	1.31	ug/L
7440-02-0	Nickel	3.19J	40.0	1.13	ug/L
7440-09-7	Potassium	8110	500	34.6	ug/L
7782-49-2	Selenium	7.82J	40.0	4.42	ug/L
7440-23-5	Sodium	60000	1000	61.1	ug/L
7440-28-0	Thallium	3.40J	20.0	3.04	ug/L
7440-62-2	Vanadium	42.7	20.0	1.25	ug/L
7440-66-6	Zinc	330	20.0	4.51	ug/L

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	44.1J	200	30.3	ug/L
7440-39-3	Barium	44.0	10.0	0.71	ug/L
7440-43-9	Cadmium	0.84J	5.00	0.16	ug/L
7440-70-2	Calcium	59800	100	45.7	ug/L
7440-47-3	Chromium	4.86J	10.0	0.26	ug/L
7440-50-8	Copper	10.2	10.0	1.01	ug/L
7439-95-4	Magnesium	54700	100	16.5	ug/L
7439-96-5	Manganese	20.4	15.0	1.31	ug/L
7440-02-0	Nickel	3.97J	40.0	1.13	ug/L
7440-09-7	Potassium	8250	500	34.6	ug/L
7782-49-2	Selenium	9.93J	40.0	4.42	ug/L
7440-23-5	Sodium	61200	1000	61.1	ug/L
7440-62-2	Vanadium	42.4	20.0	1.25	ug/L
7440-66-6	Zinc	335	20.0	4.51	ug/L

EPA 300.0

CAS#	Parameter	Result	RDL	MDL	Units
14797-55-8	Nitrate	1.57	0.500	0.115	mg/L

SM 5310B TOC

CAS#	Parameter	Result	RDL	MDL	Units
C-012	Total Organic Carbon	1.3	1.0	0.30	mg/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210310801	LF05-MW-U-01	Water	10/30/2012 10:20	10/31/2012 09:20

SW-846 8260B

CAS#	Parameter	Result	RDL	MDL	Units
75-71-8	Dichlorodifluoromethane	0.832J	1.00	0.145	ug/L
75-69-4	Trichlorofluoromethane	0.559J	1.00	0.157	ug/L

EPA 300.0

CAS#	Parameter	Result	RDL	MDL	Units
16887-00-6	Chloride	82.7	10.0	6.30	mg/L
14808-79-8	Sulfate	105	20.0	11.5	mg/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210310802	TB-11	Water	10/30/2012 10:20	10/31/2012 09:20

SW-846 8260B DOD Water

CAS#	Parameter	Result	RDL	MDL	Units
127-18-4	Tetrachloroethene	0.452J	1.00	0.193	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210310803	LF05-MW-S-01	Water	10/30/2012 14:45	10/31/2012 09:20

SW-846 7470A Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	0.07702J	0.20	0.068	ug/L

SW-846 7470A

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	0.07020J	0.20	0.068	ug/L

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	56.8J	200	30.3	ug/L
7440-39-3	Barium	39.0	10.0	0.71	ug/L
7440-43-9	Cadmium	0.97J	5.00	0.16	ug/L
7440-70-2	Calcium	51700	100	45.7	ug/L
7440-47-3	Chromium	2.99J	10.0	0.26	ug/L
7440-50-8	Copper	9.62J	10.0	1.01	ug/L
7439-95-4	Magnesium	48500	100	16.5	ug/L
7439-96-5	Manganese	4.45J	15.0	1.31	ug/L
7440-09-7	Potassium	7650	500	34.6	ug/L
7782-49-2	Selenium	7.84J	40.0	4.42	ug/L
7440-23-5	Sodium	54700	1000	61.1	ug/L
7440-62-2	Vanadium	47.6	20.0	1.25	ug/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210310803	LF05-MW-S-01	Water	10/30/2012 14:45	10/31/2012 09:20

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7440-66-6	Zinc	87.9	20.0	4.51	ug/L

SW-846 6010C

CAS#	Parameter	Result	RDL	MDL	Units
7440-38-2	Arsenic	3.90J	10.0	3.59	ug/L

SW-846 6010C Dissolved

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	Aluminum	45.5J	200	30.3	ug/L
7440-39-3	Barium	38.0	10.0	0.71	ug/L
7440-43-9	Cadmium	0.59J	5.00	0.16	ug/L
7440-70-2	Calcium	51600	100	45.7	ug/L
7440-47-3	Chromium	2.32J	10.0	0.26	ug/L
7440-50-8	Copper	9.35J	10.0	1.01	ug/L
7439-95-4	Magnesium	49000	100	16.5	ug/L
7440-09-7	Potassium	7700	500	34.6	ug/L
7782-49-2	Selenium	7.14J	40.0	4.42	ug/L
7440-23-5	Sodium	54900	1000	61.1	ug/L
7440-62-2	Vanadium	48.9	20.0	1.25	ug/L
7440-66-6	Zinc	84.2	20.0	4.51	ug/L

EPA 300.0

CAS#	Parameter	Result	RDL	MDL	Units
14797-55-8	Nitrate	1.59	0.500	0.115	mg/L

SW-846 8260B

CAS#	Parameter	Result	RDL	MDL	Units
127-18-4	Tetrachloroethene	0.519J	1.00	0.193	ug/L

EPA 300.0

CAS#	Parameter	Result	RDL	MDL	Units
16887-00-6	Chloride	66.4	5.00	3.15	mg/L
14808-79-8	Sulfate	103	10.0	5.75	mg/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210310801	**LF05-MW-U-01**	Water	10/30/2012 10:20	10/31/2012 09:20

Subcontract Work

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/16/2012 11:28	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	11/05/2012 15:14	LBH	493892

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
21210310801	**LF05-MW-U-01**	Water	10/30/2012 10:20	10/31/2012 09:20

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/05/2012 15:14	LBH	493892

CAS#	Parameter	Result	RDL	MDL	Units
75-71-8	**Dichlorodifluoromethane**	**0.832J**	**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**	**0.559J**	**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	ug/L	100	75 - 120
1868-53-7	Dibromofluoromethane	50	49.4	ug/L	99	85 - 115
2037-26-5	Toluene d8	50	50.8	ug/L	102	85 - 120
17060-07-0	1,2-Dichloroethane-d4	50	50	ug/L	100	70 - 120

SW-846 7470A Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/31/2012 12:25	493521	SW-846 7470A Dissolved	1	11/01/2012 12:39	BNB	493620

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
10/31/2012 12:25	493521	SW-846 7470A	1	11/01/2012 12:38	BNB	493620

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	0.068U	0.20	0.068	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210310801	**LF05-MW-U-01**	Water	10/30/2012 10:20	10/31/2012 09:20

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/31/2012 12:25	493522	SW-846 3010A	1	11/08/2012 16:51	BNB	494196

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	**Aluminum**	**44.1J**	**200**	**30.3**	**ug/L**
7440-36-0	Antimony	3.11U	60.0	3.11	ug/L
7440-39-3	**Barium**	**44.0**	**10.0**	**0.71**	**ug/L**
7440-41-7	Beryllium	0.10U	5.00	0.10	ug/L
7440-43-9	**Cadmium**	**0.84J**	**5.00**	**0.16**	**ug/L**
7440-70-2	**Calcium**	**59800**	**100**	**45.7**	**ug/L**
7440-47-3	**Chromium**	**4.86J**	**10.0**	**0.26**	**ug/L**
7440-48-4	Cobalt	0.58U	10.0	0.58	ug/L
7440-50-8	**Copper**	**10.2**	**10.0**	**1.01**	**ug/L**
7439-89-6	Iron	12.6U	100	12.6	ug/L
7439-92-1	Lead	1.96U	15.0	1.96	ug/L
7439-95-4	**Magnesium**	**54700**	**100**	**16.5**	**ug/L**
7439-96-5	**Manganese**	**20.4**	**15.0**	**1.31**	**ug/L**
7440-02-0	**Nickel**	**3.97J**	**40.0**	**1.13**	**ug/L**
7440-09-7	**Potassium**	**8250**	**500**	**34.6**	**ug/L**
7782-49-2	**Selenium**	**9.93J**	**40.0**	**4.42**	**ug/L**
7440-22-4	Silver	0.70U	10.0	0.70	ug/L
7440-23-5	**Sodium**	**61200**	**1000**	**61.1**	**ug/L**
7440-28-0	Thallium	3.04U	20.0	3.04	ug/L
7440-62-2	**Vanadium**	**42.4**	**20.0**	**1.25**	**ug/L**
7440-66-6	**Zinc**	**335**	**20.0**	**4.51**	**ug/L**

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/31/2012 12:25	493522	SW-846 3010A	1	11/09/2012 13:32	CLB	494287

CAS#	Parameter	Result	RDL	MDL	Units
7440-38-2	Arsenic	3.59U	10.0	3.59	ug/L

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/31/2012 12:25	493519	SW-846 3005 Dissolved	1	11/03/2012 18:15	CLB	493804

CAS#	Parameter	Result	RDL	MDL	Units
7440-38-2	Arsenic	3.59U	10.0	3.59	ug/L

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/31/2012 12:25	493519	SW-846 3005 Dissolved	1	11/08/2012 15:31	BNB	494196

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	**Aluminum**	**41.7J**	**200**	**30.3**	**ug/L**
7440-36-0	Antimony	3.11U	60.0	3.11	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210310801	**LF05-MW-U-01**	Water	10/30/2012 10:20	10/31/2012 09:20

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/31/2012 12:25	493519	SW-846 3005 Dissolved	1	11/08/2012 15:31	BNB	494196

CAS#	Parameter	Result	RDL	MDL	Units
7440-39-3	**Barium**	**41.9**	**10.0**	**0.71**	**ug/L**
7440-41-7	Beryllium	0.10U	5.00	0.10	ug/L
7440-43-9	**Cadmium**	**0.65J**	**5.00**	**0.16**	**ug/L**
7440-70-2	**Calcium**	**58200**	**100**	**45.7**	**ug/L**
7440-47-3	**Chromium**	**2.14J**	**10.0**	**0.26**	**ug/L**
7440-48-4	Cobalt	0.58U	10.0	0.58	ug/L
7440-50-8	**Copper**	**10.2**	**10.0**	**1.01**	**ug/L**
7439-89-6	Iron	12.6U	100	12.6	ug/L
7439-92-1	Lead	1.96U	15.0	1.96	ug/L
7439-95-4	**Magnesium**	**54200**	**100**	**16.5**	**ug/L**
7439-96-5	**Manganese**	**16.6**	**15.0**	**1.31**	**ug/L**
7440-02-0	**Nickel**	**3.19J**	**40.0**	**1.13**	**ug/L**
7440-09-7	**Potassium**	**8110**	**500**	**34.6**	**ug/L**
7782-49-2	**Selenium**	**7.82J**	**40.0**	**4.42**	**ug/L**
7440-22-4	Silver	0.70U	10.0	0.70	ug/L
7440-23-5	**Sodium**	**60000**	**1000**	**61.1**	**ug/L**
7440-28-0	**Thallium**	**3.40J**	**20.0**	**3.04**	**ug/L**
7440-62-2	**Vanadium**	**42.7**	**20.0**	**1.25**	**ug/L**
7440-66-6	**Zinc**	**330**	**20.0**	**4.51**	**ug/L**

SM 4500 NH3 BE Ammonia

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/03/2012 11:30	493789	SM4500 NH3 BE TKN	1	11/04/2012 14:40	DNM	493862

CAS#	Parameter	Result	RDL	MDL	Units
7664-41-7	Ammonia	0.24U	1.0	0.24	mg/L-N

EPA 300.0

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/31/2012 18:44	AEL	493575

CAS#	Parameter	Result	RDL	MDL	Units
14797-55-8	**Nitrate**	**1.57**	**0.500**	**0.115**	**mg/L**
14797-65-0	Nitrite	0.015U	0.500	0.015	mg/L

EPA 300.0

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			100	11/01/2012 10:03	AEL	493575

CAS#	Parameter	Result	RDL	MDL	Units
16887-00-6	**Chloride**	**82.7**	**10.0**	**6.30**	**mg/L**
14808-79-8	**Sulfate**	**105**	**20.0**	**11.5**	**mg/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210310801	**LF05-MW-U-01**	Water	10/30/2012 10:20	10/31/2012 09:20

SM 5310B TOC

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/01/2012 17:07	DNM	493622

CAS#	Parameter	Result	RDL	MDL	Units
C-012	**Total Organic Carbon**	**1.3**	**1.0**	**0.30**	**mg/L**

SW-846 7196A Chromium VI

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/31/2012 10:59	JEM	493538

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
21210310802	**TB-11**	Water	10/30/2012 10:20	10/31/2012 09:20

SW-846 8260B DOD Water

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/03/2012 18:25	EDS	493799

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**	**0.452J**	**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
21210310802	**TB-11**	Water	10/30/2012 10:20	10/31/2012 09:20

SW-846 8260B DOD Water

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/03/2012 18:25	EDS	493799

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	49.7	ug/L	99	75 - 120
1868-53-7	Dibromofluoromethane	50	49.2	ug/L	98	85 - 115
2037-26-5	Toluene d8	50	50	ug/L	100	85 - 120
17060-07-0	1,2-Dichloroethane-d4	50	49.9	ug/L	100	70 - 120

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210310803	**LF05-MW-S-01**	Water	10/30/2012 14:45	10/31/2012 09:20

Subcontract Work

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/16/2012 11:28	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	11/03/2012 18:46	EDS	493799

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
21210310803	**LF05-MW-S-01**	Water	10/30/2012 14:45	10/31/2012 09:20

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/03/2012 18:46	EDS	493799

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**	**0.519J**	**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	50.3	ug/L	101	75 - 120
1868-53-7	Dibromofluoromethane	50	49.3	ug/L	99	85 - 115
2037-26-5	Toluene d8	50	50.6	ug/L	101	85 - 120
17060-07-0	1,2-Dichloroethane-d4	50	50.1	ug/L	100	70 - 120

SW-846 7470A Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/31/2012 12:25	493521	SW-846 7470A Dissolved	1	11/01/2012 12:42	BNB	493620

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	**Mercury**	**0.07702J**	**0.20**	**0.068**	**ug/L**

SW-846 7470A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/31/2012 12:25	493521	SW-846 7470A	1	11/01/2012 12:41	BNB	493620

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	**Mercury**	**0.07020J**	**0.20**	**0.068**	**ug/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210310803	**LF05-MW-S-01**	Water	10/30/2012 14:45	10/31/2012 09:20

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/31/2012 12:25	493522	SW-846 3010A	1	11/08/2012 16:58	BNB	494196

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	**Aluminum**	**56.8J**	**200**	**30.3**	**ug/L**
7440-36-0	Antimony	3.11U	60.0	3.11	ug/L
7440-39-3	**Barium**	**39.0**	**10.0**	**0.71**	**ug/L**
7440-41-7	Beryllium	0.10U	5.00	0.10	ug/L
7440-43-9	**Cadmium**	**0.97J**	**5.00**	**0.16**	**ug/L**
7440-70-2	**Calcium**	**51700**	**100**	**45.7**	**ug/L**
7440-47-3	**Chromium**	**2.99J**	**10.0**	**0.26**	**ug/L**
7440-48-4	Cobalt	0.58U	10.0	0.58	ug/L
7440-50-8	**Copper**	**9.62J**	**10.0**	**1.01**	**ug/L**
7439-89-6	Iron	12.6U	100	12.6	ug/L
7439-92-1	Lead	1.96U	15.0	1.96	ug/L
7439-95-4	**Magnesium**	**48500**	**100**	**16.5**	**ug/L**
7439-96-5	**Manganese**	**4.45J**	**15.0**	**1.31**	**ug/L**
7440-02-0	Nickel	1.13U	40.0	1.13	ug/L
7440-09-7	**Potassium**	**7650**	**500**	**34.6**	**ug/L**
7782-49-2	**Selenium**	**7.84J**	**40.0**	**4.42**	**ug/L**
7440-22-4	Silver	0.70U	10.0	0.70	ug/L
7440-23-5	**Sodium**	**54700**	**1000**	**61.1**	**ug/L**
7440-28-0	Thallium	3.04U	20.0	3.04	ug/L
7440-62-2	**Vanadium**	**47.6**	**20.0**	**1.25**	**ug/L**
7440-66-6	**Zinc**	**87.9**	**20.0**	**4.51**	**ug/L**

SW-846 6010C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/31/2012 12:25	493522	SW-846 3010A	1	11/09/2012 13:54	CLB	494287

CAS#	Parameter	Result	RDL	MDL	Units
7440-38-2	**Arsenic**	**3.90J**	**10.0**	**3.59**	**ug/L**

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/31/2012 12:25	493519	SW-846 3005 Dissolved	1	11/03/2012 18:22	CLB	493804

CAS#	Parameter	Result	RDL	MDL	Units
7440-38-2	Arsenic	3.59U	10.0	3.59	ug/L

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/31/2012 12:25	493519	SW-846 3005 Dissolved	1	11/08/2012 15:40	BNB	494196

CAS#	Parameter	Result	RDL	MDL	Units
7429-90-5	**Aluminum**	**45.5J**	**200**	**30.3**	**ug/L**
7440-36-0	Antimony	3.11U	60.0	3.11	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210310803	**LF05-MW-S-01**	Water	10/30/2012 14:45	10/31/2012 09:20

SW-846 6010C Dissolved

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
10/31/2012 12:25	493519	SW-846 3005 Dissolved	1	11/08/2012 15:40	BNB	494196

CAS#	Parameter	Result	RDL	MDL	Units
7440-39-3	**Barium**	**38.0**	**10.0**	**0.71**	**ug/L**
7440-41-7	Beryllium	0.10U	5.00	0.10	ug/L
7440-43-9	**Cadmium**	**0.59J**	**5.00**	**0.16**	**ug/L**
7440-70-2	**Calcium**	**51600**	**100**	**45.7**	**ug/L**
7440-47-3	**Chromium**	**2.32J**	**10.0**	**0.26**	**ug/L**
7440-48-4	Cobalt	0.58U	10.0	0.58	ug/L
7440-50-8	**Copper**	**9.35J**	**10.0**	**1.01**	**ug/L**
7439-89-6	Iron	12.6U	100	12.6	ug/L
7439-92-1	Lead	1.96U	15.0	1.96	ug/L
7439-95-4	**Magnesium**	**49000**	**100**	**16.5**	**ug/L**
7439-96-5	Manganese	1.31U	15.0	1.31	ug/L
7440-02-0	Nickel	1.13U	40.0	1.13	ug/L
7440-09-7	**Potassium**	**7700**	**500**	**34.6**	**ug/L**
7782-49-2	**Selenium**	**7.14J**	**40.0**	**4.42**	**ug/L**
7440-22-4	Silver	0.70U	10.0	0.70	ug/L
7440-23-5	**Sodium**	**54900**	**1000**	**61.1**	**ug/L**
7440-28-0	Thallium	3.04U	20.0	3.04	ug/L
7440-62-2	**Vanadium**	**48.9**	**20.0**	**1.25**	**ug/L**
7440-66-6	**Zinc**	**84.2**	**20.0**	**4.51**	**ug/L**

SM 4500 NH3 BE Ammonia

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
11/03/2012 11:30	493789	SM4500 NH3 BE TKN	1	11/04/2012 14:40	DNM	493862

CAS#	Parameter	Result	RDL	MDL	Units
7664-41-7	Ammonia	0.24U	1.0	0.24	mg/L-N

EPA 300.0

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/31/2012 19:37	AEL	493575

CAS#	Parameter	Result	RDL	MDL	Units
14797-55-8	**Nitrate**	**1.59**	**0.500**	**0.115**	**mg/L**
14797-65-0	Nitrite	0.015U	0.500	0.015	mg/L

EPA 300.0

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			50	11/01/2012 10:55	AEL	493575

CAS#	Parameter	Result	RDL	MDL	Units
16887-00-6	**Chloride**	**66.4**	**5.00**	**3.15**	**mg/L**
14808-79-8	**Sulfate**	**103**	**10.0**	**5.75**	**mg/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21210310803	**LF05-MW-S-01**	Water	10/30/2012 14:45	10/31/2012 09:20

SM 5310B TOC

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	11/01/2012 17:24	DNM	493622

CAS#	Parameter	Result	RDL	MDL	Units
C-012	Total Organic Carbon	0.30U	1.0	0.30	mg/L

SW-846 7196A Chromium VI

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	10/31/2012 11:01	JEM	493538

CAS#	Parameter	Result	RDL	MDL	Units
18540-29-9	Chromium VI	4.00U	10.0	4.00	ug/L

GC/MS Volatiles Quality Control Summary

Analytical Batch 493799		**Client ID**	MB493799			LCS493799			LCSD493799		
Prep Batch N/A		**GCAL ID**	1124605			1124606			1124607		
		Sample Type	Method Blank			LCS			LCSD		
		Analytical Date	11/03/2012 12:37			11/03/2012 10:37			11/03/2012 11:12		
		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	43.8	88	40 - 140	43.2	86	1	30
74-97-5	Bromochloromethane		0.127U	0.127	50.0	53.9	108	65 - 130	53.0	106	2	30
75-27-4	Bromodichloromethane		0.083U	0.083	50.0	55.2	110	75 - 120	55.0	110	0.4	30
75-25-2	Bromoform		0.215U	0.215	50.0	51.1	102	70 - 130	50.4	101	1	30
74-83-9	Bromomethane		0.427U	0.427	50.0	48.0	96	30 - 145	49.1	98	2	30
75-15-0	Carbon disulfide		0.190U	0.190	50.0	49.7	99	35 - 160	51.9	104	4	30
56-23-5	Carbon tetrachloride		0.248U	0.248	50.0	54.7	109	65 - 140	54.9	110	0.4	30
75-00-3	Chloroethane		0.235U	0.235	50.0	52.6	105	60 - 135	51.7	103	2	30
136777-61-2	m,p-Xylene		0.123U	0.123	100	102	102	75 - 130	102	102	0	30
67-66-3	Chloroform		0.155U	0.155	50.0	51.3	103	65 - 135	52.0	104	1	30
74-87-3	Chloromethane		0.144U	0.144	50.0	49.1	98	40 - 125	51.9	104	6	30
74-95-3	Dibromomethane		0.211U	0.211	50.0	54.0	108	75 - 125	53.0	106	2	30
75-71-8	Dichlorodifluoromethane		0.145U	0.145	50.0	54.1	108	30 - 155	55.5	111	3	30
75-34-3	1,1-Dichloroethane		0.171U	0.171	50.0	53.3	107	70 - 135	53.4	107	0.2	30
107-06-2	1,2-Dichloroethane		0.116U	0.116	50.0	53.1	106	70 - 130	53.6	107	0.9	30
156-59-2	cis-1,2-Dichloroethene		0.103U	0.103	50.0	52.6	105	70 - 125	53.2	106	1	30
156-60-5	trans-1,2-Dichloroethene		0.077U	0.077	50.0	52.7	105	60 - 140	53.2	106	0.9	30
75-09-2	Methylene chloride		0.149U	0.149	50.0	51.1	102	55 - 140	50.4	101	1	30
78-87-5	1,2-Dichloropropane		0.150U	0.150	50.0	53.7	107	75 - 125	53.7	107	0	30
10061-01-5	cis-1,3-Dichloropropene		0.124U	0.124	50.0	53.7	107	70 - 130	54.3	109	1	30
10061-02-6	trans-1,3-Dichloropropene		0.128U	0.128	50.0	52.2	104	55 - 140	52.7	105	1	30
100-41-4	Ethylbenzene		0.109U	0.109	50.0	52.2	104	75 - 125	52.4	105	0.4	30
591-78-6	2-Hexanone		0.122U	0.122	50.0	44.8	90	55 - 130	43.6	87	3	30
98-82-8	Isopropylbenzene (Cumene)		0.130U	0.130	50.0	51.4	103	75 - 125	51.7	103	0.6	30
78-93-3	2-Butanone		0.142U	0.142	50.0	44.5	89	30 - 150	43.5	87	2	30
108-10-1	4-Methyl-2-pentanone		0.120U	0.120	50.0	47.7	95	60 - 135	46.8	94	2	30
103-65-1	n-Propylbenzene		0.727U	0.727	50.0	53.0	106	70 - 130	54.0	108	2	30
100-42-5	Styrene		0.089U	0.089	50.0	50.5	101	65 - 135	50.6	101	0.2	30
127-18-4	Tetrachloroethene		0.193U	0.193	50.0	51.7	103	45 - 150	52.6	105	2	30
630-20-6	1,1,1,2-Tetrachloroethane		0.120U	0.120	50.0	54.7	109	80 - 130	53.8	108	2	30
79-34-5	1,1,2,2-Tetrachloroethane		0.109U	0.109	50.0	50.4	101	65 - 130	49.9	100	1	30
120-82-1	1,2,4-Trichlorobenzene		0.105U	0.105	50.0	53.5	107	65 - 135	54.1	108	1	30
71-55-6	1,1,1-Trichloroethane		0.123U	0.123	50.0	54.8	110	65 - 130	54.8	110	0	30

GC/MS Volatiles Quality Control Summary

Analytical Batch	493799	**Client ID**	MB493799			LCS493799			LCSD493799			
Prep Batch	N/A	**GCAL ID**	1124605			1124606			1124607			
		Sample Type	Method Blank			LCS			LCSD			
		Analytical Date	11/03/2012 12:37			11/03/2012 10:37			11/03/2012 11:12			
		Matrix	Water			Water			Water			
SW-846 8260B		**Units**	**Result**	ug/L **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	52.2	104	75 - 125	51.9	104	0.6	30
75-69-4	Trichlorofluoromethane		0.157U	0.157	50.0	54.5	109	60 - 145	55.2	110	1	30
96-18-4	1,2,3-Trichloropropane		0.065U	0.065	50.0	50.7	101	75 - 125	49.7	99	2	30
95-63-6	1,2,4-Trimethylbenzene		0.084U	0.084	50.0	52.5	105	75 - 130	53.4	107	2	30
108-67-8	1,3,5-Trimethylbenzene		0.066U	0.066	50.0	51.2	102	75 - 130	52.2	104	2	30
75-01-4	Vinyl chloride		0.127U	0.127	50.0	52.4	105	50 - 145	55.4	111	6	30
95-47-6	o-Xylene		0.055U	0.055	50.0	50.9	102	80 - 120	50.4	101	1	30
96-12-8	1,2-Dibromo-3-chloropropane		0.194U	0.194	50.0	48.8	98	50 - 130	48.3	97	1	30
106-93-4	1,2-Dibromoethane		0.102U	0.102	50.0	52.0	104	80 - 120	51.1	102	2	30
1634-04-4	tert-Butyl methyl ether (MTBE)		0.078U	0.078	50.0	52.0	104	65 - 125	51.4	103	1	30
99-87-6	4-Isopropyltoluene		0.070U	0.070	50.0	53.8	108	75 - 130	54.7	109	2	30
594-20-7	2,2-Dichloropropane		0.170U	0.170	50.0	54.3	109	70 - 135	56.0	112	3	30
563-58-6	1,1-Dichloropropene		0.052U	0.052	50.0	53.4	107	75 - 130	55.0	110	3	30
142-28-9	1,3-Dichloropropane		0.059U	0.059	50.0	50.5	101	75 - 125	49.4	99	2	30
108-86-1	Bromobenzene		0.145U	0.145	50.0	51.0	102	75 - 125	51.4	103	0.8	30
95-49-8	2-Chlorotoluene		0.080U	0.080	50.0	50.2	100	75 - 125	50.8	102	1	30
106-43-4	4-Chlorotoluene		0.124U	0.124	50.0	52.0	104	75 - 130	52.3	105	0.6	30
98-06-6	tert-Butylbenzene		0.087U	0.087	50.0	51.3	103	70 - 130	52.2	104	2	30
135-98-8	sec-Butylbenzene		0.107U	0.107	50.0	53.4	107	70 - 125	54.7	109	2	30
541-73-1	1,3-Dichlorobenzene		0.138U	0.138	50.0	51.8	104	75 - 125	52.6	105	2	30
106-46-7	1,4-Dichlorobenzene		0.083U	0.083	50.0	51.5	103	75 - 125	52.8	106	2	30
104-51-8	n-Butylbenzene		0.123U	0.123	50.0	53.4	107	70 - 135	55.4	111	4	30
95-50-1	1,2-Dichlorobenzene		0.135U	0.135	50.0	51.8	104	70 - 120	52.3	105	1	30
87-68-3	Hexachlorobutadiene		0.265U	0.265	50.0	54.7	109	50 - 140	56.6	113	3	30
91-20-3	Naphthalene		0.176U	0.176	50.0	50.1	100	55 - 140	49.0	98	2	30
87-61-6	1,2,3-Trichlorobenzene		0.079U	0.079	50.0	52.8	106	55 - 140	53.7	107	2	30
75-35-4	1,1-Dichloroethene		0.208U	0.208	50.0	51.4	103	70 - 130	53.5	107	4	30
71-43-2	Benzene		0.111U	0.111	50.0	51.6	103	80 - 120	51.6	103	0	30
79-01-6	Trichloroethene		0.161U	0.161	50.0	51.4	103	70 - 125	51.9	104	1	30
108-88-3	Toluene		0.122U	0.122	50.0	51.8	104	75 - 120	51.8	104	0	30
108-90-7	Chlorobenzene		0.083U	0.083	50.0	50.6	101	80 - 120	50.2	100	0.8	30
Surrogate												
460-00-4	4-Bromofluorobenzene		50.1	100	50	49.5	99	75 - 120	49.4	99		

GC/MS Volatiles Quality Control Summary

Analytical Batch 493799		**Client ID**	MB493799			LCS493799			LCSD493799		
Prep Batch N/A		**GCAL ID**	1124605			1124606			1124607		
		Sample Type	Method Blank			LCS			LCSD		
		Analytical Date	11/03/2012 12:37			11/03/2012 10:37			11/03/2012 11:12		
		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		49.5	99	50	49.8	100	85 - 115	50.1	100		
2037-26-5	Toluene d8		50.1	100	50	49.7	99	85 - 120	49.2	98		
17060-07-0	1,2-Dichloroethane-d4		49.9	100	50	50	100	70 - 120	50.1	100		

Analytical Batch 493799		**Client ID**	MOUI(SAC)GW136-(35)ONBA2			MOUI(SAC)GW136-(35)ONBA2 MS			MOUI(SAC)GW136-(35)ONBA2 MSD		
Prep Batch N/A		**GCAL ID**	21210301505			21210301506			21210301507		
		Sample Type	SAMPLE			MS			MSD		
		Analytical Date	11/03/2012 12:59			11/03/2012 13:20			11/03/2012 13:42		
		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	29.8	60	40 - 140	26.6	53	11	30
74-97-5	Bromochloromethane		0.00	0.127	50.0	54.4	109	65 - 130	49.0	98	10	30
75-27-4	Bromodichloromethane		0.00	0.083	50.0	58.4	117	75 - 120	51.1	102	13	30
75-25-2	Bromoform		0.00	0.215	50.0	55.2	110	70 - 130	49.2	98	11	30
74-83-9	Bromomethane		0.00	0.427	50.0	50.3	101	30 - 145	45.0	90	11	30
75-15-0	Carbon disulfide		0.00	0.190	50.0	52.5	105	35 - 160	46.4	93	12	30
56-23-5	Carbon tetrachloride		0.00	0.248	50.0	56.5	113	65 - 140	48.9	98	14	30
75-00-3	Chloroethane		0.00	0.235	50.0	48.6	97	60 - 135	38.5	77	23	30
136777-61-2	m,p-Xylene		0.00	0.123	100	107	107	75 - 130	92.7	93	14	30
67-66-3	Chloroform		0.00	0.155	50.0	54.3	109	65 - 135	47.3	95	14	30
74-87-3	Chloromethane		0.00	0.144	50.0	50.9	102	40 - 125	46.9	94	8	30
74-95-3	Dibromomethane		0.00	0.211	50.0	56.2	112	75 - 125	50.8	102	10	30
75-71-8	Dichlorodifluoromethane		0.00	0.145	50.0	53.4	107	30 - 155	47.5	95	12	30
75-34-3	1,1-Dichloroethane		0.00	0.171	50.0	56.0	112	70 - 135	48.9	98	14	30
107-06-2	1,2-Dichloroethane		0.00	0.116	50.0	55.5	111	70 - 130	49.8	100	11	30
156-59-2	cis-1,2-Dichloroethene		5.70	0.103	50.0	60.9	110	70 - 125	53.5	96	13	30
156-60-5	trans-1,2-Dichloroethene		0.00	0.077	50.0	55.8	112	60 - 140	48.3	97	14	30
75-09-2	Methylene chloride		0.00	0.149	50.0	53.0	106	55 - 140	47.3	95	11	30
78-87-5	1,2-Dichloropropane		0.00	0.150	50.0	58.1	116	75 - 125	52.1	104	11	30
10061-01-5	cis-1,3-Dichloropropene		0.00	0.124	50.0	56.7	113	70 - 130	50.2	100	12	30
10061-02-6	trans-1,3-Dichloropropene		0.00	0.128	50.0	55.9	112	55 - 140	49.5	99	12	30

GC/MS Volatiles Quality Control Summary

Analytical Batch 493799	**Client ID**	MOUI(SAC)GW136-(35)ONBA2	MOUI(SAC)GW136-(35)ONBA2 MS	MOUI(SAC)GW136-(35)ONBA2 MSD
Prep Batch N/A	**GCAL ID**	21210301505	21210301506	21210301507
	Sample Type	SAMPLE	MS	MSD
	Analytical Date	11/03/2012 12:59	11/03/2012 13:20	11/03/2012 13:42
	Matrix	Water	Water	Water

SW-846 8260B		**Units**	ug/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
100-41-4	Ethylbenzene	0.00	0.109	50.0	55.0	110	75 - 125	47.5	95	15	30
591-78-6	2-Hexanone	0.00	0.122	50.0	44.2	88	55 - 130	39.6	79	11	30
98-82-8	Isopropylbenzene (Cumene)	0.00	0.130	50.0	53.4	107	75 - 125	45.8	92	15	30
78-93-3	2-Butanone	0.00	0.142	50.0	40.2	80	30 - 150	36.0	72	11	30
108-10-1	4-Methyl-2-pentanone	0.00	0.120	50.0	52.5	105	60 - 135	47.2	94	11	30
103-65-1	n-Propylbenzene	0.00	0.727	50.0	54.6	109	70 - 130	47.8	96	13	30
100-42-5	Styrene	0.00	0.089	50.0	53.1	106	65 - 135	46.5	93	13	30
127-18-4	Tetrachloroethene	128	0.193	50.0	232	**208***	45 - 150	215	**174***	8	30
630-20-6	1,1,1,2-Tetrachloroethane	0.00	0.120	50.0	57.9	116	80 - 130	50.5	101	14	30
79-34-5	1,1,2,2-Tetrachloroethane	0.00	0.109	50.0	55.3	111	65 - 130	49.8	100	10	30
120-82-1	1,2,4-Trichlorobenzene	0.00	0.105	50.0	51.9	104	65 - 135	48.2	96	7	30
71-55-6	1,1,1-Trichloroethane	0.00	0.123	50.0	57.5	115	65 - 130	49.3	99	15	30
79-00-5	1,1,2-Trichloroethane	0.00	0.159	50.0	55.8	112	75 - 125	48.9	98	13	30
75-69-4	Trichlorofluoromethane	0.00	0.157	50.0	56.7	113	60 - 145	44.5	89	24	30
96-18-4	1,2,3-Trichloropropane	0.00	0.065	50.0	55.2	110	75 - 125	49.4	99	11	30
95-63-6	1,2,4-Trimethylbenzene	0.00	0.084	50.0	54.0	108	75 - 130	47.8	96	12	30
108-67-8	1,3,5-Trimethylbenzene	0.00	0.066	50.0	52.4	105	75 - 130	46.0	92	13	30
75-01-4	Vinyl chloride	0.00	0.127	50.0	53.7	107	50 - 145	48.0	96	11	30
95-47-6	o-Xylene	0.00	0.055	50.0	53.8	108	80 - 120	46.7	93	14	30
96-12-8	1,2-Dibromo-3-chloropropane	0.00	0.194	50.0	54.6	109	50 - 130	49.5	99	10	30
106-93-4	1,2-Dibromoethane	0.00	0.102	50.0	55.8	112	80 - 120	49.0	98	13	30
1634-04-4	tert-Butyl methyl ether (MTBE)	0.00	0.078	50.0	54.5	109	65 - 125	49.0	98	11	30
99-87-6	4-Isopropyltoluene	0.00	0.070	50.0	54.9	110	75 - 130	48.2	96	13	30
594-20-7	2,2-Dichloropropane	0.00	0.170	50.0	57.2	114	70 - 135	49.7	99	14	30
563-58-6	1,1-Dichloropropene	0.00	0.052	50.0	56.3	113	75 - 130	48.6	97	15	30
142-28-9	1,3-Dichloropropane	0.00	0.059	50.0	52.8	106	75 - 125	47.0	94	12	30
108-86-1	Bromobenzene	0.00	0.145	50.0	52.9	106	75 - 125	47.1	94	12	30
95-49-8	2-Chlorotoluene	0.00	0.080	50.0	51.6	103	75 - 125	45.6	91	12	30
106-43-4	4-Chlorotoluene	0.00	0.124	50.0	53.3	107	75 - 130	47.1	94	12	30
98-06-6	tert-Butylbenzene	0.00	0.087	50.0	52.2	104	70 - 130	45.7	91	13	30
135-98-8	sec-Butylbenzene	0.00	0.107	50.0	54.0	108	70 - 125	47.1	94	14	30
541-73-1	1,3-Dichlorobenzene	0.00	0.138	50.0	52.9	106	65 - 130	47.4	95	11	30
106-46-7	1,4-Dichlorobenzene	0.00	0.083	50.0	52.6	105	65 - 130	47.5	95	10	30

GC/MS Volatiles Quality Control Summary

Analytical Batch 493799		**Client ID**	MOUI(SAC)GW136-(35)ONBA2			MOUI(SAC)GW136-(35)ONBA2 MS			MOUI(SAC)GW136-(35)ONBA2 MSD		
Prep Batch N/A		**GCAL ID**	21210301505			21210301506			21210301507		
		Sample Type	SAMPLE			MS			MSD		
		Analytical Date	11/03/2012 12:59			11/03/2012 13:20			11/03/2012 13:42		
		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	53.4	107	70 - 135	47.1	94	13	30
95-50-1	1,2-Dichlorobenzene		0.00	0.135	50.0	52.9	106	70 - 120	47.6	95	11	30
87-68-3	Hexachlorobutadiene		0.00	0.265	50.0	52.2	104	50 - 140	47.3	95	10	30
91-20-3	Naphthalene		0.00	0.176	50.0	49.5	99	55 - 140	48.0	96	3	30
87-61-6	1,2,3-Trichlorobenzene		0.00	0.079	50.0	51.9	104	55 - 140	48.4	97	7	30
75-35-4	1,1-Dichloroethene		0.00	0.208	50.0	56.6	113	70 - 130	47.3	95	18	30
71-43-2	Benzene		0.00	0.111	50.0	54.4	109	80 - 120	48.0	96	13	30
79-01-6	Trichloroethene		11.6	0.161	50.0	64.4	106	70 - 125	57.7	92	11	30
108-88-3	Toluene		0.00	0.122	50.0	54.7	109	75 - 120	47.3	95	15	30
108-90-7	Chlorobenzene		0.00	0.083	50.0	53.3	107	80 - 120	46.1	92	14	30
Surrogate												
460-00-4	4-Bromofluorobenzene				50	50.3	101	75 - 120	49.7	99		
1868-53-7	Dibromofluoromethane				50	50.3	101	85 - 115	50	100		
2037-26-5	Toluene d8				50	49.8	100	85 - 120	49.3	99		
17060-07-0	1,2-Dichloroethane-d4				50	52.1	104	70 - 120	52.4	105		

Analytical Batch 493892		**Client ID**	MB493892			LCS493892			LCSD493892		
Prep Batch N/A		**GCAL ID**	1124987			1124988			1124989		
		Sample Type	Method Blank			LCS			LCSD		
		Analytical Date	11/05/2012 13:27			11/05/2012 12:02			11/05/2012 12:23		
		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	42.7	85	40 - 140	46.3	93	8	30
74-97-5	Bromochloromethane		0.127U	0.127	50.0	54.7	109	65 - 130	55.7	111	2	30
75-27-4	Bromodichloromethane		0.083U	0.083	50.0	56.5	113	75 - 120	55.1	110	3	30
75-25-2	Bromoform		0.215U	0.215	50.0	51.7	103	70 - 130	54.1	108	5	30
74-83-9	Bromomethane		0.427U	0.427	50.0	46.8	94	30 - 145	51.2	102	9	30
75-15-0	Carbon disulfide		0.190U	0.190	50.0	56.6	113	35 - 160	55.1	110	3	30
56-23-5	Carbon tetrachloride		0.248U	0.248	50.0	54.7	109	65 - 140	54.4	109	0.5	30
75-00-3	Chloroethane		0.235U	0.235	50.0	53.1	106	60 - 135	53.7	107	1	30
136777-61-2	m,p-Xylene		0.123U	0.123	100	107	107	75 - 130	107	107	0	30

GC/MS Volatiles Quality Control Summary

Analytical Batch 493892		**Client ID**	MB493892			LCS493892			LCSD493892		
Prep Batch N/A		**GCAL ID**	1124987			1124988			1124989		
		Sample Type	Method Blank			LCS			LCSD		
		Analytical Date	11/05/2012 13:27			11/05/2012 12:02			11/05/2012 12:23		
		Matrix	Water			Water			Water		
SW-846 8260B		**Units**	**Result**	ug/L **RDL**	**Spike Added**	**Result**	**% R**	**Control Limits % R**	**Result**	**% R**	**RPD**	**RPD Limit**
67-66-3	Chloroform		0.155U	0.155	50.0	53.3	107	65 - 135	52.0	104	2	30
74-87-3	Chloromethane		0.144U	0.144	50.0	52.7	105	40 - 125	53.8	108	2	30
74-95-3	Dibromomethane		0.211U	0.211	50.0	55.0	110	75 - 125	55.6	111	1	30
75-71-8	Dichlorodifluoromethane		0.145U	0.145	50.0	52.5	105	30 - 155	51.3	103	2	30
75-34-3	1,1-Dichloroethane		0.171U	0.171	50.0	54.3	109	70 - 135	54.5	109	0.4	30
107-06-2	1,2-Dichloroethane		0.116U	0.116	50.0	53.8	108	70 - 130	54.1	108	0.6	30
156-59-2	cis-1,2-Dichloroethene		0.103U	0.103	50.0	53.8	108	70 - 125	54.0	108	0.4	30
156-60-5	trans-1,2-Dichloroethene		0.077U	0.077	50.0	53.9	108	60 - 140	53.5	107	0.7	30
75-09-2	Methylene chloride		0.149U	0.149	50.0	52.5	105	55 - 140	52.5	105	0	30
78-87-5	1,2-Dichloropropane		0.150U	0.150	50.0	55.0	110	75 - 125	55.0	110	0	30
10061-01-5	cis-1,3-Dichloropropene		0.124U	0.124	50.0	55.2	110	70 - 130	55.6	111	0.7	30
10061-02-6	trans-1,3-Dichloropropene		0.128U	0.128	50.0	53.8	108	55 - 140	54.2	108	0.7	30
100-41-4	Ethylbenzene		0.109U	0.109	50.0	53.5	107	75 - 125	54.0	108	0.9	30
591-78-6	2-Hexanone		0.122U	0.122	50.0	43.3	87	55 - 130	47.1	94	8	30
98-82-8	Isopropylbenzene (Cumene)		0.130U	0.130	50.0	51.9	104	75 - 125	52.4	105	1	30
78-93-3	2-Butanone		0.142U	0.142	50.0	43.5	87	30 - 150	46.5	93	7	30
108-10-1	4-Methyl-2-pentanone		0.120U	0.120	50.0	46.5	93	60 - 135	49.2	98	6	30
103-65-1	n-Propylbenzene		0.727U	0.727	50.0	53.3	107	70 - 130	53.3	107	0	30
100-42-5	Styrene		0.089U	0.089	50.0	51.9	104	65 - 135	52.5	105	1	30
127-18-4	Tetrachloroethene		0.193U	0.193	50.0	52.8	106	45 - 150	53.1	106	0.6	30
630-20-6	1,1,1,2-Tetrachloroethane		0.120U	0.120	50.0	55.9	112	80 - 130	57.1	114	2	30
79-34-5	1,1,2,2-Tetrachloroethane		0.109U	0.109	50.0	49.9	100	65 - 130	52.1	104	4	30
120-82-1	1,2,4-Trichlorobenzene		0.105U	0.105	50.0	52.8	106	65 - 135	53.7	107	2	30
71-55-6	1,1,1-Trichloroethane		0.123U	0.123	50.0	55.2	110	65 - 130	54.7	109	0.9	30
79-00-5	1,1,2-Trichloroethane		0.159U	0.159	50.0	53.2	106	75 - 125	54.0	108	1	30
75-69-4	Trichlorofluoromethane		0.157U	0.157	50.0	55.3	111	60 - 145	54.4	109	2	30
96-18-4	1,2,3-Trichloropropane		0.065U	0.065	50.0	49.9	100	75 - 125	52.0	104	4	30
95-63-6	1,2,4-Trimethylbenzene		0.084U	0.084	50.0	53.6	107	75 - 130	53.9	108	0.6	30
108-67-8	1,3,5-Trimethylbenzene		0.066U	0.066	50.0	51.6	103	75 - 130	51.3	103	0.6	30
75-01-4	Vinyl chloride		0.127U	0.127	50.0	54.7	109	50 - 145	53.2	106	3	30
95-47-6	o-Xylene		0.055U	0.055	50.0	52.3	105	80 - 120	53.4	107	2	30
96-12-8	1,2-Dibromo-3-chloropropane		0.194U	0.194	50.0	47.8	96	50 - 130	50.5	101	5	30
106-93-4	1,2-Dibromoethane		0.102U	0.102	50.0	52.3	105	80 - 120	54.0	108	3	30

GC/MS Volatiles Quality Control Summary

Analytical Batch	493892	**Client ID**	MB493892			LCS493892			LCSD493892		
Prep Batch	N/A	**GCAL ID**	1124987			1124988			1124989		
		Sample Type	Method Blank			LCS			LCSD		
		Analytical Date	11/05/2012 13:27			11/05/2012 12:02			11/05/2012 12:23		
		Matrix	Water			Water			Water		
SW-846 8260B		**Units**	**Result**	ug/L **RDL**	**Spike Added**	**Result**	**% R**	**Control Limits % R**	**Result**	**% R**	**RPD**	**RPD Limit**
1634-04-4	tert-Butyl methyl ether (MTBE)		0.078U	0.078	50.0	51.8	104	65 - 125	52.7	105	2	30
99-87-6	4-Isopropyltoluene		0.070U	0.070	50.0	54.1	108	75 - 130	53.2	106	2	30
594-20-7	2,2-Dichloropropane		0.170U	0.170	50.0	57.3	115	70 - 135	55.0	110	4	30
563-58-6	1,1-Dichloropropene		0.052U	0.052	50.0	54.4	109	75 - 130	54.1	108	0.6	30
142-28-9	1,3-Dichloropropane		0.059U	0.059	50.0	51.3	103	75 - 125	52.5	105	2	30
108-86-1	Bromobenzene		0.145U	0.145	50.0	51.3	103	75 - 125	52.4	105	2	30
95-49-8	2-Chlorotoluene		0.080U	0.080	50.0	51.0	102	75 - 125	50.8	102	0.4	30
106-43-4	4-Chlorotoluene		0.124U	0.124	50.0	52.5	105	75 - 130	53.0	106	0.9	30
98-06-6	tert-Butylbenzene		0.087U	0.087	50.0	51.2	102	70 - 130	50.6	101	1	30
135-98-8	sec-Butylbenzene		0.107U	0.107	50.0	53.4	107	70 - 125	52.7	105	1	30
541-73-1	1,3-Dichlorobenzene		0.138U	0.138	50.0	53.2	106	75 - 125	53.2	106	0	30
106-46-7	1,4-Dichlorobenzene		0.083U	0.083	50.0	52.6	105	75 - 125	54.4	109	3	30
104-51-8	n-Butylbenzene		0.123U	0.123	50.0	52.8	106	70 - 135	52.7	105	0.2	30
95-50-1	1,2-Dichlorobenzene		0.135U	0.135	50.0	52.6	105	70 - 120	53.4	107	2	30
87-68-3	Hexachlorobutadiene		0.265U	0.265	50.0	53.4	107	50 - 140	53.7	107	0.6	30
91-20-3	Naphthalene		0.176U	0.176	50.0	47.0	94	55 - 140	51.9	104	10	30
87-61-6	1,2,3-Trichlorobenzene		0.079U	0.079	50.0	52.0	104	55 - 140	54.4	109	5	30
75-35-4	1,1-Dichloroethene		0.208U	0.208	50.0	56.9	114	70 - 130	53.1	106	7	30
71-43-2	Benzene		0.111U	0.111	50.0	54.1	108	80 - 120	54.1	108	0	30
79-01-6	Trichloroethene		0.161U	0.161	50.0	52.3	105	70 - 125	52.7	105	0.8	30
108-88-3	Toluene		0.122U	0.122	50.0	53.5	107	75 - 120	53.9	108	0.7	30
108-90-7	Chlorobenzene		0.083U	0.083	50.0	51.8	104	80 - 120	52.6	105	2	30
Surrogate												
460-00-4	4-Bromofluorobenzene		50.7	101	50	50.7	101	75 - 120	50.4	101		
1868-53-7	Dibromofluoromethane		49	98	50	50.2	100	85 - 115	50.5	101		
2037-26-5	Toluene d8		50.6	101	50	49.8	100	85 - 120	50.4	101		
17060-07-0	1,2-Dichloroethane-d4		49.7	99	50	49.1	98	70 - 120	49.4	99		

Inorganics Quality Control Summary

Analytical Batch	493620	**Client ID**	MB493521		LCS493521		
Prep Batch	493521	**GCAL ID**	1122911		1122912		
Prep Method	SW-846	**Sample Type**	Method Blank		LCS		
	7470A	**Prep Date**	10/31/2012 12:25		10/31/2012 12:25		
		Analytical Date	11/01/2012 12:23		11/01/2012 12:25		
		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	4.98	100	80 - 120

Analytical Batch	493620	**Client ID**	LF05-MW-C-01		1122464MS			1122464MSD			
Prep Batch	493521	**GCAL ID**	21210300501		1122913			1122914			
Prep Method	SW-846	**Sample Type**	SAMPLE		MS			MSD			
	7470A	**Prep Date**	10/31/2012 12:25		10/31/2012 12:25			10/31/2012 12:25			
		Analytical Date	11/01/2012 12:36		11/01/2012 12:31			11/01/2012 12:33			
		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	0.06912	0.068	5.00	5.57	110	80 - 120	5.27	104	6	30

Inorganics Quality Control Summary

Analytical Batch	494196	**Client ID**	MB493522	LCS493522
Prep Batch	493522	**GCAL ID**	1122917	1122918
Prep Method	SW-846	**Sample Type**	Method Blank	LCS
	3010A	**Prep Date**	10/31/2012 12:25	10/31/2012 12:25
		Analytical Date	11/08/2012 15:48	11/08/2012 16:09
		Matrix	Water	Water

SW-846 6010C		**Units**	ug/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
7429-90-5	Aluminum	41.9J	30.3	5000	4920	98	80 - 120
7440-36-0	Antimony	3.11U	3.11	500	483	97	80 - 120
7440-38-2	Arsenic	3.59U	3.59	500	502	100	80 - 120
7440-39-3	Barium	0.71U	0.71	500	484	97	80 - 120
7440-41-7	Beryllium	0.10U	0.10	500	491	98	80 - 120
7440-43-9	Cadmium	0.16U	0.16	500	487	97	80 - 120
7440-70-2	Calcium	80.4J	45.7	5000	4960	99	80 - 120
7440-47-3	Chromium	0.26U	0.26	500	482	96	80 - 120
7440-48-4	Cobalt	0.58U	0.58	500	492	98	80 - 120
7440-50-8	Copper	1.01U	1.01	500	480	96	80 - 120
7439-89-6	Iron	12.6U	12.6	5000	4840	97	80 - 120
7439-92-1	Lead	2.32J	1.96	500	504	101	80 - 120
7439-95-4	Magnesium	16.5U	16.5	5000	4940	99	80 - 120
7439-96-5	Manganese	1.31U	1.31	500	483	97	80 - 120
7440-02-0	Nickel	1.13U	1.13	500	502	100	80 - 120
7440-09-7	Potassium	34.6U	34.6	10000	9870	99	80 - 120
7782-49-2	Selenium	4.42U	4.42	500	500	100	80 - 120
7440-22-4	Silver	0.91J	0.70	500	486	97	80 - 120
7440-23-5	Sodium	61.1U	61.1	20000	19400	97	80 - 120
7440-28-0	Thallium	3.04U	3.04	500	496	99	80 - 120
7440-62-2	Vanadium	1.25U	1.25	500	481	96	80 - 120
7440-66-6	Zinc	4.51U	4.51	500	491	98	80 - 120

Inorganics Quality Control Summary

Analytical Batch	494196	**Client ID**	LF05-MW-C-01	1122464MS	1122464MSD
Prep Batch	493522	**GCAL ID**	21210300501	1122919	1122920
Prep Method	SW-846	**Sample Type**	SAMPLE	MS	MSD
	3010A	**Prep Date**	10/31/2012 12:25	10/31/2012 12:25	10/31/2012 12:25
		Analytical Date	11/08/2012 16:15	11/08/2012 16:24	11/08/2012 16:30
		Matrix	Water	Water	Water

SW-846 6010C		**Units**	ug/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
7429-90-5	Aluminum	68.3	30.3	5000	5290	104	80 - 120	5300	105	0.1	20
7440-36-0	Antimony	0.0	3.11	500	530	106	80 - 120	564	113	6	20
7440-39-3	Barium	80.1	0.71	500	608	106	80 - 120	622	108	2	20
7440-41-7	Beryllium	0.0	0.10	500	541	108	80 - 120	556	111	3	20
7440-43-9	Cadmium	0.81	0.16	500	521	104	80 - 120	534	107	2	20
7440-70-2	Calcium	35800	45.7	5000	44400	**172***	80 - 120	44800	**181***	1	20
7440-47-3	Chromium	1.32	0.26	500	517	103	80 - 120	532	106	3	20
7440-48-4	Cobalt	0.0	0.58	500	493	99	80 - 120	523	105	6	20
7440-50-8	Copper	8.17	1.01	500	516	102	80 - 120	529	104	3	20
7439-89-6	Iron	148	12.6	5000	5420	105	80 - 120	5480	107	1	20
7439-92-1	Lead	0.0	1.96	500	527	105	80 - 120	559	112	6	20
7439-95-4	Magnesium	34600	16.5	5000	43900	**186***	80 - 120	43700	**182***	0.4	20
7439-96-5	Manganese	24.9	1.31	500	551	105	80 - 120	564	108	2	20
7440-02-0	Nickel	0.0	1.13	500	495	99	80 - 120	528	106	6	20
7440-09-7	Potassium	6570	34.6	10000	18100	116	80 - 120	18300	118	1	20
7782-49-2	Selenium	0.0	4.42	500	541	108	80 - 120	580	116	7	20
7440-22-4	Silver	0.0	0.70	500	528	106	80 - 120	542	108	2	20
7440-23-5	Sodium	51400	61.1	20000	78100	**133***	80 - 120	79000	**138***	1	20
7440-28-0	Thallium	0.0	3.04	500	529	106	80 - 120	560	112	6	20
7440-62-2	Vanadium	48.4	1.25	500	583	107	80 - 120	599	110	3	20
7440-66-6	Zinc	111	4.51	500	648	107	80 - 120	663	110	2	20

Analytical Batch	494287	**Client ID**	LF05-MW-C-01	1122464MS	1122464MSD
Prep Batch	493522	**GCAL ID**	21210300501	1122919	1122920
Prep Method	SW-846	**Sample Type**	SAMPLE	MS	MSD
	3010A	**Prep Date**	10/31/2012 12:25	10/31/2012 12:25	10/31/2012 12:25
		Analytical Date	11/09/2012 13:12	11/09/2012 13:19	11/09/2012 13:26
		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	575	115	80 - 120	586	117	2	20

Inorganics Quality Control Summary

Analytical Batch	493804	**Client ID**	LF05-MW-C-01			1122464MS			1122464MSD		
Prep Batch	493519	**GCAL ID**	21210300501			1122905			1122906		
Prep Method	SW-846 3005	**Sample Type**	SAMPLE			MS			MSD		
	Dissolved	**Prep Date**	10/31/2012 12:25			10/31/2012 12:25			10/31/2012 12:25		
		Analytical Date	11/03/2012 17:43			11/03/2012 17:50			11/03/2012 17:56		
		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**
7440-38-2	Arsenic		0.0	3.59	500	568	114	80 - 120	567	113	0.2	20

Analytical Batch	494196	**Client ID**	MB493519			LCS493519		
Prep Batch	493519	**GCAL ID**	1122903			1122904		
Prep Method	SW-846 3005	**Sample Type**	Method Blank			LCS		
	Dissolved	**Prep Date**	10/31/2012 12:25			10/31/2012 12:25		
		Analytical Date	11/08/2012 14:43			11/08/2012 14:50		
		Matrix	Water			Water		
SW-846 6010C Dissolved			**Units**	ug/L	**Spike**	**Result**		**Control**
			Result	**RDL**	**Added**		**% R**	**Limits % R**
7429-90-5	Aluminum		46.1J	30.3	5000	4970	99	80 - 120
7440-36-0	Antimony		3.11U	3.11	500	507	101	80 - 120
7440-38-2	Arsenic		3.59U	3.59	500	526	105	80 - 120
7440-39-3	Barium		0.71U	0.71	500	501	100	80 - 120
7440-41-7	Beryllium		0.10U	0.10	500	515	103	80 - 120
7440-43-9	Cadmium		0.16U	0.16	500	510	102	80 - 120
7440-70-2	Calcium		45.7U	45.7	5000	5010	100	80 - 120
7440-47-3	Chromium		0.26U	0.26	500	496	99	80 - 120
7440-48-4	Cobalt		0.58U	0.58	500	513	103	80 - 120
7440-50-8	Copper		1.01U	1.01	500	495	99	80 - 120
7439-89-6	Iron		12.6U	12.6	5000	4950	99	80 - 120
7439-92-1	Lead		2.34J	1.96	500	528	106	80 - 120
7439-95-4	Magnesium		24.2J	16.5	5000	5000	100	80 - 120
7439-96-5	Manganese		1.31U	1.31	500	501	100	80 - 120
7440-02-0	Nickel		1.13U	1.13	500	525	105	80 - 120
7440-09-7	Potassium		34.6U	34.6	10000	10100	101	80 - 120
7782-49-2	Selenium		4.42U	4.42	500	537	107	80 - 120
7440-22-4	Silver		0.70U	0.70	500	506	101	80 - 120
7440-23-5	Sodium		61.1U	61.1	20000	20100	100	80 - 120
7440-28-0	Thallium		3.04U	3.04	500	519	104	80 - 120
7440-62-2	Vanadium		1.25U	1.25	500	497	99	80 - 120

Inorganics Quality Control Summary

Analytical Batch	494196	**Client ID**	MB493519		LCS493519		
Prep Batch	493519	**GCAL ID**	1122903		1122904		
Prep Method	SW-846 3005	**Sample Type**	Method Blank		LCS		
	Dissolved	**Prep Date**	10/31/2012 12:25		10/31/2012 12:25		
		Analytical Date	11/08/2012 14:43		11/08/2012 14:50		
		Matrix	Water		Water		
SW-846 6010C Dissolved		**Units**	ug/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
7440-66-6	Zinc	4.51U	4.51	500	513	103	80 - 120

Analytical Batch	494196	**Client ID**	LF05-MW-C-01			1122464MS			1122464MSD			
Prep Batch	493519	**GCAL ID**	21210300501			1122905			1122906			
Prep Method	SW-846 3005	**Sample Type**	SAMPLE			MS			MSD			
	Dissolved	**Prep Date**	10/31/2012 12:25			10/31/2012 12:25			10/31/2012 12:25			
		Analytical Date	11/08/2012 14:57			11/08/2012 15:04			11/08/2012 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**
7429-90-5	Aluminum	58.4	30.3	5000	5090	101	80 - 120	5030	100	1	20
7440-36-0	Antimony	0.0	3.11	500	537	107	80 - 120	538	108	0.07	20
7440-39-3	Barium	84.0	0.71	500	593	102	80 - 120	593	102	0.02	20
7440-41-7	Beryllium	0.0	0.10	500	540	108	80 - 120	536	107	0.6	20
7440-43-9	Cadmium	0.78	0.16	500	517	103	80 - 120	513	103	0.8	20
7440-70-2	Calcium	37600	45.7	5000	41500	**79***	80 - 120	43500	118	5	20
7440-47-3	Chromium	1.00	0.26	500	507	101	80 - 120	504	101	0.7	20
7440-48-4	Cobalt	0.0	0.58	500	503	101	80 - 120	499	100	0.7	20
7440-50-8	Copper	7.90	1.01	500	508	100	80 - 120	505	99	0.7	20
7439-89-6	Iron	0.0	12.6	5000	5050	101	80 - 120	5070	101	0.5	20
7439-92-1	Lead	0.0	1.96	500	531	106	80 - 120	528	106	0.5	20
7439-95-4	Magnesium	37600	16.5	5000	40900	**66***	80 - 120	43300	114	6	20
7439-96-5	Manganese	0.0	1.31	500	516	103	80 - 120	514	103	0.3	20
7440-02-0	Nickel	0.0	1.13	500	503	101	80 - 120	499	100	0.6	20
7440-09-7	Potassium	6910	34.6	10000	17200	103	80 - 120	17700	108	3	20
7782-49-2	Selenium	4.72	4.42	500	567	112	80 - 120	564	112	0.5	20
7440-22-4	Silver	0.0	0.70	500	523	105	80 - 120	521	104	0.4	20
7440-23-5	Sodium	56000	61.1	20000	73700	89	80 - 120	76600	103	4	20
7440-28-0	Thallium	3.51	3.04	500	529	105	80 - 120	527	105	0.4	20
7440-62-2	Vanadium	52.2	1.25	500	570	104	80 - 120	568	103	0.3	20
7440-66-6	Zinc	129	4.51	500	649	104	80 - 120	652	105	0.4	20

General Chemistry Quality Control Summary

Analytical Batch	493862	**Client ID**	MB493789	LCS493789
Prep Batch	493789	**GCAL ID**	1124521	1124522
Prep Method	SM4500 NH3 BE TKN	**Sample Type**	Method Blank	LCS
		Prep Date	11/03/2012 11:30	11/03/2012 11:30
		Analytical Date	11/04/2012 14:40	11/04/2012 14:40
		Matrix	Water	Water

SM 4500 NH3 BE Ammonia		**Units**	mg/L-N	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
7664-41-7	Ammonia	0.24U	0.24	15.0	14.7	98	80 - 120

Analytical Batch	493862	**Client ID**	LF05-MW-U-01	1122949MS
Prep Batch	493789	**GCAL ID**	21210310801	1124523
Prep Method	SM4500 NH3 BE TKN	**Sample Type**	SAMPLE	MS
		Prep Date	11/03/2012 11:30	11/03/2012 11:30
		Analytical Date	11/04/2012 14:40	11/04/2012 14:40
		Matrix	Water	Water

SM 4500 NH3 BE Ammonia		**Units**	mg/L-N	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
7664-41-7	Ammonia	0.00	0.24	15.0	14.1	94	74.6 - 125

Analytical Batch	493862	**Client ID**	LF05-MW-S-01	1122956DUP
Prep Batch	493789	**GCAL ID**	21210310803	1124524
Prep Method	SM4500 NH3 BE TKN	**Sample Type**	SAMPLE	DUP
		Prep Date	11/03/2012 11:30	11/03/2012 11:30
		Analytical Date	11/04/2012 14:40	11/04/2012 14:40
		Matrix	Water	Water

SM 4500 NH3 BE Ammonia		**Units**	mg/L-N	**Result**		**RPD**
		Result	**RDL**		**RPD**	**Limit**
7664-41-7	Ammonia	0.00	0.24	0.00	0	25

General Chemistry Quality Control Summary

Analytical Batch 493575	**Client ID**	MB493575			LCS493575		
Prep Batch N/A	**GCAL ID**	1123204			1123205		
	Sample Type	Method Blank			LCS		
	Analytical Date	10/31/2012 18:09			10/31/2012 18:26		
	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	98.7	79 - 109
14797-65-0	Nitrite	0.015U	0.015	2.50	2.69	108	80 - 120
14797-55-8	Nitrate	0.115U	0.115	2.50	2.40	95.8	80 - 120
14808-79-8	Sulfate	0.115U	0.115	5.00	4.81	96.2	82 - 110

Analytical Batch 493575	**Client ID**	MW-X-01			MW-X-01-MS			MW-X-01-MSD			
Prep Batch N/A	**GCAL ID**	21210250303			21210250304			21210250305			
	Sample Type	SAMPLE			MS			MSD			
	Analytical Date	11/01/2012 13:52			11/01/2012 14:09			11/01/2012 14:27			
	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	24.7	1.26	50.0	75.4	101	79 - 109	75.0	101	0.47	15
14808-79-8	Sulfate	43.9	2.30	100	146	103	82 - 110	145	102	0.72	15

Analytical Batch 493575	**Client ID**	LF05-MW-U-01			1122949MS			1122949MSD			
Prep Batch N/A	**GCAL ID**	21210310801			1123206			1123207			
	Sample Type	SAMPLE			MS			MSD			
	Analytical Date	11/01/2012 10:03			11/01/2012 10:20			11/01/2012 10:38			
	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	82.7	6.30	250	321	95.5	79 - 109	323	95.9	0.35	15
14808-79-8	Sulfate	105	11.5	500	610	101	82 - 110	615	102	0.91	15

General Chemistry Quality Control Summary

Analytical Batch 493575	**Client ID**	LF05-MW-U-01		1122949MS
Prep Batch N/A	**GCAL ID**	21210310801		1123206
	Sample Type	SAMPLE		MS
	Analytical Date	10/31/2012 18:44		10/31/2012 19:02
	Matrix	Water		Water

EPA 300.0		**Units**	mg/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
14797-65-0	Nitrite	0.000	0.015	2.50	2.79	111	75 - 125
14797-55-8	Nitrate	1.57	0.115	2.50	4.10	101	75 - 125

General Chemistry Quality Control Summary

Analytical Batch 493622	**Client ID**	MB493622			LCS493622			LCSD493622			
Prep Batch N/A	**GCAL ID**	1123408			1123409			1123410			
	Sample Type	Method Blank			LCS			LCSD			
	Analytical Date	11/01/2012 12:36			11/01/2012 12:55			11/01/2012 13:11			
	Matrix	Water			Water			Water			
SM 5310B TOC		**Units**	mg/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
C-012	Total Organic Carbon	0.30U	0.30	50.0	52.7	105	80 - 120	53.7	107	2	25

Analytical Batch 493622	**Client ID**	WEEKLY 001A (COMP)			1122752MS			1122752MSD			
Prep Batch N/A	**GCAL ID**	21210302902			1123411			1123412			
	Sample Type	SAMPLE			MS			MSD			
	Analytical Date	11/01/2012 14:51			11/01/2012 15:12			11/01/2012 15:28			
	Matrix	Water			Water			Water			
SM 5310B TOC		**Units**	mg/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
C-012	Total Organic Carbon	11.8	1.5	250	265	101	75 - 125	264	101	0.08	25

Analytical Batch 493622	**Client ID**	U31D201G			1122796MS			1122796MSD			
Prep Batch N/A	**GCAL ID**	21210303501			1123413			1123414			
	Sample Type	SAMPLE			MS			MSD			
	Analytical Date	11/01/2012 21:35			11/01/2012 21:55			11/01/2012 22:10			
	Matrix	Water			Water			Water			
SM 5310B TOC		**Units**	mg/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
C-012	Total Organic Carbon	109	1.5	250	357	99	75 - 125	352	97	1	25

General Chemistry Quality Control Summary

Analytical Batch 493538	**Client ID**	MB493538			LCS493538		
Prep Batch N/A	**GCAL ID**	1122963			1122964		
	Sample Type	Method Blank			LCS		
	Analytical Date	10/31/2012 10:58			10/31/2012 10:58		
	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	519	104	80 - 120

Analytical Batch 493538	**Client ID**	LF05-MW-U-01			1122949MS		
Prep Batch N/A	**GCAL ID**	21210310801			1122966		
	Sample Type	SAMPLE			MS		
	Analytical Date	10/31/2012 10:59			10/31/2012 11:00		
	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	495	99	80 - 120

Analytical Batch 493538	**Client ID**	LF05-MW-U-01		1122949DUP		
Prep Batch N/A	**GCAL ID**	21210310801		1122965		
	Sample Type	SAMPLE		DUP		
	Analytical Date	10/31/2012 10:59		10/31/2012 11:00		
	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

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
Bhate	4760	212103108	11/7/12

Report to:
Client: Bhate Environmental Associates
Address: 1608 13th Ave S #300
Birmingham AL
Contact: Tracy Walker
Phone: 205 918 4000
Fax:

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

P.O. Number:
Project Name/Number: Cannon AFB D020-001
Sampled By: Ben Stewart Jordan Gibson

Analytical Requests & Method

Lab use only:
Custody Seal used ☑ yes ☐ no
intact ☑ yes ☐ no
Temperature °C 2.1

Matrix[1]	Date	Time (2400)	Comp	Grab	Sample Description	Preservatives	No Containers	8260C (HCL)	Total Metals (6010C/7470B) HNO3	Diss Metals (6010C/7470B) HNO3	Cr (+3,+6) 7196	Perchlorate 6860	NO2/NO3 300.1	Ammonia SM4500 H2SO4	Sulfate 300.1	Chloride 300.1	TOC SM5310B (HCL)		Remarks:	Lab ID
WG	10/30/12	1320		✓	LFOS-MW-U-01	y/o	10	X	X	X	X	X	X	X	X	X	X			1
WQ	10/30/12	1030			TB-11	y/o	3	X												2
WG	10/30/12	1415		✓	LFOS-MW-S-01	y/o	11	X	X	X	X	X	X	X	X	X	X			3

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

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
[signature]		10/30/12	1600
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
FedEx	[signature]	10/31/12	~~1030~~ 1020
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
			CS 10/31/12

Note: Diss Metals were field filtered
8003 4106 3325

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	212103108
Client 4760 - Bhate Environmental Associates, Inc.	**Transport Method** FEDEX
Profile 235531 - Cannon	**Received By** Saucier, Charlotte
Line Item(s) 1 - Waters	**Receive Date(s)** 10/31/12

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)
800341063325	2.1

DISCREPANCIES

None

LABORATORY PRESERVATIONS

None

NOTES

November 15, 2012

Brenda Martinez
GCAL LAB
7979 GSRI AVENUE
BATON ROUGE, LA 70820
TEL: (225) 769-4900
FAX (225) 767-5717

Order No.: 1211017

RE: DoD Perchlorate

Dear Brenda Martinez:

DHL Analytical, Inc. received 2 sample(s) on 11/2/2012 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

#121017

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

P.O. Number: 12-0929

Project Name/Number: 212103108

Sampled By:

Analysis Requested: PERCHLORATE (6860)

* Our P. O. Number must appear on the Invoice.
* Our Project Number must appear on the final report.

	Matrix	Date	Time (2400)	Comp	Grab	Sample Description	Pre-servatives	No. Containers	PERCHLORATE (6860)	Remarks:	Lab ID
01	W	10/30/2012	10:20		X	LF05-MW-U-01		1	X	21210310801	
02	W	10/30/2012	14:45		X	LF05-MW-S-01		1	X	21210310803	

Turn Around Time: ___ 24 - 48 hrs ___ 3 days ___ 1 week X standard other ___

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
[signature]	FedEx	11/1/12	1700
[signature]	[signature]	11/2/12	1020

Note: Receiving temp 0.8° Therm #7 Courtney and Matt

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

CHARLOTTE SAUCIER (225) 769-4900
GCAL
7979 GSRI RD
BATON ROUGE, LA 70802
UNITED STATES US

SHIP DATE: 01NOV12
ACTWGT: 14.0 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

E

J12131209160126

FRI - 02 NOV A1
PRIORITY OVERNIGHT

TRK# 0201 5443 0509 2817

A8 BSMA

78664
TX-US AUS

Part # 156148-434 RIT2 07/11

GCAL

CUSTODY SEAL

Date Sealed: 11-1-12

Sealed By: JBH

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: 11/2/2012

Work Order Number 1211017

Received by JB

Checklist completed by: [signature] 11/2/2012
Signature | Date

Reviewed by [initials] 11/2/2012
Initials | 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 ☐	0.8 °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 _____

DHL Analytical, Inc.

Laboratory Review Checklist: Reportable Data

Project Name: DoD Perchlorate	**Date:** 11/15/12
Reviewer Name: Carlos Castro	**Laboratory Work Order:** 1211017
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:** 11/15/12

Reviewer Name: Carlos Castro | **Laboratory Work Order:** 1211017

#[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

11/15/12

Date

DHL Analytical, Inc. **Date:** *15-Nov-12*

CLIENT: GCAL LAB
Project: DoD Perchlorate
Lab Order: 1211017

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 11/2/12. A total of 2 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 11/9/12 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 12-0929.

Client sent samples in own containers.

This sample delivery group arrived at DHL Analytical 11/2/12.

DHL Analytical, Inc.

Date: *15-Nov-12*

CLIENT: GCAL LAB
Project: DoD Perchlorate
Lab Order: 1211017

Work Order Sample Summary

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
1211017-01	LF05-MW-U-01		10/30/12 10:20 AM	11/2/2012
1211017-02	LF05-MW-S-01		10/30/12 02:45 PM	11/2/2012

DHL Analytical, Inc.

15-Nov-12

Lab Order: 1211017
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
1211017-01A	LF05-MW-U-01	10/30/12 10:20 AM	Aqueous	SW6860	Perchlorate Prep	11/09/12 10:27 AM	54622
1211017-02A	LF05-MW-S-01	10/30/12 02:45 PM	Aqueous	SW6860	Perchlorate Prep	11/09/12 10:27 AM	54622

DHL Analytical, Inc.

15-Nov-12

Lab Order: 1211017
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
1211017-01A	LF05-MW-U-01	Aqueous	SW6860	Perchlorate - Water	54622	1	11/09/12 12:15 PM	ICMS_121109A
1211017-02A	LF05-MW-S-01	Aqueous	SW6860	Perchlorate - Water	54622	1	11/09/12 12:27 PM	ICMS_121109A

DHL Analytical, Inc.

Date: *15-Nov-12*

CLIENT:	GCAL LAB	**Client Sample ID:**	LF05-MW-U-01
Project:	DoD Perchlorate	**Lab ID:**	1211017-01
Project No:	212103108	**Collection Date:**	10/30/12 10:20 AM
Lab Order:	1211017	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
PERCHLORATE - WATER		**SW6860**					Analyst: **CZ**
Perchlorate	0.00247	0.000100	0.000300	N	mg/L	1	11/09/12 12:15 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: *15-Nov-12*

CLIENT:	GCAL LAB	**Client Sample ID:**	LF05-MW-S-01
Project:	DoD Perchlorate	**Lab ID:**	1211017-02
Project No:	212103108	**Collection Date:**	10/30/12 02:45 PM
Lab Order:	1211017	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
PERCHLORATE - WATER		**SW6860**					Analyst: **CZ**
Perchlorate	0.00220	0.000100	0.000300	N	mg/L	1	11/09/12 12:27 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: *15-Nov-12*

CLIENT: GCAL LAB
Work Order: 1211017
Project: DoD Perchlorate

ANALYTICAL QC SUMMARY REPORT

RunID: **ICMS_121109A**

The QC data in batch 54622 applies to the following samples: 1211017-01A, 1211017-02A

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: 1211017
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

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.

15-Nov-12

Lab Order: 1211017
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
1211017-01A	LF05-MW-U-01	SW6860	54622	1	11/9/2012 12:15:00 PM	11/9/2012 10:27:48 AM	A
1211017-02A	LF05-MW-S-01	SW6860	54622	1	11/9/2012 12:27:00 PM	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

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

APPENDIX E

DATA VALIDATION SUMMARY REPORT

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DATA VALIDATION SUMMARY REPORT
for Groundwater Samples Collected from the
Cannon Air Force Base Site in October 2012
Cannon Air Force Base, New Mexico
Bhate Project No.: 9110129

Data Validation by: David Badio, Jr.
Bhate Environmental Associates, Inc. – Birmingham, Alabama

INTRODUCTION

This data validation summary report covers groundwater samples collected from the Cannon Air Force Base site in October 2012. All samples were collected by Bhate Environmental Associates, Inc. (Bhate).

The groundwater samples were analyzed for volatile organic compounds (VOCs), perchlorate, total and dissolved metals, ammonia, chloride, hexavalent chromium, nitrate, nitrite, sulfate and total organic carbon (TOC).

All analyses were performed by Gulf Coast Analytical Laboratories (GCAL) of Baton Rouge, Louisiana and DHL Analytical (DHL) of Round Rock, Texas (as a subcontractor to GCAL) following the procedures outlined in the Quality Assurance Project Plan (QAPP) prepared by Bhate. DHL performed the analysis for perchlorate only.

A list of the samples collected is presented in Attachment 1, [Summary of Groundwater Samples Collected in October 2012]. Quality control samples collected in support of the sampling event are also identified in the table. The samples are arranged by Sample Delivery Groups (SDGs). An SDG represents the group of samples that were prepared, analyzed and reported together in the analytical batch with common laboratory quality control (QC) samples. The SDG is the same as the Lab Reporting Batch ID. The samples discussed in this report were included in the following SDGs: **212101707, 212101807, 212102010, 212102306, 212102407, 212102503, 212102607, 212102705, 212103005 and 212103108.**

EVALUATION CRITERIA

The electronic data deliverables (EDD) generated and submitted by the laboratory have been evaluated against the Data Quality Objectives (DQO) specified in the Quality Assurance Project Plan (QAPP) using the Automated Data Review (ADR.Net version) software developed by Laboratory Data Consultants (LDC) of Carlsbad, California. The DQO elements evaluated include precision, accuracy, representativeness, comparability, completeness, and sensitivity (PARCCS). The evaluation criteria for the PARCCS elements are presented below. The ADR program routines are based on the guidelines and practices published in the [U.S. Environmental Protection Agency] *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review*

(USEPA, January 2010) and in the *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review* (USEPA, June 2008).

Information evaluated include the case narrative, chain of custody (COC) forms, field and laboratory QC results, calibrations, sample results, and supporting raw data. The findings presented in this report are based on the results of the ADR process and manual validation to address those elements not covered by ADR. Elements not covered by ADR include review of the COCs, calibration and tuning data and supporting raw data. Results generated using the EDDs were also verified against the data in the hardcopy analytical data packages submitted as computer readable pdf files. Data Qualifier Summary tables generated by ADR, for each SDG, are provided in Attachment 2.

Precision

Precision was evaluated using the relative percent difference (RPD) obtained from the field duplicate and matrix spike/matrix spike duplicate (MS/MSD) samples.

Accuracy

Accuracy was evaluated using the percent recovery (%R) obtained from the MS/MSD, the laboratory control sample (LCS), and the surrogate spikes.

Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the QAPP;
- Comparing actual analytical procedures to those described in the QAPP;
- Evaluating holding times; and
- Examining laboratory blanks for cross-contamination of samples during analysis.

Comparability

Comparability expresses the confidence with which one set of data can be compared to another.

Completeness

Completeness has been evaluated by comparing the total number of samples collected with the total number of samples with valid usable data.

Sensitivity

Sensitivity has been evaluated by ensuring that the method and procedures used to analyze the samples from this sampling event are the same or equivalent to those used for previous sampling events for this project.

This report addresses only those problems affecting the usability of the data. A discussion of data validation qualifiers applied to the data and reasons for the qualifiers are also presented.

Deviations from the QAPP or the analytical methods and a discussion of the overall usability of the data are also presented in the Overall Summary of Data Usability section of this report. Any QC problems leading to qualifying of data as unusable or rejected would be presented in the Major Problems section.

OVERALL SUMMARY OF DATA USABILITY

All samples were analyzed following the procedures outlined in the QAPP. All samples were prepared and/or analyzed within the holding time required by the QAPP. Results for analytes not detected are reported at the method detection limit (MDL) with the "U" qualifier. Sample specific MDLs have been corrected for sample amounts and dilution where necessary. Results reported from diluted sample aliquots are indicated with "+" in the data summary tables.

A summary of results qualified during data validation is presented in Attachment 2, [ADR Data Qualifier Summary Reports (by SDG)] and the complete summary of validated results is presented in Attachment 3, (Table 2 - Validated Groundwater Results). A glossary of data validation qualifiers and flags is presented in Attachment 4.

No major QC problem was found during validation of the SDGs. No reported results have been rejected. All validated results reported in Attachment 2, [ADR Data Qualifier Summary Reports (by SDG)] and Attachment 3, (Table 2 - Validated Groundwater Results) should be considered usable as qualified.

SUMMARY OF VALIDATION FINDINGS BY PARAMETER

Volatile Organics (VOCs)

All samples were analyzed for the full list of VOCs as specified in the QAPP. The VOC analyses were performed using USEPA Method SW8260B.

Target VOCs were detected in the samples. None of the detections for VOCs exceeded the respective comparison level.

A detection above the method detection limit (MDL) but less than the reporting limit (RL) was reported for target VOC chloroform for the trip blank associated with SDG 212102306. Since chloroform was not detected in the associated samples, no results have been qualified due to the trip blank contamination.

Detections above the method detection limit (MDL) but less than the reporting limit (RL) for dichlorodifluoromethane, trichlorofluoromethane and tetrachloroethene for samples in SDG 212103108 were qualified as estimated and flagged "J" by the laboratory. The qualifier was carried forward during validation. These results are

identified, with the "RI" reason code, in the ADR Data Quality Summary Report for SDG 212103108 (Attachment 2).

Target VOC tetrachloroethene was detected in the trip blank associated with SDG 212103108. The reported result for tetrachloroethene for sample LF05-MW-S-01 has been requalified as not detected ("UB"), at the reporting limit, due to the trip blank contamination. These results are identified with the "Tb" reason code in the ADR Data Qualifier Summary for SDG 212103108 (Attachment 2).

Two field duplicate pairs were collected is support of the sampling event. The field samples are identified in Table 1 (Attachment 1 – Summary of Groundwater Samples Collected in October 2012). No target VOCs were detected in the field duplicate pairs.

The samples were prepared and analyzed following the analytical procedures described in the QAPP. The completeness for the VOC analysis is 100%. All other PARCCS requirements were met for the VOC analysis.

Perchlorate

Samples (except for the trip blanks) were analyzed for perchlorate. The perchlorate analysis was performed by DHL Analytical using USEPA Method SW6860.

Perchlorate was detected in all of the samples except for the two equipment blanks. None of the detections exceeded the screening criteria for perchlorate.

The samples were prepared and analyzed following the analytical procedures described in the QAPP. The completeness for the perchlorate analysis is 100%. All other PARCCS requirements were met for the perchlorate analysis.

Total and Dissolved Metals

Samples (except for the trip blanks) were analyzed for total and dissolved metals. The samples were analyzed for the USEPA's Contract Laboratory Program Target Analyte List (TAL) metals. The metals analysis was performed using USEPA Methods SW6010C and SW7470A (mercury only).

Most of the target metals were detected in the samples. Some detections for thallium (total metals) and arsenic (dissolved metals) exceeded the screening criteria. The results are bolded and shaded in Attachment 3 (Table 2 – Validated Groundwater Results).

Detections above the method detection limit (MDL) but less than the reporting limit (RL) for total metals antimony, chromium, copper and thallium for samples in SDG 212101707 were qualified as estimated and flagged "J" by the laboratory. The qualifier was carried forward during validation. These results are identified, with the "RI" reason code, in the ADR Data Quality Summary Report for SDG 212101707 (Attachment 2).

Detections above the MDL but less than the RL for dissolved metals cadmium, chromium, copper and selenium for samples in SDG 212101707 were qualified as estimated and flagged "J" by the laboratory. The qualifier was carried forward during

validation. These results are identified, with the “RI” reason code, in the ADR Data Quality Summary Report for SDG 212101707 (Attachment 2).

Target total metals cadmium, cobalt and mercury were detected in method blanks associated with SDG 212101707. The reported results for cadmium, cobalt and mercury for sample LF25-MW-PA-01 have been requalified as not detected (“UB”), at the reporting limit, due to the method blank contamination. These results are identified with the “Mb” reason code in the ADR Data Qualifier Summary for SDG 212101707 (Attachment 2).

Target dissolved metals cobalt and mercury were detected in method blanks associated with SDG 212101707. The reported results for cobalt and mercury for sample LF25-MW-PA-01 have been requalified as not detected (“UB”), at the reporting limit, due to the method blank contamination. These results are identified with the “Mb” reason code in the ADR Data Qualifier Summary for SDG 212101707 (Attachment 2).

Detections above the method detection limit (MDL) but less than the reporting limit (RL) for total metals cadmium, cobalt, chromium, manganese, selenium, thallium and zinc for samples in SDG 212101807 were qualified as estimated and flagged “J” by the laboratory. The qualifier was carried forward during validation. These results are identified, with the “RI” reason code, in the ADR Data Quality Summary Report for SDG 212101807 (Attachment 2).

Detections above the MDL but less than the RL for dissolved metals cadmium, chromium, nickel, selenium and thallium for samples in SDG 212101807 were qualified as estimated and flagged “J” by the laboratory. The qualifier was carried forward during validation. These results are identified, with the “RI” reason code, in the ADR Data Quality Summary Report for SDG 212101807 (Attachment 2).

Target dissolved metal cobalt was detected in method blanks associated with SDG 212101807. The reported results for cobalt for samples LF03-MW-0A-01 and LF04-MW-NA-01 have been requalified as not detected (“UB”), at the reporting limit, due to the method blank contamination. These results are identified with the “Mb” reason code in the ADR Data Qualifier Summary for SDG 212101807 (Attachment 2).

Detections above the method detection limit (MDL) but less than the reporting limit (RL) for total metals chromium, cobalt, copper, iron, selenium and thallium for samples in SDG 212102010 were qualified as estimated and flagged “J” by the laboratory. The qualifier was carried forward during validation. These results are identified, with the “RI” reason code, in the ADR Data Quality Summary Report for SDG 212102010 (Attachment 2).

Detections above the MDL but less than the RL for dissolved metals arsenic, cadmium, chromium, cobalt, copper, iron, manganese, selenium and thallium for samples in SDG 212102010 were qualified as estimated and flagged “J” by the laboratory. The qualifier was carried forward during validation. These results are identified, with the “RI” reason code, in the ADR Data Quality Summary Report for SDG 212102010 (Attachment 2).

Target total metals cadmium and nickel were detected in method blanks associated with SDG 212102010. The reported results for cadmium and nickel for samples LF05-MW-A-01, MW-F-01 and MW-F-01-FD have been requalified as not detected ("UB"), at the reporting limit, due to the method blank contamination. These results are identified with the "Mb" reason code in the ADR Data Qualifier Summary for SDG 212102010 (Attachment 2).

Target dissolved metal nickel was detected in method blanks associated with SDG 212102010. The reported results for nickel for samples LF05-MW-A-01, MW-F-01 and MW-F-01-FD have been requalified as not detected ("UB"), at the reporting limit, due to the method blank contamination. These results are identified with the "Mb" reason code in the ADR Data Qualifier Summary for SDG 212102010 (Attachment 2).

Detections above the MDL but less than the RL for total metals aluminum, chromium, cobalt, manganese, nickel and selenium for samples in SDG 212102306 were qualified as estimated and flagged "J" by the laboratory. The qualifier was carried forward during validation. These results are identified, with the "RI" reason code, in the ADR Data Quality Summary Report for SDG 212102306 (Attachment 2).

Detections above the MDL but less than the RL for dissolved metals cadmium, chromium, cobalt, copper, selenium and thallium for samples in SDG 212102306 were qualified as estimated and flagged "J" by the laboratory. The qualifier was carried forward during validation. These results are identified, with the "RI" reason code, in the ADR Data Quality Summary Report for SDG 212102306 (Attachment 2).

Target total metal cadmium was detected in method blanks associated with SDG 212102306. The reported result for cadmium for sample MW-H-01 has been requalified as not detected ("UB"), at the reporting limit, due to the method blank contamination. This result is identified with the "Mb" reason code in the ADR Data Qualifier Summary for SDG 212102306 (Attachment 2).

Target dissolved metal nickel was detected in method blanks associated with SDG 212102306. The reported result for nickel for sample MW-H-01 has been requalified as not detected ("UB"), at the reporting limit, due to the method blank contamination. This result is identified with the "Mb" reason code in the ADR Data Qualifier Summary for SDG 212102306 (Attachment 2).

Detections above the MDL but less than the RL for total metals aluminum, chromium, selenium and thallium for samples in SDG 212102407 were qualified as estimated and flagged "J" by the laboratory. The qualifier was carried forward during validation. These results are identified, with the "RI" reason code, in the ADR Data Quality Summary Report for SDG 212102407 (Attachment 2).

Detections above the MDL but less than the RL for dissolved metals antimony, cadmium, chromium, cobalt, copper, nickel, selenium and thallium for samples in SDG 212102407 were qualified as estimated and flagged "J" by the laboratory. The qualifier was carried forward during validation. These results are identified, with the "RI" reason code, in the ADR Data Quality Summary Report for SDG 212102407 (Attachment 2).

Target total metals cadmium, cobalt and nickel were detected in method blanks associated with SDG 212102407. The reported results for cadmium, cobalt and nickel for samples MW-G-01 and MW-G-01-FD have been requalified as not detected ("UB"), at the reporting limit, due to the method blank contamination. These results are identified with the "Mb" reason code in the ADR Data Qualifier Summary for SDG 212102407 (Attachment 2).

Detections above the MDL but less than the RL for total metals arsenic, aluminum, cadmium, calcium, chromium, copper, iron, lead, magnesium, manganese, selenium and vanadium for samples in SDG 212102503 were qualified as estimated and flagged "J" by the laboratory. The qualifier was carried forward during validation. These results are identified, with the "RI" reason code, in the ADR Data Quality Summary Report for SDG 212102503 (Attachment 2).

Detections above the MDL but less than the RL for dissolved metals aluminum, arsenic, cadmium, chromium, copper, magnesium, manganese, potassium, selenium and zinc for samples in SDG 212102503 were qualified as estimated and flagged "J" by the laboratory. The qualifier was carried forward during validation. These results are identified, with the "RI" reason code, in the ADR Data Quality Summary Report for SDG 212102503 (Attachment 2).

Target total metals potassium and silver were detected in method blanks associated with SDG 212102503. The reported results for potassium and silver for the equipment blank sample EB-01 have been requalified as not detected ("UB"), at the reporting limit, due to the method blank contamination. These results are identified with the "Mb" reason code in the ADR Data Qualifier Summary for SDG 212102503 (Attachment 2).

Target total metals aluminum, cadmium, copper, magnesium, manganese, sodium and vanadium were detected in equipment blank (EB-01) associated with SDG 212102503. The reported results for aluminum, barium, cadmium and manganese for sample MW-E-01 have been requalified as not detected ("UB"), at the reporting limit, due to the equipment blank contamination. These results are identified with the "Eb" reason code in the ADR Data Qualifier Summary for SDG 212102503 (Attachment 2).

The reported results for total metals for aluminum, cadmium, manganese, silver and sodium for sample MW-X-01 have also been requalified as not detected ("UB"), at the reporting limit, due to the equipment blank contamination. These results are identified with the "Eb" reason code in the ADR Data Qualifier Summary for SDG 212102503 (Attachment 2).

Target dissolved metals barium, silver, sodium and vanadium were detected in method blanks associated with SDG 212102503. The reported result for vanadium for the equipment blank sample has been requalified as not detected ("UB"), at the reporting limit, due to the method blank contamination. The reported results for beryllium and silver for sample MW-E-01 have also been requalified as not detected ("UB), at the reporting limit, due to the method blank contamination. The report result for beryllium for sample MW-X-01 has also been requalified as not detected ("UB"), at the reporting

limit, due to the method blank contamination. This result is identified with the "Mb" reason code in the ADR Data Qualifier Summary for SDG 212102503 (Attachment 2).

Target dissolved metals aluminum, cadmium, chromium, copper, magnesium, manganese, potassium and zinc were detected in equipment blank (EB-01) associated with SDG 212102503. The reported results for barium, cadmium, chromium, manganese and silver for sample MW-E-01 have been requalified as not detected ("UB"), at the reporting limit, due to the equipment blank contamination. The reported results for aluminum, cadmium, chromium, copper and sodium for sample MW-X-01 have also been requalified as not detected ("UB"), at the reporting limit, due to the equipment blank contamination. These results are identified with the "Eb" reason code in the ADR Data Qualifier Summary for SDG 212102503 (Attachment 2).

Detections above the MDL but less than the RL for total metals aluminum, arsenic, barium, cadmium, chromium, copper, magnesium, manganese, nickel, potassium, selenium and vanadium for samples in SDG 212102607 were qualified as estimated and flagged "J" by the laboratory. The qualifier was carried forward during validation. These results are identified, with the "RI" reason code, in the ADR Data Quality Summary Report for SDG 212102607 (Attachment 2).

Detections above the MDL but less than the RL for dissolved metals arsenic, cadmium, chromium, copper, magnesium, manganese, nickel, potassium, selenium, thallium and vanadium for samples in SDG 212102607 were qualified as estimated and flagged "J" by the laboratory. The qualifier was carried forward during validation. These results are identified, with the "RI" reason code, in the ADR Data Quality Summary Report for SDG 212102607 (Attachment 2).

Target dissolved metal aluminum was detected in method blanks associated with SDG 212102607. The reported results for aluminum for the equipment blank sample (EB-02), and samples LF05-MW-T-01 and MW-V-01 have been requalified as not detected ("UB"), at the reporting limit, due to the method blank contamination. These results are identified with the "Mb" reason code in the ADR Data Qualifier Summary for SDG 212102607 (Attachment 2).

Target total metals aluminum, cadmium, copper, magnesium, manganese, potassium, sodium and vanadium were detected in equipment blank (EB-02) associated with SDG 212102607. The reported results for aluminum, barium, cadmium, manganese and sodium for sample LF05-MW-T-01 have been requalified as not detected ("UB"), at the reporting limit, due to the equipment blank contamination. The reported results for barium, cadmium and sodium for sample MW-V-01 have also been requalified as not detected ("UB"), at the reporting limit, due to the equipment blank contamination. These results are identified with the "Eb" reason code in the ADR Data Qualifier Summary for SDG 212102607 (Attachment 2).

Target dissolved metals magnesium, manganese, potassium and vanadium were detected in equipment blank (EB-02) associated with SDG 212102607. The reported results for barium and sodium for sample LF05-MW-T-01 have been requalified as not

detected ("UB"), at the reporting limit, due to the equipment blank contamination. The reported results for barium and sodium for sample MW-V-01 have also been requalified as not detected ("UB"), at the reporting limit, due to the equipment blank contamination. These results are identified with the "Eb" reason code in the ADR Data Qualifier Summary for SDG 212102607 (Attachment 2).

Detections above the MDL but less than the RL for total metals cadmium, chromium, cobalt, copper, manganese and selenium for samples in SDG 212102705 were qualified as estimated and flagged "J" by the laboratory. The qualifier was carried forward during validation. These results are identified, with the "RI" reason code, in the ADR Data Quality Summary Report for SDG 212102705 (Attachment 2).

Detections above the MDL but less than the RL for dissolved metals cadmium, chromium, copper and selenium for samples in SDG 212102705 were qualified as estimated and flagged "J" by the laboratory. The qualifier was carried forward during validation. These results are identified, with the "RI" reason code, in the ADR Data Quality Summary Report for SDG 212102705 (Attachment 2).

Target dissolved metal aluminum was detected in method blanks associated with SDG 212102705. The reported results for aluminum for sample LF05-MW-RB-01 has been requalified as not detected ("UB"), at the reporting limit, due to the method blank contamination. This result is identified with the "Mb" reason code in the ADR Data Qualifier Summary for SDG 212102705 (Attachment 2).

Accuracy outliers (as percent recovery - %R) were reported for total metals calcium, magnesium and zinc for the MS/MSD samples associated with SDG 212102705. Sample LF05-MW-RB-01 was the parent sample for the MS/MSD. The reported %Rs were below the lower control limits. Reported results for calcium, magnesium and zinc for the parent sample have been qualified as estimated ("J") due to the accuracy outliers. These results are identified with the "Ms" reason code in the ADR Qualifier summary for SDG 212102705 (Attachment 2).

An accuracy outlier was reported for dissolved metal calcium for the MS/MSD samples associated with SDG 212102705. Sample LF05-MW-RB-01 was the parent sample for the MS/MSD. The reported %R was below the lower control limits. The reported result for calcium for the parent sample has been qualified as estimated ("J") due to the accuracy outlier. This result is identified with the "Ms" reason code in the ADR Qualifier summary for SDG 212102705 (Attachment 2).

Detections above the MDL but less than the RL for total metals cadmium, chromium, copper and mercury for samples in SDG 212103005 were qualified as estimated and flagged "J" by the laboratory. The qualifier was carried forward during validation. These results are identified, with the "RI" reason code, in the ADR Data Quality Summary Report for SDG 212103005 (Attachment 2).

Detections above the MDL but less than the RL for dissolved metals cadmium, chromium, copper, mercury, selenium and thallium for samples in SDG 212103005 were qualified as estimated and flagged "J" by the laboratory. The qualifier was carried

forward during validation. These results are identified, with the "RI" reason code, in the ADR Data Quality Summary Report for SDG 212103005 (Attachment 2).

Target total metal aluminum was detected in method blanks associated with SDG 212103005. The reported result for aluminum for sample LF05-MW-C-01 has been requalified as not detected ("UB"), at the reporting limit, due to the method blank contamination. This result is identified with the "Mb" reason code in the ADR Data Qualifier Summary for SDG 212103005 (Attachment 2).

Target dissolved metal aluminum was detected in method blanks associated with SDG 212103005. The reported result for aluminum for sample LF05-MW-C-01 has been requalified as not detected ("UB"), at the reporting limit, due to the method blank contamination. This result is identified with the "Mb" reason code in the ADR Data Qualifier Summary for SDG 212103005 (Attachment 2).

Detections above the MDL but less than the RL for total metals arsenic, cadmium, chromium, copper, manganese, nickel and selenium for samples in SDG 212103108 were qualified as estimated and flagged "J" by the laboratory. The qualifier was carried forward during validation. These results are identified, with the "RI" reason code, in the ADR Data Quality Summary Report for SDG 212103108 (Attachment 2).

Detections above the MDL but less than the RL for dissolved metals cadmium, chromium, copper, nickel, selenium and thallium for samples in SDG 212103108 were qualified as estimated and flagged "J" by the laboratory. The qualifier was carried forward during validation. These results are identified, with the "RI" reason code, in the ADR Data Quality Summary Report for SDG 212103108 (Attachment 2).

Target total metal aluminum was detected in method blanks associated with SDG 212103108. The reported results for aluminum for samples LF05-MW-S-01 and LF05-MW-U-01 have been requalified as not detected ("UB"), at the reporting limit, due to the method blank contamination. These results are identified with the "Mb" reason code in the ADR Data Qualifier Summary for SDG 212103108 (Attachment 2).

Target dissolved metal aluminum was detected in method blanks associated with SDG 212103108. The reported result for aluminum for samples LF05-MW-S-01 and LF05-MW-U-01 have been requalified as not detected ("UB"), at the reporting limit, due to the method blank contamination. These results are identified with the "Mb" reason code in the ADR Data Qualifier Summary for SDG 212103108 (Attachment 2).

Two field duplicate pairs were collected is support of the sampling event. The field samples are identified in Table 1 (Attachment 1 – Summary of Cannon Air Force Base Groundwater Samples Collected in October 2012). Several target metals (total and dissolved) were detected in both field duplicate pairs above the reporting limit. A precision outlier (calculated as relative percent difference – RPD) was calculated for aluminum for the field duplicate pair associated with SDG 212102407. The calculated RPD (52%) was slightly above the control limit (50%). The reported results for aluminum for the parent (MW-G-01) and field duplicate (MW-G-01-FD) have been qualified as

estimated ("J") due to the precision outlier. No other results for metals have been qualified due to field duplicate precision.

The samples were prepared and analyzed following the analytical procedures described in the QAPP. The completeness for the total and dissolved metals analysis is 100%. All other PARCCS requirements were met for the metals analysis.

Hexavalent Chromium

All samples (except the trip blanks) were analyzed for hexavalent chromium as specified in the QAPP. The analyses were performed using method SW 7196A.

Hexavalent chromium was not detected in any of the samples.

The Laboratory reported that the analysis for hexavalent chromium for samples in the following SDGs was performed a few hours after the specified holding time (24 hours after sampling): 212101807, 212102010, 212102306, 212102503, 212102607, 212102705 and 212103108. Communications with the Laboratory indicated that the affected samples could not be analyzed within the holding time because the holding time had expired during shipment to the Laboratory. The Laboratory made every effort to analyze the samples as soon as possible.

The reported results for the affected samples in the SDGs above have been qualified as estimated ("UJ") due to the holding time violations. These results are identified with the "StoA" reason code in the ADR Data Qualifier Summary for the affected SDGs (Attachment 2).

Two field duplicate pairs were collected is support of the sampling event. The field samples are identified in Table 1 (Attachment 1 – Summary of Cannon Air Force Base Groundwater Samples Collected in October 2012). Hexavalent chromium was not detected in either of the field duplicate pairs.

The samples were prepared and analyzed following the analytical procedures described in the QAPP. The completeness for the hexavalent chromium analysis is 100%. All other PARCCS requirements were met for the hexavalent chromium analysis.

Other Parameters (Ammonia, Chloride, Nitrate, Nitrite, Sulfate, Total Organic Carbon)

All samples, except the trip blanks, were analyzed for the Other Parameters as specified in the QAPP. The analyses were performed using method SM 4500 NH3 (ammonia), SW 9056A (chloride and sulfate), EPA 353.2 (nitrate and nitrite) and SW9060A (total organic carbon).

Each of the target analyte was detected in some of the samples. The reported nitrate result for sample LF03-MW-0A-01 exceeded the screening criteria. This result has been bolded and shaded in the data summary table (Attachment 3).

Detections above the MDL but less than the RL for nitrite for samples in SDG 212101807 were qualified as estimated and flagged "J" by the laboratory. The qualifier was carried forward during validation. These results are identified, with the "RI" reason code, in the ADR Data Quality Summary Report for SDG 212101807 (Attachment 2).

Detections above the MDL but less than the RL for nitrite and ammonia for samples in SDG 212102010 were qualified as estimated and flagged "J" by the laboratory. The qualifier was carried forward during validation. These results are identified, with the "RI" reason code, in the ADR Data Quality Summary Report for SDG 212102010 (Attachment 2).

Target analyte nitrite was detected in method blanks associated with SDG 212102306. The reported result for aluminum for sample MW-H-01 has been requalified as not detected ("UB"), at the reporting limit, due to the method blank contamination. This result is identified with the "Mb" reason code in the ADR Data Qualifier Summary for SDG 212102306 (Attachment 2).

Detections above the MDL but less than the RL for nitrite for samples in SDG 212102407 were qualified as estimated and flagged "J" by the laboratory. The qualifier was carried forward during validation. These results are identified, with the "RI" reason code, in the ADR Data Quality Summary Report for SDG 212102407 (Attachment 2).

A precision outlier was calculated for TOC for the field duplicate pair associated with SDG 212102407. The RPD (67%) was above the control limit (50%). The reported results for TOC for the parent (MW-G-01) and field duplicate (MW-G-01-FD) have been qualified as estimated ("J") due to the precision outlier. These results are indicated with "Fd" in the ADR Data Qualifier Summary for SDG 212102407 (Attachment 2).

Target analytes chloride, sulfate, nitrite, nitrate and TOC were detected in equipment blank (EB-01) associated with SDG 212102503. The reported results for chloride for samples MW-E-01 and MW-X-01 have been requalified as not detected ("UB") due to the equipment blank contamination. The reported result for nitrite for sample MW-X-01 has been requalified as not detected ("UB") due to the equipment blank contamination. The reported results for TOC for samples MW-E-01 and MW-X-01 have been requalified as not detected ("UB") due to the equipment blank contamination. These results are identified with the "Eb" reason code in the ADR Data Qualifier Summary for SDG 212102503 (Attachment 2).

Target analytes chloride and TOC were detected in equipment blank (EB-02) associated with SDG 212102607. The reported result for chloride for sample LF05-MW-T-01 has been requalified as not detected ("UB") due to the equipment blank contamination. The reported results for TOC for samples LF05-MW-T-01 and MW-V-01 have been requalified as not detected ("UB") due to the equipment blank contamination. These results are identified with the "Eb" reason code in the ADR Data Qualifier Summary for SDG 212102607 (Attachment 2).

Two field duplicate pairs were collected is support of the sampling event. The field samples are identified in Table 1 (Attachment 1 – Summary of Groundwater Samples

Collected in October 2012). Generally, there was very good agreement between results, above the reporting limits, for the field duplicate pairs.

The samples were prepared and analyzed following the analytical procedures described in the QAPP. The completeness for the other parameters analysis is 100%. All other PARCCS requirements were met for the other parameters analysis.

ATTACHMENT 1

SUMMARY OF GROUNDWATER SAMPLES COLLECTED IN OCTOBER 2012

TABLE 1
SUMMARY OF GROUNDWATER SAMPLES COLLECTED IN OCTOBER 2012

LAB SAMPLE ID	SAMPLE ID	SAMPLE COLLECTION DATE	COMMENTS	PARAMETERS
21210170701	LF25-MW-PA-01	10/16/2012		Volatiles (SW8260B), Perchlorate (SW6860). Metals (SW6010C/7470A), Hexavalent Chromium (SW7196A), Ammonia (SM4500 NH3), Anions (SW9056A), Nitrate/Nitrite (353.2), TOC (SW9060A)
21210170702	TB-01	10/16/2012	TRIP BLANK	
21210180701	LF03-MW-0A-01	10/17/2012		
21210180702	TB-02	10/17/2012	TRIP BLANK	
21210180703	LF04-MW-NA-01	10/17/2012		
21210201001	LF05-MW-A-01	10/19/2012		
21210201002	TB-3	10/19/2012	TRIP BLANK	
21210201003	MW-F-01	10/19/2012		
21210201004	MW-F-01-FD	10/19/2012	FIELD DUPLICATE	
21210230601	MW-H-01	10/22/2012		
21210230602	TB-04	10/22/2012	TRIP BLANK	
21210240701	MW-G-01	10/23/2012		
21210240702	MW-G-01-FD	10/23/2012	FIELD DUPLICATE	
21210240703	TB-5	10/23/2012	TRIP BLANK	
21210250301	MW-E-01	10/24/2012		
21210250302	EB-01	10/24/2012	EQUIPMENT BLANK	
21210250303	MW-X-01	10/24/2012		
21210250306	TB-06	10/24/2012	TRIP BLANK	
21210250307	TB-07	10/24/2012	TRIP BLANK	
21210260701	MW-V-01	10/25/2012		
21210260702	TB-02	10/25/2012	TRIP BLANK	
21210260703	EB-02	10/25/2012	EQUIPMENT BLANK	
21210260704	LF05-MW-T-01	10/25/2012		
21210270501	LF25-MW-RB-01	10/26/2012		
21210270504	TB-09	10/26/2012	TRIP BLANK	
21210300501	LF05-MW-C-01	10/29/2012		
21210300502	TB-10	10/29/2012	TRIP BLANK	
21210310801	LF05-MW-U-01	10/30/2012		
21210310802	TB-11	10/30/2012	TRIP BLANK	
21210310803	LF05-MW-S-01	10/30/2012		

ATTACHMENT 2

ADR DATA QUALIFIER SUMMARY REPORTS (BY SDG)

Data Qualifier Summary

Lab Reporting Batch ID: 212101707 **Laboratory: GCAL**

)D Filename: 212101707 **eQAPP Name: Cannon AFB**

Method Category: METALS

Method: 6010C **Matrix:** AQ

Sample ID: LF25-MW-PA-01 **Collected:** 10/16/2012 2:45:00 **Analysis Type:** RE/DIS **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.63	J	0.16	MDL	5.00	RDL	ug/L	J	RI
COBALT	0.85	J	0.58	MDL	10.0	RDL	ug/L	UB	Mb

Sample ID: LF25-MW-PA-01 **Collected:** 10/16/2012 2:45:00 **Analysis Type:** RE/TOT **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.79	J	0.16	MDL	5.00	RDL	ug/L	UB	Mb
COBALT	1.05	J	0.58	MDL	10.0	RDL	ug/L	UB	Mb

Sample ID: LF25-MW-PA-01 **Collected:** 10/16/2012 2:45:00 **Analysis Type:** RES/DIS **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	1.88	J	0.26	MDL	10.0	RDL	ug/L	J	RI
COPPER	7.35	J	1.01	MDL	10.0	RDL	ug/L	J	RI
SELENIUM	9.72	J	4.42	MDL	40.0	RDL	ug/L	J	RI

Sample ID: LF25-MW-PA-01 **Collected:** 10/16/2012 2:45:00 **Analysis Type:** RES/TOT **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	3.25	J	3.11	MDL	60.0	RDL	ug/L	J	RI
CHROMIUM	2.06	J	0.26	MDL	10.0	RDL	ug/L	J	RI
COPPER	8.68	J	1.01	MDL	10.0	RDL	ug/L	J	RI
THALLIUM	4.89	J	3.04	MDL	20.0	RDL	ug/L	J	RI

Method Category: METALS

Method: 7470A **Matrix:** AQ

Sample ID: LF25-MW-PA-01 **Collected:** 10/16/2012 2:45:00 **Analysis Type:** RES/DIS **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.08569	J	0.068	MDL	0.20	RDL	ug/L	UB	Mb

* denotes a non-reportable result

Project Name and Number: 9110129 - Cannon AFB

Data Qualifier Summary

Lab Reporting Batch ID: 212101707 **Laboratory: GCAL**

EDD Filename: 212101707 **eQAPP Name: Cannon A'**

Method Category: METALS

Method: 7470A *Matrix:* AQ

Sample ID: **LF25-MW-PA-01** ***Collected:*** **10/16/2012 2:45:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.07650	J	0.068	MDL	0.20	RDL	ug/L	UB	Mb

* denotes a non-reportable result

Project Name and Number: 9110129 - Cannon AFB

Data Qualifier Summary

Lab Reporting Batch ID: 212101707 **Laboratory: GCAL**

ID Filename: 212101707 **eQAPP Name: Cannon AFB**

Reason Code Legend

Reason Code	*Description*
Mb	Method Blank Contamination
RI	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: 9110129 - Cannon AFB

Data Qualifier Summary

Lab Reporting Batch ID: 212101807 **Laboratory: GCAL**

)D Filename: 212101807 **eQAPP Name: Cannon AFB**

Method Category: GENCHEM

Method: 353.2 *Matrix:* AQ

Sample ID: **LF04-MW-NA-01** ***Collected:*** **10/17/2012 4:20:00** ***Analysis Type:*** **RE/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NITRITE	0.008	J	0.002	MDL	0.010	RDL	mg/L	J	RI

Method Category: METALS

Method: 6010C *Matrix:* AQ

Sample ID: **LF03-MW-0A-01** ***Collected:*** **10/17/2012 10:45:00** ***Analysis Type:*** **RE/DIS** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.61	J	0.16	MDL	5.00	RDL	ug/L	J	RI
COBALT	1.27	J	0.58	MDL	10.0	RDL	ug/L	UB	Mb

Sample ID: **LF03-MW-0A-01** ***Collected:*** **10/17/2012 10:45:00** ***Analysis Type:*** **RE/TOT** ***Dilution:*** **1**

ıalyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ɔADMIUM	0.78	J	0.16	MDL	5.00	RDL	ug/L	J	RI
COBALT	1.12	J	0.58	MDL	10.0	RDL	ug/L	J	RI

Sample ID: **LF03-MW-0A-01** ***Collected:*** **10/17/2012 10:45:00** ***Analysis Type:*** **RES/DIS** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	1.91	J	0.26	MDL	10.0	RDL	ug/L	J	RI
NICKEL	1.69	J	1.13	MDL	40.0	RDL	ug/L	J	RI
SELENIUM	5.05	J	4.42	MDL	40.0	RDL	ug/L	J	RI
THALLIUM	4.18	J	3.04	MDL	20.0	RDL	ug/L	J	RI

Sample ID: **LF03-MW-0A-01** ***Collected:*** **10/17/2012 10:45:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	1.78	J	0.26	MDL	10.0	RDL	ug/L	J	RI
SELENIUM	8.00	J	4.42	MDL	40.0	RDL	ug/L	J	RI
THALLIUM	4.58	J	3.04	MDL	20.0	RDL	ug/L	J	RI

* denotes a non-reportable result

Project Name and Number: 9110129 - Cannon AFB

Data Qualifier Summary

Lab Reporting Batch ID: 212101807 **Laboratory: GCAL**

EDD Filename: 212101807 **eQAPP Name: Cannon A**

Method Category: METALS

Method: 6010C **Matrix:** AQ

Sample ID: LF04-MW-NA-01 **Collected:** 10/17/2012 4:20:00 **Analysis Type:** RE/DIS **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.70	J	0.16	MDL	5.00	RDL	ug/L	J	RI
COBALT	0.79	J	0.58	MDL	10.0	RDL	ug/L	UB	Mb

Sample ID: LF04-MW-NA-01 **Collected:** 10/17/2012 4:20:00 **Analysis Type:** RE/TOT **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.83	J	0.16	MDL	5.00	RDL	ug/L	J	RI
COBALT	0.70	J	0.58	MDL	10.0	RDL	ug/L	J	RI
MANGANESE	10.5	J	1.31	MDL	15.0	RDL	ug/L	J	RI

Sample ID: LF04-MW-NA-01 **Collected:** 10/17/2012 4:20:00 **Analysis Type:** RES/DIS **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	1.29	J	0.26	MDL	10.0	RDL	ug/L	J	RI
NICKEL	1.21	J	1.13	MDL	40.0	RDL	ug/L	J	RI
SELENIUM	5.07	J	4.42	MDL	40.0	RDL	ug/L	J	RI
THALLIUM	5.06	J	3.04	MDL	20.0	RDL	ug/L	J	RI

Sample ID: LF04-MW-NA-01 **Collected:** 10/17/2012 4:20:00 **Analysis Type:** RES/TOT **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	1.69	J	0.26	MDL	10.0	RDL	ug/L	J	RI
SELENIUM	5.50	J	4.42	MDL	40.0	RDL	ug/L	J	RI
ZINC	9.16	J	4.51	MDL	20.0	RDL	ug/L	J	RI

Method Category: METALS

Method: 7196A **Matrix:** AQ

Sample ID: LF03-MW-0A-01 **Collected:** 10/17/2012 10:45:00 **Analysis Type:** RES/TOT **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	4.00	U	4.00	MDL	10.0	RDL	ug/L	UJ	StoA

* denotes a non-reportable result

Project Name and Number: 9110129 - Cannon AFB

Data Qualifier Summary

Lab Reporting Batch ID: 212101807 **Laboratory: GCAL**

)D Filename: 212101807 **eQAPP Name: Cannon AFB**

Reason Code Legend

Reason Code	*Description*
Mb	Method Blank Contamination
Rl	Reporting Limit Trace Value
StoA	Sampling to Analysis Estimation

* denotes a non-reportable result

Project Name and Number: 9110129 - Cannon AFB

Data Qualifier Summary

Lab Reporting Batch ID: 212102010 **Laboratory: GCAL**

)D Filename: 212102010 **eQAPP Name: Cannon AFB**

Method Category: **GENCHEM**

Method: **353.2** ***Matrix:*** **AQ**

Sample ID: **MW-F-01-FD** ***Collected:*** **10/19/2012 2:21:00** ***Analysis Type:*** **RE/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NITRITE	0.008	J	0.002	MDL	0.010	RDL	mg/L	J	RI, Fd

Method Category: **GENCHEM**

Method: **SM 4500 NH3** ***Matrix:*** **AQ**

Sample ID: **LF05-MW-A-01** ***Collected:*** **10/19/2012 7:11:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AMMONIA AS N	0.86	J	0.24	MDL	1.0	RDL	mg/L	J	RI

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **AQ**

mple ID: **LF05-MW-A-01** ***Collected:*** **10/19/2012 7:11:00** ***Analysis Type:*** **RES/DIS** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	4.55	J	3.59	MDL	10.0	RDL	ug/L	J	RI
CADMIUM	0.78	J	0.16	MDL	5.00	RDL	ug/L	J	RI
CHROMIUM	1.09	J	0.26	MDL	10.0	RDL	ug/L	J	RI
COBALT	1.07	J	0.58	MDL	10.0	RDL	ug/L	J	RI
COPPER	6.37	J	1.01	MDL	10.0	RDL	ug/L	J	RI
MANGANESE	7.10	J	1.31	MDL	15.0	RDL	ug/L	J	RI
NICKEL	2.40	J	1.13	MDL	40.0	RDL	ug/L	UB	Mb
SELENIUM	5.70	J	4.42	MDL	40.0	RDL	ug/L	J	RI
THALLIUM	5.77	J	3.04	MDL	20.0	RDL	ug/L	J	RI

Sample ID: **LF05-MW-A-01** ***Collected:*** **10/19/2012 7:11:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	1.07	J	0.16	MDL	5.00	RDL	ug/L	UB	Mb
CHROMIUM	3.09	J	0.26	MDL	10.0	RDL	ug/L	J	RI
COBALT	1.85	J	0.58	MDL	10.0	RDL	ug/L	J	RI
COPPER	8.47	J	1.01	MDL	10.0	RDL	ug/L	J	RI
NICKEL	2.80	J	1.13	MDL	40.0	RDL	ug/L	UB	Mb

* denotes a non-reportable result

Project Name and Number: 9110129 - Cannon AFB

Data Qualifier Summary

Lab Reporting Batch ID: 212102010 **Laboratory: GCAL**

EDD Filename: 212102010 **eQAPP Name: Cannon Al**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **AQ**

Sample ID: **LF05-MW-A-01** ***Collected:*** **10/19/2012 7:11:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	4.69	J	4.42	MDL	40.0	RDL	ug/L	J	RI

Sample ID: **MW-F-01** ***Collected:*** **10/19/2012 2:21:00** ***Analysis Type:*** **RES/DIS** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.70	J	0.16	MDL	5.00	RDL	ug/L	J	RI
CHROMIUM	1.05	J	0.26	MDL	10.0	RDL	ug/L	J	RI
COBALT	1.06	J	0.58	MDL	10.0	RDL	ug/L	J	RI
COPPER	8.62	J	1.01	MDL	10.0	RDL	ug/L	J	RI
IRON	25.1	J	12.6	MDL	100	RDL	ug/L	J	RI
NICKEL	3.55	J	1.13	MDL	40.0	RDL	ug/L	UB	Mb
SELENIUM	6.24	J	4.42	MDL	40.0	RDL	ug/L	J	RI
THALLIUM	4.65	J	3.04	MDL	20.0	RDL	ug/L	J	RI

Sample ID: **MW-F-01** ***Collected:*** **10/19/2012 2:21:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.93	J	0.16	MDL	5.00	RDL	ug/L	UB	Mb
CHROMIUM	1.68	J	0.26	MDL	10.0	RDL	ug/L	J	RI
COBALT	0.61	J	0.58	MDL	10.0	RDL	ug/L	J	RI
COPPER	7.64	J	1.01	MDL	10.0	RDL	ug/L	J	RI
IRON	55.6	J	12.6	MDL	100	RDL	ug/L	J	RI
NICKEL	1.51	J	1.13	MDL	40.0	RDL	ug/L	UB	Mb
SELENIUM	9.77	J	4.42	MDL	40.0	RDL	ug/L	J	RI
THALLIUM	3.22	J	3.04	MDL	20.0	RDL	ug/L	J	RI

Sample ID: **MW-F-01-FD** ***Collected:*** **10/19/2012 2:21:00** ***Analysis Type:*** **RES/DIS** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.65	J	0.16	MDL	5.00	RDL	ug/L	J	RI
CHROMIUM	1.03	J	0.26	MDL	10.0	RDL	ug/L	J	RI
COPPER	8.27	J	1.01	MDL	10.0	RDL	ug/L	J	RI
NICKEL	1.21	J	1.13	MDL	40.0	RDL	ug/L	UB	Mb, Fd
SELENIUM	6.93	J	4.42	MDL	40.0	RDL	ug/L	J	RI
THALLIUM	4.97	J	3.04	MDL	20.0	RDL	ug/L	J	RI

* denotes a non-reportable result

Project Name and Number: 9110129 - Cannon AFB

Data Qualifier Summary

Lab Reporting Batch ID: 212102010 **Laboratory: GCAL**

ID Filename: 212102010 **eQAPP Name: Cannon AFB**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **AQ**

Sample ID: **MW-F-01-FD** ***Collected:*** **10/19/2012 2:21:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.84	J	0.16	MDL	5.00	RDL	ug/L	UB	Mb
CHROMIUM	1.83	J	0.26	MDL	10.0	RDL	ug/L	J	RI
COBALT	0.65	J	0.58	MDL	10.0	RDL	ug/L	J	RI
COPPER	7.19	J	1.01	MDL	10.0	RDL	ug/L	J	RI
IRON	64.5	J	12.6	MDL	100	RDL	ug/L	J	RI
NICKEL	1.88	J	1.13	MDL	40.0	RDL	ug/L	UB	Mb
SELENIUM	6.71	J	4.42	MDL	40.0	RDL	ug/L	J	RI

Method Category: **METALS**

Method: **7196A** ***Matrix:*** **AQ**

Sample ID: **LF05-MW-A-01** ***Collected:*** **10/19/2012 7:11:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

alyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	4.00	U	4.00	MDL	10.0	RDL	ug/L	UJ	StoA

* denotes a non-reportable result

Project Name and Number: 9110129 - Cannon AFB

Data Qualifier Summary

Lab Reporting Batch ID: 212102010 **Laboratory: GCAL**

EDD Filename: 212102010 **eQAPP Name: Cannon A**

Reason Code Legend

Reason Code	*Description*
Fd	Field Duplicate Precision
Mb	Method Blank Contamination
RI	Reporting Limit Trace Value
StoA	Sampling to Analysis Estimation

* denotes a non-reportable result

Project Name and Number: 9110129 - Cannon AFB

Data Qualifier Summary

Lab Reporting Batch ID: 212102306 **Laboratory: GCAL**

ID Filename: 212102306 **eQAPP Name: Cannon AFB**

Method Category: GENCHEM
Method: 353.2 **Matrix:** AQ

Sample ID: MW-H-01 **Collected:** 10/22/2012 7:20:00 **Analysis Type:** RE/TOT **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NITRITE	0.010	J	0.002	MDL	0.010	RDL	mg/L	UB	Mb

Method Category: METALS
Method: 6010C **Matrix:** AQ

Sample ID: MW-H-01 **Collected:** 10/22/2012 7:20:00 **Analysis Type:** RES/DIS **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.68	J	0.16	MDL	5.00	RDL	ug/L	J	RI
CHROMIUM	1.06	J	0.26	MDL	10.0	RDL	ug/L	J	RI
COBALT	0.68	J	0.58	MDL	10.0	RDL	ug/L	J	RI
COPPER	9.24	J	1.01	MDL	10.0	RDL	ug/L	J	RI
NICKEL	5.30	J	1.13	MDL	40.0	RDL	ug/L	UB	Mb
LENIUM	7.96	J	4.42	MDL	40.0	RDL	ug/L	J	RI
THALLIUM	3.06	J	3.04	MDL	20.0	RDL	ug/L	J	RI

Sample ID: MW-H-01 **Collected:** 10/22/2012 7:20:00 **Analysis Type:** RES/TOT **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	34.6	J	30.3	MDL	200	RDL	ug/L	J	RI
CADMIUM	1.03	J	0.16	MDL	5.00	RDL	ug/L	UB	Mb
CHROMIUM	7.55	J	0.26	MDL	10.0	RDL	ug/L	J	RI
COBALT	0.77	J	0.58	MDL	10.0	RDL	ug/L	J	RI
MANGANESE	12.9	J	1.31	MDL	15.0	RDL	ug/L	J	RI
NICKEL	10.4	J	1.13	MDL	40.0	RDL	ug/L	J	RI
SELENIUM	8.63	J	4.42	MDL	40.0	RDL	ug/L	J	RI

Method Category: METALS
Method: 7196A **Matrix:** AQ

Sample ID: MW-H-01 **Collected:** 10/22/2012 7:20:00 **Analysis Type:** RES/TOT **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	4.00	U	4.00	MDL	10.0	RDL	ug/L	UJ	StoA

* denotes a non-reportable result

Project Name and Number: 9110129 - Cannon AFB

Data Qualifier Summary

Lab Reporting Batch ID: 212102306 **Laboratory: GCAL**

EDD Filename: 212102306 **eQAPP Name: Cannon A'**

Method Category: VOA

Method: 8260B *Matrix:* AQ

Sample ID: **TB-04** ***Collected:*** **10/22/2012 7:20:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHLOROFORM	0.636	J	0.155	MDL	1.00	RDL	ug/L	J	RI

* denotes a non-reportable result

Project Name and Number: 9110129 - Cannon AFB

Data Qualifier Summary

Lab Reporting Batch ID: 212102306 **Laboratory: GCAL**

)D Filename: 212102306 **eQAPP Name: Cannon AFB**

Reason Code Legend

Reason Code	*Description*
Mb	Method Blank Contamination
RI	Reporting Limit Trace Value
StoA	Sampling to Analysis Estimation

* denotes a non-reportable result

Project Name and Number: 9110129 - Cannon AFB

Data Qualifier Summary

Lab Reporting Batch ID: 212102407 | **Laboratory: GCAL**

)D Filename: 212102407 | **eQAPP Name: Cannon AFB**

Method Category: **GENCHEM**

Method: **353.2** ***Matrix:*** **AQ**

Sample ID: **MW-G-01** ***Collected:*** **10/23/2012 2:46:00** ***Analysis Type:*** **RE/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NITRITE	0.007	J	0.002	MDL	0.010	RDL	mg/L	J	RI

Sample ID: **MW-G-01-FD** ***Collected:*** **10/23/2012 2:46:00** ***Analysis Type:*** **RE/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NITRITE	0.008	J	0.002	MDL	0.010	RDL	mg/L	J	RI

Method Category: **GENCHEM**

Method: **5310B** ***Matrix:*** **AQ**

Sample ID: **MW-G-01** ***Collected:*** **10/23/2012 2:46:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
)TAL ORGANIC CARBON (TOC)	1.8		0.30	MDL	1.0	RDL	mg/L	J	Fd

Sample ID: **MW-G-01-FD** ***Collected:*** **10/23/2012 2:46:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TOTAL ORGANIC CARBON (TOC)	3.6		0.30	MDL	1.0	RDL	mg/L	J	Fd

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **AQ**

Sample ID: **MW-G-01** ***Collected:*** **10/23/2012 2:46:00** ***Analysis Type:*** **RE/DIS** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	3.42	J	3.11	MDL	60.0	RDL	ug/L	J	RI

Sample ID: **MW-G-01** ***Collected:*** **10/23/2012 2:46:00** ***Analysis Type:*** **RES/DIS** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.71	J	0.16	MDL	5.00	RDL	ug/L	J	RI
CHROMIUM	1.04	J	0.26	MDL	10.0	RDL	ug/L	J	RI
COBALT	0.63	J	0.58	MDL	10.0	RDL	ug/L	J	RI
)PPER	8.61	J	1.01	MDL	10.0	RDL	ug/L	J	RI

* denotes a non-reportable result

Project Name and Number: 9110129 - Cannon AFB

Data Qualifier Summary

Lab Reporting Batch ID: 212102407 **Laboratory: GCAL**

EDD Filename: 212102407 **eQAPP Name: Cannon Al**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **AQ**

Sample ID: **MW-G-01** ***Collected:*** **10/23/2012 2:46:00** ***Analysis Type:*** **RES/DIS** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NICKEL	1.75	J	1.13	MDL	40.0	RDL	ug/L	J	RI
SELENIUM	7.99	J	4.42	MDL	40.0	RDL	ug/L	J	RI
THALLIUM	3.45	J	3.04	MDL	20.0	RDL	ug/L	J	RI

Sample ID: **MW-G-01** ***Collected:*** **10/23/2012 2:46:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	32.0	J	30.3	MDL	200	RDL	ug/L	J	RI, Fd
CADMIUM	1.06	J	0.16	MDL	5.00	RDL	ug/L	UB	Mb
CHROMIUM	2.23	J	0.26	MDL	10.0	RDL	ug/L	J	RI
COBALT	1.47	J	0.58	MDL	10.0	RDL	ug/L	UB	Mb
NICKEL	4.06	J	1.13	MDL	40.0	RDL	ug/L	UB	Mb
THALLIUM	3.69	J	3.04	MDL	20.0	RDL	ug/L	J	RI

Sample ID: **MW-G-01-FD** ***Collected:*** **10/23/2012 2:46:00** ***Analysis Type:*** **RE/DIS** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	3.20	J	3.11	MDL	60.0	RDL	ug/L	J	RI

Sample ID: **MW-G-01-FD** ***Collected:*** **10/23/2012 2:46:00** ***Analysis Type:*** **RES/DIS** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.85	J	0.16	MDL	5.00	RDL	ug/L	J	RI
CHROMIUM	1.12	J	0.26	MDL	10.0	RDL	ug/L	J	RI
COBALT	0.87	J	0.58	MDL	10.0	RDL	ug/L	J	RI
COPPER	8.28	J	1.01	MDL	10.0	RDL	ug/L	J	RI
NICKEL	1.62	J	1.13	MDL	40.0	RDL	ug/L	J	RI
SELENIUM	7.01	J	4.42	MDL	40.0	RDL	ug/L	J	RI
THALLIUM	4.13	J	3.04	MDL	20.0	RDL	ug/L	J	RI

Sample ID: **MW-G-01-FD** ***Collected:*** **10/23/2012 2:46:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	54.2	J	30.3	MDL	200	RDL	ug/L	J	RI, Fd
CADMIUM	1.05	J	0.16	MDL	5.00	RDL	ug/L	UB	Mb

* denotes a non-reportable result

Project Name and Number: 9110129 - Cannon AFB

Data Qualifier Summary

Lab Reporting Batch ID: 212102407 **Laboratory: GCAL**

D Filename: 212102407 **eQAPP Name: Cannon AFB**

Method Category: METALS

Method: 6010C *Matrix:* AQ

Sample ID: **MW-G-01-FD** ***Collected:*** **10/23/2012 2:46:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	2.42	J	0.26	MDL	10.0	RDL	ug/L	J	RI
COBALT	1.53	J	0.58	MDL	10.0	RDL	ug/L	UB	Mb
NICKEL	4.26	J	1.13	MDL	40.0	RDL	ug/L	UB	Mb
SELENIUM	5.38	J	4.42	MDL	40.0	RDL	ug/L	J	RI, Fd

* denotes a non-reportable result

Project Name and Number: 9110129 - Cannon AFB

Data Qualifier Summary

Lab Reporting Batch ID: 212102407 **Laboratory: GCAL**

EDD Filename: 212102407 **eQAPP Name: Cannon A**

Reason Code Legend

Reason Code	*Description*
Fd	Field Duplicate Precision
Mb	Method Blank Contamination
Rl	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: 9110129 - Cannon AFB

Data Qualifier Summary

Lab Reporting Batch ID: 212102503 **Laboratory: GCAL**

)D Filename: 212102503 **eQAPP Name: Cannon AFB**

Method Category: GENCHEM
Method: 300.0 **Matrix:** AQ

Sample ID: MW-E-01 **Collected:** 10/24/2012 7:01:00 **Analysis Type:** RES/TOT **Dilution:** 50

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHLORIDE	61.6		3.15	MDL	5.00	RDL	mg/L	UB	Eb

Sample ID: MW-X-01 **Collected:** 10/24/2012 2:25:00 **Analysis Type:** RES/TOT **Dilution:** 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHLORIDE	24.7		1.26	MDL	2.00	RDL	mg/L	UB	Eb

Method Category: GENCHEM
Method: 353.2 **Matrix:** AQ

Sample ID: MW-X-01 **Collected:** 10/24/2012 2:25:00 **Analysis Type:** RE/TOT **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TRITE	0.007	J	0.002	MDL	0.010	RDL	mg/L	UB	Eb

Method Category: GENCHEM
Method: 5310B **Matrix:** AQ

Sample ID: MW-E-01 **Collected:** 10/24/2012 7:01:00 **Analysis Type:** RES/TOT **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TOTAL ORGANIC CARBON (TOC)	3.1		0.30	MDL	1.0	RDL	mg/L	UB	Eb

Sample ID: MW-X-01 **Collected:** 10/24/2012 2:25:00 **Analysis Type:** RES/TOT **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TOTAL ORGANIC CARBON (TOC)	2.0		0.30	MDL	1.0	RDL	mg/L	UB	Eb

Method Category: METALS
Method: 6010C **Matrix:** AQ

Sample ID: EB-01 **Collected:** 10/24/2012 8:45:00 **Analysis Type:** RE/DIS **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TASSIUM	412	J	3.46	MDL	500	RDL	ug/L	J	RI

* denotes a non-reportable result

Project Name and Number: 9110129 - Cannon AFB

Data Qualifier Summary

Lab Reporting Batch ID: 212102503 **Laboratory: GCAL**

EDD Filename: 212102503 **eQAPP Name: Cannon A**

Method Category: METALS

Method: 6010C *Matrix:* AQ

Sample ID: **EB-01** ***Collected:*** **10/24/2012 8:45:00** ***Analysis Type:*** **RE/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	412	J	34.6	MDL	500	RDL	ug/L	UB	Mb

Sample ID: **EB-01** ***Collected:*** **10/24/2012 8:45:00** ***Analysis Type:*** **RES/DIS** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	54.3	J	30.3	MDL	200	RDL	ug/L	J	RI
CADMIUM	0.31	J	0.16	MDL	5.00	RDL	ug/L	J	RI
CHROMIUM	0.35	J	0.26	MDL	10.0	RDL	ug/L	J	RI
COPPER	1.52	J	1.01	MDL	10.0	RDL	ug/L	J	RI
MAGNESIUM	71.7	J	16.5	MDL	100	RDL	ug/L	J	RI
MANGANESE	4.97	J	1.31	MDL	15.0	RDL	ug/L	J	RI
VANADIUM	2.11	J	1.25	MDL	20.0	RDL	ug/L	UB	Mb
ZINC	8.43	J	4.51	MDL	20.0	RDL	ug/L	J	RI

Sample ID: **EB-01** ***Collected:*** **10/24/2012 8:45:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	63.4	J	30.3	MDL	200	RDL	ug/L	J	RI
CADMIUM	0.26	J	0.16	MDL	5.00	RDL	ug/L	J	RI
COPPER	1.38	J	1.01	MDL	10.0	RDL	ug/L	J	RI
MAGNESIUM	77.9	J	16.5	MDL	100	RDL	ug/L	J	RI
MANGANESE	3.82	J	1.31	MDL	15.0	RDL	ug/L	J	RI
SILVER	0.84	J	0.70	MDL	10.0	RDL	ug/L	UB	Mb
VANADIUM	1.84	J	1.25	MDL	20.0	RDL	ug/L	J	RI

Sample ID: **MW-E-01** ***Collected:*** **10/24/2012 7:01:00** ***Analysis Type:*** **RE/DIS** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SODIUM	60600		61.1	MDL	1000	RDL	ug/L	UB	Eb

Sample ID: **MW-E-01** ***Collected:*** **10/24/2012 7:01:00** ***Analysis Type:*** **RE/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SODIUM	57900		61.1	MDL	1000	RDL	ug/L	UB	Eb

* denotes a non-reportable result

Project Name and Number: 9110129 - Cannon AFB

Data Qualifier Summary

Lab Reporting Batch ID: 212102503 **Laboratory: GCAL**

)D Filename: 212102503 **eQAPP Name: Cannon AFB**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **AQ**

Sample ID: **MW-E-01** ***Collected:*** **10/24/2012 7:01:00** ***Analysis Type:*** **RES/DIS** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	5.55	J	3.59	MDL	10.0	RDL	ug/L	J	RI
BARIUM	35.2		0.71	MDL	10.0	RDL	ug/L	UB	Eb
BERYLLIUM	0.15	J	0.10	MDL	5.00	RDL	ug/L	UB	Mb
CADMIUM	0.64	J	0.16	MDL	5.00	RDL	ug/L	UB	Eb
CHROMIUM	1.71	J	0.26	MDL	10.0	RDL	ug/L	UB	Eb
COPPER	7.93	J	1.01	MDL	10.0	RDL	ug/L	J	RI
MANGANESE	3.26	J	1.31	MDL	15.0	RDL	ug/L	UB	Eb
SELENIUM	11.6	J	4.42	MDL	40.0	RDL	ug/L	J	RI
SILVER	0.87	J	0.70	MDL	10.0	RDL	ug/L	UB	Mb

Sample ID: **MW-E-01** ***Collected:*** **10/24/2012 7:01:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
UMINUM	43.3	J	30.3	MDL	200	RDL	ug/L	UB	Eb
ARSENIC	4.75	J	3.59	MDL	10.0	RDL	ug/L	J	RI
BARIUM	33.9		0.71	MDL	10.0	RDL	ug/L	UB	Eb
CADMIUM	0.61	J	0.16	MDL	5.00	RDL	ug/L	UB	Eb
CHROMIUM	2.32	J	0.26	MDL	10.0	RDL	ug/L	J	RI
COPPER	7.53	J	1.01	MDL	10.0	RDL	ug/L	J	RI
IRON	77.5	J	12.6	MDL	100	RDL	ug/L	J	RI
LEAD	3.76	J	1.96	MDL	15.0	RDL	ug/L	J	RI
MANGANESE	6.39	J	1.31	MDL	15.0	RDL	ug/L	UB	Eb
SELENIUM	12.8	J	4.42	MDL	40.0	RDL	ug/L	J	RI

Sample ID: **MW-X-01** ***Collected:*** **10/24/2012 2:25:00** ***Analysis Type:*** **RE/DIS** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SODIUM	46900		61.1	MDL	1000	RDL	ug/L	UB	Eb

Sample ID: **MW-X-01** ***Collected:*** **10/24/2012 2:25:00** ***Analysis Type:*** **RE/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SODIUM	44200		61.1	MDL	1000	RDL	ug/L	UB	Eb

* denotes a non-reportable result

Project Name and Number: 9110129 - Cannon AFB

Data Qualifier Summary

Lab Reporting Batch ID: 212102503 **Laboratory: GCAL**

EDD Filename: 212102503 **eQAPP Name: Cannon A**

Method Category: METALS

Method: 6010C ***Matrix:*** AQ

Sample ID: MW-X-01 ***Collected:*** 10/24/2012 2:25:00 ***Analysis Type:*** RES/DIS ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	38.7	J	30.3	MDL	200	RDL	ug/L	UB	Eb
BERYLLIUM	0.12	J	0.10	MDL	5.00	RDL	ug/L	UB	Mb
CADMIUM	0.63	J	0.16	MDL	5.00	RDL	ug/L	UB	Eb
CHROMIUM	1.39	J	0.26	MDL	10.0	RDL	ug/L	UB	Eb
COPPER	6.52	J	1.01	MDL	10.0	RDL	ug/L	UB	Eb
SELENIUM	7.34	J	4.42	MDL	40.0	RDL	ug/L	J	Rl

Sample ID: MW-X-01 ***Collected:*** 10/24/2012 2:25:00 ***Analysis Type:*** RES/TOT ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	114	J	30.3	MDL	200	RDL	ug/L	UB	Eb
ARSENIC	8.84	J	3.59	MDL	10.0	RDL	ug/L	J	Rl
CADMIUM	0.62	J	0.16	MDL	5.00	RDL	ug/L	UB	Eb
CALCIUM	27900		45.7	MDL	100	RDL	ug/L	J	Ms
CHROMIUM	1.64	J	0.26	MDL	10.0	RDL	ug/L	J	Rl
COPPER	8.62	J	1.01	MDL	10.0	RDL	ug/L	J	Rl
IRON	58.3	J	12.6	MDL	100	RDL	ug/L	J	Rl
MAGNESIUM	23100		16.5	MDL	100	RDL	ug/L	J	Ms
MANGANESE	4.15	J	1.31	MDL	15.0	RDL	ug/L	UB	Eb
SELENIUM	7.89	J	4.42	MDL	40.0	RDL	ug/L	J	Rl
SILVER	0.84	J	0.70	MDL	10.0	RDL	ug/L	UB	Mb, Eb

Method Category: METALS

Method: 7196A ***Matrix:*** AQ

Sample ID: EB-01 ***Collected:*** 10/24/2012 8:45:00 ***Analysis Type:*** RES/TOT ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	4.00	U	4.00	MDL	10.0	RDL	ug/L	UJ	StoA

Sample ID: MW-E-01 ***Collected:*** 10/24/2012 7:01:00 ***Analysis Type:*** RES/TOT ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	4.00	U	4.00	MDL	10.0	RDL	ug/L	UJ	StoA

* denotes a non-reportable result

Project Name and Number: 9110129 - Cannon AFB

Data Qualifier Summary

Lab Reporting Batch ID: 212102503 **Laboratory: GCAL**

)D Filename: 212102503 **eQAPP Name: Cannon AFB**

* denotes a non-reportable result

Project Name and Number: 9110129 - Cannon AFB

Data Qualifier Summary

Lab Reporting Batch ID: 212102503 **Laboratory: GCAL**

EDD Filename: 212102503 **eQAPP Name: Cannon A'**

Reason Code Legend

Reason Code	*Description*
Eb	Equipment Blank Contamination
Mb	Method Blank Contamination
Ms	Matrix Spike Upper Estimation
Rl	Reporting Limit Trace Value
StoA	Sampling to Analysis Estimation

* denotes a non-reportable result

Project Name and Number: 9110129 - Cannon AFB

Data Qualifier Summary

Lab Reporting Batch ID: 212102607 **Laboratory: GCAL**

ɔD Filename: 212102607 **eQAPP Name: Cannon AFB**

Method Category: **GENCHEM**

Method: **300.0** ***Matrix:*** **AQ**

Sample ID: **EB-02** ***Collected:*** **10/25/2012 8:30:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NITRITE	0.099	J	0.015	MDL	0.500	RDL	mg/L	J	RI

Method Category: **GENCHEM**

Method: **5310B** ***Matrix:*** **AQ**

Sample ID: **LF05-MW-T-01** ***Collected:*** **10/25/2012 1:00:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TOTAL ORGANIC CARBON (TOC)	3.3		0.30	MDL	1.0	RDL	mg/L	UB	Eb

Sample ID: **MW-V-01** ***Collected:*** **10/25/2012 7:45:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ɔTAL ORGANIC CARBON (TOC)	4.8		0.30	MDL	1.0	RDL	mg/L	UB	Eb

Method Category: **GENCHEM**

Method: **9056A** ***Matrix:*** **AQ**

Sample ID: **LF05-MW-T-01** ***Collected:*** **10/25/2012 1:00:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **50**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHLORIDE	48.5		3.15	MDL	5.00	RDL	mg/L	UB	Eb

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **AQ**

Sample ID: **EB-02** ***Collected:*** **10/25/2012 8:30:00** ***Analysis Type:*** **RE/DIS** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	354	J	34.6	MDL	500	RDL	ug/L	J	RI

Sample ID: **EB-02** ***Collected:*** **10/25/2012 8:30:00** ***Analysis Type:*** **RE/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ɔTASSIUM	444	J	34.6	MDL	500	RDL	ug/L	J	RI

* denotes a non-reportable result

Project Name and Number: 9110129 - Cannon AFB

Data Qualifier Summary

Lab Reporting Batch ID: 212102607 **Laboratory: GCAL**

EDD Filename: 212102607 **eQAPP Name: Cannon AI**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **AQ**

Sample ID: **EB-02** ***Collected:*** **10/25/2012 8:30:00** ***Analysis Type:*** **RES/DIS** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	43.5	J	30.3	MDL	200	RDL	ug/L	UB	Mb
MAGNESIUM	60.8	J	16.5	MDL	100	RDL	ug/L	J	RI
MANGANESE	2.73	J	1.31	MDL	15.0	RDL	ug/L	J	RI
VANADIUM	2.49	J	1.25	MDL	20.0	RDL	ug/L	J	RI

Sample ID: **EB-02** ***Collected:*** **10/25/2012 8:30:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	46.0	J	30.3	MDL	200	RDL	ug/L	J	RI
CADMIUM	0.39	J	0.16	MDL	5.00	RDL	ug/L	J	RI
COPPER	1.30	J	1.01	MDL	10.0	RDL	ug/L	J	RI
MAGNESIUM	83.6	J	16.5	MDL	100	RDL	ug/L	J	RI
MANGANESE	3.86	J	1.31	MDL	15.0	RDL	ug/L	J	RI
VANADIUM	2.42	J	1.25	MDL	20.0	RDL	ug/L	J	RI

Sample ID: **LF05-MW-T-01** ***Collected:*** **10/25/2012 1:00:00** ***Analysis Type:*** **RE/DIS** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SODIUM	57000		61.1	MDL	1000	RDL	ug/L	UB	Eb

Sample ID: **LF05-MW-T-01** ***Collected:*** **10/25/2012 1:00:00** ***Analysis Type:*** **RE/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SODIUM	53700		61.1	MDL	1000	RDL	ug/L	UB	Eb

Sample ID: **LF05-MW-T-01** ***Collected:*** **10/25/2012 1:00:00** ***Analysis Type:*** **RES/DIS** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	30.5	J	30.3	MDL	200	RDL	ug/L	UB	Mb, Eb
ARSENIC	7.50	J	3.59	MDL	10.0	RDL	ug/L	J	RI
BARIUM	34.7		0.71	MDL	10.0	RDL	ug/L	UB	Eb
CADMIUM	0.41	J	0.16	MDL	5.00	RDL	ug/L	J	RI
CHROMIUM	2.24	J	0.26	MDL	10.0	RDL	ug/L	J	RI
COPPER	7.04	J	1.01	MDL	10.0	RDL	ug/L	J	RI
NICKEL	4.86	J	1.13	MDL	40.0	RDL	ug/L	J	RI

* denotes a non-reportable result

Project Name and Number: 9110129 - Cannon AFB

Data Qualifier Summary

Lab Reporting Batch ID: 212102607 **Laboratory: GCAL**

)D Filename: 212102607 **eQAPP Name: Cannon AFB**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **AQ**

Sample ID: **LF05-MW-T-01** ***Collected:*** **10/25/2012 1:00:00** ***Analysis Type:*** **RES/DIS** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	3.43	J	3.04	MDL	20.0	RDL	ug/L	J	RI

Sample ID: **LF05-MW-T-01** ***Collected:*** **10/25/2012 1:00:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	61.0	J	30.3	MDL	200	RDL	ug/L	UB	Eb
ARSENIC	5.39	J	3.59	MDL	10.0	RDL	ug/L	J	RI
BARIUM	33.8		0.71	MDL	10.0	RDL	ug/L	UB	Eb
CADMIUM	0.51	J	0.16	MDL	5.00	RDL	ug/L	UB	Eb
CHROMIUM	3.33	J	0.26	MDL	10.0	RDL	ug/L	J	RI
COPPER	7.84	J	1.01	MDL	10.0	RDL	ug/L	J	RI
MANGANESE	3.28	J	1.31	MDL	15.0	RDL	ug/L	UB	Eb
NICKEL	5.41	J	1.13	MDL	40.0	RDL	ug/L	J	RI

nple ID: **MW-V-01** ***Collected:*** **10/25/2012 7:45:00** ***Analysis Type:*** **RE/DIS** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SODIUM	81200		61.1	MDL	1000	RDL	ug/L	UB	Eb

Sample ID: **MW-V-01** ***Collected:*** **10/25/2012 7:45:00** ***Analysis Type:*** **RE/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SODIUM	84600		61.1	MDL	1000	RDL	ug/L	UB	Eb

Sample ID: **MW-V-01** ***Collected:*** **10/25/2012 7:45:00** ***Analysis Type:*** **RES/DIS** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	35.8	J	30.3	MDL	200	RDL	ug/L	UB	Mb, Eb
ARSENIC	5.52	J	3.59	MDL	10.0	RDL	ug/L	J	RI
BARIUM	19.8		0.71	MDL	10.0	RDL	ug/L	UB	Eb
CADMIUM	0.41	J	0.16	MDL	5.00	RDL	ug/L	J	RI
CHROMIUM	1.28	J	0.26	MDL	10.0	RDL	ug/L	J	RI
COPPER	9.69	J	1.01	MDL	10.0	RDL	ug/L	J	RI
SELENIUM	24.3	J	4.42	MDL	40.0	RDL	ug/L	J	RI

* denotes a non-reportable result

Project Name and Number: 9110129 - Cannon AFB

Data Qualifier Summary

Lab Reporting Batch ID: 212102607 **Laboratory: GCAL**

EDD Filename: 212102607 **eQAPP Name: Cannon A**

Method Category: METALS

Method: 6010C ***Matrix:*** AQ

Sample ID: MW-V-01 ***Collected:*** 10/25/2012 7:45:00 ***Analysis Type:*** RES/TOT ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	20.3		0.71	MDL	10.0	RDL	ug/L	UB	Eb
CADMIUM	0.46	J	0.16	MDL	5.00	RDL	ug/L	UB	Eb
CHROMIUM	1.26	J	0.26	MDL	10.0	RDL	ug/L	J	RI
COPPER	9.97	J	1.01	MDL	10.0	RDL	ug/L	J	RI
SELENIUM	24.1	J	4.42	MDL	40.0	RDL	ug/L	J	RI

Method Category: METALS

Method: 7196A ***Matrix:*** AQ

Sample ID: EB-02 ***Collected:*** 10/25/2012 8:30:00 ***Analysis Type:*** RES/TOT ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	4.00	U	4.00	MDL	10.0	RDL	ug/L	UJ	StoA

Sample ID: MW-V-01 ***Collected:*** 10/25/2012 7:45:00 ***Analysis Type:*** RES/TOT ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	4.00	U	4.00	MDL	10.0	RDL	ug/L	UJ	StoA

* denotes a non-reportable result

Project Name and Number: 9110129 - Cannon AFB

Data Qualifier Summary

Lab Reporting Batch ID: 212102607 **Laboratory: GCAL**

)D Filename: 212102607 **eQAPP Name: Cannon AFB**

Reason Code Legend

Reason Code	*Description*
Eb	Equipment Blank Contamination
Mb	Method Blank Contamination
RI	Reporting Limit Trace Value
StoA	Sampling to Analysis Estimation

* denotes a non-reportable result

Project Name and Number: 9110129 - Cannon AFB

Data Qualifier Summary

Lab Reporting Batch ID: 212102705 **Laboratory: GCAL**

)D Filename: 212102705 **eQAPP Name: Cannon AFB**

Method Category: METALS

Method: 6010C ***Matrix:*** AQ

Sample ID: LF25-MW-RB-01 ***Collected:*** 10/26/2012 9:00:00 ***Analysis Type:*** RES/DIS ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	46.8	J	30.3	MDL	200	RDL	ug/L	UB	Mb
CADMIUM	0.38	J	0.16	MDL	5.00	RDL	ug/L	J	RI
CALCIUM	42200		45.7	MDL	100	RDL	ug/L	J	Ms
CHROMIUM	1.32	J	0.26	MDL	10.0	RDL	ug/L	J	RI
COPPER	6.83	J	1.01	MDL	10.0	RDL	ug/L	J	RI
SELENIUM	11.2	J	4.42	MDL	40.0	RDL	ug/L	J	RI

Sample ID: LF25-MW-RB-01 ***Collected:*** 10/26/2012 9:00:00 ***Analysis Type:*** RES/TOT ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.53	J	0.16	MDL	5.00	RDL	ug/L	J	RI
CALCIUM	42000		45.7	MDL	100	RDL	ug/L	J	Ms
CHROMIUM	1.36	J	0.26	MDL	10.0	RDL	ug/L	J	RI
)BALT	0.86	J	0.58	MDL	10.0	RDL	ug/L	J	RI
;OPPER	8.08	J	1.01	MDL	10.0	RDL	ug/L	J	RI
MAGNESIUM	40800		16.5	MDL	100	RDL	ug/L	J	Ms
MANGANESE	1.98	J	1.31	MDL	15.0	RDL	ug/L	J	RI
SELENIUM	7.75	J	4.42	MDL	40.0	RDL	ug/L	J	RI
ZINC	1380		4.51	MDL	20.0	RDL	ug/L	J	Ms

Method Category: METALS

Method: 7196A ***Matrix:*** AQ

Sample ID: LF25-MW-RB-01 ***Collected:*** 10/26/2012 9:00:00 ***Analysis Type:*** RES/TOT ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	4.00	U	4.00	MDL	10.0	RDL	ug/L	UJ	StoA

* denotes a non-reportable result

Project Name and Number: 9110129 - Cannon AFB

Data Qualifier Summary

Lab Reporting Batch ID: 212102705 **Laboratory: GCAL**

EDD Filename: 212102705 **eQAPP Name: Cannon A**

Reason Code Legend

Reason Code	*Description*
Mb	Method Blank Contamination
Ms	Matrix Spike Lower Estimation
RI	Reporting Limit Trace Value
StoA	Sampling to Analysis Estimation

* denotes a non-reportable result

Project Name and Number: 9110129 - Cannon AFB

Data Qualifier Summary

Lab Reporting Batch ID: 212103005 | **Laboratory: GCAL**

)D Filename: 212103005 | **eQAPP Name: Cannon AFB**

Method Category: METALS

Method: 6010C **Matrix:** AQ

Sample ID: LF05-MW-C-01 **Collected:** 10/29/2012 12:50:00 **Analysis Type:** RE/DIS **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	58.4	J	30.3	MDL	200	RDL	ug/L	UB	Mb
CADMIUM	0.78	J	0.16	MDL	5.00	RDL	ug/L	J	RI
CHROMIUM	1.00	J	0.26	MDL	10.0	RDL	ug/L	J	RI
COPPER	7.90	J	1.01	MDL	10.0	RDL	ug/L	J	RI
SELENIUM	4.72	J	4.42	MDL	40.0	RDL	ug/L	J	RI
THALLIUM	3.51	J	3.04	MDL	20.0	RDL	ug/L	J	RI

Sample ID: LF05-MW-C-01 **Collected:** 10/29/2012 12:50:00 **Analysis Type:** RES/TOT **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	68.3	J	30.3	MDL	200	RDL	ug/L	UB	Mb
CADMIUM	0.81	J	0.16	MDL	5.00	RDL	ug/L	J	RI
CHROMIUM	1.32	J	0.26	MDL	10.0	RDL	ug/L	J	RI
)PPER	8.17	J	1.01	MDL	10.0	RDL	ug/L	J	RI

Method Category: METALS

Method: 7470A **Matrix:** AQ

Sample ID: LF05-MW-C-01 **Collected:** 10/29/2012 12:50:00 **Analysis Type:** RES/DIS **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.09491	J	0.068	MDL	0.20	RDL	ug/L	J	RI

Sample ID: LF05-MW-C-01 **Collected:** 10/29/2012 12:50:00 **Analysis Type:** RES/TOT **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.06912	J	0.068	MDL	0.20	RDL	ug/L	J	RI

* denotes a non-reportable result

Project Name and Number: 9110129 - Cannon AFB

Data Qualifier Summary

Lab Reporting Batch ID: 212103005

EDD Filename: 212103005

Laboratory: GCAL

eQAPP Name: Cannon A

Reason Code Legend

Reason Code	*Description*
Mb	Method Blank Contamination
RI	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: 9110129 - Cannon AFB

Data Qualifier Summary

Lab Reporting Batch ID: 212103108 | **Laboratory: GCAL**

)D Filename: 212103108 | **eQAPP Name: Cannon AFB**

Method Category: METALS

Method: 6010C ***Matrix:*** AQ

Sample ID: LF05-MW-S-01 ***Collected:*** 10/30/2012 2:45:00 ***Analysis Type:*** RE/DIS ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	45.5	J	30.3	MDL	200	RDL	ug/L	UB	Mb
CADMIUM	0.59	J	0.16	MDL	5.00	RDL	ug/L	J	RI
CHROMIUM	2.32	J	0.26	MDL	10.0	RDL	ug/L	J	RI
COPPER	9.35	J	1.01	MDL	10.0	RDL	ug/L	J	RI
SELENIUM	7.14	J	4.42	MDL	40.0	RDL	ug/L	J	RI

Sample ID: LF05-MW-S-01 ***Collected:*** 10/30/2012 2:45:00 ***Analysis Type:*** RE/TOT ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	3.90	J	3.59	MDL	10.0	RDL	ug/L	J	RI

Sample ID: LF05-MW-S-01 ***Collected:*** 10/30/2012 2:45:00 ***Analysis Type:*** RES/TOT ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	56.8	J	30.3	MDL	200	RDL	ug/L	UB	Mb
CADMIUM	0.97	J	0.16	MDL	5.00	RDL	ug/L	J	RI
CHROMIUM	2.99	J	0.26	MDL	10.0	RDL	ug/L	J	RI
COPPER	9.62	J	1.01	MDL	10.0	RDL	ug/L	J	RI
MANGANESE	4.45	J	1.31	MDL	15.0	RDL	ug/L	J	RI
SELENIUM	7.84	J	4.42	MDL	40.0	RDL	ug/L	J	RI

Sample ID: LF05-MW-U-01 ***Collected:*** 10/30/2012 10:20:00 ***Analysis Type:*** RE/DIS ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	41.7	J	30.3	MDL	200	RDL	ug/L	UB	Mb
CADMIUM	0.65	J	0.16	MDL	5.00	RDL	ug/L	J	RI
CHROMIUM	2.14	J	0.26	MDL	10.0	RDL	ug/L	J	RI
NICKEL	3.19	J	1.13	MDL	40.0	RDL	ug/L	J	RI
SELENIUM	7.82	J	4.42	MDL	40.0	RDL	ug/L	J	RI
THALLIUM	3.40	J	3.04	MDL	20.0	RDL	ug/L	J	RI

Sample ID: LF05-MW-U-01 ***Collected:*** 10/30/2012 10:20:00 ***Analysis Type:*** RES/TOT ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
UMINUM	44.1	J	30.3	MDL	200	RDL	ug/L	UB	Mb

* denotes a non-reportable result

Project Name and Number: 9110129 - Cannon AFB

Data Qualifier Summary

Lab Reporting Batch ID: 212103108 **Laboratory: GCAL**

EDD Filename: 212103108 **eQAPP Name: Cannon Al**

Method Category: METALS
Method: 6010C **Matrix:** AQ

Sample ID: LF05-MW-U-01 **Collected:** 10/30/2012 10:20:00 **Analysis Type:** RES/TOT **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.84	J	0.16	MDL	5.00	RDL	ug/L	J	RI
CHROMIUM	4.86	J	0.26	MDL	10.0	RDL	ug/L	J	RI
NICKEL	3.97	J	1.13	MDL	40.0	RDL	ug/L	J	RI
SELENIUM	9.93	J	4.42	MDL	40.0	RDL	ug/L	J	RI

Method Category: METALS
Method: 7196A **Matrix:** AQ

Sample ID: LF05-MW-U-01 **Collected:** 10/30/2012 10:20:00 **Analysis Type:** RES/TOT **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	4.00	U	4.00	MDL	10.0	RDL	ug/L	UJ	StoA

Method Category: METALS
Method: 7470A **Matrix:** AQ

Sample ID: LF05-MW-S-01 **Collected:** 10/30/2012 2:45:00 **Analysis Type:** RES/DIS **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.07702	J	0.068	MDL	0.20	RDL	ug/L	J	RI

Sample ID: LF05-MW-S-01 **Collected:** 10/30/2012 2:45:00 **Analysis Type:** RES/TOT **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.07020	J	0.068	MDL	0.20	RDL	ug/L	J	RI

Method Category: VOA
Method: 8260B **Matrix:** AQ

Sample ID: LF05-MW-S-01 **Collected:** 10/30/2012 2:45:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TETRACHLOROETHENE	0.519	J	0.193	MDL	1.00	RDL	ug/L	UB	Tb

* denotes a non-reportable result

Project Name and Number: 9110129 - Cannon AFB

Data Qualifier Summary

Lab Reporting Batch ID: 212103108 **Laboratory: GCAL**

)D Filename: 212103108 **eQAPP Name: Cannon AFB**

Method Category: VOA

Method: 8260B *Matrix:* AQ

Sample ID: **LF05-MW-U-01** ***Collected:*** **10/30/2012 10:20:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
DICHLORODIFLUOROMETHANE	0.832	J	0.145	MDL	1.00	RDL	ug/L	J	RI
TRICHLOROFLUOROMETHANE	0.559	J	0.157	MDL	1.00	RDL	ug/L	J	RI

Sample ID: **TB-11** ***Collected:*** **10/30/2012 10:20:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TETRACHLOROETHENE	0.452	J	0.193	MDL	1.00	RDL	ug/L	J	RI

* denotes a non-reportable result

Project Name and Number: 9110129 - Cannon AFB

Data Qualifier Summary

Lab Reporting Batch ID: 212103108 **Laboratory: GCAL**

EDD Filename: 212103108 **eQAPP Name: Cannon A**

Reason Code Legend

Reason Code	*Description*
Mb	Method Blank Contamination
Rl	Reporting Limit Trace Value
StoA	Sampling to Analysis Estimation
Tb	Trip Blank Contamination

* denotes a non-reportable result

Project Name and Number: 9110129 - Cannon AFB

ATTACHMENT 3

VALIDATED GROUNDWATER RESULTS

TABLE 1
Validated Groundwater Results
Cannon AFB, New Mexico
Bhate Project no.: 9110129

SAMPLE ID:			LF25-MW-PA-01		TB-01		LF03-MW-0A-01		TB-02		LF04-MW-NA-01		LF05-MW-A-01		TB-3		MW-F-01		MW-F-01-FD[2]		MW-H-01		TB-04		MW-G-01
DATE SAMPLED:			10/16/12		10/16/12		10/17/12		10/17/12		10/17/12		10/19/12		10/19/12		10/19/12		10/19/12		10/22/12		10/22/12		10/23/12
LAB SAMPLE ID:			21210170701		21210170702		21210180701		21210180702		21210180703		21210201001		21210201002		21210201003		21210201004		21210230601		21210230602		212102407(
	Units	Screening Criteria[1]	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT
Volatile Organic Compounds - SW8260B																									
1,1,1,2-Tetrachloroethane	µg/L	0.066	0.12	U	0.12	U	0.12	U	0.12	U	0.12	U	0.12	U	0.12	U	0.12	U	0.12	U	0.12	U	0.12	U	0.12
1,1,1-Trichloroethane	µg/L	200	0.123	U	0.123	U	0.123	U	0.123	U	0.123	U	0.123	U	0.123	U	0.123	U	0.123	U	0.123	U	0.123	U	0.123
1,1,2,2-Tetrachloroethane	µg/L	0.5	0.109	U	0.109	U	0.109	U	0.109	U	0.109	U	0.109	U	0.109	U	0.109	U	0.109	U	0.109	U	0.109	U	0.109
1,1,2-Trichloroethane	µg/L	5	0.159	U	0.159	U	0.159	U	0.159	U	0.159	U	0.159	U	0.159	U	0.159	U	0.159	U	0.159	U	0.159	U	0.159
1,1-Dichloroethane	µg/L	2.4	0.171	U	0.171	U	0.171	U	0.171	U	0.171	U	0.171	U	0.171	U	0.171	U	0.171	U	0.171	U	0.171	U	0.171
1,1-Dichloroethene	µg/L	7	0.208	U	0.208	U	0.208	U	0.208	U	0.208	U	0.208	U	0.208	U	0.208	U	0.208	U	0.208	U	0.208	U	0.208
1,1-Dichloropropene	µg/L	NV	0.052	U	0.052	U	0.052	U	0.052	U	0.052	U	0.052	U	0.052	U	0.052	U	0.052	U	0.052	U	0.052	U	0.052
1,2,3-Trichlorobenzene	µg/L	5.2	0.079	U	0.079	U	0.079	U	0.079	U	0.079	U	0.079	U	0.079	U	0.079	U	0.079	U	0.079	U	0.079	U	0.079
1,2,3-Trichloropropane	µg/L	0.00065	0.065	U	0.065	U	0.065	U	0.065	U	0.065	U	0.065	U	0.065	U	0.065	U	0.065	U	0.065	U	0.065	U	0.065
1,2,4-Trichlorobenzene	µg/L	70	0.105	U	0.105	U	0.105	U	0.105	U	0.105	U	0.105	U	0.105	U	0.105	U	0.105	U	0.105	U	0.105	U	0.105
1,2,4-Trimethylbenzene	µg/L	15	0.084	U	0.084	U	0.084	U	0.084	U	0.084	U	0.084	U	0.084	U	0.084	U	0.084	U	0.084	U	0.084	U	0.084
1,2-Dibromo-3-chloropropane	µg/L	0.2	0.194	U	0.194	U	0.194	U	0.194	U	0.194	U	0.194	U	0.194	U	0.194	U	0.194	U	0.194	U	0.194	U	0.194
1,2-Dibromoethane	µg/L	0.05	0.102	U	0.102	U	0.102	U	0.102	U	0.102	U	0.102	U	0.102	U	0.102	U	0.102	U	0.102	U	0.102	U	0.102
1,2-Dichlorobenzene	µg/L	600	0.135	U	0.135	U	0.135	U	0.135	U	0.135	U	0.135	U	0.135	U	0.135	U	0.135	U	0.135	U	0.135	U	0.135
1,2-Dichloroethane	µg/L	5	0.116	U	0.116	U	0.116	U	0.116	U	0.116	U	0.116	U	0.116	U	0.116	U	0.116	U	0.116	U	0.116	U	0.116
1,2-Dichloropropane	µg/L	5	0.15	U	0.15	U	0.15	U	0.15	U	0.15	U	0.15	U	0.15	U	0.15	U	0.15	U	0.15	U	0.15	U	0.15
1,3,5-Trimethylbenzene	µg/L	87	0.066	U	0.066	U	0.066	U	0.066	U	0.066	U	0.066	U	0.066	U	0.066	U	0.066	U	0.066	U	0.066	U	0.066
1,3-Dichlorobenzene	µg/L	NV	0.138	U	0.138	U	0.138	U	0.138	U	0.138	U	0.138	U	0.138	U	0.138	U	0.138	U	0.138	U	0.138	U	0.138
1,3-Dichloropropane	µg/L	290	0.059	U	0.059	U	0.059	U	0.059	U	0.059	U	0.059	U	0.059	U	0.059	U	0.059	U	0.059	U	0.059	U	0.059
1,4-Dichlorobenzene	µg/L	75	0.083	U	0.083	U	0.083	U	0.083	U	0.083	U	0.083	U	0.083	U	0.083	U	0.083	U	0.083	U	0.083	U	0.083
2,2-Dichloropropane	µg/L	NV	0.17	U	0.17	U	0.17	U	0.17	U	0.17	U	0.17	U	0.17	U	0.17	U	0.17	U	0.17	U	0.17	U	0.17
2-Butanone	µg/L	4,900	0.142	U	0.142	U	0.142	U	0.142	U	0.142	U	0.142	U	0.142	U	0.142	U	0.142	U	0.142	U	0.142	U	0.142
2-Chlorotoluene	µg/L	180	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08
2-Hexanone	µg/L	34	0.122	U	0.122	U	0.122	U	0.122	U	0.122	U	0.122	U	0.122	U	0.122	U	0.122	U	0.122	U	0.122	U	0.122
4-Chlorotoluene	µg/L	190	0.124	U	0.124	U	0.124	U	0.124	U	0.124	U	0.124	U	0.124	U	0.124	U	0.124	U	0.124	U	0.124	U	0.124
4-Isopropyltoluene	µg/L	NV	0.07	U	0.07	U	0.07	U	0.07	U	0.07	U	0.07	U	0.07	U	0.07	U	0.07	U	0.07	U	0.07	U	0.07
4-Methyl-2-pentanone	µg/L	1,000	0.12	U	0.12	U	0.12	U	0.12	U	0.12	U	0.12	U	0.12	U	0.12	U	0.12	U	0.12	U	0.12	U	0.12
Acetone	µg/L	12,000	0.193	U	0.193	U	0.193	U	0.193	U	0.193	U	0.193	U	0.193	U	0.193	U	0.193	U	0.193	U	0.193	U	0.193
Benzene	µg/L	5	0.111	U	0.111	U	0.111	U	0.111	U	0.111	U	0.111	U	0.111	U	0.111	U	0.111	U	0.111	U	0.111	U	0.111
Bromobenzene	µg/L	54	0.145	U	0.145	U	0.145	U	0.145	U	0.145	U	0.145	U	0.145	U	0.145	U	0.145	U	0.145	U	0.145	U	0.145
Bromochloromethane	µg/L	83	0.127	U	0.127	U	0.127	U	0.127	U	0.127	U	0.127	U	0.127	U	0.127	U	0.127	U	0.127	U	0.127	U	0.127
Bromodichloromethane	µg/L	80	0.083	U	0.083	U	0.083	U	0.083	U	0.083	U	0.083	U	0.083	U	0.083	U	0.083	U	0.083	U	0.083	U	0.083
Bromoform	µg/L	80	0.215	U	0.215	U	0.215	U	0.215	U	0.215	U	0.215	U	0.215	U	0.215	U	0.215	U	0.215	U	0.215	U	0.215
Bromomethane	µg/L	7	0.427	U	0.427	U	0.427	U	0.427	U	0.427	U	0.427	U	0.427	U	0.427	U	0.427	U	0.427	U	0.427	U	0.427
Carbon disulfide	µg/L	720	0.19	U	0.19	U	0.19	U	0.19	U	0.19	U	0.19	U	0.19	U	0.19	U	0.19	U	0.19	U	0.19	U	0.19
Carbon tetrachloride	µg/L	5	0.248	U	0.248	U	0.248	U	0.248	U	0.248	U	0.248	U	0.248	U	0.248	U	0.248	U	0.248	U	0.248	U	0.248
Chlorobenzene	µg/L	100	0.083	U	0.083	U	0.083	U	0.083	U	0.083	U	0.083	U	0.083	U	0.083	U	0.083	U	0.083	U	0.083	U	0.083
Chloroethane	µg/L	NV	0.235	U	0.235	U	0.235	U	0.235	U	0.235	U	0.235	U	0.235	U	0.235	U	0.235	U	0.235	U	0.235	U	0.235
Chloroform	µg/L	80	0.155	U	0.155	U	0.155	U	0.155	U	0.155	U	0.155	U	0.155	U	0.155	U	0.155	U	0.155	U	**0.636**	J	0.155
Chloromethane	µg/L	190	0.144	U	0.144	U	0.144	U	0.144	U	0.144	U	0.144	U	0.144	U	0.144	U	0.144	U	0.144	U	0.144	U	0.144
cis-1,2-Dichloroethene	µg/L	70	0.103	U	0.103	U	0.103	U	0.103	U	0.103	U	0.103	U	0.103	U	0.103	U	0.103	U	0.103	U	0.103	U	0.103
cis-1,3-Dichloropropene	µg/L	NV	0.124	U	0.124	U	0.124	U	0.124	U	0.124	U	0.124	U	0.124	U	0.124	U	0.124	U	0.124	U	0.124	U	0.124
Dibromomethane	µg/L	7.9	0.211	U	0.211	U	0.211	U	0.211	U	0.211	U	0.211	U	0.211	U	0.211	U	0.211	U	0.211	U	0.211	U	0.211
Dichlorodifluoromethane	µg/L	190	0.145	U	0.145	U	0.145	U	0.145	U	0.145	U	0.145	U	0.145	U	0.145	U	0.145	U	0.145	U	0.145	U	0.145
Ethylbenzene	µg/L	700	0.109	U	0.109	U	0.109	U	0.109	U	0.109	U	0.109	U	0.109	U	0.109	U	0.109	U	0.109	U	0.109	U	0.109
Hexachlorobutadiene	µg/L	0.26	0.265	U	0.265	U	0.265	U	0.265	U	0.265	U	0.265	U	0.265	U	0.265	U	0.265	U	0.265	U	0.265	U	0.265
ISOPROPYLBENZENE	µg/L	NV	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U	0.13
M,P-XYLENES	µg/L	NV	0.123	U	0.123	U	0.123	U	0.123	U	0.123	U	0.123	U	0.123	U	0.123	U	0.123	U	0.123	U	0.123	U	0.123
METHYL TERT-BUTYL ETHER	µg/L	12	0.078	U	0.078	U	0.078	U	0.078	U	0.078	U	0.078	U	0.078	U	0.078	U	0.078	U	0.078	U	0.078	U	0.078
Methylene chloride	µg/L	5	0.149	U	0.149	U	0.149	U	0.149	U	0.149	U	0.149	U	0.149	U	0.149	U	0.149	U	0.149	U	0.149	U	0.149
Naphthalene	µg/L	NV	0.176	U	0.176	U	0.176	U	0.176	U	0.176	U	0.176	U	0.176	U	0.176	U	0.176	U	0.176	U	0.176	U	0.176

TABLE 1
Validated Groundwater Results
Cannon AFB, New Mexico
Bhate Project no.: 9110129

SAMPLE ID:			LF25-MW-PA-01		TB-01		LF03-MW-0A-01		TB-02		LF04-MW-NA-01		LF05-MW-A-01		TB-3		MW-F-01		MW-F-01-FD[2]		MW-H-01		TB-04		MW-G-01
DATE SAMPLED:			10/16/12		10/16/12		10/17/12		10/17/12		10/17/12		10/19/12		10/19/12		10/19/12		10/19/12		10/22/12		10/22/12		10/23/12
LAB SAMPLE ID:			21210170701		21210170702		21210180701		21210180702		21210180703		21210201001		21210201002		21210201003		21210201004		21210230601		21210230602		212102407
	Units	Screening Criteria[1]	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT
n-Butylbenzene	µg/L	780	0.123	U	0.123	U	0.123	U	0.123	U	0.123	U	0.123	U	0.123	U	0.123	U	0.123	U	0.123	U	0.123	U	0.123
n-Propylbenzene	µg/L	530	0.727	U	0.727	U	0.727	U	0.727	U	0.727	U	0.727	U	0.727	U	0.727	U	0.727	U	0.727	U	0.727	U	0.727
o-Xylene	µg/L	190	0.055	U	0.055	U	0.055	U	0.055	U	0.055	U	0.055	U	0.055	U	0.055	U	0.055	U	0.055	U	0.055	U	0.055
sec-Butylbenzene	µg/L	NV	0.107	U	0.107	U	0.107	U	0.107	U	0.107	U	0.107	U	0.107	U	0.107	U	0.107	U	0.107	U	0.107	U	0.107
Styrene	µg/L	100	0.089	U	0.089	U	0.089	U	0.089	U	0.089	U	0.089	U	0.089	U	0.089	U	0.089	U	0.089	U	0.089	U	0.089
tert-Butylbenzene	µg/L	NV	0.087	U	0.087	U	0.087	U	0.087	U	0.087	U	0.087	U	0.087	U	0.087	U	0.087	U	0.087	U	0.087	U	0.087
Tetrachloroethene	µg/L	5	0.193	U	0.193	U	0.193	U	0.193	U	0.193	U	0.193	U	0.193	U	0.193	U	0.193	U	0.193	U	0.193	U	0.193
Toluene	µg/L	1,000	0.122	U	0.122	U	0.122	U	0.122	U	0.122	U	0.122	U	0.122	U	0.122	U	0.122	U	0.122	U	0.122	U	0.122
trans-1,2-Dichloroethene	µg/L	100	0.077	U	0.077	U	0.077	U	0.077	U	0.077	U	0.077	U	0.077	U	0.077	U	0.077	U	0.077	U	0.077	U	0.077
trans-1,3-Dichloropropene	µg/L	NV	0.128	U	0.128	U	0.128	U	0.128	U	0.128	U	0.128	U	0.128	U	0.128	U	0.128	U	0.128	U	0.128	U	0.128
Trichloroethene	µg/L	5	0.161	U	0.161	U	0.161	U	0.161	U	0.161	U	0.161	U	0.161	U	0.161	U	0.161	U	0.161	U	0.161	U	0.161
Trichlorofluoromethane	µg/L	1,100	0.157	U	0.157	U	0.157	U	0.157	U	0.157	U	0.157	U	0.157	U	0.157	U	0.157	U	0.157	U	0.157	U	0.157
Vinyl chloride	µg/L	2	0.127	U	0.127	U	0.127	U	0.127	U	0.127	U	0.127	U	0.127	U	0.127	U	0.127	U	0.127	U	0.127	U	0.127
Other Organic Parameters																									
Perchlorate (SW6860)	mg/L	0.015	**0.00217**		NA		**0.00147**		NA		**0.00208**		**0.00203**		NA		**0.00286**		**0.00292**		**0.00285**		NA		**0.00248**
Total Metals - SW6010C/7470A																									
Aluminum	µg/L	16,000	30.3	U	NA		30.3	U	NA		**201**		30.3	U	NA		30.3	U	30.3	U	**34.6**	J	NA		**32**
Antimony	µg/L	6	**3.25**	J	NA		3.11	U	NA		3.11	U	3.11	U	NA		3.11	U	3.11	U	3.11	U	NA		3.11
Arsenic	µg/L	10	3.59	U	NA		3.59	U	NA		3.59	U	3.59	U	NA		3.59	U	3.59	U	3.59	U	NA		3.59
Barium	µg/L	2,000	**30.9**		NA		**60.3**		NA		**44.4**		**55.6**		NA		**36**		**36.2**		**38.8**		NA		**30.6**
Beryllium	µg/L	4	0.1	U	NA		0.1	U	NA		0.1	U	0.1	U	NA		0.1	U	0.1	U	0.1	U	NA		0.1
Cadmium	µg/L	5	0.79	UB	NA		**0.78**	J	NA		**0.83**	J	1.07	UB	NA		0.93	UB	0.84	UB	1.03	UB	NA		1.06
Calcium	µg/L	NV	**44,000**		NA		**71,100**		NA		**31,600**		**34,800**		NA		**44,500**		**43,300**		**47,300**		NA		**44,100**
Chromium	µg/L	100	**2.06**	J	NA		**1.78**	J	NA		**1.69**	J	**3.09**	J	NA		**1.68**	J	**1.83**	J	**7.55**	J	NA		**2.23**
Cobalt	µg/L	4.7	1.05	UB	NA		**1.12**	J	NA		**0.7**	J	**1.85**	J	NA		**0.61**	J	**0.65**	J	**0.77**	J	NA		1.47
Copper	µg/L	1,300	**8.68**	J	NA		**11.9**		NA		**13.6**		**8.47**	J	NA		**7.64**	J	**7.19**	J	**13.6**		NA		**12**
Iron	µg/L	11,000	12.6	U	NA		12.6	U	NA		**111**		**167**		NA		**55.6**	J	**64.5**	J	**651**		NA		**587**
Lead	µg/L	15	1.96	U	NA		1.96	U	NA		1.96	U	1.96	U	NA		1.96	U	1.96	U	1.96	U	NA		1.96
Magnesium	µg/L	NV	**41,100**		NA		**65,100**		NA		**28,100**		**31,900**		NA		**38,200**		**37,300**		**40,300**		NA		**40,900**
Manganese	µg/L	320	1.31	U	NA		1.31	U	NA		**10.5**	J	**31.6**		NA		1.31	U	1.31	U	**12.9**	J	NA		**16.3**
Mercury	µg/L	2	0.0765	UB	NA		0.068	U	NA		0.068	U	0.068	U	NA		0.068	U	0.068	U	0.068	U	NA		0.068
Nickel	µg/L	300	1.13	U	NA		1.13	U	NA		1.13	U	2.8	UB	NA		1.51	UB	1.88	UB	**10.4**	J	NA		4.06
Potassium	µg/L	NV	**6,890**		NA		**9,240**		NA		**6,910**		**6,900**		NA		**7,470**		**7,260**		**7,310**		NA		**7,200**
Selenium	µg/L	50	4.42	U	NA		**8**	J	NA		**5.5**	J	**4.69**	J	NA		**9.77**	J	**6.71**	J	**8.63**	J	NA		4.42
Silver	µg/L	71	0.7	U	NA		0.7	U	NA		0.7	U	0.7	U	NA		0.7	U	0.7	U	0.7	U	NA		0.7
Sodium	µg/L	NV	**39,000**		NA		**131,000**		NA		**43,700**		**51,400**		NA		**53,800**		**52,600**		**58,300**		NA		**49,900**
Thallium	µg/L	2	**4.89**	J	NA		**4.58**	J	NA		3.04	U	3.04	U	NA		**3.22**	J	3.04	U	3.04	U	NA		**3.69**
Vanadium	µg/L	NV	**34.1**		NA		**32.3**		NA		**33.7**		**41.3**		NA		**26**		**25.1**		**29.1**		NA		**28.6**
Zinc	µg/L	4,700	4.51	U	NA		4.51	U	NA		**9.16**	J	**1,040**		NA		**170**		**171**		**217**		NA		**175**
Dissolved Metals - SW6010C/7470A																									
Aluminum	µg/L	16,000	30.3	U	NA		30.3	U	NA		30.3	U	30.3	U	NA		30.3	U	30.3	U	30.3	U	NA		30.3
Antimony	µg/L	6	3.11	U	NA		3.11	U	NA		3.11	U	3.11	U	NA		3.11	U	3.11	U	3.11	U	NA		**3.42**
Arsenic	µg/L	10	3.59	U	NA		3.59	U	NA		3.59	U	**4.55**	J	NA		3.59	U	3.59	U	3.59	U	NA		3.59
Barium	µg/L	2,000	**29.9**		NA		**61.5**		NA		**37**		**52.7**		NA		**37.6**		**36.5**		**31.9**		NA		**29.1**
Beryllium	µg/L	4	0.1	U	NA		0.1	U	NA		0.1	U	0.1	U	NA		0.1	U	0.1	U	0.1	U	NA		0.1
Cadmium	µg/L	5	**0.63**	J	NA		**0.61**	J	NA		**0.7**	J	**0.78**	J	NA		**0.7**	J	**0.65**	J	**0.68**	J	NA		**0.71**
Calcium	µg/L	NV	**44,400**		NA		**71,500**		NA		**30,300**		**34,600**		NA		**46,900**		**45,300**		**44,800**		NA		**44,800**
Chromium	µg/L	100	**1.88**	J	NA		**1.91**	J	NA		**1.29**	J	**1.09**	J	NA		**1.05**	J	**1.03**	J	**1.06**	J	NA		**1.04**
Cobalt	µg/L	4.7	0.85	UB	NA		1.27	UB	NA		0.79	UB	**1.07**	J	NA		**1.06**	J	0.58	U	**0.68**	J	NA		**0.63**
Copper	µg/L	1,300	**7.35**	J	NA		**11.7**		NA		**11.3**		**6.37**	J	NA		**8.62**	J	**8.27**	J	**9.24**	J	NA		**8.61**

TABLE 1
Validated Groundwater Results
Cannon AFB, New Mexico
Bhate Project no.: 9110129

SAMPLE ID:			LF25-MW-PA-01		TB-01		LF03-MW-0A-01		TB-02		LF04-MW-NA-01		LF05-MW-A-01		TB-3		MW-F-01		MW-F-01-FD[2]		MW-H-01		TB-04		MW-G-01
DATE SAMPLED:			10/16/12		10/16/12		10/17/12		10/17/12		10/17/12		10/19/12		10/19/12		10/19/12		10/19/12		10/22/12		10/22/12		10/23/12
LAB SAMPLE ID:			21210170701		21210170702		21210180701		21210180702		21210180703		21210201001		21210201002		21210201003		21210201004		21210230601		21210230602		212102407(
	Units	Screening Criteria[1]	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT
Iron	µg/L	11,000	12.6	U	NA		12.6	U	NA		12.6	U	12.6	U	NA		**25.1**	J	12.6	U	12.6	U	NA		12.6
Lead	µg/L	15	1.96	U	NA		1.96	U	NA		1.96	U	1.96	U	NA		1.96	U	1.96	U	1.96	U	NA		1.96
Magnesium	µg/L	NV	**42,700**		NA		**65,300**		NA		**27,500**		**30,700**		NA		**39,700**		**38,300**		**35,500**		NA		**40,900**
Manganese	µg/L	320	1.31	U	NA		1.31	U	NA		1.31	U	**7.1**	J	NA		1.31	U	1.31	U	1.31	U	NA		1.31
Mercury	µg/L	2	0.08569	UB	NA		0.068	U	NA		0.068	U	0.068	U	NA		0.068	U	0.068	U	0.068	U	NA		0.068
Nickel	µg/L	300	1.13	U	NA		**1.69**	J	NA		**1.21**	J	2.4	UB	NA		3.55	UB	1.21	UB	5.3	UB	NA		**1.75**
Potassium	µg/L	NV	**7,080**		NA		**9,560**		NA		**6,900**		**6,700**		NA		**7,810**		**7,580**		**6,840**		NA		**7,310**
Selenium	µg/L	50	**9.72**	J	NA		**5.05**	J	NA		**5.07**	J	**5.7**	J	NA		**6.24**	J	**6.93**	J	**7.96**	J	NA		**7.99**
Silver	µg/L	71	0.7	U	NA		0.7	U	NA		0.7	U	0.7	U	NA		0.7	U	0.7	U	0.7	U	NA		0.7
Sodium	µg/L	NV	**39,200**		NA		**128,000**		NA		**44,500**		**51,400**		NA		**56,600**		**52,800**		**55,400**		NA		**51,000**
Thallium	µg/L	2	3.04	U	NA		**4.18**	J	NA		**5.06**	J	**5.77**	J	NA		**4.65**	J	**4.97**	J	**3.06**	J	NA		**3.45**
Vanadium	µg/L	NV	**24.9**		NA		**35.1**		NA		**34.1**		**41.4**		NA		**26.6**		**25.3**		**26.5**		NA		**26.2**
Zinc	µg/L	4,700	4.51	U	NA		4.51	U	NA		4.51	U	**939**		NA		**254**		**206**		**128**		NA		**161**
Other Parameters																									
AMMONIA AS N (SM 4500 NH3)	mg/L	NV	0.24	U	NA		0.24	U	NA		0.24	U	**0.86**	J	NA		0.24	U	0.24	U	0.24	U	NA		0.24
Chloride (SW9056A)	mg/L	NV	**73**		NA		**185**		NA		**38.9**		**37.9**		NA		**60.3**		**61.7**		**71.3**		NA		**69.7**
HEXAVALENT CHROMIUM (SW7196A)	ug/L	NV	4	U	NA		4	UJ	NA		4	U	4	UJ	NA		4	U	4	U	4	UJ	NA		4
Nitrate (353.2)	mg/L	10	**1.37**		NA		**11.8**		NA		**1.41**		**1.55**		NA		**1.21**		**1.21**		**1.33**		NA		**1.02**
Nitrite (353.2)	mg/L	1	**0.01**		NA		**0.01**		NA		**0.008**	J	**0.01**		NA		0.002	U	**0.008**	J	0.01	UB	NA		**0.007**
SULFATE AS SO4 (SW9056A)	mg/L	NV	**117**		NA		**199**		NA		**79.9**		**53.7**		NA		**138**		**139**		**2,720**		NA		**132**
TOTAL ORGANIC CARBON (TOC) (SW9060A)	mg/L	NV	**3.2**		NA		**6.8**		NA		**5**		**4.6**		NA		**2.5**		**3.8**		**3.4**		NA		**1.8**

[1]Screening criteria based on the US Environmental Protection Agency (USEPA)Maximum Contaminant Limit (MCL) or Regional Screening Levels for Tapwater(November 2012)

NOTES:
NV - No MCL or RSL value available, Q - validation qualifier, TB - Trip Blank, EB - Equipment Blank, SM - Standard Methods
µg/L - micrograms per liter, mg/L - milligrams per liter; [2]FD - field duplicate
+ - result reported from diluted sample aliquot, RSK - Robert S Kerr.
Detections are bolded.
Detections above the screening criteria are bolded and shaded

QUALIFIERS:
U - analyte was analyzed for but not detected at or above the adjusted method detection limit (MDL)
UJ - analyte not detected, reported MDL may be inaccurate or imprecise due to quality assurance (QA) issue
J - analyte detected, estimated concentration
UB - analyte also found in associated laboratory or field blank, probable blank contaminant

TABLE 1
Validated Groundwater Results
Cannon AFB, New Mexico
Bhate Project no.: 9110129

SAMPLE ID:				MW-G-01-FD[2]		TB-5		MW-E-01		EB-01		MW-X-01		TB-06		TB-07		MW-V-01		TB-02		EB-02		LF05-MW-T-01	
DATE SAMPLED:				10/23/12		10/23/12		10/24/12		10/24/12		10/24/12		10/24/12		10/24/12		10/25/12		10/25/12		10/25/12		10/25/12	
LAB SAMPLE ID:			1	21210240702		21210240703		21210250301		21210250302		21210250303		21210250306		21210250307		21210260701		21210260702		21210260703		21210260704	
	Units	Screening Criteria[1]	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q
Volatile Organic Compounds - SW8260B																									
1,1,1,2-Tetrachloroethane	µg/L	0.066	U	0.12	U	0.12	U	0.12	U	0.12	U	0.12	U	0.12	U	0.12	U	0.12	U	0.12	U	0.12	U	0.12	U
1,1,1-Trichloroethane	µg/L	200	U	0.123	U	0.123	U	0.123	U	0.123	U	0.123	U	0.123	U	0.123	U	0.123	U	0.123	U	0.123	U	0.123	U
1,1,2,2-Tetrachloroethane	µg/L	0.5	U	0.109	U	0.109	U	0.109	U	0.109	U	0.109	U	0.109	U	0.109	U	0.109	U	0.109	U	0.109	U	0.109	U
1,1,2-Trichloroethane	µg/L	5	U	0.159	U	0.159	U	0.159	U	0.159	U	0.159	U	0.159	U	0.159	U	0.159	U	0.159	U	0.159	U	0.159	U
1,1-Dichloroethane	µg/L	2.4	U	0.171	U	0.171	U	0.171	U	0.171	U	0.171	U	0.171	U	0.171	U	0.171	U	0.171	U	0.171	U	0.171	U
1,1-Dichloroethene	µg/L	7	U	0.208	U	0.208	U	0.208	U	0.208	U	0.208	U	0.208	U	0.208	U	0.208	U	0.208	U	0.208	U	0.208	U
1,1-Dichloropropene	µg/L	NV	U	0.052	U	0.052	U	0.052	U	0.052	U	0.052	U	0.052	U	0.052	U	0.052	U	0.052	U	0.052	U	0.052	U
1,2,3-Trichlorobenzene	µg/L	5.2	U	0.079	U	0.079	U	0.079	U	0.079	U	0.079	U	0.079	U	0.079	U	0.079	U	0.079	U	0.079	U	0.079	U
1,2,3-Trichloropropane	µg/L	0.00065	U	0.065	U	0.065	U	0.065	U	0.065	U	0.065	U	0.065	U	0.065	U	0.065	U	0.065	U	0.065	U	0.065	U
1,2,4-Trichlorobenzene	µg/L	70	U	0.105	U	0.105	U	0.105	U	0.105	U	0.105	U	0.105	U	0.105	U	0.105	U	0.105	U	0.105	U	0.105	U
1,2,4-Trimethylbenzene	µg/L	15	U	0.084	U	0.084	U	0.084	U	0.084	U	0.084	U	0.084	U	0.084	U	0.084	U	0.084	U	0.084	U	0.084	U
1,2-Dibromo-3-chloropropane	µg/L	0.2	U	0.194	U	0.194	U	0.194	U	0.194	U	0.194	U	0.194	U	0.194	U	0.194	U	0.194	U	0.194	U	0.194	U
1,2-Dibromoethane	µg/L	0.05	U	0.102	U	0.102	U	0.102	U	0.102	U	0.102	U	0.102	U	0.102	U	0.102	U	0.102	U	0.102	U	0.102	U
1,2-Dichlorobenzene	µg/L	600	U	0.135	U	0.135	U	0.135	U	0.135	U	0.135	U	0.135	U	0.135	U	0.135	U	0.135	U	0.135	U	0.135	U
1,2-Dichloroethane	µg/L	5	U	0.116	U	0.116	U	0.116	U	0.116	U	0.116	U	0.116	U	0.116	U	0.116	U	0.116	U	0.116	U	0.116	U
1,2-Dichloropropane	µg/L	5	U	0.15	U	0.15	U	0.15	U	0.15	U	0.15	U	0.15	U	0.15	U	0.15	U	0.15	U	0.15	U	0.15	U
1,3,5-Trimethylbenzene	µg/L	87	U	0.066	U	0.066	U	0.066	U	0.066	U	0.066	U	0.066	U	0.066	U	0.066	U	0.066	U	0.066	U	0.066	U
1,3-Dichlorobenzene	µg/L	NV	U	0.138	U	0.138	U	0.138	U	0.138	U	0.138	U	0.138	U	0.138	U	0.138	U	0.138	U	0.138	U	0.138	U
1,3-Dichloropropane	µg/L	290	U	0.059	U	0.059	U	0.059	U	0.059	U	0.059	U	0.059	U	0.059	U	0.059	U	0.059	U	0.059	U	0.059	U
1,4-Dichlorobenzene	µg/L	75	U	0.083	U	0.083	U	0.083	U	0.083	U	0.083	U	0.083	U	0.083	U	0.083	U	0.083	U	0.083	U	0.083	U
2,2-Dichloropropane	µg/L	NV	U	0.17	U	0.17	U	0.17	U	0.17	U	0.17	U	0.17	U	0.17	U	0.17	U	0.17	U	0.17	U	0.17	U
2-Butanone	µg/L	4,900	U	0.142	U	0.142	U	0.142	U	0.142	U	0.142	U	0.142	U	0.142	U	0.142	U	0.142	U	0.142	U	0.142	U
2-Chlorotoluene	µg/L	180	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
2-Hexanone	µg/L	34	U	0.122	U	0.122	U	0.122	U	0.122	U	0.122	U	0.122	U	0.122	U	0.122	U	0.122	U	0.122	U	0.122	U
4-Chlorotoluene	µg/L	190	U	0.124	U	0.124	U	0.124	U	0.124	U	0.124	U	0.124	U	0.124	U	0.124	U	0.124	U	0.124	U	0.124	U
4-Isopropyltoluene	µg/L	NV	U	0.07	U	0.07	U	0.07	U	0.07	U	0.07	U	0.07	U	0.07	U	0.07	U	0.07	U	0.07	U	0.07	U
4-Methyl-2-pentanone	µg/L	1,000	U	0.12	U	0.12	U	0.12	U	0.12	U	0.12	U	0.12	U	0.12	U	0.12	U	0.12	U	0.12	U	0.12	U
Acetone	µg/L	12,000	U	0.193	U	0.193	U	0.193	U	0.193	U	0.193	U	0.193	U	0.193	U	0.193	U	0.193	U	0.193	U	0.193	U
Benzene	µg/L	5	U	0.111	U	0.111	U	0.111	U	0.111	U	0.111	U	0.111	U	0.111	U	0.111	U	0.111	U	0.111	U	0.111	U
Bromobenzene	µg/L	54	U	0.145	U	0.145	U	0.145	U	0.145	U	0.145	U	0.145	U	0.145	U	0.145	U	0.145	U	0.145	U	0.145	U
Bromochloromethane	µg/L	83	U	0.127	U	0.127	U	0.127	U	0.127	U	0.127	U	0.127	U	0.127	U	0.127	U	0.127	U	0.127	U	0.127	U
Bromodichloromethane	µg/L	80	U	0.083	U	0.083	U	0.083	U	0.083	U	0.083	U	0.083	U	0.083	U	0.083	U	0.083	U	0.083	U	0.083	U
Bromoform	µg/L	80	U	0.215	U	0.215	U	0.215	U	0.215	U	0.215	U	0.215	U	0.215	U	0.215	U	0.215	U	0.215	U	0.215	U
Bromomethane	µg/L	7	U	0.427	U	0.427	U	0.427	U	0.427	U	0.427	U	0.427	U	0.427	U	0.427	U	0.427	U	0.427	U	0.427	U
Carbon disulfide	µg/L	720	U	0.19	U	0.19	U	0.19	U	0.19	U	0.19	U	0.19	U	0.19	U	0.19	U	0.19	U	0.19	U	0.19	U
Carbon tetrachloride	µg/L	5	U	0.248	U	0.248	U	0.248	U	0.248	U	0.248	U	0.248	U	0.248	U	0.248	U	0.248	U	0.248	U	0.248	U
Chlorobenzene	µg/L	100	U	0.083	U	0.083	U	0.083	U	0.083	U	0.083	U	0.083	U	0.083	U	0.083	U	0.083	U	0.083	U	0.083	U
Chloroethane	µg/L	NV	U	0.235	U	0.235	U	0.235	U	0.235	U	0.235	U	0.235	U	0.235	U	0.235	U	0.235	U	0.235	U	0.235	U
Chloroform	µg/L	80	U	0.155	U	0.155	U	0.155	U	0.155	U	0.155	U	0.155	U	0.155	U	0.155	U	0.155	U	0.155	U	0.155	U
Chloromethane	µg/L	190	U	0.144	U	0.144	U	0.144	U	0.144	U	0.144	U	0.144	U	0.144	U	0.144	U	0.144	U	0.144	U	0.144	U
cis-1,2-Dichloroethene	µg/L	70	U	0.103	U	0.103	U	0.103	U	0.103	U	0.103	U	0.103	U	0.103	U	0.103	U	0.103	U	0.103	U	0.103	U
cis-1,3-Dichloropropene	µg/L	NV	U	0.124	U	0.124	U	0.124	U	0.124	U	0.124	U	0.124	U	0.124	U	0.124	U	0.124	U	0.124	U	0.124	U
Dibromomethane	µg/L	7.9	U	0.211	U	0.211	U	0.211	U	0.211	U	0.211	U	0.211	U	0.211	U	0.211	U	0.211	U	0.211	U	0.211	U
Dichlorodifluoromethane	µg/L	190	U	0.145	U	0.145	U	0.145	U	0.145	U	0.145	U	0.145	U	0.145	U	0.145	U	0.145	U	0.145	U	0.145	U
Ethylbenzene	µg/L	700	U	0.109	U	0.109	U	0.109	U	0.109	U	0.109	U	0.109	U	0.109	U	0.109	U	0.109	U	0.109	U	0.109	U
Hexachlorobutadiene	µg/L	0.26	U	0.265	U	0.265	U	0.265	U	0.265	U	0.265	U	0.265	U	0.265	U	0.265	U	0.265	U	0.265	U	0.265	U
ISOPROPYLBENZENE	µg/L	NV	U	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U
M,P-XYLENES	µg/L	NV	U	0.123	U	0.123	U	0.123	U	0.123	U	0.123	U	0.123	U	0.123	U	0.123	U	0.123	U	0.123	U	0.123	U
METHYL TERT-BUTYL ETHER	µg/L	12	U	0.078	U	0.078	U	0.078	U	0.078	U	0.078	U	0.078	U	0.078	U	0.078	U	0.078	U	0.078	U	0.078	U
Methylene chloride	µg/L	5	U	0.149	U	0.149	U	0.149	U	0.149	U	0.149	U	0.149	U	0.149	U	0.149	U	0.149	U	0.149	U	0.149	U
Naphthalene	µg/L	NV	U	0.176	U	0.176	U	0.176	U	0.176	U	0.176	U	0.176	U	0.176	U	0.176	U	0.176	U	0.176	U	0.176	U

TABLE 1
Validated Groundwater Results
Cannon AFB, New Mexico
Bhate Project no.: 9110129

SAMPLE ID:				MW-G-01-FD[2]		TB-5		MW-E-01		EB-01		MW-X-01		TB-06		TB-07		MW-V-01		TB-02		EB-02		LF05-MW-T-01	
DATE SAMPLED:				10/23/12		10/23/12		10/24/12		10/24/12		10/24/12		10/24/12		10/24/12		10/25/12		10/25/12		10/25/12		10/25/12	
LAB SAMPLE ID:			)1	21210240702		21210240703		21210250301		21210250302		21210250303		21210250306		21210250307		21210260701		21210260702		21210260703		21210260704	
	Units	Screening Criteria[1]	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q
n-Butylbenzene	µg/L	780	U	0.123	U	0.123	U	0.123	U	0.123	U	0.123	U	0.123	U	0.123	U	0.123	U	0.123	U	0.123	U	0.123	U
n-Propylbenzene	µg/L	530	U	0.727	U	0.727	U	0.727	U	0.727	U	0.727	U	0.727	U	0.727	U	0.727	U	0.727	U	0.727	U	0.727	U
o-Xylene	µg/L	190	U	0.055	U	0.055	U	0.055	U	0.055	U	0.055	U	0.055	U	0.055	U	0.055	U	0.055	U	0.055	U	0.055	U
sec-Butylbenzene	µg/L	NV	U	0.107	U	0.107	U	0.107	U	0.107	U	0.107	U	0.107	U	0.107	U	0.107	U	0.107	U	0.107	U	0.107	U
Styrene	µg/L	100	U	0.089	U	0.089	U	0.089	U	0.089	U	0.089	U	0.089	U	0.089	U	0.089	U	0.089	U	0.089	U	0.089	U
tert-Butylbenzene	µg/L	NV	U	0.087	U	0.087	U	0.087	U	0.087	U	0.087	U	0.087	U	0.087	U	0.087	U	0.087	U	0.087	U	0.087	U
Tetrachloroethene	µg/L	5	U	0.193	U	0.193	U	0.193	U	0.193	U	0.193	U	0.193	U	0.193	U	0.193	U	0.193	U	0.193	U	0.193	U
Toluene	µg/L	1,000	U	0.122	U	0.122	U	0.122	U	0.122	U	0.122	U	0.122	U	0.122	U	0.122	U	0.122	U	0.122	U	0.122	U
trans-1,2-Dichloroethene	µg/L	100	U	0.077	U	0.077	U	0.077	U	0.077	U	0.077	U	0.077	U	0.077	U	0.077	U	0.077	U	0.077	U	0.077	U
trans-1,3-Dichloropropene	µg/L	NV	U	0.128	U	0.128	U	0.128	U	0.128	U	0.128	U	0.128	U	0.128	U	0.128	U	0.128	U	0.128	U	0.128	U
Trichloroethene	µg/L	5	U	0.161	U	0.161	U	0.161	U	0.161	U	0.161	U	0.161	U	0.161	U	0.161	U	0.161	U	0.161	U	0.161	U
Trichlorofluoromethane	µg/L	1,100	U	0.157	U	0.157	U	0.157	U	0.157	U	0.157	U	0.157	U	0.157	U	0.157	U	0.157	U	0.157	U	0.157	U
Vinyl chloride	µg/L	2	U	0.127	U	0.127	U	0.127	U	0.127	U	0.127	U	0.127	U	0.127	U	0.127	U	0.127	U	0.127	U	0.127	U
Other Organic Parameters																									
Perchlorate (SW6860)	mg/L	0.015		0.00252		NA		0.00292		0.0001	U	0.00151		NA		NA		0.00682		NA		0.0001	U	0.00202	
Total Metals - SW6010C/7470A																									
Aluminum	µg/L	16,000	J	54.2	J	NA		43.3	UB	63.4	J	114	UB	NA		NA		30.3	U	NA		46	J	61	UB
Antimony	µg/L	6	U	3.11	U	NA		3.11	U	3.11	U	3.11	U	NA		NA		3.11	U	NA		3.11	U	3.11	U
Arsenic	µg/L	10	U	3.59	U	NA		4.75	J	3.59	U	8.84	J	NA		NA		3.59	U	NA		3.59	U	5.39	J
Barium	µg/L	2,000		33.2		NA		33.9	UB	12.3		62.4		NA		NA		20.3	UB	NA		12.9		33.8	UB
Beryllium	µg/L	4	U	0.1	U	NA		0.1	U	0.1	U	0.1	U	NA		NA		0.1	U	NA		0.1	U	0.1	U
Cadmium	µg/L	5	UB	1.05	UB	NA		0.61	UB	0.26	J	0.62	UB	NA		NA		0.46	UB	NA		0.39	J	0.51	UB
Calcium	µg/L	NV		48,000		NA		48,300		1,420		27,900	J	NA		NA		96,400		NA		1,510		37,900	
Chromium	µg/L	100	J	2.42	J	NA		2.32	J	0.26	U	1.64	J	NA		NA		1.26	J	NA		0.26	U	3.33	J
Cobalt	µg/L	4.7	UB	1.53	UB	NA		0.58	U	0.58	U	0.58	U	NA		NA		0.58	U	NA		0.58	U	0.58	U
Copper	µg/L	1,300		11.7		NA		7.53	J	1.38	J	8.62	J	NA		NA		9.97	J	NA		1.3	J	7.84	J
Iron	µg/L	11,000		581		NA		77.5	J	12.6	U	58.3	J	NA		NA		12.6	U	NA		12.6	U	139	
Lead	µg/L	15	U	1.96	U	NA		3.76	J	1.96	U	1.96	U	NA		NA		1.96	U	NA		1.96	U	1.96	U
Magnesium	µg/L	NV		44,800		NA		44,400		77.9	J	23,100	J	NA		NA		81,000		NA		83.6	J	35,100	
Manganese	µg/L	320		16.9		NA		6.39	UB	3.82	J	4.15	UB	NA		NA		1.31	U	NA		3.86	J	3.28	UB
Mercury	µg/L	2	U	0.068	U	NA		0.068	U	0.068	U	0.068	U	NA		NA		0.068	U	NA		0.068	U	0.068	U
Nickel	µg/L	300	UB	4.26	UB	NA		1.13	U	1.13	U	1.13	U	NA		NA		1.13	U	NA		1.13	U	5.41	J
Potassium	µg/L	NV		7,800		NA		7,410		412	UB	5,700		NA		NA		9,790		NA		444	J	6,480	
Selenium	µg/L	50	U	5.38	J	NA		12.8	J	4.42	U	7.89	J	NA		NA		24.1	J	NA		4.42	U	4.42	U
Silver	µg/L	71	U	0.7	U	NA		0.7	U	0.84	UB	0.84	UB	NA		NA		0.7	U	NA		0.7	U	0.7	U
Sodium	µg/L	NV		54,300		NA		57,900	UB	72,900		44,200	UB	NA		NA		84,600	UB	NA		79,400		53,700	UB
Thallium	µg/L	2	J	3.04	U	NA		3.04	U	3.04	U	3.04	U	NA		NA		3.04	U	NA		3.04	U	3.04	U
Vanadium	µg/L	NV		30.3		NA		28.1		1.84	J	53.3		NA		NA		34.4		NA		2.42	J	37.7	
Zinc	µg/L	4,700		169		NA		276		4.51	U	221		NA		NA		529		NA		4.51	U	88.3	
Dissolved Metals - SW6010C/7470A																									
Aluminum	µg/L	16,000	U	30.3	U	NA		30.3	U	54.3	J	38.7	UB	NA		NA		35.8	UB	NA		43.5	UB	30.5	UB
Antimony	µg/L	6	J	3.2	J	NA		3.11	U	3.11	U	3.11	U	NA		NA		3.11	U	NA		3.11	U	3.11	U
Arsenic	µg/L	10	U	3.59	U	NA		5.55	J	3.59	U	11.4		NA		NA		5.52	J	NA		3.59	U	7.5	J
Barium	µg/L	2,000		28.6		NA		35.2	UB	12.5		62.9		NA		NA		19.8	UB	NA		10.6		34.7	UB
Beryllium	µg/L	4	U	0.1	U	NA		0.15	UB	0.1	U	0.12	UB	NA		NA		0.1	U	NA		0.1	U	0.1	U
Cadmium	µg/L	5	J	0.85	J	NA		0.64	UB	0.31	J	0.63	UB	NA		NA		0.41	J	NA		0.16	U	0.41	J
Calcium	µg/L	NV		44,100		NA		51,100		1,630		29,200		NA		NA		94,100		NA		1,270		40,700	
Chromium	µg/L	100	J	1.12	J	NA		1.71	UB	0.35	J	1.39	UB	NA		NA		1.28	J	NA		0.26	U	2.24	J
Cobalt	µg/L	4.7	J	0.87	J	NA		0.58	U	0.58	U	0.58	U	NA		NA		0.58	U	NA		0.58	U	0.58	U
Copper	µg/L	1,300	J	8.28	J	NA		7.93	J	1.52	J	6.52	UB	NA		NA		9.69	J	NA		1.01	U	7.04	J

TABLE 1
Validated Groundwater Results
Cannon AFB, New Mexico
Bhate Project no.: 9110129

SAMPLE ID:				MW-G-01-FD[2]		TB-5		MW-E-01		EB-01		MW-X-01		TB-06		TB-07		MW-V-01		TB-02		EB-02		LF05-MW-T-01	
DATE SAMPLED:				10/23/12		10/23/12		10/24/12		10/24/12		10/24/12		10/24/12		10/24/12		10/25/12		10/25/12		10/25/12		10/25/12	
LAB SAMPLE ID:			1	21210240702		21210240703		21210250301		21210250302		21210250303		21210250306		21210250307		21210260701		21210260702		21210260703		21210260704	
	Units	Screening Criteria[1]	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q
Iron	µg/L	11,000	U	12.6	U	NA		12.6	U	12.6	U	12.6	U	NA		NA		12.6	U	NA		12.6	U	12.6	U
Lead	µg/L	15	U	1.96	U	NA		1.96	U	1.96	U	1.96	U	NA		NA		1.96	U	NA		1.96	U	1.96	U
Magnesium	µg/L	NV		**40,000**		NA		**46,700**		**71.7**	J	**25,200**		NA		NA		**79,100**		NA		**60.8**	J	**37,700**	
Manganese	µg/L	320	U	1.31	U	NA		3.26	UB	**4.97**	J	1.31	U	NA		NA		1.31	U	NA		**2.73**	J	1.31	U
Mercury	µg/L	2	U	0.068	U	NA		0.068	U	0.068	U	0.068	U	NA		NA		0.068	U	NA		0.068	U	0.068	U
Nickel	µg/L	300	J	**1.62**	J	NA		1.13	U	1.13	U	1.13	U	NA		NA		1.13	U	NA		1.13	U	**4.86**	J
Potassium	µg/L	NV		**7,240**		NA		**7,820**		**412**	J	**6,100**		NA		NA		**9,470**		NA		**354**	J	**6,970**	
Selenium	µg/L	50	J	**7.01**	J	NA		**11.6**	J	4.42	U	**7.34**	J	NA		NA		**24.3**	J	NA		4.42	U	4.42	U
Silver	µg/L	71	U	0.7	U	NA		0.87	UB	0.7	U	0.7	U	NA		NA		0.7	U	NA		0.7	U	0.7	U
Sodium	µg/L	NV		**50,400**		NA		60,600	UB	**78,500**		46,900	UB	NA		NA		81,200	UB	NA		**71,800**		57,000	UB
Thallium	µg/L	2	J	**4.13**	J	NA		3.04	U	3.04	U	3.04	U	NA		NA		3.04	U	NA		3.04	U	**3.43**	J
Vanadium	µg/L	NV		**24.9**		NA		**28.4**		2.11	UB	**59.9**		NA		NA		**33**		NA		**2.49**	J	**38**	
Zinc	µg/L	4,700		**152**		NA		**285**		**8.43**	J	**248**		NA		NA		**549**		NA		4.51	U	**91**	
Other Parameters																									
AMMONIA AS N (SM 4500 NH3)	mg/L	NV	U	0.24	U	NA		0.24	U	0.24	U	0.24	U	NA		NA		0.24	U	NA		0.24	U	0.24	U
Chloride (SW9056A)	mg/L	NV		**69.3**		NA		61.6	UB	**16.8**		24.7	UB	NA		NA		**192**		NA		**12.4**		48.5	UB
HEXAVALENT CHROMIUM (SW7196A)	ug/L	NV	U	4	U	NA		4	UJ	4	UJ	4	U	NA		NA		4	UJ	NA		4	UJ	4	U
Nitrate (353.2)	mg/L	10		**1.12**		NA		**1.29**		**0.014**		**1.39**		NA		NA		**8.35**		NA		0.115	U	**1.2**	
Nitrite (353.2)	mg/L	1	J	**0.008**	J	NA		0.002	U	**0.053**		0.007	UB	NA		NA		0.03	U	NA		**0.099**	J	0.015	U
SULFATE AS SO4 (SW9056A)	mg/L	NV		**131**		NA		**138**		**8.58**		**43.9**		NA		NA		**261**		NA		**8.78**		**98.5**	
TOTAL ORGANIC CARBON (TOC) (SW9060A)	mg/L	NV	J	**3.6**	J	NA		3.1	UB	**2.6**		2	UB	NA		NA		4.8	UB	NA		**2.9**		3.3	UB

[1]Screening criteria based on the US Environmental Protection Agency (USEPA)Maximum Contaminant Limit (MCL) or Regional Screening Levels for Tapwater(November 2012)

NOTES:
NV - No MCL or RSL value available, Q - validation qualifier, TB - Trip Blank, EB - Equipment Blank, SM - Standard Methods
µg/L - micrograms per liter, mg/L - milligrams per liter; [2]FD - field duplicate
+ - result reported from diluted sample aliquot, RSK - Robert S Kerr.
Detections are bolded.
Detections above the screening criteria are bolded and shaded

QUALIFIERS:
U - analyte was analyzed for but not detected at or above the adjusted method detection limit (MDL)
UJ - analyte not detected, reported MDL may be inaccurate or imprecise due to quality assurance (QA) issue
J - analyte detected, estimated concentration
UB - analyte also found in associated laboratory or field blank, probable blank contaminant

TABLE 1
Validated Groundwater Results
Cannon AFB, New Mexico
Bhate Project no.: 9110129

SAMPLE ID:			LF25-MW-RB-01		TB-09		LF05-MW-C-01		TB-10		LF05-MW-U-01		TB-11		LF05-MW-S-01	
DATE SAMPLED:			10/26/12		10/26/12		10/29/12		10/29/12		10/30/12		10/30/12		10/30/12	
LAB SAMPLE ID:			21210270501		21210270504		21210300501		21210300502		21210310801		21210310802		21210310803	
	Units	Screening Criteria[1]	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q
Volatile Organic Compounds - SW8260B																
1,1,1,2-Tetrachloroethane	µg/L	0.066	0.12	U	0.12	U	0.12	U	0.12	U	0.12	U	0.12	U	0.12	U
1,1,1-Trichloroethane	µg/L	200	0.123	U	0.123	U	0.123	U	0.123	U	0.123	U	0.123	U	0.123	U
1,1,2,2-Tetrachloroethane	µg/L	0.5	0.109	U	0.109	U	0.109	U	0.109	U	0.109	U	0.109	U	0.109	U
1,1,2-Trichloroethane	µg/L	5	0.159	U	0.159	U	0.159	U	0.159	U	0.159	U	0.159	U	0.159	U
1,1-Dichloroethane	µg/L	2.4	0.171	U	0.171	U	0.171	U	0.171	U	0.171	U	0.171	U	0.171	U
1,1-Dichloroethene	µg/L	7	0.208	U	0.208	U	0.208	U	0.208	U	0.208	U	0.208	U	0.208	U
1,1-Dichloropropene	µg/L	NV	0.052	U	0.052	U	0.052	U	0.052	U	0.052	U	0.052	U	0.052	U
1,2,3-Trichlorobenzene	µg/L	5.2	0.079	U	0.079	U	0.079	U	0.079	U	0.079	U	0.079	U	0.079	U
1,2,3-Trichloropropane	µg/L	0.00065	0.065	U	0.065	U	0.065	U	0.065	U	0.065	U	0.065	U	0.065	U
1,2,4-Trichlorobenzene	µg/L	70	0.105	U	0.105	U	0.105	U	0.105	U	0.105	U	0.105	U	0.105	U
1,2,4-Trimethylbenzene	µg/L	15	0.084	U	0.084	U	0.084	U	0.084	U	0.084	U	0.084	U	0.084	U
1,2-Dibromo-3-chloropropane	µg/L	0.2	0.194	U	0.194	U	0.194	U	0.194	U	0.194	U	0.194	U	0.194	U
1,2-Dibromoethane	µg/L	0.05	0.102	U	0.102	U	0.102	U	0.102	U	0.102	U	0.102	U	0.102	U
1,2-Dichlorobenzene	µg/L	600	0.135	U	0.135	U	0.135	U	0.135	U	0.135	U	0.135	U	0.135	U
1,2-Dichloroethane	µg/L	5	0.116	U	0.116	U	0.116	U	0.116	U	0.116	U	0.116	U	0.116	U
1,2-Dichloropropane	µg/L	5	0.15	U	0.15	U	0.15	U	0.15	U	0.15	U	0.15	U	0.15	U
1,3,5-Trimethylbenzene	µg/L	87	0.066	U	0.066	U	0.066	U	0.066	U	0.066	U	0.066	U	0.066	U
1,3-Dichlorobenzene	µg/L	NV	0.138	U	0.138	U	0.138	U	0.138	U	0.138	U	0.138	U	0.138	U
1,3-Dichloropropane	µg/L	290	0.059	U	0.059	U	0.059	U	0.059	U	0.059	U	0.059	U	0.059	U
1,4-Dichlorobenzene	µg/L	75	0.083	U	0.083	U	0.083	U	0.083	U	0.083	U	0.083	U	0.083	U
2,2-Dichloropropane	µg/L	NV	0.17	U	0.17	U	0.17	U	0.17	U	0.17	U	0.17	U	0.17	U
2-Butanone	µg/L	4,900	0.142	U	0.142	U	0.142	U	0.142	U	0.142	U	0.142	U	0.142	U
2-Chlorotoluene	µg/L	180	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
2-Hexanone	µg/L	34	0.122	U	0.122	U	0.122	U	0.122	U	0.122	U	0.122	U	0.122	U
4-Chlorotoluene	µg/L	190	0.124	U	0.124	U	0.124	U	0.124	U	0.124	U	0.124	U	0.124	U
4-Isopropyltoluene	µg/L	NV	0.07	U	0.07	U	0.07	U	0.07	U	0.07	U	0.07	U	0.07	U
4-Methyl-2-pentanone	µg/L	1,000	0.12	U	0.12	U	0.12	U	0.12	U	0.12	U	0.12	U	0.12	U
Acetone	µg/L	12,000	0.193	U	0.193	U	0.193	U	0.193	U	0.193	U	0.193	U	0.193	U
Benzene	µg/L	5	0.111	U	0.111	U	0.111	U	0.111	U	0.111	U	0.111	U	0.111	U
Bromobenzene	µg/L	54	0.145	U	0.145	U	0.145	U	0.145	U	0.145	U	0.145	U	0.145	U
Bromochloromethane	µg/L	83	0.127	U	0.127	U	0.127	U	0.127	U	0.127	U	0.127	U	0.127	U
Bromodichloromethane	µg/L	80	0.083	U	0.083	U	0.083	U	0.083	U	0.083	U	0.083	U	0.083	U
Bromoform	µg/L	80	0.215	U	0.215	U	0.215	U	0.215	U	0.215	U	0.215	U	0.215	U
Bromomethane	µg/L	7	0.427	U	0.427	U	0.427	U	0.427	U	0.427	U	0.427	U	0.427	U
Carbon disulfide	µg/L	720	0.19	U	0.19	U	0.19	U	0.19	U	0.19	U	0.19	U	0.19	U
Carbon tetrachloride	µg/L	5	0.248	U	0.248	U	0.248	U	0.248	U	0.248	U	0.248	U	0.248	U
Chlorobenzene	µg/L	100	0.083	U	0.083	U	0.083	U	0.083	U	0.083	U	0.083	U	0.083	U
Chloroethane	µg/L	NV	0.235	U	0.235	U	0.235	U	0.235	U	0.235	U	0.235	U	0.235	U
Chloroform	µg/L	80	0.155	U	0.155	U	0.155	U	0.155	U	0.155	U	0.155	U	0.155	U
Chloromethane	µg/L	190	0.144	U	0.144	U	0.144	U	0.144	U	0.144	U	0.144	U	0.144	U
cis-1,2-Dichloroethene	µg/L	70	0.103	U	0.103	U	0.103	U	0.103	U	0.103	U	0.103	U	0.103	U
cis-1,3-Dichloropropene	µg/L	NV	0.124	U	0.124	U	0.124	U	0.124	U	0.124	U	0.124	U	0.124	U
Dibromomethane	µg/L	7.9	0.211	U	0.211	U	0.211	U	0.211	U	0.211	U	0.211	U	0.211	U
Dichlorodifluoromethane	µg/L	190	0.145	U	0.145	U	0.145	U	0.145	U	**0.832**	J	0.145	U	0.145	U
Ethylbenzene	µg/L	700	0.109	U	0.109	U	0.109	U	0.109	U	0.109	U	0.109	U	0.109	U
Hexachlorobutadiene	µg/L	0.26	0.265	U	0.265	U	0.265	U	0.265	U	0.265	U	0.265	U	0.265	U
ISOPROPYLBENZENE	µg/L	NV	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U
M,P-XYLENES	µg/L	NV	0.123	U	0.123	U	0.123	U	0.123	U	0.123	U	0.123	U	0.123	U
METHYL TERT-BUTYL ETHER	µg/L	12	0.078	U	0.078	U	0.078	U	0.078	U	0.078	U	0.078	U	0.078	U
Methylene chloride	µg/L	5	0.149	U	0.149	U	0.149	U	0.149	U	0.149	U	0.149	U	0.149	U
Naphthalene	µg/L	NV	0.176	U	0.176	U	0.176	U	0.176	U	0.176	U	0.176	U	0.176	U

TABLE 1
Validated Groundwater Results
Cannon AFB, New Mexico
Bhate Project no.: 9110129

SAMPLE ID:			LF25-MW-RB-01		TB-09		LF05-MW-C-01		TB-10		LF05-MW-U-01		TB-11		LF05-MW-S-01	
DATE SAMPLED:			10/26/12		10/26/12		10/29/12		10/29/12		10/30/12		10/30/12		10/30/12	
LAB SAMPLE ID:			21210270501		21210270504		21210300501		21210300502		21210310801		21210310802		21210310803	
	Units	Screening Criteria[1]	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q
n-Butylbenzene	µg/L	780	0.123	U	0.123	U	0.123	U	0.123	U	0.123	U	0.123	U	0.123	U
n-Propylbenzene	µg/L	530	0.727	U	0.727	U	0.727	U	0.727	U	0.727	U	0.727	U	0.727	U
o-Xylene	µg/L	190	0.055	U	0.055	U	0.055	U	0.055	U	0.055	U	0.055	U	0.055	U
sec-Butylbenzene	µg/L	NV	0.107	U	0.107	U	0.107	U	0.107	U	0.107	U	0.107	U	0.107	U
Styrene	µg/L	100	0.089	U	0.089	U	0.089	U	0.089	U	0.089	U	0.089	U	0.089	U
tert-Butylbenzene	µg/L	NV	0.087	U	0.087	U	0.087	U	0.087	U	0.087	U	0.087	U	0.087	U
Tetrachloroethene	µg/L	5	0.193	U	0.193	U	0.193	U	0.193	U	0.193	U	**0.452**	J	0.519	UB
Toluene	µg/L	1,000	0.122	U	0.122	U	0.122	U	0.122	U	0.122	U	0.122	U	0.122	U
trans-1,2-Dichloroethene	µg/L	100	0.077	U	0.077	U	0.077	U	0.077	U	0.077	U	0.077	U	0.077	U
trans-1,3-Dichloropropene	µg/L	NV	0.128	U	0.128	U	0.128	U	0.128	U	0.128	U	0.128	U	0.128	U
Trichloroethene	µg/L	5	0.161	U	0.161	U	0.161	U	0.161	U	0.161	U	0.161	U	0.161	U
Trichlorofluoromethane	µg/L	1,100	0.157	U	0.157	U	0.157	U	0.157	U	**0.559**	J	0.157	U	0.157	U
Vinyl chloride	µg/L	2	0.127	U	0.127	U	0.127	U	0.127	U	0.127	U	0.127	U	0.127	U
Other Organic Parameters																
Perchlorate (SW6860)	mg/L	0.015	**0.00198**		NA		**0.000589**		NA		**0.00247**		NA		**0.0022**	
Total Metals - SW6010C/7470A																
Aluminum	µg/L	16,000	30.3	U	NA		68.3	UB	NA		44.1	UB	NA		56.8	UB
Antimony	µg/L	6	3.11	U	NA		3.11	U	NA		3.11	U	NA		3.11	U
Arsenic	µg/L	10	3.59	U	NA		3.59	U	NA		3.59	U	NA		**3.9**	J
Barium	µg/L	2,000	**35.1**		NA		**80.1**		NA		**44**		NA		**39**	
Beryllium	µg/L	4	0.1	U	NA		0.1	U	NA		0.1	U	NA		0.1	U
Cadmium	µg/L	5	**0.53**	J	NA		**0.81**	J	NA		**0.84**	J	NA		**0.97**	J
Calcium	µg/L	NV	**42,000**	J	NA		**35,800**		NA		**59,800**		NA		**51,700**	
Chromium	µg/L	100	**1.36**	J	NA		**1.32**	J	NA		**4.86**	J	NA		**2.99**	J
Cobalt	µg/L	4.7	**0.86**	J	NA		0.58	U	NA		0.58	U	NA		0.58	U
Copper	µg/L	1,300	**8.08**	J	NA		**8.17**	J	NA		**10.2**		NA		**9.62**	J
Iron	µg/L	11,000	12.6	U	NA		**148**		NA		12.6	U	NA		12.6	U
Lead	µg/L	15	1.96	U	NA		1.96	U	NA		1.96	U	NA		1.96	U
Magnesium	µg/L	NV	**40,800**	J	NA		**34,600**		NA		**54,700**		NA		**48,500**	
Manganese	µg/L	320	**1.98**	J	NA		**24.9**		NA		**20.4**		NA		**4.45**	J
Mercury	µg/L	2	0.068	U	NA		**0.06912**	J	NA		0.068	U	NA		**0.0702**	J
Nickel	µg/L	300	1.13	U	NA		1.13	U	NA		**3.97**	J	NA		1.13	U
Potassium	µg/L	NV	**7,070**		NA		**6,570**		NA		**8,250**		NA		**7,650**	
Selenium	µg/L	50	**7.75**	J	NA		4.42	U	NA		**9.93**	J	NA		**7.84**	J
Silver	µg/L	71	0.7	U	NA		0.7	U	NA		0.7	U	NA		0.7	U
Sodium	µg/L	NV	**41,400**		NA		**51,400**		NA		**61,200**		NA		**54,700**	
Thallium	µg/L	2	3.04	U	NA		3.04	U	NA		3.04	U	NA		3.04	U
Vanadium	µg/L	NV	**30.2**		NA		**48.4**		NA		**42.4**		NA		**47.6**	
Zinc	µg/L	4,700	**1,380**	J	NA		**111**		NA		**335**		NA		**87.9**	
Dissolved Metals - SW6010C/7470A																
Aluminum	µg/L	16,000	46.8	UE	NA		58.4	UB	NA		41.7	UB	NA		45.5	UB
Antimony	µg/L	6	3.11	U	NA		3.11	U	NA		3.11	U	NA		3.11	U
Arsenic	µg/L	10	3.59	U	NA		3.59	U	NA		3.59	U	NA		3.59	U
Barium	µg/L	2,000	**34.6**		NA		**84**		NA		**41.9**		NA		**38**	
Beryllium	µg/L	4	0.1	U	NA		0.1	U	NA		0.1	U	NA		0.1	U
Cadmium	µg/L	5	**0.38**	J	NA		**0.78**	J	NA		**0.65**	J	NA		**0.59**	J
Calcium	µg/L	NV	**42,200**	J	NA		**37,600**		NA		**58,200**		NA		**51,600**	
Chromium	µg/L	100	**1.32**	J	NA		**1**	J	NA		**2.14**	J	NA		**2.32**	J
Cobalt	µg/L	4.7	0.58	U	NA		0.58	U	NA		0.58	U	NA		0.58	U
Copper	µg/L	1,300	**6.83**	J	NA		**7.9**	J	NA		**10.2**		NA		**9.35**	J

TABLE 1
Validated Groundwater Results
Cannon AFB, New Mexico
Bhate Project no.: 9110129

SAMPLE ID:			LF25-MW-RB-01		TB-09		LF05-MW-C-01		TB-10		LF05-MW-U-01		TB-11		LF05-MW-S-01	
DATE SAMPLED:			10/26/12		10/26/12		10/29/12		10/29/12		10/30/12		10/30/12		10/30/12	
LAB SAMPLE ID:			21210270501		21210270504		21210300501		21210300502		21210310801		21210310802		21210310803	
	Units	Screening Criteria[1]	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q
Iron	µg/L	11,000	12.6	U	NA		12.6	U	NA		12.6	U	NA		12.6	U
Lead	µg/L	15	1.96	U	NA		1.96	U	NA		1.96	U	NA		1.96	U
Magnesium	µg/L	NV	**41,000**		NA		**37,600**		NA		**54,200**		NA		**49,000**	
Manganese	µg/L	320	1.31	U	NA		1.31	U	NA		**16.6**		NA		1.31	U
Mercury	µg/L	2	0.068	U	NA		**0.09491**	J	NA		0.068	U	NA		**0.07702**	J
Nickel	µg/L	300	1.13	U	NA		1.13	U	NA		**3.19**	J	NA		1.13	U
Potassium	µg/L	NV	**7,290**		NA		**6,910**		NA		**8,110**		NA		**7,700**	
Selenium	µg/L	50	**11.2**	J	NA		**4.72**	J	NA		**7.82**	J	NA		**7.14**	J
Silver	µg/L	71	0.7	U	NA		0.7	U	NA		0.7	U	NA		0.7	U
Sodium	µg/L	NV	**41,800**		NA		**56,000**		NA		**60,000**		NA		**54,900**	
Thallium	µg/L	2	3.04	U	NA		**3.51**	J	NA		**3.4**	J	NA		3.04	U
Vanadium	µg/L	NV	**26.7**		NA		**52.2**		NA		**42.7**		NA		**48.9**	
Zinc	µg/L	4,700	**1,160**		NA		**129**		NA		**330**		NA		**84.2**	
Other Parameters																
AMMONIA AS N (SM 4500 NH3)	mg/L	NV	0.24	U	NA		0.24	U	NA		0.24	U	NA		0.24	U
Chloride (SW9056A)	mg/L	NV	**68.6**		NA		**19.7**		NA		**82.7**		NA		**66.4**	
HEXAVALENT CHROMIUM (SW7196A)	ug/L	NV	4	UJ	NA		4	U	NA		4	UJ	NA		4	U
Nitrate (353.2)	mg/L	10	**1.02**		NA		**1.8**		NA		**1.57**		NA		**1.59**	
Nitrite (353.2)	mg/L	1	0.015	U	NA		0.015	U	NA		0.015	U	NA		0.015	U
SULFATE AS SO4 (SW9056A)	mg/L	NV	**101**		NA		**38.5**		NA		**105**		NA		**103**	
TOTAL ORGANIC CARBON (TOC) (SW9060A)	mg/L	NV	**5.2**		NA		**3.2**		NA		**1.3**		NA		0.3	U

[1]Screening criteria based on the US Environmental Protection Agency (USEPA)Maximum Contaminant Limit (MCL) or Regional Screening Levels for Tapwater(November 2012)

NOTES:
NV - No MCL or RSL value available, Q - validation qualifier, TB - Trip Blank, EB - Equipment Blank, SM - Standard Methods
µg/L - micrograms per liter, mg/L - milligrams per liter; [2]FD - field duplicate
+ - result reported from diluted sample aliquot, RSK - Robert S Kerr.
Detections are bolded.
Detections above the screening criteria are bolded and shaded

QUALIFIERS:
U - analyte was analyzed for but not detected at or above the adjusted method detection limit (MDL)
UJ - analyte not detected, reported MDL may be inaccurate or imprecise due to quality assurance (QA) issue
J - analyte detected, estimated concentration
UB - analyte also found in associated laboratory or field blank, probable blank contaminant

ATTACHMENT 4

GLOSSARY OF DATA VALIDATION QUALIFIERS/FLAGS

GLOSSARY OF DATA VALIDATION QUALIFIERS

U The analyte was analyzed for and is not present. The associated numerical value is the MDL. The "J" qualifier may be combined with the 'U' qualifier.

J The analyte was analyzed for and was detected in the samples, but the reported result is estimated either because it is less than the RL or at least one minor QA/QC problem was found during validation. Data with the "J" qualifier is considered usable for most decision-making purposes, including risk assessment.

UB The analyte was also detected in the field or laboratory blank associated with the sample. The reported result is comparable (< 5 times, except for common laboratory contaminants which are < 10 times), to the level found in the associated blank. The reported result has been requalified as not detected at the reporting limit. Sample results above the reporting limit are reported at that concentration with the "UB" qualifier.

R The reported result has been qualified as unusable due to a major QA/QC problem found during validation. This flag does not address the presence or absence of the analyte of concern rather it addresses one or more major QA/QC problems associated with the reported result. If the analyte affected is critical to the project, resampling and reanalysis of the qualified result may be required.

+ The result reported is from the diluted sample run. The original analysis of the sample required dilution either because of matrix interferences in the sample or concentration above the calibration range for the method. The sample was rerun at a dilution to obtain a more reliable result. The reported result or detection limit has been adjusted to reflect the dilution factor. The reported result should be considered estimated and usable for most decision-making purposes, including risk assessment.

MDL The minimum concentration of an analyte that can be measured and reported with 99% confidence that the analyte concentration is greater than zero. The MDL is determined by multiplying the appropriate one-sided 99% t-statistic by

the standard problem obtained from the analysis of seven replicates of a matrix spike containing the analyte of interest at a concentration three to five times the estimated MDL. For seven replicates, the t-statistic is 3.143.

RL The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory conditions. The RL is generally 5 to 10 times the MDL. However, it may be nominally chosen within these guidelines to simplify data reporting. For many analytes the RL is selected as the lowest non-zero standard in the calibration curve.