DEPARTMENT OF THE ARMY
U.S. ARMY GARRISON WHITE SANDS
100 Headquarters Avenue
WHITE SANDS MISSILE RANGE, NEW MEXICO 88002-5000

ENTERED

SEP 2012

REPLY TO
ATTENTION OF

SEP 13 2012

Directorate of Public Works

Mr. John Kieling
New Mexico Environment Department
Hazardous Waste Bureau
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303

SUBJECT: Soil Background Study Report for SWMUs 12, 14, 16, 17, 21, 22, 80 and 140

Dear Mr. Kieling:

Enclosed for review is the report submittal titled: *Final Soil Background Study Report Solid Waste Management Unit 80, Sewage Treatment Plant Sludge Waste Pile (WSMR-30), Solid Waste Management Units 12, 14, 16, 17, 21, and 22, Main Post Sites (WSMR-60, WSMR-33, WSMR-79, WSMR-73, WSMR-31, and WSMR-32), and Solid Waste Management Unit 140, Former LC-37 Paint Dump (WSMR-84), White Sands Missile Range, New Mexico, August 2012.*

This report is submitted pursuant to the New Mexico Environment Department (NMED) approval notice on the work plan dated February 15, 2012 (WSMR-11-003). The field work was completed in accordance with the approved work plan and NMED's comments contained within the approval notice.

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

Should you have any questions regarding this matter, please contact Mr. Benito Avalos of our Environmental Compliance Branch at (575) 678-2225.

I am forwarding a copy of this letter with enclosure (1 print copy w/ CD) to Ms. Kristen Van Horn, NMED-HWB; and without enclosure to Mr. Dave Cobrain, NMED-HWB; Mr. Paul Torcoletti, EPA Region 6; and Mr. Sudhakar Matlapudi, Shaw, Inc.

Sincerely,

Gerold P. Veara
Director, Public Works

Enclosure

Final
Soil Background Study Report, Solid Waste Management Unit 80, Sewage Treatment Plant Sludge Waste Pile (WSMR-30), Solid Waste Management Units 12, 14, 16, 17, 21, and 22, Main Post Sites (WSMR-60, WSMR-33, WSMR-79, WSMR-73, WSMR-31, and WSMR-32), and Solid Waste Management Unit 140, Former LC-37 Paint Dump (WSMR-84)

August 2012

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SWMU 80, Sewage Treatment Plant Sludge Waste Pile (WSMR-30)
SWMUs 12, 14, 16, 17, 21, and 22, Main Post Sites (WSMR-60, WSMR-33, WSMR-79, WSMR-73, WSMR-31, and WSMR-32), and
SWMU 140, Former LC-37 Paint Dump (WSMR--84)

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Shaw Environmental, Inc.
1401 Enclave Parkway, Suite 250
Houston, Texas 77077

8. PERFORMING ORGANIZATION REPORT NUMBER
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9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)

Department of the Army
U.S. Army Garrison, White Sands
Building 163 Springfield Street
White Sands Missile Range, NM 88002
ATTN: IMWE-WSM-PW-E-EC (Benito Avalos)

10. SPONSOR/MONITOR'S ACRONYM(S)

11. SPONSOR/MONITOR'S REPORT NUMBER(S)

12. DISTRIBUTION/AVAILABILITY STATEMENT

13. SUPPLEMENTARY NOTES

14. ABSTRACT

This Report documents the activities performed related to the determination of background concentrations of inorganic constituents at permitted sites on White Sands Missile Range (WSMR) in New Mexico. WSMR prepared this Report pursuant to the requirements of WSMR Resource Conservation and Recovery Act Permit (NM2750211235) (the Permit) issued by the New Mexico Environment Department (NMED) Hazardous Waste Bureau (NMED, 2009a). This WSMR Background Study Report is submitted in response to the NMED letter dated January 24, 2007, in which the NMED required a new background study. A site-specific background study is necessary to achieve corrective action complete (CAC) and response complete (RC) determinations for designated Solid Waste Management Units (SWMUs) at WSMR. Specifically, the new background study developed representative concentrations for the 23 Target Analyte List (TAL) metals in soil to be used to evaluate whether site-specific releases have occurred. The new background study does not include data from the previous background study developed for the Main Post.

15. SUBJECT TERMS

Soil Background Study Report

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Final
Soil Background Study Report, Solid Waste Management Unit 80, Sewage Treatment Plant Sludge Waste Pile (WSMR-30), Solid Waste Management Units 12, 14, 16, 17, 21, and 22, Main Post Sites (WSMR-60, WSMR-33, WSMR-79, WSMR-73, WSMR-31, and WSMR-32), and Solid Waste Management Unit 140, Former LC-37 Paint Dump (WSMR-84)

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August 2012

Prepared for:

U.S. Army
White Sands Missile Range
Directorate of Public Works – Environmental Division
White Sands Missile Range, New Mexico 88002-5048

Prepared by:

Shaw Environmental, Inc.
1401 Enclave Parkway, Suite 250
Houston, Texas 77077

ABSTRACT

This Report documents the activities performed related to the determination of background concentrations of inorganic constituents at permitted sites on White Sands Missile Range (WSMR) in New Mexico. The WSMR prepared this Report pursuant to the requirements of WSMR's Resource Conservation and Recovery Act Permit (No. NM2750211235) (the Permit) issued by the New Mexico Environment Department (NMED) Hazardous Waste Bureau (2009).

This WSMR Background Study Report is submitted in response to the NMED letter dated January 24, 2007, in which the NMED required a new background study. A new site-specific background study was necessary to achieve corrective action complete (CAC) determinations for designated Solid Waste Management Units (SWMU) at WSMR. Specifically, the new background study developed representative concentrations for the 23 Target Analyte List (TAL) metals in soil to be used to evaluate whether site-specific releases have occurred. The new background study does not include data from the previous background study developed for the Main Post. Independent background studies were performed for the 23 TAL metals in soil to meet the requirements necessary to achieve CAC at the following two SWMUs:

- SWMU 80 (WSMR-30) – Main Post Sewage Treatment Plant Sludge Waste Pile
- SWMU 140 (WSMR-84) – Former LC-37 Paint Dump

An independent background study was also performed to meet requirements necessary to achieve CAC at six SWMUs located at the Main Post of the WSMR facility (hereinafter referred to as the Main Post Sites). The Main Post Sites are as follows:

- SWMU 21 (WSMR-31) – Fire Fighting Training Area
- SWMU 22 (WSMR-32) – Fire Fighting Training Area Waste Pile
- SWMU 14 (WSMR-33) – Used Battery Accumulation Areas
- SWMU 17 (WSMR-73) – Waste Underground Injection Pipe
- SWMU 16 (WSMR-79) – Heavy Equipment Wash Pad
- SWMU 12 (WSMR-60) – Wash Ramp and Drains, Sump, and Oil/Water Separator

Independent background data sets were developed and evaluated for TAL metals in three different areas (the Main Post Sites, SWMU 80, and SWMU 140), as each is a geographically separate area within the WSMR. The geologic processes that control the

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distribution of the 23 TAL metals in soil across WSMR are variable and mandated the development of independent background concentrations for each of these areas.

Potential applications for the background screening values include supporting baseline human health and ecological risk assessments, proposals for CAC, developing realistic remediation goals, and evaluating the success of remediation efforts. Background characterization and site-to-background comparison methodologies are based on U.S. Environmental Protection Agency guidance and Appendix 5, Section 5.5 of the Permit (NMED, 2009).

Based on the background screening values determined for Arsenic as part of this study, the following sites are recommended to be petitioned for Corrective Action Complete without Controls:

- SWMU 21 (WSMR-31) – Fire Fighting Training Area
- SWMU 16 (WSMR-79) – Heavy Equipment Wash Pad
- SWMU 140 (WSMR-84) – Former LC-37 Paint Dump

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At each of these three sites, the arsenic concentrations detected in site characterization samples collected during previous studies were below the background screening value and therefore do not require further action. All other constituents were below their respective screening values.

The remaining five sites are being recommended for Corrective Action Complete without Controls:

- SWMU 80 (WSMR-30) – Main Post Sewage Treatment Plant Sludge Waste Pile
- SWMU 22 (WSMR-32) – Fire Fighting Training Area Waste Pile
- SWMU 14 (WSMR-33) – Used Battery Accumulation Areas
- SWMU 17 (WSMR-73) – Waste Underground Injection Pipe
- SWMU 12 (WSMR-60) – Wash Ramp and Drains, Sump, and Oil/Water Separator

At each of these sites, arsenic concentrations are greater than the background screening value but below the Industrial NMED Soil Screening Level.

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Acronyms and Abbreviations

bgs	below ground surface
CAC	Corrective Action Complete
cm/sec	centimeter(s) per second
EDD	electronic data deliverable
EPA	U.S. Environmental Protection Agency
EWS	Environmental Waste Solutions, LLC
FFTA	Fire Fighting Training Area
ID	identification
KW	Kruskal-Wallis
LOD	limit of detection
LOQ	limit of quantitation
MDL	method detection limit
mg/kg	milligram(s) per kilogram
Microbac	Microbac Laboratories, Inc.
MS	matrix spike
MQO	Measurement Quality Objective
NMED	New Mexico Environment Department
OWS	Oil/Water Separator
QC	quality control
RCRA	Resource Conservation and Recovery Act
RFA	RCRA Facility Assessment
RFI	RCRA Facility Investigation
RPD	relative percent difference
Shaw	Shaw Environmental, Inc.
SSL	soil screening level
STP	Sewage Treatment Plant
SWMU	Solid Waste Management Unit
TAL	Target Analyte List
the Permit	Resource Conservation and Recovery Act Permit (No. NM2750211235)
UCL	upper confidence limit
UTL	upper tolerance limit
WGS	World Geodetic System
WSMR	White Sands Missile Range
WTS	White Sands Technical Services, LLC

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1.0 INTRODUCTION

This Report documents the activities performed related to the determination of background concentrations of inorganic constituents at permitted sites on White Sands Missile Range (WSMR) in New Mexico. WSMR has prepared this Report pursuant to the requirements of WSMR's Resource Conservation and Recovery Act (RCRA) Permit (NM2750211235) (the Permit) issued by the New Mexico Environment Department (NMED) Hazardous Waste Bureau (NMED, 2009).

This WSMR Background Study Report is being submitted in response to the NMED letter dated January 24, 2007, in which the NMED required a new background study. A new site-specific background study was necessary to achieve Corrective Action Complete (CAC) determinations for designated Solid Waste Management Units (SWMU) at WSMR. Specifically, the new background study develops representative concentrations for arsenic in soil to be used to evaluate whether site-specific releases have occurred. The new background study does not include data from the previous background study developed for the Main Post. Independent background studies were performed for the 23 Target Analyte List (TAL) metals in soil to meet the requirements necessary to achieve CAC at the following two SWMUs:

- SWMU 80 (WSMR-30) – Main Post Sewage Treatment Plant (STP) Sludge Waste Pile
- SWMU 140 (WSMR-84) – Former LC-37 Paint Dump

An additional independent background study was also performed to meet requirements necessary to achieve CAC at six SWMUs located at the Main Post of the WSMR facility (hereinafter referred to as the Main Post Sites). The Main Post Sites are as follows:

- SWMU 21 (WSMR-31) – Fire Fighting Training Area (FFTA)
- SWMU 22 (WSMR-32) – FFTA Waste Pile
- SWMU 14 (WSMR-33) – Used Battery Accumulation Areas
- SWMU 17 (WSMR-73) – Waste Underground Injection Pipe
- SWMU 16 (WSMR-79) – Heavy Equipment Wash Pad
- SWMU 12 (WSMR-60) – Wash Ramp and Drains, Sump, and Oil/Water Separator (OWS)

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Independent background data sets were developed and evaluated for TAL metals in three different areas (SWMU 80, SWMU 140, and the Main Post Sites), as each is a geographically separate area within WSMR. The geologic processes that control the distribution of the 23 TAL metals in soil across WSMR are variable and mandated the development of independent background concentrations for each of these areas. Figure 1-1 shows the locations of SWMU 80; SWMU 140; and the Main Post Sites that consist of SWMUs 12, 14, 16, 17, 21, and 22.

In December 2009, WSMR received the final Permit to operate a hazardous waste storage facility on the installation (NMED, 2009). The Installation Restoration Program requirements for investigations of the SWMUs are provided in Section VI of the Permit. The NMED has primary regulatory responsibility, and investigations must be performed under the guidelines of Title 20 of the New Mexico Administrative Code.

1.1 Purpose and Objective

The NMED determined that the previous facility-wide background study performed by BAE Systems (BAE, 2004) at WSMR in 2003 was not representative of background values for arsenic. In a letter to WSMR dated December 8, 2006, the NMED stated that the primary contaminant of concern at the above SWMUs is arsenic and that the background mean concentration of 2 milligrams per kilogram (mg/kg) in the facility-wide study appears to be low and not typical of arsenic levels in soil at WSMR (NMED, 2006). Further correspondence from NMED to WSMR recommended that to achieve a CAC designation for the Main Post Sites, the permittee may conduct another soil background study for the entire Main Post (NMED, 2007). The NMED specifically had concerns about where the former background soil samples were collected and whether they were from the same geologic unit and soil type as each of the SWMUs. The NMED correspondence related to the former background soil study report is provided in Appendix A.

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The purpose of this report is to describe the soil background study field activities and TAL metal background evaluations performed in March and April 2012 in response to the NMED correspondence (Appendix A). In addition to a statistical evaluation of TAL metals in background soil, a geochemical evaluation was also performed. Purely statistical approaches can identify if a concentration in a site sample is high but cannot explain why. Geochemical evaluation of the data reduces the probability of falsely identifying contamination and provides mechanistic explanations for naturally elevated concentrations.

The broader objective of the soil background study is to develop background screening values that can be compared against previous investigation data for SWMUs 80, 12, 14, 16, 17, 22, and 140; the site objective for each of the listed SWMUs is to submit a petition for a CAC determination and permit modification to remove the SWMUs from the Permit

(NMED, 2009). Field work was performed in accordance with the NMED-approved Soil Background Study Work Plan (Shaw Environmental, Inc. [Shaw], 2011).

1.2 Report Organization

This Report is organized as follows:

- Section 2.0 provides the site description, describes the environmental setting, and summarizes the previous background investigation performed by BAE Systems (2004).
- Section 3.0 presents the soil investigation activities and sampling methodology.
- Section 4.0 describes the methodology for the evaluation of the analytical data to characterize the background distributions.
- Section 5.0 presents the results of the statistical characterization of the background distributions.
- Section 6.0 provides the results of the geochemical evaluation of metals in soil.
- Section 7.0 details the quality control and quality assurance procedures for evaluation of the analytical data.
- Section 8.0 provides the summary and intended use of the soil background data.
- Section 9.0 provides the references cited in this report.
- The figures and tables referenced in this report are included in separate tabs at the end of this report.
- Appendix A provides the 2006 and 2007 NMED correspondence.
- Appendix B presents the Field Documentation such as Field Activity Daily Logs, Soil Sample Collection Logs, and chain-of-custody forms.
- Appendix C presents the Analytical Results Tables.
- Appendix D provides Soil Classification Logs and Historical Well Logs.
- Appendix E includes the Civil Survey Data.
- Appendix F contains the Laboratory Data Reports.
- Appendix G presents Field Work Variances to the Work Plan.

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2.0 SITE DESCRIPTIONS AND PREVIOUS BACKGROUND INVESTIGATION

The WSMR installation is a U.S. Army Development Test Command Installation established in 1945. The WSMR is the largest land area military installation in the United States, comprised of approximately 3,200 square miles of land in Doña Ana, Socorro, Lincoln, Otero, and Sierra Counties in south-central New Mexico. The installation is approximately 99 miles long (north to south) and 25 to 40 miles wide (east to west) (White Sands Technical Services, LLC [WTS], 2006). The WSMR was established on July 9, 1945, as White Sands Proving Ground (the name was changed in 1958) to be the nation's testing range for the newly developed missile weapons. The New Mexico desert was selected as the testing range. The sparse population, almost year-round clear weather, and excellent visibility affording relatively easy recovery of spent missiles contributed to establishing the base in this location.

The WSMR now functions as a large complex of test ranges, launch sites, impact areas, and instrumentation sites required to develop and test tactical and strategic weapons and weapons systems. The WSMR is designated as a national range whose mission is to support missile development and test programs for the U.S. Army, U.S. Navy, U.S. Air Force, National Aeronautics and Space Administration, and other government agencies.

The headquarters (Main Post) area of WSMR is located at the southwestern corner of the installation, approximately 27 miles east-northeast of Las Cruces, New Mexico, and 45 miles north of El Paso, Texas. Figure 1-1 presents a site map of WSMR that shows the location of SWMU 80, SWMU 140, and the Main Post Sites.

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2.1 Site Descriptions

2.1.1 Solid Waste Management Unit 80 (WSMR-30) – Main Post Sewage Treatment Plant Sludge Waste Pile

A flash flood in 1978 damaged the STP sludge drying beds. Debris from the flood damage cleanup, including reinforced concrete, excavated soil, and sludge, was stockpiled at SWMU 80 (WSMR-30). Dimensions of the sludge waste pile were approximately 75 feet long by 50 feet wide by 2 to 6 feet high. The site was subsequently used for the stockpiling of dried sludge following construction of new sludge drying beds. WSMR-30 was located approximately 100 feet southeast of the sludge drying beds (SWMU 79) (Figure 2-1). Following waste characterization through the RCRA Facility Investigation (RFI), the waste material, which comprised the SWMU, was removed for disposal at the WSMR Main Post Landfill.

2.1.2 Solid Waste Management Unit 21 (WSMR-31) – Fire Fighting Training Area

The former FFTA (SWMU 21) is located in the southern portion of the WSMR Main Post (Figure 2-2). During its operation from the 1960s until 1982, petroleum-based fuels were ignited to simulate fire emergencies. The site is located approximately 900 feet south of Martin Luther King Boulevard (formerly Raritan Avenue), and west of War Road. Training activities for the WSMR Fire Department involved releasing and igniting petroleum-based fuels. Storage tanks at the site reportedly held waste jet fuel and diesel fuel (IT Corporation, 1992). The FFTA was deactivated in 1982 and is no longer used for fire fighter training.

2.1.3 Solid Waste Management Unit 22 (WSMR-32) – Fire Fighting Training Area Waste Pile

The FFTA Waste Pile (SWMU 22) is located approximately 1,200 feet south of Martin Luther King Boulevard and immediately west of War Road (Figure 2-2). The RCRA Facility Assessment (RFA) identified the site as SWMU 22 (WSMR-32) because of its proximity to the FFTA and due to its petroleum-stained soil and gravel stockpiles (A.T. Kearney, Inc., 1988). The Phase I RFI described the site in 1992 as more of a "pile" than a "pit" (IT Corporation, 1992) and speculated that the soil/gravel pile was excavated from the FFTA (SWMU 21) and relocated to SWMU 22. If the site was in fact related to the FFTA, then the operational dates may coincide. The FFTA was closed in 1982.

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2.1.4 Solid Waste Management Unit 14 (WSMR-33) – Used Battery Accumulation Areas

Lead-acid batteries were stored on two sections of asphalt pavement that comprised SWMUs 14 and 15. The former Used Battery Accumulation Areas are located immediately south (SWMU 14) and approximately 50 feet northeast (SWMU 15) of the Building 1776 Battery Shop as shown on Figure 2-2 (A.T. Kearney, Inc., 1988). In 1999, the NMED administratively combined both SWMUs into SWMU 14. Building 1776 is located on the Main Post, within the secured fence surrounding the Maintenance Area. A sump located on the east side of Building 1776 collects solids prior to wastewater entering the sanitary sewer system. The sanitary sewer system ultimately discharges the wastewater flowing through this sump into the STP.

Approximately 40,000 pounds of used batteries were collected annually at this facility and stored prior to off-site recycling (A.T. Kearney, Inc., 1988). Used battery storage operations were moved in 1990 to a facility constructed with a roof and berms to prevent and contain accidental releases. During a site reconnaissance performed on September 10, 2003, approximately 10 batteries were present on a wooden pallet at the SWMU 14 site.

The WSMR RFA (A.T. Kearney, Inc., 1988) could not determine the inception date for battery storage adjacent to Building 1776. Battery storage ceased at the site in 1990 when the covered battery storage area was built. During the operation of SWMU 14, batteries were stored on wooden pallets to a height of 3 to 4 feet. Pallets could then be loaded onto trucks for transport to recycling sites.

2.1.5 Solid Waste Management Unit 12 (WSMR-60) – Vehicle Wash Ramp and Drains, Sump, and Oil/Water Separator

The vehicle wash ramp and drains (SWMU 12) and the sump and OWS (SWMU 13) were built in the 1950s. The site is located in the Maintenance Area of the Main Post east of the Maintenance Shop, Waste Oil Tank, and Wash Pad and Drains. It is situated immediately east of Building 1778 in the Main Post area (Figure 2-2).

The wash ramp and drain/sump were used to steam-clean vehicles operated at WSMR. The concrete pad was designed to collect wastewater from spray-washing vehicles. The wastewater formerly discharged through a subgrade pipe to the drainage ditch located east of the wash pad. After the Main Post STP was built in 1958, the OWS outlet was plumbed to the sanitary sewer system for treatment and disposal of the wastewater. The OWS worked by gravity separation, and the skimmed oil phase was drained into the waste oil storage tank. The wash ramp was dismantled in 1997 and transported off site as scrap. In 1999, the NMED administratively combined both SWMUs 12 and 13 into SWMU 12.

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2.1.5.1 Vehicle Wash Ramp and Drains

The dimensions of the concrete wash pad are approximately 40 feet long by 15 feet wide. It slopes to a central, longitudinal drain that discharged to the 200-gallon sump with the OWS at the north end of the drain. The drain is located in the center of the pad with a sump situated east of Building 1778 at the south end of the drain. The separator/sump was constructed of concrete and covered by a metal grate. Before being dismantled in 1997, the wash ramp reached a maximum height of 8 feet above the surrounding grade (A.T. Kearney, Inc., 1988). When the facility was operational, waste oil and debris from the separator/sump were periodically transferred to a waste oil tank for recycling and disposal, while the effluent discharged to the STP through the sanitary sewer.

The vehicle washing operations generated rinse water that may have contained oil and other petroleum products. The release controls for the unit are the concrete pad, the drain, and the sump. The area surrounding this unit is paved with asphalt. There were no automatic level controls or secondary containment. The waste liquids flowed by gravity to the sump (A.T. Kearney, Inc., 1988).

2.1.5.2 Sump and Oil/Water Separator

The separator, which acted as both a sump and OWS, is located at the south end of the vehicle wash ramp and drain, east of Building 1778. The separator was installed in the mid-1950s. The unit is constructed of concrete, and the area surrounding the separator is paved with asphalt (A.T. Kearney, Inc., 1988).

The separator had a capacity of approximately 200 gallons, was constructed of concrete, and was covered by a metal grate. The separator received rinse water, waste oil, and debris from vehicle washing operations conducted at the concrete pad and drain (A.T. Kearney, Inc., 1988). The OWS worked by gravity separation and the skimmed oil phase was drained into the waste oil storage tank. The water discharged to the STP via sanitary sewer pipes, and the oil and debris were periodically cleaned out and transferred to the waste oil storage tank. There were no automatic level controls. Liquids were pumped to and from this unit.

2.1.6 Solid Waste Management Unit 17 (WSMR-73) – Waste Underground Injection Pipe

The Waste Underground Injection Pipe designated as SWMU 17 (WSMR-73) was reportedly located at the southwest corner of Building 1753, the Heavy Equipment Maintenance Shop, at the WSMR Main Post (Figure 2-2). The dimensions, composition, and depth of the pipe are unknown. SWMU 17 was reportedly used to dispose of waste oil and degreasing solvents from the Heavy Equipment Maintenance Shop (Building 1753). According to site personnel, the pipe was installed vertically in the ground, and wastes were poured into the open end. The dates of operation are unknown. The anecdotal evidence of the existence of SWMU 17 was acquired from former site personnel during the RFA (A.T. Kearney, Inc., 1988).

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2.1.7 Solid Waste Management Unit 16 (WSMR-79) – Heavy Equipment Wash Pad

The Heavy Equipment Wash Pad (SWMU 16) is located in the southern section of the WSMR Main Post, west of Building 1736, as shown on Figure 2-2. The wash pad is constructed of concrete and measures 50 by 40 feet. The pad slopes toward the center where a grate covers the drain. The drain discharged to a drainage ditch located south of the wash pad. Drainage ultimately reached Davies Tank, located approximately 4 miles southeast of the Main Post. The Heavy Equipment Wash Pad began operations during the 1960s and was used primarily for spray-washing trucks and maintenance of heavy equipment.

2.1.8 Solid Waste Management Unit 140 (WSMR-84) – Former LC-37 Paint Dump

SWMU 140, the Former LC-37 Paint Dump (WSMR-84), is located approximately 12 miles east of the Main Post and 0.8 mile north of Nike Road (Range Road 2) (Figure 2-3).

SWMU 140 (WSMR-84) consisted of an 8-foot-deep trench measuring approximately 70 by 35 feet that was rimmed on the north side by a soil berm.

The Former LC-37 Paint Dump was comprised of the open trench, which contained paint and solvent cans, construction debris, 55-gallon drums, and wire. The trench was constructed as an unlined excavation; construction debris was deposited in the trench and left uncovered (IT Corporation, 1992). The site is currently closed, and the dates of usage are unknown. Restoration actions conducted from 1995 to 1996 involved waste/soil removal and confirmatory soil sampling. Upon completion of these activities, the trenches were backfilled with clean soil.

2.2 Geology and Soil

2.2.1 Regional Geology

WSMR lies within the Mexican Highland Section of the Basin and Range Province. This province is characterized by a series of tilted fault blocks forming longitudinal, asymmetric ridges, or mountains, and broad intervening basins. The geology of WSMR consists predominantly of the Tularosa Basin and surrounding mountain ranges. The San Andres, San Augustin, and Oscura Mountains border the Tularosa Basin on the west while the Sacramento Mountains form the eastern border. A narrow region of north-south-trending, large-displacement, normal faulting separates the mountains from the basin resulting in the change in relief across the missile range. The majority of WSMR property, including most test facilities, is located within the Tularosa Basin (WTS, 2006).

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The Tularosa Basin contains thick sequences of Tertiary and Quaternary age alluvial and bolson fill deposits. These sediments, more than 5,000 feet in thickness in some areas, primarily consist of silt, sand, gypsum, and clay weathered from the surrounding mountain ranges. The average elevation of the basin floor is 4,000 feet above mean sea level, and surface features consist of flat sandy areas, sand dunes, basalt flows, and playas (dry lake beds) (WTS, 2006).

The nature of the bolson-fill deposits varies both laterally and vertically throughout the Tularosa Basin. Coarse-grained, poorly-sorted sediments deposited near mountain fronts grade into fine-grained, well-sorted sediments toward the center of the basin (Kelly and Hearne, 1976). Sediments farther from the mountain fronts also contain a greater percentage of clay and gypsum. Vertically, the sediments are reported to become finer-grained and more consolidated with depth until reaching a laterally continuous clay unit about 1,000 feet below ground surface (bgs).

In general, the stratigraphy is represented by unconsolidated to partially consolidated, fine to medium-grained sand with subordinate amounts of clay. Caliche is present as discrete layers

and nodules throughout the stratigraphic section. Although no faults within the basin fill are mapped within the immediate area, Quaternary faulting is known to exist within the region. These faults are reported to occur within the unconsolidated bolson sediments, trend north to south, and are most common near the mountain fronts. Orr and Myers (1986) divide the Tularosa Basin fill deposits into five distinct, mappable units that consist of the following:

- Coarse- to fine-grained deposits occur in gently sloping alluvial fans along the basin margin. The alluvial fans spread outward from the surrounding mountain slopes and coalesce into flat alluvial plains toward the basin interior. These fan deposits interfinger with lacustrine and alluvial deposits of the central part of the Tularosa Basin.
- Fine-grained sediments formed from lacustrine deposition extend throughout most of the Tularosa Basin. These deposits primarily consist of clay and evaporites with minor sand beds and occur near the surface in the northern part of the basin and at depth in the southern part of the basin.
- Fluvial-eolian sand, gravel, and clay deposits occur in the southern part of the basin, near Fort Bliss, extending from the Organ and Franklin Mountains south to the Hueco Mountains.
- Gypsiferous evaporite deposits of the Lake Lucero-White Sands area occupy WSMR and areas administered by WSMR including the Lake Lucero area and the alkali flats north of Lake Lucero. These deposits occur as dense, recrystallized gypsum; gypsum sand dunes; and alluvial deposits. Hard caliche (cemented with recrystallized gypsum) is present at or near the surface in the dry lake gypsum deposits of the central portion of the basin.
- The last depositional unit is described as composed of coarse-grained deposits that are saturated with saline water in the central portion of the Tularosa Basin.

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2.2.2 WSMR Main Post Sites Geology

The WSMR facility Main Post is located on one of the many alluvial fans descending from the San Andres and Organ Mountains in the southwest portion of the Tularosa Basin. A small-scale geologic map shows the Main Post residing mainly on Quaternary piedmont/bajada deposits. Other geologic units surrounding the Main Post are upper and middle Quaternary alluvium, lacustrine, and playa lake deposits; and Quaternary and Tertiary Upper Santa Fe Group units (Figure 2-4) (Green and Jones, 1997). The Upper Santa Fe Group units create a slight ridge that borders the Main Post on the north, south, and east. The alluvial and bajada deposits in this area are typically unconsolidated, poorly-sorted, and well-graded gravels, sands, clays, and evaporites. These deposits increase in sorting and maturity

and decrease in grain size as they are transported closer to the center of the basin (Green and Jones, 1997).

The soil types within the Main Post area are composed of the Sonoita-Pinaleno-Aladdin association (Neher and Bailey, 1976). This unit is 35 percent Sonoita gravelly sandy loam, 25 percent Pinaleno gravelly sandy loam, and 20 percent Aladdin gravely loamy sand. The Sonoita and Pinaleno soil types typically occur as broad, gently undulating or rolling areas on old alluvial fans. The Aladdin soil type is typically present on younger surfaces associated with arroyos or narrow elongated ridges along arroyos.

2.2.3 Solid Waste Management Unit 80 (WSMR-30) – Main Post Sewage Treatment Plant Sludge Waste Pile Geology

The Main Post STP Sludge Waste Pile (SWMU 80 [WSMR-30]) is located approximately 1.5 miles southeast of the WSMR Main Post (Figure 1-1) and 100 feet southeast of the STP sludge drying beds. According to Neher and Bailey (1976), the soil in the STP area is composed of the Sonoita-Pinaleno-Aladdin association. This unit is 35 percent Sonoita gravelly sandy loam, 25 percent Pinaleno gravelly sandy loam and 20 percent Aladdin gravely loamy sand. The Sonoita and Pinaleno soil types typically occur as broad, gently undulating or rolling areas on old alluvial fans. The Aladdin soil type is typically present on younger surfaces associated with arroyos or narrow elongated ridges along arroyos.

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Soil classification logs show that the soil at SWMU 80 is composed mainly of either silty sands or poorly graded to well graded sands. Gravel content in the soils also increased with depth at most of the boreholes. Soil Classification Logs can be found in Appendix D.

2.2.4 Solid Waste Management Unit 140 (WSMR-84) – Former LC-37 Paint Dump Geology

SWMU 140 (WSMR-84), the Former LC-37 Paint Dump, is located approximately 12 miles east of the WSMR Main Post (Figure 1-1). Based on soil borings completed at SWMU 140 (Appendix D), the geology consists of unconsolidated deposits characterized by alternating sequences of Quaternary/Tertiary sands, silts, and clays originating from the Organ Mountains. The shallow subsurface is comprised of loose fill materials consisting of poorly graded, fine- to coarse-grained sand, sandy silt, silty sand and occasional beds of lean clay. Abundant broken white caliche and gypsum crystals were present in many of the soil borings from the surface to 8 feet bgs.

The presence of caliche layers with gypsum and calcite crystals indicate that the area is under playa conditions. A playa occurs in an arid basin environment with no outlet. When precipitation occurs, the soluble elements in the surface soil are transported downwards. After the rainfall event, the moisture is transported back up in the soil through capillary

action. As the water evaporates, the soluble elements are deposited as gypsum, calcite, and other salts in the soil, which over time form caliche layers. These caliche layers, along with the clay layers at this site, reduce the porosity and permeability in the playa environment.

2.3 Hydrogeology

2.3.1 Regional Hydrogeology

Surface hydrogeology at WSMR is characterized by low precipitation, high evapotranspiration rates, and high soil infiltration. During the summer season, when thunderstorm activity is most common, playas within the basin may contain standing water. The arroyos that drain the surrounding mountain ranges usually contain water only following heavy precipitation events. The Tularosa Basin is a closed basin with no surface water drainage outside of WSMR (WTS, 2006).

The Main Post obtains its potable water supply from an aquifer in the upper bolson deposits. The majority of the groundwater recharge to this bolson aquifer occurs through the coarse, unconsolidated Tertiary/Quaternary alluvial fan deposits and arroyos along the eastern flank of the Organ, San Augustin, and San Andres Mountains. This aquifer consists of a wedge-shaped belt of potable water more than 30 miles long from north to south, and 3 to 5 miles east of the mountain front. Groundwater in the vicinity of the Main Post is of sufficient quality (less than 1,000 milligrams per liter total dissolved solids) for human consumption. McClean (1970) reported this freshwater zone extends downward to about 1,800 feet bgs.

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Recharge to the regional aquifer comes from precipitation falling on the mountain ranges and alluvial fans that border the bolson on the west (WTS, 2006). This precipitation infiltrates the unconsolidated, relatively coarse deposits of the alluvial fans, and the resultant groundwater flows toward the center of the Tularosa Basin, generally to the east-southeast. To the east, groundwater becomes more mineralized, primarily with sulfate and chloride. The mineralization is most likely due to the slow lateral migration rate of groundwater from recharge to discharge areas in the presence of readily soluble minerals in the bolson sediments. However, groundwater flow direction within the western Tularosa Basin region is presumed to discharge to the south as underflow into the contiguous, northern Hueco basin of western Texas. No surface expressions of groundwater discharge have been reported within the western Tularosa Basin.

2.3.2 Main Post Sites Hydrogeology

The primary aquifer in the Main Post area is a wedge-shaped, unconfined aquifer in the bolson deposits of the Tularosa Basin. Recharge for the aquifer is supplied by drainage from the alluvial fans and accumulations of storm runoff in natural depressions on the bolson

surface. Recharge of the aquifer primarily occurs in the coarse sediment of the proximal facies of the alluvial fans, near the area of stream emergence from the Organ Mountains. Beneath and to the east of the freshwater wedge, the groundwater is saline (IT Corporation, 1992).

The source of groundwater at WSMR is from precipitation, of which an estimated maximum of only 25 percent reaches the saturated zone. Yearly precipitation ranges from less than 7 inches in the Tularosa Basin to 25 inches in the higher mountains. Of particular significance to the groundwater resources of the Main Post area is a re-entrant or indentation of a large alluvial apron into the Organ Mountains. This re-entrant has entrapped a large quantity of freshwater that occurs along the mountain front, and it represents a major groundwater recharge source for the Main Post area aquifer.

The 11 water supply wells located throughout the Main Post area have a combined discharge capacity in excess of 14 million gallons per day. The average depth of these wells is approximately 772 feet bgs. The depth to water in the 11 wells ranges from 307 to 403 feet bgs. It is estimated that the freshwater zone could be up to 1,732 feet in thickness near the western edge of the basin. The freshwater zone thins to the east and "pinches out" just west of the Doña Ana-Otero County boundary where saline water predominates. Similarly, along the eastern edge of the basin, it is estimated that the freshwater zone thins to the west where saline water predominates (IT Corporation, 1992).

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The natural groundwater flow direction in the vicinity of the Main Post is to the east, toward the center of the valley. In the Main Post area, groundwater flow is affected by pumping from the Main Post well field, which provides potable water for the Main Post and adjacent facilities. The pumping of water between 1968 and 1982 caused a drawdown of about 20 feet in the Main Gate well, and a total drawdown of 75 feet was caused by pumping of wells between 1945 and 1982.The overall impact on groundwater elevation and flow direction varies with the rate of pumping from each well and with recharge from the vicinity of the mountains to the west. Under static, nonpumping conditions, groundwater elevation may be expected to vary from 200 to 300 feet below general levels within the Main Post area (IT Corporation, 1992).

The grain size distributions of the transmissive zone characterize the water-bearing units as poorly graded sand. The distributions were examined by running sieve analyses on a sample collected from within each of the screened intervals (approximately 330 to 350 feet bgs) of monitoring wells MW-9 and MW-10 during the Phase II RFI. The grain size distribution, as examined during the Phase II RFI, characterized the screened interval of monitoring well MW-1 (325 to 350 feet bgs) as silty clayey sand and the screened interval of monitoring well MW-2 (318 to 343 feet bgs) as silty sand (Sverdrup Environmental, Inc., 1994). Well

locations are shown on Figure 2-5, and construction details are presented in Table 2-1. Well logs are provided in Appendix D.

The hydraulic conductivity values for monitoring wells MW-9 and MW-10 range from 7.75 feet per day (2.74×10^{-3} centimeters per second [cm/sec]) to 3.68 feet per day (1.30×10^{-3} cm/sec). The hydraulic conductivity values for monitoring wells MW-1 and MW-2 range from 1.92 feet per day (6.6×10^{-4} cm/sec) to 5.6 feet per day (2.0×10^{-3} cm/sec). The static groundwater depths in the area of the Main Post range from approximately 3,883 to 3,908 feet above mean sea level (Sverdrup Environmental, Inc., 1994).

2.3.3 Solid Waste Management Unit 80 (WSMR-30) – Main Post Sewage Treatment Plant Sludge Waste Pile Hydrogeology

In the vicinity of the Main Post, the majority of the groundwater recharge to the bolson aquifer occurs through the coarse, unconsolidated alluvial fan deposits along the eastern flank of the Organ and San Andres Mountains. The Organ Mountain fault lies immediately west of the Post Headquarters, and acts as the western limit for potable water production. Groundwater that travels east through fractured bedrock and alluvium becomes progressively more mineralized downgradient toward the interior of the Tularosa Basin. This is attributed to the slow migration rate of groundwater and the presence of readily soluble minerals in the bolson sediments (MEVATEC Corporation, 1997). Table 2-2 lists the groundwater elevations and field parameters for monitoring wells SMW-1 and SMW-4. Figure 2-1 shows the two monitoring wells in relation to SWMU 80 (WSMR-30).

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2.3.4 Solid Waste Management Unit 140 (WSMR-84) – Former LC-37 Paint Dump Hydrogeology

Hydrogeology at SWMU 140 (WSMR-84) has not been previously investigated, therefore exact conditions are unknown. SWMU 140 (WSMR-84) is located approximately 10 miles east of SWMU 80, towards the center of the basin, which indicates that depth to water is likely greater than at SWMU 80. Depth to water at SWMU 80 is between 200 and 250 feet bgs, so leaching of contaminants is not expected to be an important factor at SWMU 140 (WSMR-84).

2.4 Previous Background Investigation

A previous facility-wide background investigation for metals in soil was performed by BAE Systems (2004). The investigation collected samples from 50 borings located across the Main Post area of WSMR. Three samples were collected from each boring (surface, 5 foot and 10 foot depths), yielding a total of 150 samples. Each sample was analyzed for 17 metals plus cyanide, sulfide, and cation exchange capacity.

Summary statistics for each of the three depth intervals were provided for each of the 20 analytes. These statistics were limited to the number of samples, distributional shape (normal, lognormal, or nonparametric), arithmetic mean, standard deviation, and the 95th upper confidence limit (UCL) of the mean. The 95th UCL of the mean is described in the BAE Systems report (2004) as a "background value," but this statistic is of limited use as a background screening value.

The 95th UCL of the mean is a statistic that is designed to bound (be greater than) the true population mean with a 95 percent confidence. For most of the analytes, the 95th UCL of the means were just slightly higher than the means of the samples, and were much lower than the maximum concentrations. The main use of a UCL of the mean is to provide an average exposure point concentration for risk assessments. A UCL of the mean is not designed for use as a background screening value, because slightly less than one-half of uncontaminated samples are expected to be greater than the UCL of the mean. Screening suspect samples against a 95th UCL of the mean of the background distribution will result in a false-positive error rate of slightly less than 50 percent. The lack of useful background screening values is a major limitation of the 2004 background investigation for the Main Post.

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3.0 FIELD ACTIVITIES

Field work at SWMU 80, SWMU 140, and the Main Post Sites was performed March 19 through 23, 2012. Field work was performed in accordance with the NMED approved Soil Background Study Work Plan (Shaw, 2011).

3.1 Soil Sampling

3.1.1 Soil Sampling Location Selection and Rationale

A combination of field observations and a working map with the locations of previous investigations were used to identify the areas of the sites unaffected by WSMR activity and suitable for background sampling. The sampling locations were logged with a hand-held Trimble GeoXH global positioning system and were geo-referenced to site maps using geographic information systems. The following criteria were also reviewed as part of the background location selection process for each area:

- Geologic maps were reviewed to ensure that the background locations represent the same depositional environment, soil types, and underlying geologic units as the site samples.
- The geologic processes that control the distribution of arsenic in soil were taken into consideration during the selection process.
- Prevailing wind direction data was obtained for 1997, which was the most recent data available for the Main Post. The data was evaluated, and taken into consideration for selecting borehole locations.
- Topographic features were reviewed to determine an upgradient direction at the site.
- Historical operational history of each site was evaluated to ensure that the background locations are outside the operational footprint of each of the SWMUs.

Prior to the commencement of sample collection, WSMR ground-verified the background sample locations to ensure they met the above selection criteria. These locations were provided to NMED after submittal of the approved work plan (Shaw, 2011) and were approved by NMED prior to the commencement of sampling activities.

Two borehole locations were moved during field activities due to rig accessibility, borehole refusal, and health and safety concerns. MP-BH08 was moved approximately 25 feet south to provide more stable ground for the Geoprobe® rig. The Geoprobe® rig was also unable to access the proposed location for MP-BH04; therefore, the location was moved approximately

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100 yards south. After moving the location, the Geoprobe® rig encountered refusal three times in different locations in a 25 foot radius. This area is located in a large outwash channel from the Organ Mountains, likely producing large cobbles in the area. In order to avoid refusal at a fourth location, MP-BH04 was moved to the northeast side of the Main Post, between MP-BH03 and MP-BH11; the new location for MP-BH04 met the above listed criteria for a background sample location. Figure 3-1, Figure 3-2, and Plate 3-1 present the background soil boring locations for SWMU 80, SWMU 140, and the Main Post Sites, respectively.

3.1.2 Soil Sampling Procedures and Documentation

Soil samples were collected and standard operating procedures were followed as described in the Soil Background Study Work Plan (Shaw, 2011). A truck-mounted Geoprobe® (Photos 3-1 through 3-4) was used to advance 15 soil borings (2-inch-diameter) to 10 feet bgs for geologic description and soil sample collection around three different locations: SWMU 80, SWMU 140, and the Main Post Sites. Once the boreholes were advanced to the desired sampling depth, the entire length of each soil boring was logged by the field geologist (Photo 3-5).

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Upon completion of logging the boreholes, the field team collected samples from 0 to 2 feet, 5 to 6 feet, and 9 to 10 feet bgs. Each interval was homogenized in a plastic bowl with a plastic scoop and large pieces of gravel were removed, if necessary (Photo 3-6 through 3-8). The soil was then placed in a laboratory-provided 2 ounce jar, labeled, and placed into a laboratory provided cooler with ice (Photo 3-9 and 3-10). Shaw maintained custody of the samples at all times until relinquished to Federal Express for priority overnight shipment to the laboratory. The soil sample was handled and packaged for shipment according to Appendix 5, Section 5.2.2.j of the Permit (NMED, 2009).

Each sample was assigned unique field identification (ID) nomenclature specific for SWMU 80, SWMU 140, and the Main Post Sites. Soil sample IDs consist of a combination of the site number, borehole number, and depth interval as follows:

- SWMU Site ID: 80, MP (Main Post), or 140
- Borehole number: BH01
- Depth Interval: 1 = 0–2 feet bgs
2 = 5–6 feet bgs
3 = 9–10 feet bgs

An example of a sample ID for a soil sample taken at the 0 to 2 feet interval from BH01 at SWMU 80 would therefore be 80-BH01-1.

Sampling equipment, such as plastic bowls and scoops, were decontaminated between each sample collection depth and soil boring location using a solution of deionized water and Alconox®, followed by a final deionized water rinse (Photo 3-11).

Chain-of-custody documentation was electronically generated in the field using EnviroData software and placed in each cooler to accompany samples to Environmental Waste Solutions, LLC (EWS)/Microbac Laboratories Inc. (Microbac).

Tables 3-1, 3-2, and 3-3 provide a summary of all soil samples collected during the Background Study. Field documentation, including Field Activity Daily Logs, Soil Sample Collection Logs, and chain-of-custody forms, are included in Appendices B1, B2, and B3, respectively.

3.2 Soil Analytical Parameters

All samples were analyzed for TAL metals only. Field quality assurance/quality control (QC) samples were collected as field duplicates and for matrix spike (MS)/MS duplicate analyses. Soil samples collected for chemical analysis were then submitted to EWS/Microbac in Marietta, Ohio.

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3.3 Soil Boring Abandonment

The soil borings were abandoned according to the field work variance presented in Appendix G. Each borehole was abandoned by placing bentonite chips into the soil boring and hydrating every 1 foot to a depth of 2 feet bgs (Photos 3-12 and 3-13). The remaining 2 feet were backfilled with the clean native soil cuttings removed from the soil boring. Any remaining soil cuttings were thin spread around the borehole to match the elevation of the ground surface.

3.4 Civil Survey

A civil survey was performed on April 23 and 24, 2012. The results from the survey are included in Appendix E. Coordinates for the borehole locations are presented in Tables 3-1, 3-2, and 3-3. Coordinates shown are in World Geodetic System (WGS) 1984 Universal Transverse Mercator Zone 13N projection.

3.5 Investigation-Derived Waste

Investigation-derived waste was handled according to the NMED approved Soil Background Study Work Plan (Shaw, 2011). Investigation-derived waste was limited to spent

decontamination wash and rinse water, which was generated in small quantities. Because sampling occurred at background sites that have not been impacted by WSMR base operations, excess material from the continuous coring and hand-auger operations did not require sampling and was either deposited back into the borehole or thin-spread around the borehole. Decontamination and rinse water was allowed to evaporate on site.

4.0 DATA EVALUATION METHODOLOGY

This section describes the methodology used to characterize background distributions for the 23 TAL elements in soil at the SWMU 80, SWMU 140, and the Main Post Sites areas. Background concentrations of naturally occurring elements form a distribution of values over the domain of interest. The characterization of background can be defined as the process of describing the statistical distributions of concentrations in samples obtained at representative locations that are not impacted by facility operations. This background investigation provides the actual concentration data, as well as statistical descriptions of the distributions of 23 elements in soil at the three investigation areas.

The statistical descriptions of the distributions provided here for the 23 TAL elements may be used for a variety of purposes. The primary purpose of the background distributions is for comparison with sample analyses from site investigations to determine whether local releases have occurred. Other possible uses include supporting human health and ecological risk assessments, proposals for CAC without controls, developing realistic remediation goals, and evaluating the success of remediation efforts. These uses require the ability to distinguish between site-related impacts, non-site-related impacts, and background. Accordingly, any contributions from "anthropogenic background" or non-site-related regional sources of metals, such as mercury fallout from power plants, if present, would be considered to be part of the background distribution for these purposes.

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The statistical methodology used to characterize background distributions is based on published U.S. Environmental Protection Agency (EPA) guidance (1989, 1992, 1994, 1995, 1996, 1997, 2006, and 2009). The following key issues are addressed in the background characterization methodology:

- Handling of duplicates
- Handling of nondetects
- Appropriate spatial grouping of soil samples
- Evaluation of distributional assumptions
- Calculation of summary statistics

The following sections explain how these key issues are addressed.

4.1 Handling of Duplicates

Forty-five primary and five duplicate samples were obtained at each of the three background areas, yielding a total of 150 samples, including 15 field duplicates. Details of the sampling are provided in Section 3.0. Analyses of the 15 field duplicate samples were averaged with their primary samples prior to statistical characterization. This approach makes use of all of the available data while avoiding any bias introduced by giving extra statistical weight to the locations where the duplicates were obtained.

4.2 Handling of Nondetections

A certain proportion of nondetectable concentrations of trace elements are common in background data sets. There are a variety of methods to deal with nondetections, each of which has advantages and disadvantages with respect to introducing unwanted bias into the description of background distributions. In accordance with EPA guidance, nondetections were replaced with a value equal to the detection limit (equivalent to the method detection limit [MDL]) for the purpose of calculating the mean, median, and standard deviation. The analytical laboratory routinely assigns "estimated" ("J") qualifiers to results that fall between the MDL and the limit of quantitation, so it is likely that concentrations reported as nondetectable are between zero and the MDL.

Calculations of the 95th UCL of the mean and the 95th upper tolerance limit (UTL) for data sets containing nondetect results use the Kaplan-Meier method, also known as the "product-limit estimator" (Kaplan and Meier, 1958), as implemented in the ProUCL (Version 4.1) software package (EPA, 2010). This method minimizes the bias introduced by the presence of nondetect results with varying reporting limits.

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4.3 Spatial Grouping of Soil Samples

It is generally preferable to characterize background distributions on as broad a spatial scale as possible. Subdividing soil samples by depth, region of the site, soil type, underlying bedrock, watershed, or other parameter results in smaller data sets per group; smaller data sets increase the uncertainty when inferring the characteristics of the sampled population. However, if the distributions of element concentrations are indeed significantly different between spatial subgroups of samples, then separate background characterizations should be performed for those subgroups.

Background samples from the three areas (SWMU 80, SWMU 140, and the Main Post Sites) were kept separate because of the distances between them and differences in the geologic environment. SWMU 140 is located on a playa environment where as the Main Post and SWMU 80 are located on alluvial fans. The element concentrations are controlled by different processes in these two types of environments. A key consideration in this

investigation is if the sample data from the three different depth intervals (0 to 2, 5 to 6, and 9 to 10 feet bgs) at a given area should be kept as separate distributions or can be combined.

A statistical test recommended in EPA guidance (1989, 1996, and 2009) to compare more than two subgroups of samples is the Kruskal-Wallis (KW) test (Kruskal and Wallis, 1952). The KW test is a modification of the Wilcoxon Rank Sum test (a.k.a. Mann-Whitney *U* test) that allows comparisons of more than two groups of data. The KW procedure tests the null hypothesis that the groups of samples are drawn from the same population. It is a nonparametric test that is performed with the actual sets of concentration data rather than summary parameters such as the mean or standard deviation, so it is valid for a wide range of distributional shapes.

The KW test calculates the *H* statistic, which is then used to find the two-sided significance. If the test statistic yields a probability of a Type I error (*p*-level) less than 0.05, then there is a statistically significant difference between the medians of one or more of the groups at a 95-percent confidence level.

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A Type I error involves rejecting the null hypothesis when it is true. If the *p*-level is greater than 0.05, then the null hypothesis is accepted, and the groups are assumed to be drawn from the same population. If the *p*-level is less than 0.05, then the medians of one or more of the groups are significantly different at the 95-percent confidence level. If three groups are being compared, then a *p*-level less than 0.05 can occur if any one of the groups is shifted higher or lower relative to the other two, or if all three groups are different from each other.

The following factors should be kept in mind when evaluating KW test results:

- Dividing the original data set into a larger number of subgroups increases the false-positive error rate because the probability of a larger number of groups being in agreement is lower than the probability of a fewer number of groups being in agreement.
- Dividing the data into a larger number of subgroups results in smaller sample sizes in each group, which are thus less representative of the sampled population. This effect further increases the false-positive error rate of the test and also increases the uncertainty in the estimates of the population statistics.
- Analytes with higher variances are generally prone to higher false-positive and false-negative errors in subgroup comparison tests because more samples are needed to adequately characterize populations with higher variances. When the data is subdivided into groups, then the analytes with higher variances show more

frequent false-positive test results due to an insufficient sample size in one or more groups.

- The presence of nondetect results can increase the error rates of the test, especially if the surrogate values assigned to nondetects are not constant.

Results of the statistical comparisons of the soil samples by depth at each of the three sites is provided in Section 5.1.

4.4 Evaluation of Distributional Assumptions

The shape of the distribution – considered to be either normal, lognormal, or nonparametric – is reported as part of the background characterization. The term "nonparametric" is not a specific shape, but is used to describe distributions that are neither normal nor lognormal, in accordance with EPA guidance (1989, 1992, and 2009). The selection of an appropriate type of statistical distribution is based on EPA guidance, which recommends the Shapiro-Wilk test for determining whether the distribution of concentration data is normal (EPA, 2006). Lognormality is tested by taking the logarithm (log transform) of the data and testing for normality (EPA, 1992).

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The Shapiro-Wilk test returns a "*p*-level" value between 0 and 1, indicating the "goodness of fit" to the tested distribution. A *p*-level of 0.05 or greater indicates an acceptable fit to a normal (or lognormal) model at a 95-percent confidence level; therefore, there is only a 1-in-20 chance of falsely identifying the distribution as normal (or lognormal) when it actually is not. If a data set passes tests for normality and lognormality, then the test result with the highest *p*-level determines the assigned distribution.

If the Shapiro-Wilk test indicates that a data set is neither normal nor lognormal at this confidence level, then the data are assumed to have a nonparametric distribution. Data sets with greater than 15 percent nondetects are automatically treated as nonparametric distributions according to EPA guidance (1989). Results of the distribution testing are provided in Section 5.2.

4.5 Calculation of Summary Statistics

Complete statistical descriptions of the background distributions of 23 elements in soil for the three background areas are provided in Section 5.2. These descriptions include the number of samples, percent nondetects, minimum concentration, median concentration, maximum concentration, geometric mean, arithmetic mean, 95th UCL of the mean, 95th UTL, and the current 2012 NMED residential soil screening level (NMED, 2012). Also provided are three measures of the variance of the distributions, including the interquartile range (difference between the 25th and 75th percentiles), standard deviation, and coefficient of

variation (ratio of standard deviation to mean). The shapes of the distributions, defined as either normal, lognormal, or nonparametric, are also provided.

The 95th UCL of the mean is a value that has a 95-percent probability of bounding (being greater than) the true population mean. It is often used as an exposure point concentration in human health and ecological risk assessments. The 95th UTL is a value that has a 95-percent probability of bounding the true 95th percentile of the population. It is often used as a background screening value as recommended in EPA guidance (1989). It should be kept in mind that there is a 5 percent probability that a concentration in any randomly collected uncontaminated sample will exceed the background 95th UTL. If a concentration in a site investigation sample exceeds a background 95th UTL, then that sample should be considered to be suspect and may warrant further evaluation, but it is not necessarily contaminated.

The summary statistics are calculated for each element in soil using standard Excel® functions, except for the 95th UCL of the mean and the 95th UTL, which are calculated using procedures implemented in the ProUCL software package Version 4.1.00 (EPA, 2010). This software is developed, maintained, and distributed by the EPA for the specific purpose of calculating UCLs of the mean and UTLs, and is based in part on guidance provided by the EPA (2002a and 2002b). ProUCL provides several different UCLs of the mean and UTLs for each data set, which are calculated using a variety of methods. The selection of the appropriate UCL of the mean and UTL is based on careful consideration of the size of each data set, the proportion of nondetect results, and differences in the reporting limits of the nondetect results.

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The 95th UCL of the mean was calculated using the nonparametric 95 percent bootstrap-*t* method for elements with no nondetect concentration. The Kaplan-Meier 95 percent bootstrap-*t* method was used to calculate the 95th UCL of the mean for elements with one or more nondetects. Two-thousand replications were used for all bootstrap calculations. Bootstrap procedures are nonparametric techniques that operate on the actual data rather than statistical parameters (i.e., mean and standard deviation). They do not require assumptions regarding the statistical distribution of the underlying population and are valid for any distributional shape (EPA, 1997).

The UTL results were based on the normal or lognormal parametric 95th UTL with 95 percent coverage method if there were less than 15 percent nondetects and the distributions passed the Shapiro-Wilk test for normality or lognormality. The nonparametric 95 percent Kaplan-Meier UTL with 95 percent coverage was used if more than 15 percent of the results were nondetects or if the distribution failed the tests for normality or lognormality. Details of these methods are provided in the *ProUCL Version 4.1.00 Technical Guide* (EPA, 2010).

The complete descriptions of background distributions that are provided in Section 5.2 are sufficient to allow the calculation of additional statistical parameters of interest, such as the variance, standard error of the mean, two standard deviations above the mean, etc. The descriptions can also be used to support statistical site-to-background data set comparisons. There are two general types of statistical site-to-background comparisons. Parametric comparisons, such as the two-sample *t*-test, require the means and standard deviations of the distributions that are being compared. Nonparametric comparison tests, such as the Wilcoxon Rank Sum test and the Gehan test, require the actual data rather than summary statistics. The actual background analytical data are provided in Appendix C.

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5.0 DATA EVALUATION RESULTS: BACKGROUND DISTRIBUTIONS OF ELEMENTS IN SOIL

This section presents the results of the statistical characterization of background distributions at SWMU 80, SWMU 140, and the Main Post Sites areas.

5.1 Spatial Grouping of Samples

Background samples from the three areas (SWMU 80, SWMU 140, and the Main Post Sites) were kept separate because of the distances between them and the fact that SWMU 140 is located on a playa environment whereas the Main Post and SWMU 80 areas are located on alluvial fans. Element concentrations are controlled by different geochemical processes in these two environments, as discussed in more detail in Section 6.0 Geochemical Processes. A key consideration in this investigation is if the samples from the three different depth intervals (0 to 2, 5 to 6, and 9 to 10 feet bgs) at a given area should be kept as separate distributions or can be combined.

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The KW test, as described in the Methodology, Section 4.3, was used to compare the distributions of samples from the three depth intervals at each area to determine if they should be kept as separate distributions or can be combined. Results of the KW test are provided in Table 5-1, which shows the p-levels for each comparison. The comparisons were performed at the 95 percent confidence level. At this confidence level, p-levels below 0.05 indicate statistically significant differences between the depth groups.

Antimony, cadmium, mercury, selenium, silver, and thallium are not listed in Table 5-1 because these elements had very high proportions (greater than 60 percent) of nondetect results. Their test results are dominated by the surrogate values (equal to the MDL) assigned to them and therefore lack meaning.

The remaining 17 elements show some interesting patterns. The major soluble elements calcium, magnesium, sodium, and potassium failed the test at two or three of the background areas, and the soluble trace elements cobalt, copper, nickel, and vanadium also failed the test at two background areas. These soluble elements tend to be redistributed in the soil column as they leach from the surface horizons and adsorb or precipitate in lower horizons in response to the wet/dry cycling that occurs over geologic time scales in arid environments. Low solubility elements such as iron and trivalent chromium showed similar distributions in the three layers as expected because the mobility of these elements in the soil column are low in these oxic alkaline environments.

An additional observation is that the Main Post area had fewer KW test failures (5 of 17 elements) compared to SWMU 80 (13 of 17) and SWMU 140 (8 of 17). The Main Post background samples were obtained from locations north and east of the Main Post to ensure they represented undisturbed locations upgradient of any contaminated runoff from WSMR activities. These Main Post sample locations on the alluvial fan have steeper terrain and are composed of younger and coarser sediments relative to the other two background areas. These characteristics are consistent with a lower degree of soil horizon development and vertical redistribution of elements. The SWMU 80 area is composed of older alluvial fan sediments that are farther from the source rock and it has flatter topography. These characteristics favor the development of soil horizons and vertical redistribution of elements. The SWMU 140 area is located in a playa environment where extensive vertical redistribution of the elements has occurred in response to wet-dry cycling.

The KW test results indicate a lack of good agreement in the distributions of many elements within the three layers, at each of the three background areas. This argues in favor of keeping samples from the three layers as distinct distributions. Separate background characterizations are therefore provided for the surface, intermediate, and deep layers at each of the three background areas.

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5.2 Summary Statistics

Tables 5-2 through 5-10 provide the summary statistics for the three depth intervals at the three background areas. Cadmium was nondetect in all 150 samples and antimony was only detected in one sample. Aluminum, barium, calcium, iron, lead, magnesium, manganese, potassium, sodium, vanadium, and zinc had detectable concentrations in all 150 samples. The remaining 10 elements have varying proportions of nondetects. The 95th UTL column in each of the nine tables represents the background screening value (in mg/kg) for each depth interval at each area. If the concentrations of an element in a subgroup (depth interval at one of the three background areas) are all nondetect, then the 95th UTL background screening value is expressed as a limit of less than (<) the maximum reporting limit.

These 95th UTL background screening values are shown next to the current NMED residential soil screening limit for comparison (NMED, 2012). The 95th UTL background screening values for arsenic exceeds the residential soil screening limit of 3.9 mg/kg in the middle soil layer at SWMU-80 and all three soil layers at SWMU-140. Reasons for the naturally high arsenic concentrations at these locations are discussed in Section 6.0.

6.0 GEOCHEMICAL PROCESSES

This section discusses the site-specific processes controlling element concentrations in the three background areas. It is important to understand these processes so that site-to-background comparisons can be properly performed. Consideration of the site-specific geochemical conditions is an important complement to statistical comparisons. Purely statistical approaches can identify if a concentration in a site sample is high relative to background but they cannot explain the reasons for the elevated concentration. Geochemical evaluation of the data provides mechanistic explanations for naturally elevated concentrations, thereby reducing the probability of falsely identifying contamination.

The Main Post and SWMU 80 background areas are located on alluvial fans. The Main Post area is on a younger fan that is closer to the eroding igneous source rock of the Organ Mountains and has the most topographic relief. The SWMU 80 area is located on an older alluvial fan that is a greater distance from the source rock and has less topographic relief and finer-grained soil than the Main Post. The SWMU 140 background area is located in a playa environment where different processes control major and trace element concentrations.

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The main processes controlling element concentrations in alluvial fan soil are chemical and physical weathering of the mineral grains, and downward leaching of dissolved elements. The more soluble elements – such as calcium, magnesium, sodium, and potassium – are more prone to leaching and transport, whereas the low-solubility elements (such as iron) remain in the soil as residuum. Younger alluvial fan sediments present at the Main Post tend to be coarser grained and more permeable, facilitating the vertical transport of leached elements.

The SWMU 140 area is located on a playa, which is a closed desert basin with no outlet that periodically fills with water to form a temporary lake. An important natural process that occurs in playa soil is caliche formation, in which several trace elements accumulate in discrete evaporite layers along with calcium, magnesium, sulfate, and carbonate. During rainfall events in an arid environment, the soluble components in the surface layer (mostly Ca^{+2}, Mg^{+2}, Na^{+}, K^{+}, HCO_3^{-}, SO_4^{-2}, and Cl^{-}) dissolve and are transported some distance downward in the soil column. Following the rain event, arid conditions return and the water is wicked back up via capillary action to the surface, where it evaporates. The dissolved salts that were transported downward then precipitate in place as the water is removed and the solubility of the salts are exceeded. When this process is repeated over geologic time, evaporite layers form that are mostly composed of calcite ($CaCO_3$), gypsum ($CaSO_4 \bullet 2H_2O$), anhydrite ($CaSO_4$), and other evaporite salts. These mineral precipitates reduce the porosity and permeability of the soil so that downward migration of the dissolved elements is limited.

Soluble trace elements such as barium are also concentrated by this process and become correlated with calcium, which is the major element in these evaporite zones. Barium in samples affected by this process will exhibit fairly consistent Ba/Ca ratios, and both barium and calcium will show peak concentrations at the depth of caliche formation.

Caliche horizons can be discontinuous, and the depths of the horizons may vary across a site. Multiple caliche layers of different ages may also be present in some areas of a site. It is important to be aware of caliche horizons if they are present because they can contain high natural concentrations of several trace elements. Awareness of the presence of caliche will preclude the misinterpretation of naturally high concentrations as contamination.

6.1 Geochemical Evaluation Results

The following sections discuss the processes controlling the concentrations of selected elements at the three background areas.

6.1.1 Aluminum and Iron

Aluminum is a primary component of common soil-forming minerals such as clays, feldspars, and micas. Aluminum also substitutes for ferric iron in iron oxide minerals and it can adsorb on iron oxide surfaces (Cornell and Schwertmann, 2003). Iron is dominantly present as iron oxides, which are common soil-forming minerals and occur as discrete mineral grains or as coatings on silicate minerals.

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Iron oxides and clay minerals tend to exist as very fine particles, so both iron and aluminum are enriched in samples with finer grain sizes. A plot of aluminum versus iron concentrations can be used to qualitatively assess the relative abundance of these minerals in soil samples, as shown on Figure 6-1. Both elements are present in the alluvial fan samples in roughly fixed proportions. Coarser grained samples are at the lower end of the trend and finer grained samples are at the higher end of the trend. The playa samples are naturally enriched in aluminum, so these samples form a parallel trend that falls above the trend established by the alluvial fan samples.

The primary aluminum-bearing igneous minerals, such as feldspars and micas, in the alluvial-fan soils will weather to fine-grained aluminum-bearing clay minerals. Clay particles are less dense than iron oxide particles and their strong negative surface charges allow the particles to remain suspended in water for a longer period of time. During heavy rainfall events, these clay particles are transported via surface runoff to the playas where they accumulate. These processes likely explain the higher aluminum and lower iron concentrations in the playa versus alluvial fan soils.

6.1.2 Calcium and Magnesium

Calcium and magnesium are soluble elements that have similar chemical properties and tend to substitute for each other in mineral structures. Both elements are leached from the primary igneous minerals (plagioclase feldspar, pyroxenes, amphiboles) present in the alluvial fan soils as they weather. These elements are then transported to the playas where they concentrate mostly as carbonate and sulfate minerals. This can be seen on Figure 6-2, which shows the correlation between magnesium versus calcium. The proportion of magnesium to calcium is similar in samples from all three sites, but the average concentrations are much higher in samples from the playa area where they accumulate.

6.1.3 Sodium

Sodium is a highly soluble element that is slowly leached from the alkali feldspar and micas that are present as primary igneous minerals in the fan soils; the sodium is then transported to the playa where it concentrates along with calcium and magnesium. This can be seen on Figure 6-3, which shows sodium versus calcium concentrations at the three background areas. The alluvial fan samples have low concentrations of both elements and exhibit general covariance of the elements' concentrations. In contrast, the playa samples show a distinct pair of parallel trends. Most of the playa samples have higher sodium and calcium concentrations than the fan samples, and they fall on the same trend as the fan samples. The playa samples that form the lower trend are controlled by a different local process.

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Figure 6-4 depicts only the SWMU 140 playa samples, using different symbols for the three depth intervals. This perspective reveals that the shallow samples form the lower parallel trend. The intermediate and deep samples have, on average, slightly higher calcium concentrations and approximately one order-of-magnitude higher sodium concentrations relative to the shallow samples. These relationships illustrate the vertical redistribution processes occurring in playa environments. Sodium is more soluble than calcium and is leached to greater depths in playa soil. Magnesium shows similar behavior (plot not provided), with enrichment in the lower playa horizons due to its higher solubility.

6.1.4 Barium

Barium is commonly present in soil as the divalent cation (Ba^{2+}) and is known to associate with manganese oxides (Kabata-Pendias, 2001) in most soil environments. Manganese oxides are a class of naturally occurring minerals that are common in soil and sediment, and they exist either as discrete mineral grains or as coatings on other minerals (Post, 1999). As a result of their large surface areas and high negative surface charges, these minerals have a strong affinity to adsorb specific divalent cations such as Ba^{2+}, Co^{2+}, and Pb^{2+}. A soil sample that is naturally enriched in manganese oxides will have high concentrations of manganese and associated trace elements, such as barium.

This can be seen on Figure 6-5, which shows the correlation between barium and manganese at the three background areas. Samples from the two alluvial fan sites show very strong correlations between barium and manganese (the samples form a common trend with a positive slope), implying that adsorption of barium on manganese oxide surfaces is a key process controlling barium concentrations in those environments. Samples from the playa environment do not show this correlation, suggesting that some other process is controlling barium concentrations there.

Barium has similar chemical behavior as calcium in that both elements are soluble if the concentrations of carbonate or sulfate are low, and will precipitate if carbonate or sulfate concentrations are high. Barium can substitute for calcium in calcite ($CaCO_3$) and gypsum ($CaSO_4 \bullet 2H_2O$), which are the principal minerals in caliche. It may also precipitate as witherite ($BaCO_3$) or barite ($BaSO_4$) along with calcite and gypsum within the caliche horizon where carbonate and sulfate concentrations are high. Figure 6-6 shows the correlation between barium versus calcium in samples from the three background areas. The much higher (order of magnitude) calcium concentrations in the playa samples and the positive correlation between barium and calcium in the playa samples with higher calcium concentrations are notable on this figure.

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These observations are consistent with barium being controlled in the alluvial fan environments by adsorption on manganese oxides and controlled in the playa environment by substitution for calcium in the evaporite layers. Also note that barium is considerably higher in most of the playa samples because it is leached from the alluvial fan soil and transported to the playas where it naturally accumulates with calcium. Barium contamination can be identified in suspect samples from alluvial fan environments by evaluation of Ba/Mn ratios, and can be identified in suspect samples from playa environments by evaluation of Ba/Ca ratios.

6.1.5 Arsenic

Arsenic in oxic soil pore fluid is commonly present as oxyanions ($H_2AsO_4^-$, $HAsO_4^{2-}$) that are soluble but have a strong affinity to adsorb on iron oxides, which tend to maintain a net positive surface charge (Brookins, 1988). Positive correlations between arsenic and iron are typically observed in soil samples under oxic, neutral pH conditions for this reason (Bowell, 1994). A plot of arsenic versus iron concentrations in the background samples is provided on Figure 6-7. Arsenic and iron concentrations are correlated in the alluvial fan samples and are also correlated in the playa samples but the playa trend is shifted higher and to the left of the alluvial fan samples. These parallel trends indicate lower iron and higher arsenic concentrations in the playa samples relative to the alluvial fan samples.

Iron is fairly insoluble under the oxic conditions that exist in the alluvial fan environments so it will tend to accumulate in the alluvial fan soil as the more soluble elements, such as sodium, magnesium, and calcium, are leached. Arsenic is more mobile than iron and can desorb from the iron oxides in the alluvial fan soils and be transported to the playa where it accumulates. These known geochemical behaviors are consistent with the background concentrations and explain the naturally higher arsenic concentrations at SWMU 140.

6.2 Geochemical Evaluation Conclusions

Comparisons of element concentrations in site samples versus background samples need to consider the site-specific geochemical processes controlling element concentrations. Purely statistical comparisons that do not also consider these local geochemical processes can lead to the misidentification of naturally high concentrations as contamination. As an example, if the arsenic and barium concentrations in a site sample containing some proportion of caliche material were statistically compared to background distributions derived from samples that did not contain caliche, then it is likely that the site sample would have significantly higher concentrations relative to “background,” even though these concentrations were natural.

Site investigation samples with trace element concentrations that fail statistical site-to-background tests should be further evaluated from a geochemical perspective to determine if the reason for the test failure is contamination or naturally high concentration(s). These geochemical methods can identify contaminated samples based on evaluation of selected trace/major element ratios, thereby avoiding the false-positive and false-negative errors that are inherent in univariate statistical tests. Applicable site-to-background geochemical evaluation methods are discussed in Myers and Thorbjornsen (2004).

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7.0 QUALITY ASSURANCE AND QUALITY CONTROL

7.1 Laboratory Quality Control

EWS/Microbac performed the measurement quality objectives (MQO) specified for each analytical method during analysis of the background soil samples. QC measurements are typically made on laboratory-prepared, standard materials and samples to monitor MQOs for accuracy and precision. The laboratory QC checks included the following:

- Calibration checks
- Calibration blanks
- Reporting limits and MDLs
- Laboratory control samples
- MS samples
- Duplicate samples
- Method blank samples

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7.1.1 Data Evaluation

Analytical data results for the investigation soil samples were provided in electronic format. Analytical data produced electronically included Form 1 and Level IV data report files in portable document format and the electronic data deliverable (EDD) format, Enviro Data®, for data review and evaluation, as specified in the Soil Background Study Work Plan (Shaw, 2011).

Analytical data were manually reviewed and evaluated in each EWS/Microbac-provided Level IV portable document format reports. Data review and validation were documented and any validation qualifiers applied were edited into the EDD. Once the EDD was reviewed and edited the data were uploaded into the project Enviro Data® database. The data review report is included in Appendix F. The Enviro Data® database was used to query data for report preparation and to generate report tables.

7.1.2 Data Usability

In general, analytical QC measures and analytical results were acceptable and usable for project objectives. QC measurements outside of acceptance criteria resulted in the qualification of some data, which generally were flagged as estimated values ("J" qualified) with positive or negative bias indicators. Qualified data are considered usable.

The analytical limit of quantitation (LOQ) and limits of detection (LOD) actually achieved at EWS/Microbac during analysis of the investigation soil samples were evaluated against applicable MQO requirements provided in the sampling and analysis plan in the Soil Background Study Work Plan (Shaw, 2011). When chemical analyses showed quantified or detected but estimated results, the MQO LOQ and LOD requirements are considered to be met. However, when chemical analyses do not detect the analyte of interest, then applicable LOQs and LODs should meet MQO requirements.

LOQs and LODs can be elevated when analytical extracts or digestions are diluted at analysis. The laboratory may choose to dilute the sample for a number of different reasons. Generally dilutions are performed when there are high concentrations of target analytes in the sample and dilution is necessary to bring the tested concentrate down to the calibration range on the instrument, or when high concentrations for nontarget compounds interfere with the analysis. The non-target compounds need not be identified.

Completeness, calculated in accordance with the Soil Background Study Work Plan (Shaw, 2011), was 100 percent. Field sampling completeness was 100 percent. Of 135 primary background soil samples planned, 135 soil samples were collected.

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7.2 Field Quality Control

Fifteen field duplicate soil samples were collected during the background investigation, including five at each of the three sites. The soil was homogenized and the field duplicate sample was split from the original sample immediately before being placed into sampling jars. Homogenized field duplicate QC samples were analyzed for only TAL metals using methods identical to the parent samples. Samples for MS and MS duplicate were also collected at seven different borehole locations between the three different sites.

The analytical results for field duplicate samples are included in the complete analytical results tables provided in Appendix C. Relative percent differences (RPD) are presented in Table 7-1 (SWMU 80), Table 7-2 (Main Post Sites), and Table 7-3 (SWMU 140) for samples detected above the LOQ in both the original and field duplicate subsurface soil samples, and that were not qualified as estimated values during data validation.

Field duplicate results for soil samples were generally comparable with the original parent sample results. The RPD measurements calculated for paired metal results at SWMU 80 range from 0 to 54.7 percent (Table 7-1). For the Main Post the RPD results range from 0 to 57 percent (Table 7-2). And RPD measurements at SWMU 140, shown in Table 7-3, range from 0 to 64.6 percent. The average RPD for all duplicate pairs shown in Table 7-1 is 16.43 percent with a standard deviation of 11.27 percent. For Table 7-2 the average is 13.58 percent, with a standard deviation of 13.59 percent. Finally, for Table 7-3 the average

RPD is 14.75 percent, with a standard deviation of 12.73 percent. Field duplicate precision measurements exceeding the established MQO were noted during data validation and are reported in Appendix F.

7.3 Variance and Deficiency Management

One field work variance was written for the Soil Background Study. Appendix 6, Section 6.4 of the Permit (NMED, 2009) states that the soil borings will be abandoned by pressure grouting to a minimum of 2 feet bgs. The Permit then states that once the grout has cured, the top 2 feet of the borehole will be filled with concrete as a surface seal. The background soil borings are located in undisturbed remote areas of WSMR and outside the boundary of any SWMU areas. The background soil boring locations were also advanced to a depth of no greater than 10 feet bgs. Because of these factors, each borehole was abandoned by placing bentonite chips into the soil boring and hydrating in 1-foot lifts to 2 feet bgs. The remaining 2 feet were backfilled with the clean native soil cuttings removed from the soil boring. Any remaining soil cuttings were thinly spread around the borehole to match the elevation of the ground surface. A copy of the field work variance can be found in Appendix G.

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8.0 SUMMARY AND RECOMMENDATIONS

8.1 Summary

The primary use of the background data is for comparisons with distributions from site investigations at WSMR to determine whether site-related releases have occurred. The 95th UTLs presented in Tables 5-2 through 5-10 represent the background screening values in mg/kg for each of the three sites at the three different depths. High arsenic concentrations at SWMU 80, SWMU 140, and the Main Post Sites were the primary driver for creation of background screening values for these sites. For all metals, arsenic is the only element with background screening values that are above the NMED residential soil screening level (SSL). Arsenic background screening values at the three depths, listed in feet bgs, for each of the three sites are shown as follows, with values above the SSL of 3.90 mg/kg in bold (NMED, 2012):

- SWMU 80 (WSMR-30)
  - 1–2 feet = 1.99 mg/kg
  - **5–6 feet = 4.45 mg/kg**
  - 9–10 feet = 1.80 mg/kg
- Main Post Sites
  - 1–2 feet = 2.74 mg/kg
  - 5–6 feet = 1.82 mg/kg
  - 9–10 feet = 2.57 mg/kg
- SWMU 140 (WSMR-84)
  - **1–2 feet = 6.03 mg/kg**
  - **5–6 feet = 15.1 mg/kg**
  - **9–10 feet = 25.6 mg/kg**

Only four arsenic background screening values exceed the NMED residential SSL. Background screening values were also calculated for the other 22 TAL metals, but for all three sites at all depths the background screening values for the 22 TAL metals are below their corresponding NMED residential SSL, if an SSL was established.

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8.2 Recommendations

Based on the background screening values determined for arsenic as part of this study, the following sites are recommended to be petitioned for Corrective Action Complete without Controls:

- SWMU 21 (WSMR-31) – Fire Fighting Training Area
- SWMU 16 (WSMR-79) – Heavy Equipment Wash Pad
- SWMU 140 (WSMR-84) – Former LC-37 Paint Dump

At each of these three sites, the arsenic concentrations detected in site characterization samples collected during previous studies were below the background screening value and/or the NMED residential screening value and therefore do not require further action. All other constituents were below their respective screening values.

The soil sample results from previous investigations were compared against the NMED residential and industrial SSL (NMED, 2012). In all cases below, the detected arsenic concentrations were greater than the background screening value presented in this report. The five sites below are being recommended for Corrective Action Complete without Controls:

- SWMU 80 (WSMR-30) – Main Post Sewage Treatment Plant Sludge Waste Pile
- SWMU 22 (WSMR-32) – Fire Fighting Training Area Waste Pile
- SWMU 14 (WSMR-33) – Used Battery Accumulation Areas
- SWMU 17 (WSMR-73) – Waste Underground Injection Pipe
- SWMU 12 (WSMR-60) – Wash Ramp and Drains, Sump, and Oil/Water Separator

9.0 REFERENCES

A.T. Kearney, Inc., 1988, *RCRA Facility Assessment Preliminary Review/Visual Site Inspection Report, White Sands Missile Range, New Mexico*, EPA Contract No. 68-01-7374, prepared for the U.S. Environmental Protection Agency Region VI, August.

BAE Systems, 2004, *Main Post Phase III RFI Comprehensive Data Review*, submitted to the U.S. Army White Sands Missile Range Environment and Safety Directorate, February.

Bowell, R.J., 1994, "Sorption of arsenic by iron oxides and oxyhydroxides in soils," *Applied Geochemistry*, Vol. 9, No. 3, pp. 279-286.

Brookins, D.G., 1988, *Eh-pH Diagrams for Geochemistry*, Springer-Verlag, Berlin.

Cornell, R.M. and U. Schwertmann, 2003, *The Iron Oxides: Structure, Properties, Reactions, Occurrences and Uses*, Second Edition, Wiley-VCH, Weinheim.

EPA, see U.S. Environmental Protection Agency.

Green, G.N. and G.E. Jones, 1997, *The Digital Geologic Map of New Mexico in ARC/INFO Format*, U.S. Geological Survey Open-File Report OFR 97-0052, U.S. Geological Survey, Denver, Colorado.

IT Corporation, 1992, *Final RCRA Facility Investigation Report, Appendix I Sites, White Sands Missile Range, New Mexico, Volume 1,* Contract No. DACA 87-90-D-0015, Project No. 42-1552, U.S. Army Corps of Engineers, Huntsville District.

Kabata-Pendias, A., 2001, *Trace Elements in Soils and Plants*, Third Edition, CRC Press, Boca Raton.

Kaplan, E.L. and P. Meier, 1958, "Nonparametric estimation from incomplete observations," *Journal of the American Statistical Association*, Vol. 53, pp. 457–481.

Kelly, T.E. and G.A. Hearne, 1976, *The Effects of Groundwater Development on the Water Supply in the Post Headquarters Area, White Sands Missile Range, New Mexico*, USGS Open File Report 76-277, U.S. Geological Survey.

Kruskal, W.H. and W.A. Wallis, 1952, "Use of Ranks in One-Criterion Variance Analysis," *Journal of the American Statistical Association*, Vol. 47, No. 260, pp. 583–621.

McLean, J.S., 1970, *Saline ground-water resources of the Tularosa Basin, New Mexico*, U.S. Department of the Interior Office of Saline Water Research and Development Progress Report 561, 128.

MEVATEC Corporation, 1997, *SWMU Groundwater Monitoring Program, White Sands Missile Range,* Final Report for Directorate of Environment and Safety, Environmental Services Division White Sands, New Mexico, April.

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Myers, J. and K. Thorbjornsen, 2004, "Identifying Metals Contamination in Soil: A Geochemical Approach," *Soil & Sediment Contamination*, Vol. 13, No. 1, pp. 1-16.

Neher, R.E. and O.F. Bailey, 1976, *Soil Survey of White Sands Missile Range, New Mexico Parts of Doña Ana, Lincoln, Otero, Sierra and Socorro Counties*, U.S. Department of Agriculture, Soil Conservation Service.

New Mexico Environment Department (NMED), 2006, Letter, J.P. Bearzi, New Mexico Environment Department, Hazardous Waste Bureau, Permits Management Program, to T.A. Ladd, WSMR, Subject: *Notice of Deficiency (NOD), Phase III RCRA Facility Investigation (RFI) Report Main Post Multiple Sites (SWMUs 8-17, 21, 22, 80, 140, and 156), White Sands Missile Range, New Mexico, EPA ID No. NM2750211235, HWB-WSMR-06-003,* December 8, 2006.

New Mexico Environment Department (NMED), 2007, Letter, J.E. Kieling, New Mexico Environment Department, Hazardous Waste Bureau, Permits Management Program, to T.A. Ladd, WSMR, Subject: *Response to Notice of Deficiency (NOD) Response, Final Background Soils, RCRA Facility Investigation (RFI) Report for the Main Post, White Sands Missile Range, New Mexico, EPA ID No. NM2750211235, HWB-WSMR-04-012,* January 24.

New Mexico Environment Department (NMED), 2009, *Resource Conservation and Recovery Act Permit EPA ID No. NM 2750211235 to U.S. Department of Army for White Sands Missile Range Located in Doña Ana, Lincoln, Otero, Sierra and Socorro Counties, New Mexico,* Hazardous Waste Bureau, New Mexico Environment Department, Santa Fe, New Mexico.

New Mexico Environment Department (NMED), 2012, *Risk Assessment Guidance for Site Investigations and Remediation, Volume 1, Tier 1: Soil Screening Guidance Technical Background Document*, Hazardous Waste Bureau and Groundwater Quality Bureau, Voluntary Remediation Program, Table A-1 Updated February 2012.

NMED, see New Mexico Environment Department.

Orr, B.R. and R.G. Myers, 1986, *Water Resources in basin-fill Deposits in the Tularosa Basin, New Mexico,* USGS Investigations Report 85-4219, U.S. Geological Survey.

Post, J. E., 1999, *Manganese oxide minerals: Crystal structures and economic and environmental significance*, **Proceedings of the National Academy of Sciences**, Vol. 96, pp. 3447-3454.

Shaw, see Shaw Environmental, Inc.

Shaw Environmental, Inc. (Shaw), 2011, *Soil Background Study Work Plan SWMU 80, Sewage Treatment Plant Sludge Waste Pile (WSMR-30), SWMUs 12, 14, 16, 17, 21, and 22, Main Post Sites (WSMR-60, WSMR-33, WSMR-79, WSMR-73, WSMR-31, and WSMR-32), and SWMU 140, Former LC-37 Paint Dump (WSMR-84)*, October.

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Sverdrup Environmental, Inc., 1994, *Phase-II RCRA Facility Assessment, Appendix I, II, III, IV Sites, White Sands Missile Range, New Mexico, Revision 1,* Contract No. DACA56-93-D-0002/0001, prepared for U.S. Army Corps of Engineers, Tulsa District.

U.S. Environmental Protection Agency (EPA), 1989, *Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Final Guidance,* EPA/530/SW-89/026, Office of Solid Waste, Waste Management Division, U.S. Environmental Protection Agency, Washington, D.C.

U.S. Environmental Protection Agency (EPA), 1992, *Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Addendum to Interim Final Guidance,* EPA/530/R-93/003, Environmental Statistics and Information Division, Office of Policy, Planning, and Evaluation, U.S. Environmental Protection Agency, Washington, D.C.

U.S. Environmental Protection Agency (EPA), 1994, *Statistical Methods for Evaluating the Attainment of Cleanup Standards*, EPA/230/R-94/004, Environmental Statistics and Information Division, Office of Policy, Planning, and Evaluation, U.S. Environmental Protection Agency, Washington, D.C., June.

U.S. Environmental Protection Agency (EPA), 1995, *Determination of Background Concentrations of Inorganics in Soils and Sediments at Hazardous Waste Sites*, EPA/540/S-96/500, Office of Research and Development, U.S. Environmental Protection Agency, Washington, D.C., December.

U.S. Environmental Protection Agency (EPA), 1996, *Soil Screening Guidance: User's Guide*, Second Edition, Office of Solid Waste and Emergency Response, U.S. Environmental Protection Agency, Washington, D.C., July.

U.S. Environmental Protection Agency (EPA), 1997, *The Lognormal Distribution in Environmental Applications*, EPA/600/R-97/006, Technical Support Center Issue, U.S. Environmental Protection Agency, Washington, D.C., December.

U.S. Environmental Protection Agency (EPA), 2002a, *Guidance for Comparing Background and Chemical Concentrations in Soil for CERCLA Sites*, EPA 540-R-01-003-OSWER 9285.7-41, September, 2002.

U.S. Environmental Protection Agency (EPA), 2002b, *Calculating Upper Confidence Limits for Exposure Point Concentrations at Hazardous Waste Sites*, OSWER 9285.6-10, December, 2002.

U.S. Environmental Protection Agency (EPA), 2006, *Data Quality Assessment: Statistical Methods for Practitioners, EPA QA/G-9S,* EPA/240/B-06/003, Office of Environmental Information, Washington, D.C., February.

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U.S. Environmental Protection Agency (EPA), 2009, *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities: Unified Guidance*, EPA 530-R-09-007, Office of Resource Conservation and Recovery Program Implementation and Information Division, Washington, D.C., March.

U.S. Environmental Protection Agency (EPA), 2010, *ProUCL Version 4.1.00, Technical Guide*, EPA/600/R-07/041, Washington, D.C., May.

White Sands Technical Services, LLC, 2006, *Phase III RFI Report, Main Post Multiple Sites SWMUs 8-17, 21, 22, 80, 140, and 156 (IRP Sites WSMRs 30-33, 36, 57, 60, 73, 74, 79, and 84),* submitted to U.S. Army White Sands Missile Range, Directorate of Public Works – Environment Division, White Sands, New Mexico.

WTS, see White Sands Technical Services, LLC.

Photos

Photo 3-1
Truck-mounted Geoprobe rig operated by JR Drilling.

Photo 3-2
Advancing casing at 5 ft intervals.

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Photo 3-3
Installing borehole.

Photo 3-4
Bottom of the 5 ft advancement.

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Photo 3-5
Logging soil and decon sampling equipment.

Photo 3-6
Acetate liner containing soil core for sampling.

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Photo 3-7
Emptying selected soil interval into plastic bowl for homogenization.

Photo 3-8
Homogenizing sample interval to fill designated sample jars.

Photo 3-9
Filling 2 oz sample jar.

Photo 3-10
Filling 2 oz jar with homogenized soil.

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Photo 3-11
Decontamination of the drill rod shoe. Rinsing shoe to prepare for equipment rinsate sample.

Photo 3-12
Soil boring abandonment. Bentonite boring up to 2 ft bgs.
Fill upper 2 ft with native soil.

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Photo 3-13
Hydrating bentonite.

Figures

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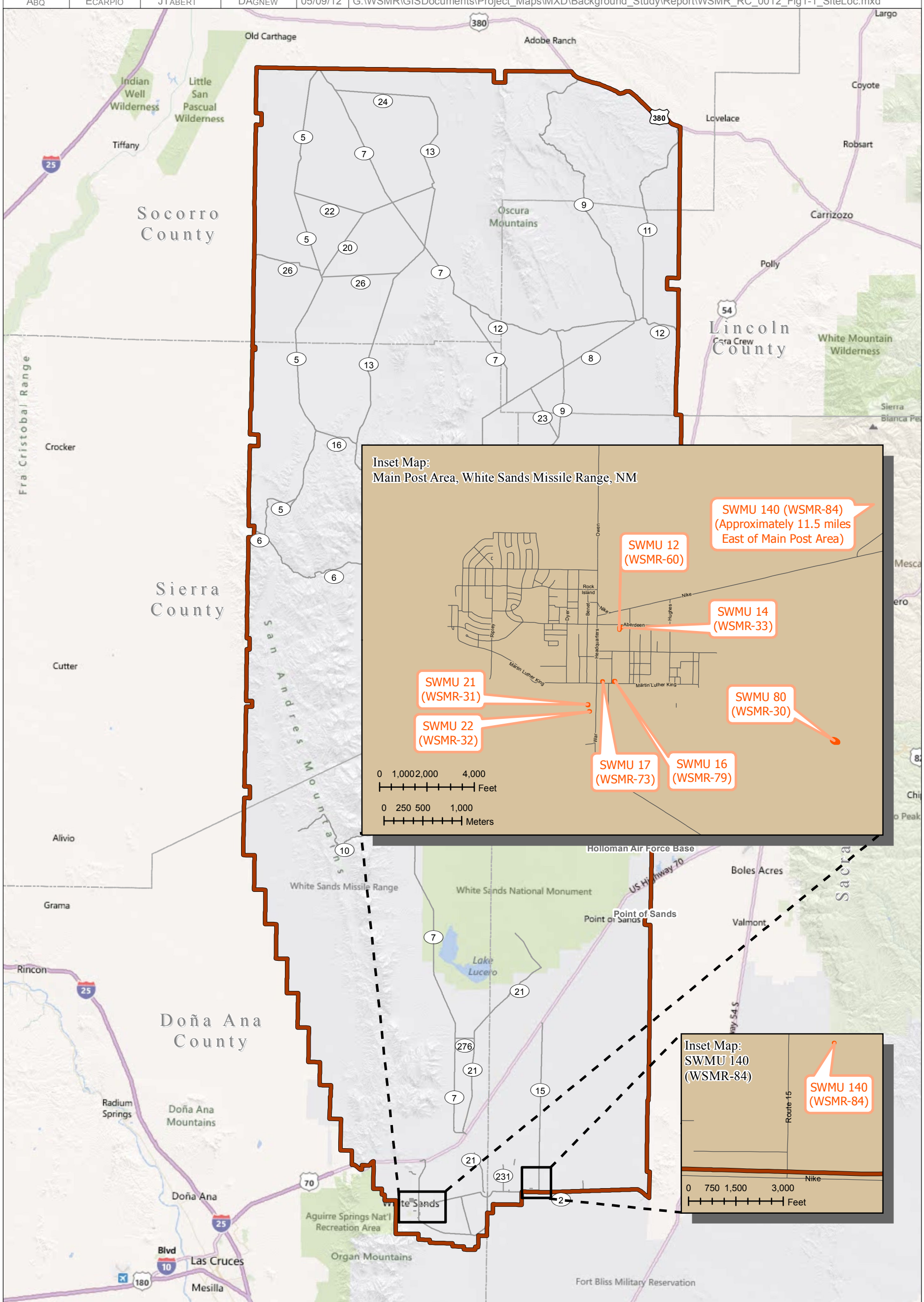


LEGEND

- WSMR Installation
- Interstate Highway
- US Highway
- WSMR Federal Road
- SWMU 21 (WSMR-31) — SWMU Location

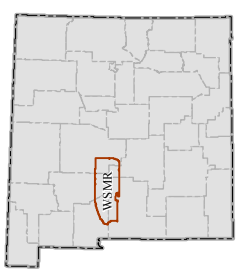
NOTES

SWMU = Solid Waste Management Unit
WSMR = White Sands Missile Range

0 4 8 Miles
0 4 8 16 Kilometers

N

WGS 84 UTM Zone 13N
Meters



Shaw

Figure 1-1

GEOGRAPHIC LOCATION MAP
SOIL BACKGROUND STUDY
REPORT
WHITE SANDS MISSILE RANGE, NM

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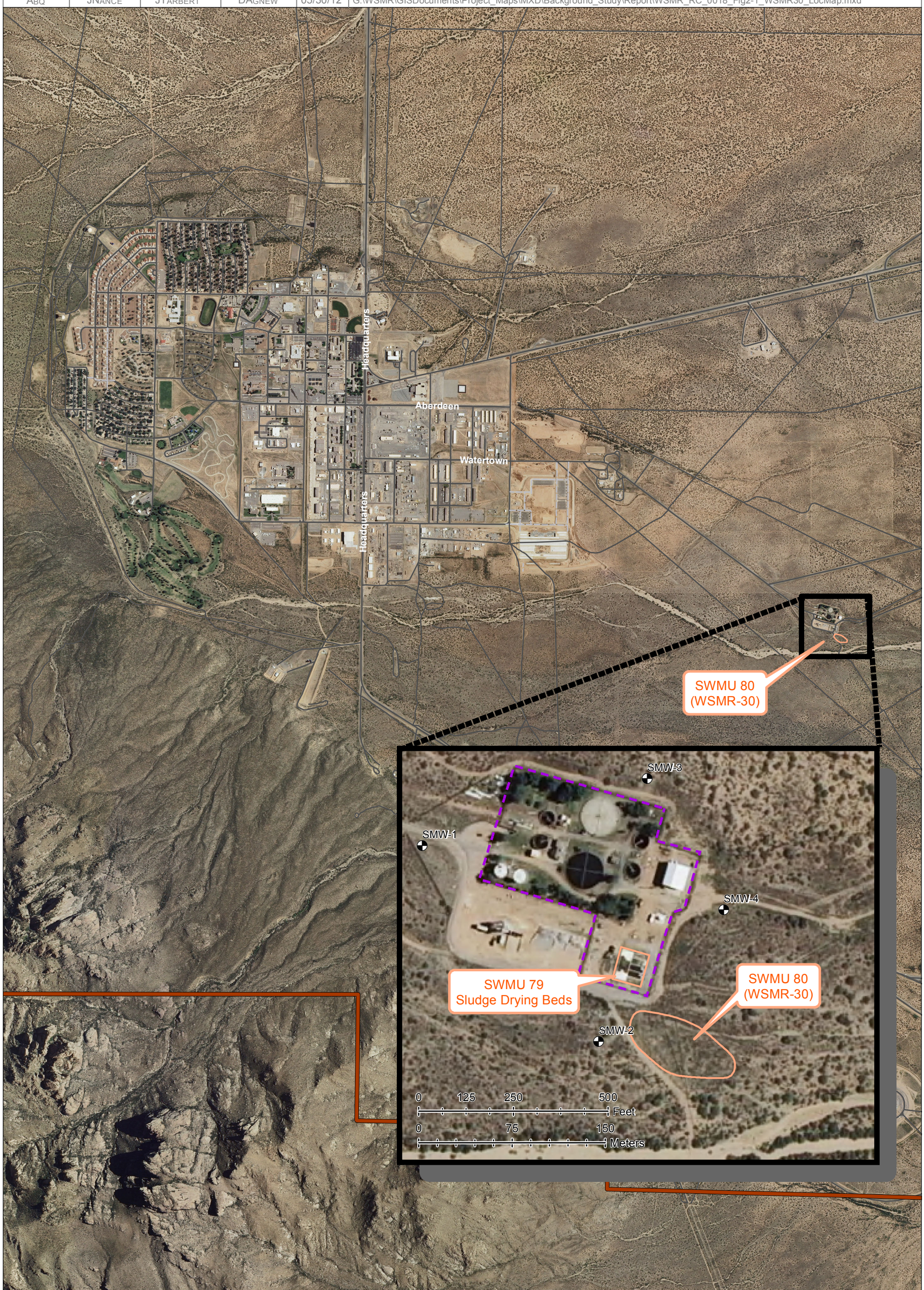

LEGEND

- SWMU Boundary
- WSMR Installation
- Fence
- Federal Route
- Other
- SMW-2 Monitoring Wells
- 10 Interstate Number

NOTES

SMW = Sewage Plant Monitoring Well
SWMU = Solid Waste Management Unit
WSMR = White Sands Missile Range

0 2,000 4,000
Feet
0 0.125 0.25 0.5 0.75 1
Kilometers

N
WGS 84 UTM Zone 13N
Meters

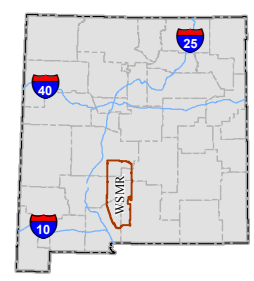

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Figure 2-1

SITE-SPECIFIC LOCATION MAP,
SWMU 80 (WSMR-30)
SEWAGE TREATMENT PLANT
SLUDGE WASTE PILE
SOIL BACKGROUND STUDY
REPORT
WHITE SANDS MISSILE RANGE, NM

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LEGEND

- SWMU Boundary
- WSMR Installation
- Federal Route

NOTES

SWMU = Solid Waste Management Unit

WSMR = White Sands Missile Range

0 300 600 Feet

0 90 180 Meters

N

WGS 84 UTM Zone 13N Meters

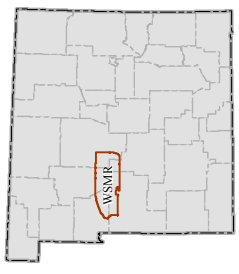

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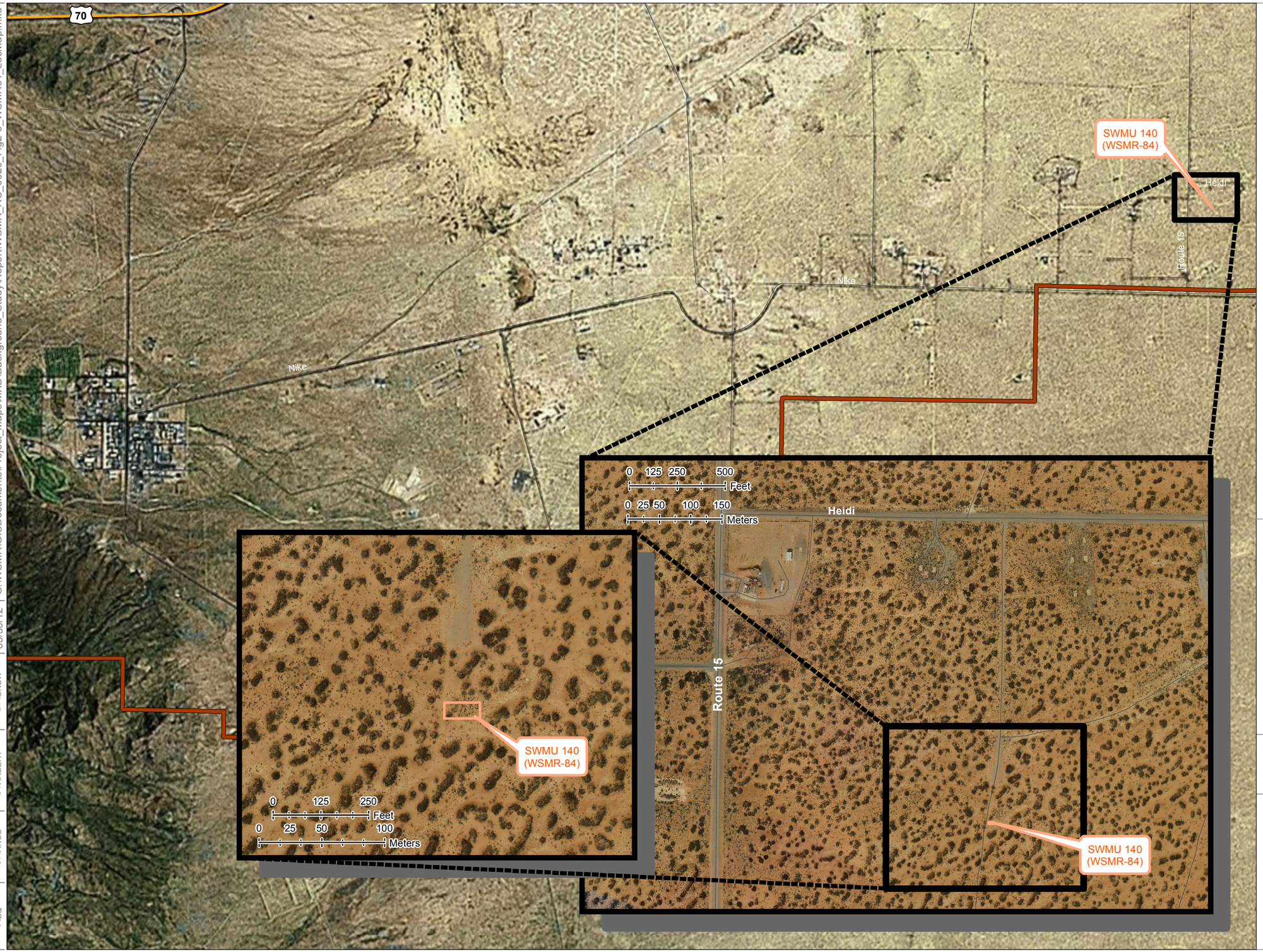
Figure 2-2

SITE-SPECIFIC LOCATION MAP
MAIN POST SITES
SOIL BACKGROUND STUDY
REPORT
WHITE SANDS MISSILE RANGE, NM



LEGEND

- WSMR Installation
- US Highway
- Federal Route
- SWMU Boundary
- Interstate Number
- US Highway Number

NOTES

SWMU = Solid Waste Management Unit

WSMR = White Sands Missile Range

0 0.25 0.5 1
Miles

0 0.5 1 2
Kilometers

N

WGS 84 UTM ZONE 13N
METERS

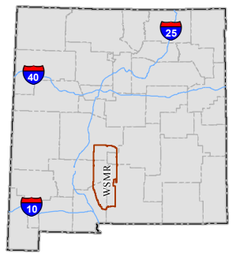


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FIGURE 2-3

SITE-SPECIFIC LOCATION MAP
SWMU 140 (WSMR-84)
FORMER LC-37 PAINT DUMP
SOIL BACKGROUND STUDY
REPORT
WHITE SANDS MISSILE RANGE, NM

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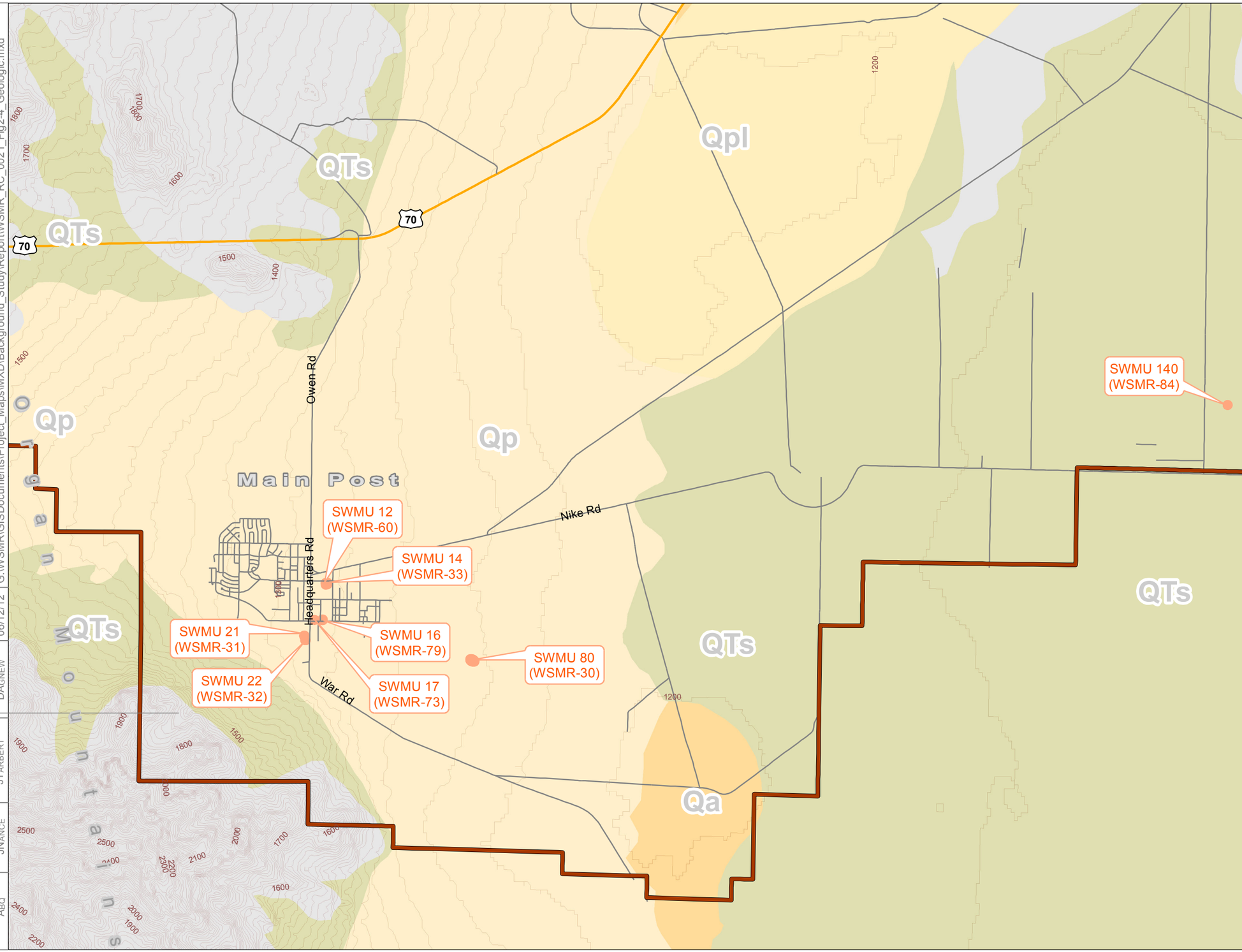

LEGEND

- WSMR Installation
- US Highway
- Other Roads
- Elevation Contours (Meters, AMSL)
- SWMU Location
- Consolidated Units
- Qa
- Qp
- Qpl
- QTs

NOTES

AMSL = Above Mean Sea Level

Qa = Alluvium; upper and middle Quaternary

Qp = Piedmont alluvial deposits; upper and middle Quaternary; includes deposits of higher gradient tributaries bordering major stream valleys, alluvial veneers of the Piedmont slope, and alluvial fan

Qpl = Lacustrine and playa lake deposits; includes associated alluvial and eolian deposits of major lake basins; upper Quaternary

QTs = Upper Santa Fe Group. Includes Camp Rice, Fort Hancock, Palomas, Sierra Ladrones, Ancho, Puye, and Alamosa formations; middle Pleistocene to uppermost Miocene

WSMR = White Sands Missile Range

0 3,000 6,000 9,000 12,000 Feet

0 1,000 2,000 4,000 Meters

N

WGS 84 UTM ZONE 13N METERS

FIGURE 2-4

GEOLOGIC MAP
SOIL BACKGROUND STUDY
REPORT
WHITE SANDS MISSILE RANGE, NM

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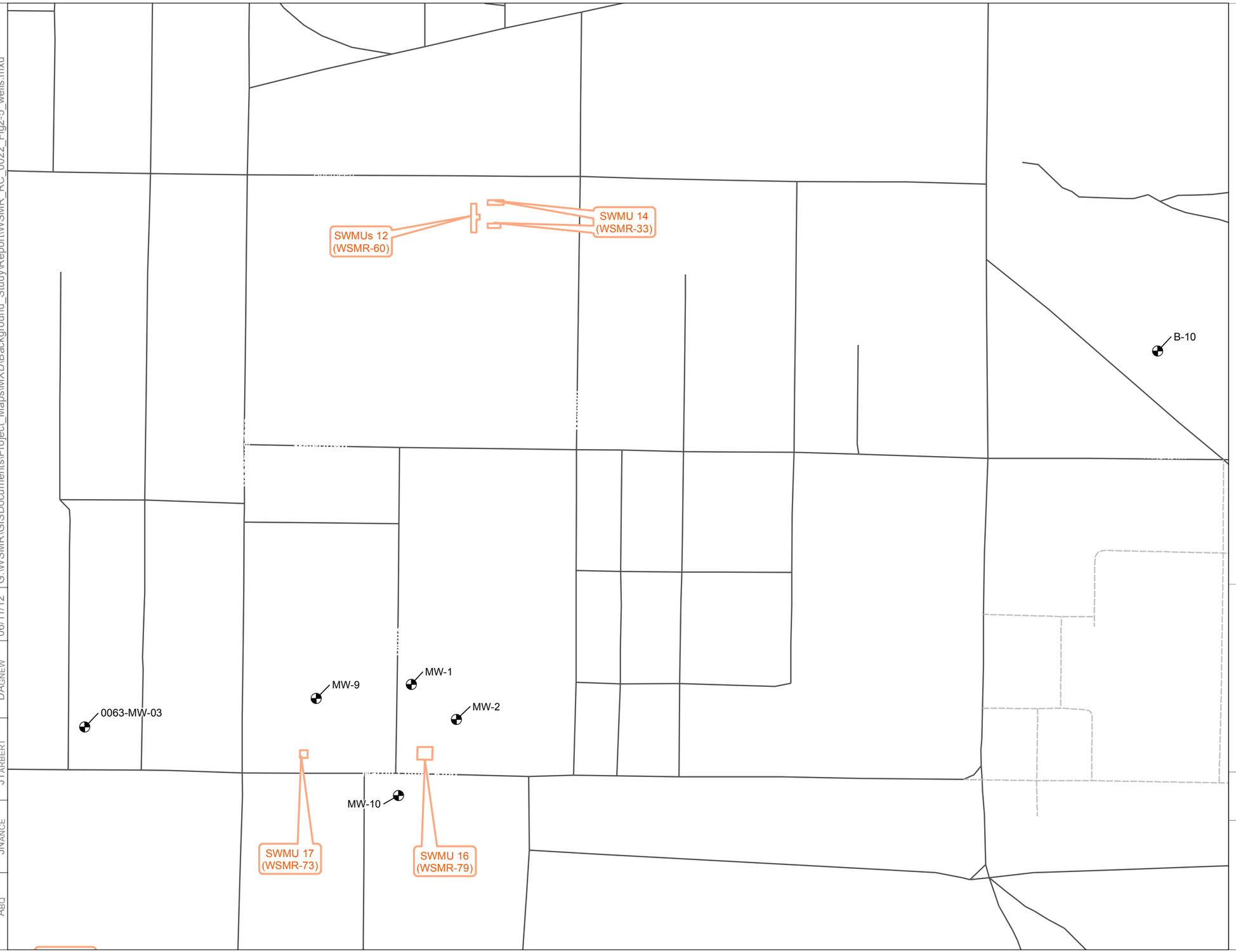

LEGEND

- SWMU Boundary
- WSMR Installation
- Federal Route
- MW-1 Monitoring Well

NOTES

MW = Monitoring Well
SWMU = Solid Waste Management Unit
WSMR = White Sands Missile Range

N
WGS 84 UTM ZONE 13N
METERS

0 400 800
Feet

0 50 100 200
Meters

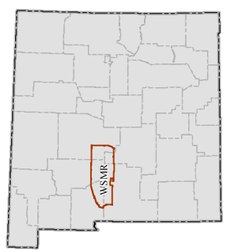

FIGURE 2-5

MONITORING WELL LOCATIONS
MAIN POST SITES
SOIL BACKGROUND STUDY
REPORT
WHITE SANDS MISSILE RANGE, NM

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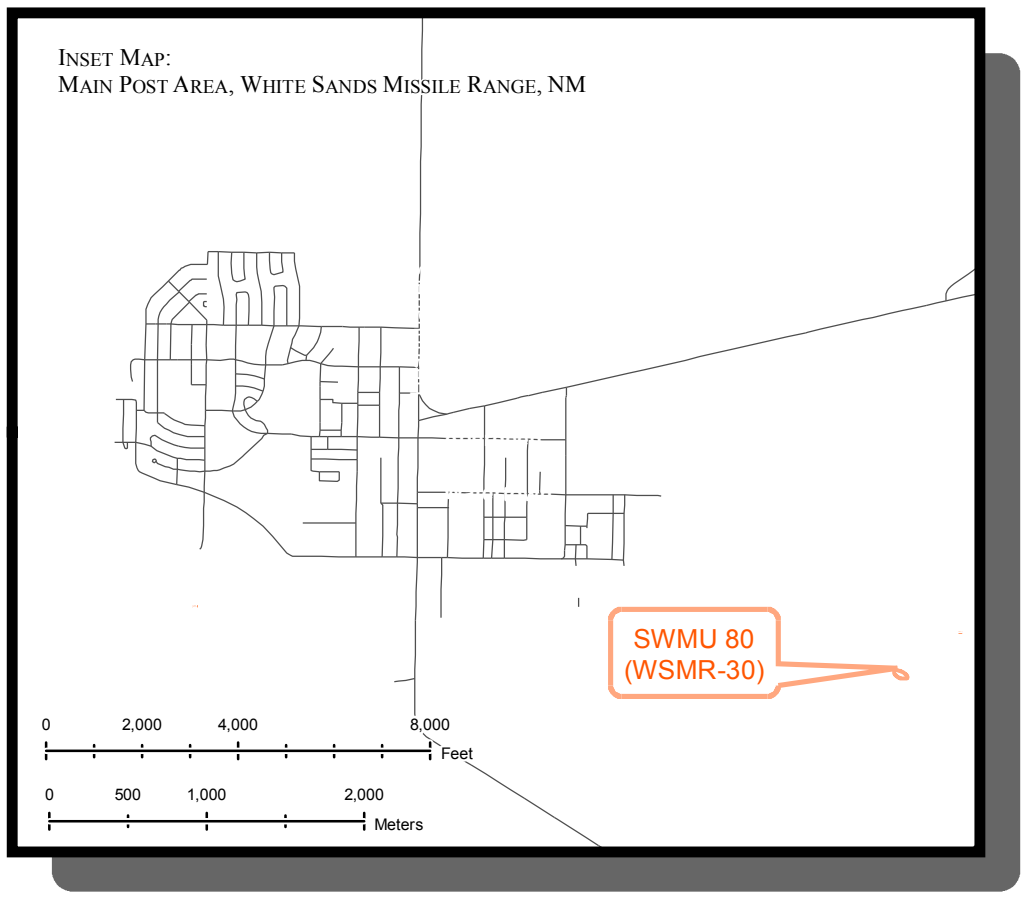
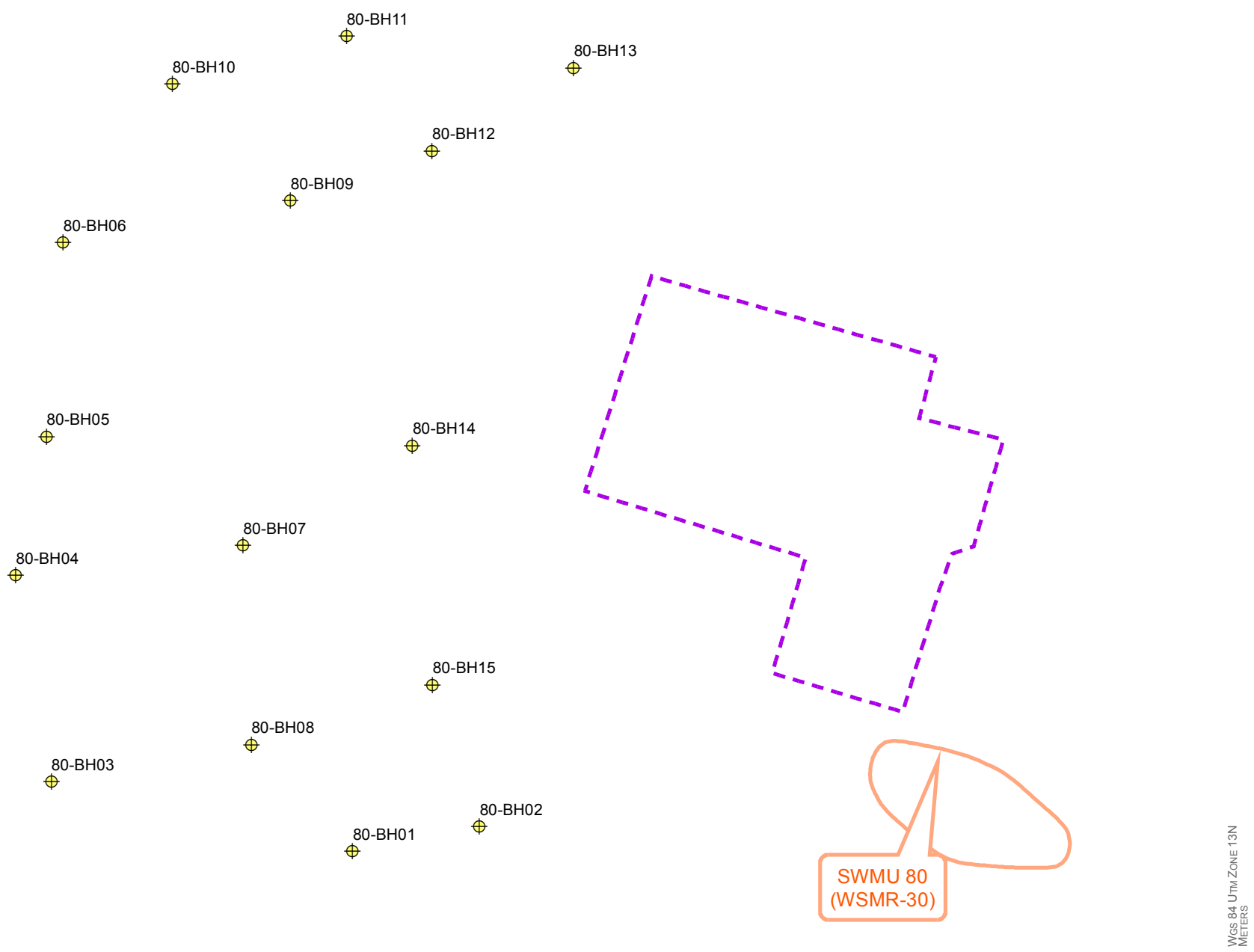




Legend

- SWMU Boundary
- WSMR Installation
- Fence
- Federal Route
- 80-BH02 — 2012 Soil Boring Locations
- 10 — Interstate Number

Notes

BH = Borehole
SWMU = Solid Waste Management Unit
WSMR = White Sands Missile Range

0 50 100 200 300 Feet
0 50 100 Meters

N
WGS 84 UTM Zone 13N
Meters

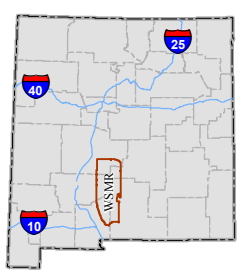
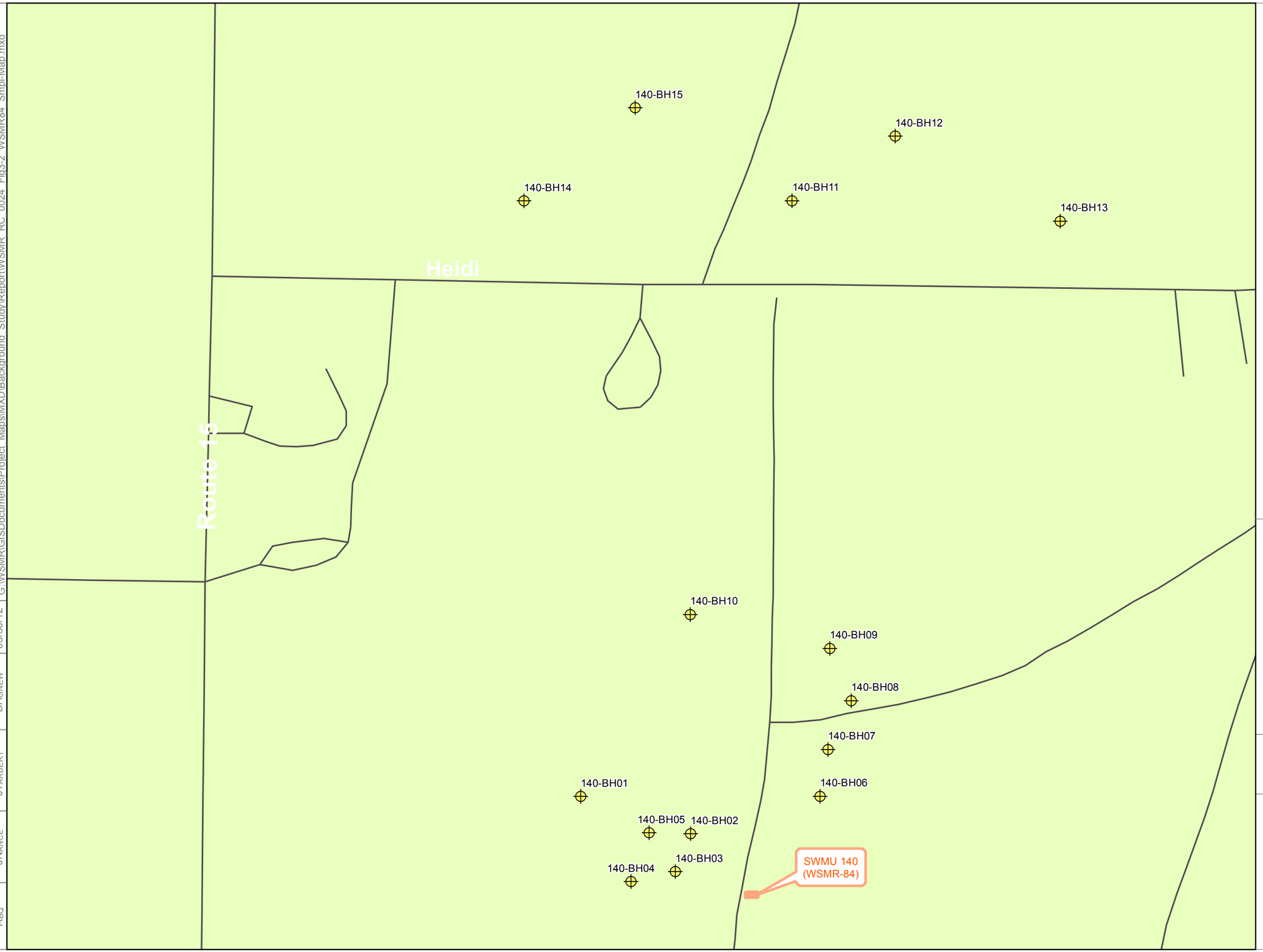


Figure 3-1

SWMU 80 (WSMR-30)
SOIL SAMPLING LOCATIONS
SOIL BACKGROUND STUDY REPORT
WHITE SANDS MISSILE RANGE, NM



LEGEND

- WSMR Installation
- 2012 Soil Boring Locations
- Federal Route
- SWMU Boundary
- Interstate Number

NOTES

BH = Borehole
SWMU = Solid Waste Management Unit
WSMR = White Sands Missile Range

0 125 250 Feet
0 25 50 75 100 Meters

N

WGS 84 UTM ZONE 13N
METERS

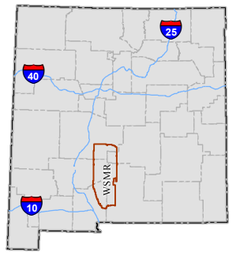


FIGURE 3-2

SWMU 140 (WSMR-84)
FORMER LC-37 PAINT DUMP
SOIL SAMPLING LOCATIONS
SOIL BACKGROUND STUDY
REPORT
WHITE SANDS MISSILE RANGE, NM

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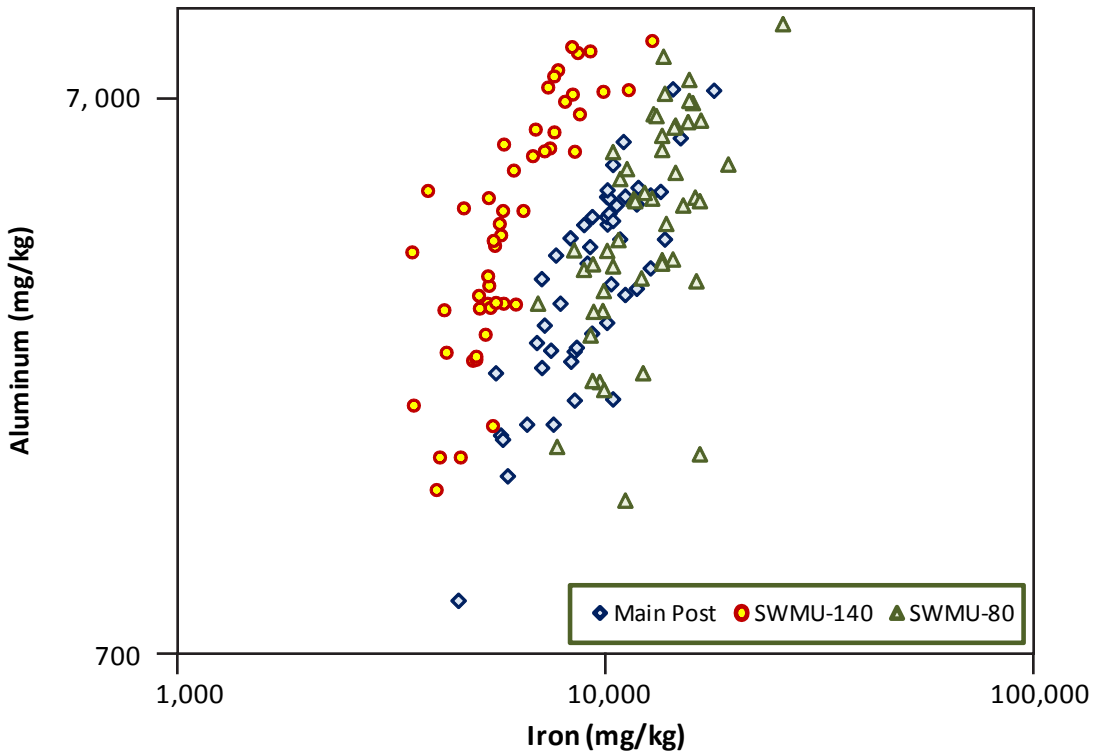


Figure 6-1
Aluminum vs. Iron in Soil
Soil Background Study Report
White Sands Missile Range, NM

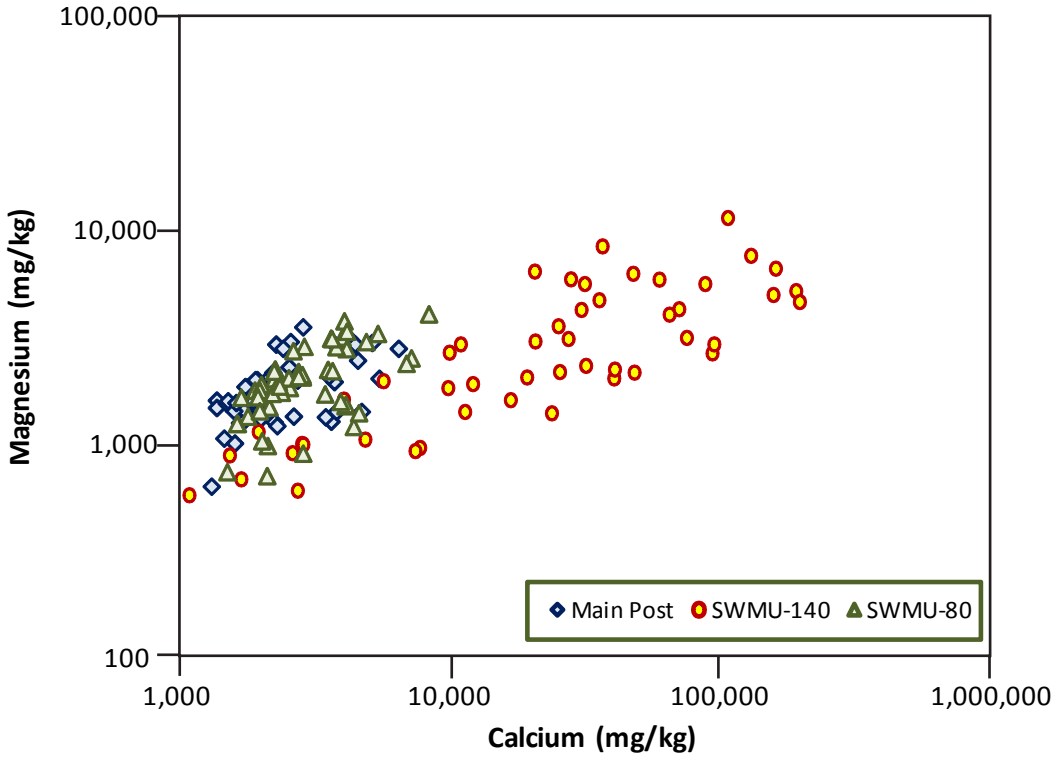


Figure 6-2
Magnesium vs. Calcium in Soil
Soil Background Study Report
White Sands Missile Range, NM

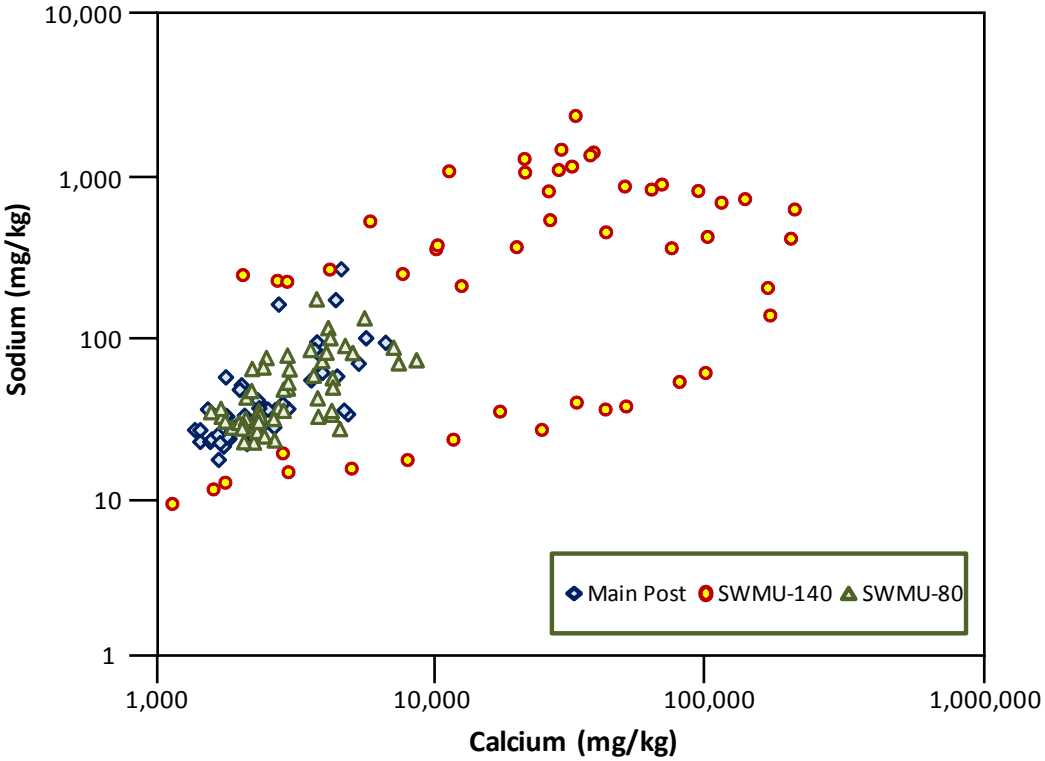


Figure 6-3
Sodium vs. Calcium in Soil
Soil Background Study Report
White Sands Missile Range, NM

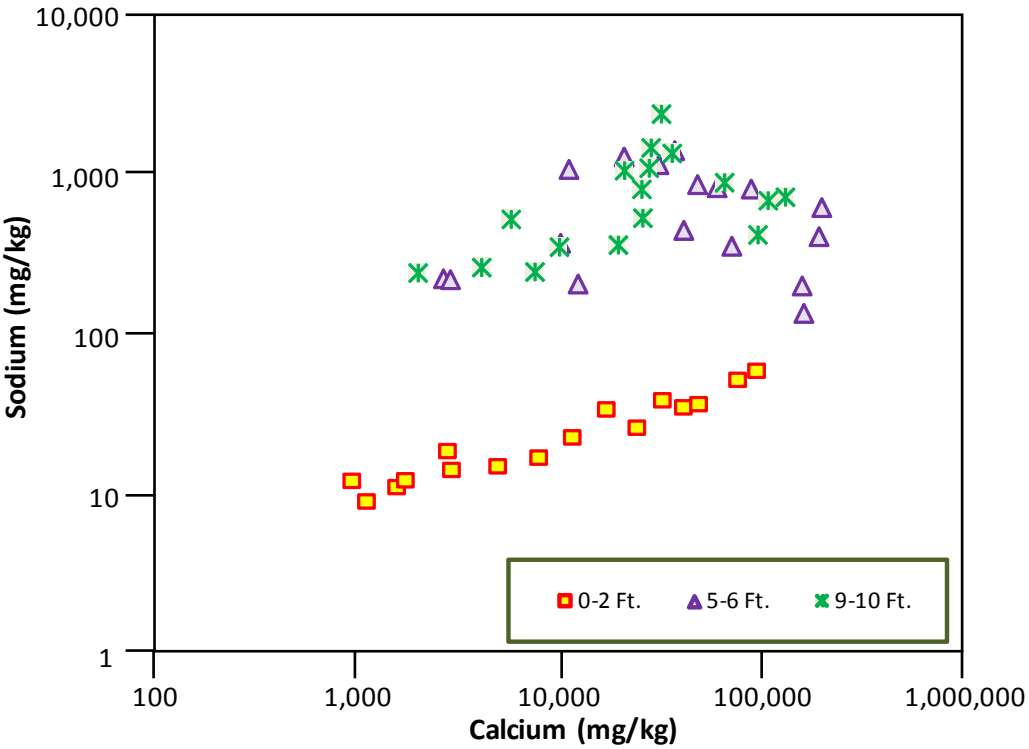


Figure 6-4
Sodium vs. Calcium in Soil
Sodium vs. Calcium at SWMU-140 Only
Soil Background Study Report
White Sands Missile Range, NM

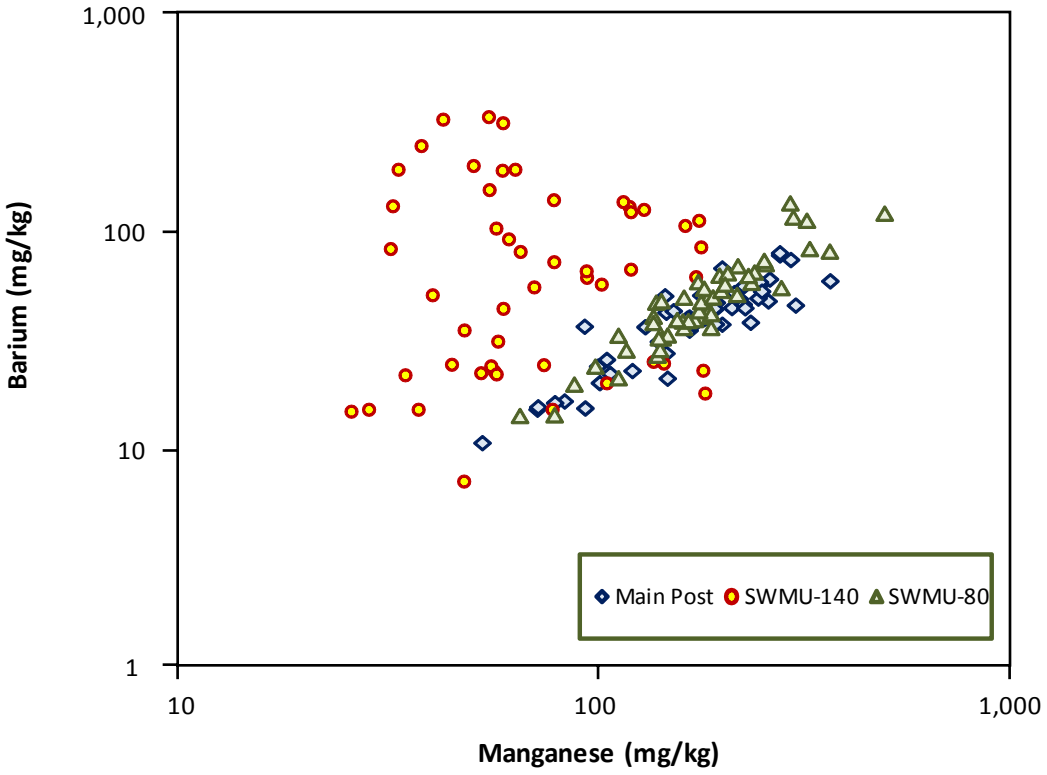
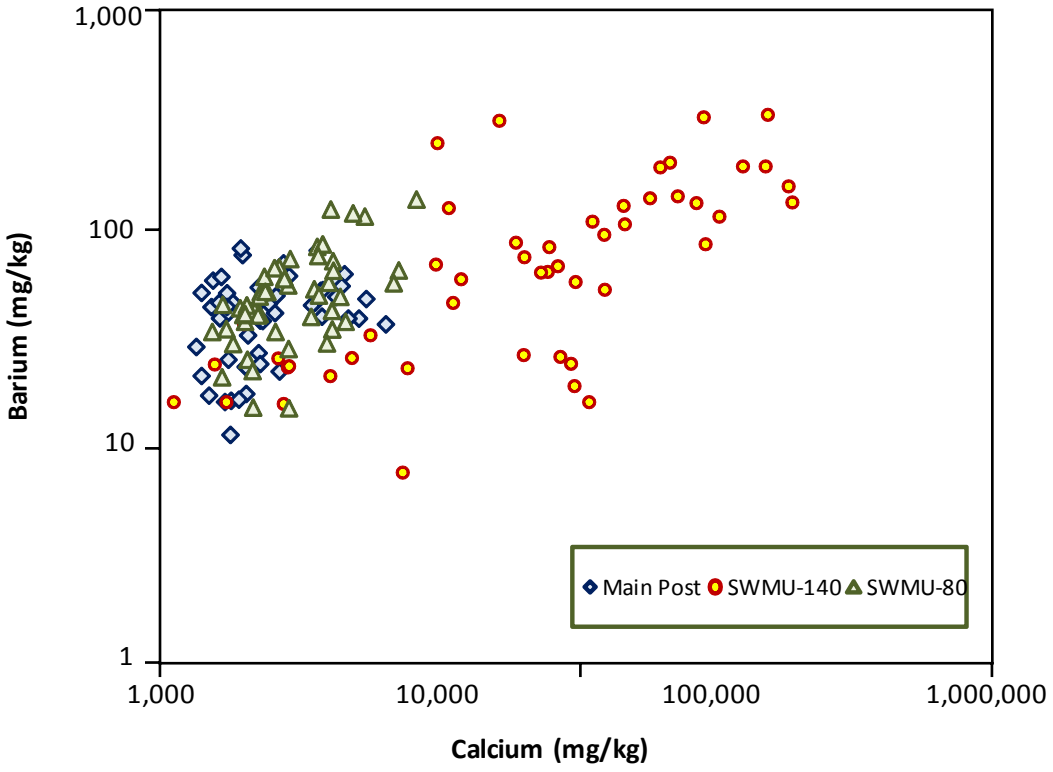


Figure 6-5
Barium vs. Manganese in Soil
Soil Background Study Report
White Sands Missile Range, NM



139791.DA0310 A3

Figure 6-6
Barium vs. Calcium in Soil
Soil Background Study Report
White Sands Missile Range, NM

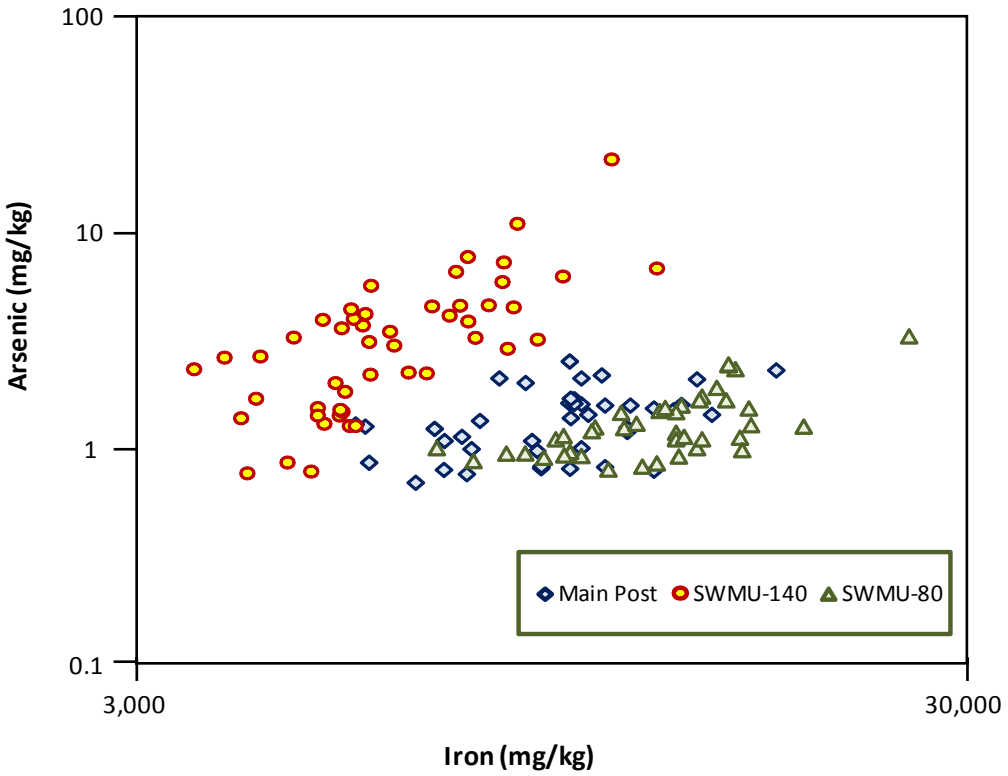


Figure 6-7
Arsenic vs. Iron
Soil Background Study Report
White Sands Missile Range, NM

Office	Drawn By	Checked By	Approved By	Date	File Path
ABQ	JNance	JTarbert	DAgnew	05/29/12	G:\WSMR\GISDocuments\Project_Maps\MXD\Background_Study\Report\WSMR_RC_0016_Plate3-1_MP-Smpl-Map.mxd

LEGEND

MP-BH01 — 2012 Soil Boring Locations

SWMU Boundary

WSMR Installation

Federal Route

40 — Interstate Number

NOTES

BH = Borehole
SWMU = Solid Waste Management Unit
WSMR = White Sands Missile Range

0 500 1,000 1,500 2,000 Feet

0 100 200 400 600 Meters

N

WGS 84 UTM Zone 13N
Meters

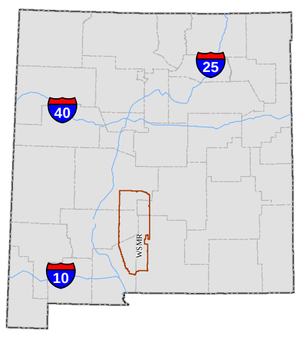


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PLATE 3-1

MAIN POST SITES
SOIL SAMPLING LOCATIONS
SOIL BACKGROUND STUDY
REPORT
WHITE SANDS MISSILE RANGE, NM

Tables

Table 2-1
Monitoring Well Construction Details and Water Depths
Main Post Sites, Soil Background Study Report, White Sands Missile Range, New Mexico

Well Number	Coordinates[a]		Elevation-Top of Casing (ft amsl)	Elevation-Ground Surface (ft amsl)	Total Depth (ft bgs)	Screen Interval (ft bgs)	Depth to Water (ft bgs)	Water Elevation (ft amsl)	Date Measured
	Northing	Easting							
MW-1	3582855.22	361037.95	4224.20	4222.77	352	325-350	338.59	3884.18	2/8/1994
MW-2	3582810.67	361095.05	4229.00	4227.78	345	318-343	334.11	3893.67	2/8/1994
MW-9	3582837.27	360917.31	4231.14	4229.08	350	330-350	321.05	3908.03	2/8/1994
MW-10	3582714.20	361021.44	4224.67	4222.66	353	333-353	339.46	3883.20	2/8/1994
0063-MW-03	3582800.80	360623.91	4244.31	4243.50	358	NA	344	3899.81	9/26/2011
B-10	3583278.00	361984.38	4174.42	4172.42	384	NA	306	3866.42	9/26/2011

Note: Table 2-1 represents a combination of data from Phase I (IT Corporation, 1992, Final RCRA Facility Investigation Report, Appendix I Sites, White Sands Missile Range, New Mexico, Volume 1, Contract No. DACA 87-90-D-0015, Project No. 42-1552, U.S. Army Corps of Engineers, Huntsville District) and Phase II (Sverdrup Environmental, Inc., 1994, Phase-II RCRA Facility Investigation, Appendix I, II, III, IV Sites, White Sands Missile Range, New Mexico, Revision 1, Contract No. DACA56-93-D- 0002/0001, prepared for U.S. Army Corps of Engineers, Tulsa District) RFI reports.

[a]Coordinates are in UTM, Zone 13, North American Datum of 1983.

amsl = Above mean sea level.
bgs = Below ground surface.
ft = Foot (feet).
MW = Monitoring well.
NA = Not applicable.
RCRA = Resource Conservation and Recovery Act.
RFI = RCRA Facility Investigation.
UTM = Universal Transverse Mercator.

Table 2-2
Depth to Groundwater and Field Parameters
Solid Waste Management Unit 80 (WSMR-30) Soil Background Study Report, White Sands Missile Range, New Mexico

Date Measured	Well ID	Depth to Groundwater (ft bgs)	Water Table Elevation (ft amsl)	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	pH	Temperature (°C)	Turbidity (NTU)
3/26/2007	SMW-1	208.01	3874.97	0.314	3.52	80.9	6.63	20.66	0.79
3/23/2007	SMW-4	252.07	3816.46	0.336	3.3	72.3	6.99	19.85	4.65

Note: Table 2-2 is adapted from White Sands Technical Services, LLC, 2007, Long Term Monitoring Program Report January – June, 2007, Multiple Sites SWMUs 38, 39, 41 – 46, 50 – 56a, 61, 65, 82, - 83, 108, 114 – 115, 143, 154 – 155, and 197 – 198, White Sands Missile Range Installation Restoration Program and Compliance Cleanup Programs, White Sands, New Mexico, September.

amsl = Above mean sea level.
bgs = Below ground surface.
°C = Degrees Celsius.
ft = Foot (feet).
ID = Identification.
mg/L = Milligrams per liter.
mS/cm = Millisiemens per centimeter.
mV = Millivolts.
NTU = Nephelometric turbidity unit.
ORP = Oxidation-reduction potential.
SWMU = Solid Waste Management Unit.
WSMR = White Sands Missile Range.

Table 3-1
Solid Waste Management Unit 80 (WSMR-30) Soil Sample Summary
Soil Background Study Report
White Sands Missile Range, New Mexico

Borehole ID	Coordinates		Sample Type/Location	Sample ID	Sample Depth (ft bgs)	Sample Date	Analytical Suite	Analytical Method
	X	Y						
80-BH01	363633.066	3581981.151	Environmental Soil	80-BH01-1	0 - 2	3/21/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				80-BH01-2	5 - 6	3/21/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				80-BH01-3	9 - 10	3/21/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
80-BH02	363686.865	3581991.566	Environmental Soil - Duplicate Sample	80-BH02-FD1	0 - 2	3/21/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
			Environmental Soil	80-BH02-1	0 - 2	3/21/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				80-BH02-2	5 - 6	3/21/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				80-BH02-3	9 - 10	3/21/2012	TAL Metals	6010B
								6020
								7471A (Mercury)

Table 3-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Soil Sample Summary
Soil Background Study Report
White Sands Missile Range, New Mexico

Borehole ID	Coordinates		Sample Type/Location	Sample ID	Sample Depth (ft bgs)	Sample Date	Analytical Suite	Analytical Method
	X	Y						
80-BH03	363505.171	3582010.673	Environmental Soil	80-BH03-1	0 - 2	3/21/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				80-BH03-2	5 - 6	3/21/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				80-BH03-3	9 - 10	3/21/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
80-BH04	363490.006	3582098.264	Environmental Soil - Matrix Spike	80-BH04-MS1	0 - 2	3/21/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
			Environmental Soil - Matrix Spike Duplicate	80-BH04-MSD1	0 - 2	3/21/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
			Environmental Soil	80-BH04-1	0 - 2	3/21/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				80-BH04-2	5 - 6	3/21/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				80-BH04-3	9 - 10	3/21/2012	TAL Metals	6010B
								6020
								7471A (Mercury)

Table 3-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Soil Sample Summary
Soil Background Study Report
White Sands Missile Range, New Mexico

Borehole ID	Coordinates		Sample Type/Location	Sample ID	Sample Depth (ft bgs)	Sample Date	Analytical Suite	Analytical Method
	X	Y						
80-BH05	363503.072	3582157.238	Environmental Soil - Duplicate Sample	80-BH05-FD2	5 - 6	3/21/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
			Environmental Soil	80-BH05-1	0 - 2	3/21/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				80-BH05-2	5 - 6	3/21/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				80-BH05-3	9 - 10	3/21/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
80-BH06	363510.108	3582239.495	Environmental Soil	80-BH06-1	0 - 2	3/21/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				80-BH06-2	5 - 6	3/21/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				80-BH06-3	9 - 10	3/21/2012	TAL Metals	6010B
								6020
								7471A (Mercury)

Table 3-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Soil Sample Summary
Soil Background Study Report
White Sands Missile Range, New Mexico

Borehole ID	Coordinates		Sample Type/Location	Sample ID	Sample Depth (ft bgs)	Sample Date	Analytical Suite	Analytical Method
	X	Y						
80-BH07	363586.497	3582111.046	Environmental Soil	80-BH07-1	0 - 2	3/21/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				80-BH07-2	5 - 6	3/21/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				80-BH07-3	9 - 10	3/21/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
80-BH08	363590.069	3582026.198	Environmental Soil - Matrix Spike	80-BH08-MS2	5 - 6	3/21/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
			Environmental Soil - Matrix Spike Duplicate	80-BH08-MSD2	5 - 6	3/21/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
			Environmental Soil	80-BH08-1	0 - 2	3/21/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				80-BH08-2	5 - 6	3/21/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				80-BH08-3	9 - 10	3/21/2012	TAL Metals	6010B
								6020
								7471A (Mercury)

Table 3-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Soil Sample Summary
Soil Background Study Report
White Sands Missile Range, New Mexico

Borehole ID	Coordinates		Sample Type/Location	Sample ID	Sample Depth (ft bgs)	Sample Date	Analytical Suite	Analytical Method
	X	Y						
80-BH09	363606.678	3582257.351	Environmental Soil	80-BH09-1	0 - 2	3/21/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				80-BH09-2	5 - 6	3/21/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				80-BH09-3	9 - 10	3/21/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
80-BH10	363556.583	3582306.720	Environmental Soil	80-BH10-1	0 - 2	3/21/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				80-BH10-2	5 - 6	3/21/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				80-BH10-3	9 - 10	3/21/2012	TAL Metals	6010B
								6020
								7471A (Mercury)

Table 3-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Soil Sample Summary
Soil Background Study Report
White Sands Missile Range, New Mexico

Borehole ID	Coordinates		Sample Type/Location	Sample ID	Sample Depth (ft bgs)	Sample Date	Analytical Suite	Analytical Method
	X	Y						
80-BH11	363630.473	3582327.193	Environmental Soil - Duplicate Sample	80-BH11-FD3	9 - 10	3/21/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
			Environmental Soil	80-BH11-1	0 - 2	3/21/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				80-BH11-2	5 - 6	3/21/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				80-BH11-3	9 - 10	3/21/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
80-BH12	363666.764	3582278.331	Environmental Soil - Duplicate Sample	80-BH12-FD1	0 - 2	3/21/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
			Environmental Soil	80-BH12-1	0 - 2	3/21/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				80-BH12-2	5 - 6	3/21/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				80-BH12-3	9 - 10	3/21/2012	TAL Metals	6010B
								6020
								7471A (Mercury)

Table 3-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Soil Sample Summary
Soil Background Study Report
White Sands Missile Range, New Mexico

Borehole ID	Coordinates		Sample Type/Location	Sample ID	Sample Depth (ft bgs)	Sample Date	Analytical Suite	Analytical Method
	X	Y						
80-BH13	363726.962	3582313.564	Environmental Soil	80-BH13-1	0 - 2	3/21/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				80-BH13-2	5 - 6	3/21/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				80-BH13-3	9 - 10	3/21/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
80-BH14	363658.481	3582153.205	Environmental Soil	80-BH14-1	0 - 2	3/21/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				80-BH14-2	5 - 6	3/21/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				80-BH14-3	9 - 10	3/21/2012	TAL Metals	6010B
								6020
								7471A (Mercury)

Table 3-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Soil Sample Summary
Soil Background Study Report
White Sands Missile Range, New Mexico

Borehole ID	Coordinates		Sample Type/Location	Sample ID	Sample Depth (ft bgs)	Sample Date	Analytical Suite	Analytical Method
	X	Y						
80-BH15	363666.929	3582051.839	Environmental Soil - Duplicate Sample	80-BH15-FD2	5 - 6	3/21/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
			Environmental Soil	80-BH15-1	0 - 2	3/21/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				80-BH15-2	5 - 6	3/21/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				80-BH15-3	9 - 10	3/21/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
			Water – Equipment Rinsate Blank	80-BH15-RB	0	3/21/2012	TAL Metals	6010B
								6020
								7470A (Mercury)

Coordinate System: WGS 1984 UTM Zone 13N

EPA. 2007. Test Methods for Evaluating Solid Waste Physical/Chemical Methods, EPA Publication SW-846, Final Update IV. Available online at www.epa.gov/oswhazard/testmethods/sw846.

bgs = Below ground surface.
BH = Borehole.
EPA = U.S. Environmental Protection Agency
FD = Field duplicate.
FT = Foot (feet).
ID = Identification.
MS = Matrix spike.
MSD = Matrix spike duplicate.
RB = Rinsate blank
TAL = Target Analyte List.
UTM = Universal Transverse Mercator.
WGS = World Geodetic System.
WSMR = White Sands Missile Range.

Table 3-2
Main Post Soil Sample Summary
Soil Background Study Report
White Sands Missile Range, New Mexico

Borehole ID	Coordinates		Sample Type	Sample ID	Sample Depth (ft bgs)	Sample Date	Analytical Suite	Analytical Method
	X	Y						
MP-BH01	359801.979	3585103.483	Environmental Soil	MP-BH01-1	0 - 2	3/22/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				MP-BH01-2	5 - 6	3/22/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				MP-BH01-3	9 - 10	3/22/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
MP-BH02	360027.096	3585174.522	Environmental Soil - Duplicate Sample	MP-BH02-FD1	0 - 2	3/22/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
			Environmental Soil	MP-BH02-1	0 - 2	3/22/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				MP-BH02-2	5 - 6	3/22/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				MP-BH02-3	9 - 10	3/22/2012	TAL Metals	6010B
								6020
								7471A (Mercury)

Table 3-2 (continued)
Main Post Soil Sample Summary
Soil Background Study Report
White Sands Missile Range, New Mexico

Borehole ID	Coordinates		Sample Type	Sample ID	Sample Depth (ft bgs)	Sample Date	Analytical Suite	Analytical Method
	X	Y						
MP-BH03	360378.787	3585202.843	Environmental Soil	MP-BH03-1	0 - 2	3/22/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				MP-BH03-2	5 - 6	3/22/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				MP-BH03-3	9 - 10	3/22/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
MP-BH04	360918.210	3585240.477	Environmental Soil - Matrix Spike	MP-BH04-MS3	9 - 10	3/23/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
			Environmental Soil - Matrix Spike Duplicate	MP-BH04-MSD3	9 - 10	3/23/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
			Environmental Soil	MP-BH04-1	0 - 2	3/23/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				MP-BH04-2	5 - 6	3/23/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				MP-BH04-3	9 - 10	3/23/2012	TAL Metals	6010B
								6020
								7471A (Mercury)

Table 3-2 (continued)
Main Post Soil Sample Summary
Soil Background Study Report
White Sands Missile Range, New Mexico

Borehole ID	Coordinates		Sample Type	Sample ID	Sample Depth (ft bgs)	Sample Date	Analytical Suite	Analytical Method
	X	Y						
MP-BH05	358708.811	3583390.932	Environmental Soil - Duplicate Sample	MP-BH05-FD2	5 - 6	3/22/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
			Environmental Soil	MP-BH05-1	0 - 2	3/22/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				MP-BH05-2	5 - 6	3/22/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				MP-BH05-3	9 - 10	3/22/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
MP-BH06	358667.823	3583788.809	Environmental Soil	MP-BH06-1	0 - 2	3/22/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				MP-BH06-2	5 - 6	3/22/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				MP-BH06-3	9 - 10	3/22/2012	TAL Metals	6010B
								6020
								7471A (Mercury)

Table 3-2 (continued)
Main Post Soil Sample Summary
Soil Background Study Report
White Sands Missile Range, New Mexico

Borehole ID	Coordinates		Sample Type	Sample ID	Sample Depth (ft bgs)	Sample Date	Analytical Suite	Analytical Method
	X	Y						
MP-BH07	358669.874	3583812.451	Environmental Soil	MP-BH07-1	0 - 2	3/22/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				MP-BH07-2	5 - 6	3/22/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				MP-BH07-3	9 - 10	3/22/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
MP-BH08	358751.898	3584296.766	Environmental Soil - Matrix Spike	MP-BH08-MS1	0 - 2	3/22/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
			Environmental Soil - Matrix Spike Duplicate	MP-BH08-MSD1	0 - 2	3/22/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
			Environmental Soil	MP-BH08-1	0 - 2	3/22/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				MP-BH08-2	5 - 6	3/22/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				MP-BH08-3	9 - 10	3/22/2012	TAL Metals	6010B
								6020
								7471A (Mercury)

Table 3-2 (continued)
Main Post Soil Sample Summary
Soil Background Study Report
White Sands Missile Range, New Mexico

Borehole ID	Coordinates		Sample Type	Sample ID	Sample Depth (ft bgs)	Sample Date	Analytical Suite	Analytical Method
	X	Y						
MP-BH09	358777.688	3584319.780	Environmental Soil	MP-BH09-1	0 - 2	3/22/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				MP-BH09-2	5 - 6	3/22/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				MP-BH09-3	9 - 10	3/22/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
MP-BH10	359179.937	3584880.925	Environmental Soil - Duplicate Sample	MP-BH10-FD3	9 - 10	3/22/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
			Environmental Soil	MP-BH10-1	0 - 2	3/22/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				MP-BH10-2	5 - 6	3/22/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				MP-BH10-3	9 - 10	3/22/2012	TAL Metals	6010B
								6020
								7471A (Mercury)

Table 3-2 (continued)
Main Post Soil Sample Summary
Soil Background Study Report
White Sands Missile Range, New Mexico

Borehole ID	Coordinates		Sample Type	Sample ID	Sample Depth (ft bgs)	Sample Date	Analytical Suite	Analytical Method
	X	Y						
MP-BH11	361432.257	3584860.976	Environmental Soil	MP-BH11-1	0 - 2	3/22/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				MP-BH11-2	5 - 6	3/22/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				MP-BH11-3	9 - 10	3/22/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
MP-BH12	361550.298	3585041.842	Environmental Soil - Duplicate Sample	MP-BH12-FD1	0 - 2	3/22/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
			Environmental Soil	MP-BH12-1	0 - 2	3/22/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				MP-BH12-2	5 - 6	3/22/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				MP-BH12-3	9 - 10	3/22/2012	TAL Metals	6010B
								6020
								7471A (Mercury)

Table 3-2 (continued)
Main Post Soil Sample Summary
Soil Background Study Report
White Sands Missile Range, New Mexico

Borehole ID	Coordinates		Sample Type	Sample ID	Sample Depth (ft bgs)	Sample Date	Analytical Suite	Analytical Method
	X	Y						
MP-BH13	361621.812	3584736.609	Environmental Soil	MP-BH13-1	0 - 2	3/23/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				MP-BH13-2	5 - 6	3/23/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				MP-BH13-3	9 - 10	3/23/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
MP-BH14	361807.338	3585007.186	Environmental Soil	MP-BH14-1	0 - 2	3/22/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				MP-BH14-2	5 - 6	3/22/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				MP-BH14-3	9 - 10	3/22/2012	TAL Metals	6010B
								6020
								7471A (Mercury)

Table 3-2 (continued)
Main Post Soil Sample Summary
Soil Background Study Report
White Sands Missile Range, New Mexico

Borehole ID	Coordinates		Sample Type	Sample ID	Sample Depth (ft bgs)	Sample Date	Analytical Suite	Analytical Method
	X	Y						
MP-BH15	361872.275	3584803.833	Environmental Soil - Duplicate Sample	MP-BH15-FD2	5 - 6	3/23/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
			Environmental Soil	MP-BH15-1	0 - 2	3/23/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				MP-BH15-2	5 - 6	3/23/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				MP-BH15-3	9 - 10	3/23/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
	361872.275	3584803.833	Water - Equipment Rinsate Blank	MP-BH15-RB	0	3/22/2012	TAL Metals	6010B
								6020
								7470A (Mercury)
MP-BH05	358708.811	3583390.932	Water - Equipment Rinsate Blank	MP-BH05-RB	0	3/23/2012	TAL Metals	6010B
								6020
								7470A (Mercury)

Coordinate System: WGS 1984 UTM Zone 13N

EPA. 2007. Test Methods for Evaluating Solid Waste Physical/Chemical Methods, EPA Publication SW-846, Final Update IV. Available online at www.epa.gov/osw/hazard/testmethods/sw846.

bgs = Below ground surface.
BH = Borehole.
EPA = U.S. Environmental Protection Agency.
FD = Field duplicate.
FT = Foot (feet).
ID = Identification.
MS = Matrix spike.
MSD = Matrix spike duplicate.
RB = Rinsate blank.
TAL = Target Analyte List.
UTM = Universal Transverse Mercator.
WGS = World Geodetic System.
WSMR = White Sands Missile Range.

Table 3-3
Solid Waste Management Unit 140 (WSMR-84) Soil Sample Summary
Soil Background Study Report
White Sands Missile Range, New Mexico

Borehole ID	Coordinates		Sample Type/Location	Sample ID	Sample Depth (ft bgs)	Sample Date	Analytical Suite	Analytical Method
	X	Y						
140-BH01	378058.4762	3586913.346	Environmental Soil	140-BH01-1	0 - 2	3/20/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				140-BH01-2	5 - 6	3/20/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				140-BH01-3	9 - 10	3/20/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
140-BH02	378146.0385	3586883.634	Environmental Soil	140-BH02-1	0 - 2	3/19/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				140-BH02-2	5 - 6	3/19/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				140-BH02-3	9 - 10	3/19/2012	TAL Metals	6010B
								6020
								7471A (Mercury)

Table 3-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Soil Sample Summary
Soil Background Study Report
White Sands Missile Range, New Mexico

Borehole ID	Coordinates		Sample Type/Location	Sample ID	Sample Depth (ft bgs)	Sample Date	Analytical Suite	Analytical Method
	X	Y						
140-BH03	378134.0058	3586853.651	Environmental Soil - Duplicate Sample	140-BH03-FD2	5 - 6	3/19/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
			Environmental Soil	140-BH03-1	0 - 2	3/19/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				140-BH03-2	5 - 6	3/19/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				140-BH03-3	9 - 10	3/19/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
140-BH04	378098.7223	3586845.846	Environmental Soil	140-BH04-1	0 - 2	3/20/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				140-BH04-2	5 - 6	3/20/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				140-BH04-3	9 - 10	3/20/2012	TAL Metals	6010B
								6020
								7471A (Mercury)

Table 3-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Soil Sample Summary
Soil Background Study Report
White Sands Missile Range, New Mexico

Borehole ID	Coordinates		Sample Type/Location	Sample ID	Sample Depth (ft bgs)	Sample Date	Analytical Suite	Analytical Method
	X	Y						
140-BH05	378113.204	3586884.501	Environmental Soil - Duplicate Sample	140-BH05-FD3	9 - 10	3/20/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
			Environmental Soil	140-BH05-1	0 - 2	3/20/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				140-BH05-2	5 - 6	3/20/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				140-BH05-3	9 - 10	3/20/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
140-BH06	378249.3022	3586913.761	Environmental Soil	140-BH06-1	0 - 2	3/20/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				140-BH06-2	5 - 6	3/20/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				140-BH06-3	9 - 10	3/20/2012	TAL Metals	6010B
								6020
								7471A (Mercury)

Table 3-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Soil Sample Summary
Soil Background Study Report
White Sands Missile Range, New Mexico

Borehole ID	Coordinates		Sample Type/Location	Sample ID	Sample Depth (ft bgs)	Sample Date	Analytical Suite	Analytical Method
	X	Y						
140-BH07	378255.6537	3586951.112	Environmental Soil - Matrix Spike	140-BH07-MS2	5 - 6	3/20/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
			Environmental Soil - Matrix Spike Duplicate	140-BH07-MSD2	5 - 6	3/20/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
			Environmental Soil	140-BH07-1	0 - 2	3/20/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				140-BH07-2	5 - 6	3/20/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				140-BH07-3	9 - 10	3/20/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
140-BH08	378274.0192	3586989.914	Environmental Soil	140-BH08-1	0 - 2	3/20/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				140-BH08-2	5 - 6	3/20/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				140-BH08-3	9 - 10	3/20/2012	TAL Metals	6010B
								6020
								7471A (Mercury)

Table 3-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Soil Sample Summary
Soil Background Study Report
White Sands Missile Range, New Mexico

Borehole ID	Coordinates		Sample Type/Location	Sample ID	Sample Depth (ft bgs)	Sample Date	Analytical Suite	Analytical Method
	X	Y						
140-BH09	378257.0595	3587031.567	Environmental Soil - Matrix Spike	140-BH09-MS2	5 - 6	3/20/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
			Environmental Soil - Matrix Spike Duplicate	140-BH09-MSD2	5 - 6	3/20/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
			Environmental Soil	140-BH09-1	0 - 2	3/20/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				140-BH09-2	5 - 6	3/20/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				140-BH09-3	9 - 10	3/20/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
140-BH10	378145.8699	3587058.508	Environmental Soil - Duplicate Sample	140-BH10-FD1	0 - 2	3/20/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
			Environmental Soil	140-BH10-1	0 - 2	3/20/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				140-BH10-2	5 - 6	3/20/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				140-BH10-3	9 - 10	3/20/2012	TAL Metals	6010B
								6020
								7471A (Mercury)

Table 3-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Soil Sample Summary
Soil Background Study Report
White Sands Missile Range, New Mexico

Borehole ID	Coordinates		Sample Type/Location	Sample ID	Sample Depth (ft bgs)	Sample Date	Analytical Suite	Analytical Method
	X	Y						
140-BH11	378226.9556	3587388.517	Environmental Soil	140-BH11-1	0 - 2	3/20/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				140-BH11-2	5 - 6	3/20/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				140-BH11-3	9 - 10	3/20/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
140-BH12	378309.137	3587439.605	Environmental Soil - Duplicate Sample	140-BH12-FD2	5 - 6	3/20/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
			Environmental Soil	140-BH12-1	0 - 2	3/20/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				140-BH12-2	5 - 6	3/20/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				140-BH12-3	9 - 10	3/20/2012	TAL Metals	6010B
								6020
								7471A (Mercury)

Table 3-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Soil Sample Summary
Soil Background Study Report
White Sands Missile Range, New Mexico

Borehole ID	Coordinates		Sample Type/Location	Sample ID	Sample Depth (ft bgs)	Sample Date	Analytical Suite	Analytical Method
	X	Y						
140-BH13	378440.7797	3587372.195	Environmental Soil	140-BH13-1	0 - 2	3/20/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				140-BH13-2	5 - 6	3/20/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				140-BH13-3	9 - 10	3/20/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
140-BH14	378013.2133	3587388.215	Environmental Soil - Matrix Spike	140-BH14-MS3	9 - 10	3/20/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
			Environmental Soil - Matrix Spike Duplicate	140-BH14-MSD3	9 - 10	3/20/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
			Environmental Soil	140-BH14-1	0 - 2	3/20/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				140-BH14-2	5 - 6	3/20/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				140-BH14-3	9 - 10	3/20/2012	TAL Metals	6010B
								6020
								7471A (Mercury)

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Table 3-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Soil Sample Summary
Soil Background Study Report
White Sands Missile Range, New Mexico

Borehole ID	Coordinates		Sample Type/Location	Sample ID	Sample Depth (ft bgs)	Sample Date	Analytical Suite	Analytical Method
	X	Y						
140-BH15	378101.9736	3587462.497	Environmental Soil - Duplicate Sample	140-BH15-FD3	9 - 10	3/20/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
			Environmental Soil	140-BH15-1	0 - 2	3/20/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				140-BH15-2	5 - 6	3/20/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
				140-BH15-3	9 - 10	3/20/2012	TAL Metals	6010B
								6020
								7471A (Mercury)
140-BH02	378146.0385	3586883.634	Water - Equipment Rinsate Blank	140-BH02-RB	0	3/20/2012	TAL Metals	6010B
								6020
								7470A (Mercury)

Coordinate System: WGS 1984 UTM Zone 13N

EPA. 2007. Test Methods for Evaluating Solid Waste Physical/Chemical Methods, EPA Publication SW-846, Final Update IV. Available online at www.epa.gov/osw\hazard\testmethods\sw846.

bgs = Below ground surface.
BH = Borehole.
EPA = U.S. Environmental Protection Agency.
FD = Field duplicate.
FT = Foot (feet).
ID = Identification.
MS = Matrix spike.
MSD = Matrix spike duplicate.
RB = Rinsate blank.
TAL = Target Analyte List.
UTM = Universal Transverse Mercator.
WGS = World Geodetic System.
WSMR = White Sands Missile Range.

Table 5-1
Kruskal Wallis *p*-Level Test Results for Comparisons of the Surface, Intermediate, and Deep Samples
Soil Background Study Report
White Sands Missile Range, New Mexico

Element	Main Post	SWMU 80	SWMU 140
Aluminum	0.108	***0.008***	0.060
Arsenic	0.070	0.307	0.213
Barium	0.407	***0.001***	0.055
Beryllium	0.690	0.206	***0.027***
Calcium	***0.024***	***0.000***	***0.042***
Chromium	0.286	0.082	0.102
Cobalt	0.354	***0.006***	***0.002***
Copper	***0.049***	***0.020***	0.559
Iron	0.550	0.223	0.241
Lead	***0.027***	***0.012***	0.186
Magnesium	0.744	***0.005***	***0.000***
Manganese	0.306	***0.003***	***0.018***
Nickel	0.360	***0.021***	***0.003***
Potassium	***0.001***	***0.000***	0.484
Sodium	***0.000***	***0.000***	***0.000***
Vanadium	0.252	***0.005***	***0.000***
Zinc	0.272	***0.006***	0.112

Bold Red text indicates a value that failed the Kruskal Wallis test.

SWMU = Solid Waste Management Unit.

Table 5-2
Solid Waste Management Unit 80 (WSMR-30) Top Soil Layer Summary Statistics
Soil Background Study Report
White Sands Missile Range, New Mexico

		Sample Statistics								Sample Variance			Population Statistics		
Element	Units	Number of Samples	Percent Nondetects	Distribution Type	Minimum	Median	Geometric Mean	Arithmetic Mean	Maximum	Inter-Quartile Range	Standard Deviation	Coefficient of Variation	95th UCL of Mean	95th UTL	NMED Residential SSL[a]
Aluminum	mg/kg	15	0.0%	Normal	2100	4630	4398	4565	6560	1698	1211	0.265	5138	7672	78002
Antimony	mg/kg	15	100.0%	Nonparametric	0.354	0.373	0.374	0.375	0.437	0.0245	0.0210	0.056	<0.437	<0.437	31.3
Arsenic	mg/kg	15	0.0%	Lognormal	0.859	1.21	1.18	1.21	1.68	0.263	0.247	0.205	1.33	1.99	3.90
Barium	mg/kg	15	0.0%	Lognormal	28.8	41.2	42.7	43.6	65.6	11.4	9.57	0.220	49.1	73.5	15558
Beryllium	mg/kg	15	20.0%	Nonparametric	0.0377	0.377	0.240	0.316	0.467	0.156	0.156	0.492	0.392	0.567	156
Cadmium	mg/kg	15	100.0%	Nonparametric	0.236	0.244	0.249	0.250	0.303	0.00875	0.016	0.063	<0.303	<0.303	70.3
Calcium	mg/kg	15	0.0%	Lognormal	1710	2170	2152	2171	2780	340	294	0.136	2315	3034	NA
Chromium	mg/kg	15	6.7%	Lognormal	1.2	2.12	2.08	2.19	3.41	0.96	0.712	0.325	2.53	3.96	117321
Cobalt	mg/kg	15	0.0%	Lognormal	2.26	3.25	3.47	3.56	5.59	1.00	0.870	0.244	4.05	6.37	NA
Copper	mg/kg	15	0.0%	Lognormal	3.12	4.74	4.89	5.11	8.98	2.03	1.63	0.319	6.02	10.7	3129
Iron	mg/kg	15	0.0%	Lognormal	8360	12700	12369	12622	19100	2950	2678	0.212	14011	21042	54750
Lead	mg/kg	15	0.0%	Lognormal	5.14	6.77	7.10	7.20	10.6	1.75	1.33	0.185	7.95	11.2	400
Magnesium	mg/kg	15	0.0%	Lognormal	1330	1760	1782	1805	2350	335	296	0.164	1944	2720	NA
Manganese	mg/kg	15	0.0%	Normal	117	175	170	172	222	27.0	24.7	0.144	183	235	1865
Mercury	mg/kg	15	93.3%	Nonparametric	0.00962	0.00991	0.010	0.0101	0.012	0.000217	0.000568	0.056	<0.012	<0.012	15.6
Nickel	mg/kg	15	6.7%	Lognormal	2.02	3.23	3.31	3.43	5.29	1.29	0.978	0.285	3.95	5.81	1560
Potassium	mg/kg	15	0.0%	Normal	889	1670	1563	1594	2120	265	304	0.191	1716	2374	NA
Selenium	mg/kg	15	100.0%	Nonparametric	0.472	0.488	0.499	0.500	0.605	0.0170	0.0313	0.063	<0.605	<0.605	391
Silver	mg/kg	15	86.7%	Nonparametric	1.13	1.49	1.47	1.47	1.75	0.095	0.136	0.092	1.37	1.42	391
Sodium	mg/kg	15	0.0%	Normal	23.1	30.1	29.4	29.7	36.4	4.25	3.99	0.134	31.6	39.9	NA
Thallium	mg/kg	15	66.7%	Nonparametric	0.0965	0.101	0.108	0.109	0.168	0.0131	0.0187	0.172	0.127	0.153	0.782
Vanadium	mg/kg	15	0.0%	Lognormal	4.86	8.31	8.59	8.98	13.6	3.47	2.74	0.305	10.3	19.2	391
Zinc	mg/kg	15	0.0%	Normal	11.7	18.2	18.3	18.6	24.2	3.55	3.34	0.180	20.1	27.2	23464

[a]NMED, 2012, Risk Assessment Guidance for Site Investigations and Remediation, Volume 1, Tier 1: Soil Screening Guidance Technical Background Document, Hazardous Waste Bureau and Groundwater Quality Bureau, Voluntary Remediation Program, Table A-1 Updated February 2012.

% = Percentage.
mg/kg = Milligrams per kilogram.
NA = Not applicable.
NMED = New Mexico Environment Department.
SSL = Soil Screening Level.
UCL = Upper confidence limit.
UTL = Upper tolerance limit.
WSMR = White Sands Missile Range.

Table 5-3
Solid Waste Management Unit 80 (WSMR-30) Middle Soil Layer Summary Statistics
Soil Background Study Report
White Sands Missile Range, New Mexico

		Sample Statistics								Sample Variance			Population Statistics		
Element	Units	Number of Samples	Percent Nondetects	Distribution Type	Minimum	Median	Geometric Mean	Arithmetic Mean	Maximum	Inter-Quartile Range	Standard Deviation	Coefficient of Variation	95th UCL of Mean	95th UTL	NMED Residential SSL[a]
Aluminum	mg/kg	15	0.0%	Normal	2170	5660	5148	5565	9520	3040	2141	0.385	6577	11058	78002
Antimony	mg/kg	15	100.0%	Nonparametric	0.339	0.365	0.364	0.364	0.388	0.0105	0.0121	0.033	<0.388	<0.388	31.3
Arsenic	mg/kg	15	0.0%	Lognormal	0.83	1.2	1.44	1.58	3.32	1.07	0.749	0.473	2.03	4.45	3.90
Barium	mg/kg	15	0.0%	Lognormal	37.5	63.7	67.6	72.6	137	24.5	30.3	0.417	90.4	180	15558
Beryllium	mg/kg	15	13.3%	Lognormal	0.036	0.121	0.157	0.262	0.879	0.325	0.255	0.974	0.428	0.893	156
Cadmium	mg/kg	15	100.0%	Nonparametric	0.242	0.248	0.248	0.249	0.259	0.00675	0.005	0.020	<0.259	<0.259	70.3
Calcium	mg/kg	15	0.0%	Lognormal	1660	4100	4159	4474	8400	990	1785	0.399	5397	11667	NA
Chromium	mg/kg	15	0.0%	Lognormal	1.36	2.7	2.93	3.23	7.72	1.40	1.62	0.502	4.37	9.12	117321
Cobalt	mg/kg	15	0.0%	Lognormal	2.58	4.93	5.01	5.38	9.90	1.99	2.10	0.391	6.49	13.7	NA
Copper	mg/kg	15	0.0%	Lognormal	3.17	5.9	5.84	6.20	12.6	2.43	2.39	0.386	7.69	14.5	3129
Iron	mg/kg	15	0.0%	Lognormal	6890	13600	13185	13790.667	25600	4500	4351	0.316	16021	29389	54750
Lead	mg/kg	15	0.0%	Lognormal	4.85	9.35	8.94	9.48	17.0	3.46	3.42	0.361	11.4	22.1	400
Magnesium	mg/kg	15	0.0%	Normal	1190	2750	2423	2565	4000	870	826	0.322	2950	4685	NA
Manganese	mg/kg	15	0.0%	Lognormal	124	234	231	244	489	92.5	88.3	0.362	298	553	1865
Mercury	mg/kg	15	80.0%	Nonparametric	0.00956	0.00991	0.010	0.0101	0.0111	0.000335	0.000477	0.047	0.0111	0.0111	15.6
Nickel	mg/kg	15	0.0%	Normal	2.52	4.61	4.80	5.19	10.7	2.54	2.19	0.422	6.48	13.6	1560
Potassium	mg/kg	15	0.0%	Normal	706	1530	1310	1395	2390	733	493	0.354	1632	2661	NA
Selenium	mg/kg	15	100.0%	Nonparametric	0.485	0.496	0.497	0.497	0.518	0.0130	0.0098	0.020	<0.518	<0.518	391
Silver	mg/kg	15	80.0%	Nonparametric	0.14	1.46	1.22	1.34	1.55	0.040	0.353	0.263	1.40	1.96	391
Sodium	mg/kg	15	0.0%	Normal	28	65.9	61.3	66.3	119	31.0	25.9	0.391	79.6	133	NA
Thallium	mg/kg	15	33.3%	Nonparametric	0.097	0.13	0.126	0.131	0.236	0.0489	0.0384	0.294	0.155	0.224	0.782
Vanadium	mg/kg	15	0.0%	Lognormal	6.45	12.4	12.8	13.9	28.4	8.19	5.91	0.426	17.4	36.2	391
Zinc	mg/kg	15	0.0%	Normal	13.2	24.7	23.1	24.2	39	7.50	7.09	0.293	27.6	42.3	23464

[a]NMED, 2012, Risk Assessment Guidance for Site Investigations and Remediation, Volume 1, Tier 1: Soil Screening Guidance Technical Background Document, Hazardous Waste Bureau and Groundwater Quality Bureau, Voluntary Remediation Program, Table A-1 Updated February 2012.

% = Percentage.
mg/kg = Milligrams per kilogram.
NA = Not applicable.
NMED = New Mexico Environment Department.
SSL = Soil Screening Level.
UCL = Upper confidence limit.
UTL = Upper tolerance limit.
WSMR = White Sands Missile Range.

Table 5-4
Solid Waste Management Unit 80 (WSMR-30) Bottom Soil Layer Summary Statistics
Soil Background Study Report
White Sands Missile Range, New Mexico

		Sample Statistics								Sample Variance			Population Statistics		
Element	Units	Number of Samples	Percent Nondetects	Distribution Type	Minimum	Median	Geometric Mean	Arithmetic Mean	Maximum	Inter-Quartile Range	Standard Deviation	Coefficient of Variation	95th UCL of Mean	95th UTL	NMED Residential SSL[a]
Aluminum	mg/kg	15	0.0%	Lognormal	1330	3290	3191	3524	6510	1955	1587	0.450	4318	10711	78002
Antimony	mg/kg	15	100.0%	Nonparametric	0.339	0.368	0.368	0.368	0.394	0.0225	0.0169	0.046	<0.394	<0.394	31.3
Arsenic	mg/kg	15	40.0%	Nonparametric	0.707	0.805	0.94	0.99	1.75	0.328	0.340	0.345	1.22	1.80	3.90
Barium	mg/kg	15	0.0%	Lognormal	14.4	36.6	35.9	42.6	114	28.0	27.2	0.639	60.2	169	15558
Beryllium	mg/kg	15	6.7%	Lognormal	0.0381	0.246	0.238	0.270	0.473	0.155	0.116	0.429	0.33	1.61	156
Cadmium	mg/kg	15	100.0%	Nonparametric	0.233	0.243	0.243	0.243	0.251	0.00525	0.005	0.022	<0.251	<0.251	70.3
Calcium	mg/kg	15	0.0%	Lognormal	1650	2880	2899	3067	5450	1440	1081	0.352	3615	7067	NA
Chromium	mg/kg	15	26.7%	Nonparametric	0.973	1.97	1.87	2.10	4.51	1.23	1.05	0.500	2.81	4.47	117321
Cobalt	mg/kg	15	0.0%	Lognormal	1.32	3.04	3.02	3.43	7.86	1.96	1.89	0.552	4.71	11.4	NA
Copper	mg/kg	15	0.0%	Lognormal	1.58	3.61	3.73	4.22	9.92	2.13	2.31	0.547	5.64	13.8	3129
Iron	mg/kg	15	0.0%	Lognormal	8430	11100	11509	11745	16400	3485	2498	0.213	13076	19546	54750
Lead	mg/kg	15	0.0%	Lognormal	3.04	5.84	5.97	6.44	12.5	2.14	2.68	0.416	8.00	16.5	400
Magnesium	mg/kg	15	0.0%	Lognormal	701	1690	1550	1703	3240	955	756	0.444	2114	4982	NA
Manganese	mg/kg	15	0.0%	Lognormal	64.9	141	145	161	361	64.9	82.1	0.509	227	480	1865
Mercury	mg/kg	15	80.0%	Nonparametric	0.00953	0.00996	0.010	0.0101	0.0116	0.000435	0.000571	0.057	0.0116	0.0114	15.6
Nickel	mg/kg	15	20.0%	Nonparametric	1.95	3.10	3.18	3.48	7.14	1.94	1.61	0.463	4.40	7.45	1560
Potassium	mg/kg	15	0.0%	Normal	417	933	909	976	1560	542	355	0.364	1135	1887	NA
Selenium	mg/kg	15	100.0%	Nonparametric	0.466	0.486	0.485	0.485	0.502	0.0095	0.0105	0.022	<0.502	<0.502	391
Silver	mg/kg	15	73.3%	Nonparametric	0.35	1.45	1.11	1.22	1.58	0.458	0.448	0.366	0.765	0.952	391
Sodium	mg/kg	15	0.0%	Lognormal	33.4	67.8	67.9	75.7	180	36.1	39.3	0.520	104	227	NA
Thallium	mg/kg	15	66.7%	Nonparametric	0.0931	0.0979	0.108	0.109	0.162	0.0146	0.0232	0.212	0.126	0.164	0.782
Vanadium	mg/kg	15	0.0%	Lognormal	3.59	6.47	7.37	8.17	17.7	4.52	4.04	0.495	10.7	24.1	391
Zinc	mg/kg	15	0.0%	Normal	10.1	15.8	16.2	17.0	29.7	7.95	5.88	0.345	20.4	37.9	23464

[a]NMED, 2012, Risk Assessment Guidance for Site Investigations and Remediation, Volume 1, Tier 1: Soil Screening Guidance Technical Background Document, Hazardous Waste Bureau and Groundwater Quality Bureau, Voluntary Remediation Program, Table A-1 Updated February 2012.

% = Percentage.
mg/kg = Milligrams per kilogram.
NA = Not applicable.
NMED = New Mexico Environment Department.
SSL = Soil Screening Level.
UCL = Upper confidence limit.
UTL = Upper tolerance limit.
WSMR = White Sands Missile Range.

Table 5-5
Main Post Sites Top Soil Layer Summary Statistics
Soil Background Study Report
White Sands Missile Range, New Mexico

		Sample Statistics								Sample Variance			Population Statistics		
Element	Units	Number of Samples	Percent Nondetects	Distribution Type	Minimum	Median	Geometric Mean	Arithmetic Mean	Maximum	Inter-Quartile Range	Standard Deviation	Coefficient of Variation	95th UCL of Mean	95th UTL	NMED Residential SSL[a]
Aluminum	mg/kg	15	0.0%	Normal	1740	4150	3831	4100	7270	915	1488	0.363	4780	7918	78002
Antimony	mg/kg	15	100.0%	Nonparametric	0.343	0.373	0.369	0.370	0.391	0.02	0.015	0.040	<0.391	<0.391	31.3
Arsenic	mg/kg	15	6.7%	Normal	0.726	1.54	1.39	1.46	2.12	0.653	0.459	0.315	1.65	2.74	3.90
Barium	mg/kg	15	0.0%	Normal	10.8	44.9	38.4	41.6	59.4	10.6	13.8	0.331	46.8	77.0	15558
Beryllium	mg/kg	15	6.7%	Normal	0.0381	0.252	0.235	0.292	0.549	0.215	0.165	0.566	0.373	0.721	156
Cadmium	mg/kg	15	100.0%	Nonparametric	0.241	0.247	0.247	0.247	0.255	0.007	0.00409	0.017	<0.255	<0.255	70.3
Calcium	mg/kg	15	0.0%	Lognormal	1450	1780	1896	1930	2745	540	390	0.202	2142	3109	NA
Chromium	mg/kg	15	13.3%	Normal	0.967	2.35	2.15	2.34	3.7	1.33	0.931	0.398	2.81	4.95	117321
Cobalt	mg/kg	15	6.7%	Normal	1.21	3.84	3.49	3.70	5.09	1.25	1.077	0.291	4.14	6.69	NA
Copper	mg/kg	15	0.0%	Normal	1.67	7	6.25	6.92	13.5	2.17	2.91	0.421	8.35	14.4	3129
Iron	mg/kg	15	0.0%	Lognormal	5650	9960	9704	10030	16250	2340	2718	0.271	11493	19191	54750
Lead	mg/kg	15	0.0%	Normal	3.24	9.24	8.39	8.88	13.0	3.13	2.71	0.305	10	15.8	400
Magnesium	mg/kg	15	0.0%	Lognormal	996	1670	1763	1840	3225	573	589	0.320	2226	3797	NA
Manganese	mg/kg	15	0.0%	Normal	52.7	192	180	194	310	63.8	68.3	0.352	223	370	1865
Mercury	mg/kg	15	46.7%	Nonparametric	0.00977	0.0105	0.013	0.020	0.153	0.000875	0.0367	1.818	0.0394	0.111	15.6
Nickel	mg/kg	15	13.3%	Normal	1.93	3.97	3.46	3.61	5.14	1.51	1.02	0.283	4.09	6.75	1560
Potassium	mg/kg	15	0.0%	Lognormal	825	1430	1374	1420	2270	305	376	0.265	1629	2725	NA
Selenium	mg/kg	15	100.0%	Nonparametric	0.482	0.493	0.494	0.494	0.509	0.0145	0.00826	0.017	<0.509	<0.509	391
Silver	mg/kg	15	100.0%	Nonparametric	1.37	1.49	1.48	1.48	1.56	0.0825	0.0575	0.039	<1.56	<1.56	391
Sodium	mg/kg	15	0.0%	Lognormal	18	25.7	26.3	26.7	37.1	4.75	4.99	0.187	29.4	42.1	NA
Thallium	mg/kg	15	80.0%	Nonparametric	0.0964	0.0993	0.101	0.101	0.113	0.00495	0.00496	0.049	0.113	0.112	0.782
Vanadium	mg/kg	15	0.0%	Normal	2.54	9.76	8.50	9.07	12.3	3.08	2.76	0.304	10.2	16.2	391
Zinc	mg/kg	15	0.0%	Lognormal	11.2	18.4	18.6	19.1	28.8	4.15	4.68	0.245	21.6	35.1	23464

[a]NMED, 2012, Risk Assessment Guidance for Site Investigations and Remediation, Volume 1, Tier 1: Soil Screening Guidance Technical Background Document, Hazardous Waste Bureau and Groundwater Quality Bureau, Voluntary Remediation Program, Table A-1 Updated February 2012.

% = Percentage.
mg/kg = Milligrams per kilogram.
NA = Not applicable.
NMED = New Mexico Environment Department.
SSL = Soil Screening Level.
UCL = Upper confidence limit.
UTL = Upper tolerance limit.
WSMR = White Sands Missile Range.

Table 5-6
Main Post Sites Middle Soil Layer Summary Statistics
Soil Background Study Report
White Sands Missile Range, New Mexico

		Sample Statistics								Sample Variance			Population Statistics		
Element	Units	Number of Samples	Percent Nondetects	Distribution Type	Minimum	Median	Geometric Mean	Arithmetic Mean	Maximum	Inter-Quartile Range	Standard Deviation	Coefficient of Variation	95th UCL of Mean	95th UTL	NMED Residential SSL[a]
Aluminum	mg/kg	15	0.0%	Normal	1710	3250	3126	3270	4840	1515	980	0.300	3740	5785	78002
Antimony	mg/kg	15	100.0%	Nonparametric	0.339	0.357	0.361	0.362	0.389	0.0165	0.016	0.044	< 0.389	< 0.389	31.3
Arsenic	mg/kg	15	26.7%	Nonparametric	0.731	0.901	1.00	1.04	1.6	0.533	0.323	0.309	1.21	1.82	3.90
Barium	mg/kg	15	0.0%	Normal	15.6	37.9	35.0	37.6	61.2	23.5	13.9	0.369	44.1	73.2	15558
Beryllium	mg/kg	15	6.7%	Lognormal	0.0389	0.275	0.233	0.268	0.569	0.123	0.127	0.473	0.341	1.61	156
Cadmium	mg/kg	15	100.0%	Nonparametric	0.24	0.246	0.246	0.246	0.254	0.00675	0.00456	0.019	< 0.245	< 0.245	70.3
Calcium	mg/kg	15	0.0%	Lognormal	1390	2440	2869	3171	5520	2568	1434	0.452	3836	9556	NA
Chromium	mg/kg	15	26.7%	Nonparametric	0.966	2.1	1.73	1.90	3.84	1.24	0.811	0.428	2.3	3.86	117321
Cobalt	mg/kg	15	0.0%	Lognormal	1.74	3.01	3.19	3.38	5.59	1.60	1.19	0.353	3.97	7.9	NA
Copper	mg/kg	15	0.0%	Lognormal	2.58	4.79	4.81	5.13	9.48	2.37	1.92	0.375	6.09	12.7	3129
Iron	mg/kg	15	0.0%	Lognormal	5710	9980	9114	9400	13600	3875	2388	0.254	10509	17724	54750
Lead	mg/kg	15	0.0%	Normal	3.46	7.13	6.61	6.90	10.3	3.25	2.05	0.297	7.88	12.2	400
Magnesium	mg/kg	15	0.0%	Nonparametric	1200	1580	1837	1936	2940	1193	664	0.343	2261	4314	NA
Manganese	mg/kg	15	0.0%	Normal	71.7	170	157	168	259	108	59.0	0.352	194	319	1865
Mercury	mg/kg	15	86.7%	Nonparametric	0.0096	0.00983	0.010	0.010	0.0124	0.0003	0.0008	0.076	0.0124	0.0121	15.6
Nickel	mg/kg	15	20.0%	Nonparametric	1.95	3.13	3.00	3.18	4.95	1.95	1.09	0.344	3.65	5.87	1560
Potassium	mg/kg	15	0.0%	Lognormal	582	1120	1040	1085	1980	346	336	0.310	1282	2239	NA
Selenium	mg/kg	15	93.3%	Nonparametric	0.48	0.493	0.495	0.495	0.526	0.0168	0.0124	0.025	< 0.526	< 0.526	391
Silver	mg/kg	15	100.0%	Nonparametric	1.35	1.43	1.45	1.45	1.55	0.0675	0.0636	0.044	< 1.55	< 1.55	391
Sodium	mg/kg	15	0.0%	Nonparametric	25.7	36.5	42.7	46.8	103.0	25.9	22.7	0.485	62	103	NA
Thallium	mg/kg	15	80.0%	Nonparametric	0.0963	0.099	0.102	0.102	0.129	0.00345	0.00923	0.090	0.129	0.125	0.782
Vanadium	mg/kg	15	0.0%	Lognormal	4.32	7.18	7.74	8.28	15.8	3.77	3.27	0.395	10.1	20.2	391
Zinc	mg/kg	15	0.0%	Lognormal	11.2	16.4	17.4	17.9	26.6	6.35	4.38	0.245	20.1	32.9	23464

[a]NMED, 2012, Risk Assessment Guidance for Site Investigations and Remediation, Volume 1, Tier 1: Soil Screening Guidance Technical Background Document, Hazardous Waste Bureau and Groundwater Quality Bureau, Voluntary Remediation Program, Table A-1 Updated February 2012.

% = Percentage.
mg/kg = Milligrams per kilogram.
NA = Not applicable.
NMED = New Mexico Environment Department.
SSL = Soil Screening Level.
UCL = Upper confidence limit.
UTL = Upper tolerance limit.
WSMR = White Sands Missile Range.

Table 5-7
Main Post Sites Bottom Soil Layer Summary Statistics
Soil Background Study Report
White Sands Missile Range, New Mexico

		Sample Statistics								Sample Variance			Population Statistics		
Element	Units	Number of Samples	Percent Nondetects	Distribution Type	Minimum	Median	Geometric Mean	Arithmetic Mean	Maximum	Inter-Quartile Range	Standard Deviation	Coefficient of Variation	95th UCL of Mean	95th UTL	NMED Residential SSL[a]
Aluminum	mg/kg	15	0.0%	Lognormal	879	2650	2851	3160	5320	2390	1390	0.440	3854	10098	78002
Antimony	mg/kg	15	100.0%	Nonparametric	0.341	0.367	0.365	0.366	0.39	0.0305	0.017	0.045	< 0.39	< 0.39	31.3
Arsenic	mg/kg	15	20.0%	Nonparametric	0.692	1.2	1.12	1.22	2.37	0.772	0.542	0.442	1.51	2.57	3.90
Barium	mg/kg	15	0.0%	Lognormal	16.5	43	38.6	43.2	79	25.5	20.5	0.473	53	143	15558
Beryllium	mg/kg	15	13.3%	Normal	0.0367	0.23	0.182	0.249	0.56	0.234	0.171	0.685	0.333	0.693	156
Cadmium	mg/kg	15	100.0%	Nonparametric	0.231	0.244	0.244	0.244	0.257	0.0145	0.00926	0.038	< 0.257	< 0.257	70.3
Calcium	mg/kg	15	0.0%	Lognormal	1330	2670	2709	2984	6500	1738	1405	0.471	3768	8634	NA
Chromium	mg/kg	15	20.0%	Nonparametric	0.922	1.95	1.81	2.06	4.75	1.50	1.12	0.541	2.69	4.77	117321
Cobalt	mg/kg	15	0.0%	Lognormal	1.63	3.32	3.18	3.42	6.14	2.06	1.34	0.391	4.11	8.84	NA
Copper	mg/kg	15	0.0%	Lognormal	2.36	4.93	4.76	5.38	14.5	3.08	3.09	0.575	7.46	16.9	3129
Iron	mg/kg	15	0.0%	Normal	4500	9220	8711	9046	13300	2748	2395	0.265	10066	15191	54750
Lead	mg/kg	15	0.0%	Lognormal	3.92	7.33	7.07	7.49	14.7	2.77	2.75	0.367	9.12	17.4	400
Magnesium	mg/kg	15	0.0%	Lognormal	626	1810	1628	1766	3060	755	714	0.404	2118	4896	NA
Manganese	mg/kg	15	0.0%	Lognormal	78.8	147	156	169	283	87.5	66.8	0.395	201	456	1865
Mercury	mg/kg	15	86.7%	Nonparametric	0.00957	0.00997	0.010	0.010	0.014	0.00028	0.0011	0.107	0.014	0.0132	15.6
Nickel	mg/kg	15	26.7%	Nonparametric	1.84	3.21	3.13	3.40	6.57	2.18	1.48	0.435	4.23	6.92	1560
Potassium	mg/kg	15	0.0%	Normal	349	906	888	958	1670	540	367	0.383	1132	1899	NA
Selenium	mg/kg	15	100.0%	Nonparametric	0.461	0.488	0.489	0.489	0.523	0.029	0.0195	0.040	< 0.523	< 0.523	391
Silver	mg/kg	15	100.0%	Nonparametric	1.36	1.47	1.46	1.46	1.56	0.125	0.0675	0.046	< 1.56	< 1.56	391
Sodium	mg/kg	15	0.0%	Lognormal	27.6	58.8	67.4	86.3	277	56.4	70.3	0.815	138	401	NA
Thallium	mg/kg	15	73.3%	Nonparametric	0.0922	0.1	0.104	0.105	0.144	0.0124	0.0149	0.142	0.12	0.138	0.782
Vanadium	mg/kg	15	0.0%	Normal	3.54	9.75	8.46	9.14	14.5	5.69	3.50	0.383	10.8	18.1	391
Zinc	mg/kg	15	0.0%	Normal	7.39	15.9	15.9	16.6	23.9	7.75	4.99	0.300	18.7	29.4	23464

[a]NMED, 2012, Risk Assessment Guidance for Site Investigations and Remediation, Volume 1, Tier 1: Soil Screening Guidance Technical Background Document, Hazardous Waste Bureau and Groundwater Quality Bureau, Voluntary Remediation Program, Table A-1 Updated February 2012.

% = Percentage.
mg/kg = Milligrams per kilogram.
NA = Not applicable.
NMED = New Mexico Environment Department.
SSL = Soil Screening Level.
UCL = Upper confidence limit.
UTL = Upper tolerance limit.
WSMR = White Sands Missile Range.

Table 5-8
Solid Waste Management Unit 140 (WSMR-84) Top Soil Layer Summary Statistics
Soil Background Study Report
White Sands Missile Range, New Mexico

		Sample Statistics								Sample Variance			Population Statistics		
Element	Units	Number of Samples	Percent Nondetects	Distribution Type	Minimum	Median	Geometric Mean	Arithmetic Mean	Maximum	Inter-Quartile Range	Standard Deviation	Coefficient of Variation	95th UCL of Mean	95th UTL	2012 NMED Residential SSL[a]
Aluminum	mg/kg	15	0.0%	Lognormal	1590	3230	3338	3668	6910	1865	1623	0.442	4513	10806	78002
Antimony	mg/kg	15	100.0%	Nonparametric	0.342	0.373	0.371	0.371	0.401	0.0270	0.0172	0.046	<0.401	<0.401	31.3
Arsenic	mg/kg	15	6.7%	Nonparametric	0.749	1.52	1.91	2.36	4.62	2.72	1.48	0.628	3.06	6.03	3.90
Barium	mg/kg	15	0.0%	Nonparametric	15.1	24.8	44.9	81.5	333	58.4	106	1.300	200	333	15558
Beryllium	mg/kg	15	0.0%	Lognormal	0.135	0.22	0.229	0.244	0.417	0.115	0.0937	0.384	0.292	0.595	156
Cadmium	mg/kg	15	100.0%	Nonparametric	0.238	0.252	0.253	0.253	0.269	0.0095	0.00816	0.032	<0.269	<0.269	70.3
Calcium	mg/kg	15	0.0%	Lognormal	930	7790	8022	21288	92900	25565	28635	1.35	44982	431202	NA
Chromium	mg/kg	15	0.0%	Normal	1.13	2.73	2.55	2.78	4.49	1.72	1.10	0.396	3.27	5.60	117321
Cobalt	mg/kg	15	53.3%	Nonparametric	1.19	1.28	1.60	1.68	2.65	0.808	0.528	0.315	2.16	2.68	NA
Copper	mg/kg	15	20.0%	Nonparametric	1.43	2.03	2.32	2.46	3.94	1.23	0.881	0.358	2.96	4.53	3129
Iron	mg/kg	15	0.0%	Lognormal	3540	5270	5401	5527	7960	1050	1247	0.226	6188	9532	54750
Lead	mg/kg	15	0.0%	Normal	2.15	3.59	3.60	3.70	5.05	1.24	0.877	0.237	4.07	5.95	400
Magnesium	mg/kg	15	0.0%	Lognormal	571	1040	1219	1401	3110	982	788	0.563	1840	4869	NA
Manganese	mg/kg	15	0.0%	Lognormal	25.5	55.3	49.9	53.0	94.0	19.5	18.7	0.353	62.3	128	1865
Mercury	mg/kg	15	100.0%	Nonparametric	0.00953	0.0101	0.0101	0.0101	0.0107	0.000455	0.000316	0.031	<0.0107	<0.0107	15.6
Nickel	mg/kg	15	26.7%	Nonparametric	1.9	2.72	3.48	3.94	7.73	3.31	2.02	0.513	5.05	8.77	1560
Potassium	mg/kg	15	0.0%	Lognormal	483	955	887	935	1660	237	316	0.338	1107	2106	NA
Selenium	mg/kg	15	86.7%	Nonparametric	0.475	0.505	0.521	0.525	0.771	0.0220	0.0709	0.135	0.574	0.709	391
Silver	mg/kg	15	100.0%	Nonparametric	1.37	1.49	1.48	1.49	1.61	0.108	0.0691	0.047	<1.61	<1.61	391
Sodium	mg/kg	15	0.0%	Lognormal	9.59	19.8	22.6	26.7	62.7	22.9	16.5	0.616	36.5	103	NA
Thallium	mg/kg	15	93.3%	Nonparametric	0.0951	0.101	0.10	0.102	0.108	0.00405	0.00345	0.034	<0.108	<0.108	0.782
Vanadium	mg/kg	15	0.0%	Lognormal	2.12	5.17	5.55	6.58	13.0	6.64	3.72	0.566	8.44	27.7	391
Zinc	mg/kg	15	0.0%	Lognormal	6.67	10.3	10.1	10.5	15.7	2.62	2.68	0.256	11.8	19.6	23464

[a]*NMED, 2012, Risk Assessment Guidance for Site Investigations and Remediation, Volume 1, Tier 1: Soil Screening Guidance Technical Background Document, Hazardous Waste Bureau and Groundwater Quality Bureau, Voluntary Remediation Program, Table A-1 Updated February 2012.*

% = Percentage.
mg/kg = Milligrams per kilogram.
NA = Not applicable.
NMED = New Mexico Environment Department.
SSL = Soil Screening Level.
UCL = Upper confidence limit.
UTL = Upper tolerance limit.
WSMR = White Sands Missile Range.

Table 5-9
Solid Waste Management Unit 140 (WSMR-84) Middle Soil Layer Summary Statistics
Soil Background Study Report
White Sands Missile Range, New Mexico

		Sample Statistics								Sample Variance			Population Statistics		
Element	Units	Number of Samples	Percent Nondetects	Distribution Type	Minimum	Median	Geometric Mean	Arithmetic Mean	Maximum	Inter-Quartile Range	Standard Deviation	Coefficient of Variation	95th UCL of Mean	95th UTL	NMED Residential SSL[a]
Aluminum	mg/kg	15	0.0%	Lognormal	2710	5520	5281	5614	8660	3128	1958	0.349	6544	13655	78002
Antimony	mg/kg	15	100.0%	Nonparametric	0.364	0.392	0.392	0.393	0.425	0.0270	0.0168	0.043	<0.425	<0.425	31.3
Arsenic	mg/kg	15	0.0%	Lognormal	1.36	3.21	3.63	4.22	11	2.74	2.59	0.613	6.00	15.1	3.90
Barium	mg/kg	15	0.0%	Normal	23.3	128	97.8	131	342	122	91	0.695	181	364	15558
Beryllium	mg/kg	15	0.0%	Normal	0.21	0.395	0.356	0.376	0.584	0.224	0.124	0.331	0.432	0.695	156
Cadmium	mg/kg	15	100.0%	Nonparametric	0.249	0.261	0.261	0.262	0.282	0.0140	0.00955	0.037	<0.282	<0.282	70.3
Calcium	mg/kg	15	0.0%	Lognormal	2750	40600	39129	70287	195000	98275	68939	0.981	109117	980973	NA
Chromium	mg/kg	15	0.0%	Normal	1.51	3.82	3.77	4.04	6.58	2.27	1.48	0.365	4.70	7.83	117321
Cobalt	mg/kg	15	0.0%	Lognormal	1.44	2.7	2.54	2.72	5.08	1.59	1.05	0.385	3.27	6.81	NA
Copper	mg/kg	15	20.0%	Nonparametric	1.5	2.22	2.68	3.03	6.65	2.06	1.60	0.530	3.91	7.02	3129
Iron	mg/kg	15	0.0%	Normal	3510	6700	6273	6521	9120	2530	1778	0.273	7327	11083	54750
Lead	mg/kg	15	0.0%	Lognormal	2.63	4.37	4.73	5.04	9.9	2.40	1.95	0.386	6.07	12.1	400
Magnesium	mg/kg	15	0.0%	Normal	946	4570	3909	4451	8320	3168	2034	0.457	5354	9670	NA
Manganese	mg/kg	15	0.0%	Lognormal	32.1	65.6	74.2	87.5	179	79.4	50.0	0.571	112	352	1865
Mercury	mg/kg	15	100.0%	Nonparametric	0.00977	0.0106	0.0105	0.0105	0.0114	0.000425	0.000389	0.037	<0.0114	<0.0114	15.6
Nickel	mg/kg	15	0.0%	Normal	2.90	7.95	6.77	7.30	11.9	3.50	2.64	0.361	8.38	14.1	1560
Potassium	mg/kg	15	0.0%	Lognormal	311	872	796	885	1740	487	416	0.470	1108	2754	NA
Selenium	mg/kg	15	60.0%	Nonparametric	0.497	0.528	0.594	0.616	1.08	0.0850	0.193	0.314	0.783	1.09	391
Silver	mg/kg	15	100.0%	Nonparametric	1.46	1.57	1.57	1.57	1.7	0.105	0.0663	0.042	<1.7	<1.7	391
Sodium	mg/kg	15	0.0%	Lognormal	143	471	525	671	1480	715	452	0.673	894	3671	NA
Thallium	mg/kg	15	93.3%	Nonparametric	0.0994	0.104	0.11	0.106	0.127	0.00600	0.00674	0.064	<0.127	<0.127	0.782
Vanadium	mg/kg	15	0.0%	Lognormal	5.77	13.1	14.9	17.3	47.2	9.48	10.7	0.619	24.4	61.9	391
Zinc	mg/kg	15	0.0%	Lognormal	5.98	12.8	12.9	13.8	21.9	7.88	4.99	0.361	16.1	34.8	23464

[a]NMED, 2012, Risk Assessment Guidance for Site Investigations and Remediation, Volume 1, Tier 1: Soil Screening Guidance Technical Background Document, Hazardous Waste Bureau and Groundwater Quality Bureau, Voluntary Remediation Program, Table A-1 Updated February 2012.

% = Percentage.
mg/kg = Milligrams per kilogram.
NA = Not applicable.
NMED = New Mexico Environment Department.
SSL = Soil Screening Level.
UCL = Upper confidence limit.
UTL = Upper tolerance limit.
WSMR = White Sands Missile Range.

Table 5-10
Solid Waste Management Unit 140 (WSMR-84) Bottom Soil Layer Summary Statistics
Soil Background Study Report
White Sands Missile Range, New Mexico

		Sample Statistics								Sample Variance			Population Statistics		
Element	Units	Number of Samples	Percent Nondetects	Distribution Type	Minimum	Median	Geometric Mean	Arithmetic Mean	Maximum	Inter-Quartile Range	Standard Deviation	Coefficient of Variation	95th UCL of Mean	95th UTL	NMED Residential SSL[a]
Aluminum	mg/kg	15	0.0%	Lognormal	1390	3850	3999	4658	8880	4528	2504	0.538	5882	18261	78002
Antimony	mg/kg	15	93.3%	Nonparametric	0.339	0.382	0.393	0.396	0.57	0.0350	0.0541	0.137	<0.57	<0.57	31.3
Arsenic	mg/kg	15	0.0%	Lognormal	1.28	3.27	3.43	4.79	21.8	4.21	5.14	1.07	9.83	25.6	3.90
Barium	mg/kg	15	0.0%	Lognormal	7.2	62.8	47.0	69.0	196	60.6	60	0.870	111	555	15558
Beryllium	mg/kg	15	0.0%	Lognormal	0.133	0.307	0.318	0.359	0.75	0.191	0.188	0.525	0.476	1.18	156
Cadmium	mg/kg	15	100.0%	Nonparametric	0.243	0.259	0.261	0.262	0.294	0.0265	0.0158	0.060	<0.294	<0.294	70.3
Calcium	mg/kg	15	0.0%	Lognormal	1980	25500	22591	39846	129000	39065	39978	1.003	65348	528375	NA
Chromium	mg/kg	15	13.3%	Lognormal	0.976	3.18	2.84	3.53	8.46	3.11	2.33	0.661	4.85	9.21	117321
Cobalt	mg/kg	15	0.0%	Lognormal	1.41	2.23	2.49	2.70	5.87	1.43	1.20	0.444	3.44	7.15	NA
Copper	mg/kg	15	6.7%	Lognormal	1.54	2.34	3.01	3.69	10.6	2.58	2.79	0.757	6.20	10.6	3129
Iron	mg/kg	15	0.0%	Lognormal	4000	5660	6290	6709	12700	2840	2668	0.398	8341	15863	54750
Lead	mg/kg	15	0.0%	Lognormal	2.53	3.78	4.27	4.66	10.6	1.84	2.27	0.486	6.48	12.3	400
Magnesium	mg/kg	15	0.0%	Lognormal	919	3030	3079	3865	11300	3170	2796	0.723	5671	18803	NA
Manganese	mg/kg	15	0.0%	Lognormal	31.7	77.7	84.6	97.4	181	88.1	52.4	0.538	125	352	1865
Mercury	mg/kg	15	93.3%	Nonparametric	0.00978	0.0104	0.0104	0.0105	0.0114	0.000935	0.000563	0.054	<0.0114	<0.0114	15.6
Nickel	mg/kg	15	0.0%	Lognormal	2.27	6	5.51	6.12	12.5	3.26	2.83	0.463	7.54	19.3	1560
Potassium	mg/kg	15	0.0%	Lognormal	306	873	743	851	1680	758	440	0.517	1077	3085	NA
Selenium	mg/kg	15	66.7%	Nonparametric	0.487	0.531	0.569	0.581	0.923	0.106	0.129	0.223	0.688	0.879	391
Silver	mg/kg	15	93.3%	Nonparametric	0.463	1.52	1.41	1.46	1.72	0.153	0.294	0.201	<1.72	<1.72	391
Sodium	mg/kg	15	0.0%	Lognormal	255	721	670.6	838.0	2500	624	611	0.729	1242	3933	NA
Thallium	mg/kg	15	93.3%	Nonparametric	0.0974	0.104	0.11	0.107	0.149	0.0106	0.0128	0.120	<0.149	<0.149	0.782
Vanadium	mg/kg	15	0.0%	Lognormal	6.32	11.5	14.49	18.8	82.0	8.36	18.9	1.00	40.4	80.0	391
Zinc	mg/kg	15	0.0%	Lognormal	6.24	13	13.9	15.6	34.5	8.61	8.34	0.534	21.1	48.7	23464

[a]NMED, 2012, Risk Assessment Guidance for Site Investigations and Remediation, Volume 1, Tier 1: Soil Screening Guidance Technical Background Document, Hazardous Waste Bureau and Groundwater Quality Bureau, Voluntary Remediation Program, Table A-1 Updated February 2012.

% = Percentage.
mg/kg = Milligrams per kilogram.
NA = Not applicable.
NMED = New Mexico Environment Department.
SSL = Soil Screening Level.
UCL = Upper confidence limit.
UTL = Upper tolerance limit.
WSMR = White Sands Missile Range.

Table 7-1
Solid Waste Management Unit 80 (WSMR-30) Field Duplicate Analysis
Soil Background Study Report
White Sands Missile Range, New Mexico

Method	Parameter	80-BH02-1 Result (mg/kg)	Data Validation Qualifier	80-BH02-FD1 Result (mg/kg)	Data Validation Qualifier	RPD
6010B	Aluminum	3600		6000		50.0%
6010B	Antimony	0.744	U	0.742	U	NC
6010B	Beryllium	0.371		0.454		20.1%
6010B	Calcium	2580		2260		13.2%
6010B	Iron	14200		13400		5.8%
6010B	Magnesium	1810		1990		9.5%
6010B	Potassium	1560		1790		13.7%
6010B	Sodium	23.8		36.3	J	NC
6010B	Zinc	18.3		20		8.9%
6020	Arsenic	1.01	J	1.19	J	NC
6020	Barium	32.8		39.8		19.3%
6020	Cadmium	0.503	U	0.495	U	NC
6020	Chromium	1.75	J	1.80	J	NC
6020	Cobalt	2.76		3.29		17.5%
6020	Copper	3.88		4.27		9.6%
6020	Lead	5.38		7.05		26.9%
6020	Manganese	143		171		17.8%
6020	Nickel	2.61	J	2.91	J	NC
6020	Selenium	1.01	U	0.99	U	NC
6020	Silver	2.98	U	2.97	U	NC
6020	Thallium	0.201	U	0.198	U	NC
6020	Vanadium	8.60		8.01		7.1%
7471A	Mercury	0.0990	U	0.0968	U	NC

Table 7-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Field Duplicate Analysis
Soil Background Study Report
White Sands Missile Range, New Mexico

Method	Parameter	80-BH05-2 Result (mg/kg)	Data Validation Qualifier	80-BH05-FD2 Result (mg/kg)	Data Validation Qualifier	RPD
6010B	Aluminum	3450		3530		2.3%
6010B	Antimony	0.724	U	0.743	U	NC
6010B	Beryllium	0.305		0.31		1.6%
6010B	Calcium	4140		4150		0.2%
6010B	Iron	8810		9250		4.9%
6010B	Magnesium	1490		1510		1.3%
6010B	Potassium	968		972		0.4%
6010B	Sodium	34.4		36.3		5.4%
6010B	Zinc	14.2		15.2		6.8%
6020	Arsenic	0.955	J	1.48	U	NC
6020	Barium	41.2		33.7		20.0%
6020	Cadmium	0.505	U	0.494	U	NC
6020	Chromium	1.58	J	1.14	J	NC
6020	Cobalt	2.84		2.32	J	NC
6020	Copper	3.56		2.78	J	NC
6020	Lead	5.21		4.48		15.1%
6020	Manganese	136		112		19.4%
6020	Nickel	2.8	J	2.24	J	NC
6020	Selenium	1.01	U	0.988	U	NC
6020	Silver	2.9	U	2.97	U	NC
6020	Thallium	0.202	U	0.198	U	NC
6020	Vanadium	7.68		5.22		38.1%
7471A	Mercury	0.0998	U	0.0973	U	NC

Table 7-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Field Duplicate Analysis
Soil Background Study Report
White Sands Missile Range, New Mexico

Method	Parameter	80-BH11-3 Result (mg/kg)	Data Validation Qualifier	80-BH11-FD3 Result (mg/kg)	Data Validation Qualifier	RPD
6010B	Aluminum	1660		2180		27.1%
6010B	Antimony	0.709	U	0.735	U	NC
6010B	Beryllium	0.179		0.222		21.4%
6010B	Calcium	1520		2040		29.2%
6010B	Iron	7630		9230		19.0%
6010B	Magnesium	732		1020		32.9%
6010B	Potassium	572		719		22.8%
6010B	Sodium	35.7		44.0		20.8%
6010B	Zinc	9.23		11.0		17.5%
6020	Arsenic	0.880	J	1.45	U	NC
6020	Barium	32.8		24.3		29.8%
6020	Cadmium	0.474	U	0.484	U	NC
6020	Chromium	2.78		2.04		30.7%
6020	Cobalt	2.57		1.84	J	NC
6020	Copper	3.45		2.10	J	NC
6020	Lead	6.12		4.30		34.9%
6020	Manganese	140		98.5		34.8%
6020	Nickel	2.44	J	3.87	U	NC
6020	Selenium	0.949	U	0.968	U	NC
6020	Silver	2.84	U	2.94	U	NC
6020	Thallium	0.190	U	0.194	U	NC
6020	Vanadium	7.78		4.44		54.7%
7471A	Mercury	0.0953	U	0.0987	U	NC

Table 7-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Field Duplicate Analysis
Soil Background Study Report
White Sands Missile Range, New Mexico

Method	Parameter	80-BH12-1 Result (mg/kg)	Data Validation Qualifier	80-BH12-FD1 Result (mg/kg)	Data Validation Qualifier	RPD
6010B	Aluminum	6210		4580		30.2%
6010B	Antimony	0.701	U	0.724	U	NC
6010B	Beryllium	0.0701	U	0.442		NC
6010B	Calcium	2660		2560		3.8%
6010B	Iron	14300		16400		13.7%
6010B	Magnesium	2690		2010		28.9%
6010B	Potassium	2140		1680		24.1%
6010B	Sodium	37.9		32.4		15.6%
6010B	Zinc	25.6		20.2		23.6%
6020	Arsenic	1.68		1.54		8.7%
6020	Barium	65.9		65.3		0.9%
6020	Cadmium	0.491	U	0.481	U	NC
6020	Chromium	3.68		3.13		16.2%
6020	Cobalt	5.80		5.37		7.7%
6020	Copper	8.46		9.49		11.5%
6020	Lead	10.3		10.8		4.7%
6020	Manganese	238		205		14.9%
6020	Nickel	5.50		5.07		8.1%
6020	Selenium	0.982	U	0.962	U	NC
6020	Silver	2.80	U	2.89	U	NC
6020	Thallium	0.135	J	0.108	J	NC
6020	Vanadium	15.2		11.9		24.4%
7471A	Mercury	0.0994	U	0.0967	U	NC

Table 7-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Field Duplicate Analysis
Soil Background Study Report
White Sands Missile Range, New Mexico

Method	Parameter	80-BH15-2 Result (mg/kg)	Data Validation Qualifier	80-BH15-FD2 Result (mg/kg)	Data Validation Qualifier	RPD
6010B	Aluminum	5150		6390		21.5%
6010B	Antimony	0.714	U	0.702	U	NC
6010B	Beryllium	0.0729		0.0702	U	NC
6010B	Calcium	3690		4190		12.7%
6010B	Iron	14400		16500		13.6%
6010B	Magnesium	3060		3320		8.2%
6010B	Potassium	1710		1840		7.3%
6010B	Sodium	43.5		50.8		15.5%
6010B	Zinc	23.3		26.0		11.0%
6020	Arsenic	1.11	J	1.29	J	NC
6020	Barium	74.5		63.5		15.9%
6020	Cadmium	0.484	U	0.493	U	NC
6020	Chromium	2.28		2.63		14.3%
6020	Cobalt	5.63		4.87		14.5%
6020	Copper	5.99		6.28		4.7%
6020	Lead	9.97		8.72		13.4%
6020	Manganese	251		230		8.7%
6020	Nickel	5.07		4.71		7.4%
6020	Selenium	0.968	U	0.986	U	NC
6020	Silver	2.86	U	2.81	U	NC
6020	Thallium	0.107	J	0.158	J	NC
6020	Vanadium	10.4		12.4		17.5%
7471A	Mercury	0.100	U	0.100	U	NC

% = *Percent.*

J = *Estimated. The analyte was detected and positively identified. The associated numerical value is the approximate concentration of the analyte in the sample and the bias is in determinable.*

mg/kg = *Milligrams per kilogram.*

NC = *Not Calculated. One or both of the results were not greater than the limit of quantitation.*

RPD = *Relative Percent Difference.*

U = *Not detected. The analyte was analyzed for but was not detected above the level of the associated value. The associated value is the Limit of Quantitation.*

WSMR = *White Sands Missile Range.*

Table 7-2
Main Post Field Duplicate Analysis
Soil Background Study Report
White Sands Missile Range, New Mexico

Method	Parameter	MP-BH02-1 Result (mg/kg)	Data Validation Qualifier	MP-BH02-FD1 Result (mg/kg)	Data Validation Qualifier	RPD
6010B	Aluminum	7230		5940		19.6%
6010B	Antimony	0.713	U	0.732	U	NC
6010B	Beryllium	0.533		0.565		5.8%
6010B	Calcium	2890		2600		10.6%
6010B	Iron	17700		14800		17.8%
6010B	Magnesium	3480		2970		15.8%
6010B	Potassium	2060		1800		13.5%
6010B	Sodium	37.3		36.8		1.3%
6010B	Zinc	27.5		25.9		6.0%
6020	Arsenic	2.31		1.44	J	NC
6020	Barium	60.0		48.5		21.2%
6020	Cadmium	0.493	U	0.493	U	NC
6020	Chromium	3.66		1.95	J	NC
6020	Cobalt	5.13		3.94		26.2%
6020	Copper	13.4		8.72		42.3%
6020	Lead	14.1		11.8		17.8%
6020	Manganese	362		257		33.9%
6020	Nickel	5.32		3.48	J	NC
6020	Selenium	0.986	U	0.986	U	NC
6020	Silver	2.85	U	2.93	U	NC
6020	Thallium	0.110	J	0.197	U	NC
6020	Vanadium	12.2		6.79		57.0%
7471A	Mercury	0.0114	J	0.0107	J	NC

Table 7-2 (continued)
Main Post Field Duplicate Analysis
Soil Background Study Report
White Sands Missile Range, New Mexico

Method	Parameter	MP-BH05-2 Result (mg/kg)	Data Validation Qualifier	MP-BH05-FD2 Result (mg/kg)	Data Validation Qualifier	RPD
6010B	Aluminum	1470		2460		50.4%
6010B	Antimony	0.764	U	0.735	U	NC
6010B	Beryllium	0.153	U	0.260		NC
6010B	Calcium	1690		1900		11.7%
6010B	Iron	5860		8380		35.4%
6010B	Magnesium	1240		1570		23.5%
6010B	Potassium	698		1120		46.4%
6010B	Sodium	21.8		29.6		30.4%
6010B	Zinc	9.29		15.1		47.6%
6020	Arsenic	1.52	U	1.42	U	NC
6020	Barium	15.4		15.8		2.6%
6020	Cadmium	0.507	U	0.472	U	NC
6020	Chromium	2.03	U	1.89	U	NC
6020	Cobalt	1.71	J	1.77	J	NC
6020	Copper	1.98	J	3.3		NC
6020	Lead	3.5		3.42		2.3%
6020	Manganese	71.5		71.8		0.4%
6020	Nickel	4.05	U	3.78	U	NC
6020	Selenium	1.01	U	0.944	U	NC
6020	Silver	3.06	U	2.94	U	NC
6020	Thallium	0.203	U	0.189	U	NC
6020	Vanadium	4.25		4.38		3.0%
7471A	Mercury	0.102	U	0.0972	U	NC

Table 7-2 (continued)
Main Post Field Duplicate Analysis
Soil Background Study Report
White Sands Missile Range, New Mexico

Method	Parameter	MP-BH10-3 Result (mg/kg)	Data Validation Qualifier	MP-BH10-FD3 Result (mg/kg)	Data Validation Qualifier	RPD
6010B	Aluminum	5850		4660		22.6%
6010B	Antimony	0.725	U	0.723	U	NC
6010B	Beryllium	0.362		0.478		27.6%
6010B	Calcium	1960		1930		1.5%
6010B	Iron	10900		9970		8.9%
6010B	Magnesium	1970		1970		0.0%
6010B	Potassium	1390		1280		8.2%
6010B	Sodium	52.5		49.2		6.5%
6010B	Zinc	24.7		23.0		7.1%
6020	Arsenic	2.19		2.54		14.8%
6020	Barium	75.2		80.8		7.2%
6020	Cadmium	0.51	U	0.516	U	NC
6020	Chromium	4.4		5.1		14.7%
6020	Cobalt	6.01		6.27		NC
6020	Copper	14		15		NC
6020	Lead	14		15.4		9.5%
6020	Manganese	291		274		6.0%
6020	Nickel	6.37		6.76		5.9%
6020	Selenium	0.529	J	1.03	U	NC
6020	Silver	2.9	U	2.89	U	NC
6020	Thallium	0.12	J	0.134	J	NC
6020	Vanadium	13.3		15.4		14.6%
7471A	Mercury	0.102	U	0.0122	J	NC

Table 7-2 (continued)
Main Post Field Duplicate Analysis
Soil Background Study Report
White Sands Missile Range, New Mexico

Method	Parameter	MP-B12-1 Result (mg/kg)	Data Validation Qualifier	MP-B12-FD1 Result (mg/kg)	Data Validation Qualifier	RPD
6010B	Aluminum	4630		4350		6.2%
6010B	Antimony	0.718	U	0.688	U	NC
6010B	Beryllium	0.195		0.283		36.8%
6010B	Calcium	1390		1510		8.3%
6010B	Iron	10100		10100		0.0%
6010B	Magnesium	1460		1530		4.7%
6010B	Potassium	1470		1500		2.0%
6010B	Sodium	23.3		23.3		0.0%
6010B	Zinc	18.2		18.5		1.6%
6020	Arsenic	1.7		1.62		4.8%
6020	Barium	50		42.9		15.3%
6020	Cadmium	0.511	U	0.481		NC
6020	Chromium	3.35		2.95		12.7%
6020	Cobalt	4.66		3.88		18.3%
6020	Copper	6.87		6.48		5.8%
6020	Lead	11.3		9.24		20.1%
6020	Manganese	243		184		27.6%
6020	Nickel	4.75		3.95		18.4%
6020	Selenium	1.02	U	0.963	U	NC
6020	Silver	2.87	U	2.75	U	NC
6020	Thallium	0.205	U	0.193	U	6.0%
6020	Vanadium	10.9		9.51		13.6%
7471A	Mercury	0.103	U	0.0106	J	NC

Table 7-2 (continued)
Main Post Field Duplicate Analysis
Soil Background Study Report
White Sands Missile Range, New Mexico

Method	Parameter	MP-BH15-2 Result (mg/kg)	Data Validation Qualifier	MP-BH15-FD2 Result (mg/kg)	Data Validation Qualifier	RPD
6010B	Aluminum	3320		3660		9.7%
6010B	Antimony	0.727	U	0.690	U	NC
6010B	Beryllium	0.420		0.452		7.3%
6010B	Calcium	3500		3840		9.3%
6010B	Iron	7030		7590		7.7%
6010B	Magnesium	1320		1400		5.9%
6010B	Potassium	677		744		9.4%
6010B	Sodium	56.3		62.7		10.8%
6010B	Zinc	15.5		16.3		5.0%
6020	Arsenic	0.801	J	1.00	J	NC
6020	Barium	43.7		51.6		16.6%
6020	Cadmium	0.474	U	0.497	U	NC
6020	Chromium	1.91		2.29		18.1%
6020	Cobalt	2.57		2.90		12.1%
6020	Copper	4.36		5.21		17.8%
6020	Lead	5.4		6.22		14.1%
6020	Manganese	152		177		15.2%
6020	Nickel	2.97	J	3.57	J	NC
6020	Selenium	0.948	U	0.993	U	NC
6020	Silver	2.91	U	2.76	U	NC
6020	Thallium	0.19	U	0.199	U	NC
6020	Vanadium	4.75		5.69		18.0%
7471A	Mercury	0.0141	J	0.0107	J	NC

% = *Percent.*

J = *Estimated. The analyte was detected and positively identified. The associated numerical value is the approximate concentration of the analyte in the sample and the bias is in determinable.*

mg/kg = *Milligrams per kilogram.*

NC = *Not Calculated. One or both of the results were not greater than the limit of quantitation.*

RPD = *Relative Percent Difference.*

U = *Not detected. The analyte was analyzed for but was not detected above the level of the associated value. The associated value is the Limit of Quantitation.*

Table 7-3
Solid Waste Management Unit 140 (WSMR-84) Field Duplicate Analysis
Soil Background Study Report
White Sands Missile Range, New Mexico

Method	Parameter	140-BH03-2 Result (mg/kg)	Data Validation Qualifier	140-BH03-FD2 Result (mg/kg)	Data Validation Qualifier	RPD
6010B	Aluminum	6160		8450		31.3%
6010B	Antimony	0.810	U	0.771	U	NC
6010B	Beryllium	0.456		0.511		11.4%
6010B	Calcium	87400		59300		38.3%
6010B	Iron	6800		8530		22.6%
6010B	Magnesium	5550		5820		4.7%
6010B	Potassium	777		1300		50.4%
6010B	Sodium	852		869		2.0%
6010B	Zinc	15.8		19.5		21.0%
6020	Arsenic	4.57		4.52		1.1%
6020	Barium	132		139		5.2%
6020	Cadmium	0.510	U	0.543	U	NC
6020	Chromium	5.41		5.00		7.9%
6020	Cobalt	3.40		3.36		1.2%
6020	Copper	3.88		3.69		5.0%
6020	Lead	5.96		5.93		0.5%
6020	Manganese	119		115		3.4%
6020	Nickel	8.73		8.40		3.9%
6020	Selenium	1.02	U	1.09	U	NC
6020	Silver	3.24	U	3.09	U	NC
6020	Thallium	0.204	U	0.217	U	NC
6020	Vanadium	20.7		20.4		1.5%
7471A	Mercury	0.108	U	0.107	U	NC

Table 7-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Field Duplicate Analysis
Soil Background Study Report
White Sands Missile Range, New Mexico

Method	Parameter	140-BH05-3 Result (mg/kg)	Data Validation Qualifier	140-BH05-FD3 Result (mg/kg)	Data Validation Qualifier	RPD
6010B	Aluminum	2640		2990		12.4%
6010B	Antimony	0.754	U	0.735	U	NC
6010B	Beryllium	0.250		0.272		8.4%
6010B	Calcium	9880		19300		64.6%
6010B	Iron	5200		6120		16.3%
6010B	Magnesium	1810		2030		11.5%
6010B	Potassium	480		551		13.8%
6010B	Sodium	370		381		2.9%
6010B	Zinc	11.7		12.5		6.6%
6020	Arsenic	2.02		3.01		39.4%
6020	Barium	68		86.1		23.5%
6020	Cadmium	0.476	U	0.507	U	NC
6020	Chromium	1.07	J	2.03		NC
6020	Cobalt	2.78		4.16		39.8%
6020	Copper	1.53	J	2.79	J	NC
6020	Lead	3.19		4.36		31.0%
6020	Manganese	120		177		38.4%
6020	Nickel	3.81		6.08		45.9%
6020	Selenium	0.952	U	1.01	U	NC
6020	Silver	3.02	U	2.94	U	NC
6020	Thallium	0.19	U	0.203	U	NC
6020	Vanadium	8.12		11.9		37.8%
7471A	Mercury	0.0996	U	0.00982	J	NC

Table 7-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Field Duplicate Analysis
Soil Background Study Report
White Sands Missile Range, New Mexico

Method	Parameter	140-BH10-1 Result (mg/kg)	Data Validation Qualifier	140-BH10-FD1 Result (mg/kg)	Data Validation Qualifier	RPD
6010B	Aluminum	5700		5630		1.2%
6010B	Antimony	0.735	U	0.8	U	NC
6010B	Beryllium	0.371		0.384		3.4%
6010B	Calcium	40400		48000		17.2%
6010B	Iron	7350		7140		2.9%
6010B	Magnesium	2010		2140		6.3%
6010B	Potassium	1290		1250		3.1%
6010B	Sodium	37.1		38.8		4.5%
6010B	Zinc	13.5		13.4		0.7%
6020	Barium	93.7		105		11.4%
6020	Cadmium	0.518	U	0.529	U	NC
6020	Chromium	4.23		3.49		19.2%
6020	Cobalt	2.37	J	2.06	J	NC
6020	Copper	3.70		3.04	J	NC
6020	Lead	4.95		4.37		12.4%
6020	Manganese	61.0		56.9		7.0%
6020	Nickel	6.03		5.90		2.2%
6020	Selenium	1.04	U	1.06	U	NC
6020	Silver	2.94	U	3.20	U	NC
6020	Thallium	0.106	J	0.212	U	NC
6020	Vanadium	11.3		10.7		5.5%
7471A	Mercury	0.104	U	0.105	U	NC

Table 7-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Field Duplicate Analysis
Soil Background Study Report
White Sands Missile Range, New Mexico

Method	Parameter	140-BH12-2 Result (mg/kg)	Data Validation Qualifier	140-BH12-FD2 Result (mg/kg)	Data Validation Qualifier	RPD
6010B	Aluminum	2410		3010		22.1%
6010B	Antimony	0.751	U	0.728	U	NC
6010B	Beryllium	0.220		0.239		8.3%
6010B	Calcium	2640		2860		8.0%
6010B	Iron	4950		5500		10.5%
6010B	Magnesium	898		993		10.0%
6010B	Potassium	472		562		17.4%
6010B	Sodium	235		232		1.3%
6010B	Zinc	9.27		10.5		12.4%
6020	Arsenic	1.43	J	1.28	J	NC
6020	Barium	24.7		22.4		9.8%
6020	Cadmium	0.5	U	0.499	U	NC
6020	Chromium	3.2		2.54		23.0%
6020	Cobalt	1.77	J	1.44	J	NC
6020	Copper	2.13	J	1.66	J	NC
6020	Lead	3.93		3.03		25.9%
6020	Manganese	74.1		57		26.1%
6020	Nickel	3.25	J	2.54	J	NC
6020	Selenium	1	U	0.999	U	NC
6020	Silver	3	U	2.91	U	NC
6020	Thallium	0.2	U	0.2	U	NC
6020	Vanadium	6.02		5.52		8.7%
7471A	Mercury	0.100	U	0.0996	U	NC

Table 7-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Field Duplicate Analysis
Soil Background Study Report
White Sands Missile Range, New Mexico

Method	Parameter	140-BH15-3 Result (mg/kg)	Data Validation Qualifier	140-BH15-FD3 Result (mg/kg)	Data Validation Qualifier	RPD
6010B	Aluminum	3810		3890		2.1%
6010B	Antimony	0.791	U	0.803	U	NC
6010B	Beryllium	0.361		0.359		0.6%
6010B	Calcium	27400		20700		27.9%
6010B	Iron	5470		5430		0.7%
6010B	Magnesium	3070		2990		2.6%
6010B	Potassium	884		902		2.0%
6010B	Sodium	1150		1110		3.5%
6010B	Zinc	13.2		12.8		3.1%
6020	Arsenic	4.00		4.43		10.2%
6020	Barium	66.8		73.6		9.7%
6020	Cadmium	0.522	U	0.534	U	NC
6020	Chromium	4.87		5.93		19.6%
6020	Cobalt	3.05		2.73		11.1%
6020	Copper	3.17		3.46		8.7%
6020	Lead	4.99		4.89		2.0%
6020	Manganese	93.8		78.4		17.9%
6020	Nickel	5.90		6.10		3.3%
6020	Selenium	1.04	U	0.540	J	NC
6020	Silver	3.16	U	3.21	U	NC
6020	Thallium	0.209	U	0.214	U	NC
6020	Vanadium	13.7		17.2		22.7%
7471A	Mercury	0.106	U	0.107	U	NC

% = *Percent.*

J = *Estimated. The analyte was detected and positively identified. The associated numerical value is the approximate concentration of the analyte in the sample and the bias is in determinable.*

mg/kg = *Milligrams per kilogram.*

NC = *Not Calculated. One or both of the results were not greater than the limit of quantitation.*

RPD = *Relative Percent Difference.*

U = *Not detected. The analyte was analyzed for but was not detected above the level of the associated value. The associated value is the Limit of Quantitation.*

WSMR = *White Sands Missile Range.*

Appendix A
NMED Correspondence

State of New Mexico
ENVIRONMENT DEPARTMENT
Hazardous Waste Bureau
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303
Telephone (505) 476-6000
Fax (505) 476-6030
www.nmenv.state.nm.us

BILL RICHARDSON
GOVERNOR

RON CURRY
SECRETARY

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

December 8, 2006

Thomas A. Ladd, Director
Environment and Safety Directorate
U.S. Army White Sands Missile Range
White Sands Missile Range,
New Mexico 88002-5000

RE: NOTICE OF DEFICIENCY (NOD)
PHASE III RCRA FACILITY INVESTIGATION (RFI) REPORT
MAIN POST MULTIPLE SITES (SWMUs 8-17, 21, 22, 80, 140, AND 156
WHITE SANDS MISSILE RANGE, EPA ID NO. NM2750211235
HWB-WSMR-06-003

Dear Mr. Ladd:

The New Mexico Environment Department (NMED) reviewed the Department of the Army's (Permittee) *Phase III RCRA Facility Investigation (RFI) Report Main Post Multiple Sites SWMUs 8-17, 21, 22, 80, 140, and 156*, dated May 2006. The Permittee must address the following comments before any of the Solid Waste Management Units (SWMUs) in the report can be considered for a Corrective Action Complete determination.

COMMENT 1

The primary constituent of concern at the subject SWMUs is arsenic. In most cases, the arsenic levels detected in soils collected form the SWMUs are significantly greater than background. The established background mean value of 2 mg/kg arsenic appears to be low and atypical of regional, naturally occurring arsenic levels. It appears that an inappropriate background level may have been established as opposed to their being elevated levels of arsenic resulting from site activities at these SWMUs. If an appropriate background concentration for arsenic cannot be established and used to demonstrate that site concentrations are in fact representative of naturally occurring levels, then industrial closure may be warranted for all or most of the SWMUs contained in the report.

A primary concern of NMED is that the Permittee concludes that the background data are not of

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a similar population to the SWMU and, therefore, are not appropriate for comparison purposes. It is possible that the background samples analyzed were collected from fill material, either native to the area or not native to the sites, based on the fact that the background samples appear to have been collected very close to the edges of the roadways. If this is the case, resulting background values could be significantly different from the concentrations detected at the SWMUs.

To investigate the inappropriate background values, the Permittee must address the following:

- Provide a detailed description of the soil samples that were used to establish background values. Appendix B of the September 2004 *Final Background Soils RCRA Facility Investigation Report for the Main Post* provided Main Post soil descriptions as described in the *Soil Survey for White Sands Missile Range*. These descriptions are not adequate to determine if fill was sampled or some other type of biased sampling was conducted,
- Address the specific geologic units at each SWMU and provide a discussion of the differences between the soil/geology at each SWMU as compared to the background sample soil/geology, and
- If the SWMUs and background samples were collected from different soil/geologic units, discuss whether or not additional background sampling (perhaps for each SWMU) is warranted to establish background reference values appropriate for each soil type present at each SWMU.

COMMENT 2 (Section 4.2.6.)

After completion of additional soil removal activities at SWMU 21 to reduce lead and total petroleum hydrocarbon (TPH) contamination, confirmation samples were collected from the east and west sidewalls and the base of the excavation area. As noted in Table 10, arsenic was included as an analyte for analysis. The results from the confirmation sampling, as summarized in Table 10, indicate that arsenic levels were between 1.21 mg/kg and 1.71 mg/kg. These levels of arsenic are significantly lower than the confirmation samples collected and summarized in Table 8 for the same SWMU. Further, the significance of the difference in magnitude between these two sets of arsenic sample data for the same site is contrary to the conclusion that the background sample population and the SWMU 21 sample population are different. The discussion of the background comparison provided on page 25 indicates that the mean Phase III arsenic concentration of 10.9 mg/kg is not due to site activities but is representative of a different background. However, the second set of confirmation samples for arsenic at the same site were below the established background concentration of 2.0 mg/kg.

The Permittee must address why there is such a discrepancy between arsenic data collected during the two separate confirmation sampling events at SWMU 21.

COMMENT 3 (Section 5.0)

Table 28 presents the highest concentration with an exposure scenario depth for each SWMU that was used in the baseline risk assessment. For those SWMUs where the exposure point

concentration (EPC) was based upon either RFI Phase I or Phase II data, the EPC could not be verified, as these data were not provided with the report. However, there appear to be discrepancies related to the EPCs for SWMU 21. An EPC of 9.03 mg/kg is listed for all three receptors. In reviewing the SWMU 21 data provided in Table 8 on page 24, a datum of 9.03 mg/kg is not listed. In addition, the human health evaluation used 16 mg/kg as the EPC (i.e., the 95% UCL) for arsenic, while the ecological risk assessment identified an outlier in the data and stated that the 95% UCL should be 8.9 mg/kg. Further, Table 8 indicates the following concentrations for the resident, industrial worker, and construction worker, respectively: 27.1 mg/kg, 27.1 mg/kg, and 10.6 mg/kg.

The Permittee must clarify the discrepancies in the EPC listed in Section 4.0 versus Section 5. In addition, clarify why the confirmation data provided in Table 8 were not applied in determining the EPCs for SWMU 21.

COMMENT 4 (Section 5.2)

In determining the UCL for surface soil at SWMU 21, the datum of 27.1 mg/kg (arsenic) was indicated as being an outlier. However, it does not appear that any statistical tests were conducted to confirm that this datum should be labeled as an outlier. A simple test based upon the median of absolute deviation about the median was applied to determine if the 27.1 mg/kg datum is an outlier. The results of this cursory analysis indicated that it is not an outlier. (Refer to http://ewr.cee.vt.edu/environmental/teach/smprimer/outlier/outlier.html). Another simple test is to apply two or 2.5 times the standard deviation plus the mean. Applying the factors of two and 2.5 results in a value of 25.26 mg/kg and 28.92 mg/kg, respectively. It is, therefore, not clear whether or not this datum is an outlier. Given the sample number of sample points, it appears that there may not be sufficient data to conduct a robust outlier test.

The Permittee must justify how the datum of 27.1 mg/kg was deemed an outlier. It is also noted that for the comparison to NMSSLs, the datum of 27.1 mg/kg was conservatively included in the derivation of the UCL (Page 26 of the report). However, in developing the EPC for the baseline risk assessment, this datum was excluded from the analysis. The Permittee must explain why this datum was not treated consistently throughout the report.

COMMENT 5 (Section 5.2)

Table 29 presents the EPC that were used in the baseline risk assessment. It is noted that the table lists the EPC for arsenic at SWMU 14-15 as 6.37 mg/kg. However, in the spreadsheet associated with Appendix I (Exposure Calculations Age-Weighted Resident), the EPC applied at SWMUs 14-15 was 9.3 mg/kg.

The Permittee must clarify this discrepancy.

COMMENT 6

For any metal that was detected above current background and at concentrations between residential and industrial NMSSLs, the Permittee may choose to petition for Corrective Action Complete with Controls status rather than conduct additional corrective measures to achieve residential clean up levels.

The Permittee must respond within 90 days of receipt of this letter. If you have any questions regarding this letter, please call Cheryl Frischkorn. The NMED Hazardous Waste Bureau is in the process of switching to a new phone system. On or about December 7, 2006 the phone number for Cheryl Frischkorn will change from the current number (505-428-2550) to the new number (505-476-6058). The NMED Hazardous Waste Bureau's main number will be (505) 476-6000.

Sincerely,

James P. Bearzi
Chief
Hazardous Waste Bureau

JPB:caf

cc: J. Kieling, NMED HWB
D. Cobrain, NMED HWB
C. Frischkorn, NMED HWB
J. Gallegos, WSMR
File: Reading File & White Sands Missile Range 2006 File
HWB-FB-06-003

State of New Mexico
ENVIRONMENT DEPARTMENT
Hazardous Waste Bureau
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303
Telephone (505) 476-6000
Fax (505) 476-6030
www.nmenv.state.nm.us

BILL RICHARDSON
GOVERNOR

RON CURRY
SECRETARY

CINDY PADILLA
DEPUTY SECRETARY

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

January 24, 2007

Thomas A. Ladd, Director
Environment and Safety Directorate
U.S. Army White Sands Missile Range
White Sands Missile Range, New Mexico 88002-5000

RE: RESPONSE TO NOTICE OF DEFICIENCY (NOD) RESPONSE
FINAL BACKGROUND SOILS
RCRA FACILITY INVESTIGATION (RFI) REPORT
FOR THE MAIN POST
WHITE SANDS MISSLE RANGE, NEW MEXICO, EPA ID NO. NM2750211235
HWB-WSMR-04-012

Dear Mr. Ladd:

The New Mexico Environment Department (NMED) has received the Department of the Army's (Permittee) January 4, 2007 response to NMED's December 3, 2005 Notice of Deficiency.

As is, the soil background values for arsenic do not appear to be representative of local and/or regional background. This is indicated when comparing the Permittee's calculated background value for arsenic to analytical data from soil samples collected from SWMUs at the Main Post. The Permittee's calculated background value for arsenic is below the residential New Mexico Soil Screening Level (NMSSL) and also less than calculated arsenic background concentrations at two nearby facilities (NASA WSTF and Ft. Bliss). Based on the current data, the Permittee can not achieve a corrective action complete without controls determination for many Main Post SWMUs because the arsenic concentrations detected in soil samples at these SWMUs are above residential NMSSLs and the Permittee's calculated soil background value.

The Permittee has several options regarding the background soil study conducted at the Main Post and all the Main Post Solid Waste Management Units (SWMUs) expected to get corrective action complete determinations.

1. The Permittee may conduct another soil background study for the entire Main Post. If the Permittee chooses this option, the Permittee must submit a Work Plan for NMED

approval prior to conducting the study.

2. The Permittee may calculate SWMU-specific soil background values for those SWMUs where one or several inorganic constituents were detected above the current background value and residential NMSSLs. The background calculation must be based on samples collected from locations that can be demonstrated to be unaffected by contaminant releases.

Either of these options may result in corrective action complete without controls determinations if inorganic constituents are detected below approved background values or residential NMSSLs.

3. The Permittee may use the results of current background soil study for the Main Post as it is. Several SWMUs at the Main Post could qualify for a corrective action complete with controls determination; whether or not a risk assessment is performed. The SWMUs would remain on the permit until the Permittee could demonstrate that constituents detected at these SWMUs were below approved background values or residential NMSSLs. NMED accepts the results of the current background soil study for the Main Post; however, with reservations.

If you have any questions regarding this letter, please contact Cheryl Frischkorn at (505) 476-6058.

Sincerely,

for

John E. Kieling
Manager
Permits Management Program

JEK: caf

cc: D. Cobrain, NMED HWB
C. Frischkorn, NMED HWB
Jose Gallegos, WSMR
File: White Sands Missile Range 2007 and Reading File

Appendix B
Field Documentation

Appendix B1
Field Activity Daily Logs

TAILGATE SAFETY MEETING

Division/Subsidiary E & I Facility Whites Sands Missile Range

Date March - 19 - 2012 Time 11 00 Job Number 739791

Customer US Army DOD Address: WSMR Las Cruces NM

Specific Location WSMR - Main Post & WSMR # 84

Type of Work Utility Clearence & Direct Push Sampling

Chemicals Used Motor fuels,

SAFETY TOPICS PRESENTED

Protective Clothing/Equipment Level D PPE - gloves, hard hat, Reflective wear safety glasses, safety Boots, Hearing Protection as needed, gloves

Chemical Hazards Fuel, motor fluids,

Physical Hazards Slips / Trips / Falls / Pinch points / wind / Insects / Animals

Emergency Procedures call 1-575-678-1234

Hospital / Clinic Memorial Medical Phone ( ) Paramedic Phone ( ) 911

Hospital Address Telshore & University Dr - Las Cruces, NM

Special Equipment

Other

ATTENDEES

NAME PRINTED	SIGNATURE
Rob Helton	Rob Helton
Rachel Daly	Rachel Daly
Caitlin Lalhance	[illegible]
Kenneth White	Kenneth White
Jason Tarbert	[illegible]
[illegible]	[illegible]

Meeting conducted by:

James Viyerust
NAME PRINTED

SIGNATURE

Supervisor Flores, Dale

Manager [illegible]

36-8-85

JOB SAFETY ANALYSIS WORKSHEET FORM

Shaw®

DATE: 3/9 2012
JOB#: 139741
PERMIT#:
ISSUED BY: Vigerust
SUPERVISOR: Dale Flores

Location of Job WSMR –
(Unit/Location on Project): WSMR – #84

Job Task Analyzed Site utility Clearence – Direct Push Sampling

Required PPE:
gloves safety shoes
hard hat safty glasses

Safety Access/ Location

Safe Haven: Basement
Wind Direction: Northerly
Evacuation Route: To main post
Assembly Point:: @ Truck

Supervisor of Work:
JSA Prepared By: James Vigerust
Are other crews in area? NO

New:	✓
Revised:	

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

Job Task (What you are doing)	Audit the Job: Audit Time:
Mob To Site	
Site utility Clearence	
site setup	
Direct Push Sampling at Specific Sites	

Potential Hazards	Supervisor's Comments:
Slip – Trips – falls	
Animals	
Insects	
Noise	
Enviromtal wind	

Recommended Action or Procedure	Supervisor's Initials:
If you get Resistance → Remove To new Location	
If we strike an ~~one~~ utility Back off call utility Emergency # on Dig permits	

Crew Name Signatures:		
Rob Hall	[illegible]	[illegible]
Rachel Daly	Kenneth White	[illegible]

JOB SAFETY ANALYSIS CHECKLIST FORM

Shaw®

DATE:
JOB#:
PERMIT#:
ISSUED BY:
SUPERVISOR:

Job Analyzed: Direct Push Sampling / Setup. Project Name: WSMR-#84

Consider the following and check the items which apply to the job, then review with the work crew.

PERMITS
- ___ Excavation
- ___ Cold Work
- ___ Hot Work
- ___ Confined Space Entry Permit
- ___ All Conditions Met
- ___ Signed-off When Complete
- ✓ Other: Utility Easement

PPE
- ___ Chemical Protective Gloves
- ___ Leather Gloves
- ___ Special Purpose Gloves (e.g. Whizards)
- ___ Chemical Protective Coveralls
- ___ Acid Suit
- ___ Chemical protective Boots
- ___ Chemical Splash Goggles
- ___ Face Shield
- ___ Respirator
- ___ Fresh Air Ventilation
- ___ Hearing Protection
- ___ Safety Harness
- ___ Burning Goggles/Welder's Helmet
- ___ Other: ___

TOOLS
- ___ Current Inspection
- ✓ Proper Tools for the Job
- ✓ Good Tool Condition
- ___ Qualifications, e.g. explosive actuated tool
- ___ Other: ___

EMERGENCY EQUIPMENT
- ✓ Fire Extinguishers
- ___ Safety Shower/Eyewash
- ✓ Evacuation Route Mapped
- ___ Other: ___

ACCESS
- ___ Scaffold (properly inspected ____)
- ___ Scaffold Training
- ___ Ladder (HS 302 followed)
- ___ Man-lift
- ___ Personnel Basket (inspected/approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other: ___

WELDING
- ___ Flash-burns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other: ___

OVERHEAD WORK
- ___ Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other: ___

ELECTRICAL
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- ___ GFCI Test
- ___ Assured Grounding
- ___ Extension Cord Inspection
- ___ Other: ___

LIFTING
- ___ Forklift
- ___ Boom Truck
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chain-fall
- ___ Proper Rigging Practices
- ___ Manual Lifting
- ___ Condition of Equipment
- ___ Operator Certification

DRILLING
- ✓ Underground Utilities
- ✓ Overhead Hazards
- ✓ Drill Rig Inspected
- ___ Air Monitoring
- ✓ Emergency Procedures
- ___ Other: ___

HAZARDS (ENVIRONMENTAL)
- ✓ Cold Stress
- ✓ Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surfaces or Materials
- ___ Inadequate Lighting
- ___ Irritating Plants
- ✓ Noise
- ✓ Heavy Weather
- ✓ Insects/Animals
- ___ Other: ___

HAZARDS (CHEMICALS)
- ___ Chemical Burn Skin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contact

HAZARDS (BODY)
- ___ Fall Potential
- ✓ Pinch Points
- ✓ Slip-Trip Potential
- ___ Other: ___

OTHER WORK IN AREA
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other: ___

CONFINED SPACE ENTRY
- ___ Permit Required
- ___ Permit Completed
- ___ Personnel Trained
- ___ Rescue Services Available

EXCAVATION
- ___ Permit Completed
- ___ Competent Person Supervising
- ___ Underground Utilities
- ___ Overhead Hazards
- ___ Soils Tested
- ___ Heavy Equipment Inspected
- ___ Perimeter Protection
- ___ Daily Inspections
- ___ Protective Systems
- ___ Air Monitoring

SUPERVISOR/FOREMAN RECOMMENDATIONS:

Shaw® Shaw Environmental, Inc.

Daily Report: Health & Safety

Project Number: 139791 **Date:** 3-19-2012

Project Name: WSMR - Background sampling

Work Areas Checked:

Primary Work Area (Base)	✓	First Aid Kits (weekly)	✓
Communications	✓	Eye Wash (weekly)	✓
Ladders (monthly)	NA	Fire Extinguishers (monthly)	✓
Vehicles (weekly)	✓	Excavations	NA
Heavy Equipment (daily)	NA	Hillside / Canyon	NA
Site & Storage Trailers	✓	Housekeeping	✓

Daily Activities: 0630 @ Shaw office Albuquerque NM, Drove to WSMR site office for work
1300 At Shaw Office - 1310 Tailgate - with JR Drilling - UXO Video Shown
1349 leave office for site 84 for utility clearance. Temp/weather Balloons.
1420 @ site for clearance
1655 off site

Trucks 101976 10777, (5) JR Ready Rig X(2)
(If needed, document additional information on reverse side of form)

Time Of Daily Meeting: 1210 P.P.E. Level: D

Weather Conditions: 10 AM windy cloudy 43°F
1349. windy cloudy snow wc 31°F

Equipment Inspections: Drill Rig

Accidents / Incidents / Violations Of Procedures: none

Monitoring Results: **if applicable, see reports for details**

Personnel on site: **see visitor's log and daily meeting roster**

Completed By:

Site Safety Officer

Shaw® Shaw Environmental, Inc.

FIELD ACTIVITY DAILY LOG

DAILY LOG	DATE	3	19
	NO.	1	
	SHEET	1	OF 1

PROJECT NAME: WSMR Background Sampling

PROJECT NO.: 139791

FIELD ACTIVITY SUBJECT: Sampling WSMR 8/9

DESCRIPTION OF DAILY ACTIVITIES AND EVENTS:

0630 Leave Albuquerque office - Fueled truck in Tor C due to Land Fill
1200 at WSMR unloading equipment
1349 at Basement office for Tailgate & WSMR-UXO Training
1420 clearing sites sample points
1559 All areas cleared & Jason Trabet Received message from WSMR COR All Base personnel being sent home for weather issues
1607 all off Site enroute to Basement
1621 at basement
1647 all materials Loaded off - Tied-Down Samples Secured Samples -
1655 cleaned up Area
1700 Leave Building 126 for hotel

3/19/2012

VISITORS ON SITE: None

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS: None

WEATHER CONDITIONS: cold & windy

IMPORTANT TELEPHONE CALLS: none

SHAW E&I PERSONNEL ON SITE: Vincent Taibert Flores Daily Lalanes

SIGNATURE:

DATE: 3-19-2012

327C-12-98

Shaw® Shaw Environmental, Inc.

FIELD ACTIVITY DAILY LOG

DAILY LOG			
DATE	3	19	12
NO.			
SHEET	1 OF 1		

PROJECT NAME: White Sands Missile Range ERS

PROJECT NO.: 139791

FIELD ACTIVITY SUBJECT: MOB for background Soil Sampling / Soil Sample Collection LC-37

DESCRIPTION OF DAILY ACTIVITIES AND EVENTS:

1132 Arrive on Main Post → Check in w/ Benito Avalos. Shaw Personnel on site Daly, LaChance, Tarbert, Flores, Vigeurst (Stakes).
1148 At SUBWAY Rustin Baca Phones to inform Shaw Benito Wants to meet w/us before starting. JR arriving onsite
1238 At Benito's office to discuss background locations at LC-37. Benito had concerns regarding to background locations relative to Sumu-84. Revisiting locations with Benito / Rustin and concerned locations are good. Remaining Crew and JR Drilling are reviewing HAS Plan.
1335 Return to Basement and Jamor Vigeurst conducts Safety briefing.
1342 Depart for LC-37.
1420 At LC-37, Walk w/ crew to find stakes. Setting up at LC-37002
1435 James Vigeurst & Bob Flores depart to clear all boring locations with Schwenstdt.
1800 Return to staging area, All locations are cleared for metal to 5 feet. Jason informed me that Benito called and sent contractor & Base personnel home due to inclement weather. Pack up and depart site.
1625 Return to Basement off load supplies eqpt.
1638 Depart Site for hotel. End DAR

DAR

VISITORS ON SITE: Rustin Baca

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS: N/A

WEATHER CONDITIONS: Windy, Clear to pt Cloudy

IMPORTANT TELEPHONE CALLS: NONE

SHAW E&I PERSONNEL ON SITE: P. Flores, R. Daly, C. LaChance, J. Vigeurst, J Tarbert

SIGNATURE: [signature] DATE: 3/19/2012

327C-12-98

Shaw™ Shaw E & I, Inc.

FIELD ACTIVITY DAILY LOG

DAILY LOG	DATE	3	19	12
	NO.			
	SHEET	1	OF	1

PROJECT NAME: WSMR

PROJECT NO.: 139791

FIELD ACTIVITY SUBJECT: Background Sampling at SWMU 140

DESCRIPTION OF DAILY ACTIVITIES AND EVENTS:

0700 - Depart office for White Sands Missile Range
1130 - Arrive at WSMR, prep for sampling
1200 - Break for lunch
1230 - D. Flores and I meet w/ B. Avalos and R. Baca to discuss points at SWMU 140.
1340 - Tailgate safety meeting and JSA given by J. Vigerust
1430 - Arrive at SWMU 140, prep for boring and sampling
1450 - Begin sampling at 140-BH02
1516 - Complete sampling at 140-BH02
1520 - Begin boring and sampling at 140-BH03
1545 - Complete sampling at 140-BH03. Receive message from B. Avalos, base being sent home due to inclement weather. Stop sampling for the day, begin clean up, return to Main Post.
1643 - Return to bldg. 126 and unpack. Place samples on ice in cooler. Depart base for hotel, end of day.

3/19/12

VISITORS ON SITE:
None

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:
None

WEATHER CONDITIONS:
AM - Sunny, some clouds 50's
PM - Cloudy, windy, some wintery mix w/ hail

IMPORTANT TELEPHONE CALLS:
B. Avalos - 1545

SHAW E & I PERSONNEL ON SITE: J. Tarbert, R. Daly, C. LaChance, D. Flores, J. Vigerust

SIGNATURE:

DATE: 3/19/12

327D-6-02

Shaw™ Shaw E & I

Tailgate Safety Meeting Form

Project Name/Number: _____ Date: 3-21-2012 Time: 0700

Client: WSMR Envior.

Work Activities: Direct Push sampling of STP

Hospital Name/Address: Memorial Medical Hospital Talsha & University

Hospital Telephone No.: 911 Ambulance Telephone No.: 911

Safety Topics Presented

Chemical Hazards: None - motor fuel

Physical Hazards: Slips / Trips / Falls / Noise / Environmental Plants, Insects, Animals, other items.

Personal Protective Equipment:

Activity: Direct Push PPE Level: Level D

Activity: Site utility walk PPE Level: Level D

Activity: _____ PPE Level: _____

Activity: _____ PPE Level: _____

Activity: _____ PPE Level: _____

New Equipment: None

Other Safety Topic(s): _____

Attendees

NAME PRINTED	SIGNATURE
CAITLIN LACHANCE	Caitlin Lachance
Rachel Daly	Rachel Daly
Dale Flores	[illegible]
Rob Helton	Rob Helton
Kenneth White	Kenneth White
S. MATLAPUDI	[illegible]
Jason Tarbert	[illegible]

Meeting conducted by:

James Vigeant

JOB SAFETY ANALYSIS WORKSHEET FORM

Shaw®

DATE: 3-21-2012
JOB#: 139781
PERMIT#:
ISSUED BY: Vigenest
SUPERVISOR: Dale Flores

Location of Job (Unit/Location on Project): WSAR STP		**Job Task Analyzed** Backround Sampling
Required PPE: Level D mod	**Safety Access/ Location**	Supervisor of Work: Dale Flores
	Safe Haven:	JSA Prepared By: James Vigenest
	Wind Direction:	Are other crews in area?
Pre-Job Preparation	Evacuation Route:	
1. Fill out JSA 2. Review JSA (EVERYONE) 3. Sign JSA (EVERYONE)	Assembly Point::	New: ✓ Revised:

Job Task (What you are doing)	Audit the Job: Audit Time:
Site utility work Site Direct Push Sampling.	

Potential Hazards	Supervisor's Comments:
Slips - Trips - Falls Noise Footing Animals Plants Insects	

Recommended Action or Procedure	Supervisor's Initials:

Crew Name Signatures:		
Rachel Daly	Dale Flores	[illegible]
[illegible]	[illegible]	
[illegible]		

JOB SAFETY ANALYSIS CHECKLIST FORM

Shaw®

DATE: 3-21-2012
JOB#: 137741
PERMIT#:
ISSUED BY: Vigerust
SUPERVISOR: Flores

Job Analyzed: DPS -

Project Name: WSSMR

Consider the following and check the items which apply to the job, then review with the work crew.

PERMITS
- ✓ Excavation
- Cold Work
- Hot Work
- Confined Space Entry Permit
- All Conditions Met
- Signed-off When Complete
- Other:

PPE
- Chemical Protective Gloves
- ✓ Leather Gloves
- Special Purpose Gloves (e.g. Whizards)
- Chemical Protective Coveralls
- Acid Suit
- Chemical protective Boots
- Chemical Splash Goggles
- Face Shield
- Respirator
- Fresh Air Ventilation
- ✓ Hearing Protection
- Safety Harness
- Burning Goggles/Welder's Helmet
- Other: Leveld

TOOLS
- ✓ Current Inspection
- * Proper Tools for the Job
- Good Tool Condition
- Qualifications, e.g. explosive actuated tool
- Other:

EMERGENCY EQUIPMENT
- ✓ Fire Extinguishers
- Safety Shower/Eyewash
- Evacuation Route Mapped
- Other:

ACCESS
- Scaffold (properly inspected ____)
- Scaffold Training
- Ladder (HS 302 followed)
- Man-lift
- Personnel Basket (inspected/approved)
- Operator Training
- Special Provisions
- Other:

WELDING
- Flash-burns
- Combustibles
- Spark Containment
- Shields
- Grounding
- Water Hose
- Fire Extinguisher
- Fire Blanket
- Fire Watch
- Sewer Covers
- Other:

OVERHEAD WORK
- Barricades
- Signs
- Hole Cover
- Handrail
- Other:

ELECTRICAL
- Locked & Tagged out
- Try Start/Stop Switch
- GFCI Test
- Assured Grounding
- Extension Cord Inspection
- Other:

LIFTING
- Forklift
- Boom Truck
- Load Chart
- Angle
- Crane
- Chain-fall
- Proper Rigging Practices
- Manual Lifting
- Condition of Equipment
- Operator Certification

DRILLING / DIRECT PUSH
- ✓ Underground Utilities
- Overhead Hazards
- ✓ Rig Inspected
- Air Monitoring
- Emergency Procedures
- Other:

HAZARDS (ENVIRONMENTAL)
- ✓ Cold Stress
- ✓ Heat Stress
- Heavy Objects
- Hot/Cold Surfaces or Materials
- Inadequate Lighting
- Irritating Plants
- ✓ Noise
- Heavy Weather
- ✓ Insects/Animals
- Other:

HAZARDS (CHEMICALS)
- Chemical Burn Skin/Eyes
- Flammable
- Ingestion
- Inhalation
- Skin Contact

HAZARDS (BODY)
- Fall Potential
- Pinch Points
- ✓ Slip-Trip Potential
- Other:

OTHER WORK IN AREA
- Others Working Overhead
- Type Work Others Doing
- PPE Due to Other Work
- Other:

CONFINED SPACE ENTRY
- Permit Required
- Permit Completed
- Personnel Trained
- Rescue Services Available

EXCAVATION
- Permit Completed
- Competent Person Supervising
- Underground Utilities
- Overhead Hazards
- Soils Tested
- Heavy Equipment Inspected
- Perimeter Protection
- ✓ Daily Inspections
- Protective Systems
- Air Monitoring

SUPERVISOR/FOREMAN RECOMMENDATIONS:

Shaw® Shaw Environmental, Inc.

FIELD ACTIVITY DAILY LOG

DAILY LOG	DATE	3	21	12
	NO.			
	SHEET 1 OF 2			

PROJECT NAME: WSMR

PROJECT NO.: 132791

FIELD ACTIVITY SUBJECT: Direct Push @ WSMR 30

DESCRIPTION OF DAILY ACTIVITIES AND EVENTS:

0545 - ON truck to get fuel -
0600 - at Chevron to get fuel
0610 - At Lowes for Screws
0620 - enroute to WSMR - For morning meeting
0655 - at site for morning meeting waiting on crew to get in
0700 - Tailgate & JSA, Daily Status meeting
0747 - Leaving for Bare wide sampling site "ON post".
To clear using metalic Detector.
0825 @ BH-11 Looking for Stake & cleared
0835 BH-12 Looking for Stake & cleared
0848 BH-13 Looking for Stake & Cleared
0850 BH-14 Looking for Stake & Clear
0853 BH-15 Looking for Stake & Cleared
0858 Leave for BH4 -
0915 BH4 Cleared
0924 BH5 Cleared
0926 BH6 Cleared
0930 BH-7 Cleared
0933 BH-8 Cleared
0936 BH9 Cleared
0939 BH10 cleared
0946 BH02 cleared
0959 BH03 cleared
1020 Finished Clearing Sites
1036 @ Buddy 125 offices to let Task Lead check email

VISITORS ON SITE:

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:

WEATHER CONDITIONS:
0545 - Dark & 32°F

IMPORTANT TELEPHONE CALLS:

SHAW E&I PERSONNEL ON SITE: Vincent Flores

SIGNATURE:

DATE: 3-21-12

327C-12-98

Shaw® Shaw Environmental, Inc.

FIELD ACTIVITY DAILY LOG

DAILY LOG				
	DATE	3	21	2012
	NO.			
	SHEET	2 OF 2		

PROJECT NAME: WSMR

PROJECT NO.: 139791

FIELD ACTIVITY SUBJECT: Direct Push set WSMR 30

DESCRIPTION OF DAILY ACTIVITIES AND EVENTS:

1104 enroute to STP sampling
1114 @ STP site with sampling crew - crew looking good sampled 9 Boreholes before taking lunch -
1300 @ STP for sampling
1635 complete sampling and Return To B-126
1700 off site

3/21/2012

VISITORS ON SITE:
B. Baca, I Gamboa

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:
NA

WEATHER CONDITIONS:
AM - cool 48°F slight Breeze
PM 64°F windy

IMPORTANT TELEPHONE CALLS:
NA

SHAW E&I PERSONNEL ON SITE: Vicente Flores

SIGNATURE:

DATE: 3-21-12

327C-12-98

Shaw™ Shaw E & I, Inc.

FIELD ACTIVITY DAILY LOG

DAILY LOG			
DATE	3	21	12
NO.			
SHEET	1	OF	1

PROJECT NAME: WSMR

PROJECT NO.: 139791

FIELD ACTIVITY SUBJECT: Direct push sampling at WSMR-30

DESCRIPTION OF DAILY ACTIVITIES AND EVENTS:

0705 - Arrive at WSMR, Tailgate safety meeting given by J. Vigerust
Prep for sampling
0813 - Begin sampling at 80-BH14
0827 - Complete sampling at 80-BH14
0838 - Begin sampling at 80-BH10
0900 - Complete sampling at 80-BH10, begin at 80-BH11
0926 - Complete sampling at 80-BH11
0933 - Begin sampling at 80-BH12
0957 - Complete sampling at 80-BH12, begin sampling at 80-BH13
1016 - Complete sampling at 80-BH13
1026 - Begin sampling at 80-BH09
1139 - Complete sampling at 80-BH06 and 80-BH05
1213 - Complete sampling at 80-BH04, Break for lunch
1320 - Begin sampling at 80-BH03
1340 - Sample from 9-10' at BH03 was accidentally disposed of, will bore new hole 1 foot west to collect 9-10' sample. R. Baca and I. Gamboa onsite.
1405 - Complete sampling at 80-BH03, begin sampling at 80-BH08
1437 - Complete sampling at 80-BH08, begin sampling at 80-BH01, R. Baca departs.
1526 - Complete sampling at 80-BH01 and 80 BH02
1540 - Begin sampling at 80-BH15
1616 - Complete sampling at 80-BH15, begin at 80-BH07
1635 - Complete sampling at 80-BH07 and take rinsate blank. Return to basement
1700 - Return to basement, pack samples in refridgerator end of day.

3/21/12

VISITORS ON SITE:
1340 - R. Baca + I. Gamboa

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:
None

WEATHER CONDITIONS:
AM - Clear, 40's
PM - High 60's, sunny, breezy

IMPORTANT TELEPHONE CALLS:
None

SHAW E & I PERSONNEL ON SITE: J. Tarbert, C. LaChance, R. Daly

SIGNATURE: DATE: 3/21/12

327D-6-02

Shaw™ Shaw E & I, Inc.

FIELD ACTIVITY DAILY LOG

DAILY LOG				
	DATE	3	23	12
	NO.			
	SHEET 1 OF 1			

PROJECT NAME: WSMR

PROJECT NO.: 139791

FIELD ACTIVITY SUBJECT: Sampling at Main Post and shipping samples

DESCRIPTION OF DAILY ACTIVITIES AND EVENTS:

0745 - Depart hotel for Zia Engineering & Environmental
0800 - Arrive at Zia for Amber Bottles
0830 - Depart Zia for WSMR
0900 - Arrive at WSMR-56, dimensions of sump are 3' x 3' x 3' with 3" concrete walls outside of those dimensions
0915 - Arrive at basement prep for sampling. Take TCLP samples for VOCs + SVOCs from WSMR-56 IDW. Take decon water samples from WSMR-56 water.
0930 - Tailgate safety meeting for geoprobe sampling.
0940 - Depart for site
1007 - Begin sampling at MP-BH13.
1032 - Complete sampling at MP-BH13, move to MP-BH15
1137 - Completed sampling at MP-BH15, moved to ~~get~~ MP-BH04. Moved point ~100 yds south and slightly west to avoid getting stuck and incompetent ground.
1145 - Probed two holes at new location, encountered boulders at about 4' bgs. Moved location about 25' east.
1240 - Moved MP-BH04 approximately 1/2 way between MP-BH03 & BH11 to avoid arroyo channel from Organ Mts and provide better coverage. Point is approximately 50 yds away from road entering base and upgradient. Opposite side of dirt road access has become disturbed stripped land.
1302 - Complete sampling at MP-BH04, return to basement
1730 - Complete logging samples and packing, depart WSMR for Albuquerque. End of day.

3/23/12

VISITORS ON SITE:
None

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:
1240 - Moved MP-BH04

WEATHER CONDITIONS:
Sunny, High 20's

IMPORTANT TELEPHONE CALLS:
1240 - called D. Flores to approve moving MP-BH04

SHAW E & I PERSONNEL ON SITE: J. Tarbert, C. LaChance

SIGNATURE:

DATE: 3/23/12

327D-6-02

JOB SAFETY ANALYSIS WORKSHEET FORM

Shaw®

DATE: 3-23-2012
JOB#: 139791
PERMIT#:
ISSUED BY:
SUPERVISOR:

Location of Job (Unit/Location on Project): WSMR Main Post

Job Task Analyzed Sampling with Geoprobe

Required PPE: Hard hat, gloves, safety toe boots safety glasses, vest

Safety Access/ Location

Safe Haven: Basement

Wind Direction:

Evacuation Route:

Assembly Point:: Shaw truck

Supervisor of Work:

JSA Prepared By: J. Tarbert

Are other crews in area? No

New: ✓

Revised:

Pre-Job Preparation

1. Fill out JSA
2. Review JSA (EVERYONE)
3. Sign JSA (EVERYONE)

Job Task (What you are doing)

Sampling for soil with Geoprobe direct push rig.

Audit the Job:

Audit Time:

Potential Hazards

Slips, trips, falls
Pinch points
Etiological
Heat stress

Supervisor's Comments:

Recommended Action or Procedure

Proper PPE
Mind on task

Supervisor's Initials:

Crew Name Signatures:

Kenneth White
Rob [illegible]
[illegible]

Shaw™ Shaw E & I

Tailgate Safety Meeting Form

Project Name/Number: 139791 Date: 3/23/12 Time: 0930

Client: AFCEE

Work Activities: Geoprobe sampling

Hospital Name/Address:

Hospital Telephone No.: Ambulance Telephone No.:

Safety Topics Presented

Chemical Hazards: ~~None~~ HNO_3 in rinse blank bottle, fuel oil

Physical Hazards: slips, trips, falls, pinch points, animals, insects, irritating plants

Personal Protective Equipment:

Activity: Sampling PPE Level: Level D

Activity: PPE Level:

Activity: PPE Level:

Activity: PPE Level:

Activity: PPE Level:

New Equipment:

Other Safety Topic(s):

Attendees

NAME PRINTED	SIGNATURE
Kenneth White	Kenneth White
Rob Helton	Rob Helton
Caitlin Lalhance	Caitlin Lalhance
Jason Tarbert	Jason Tarbert

Meeting conducted by: Jason Tarbert

JOB SAFETY ANALYSIS CHECKLIST FORM

DATE: 3/23/12
JOB#: 139791
PERMIT#:
ISSUED BY:
SUPERVISOR:

Job Analyzed: Geoprobe sampling **Project Name:** WSMR

Consider the following and check the items which apply to the job, then review with the work crew.

PERMITS
- ___ Excavation
- ___ Cold Work
- ___ Hot Work
- ___ Confined Space Entry Permit
- ___ All Conditions Met
- ___ Signed-off When Complete
- ___ Other: ___

PPE
- ___ Chemical Protective Gloves
- ___ Leather Gloves
- ___ Special Purpose Gloves (e.g. Whizards)
- ___ Chemical Protective Coveralls
- ___ Acid Suit
- ___ Chemical protective Boots
- ___ Chemical Splash Goggles
- ___ Face Shield
- ___ Respirator
- ___ Fresh Air Ventilation
- X Hearing Protection
- ___ Safety Harness
- ___ Burning Goggles/Welder's Helmet
- ___ Other: ___

TOOLS
- ___ Current Inspection
- X Proper Tools for the Job
- X Good Tool Condition
- ___ Qualifications, e.g. explosive actuated tool
- ___ Other: ___

EMERGENCY EQUIPMENT
- X Fire Extinguishers
- ___ Safety Shower/Eyewash
- ___ Evacuation Route Mapped
- ___ Other: ___

ACCESS
- ___ Scaffold (properly inspected ____)
- ___ Scaffold Training
- ___ Ladder (HS 302 followed)
- ___ Man-lift
- ___ Personnel Basket (inspected/approved)
- ___ Operator Training
- ___ Special Provisions
- ___ Other: ___

WELDING
- ___ Flash-burns
- ___ Combustibles
- ___ Spark Containment
- ___ Shields
- ___ Grounding
- ___ Water Hose
- ___ Fire Extinguisher
- ___ Fire Blanket
- ___ Fire Watch
- ___ Sewer Covers
- ___ Other: ___

OVERHEAD WORK
- ___ Barricades
- ___ Signs
- ___ Hole Cover
- ___ Handrail
- ___ Other: ___

ELECTRICAL
- ___ Locked & Tagged out
- ___ Try Start/Stop Switch
- ___ GFCI Test
- ___ Assured Grounding
- ___ Extension Cord Inspection
- ___ Other: ___

LIFTING
- ___ Forklift
- ___ Boom Truck
- ___ Load Chart
- ___ Angle
- ___ Crane
- ___ Chain-fall
- ___ Proper Rigging Practices
- ___ Manual Lifting
- ___ Condition of Equipment
- ___ Operator Certification

DRILLING / DIRECT PUSH
- X Underground Utilities
- X Overhead Hazards
- X Rig Inspected
- ___ Air Monitoring
- ___ Emergency Procedures
- ___ Other: ___

HAZARDS (ENVIRONMENTAL)
- ___ Cold Stress
- X Heat Stress
- ___ Heavy Objects
- ___ Hot/Cold Surfaces or Materials
- ___ Inadequate Lighting
- X Irritating Plants
- X Noise
- X Heavy Weather
- X Insects/Animals
- ___ Other: ___

HAZARDS (CHEMICALS)
- ___ Chemical Burn Skin/Eyes
- ___ Flammable
- ___ Ingestion
- ___ Inhalation
- ___ Skin Contact

HAZARDS (BODY)
- ___ Fall Potential
- X Pinch Points
- X Slip-Trip Potential
- ___ Other: ___

OTHER WORK IN AREA
- ___ Others Working Overhead
- ___ Type Work Others Doing
- ___ PPE Due to Other Work
- ___ Other: ___

CONFINED SPACE ENTRY
- ___ Permit Required
- ___ Permit Completed
- ___ Personnel Trained
- ___ Rescue Services Available

EXCAVATION
- ___ Permit Completed
- ___ Competent Person Supervising
- ___ Underground Utilities
- ___ Overhead Hazards
- ___ Soils Tested
- ___ Heavy Equipment Inspected
- ___ Perimeter Protection
- ___ Daily Inspections
- ___ Protective Systems
- ___ Air Monitoring

SUPERVISOR/FOREMAN RECOMMENDATIONS:

Shaw™ Shaw E & I, Inc.

FIELD ACTIVITY DAILY LOG

DAILY LOG			
DATE	3	22	12
NO.			
SHEET 1	OF	1	

PROJECT NAME: WSMR

PROJECT NO.: 139791

FIELD ACTIVITY SUBJECT: Direct push sampling at the Main Post

DESCRIPTION OF DAILY ACTIVITIES AND EVENTS:

0700 - Arrive at WSMR, tailgate safety meeting given by J. Vigerust
0800 - Arrive at MP-BH04, ground is too soft to get to point and/or sample. May have to return with dual tube core. Will attempt to sample other points
0838 - Begin sampling at MP-BH05
0915 - Complete sampling at MP-BH05, begin at MP-BH06
0936 - Complete sampling at MP-BH06, begin at MP-BH07
1020 - Complete sampling at MP-BH07, and move to MP-BH08. Move hole ~25' South to get into more stable ground. Begin hand augering.
1031 - In lieu of hand augering, used small diameter probe hammered into ground at 4 locations around the borehole. No obstructions detected. Begin geoprobe sampling at MP-BH08.
1054 - J. Vigerust probed at MP-BH09. Complete sampling at MP-BH08, begin at MP-BH09
1146 - Complete MP-BH09, begin at MP-BH10
1226 - Complete MP-BH10, begin at MP-BH01
1245 - Break for lunch
1300 - FFOR and WSMR-56 call
1400 - Return to site, began sampling at MP-BH02
1447 - Complete sampling at MP-BH02, begin at MP-BH03
1536 - Complete MP-BH03, begin MP-BH11
1608 - Begin MP-BH12, R. Baca on site
1630 - Complete sampling at MP-BH12, begin at MP-BH14. R. Baca departs
1700 - Complete sampling at MP-BH14, return to basement
1730 - Pack samples into refridgerator. Depart WSMR, end of day.

JT 3/22/12

VISITORS ON SITE:
1608 - R. Baca, Northwind

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:
~~None~~ JT 1020 - Moved MP-BH08

WEATHER CONDITIONS:
AM - Sunny, 50's
PM - Sunny, 70's

IMPORTANT TELEPHONE CALLS:
None

SHAW E & I PERSONNEL ON SITE: C. LaChance, J. Tarbert, J. Vigerust

SIGNATURE: J Tarbert

DATE: 3/22/12

327D-6-02

JOB SAFETY ANALYSIS WORKSHEET FORM

Shaw®

DATE: 3-22-2012
JOB#: 138791
PERMIT#:
ISSUED BY:
SUPERVISOR:

Location of Job (Unit/Location on Project): WSMR Background		**Job Task Analyzed** DPS
Required PPE: D-	**Safety Access/ Location**	Supervisor of Work: Jason Thyrott
	Safe Haven: B 126	JSA Prepared By: James Vigeant
	Wind Direction:	Are other crews in area? NO
Pre-Job Preparation	Evacuation Route:	
1. Fill out JSA 2. Review JSA (EVERYONE) 3. Sign JSA (EVERYONE)	Assembly Point:: B-126	New: ✓ Revised:

Job Task (What you are doing)	Audit the Job: Audit Time:
Direct Push sampling Sample Prep	

Potential Hazards	Supervisor's Comments:
Motor fuels Slips Noise Cuts / Scrapes	

Recommended Action or Procedure	Supervisor's Initials:
~~S~~	

Crew Name Signatures:		
x [illegible]	[illegible]	
[illegible]		
[illegible]		

[redacted]

TAILGATE SAFETY MEETING

Division/Subsidiary E+I Facility WSMR

Date 3/20/12 Time 0730 Job Number 139791

Customer _____ Address: _____

Specific Location WSMR-84 SWMU 140

Type of Work DPT Sampling

Chemicals Used Motor Fuel

SAFETY TOPICS PRESENTED

Protective Clothing/Equipment Level D

Chemical Hazards _____

Physical Hazards Slips, trips, falls, pinch points, wind, insects, animals, plants

Emergency Procedures 575-678-1234

Hospital / Clinic Memorial Medical Phone ( ) _____ Paramedic Phone ( ) 911

Hospital Address Telshor & University - Las Cruces, NM

Special Equipment _____

Other _____

ATTENDEES

NAME PRINTED	SIGNATURE
Kenneth White	Kenneth White
Rob Helton	Rob Helton
Rachel Daly	Rachel Daly
Dale Flores	Dale Flores
James Viyanest	James Viyanest

Meeting conducted by: Jason Tarbert

Supervisor (NAME PRINTED) Dale Flores

Manager (SIGNATURE) Dale Flores

36-8-85

JOB SAFETY ANALYSIS WORKSHEET FORM

Shaw®

DATE: 3-20-2012
JOB#: 139791
PERMIT#:
ISSUED BY: Vigerust
SUPERVISOR: Flores

Location of Job (Unit/Location on Project): WSMR-84	**Job Task Analyzed** Direct Push Sampling

Required PPE: Gloves, steel toes, hard hat safety glasses	**Safety Access/ Location**	Supervisor of Work:
	Safe Haven: Basement	JSA Prepared By: J. Torbert
	Wind Direction:	Are other crews in area? No
Pre-Job Preparation	Evacuation Route: To Main Post	
1. Fill out JSA		New: ✓
2. Review JSA (EVERYONE)	Assembly Point:: @Truck	Revised:
3. Sign JSA (EVERYONE)		

Job Task (What you are doing)	**Audit the Job:** Audit Time:
Mob to site	
Site Utility clearance	
Site setup	
Direct push sampling	

Potential Hazards	**Supervisor's Comments:**
Slips - trips - falls	
Animals	
Insects	
Noise	
Wind	
Plants	

Recommended Action or Procedure	**Supervisor's Initials:**

Crew Name Signatures:		
Rob [illegible]	[illegible]	[illegible]
Kenneth [illegible]	Rachel Daly	[illegible]

Shaw™ Shaw E & I, Inc.

FIELD ACTIVITY DAILY LOG

DAILY LOG	DATE	3	20	12
	NO.			
	SHEET	1	OF	2

PROJECT NAME: WSMR | PROJECT NO.: 139791

FIELD ACTIVITY SUBJECT: Direct Push sampling at SWMU-140

DESCRIPTION OF DAILY ACTIVITIES AND EVENTS:

0720 - Arrive at Building 126 on base
0730 - Tailgate safety meeting given by J. Tarbert. Depart for WSMR-84
0800 - Arrive at WSMR-84, prep for sampling
0817 - Begin sampling at 140-BH04
0840 - JR broke rod in BH04, abandoned hole and moved approximately 1 foot east and re bored hole.
0900 - Complete sampling at 140-BH04
0915 - Begin sampling at 140-BH05
0931 - Complete sampling at 140-BH05
0942 - Begin sampling at 140-BH01
1001 - Complete sampling at 140-BH01
1017 - Begin sampling at 140-BH06
1030 - Complete sampling at 140-BH06
1040 - Begin sampling at 140-BH07
1055 - Complete sampling at 140-BH07
1108 - Begin sampling at 140-BH08
1127 - Complete sampling at 140-BH08
1132 - Begin sampling at 140-BH09
1152 - Complete sampling at 140-BH09
1205 - Begin sampling at 140-BH10
1225 - Complete sampling at 140-BH10, break for lunch
1300 - Begin sampling at 140-BH13, R. Baca and S. Mathapudi on site
1330 - Complete sampling at 140-BH13
1352 - Begin sampling at 140-BH12, R. Baca departs site

VISITORS ON SITE:
1300 - R. Baca, Northwind/WSMR

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:
None

WEATHER CONDITIONS:
AM - Partly cloudy, low 40s
PM - Sunny, 50's

IMPORTANT TELEPHONE CALLS:
None

SHAW E & I PERSONNEL ON SITE: J. Tarbert, R. Daly, C. LaChance / Flores / Vigarest

SIGNATURE: [signature] DATE: 3/20/12

327D-6-02

Shaw® Shaw Environmental, Inc.

FIELD ACTIVITY DAILY LOG CONTINUATION SHEET

DAILY LOG				
	DATE	3	20	12
	NO.			
	SHEET 2 OF 2			

PROJECT NAME: WSMR

PROJECT NO.: 139791

FIELD ACTIVITY SUBJECT: Sampling at SWMU 140 (WSMR-84)

DESCRIPTION OF DAILY ACTIVITIES AND EVENTS:

1406 - Complete sampling at 140-BH12
1430 - Complete sampling at 140-BH11
1519 - Complete sampling at 140-BH15, took Field Duplicate. Begin sampling at 140-BH14
1538 - Complete sampling at 140-BH14
1614 - Return to Building 1216, pack samples into refrigerator. Log samples into EnviroData
1700 - Could not log in to EnviroData, will log samples tomorrow. End of day.

3/20/12

032B-12-98

Appendix B2
Soil Sample Collection Logs

Shaw Solutions

COC # 139791-SB004

Chain of Custody

Lab EWS
Lab Contact

Lab Phone 330-720-1061

Client US Army
W. O. TO-08, PO:620349
TAT 14 Days

Site Name WSMR - 84
Contact Name 1
Contact Phone

Bill To: Shaw Environmental and
Phone
Fax
Address Bill electronically to
City Baton Rouge
State Louisi Zip 70809

Results To: Mark Lyon
Phone 5052628920
Fax 5052628955
Address 2440 Louisiana Blvd NE
City Albuquerque
State NM Zip 87110

	Sample ID	Matrix	Wt/ Vol	Date-Time Collected	Filtered	Number Containers	Mercury by 7471A	Metals by 6010B	Metals by 6020							
						Container	G60W	G60W	G60W							
						Preservative	n	n	n							
✓	140-BH01-1	Soil		3/20/2012 9:47:00 AM		1	X	X	X							
✓	140-BH01-2	Soil		3/20/2012 9:53:00 AM		1	X	X	X							
✓	140-BH01-3	Soil		3/20/2012 9:57:00 AM		1	X	X	X							
✓	140-BH02-1	Soil		3/19/2012 2:55:00 PM		1	X	X	X							
✓	140-BH02-2	Soil		3/19/2012 3:07:00 PM		1	X	X	X							
✓	140-BH02-3	Soil		3/19/2012 3:12:00 PM		1	X	X	X							
✓	140-BH02-RB	Water		3/20/2012 3:10:00 PM		1	X	X	X							
✓	140-BH03-1	Soil		3/19/2012 3:25:00 PM		1	X	X	X							
✓	140-BH03-2	Soil		3/19/2012 3:32:00 PM		~~2~~ 1	X	X	X							
✓	140-BH03-3	Soil		3/19/2012 3:40:00 PM		1	X	X	X							
✓	140-BH03-FD2	Soil		3/19/2012 3:32:00 PM		1	X	X	X							
✓	140-BH04-1	Soil		3/20/2012 8:20:00 AM		1	X	X	X							
✓	140-BH04-2	Soil		3/20/2012 8:28:00 AM		1	X	X	X							
✓	140-BH04-3	Soil		3/20/2012 8:54:00 AM		1	X	X	X							
✓	140-BH05-1	Soil		3/20/2012 9:16:00 AM		1	X	X	X							
✓	140-BH05-2	Soil		3/20/2012 9:22:00 AM		1	X	X	X							
✓	140-BH05-3	Soil		3/20/2012 9:27:00 AM		1	X	X	X							
✓	140-BH05-FD3	Soil		3/20/2012 9:27:00 AM		~~2~~ 1	X	X	X							
✓	140-BH06-1	Soil		3/20/2012 10:19:00 AM		1	X	X	X							

Remarks/Comments
FedEx Express
Waybill No:
873013169492

Sampled By

Lab Use Only
Temp of Cooler when Received, C

1	2	3	4	5

COC Tape was present on outer package Y N
COC Tape was unbroken on outer package Y N
COC Tape ws present on sample Y N
COC Tape was unbroken on sample Y N

Received in good condition Y N
Labels indicate Properly Preserved Y N
Received within Holding Time Y N

Relinquished By	Date / Time	Received By	Date / Time	Relinquished By	Date / Time	Received By	Date / Time
Rachel Daly	1600 3/22/12						

Shaw

Shaw Solutions

COC # 139791-SB004

Chain of Custody

Lab EWS
Lab Contact
Lab Phone 330-720-1061

Client US Army
W. O. TO-08, PO:620349
TAT 14 Days

Site Name WSMR
Contact Name 1
Contact Phone

Bill To: Shaw Environmental and
Phone
Fax
Address Bill electronically to
City Baton Rouge
State Louisi Zip 70809

Results To: Mark Lyon
Phone 5052628920
Fax 5052628955
Address 2440 Louisiana Blvd NE
City Albuquerque
State NM Zip 87110

	Sample ID	Matrix	Wt/ Vol	Date-Time Collected	Filtered	Number Containers	Mercury by 7471A	Metals by 6010B	Metals by 6020							
						Container	G60W	G60W	G60W							
						Preservative	n	n	n							
✓	140-BH06-2	Soil		3/20/2012 10:24:00 AM		1	X	X	X							
✓	140-BH06-3	Soil		3/20/2012 10:27:00 AM		1	X	X	X							
✓	140-BH07-1	Soil		3/20/2012 10:44:00 AM		1	X	X	X							
✓	140-BH07-2	Soil		3/20/2012 10:49:00 AM		1	X	X	X							
✓	140-BH07-3	Soil		3/20/2012 10:53:00 AM		1	X	X	X							
✓	140-BH07-MS2	Soil		3/20/2012 10:49:00 AM		1	X	X	X							
✓	140-BH07-MSD2	Soil		3/20/2012 10:49:00 AM		1	X	X	X							
✓	140-BH08-1	Soil		3/20/2012 11:10:00 AM		1	X	X	X							
✓	140-BH08-2	Soil		3/20/2012 11:15:00 AM		1	X	X	X							
✓	140-BH08-3	Soil		3/20/2012 11:18:00 AM		1	X	X	X							
✓	140-BH09-1	Soil		3/20/2012 11:38:00 AM		1	X	X	X							
✓	140-BH09-2	Soil		3/20/2012 11:41:00 AM		1	X	X	X							
✓	140-BH09-3	Soil		3/20/2012 11:47:00 AM		1	X	X	X							
✓	140-BH09-MS2	Soil		3/20/2012 11:41:00 AM		1	X	X	X							
✓	140-BH09-MSD2	Soil		3/20/2012 11:41:00 AM		1	X	X	X							
✓	140-BH10-1	Soil		3/20/2012 12:08:00 PM		1	X	X	X							
✓	140-BH10-2	Soil		3/20/2012 12:12:00 PM		1	X	X	X							
✓	140-BH10-3	Soil		3/20/2012 12:15:00 PM		1	X	X	X							
✓	140-BH10-FD1	Soil		3/20/2012 12:08:00 PM		1	X	X	X							

Remarks/Comments
FedEx Express

Lab Use Only
Temp of Cooler when Received, C

1	2	3	4	5

COC Tape was present on outer package Y N
COC Tape was unbroken on outer package Y N
COC Tape ws present on sample Y N
COC Tape was unbroken on sample Y N

Received in good condition Y N
Labels Indicate Properly Preserved Y N
Received within Holding Time Y N

Relinquished By	Date / Time	Received By	Date / Time	Relinquished By	Date / Time	Received By	Date / Time

Sampled By

Shaw

Shaw Solutions

COC # 139791-SB004

Chain of Custody

Lab EWS
Lab Contact
Lab Phone 330-720-1061

Client US Army
W. O. TO-08, PO:620349
TAT 14 Days

Site Name WSMR
Contact Name 1
Contact Phone

Bill To: Shaw Environmental and
Phone
Fax
Address Bill electronically to
City Baton Rouge
State Louisi Zip 70809

Results To: Mark Lyon
Phone 5052628920
Fax 5052628955
Address 2440 Louisiana Blvd NE
City Albuquerque
State NM Zip 87110

	Sample ID	Matrix	Wt/ Vol	Date-Time Collected	Filtered	Number Containers	Mercury by 7471A	Metals by 6010B	Metals by 6020							
						Container	G60W	G60W	G60W							
						Preservative	n	n	n							
✓	140-BH11-1	Soil		3/20/2012 2:20:00 PM		1	X	X	X							
✓	140-BH11-2	Soil		3/20/2012 2:25:00 PM		1	X	X	X							
✓	140-BH11-3	Soil		3/20/2012 2:28:00 PM		1	X	X	X							
✓	140-BH12-1	Soil		3/20/2012 1:54:00 PM		1	X	X	X							
✓	140-BH12-2	Soil		3/20/2012 1:56:00 PM		1	X	X	X							
✓	140-BH12-3	Soil		3/20/2012 2:01:00 PM		1	X	X	X							
✓	140-BH12-FD2	Soil		3/20/2012 1:56:00 PM		1	X	X	X							
✓	140-BH13-1	Soil		3/20/2012 1:09:00 PM		1	X	X	X							
✓	140-BH13-2	Soil		3/20/2012 1:14:00 PM		1	X	X	X							
✓	140-BH13-3	Soil		3/20/2012 1:19:00 PM		1	X	X	X							
✓	140-BH14-1	Soil		3/20/2012 3:23:00 PM		1	X	X	X							
✓	140-BH14-2	Soil		3/20/2012 3:27:00 PM		1	X	X	X							
✓	140-BH14-3	Soil		3/20/2012 3:31:00 PM		1	X	X	X							
✓	140-BH14-MS3	Soil		3/20/2012 3:31:00 PM		1	X	X	X							
✓	140-BH14-MSD3	Soil		3/20/2012 3:31:00 PM		1	X	X	X							
✓	140-BH15-1	Soil		3/20/2012 2:49:00 PM		1	X	X	X							
✓	140-BH15-2	Soil		3/20/2012 2:57:00 PM		1	X	X	X							
✓	140-BH15-3	Soil		3/20/2012 3:01:00 PM		1	X	X	X							
✓	140-BH15-FD3	Soil		3/20/2012 3:01:00 PM		1	X	X	X							

Remarks/Comments
FedEx Express

Sampled By

Lab Use Only
Temp of Cooler when Received, C

1	2	3	4	5

COC Tape was present on outer package Y N
COC Tape was unbroken on outer package Y N
COC Tape ws present on sample Y N
COC Tape was unbroken on sample Y N

Received in good condition Y N
Labels indicate Properly Preserved Y N
Received within Holding Time Y N

Relinquished By	Date / Time	Received By	Date / Time	Relinquished By	Date / Time	Received By	Date / Time

Shaw

Shaw Environmental Solutions

COC # 139791-SB004

Chain of Custody

Lab EWS

Lab Contact

Lab Phone 330-720-1061

Client US Army

W. O. TO-08, PO:620349

TAT 14 Days

Site Name WSMR

Contact Name 1

Contact Phone

Bill To: Shaw Environmental and

Phone

Fax

Address Bill electronically to

City Baton Rouge

State Louisi Zip 70809

Results To: Mark Lyon

Phone 5052628920

Fax 5052628955

Address 2440 Louisiana Blvd NE

City Albuquerque

State NM Zip 87110

	Sample ID	Matrix	Wt/ Vol	Date-Time Collected	Filtered	Number Containers	Mercury by 7471A	Metals by 6010B	Metals by 6020							
Container							G60W	G60W	G60W							
Preservative							n	n	n							

Remarks/Comments

FedEx Express

Sampled By

Shaw

Lab Use Only

Temp of Cooler when Received, C

1	2	3	4	5

COC Tape was present on outer package Y N

COC Tape was unbroken on outer package Y N

COC Tape ws present on sample Y N

COC Tape was unbroken on sample Y N

Received in good condition Y N

Labels indicate Properly Preserved Y N

Received within Holding Time Y N

Relinquished By	Date / Time	Received By	Date / Time	Relinquished By	Date / Time	Received By	Date / Time

MUR42

FedEx Express US Airbill

FedEx Tracking Number 8730 1316 9492

Form ID No. 0215

1 From *Please print and press hard.*

Date 3/21/12 Sender's FedEx Account Number SENDER'S FEDEX ACCOUNT NUMBER ONLY

Sender's Name CAITLIN LACHANCE Phone (505) 262-8942

Company Shaw E & I

Address Building 163 Springfield St. Dept./Floor/Suite/Room

City White Sands Missile Range State NM ZIP 88002

2 Your Internal Billing Reference First 24 characters will appear on invoice. 139791 OPTIONAL

3 To Recipient's Name Stepanie Mossberg Phone (740) 373-4071

Company MICROBAC LABORATORIES, INC

Address 158 STARLITE DR Dept./Floor/Suite/Room
We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address
Use this line for the HOLD location address or for continuation of your shipping address.

City MARIETTA State OH ZIP 45750-5279

☐ HOLD Weekday FedEx location address REQUIRED. NOT available for FedEx First Overnight.

☐ HOLD Saturday FedEx location address REQUIRED. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

0422153928

Try FedEx® QuickShip at fedex.com
Access the shipping tools you need directly from Microsoft® Office Outlook®.

4a Express Package Service *To most locations. *Packages up to 150 lbs.*

- [x] FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.
- [ ] FedEx First Overnight — Earliest next business morning delivery to select locations.*
- [ ] FedEx 2Day — Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

4b Express Freight Service *To most locations. *Packages over 150 lbs.*

- [ ] FedEx 1Day Freight — Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 2Day Freight — Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 3Day Freight — Third business day.** Saturday Delivery NOT available.

FedEx 1Day Freight Booking No. CALL 1.800.332.8807

5 Packaging *Declared value limit $500.

- [ ] FedEx Envelope*
- [ ] FedEx Pak* — Includes FedEx Small Pak and FedEx Large Pak.
- [ ] FedEx Box
- [ ] FedEx Tube
- [x] Other

6 Special Handling and Delivery Signature Options

- [ ] SATURDAY Delivery — NOT available for FedEx Standard Overnight, FedEx Express Saver, or FedEx 3Day Freight.
- [ ] No Signature Required — Package may be left without obtaining a signature for delivery.
- [ ] Direct Signature — Someone at recipient's address may sign for delivery. *Fee applies.*
- [ ] Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. *Fee applies.*

Does this shipment contain dangerous goods?

One box must be checked.

- [x] No
- [ ] Yes — As per attached Shipper's Declaration.
- [ ] Yes — Shipper's Declaration not required.
- [ ] Dry Ice — Dry ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.

- [ ] Cargo Aircraft Only

7 Payment *Bill to:*

Enter FedEx Acct. No. or Credit Card No. below.

- [ ] Sender — Acct. No. in Section 1 will be billed.
- [x] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check

FedEx Acct. No. / Credit Card No. 157805967 Exp. Date

Total Packages	Total Weight	Total Declared Value†
2	80 lbs.	$ 100 .00

†Our liability is limited to $100 unless you declare a higher value. See back for details. By using this Airbill you agree to the service conditions on the back of this Airbill and in the current FedEx Service Guide, including terms that limit our liability.

605

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PULL AND RETAIN THIS COPY BEFORE AFFIXING TO THE PACKAGE. NO POUCH NEEDED.

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH01**

RFA / COC Number 139791-SB005

Sample Number **80-BH01-1**

Task

Sample Name **80-BH01-z-80-BH01-1-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1443

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RCD 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/21/12

Reviewed By / Dat 6/12/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH01**

RFA / COC Number 139791-SB005

Sample Number **80-BH01-2**

Task

Sample Name **80-BH01-z-80-BH01-2-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1448

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ → None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ → None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat [signature] 3/21/12

Reviewed By / Dat [signature] 6/12/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH01**

RFA / COC Number 139791-SB005

Sample Number **80-BH01-3**

Task

Sample Name **80-BH01-z-80-BH01-3-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1449

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RSD 2/28/12

Comments:

Sketch Location:

Logged By / Dat [signature] 3/21/12

Reviewed By / Dat [signature] 6/12/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH02**

RFA / COC Number 139791-SB005

Sample Number **80-BH02-1**

Task

Sample Name **80-BH02-z-80-BH02-1-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1500

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RLD 2/28/12

Comments:

Sketch Location:

Logged By / Dat J. Tarbert 3/21/12

Reviewed By / Dat Mark Lia 6/12/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH02**

RFA / COC Number 139791-SB005

Sample Number **80-BH02-FD1**

Task

Sample Name **80-BH02-z-80-BH02-FD1-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1506

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 0

QC Code **Field duplicates**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RCD 2/28/12

Comments: Field duplicate of 80-BH02-1

Sketch Location:

Logged By / Dat J. Tarbert 3/21/12

Reviewed By / Dat [signature] 6/12/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH02**

RFA / COC Number 139791-SB005

Sample Number **80-BH02-2**

Task

Sample Name **80-BH02-z-80-BH02-2-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1513

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat J. Tarbert 3/21/12

Reviewed By / Dat Marilyn 6/12/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH02**

RFA / COC Number 139791-SB005

Sample Number **80-BH02-3**

Task

Sample Name **80-BH02-z-80-BH02-3-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1516

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RAD 2/28/12

Comments:

Sketch Location:

Logged By / Dat J. Tarbert 3/21/12

Reviewed By / Dat Marlyn 6/12/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH03**

RFA / COC Number 139791-SB005

Sample Number **80-BH03-1**

Task

Sample Name **80-BH03-z-80-BH03-1-z**

Collection Date 3/21/12

Collection Time 1326

Sampling Method **Unknown**

Start Depth 0

Sample Type **Unknown**

Sample Purpose **Unknown**

End Depth 2

QC Code **Unknown**

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RaD 2/28/12

Comments:

Sketch Location:

Logged By / Dat [signature] 3/21/12

Reviewed By / Dat [signature] 6/12/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH03**

RFA / COC Number 139791-SB005

Sample Number **80-BH03-2**

Task

Sample Name **80-BH03-z-80-BH03-2-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1329

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat [signature] 3/21/12

Reviewed By / Dat [signature] 6/12/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH03**

RFA / COC Number 139791-SB005

Sample Number **80-BH03-3**

Task

Sample Name **80-BH03-z-80-BH03-3-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time ~~1337~~ ~~1337~~ 1355

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/21/12

Reviewed By / Dat 6/12/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH04**

RFA / COC Number 139791-SB005

Sample Number **80-BH04-1**

Task

Sample Name **80-BH04-z-80-BH04-1-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1158

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RCD 2/28/12

Comments:

Sketch Location:

Logged By / Dat Rachel Daly 3/21/12

Reviewed By / Dat Mat 6/12/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH04**

RFA / COC Number 139791-SB005

Sample Number **80-BH04-MS1**

Task

Sample Name **80-BH04-z-80-BH04-MS1-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1158

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 0

QC Code **Matrix spike**

End Depth 2

Sampling Equip

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RAD 2/28/12

Comments: Extra volume for matrix spike on 80-BH04-1

Sketch Location:

Logged By / Dat Rachel Daly 3/21/12

Reviewed By / Dat Marty Lyn 6/12/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH04**

RFA / COC Number 139791-SB005

Sample Number **80-BH04-MSD1**

Task

Sample Name **80-BH04-z-80-BH04-MSD1-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1158

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 0

QC Code **Matrix spike duplicate**

End Depth 2

Sampling Equip

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None 2/28/12 RGD
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

Comments: Extra volume for matrix spike duplicate on 80-BH04-1

Sketch Location:

Logged By / Dat Rachel Daly 3/21/12

Reviewed By / Dat Mark 6/12/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH04**

RFA / COC Number 139791-SB005

Sample Number **80-BH04-2**

Task

Sample Name **80-BH04-z-80-BH04-2-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1203

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None RAD 2/28/12
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat Rachel Daly 3/21/12

Reviewed By / Dat Mark Lyn 6/12/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH04**

RFA / COC Number 139791-SB005

Sample Number **80-BH04-3**

Task

Sample Name **80-BH04-z-80-BH04-3-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1207

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

AGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat Rachel Daly 3/21/12

Reviewed By / Dat Mark Ga 6/12/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH05**

RFA / COC Number 139791-SB005

Sample Number **80-BH05-1**

Task

Sample Name **80-BH05-z-80-BH05-1-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1129

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

2/28/12 RGD

Comments:

Sketch Location:

Logged By / Dat [signature] 3/21/12

Reviewed By / Dat [signature] 6/12/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH05**

RFA / COC Number 139791-SB005

Sample Number **80-BH05-2**

Task

Sample Name **80-BH05-z-80-BH05-2-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1132

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

ACD 2/28/12

Comments:

Sketch Location:

Logged By / Dat [signature] 3/21/12

Reviewed By / Dat [signature] 6/12/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH05**

RFA / COC Number 139791-SB005

Sample Number **80-BH05-FD2**

Task

Sample Name **80-BH05-z-80-BH05-FD2-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1132

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 5

QC Code **Field duplicates**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat [signature] 3/21/12

Reviewed By / Dat [signature] 6/12/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH05**

RFA / COC Number 139791-SB005

Sample Number **80-BH05-3**

Task

Sample Name **80-BH05-z-80-BH05-3-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1138

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

2/28/12 RGD

Comments:

Sketch Location:

Logged By / Dat [signature] 3/21/12

Reviewed By / Dat [signature] 6/12/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH06**

RFA / COC Number 139791-SB005

Sample Number **80-BH06-1**

Task

Sample Name **80-BH06-z-80-BH06-1-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1100

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	~~None~~ None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

2/28/12 RGD

Comments:

Sketch Location:

Logged By / Dat Rachel Daly 3/21/12

Reviewed By / Dat Matlapudi 6/12/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH06**

RFA / COC Number 139791-SB005

Sample Number **80-BH06-2**

Task

Sample Name **80-BH06-z-80-BH06-2-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1105

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RLO 2/28/12

Comments:

Sketch Location:

Logged By / Dat Rachel Daly 3/21/12

Reviewed By / Dat Mat Lin 6/12/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH06**

RFA / COC Number 139791-SB005

Sample Number **80-BH06-3**

Task

Sample Name **80-BH06-z-80-BH06-3-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1107

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RaD 2/28/12

Comments:

Sketch Location:

Logged By / Dat Rachel Daly 3/21/12

Reviewed By / Dat Mahdha 6/12/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH07**

RFA / COC Number 139791-SB005

Sample Number **80-BH07-1**

Task

Sample Name **80-BH07-z-80-BH07-1-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1620

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/21/12

Reviewed By / Dat 6/12/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH07**

RFA / COC Number 139791-SB005

Sample Number **80-BH07-2**

Task

Sample Name **80-BH07-z-80-BH07-2-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1623

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat J. Tarbert 3/21/12

Reviewed By / Dat Mat Lya 6/12/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH07**

RFA / COC Number 139791-SB005

Sample Number **80-BH07-3**

Task

Sample Name **80-BH07-z-80-BH07-3-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1627

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **J.Tarbert, R.Daly, C. La Charce**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ NONE
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat J. Tarbert 3/21/12

Reviewed By / Dat Martha 6/12/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH08**

RFA / COC Number 139791-SB005

Sample Number **80-BH08-1**

Task

Sample Name **80-BH08-z-80-BH08-1-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1411

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) ____ (EB) ____ (FB) ____

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RCD 2/28/12

Comments:

Sketch Location:

Logged By / Dat [signature] 3/21/12

Reviewed By / Dat [signature] 6/12/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH08**

RFA / COC Number 139791-SB005

Sample Number **80-BH08-2**

Task

Sample Name **80-BH08-z-80-BH08-2-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1418

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RAD 2/28/12

Comments:

Sketch Location:

Logged By / Dat J. Tarbert 3/21/12

Reviewed By / Dat Mark La 6/12/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH08**

RFA / COC Number 139791-SB005

Sample Number **80-BH08-MS2**

Task

Sample Name **80-BH08-z-80-BH08-MS2-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1418

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 5

QC Code **Matrix spike**

End Depth 6

Sampling Equip

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments: Extra volume for matrix spike on 80-BH08-2

Sketch Location:

Logged By / Dat 3/21/12

Reviewed By / Dat 6/12/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH08**

RFA / COC Number 139791-SB005

Sample Number **80-BH08-MSD2**

Task

Sample Name **80-BH08-z-80-BH08-MSD2-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1148

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 5

QC Code **Matrix spike duplicate**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RCD 2/28/12

Comments: Extra volume for matrix spike duplicate on 80-BH08-2

Sketch Location:

Logged By / Dat [signature] 3/21/12

Reviewed By / Dat [signature] 6/12/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH08**

RFA / COC Number 139791-SB005

Sample Number **80-BH08-3**

Task

Sample Name **80-BH08-z-80-BH08-3-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1425

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None RGD 2/28/12
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat [signature] 3/21/12

Reviewed By / Dat [signature] 6/12/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH09**

RFA / COC Number 139791-SB005

Sample Number **80-BH09-1**

Task

Sample Name **80-BH09-z-80-BH09-1-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1029

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat [signature] 3/21/12

Reviewed By / Dat [signature] 6/12/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH09**

RFA / COC Number 139791-SB005

Sample Number **80-BH09-2**

Task

Sample Name **80-BH09-z-80-BH09-2-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1033

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

2/28/12 RGD

Comments:

Sketch Location:

Logged By / Dat C Haller 3/21/12

Reviewed By / Dat Matlapudi 6/12/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH09**

RFA / COC Number 139791-SB005

Sample Number **80-BH09-3**

Task

Sample Name **80-BH09-z-80-BH09-3-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1037

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat [signature] 3/21/12

Reviewed By / Dat [signature] 6/12/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH~~11~~** 10

RFA / COC Number 139791-SB005

Sample Number **80-BH~~11~~ 10-1**

Task

Sample Name **80-BH11-z-80-BH11-1-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 0842

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RCD 2/28/12

Comments:

Sketch Location:

Logged By / Dat Rachel Daly 3/21/12

Reviewed By / Dat [illegible] 4/12/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH~~11~~ 10**

RFA / COC Number 139791-SB005

Sample Number **80-BH~~11~~ 10-2**

Task

Sample Name **80-BH11-z-80-BH11-2-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 0847

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RCD 2/28/12

Comments:

Sketch Location:

3/21/12

Logged By / Dat Rachel Daly

Reviewed By / Dat Mark Lin 6/12/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH~~11~~10**

RFA / COC Number 139791-SB005

Sample Number **80-BH~~11~~10-3**

Task

Sample Name **80-BH11-z-80-BH11-3-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 0850

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None 2/28/12
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat Rachel Daly 3/21/12

Reviewed By / Dat Mallika 4/12/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH~~10~~ 11**

Sample Number **80-BH~~10~~ 11-1** RGD

Sample Name **80-BH10-z-80-BH10-1-z**

Sampling Method **Unknown**

Sample Type **Unknown** Sample Purpose **Unknown**

QC Code **Unknown**

Sampling Equip Geoprobe

RFA / COC Number 139791-SB005

Task

Collection Date 3/21/12

Collection Time 0905

Start Depth 0

End Depth 2

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ ~~[illegible]~~ NONE
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None RGD 2/28/12

Comments:

Sketch Location:

/ Dat Rachel Daly 3/21/12

Reviewed By / Dat Mark Lyn 6/12/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH~~10~~ 11** RGD

Sample Number **80-BH~~10~~ 11-2**

RFA / COC Number 139791-SB005

Task

Sample Name **80-BH10-z-80-BH10-2-z**

Collection Date 3/21/12

Collection Time 0910

Sampling Method **Unknown**

Start Depth 5

Sample Type **Unknown**

Sample Purpose **Unknown**

End Depth 6

QC Code **Unknown**

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat Rachel Daly 3/21/12

Reviewed By / Dat Mat 4/12/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH~~10~~** 11

Sample Number **80-BH~~10~~-3** 11 RGD

Sample Name **80-BH10-z-80-BH10-3-z**

Sampling Method **Unknown**

Sample Type **Unknown** Sample Purpose **Unknown**

QC Code **Unknown**

Sampling Equip Geoprobe

RFA / COC Number 139791-SB005

Task

Collection Date 3/21/12

Collection Time 0920

Start Depth 9

End Depth 10

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

2/28/12 RGD

Comments:

Sketch Location:

Logged By / Dat Rachel Daly 3/21/12

Reviewed By / Dat Mahesh 6/12/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH~~10~~11**

Sample Number **80-BH~~10~~11-FD3** RGD

RFA / COC Number 13979-SB005

Task

Sample Name **80-BH10-z-80-BH10-FD3-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 0920

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 9

QC Code **Field duplicates**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments: Field duplicate of 80-BH11-3

Sketch Location:

3/21/12

Logged By / Dat Rachel Daly

Reviewed By / Dat Mat 6/12/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH12**

RFA / COC Number 139791-SB005

Sample Number **80-BH12-1**

Task

Sample Name **80-BH12-z-80-BH12-1-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 0936

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth ~~0.5~~ RGD 0

QC Code **Unknown**

End Depth 2

Sampling Equip

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

3/21/12

Logged By / Dat Rachel Daly

Reviewed By / Dat Madhya 6/12/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH12**

RFA / COC Number 139791-SB005

Sample Number **80-BH12-FD1**

Task

Sample Name **80-BH12-z-80-BH12-FD1-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 0936

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 0

End Depth 2

QC Code **Field duplicates**

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None RAD 2/28/12
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None

Comments: Field duplicate of 80-BH12-1

Sketch Location:

Logged By / Dat [signature] 3/21/12

Reviewed By / Dat [signature] 6/12/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH12**

RFA / COC Number 139791-SB005

Sample Number **80-BH12-2**

Task

Sample Name **80-BH12-z-80-BH12-2-z**

Collection Date 3/2/12

Sampling Method **Unknown**

Collection Time 0943

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RCD 2/28/12

Comments:

Sketch Location:

Logged By / Dat [signature] 3/2/12

Reviewed By / Dat [signature] 6/12/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH12**

RFA / COC Number 139791-SB005

Sample Number **80-BH12-3**

Task

Sample Name **80-BH12-z-80-BH12-3-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time ~~9a~~ 0946

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth ~~10a~~ 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat [signature] 3/21/12

Reviewed By / Dat [signature] 6/12/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH13**

RFA / COC Number 13979/-SB005

Sample Number **80-BH13-1**

Task

Sample Name **80-BH13-z-80-BH13-1-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1005

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat Rachel Daly 3/21/12

Reviewed By / Dat [illegible] 4/12/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH13**

RFA / COC Number 139791-SB005

Sample Number **80-BH13-2**

Task

Sample Name **80-BH13-z-80-BH13-2-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1009

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat [signature] 3/21/12

Reviewed By / Dat [signature] 6/12/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH13**

RFA / COC Number 139791-SB005

Sample Number **80-BH13-3**

Task

Sample Name **80-BH13-z-80-BH13-3-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1013

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

2/28/12 RaD

Comments:

Sketch Location:

Logged By / Dat [signature] 3/21/12

Reviewed By / Dat [signature] 6/12/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH14**

RFA / COC Number 139791-SB005

Sample Number **80-BH14-1**

Task

Sample Name **80-BH14-z-80-BH14-1-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 0814

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/21/12

Reviewed By / Dat 6/12/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH14**

RFA / COC Number 13979/-SB005

Sample Number **80-BH14-2**

Task

Sample Name **80-BH14-z-80-BH14-2-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 0821

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None 2/28/12
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None RGD

Comments:

Sketch Location:

Logged By / Dat [signature] 3/21/12

Reviewed By / Dat [signature] 6/12/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH14**

RFA / COC Number 139791-SB005

Sample Number **80-BH14-3**

Task

Sample Name **80-BH14-z-80-BH14-3-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 0824

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat [signature] 3/21/12

Reviewed By / Dat [signature] 4/12/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH15**

RFA / COC Number 139791-SB005

Sample Number **80-BH15-1**

Task

Sample Name **80-BH15-z-80-BH15-1-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1544

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/21/12

Reviewed By / Dat 4/12/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH15**

RFA / COC Number 139791-SB005

Sample Number **80-BH15-2**

Task

Sample Name **80-BH15-z-80-BH15-2-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1550

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat [signature] 3/21/12

Reviewed By / Dat [signature] 6/12/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH15**

RFA / COC Number 139791-SB005

Sample Number **80-BH15-FD2**

Task

Sample Name **80-BH15-z-80-BH15-FD2-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1550

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 5

QC Code **Field duplicates**

End Depth 6

Sampling Equip

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments: Field duplicate of 80-BH15-2

Sketch Location:

Logged By / Dat 3/21/12

Reviewed By / Dat 6/12/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH15**

RFA / COC Number 139791-SB005

Sample Number **80-BH15-3**

Task

Sample Name **80-BH15-z-80-BH15-3-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1556

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RCD 2/28/12

Comments:

Sketch Location:

Logged By / Dat [signature] 3/21/12

Reviewed By / Dat [signature] 6/12/12

Sample Collection Log

Enviro Data®

- WSMR

Manager **S. Matlapudi**

Location Code **80-BH15**

RFA / COC Number 139791-SB005

Sample Number **80-BH15-RB**

Task

Sample Name **80-BH15-z-80-BH15-RB-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1632

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth N/A

QC Code **Rinsate blank**

End Depth N/A

Sampling Equip Geoprobe shoe + DI water

Sample Matrix **Water**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6020	A	Unknown	0	250	mg/l	250 ml Poly Container	~~None~~ HNO3 RGD
Mercury by 7471A	A	Unknown	0	250	mg/l	250 ml Poly Container	~~Unknown~~ HNO_3 2/28/12
Metals by 6010B	A	Unknown	1	250	mg/l	250 ml Poly Container	HNO3

Comments:

Sketch Location:

Logged By / Dat J. Tarbert 3/21/12

Reviewed By / Dat [illegible] 4/12/12

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COC # 139791-SB005

Chain of Custody

Lab EWS
Lab Contact
Lab Phone 330-720-1061

Client US Army
W. O. WSMR-30 PO 620349
TAT 14 Days

Site Name WSMR
Contact Name 1
Contact Phone

Bill To: Shaw Environmental & In
Phone
Fax
Address Bill electronically to
City Baton Rouge
State LA Zip 70809

Results To: Mark Lyon
Phone
Fax
Address 2440 Louisiana Blvd NE
City Albuquerque
State NM Zip 87110

Sample ID	Matrix	Wt/ Vol	Date-Time Collected	Filtered	Number Containers	Mercury by 7471A	Metals by 6010B	Metals by 6020							
					Container	G60W	G60W	G60W							
					Preservative	n	n	n							
80-BH01-1	Soil		3/21/2012 2:43:00 PM		1	X	X	X							
80-BH01-2	Soil		3/21/2012 2:48:00 PM		1	X	X	X							
80-BH01-3	Soil		3/21/2012 2:49:00 PM		1	X	X	X							
80-BH02-1	Soil		3/21/2012 3:06:00 PM		1	X	X	X							
80-BH02-2	Soil		3/21/2012 3:13:00 PM		1	X	X	X							
80-BH02-3	Soil		3/21/2012 3:16:00 PM		1	X	X	X							
80-BH02-FD1	Soil		3/21/2012 3:06:00 PM		1	X	X	X							
80-BH03-1	Soil		3/21/2012 1:26:00 PM		1	X	X	X							
80-BH03-2	Soil		3/21/2012 1:29:00 PM		1	X	X	X							
80-BH03-3	Soil		3/21/2012 1:55:00 PM		1	X	X	X							
80-BH04-1	Soil		3/21/2012 11:58:00 AM		1	X	X	X							
80-BH04-2	Soil		3/21/2012 12:03:00 PM		1	X	X	X							
80-BH04-3	Soil		3/21/2012 12:07:00 PM		1	X	X	X							
80-BH04-MS1	Soil		3/21/2012 11:58:00 AM		1	X	X	X							
80-BH04-MSD1	Soil		3/21/2012 11:58:00 AM		1	X	X	X							
80-BH05-1	Soil		3/21/2012 11:29:00 AM		1	X	X	X							
80-BH05-2	Soil		3/21/2012 11:32:00 AM		1	X	X	X							
80-BH05-3	Soil		3/21/2012 11:38:00 AM		1	X	X	X							
80-BH05-FD2	Soil		3/21/2012 11:32:00 AM		1	X	X	X							

Remarks/Comments
Waybill # 873013169507 FedEx Express
Cost Codes: 139791.PA0341

Sampled By _____

Lab Use Only
Temp of Cooler when Received, C

1	2	3	4	5

COC Tape was present on outer package Y N
COC Tape was unbroken on outer package Y N
COC Tape ws present on sample Y N
COC Tape was unbroken on sample Y N

Received in good condition Y N
Labels indicate Properly Preserved Y N
Received within Holding Time Y N

Relinquished By	Date / Time	Received By	Date / Time	Relinquished By	Date / Time	Received By	Date / Time
[illegible]	3/23/12 1600						

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COC # 139791-SB005

Chain of Custody

Lab EWS
Lab Contact
Lab Phone 330-720-1061

Client US Army
W. O. WSMR-30 PO 620349
TAT 14 Days

Site Name WSMR
Contact Name 1
Contact Phone

Bill To: Shaw Environmental & In
Phone
Fax
Address Bill electronically to
City Baton Rouge
State LA Zip 70809

Results To: Mark Lyon
Phone
Fax
Address 2440 Louisiana Blvd NE
City Albuquerque
State NM Zip 87110

	Sample ID	Matrix	Wt/ Vol	Date-Time Collected	Filtered	Number Containers	Mercury by 7471A	Metals by 6010B	Metals by 6020							
						Container	G60W	G60W	G60W							
						Preservative	n	n	n							
✓	80-BH06-1	Soil		3/21/2012 11:00:00 AM		1	X	X	X							
✓	80-BH06-2	Soil		3/21/2012 11:05:00 AM		1	X	X	X							
✓	80-BH06-3	Soil		3/21/2012 11:07:00 AM		1	X	X	X							
✓	80-BH07-1	Soil		3/21/2012 4:20:00 PM		1	X	X	X							
✓	80-BH07-2	Soil		3/21/2012 4:23:00 PM		1	X	X	X							
✓	80-BH07-3	Soil		3/21/2012 4:27:00 PM		1	X	X	X							
✓	80-BH08-1	Soil		3/21/2012 2:11:00 PM		1	X	X	X							
✓	80-BH08-2	Soil		3/21/2012 2:18:00 PM		1	X	X	X							
✓	80-BH08-3	Soil		3/21/2012 2:25:00 PM		1	X	X	X							
✓	80-BH08-MS2	Soil		3/21/2012 2:18:00 PM		1	X	X	X							
✓	80-BH08-MSD2	Soil		3/21/2012 2:18:00 PM		1	X	X	X							
✓	80-BH09-1	Soil		3/21/2012 10:29:00 AM		1	X	X	X							
✓	80-BH09-2	Soil		3/21/2012 10:33:00 AM		1	X	X	X							
✓	80-BH09-3	Soil		3/21/2012 10:37:00 AM		1	X	X	X							
✓	80-BH10-1	Soil		3/21/2012 8:42:00 AM		1	X	X	X							
✓	80-BH10-2	Soil		3/21/2012 8:47:00 AM		1	X	X	X							
✓	80-BH10-3	Soil		3/21/2012 8:50:00 AM		1	X	X	X							
✓	80-BH11-1	Soil		3/21/2012 9:05:00 AM		1	X	X	X							
✓	80-BH11-2	Soil		3/21/2012 9:10:00 AM		1	X	X	X							

Remarks/Comments
Waybill # 873013169507 FedEx Express

Sampled By _____

Lab Use Only
Temp of Cooler when Received, C

1	2	3	4	5

COC Tape was present on outer package Y N
COC Tape was unbroken on outer package Y N
COC Tape ws present on sample Y N
COC Tape was unbroken on sample Y N

Received in good condition Y N
Labels indicate Properly Preserved Y N
Received within Holding Time Y N

Relinquished By	Date / Time	Received By	Date / Time	Relinquished By	Date / Time	Received By	Date / Time

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Shaw® a world of Solutions™

COC # 139791-SB005

Chain of Custody

Lab EWS
Lab Contact

Lab Phone 330-720-1061

Client US Army
W. O. WSMR-30 PO 620349
TAT 14 Days

Site Name WSMR
Contact Name 1
Contact Phone

Bill To: Shaw Environmental & In
Phone
Fax
Address Bill electronically to
City Baton Rouge
State LA Zip 70809

Results To: Mark Lyon
Phone
Fax
Address 2440 Louisiana Blvd NE
City Albuquerque
State NM Zip 87110

	Sample ID	Matrix	Wt/ Vol	Date-Time Collected	Filtered	Number Containers	Mercury by 7471A	Metals by 6010B	Metals by 6020							
						Container	G60W	G60W	G60W							
						Preservative	n	n	n							
✓	80-BH11-3	Soil		3/21/2012 9:20:00 AM		1	X	X	X							
✓	80-BH11-FD3	Soil		3/21/2012 9:20:00 AM		1	X	X	X							
✓	80-BH12-1	Soil		3/21/2012 9:36:00 AM		1	X	X	X							
✓	80-BH12-2	Soil		3/21/2012 9:43:00 AM		1	X	X	X							
✓	80-BH12-3	Soil		3/21/2012 9:46:00 AM		1	X	X	X							
✓	80-BH12-FD1	Soil		3/21/2012 9:36:00 AM		1	X	X	X							
✓	80-BH13-1	Soil		3/21/2012 10:05:00 AM		1	X	X	X							
✓	80-BH13-2	Soil		3/21/2012 10:09:00 AM		1	X	X	X							
✓	80-BH13-3	Soil		3/21/2012 10:13:00 AM		1	X	X	X							
✓	80-BH14-1	Soil		3/21/2012 8:16:00 AM		1	X	X	X							
✓	80-BH14-2	Soil		3/21/2012 8:21:00 AM		1	X	X	X							
✓	80-BH14-3	Soil		3/21/2012 8:24:00 AM		1	X	X	X							
✓	80-BH15-1	Soil		3/21/2012 3:44:00 PM		1	X	X	X							
✓	80-BH15-2	Soil		3/21/2012 3:50:00 PM		1	X	X	X							
✓	80-BH15-3	Soil		3/21/2012 3:56:00 PM		1	X	X	X							
✓	80-BH15-FD2	Soil		3/21/2012 3:50:00 PM		1	X	X	X							
✓	80-BH15-RB	Water		3/21/2012 4:32:00 PM		1	X	X	X							

Remarks/Comments
Waybill # 873013169507 FedEx Express

Sampled By _____

Lab Use Only
Temp of Cooler when Received, C

1	2	3	4	5

COC Tape was present on outer package Y N
COC Tape was unbroken on outer package Y N
COC Tape ws present on sample Y N
COC Tape was unbroken on sample Y N

Received in good condition Y N
Labels indicate Properly Preserved Y N
Received within Holding Time Y N

Relinquished By	Date / Time	Received By	Date / Time	Relinquished By	Date / Time	Received By	Date / Time

EMS Shaw

Shaw® a world of Solutions™

COC # 139791-SB005

Chain of Custody

Lab EWS

Lab Contact

Lab Phone 330-720-1061

Client US Army

W. O. WSMR-30 PO 620349

TAT 14 Days

Site Name WSMR

Contact Name 1

Contact Phone

Bill To: Shaw Environmental & In

Phone

Fax

Address Bill electronically to

City Baton Rouge

State LA Zip 70809

Results To: Mark Lyon

Phone

Fax

Address 2440 Louisiana Blvd NE

City Albuquerque

State NM Zip 87110

	Sample ID	Matrix	Wt/ Vol	Date-Time Collected	Filtered	Number Containers	Mercury by 7471A	Metals by 6010B	Metals by 6020							
						Container	G60W	G60W	G60W							
						Preservative	n	n	n							

Remarks/Comments

Waybill # 873013169507 FedEx Express

Sampled By _____

Lab Use Only

Temp of Cooler when Received, C

1	2	3	4	5

COC Tape was present on outer package Y N

COC Tape was unbroken on outer package Y N

COC Tape ws present on sample Y N

COC Tape was unbroken on sample Y N

Received in good condition Y N

Labels indicate Properly Preserved Y N

Received within Holding Time Y N

Relinquished By	Date / Time	Received By	Date / Time	Relinquished By	Date / Time	Received By	Date / Time

EIMS Shaw

MUR42

FedEx Express **US Airbill**

FedEx Tracking Number 8730 1316 9518

Form ID No. 0215

1 From *Please print and press hard.*

Date 3/23/12 Sender's FedEx Account Number SENDER'S FEDEX ACCOUNT NUMBER ONLY

Sender's Name Caitlin LaChance Phone (505) 262-8942

Company Shaw E and I

Address 2440 Louisiana Blvd NE Dept./Floor/Suite/Room

City Albuquerque State NM ZIP 87110

2 Your Internal Billing Reference First 24 characters will appear on invoice. 139791. (Main Post)

3 To Recipient's Name Stephanie Mossburg Phone (740) 373-4071

Company MICROBAC LABORATORIES, INC

Address 158 STARLITE DR Dept./Floor/Suite/Room

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address

Use this line for the HOLD location address or for continuation of your shipping address.

City MARIETTA State OH ZIP 45750-5279

☐ HOLD Weekday FedEx location address REQUIRED. NOT available for FedEx First Overnight.

☐ HOLD Saturday FedEx location address REQUIRED. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

0422153928

Learn to pack like a pro at fedex.com/packaging
Or let our pros pack for you with FedEx Office℠ Pack & Ship.

4a Express Package Service *To most locations. *Packages up to 150 lbs.*

- [x] FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.
- [ ] FedEx First Overnight — Earliest next business morning delivery to select locations.*
- [ ] FedEx 2Day — Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

4b Express Freight Service **To most locations. *Packages over 150 lbs.*

- [ ] FedEx 1Day Freight — Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 2Day Freight — Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 3Day Freight — Third business day.** Saturday Delivery NOT available.

CALL 1.800.332.0807 FedEx 1Day Freight Booking No.

5 Packaging *Declared value limit $500.

- [ ] FedEx Envelope*
- [ ] FedEx Pak* Includes FedEx Small Pak and FedEx Large Pak.
- [ ] FedEx Box
- [ ] FedEx Tube
- [x] Other

6 Special Handling and Delivery Signature Options

- [x] SATURDAY Delivery NOT available for FedEx Standard Overnight, FedEx Express Saver, or FedEx 3Day Freight.
- [ ] No Signature Required — Package may be left without obtaining a signature for delivery.
- [ ] Direct Signature — Someone at recipient's address may sign for delivery. Fee applies.
- [ ] Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. Fee applies.

Does this shipment contain dangerous goods?

One box must be checked.

- [x] No
- [ ] Yes — As per attached Shipper's Declaration.
- [ ] Yes — Shipper's Declaration not required.
- [ ] Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.

- [ ] Cargo Aircraft Only

7 Payment *Bill to:*

Enter FedEx Acct. No. or Credit Card No. below.

- [ ] Sender — Acct. No. in Section 1 will be billed.
- [x] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check

FedEx Acct. No. / Credit Card No. 1578 05967 Exp. Date

Total Packages	Total Weight	Total Declared Value†
2	____ lbs.	$ 100 .00

†Our liability is limited to $100 unless you declare a higher value. See back for details. By using this Airbill you agree to the service conditions on the back of this Airbill and in the current FedEx Service Guide, including terms that limit our liability.

605

Rev. Date 2/10 • Part #158275 • ©1994–2010 FedEx • PRINTED IN U.S.A. SRS

PULL AND RETAIN THIS COPY BEFORE AFFIXING TO THE PACKAGE. NO POUCH NEEDED.

FedEx Office

2400 LOUISIANA BLVD, NE
ALBUQUERQUE, NM 87110

Location:	ABQKO
Device ID:	ABQKO-POS1
Employee:	2270041
Transaction:	78048746032

PRIORITY OVERNIGHT
873013169518 234.00 lb (S) ***
795544106757
795544106768
795544106779
795544106780

Scheduled Delivery Date 03/27/2012

Bill Recipient/Third Party

*** See payer invoice

M = Weight entered manually
S = Weight read from scale
T = Taxable item

Subject to additional charges. See FedEx Service Guide at fedex.com for details. All merchandise sales final.

Visit us at: fedex.com
Or call 1.800.GoFedEx
1.800.463.3339

March 26, 2012 12:03:06 PM

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH01**

RFA / COC Number

Task

Sample Number **140-BH01-1**

Collection Date ~~3/19/12~~ a 3/20/12

Sample Name **140-BH01-z-140-BH01-1-z**

Collection Time 0947

Sampling Method **Unknown**

Start Depth 0

Sample Type **Unknown**

Sample Purpose **Unknown**

End Depth 2

QC Code **Unknown**

Sample Matrix **Soil**

Sampling Equip Geoprobe

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	HNO3
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None

Comments:

Sketch Location:

Logged By / Dat [signature] 3/20/12 ~~3/19/12~~ a

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

RFA / COC Number _____

Location Code **140-BH01**

Task _____

Sample Number **140-BH01-2**

Collection Date ~~3/19/12~~ a 3/20/12

Sample Name **140-BH01-z-140-BH01-2-z**

Collection Time 0953

Sampling Method **Unknown**

Start Depth 5

Sample Type **Unknown**

Sample Purpose **Unknown**

End Depth 6

QC Code **Unknown**

Sample Matrix **Soil**

Sampling Equip Geoprobe

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments: _____

Sketch Location:

Logged By / Dat C Galle 3/20/12 ~~3/19/12~~ a *Reviewed By / Dat* _____

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH01**

RFA / COC Number

Sample Number **140-BH01-3**

Task

Sample Name **140-BH01-z-140-BH01-3-z**

Collection Date ~~3/19/12~~ a 3/20/12

Sampling Method **Unknown**

Collection Time 0957

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 9

End Depth 10

QC Code **Unknown**

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat [signature] ~~3/19/12~~ 3/20/12 a

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH02**

Sample Number **140-BH02-~~2~~1 a**

Sample Name **140-BH02-z-140-BH02-2-z**

Sampling Method **Unknown**

Sample Type **Unknown**

Sample Purpose **Unknown**

QC Code **Unknown**

Sampling Equip Geoprobe

RFA / COC Number _____

Task _____

Collection Date 3/19/12

Collection Time 1455

Start Depth 0

End Depth 2

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments: _____

Sketch Location:

Logged By / Dat [signature] 3/19/12

Reviewed By / Dat _____

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH02**

RFA / COC Number _____

Sample Number **140-BH02-2**

Task _____

Sample Name **140-BH02-z-140-BH02-2-z**

Collection Date 3/19/12

Collection Time 1507

Sampling Method **Unknown**

Start Depth 5

Sample Type **Unknown**

Sample Purpose **Unknown**

End Depth 6

QC Code **Unknown**

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam RD, CL

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	Unknown None

Comments: _____

Sketch Location:

Logged By / Dat [signature] 3/19/12

Reviewed By / Dat _____

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH02**

RFA / COC Number _____

Sample Number **140-BH02-3**

Task _____

Sample Name **140-BH02-z-140-BH02-3-z**

Collection Date 3/19/12

Collection Time 1512

Sampling Method **Unknown**

Start Depth 9

Sample Type **Unknown**

Sample Purpose **Unknown**

End Depth 10

QC Code **Unknown**

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam RD, CL

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments: _____

Sketch Location:

Logged By / Dat [signature] 3/19/12

Reviewed By / Dat _____

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH03**

RFA / COC Number _____

Sample Number **140-BH03-1**

Task _____

Sample Name **140-BH03-z-140-BH03-1-z**

Collection Date 3/19/12

Collection Time 1525

Sampling Method **Unknown**

Start Depth 0

Sample Type **Unknown**

Sample Purpose **Unknown**

End Depth 2

QC Code **Unknown**

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam RD, CL

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat [signature] 3/19/12

Reviewed By / Dat _____

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH03**

RFA / COC Number

Sample Number **140-BH03-2**

Task

Sample Name **140-BH03-z-140-BH03-2-z**

Collection Date 3/19/12

Collection Time 1532

Sampling Method **Unknown**

Start Depth 5

Sample Type **Unknown** *Sample Purpose* **Unknown**

End Depth 6

QC Code **Unknown**

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) *(EB)* *(FB)*

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat 3/19/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH03**

RFA / COC Number

Sample Number **140-BH03-FD1/2** a

Task

Sample Name **140-BH03-z-140-BH03-FD1-z** 2 a

Collection Date 3/19/12

Sampling Method **Unknown**

Collection Time 1532

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 5

End Depth 4

QC Code **Field duplicates**

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH03**

RFA / COC Number _____

Sample Number **140-BH03-3**

Task _____

Sample Name **140-BH03-z-140-BH03-3-z**

Collection Date 3/19/12

Collection Time 1540

Sampling Method **Unknown**

Start Depth 9

Sample Type **Unknown** *Sample Purpose* **Unknown**

End Depth 10

QC Code **Unknown**

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____ *SampleTeam* CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments: _____

Sketch Location:

Logged By / Dat [signature] 3/19/12 *Reviewed By / Dat* _____

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH04**

RFA / COC Number _____

Sample Number **140-BH04-1**

Task _____

Sample Name **140-BH04-z-140-BH04-1-z**

Collection Date 3/20/19

Collection Time 0820

Sampling Method **Unknown**

Start Depth 0

Sample Type **Unknown**

Sample Purpose **Unknown**

End Depth 2

QC Code **Unknown**

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments: _____

Sketch Location:

Logged By / Dat [signature] 3/20/12

Reviewed By / Dat _____

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH04**

RFA / COC Number _____

Sample Number **140-BH04-2**

Task _____

Sample Name **140-BH04-z-140-BH04-2-z**

Collection Date 3/20/12

Collection Time 0828

Sampling Method **Unknown**

Start Depth 5

Sample Type **Unknown**

Sample Purpose **Unknown**

End Depth 6

QC Code **Unknown**

Sample Matrix **Soil**

Sampling Equip Geoprobe

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam RD, CL

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments: _____

Sketch Location:

Logged By / Dat [signature] 3/20/12

Reviewed By / Dat _____

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH04**

RFA / COC Number _____

Sample Number **140-BH04-3**

Task _____

Sample Name **140-BH04-z-140-BH04-3-z**

Collection Date 3/20/12

Collection Time 0854

Sampling Method **Unknown**

Start Depth 9

Sample Type **Unknown** *Sample Purpose* **Unknown**

End Depth 10

QC Code **Unknown**

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____ *SampleTeam* RD, CL

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments: _____

Sketch Location:

Logged By / Dat [signature] 3/20/12 *Reviewed By / Dat* _____

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH05**

RFA / COC Number _____

Sample Number **140-BH05-1**

Task _____

Sample Name **140-BH05-z-140-BH05-1-z**

Collection Date 3/20/12

Collection Time 0916

Sampling Method **Unknown**

Start Depth 0

Sample Type **Unknown**

Sample Purpose **Unknown**

End Depth 2

QC Code **Unknown**

Sample Matrix **Soil**

Sampling Equip Geoprobe

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments: _____

Sketch Location:

Logged By / Dat [signature] 3/20/12

Reviewed By / Dat _____

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH05**

RFA / COC Number _____

Task _____

Sample Number **140-BH05-2**

Collection Date 3/20/12

Sample Name **140-BH05-z-140-BH05-2-z**

Collection Time 0922

Sampling Method **Unknown**

Start Depth 5

Sample Type **Unknown**

Sample Purpose **Unknown**

End Depth 6

QC Code **Unknown**

Sample Matrix **Soil**

Sampling Equip Geoprobe

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL; RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments: _____

Sketch Location:

Logged By / Dat [signature] 3/20/12

Reviewed By / Dat _____

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH05**

RFA / COC Number

Task

Sample Number **140-BH05-3**

Collection Date 3/20/12

Sample Name **140-BH05-z-140-BH05-3-z**

Collection Time 0927

Sampling Method **Unknown**

Start Depth 9

Sample Type **Unknown**

Sample Purpose **Unknown**

End Depth 10

QC Code **Unknown**

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat CKaller 3/20/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH05**

RFA / COC Number _____

Sample Number **140-BH05-FD3**

Task _____

Sample Name **140-BH05-z-140-BH05-FD3-z**

Collection Date 3/20/12

Collection Time 0927

Sampling Method **Unknown**

Start Depth 9

Sample Type **Unknown** *Sample Purpose* **Unknown**

End Depth 10

QC Code **Field duplicates**

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____ *SampleTeam* CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments: _____

Sketch Location:

Logged By / Dat [signature] 3/20/12 *Reviewed By / Dat* _____

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH06**

RFA / COC Number

Sample Number **140-BH06-1**

Task

Sample Name **140-BH06-z-140-BH06-1-z**

Collection Date 3/20/12

Collection Time 1019

Sampling Method **Unknown**

Start Depth 0

Sample Type **Unknown**

Sample Purpose **Unknown**

End Depth 2

QC Code **Unknown**

Sample Matrix **Soil**

Sampling Equip Geoprobe

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat [signature] 3/20/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH06**

RFA / COC Number

Sample Number **140-BH06-2**

Task

Sample Name **140-BH06-z-140-BH06-2-z**

Collection Date 3/20/12

Collection Time 1024

Sampling Method **Unknown**

Start Depth 5

Sample Type **Unknown**

Sample Purpose **Unknown**

End Depth 6

QC Code **Unknown**

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) *(EB)* *(FB)*

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat CSalle 3/20/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH06**

RFA / COC Number

Sample Number **140-BH06-3**

Task

Sample Name **140-BH06-z-140-BH06-3-z**

Collection Date 3/20/12

Sampling Method **Unknown**

Collection Time 1027

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~+HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat [signature] 3/20/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH07**

RFA / COC Number _____

Sample Number **140-BH07-1**

Task _____

Sample Name **140-BH07-z-140-BH07-1-z**

Collection Date 3/20/12

Collection Time 1044

Sampling Method **Unknown**

Start Depth 0

Sample Type **Unknown** *Sample Purpose* **Unknown**

End Depth 2

QC Code **Unknown**

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____ *SampleTeam* CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments: _____

Sketch Location:

Logged By / Dat [signature] 3/20/12 *Reviewed By / Dat* _____

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH07**

RFA / COC Number _____

Sample Number **140-BH07-2**

Task _____

Sample Name **140-BH07-z-140-BH07-2-z**

Collection Date 3/20/12

Collection Time 1049

Sampling Method **Unknown**

Start Depth 5

Sample Type **Unknown** *Sample Purpose* **Unknown**

End Depth 6

QC Code **Unknown**

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty.	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments: _____

Sketch Location:

Logged By / Dat [signature] 3/20/12 *Reviewed By / Dat* _____

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager S. Matlapudi

Location Code 140-BH07

RFA / COC Number

Task

Sample Number 140-BH07-MS2

Collection Date 3/20/12

Sample Name 140-BH07-z-140-BH07-MS2-z

Collection Time 1049

Sampling Method Unknown

Start Depth 5

Sample Type Unknown

Sample Purpose Unknown

End Depth 6

QC Code Matrix spike

Sampling Equip Geoprobe

Sample Matrix Soil

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat CGallen 3/20/12 *Reviewed By / Dat*

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH07**

RFA / COC Number _____

Task _____

Sample Number **140-BH07-MSD2**

Collection Date 3/20/12

Sample Name **140-BH07-z-140-BH07-MSD2-z**

Collection Time 1049

Sampling Method **Unknown**

Start Depth 5

Sample Type **Unknown** *Sample Purpose* **Unknown**

End Depth 6

QC Code **Matrix spike duplicate**

Sample Matrix **Soil**

Sampling Equip Geoprobe

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments: _____

Sketch Location:

Logged By / Dat C Fallen 3/20/12

Reviewed By / Dat _____

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH07**

RFA / COC Number _____

Sample Number **140-BH07-3**

Task _____

Sample Name **140-BH07-z-140-BH07-3-z**

Collection Date 3/20/12

Collection Time 1053

Sampling Method **Unknown**

Start Depth 9

Sample Type **Unknown**

Sample Purpose **Unknown**

End Depth 10

QC Code **Unknown**

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments: _____

Sketch Location:

Logged By / Dat [signature] 3/20/12

Reviewed By / Dat _____

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH08** ~~0~~

RFA / COC Number

Sample Number **140-BH08-~~z~~ 1**

Task

Sample Name **140-BH08-z-140-BH08-~~z~~ 1-z**

Collection Date 3/20/12

Sampling Method **Unknown**

Collection Time 1110

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat [signature] 3/20/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH08**

RFA / COC Number

Task

Sample Number **140-BH08-2**

Collection Date 3/20/12

Sample Name **140-BH08-z-140-BH08-2-z**

Collection Time 1115

Sampling Method **Unknown**

Start Depth 5

Sample Type **Unknown**

Sample Purpose **Unknown**

End Depth 6

QC Code **Unknown**

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) *(EB)* *(FB)*

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat 3/20/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH08**

RFA / COC Number _____

Sample Number **140-BH08-3**

Task _____

Sample Name **140-BH08-z-140-BH08-3-z**

Collection Date 3/20/12

Collection Time 1118

Sampling Method **Unknown**

Start Depth 9

Sample Type **Unknown**

Sample Purpose **Unknown**

End Depth 10

QC Code **Unknown**

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments: _____

Sketch Location:

Logged By / Dat [signature] 3/20/12

Reviewed By / Dat _____

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH09**

RFA / COC Number

Sample Number **140-BH09-1**

Task

Sample Name **140-BH09-z-140-BH09-1-z**

Collection Date 3/20/12

Sampling Method **Unknown**

Collection Time 1138

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat [signature] 3/20/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH09**

Sample Number **140-BH09-2**

Sample Name **140-BH09-z-140-BH09-2-z**

Sampling Method **Unknown**

Sample Type **Unknown** *Sample Purpose* **Unknown**

QC Code **Unknown**

Sampling Equip Geoprobe

RFA / COC Number _____

Task _____

Collection Date 3/20/12

Collection Time 1141

Start Depth 5

End Depth 6

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments: _____

Sketch Location:

Logged By / Dat CJ Allen 3/20/12 *Reviewed By / Dat* _____

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH09** a

Sample Number **140-BH09-MS~~1~~** 2

Sample Name **140-BH09-z-140-BH09-MS~~1~~-z** W2

Sampling Method **Unknown**

Sample Type **Unknown** *Sample Purpose* **Unknown**

QC Code **Matrix spike**

Sampling Equip Geoprobe

RFA / COC Number

Task

Collection Date 3/20/12

Collection Time 1141

Start Depth 5

End Depth 6

Sample Matrix **Soil**

QC Partners:

(TB) *(EB)* *(FB)*

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat CKaller 3/20/12 *Reviewed By / Dat*

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH09**

RFA / COC Number _____

Sample Number **140-BH09-MSD2**

Task _____

Sample Name **140-BH09-z-140-BH09-MSD2-z**

Collection Date 3/20/12

Collection Time 1141

Sampling Method **Unknown**

Start Depth 5

Sample Type **Unknown** *Sample Purpose* **Unknown**

End Depth 6

QC Code **Matrix spike duplicate**

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL, KD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments: _____

Sketch Location:

Logged By / Dat [signature] 3/20/12

Reviewed By / Dat _____

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH09**

RFA / COC Number _____

Sample Number **140-BH09-3**

Task _____

Sample Name **140-BH09-z-140-BH09-3-z**

Collection Date 3/20/12

Collection Time 1147

Sampling Method **Unknown**

Start Depth 9

Sample Type **Unknown**

Sample Purpose **Unknown**

End Depth 10

QC Code **Unknown**

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments: _____

Sketch Location:

Logged By / Dat [signature] 3/20/12

Reviewed By / Dat _____

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH10**

RFA / COC Number

Sample Number **140-BH10-1**

Task

Sample Name **140-BH10-z-140-BH10-1-z**

Collection Date 3/20/12

Sampling Method **Unknown**

Collection Time 1208

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat [signature] 3/20/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH10**

RFA / COC Number

Sample Number **140-BH10-FD1**

Task

Sample Name **140-BH10-z-140-BH10-FD1-z**

Collection Date 3/20/12

Sampling Method **Unknown**

Collection Time 1208

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 0

QC Code **Field duplicates**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat [signature] 3/20/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH10**

RFA / COC Number _____

Sample Number **140-BH10-2**

Task _____

Sample Name **140-BH10-z-140-BH10-2-z**

Collection Date 3/20/12

Collection Time 12/2

Sampling Method **Unknown**

Start Depth 5

Sample Type **Unknown** *Sample Purpose* **Unknown**

End Depth 6

QC Code **Unknown**

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments: _____

Sketch Location:

Logged By / Dat [signature] 3/20/12 *Reviewed By / Dat* _____

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH10**

RFA / COC Number _____

Sample Number **140-BH10-3**

Task _____

Sample Name **140-BH10-z-140-BH10-3-z**

Collection Date 3/20/12

Sampling Method **Unknown**

Collection Time 1215

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~UNOS~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments: _____

Sketch Location:

Logged By / Dat [signature] 3/20/12

Reviewed By / Dat _____

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH11**

Sample Number **140-BH11-1**

Sample Name **140-BH11-z-140-BH11-1-z**

Sampling Method **Unknown**

Sample Type **Unknown** *Sample Purpose* **Unknown**

QC Code **Unknown**

Sampling Equip Geoprobe

RFA / COC Number

Task

Collection Date 3/20/12

Collection Time 1420

Start Depth 0

End Depth 2

Sample Matrix **Soil**

QC Partners:

(TB) *(EB)* *(FB)*

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat 3/20/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH11**

RFA / COC Number

Sample Number **140-BH11-2**

Task

Sample Name **140-BH11-z-140-BH11-2-z**

Collection Date 3/20/12

Collection Time 1425 RWD

Sampling Method **Unknown**

Start Depth 5

Sample Type **Unknown** *Sample Purpose* **Unknown**

End Depth 6

QC Code **Unknown**

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) *(EB)* *(FB)*

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat 3/20/12 *Reviewed By / Dat*

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH11**

RFA / COC Number _____

Sample Number **140-BH11-3**

Task _____

Sample Name **140-BH11-z-140-BH11-3-z**

Collection Date 3/20/12

Sampling Method **Unknown**

Collection Time ~~1420~~ RSD 1428

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments: _____

Sketch Location:

Logged By / Dat [signature] 3/20/12

Reviewed By / Dat _____

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH12**

RFA / COC Number

Sample Number **140-BH12-1**

Task

Sample Name **140-BH12-z-140-BH12-1-z**

Collection Date 3/20/12

Collection Time 1354

Sampling Method **Unknown**

Start Depth 0

Sample Type **Unknown** *Sample Purpose* **Unknown**

End Depth 2

QC Code **Unknown**

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) *(EB)* *(FB)*

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat 3/20/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH12**

RFA / COC Number

Sample Number **140-BH12-2**

Task

Sample Name **140-BH12-z-140-BH12-2-z**

Collection Date 3/20/12

Sampling Method **Unknown**

Collection Time 1356

Start Depth 5

Sample Type **Unknown** *Sample Purpose* **Unknown**

End Depth 6

QC Code **Unknown**

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) *(EB)* *(FB)*

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat Gallen 3/20/12 *Reviewed By / Dat*

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH12**

RFA / COC Number

Sample Number **140-BH12-FD2**

Task

Sample Name **140-BH12-z-140-BH12-FD2-z**

Collection Date 3/20/12

Collection Time 1356

Sampling Method **Unknown**

Start Depth 5

Sample Type **Unknown** *Sample Purpose* **Unknown**

End Depth 6

QC Code **Field duplicates**

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) *(EB)* *(FB)*

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat 3/20/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH12**

RFA / COC Number

Sample Number **140-BH12-3**

Task

Sample Name **140-BH12-z-140-BH12-3-z**

Collection Date 3/20/12

Sampling Method **Unknown**

Collection Time 1401

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat [signature] 3/20/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH13**

RFA / COC Number

Sample Number **140-BH13-1**

Task

Sample Name **140-BH13-z-140-BH13-1-z**

Collection Date 3/20/12

Collection Time 1309

Sampling Method **Unknown**

Start Depth 0

Sample Type **Unknown** *Sample Purpose* **Unknown**

End Depth 2

QC Code **Unknown**

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) *(EB)* *(FB)* *SampleTeam* CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat [illegible] 3/20/12 *Reviewed By / Dat*

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH13**

RFA / COC Number

Sample Number **140-BH13-2**

Task

Sample Name **140-BH13-z-140-BH13-2-z**

Collection Date 3/20/12

Collection Time 1314

Sampling Method **Unknown**

Start Depth 5

Sample Type **Unknown** *Sample Purpose* **Unknown**

End Depth 6

QC Code **Unknown**

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) *(EB)* *(FB)*

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat [illegible] 3/20/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager S. Matlapudi

Location Code 140-BH13

RFA / COC Number

Sample Number 140-BH13-3

Task

Sample Name 140-BH13-z-140-BH13-3-z

Collection Date 3/20/12

Sampling Method Unknown

Collection Time 1319

Start Depth 9

Sample Type Unknown

Sample Purpose Unknown

End Depth 10

QC Code Unknown

Sampling Equip Geoprobe

Sample Matrix Soil

QC Partners:

(TB) *(EB)* *(FB)*

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	HNO3
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	Unknown

Comments:

Sketch Location:

Logged By / Dat 3/20/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH14**

RFA / COC Number _____

Sample Number **140-BH14-1**

Task _____

Sample Name **140-BH14-z-140-BH14-1-z**

Collection Date 3/20/12

Collection Time 1523

Sampling Method **Unknown**

Start Depth 0

Sample Type **Unknown**

Sample Purpose **Unknown**

End Depth 2

QC Code **Unknown**

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments: _____

Sketch Location:

Logged By / Dat [signature] 3/20/12

Reviewed By / Dat _____

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH14**

RFA / COC Number

Sample Number **140-BH14-2**

Task

Sample Name **140-BH14-z-140-BH14-2-z**

Collection Date 3/20/12

Collection Time 1527

Sampling Method **Unknown**

Start Depth 5

Sample Type **Unknown** *Sample Purpose* **Unknown**

End Depth 6

QC Code **Unknown**

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) *(EB)* *(FB)*

SampleTeam A, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat 3/20/12 *Reviewed By / Dat*

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH14**

RFA / COC Number _____

Sample Number **140-BH14-3**

Task _____

Sample Name **140-BH14-z-140-BH14-3-z**

Collection Date 3/20/12

Collection Time 1531

Sampling Method **Unknown**

Start Depth 9

Sample Type **Unknown**

Sample Purpose **Unknown**

End Depth 10

QC Code **Unknown**

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments: _____

Sketch Location:

Logged By / Dat [signature] 3/20/12

Reviewed By / Dat _____

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH14**

RFA / COC Number _____

Sample Number **140-BH14-MS3**

Task _____

Sample Name **140-BH14-z-140-BH14-MS3-z**

Collection Date 3/20/12

Sampling Method **Unknown**

Collection Time 1531

Start Depth 9

Sample Type **Unknown** *Sample Purpose* **Unknown**

End Depth 10

QC Code **Matrix spike**

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____ *SampleTeam* A, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments: _____

Sketch Location:

Logged By / Dat [signature] 3/20/12 *Reviewed By / Dat* _____

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH14**

Sample Number **140-BH14-MSD~~1~~3** (a)

Sample Name **140-BH14-z-140-BH14-MSD~~1~~3-z** (a)

Sampling Method **Unknown**

Sample Type **Unknown** *Sample Purpose* **Unknown**

QC Code **Matrix spike duplicate**

Sampling Equip Geoprobe

RFA / COC Number

Task

Collection Date 3/20/12

Collection Time ~~1541~~ RQD 1531

Start Depth 9

End Depth 10

Sample Matrix **Soil**

QC Partners:

(TB) *(EB)* *(FB)*

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat [signature] 3/20/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH15**

RFA / COC Number

Sample Number **140-BH15-1**

Task

Sample Name **140-BH15-z-140-BH15-1-z**

Collection Date 3/20/12

Collection Time 1449

Sampling Method **Unknown**

Start Depth 0

Sample Type **Unknown** *Sample Purpose* **Unknown**

End Depth 2

QC Code **Unknown**

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) *(EB)* *(FB)*

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat [signature] 3/20/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH15**

RFA / COC Number

Sample Number **140-BH15-2**

Task

Sample Name **140-BH15-z-140-BH15-2-z**

Collection Date 3/20/12

Collection Time 1457

Sampling Method **Unknown**

Start Depth 5

Sample Type **Unknown** *Sample Purpose* **Unknown**

End Depth 6

QC Code **Unknown**

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) *(EB)* *(FB)*

SampleTeam a, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat 3/20/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH15**

RFA / COC Number _____

Sample Number **140-BH15-3**

Task _____

Sample Name **140-BH15-z-140-BH15-3-z**

Collection Date 3/20/12

Collection Time 1501

Sampling Method **Unknown**

Start Depth 9

Sample Type **Unknown** *Sample Purpose* **Unknown**

End Depth 10

QC Code **Unknown**

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments: _____

Sketch Location:

Logged By / Dat [signature] 3/20/12 *Reviewed By / Dat* _____

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH15**

RFA / COC Number

Sample Number **140-BH15-FD3**

Task

Sample Name **140-BH15-z-140-BH15-FD3-z**

Collection Date 3/20/12

Sampling Method **Unknown**

Collection Time 1501

Sample Type **Unknown** *Sample Purpose* **Unknown**

Start Depth 9

QC Code **Field duplicates**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) *(EB)* *(FB)*

SampleTeam a, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat 3/20/12 *Reviewed By / Dat*

Sample Collection Log

Enviro Data®

- WSMR

Manager **S. Matlapudi**

Location Code **140-BH02**

RFA / COC Number

Sample Number **140-BH02-RB**

Task

Sample Name **140-BH02-z-140-BH02-RB-z**

Collection Date 3/20/12

Sampling Method **Unknown**

Collection Time 1510

Sample Type **Unknown** *Sample Purpose* **Unknown**

Start Depth —

QC Code **Rinsate blank**

End Depth —

Sampling Equip Shoe ; DI Water

Sample Matrix **Water**

QC Partners:

(TB) *(EB)* *(FB)*

SampleTeam CL, RGD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	250	mg/l	250 ml Poly Container	HNO3
Metals by 6020	A	Unknown	0	250	mg/l	250 ml Poly Container	~~None~~ HNO_3
Mercury by 7471A	A	Unknown	1	250	mg/l	250 ml Poly Container	~~Unknown~~ HNO_3

Comments:

Sketch Location:

Logged By / Dat 3/20/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH01**

RFA / COC Number

Sample Number **80-BH01-1**

Task

Sample Name **80-BH01-z-80-BH01-1-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1443

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RaD 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/21/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH01**

RFA / COC Number

Sample Number **80-BH01-2**

Task

Sample Name **80-BH01-z-80-BH01-2-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1448

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/21/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH01**

RFA / COC Number

Sample Number **80-BH01-3**

Task

Sample Name **80-BH01-z-80-BH01-3-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1449

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RSD 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/21/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH02**

RFA / COC Number

Sample Number **80-BH02-1**

Task

Sample Name **80-BH02-z-80-BH02-1-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1500

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RLD 2/28/12

Comments:

Sketch Location:

Logged By / Dat J. Tarbert 3/21/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH02**

RFA / COC Number

Sample Number **80-BH02-FD1**

Task

Sample Name **80-BH02-z-80-BH02-FD1-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1500

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 0

QC Code **Field duplicates**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RCD 2/28/12

Comments:

Sketch Location:

Logged By / Dat J. Tarbert 3/21/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH02**

RFA / COC Number

Sample Number **80-BH02-2**

Task

Sample Name **80-BH02-z-80-BH02-2-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1513

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RCD 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/21/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH02**

RFA / COC Number

Sample Number **80-BH02-3**

Task

Sample Name **80-BH02-z-80-BH02-3-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1516

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/21/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH03**

RFA / COC Number

Sample Number **80-BH03-1**

Task

Sample Name **80-BH03-z-80-BH03-1-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1326

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RaD 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/21/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH03**

RFA / COC Number

Sample Number **80-BH03-2**

Task

Sample Name **80-BH03-z-80-BH03-2-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1329

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RAD 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/21/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH03**

RFA / COC Number

Sample Number **80-BH03-3**

Task

Sample Name **80-BH03-z-80-BH03-3-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time ~~1337~~ JT ~~1335~~ JT 1355

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat [signature] 3/21/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH04**

RFA / COC Number

Sample Number **80-BH04-1**

Task

Sample Name **80-BH04-z-80-BH04-1-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1158

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat Rachel Daly 3/21/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH04**

RFA / COC Number

Sample Number **80-BH04-MS1**

Task

Sample Name **80-BH04-z-80-BH04-MS1-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1158

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 0

QC Code **Matrix spike**

End Depth 2

Sampling Equip

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat Rachel Daly 3/21/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH04**

RFA / COC Number

Sample Number **80-BH04-MSD1**

Task

Sample Name **80-BH04-z-80-BH04-MSD1-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1158

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 0

QC Code **Matrix spike duplicate**

End Depth 2

Sampling Equip

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None 2/28/12 RGD
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat Rachel Daly 3/21/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH04**

RFA / COC Number

Sample Number **80-BH04-2**

Task

Sample Name **80-BH04-z-80-BH04-2-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1203

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None RAD 2/28/12
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat Rachel Daly 3/21/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH04**

RFA / COC Number

Sample Number **80-BH04-3**

Task

Sample Name **80-BH04-z-80-BH04-3-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1207

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

AGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat Rachel Daly 3/21/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH05**

RFA / COC Number

Sample Number **80-BH05-1**

Task

Sample Name **80-BH05-z-80-BH05-1-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1129

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

2/28/12 RGD

Comments:

Sketch Location:

Logged By / Dat 3/21/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH05**

RFA / COC Number

Sample Number **80-BH05-2**

Task

Sample Name **80-BH05-z-80-BH05-2-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1132

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

ACD 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/21/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH05**

RFA / COC Number

Sample Number **80-BH05-FD2**

Task

Sample Name **80-BH05-z-80-BH05-FD2-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1132

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 5

QC Code **Field duplicates**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/21/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH05**

RFA / COC Number

Sample Number **80-BH05-3**

Task

Sample Name **80-BH05-z-80-BH05-3-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1138

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

2/28/12 RGD

Comments:

Sketch Location:

Logged By / Dat 3/21/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH06**

RFA / COC Number

Sample Number **80-BH06-1**

Task

Sample Name **80-BH06-z-80-BH06-1-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1100

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	~~None~~ None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

2/28/12 RGD

Comments:

Sketch Location:

Logged By / Dat Rachel Daly 3/21/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH06**

RFA / COC Number

Sample Number **80-BH06-2**

Task

Sample Name **80-BH06-z-80-BH06-2-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1105

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RCD 2/28/12

Comments:

Sketch Location:

Logged By / Dat Rachel Daly 3/21/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH06**

RFA / COC Number

Sample Number **80-BH06-3**

Task

Sample Name **80-BH06-z-80-BH06-3-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1107

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RaD 2/28/12

Comments:

Sketch Location:

Logged By / Dat Rachel Daly 3/21/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH07**

RFA / COC Number

Sample Number **80-BH07-1**

Task

Sample Name **80-BH07-z-80-BH07-1-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1620

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RAD 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/21/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH07**

RFA / COC Number

Sample Number **80-BH07-2**

Task

Sample Name **80-BH07-z-80-BH07-2-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1623

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat J. Tarbert 3/21/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH07**

RFA / COC Number

Sample Number **80-BH07-3**

Task

Sample Name **80-BH07-z-80-BH07-3-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1627

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ NONE
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat J. Tarbert 3/21/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH08**

RFA / COC Number

Sample Number **80-BH08-1**

Task

Sample Name **80-BH08-z-80-BH08-1-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1411

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/21/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH08**

RFA / COC Number

Sample Number **80-BH08-2**

Task

Sample Name **80-BH08-z-80-BH08-2-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1418

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat J. Tarbert 3/21/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH08**

RFA / COC Number

Sample Number **80-BH08-MS2**

Task

Sample Name **80-BH08-z-80-BH08-MS2-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1418

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 5

QC Code **Matrix spike**

End Depth 6

Sampling Equip

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat [signature] 3/21/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH08**

RFA / COC Number

Sample Number **80-BH08-MSD2**

Task

Sample Name **80-BH08-z-80-BH08-MSD2-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1148

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 5

QC Code **Matrix spike duplicate**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/21/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH08**

RFA / COC Number

Sample Number **80-BH08-3**

Task

Sample Name **80-BH08-z-80-BH08-3-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1425

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None RGD 2/28/12
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat 3/21/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH09**

RFA / COC Number

Sample Number **80-BH09-1**

Task

Sample Name **80-BH09-z-80-BH09-1-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1029

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RWD 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/21/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH09**

RFA / COC Number

Sample Number **80-BH09-2**

Task

Sample Name **80-BH09-z-80-BH09-2-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1033

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

2/28/12 RGD

Comments:

Sketch Location:

Logged By / Dat 3/21/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH09**

RFA / COC Number

Sample Number **80-BH09-3**

Task

Sample Name **80-BH09-z-80-BH09-3-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1037

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO8~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RaD 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/21/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH~~11~~** 10

Sample Number **80-BH~~11~~ 10-1**

Sample Name **80-BH11-z-80-BH11-1-z**

Sampling Method **Unknown**

Sample Type **Unknown** Sample Purpose **Unknown**

QC Code **Unknown**

Sampling Equip Geoprobe

RFA / COC Number

Task

Collection Date 3/21/12

Collection Time 0842

Start Depth 0

End Depth 2

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RaD 2/28/12

Comments:

Sketch Location:

Logged By / Dat Rachel Daly 3/21/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH~~11~~ 10**

Sample Number **80-BH~~11~~ 10-2**

Sample Name **80-BH11-z-80-BH11-2-z**

Sampling Method **Unknown**

Sample Type **Unknown** Sample Purpose **Unknown**

QC Code **Unknown**

Sampling Equip Geoprobe

RFA / COC Number

Task

Collection Date 3/21/12

Collection Time 0847

Start Depth 5

End Depth 6

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	Unknown None

RCVD 2/28/12

Comments:

Sketch Location:

3/21/12

Logged By / Dat Rachel Daly

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH~~11~~10**

Sample Number **80-BH~~11~~10-3**

Sample Name **80-BH11-z-80-BH11-3-z**

Sampling Method **Unknown**

Sample Type **Unknown** Sample Purpose **Unknown**

QC Code **Unknown**

Sampling Equip Geoprobe

RFA / COC Number

Task

Collection Date 3/21/12

Collection Time 0850

Start Depth 9

End Depth 10

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

2/28/12

Comments:

Sketch Location:

Logged By / Dat Rachel Daly 3/21/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH~~10~~ 11**

Sample Number **80-BH~~10~~ 11-1** RCD

Sample Name **80-BH10-z-80-BH10-1-z**

Sampling Method **Unknown**

Sample Type **Unknown** Sample Purpose **Unknown**

QC Code **Unknown**

Sampling Equip Geoprobe

RFA / COC Number

Task

Collection Date 3/21/12

Collection Time 0905

Start Depth 0

End Depth 2

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ ~~ex~~ NONE
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None RCD 2/28/12

Comments:

Sketch Location:

/ Dat Rachel Daly 3/21/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH10** 11 RGD

Sample Number **80-BH10-2** 11

Sample Name **80-BH10-z-80-BH10-2-z**

Sampling Method **Unknown**

Sample Type **Unknown** Sample Purpose **Unknown**

QC Code **Unknown**

Sampling Equip Geoprobe

RFA / COC Number

Task

Collection Date 3/21/12

Collection Time 0910

Start Depth 5

End Depth 6

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat Rachel Daly 3/21/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH~~10~~** 11

Sample Number **80-BH~~10~~-3** 11 RGD

Sample Name **80-BH10-z-80-BH10-3-z**

Sampling Method **Unknown**

Sample Type **Unknown** Sample Purpose **Unknown**

QC Code **Unknown**

Sampling Equip Geoprobe

RFA / COC Number

Task

Collection Date 3/21/12

Collection Time 0920

Start Depth 9

End Depth 10

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

2/28/12 RGD

Comments:

Sketch Location:

3/21/12

Logged By / Dat Rachel Daly

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH10** 11

Sample Number **80-BH10-FD3** 11 RGD

Sample Name **80-BH10-z-80-BH10-FD3-z**

Sampling Method **Unknown**

Sample Type **Unknown** Sample Purpose **Unknown**

QC Code **Field duplicates**

Sampling Equip Geoprobe

RFA / COC Number

Task

Collection Date 3/21/12

Collection Time 0920

Start Depth 9

End Depth 10

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

3/21/12

Logged By / Dat Rachel Daly

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH12**

RFA / COC Number

Sample Number **80-BH12-1**

Task

Sample Name **80-BH12-z-80-BH12-1-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 0936

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth ~~0.5~~ RGD 0

QC Code **Unknown**

End Depth 2

Sampling Equip

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

3/21/12

Logged By / Dat Rachel Daly

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH12**

RFA / COC Number

Sample Number **80-BH12-FD1**

Task

Sample Name **80-BH12-z-80-BH12-FD1-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 0936

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 0

QC Code **Field duplicates**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None RAD 2/28/12
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None

Comments:

Sketch Location:

Logged By / Dat [signature] 3/21/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH12**

RFA / COC Number

Sample Number **80-BH12-2**

Task

Sample Name **80-BH12-z-80-BH12-2-z**

Collection Date 3/2/12

Sampling Method **Unknown**

Collection Time 0943

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RcD 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/2/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH12**

RFA / COC Number

Sample Number **80-BH12-3**

Task

Sample Name **80-BH12-z-80-BH12-3-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time ~~9a~~ 0946

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth ~~10a~~ 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/21/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH13**

RFA / COC Number

Sample Number **80-BH13-1**

Task

Sample Name **80-BH13-z-80-BH13-1-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1005

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat Rachel Daly 3/21/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH13**

RFA / COC Number

Sample Number **80-BH13-2**

Task

Sample Name **80-BH13-z-80-BH13-2-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1009

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/21/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH13**

RFA / COC Number

Sample Number **80-BH13-3**

Task

Sample Name **80-BH13-z-80-BH13-3-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1013

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

2/28/12 RaD

Comments:

Sketch Location:

Logged By / Dat 3/21/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH14**

RFA / COC Number

Sample Number **80-BH14-1**

Task

Sample Name **80-BH14-z-80-BH14-1-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 0814

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/21/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH14**

RFA / COC Number

Sample Number **80-BH14-2**

Task

Sample Name **80-BH14-z-80-BH14-2-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 0821

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None 2/28/12
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None RGD

Comments:

Sketch Location:

Logged By / Dat 3/21/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH14**

RFA / COC Number

Sample Number **80-BH14-3**

Task

Sample Name **80-BH14-z-80-BH14-3-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 0824

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/21/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH15**

RFA / COC Number

Sample Number **80-BH15-1**

Task

Sample Name **80-BH15-z-80-BH15-1-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1544

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/21/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH15**

RFA / COC Number

Sample Number **80-BH15-2**

Task

Sample Name **80-BH15-z-80-BH15-2-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1550

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/21/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH15**

RFA / COC Number

Sample Number **80-BH15-FD2**

Task

Sample Name **80-BH15-z-80-BH15-FD2-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1550

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 5

QC Code **Field duplicates**

End Depth 6

Sampling Equip

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/21/12

Reviewed By / Dat

Sample Collection Log

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TO 08 SWMU 80 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **80-BH15**

RFA / COC Number

Sample Number **80-BH15-3**

Task

Sample Name **80-BH15-z-80-BH15-3-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1556

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RCD 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/21/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

- WSMR

Manager **S. Matlapudi**

Location Code **80-BH15**

RFA / COC Number

Sample Number **80-BH15-RB**

Task

Sample Name **80-BH15-z-80-BH15-RB-z**

Collection Date 3/21/12

Sampling Method **Unknown**

Collection Time 1632

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth N/A

QC Code **Rinsate blank**

End Depth N/A

Sampling Equip Geoprobe shoe + DI water

Sample Matrix **Water**

QC Partners:

(TB) (EB) (FB)

SampleTeam **J.Tarbert, R.Daly, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6020	A	Unknown	0	250	mg/l	250 ml Poly Container	~~None~~ HNO3 RGD
Mercury by 7471A	A	Unknown	0	250	mg/l	250 ml Poly Container	~~Unknown~~ HNO_3 2/28/12
Metals by 6010B	A	Unknown	1	250	mg/l	250 ml Poly Container	HNO3

Comments:

Sketch Location:

Logged By / Dat J. Tarbert 3/21/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH01**

RFA / COC Number

Sample Number **MP-BH01-1**

Task

Sample Name **MP-BH01-z-MP-BH01-1-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1229

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None RGD
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat 3/22/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH01**

RFA / COC Number

Sample Number **MP-BH01-2**

Task

Sample Name **MP-BH01-z-MP-BH01-2-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1231

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None RGD
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None RGD

Comments:

Sketch Location:

Logged By / Dat [signature] 3/22/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH01**

RFA / COC Number

Sample Number **MP-BH01-3**

Task

Sample Name **MP-BH01-z-MP-BH01-3-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1235

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RED 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/22/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH02**

RFA / COC Number

Sample Number **MP-BH02-1**

Task

Sample Name **MP-BH02-z-MP-BH02-1-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1418

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None RAD
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat 3/22/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH02**

RFA / COC Number

Sample Number **MP-BH02-FD1**

Task

Sample Name **MP-BH02-z-MP-BH02-FD1-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 418

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 0

QC Code **Field duplicates**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	HNO3
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	Unknown

Comments:

Sketch Location:

Logged By / Dat [signature] 3/22/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH02**

RFA / COC Number

Sample Number **MP-BH02-2**

Task

Sample Name **MP-BH02-z-MP-BH02-2-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1420

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None RAD
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat [signature] 3/22/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH02**

RFA / COC Number

Sample Number **MP-BH02-3**

Task

Sample Name **MP-BH02-z-MP-BH02-3-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1425

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None RGD
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None RGD

Comments:

Sketch Location:

Logged By / Dat 3/22/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH03**

RFA / COC Number

Sample Number **MP-BH03-1**

Task

Sample Name **MP-BH03-z-MP-BH03-1-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1449

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None RAD
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None RAD

Comments:

Sketch Location:

Logged By / Dat 3/22/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH03**

RFA / COC Number

Sample Number **MP-BH03-2**

Task

Sample Name **MP-BH03-z-MP-BH03-2-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1452

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None RAD
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None RAD

Comments:

Sketch Location:

Logged By / Dat C Fallen 3/22/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH03**

RFA / COC Number

Sample Number **MP-BH03-3**

Task

Sample Name **MP-BH03-z-MP-BH03-3-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1456

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None RaD 2/28/12
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None RaD

Comments:

Sketch Location:

Logged By / Dat Gallu 3/22/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH04**

RFA / COC Number

Sample Number **MP-BH04-1**

Task

Sample Name **MP-BH04-z-MP-BH04-1-db**

Collection Date 3/23/12

Sampling Method **Unknown**

Collection Time 1242

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RAD 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/23/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH04**

RFA / COC Number

Sample Number **MP-BH04-2**

Task

Sample Name **MP-BH04-z-MP-BH04-2-db**

Collection Date 3/23/12

Sampling Method **Unknown**

Collection Time 1250

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None RGD 2/28/12
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None RGD

Comments:

Sketch Location:

Logged By / Dat 3/23/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH04**

RFA / COC Number

Sample Number **MP-BH04-3**

Task

Sample Name **MP-BH04-z-MP-BH04-3-db**

Collection Date 3/23/12

Sampling Method **Unknown**

Collection Time 1253

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None RGD
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None RGD

Comments:

Sketch Location:

Logged By / Dat [signature] 3/23/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH04**

RFA / COC Number

Sample Number **MP-BH04-MS3**

Task

Sample Name **MP-BH04-z-MP-BH04-MS3-db**

Collection Date 3/23/12

Sampling Method **Unknown**

Collection Time 1253

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 9

QC Code **Matrix spike**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat C Gallen 3/23/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH04**

RFA / COC Number

Sample Number **MP-BH04-MSD3**

Task

Sample Name **MP-BH04-z-MP-BH04-MSD3-db**

Collection Date 3/23/12

Sampling Method **Unknown**

Collection Time 1253

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 9

QC Code **Matrix spike duplicate**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RCD 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/23/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH05**

RFA / COC Number

Sample Number **MP-BH05-1**

Task

Sample Name **MP-BH05-z-MP-BH05-1-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 0843

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RAD

Comments:

Sketch Location:

Logged By / Dat 3/22/12

Reviewed By / Dat

Sample Collection Log

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TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH05**

RFA / COC Number

Sample Number **MP-BH05-2**

Task

Sample Name **MP-BH05-z-MP-BH05-2-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 0848

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None RGD
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None RGD

Comments:

Sketch Location:

Logged By / Dat 3/22/12

Reviewed By / Dat

Sample Collection Log

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TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH05**

RFA / COC Number

Sample Number **MP-BH05-FD2**

Task

Sample Name **MP-BH05-z-MP-BH05-FD2-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 0848

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 5

QC Code **Field duplicates**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative	
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None	RAD
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None	RAD
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None	

Comments:

Sketch Location:

Logged By / Dat 3/22/12

Reviewed By / Dat

Sample Collection Log

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TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH05**

RFA / COC Number

Sample Number **MP-BH05-3**

Task

Sample Name **MP-BH05-z-MP-BH05-3-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 0853

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD
RGD
2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/22/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH06**

RFA / COC Number

Sample Number **MP-BH06-1**

Task

Sample Name **MP-BH06-z-MP-BH06-1-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 0919

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

2/28/12 RCD

Comments:

Sketch Location:

Logged By / Dat 3/22/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH06**

RFA / COC Number

Sample Number **MP-BH06-2**

Task

Sample Name **MP-BH06-z-MP-BH06-2-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 0923

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

2/28/12 RaD

Comments:

Sketch Location:

Logged By / Dat 3/22/12

Reviewed By / Dat

Sample Collection Log

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TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH06**

RFA / COC Number

Sample Number **MP-BH06-3**

Task

Sample Name **MP-BH06-z-MP-BH06-3-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 0926

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/22/12

Reviewed By / Dat

Sample Collection Log

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TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH07**

RFA / COC Number

Sample Number **MP-BH07-1**

Task

Sample Name **MP-BH07-z-MP-BH07-1-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 0939

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 3/28/12

Comments:

Sketch Location:

Logged By / Dat 3/22/12

Reviewed By / Dat

Sample Collection Log

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TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH07**

RFA / COC Number

Sample Number **MP-BH07-2**

Task

Sample Name **MP-BH07-z-MP-BH07-2-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 0945

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/22/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH07**

RFA / COC Number

Sample Number **MP-BH07-3**

Task

Sample Name **MP-BH07-z-MP-BH07-3-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 0948

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/22/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH08**

RFA / COC Number

Sample Number **MP-BH08-1**

Task

Sample Name **MP-BH08-z-MP-BH08-1-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1032

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe / Hand auger

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

2/28/12 RAD

Comments: Hand augered 0-5ft bgs (small probe)

Sketch Location:

Logged By / Dat 3/22/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH08**

RFA / COC Number

Sample Number **MP-BH08-MS1**

Task

Sample Name **MP-BH08-z-MP-BH08-MS1-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1032

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 0

QC Code **Matrix spike**

End Depth 2

Sampling Equip Geoprobe/Hand auger

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chapa**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None 2/28/12 RAD
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

Comments: Hand augered 0-5ft bgs (small probe)

Sketch Location:

Logged By / Dat 3/22/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH08**

RFA / COC Number

Sample Number **MP-BH08-MSD1**

Task

Sample Name **MP-BH08-z-MP-BH08-MSD1-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1032

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 0

QC Code **Matrix spike duplicate**

End Depth 2

Sampling Equip Geoprobe / Hand auger

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments: Hand augered 0-5ft bgs (small probe)

Sketch Location:

Logged By / Dat 3/22/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH08**

RFA / COC Number

Sample Number **MP-BH08-2**

Task

Sample Name **MP-BH08-z-MP-BH08-2-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1038

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe/Hand auger

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments: Hand augered 0-5ft bgs (small probe)

Sketch Location:

Logged By / Dat 3/22/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH08**

RFA / COC Number

Sample Number **MP-BH08-3**

Task

Sample Name **MP-BH08-z-MP-BH08-3-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1041

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/22/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH09**

RFA / COC Number

Sample Number **MP-BH09-1**

Task

Sample Name **MP-BH09-z-MP-BH09-1-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1057

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments: used a small diameter probe to check for utilities instead of hand augering.

Sketch Location:

Logged By / Dat 3/22/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH09**

RFA / COC Number

Sample Number **MP-BH09-2**

Task

Sample Name **MP-BH09-z-MP-BH09-2-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1059

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chappa**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RWD 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/22/12

Reviewed By / Dat

Sample Collection Log

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TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH09**

RFA / COC Number

Sample Number **MP-BH09-3**

Task

Sample Name **MP-BH09-z-MP-BH09-3-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1102

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Charge**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/22/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH10**

RFA / COC Number

Sample Number **MP-BH10-1**

Task

Sample Name **MP-BH10-z-MP-BH10-1-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1147

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

R4D 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/22/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH10**

RFA / COC Number

Sample Number **MP-BH10-2**

Task

Sample Name **MP-BH10-z-MP-BH10-2-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1151

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/22/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH10**

RFA / COC Number

Sample Number **MP-BH10-3**

Task

Sample Name **MP-BH10-z-MP-BH10-3-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1155

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/22/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH10**

RFA / COC Number

Sample Number **MP-BH10-FD3**

Task

Sample Name **MP-BH10-z-MP-BH10-FD3-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1155

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 9

QC Code **Field duplicates**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/22/12

Reviewed By / Dat

Sample Collection Log

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TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH11**

RFA / COC Number

Sample Number **MP-BH11-1**

Task

Sample Name **MP-BH11-z-MP-BH11-1-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1536

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RAD 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/22/12

Reviewed By / Dat

Sample Collection Log

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TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH11**

RFA / COC Number

Sample Number **MP-BH11-2**

Task

Sample Name **MP-BH11-z-MP-BH11-2-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1542

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RLD 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/22/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH11**

RFA / COC Number

Sample Number **MP-BH11-3**

Task

Sample Name **MP-BH11-z-MP-BH11-3-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1546

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/22/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH12**

RFA / COC Number

Sample Number **MP-BH12-1**

Task

Sample Name **MP-BH12-z-MP-BH12-1-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1607

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat C. Gallu 3/22/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH12**

RFA / COC Number

Sample Number **MP-BH12-FD1**

Task

Sample Name **MP-BH12-z-MP-BH12-FD1-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1607

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 0

QC Code **Field duplicates**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	~~None~~

RCD 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/22/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH12**

RFA / COC Number

Sample Number **MP-BH12-2**

Task

Sample Name **MP-BH12-z-MP-BH12-2-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1613

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/22/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH12**

RFA / COC Number

Sample Number **MP-BH12-3**

Task

Sample Name **MP-BH12-z-MP-BH12-3-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1617

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/22/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH13**

RFA / COC Number

Sample Number **MP-BH13-1**

Task

Sample Name **MP-BH13-z-MP-BH13-1-db**

Collection Date 3/23/12

Sampling Method **Unknown**

Collection Time 1011

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RAD 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/23/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH13**

RFA / COC Number

Sample Number **MP-BH13-2**

Task

Sample Name **MP-BH13-z-MP-BH13-2-db**

Collection Date 3/23/12

Sampling Method **Unknown**

Collection Time 1018

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RCD 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/23/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH13**

RFA / COC Number

Sample Number **MP-BH13-3**

Task

Sample Name **MP-BH13-z-MP-BH13-3-db**

Collection Date 3/23/12

Sampling Method **Unknown**

Collection Time 1023

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chapa**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

2/28/12 RGD

Comments:

Sketch Location:

Logged By / Dat 3/23/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH14**

RFA / COC Number

Sample Number **MP-BH14-1**

Task

Sample Name **MP-BH14-z-MP-BH14-1-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1637

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat C Keller 3/22/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH14**

RFA / COC Number

Sample Number **MP-BH14-2**

Task

Sample Name **MP-BH14-z-MP-BH14-2-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1641

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/22/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH14**

RFA / COC Number

Sample Number **MP-BH14-3**

Task

Sample Name **MP-BH14-z-MP-BH14-3-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1644

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO8~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

2/28/12 RGD

Comments:

Sketch Location:

Logged By / Dat 3/22/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH15**

RFA / COC Number

Sample Number **MP-BH15-1**

Task

Sample Name **MP-BH15-z-MP-BH15-1-db**

Collection Date 3/23/12

Sampling Method **Unknown**

Collection Time 1049

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/12/28

Comments:

Sketch Location:

Logged By / Dat 3/23/12

Reviewed By / Dat

Sample Collection Log

Envirо Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH15**

RFA / COC Number

Sample Number **MP-BH15-2**

Task

Sample Name **MP-BH15-z-MP-BH15-2-db**

Collection Date 3/23/12

Sampling Method **Unknown**

Collection Time 1054

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chanse**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/12/28

Comments:

Sketch Location:

Logged By / Dat 3/23/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH15**

RFA / COC Number

Sample Number **MP-BH15-FD2**

Task

Sample Name **MP-BH15-z-MP-BH15-FD2-db**

Collection Date 3/23/12

Sampling Method **Unknown**

Collection Time 1054

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 5

QC Code **Field duplicates**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/23/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH15**

RFA / COC Number

Sample Number **MP-BH15-3**

Task

Sample Name **MP-BH15-z-MP-BH15-3-db**

Collection Date 3/23/12

Sampling Method **Unknown**

Collection Time 1100

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RMD 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/23/12

Reviewed By / Dat

Sample Collection Log

Enviro Data®

- WSMR

Manager ***S. Matlapudi***

Location Code ***MP-BH15***

RFA / COC Number _____

Sample Number ***MP-BH15-RB***

Task _____

Sample Name ***MP-BH15-z-MP-BH15-RB-z***

Collection Date 3/22/12

Sampling Method ***Unknown***

Collection Time 1650

Sample Type ***Unknown***

Sample Purpose ***Unknown***

Start Depth —

QC Code ***Rinsate blank***

End Depth —

Sampling Equip Shoe and DI Water

Sample Matrix ***Water***

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam ***R.Daly, J. Tarbert, C. La Chance***

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6020	A	Unknown	0	250	mg/l	250 ml Poly Container	~~None~~ HNO3
Mercury by 7471A	A	Unknown	0	250	mg/l	250 ml Poly Container	~~Unknown~~ 2/28/12
Metals by 6010B	A	Unknown	1	250	mg/l	250 ml Poly Container	HNO3 HNO3

Comments:

Sketch Location:

Logged By / Dat [signature] 3/22/12

Reviewed By / Dat _____

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH05**

RFA / COC Number

Sample Number **MP-BH05-RB**

Task

Sample Name **MP-BH05-z-MP-BH05-RB-db**

Collection Date 3/23/12.

Sampling Method **Unknown**

Collection Time 1256

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth —

QC Code **Rinsate blank**

End Depth —

Sampling Equip Geoprobe shoe

Sample Matrix **Water**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	250	mg/l	250 ml Poly Container	~~HNO3~~ ~~None~~ HNO3
Metals by 6020	A	Unknown	0	250	mg/l	250 ml Poly Container	~~None~~ HNO3
Mercury by 7471A	A	Unknown	0	250	mg/l	250 ml Poly Container	~~Unknown~~ ~~None~~ HNO3

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/23/12

Reviewed By / Dat

Shaw® a world of Solutions™

COC # 139791-SB006

Chain of Custody

Lab EWS
Lab Contact
Lab Phone 330-720-1061

Client US Army
W. O. WSMR Main Post PO# 6
TAT 14 Days

Site Name WSMR
Contact Name 1
Contact Phone

Bill To: Shaw Environmental and
Phone
Fax
Address Bill Electronically to
City Baton Rouge
State Louisi Zip 70809

Results To: Mark Lyon
Phone 5052628920
Fax 5052628855
Address 2440 Louisiana Blvd Suit
City Albuquerque
State NM Zip 87110

	Mercury by 7471A	Metals by 6010B	Metals by 6020							
Container	P250	P250	P250							
Preservative	HNO3	HNO3	HNO3							

Sample ID	Matrix	Wt/ Vol	Date-Time Collected	Filtered	Number Containers										
MP-BH01-1	Soil		3/22/2012 12:29:00 PM		1	X	X	X							
MP-BH01-2	Soil		3/22/2012 12:31:00 PM		1	X	X	X							
MP-BH01-3	Soil		3/22/2012 12:35:00 PM		1	X	X	X							
MP-BH02-1	Soil		3/22/2012 2:18:00 PM		1	X	X	X							
MP-BH02-2	Soil		3/22/2012 2:20:00 PM		1	X	X	X							
MP-BH02-3	Soil		3/22/2012 2:25:00 PM		1	X	X	X							
MP-BH02-FD1	Soil		3/22/2012 2:18:00 PM		1	X	X	X							
MP-BH03-1	Soil		3/22/2012 2:49:00 PM		1	X	X	X							
MP-BH03-2	Soil		3/22/2012 2:52:00 PM		1	X	X	X							
MP-BH03-3	Soil		3/22/2012 2:56:00 PM		1	X	X	X							
MP-BH04-1	Soil		3/23/2012 12:42:00 PM		1	X	X	X							
MP-BH04-2	Soil		3/23/2012 12:50:00 PM		1	X	X	X							
MP-BH04-3	Soil		3/23/2012 12:53:00 PM		1	X	X	X							
MP-BH04-MS3	Soil		3/23/2012 12:53:00 PM		1	X	X	X							
MP-BH04-MSD3	Soil		3/23/2012 12:53:00 PM		1	X	X	X							
MP-BH05-1	Soil		3/22/2012 8:43:00 AM		1	X	X	X							
MP-BH05-2	Soil		3/22/2012 8:48:00 AM		1	X	X	X							
MP-BH05-3	Soil		3/22/2012 8:53:00 AM		1	X	X	X							
MP-BH05-FD2	Soil		3/22/2012 8:48:00 AM		1	X	X	X							

Remarks/Comments
Waybill #: 873013169518 Carrier: FEDEX Express
cost codes: CA0220
DA0220
EA0220
GA0220
HA0220

Sampled By

Lab Use Only
Temp of Cooler when Received, C

1	2	3	4	5

COC Tape was present on outer package Y N
COC Tape was unbroken on outer package Y N
COC Tape ws present on sample Y N
COC Tape was unbroken on sample Y N

Received in good condition Y N
Labels indicate Properly Preserved Y N
Received within Holding Time Y N

Relinquished By	Date / Time	Received By	Date / Time	Relinquished By	Date / Time	Received By	Date / Time
[signature]	3/23/12 1600						

EMS Shaw

Shaw® a world of Solutions™

COC # 139791-SB006

Chain of Custody

Lab EWS
Lab Contact
Lab Phone 330-720-1061

Client US Army
W. O. WSMR Main Post PO# 6
TAT 14 Days

Site Name WSMR
Contact Name 1
Contact Phone

Bill To: Shaw Environmental and
Phone
Fax
Address Bill Electronically to
City Baton Rouge
State Louisi Zip 70809

Results To: Mark Lyon
Phone 5052628920
Fax 5052628855
Address 2440 Louisiana Blvd Suit
City Albuquerque
State NM Zip 87110

	Mercury by 7471A	Metals by 6010B	Metals by 6020							
Container	P250	P250	P250							
Preservative	HNO3	HNO3	HNO3							

Sample ID	Matrix	Wt/ Vol	Date-Time Collected	Filtered	Number Containers	Mercury by 7471A	Metals by 6010B	Metals by 6020							
MP-BH05-RB	Water		3/23/2012 12:56:00 PM		1	X	X	X							
MP-BH06-1	Soil		3/22/2012 9:19:00 AM		1	X	X	X							
MP-BH06-2	Soil		3/22/2012 9:23:00 AM		1	X	X	X							
MP-BH06-3	Soil		3/22/2012 9:26:00 AM		1	X	X	X							
MP-BH07-1	Soil		3/22/2012 9:39:00 AM		1	X	X	X							
MP-BH07-2	Soil		3/22/2012 9:45:00 AM		1	X	X	X							
MP-BH07-3	Soil		3/22/2012 9:48:00 AM		1	X	X	X							
MP-BH08-1	Soil		3/22/2012 10:32:00 AM		1	X	X	X							
MP-BH08-2	Soil		3/22/2012 10:38:00 AM		1	X	X	X							
MP-BH08-3	Soil		3/22/2012 10:41:00 AM		1	X	X	X							
MP-BH08-MS1	Soil		3/22/2012 10:32:00 AM		1	X	X	X							
MP-BH08-MSD1	Soil		3/22/2012 10:32:00 AM		1	X	X	X							
MP-BH09-1	Soil		3/22/2012 10:57:00 AM		1	X	X	X							
MP-BH09-2	Soil		3/22/2012 10:59:00 AM		1	X	X	X							
MP-BH09-3	Soil		3/22/2012 11:02:00 AM		1	X	X	X							
MP-BH10-1	Soil		3/22/2012 11:47:00 AM		1	X	X	X							
MP-BH10-2	Soil		3/22/2012 11:51:00 AM		1	X	X	X							
MP-BH10-3	Soil		3/22/2012 11:55:00 AM		1	X	X	X							
MP-BH10-FD3	Soil		3/22/2012 11:55:00 AM		1	X	X	X							

Remarks/Comments
Waybill #: 873013169518 Carrier: FEDEX Express

Lab Use Only
Temp of Cooler when Received, C

1	2	3	4	5

COC Tape was present on outer package Y N
COC Tape was unbroken on outer package Y N
COC Tape ws present on sample Y N
COC Tape was unbroken on sample Y N

Received in good condition Y N
Labels indicate Properly Preserved Y N
Received within Holding Time Y N

Relinquished By	Date / Time	Received By	Date / Time	Relinquished By	Date / Time	Received By	Date / Time

Sampled By _____

SIMS Shaw

Shaw® a world of Solutions™

COC # 139791-SB006

Chain of Custody

Lab EWS
Lab Contact
Lab Phone 330-720-1061

Client US Army
W. O. WSMR Main Post PO# 6
TAT 14 Days

Site Name WSMR
Contact Name 1
Contact Phone

Bill To: Shaw Environmental and
Phone
Fax
Address Bill Electronically to
City Baton Rouge
State Louisi Zip 70809

Results To: Mark Lyon
Phone 5052628920
Fax 5052628855
Address 2440 Louisiana Blvd Suit
City Albuquerque
State NM Zip 87110

	Mercury by 7471A	Metals by 6010B	Metals by 6020							
Container	P250	P250	P250							
Preservative	HNO3	HNO3	HNO3							

	Sample ID	Matrix	Wt/ Vol	Date-Time Collected	Filtered	Number Containers										
✓	MP-BH11-1	Soil		3/22/2012 3:36:00 PM		1	X	X	X							
✓	MP-BH11-2	Soil		3/22/2012 3:42:00 PM		1	X	X	X							
✓	MP-BH11-3	Soil		3/22/2012 3:46:00 PM		1	X	X	X							
✓	MP-BH12-1	Soil		3/22/2012 4:07:00 PM		1	X	X	X							
✓	MP-BH12-2	Soil		3/22/2012 4:13:00 PM		1	X	X	X							
✓	MP-BH12-3	Soil		3/22/2012 4:17:00 PM		1	X	X	X							
✓	MP-BH12-FD1	Soil		3/22/2012 4:07:00 PM		1	X	X	X							
✓	MP-BH13-1	Soil		3/23/2012 10:11:00 AM		1	X	X	X							
✓	MP-BH13-2	Soil		3/23/2012 10:18:00 AM		1	X	X	X							
✓	MP-BH13-3	Soil		3/23/2012 10:23:00 AM		1	X	X	X							
✓	MP-BH14-1	Soil		3/22/2012 4:37:00 PM		1	X	X	X							
✓	MP-BH14-2	Soil		3/22/2012 4:41:00 PM		1	X	X	X							
✓	MP-BH14-3	Soil		3/22/2012 4:44:00 PM		1	X	X	X							
✓	MP-BH15-1	Soil		3/23/2012 10:49:00 AM		1	X	X	X							
✓	MP-BH15-2	Soil		3/23/2012 10:54:00 AM		1	X	X	X							
✓	MP-BH15-3	Soil		3/23/2012 11:00:00 AM		1	X	X	X							
✓	MP-BH15-FD2	Soil		3/23/2012 10:54:00 AM		1	X	X	X							
✓	MP-BH15-RB	Water		3/22/2012 4:50:00 PM		1	X	X	X							

Remarks/Comments
Waybill #: 873013169518 Carrier: FEDEX Express

Sampled By _____

Lab Use Only
Temp of Cooler when Received, C

1	2	3	4	5

COC Tape was present on outer package Y N
COC Tape was unbroken on outer package Y N
COC Tape ws present on sample Y N
COC Tape was unbroken on sample Y N

Received in good condition Y N
Labels indicate Properly Preserved Y N
Received within Holding Time Y N

Relinquished By	Date / Time	Received By	Date / Time	Relinquished By	Date / Time	Received By	Date / Time

EIMS Shaw

Shaw® a world of Solutions™

COC # 139791-SB006

Chain of Custody

Lab EWS
Lab Contact

Lab Phone 330-720-1061

Client US Army

W. O. WSMR Main Post PO# 6

TAT 14 Days

Site Name WSMR

Contact Name 1
Contact Phone

Bill To: Shaw Environmental and
Phone
Fax
Address Bill Electronically to
City Baton Rouge
State Louisi Zip 70809

Results To: Mark Lyon
Phone 5052628920
Fax 5052628855
Address 2440 Louisiana Blvd Suit
City Albuquerque
State NM Zip 87110

	Mercury by 7471A	Metals by 6010B	Metals by 6020							
Container	P250	P250	P250							
Preservative	HNO3	HNO3	HNO3							

Sample ID	Matrix	Wt/ Vol	Date-Time Collected	Filtered	Number Containers									

Remarks/Comments
Waybill #: 873013169518 Carrier: FEDEX Express

Sampled By _____

Lab Use Only

Temp of Cooler when Received, C

1	2	3	4	5

COC Tape was present on outer package Y N
COC Tape was unbroken on outer package Y N
COC Tape ws present on sample Y N
COC Tape was unbroken on sample Y N

Received in good condition Y N
Labels indicate Properly Preserved Y N
Received within Holding Time Y N

Relinquished By	Date / Time	Received By	Date / Time	Relinquished By	Date / Time	Received By	Date / Time

EIMS Shaw

MUR42

FedEx Express **US Airbill**

FedEx Tracking Number 8730 1316 9518

Form ID No. 0215

1 From *Please print and press hard.*

Date 3/23/12 Sender's FedEx Account Number SENDER'S FEDEX ACCOUNT NUMBER ONLY

Sender's Name Caitlin LaChance Phone (505) 262-8942

Company Shaw E and I

Address 2440 Louisiana Blvd NE Dept./Floor/Suite/Room

City Albuquerque State NM ZIP 87110

2 Your Internal Billing Reference First 24 characters will appear on invoice. 139791. (Main Post)

3 To Recipient's Name Stephanie Mossburg Phone (740) 373-4071

Company MICROBAC LABORATORIES, INC

Address 158 STARLITE DR Dept./Floor/Suite/Room

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address

Use this line for the HOLD location address or for continuation of your shipping address.

City MARIETTA State OH ZIP 45750-5279

☐ HOLD Weekday FedEx location address REQUIRED. NOT available for FedEx First Overnight.

☐ HOLD Saturday FedEx location address REQUIRED. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

0422153928

Learn to pack like a pro at fedex.com/packaging
Or let our pros pack for you with FedEx Office℠ Pack & Ship.

4a Express Package Service *To most locations. *Packages up to 150 lbs.*

- [x] FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.
- [ ] FedEx First Overnight — Earliest next business morning delivery to select locations.*
- [ ] FedEx 2Day — Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

4b Express Freight Service **To most locations. *Packages over 150 lbs.*

- [ ] FedEx 1Day Freight — Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 2Day Freight — Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 3Day Freight — Third business day.** Saturday Delivery NOT available.

CALL 1.800.332.0807 FedEx 1Day Freight Booking No.

5 Packaging *Declared value limit $500.

- [ ] FedEx Envelope*
- [ ] FedEx Pak* Includes FedEx Small Pak and FedEx Large Pak.
- [ ] FedEx Box
- [ ] FedEx Tube
- [x] Other

6 Special Handling and Delivery Signature Options

- [x] SATURDAY Delivery NOT available for FedEx Standard Overnight, FedEx Express Saver, or FedEx 3Day Freight.
- [ ] No Signature Required — Package may be left without obtaining a signature for delivery.
- [ ] Direct Signature — Someone at recipient's address may sign for delivery. Fee applies.
- [ ] Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. Fee applies.

Does this shipment contain dangerous goods?

One box must be checked.

- [x] No
- [ ] Yes — As per attached Shipper's Declaration.
- [ ] Yes — Shipper's Declaration not required.
- [ ] Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.

- [ ] Cargo Aircraft Only

7 Payment *Bill to:*

Enter FedEx Acct. No. or Credit Card No. below.

- [ ] Sender — Acct. No. in Section 1 will be billed.
- [x] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check

FedEx Acct. No. / Credit Card No. 1578 05967 Exp. Date

Total Packages	Total Weight	Total Declared Value†
2	____ lbs.	$ 100 .00

†Our liability is limited to $100 unless you declare a higher value. See back for details. By using this Airbill you agree to the service conditions on the back of this Airbill and in the current FedEx Service Guide, including terms that limit our liability.

605

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Location:	ABQKO
Device ID:	ABQKO-POS1
Employee:	2270041
Transaction:	78048746032

PRIORITY OVERNIGHT
873013169518 234.00 lb (S) ***
795544106757
795544106768
795544106779
795544106780

Scheduled Delivery Date 03/27/2012

Bill Recipient/Third Party

*** See payer invoice

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March 26, 2012 12:03:06 PM

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH01**

RFA / COC Number 139791-SB006

Sample Number **MP-BH01-1**

Task

Sample Name **MP-BH01-z-MP-BH01-1-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1229

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None RGD
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat 3/22/12

Reviewed By / Dat 6/11/12

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH01**

RFA / COC Number 139791 - SB006

Sample Number **MP-BH01-2**

Task

Sample Name **MP-BH01-z-MP-BH01-2-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1231

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None RGD
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None RGD

Comments:

Sketch Location:

Logged By / Dat [signature] 3/22/12

Reviewed By / Dat [signature] 6/11/12

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH01**

RFA / COC Number 139791-SB006

Sample Number **MP-BH01-3**

Task

Sample Name **MP-BH01-z-MP-BH01-3-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1235

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RED 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/22/12

Reviewed By / Dat 6/11/12

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH02**

RFA / COC Number 139791 - SB006

Sample Number **MP-BH02-1**

Task

Sample Name **MP-BH02-z-MP-BH02-1-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1418

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None RAD
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat 3/22/12

Reviewed By / Dat 6/11/12

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH02**

RFA / COC Number 139791-SB006

Sample Number **MP-BH02-FD1**

Task

Sample Name **MP-BH02-z-MP-BH02-FD1-db**

Collection Date 3/22/12

Collection Time 1418

Sampling Method **Unknown**

Start Depth 0

Sample Type **Unknown**

Sample Purpose **Background**

End Depth 2

QC Code **Field duplicates**

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

Comments: Field duplicate of MP-BH02-1

Sketch Location:

Logged By / Dat [signature] 3/22/12

Reviewed By / Dat [signature] 6/11/12

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH02**

RFA / COC Number 139791-SB004

Sample Number **MP-BH02-2**

Task

Sample Name **MP-BH02-z-MP-BH02-2-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1420

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None EAD
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ → None

Comments:

Sketch Location:

Logged By / Dat [signature] 3/22/12

Reviewed By / Dat [signature] 6/11/12

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH02**

RFA / COC Number 139791-SB006

Sample Number **MP-BH02-3**

Task

Sample Name **MP-BH02-z-MP-BH02-3-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1425

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None RGD
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None RGD

Comments:

Sketch Location:

Logged By / Dat 3/22/12

Reviewed By / Dat 6/11/12

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH03**

RFA / COC Number 139791-SB006

Sample Number **MP-BH03-1**

Task

Sample Name **MP-BH03-z-MP-BH03-1-db**

Collection Date 3/22/12

Collection Time 1449

Sampling Method **Unknown**

Start Depth 0

Sample Type **Unknown**

Sample Purpose **Background**

End Depth 2

QC Code **Unknown**

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None RGD
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None RGD

Comments:

Sketch Location:

Logged By / Dat [signature] 3/22/12

Reviewed By / Dat [signature] 6/4/12

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH03**

RFA / COC Number 139791-SB006

Sample Number **MP-BH03-2**

Task

Sample Name **MP-BH03-z-MP-BH03-2-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1452

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None RAD
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None RAD

Comments:

Sketch Location:

Logged By / Dat [signature] 3/22/12

Reviewed By / Dat [signature] 6/11/12

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH03**

RFA / COC Number 139791-SB006

Sample Number **MP-BH03-3**

Task

Sample Name **MP-BH03-z-MP-BH03-3-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1456

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None RaD 2/28/12
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None RaD

Comments:

Sketch Location:

Logged By / Dat [signature] 3/22/12

Reviewed By / Dat [signature] 6/11/12

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH04**

RFA / COC Number 139791-SB006

Sample Number **MP-BH04-1**

Task

Sample Name **MP-BH04-z-MP-BH04-1-db**

Collection Date 3/23/12

Sampling Method **Unknown**

Collection Time 1242

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RJD 2/28/12

Comments:

Sketch Location:

Logged By / Dat [signature] 3/23/12

Reviewed By / Dat [signature] 6/11/12

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH04**

RFA / COC Number 139791-SB006

Sample Number **MP-BH04-2**

Task

Sample Name **MP-BH04-z-MP-BH04-2-db**

Collection Date 3/23/12

Sampling Method **Unknown**

Collection Time 1250

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

RGP

Comments:

Sketch Location:

Logged By / Dat 3/23/12

Reviewed By / Dat 6/14/12

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH04**

RFA / COC Number 139791-SB006

Sample Number **MP-BH04-3**

Task

Sample Name **MP-BH04-z-MP-BH04-3-db**

Collection Date 3/23/12

Sampling Method **Unknown**

Collection Time 1253

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None RGD
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None RGD

Comments:

Sketch Location:

Logged By / Dat 3/23/12

Reviewed By / Dat 6/11/12

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH04**

RFA / COC Number 139791-SB006

Sample Number **MP-BH04-MS3**

Task

Sample Name **MP-BH04-z-MP-BH04-MS3-db**

Collection Date 3/23/12

Sampling Method **Unknown**

Collection Time 1253

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 9

QC Code **Matrix spike**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

Comments: Extra sample volume for Matrix spike on MP-BH04-3

Sketch Location:

Logged By / Dat [signature] 3/23/12

Reviewed By / Dat [signature] 6/11/12

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH04**

RFA / COC Number 139791-SB006

Sample Number **MP-BH04-MSD3**

Task

Sample Name **MP-BH04-z-MP-BH04-MSD3-db**

Collection Date 3/23/12

Sampling Method **Unknown**

Collection Time 1253

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 9

QC Code **Matrix spike duplicate**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	Unknown None

RCVD 2/28/12

Comments: Extra sample volume for matrix spike duplicate on MP-BH04-3

Sketch Location:

Logged By / Dat [signature] 3/23/12

Reviewed By / Dat [signature] 6/11/12

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH05**

RFA / COC Number 13979/-SB006

Sample Number **MP-BH05-1**

Task

Sample Name **MP-BH05-z-MP-BH05-1-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 0843

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD

Comments:

Sketch Location:

Logged By / Dat [signature] 3/22/12

Reviewed By / Dat [signature] 6/11/12

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH05**

RFA / COC Number 139791-SB006

Sample Number **MP-BH05-2**

Task

Sample Name **MP-BH05-z-MP-BH05-2-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 0848

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None RQD
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None RQD

Comments:

Sketch Location:

Logged By / Dat [signature] 3/22/12

Reviewed By / Dat [signature] 4/11/12

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH05**

RFA / COC Number 139791-SB006

Sample Number **MP-BH05-FD2**

Task

Sample Name **MP-BH05-z-MP-BH05-FD2-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 0848

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 5

QC Code **Field duplicates**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative	
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None	RGD
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None	RGD
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None	

Comments: Field duplicate of MP-BH05-2

Sketch Location:

Logged By / Dat 3/22/12

Reviewed By / Dat 6/11/12

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH05**

RFA / COC Number 139791-SB006

Sample Number **MP-BH05-3**

Task

Sample Name **MP-BH05-z-MP-BH05-3-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 0853

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD
RGD
2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/22/12

Reviewed By / Dat 6/11/12

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH06**

RFA / COC Number 139791-SB006

Sample Number **MP-BH06-1**

Task

Sample Name **MP-BH06-z-MP-BH06-1-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 0919

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

2/28/12 RCD

Comments:

Sketch Location:

Logged By / Dat [signature] 3/22/12

Reviewed By / Dat [signature] 6/11/12

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH06**

RFA / COC Number 139791 - SB006

Sample Number **MP-BH06-2**

Task

Sample Name **MP-BH06-z-MP-BH06-2-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 0923

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

2/28/12 RGD

Comments:

Sketch Location:

Logged By / Dat [signature] 3/22/12

Reviewed By / Dat [signature] 4/11/12

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH06**

RFA / COC Number 139791-SB006

Sample Number **MP-BH06-3**

Task

Sample Name **MP-BH06-z-MP-BH06-3-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 0926

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat [signature] 3/22/12

Reviewed By / Dat [signature] 6/11/12

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH07**

RFA / COC Number 139791-SB006

Sample Number **MP-BH07-1**

Task

Sample Name **MP-BH07-z-MP-BH07-1-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 0939

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RAD 2/28/12

Comments:

Sketch Location:

Logged By / Dat [signature] 3/22/12

Reviewed By / Dat [signature] 6/11/12

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH07**

RFA / COC Number 139791-SB006

Sample Number **MP-BH07-2**

Task

Sample Name **MP-BH07-z-MP-BH07-2-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 0945

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/22/12

Reviewed By / Dat 6/1/12

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH07**

RFA / COC Number 139791-SB006

Sample Number **MP-BH07-3**

Task

Sample Name **MP-BH07-z-MP-BH07-3-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 0948

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/22/12

Reviewed By / Dat 6/11/12

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH08**

RFA / COC Number 139791-SB006

Sample Number **MP-BH08-1**

Task

Sample Name **MP-BH08-z-MP-BH08-1-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1032

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe / Hand auger

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

2/28/12 RAD

Comments: Hand augered 0-5ft bgs (small probe)

Sketch Location:

Logged By / Dat 3/22/12

Reviewed By / Dat 6/11/12

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH08**

RFA / COC Number 139791-5B006

Sample Number **MP-BH08-MS1**

Task

Sample Name **MP-BH08-z-MP-BH08-MS1-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1032

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 0

QC Code **Matrix spike**

End Depth 2

Sampling Equip Geoprobe/Hand auger

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

2/28/12 RAD

Comments: Hand augered 0-5ft bgs (small probe)
Extra volume for matrix spike on MP-BH08-1

Sketch Location:

Logged By / Dat 3/22/12

Reviewed By / Dat 6/11/12

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH08**

RFA / COC Number 139791-SB006

Sample Number **MP-BH08-MSD1**

Task

Sample Name **MP-BH08-z-MP-BH08-MSD1-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1032

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 0

QC Code **Matrix spike duplicate**

End Depth 2

Sampling Equip Geoprobe / Hand auger

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments: Hand augered 0-5ft bgs (small probe)
Extra volume for matrix spike duplicate on MP-BH08-1

Sketch Location:

Logged By / Dat [signature] 3/22/12

Reviewed By / Dat [signature] 6/11/12

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH08**

RFA / COC Number 139791-SB006

Sample Number **MP-BH08-2**

Task

Sample Name **MP-BH08-z-MP-BH08-2-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1038

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe/Hand auger

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments: Hand augered 0-5ft bgs (small probe)

Sketch Location:

Logged By / Dat 3/22/12

Reviewed By / Dat 6/11/12

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH08**

RFA / COC Number 139791-SB006

Sample Number **MP-BH08-3**

Task

Sample Name **MP-BH08-z-MP-BH08-3-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1041

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RAD 2/28/12

Comments:

Sketch Location:

Logged By / Dat [signature] 3/22/12

Reviewed By / Dat [signature] 4/11/12

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH09**

RFA / COC Number 139791-SB006

Sample Number **MP-BH09-1**

Task

Sample Name **MP-BH09-z-MP-BH09-1-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1057

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RAD 2/28/12

Comments: used a small diameter probe to check for utilities instead of hand augering.

Sketch Location:

Logged By / Dat 3/22/12

Reviewed By / Dat 6/11/12

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH09**

RFA / COC Number 139791 - SB006

Sample Number **MP-BH09-2**

Task

Sample Name **MP-BH09-z-MP-BH09-2-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1059

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RWD 2/28/12

Comments:

Sketch Location:

Logged By / Dat [signature] 3/22/12

Reviewed By / Dat [signature] 6/4/12

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH09**

RFA / COC Number 139791-SB006

Sample Number **MP-BH09-3**

Task

Sample Name **MP-BH09-z-MP-BH09-3-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1102

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RAD 2/28/12

Comments:

Sketch Location:

Logged By / Dat [signature] 3/22/12

Reviewed By / Dat [signature] 4/4/12

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH10**

RFA / COC Number 139791-SB006

Sample Number **MP-BH10-1**

Task

Sample Name **MP-BH10-z-MP-BH10-1-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1147

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RAD 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/22/12

Reviewed By / Dat 6/11/12

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH10**

RFA / COC Number 139791-SB006

Sample Number **MP-BH10-2**

Task

Sample Name **MP-BH10-z-MP-BH10-2-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1151

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat [signature] 3/22/12

Reviewed By / Dat [signature] 6/11/12

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH10**

RFA / COC Number 139791-SB006

Sample Number **MP-BH10-3**

Task

Sample Name **MP-BH10-z-MP-BH10-3-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1155

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/22/12

Reviewed By / Dat 4/11/12

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH10**

RFA / COC Number 139791-SB006

Sample Number **MP-BH10-FD3**

Task

Sample Name **MP-BH10-z-MP-BH10-FD3-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1155

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 9

QC Code **Field duplicates**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments: Field duplicate of MP-BH10-3

Sketch Location:

Logged By / Dat 3/22/12

Reviewed By / Dat 6/11/12

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH11**

RFA / COC Number 139791-SB006

Sample Number **MP-BH11-1**

Task

Sample Name **MP-BH11-z-MP-BH11-1-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1536

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RAD 2/28/12

Comments:

Sketch Location:

Logged By / Dat [signature] 3/22/12

Reviewed By / Dat [signature] 6/11/12

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH11**

RFA / COC Number 139791-SB006

Sample Number **MP-BH11-2**

Task

Sample Name **MP-BH11-z-MP-BH11-2-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1542

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RLD 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/22/12

Reviewed By / Dat 4/4/12

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH11**

RFA / COC Number 139791-SB006

Sample Number **MP-BH11-3**

Task

Sample Name **MP-BH11-z-MP-BH11-3-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1546

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat [signature] 3/22/12

Reviewed By / Dat [signature] 6/11/12

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH12**

RFA / COC Number 139791-SB006

Sample Number **MP-BH12-1**

Task

Sample Name **MP-BH12-z-MP-BH12-1-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1607

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat [signature] 3/22/12

Reviewed By / Dat [signature] 6/11/12

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH12**

RFA / COC Number 139791-SB006

Sample Number **MP-BH12-FD1**

Task

Sample Name **MP-BH12-z-MP-BH12-FD1-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1607

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 0

QC Code **Field duplicates**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	~~None~~

RGD 2/28/12

Comments: Field duplicate of MP-BH12-1

Sketch Location:

Logged By / Dat 3/22/12

Reviewed By / Dat 6/11/12

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH12**

RFA / COC Number 139791-SB006

Sample Number **MP-BH12-2**

Task

Sample Name **MP-BH12-z-MP-BH12-2-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1613

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat [signature] 3/22/12

Reviewed By / Dat [signature] 6/4/12

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH12**

RFA / COC Number 139791-SB006

Sample Number **MP-BH12-3**

Task

Sample Name **MP-BH12-z-MP-BH12-3-db**

Collection Date 3/22/12

Collection Time 1617

Sampling Method **Unknown**

Start Depth 9

Sample Type **Unknown**

Sample Purpose **Background**

End Depth 10

QC Code **Unknown**

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/22/12

Reviewed By / Dat 6/11/12

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH13**

RFA / COC Number 139791-SB006

Sample Number **MP-BH13-1**

Task

Sample Name **MP-BH13-z-MP-BH13-1-db**

Collection Date 3/23/12

Sampling Method **Unknown**

Collection Time 1011

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RAD 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/23/12

Reviewed By / Dat 6/11/12

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH13**

RFA / COC Number 139791-SB006

Sample Number **MP-BH13-2**

Task

Sample Name **MP-BH13-z-MP-BH13-2-db**

Collection Date 3/23/12

Sampling Method **Unknown**

Collection Time 1018

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RAD 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/23/12

Reviewed By / Dat 6/11/12

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH13**

RFA / COC Number 139791-SB006

Sample Number **MP-BH13-3**

Task

Sample Name **MP-BH13-z-MP-BH13-3-db**

Collection Date 3/23/12

Sampling Method **Unknown**

Collection Time 1023

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

2/28/12 RaD

Comments:

Sketch Location:

Logged By / Dat 3/23/12

Reviewed By / Dat 6/11/12

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH14**

RFA / COC Number 139791-SB006

Sample Number **MP-BH14-1**

Task

Sample Name **MP-BH14-z-MP-BH14-1-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1137

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown.~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat C Keller 3/22/12

Reviewed By / Dat Mark Lyn 6/11/12

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH14**

RFA / COC Number 139791-SB006

Sample Number **MP-BH14-2**

Task

Sample Name **MP-BH14-z-MP-BH14-2-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1141

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat [signature] 3/22/12

Reviewed By / Dat [signature] 6/11/12

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH14**

RFA / COC Number 139791-SB006

Sample Number **MP-BH14-3**

Task

Sample Name **MP-BH14-z-MP-BH14-3-db**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1644

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

2/28/12 RGD

Comments:

Sketch Location:

Logged By / Dat [signature] 3/22/12

Reviewed By / Dat [signature] 6/11/12

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH15**

RFA / COC Number 139791-SB006

Sample Number **MP-BH15-1**

Task

Sample Name **MP-BH15-z-MP-BH15-1-db**

Collection Date 3/23/12

Sampling Method **Unknown**

Collection Time 1049

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) (EB) (FB)

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RGD 2/12/28

Comments:

Sketch Location:

Logged By / Dat 3/23/12

Reviewed By / Dat 6/11/12

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH15**

RFA / COC Number 139791-SB006

Sample Number **MP-BH15-2**

Task

Sample Name **MP-BH15-z-MP-BH15-2-db**

Collection Date 3/23/12

Sampling Method **Unknown**

Collection Time 1054

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RAD 2/12/28

Comments:

Sketch Location:

Logged By / Dat [signature] 3/23/12

Reviewed By / Dat [signature] 6/11/12

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH15**

RFA / COC Number 139791-SB006

Sample Number **MP-BH15-FD2**

Task

Sample Name **MP-BH15-z-MP-BH15-FD2-db**

Collection Date 3/23/12

Sampling Method **Unknown**

Collection Time 1054

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 5

QC Code **Field duplicates**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

2/28/12

Comments: Field duplicate of MP-BH15-2

Sketch Location:

Logged By / Dat 3/23/12

Reviewed By / Dat 4/11/12

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH15**

RFA / COC Number 139791-SB006

Sample Number **MP-BH15-3**

Task

Sample Name **MP-BH15-z-MP-BH15-3-db**

Collection Date 3/23/12

Sampling Method **Unknown**

Collection Time 1100

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	0	60	grams	60 g Glass	~~Unknown~~ None

RMD 2/28/12

Comments:

Sketch Location:

Logged By / Dat [signature] 3/23/12

Reviewed By / Dat [signature] 6/11/12

Sample Collection Log

Enviro Data®

- WSMR

Manager **S. Matlapudi**

Location Code **MP-BH15**

RFA / COC Number 139791-SB00 6

Sample Number **MP-BH15-RB**

Task

Sample Name **MP-BH15-z-MP-BH15-RB-z**

Collection Date 3/22/12

Sampling Method **Unknown**

Collection Time 1650

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth —

QC Code **Rinsate blank**

End Depth —

Sampling Equip Shoe and DI Water

Sample Matrix **Water**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6020	A	Unknown	0	250	mg/l	250 ml Poly Container	~~None~~ HNO3
Mercury by 7471A	A	Unknown	0	250	mg/l	250 ml Poly Container	~~Unknown~~ 2/28/12
Metals by 6010B	A	Unknown	1	250	mg/l	250 ml Poly Container	HNO3 HNO3

Comments:

Sketch Location:

Logged By / Dat [signature] 3/22/12

Reviewed By / Dat [signature] 6/11/12

Sample Collection Log

Enviro Data®

TO 08 WSMR Main Post Baground Soil - WSMR

Manager **S. Matlapudi**

Location Code **MP-BH05**

RFA / COC Number 139791-SB006

Sample Number **MP-BH05-RB**

Task

Sample Name **MP-BH05-z-MP-BH05-RB-db**

Collection Date 3/23/12.

Sampling Method **Unknown**

Collection Time 1256

Sample Type **Unknown**

Sample Purpose **Background**

Start Depth —

QC Code **Rinsate blank**

End Depth —

Sampling Equip Geoprobe shoe

Sample Matrix **Water**

QC Partners:

(TB) _____ (EB) _____ (FB) _____

SampleTeam **R.Daly, J. Tarbert, C. La Chance**

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	1	250	mg/l	250 ml Poly Container	~~HNO3~~ ~~None~~ HNO3
Metals by 6020	A	Unknown	0	250	mg/l	250 ml Poly Container	~~None~~ HNO3
Mercury by 7471A	A	Unknown	0	250	mg/l	250 ml Poly Container	~~Unknown~~ ~~None~~ HNO3

RGD 2/28/12

Comments:

Sketch Location:

Logged By / Dat 3/23/12

Reviewed By / Dat 6/11/12

WSMR

Environmental Project Number **IR Main Post B**

Sample No: MP-BH06-1
Lab: MBLM **Location:** MP-BH06
Sample Date: **Time:**
Analysis 6010B, 6020, 7471A

Preservation: None
Cooler Temp **Filtered:** Unknown
Sampler **Container** 60 g Glass

WSMR

Environmental Project Number **IR Main Post B**

Sample No: MP-BH06-2
Lab: MBLM **Location:** MP-BH06
Sample Date: **Time:**
Analysis 6010B, 6020, 7471A

Preservation: None
Cooler Temp **Filtered:** Unknown
Sampler **Container** 60 g Glass

WSMR

Environmental Project Number **IR Main Post B**

Sample No: MP-BH06-3
Lab: MBLM **Location:** MP-BH06
Sample Date: **Time:**
Analysis 6010B, 6020, 7471A

Preservation: None
Cooler Temp **Filtered:** Unknown
Sampler **Container** 60 g Glass

WSMR

Environmental Project Number **IR Main Post B**

Sample No: MP-BH07-1
Lab: MBLM **Location:** MP-BH07
Sample Date: **Time:**
Analysis 6010B, 6020, 7471A

Preservation: None
Cooler Temp **Filtered:** Unknown
Sampler **Container** 60 g Glass

WSMR

Environmental Project Number **IR Main Post B**

Sample No: MP-BH07-2
Lab: MBLM **Location:** MP-BH07
Sample Date: **Time:**
Analysis 6010B, 6020, 7471A

Preservation: None
Cooler Temp **Filtered:** Unknown
Sampler **Container** 60 g Glass

WSMR

Environmental Project Number **IR Main Post B**

Sample No: MP-BH07-3
Lab: MBLM **Location:** MP-BH07
Sample Date: **Time:**
Analysis 6010B, 6020, 7471A

Preservation: None
Cooler Temp **Filtered:** Unknown
Sampler **Container** 60 g Glass

WSMR

Environmental Project Number **IR Main Post B**

Sample No: MP-BH08-1
Lab: MBLM **Location:** MP-BH08
Sample Date: **Time:**
Analysis 6010B, 6020, 7471A

Preservation: None
Cooler Temp **Filtered:** Unknown
Sampler **Container** 60 g Glass

WSMR

Environmental Project Number **IR Main Post B**

Sample No: MP-BH08-2
Lab: MBLM **Location:** MP-BH08
Sample Date: **Time:**
Analysis 6010B, 6020, 7471A

Preservation: None
Cooler Temp **Filtered:** Unknown
Sampler **Container** 60 g Glass

WSMR

Environmental Project Number **IR Main Post B**

Sample No: MP-BH08-3
Lab: MBLM **Location:** MP-BH08
Sample Date: **Time:**
Analysis 6010B, 6020, 7471A

Preservation: None
Cooler Temp **Filtered:** Unknown
Sampler **Container** 60 g Glass

WSMR

Environmental Project Number **IR Main Post B**

Sample No: MP-BH08-MS1
Lab: MBLM **Location:** MP-BH08
Sample Date: **Time:**
Analysis 6010B, 6020, 7471A

Preservation: None
Cooler Temp **Filtered:** Unknown
Sampler **Container** 60 g Glass

WSMR

Environmental Project Number **IR Main Post B**

Sample No: MP-BH04-1
Lab: MBLM **Location:** MP-BH04
Sample Date: **Time:**
Analysis 6010B, 6020, 7471A

Preservation: None
Cooler Temp **Filtered:** Unknown
Sampler **Container** 60 g Glass

WSMR

Environmental Project Number **IR Main Post B**

Sample No: MP-BH04-2
Lab: MBLM **Location:** MP-BH04
Sample Date: **Time:**
Analysis 6010B, 6020, 7471A

Preservation: None
Cooler Temp **Filtered:** Unknown
Sampler **Container** 60 g Glass

WSMR

Environmental Project Number **IR Main Post B**

Sample No: MP-BH04-3
Lab: MBLM **Location:** MP-BH04
Sample Date: **Time:**
Analysis 6010B, 6020, 7471A

Preservation: None
Cooler Temp **Filtered:** Unknown
Sampler **Container** 60 g Glass

WSMR

Environmental Project Number **IR Main Post B**

Sample No: MP-BH04-MS3
Lab: MBLM **Location:** MP-BH04
Sample Date: **Time:**
Analysis 6010B, 6020, 7471A

Preservation: None
Cooler Temp **Filtered:** Unknown
Sampler **Container** 60 g Glass

WSMR

Environmental Project Number **IR Main Post B**

Sample No: MP-BH04-MSD3
Lab: MBLM **Location:** MP-BH04
Sample Date: **Time:**
Analysis 6010B, 6020, 7471A

Preservation: None
Cooler Temp **Filtered:** Unknown
Sampler **Container** 60 g Glass

WSMR

Environmental Project Number **IR Main Post B**

Sample No: MP-BH05-1
Lab: MBLM **Location:** MP-BH05
Sample Date: **Time:**
Analysis 6010B, 6020, 7471A

Preservation: None
Cooler Temp **Filtered:** Unknown
Sampler **Container** 60 g Glass

WSMR

Environmental Project Number **IR Main Post B**

Sample No: MP-BH05-2
Lab: MBLM **Location:** MP-BH05
Sample Date: **Time:**
Analysis 6010B, 6020, 7471A

Preservation: None
Cooler Temp **Filtered:** Unknown
Sampler **Container** 60 g Glass

WSMR

Environmental Project Number **IR Main Post B**

Sample No: MP-BH05-3
Lab: MBLM **Location:** MP-BH05
Sample Date: **Time:**
Analysis 6010B, 6020, 7471A

Preservation: None
Cooler Temp **Filtered:** Unknown
Sampler **Container** 60 g Glass

WSMR

Environmental Project Number **IR Main Post B**

Sample No: MP-BH05-FD2
Lab: MBLM **Location:** MP-BH05
Sample Date: **Time:**
Analysis 6010B, 6020, 7471A

Preservation: None
Cooler Temp **Filtered:** Unknown
Sampler **Container** 60 g Glass

WSMR

Environmental Project Number **IR Main Post B**

Sample No: MP-BH05-RB
Lab: MBLM **Location:** MP-BH05
Sample Date: **Time:**
Analysis 6010B, 6020, 7471A

Preservation: HNO3
Cooler Temp **Filtered:** Unknown
Sampler **Container** 250 ml Poly Contain

Environmental Project Number

Sample No:	MP-BH10-RB		
Lab:	MBLM	**Location:**	MP-BH10
	Sample Date:	**Time:**	
Analysis	6010B, 6020, 7471A		
Preservation:	HNO3		
Cooler Temp		**Filtered:**	Unknown
Sampler	CL	**Container**	250 ml Poly Contain

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager S. Matlapudi

Location Code 140-BH01

RFA / COC Number 139791-SB004

Sample Number 140-BH01-1

Task

Sample Name 140-BH01-z-140-BH01-1-z

Collection Date ~~3/19/12~~ a 3/20/12

Collection Time 0947

Sampling Method Unknown

Start Depth 0

Sample Type Unknown

Sample Purpose Unknown

End Depth 2

QC Code Unknown

Sampling Equip Geoprobe

Sample Matrix Soil

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury	A			60	grams	60g Glass	None

RGD 6/12/12

Comments:

Sketch Location:

Logged By / Dat [signature] 3/20/12 ~~3/19/12~~ a

Reviewed By / Dat [signature] 6/11/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH01**

RFA / COC Number 139791-SB004

Sample Number **140-BH01-2**

Task

Sample Name **140-BH01-z-140-BH01-2-z**

Collection Date ~~3/19/12~~ a 3/20/12

Collection Time 0953

Sampling Method **Unknown**

Start Depth 5

Sample Type **Unknown** *Sample Purpose* **Unknown**

End Depth 6

QC Code **Unknown**

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____ *SampleTeam* CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat CGallu ~~3/19/12~~ 3/20/12 a *Reviewed By / Dat* Mark Lyn 6/11/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH01**

RFA / COC Number 139791-SB004

Sample Number **140-BH01-3**

Task

Sample Name **140-BH01-z-140-BH01-3-z**

Collection Date ~~3/19/12~~ a 3/20/12

Sampling Method **Unknown**

Collection Time 0957

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 9

End Depth 10

QC Code **Unknown**

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat [signature] ~~3/19/12~~ a 3/20/12

Reviewed By / Dat [signature] 6/11/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH02**

RFA / COC Number 139791-SB004

Sample Number **140-BH02-~~2~~1 a**

Task

Sample Name **140-BH02-z-140-BH02-2-z**

Collection Date 3/19/12

Collection Time 1455

Sampling Method **Unknown**

Start Depth 0

Sample Type **Unknown** *Sample Purpose* **Unknown**

End Depth 2

QC Code **Unknown**

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____ *SampleTeam* CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat [signature] 3/19/12 *Reviewed By / Dat* [signature] 6/11/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH02**

RFA / COC Number 139791-SB004

Sample Number **140-BH02-2**

Task

Sample Name **140-BH02-z-140-BH02-2-z**

Collection Date 3/19/12

Sampling Method **Unknown**

Collection Time 1507

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam RD, CL

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	Unknown None

Comments:

Sketch Location:

Logged By / Dat [signature] 3/19/12

Reviewed By / Dat [signature] 6/11/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH02**

RFA / COC Number 139791-SB004

Sample Number **140-BH02-3**

Task

Sample Name **140-BH02-z-140-BH02-3-z**

Collection Date 3/19/12

Sampling Method **Unknown**

Collection Time 15/2

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam RD, CL

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat [signature] 3/19/12

Reviewed By / Dat [signature] 6/11/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH03**

RFA / COC Number 139791-SB004

Sample Number **140-BH03-1**

Task

Sample Name **140-BH03-z-140-BH03-1-z**

Collection Date 3/19/12

Collection Time 1525

Sampling Method **Unknown**

Start Depth 0

Sample Type **Unknown** *Sample Purpose* **Unknown**

End Depth 2

QC Code **Unknown**

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____ *SampleTeam* RD, CL

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat [signature] 3/19/12 *Reviewed By / Dat* [signature] 6/11/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH03**

RFA / COC Number 139791-SB004

Sample Number **140-BH03-2**

Task

Sample Name **140-BH03-z-140-BH03-2-z**

Collection Date 3/19/12

Collection Time 1532

Sampling Method **Unknown**

Start Depth 5

Sample Type **Unknown** *Sample Purpose* **Unknown**

End Depth 6

QC Code **Unknown**

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____ *SampleTeam* CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat [signature] 3/19/12

Reviewed By / Dat [signature] 4/11/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH03**

RFA / COC Number 139791-SB004

Sample Number **140-BH03-FD~~1~~2a**

Task

Sample Name **140-BH03-z-140-BH03-FD~~1~~2-z a**

Collection Date 3/19/12

Sampling Method **Unknown**

Collection Time 1532

Sample Type **Unknown** *Sample Purpose* **Unknown**

Start Depth 5

QC Code **Field duplicates**

End Depth 4

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____ *SampleTeam* CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments: Field duplicate of 140-BH03-2

Sketch Location:

Logged By / Dat Cintia Lallier 3/19/12 *Reviewed By / Dat* Mark Lyn 6/11/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH03**

RFA / COC Number 139791-SB004

Sample Number **140-BH03-3**

Task

Sample Name **140-BH03-z-140-BH03-3-z**

Collection Date 3/19/12

Sampling Method **Unknown**

Collection Time 1540

Sample Type **Unknown** *Sample Purpose* **Unknown**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____ *SampleTeam* CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat [signature] 3/19/12

Reviewed By / Dat [signature] 6/11/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH04**

RFA / COC Number 139791-SB004

Sample Number **140-BH04-1**

Task

Sample Name **140-BH04-z-140-BH04-1-z**

Collection Date 3/20/19

Sampling Method **Unknown**

Collection Time 0820

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat [signature] 3/20/12

Reviewed By / Dat [signature] 6/11/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH04**

RFA / COC Number 139791-SB004

Sample Number **140-BH04-2**

Task

Sample Name **140-BH04-z-140-BH04-2-z**

Collection Date 3/20/12

Collection Time 0828

Sampling Method **Unknown**

Start Depth 5

Sample Type **Unknown** *Sample Purpose* **Unknown**

End Depth 6

QC Code **Unknown**

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____ *SampleTeam* RD, CL

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat [signature] 3/20/12 *Reviewed By / Dat* [signature] 6/11/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH04**

RFA / COC Number 139791-SB004

Sample Number **140-BH04-3**

Task

Sample Name **140-BH04-z-140-BH04-3-z**

Collection Date 3/20/12

Sampling Method **Unknown**

Collection Time 0854

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam RD, CL

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat [signature] 3/20/12

Reviewed By / Dat [signature] 6/11/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH05**

RFA / COC Number 139791-SB004

Sample Number **140-BH05-1**

Task

Sample Name **140-BH05-z-140-BH05-1-z**

Collection Date 3/20/12

Sampling Method **Unknown**

Collection Time 0916

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat [signature] 3/20/12

Reviewed By / Dat [signature] 6/11/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH05**

RFA / COC Number 139791-SB004

Sample Number **140-BH05-2**

Task

Sample Name **140-BH05-z-140-BH05-2-z**

Collection Date 3/20/12

Sampling Method **Unknown**

Collection Time 0922

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL; RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat [signature] 3/20/12

Reviewed By / Dat [signature] 6/11/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH05**

RFA / COC Number 139791-SB004

Sample Number **140-BH05-3**

Task

Sample Name **140-BH05-z-140-BH05-3-z**

Collection Date 3/20/12

Sampling Method **Unknown**

Collection Time 0927

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat CGaller 3/20/12

Reviewed By / Dat Mark Lyn 4/11/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH05**

RFA / COC Number 139791-SB004

Sample Number **140-BH05-FD3**

Task

Sample Name **140-BH05-z-140-BH05-FD3-z**

Collection Date 3/20/12

Sampling Method **Unknown**

Collection Time 0927

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 9

QC Code **Field duplicates**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments: Field duplicate of 140-BH05-3

Sketch Location:

Logged By / Dat [signature] 3/20/12

Reviewed By / Dat [signature] 6/11/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH06**

RFA / COC Number 139791-SB004

Sample Number **140-BH06-1**

Task

Sample Name **140-BH06-z-140-BH06-1-z**

Collection Date 3/20/12

Sampling Method **Unknown**

Collection Time 1019

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat [signature] 3/20/12

Reviewed By / Dat [signature] 4/11/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH06**

RFA / COC Number 139791-SB004

Sample Number **140-BH06-2**

Task

Sample Name **140-BH06-z-140-BH06-2-z**

Collection Date 3/20/12

Sampling Method **Unknown**

Collection Time 1024

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat [illegible] 3/20/12

Reviewed By / Dat [illegible] 6/11/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH06**

RFA / COC Number 139791-SB004

Sample Number **140-BH06-3**

Task

Sample Name **140-BH06-z-140-BH06-3-z**

Collection Date 3/20/12

Sampling Method **Unknown**

Collection Time 1027

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat CGallen 3/20/12

Reviewed By / Dat Mat Sya 6/11/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH07**

RFA / COC Number 139791-SB004

Sample Number **140-BH07-1**

Task

Sample Name **140-BH07-z-140-BH07-1-z**

Collection Date 3/20/12

Sampling Method **Unknown**

Collection Time 1044

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam a, BD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat [illegible] 3/20/12

Reviewed By / Dat [illegible] 6/11/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH07**

RFA / COC Number 139791 SB004

Sample Number **140-BH07-2**

Task

Sample Name **140-BH07-z-140-BH07-2-z**

Collection Date 3/20/12

Sampling Method **Unknown**

Collection Time 1049

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty.	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat [signature] 3/20/12

Reviewed By / Dat [signature] 6/11/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH07**

RFA / COC Number 139791-SB004

Sample Number **140-BH07-MS2**

Task

Sample Name **140-BH07-z-140-BH07-MS2-z**

Collection Date 3/20/12

Sampling Method **Unknown**

Collection Time 1049

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 5

QC Code **Matrix spike**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments: Extra volume for matrix spike on 140-BH07-2

Sketch Location:

Logged By / Dat [signature] 3/20/12 *Reviewed By / Dat* [signature] 6/11/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH07**

RFA / COC Number 139791-SB004

Sample Number **140-BH07-MSD2**

Task

Sample Name **140-BH07-z-140-BH07-MSD2-z**

Collection Date 3/20/12

Collection Time 1049

Sampling Method **Unknown**

Start Depth 5

Sample Type **Unknown** *Sample Purpose* **Unknown**

End Depth 6

QC Code **Matrix spike duplicate**

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____ *SampleTeam* CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments: Extra volume for matrix spike duplicate on 140-BH07-2

Sketch Location:

Logged By / Dat CGallen 3/20/12 *Reviewed By / Dat* [illegible] 6/14/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH07**

RFA / COC Number 139791-SB004

Sample Number **140-BH07-3**

Task

Sample Name **140-BH07-z-140-BH07-3-z**

Collection Date 3/20/12

Sampling Method **Unknown**

Collection Time 1053

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat [signature] 3/20/12

Reviewed By / Dat [signature] 4/11/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH08** ~~0~~

RFA / COC Number 139791-SB004

Sample Number **140-BH08-~~2~~ 1**

Task

Sample Name **140-BH08-z-140-BH08-~~2~~ 1-z**

Collection Date 3/20/12

Sampling Method **Unknown**

Collection Time 1110

Sample Type **Unknown** *Sample Purpose* **Unknown**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____ *SampleTeam* CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat [signature] 3/20/12 *Reviewed By / Dat* [signature] 6/11/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH08**

RFA / COC Number 139791-SB004

Sample Number **140-BH08-2**

Task

Sample Name **140-BH08-z-140-BH08-2-z**

Collection Date 3/20/12

Sampling Method **Unknown**

Collection Time 1115

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat [signature] 3/20/12

Reviewed By / Dat [signature] 4/11/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH08**

RFA / COC Number 139791-SB004

Sample Number **140-BH08-3**

Task

Sample Name **140-BH08-z-140-BH08-3-z**

Collection Date 3/20/12

Sampling Method **Unknown**

Collection Time 1118

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat [signature] 3/20/12

Reviewed By / Dat [signature] 4/11/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH09**

RFA / COC Number 139791-SB004

Sample Number **140-BH09-1**

Task

Sample Name **140-BH09-z-140-BH09-1-z**

Collection Date 3/20/12

Sampling Method **Unknown**

Collection Time 1138

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat [signature] 3/20/12

Reviewed By / Dat [signature] 4/11/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH09**

RFA / COC Number 139791-SB004

Sample Number **140-BH09-2**

Task

Sample Name **140-BH09-z-140-BH09-2-z**

Collection Date 3/20/12

Sampling Method **Unknown**

Collection Time 1141

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat C Fallen 3/20/12

Reviewed By / Dat Manjula 6/11/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH09** w

RFA / COC Number 139791-SB004

Sample Number **140-BH09-MS~~1~~2**

Task

Sample Name **140-BH09-z-140-BH09-MS~~1~~2-z**

Collection Date 3/20/12

Sampling Method **Unknown**

Collection Time 1141

Sample Type **Unknown** *Sample Purpose* **Unknown**

Start Depth 5

QC Code **Matrix spike**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____ *SampleTeam* CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments: Extra volume for Matrix spike 140-BH09-2

Sketch Location:

Logged By / Dat [illegible] 3/20/12 *Reviewed By / Dat* [illegible] 6/11/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH09**

RFA / COC Number 139791-SB004

Sample Number **140-BH09-MSD2**

Task

Sample Name **140-BH09-z-140-BH09-MSD2-z**

Collection Date 3/20/12

Sampling Method **Unknown**

Collection Time 1141

Sample Type **Unknown** *Sample Purpose* **Unknown**

Start Depth 5

QC Code **Matrix spike duplicate**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____ *SampleTeam* CL, KD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments: Extra volume for matrix spike duplicate 140-BH09-2

Sketch Location:

Logged By / Dat [signature] 3/20/12

Reviewed By / Dat [signature] 4/11/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH09**

RFA / COC Number 139791-SB004

Sample Number **140-BH09-3**

Task

Sample Name **140-BH09-z-140-BH09-3-z**

Collection Date 3/20/12

Sampling Method **Unknown**

Collection Time 1147

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat [signature] 3/20/12

Reviewed By / Dat [signature] 4/11/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH10**

RFA / COC Number 139791-SB004

Sample Number **140-BH10-1**

Task

Sample Name **140-BH10-z-140-BH10-1-z**

Collection Date 3/20/12

Sampling Method **Unknown**

Collection Time 1208

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat [signature] 3/20/12

Reviewed By / Dat [signature] 6/11/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH10**

RFA / COC Number 139791-SB004

Sample Number **140-BH10-FD1**

Task

Sample Name **140-BH10-z-140-BH10-FD1-z**

Collection Date 3/20/12

Sampling Method **Unknown**

Collection Time 1208

Sample Type **Unknown** *Sample Purpose* **Unknown**

Start Depth 0

QC Code **Field duplicates**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____ *SampleTeam* CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments: Field duplicate of 140-BH10-1

Sketch Location:

Logged By / Dat [signature] 3/20/12 *Reviewed By / Dat* [signature] 6/11/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH10**

RFA / COC Number 139791-SB004

Sample Number **140-BH10-2**

Task

Sample Name **140-BH10-z-140-BH10-2-z**

Collection Date 3/20/12

Collection Time 12/2

Sampling Method **Unknown**

Start Depth 5

Sample Type **Unknown** *Sample Purpose* **Unknown**

End Depth 6

QC Code **Unknown**

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____ *SampleTeam* CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat [signature] 3/20/12 *Reviewed By / Dat* [signature] 6/11/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH10**

RFA / COC Number 139791-SB004

Sample Number **140-BH10-3**

Task

Sample Name **140-BH10-z-140-BH10-3-z**

Collection Date 3/20/12

Sampling Method **Unknown**

Collection Time 1215

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~UNOS~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat [signature] 3/20/12

Reviewed By / Dat [signature] 6/11/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH11**

RFA / COC Number 139791-SB004

Sample Number **140-BH11-1**

Task

Sample Name **140-BH11-z-140-BH11-1-z**

Collection Date 3/20/12

Sampling Method **Unknown**

Collection Time 1420

Sample Type **Unknown** *Sample Purpose* **Unknown**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____ *SampleTeam* CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat [signature] 3/20/12 *Reviewed By / Dat* [signature] 6/11/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH11**

RFA / COC Number 139791-SB004

Sample Number **140-BH11-2**

Task

Sample Name **140-BH11-z-140-BH11-2-z**

Collection Date 3/20/12

Sampling Method **Unknown**

Collection Time 1425 RAD

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat [signature] 3/20/12

Reviewed By / Dat [signature] 6/11/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH11**

RFA / COC Number 139791-SB004

Sample Number **140-BH11-3**

Task

Sample Name **140-BH11-z-140-BH11-3-z**

Collection Date 3/20/12

Sampling Method **Unknown**

Collection Time ~~1420~~ RAD 1428

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat [signature] 3/20/12

Reviewed By / Dat [signature] 6/11/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH12**

RFA / COC Number 139791-SB004

Sample Number **140-BH12-1**

Task

Sample Name **140-BH12-z-140-BH12-1-z**

Collection Date 3/20/12

Sampling Method **Unknown**

Collection Time 1354

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat [signature] 3/20/12

Reviewed By / Dat [signature] 6/11/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH12**

RFA / COC Number 139791-SB004

Sample Number **140-BH12-2**

Task

Sample Name **140-BH12-z-140-BH12-2-z**

Collection Date 3/20/12

Sampling Method **Unknown**

Collection Time 1356

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat [illegible] 3/20/12

Reviewed By / Dat [illegible] 6/4/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH12**

RFA / COC Number 139791-SB004

Sample Number **140-BH12-FD2**

Task

Sample Name **140-BH12-z-140-BH12-FD2-z**

Collection Date 3/20/12

Collection Time 1356

Sampling Method **Unknown**

Start Depth 5

Sample Type **Unknown** *Sample Purpose* **Unknown**

End Depth 6

QC Code **Field duplicates**

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____ *SampleTeam* CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments: Field duplicate of 140-BH12-2

Sketch Location:

Logged By / Dat [signature] 3/20/12 *Reviewed By / Dat* [signature] 6/11/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH12**

RFA / COC Number 139791-SB004

Sample Number **140-BH12-3**

Task

Sample Name **140-BH12-z-140-BH12-3-z**

Collection Date 3/20/12

Sampling Method **Unknown**

Collection Time 1401

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat [signature] 3/20/12

Reviewed By / Dat [signature] 6/11/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH13**

RFA / COC Number 139791-SB004

Sample Number **140-BH13-1**

Task

Sample Name **140-BH13-z-140-BH13-1-z**

Collection Date 3/20/12

Collection Time 1309

Sampling Method **Unknown**

Start Depth 0

Sample Type **Unknown** *Sample Purpose* **Unknown**

End Depth 2

QC Code **Unknown**

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____ *SampleTeam* CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat [signature] 3/20/12 *Reviewed By / Dat* [signature] 4/11/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH13**

RFA / COC Number 139791-SB004

Sample Number **140-BH13-2**

Task

Sample Name **140-BH13-z-140-BH13-2-z**

Collection Date 3/20/12

Sampling Method **Unknown**

Collection Time 1314

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat [illegible] 3/20/12

Reviewed By / Dat [illegible] 6/11/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH13**

RFA / COC Number 139791-SB004

Sample Number **140-BH13-3**

Task

Sample Name **140-BH13-z-140-BH13-3-z**

Collection Date 3/20/12

Sampling Method **Unknown**

Collection Time 1319

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	HNO3
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	Unknown

Comments:

Sketch Location:

Logged By / Dat 3/20/12

Reviewed By / Dat 4/11/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH14**

RFA / COC Number 139791-SB004

Sample Number **140-BH14-1**

Task

Sample Name **140-BH14-z-140-BH14-1-z**

Collection Date 3/20/12

Collection Time 1523

Sampling Method **Unknown**

Start Depth 0

Sample Type **Unknown** *Sample Purpose* **Unknown**

End Depth 2

QC Code **Unknown**

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____ *SampleTeam* CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat [signature] 3/20/12

Reviewed By / Dat [signature] 6/11/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH14**

RFA / COC Number 139791-SB004

Sample Number **140-BH14-2**

Task

Sample Name **140-BH14-z-140-BH14-2-z**

Collection Date 3/20/12

Sampling Method **Unknown**

Collection Time 1527

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam A, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat [signature] 3/20/12

Reviewed By / Dat [signature] 6/11/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH14**

RFA / COC Number 139791 - SB004

Sample Number **140-BH14-3**

Task

Sample Name **140-BH14-z-140-BH14-3-z**

Collection Date 3/20/12

Sampling Method **Unknown**

Collection Time 1531

Sample Type **Unknown** *Sample Purpose* **Unknown**

Start Depth 9

QC Code **Unknown**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat [signature] 3/20/12

Reviewed By / Dat [signature] 4/11/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH14**

RFA / COC Number 139791 - SB004

Sample Number **140-BH14-MS3**

Task

Sample Name **140-BH14-z-140-BH14-MS3-z**

Collection Date 3/20/12

Sampling Method **Unknown**

Collection Time 1531

Sample Type **Unknown** *Sample Purpose* **Unknown**

Start Depth 9

QC Code **Matrix spike**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____ *SampleTeam* CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments: Extra volume for matrix spike 140-BH14-3

Sketch Location:

Logged By / Dat 3/20/12 *Reviewed By / Dat* 6/11/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH14**

RFA / COC Number 139791 - SB004

Sample Number **140-BH14-MSD~~1~~3** (a)

Task

Sample Name **140-BH14-z-140-BH14-MSD~~1~~3-z** (a)

Collection Date 3/20/12

Sampling Method **Unknown**

Collection Time ~~1547~~ RAD 1531

Start Depth 9

Sample Type **Unknown** *Sample Purpose* **Unknown**

End Depth 10

QC Code **Matrix spike duplicate**

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____ *SampleTeam* CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments: Extra volume matrix spike duplicate 140-BH14-3

Sketch Location:

Logged By / Dat [signature] 3/20/12 *Reviewed By / Dat* [signature] 4/11/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH15**

RFA / COC Number 139791-SB004

Sample Number **140-BH15-1**

Task

Sample Name **140-BH15-z-140-BH15-1-z**

Collection Date 3/20/12

Sampling Method **Unknown**

Collection Time 1449

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 0

QC Code **Unknown**

End Depth 2

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat [signature] 3/20/12

Reviewed By / Dat [signature] 4/11/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH15**

RFA / COC Number 139791-SB004

Sample Number **140-BH15-2**

Task

Sample Name **140-BH15-z-140-BH15-2-z**

Collection Date 3/20/12

Sampling Method **Unknown**

Collection Time 1457

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth 5

QC Code **Unknown**

End Depth 6

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam A, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat [signature] 3/20/12

Reviewed By / Dat [signature] 4/11/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH15**

RFA / COC Number 139791-SB004

Sample Number **140-BH15-3**

Task

Sample Name **140-BH15-z-140-BH15-3-z**

Collection Date 3/20/12

Collection Time 1501

Sampling Method **Unknown**

Start Depth 9

Sample Type **Unknown** *Sample Purpose* **Unknown**

End Depth 10

QC Code **Unknown**

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments:

Sketch Location:

Logged By / Dat [signature] 3/20/12

Reviewed By / Dat [signature] 4/11/12

Sample Collection Log

Enviro Data®

TO 08 SWMU 140 Background Soil Sampling - WSMR

Manager **S. Matlapudi**

Location Code **140-BH15**

RFA / COC Number 139791-SB004

Sample Number **140-BH15-FD3**

Task

Sample Name **140-BH15-z-140-BH15-FD3-z**

Collection Date 3/20/12

Sampling Method **Unknown**

Collection Time 1501

Sample Type **Unknown** *Sample Purpose* **Unknown**

Start Depth 9

QC Code **Field duplicates**

End Depth 10

Sampling Equip Geoprobe

Sample Matrix **Soil**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____ *SampleTeam* CL, RD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	60	grams	60 g Glass	~~HNO3~~ None
Metals by 6020	A	Unknown	0	60	grams	60 g Glass	None
Mercury by 7471A	A	Unknown	1	60	grams	60 g Glass	~~Unknown~~ None

Comments: Field duplicate of 140-BH15-3

Sketch Location:

Logged By / Dat [signature] 3/20/12 *Reviewed By / Dat* [signature] 6/11/12

Sample Collection Log

Enviro Data®

- WSMR

Manager **S. Matlapudi**

Location Code **140-BH02**

RFA / COC Number 139791-SB004

Sample Number **140-BH02-RB**

Task

Sample Name **140-BH02-z-140-BH02-RB-z**

Collection Date 3/20/12

Sampling Method **Unknown**

Collection Time 1510

Sample Type **Unknown**

Sample Purpose **Unknown**

Start Depth —

QC Code **Rinsate blank**

End Depth —

Sampling Equip Shoe ; DI Water

Sample Matrix **Water**

QC Partners:

(TB) _____ *(EB)* _____ *(FB)* _____

SampleTeam CL, RGD

Containers:

Analytical Suite	Frtn	Flt	Qty	Size	Units	Container Type	Perservative
Metals by 6010B	A	Unknown	0	250	mg/l	250 ml Poly Container	HNO3
Metals by 6020	A	Unknown	0	250	mg/l	250 ml Poly Container	~~None~~ HNO_3
Mercury by 7471A	A	Unknown	1	250	mg/l	250 ml Poly Container	~~Unknown~~ HNO_3

Comments:

Sketch Location:

Logged By / Dat [signature] 3/20/12

Reviewed By / Dat [signature] 6/11/12

Appendix B3
Chain of Custody Forms

Shaw a world of Solutions

COC # 139791-SB004

Chain of Custody

Lab EWS
Lab Contact
Lab Phone 330-720-1061

Client US Army
W. O. TO-08, PO:620349
TAT 14 Days

Site Name WSMR - 84
Contact Name 1
Contact Phone

Bill To: Shaw Environmental and
Phone
Fax
Address Bill electronically to
City Baton Rouge
State Louisi Zip 70809

Results To: Mark Lyon
Phone 5052628920
Fax 5052628955
Address 2440 Louisiana Blvd NE
City Albuquerque
State NM Zip 87110

	Sample ID	Matrix	Wt/ Vol	Date-Time Collected	Filtered	Number Containers	Mercury by 7471A	Metals by 6010B	Metals by 6020							
						Container	G60W	G60W	G60W							
						Preservative	n	n	n							
✓	140-BH01-1	Soil		3/20/2012 9:47:00 AM		1	X	X	X							
✓	140-BH01-2	Soil		3/20/2012 9:53:00 AM		1	X	X	X							
✓	140-BH01-3	Soil		3/20/2012 9:57:00 AM		1	X	X	X							
✓	140-BH02-1	Soil		3/19/2012 2:55:00 PM		1	X	X	X							
✓	140-BH02-2	Soil		3/19/2012 3:07:00 PM		1	X	X	X							
✓	140-BH02-3	Soil		3/19/2012 3:12:00 PM		1	X	X	X							
✓	140-BH02-RB	Water		3/20/2012 3:10:00 PM		1	X	X	X							
✓	140-BH03-1	Soil		3/19/2012 3:25:00 PM		1	X	X	X							
✓	140-BH03-2	Soil		3/19/2012 3:32:00 PM		~~0~~ 1	X	X	X							
✓	140-BH03-3	Soil		3/19/2012 3:40:00 PM		1	X	X	X							
✓	140-BH03-FD2	Soil		3/19/2012 3:32:00 PM		1	X	X	X							
✓	140-BH04-1	Soil		3/20/2012 8:20:00 AM		1	X	X	X							
✓	140-BH04-2	Soil		3/20/2012 8:28:00 AM		1	X	X	X							
✓	140-BH04-3	Soil		3/20/2012 8:54:00 AM		1	X	X	X							
✓	140-BH05-1	Soil		3/20/2012 9:16:00 AM		1	X	X	X							
✓	140-BH05-2	Soil		3/20/2012 9:22:00 AM		1	X	X	X							
✓	140-BH05-3	Soil		3/20/2012 9:27:00 AM		1	X	X	X							
✓	140-BH05-FD3	Soil		3/20/2012 9:27:00 AM		~~0~~ 1	X	X	X							
✓	140-BH06-1	Soil		3/20/2012 10:19:00 AM		1	X	X	X							

Remarks/Comments
FedEx Express
Waybill No:
873013169492

Sampled By

Lab Use Only
Temp of Cooler when Received, C

1	2	3	4	5

COC Tape was present on outer package Y N
COC Tape was unbroken on outer package Y N
COC Tape ws present on sample Y N
COC Tape was unbroken on sample Y N

Received in good condition Y N
Labels indicate Properly Preserved Y N
Received within Holding Time Y N

Relinquished By	Date / Time	Received By	Date / Time	Relinquish
Rachel Daly	1600 3/22/12			

Microbac OVD
Received: 03/22/2012 10:49
By: CARA STRICKLER
221000023417

Cara Strickler

Shaw a world of Solutions

COC # 139791-SB004

Chain of Custody

Lab EWS
Lab Contact
Lab Phone 330-720-1061

Client US Army
W. O. TO-08, PO:620349
TAT 14 Days

Site Name WSMR
Contact Name 1
Contact Phone

Bill To: Shaw Environmental and
Phone
Fax
Address Bill electronically to
City Baton Rouge
State Louisi Zip 70809

Results To: Mark Lyon
Phone 5052628920
Fax 5052628955
Address 2440 Louisiana Blvd NE
City Albuquerque
State NM Zip 87110

	Sample ID	Matrix	Wt/ Vol	Date-Time Collected	Filtered	Number Containers	Mercury by 7471A	Metals by 6010B	Metals by 6020							
						Container	G60W	G60W	G60W							
						Preservative	n	n	n							
✓	140-BH06-2	Soil		3/20/2012 10:24:00 AM		1	X	X	X							
✓	140-BH06-3	Soil		3/20/2012 10:27:00 AM		1	X	X	X							
✓	140-BH07-1	Soil		3/20/2012 10:44:00 AM		1	X	X	X							
✓	140-BH07-2	Soil		3/20/2012 10:49:00 AM		1	X	X	X							
✓	140-BH07-3	Soil		3/20/2012 10:53:00 AM		1	X	X	X							
✓	140-BH07-MS2	Soil		3/20/2012 10:49:00 AM		1	X	X	X							
✓	140-BH07-MSD2	Soil		3/20/2012 10:49:00 AM		1	X	X	X							
✓	140-BH08-1	Soil		3/20/2012 11:10:00 AM		1	X	X	X							
✓	140-BH08-2	Soil		3/20/2012 11:15:00 AM		1	X	X	X							
✓	140-BH08-3	Soil		3/20/2012 11:18:00 AM		1	X	X	X							
✓	140-BH09-1	Soil		3/20/2012 11:38:00 AM		1	X	X	X							
✓	140-BH09-2	Soil		3/20/2012 11:41:00 AM		1	X	X	X							
✓	140-BH09-3	Soil		3/20/2012 11:47:00 AM		1	X	X	X							
✓	140-BH09-MS2	Soil		3/20/2012 11:41:00 AM		1	X	X	X							
✓	140-BH09-MSD2	Soil		3/20/2012 11:41:00 AM		1	X	X	X							
✓	140-BH10-1	Soil		3/20/2012 12:08:00 PM		1	X	X	X							
✓	140-BH10-2	Soil		3/20/2012 12:12:00 PM		1	X	X	X							
✓	140-BH10-3	Soil		3/20/2012 12:15:00 PM		1	X	X	X							
✓	140-BH10-FD1	Soil		3/20/2012 12:08:00 PM		1	X	X	X							

Remarks/Comments
FedEx Express

Sampled By _____

Lab Use Only
Temp of Cooler when Received, C

1	2	3	4	5

COC Tape was present on outer package Y N
COC Tape was unbroken on outer package Y N
COC Tape ws present on sample Y N
COC Tape was unbroken on sample Y N

Received in good condition Y N
Labels indicate Properly Preserved Y N
Received within Holding Time Y N

Relinquished By	Date / Time	Received By	Date / Time	Relinquishe

Microbac OVD
Received: 03/22/2012 10:49
By: CARA STRICKLER 221000023417

Cara Strickler

Shaw® a world of Solutions™

COC # 139791-SB004

Chain of Custody

Lab EWS
Lab Contact
Lab Phone 330-720-1061

Client US Army
W. O. TO-08, PO:620349
TAT 14 Days

Site Name WSMR
Contact Name 1
Contact Phone

Bill To: Shaw Environmental and
Phone
Fax
Address Bill electronically to
City Baton Rouge
State Louisi Zip 70809

Results To: Mark Lyon
Phone 5052628920
Fax 5052628955
Address 2440 Louisiana Blvd NE
City Albuquerque
State NM Zip 87110

							Mercury by 7471A	Metals by 6010B	Metals by 6020							
						Container	G60W	G60W	G60W							
						Preservative	n	n	n							
	Sample ID	Matrix	Wt/ Vol	Date-Time Collected	Filtered	Number Containers										
✓	140-BH11-1	Soil		3/20/2012 2:20:00 PM		1	X	X	X							
✓	140-BH11-2	Soil		3/20/2012 2:25:00 PM		1	X	X	X							
✓	140-BH11-3	Soil		3/20/2012 2:28:00 PM		1	X	X	X							
✓	140-BH12-1	Soil		3/20/2012 1:54:00 PM		1	X	X	X							
✓	140-BH12-2	Soil		3/20/2012 1:56:00 PM		1	X	X	X							
✓	140-BH12-3	Soil		3/20/2012 2:01:00 PM		1	X	X	X							
✓	140-BH12-FD2	Soil		3/20/2012 1:56:00 PM		1	X	X	X							
✓	140-BH13-1	Soil		3/20/2012 1:09:00 PM		1	X	X	X							
✓	140-BH13-2	Soil		3/20/2012 1:14:00 PM		1	X	X	X							
✓	140-BH13-3	Soil		3/20/2012 1:19:00 PM		1	X	X	X							
✓	140-BH14-1	Soil		3/20/2012 3:23:00 PM		1	X	X	X							
✓	140-BH14-2	Soil		3/20/2012 3:27:00 PM		1	X	X	X							
✓	140-BH14-3	Soil		3/20/2012 3:31:00 PM		1	X	X	X							
✓	140-BH14-MS3	Soil		3/20/2012 3:31:00 PM		1	X	X	X							
✓	140-BH14-MSD3	Soil		3/20/2012 3:31:00 PM		1	X	X	X							
✓	140-BH15-1	Soil		3/20/2012 2:49:00 PM		1	X	X	X							
✓	140-BH15-2	Soil		3/20/2012 2:57:00 PM		1	X	X	X							
✓	140-BH15-3	Soil		3/20/2012 3:01:00 PM		1	X	X	X							
✓	140-BH15-FD3	Soil		3/20/2012 3:01:00 PM		1	X	X	X							

Remarks/Comments
FedEx Express

Sampled By _____

Lab Use Only
Temp of Cooler when Received, C

1	2	3	4	5

COC Tape was present on outer package Y N
COC Tape was unbroken on outer package Y N
COC Tape ws present on sample Y N
COC Tape was unbroken on sample Y N

Received in good condition Y N
Labels indicate Properly Preserved Y N
Received within Holding Time Y N

Relinquished By	Date / Time	Received By	Date / Time	Relinquis

Microbac OVD
Received: 03/22/2012 10:49
By: CARA STRICKLER
221000023417

Cara Strickler

Shaw a world of Solutions

COC # 139791-SB004

Chain of Custody

Lab EWS
Lab Contact

Lab Phone 330-720-1061

Client US Army
W. O. TO-08, PO:620349
TAT 14 Days

Site Name WSMR
Contact Name 1
Contact Phone

Bill To: Shaw Environmental and
Phone
Fax
Address Bill electronically to
City Baton Rouge
State Louisi Zip 70809

Results To: Mark Lyon
Phone 5052628920
Fax 5052628955
Address 2440 Louisiana Blvd NE
City Albuquerque
State NM Zip 87110

	Sample ID	Matrix	Wt/ Vol	Date-Time Collected	Filtered	Number Containers	Mercury by 7471A	Metals by 6010B	Metals by 6020							
Container							G60W	G60W	G60W							
Preservative							n	n	n							

Remarks/Comments
FedEx Express

Sampled By

Lab Use Only
Temp of Cooler when Received, C

1	2	3	4	5

COC Tape was present on outer package Y N
COC Tape was unbroken on outer package Y N
COC Tape was present on sample Y N
COC Tape was unbroken on sample Y N

Received in good condition Y N
Labels indicate Properly Preserved Y N
Received within Holding Time Y N

Relinquished By	Date / Time	Received By	Date / Time	Relinquished

Microbac OVD
Received: 03/22/2012 10:49
By: CARA STRICKLER
221000023417

Cara Strickler

Shaw

Shaw® a world of Solutions™

COC # 139791-SB006

Chain of Custody

Lab EWS
Lab Contact
Lab Phone 330-720-1061

Client US Army
W. O. WSMR Main Post PO# 6
TAT 14 Days

Site Name WSMR
Contact Name 1
Contact Phone

Bill To: Shaw Environmental and
Phone
Fax
Address Bill Electronically to
City Baton Rouge
State Louisi Zip 70809

Results To: Mark Lyon
Phone 5052628920
Fax 5052628855
Address 2440 Louisiana Blvd Suit
City Albuquerque
State NM Zip 87110

	Mercury by 7471A	Metals by 6010B	Metals by 6020							
Container	P250	P250	P250							
Preservative	HNO3	HNO3	HNO3							

Sample ID	Matrix	Wt/ Vol	Date-Time Collected	Filtered	Number Containers										
MP-BH01-1	Soil		3/22/2012 12:29:00 PM		1	X	X	X							
MP-BH01-2	Soil		3/22/2012 12:31:00 PM		1	X	X	X							
MP-BH01-3	Soil		3/22/2012 12:35:00 PM		1	X	X	X							
MP-BH02-1	Soil		3/22/2012 2:18:00 PM		1	X	X	X							
MP-BH02-2	Soil		3/22/2012 2:20:00 PM		1	X	X	X							
MP-BH02-3	Soil		3/22/2012 2:25:00 PM		1	X	X	X							
MP-BH02-FD1	Soil		3/22/2012 2:18:00 PM		1	X	X	X							
MP-BH03-1	Soil		3/22/2012 2:49:00 PM		1	X	X	X							
MP-BH03-2	Soil		3/22/2012 2:52:00 PM		1	X	X	X							
MP-BH03-3	Soil		3/22/2012 2:56:00 PM		1	X	X	X							
MP-BH04-1	Soil		3/23/2012 12:42:00 PM		1	X	X	X							
MP-BH04-2	Soil		3/23/2012 12:50:00 PM		1	X	X	X							
MP-BH04-3	Soil		3/23/2012 12:53:00 PM		1	X	X	X							
MP-BH04-MS3	Soil		3/23/2012 12:53:00 PM		1	X	X	X							
MP-BH04-MSD3	Soil		3/23/2012 12:53:00 PM		1	X	X	X							
MP-BH05-1	Soil		3/22/2012 8:43:00 AM		1	X	X	X							
MP-BH05-2	Soil		3/22/2012 8:48:00 AM		1	X	X	X							
MP-BH05-3	Soil		3/22/2012 8:53:00 AM		1	X	X	X							
MP-BH05-FD2	Soil		3/22/2012 8:48:00 AM		1	X	X	X							

Remarks/Comments
Waybill #: 873013169518 Carrier: FEDEX Express
cost codes: CA0220
DA0220
EA0220
GA0220
HA0220

Sampled By

Lab Use Only
Temp of Cooler when Received, C

1	2	3	4	5

COC Tape was present on outer package Y N
COC Tape was unbroken on outer package Y N
COC Tape ws present on sample Y N
COC Tape was unbroken on sample Y N

Received in good condition Y N
Labels indicate Properly Preserved Y N
Received within Holding Time Y N

Relinquished By	Date / Time	Received By	Date / Time	Relinquished By	Date / Time	Received By	Date / Time
[illegible]	3/23/12 1600						

EIMS Shaw

Shaw® a world of Solutions™

COC # 139791-SB006

Chain of Custody

Lab EWS
Lab Contact
Lab Phone 330-720-1061

Client US Army
W. O. WSMR Main Post PO# 6
TAT 14 Days

Site Name WSMR
Contact Name 1
Contact Phone

Bill To: Shaw Environmental and
Phone
Fax
Address Bill Electronically to
City Baton Rouge
State Louisi Zip 70809

Results To: Mark Lyon
Phone 5052628920
Fax 5052628855
Address 2440 Louisiana Blvd Suit
City Albuquerque
State NM Zip 87110

	Mercury by 7471A	Metals by 6010B	Metals by 6020							
Container	P250	P250	P250							
Preservative	HNO3	HNO3	HNO3							

	Sample ID	Matrix	Wt/ Vol	Date-Time Collected	Filtered	Number Containers										
✓	MP-BH05-RB	Water		3/23/2012 12:56:00 PM		1	X	X	X							
✓	MP-BH06-1	Soil		3/22/2012 9:19:00 AM		1	X	X	X							
✓	MP-BH06-2	Soil		3/22/2012 9:23:00 AM		1	X	X	X							
✓	MP-BH06-3	Soil		3/22/2012 9:26:00 AM		1	X	X	X							
✓	MP-BH07-1	Soil		3/22/2012 9:39:00 AM		1	X	X	X							
✓	MP-BH07-2	Soil		3/22/2012 9:45:00 AM		1	X	X	X							
✓	MP-BH07-3	Soil		3/22/2012 9:48:00 AM		1	X	X	X							
✓	MP-BH08-1	Soil		3/22/2012 10:32:00 AM		1	X	X	X							
✓	MP-BH08-2	Soil		3/22/2012 10:38:00 AM		1	X	X	X							
✓	MP-BH08-3	Soil		3/22/2012 10:41:00 AM		1	X	X	X							
✓	MP-BH08-MS1	Soil		3/22/2012 10:32:00 AM		1	X	X	X							
✓	MP-BH08-MSD1	Soil		3/22/2012 10:32:00 AM		1	X	X	X							
✓	MP-BH09-1	Soil		3/22/2012 10:57:00 AM		1	X	X	X							
✓	MP-BH09-2	Soil		3/22/2012 10:59:00 AM		1	X	X	X							
✓	MP-BH09-3	Soil		3/22/2012 11:02:00 AM		1	X	X	X							
✓	MP-BH10-1	Soil		3/22/2012 11:47:00 AM		1	X	X	X							
✓	MP-BH10-2	Soil		3/22/2012 11:51:00 AM		1	X	X	X							
✓	MP-BH10-3	Soil		3/22/2012 11:55:00 AM		1	X	X	X							
✓	MP-BH10-FD3	Soil		3/22/2012 11:55:00 AM		1	X	X	X							

Remarks/Comments
Waybill #: 873013169518 Carrier: FEDEX Express

Lab Use Only
Temp of Cooler when Received, C

1	2	3	4	5

COC Tape was present on outer package Y N
COC Tape was unbroken on outer package Y N
COC Tape ws present on sample Y N
COC Tape was unbroken on sample Y N

Received in good condition Y N
Labels indicate Properly Preserved Y N
Received within Holding Time Y N

Relinquished By	Date / Time	Received By	Date / Time	Relinquished By	Date / Time	Received By	Date / Time

Sampled By _____

EIMS Shaw

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COC # 139791-SB006

Chain of Custody

Lab EWS
Lab Contact
Lab Phone 330-720-1061

Client US Army
W. O. WSMR Main Post PO# 6
TAT 14 Days

Site Name WSMR
Contact Name 1
Contact Phone

Bill To: Shaw Environmental and
Phone
Fax
Address Bill Electronically to
City Baton Rouge
State Louisi Zip 70809

Results To: Mark Lyon
Phone 5052628920
Fax 5052628855
Address 2440 Louisiana Blvd Suit
City Albuquerque
State NM Zip 87110

	Mercury by 7471A	Metals by 6010B	Metals by 6020							
Container	P250	P250	P250							
Preservative	HNO3	HNO3	HNO3							

	Sample ID	Matrix	Wt/ Vol	Date-Time Collected	Filtered	Number Containers										
√	MP-BH11-1	Soil		3/22/2012 3:36:00 PM		1	X	X	X							
√	MP-BH11-2	Soil		3/22/2012 3:42:00 PM		1	X	X	X							
√	MP-BH11-3	Soil		3/22/2012 3:46:00 PM		1	X	X	X							
√	MP-BH12-1	Soil		3/22/2012 4:07:00 PM		1	X	X	X							
√	MP-BH12-2	Soil		3/22/2012 4:13:00 PM		1	X	X	X							
√	MP-BH12-3	Soil		3/22/2012 4:17:00 PM		1	X	X	X							
√	MP-BH12-FD1	Soil		3/22/2012 4:07:00 PM		1	X	X	X							
√	MP-BH13-1	Soil		3/23/2012 10:11:00 AM		1	X	X	X							
√	MP-BH13-2	Soil		3/23/2012 10:18:00 AM		1	X	X	X							
√	MP-BH13-3	Soil		3/23/2012 10:23:00 AM		1	X	X	X							
√	MP-BH14-1	Soil		3/22/2012 4:37:00 PM		1	X	X	X							
√	MP-BH14-2	Soil		3/22/2012 4:41:00 PM		1	X	X	X							
√	MP-BH14-3	Soil		3/22/2012 4:44:00 PM		1	X	X	X							
√	MP-BH15-1	Soil		3/23/2012 10:49:00 AM		1	X	X	X							
√	MP-BH15-2	Soil		3/23/2012 10:54:00 AM		1	X	X	X							
√	MP-BH15-3	Soil		3/23/2012 11:00:00 AM		1	X	X	X							
√	MP-BH15-FD2	Soil		3/23/2012 10:54:00 AM		1	X	X	X							
√	MP-BH15-RB	Water		3/22/2012 4:50:00 PM		1	X	X	X							

Remarks/Comments
Waybill #: 873013169518 Carrier: FEDEX Express

Sampled By _____

Lab Use Only
Temp of Cooler when Received, C

1	2	3	4	5

COC Tape was present on outer package Y N
COC Tape was unbroken on outer package Y N
COC Tape ws present on sample Y N
COC Tape was unbroken on sample Y N

Received in good condition Y N
Labels indicate Properly Preserved Y N
Received within Holding Time Y N

Relinquished By	Date / Time	Received By	Date / Time	Relinquished By	Date / Time	Received By	Date / Time

EIMS Shaw

Shaw® a world of Solutions™

COC # 139791-SB006

Chain of Custody

Lab EWS
Lab Contact

Lab Phone 330-720-1061

Client US Army

W. O. WSMR Main Post PO# 6 TAT 14 Days

Site Name WSMR

Contact Name 1
Contact Phone

Bill To: Shaw Environmental and
Phone
Fax
Address Bill Electronically to
City Baton Rouge
State Louisi Zip 70809

Results To: Mark Lyon
Phone 5052628920
Fax 5052628855
Address 2440 Louisiana Blvd Suit
City Albuquerque
State NM Zip 87110

	Mercury by 7471A	Metals by 6010B	Metals by 6020							
Container	P250	P250	P250							
Preservative	HNO3	HNO3	HNO3							

Sample ID	Matrix	Wt/ Vol	Date-Time Collected	Filtered	Number Containers									

Remarks/Comments
Waybill #: 873013169518 Carrier: FEDEX Express

Sampled By _____

Lab Use Only

Temp of Cooler when Received, C

1	2	3	4	5

COC Tape was present on outer package Y N
COC Tape was unbroken on outer package Y N
COC Tape ws present on sample Y N
COC Tape was unbroken on sample Y N

Received in good condition Y N
Labels indicate Properly Preserved Y N
Received within Holding Time Y N

Relinquished By	Date / Time	Received By	Date / Time	Relinquished By	Date / Time	Received By	Date / Time

EIMS Shaw

Shaw® a world of Solutions™

COC # 139791-SB005

Chain of Custody

Lab EWS

Lab Contact

Lab Phone 330-720-1061

Client US Army

W. O. WSMR-30 PO 620349

TAT 14 Days

Site Name WSMR

Contact Name 1

Contact Phone

Bill To: Shaw Environmental & In

Phone

Fax

Address Bill electronically to

City Baton Rouge

State LA Zip 70809

Results To: Mark Lyon

Phone

Fax

Address 2440 Louisiana Blvd NE

City Albuquerque

State NM Zip 87110

	Sample ID	Matrix	Wt/ Vol	Date-Time Collected	Filtered	Number Containers	Mercury by 7471A	Metals by 6010B	Metals by 6020							
						Container	G60W	G60W	G60W							
						Preservative	n	n	n							
✓	80-BH01-1	Soil		3/21/2012 2:43:00 PM		1	X	X	X							
✓	80-BH01-2	Soil		3/21/2012 2:48:00 PM		1	X	X	X							
✓	80-BH01-3	Soil		3/21/2012 2:49:00 PM		1	X	X	X							
✓	80-BH02-1	Soil		3/21/2012 3:06:00 PM		1	X	X	X							
✓	80-BH02-2	Soil		3/21/2012 3:13:00 PM		1	X	X	X							
✓	80-BH02-3	Soil		3/21/2012 3:16:00 PM		1	X	X	X							
✓	80-BH02-FD1	Soil		3/21/2012 3:06:00 PM		1	X	X	X							
✓	80-BH03-1	Soil		3/21/2012 1:26:00 PM		1	X	X	X							
✓	80-BH03-2	Soil		3/21/2012 1:29:00 PM		1	X	X	X							
✓	80-BH03-3	Soil		3/21/2012 1:55:00 PM		1	X	X	X							
✓	80-BH04-1	Soil		3/21/2012 11:58:00 AM		1	X	X	X							
✓	80-BH04-2	Soil		3/21/2012 12:03:00 PM		1	X	X	X							
✓	80-BH04-3	Soil		3/21/2012 12:07:00 PM		1	X	X	X							
✓	80-BH04-MS1	Soil		3/21/2012 11:58:00 AM		1	X	X	X							
✓	80-BH04-MSD1	Soil		3/21/2012 11:58:00 AM		1	X	X	X							
✓	80-BH05-1	Soil		3/21/2012 11:29:00 AM		1	X	X	X							
✓	80-BH05-2	Soil		3/21/2012 11:32:00 AM		1	X	X	X							
✓	80-BH05-3	Soil		3/21/2012 11:38:00 AM		1	X	X	X							
✓	80-BH05-FD2	Soil		3/21/2012 11:32:00 AM		1	X	X	X							

Remarks/Comments

Waybill # 873013169507 FedEx Express

Cost Codes: 139791.PA0341

Sampled By _____

Lab Use Only

Temp of Cooler when Received, C

1	2	3	4	5

COC Tape was present on outer package Y N

COC Tape was unbroken on outer package Y N

COC Tape ws present on sample Y N

COC Tape was unbroken on sample Y N

Received in good condition Y N

Labels indicate Properly Preserved Y N

Received within Holding Time Y N

Relinquished By	Date / Time	Received By	Date / Time	Relinquished By	Date / Time	Received By	Date / Time
[illegible]	3/23/12 1600						

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COC # 139791-SB005

Chain of Custody

Lab EWS
Lab Contact
Lab Phone 330-720-1061

Client US Army
W. O. WSMR-30 PO 620349
TAT 14 Days
Site Name WSMR
Contact Name 1
Contact Phone

Bill To: Shaw Environmental & In
Phone
Fax
Address Bill electronically to
City Baton Rouge
State LA Zip 70809

Results To: Mark Lyon
Phone
Fax
Address 2440 Louisiana Blvd NE
City Albuquerque
State NM Zip 87110

	Sample ID	Matrix	Wt/ Vol	Date-Time Collected	Filtered	Number Containers	Mercury by 7471A	Metals by 6010B	Metals by 6020							
						Container	G60W	G60W	G60W							
						Preservative	n	n	n							
✓	80-BH06-1	Soil		3/21/2012 11:00:00 AM		1	X	X	X							
✓	80-BH06-2	Soil		3/21/2012 11:05:00 AM		1	X	X	X							
✓	80-BH06-3	Soil		3/21/2012 11:07:00 AM		1	X	X	X							
✓	80-BH07-1	Soil		3/21/2012 4:20:00 PM		1	X	X	X							
✓	80-BH07-2	Soil		3/21/2012 4:23:00 PM		1	X	X	X							
✓	80-BH07-3	Soil		3/21/2012 4:27:00 PM		1	X	X	X							
✓	80-BH08-1	Soil		3/21/2012 2:11:00 PM		1	X	X	X							
✓	80-BH08-2	Soil		3/21/2012 2:18:00 PM		1	X	X	X							
✓	80-BH08-3	Soil		3/21/2012 2:25:00 PM		1	X	X	X							
✓	80-BH08-MS2	Soil		3/21/2012 2:18:00 PM		1	X	X	X							
✓	80-BH08-MSD2	Soil		3/21/2012 2:18:00 PM		1	X	X	X							
✓	80-BH09-1	Soil		3/21/2012 10:29:00 AM		1	X	X	X							
✓	80-BH09-2	Soil		3/21/2012 10:33:00 AM		1	X	X	X							
✓	80-BH09-3	Soil		3/21/2012 10:37:00 AM		1	X	X	X							
✓	80-BH10-1	Soil		3/21/2012 8:42:00 AM		1	X	X	X							
✓	80-BH10-2	Soil		3/21/2012 8:47:00 AM		1	X	X	X							
✓	80-BH10-3	Soil		3/21/2012 8:50:00 AM		1	X	X	X							
✓	80-BH11-1	Soil		3/21/2012 9:05:00 AM		1	X	X	X							
✓	80-BH11-2	Soil		3/21/2012 9:10:00 AM		1	X	X	X							

Remarks/Comments
Waybill # 873013169507 FedEx Express

Lab Use Only
Temp of Cooler when Received, C

1	2	3	4	5

COC Tape was present on outer package Y N
COC Tape was unbroken on outer package Y N
COC Tape ws present on sample Y N
COC Tape was unbroken on sample Y N

Received in good condition Y N
Labels indicate Properly Preserved Y N
Received within Holding Time Y N

Sampled By _____

Relinquished By	Date / Time	Received By	Date / Time	Relinquished By	Date / Time	Received By	Date / Time

EIMS Shaw

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COC # 139791-SB005

Chain of Custody

Lab EWS

Lab Contact

Lab Phone 330-720-1061

Client US Army

W. O. WSMR-30 PO 620349

TAT 14 Days

Site Name WSMR

Contact Name 1

Contact Phone

Bill To: Shaw Environmental & In

Phone

Fax

Address Bill electronically to

City Baton Rouge

State LA Zip 70809

Results To: Mark Lyon

Phone

Fax

Address 2440 Louisiana Blvd NE

City Albuquerque

State NM Zip 87110

	Sample ID	Matrix	Wt/ Vol	Date-Time Collected	Filtered	Number Containers	Mercury by 7471A	Metals by 6010B	Metals by 6020							
						Container	G60W	G60W	G60W							
						Preservative	n	n	n							
✓	80-BH11-3	Soil		3/21/2012 9:20:00 AM		1	X	X	X							
✓	80-BH11-FD3	Soil		3/21/2012 9:20:00 AM		1	X	X	X							
✓	80-BH12-1	Soil		3/21/2012 9:36:00 AM		1	X	X	X							
✓	80-BH12-2	Soil		3/21/2012 9:43:00 AM		1	X	X	X							
✓	80-BH12-3	Soil		3/21/2012 9:46:00 AM		1	X	X	X							
✓	80-BH12-FD1	Soil		3/21/2012 9:36:00 AM		1	X	X	X							
✓	80-BH13-1	Soil		3/21/2012 10:05:00 AM		1	X	X	X							
✓	80-BH13-2	Soil		3/21/2012 10:09:00 AM		1	X	X	X							
✓	80-BH13-3	Soil		3/21/2012 10:13:00 AM		1	X	X	X							
✓	80-BH14-1	Soil		3/21/2012 8:16:00 AM		1	X	X	X							
✓	80-BH14-2	Soil		3/21/2012 8:21:00 AM		1	X	X	X							
✓	80-BH14-3	Soil		3/21/2012 8:24:00 AM		1	X	X	X							
✓	80-BH15-1	Soil		3/21/2012 3:44:00 PM		1	X	X	X							
✓	80-BH15-2	Soil		3/21/2012 3:50:00 PM		1	X	X	X							
✓	80-BH15-3	Soil		3/21/2012 3:56:00 PM		1	X	X	X							
✓	80-BH15-FD2	Soil		3/21/2012 3:50:00 PM		1	X	X	X							
✓	80-BH15-RB	Water		3/21/2012 4:32:00 PM		1	X	X	X							

Remarks/Comments

Waybill # 873013169507 FedEx Express

Sampled By

Lab Use Only

Temp of Cooler when Received, C

1	2	3	4	5

COC Tape was present on outer package Y N

COC Tape was unbroken on outer package Y N

COC Tape ws present on sample Y N

COC Tape was unbroken on sample Y N

Received in good condition Y N

Labels indicate Properly Preserved Y N

Received within Holding Time Y N

Relinquished By	Date / Time	Received By	Date / Time	Relinquished By	Date / Time	Received By	Date / Time

EIMS Shaw

Shaw® a world of Solutions™

COC # 139791-SB005

Chain of Custody

Lab EWS

Lab Contact

Lab Phone 330-720-1061

Client US Army

Site Name WSMR

W. O. WSMR-30 PO 620349

TAT 14 Days

Contact Name 1

Contact Phone

Bill To: Shaw Environmental & In

Phone

Fax

Address Bill electronically to

City Baton Rouge

State LA Zip 70809

Results To: Mark Lyon

Phone

Fax

Address 2440 Louisiana Blvd NE

City Albuquerque

State NM Zip 87110

	Sample ID	Matrix	Wt/ Vol	Date-Time Collected	Filtered	Number Containers	Mercury by 7471A	Metals by 6010B	Metals by 6020							
Container							G60W	G60W	G60W							
Preservative							n	n	n							

Remarks/Comments

Waybill # 873013169507 FedEx Express

Sampled By _____

Lab Use Only

Temp of Cooler when Received, C

1	2	3	4	5

COC Tape was present on outer package Y N

COC Tape was unbroken on outer package Y N

COC Tape ws present on sample Y N

COC Tape was unbroken on sample Y N

Received in good condition Y N

Labels indicate Properly Preserved Y N

Received within Holding Time Y N

Relinquished By	Date / Time	Received By	Date / Time	Relinquished By	Date / Time	Received By	Date / Time

EIMS Shaw

Appendix B4
Field Photos

Direct Push Process

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139791 • Final • August 2012 • ACA08-027

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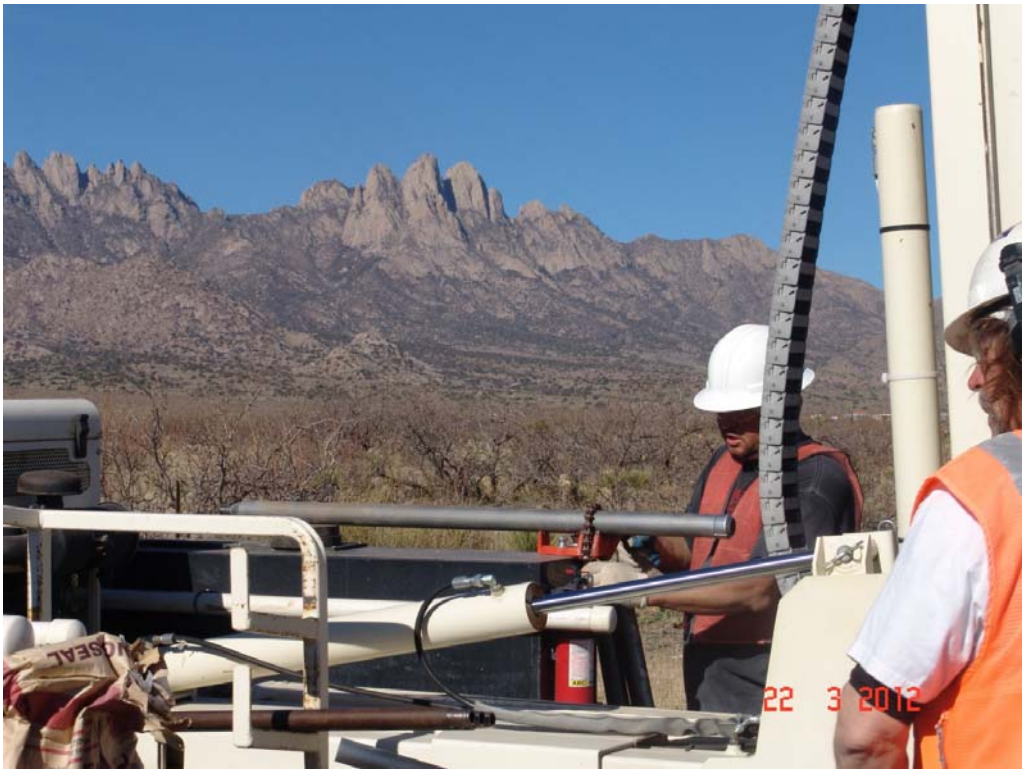

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Soil Sampling Process

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Appendix C
Analytical Results Tables

Appendix C1
Complete Analytical Results for
Solid Waste Management Unit 80 (WSMR-30)

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Table C-1
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH01-1	3/21/2012	0	2	Aluminum	7429-90-5	mg/kg	78002	3590		15.0	7.49	6010B
80-BH01-1	3/21/2012	0	2	Antimony	7440-36-0	mg/kg	31.3	0.749	U	0.749	0.374	6010B
80-BH01-1	3/21/2012	0	2	Beryllium	7440-41-7	mg/kg	156	0.371		0.0749	0.0374	6010B
80-BH01-1	3/21/2012	0	2	Calcium	7440-70-2	mg/kg		2170		7.49	3.74	6010B
80-BH01-1	3/21/2012	0	2	Iron (Ferrous)	7439-89-6	mg/kg	54750	13400		225	112	6010B
80-BH01-1	3/21/2012	0	2	Magnesium	7439-95-4	mg/kg		1470		18.7	9.36	6010B
80-BH01-1	3/21/2012	0	2	Potassium	7440-09-7	mg/kg		1360		37.4	18.7	6010B
80-BH01-1	3/21/2012	0	2	Silver	7440-22-4	mg/kg	391	0.494		0.150	0.0749	6010B
80-BH01-1	3/21/2012	0	2	Sodium	7440-23-5	mg/kg		23.1		18.7	9.36	6010B
80-BH01-1	3/21/2012	0	2	Zinc	7440-66-6	mg/kg	23464	16.2		0.749	0.374	6010B
80-BH01-1	3/21/2012	0	2	Arsenic	7440-38-2	mg/kg	3.90	1.12	J	1.46	0.732	6020
80-BH01-1	3/21/2012	0	2	Barium	7440-39-3	mg/kg	15558	41.2		1.46	0.732	6020
80-BH01-1	3/21/2012	0	2	Cadmium	7440-43-9	mg/kg	70.3	0.488	U	0.488	0.244	6020
80-BH01-1	3/21/2012	0	2	Chromium	7440-47-3	mg/kg	117321	2.12		1.95	0.976	6020
80-BH01-1	3/21/2012	0	2	Cobalt	7440-48-4	mg/kg		3.25		2.44	1.22	6020

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH01-1	3/21/2012	0	2	Copper	7440-50-8	mg/kg	3129	4.37		2.93	1.46	6020
80-BH01-1	3/21/2012	0	2	Lead (Pb)	7439-92-1	mg/kg	400	6.40		0.976	0.488	6020
80-BH01-1	3/21/2012	0	2	Manganese	7439-96-5	mg/kg	1865	177		0.976	0.488	6020
80-BH01-1	3/21/2012	0	2	Nickel	7440-02-0	mg/kg	1560	3.23	J	3.90	1.95	6020
80-BH01-1	3/21/2012	0	2	Selenium	7782-49-2	mg/kg	391	0.976	U	0.976	0.488	6020
80-BH01-1	3/21/2012	0	2	Silver	7440-22-4	mg/kg	391	2.99	U	2.99	1.50	6020
80-BH01-1	3/21/2012	0	2	Thallium	7440-28-0	mg/kg	0.782	0.195	U	0.195	0.0976	6020
80-BH01-1	3/21/2012	0	2	Vanadium	7440-62-2	mg/kg	391	7.47		2.44	1.22	6020
80-BH01-1	3/21/2012	0	2	Mercury	7439-97-6	mg/kg	15.6	0.0998	U	0.0998	0.00998	7471A
80-BH01-1	3/21/2012	0	2	Percent Solids	10-02-6	%		97.9		1.00	1.00	D2216-90
80-BH01-2	3/21/2012	5	6	Aluminum	7429-90-5	mg/kg	78002	2170		13.6	6.78	6010B
80-BH01-2	3/21/2012	5	6	Antimony	7440-36-0	mg/kg	31.3	0.678	U	0.678	0.339	6010B
80-BH01-2	3/21/2012	5	6	Beryllium	7440-41-7	mg/kg	156	0.337		0.0678	0.0339	6010B
80-BH01-2	3/21/2012	5	6	Calcium	7440-70-2	mg/kg		4440		6.78	3.39	6010B
80-BH01-2	3/21/2012	5	6	Iron (Ferrous)	7439-89-6	mg/kg	54750	9590		203	102	6010B
80-BH01-2	3/21/2012	5	6	Magnesium	7439-95-4	mg/kg		1190		17.0	8.48	6010B

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH01-2	3/21/2012	5	6	Potassium	7440-09-7	mg/kg		743		33.9	17	6010B
80-BH01-2	3/21/2012	5	6	Silver	7440-22-4	mg/kg	391	0.142		0.136	0.0678	6010B
80-BH01-2	3/21/2012	5	6	Sodium	7440-23-5	mg/kg		28		17	8.48	6010B
80-BH01-2	3/21/2012	5	6	Zinc	7440-66-6	mg/kg	23464	13.5		0.678	0.339	6010B
80-BH01-2	3/21/2012	5	6	Arsenic	7440-38-2	mg/kg	3.90	1.11	J	1.45	0.727	6020
80-BH01-2	3/21/2012	5	6	Barium	7440-39-3	mg/kg	15558	47.9		1.45	0.727	6020
80-BH01-2	3/21/2012	5	6	Cadmium	7440-43-9	mg/kg	70.3	0.485	U	0.485	0.242	6020
80-BH01-2	3/21/2012	5	6	Chromium	7440-47-3	mg/kg	117321	1.83	J	1.94	0.970	6020
80-BH01-2	3/21/2012	5	6	Cobalt	7440-48-4	mg/kg		2.59		2.42	1.21	6020
80-BH01-2	3/21/2012	5	6	Copper	7440-50-8	mg/kg	3129	3.95		2.91	1.45	6020
80-BH01-2	3/21/2012	5	6	Lead (Pb)	7439-92-1	mg/kg	400	5.27		0.970	0.485	6020
80-BH01-2	3/21/2012	5	6	Manganese	7439-96-5	mg/kg	1865	138		0.970	0.485	6020
80-BH01-2	3/21/2012	5	6	Nickel	7440-02-0	mg/kg	1560	2.74	J	3.88	1.94	6020
80-BH01-2	3/21/2012	5	6	Selenium	7782-49-2	mg/kg	391	0.970	U	0.970	0.485	6020
80-BH01-2	3/21/2012	5	6	Silver	7440-22-4	mg/kg	391	2.71	U	2.71	1.36	6020
80-BH01-2	3/21/2012	5	6	Thallium	7440-28-0	mg/kg	0.782	0.194	U	0.194	0.0970	6020

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH01-2	3/21/2012	5	6	Vanadium	7440-62-2	mg/kg	391	7.87		2.42	1.21	6020
80-BH01-2	3/21/2012	5	6	Mercury	7439-97-6	mg/kg	15.6	0.0991	U	0.0991	0.00991	7471A
80-BH01-2	3/21/2012	5	6	Percent Solids	10-02-6	%		98.6		1.00	1.00	D2216-90
80-BH01-3	3/21/2012	9	10	Aluminum	7429-90-5	mg/kg	78002	3500		15.2	7.58	6010B
80-BH01-3	3/21/2012	9	10	Antimony	7440-36-0	mg/kg	31.3	0.758	U	0.758	0.379	6010B
80-BH01-3	3/21/2012	9	10	Beryllium	7440-41-7	mg/kg	156	0.448		0.0758	0.0379	6010B
80-BH01-3	3/21/2012	9	10	Calcium	7440-70-2	mg/kg		2880		7.58	3.79	6010B
80-BH01-3	3/21/2012	9	10	Iron (Ferrous)	7439-89-6	mg/kg	54750	10300		227	114	6010B
80-BH01-3	3/21/2012	9	10	Magnesium	7439-95-4	mg/kg		2030		19	9.48	6010B
80-BH01-3	3/21/2012	9	10	Potassium	7440-09-7	mg/kg		1400		37.9	19.0	6010B
80-BH01-3	3/21/2012	9	10	Silver	7440-22-4	mg/kg	391	0.643		0.152	0.0758	6010B
80-BH01-3	3/21/2012	9	10	Sodium	7440-23-5	mg/kg		50.1		19	9.48	6010B
80-BH01-3	3/21/2012	9	10	Zinc	7440-66-6	mg/kg	23464	19.9		0.758	0.379	6010B
80-BH01-3	3/21/2012	9	10	Arsenic	7440-38-2	mg/kg	3.90	1.5	U	1.50	0.749	6020
80-BH01-3	3/21/2012	9	10	Barium	7440-39-3	mg/kg	15558	27.3		1.50	0.749	6020
80-BH01-3	3/21/2012	9	10	Cadmium	7440-43-9	mg/kg	70.3	0.499	U	0.499	0.250	6020

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH01-3	3/21/2012	9	10	Chromium	7440-47-3	mg/kg	117321	2.00	U	2.00	1.00	6020
80-BH01-3	3/21/2012	9	10	Cobalt	7440-48-4	mg/kg		2.48	J	2.50	1.25	6020
80-BH01-3	3/21/2012	9	10	Copper	7440-50-8	mg/kg	3129	3.22		2.99	1.50	6020
80-BH01-3	3/21/2012	9	10	Lead (Pb)	7439-92-1	mg/kg	400	5.5		0.998	0.499	6020
80-BH01-3	3/21/2012	9	10	Manganese	7439-96-5	mg/kg	1865	139		0.998	0.499	6020
80-BH01-3	3/21/2012	9	10	Nickel	7440-02-0	mg/kg	1560	2.15	J	3.99	2.00	6020
80-BH01-3	3/21/2012	9	10	Selenium	7782-49-2	mg/kg	391	0.998	U	0.998	0.499	6020
80-BH01-3	3/21/2012	9	10	Silver	7440-22-4	mg/kg	391	3.03	U	3.03	1.52	6020
80-BH01-3	3/21/2012	9	10	Thallium	7440-28-0	mg/kg	0.782	0.200	U	0.200	0.0998	6020
80-BH01-3	3/21/2012	9	10	Vanadium	7440-62-2	mg/kg	391	4.64		2.50	1.25	6020
80-BH01-3	3/21/2012	9	10	Mercury	7439-97-6	mg/kg	15.6	0.102	U	0.102	0.0102	7471A
80-BH01-3	3/21/2012	9	10	Percent Solids	10-02-6	%		97.6		1.00	1.00	D2216-90
80-BH02-1	3/21/2012	0	2	Aluminum	7429-90-5	mg/kg	78002	3600	J	14.9	7.44	6010B
80-BH02-1	3/21/2012	0	2	Antimony	7440-36-0	mg/kg	31.3	0.744	U	0.744	0.372	6010B
80-BH02-1	3/21/2012	0	2	Beryllium	7440-41-7	mg/kg	156	0.371		0.0744	0.0372	6010B
80-BH02-1	3/21/2012	0	2	Calcium	7440-70-2	mg/kg		2580		7.44	3.72	6010B

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH02-1	3/21/2012	0	2	Iron (Ferrous)	7439-89-6	mg/kg	54750	14200		223	112	6010B
80-BH02-1	3/21/2012	0	2	Magnesium	7439-95-4	mg/kg		1810		18.6	9.30	6010B
80-BH02-1	3/21/2012	0	2	Potassium	7440-09-7	mg/kg		1560		37.2	18.6	6010B
80-BH02-1	3/21/2012	0	2	Silver	7440-22-4	mg/kg	391	0.830		0.149	0.0744	6010B
80-BH02-1	3/21/2012	0	2	Sodium	7440-23-5	mg/kg		23.8		18.6	9.30	6010B
80-BH02-1	3/21/2012	0	2	Zinc	7440-66-6	mg/kg	23464	18.3		0.744	0.372	6010B
80-BH02-1	3/21/2012	0	2	Arsenic	7440-38-2	mg/kg	3.90	1.01	J	1.51	0.755	6020
80-BH02-1	3/21/2012	0	2	Barium	7440-39-3	mg/kg	15558	32.8		1.51	0.755	6020
80-BH02-1	3/21/2012	0	2	Cadmium	7440-43-9	mg/kg	70.3	0.503	U	0.503	0.252	6020
80-BH02-1	3/21/2012	0	2	Chromium	7440-47-3	mg/kg	117321	1.75	J	2.01	1.01	6020
80-BH02-1	3/21/2012	0	2	Cobalt	7440-48-4	mg/kg		2.76		2.52	1.26	6020
80-BH02-1	3/21/2012	0	2	Copper	7440-50-8	mg/kg	3129	3.88		3.02	1.51	6020
80-BH02-1	3/21/2012	0	2	Lead (Pb)	7439-92-1	mg/kg	400	5.38		1.01	0.503	6020
80-BH02-1	3/21/2012	0	2	Manganese	7439-96-5	mg/kg	1865	143		1.01	0.503	6020
80-BH02-1	3/21/2012	0	2	Nickel	7440-02-0	mg/kg	1560	2.61	J	4.03	2.01	6020
80-BH02-1	3/21/2012	0	2	Selenium	7782-49-2	mg/kg	391	1.01	U	1.01	0.503	6020

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH02-1	3/21/2012	0	2	Silver	7440-22-4	mg/kg	391	2.98	U	2.98	1.49	6020
80-BH02-1	3/21/2012	0	2	Thallium	7440-28-0	mg/kg	0.782	0.201	U	0.201	0.101	6020
80-BH02-1	3/21/2012	0	2	Vanadium	7440-62-2	mg/kg	391	8.60		2.52	1.26	6020
80-BH02-1	3/21/2012	0	2	Mercury	7439-97-6	mg/kg	15.6	0.0990	U	0.0990	0.00990	7471A
80-BH02-1	3/21/2012	0	2	Percent Solids	10-02-6	%		98.4		1.00	1.00	D2216-90
80-BH02-2	3/21/2012	5	6	Aluminum	7429-90-5	mg/kg	78002	4650		15.4	7.69	6010B
80-BH02-2	3/21/2012	5	6	Antimony	7440-36-0	mg/kg	31.3	0.769	U	0.769	0.384	6010B
80-BH02-2	3/21/2012	5	6	Beryllium	7440-41-7	mg/kg	156	0.478		0.0769	0.0384	6010B
80-BH02-2	3/21/2012	5	6	Calcium	7440-70-2	mg/kg		7240		7.69	3.84	6010B
80-BH02-2	3/21/2012	5	6	Iron (Ferrous)	7439-89-6	mg/kg	54750	16000		231	115	6010B
80-BH02-2	3/21/2012	5	6	Magnesium	7439-95-4	mg/kg		2490		19.2	9.61	6010B
80-BH02-2	3/21/2012	5	6	Potassium	7440-09-7	mg/kg		1090		38.4	19.2	6010B
80-BH02-2	3/21/2012	5	6	Silver	7440-22-4	mg/kg	391	1.02		0.154	0.0769	6010B
80-BH02-2	3/21/2012	5	6	Sodium	7440-23-5	mg/kg		71.9		19.2	9.61	6010B
80-BH02-2	3/21/2012	5	6	Zinc	7440-66-6	mg/kg	23464	22.6		0.769	0.384	6010B
80-BH02-2	3/21/2012	5	6	Arsenic	7440-38-2	mg/kg	3.90	1.13	J	1.48	0.739	6020

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH02-2	3/21/2012	5	6	Barium	7440-39-3	mg/kg	15558	63.7		1.48	0.739	6020
80-BH02-2	3/21/2012	5	6	Cadmium	7440-43-9	mg/kg	70.3	0.493	U	0.493	0.246	6020
80-BH02-2	3/21/2012	5	6	Chromium	7440-47-3	mg/kg	117321	1.90	J	1.97	0.985	6020
80-BH02-2	3/21/2012	5	6	Cobalt	7440-48-4	mg/kg		4.33		2.46	1.23	6020
80-BH02-2	3/21/2012	5	6	Copper	7440-50-8	mg/kg	3129	4.54		2.96	1.48	6020
80-BH02-2	3/21/2012	5	6	Lead (Pb)	7439-92-1	mg/kg	400	7.10		0.985	0.493	6020
80-BH02-2	3/21/2012	5	6	Manganese	7439-96-5	mg/kg	1865	196		0.985	0.493	6020
80-BH02-2	3/21/2012	5	6	Nickel	7440-02-0	mg/kg	1560	4.09		3.94	1.97	6020
80-BH02-2	3/21/2012	5	6	Selenium	7782-49-2	mg/kg	391	0.985	U	0.985	0.493	6020
80-BH02-2	3/21/2012	5	6	Silver	7440-22-4	mg/kg	391	3.07	U	3.07	1.54	6020
80-BH02-2	3/21/2012	5	6	Thallium	7440-28-0	mg/kg	0.782	0.197	U	0.197	0.0985	6020
80-BH02-2	3/21/2012	5	6	Vanadium	7440-62-2	mg/kg	391	9.71		2.46	1.23	6020
80-BH02-2	3/21/2012	5	6	Mercury	7439-97-6	mg/kg	15.6	0.0993	U	0.0993	0.00993	7471A
80-BH02-2	3/21/2012	5	6	Percent Solids	10-02-6	%		98.0		1.00	1.00	D2216-90
80-BH02-3	3/21/2012	9	10	Aluminum	7429-90-5	mg/kg	78002	2250		1550	774	6010B
80-BH02-3	3/21/2012	9	10	Antimony	7440-36-0	mg/kg	31.3	0.774	U	0.774	0.387	6010B

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH02-3	3/21/2012	9	10	Beryllium	7440-41-7	mg/kg	156	0.214		0.155	0.0774	6010B
80-BH02-3	3/21/2012	9	10	Calcium	7440-70-2	mg/kg		2140		7.74	3.87	6010B
80-BH02-3	3/21/2012	9	10	Iron (Ferrous)	7439-89-6	mg/kg	54750	12100		2.32	1.16	6010B
80-BH02-3	3/21/2012	9	10	Magnesium	7439-95-4	mg/kg		970		19.4	9.68	6010B
80-BH02-3	3/21/2012	9	10	Potassium	7440-09-7	mg/kg		560		38.7	19.4	6010B
80-BH02-3	3/21/2012	9	10	Sodium	7440-23-5	mg/kg		66.3		38.7	19.4	6010B
80-BH02-3	3/21/2012	9	10	Zinc	7440-66-6	mg/kg	23464	12.8		0.774	0.387	6010B
80-BH02-3	3/21/2012	9	10	Arsenic	7440-38-2	mg/kg	3.90	1.47	U	1.47	0.734	6020
80-BH02-3	3/21/2012	9	10	Barium	7440-39-3	mg/kg	15558	14.5		1.47	0.734	6020
80-BH02-3	3/21/2012	9	10	Cadmium	7440-43-9	mg/kg	70.3	0.489	U	0.489	0.245	6020
80-BH02-3	3/21/2012	9	10	Chromium	7440-47-3	mg/kg	117321	1.96	U	1.96	0.979	6020
80-BH02-3	3/21/2012	9	10	Cobalt	7440-48-4	mg/kg		1.56	J	2.45	1.22	6020
80-BH02-3	3/21/2012	9	10	Copper	7440-50-8	mg/kg	3129	2.06	J	2.94	1.47	6020
80-BH02-3	3/21/2012	9	10	Lead (Pb)	7439-92-1	mg/kg	400	3.56		0.979	0.489	6020
80-BH02-3	3/21/2012	9	10	Manganese	7439-96-5	mg/kg	1865	78.6		0.979	0.489	6020
80-BH02-3	3/21/2012	9	10	Nickel	7440-02-0	mg/kg	1560	3.92	U	3.92	1.96	6020

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH02-3	3/21/2012	9	10	Selenium	7782-49-2	mg/kg	391	0.979	U	0.979	0.489	6020
80-BH02-3	3/21/2012	9	10	Silver	7440-22-4	mg/kg	391	3.10	U	3.10	1.55	6020
80-BH02-3	3/21/2012	9	10	Thallium	7440-28-0	mg/kg	0.782	0.196	U	0.196	0.0979	6020
80-BH02-3	3/21/2012	9	10	Vanadium	7440-62-2	mg/kg	391	4.78		2.45	1.22	6020
80-BH02-3	3/21/2012	9	10	Mercury	7439-97-6	mg/kg	15.6	0.0972	U	0.0972	0.00972	7471A
80-BH02-3	3/21/2012	9	10	Percent Solids	10-02-6	%		99.4		1.00	1.00	D2216-90
80-BH02-FD1	3/21/2012	0	2	Aluminum	7429-90-5	mg/kg	78002	6000	J	1480	742	6010B
80-BH02-FD1	3/21/2012	0	2	Antimony	7440-36-0	mg/kg	31.3	0.742	U	0.742	0.371	6010B
80-BH02-FD1	3/21/2012	0	2	Beryllium	7440-41-7	mg/kg	156	0.454		0.148	0.0742	6010B
80-BH02-FD1	3/21/2012	0	2	Calcium	7440-70-2	mg/kg		2260		7.42	3.71	6010B
80-BH02-FD1	3/21/2012	0	2	Iron (Ferrous)	7439-89-6	mg/kg	54750	13400		2.23	1.11	6010B
80-BH02-FD1	3/21/2012	0	2	Magnesium	7439-95-4	mg/kg		1990		18.6	9.28	6010B
80-BH02-FD1	3/21/2012	0	2	Potassium	7440-09-7	mg/kg		1790		37.1	18.6	6010B
80-BH02-FD1	3/21/2012	0	2	Sodium	7440-23-5	mg/kg		36.3	J	37.1	18.6	6010B
80-BH02-FD1	3/21/2012	0	2	Zinc	7440-66-6	mg/kg	23464	20.0		0.742	0.371	6010B
80-BH02-FD1	3/21/2012	0	2	Arsenic	7440-38-2	mg/kg	3.90	1.19	J	1.48	0.742	6020

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH02-FD1	3/21/2012	0	2	Barium	7440-39-3	mg/kg	15558	39.8		1.48	0.742	6020
80-BH02-FD1	3/21/2012	0	2	Cadmium	7440-43-9	mg/kg	70.3	0.495	U	0.495	0.247	6020
80-BH02-FD1	3/21/2012	0	2	Chromium	7440-47-3	mg/kg	117321	1.80	J	1.98	0.990	6020
80-BH02-FD1	3/21/2012	0	2	Cobalt	7440-48-4	mg/kg		3.29		2.47	1.24	6020
80-BH02-FD1	3/21/2012	0	2	Copper	7440-50-8	mg/kg	3129	4.27		2.97	1.48	6020
80-BH02-FD1	3/21/2012	0	2	Lead (Pb)	7439-92-1	mg/kg	400	7.05		0.990	0.495	6020
80-BH02-FD1	3/21/2012	0	2	Manganese	7439-96-5	mg/kg	1865	171		0.990	0.495	6020
80-BH02-FD1	3/21/2012	0	2	Nickel	7440-02-0	mg/kg	1560	2.91	J	3.96	1.98	6020
80-BH02-FD1	3/21/2012	0	2	Selenium	7782-49-2	mg/kg	391	0.990	U	0.990	0.495	6020
80-BH02-FD1	3/21/2012	0	2	Silver	7440-22-4	mg/kg	391	2.97	U	2.97	1.48	6020
80-BH02-FD1	3/21/2012	0	2	Thallium	7440-28-0	mg/kg	0.782	0.198	U	0.198	0.0990	6020
80-BH02-FD1	3/21/2012	0	2	Vanadium	7440-62-2	mg/kg	391	8.01		2.47	1.24	6020
80-BH02-FD1	3/21/2012	0	2	Mercury	7439-97-6	mg/kg	15.6	0.0968	U	0.0968	0.00968	7471A
80-BH02-FD1	3/21/2012	0	2	Percent Solids	10-02-6	%		98.3		1.00	1.00	D2216-90
80-BH03-1	3/21/2012	0	2	Aluminum	7429-90-5	mg/kg	78002	3740		1560	780	6010B
80-BH03-1	3/21/2012	0	2	Antimony	7440-36-0	mg/kg	31.3	0.780	U	0.780	0.390	6010B

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH03-1	3/21/2012	0	2	Beryllium	7440-41-7	mg/kg	156	0.292		0.0780	0.0390	6010B
80-BH03-1	3/21/2012	0	2	Calcium	7440-70-2	mg/kg		1810		7.80	3.90	6010B
80-BH03-1	3/21/2012	0	2	Iron (Ferrous)	7439-89-6	mg/kg	54750	8360		2.34	1.17	6010B
80-BH03-1	3/21/2012	0	2	Magnesium	7439-95-4	mg/kg		1330		19.5	9.75	6010B
80-BH03-1	3/21/2012	0	2	Potassium	7440-09-7	mg/kg		1160		39	19.5	6010B
80-BH03-1	3/21/2012	0	2	Sodium	7440-23-5	mg/kg		28.6		19.5	9.75	6010B
80-BH03-1	3/21/2012	0	2	Zinc	7440-66-6	mg/kg	23464	14.3		0.780	0.390	6010B
80-BH03-1	3/21/2012	0	2	Arsenic	7440-38-2	mg/kg	3.90	0.954	J	1.52	0.759	6020
80-BH03-1	3/21/2012	0	2	Barium	7440-39-3	mg/kg	15558	28.8		1.52	0.759	6020
80-BH03-1	3/21/2012	0	2	Cadmium	7440-43-9	mg/kg	70.3	0.506	U	0.506	0.253	6020
80-BH03-1	3/21/2012	0	2	Chromium	7440-47-3	mg/kg	117321	1.20	J	2.02	1.01	6020
80-BH03-1	3/21/2012	0	2	Cobalt	7440-48-4	mg/kg		2.26	J	2.53	1.26	6020
80-BH03-1	3/21/2012	0	2	Copper	7440-50-8	mg/kg	3129	3.12		3.03	1.52	6020
80-BH03-1	3/21/2012	0	2	Lead (Pb)	7439-92-1	mg/kg	400	5.14		1.01	0.506	6020
80-BH03-1	3/21/2012	0	2	Manganese	7439-96-5	mg/kg	1865	117		1.01	0.506	6020
80-BH03-1	3/21/2012	0	2	Nickel	7440-02-0	mg/kg	1560	4.05	U	4.05	2.02	6020

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH03-1	3/21/2012	0	2	Selenium	7782-49-2	mg/kg	391	1.01	U	1.01	0.506	6020
80-BH03-1	3/21/2012	0	2	Silver	7440-22-4	mg/kg	391	3.12	U	3.12	1.56	6020
80-BH03-1	3/21/2012	0	2	Thallium	7440-28-0	mg/kg	0.782	0.202	U	0.202	0.101	6020
80-BH03-1	3/21/2012	0	2	Vanadium	7440-62-2	mg/kg	391	6.41		2.53	1.26	6020
80-BH03-1	3/21/2012	0	2	Mercury	7439-97-6	mg/kg	15.6	0.102	U	0.102	0.0102	7471A
80-BH03-1	3/21/2012	0	2	Percent Solids	10-02-6	%		97.5		1.00	1.00	D2216-90
80-BH03-2	3/21/2012	5	6	Aluminum	7429-90-5	mg/kg	78002	3000		1460	730	6010B
80-BH03-2	3/21/2012	5	6	Antimony	7440-36-0	mg/kg	31.3	0.730	U	0.730	0.365	6010B
80-BH03-2	3/21/2012	5	6	Beryllium	7440-41-7	mg/kg	156	0.276		0.0730	0.0365	6010B
80-BH03-2	3/21/2012	5	6	Calcium	7440-70-2	mg/kg		1660		7.30	3.65	6010B
80-BH03-2	3/21/2012	5	6	Iron (Ferrous)	7439-89-6	mg/kg	54750	6890		2.19	1.09	6010B
80-BH03-2	3/21/2012	5	6	Magnesium	7439-95-4	mg/kg		1230		18.2	9.12	6010B
80-BH03-2	3/21/2012	5	6	Potassium	7440-09-7	mg/kg		706		36.5	18.2	6010B
80-BH03-2	3/21/2012	5	6	Sodium	7440-23-5	mg/kg		33.4		18.2	9.12	6010B
80-BH03-2	3/21/2012	5	6	Zinc	7440-66-6	mg/kg	23464	13.2		0.730	0.365	6010B
80-BH03-2	3/21/2012	5	6	Arsenic	7440-38-2	mg/kg	3.90	1.01	J	1.49	0.743	6020

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH03-2	3/21/2012	5	6	Barium	7440-39-3	mg/kg	15558	44.0		1.49	0.743	6020
80-BH03-2	3/21/2012	5	6	Cadmium	7440-43-9	mg/kg	70.3	0.496	U	0.496	0.248	6020
80-BH03-2	3/21/2012	5	6	Chromium	7440-47-3	mg/kg	117321	2.65		1.98	0.991	6020
80-BH03-2	3/21/2012	5	6	Cobalt	7440-48-4	mg/kg		3.37		2.48	1.24	6020
80-BH03-2	3/21/2012	5	6	Copper	7440-50-8	mg/kg	3129	4.05		2.97	1.49	6020
80-BH03-2	3/21/2012	5	6	Lead (Pb)	7439-92-1	mg/kg	400	6.61		0.991	0.496	6020
80-BH03-2	3/21/2012	5	6	Manganese	7439-96-5	mg/kg	1865	185		0.991	0.496	6020
80-BH03-2	3/21/2012	5	6	Nickel	7440-02-0	mg/kg	1560	2.89	J	3.97	1.98	6020
80-BH03-2	3/21/2012	5	6	Selenium	7782-49-2	mg/kg	391	0.991	U	0.991	0.496	6020
80-BH03-2	3/21/2012	5	6	Silver	7440-22-4	mg/kg	391	2.92	U	2.92	1.46	6020
80-BH03-2	3/21/2012	5	6	Thallium	7440-28-0	mg/kg	0.782	0.198	U	0.198	0.0991	6020
80-BH03-2	3/21/2012	5	6	Vanadium	7440-62-2	mg/kg	391	8.98		2.48	1.24	6020
80-BH03-2	3/21/2012	5	6	Mercury	7439-97-6	mg/kg	15.6	0.0978	U	0.0978	0.00978	7471A
80-BH03-2	3/21/2012	5	6	Percent Solids	10-02-6	%		98.1		1.00	1.00	D2216-90
80-BH03-3	3/21/2012	9	10	Aluminum	7429-90-5	mg/kg	78002	2630		1540	771	6010B
80-BH03-3	3/21/2012	9	10	Antimony	7440-36-0	mg/kg	31.3	0.771	U	0.771	0.386	6010B

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH03-3	3/21/2012	9	10	Beryllium	7440-41-7	mg/kg	156	0.246		0.154	0.0771	6010B
80-BH03-3	3/21/2012	9	10	Calcium	7440-70-2	mg/kg		1650		7.71	3.86	6010B
80-BH03-3	3/21/2012	9	10	Iron (Ferrous)	7439-89-6	mg/kg	54750	9130		2.31	1.16	6010B
80-BH03-3	3/21/2012	9	10	Magnesium	7439-95-4	mg/kg		1230		19.3	9.64	6010B
80-BH03-3	3/21/2012	9	10	Potassium	7440-09-7	mg/kg		933		38.6	19.3	6010B
80-BH03-3	3/21/2012	9	10	Sodium	7440-23-5	mg/kg		37.4	J	38.6	19.3	6010B
80-BH03-3	3/21/2012	9	10	Zinc	7440-66-6	mg/kg	23464	12.2		0.771	0.386	6010B
80-BH03-3	3/21/2012	9	10	Arsenic	7440-38-2	mg/kg	3.90	1.46	U	1.46	0.729	6020
80-BH03-3	3/21/2012	9	10	Barium	7440-39-3	mg/kg	15558	20.1		1.46	0.729	6020
80-BH03-3	3/21/2012	9	10	Cadmium	7440-43-9	mg/kg	70.3	0.486	U	0.486	0.243	6020
80-BH03-3	3/21/2012	9	10	Chromium	7440-47-3	mg/kg	117321	1.95	U	1.95	0.973	6020
80-BH03-3	3/21/2012	9	10	Cobalt	7440-48-4	mg/kg		1.64	J	2.43	1.22	6020
80-BH03-3	3/21/2012	9	10	Copper	7440-50-8	mg/kg	3129	1.58	J	2.92	1.46	6020
80-BH03-3	3/21/2012	9	10	Lead (Pb)	7439-92-1	mg/kg	400	3.87		0.973	0.486	6020
80-BH03-3	3/21/2012	9	10	Manganese	7439-96-5	mg/kg	1865	87.7		0.973	0.486	6020
80-BH03-3	3/21/2012	9	10	Nickel	7440-02-0	mg/kg	1560	3.89	U	3.89	1.95	6020

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH03-3	3/21/2012	9	10	Selenium	7782-49-2	mg/kg	391	0.973	U	0.973	0.486	6020
80-BH03-3	3/21/2012	9	10	Silver	7440-22-4	mg/kg	391	3.08	U	3.08	1.54	6020
80-BH03-3	3/21/2012	9	10	Thallium	7440-28-0	mg/kg	0.782	0.195	U	0.195	0.0973	6020
80-BH03-3	3/21/2012	9	10	Vanadium	7440-62-2	mg/kg	391	3.59		2.43	1.22	6020
80-BH03-3	3/21/2012	9	10	Mercury	7439-97-6	mg/kg	15.6	0.0953	U	0.0953	0.00953	7471A
80-BH03-3	3/21/2012	9	10	Percent Solids	10-02-6	%		99.4		1.00	1.00	D2216-90
80-BH04-1	3/21/2012	0	2	Aluminum	7429-90-5	mg/kg	78002	5020		14.9	7.46	6010B
80-BH04-1	3/21/2012	0	2	Antimony	7440-36-0	mg/kg	31.3	0.746	Un	0.746	0.373	6010B
80-BH04-1	3/21/2012	0	2	Beryllium	7440-41-7	mg/kg	156	0.465		0.0746	0.0373	6010B
80-BH04-1	3/21/2012	0	2	Calcium	7440-70-2	mg/kg		1920		7.46	3.73	6010B
80-BH04-1	3/21/2012	0	2	Iron (Ferrous)	7439-89-6	mg/kg	54750	10700		2.24	1.12	6010B
80-BH04-1	3/21/2012	0	2	Magnesium	7439-95-4	mg/kg		1760		18.7	9.33	6010B
80-BH04-1	3/21/2012	0	2	Potassium	7440-09-7	mg/kg		1580		37.3	18.7	6010B
80-BH04-1	3/21/2012	0	2	Sodium	7440-23-5	mg/kg		30.6		18.7	9.33	6010B
80-BH04-1	3/21/2012	0	2	Zinc	7440-66-6	mg/kg	23464	18.2		0.746	0.373	6010B
80-BH04-1	3/21/2012	0	2	Arsenic	7440-38-2	mg/kg	3.90	1.26	J	1.56	0.778	6020

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH04-1	3/21/2012	0	2	Barium	7440-39-3	mg/kg	15558	42.4		1.56	0.778	6020
80-BH04-1	3/21/2012	0	2	Cadmium	7440-43-9	mg/kg	70.3	0.519	U	0.519	0.259	6020
80-BH04-1	3/21/2012	0	2	Chromium	7440-47-3	mg/kg	117321	1.99	J	2.08	1.04	6020
80-BH04-1	3/21/2012	0	2	Cobalt	7440-48-4	mg/kg		3.52		2.59	1.30	6020
80-BH04-1	3/21/2012	0	2	Copper	7440-50-8	mg/kg	3129	4.20		3.11	1.56	6020
80-BH04-1	3/21/2012	0	2	Lead (Pb)	7439-92-1	mg/kg	400	6.49		1.04	0.519	6020
80-BH04-1	3/21/2012	0	2	Manganese	7439-96-5	mg/kg	1865	187		10.4	5.19	6020
80-BH04-1	3/21/2012	0	2	Nickel	7440-02-0	mg/kg	1560	3.33	J	4.15	2.08	6020
80-BH04-1	3/21/2012	0	2	Selenium	7782-49-2	mg/kg	391	1.04	U	1.04	0.519	6020
80-BH04-1	3/21/2012	0	2	Silver	7440-22-4	mg/kg	391	2.99	Un	2.99	1.49	6020
80-BH04-1	3/21/2012	0	2	Thallium	7440-28-0	mg/kg	0.782	0.208	U	0.208	0.104	6020
80-BH04-1	3/21/2012	0	2	Vanadium	7440-62-2	mg/kg	391	7.29		2.59	1.30	6020
80-BH04-1	3/21/2012	0	2	Mercury	7439-97-6	mg/kg	15.6	0.0103	J	0.101	0.0101	7471A
80-BH04-1	3/21/2012	0	2	Percent Solids	10-02-6	%		96.0		1.00	1.00	D2216-90
80-BH04-2	3/21/2012	5	6	Aluminum	7429-90-5	mg/kg	78002	8320		1550	775	6010B
80-BH04-2	3/21/2012	5	6	Antimony	7440-36-0	mg/kg	31.3	0.775	U	0.775	0.388	6010B

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH04-2	3/21/2012	5	6	Beryllium	7440-41-7	mg/kg	156	0.637		0.0775	0.0388	6010B
80-BH04-2	3/21/2012	5	6	Calcium	7440-70-2	mg/kg		4030		7.75	3.88	6010B
80-BH04-2	3/21/2012	5	6	Iron (Ferrous)	7439-89-6	mg/kg	54750	13500		2.33	1.16	6010B
80-BH04-2	3/21/2012	5	6	Magnesium	7439-95-4	mg/kg		3120		19.4	9.69	6010B
80-BH04-2	3/21/2012	5	6	Potassium	7440-09-7	mg/kg		1570		38.8	19.4	6010B
80-BH04-2	3/21/2012	5	6	Sodium	7440-23-5	mg/kg		119		19.4	9.69	6010B
80-BH04-2	3/21/2012	5	6	Zinc	7440-66-6	mg/kg	23464	27.9		0.775	0.388	6010B
80-BH04-2	3/21/2012	5	6	Arsenic	7440-38-2	mg/kg	3.90	0.925	J	1.49	0.744	6020
80-BH04-2	3/21/2012	5	6	Barium	7440-39-3	mg/kg	15558	55.8		1.49	0.744	6020
80-BH04-2	3/21/2012	5	6	Cadmium	7440-43-9	mg/kg	70.3	0.496	U	0.496	0.248	6020
80-BH04-2	3/21/2012	5	6	Chromium	7440-47-3	mg/kg	117321	2.86		1.99	0.993	6020
80-BH04-2	3/21/2012	5	6	Cobalt	7440-48-4	mg/kg		6.06		2.48	1.24	6020
80-BH04-2	3/21/2012	5	6	Copper	7440-50-8	mg/kg	3129	4.95		2.98	1.49	6020
80-BH04-2	3/21/2012	5	6	Lead (Pb)	7439-92-1	mg/kg	400	9.78		0.993	0.496	6020
80-BH04-2	3/21/2012	5	6	Manganese	7439-96-5	mg/kg	1865	276		9.93	4.96	6020
80-BH04-2	3/21/2012	5	6	Nickel	7440-02-0	mg/kg	1560	5.15		3.97	1.99	6020

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH04-2	3/21/2012	5	6	Selenium	7782-49-2	mg/kg	391	0.993	U	0.993	0.496	6020
80-BH04-2	3/21/2012	5	6	Silver	7440-22-4	mg/kg	391	3.10	U	3.10	1.55	6020
80-BH04-2	3/21/2012	5	6	Thallium	7440-28-0	mg/kg	0.782	0.130	J	0.199	0.0993	6020
80-BH04-2	3/21/2012	5	6	Vanadium	7440-62-2	mg/kg	391	11.8		2.48	1.24	6020
80-BH04-2	3/21/2012	5	6	Mercury	7439-97-6	mg/kg	15.6	0.102	U	0.102	0.0102	7471A
80-BH04-2	3/21/2012	5	6	Percent Solids	10-02-6	%		97.2		1.00	1.00	D2216-90
80-BH04-3	3/21/2012	9	10	Aluminum	7429-90-5	mg/kg	78002	5230		1420	708	6010B
80-BH04-3	3/21/2012	9	10	Antimony	7440-36-0	mg/kg	31.3	0.708	U	0.708	0.354	6010B
80-BH04-3	3/21/2012	9	10	Beryllium	7440-41-7	mg/kg	156	0.364		0.0708	0.0354	6010B
80-BH04-3	3/21/2012	9	10	Calcium	7440-70-2	mg/kg		4640		7.08	3.54	6010B
80-BH04-3	3/21/2012	9	10	Iron (Ferrous)	7439-89-6	mg/kg	54750	11100		2.13	1.06	6010B
80-BH04-3	3/21/2012	9	10	Magnesium	7439-95-4	mg/kg		1380		17.7	8.86	6010B
80-BH04-3	3/21/2012	9	10	Potassium	7440-09-7	mg/kg		910		35.4	17.7	6010B
80-BH04-3	3/21/2012	9	10	Sodium	7440-23-5	mg/kg		92.2		17.7	8.86	6010B
80-BH04-3	3/21/2012	9	10	Zinc	7440-66-6	mg/kg	23464	16.4		0.708	0.354	6010B
80-BH04-3	3/21/2012	9	10	Arsenic	7440-38-2	mg/kg	3.90	0.805	J	1.45	0.727	6020

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH04-3	3/21/2012	9	10	Barium	7440-39-3	mg/kg	15558	36.6		1.45	0.727	6020
80-BH04-3	3/21/2012	9	10	Cadmium	7440-43-9	mg/kg	70.3	0.485	U	0.485	0.242	6020
80-BH04-3	3/21/2012	9	10	Chromium	7440-47-3	mg/kg	117321	2.12		1.94	0.969	6020
80-BH04-3	3/21/2012	9	10	Cobalt	7440-48-4	mg/kg		3.04		2.42	1.21	6020
80-BH04-3	3/21/2012	9	10	Copper	7440-50-8	mg/kg	3129	4.04		2.91	1.45	6020
80-BH04-3	3/21/2012	9	10	Lead (Pb)	7439-92-1	mg/kg	400	5.84		0.969	0.485	6020
80-BH04-3	3/21/2012	9	10	Manganese	7439-96-5	mg/kg	1865	187		0.969	0.485	6020
80-BH04-3	3/21/2012	9	10	Nickel	7440-02-0	mg/kg	1560	3.10	J	3.88	1.94	6020
80-BH04-3	3/21/2012	9	10	Selenium	7782-49-2	mg/kg	391	0.969	U	0.969	0.485	6020
80-BH04-3	3/21/2012	9	10	Silver	7440-22-4	mg/kg	391	2.83	U	2.83	1.42	6020
80-BH04-3	3/21/2012	9	10	Thallium	7440-28-0	mg/kg	0.782	0.194	U	0.194	0.0969	6020
80-BH04-3	3/21/2012	9	10	Vanadium	7440-62-2	mg/kg	391	6.47		2.42	1.21	6020
80-BH04-3	3/21/2012	9	10	Mercury	7439-97-6	mg/kg	15.6	0.0983	U	0.0983	0.00983	7471A
80-BH04-3	3/21/2012	9	10	Percent Solids	10-02-6	%		98.1		1.00	1.00	D2216-90
80-BH05-1	3/21/2012	0	2	Aluminum	7429-90-5	mg/kg	78002	5610		1750	875	6010B
80-BH05-1	3/21/2012	0	2	Antimony	7440-36-0	mg/kg	31.3	0.875	U	0.875	0.437	6010B

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH05-1	3/21/2012	0	2	Beryllium	7440-41-7	mg/kg	156	0.395		0.0875	0.0437	6010B
80-BH05-1	3/21/2012	0	2	Calcium	7440-70-2	mg/kg		1710		8.75	4.37	6010B
80-BH05-1	3/21/2012	0	2	Iron (Ferrous)	7439-89-6	mg/kg	54750	10300		2.62	1.31	6010B
80-BH05-1	3/21/2012	0	2	Magnesium	7439-95-4	mg/kg		1630		21.9	10.9	6010B
80-BH05-1	3/21/2012	0	2	Potassium	7440-09-7	mg/kg		1580		43.7	21.9	6010B
80-BH05-1	3/21/2012	0	2	Sodium	7440-23-5	mg/kg		31.2		21.9	10.9	6010B
80-BH05-1	3/21/2012	0	2	Zinc	7440-66-6	mg/kg	23464	16.9		0.875	0.437	6010B
80-BH05-1	3/21/2012	0	2	Arsenic	7440-38-2	mg/kg	3.90	0.929	J	1.82	0.908	6020
80-BH05-1	3/21/2012	0	2	Barium	7440-39-3	mg/kg	15558	33.8		1.82	0.908	6020
80-BH05-1	3/21/2012	0	2	Cadmium	7440-43-9	mg/kg	70.3	0.605	U	0.605	0.303	6020
80-BH05-1	3/21/2012	0	2	Chromium	7440-47-3	mg/kg	117321	2.42	U	2.42	1.21	6020
80-BH05-1	3/21/2012	0	2	Cobalt	7440-48-4	mg/kg		2.54	J	3.03	1.51	6020
80-BH05-1	3/21/2012	0	2	Copper	7440-50-8	mg/kg	3129	3.32	J	3.63	1.82	6020
80-BH05-1	3/21/2012	0	2	Lead (Pb)	7439-92-1	mg/kg	400	6.23		1.21	0.605	6020
80-BH05-1	3/21/2012	0	2	Manganese	7439-96-5	mg/kg	1865	147		1.21	0.605	6020
80-BH05-1	3/21/2012	0	2	Nickel	7440-02-0	mg/kg	1560	2.47	J	4.84	2.42	6020

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH05-1	3/21/2012	0	2	Selenium	7782-49-2	mg/kg	391	1.21	U	1.21	0.605	6020
80-BH05-1	3/21/2012	0	2	Silver	7440-22-4	mg/kg	391	3.5	U	3.50	1.75	6020
80-BH05-1	3/21/2012	0	2	Thallium	7440-28-0	mg/kg	0.782	0.242	U	0.242	0.121	6020
80-BH05-1	3/21/2012	0	2	Vanadium	7440-62-2	mg/kg	391	4.86		3.03	1.51	6020
80-BH05-1	3/21/2012	0	2	Mercury	7439-97-6	mg/kg	15.6	0.120	U	0.120	0.0120	7471A
80-BH05-1	3/21/2012	0	2	Percent Solids	10-02-6	%		82.1		1.00	1.00	D2216-90
80-BH05-2	3/21/2012	5	6	Aluminum	7429-90-5	mg/kg	78002	3450		1450	724	6010B
80-BH05-2	3/21/2012	5	6	Antimony	7440-36-0	mg/kg	31.3	0.724	U	0.724	0.362	6010B
80-BH05-2	3/21/2012	5	6	Beryllium	7440-41-7	mg/kg	156	0.305		0.0724	0.0362	6010B
80-BH05-2	3/21/2012	5	6	Calcium	7440-70-2	mg/kg		4140		7.24	3.62	6010B
80-BH05-2	3/21/2012	5	6	Iron (Ferrous)	7439-89-6	mg/kg	54750	8810		2.17	1.09	6010B
80-BH05-2	3/21/2012	5	6	Magnesium	7439-95-4	mg/kg		1490		18.1	9.05	6010B
80-BH05-2	3/21/2012	5	6	Potassium	7440-09-7	mg/kg		968		36.2	18.1	6010B
80-BH05-2	3/21/2012	5	6	Sodium	7440-23-5	mg/kg		34.4		18.1	9.05	6010B
80-BH05-2	3/21/2012	5	6	Zinc	7440-66-6	mg/kg	23464	14.2		0.724	0.362	6010B
80-BH05-2	3/21/2012	5	6	Arsenic	7440-38-2	mg/kg	3.90	0.955	J	1.52	0.758	6020

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH05-2	3/21/2012	5	6	Barium	7440-39-3	mg/kg	15558	41.2		1.52	0.758	6020
80-BH05-2	3/21/2012	5	6	Cadmium	7440-43-9	mg/kg	70.3	0.505	U	0.505	0.253	6020
80-BH05-2	3/21/2012	5	6	Chromium	7440-47-3	mg/kg	117321	1.58	J	2.02	1.01	6020
80-BH05-2	3/21/2012	5	6	Cobalt	7440-48-4	mg/kg		2.84		2.53	1.26	6020
80-BH05-2	3/21/2012	5	6	Copper	7440-50-8	mg/kg	3129	3.56		3.03	1.52	6020
80-BH05-2	3/21/2012	5	6	Lead (Pb)	7439-92-1	mg/kg	400	5.21		1.01	0.505	6020
80-BH05-2	3/21/2012	5	6	Manganese	7439-96-5	mg/kg	1865	136		1.01	0.505	6020
80-BH05-2	3/21/2012	5	6	Nickel	7440-02-0	mg/kg	1560	2.80	J	4.04	2.02	6020
80-BH05-2	3/21/2012	5	6	Selenium	7782-49-2	mg/kg	391	1.01	U	1.01	0.505	6020
80-BH05-2	3/21/2012	5	6	Silver	7440-22-4	mg/kg	391	2.90	U	2.90	1.45	6020
80-BH05-2	3/21/2012	5	6	Thallium	7440-28-0	mg/kg	0.782	0.202	U	0.202	0.101	6020
80-BH05-2	3/21/2012	5	6	Vanadium	7440-62-2	mg/kg	391	7.68		2.53	1.26	6020
80-BH05-2	3/21/2012	5	6	Mercury	7439-97-6	mg/kg	15.6	0.100	U	0.100	0.00998	7471A
80-BH05-2	3/21/2012	5	6	Percent Solids	10-02-6	%		98.7		1.00	1.00	D2216-90
80-BH05-3	3/21/2012	9	10	Aluminum	7429-90-5	mg/kg	78002	3730		1470	735	6010B
80-BH05-3	3/21/2012	9	10	Antimony	7440-36-0	mg/kg	31.3	0.735	U	0.735	0.368	6010B

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH05-3	3/21/2012	9	10	Beryllium	7440-41-7	mg/kg	156	0.330		0.0735	0.0368	6010B
80-BH05-3	3/21/2012	9	10	Calcium	7440-70-2	mg/kg		2410		7.35	3.68	6010B
80-BH05-3	3/21/2012	9	10	Iron (Ferrous)	7439-89-6	mg/kg	54750	9980		2.21	1.10	6010B
80-BH05-3	3/21/2012	9	10	Magnesium	7439-95-4	mg/kg		1720		18.4	9.19	6010B
80-BH05-3	3/21/2012	9	10	Potassium	7440-09-7	mg/kg		851		36.8	18.4	6010B
80-BH05-3	3/21/2012	9	10	Sodium	7440-23-5	mg/kg		77.6		18.4	9.19	6010B
80-BH05-3	3/21/2012	9	10	Zinc	7440-66-6	mg/kg	23464	15.0		0.735	0.368	6010B
80-BH05-3	3/21/2012	9	10	Arsenic	7440-38-2	mg/kg	3.90	0.970	J	1.47	0.733	6020
80-BH05-3	3/21/2012	9	10	Barium	7440-39-3	mg/kg	15558	50.5		1.47	0.733	6020
80-BH05-3	3/21/2012	9	10	Cadmium	7440-43-9	mg/kg	70.3	0.489	U	0.489	0.244	6020
80-BH05-3	3/21/2012	9	10	Chromium	7440-47-3	mg/kg	117321	1.97		1.96	0.978	6020
80-BH05-3	3/21/2012	9	10	Cobalt	7440-48-4	mg/kg		3.84		2.44	1.22	6020
80-BH05-3	3/21/2012	9	10	Copper	7440-50-8	mg/kg	3129	4.65		2.93	1.47	6020
80-BH05-3	3/21/2012	9	10	Lead (Pb)	7439-92-1	mg/kg	400	6.61		0.978	0.489	6020
80-BH05-3	3/21/2012	9	10	Manganese	7439-96-5	mg/kg	1865	161		0.978	0.489	6020
80-BH05-3	3/21/2012	9	10	Nickel	7440-02-0	mg/kg	1560	3.83	J	3.91	1.96	6020

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH05-3	3/21/2012	9	10	Selenium	7782-49-2	mg/kg	391	0.978	U	0.978	0.489	6020
80-BH05-3	3/21/2012	9	10	Silver	7440-22-4	mg/kg	391	2.94	U	2.94	1.47	6020
80-BH05-3	3/21/2012	9	10	Thallium	7440-28-0	mg/kg	0.782	0.107	J	0.196	0.0978	6020
80-BH05-3	3/21/2012	9	10	Vanadium	7440-62-2	mg/kg	391	9.63		2.44	1.22	6020
80-BH05-3	3/21/2012	9	10	Mercury	7439-97-6	mg/kg	15.6	0.0116	J	0.0968	0.00968	7471A
80-BH05-3	3/21/2012	9	10	Percent Solids	10-02-6	%		98.3		1.00	1.00	D2216-90
80-BH05-FD2	3/21/2012	5	6	Aluminum	7429-90-5	mg/kg	78002	3530		1490	743	6010B
80-BH05-FD2	3/21/2012	5	6	Antimony	7440-36-0	mg/kg	31.3	0.743	U	0.743	0.371	6010B
80-BH05-FD2	3/21/2012	5	6	Beryllium	7440-41-7	mg/kg	156	0.310		0.0743	0.0371	6010B
80-BH05-FD2	3/21/2012	5	6	Calcium	7440-70-2	mg/kg		4150		7.43	3.71	6010B
80-BH05-FD2	3/21/2012	5	6	Iron (Ferrous)	7439-89-6	mg/kg	54750	9250		2.23	1.11	6010B
80-BH05-FD2	3/21/2012	5	6	Magnesium	7439-95-4	mg/kg		1510		18.6	9.28	6010B
80-BH05-FD2	3/21/2012	5	6	Potassium	7440-09-7	mg/kg		972		37.1	18.6	6010B
80-BH05-FD2	3/21/2012	5	6	Sodium	7440-23-5	mg/kg		36.3		18.6	9.28	6010B
80-BH05-FD2	3/21/2012	5	6	Zinc	7440-66-6	mg/kg	23464	15.2		0.743	0.371	6010B
80-BH05-FD2	3/21/2012	5	6	Arsenic	7440-38-2	mg/kg	3.90	1.48	U	1.48	0.741	6020

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH05-FD2	3/21/2012	5	6	Barium	7440-39-3	mg/kg	15558	33.7		1.48	0.741	6020
80-BH05-FD2	3/21/2012	5	6	Cadmium	7440-43-9	mg/kg	70.3	0.494	U	0.494	0.247	6020
80-BH05-FD2	3/21/2012	5	6	Chromium	7440-47-3	mg/kg	117321	1.14	J	1.98	0.988	6020
80-BH05-FD2	3/21/2012	5	6	Cobalt	7440-48-4	mg/kg		2.32	J	2.47	1.23	6020
80-BH05-FD2	3/21/2012	5	6	Copper	7440-50-8	mg/kg	3129	2.78	J	2.96	1.48	6020
80-BH05-FD2	3/21/2012	5	6	Lead (Pb)	7439-92-1	mg/kg	400	4.48		0.988	0.494	6020
80-BH05-FD2	3/21/2012	5	6	Manganese	7439-96-5	mg/kg	1865	112		0.988	0.494	6020
80-BH05-FD2	3/21/2012	5	6	Nickel	7440-02-0	mg/kg	1560	2.24	J	3.95	1.98	6020
80-BH05-FD2	3/21/2012	5	6	Selenium	7782-49-2	mg/kg	391	0.988	U	0.988	0.494	6020
80-BH05-FD2	3/21/2012	5	6	Silver	7440-22-4	mg/kg	391	2.97	U	2.97	1.49	6020
80-BH05-FD2	3/21/2012	5	6	Thallium	7440-28-0	mg/kg	0.782	0.198	U	0.198	0.0988	6020
80-BH05-FD2	3/21/2012	5	6	Vanadium	7440-62-2	mg/kg	391	5.22		2.47	1.23	6020
80-BH05-FD2	3/21/2012	5	6	Mercury	7439-97-6	mg/kg	15.6	0.0973	U	0.0973	0.00973	7471A
80-BH05-FD2	3/21/2012	5	6	Percent Solids	10-02-6	%		98.9		1.00	1.00	D2216-90
80-BH06-1	3/21/2012	0	2	Aluminum	7429-90-5	mg/kg	78002	6560		1420	709	6010B
80-BH06-1	3/21/2012	0	2	Antimony	7440-36-0	mg/kg	31.3	0.709	U	0.709	0.354	6010B

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH06-1	3/21/2012	0	2	Beryllium	7440-41-7	mg/kg	156	0.430		0.142	0.0709	6010B
80-BH06-1	3/21/2012	0	2	Calcium	7440-70-2	mg/kg		2030		7.09	3.54	6010B
80-BH06-1	3/21/2012	0	2	Iron (Ferrous)	7439-89-6	mg/kg	54750	12800		2.13	1.06	6010B
80-BH06-1	3/21/2012	0	2	Magnesium	7439-95-4	mg/kg		1870		17.7	8.86	6010B
80-BH06-1	3/21/2012	0	2	Potassium	7440-09-7	mg/kg		1760		35.4	17.7	6010B
80-BH06-1	3/21/2012	0	2	Sodium	7440-23-5	mg/kg		32.4	J	35.4	17.7	6010B
80-BH06-1	3/21/2012	0	2	Zinc	7440-66-6	mg/kg	23464	20.0		0.709	0.354	6010B
80-BH06-1	3/21/2012	0	2	Arsenic	7440-38-2	mg/kg	3.90	1.5		1.47	0.733	6020
80-BH06-1	3/21/2012	0	2	Barium	7440-39-3	mg/kg	15558	43.7		1.47	0.733	6020
80-BH06-1	3/21/2012	0	2	Cadmium	7440-43-9	mg/kg	70.3	0.488	U	0.488	0.244	6020
80-BH06-1	3/21/2012	0	2	Chromium	7440-47-3	mg/kg	117321	2.5		1.95	0.977	6020
80-BH06-1	3/21/2012	0	2	Cobalt	7440-48-4	mg/kg		3.58		2.44	1.22	6020
80-BH06-1	3/21/2012	0	2	Copper	7440-50-8	mg/kg	3129	5.76		2.93	1.47	6020
80-BH06-1	3/21/2012	0	2	Lead (Pb)	7439-92-1	mg/kg	400	7.89		0.977	0.488	6020
80-BH06-1	3/21/2012	0	2	Manganese	7439-96-5	mg/kg	1865	175		0.977	0.488	6020
80-BH06-1	3/21/2012	0	2	Nickel	7440-02-0	mg/kg	1560	3.59	J	3.91	1.95	6020

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH06-1	3/21/2012	0	2	Selenium	7782-49-2	mg/kg	391	0.977	U	0.977	0.488	6020
80-BH06-1	3/21/2012	0	2	Silver	7440-22-4	mg/kg	391	2.83	U	2.83	1.42	6020
80-BH06-1	3/21/2012	0	2	Thallium	7440-28-0	mg/kg	0.782	0.195	U	0.195	0.0977	6020
80-BH06-1	3/21/2012	0	2	Vanadium	7440-62-2	mg/kg	391	10.1		2.44	1.22	6020
80-BH06-1	3/21/2012	0	2	Mercury	7439-97-6	mg/kg	15.6	0.0962	U	0.0962	0.00962	7471A
80-BH06-1	3/21/2012	0	2	Percent Solids	10-02-6	%		98.1		1.00	1.00	D2216-90
80-BH06-2	3/21/2012	5	6	Aluminum	7429-90-5	mg/kg	78002	7140		14.7	7.34	6010B
80-BH06-2	3/21/2012	5	6	Antimony	7440-36-0	mg/kg	31.3	0.734	U	0.734	0.367	6010B
80-BH06-2	3/21/2012	5	6	Beryllium	7440-41-7	mg/kg	156	0.0734	U	0.0734	0.0367	6010B
80-BH06-2	3/21/2012	5	6	Calcium	7440-70-2	mg/kg		8400		7.34	3.67	6010B
80-BH06-2	3/21/2012	5	6	Iron (Ferrous)	7439-89-6	mg/kg	54750	13600		2.20	1.10	6010B
80-BH06-2	3/21/2012	5	6	Magnesium	7439-95-4	mg/kg		4000		91.8	45.9	6010B
80-BH06-2	3/21/2012	5	6	Potassium	7440-09-7	mg/kg		1530		36.7	18.4	6010B
80-BH06-2	3/21/2012	5	6	Sodium	7440-23-5	mg/kg		75.1		18.4	9.18	6010B
80-BH06-2	3/21/2012	5	6	Zinc	7440-66-6	mg/kg	23464	30.5		0.734	0.367	6010B
80-BH06-2	3/21/2012	5	6	Arsenic	7440-38-2	mg/kg	3.90	1.59		1.53	0.767	6020

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH06-2	3/21/2012	5	6	Barium	7440-39-3	mg/kg	15558	137		1.53	0.767	6020
80-BH06-2	3/21/2012	5	6	Cadmium	7440-43-9	mg/kg	70.3	0.511	U	0.511	0.256	6020
80-BH06-2	3/21/2012	5	6	Chromium	7440-47-3	mg/kg	117321	3.08		2.04	1.02	6020
80-BH06-2	3/21/2012	5	6	Cobalt	7440-48-4	mg/kg		7.12		2.56	1.28	6020
80-BH06-2	3/21/2012	5	6	Copper	7440-50-8	mg/kg	3129	7.33		3.07	1.53	6020
80-BH06-2	3/21/2012	5	6	Lead (Pb)	7439-92-1	mg/kg	400	11.2		1.02	0.511	6020
80-BH06-2	3/21/2012	5	6	Manganese	7439-96-5	mg/kg	1865	290		10.2	5.11	6020
80-BH06-2	3/21/2012	5	6	Nickel	7440-02-0	mg/kg	1560	6.40		4.09	2.04	6020
80-BH06-2	3/21/2012	5	6	Selenium	7782-49-2	mg/kg	391	1.02	U	1.02	0.511	6020
80-BH06-2	3/21/2012	5	6	Silver	7440-22-4	mg/kg	391	2.94	U	2.94	1.47	6020
80-BH06-2	3/21/2012	5	6	Thallium	7440-28-0	mg/kg	0.782	0.147	J	0.204	0.102	6020
80-BH06-2	3/21/2012	5	6	Vanadium	7440-62-2	mg/kg	391	15.9		2.56	1.28	6020
80-BH06-2	3/21/2012	5	6	Mercury	7439-97-6	mg/kg	15.6	0.0111	J	0.101	0.0101	7471A
80-BH06-2	3/21/2012	5	6	Percent Solids	10-02-6	%		97.0		1.00	1.00	D2216-90
80-BH06-3	3/21/2012	9	10	Aluminum	7429-90-5	mg/kg	78002	4620		13.8	6.92	6010B
80-BH06-3	3/21/2012	9	10	Antimony	7440-36-0	mg/kg	31.3	0.692	U	0.692	0.346	6010B

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH06-3	3/21/2012	9	10	Beryllium	7440-41-7	mg/kg	156	0.181		0.0692	0.0346	6010B
80-BH06-3	3/21/2012	9	10	Calcium	7440-70-2	mg/kg		3660		6.92	3.46	6010B
80-BH06-3	3/21/2012	9	10	Iron (Ferrous)	7439-89-6	mg/kg	54750	11500		2.08	1.04	6010B
80-BH06-3	3/21/2012	9	10	Magnesium	7439-95-4	mg/kg		3080		17.3	8.65	6010B
80-BH06-3	3/21/2012	9	10	Potassium	7440-09-7	mg/kg		1560		34.6	17.3	6010B
80-BH06-3	3/21/2012	9	10	Sodium	7440-23-5	mg/kg		180		17.3	8.65	6010B
80-BH06-3	3/21/2012	9	10	Zinc	7440-66-6	mg/kg	23464	26.8		0.692	0.346	6010B
80-BH06-3	3/21/2012	9	10	Arsenic	7440-38-2	mg/kg	3.90	1.47	J	1.51	0.753	6020
80-BH06-3	3/21/2012	9	10	Barium	7440-39-3	mg/kg	15558	82.2		1.51	0.753	6020
80-BH06-3	3/21/2012	9	10	Cadmium	7440-43-9	mg/kg	70.3	0.502	U	0.502	0.251	6020
80-BH06-3	3/21/2012	9	10	Chromium	7440-47-3	mg/kg	117321	3.03		2.01	1.00	6020
80-BH06-3	3/21/2012	9	10	Cobalt	7440-48-4	mg/kg		6.95		2.51	1.25	6020
80-BH06-3	3/21/2012	9	10	Copper	7440-50-8	mg/kg	3129	7.23		3.01	1.51	6020
80-BH06-3	3/21/2012	9	10	Lead (Pb)	7439-92-1	mg/kg	400	11.0		1.00	0.502	6020
80-BH06-3	3/21/2012	9	10	Manganese	7439-96-5	mg/kg	1865	361		10.0	5.02	6020
80-BH06-3	3/21/2012	9	10	Nickel	7440-02-0	mg/kg	1560	5.69		4.02	2.01	6020

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH06-3	3/21/2012	9	10	Selenium	7782-49-2	mg/kg	391	1.00	U	1.00	0.502	6020
80-BH06-3	3/21/2012	9	10	Silver	7440-22-4	mg/kg	391	2.77	U	2.77	1.38	6020
80-BH06-3	3/21/2012	9	10	Thallium	7440-28-0	mg/kg	0.782	0.158	J	0.201	0.100	6020
80-BH06-3	3/21/2012	9	10	Vanadium	7440-62-2	mg/kg	391	13.7		2.51	1.25	6020
80-BH06-3	3/21/2012	9	10	Mercury	7439-97-6	mg/kg	15.6	0.101	U	0.101	0.0101	7471A
80-BH06-3	3/21/2012	9	10	Percent Solids	10-02-6	%		96.7		1.00	1.00	D2216-90
80-BH07-1	3/21/2012	0	2	Aluminum	7429-90-5	mg/kg	78002	4630		15.3	7.67	6010B
80-BH07-1	3/21/2012	0	2	Antimony	7440-36-0	mg/kg	31.3	0.767	U	0.767	0.384	6010B
80-BH07-1	3/21/2012	0	2	Beryllium	7440-41-7	mg/kg	156	0.0767	U	0.0767	0.0384	6010B
80-BH07-1	3/21/2012	0	2	Beryllium	7440-41-7	mg/kg	156	0.385		0.0767	0.0384	6010B
80-BH07-1	3/21/2012	0	2	Calcium	7440-70-2	mg/kg		2000		7.67	3.84	6010B
80-BH07-1	3/21/2012	0	2	Iron (Ferrous)	7439-89-6	mg/kg	54750	12700		2.30	1.15	6010B
80-BH07-1	3/21/2012	0	2	Magnesium	7439-95-4	mg/kg		1760		19.2	9.59	6010B
80-BH07-1	3/21/2012	0	2	Potassium	7440-09-7	mg/kg		1670		38.4	19.2	6010B
80-BH07-1	3/21/2012	0	2	Sodium	7440-23-5	mg/kg		29.4		19.2	9.59	6010B
80-BH07-1	3/21/2012	0	2	Zinc	7440-66-6	mg/kg	23464	18.2		0.767	0.384	6010B

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH07-1	3/21/2012	0	2	Arsenic	7440-38-2	mg/kg	3.90	0.859	J	1.49	0.746	6020
80-BH07-1	3/21/2012	0	2	Barium	7440-39-3	mg/kg	15558	36.6		1.49	0.746	6020
80-BH07-1	3/21/2012	0	2	Cadmium	7440-43-9	mg/kg	70.3	0.498	U	0.498	0.249	6020
80-BH07-1	3/21/2012	0	2	Chromium	7440-47-3	mg/kg	117321	1.38	J	1.99	0.995	6020
80-BH07-1	3/21/2012	0	2	Cobalt	7440-48-4	mg/kg		2.85		2.49	1.24	6020
80-BH07-1	3/21/2012	0	2	Copper	7440-50-8	mg/kg	3129	3.32		2.99	1.49	6020
80-BH07-1	3/21/2012	0	2	Lead (Pb)	7439-92-1	mg/kg	400	6.10		0.995	0.498	6020
80-BH07-1	3/21/2012	0	2	Manganese	7439-96-5	mg/kg	1865	161		0.995	0.498	6020
80-BH07-1	3/21/2012	0	2	Nickel	7440-02-0	mg/kg	1560	2.30	J	3.98	1.99	6020
80-BH07-1	3/21/2012	0	2	Selenium	7782-49-2	mg/kg	391	1.00	U	1.00	0.498	6020
80-BH07-1	3/21/2012	0	2	Silver	7440-22-4	mg/kg	391	3.07	U	3.07	1.53	6020
80-BH07-1	3/21/2012	0	2	Thallium	7440-28-0	mg/kg	0.782	0.199	U	0.199	0.0995	6020
80-BH07-1	3/21/2012	0	2	Vanadium	7440-62-2	mg/kg	391	5.20		2.49	1.24	6020
80-BH07-1	3/21/2012	0	2	Mercury	7439-97-6	mg/kg	15.6	0.0990	U	0.0990	0.00990	7471A
80-BH07-1	3/21/2012	0	2	Percent Solids	10-02-6	%		97.9		1.00	1.00	D2216-90
80-BH07-2	3/21/2012	5	6	Aluminum	7429-90-5	mg/kg	78002	5660		14.7	7.36	6010B

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH07-2	3/21/2012	5	6	Antimony	7440-36-0	mg/kg	31.3	0.736	U	0.736	0.368	6010B
80-BH07-2	3/21/2012	5	6	Beryllium	7440-41-7	mg/kg	156	0.0379	J	0.0736	0.0368	6010B
80-BH07-2	3/21/2012	5	6	Calcium	7440-70-2	mg/kg		4180		7.36	3.68	6010B
80-BH07-2	3/21/2012	5	6	Iron (Ferrous)	7439-89-6	mg/kg	54750	13400		2.21	1.10	6010B
80-BH07-2	3/21/2012	5	6	Magnesium	7439-95-4	mg/kg		2750		18.4	9.19	6010B
80-BH07-2	3/21/2012	5	6	Potassium	7440-09-7	mg/kg		1750		36.8	18.4	6010B
80-BH07-2	3/21/2012	5	6	Sodium	7440-23-5	mg/kg		58.0		18.4	9.19	6010B
80-BH07-2	3/21/2012	5	6	Zinc	7440-66-6	mg/kg	23464	26.0		0.736	0.368	6010B
80-BH07-2	3/21/2012	5	6	Arsenic	7440-38-2	mg/kg	3.90	1.48		1.47	0.733	6020
80-BH07-2	3/21/2012	5	6	Barium	7440-39-3	mg/kg	15558	70.4		1.47	0.733	6020
80-BH07-2	3/21/2012	5	6	Cadmium	7440-43-9	mg/kg	70.3	0.489	U	0.489	0.244	6020
80-BH07-2	3/21/2012	5	6	Chromium	7440-47-3	mg/kg	117321	2.57		1.96	0.978	6020
80-BH07-2	3/21/2012	5	6	Cobalt	7440-48-4	mg/kg		4.93		2.44	1.22	6020
80-BH07-2	3/21/2012	5	6	Copper	7440-50-8	mg/kg	3129	5.90		2.93	1.47	6020
80-BH07-2	3/21/2012	5	6	Lead (Pb)	7439-92-1	mg/kg	400	8.68		0.978	0.489	6020
80-BH07-2	3/21/2012	5	6	Manganese	7439-96-5	mg/kg	1865	217		9.78	4.89	6020

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH07-2	3/21/2012	5	6	Nickel	7440-02-0	mg/kg	1560	4.61		3.91	1.96	6020
80-BH07-2	3/21/2012	5	6	Selenium	7782-49-2	mg/kg	391	0.978	U	0.978	0.489	6020
80-BH07-2	3/21/2012	5	6	Silver	7440-22-4	mg/kg	391	2.94	U	2.94	1.47	6020
80-BH07-2	3/21/2012	5	6	Thallium	7440-28-0	mg/kg	0.782	0.131	J	0.196	0.0978	6020
80-BH07-2	3/21/2012	5	6	Vanadium	7440-62-2	mg/kg	391	13.1		2.44	1.22	6020
80-BH07-2	3/21/2012	5	6	Mercury	7439-97-6	mg/kg	15.6	0.0975	U	0.0975	0.00975	7471A
80-BH07-2	3/21/2012	5	6	Percent Solids	10-02-6	%		97.9		1.00	1.00	D2216-90
80-BH07-3	3/21/2012	9	10	Aluminum	7429-90-5	mg/kg	78002	6510		15.3	7.63	6010B
80-BH07-3	3/21/2012	9	10	Antimony	7440-36-0	mg/kg	31.3	0.763	U	0.763	0.381	6010B
80-BH07-3	3/21/2012	9	10	Beryllium	7440-41-7	mg/kg	156	0.0763	U	0.0763	0.0381	6010B
80-BH07-3	3/21/2012	9	10	Calcium	7440-70-2	mg/kg		5450		7.63	3.81	6010B
80-BH07-3	3/21/2012	9	10	Iron (Ferrous)	7439-89-6	mg/kg	54750	13000		2.29	1.14	6010B
80-BH07-3	3/21/2012	9	10	Magnesium	7439-95-4	mg/kg		3240		19.1	9.53	6010B
80-BH07-3	3/21/2012	9	10	Potassium	7440-09-7	mg/kg		1200		38.1	19.1	6010B
80-BH07-3	3/21/2012	9	10	Sodium	7440-23-5	mg/kg		137		19.1	9.53	6010B
80-BH07-3	3/21/2012	9	10	Zinc	7440-66-6	mg/kg	23464	29.7		0.763	0.381	6010B

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH07-3	3/21/2012	9	10	Arsenic	7440-38-2	mg/kg	3.90	1.55		1.49	0.746	6020
80-BH07-3	3/21/2012	9	10	Barium	7440-39-3	mg/kg	15558	114		1.49	0.746	6020
80-BH07-3	3/21/2012	9	10	Cadmium	7440-43-9	mg/kg	70.3	0.497	U	0.497	0.249	6020
80-BH07-3	3/21/2012	9	10	Chromium	7440-47-3	mg/kg	117321	3.77		1.99	0.995	6020
80-BH07-3	3/21/2012	9	10	Cobalt	7440-48-4	mg/kg		7.86		2.49	1.24	6020
80-BH07-3	3/21/2012	9	10	Copper	7440-50-8	mg/kg	3129	9.92		2.98	1.49	6020
80-BH07-3	3/21/2012	9	10	Lead (Pb)	7439-92-1	mg/kg	400	12.5		0.995	0.497	6020
80-BH07-3	3/21/2012	9	10	Manganese	7439-96-5	mg/kg	1865	318		9.95	4.97	6020
80-BH07-3	3/21/2012	9	10	Nickel	7440-02-0	mg/kg	1560	7.14		3.98	1.99	6020
80-BH07-3	3/21/2012	9	10	Selenium	7782-49-2	mg/kg	391	0.995	U	0.995	0.497	6020
80-BH07-3	3/21/2012	9	10	Silver	7440-22-4	mg/kg	391	3.05	U	3.05	1.53	6020
80-BH07-3	3/21/2012	9	10	Thallium	7440-28-0	mg/kg	0.782	0.162	J	0.199	0.0995	6020
80-BH07-3	3/21/2012	9	10	Vanadium	7440-62-2	mg/kg	391	17.7		2.49	1.24	6020
80-BH07-3	3/21/2012	9	10	Mercury	7439-97-6	mg/kg	15.6	0.0110	J	0.102	0.0102	7471A
80-BH07-3	3/21/2012	9	10	Percent Solids	10-02-6	%		96.9		1.00	1.00	D2216-90
80-BH08-1	3/21/2012	0	2	Aluminum	7429-90-5	mg/kg	78002	3540		14.8	7.39	6010B

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH08-1	3/21/2012	0	2	Antimony	7440-36-0	mg/kg	31.3	0.739	U	0.739	0.369	6010B
80-BH08-1	3/21/2012	0	2	Beryllium	7440-41-7	mg/kg	156	0.364		0.148	0.0739	6010B
80-BH08-1	3/21/2012	0	2	Calcium	7440-70-2	mg/kg		2230		7.39	3.69	6010B
80-BH08-1	3/21/2012	0	2	Iron (Ferrous)	7439-89-6	mg/kg	54750	13400		2.22	1.11	6010B
80-BH08-1	3/21/2012	0	2	Magnesium	7439-95-4	mg/kg		1700		18.5	9.24	6010B
80-BH08-1	3/21/2012	0	2	Potassium	7440-09-7	mg/kg		1500		36.9	18.5	6010B
80-BH08-1	3/21/2012	0	2	Sodium	7440-23-5	mg/kg		26.9		18.5	9.24	6010B
80-BH08-1	3/21/2012	0	2	Zinc	7440-66-6	mg/kg	23464	17.8		0.739	0.369	6010B
80-BH08-1	3/21/2012	0	2	Arsenic	7440-38-2	mg/kg	3.90	1.11	J	1.49	0.745	6020
80-BH08-1	3/21/2012	0	2	Barium	7440-39-3	mg/kg	15558	39.2		1.49	0.745	6020
80-BH08-1	3/21/2012	0	2	Cadmium	7440-43-9	mg/kg	70.3	0.496	U	0.496	0.248	6020
80-BH08-1	3/21/2012	0	2	Chromium	7440-47-3	mg/kg	117321	1.85	J	1.99	0.993	6020
80-BH08-1	3/21/2012	0	2	Cobalt	7440-48-4	mg/kg		3.25		2.48	1.24	6020
80-BH08-1	3/21/2012	0	2	Copper	7440-50-8	mg/kg	3129	4.74		2.98	1.49	6020
80-BH08-1	3/21/2012	0	2	Lead (Pb)	7439-92-1	mg/kg	400	7.31		0.993	0.496	6020
80-BH08-1	3/21/2012	0	2	Manganese	7439-96-5	mg/kg	1865	160		0.993	0.496	6020

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH08-1	3/21/2012	0	2	Nickel	7440-02-0	mg/kg	1560	2.95	J	3.97	1.99	6020
80-BH08-1	3/21/2012	0	2	Selenium	7782-49-2	mg/kg	391	0.993	U	0.993	0.496	6020
80-BH08-1	3/21/2012	0	2	Silver	7440-22-4	mg/kg	391	2.96	U	2.96	1.48	6020
80-BH08-1	3/21/2012	0	2	Thallium	7440-28-0	mg/kg	0.782	0.199	U	0.199	0.0993	6020
80-BH08-1	3/21/2012	0	2	Vanadium	7440-62-2	mg/kg	391	8.04		2.48	1.24	6020
80-BH08-1	3/21/2012	0	2	Mercury	7439-97-6	mg/kg	15.6	0.100	U	0.100	0.0100	7471A
80-BH08-1	3/21/2012	0	2	Percent Solids	10-02-6	%		98.4		1.00	1.00	D2216-90
80-BH08-2	3/21/2012	5	6	Aluminum	7429-90-5	mg/kg	78002	4740		14.4	7.19	6010B
80-BH08-2	3/21/2012	5	6	Antimony	7440-36-0	mg/kg	31.3	0.719	U	0.719	0.360	6010B
80-BH08-2	3/21/2012	5	6	Beryllium	7440-41-7	mg/kg	156	0.0719	Un	0.0719	0.0360	6010B
80-BH08-2	3/21/2012	5	6	Calcium	7440-70-2	mg/kg		2780		7.19	3.60	6010B
80-BH08-2	3/21/2012	5	6	Iron (Ferrous)	7439-89-6	mg/kg	54750	12200		2.16	1.08	6010B
80-BH08-2	3/21/2012	5	6	Magnesium	7439-95-4	mg/kg		2150		18.0	8.99	6010B
80-BH08-2	3/21/2012	5	6	Potassium	7440-09-7	mg/kg		1150		36.0	18.0	6010B
80-BH08-2	3/21/2012	5	6	Sodium	7440-23-5	mg/kg		49.3		18.0	8.99	6010B
80-BH08-2	3/21/2012	5	6	Zinc	7440-66-6	mg/kg	23464	24.3		0.719	0.360	6010B

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH08-2	3/21/2012	5	6	Arsenic	7440-38-2	mg/kg	3.90	0.830	J	1.49	0.746	6020
80-BH08-2	3/21/2012	5	6	Barium	7440-39-3	mg/kg	15558	59.0		1.49	0.746	6020
80-BH08-2	3/21/2012	5	6	Cadmium	7440-43-9	mg/kg	70.3	0.497	U	0.497	0.249	6020
80-BH08-2	3/21/2012	5	6	Chromium	7440-47-3	mg/kg	117321	2.21		1.99	0.994	6020
80-BH08-2	3/21/2012	5	6	Cobalt	7440-48-4	mg/kg		4.42		2.49	1.24	6020
80-BH08-2	3/21/2012	5	6	Copper	7440-50-8	mg/kg	3129	5.04		2.98	1.49	6020
80-BH08-2	3/21/2012	5	6	Lead (Pb)	7439-92-1	mg/kg	400	7.93		0.994	0.497	6020
80-BH08-2	3/21/2012	5	6	Manganese	7439-96-5	mg/kg	1865	234		9.94	4.97	6020
80-BH08-2	3/21/2012	5	6	Nickel	7440-02-0	mg/kg	1560	3.66	J	3.98	1.99	6020
80-BH08-2	3/21/2012	5	6	Selenium	7782-49-2	mg/kg	391	0.994	U	0.994	0.497	6020
80-BH08-2	3/21/2012	5	6	Silver	7440-22-4	mg/kg	391	2.88	Un	2.88	1.44	6020
80-BH08-2	3/21/2012	5	6	Thallium	7440-28-0	mg/kg	0.782	0.199	U	0.199	0.0994	6020
80-BH08-2	3/21/2012	5	6	Vanadium	7440-62-2	mg/kg	391	9.72		2.49	1.24	6020
80-BH08-2	3/21/2012	5	6	Mercury	7439-97-6	mg/kg	15.6	0.0970	U	0.0970	0.00970	7471A
80-BH08-2	3/21/2012	5	6	Percent Solids	10-02-6	%		97.9		1.00	1.00	D2216-90
80-BH08-3	3/21/2012	9	10	Aluminum	7429-90-5	mg/kg	78002	6260		15.8	7.88	6010B

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH08-3	3/21/2012	9	10	Antimony	7440-36-0	mg/kg	31.3	0.788	U	0.788	0.394	6010B
80-BH08-3	3/21/2012	9	10	Beryllium	7440-41-7	mg/kg	156	0.360		0.0788	0.0394	6010B
80-BH08-3	3/21/2012	9	10	Calcium	7440-70-2	mg/kg		2350		7.88	3.94	6010B
80-BH08-3	3/21/2012	9	10	Iron (Ferrous)	7439-89-6	mg/kg	54750	14400		2.36	1.18	6010B
80-BH08-3	3/21/2012	9	10	Magnesium	7439-95-4	mg/kg		1920		19.7	9.85	6010B
80-BH08-3	3/21/2012	9	10	Potassium	7440-09-7	mg/kg		1290		39.4	19.7	6010B
80-BH08-3	3/21/2012	9	10	Sodium	7440-23-5	mg/kg		67.8		19.7	9.85	6010B
80-BH08-3	3/21/2012	9	10	Zinc	7440-66-6	mg/kg	23464	21.0		0.788	0.394	6010B
80-BH08-3	3/21/2012	9	10	Arsenic	7440-38-2	mg/kg	3.90	1.75		1.46	0.728	6020
80-BH08-3	3/21/2012	9	10	Barium	7440-39-3	mg/kg	15558	59.5		1.46	0.728	6020
80-BH08-3	3/21/2012	9	10	Cadmium	7440-43-9	mg/kg	70.3	0.485	U	0.485	0.243	6020
80-BH08-3	3/21/2012	9	10	Chromium	7440-47-3	mg/kg	117321	4.51		1.94	0.970	6020
80-BH08-3	3/21/2012	9	10	Cobalt	7440-48-4	mg/kg		4.56		2.43	1.21	6020
80-BH08-3	3/21/2012	9	10	Copper	7440-50-8	mg/kg	3129	7.21		2.91	1.46	6020
80-BH08-3	3/21/2012	9	10	Lead (Pb)	7439-92-1	mg/kg	400	9.24		0.970	0.485	6020
80-BH08-3	3/21/2012	9	10	Manganese	7439-96-5	mg/kg	1865	174		9.70	4.85	6020

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH08-3	3/21/2012	9	10	Nickel	7440-02-0	mg/kg	1560	5.81		3.88	1.94	6020
80-BH08-3	3/21/2012	9	10	Selenium	7782-49-2	mg/kg	391	0.970	U	0.970	0.485	6020
80-BH08-3	3/21/2012	9	10	Silver	7440-22-4	mg/kg	391	3.15	U	3.15	1.58	6020
80-BH08-3	3/21/2012	9	10	Thallium	7440-28-0	mg/kg	0.782	0.135	J	0.194	0.0970	6020
80-BH08-3	3/21/2012	9	10	Vanadium	7440-62-2	mg/kg	391	13.0		2.43	1.21	6020
80-BH08-3	3/21/2012	9	10	Mercury	7439-97-6	mg/kg	15.6	0.0106	J	0.0982	0.00982	7471A
80-BH08-3	3/21/2012	9	10	Percent Solids	10-02-6	%		96.9		1.00	1.00	D2216-90
80-BH09-1	3/21/2012	0	2	Aluminum	7429-90-5	mg/kg	78002	6350		15.1	7.54	6010B
80-BH09-1	3/21/2012	0	2	Antimony	7440-36-0	mg/kg	31.3	0.754	U	0.754	0.377	6010B
80-BH09-1	3/21/2012	0	2	Beryllium	7440-41-7	mg/kg	156	0.0754	U	0.0754	0.0377	6010B
80-BH09-1	3/21/2012	0	2	Calcium	7440-70-2	mg/kg		2280		7.54	3.77	6010B
80-BH09-1	3/21/2012	0	2	Iron (Ferrous)	7439-89-6	mg/kg	54750	15400		2.26	1.13	6010B
80-BH09-1	3/21/2012	0	2	Magnesium	7439-95-4	mg/kg		2210		18.9	9.43	6010B
80-BH09-1	3/21/2012	0	2	Potassium	7440-09-7	mg/kg		2120		37.7	18.9	6010B
80-BH09-1	3/21/2012	0	2	Sodium	7440-23-5	mg/kg		34.0		18.9	9.43	6010B
80-BH09-1	3/21/2012	0	2	Zinc	7440-66-6	mg/kg	23464	23.1		0.754	0.377	6010B

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH09-1	3/21/2012	0	2	Arsenic	7440-38-2	mg/kg	3.90	1.68		1.46	0.730	6020
80-BH09-1	3/21/2012	0	2	Barium	7440-39-3	mg/kg	15558	50.4		1.46	0.730	6020
80-BH09-1	3/21/2012	0	2	Cadmium	7440-43-9	mg/kg	70.3	0.487	U	0.487	0.243	6020
80-BH09-1	3/21/2012	0	2	Chromium	7440-47-3	mg/kg	117321	3.32		1.95	0.973	6020
80-BH09-1	3/21/2012	0	2	Cobalt	7440-48-4	mg/kg		4.22		2.43	1.22	6020
80-BH09-1	3/21/2012	0	2	Copper	7440-50-8	mg/kg	3129	6.14		2.92	1.46	6020
80-BH09-1	3/21/2012	0	2	Lead (Pb)	7439-92-1	mg/kg	400	8.05		0.973	0.487	6020
80-BH09-1	3/21/2012	0	2	Manganese	7439-96-5	mg/kg	1865	184		9.73	4.87	6020
80-BH09-1	3/21/2012	0	2	Nickel	7440-02-0	mg/kg	1560	4.57		3.89	1.95	6020
80-BH09-1	3/21/2012	0	2	Selenium	7782-49-2	mg/kg	391	0.973	U	0.973	0.487	6020
80-BH09-1	3/21/2012	0	2	Silver	7440-22-4	mg/kg	391	3.02	U	3.02	1.51	6020
80-BH09-1	3/21/2012	0	2	Thallium	7440-28-0	mg/kg	0.782	0.103	J	0.195	0.0973	6020
80-BH09-1	3/21/2012	0	2	Vanadium	7440-62-2	mg/kg	391	12.1		2.43	1.22	6020
80-BH09-1	3/21/2012	0	2	Mercury	7439-97-6	mg/kg	15.6	0.0986	U	0.0986	0.00986	7471A
80-BH09-1	3/21/2012	0	2	Percent Solids	10-02-6	%		97.5		1.00	1.00	D2216-90
80-BH09-2	3/21/2012	5	6	Aluminum	7429-90-5	mg/kg	78002	3160		14.2	7.08	6010B

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH09-2	3/21/2012	5	6	Antimony	7440-36-0	mg/kg	31.3	0.708	U	0.708	0.354	6010B
80-BH09-2	3/21/2012	5	6	Beryllium	7440-41-7	mg/kg	156	0.0736		0.0708	0.0354	6010B
80-BH09-2	3/21/2012	5	6	Calcium	7440-70-2	mg/kg		6940		7.08	3.54	6010B
80-BH09-2	3/21/2012	5	6	Iron (Ferrous)	7439-89-6	mg/kg	54750	9800		2.12	1.06	6010B
80-BH09-2	3/21/2012	5	6	Magnesium	7439-95-4	mg/kg		2350		17.7	8.85	6010B
80-BH09-2	3/21/2012	5	6	Potassium	7440-09-7	mg/kg		819		35.4	17.7	6010B
80-BH09-2	3/21/2012	5	6	Sodium	7440-23-5	mg/kg		90.0		17.7	8.85	6010B
80-BH09-2	3/21/2012	5	6	Zinc	7440-66-6	mg/kg	23464	18.8		0.708	0.354	6010B
80-BH09-2	3/21/2012	5	6	Arsenic	7440-38-2	mg/kg	3.90	1.15	J	1.46	0.728	6020
80-BH09-2	3/21/2012	5	6	Barium	7440-39-3	mg/kg	15558	55.5		1.46	0.728	6020
80-BH09-2	3/21/2012	5	6	Cadmium	7440-43-9	mg/kg	70.3	0.485	U	0.485	0.243	6020
80-BH09-2	3/21/2012	5	6	Chromium	7440-47-3	mg/kg	117321	2.70		1.94	0.971	6020
80-BH09-2	3/21/2012	5	6	Cobalt	7440-48-4	mg/kg		4.27		2.43	1.21	6020
80-BH09-2	3/21/2012	5	6	Copper	7440-50-8	mg/kg	3129	5.08		2.91	1.46	6020
80-BH09-2	3/21/2012	5	6	Lead (Pb)	7439-92-1	mg/kg	400	7.19		0.971	0.485	6020
80-BH09-2	3/21/2012	5	6	Manganese	7439-96-5	mg/kg	1865	180		9.71	4.85	6020

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH09-2	3/21/2012	5	6	Nickel	7440-02-0	mg/kg	1560	4.41		3.88	1.94	6020
80-BH09-2	3/21/2012	5	6	Selenium	7782-49-2	mg/kg	391	0.971	U	0.971	0.485	6020
80-BH09-2	3/21/2012	5	6	Silver	7440-22-4	mg/kg	391	2.83	U	2.83	1.42	6020
80-BH09-2	3/21/2012	5	6	Thallium	7440-28-0	mg/kg	0.782	0.103	J	0.194	0.0971	6020
80-BH09-2	3/21/2012	5	6	Vanadium	7440-62-2	mg/kg	391	12.7		2.43	1.21	6020
80-BH09-2	3/21/2012	5	6	Mercury	7439-97-6	mg/kg	15.6	0.0981	U	0.0981	0.00981	7471A
80-BH09-2	3/21/2012	5	6	Percent Solids	10-02-6	%		98.3		1.00	1.00	D2216-90
80-BH09-3	3/21/2012	9	10	Aluminum	7429-90-5	mg/kg	78002	1610		14.9	7.43	6010B
80-BH09-3	3/21/2012	9	10	Antimony	7440-36-0	mg/kg	31.3	0.743	U	0.743	0.372	6010B
80-BH09-3	3/21/2012	9	10	Beryllium	7440-41-7	mg/kg	156	0.185		0.149	0.0743	6010B
80-BH09-3	3/21/2012	9	10	Calcium	7440-70-2	mg/kg		2890		7.43	3.72	6010B
80-BH09-3	3/21/2012	9	10	Iron (Ferrous)	7439-89-6	mg/kg	54750	16400		2.23	1.11	6010B
80-BH09-3	3/21/2012	9	10	Magnesium	7439-95-4	mg/kg		893		18.6	9.29	6010B
80-BH09-3	3/21/2012	9	10	Potassium	7440-09-7	mg/kg		509		37.2	18.6	6010B
80-BH09-3	3/21/2012	9	10	Sodium	7440-23-5	mg/kg		54.4		18.6	9.29	6010B
80-BH09-3	3/21/2012	9	10	Zinc	7440-66-6	mg/kg	23464	11.3		0.743	0.372	6010B

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH09-3	3/21/2012	9	10	Arsenic	7440-38-2	mg/kg	3.90	1.48	U	1.48	0.740	6020
80-BH09-3	3/21/2012	9	10	Barium	7440-39-3	mg/kg	15558	14.4		1.48	0.740	6020
80-BH09-3	3/21/2012	9	10	Cadmium	7440-43-9	mg/kg	70.3	0.493	U	0.493	0.247	6020
80-BH09-3	3/21/2012	9	10	Chromium	7440-47-3	mg/kg	117321	1.97	U	1.97	0.986	6020
80-BH09-3	3/21/2012	9	10	Cobalt	7440-48-4	mg/kg		1.32	J	2.47	1.23	6020
80-BH09-3	3/21/2012	9	10	Copper	7440-50-8	mg/kg	3129	2.10	J	2.96	1.48	6020
80-BH09-3	3/21/2012	9	10	Lead (Pb)	7439-92-1	mg/kg	400	3.04		0.986	0.493	6020
80-BH09-3	3/21/2012	9	10	Manganese	7439-96-5	mg/kg	1865	64.9		0.986	0.493	6020
80-BH09-3	3/21/2012	9	10	Nickel	7440-02-0	mg/kg	1560	3.94	U	3.94	1.97	6020
80-BH09-3	3/21/2012	9	10	Selenium	7782-49-2	mg/kg	391	0.986	U	0.986	0.493	6020
80-BH09-3	3/21/2012	9	10	Silver	7440-22-4	mg/kg	391	2.97	U	2.97	1.49	6020
80-BH09-3	3/21/2012	9	10	Thallium	7440-28-0	mg/kg	0.782	0.197	U	0.197	0.0986	6020
80-BH09-3	3/21/2012	9	10	Vanadium	7440-62-2	mg/kg	391	4.78		2.47	1.23	6020
80-BH09-3	3/21/2012	9	10	Mercury	7439-97-6	mg/kg	15.6	0.0971	U	0.0971	0.00971	7471A
80-BH09-3	3/21/2012	9	10	Percent Solids	10-02-6	%		99.2		1.00	1.00	D2216-90
80-BH10-1	3/21/2012	0	2	Aluminum	7429-90-5	mg/kg	78002	4580		14.4	7.21	6010B

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH10-1	3/21/2012	0	2	Antimony	7440-36-0	mg/kg	31.3	0.721	U	0.721	0.361	6010B
80-BH10-1	3/21/2012	0	2	Beryllium	7440-41-7	mg/kg	156	0.467		0.144	0.0721	6010B
80-BH10-1	3/21/2012	0	2	Calcium	7440-70-2	mg/kg		2260		7.21	3.61	6010B
80-BH10-1	3/21/2012	0	2	Iron (Ferrous)	7439-89-6	mg/kg	54750	11600		2.16	1.08	6010B
80-BH10-1	3/21/2012	0	2	Magnesium	7439-95-4	mg/kg		2160		18.0	9.01	6010B
80-BH10-1	3/21/2012	0	2	Potassium	7440-09-7	mg/kg		1880		36.1	18	6010B
80-BH10-1	3/21/2012	0	2	Sodium	7440-23-5	mg/kg		31.1		18.0	9.01	6010B
80-BH10-1	3/21/2012	0	2	Zinc	7440-66-6	mg/kg	23464	20.9		0.721	0.361	6010B
80-BH10-1	3/21/2012	0	2	Arsenic	7440-38-2	mg/kg	3.90	1.25	J	1.42	0.708	6020
80-BH10-1	3/21/2012	0	2	Barium	7440-39-3	mg/kg	15558	48.1		1.42	0.708	6020
80-BH10-1	3/21/2012	0	2	Cadmium	7440-43-9	mg/kg	70.3	0.472	U	0.472	0.236	6020
80-BH10-1	3/21/2012	0	2	Chromium	7440-47-3	mg/kg	117321	2.89		1.89	0.944	6020
80-BH10-1	3/21/2012	0	2	Cobalt	7440-48-4	mg/kg		3.99		2.36	1.18	6020
80-BH10-1	3/21/2012	0	2	Copper	7440-50-8	mg/kg	3129	6.08		2.83	1.42	6020
80-BH10-1	3/21/2012	0	2	Lead (Pb)	7439-92-1	mg/kg	400	8.03		0.944	0.472	6020
80-BH10-1	3/21/2012	0	2	Manganese	7439-96-5	mg/kg	1865	177		9.44	4.72	6020

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH10-1	3/21/2012	0	2	Nickel	7440-02-0	mg/kg	1560	4.07		3.78	1.89	6020
80-BH10-1	3/21/2012	0	2	Selenium	7782-49-2	mg/kg	391	0.944	U	0.944	0.472	6020
80-BH10-1	3/21/2012	0	2	Silver	7440-22-4	mg/kg	391	2.88	U	2.88	1.44	6020
80-BH10-1	3/21/2012	0	2	Thallium	7440-28-0	mg/kg	0.782	0.103	J	0.189	0.0944	6020
80-BH10-1	3/21/2012	0	2	Vanadium	7440-62-2	mg/kg	391	11.6		2.36	1.18	6020
80-BH10-1	3/21/2012	0	2	Mercury	7439-97-6	mg/kg	15.6	0.101	U	0.101	0.0101	7471A
80-BH10-1	3/21/2012	0	2	Percent Solids	10-02-6	%		98.4		1.00	1.00	D2216-90
80-BH10-2	3/21/2012	5	6	Aluminum	7429-90-5	mg/kg	78002	6870		14.1	7.04	6010B
80-BH10-2	3/21/2012	5	6	Antimony	7440-36-0	mg/kg	31.3	0.704	U	0.704	0.352	6010B
80-BH10-2	3/21/2012	5	6	Beryllium	7440-41-7	mg/kg	156	0.114		0.0704	0.0352	6010B
80-BH10-2	3/21/2012	5	6	Calcium	7440-70-2	mg/kg		3830		7.04	3.52	6010B
80-BH10-2	3/21/2012	5	6	Iron (Ferrous)	7439-89-6	mg/kg	54750	15800		2.11	1.06	6010B
80-BH10-2	3/21/2012	5	6	Magnesium	7439-95-4	mg/kg		2810		17.6	8.81	6010B
80-BH10-2	3/21/2012	5	6	Potassium	7440-09-7	mg/kg		1630		35.2	17.6	6010B
80-BH10-2	3/21/2012	5	6	Sodium	7440-23-5	mg/kg		74.2		17.6	8.81	6010B
80-BH10-2	3/21/2012	5	6	Zinc	7440-66-6	mg/kg	23464	27.3		0.704	0.352	6010B

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH10-2	3/21/2012	5	6	Arsenic	7440-38-2	mg/kg	3.90	2.34		1.46	0.731	6020
80-BH10-2	3/21/2012	5	6	Barium	7440-39-3	mg/kg	15558	84.4		1.46	0.731	6020
80-BH10-2	3/21/2012	5	6	Cadmium	7440-43-9	mg/kg	70.3	0.487	U	0.487	0.244	6020
80-BH10-2	3/21/2012	5	6	Chromium	7440-47-3	mg/kg	117321	4.33		1.95	0.974	6020
80-BH10-2	3/21/2012	5	6	Cobalt	7440-48-4	mg/kg		6.47		2.44	1.22	6020
80-BH10-2	3/21/2012	5	6	Copper	7440-50-8	mg/kg	3129	7.63		2.92	1.46	6020
80-BH10-2	3/21/2012	5	6	Lead (Pb)	7439-92-1	mg/kg	400	10.7		0.974	0.487	6020
80-BH10-2	3/21/2012	5	6	Manganese	7439-96-5	mg/kg	1865	323		9.74	4.87	6020
80-BH10-2	3/21/2012	5	6	Nickel	7440-02-0	mg/kg	1560	6.73		3.90	1.95	6020
80-BH10-2	3/21/2012	5	6	Selenium	7782-49-2	mg/kg	391	0.974	U	0.974	0.487	6020
80-BH10-2	3/21/2012	5	6	Silver	7440-22-4	mg/kg	391	2.82	U	2.82	1.41	6020
80-BH10-2	3/21/2012	5	6	Thallium	7440-28-0	mg/kg	0.782	0.152	J	0.195	0.0974	6020
80-BH10-2	3/21/2012	5	6	Vanadium	7440-62-2	mg/kg	391	19.9		2.44	1.22	6020
80-BH10-2	3/21/2012	5	6	Mercury	7439-97-6	mg/kg	15.6	0.0974	U	0.0974	0.00974	7471A
80-BH10-2	3/21/2012	5	6	Percent Solids	10-02-6	%		97.4		1.00	1.00	D2216-90
80-BH10-3	3/21/2012	9	10	Aluminum	7429-90-5	mg/kg	78002	2910		14.7	7.36	6010B

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH10-3	3/21/2012	9	10	Antimony	7440-36-0	mg/kg	31.3	0.736	U	0.736	0.368	6010B
80-BH10-3	3/21/2012	9	10	Beryllium	7440-41-7	mg/kg	156	0.314		0.147	0.0736	6010B
80-BH10-3	3/21/2012	9	10	Calcium	7440-70-2	mg/kg		3970		7.36	3.68	6010B
80-BH10-3	3/21/2012	9	10	Iron (Ferrous)	7439-89-6	mg/kg	54750	9750		2.21	1.10	6010B
80-BH10-3	3/21/2012	9	10	Magnesium	7439-95-4	mg/kg		1560		18.4	9.20	6010B
80-BH10-3	3/21/2012	9	10	Potassium	7440-09-7	mg/kg		761		36.8	18.4	6010B
80-BH10-3	3/21/2012	9	10	Sodium	7440-23-5	mg/kg		83.7		18.4	9.20	6010B
80-BH10-3	3/21/2012	9	10	Zinc	7440-66-6	mg/kg	23464	15.8		0.736	0.368	6010B
80-BH10-3	3/21/2012	9	10	Arsenic	7440-38-2	mg/kg	3.90	1.41	U	1.41	0.707	6020
80-BH10-3	3/21/2012	9	10	Barium	7440-39-3	mg/kg	15558	29.0		1.41	0.707	6020
80-BH10-3	3/21/2012	9	10	Cadmium	7440-43-9	mg/kg	70.3	0.472	U	0.472	0.236	6020
80-BH10-3	3/21/2012	9	10	Chromium	7440-47-3	mg/kg	117321	1.63	J	1.89	0.943	6020
80-BH10-3	3/21/2012	9	10	Cobalt	7440-48-4	mg/kg		2.91		2.36	1.18	6020
80-BH10-3	3/21/2012	9	10	Copper	7440-50-8	mg/kg	3129	3.12		2.83	1.41	6020
80-BH10-3	3/21/2012	9	10	Lead (Pb)	7439-92-1	mg/kg	400	5.09		0.943	0.472	6020
80-BH10-3	3/21/2012	9	10	Manganese	7439-96-5	mg/kg	1865	141		0.943	0.472	6020

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH10-3	3/21/2012	9	10	Nickel	7440-02-0	mg/kg	1560	2.61	J	3.77	1.89	6020
80-BH10-3	3/21/2012	9	10	Selenium	7782-49-2	mg/kg	391	0.943	U	0.943	0.472	6020
80-BH10-3	3/21/2012	9	10	Silver	7440-22-4	mg/kg	391	2.95	U	2.95	1.47	6020
80-BH10-3	3/21/2012	9	10	Thallium	7440-28-0	mg/kg	0.782	0.189	U	0.189	0.0943	6020
80-BH10-3	3/21/2012	9	10	Vanadium	7440-62-2	mg/kg	391	5.90		2.36	1.18	6020
80-BH10-3	3/21/2012	9	10	Mercury	7439-97-6	mg/kg	15.6	0.0988	U	0.0988	0.00988	7471A
80-BH10-3	3/21/2012	9	10	Percent Solids	10-02-6	%		98.9		1.00	1.00	D2216-90
80-BH11-1	3/21/2012	0	2	Aluminum	7429-90-5	mg/kg	78002	3900		14.3	7.13	6010B
80-BH11-1	3/21/2012	0	2	Antimony	7440-36-0	mg/kg	31.3	0.713	U	0.713	0.356	6010B
80-BH11-1	3/21/2012	0	2	Beryllium	7440-41-7	mg/kg	156	0.382		0.143	0.0713	6010B
80-BH11-1	3/21/2012	0	2	Calcium	7440-70-2	mg/kg		1970		7.13	3.56	6010B
80-BH11-1	3/21/2012	0	2	Iron (Ferrous)	7439-89-6	mg/kg	54750	10600		2.14	1.07	6010B
80-BH11-1	3/21/2012	0	2	Magnesium	7439-95-4	mg/kg		1640		17.8	8.91	6010B
80-BH11-1	3/21/2012	0	2	Potassium	7440-09-7	mg/kg		1440		35.6	17.8	6010B
80-BH11-1	3/21/2012	0	2	Sodium	7440-23-5	mg/kg		28.2		17.8	8.91	6010B
80-BH11-1	3/21/2012	0	2	Zinc	7440-66-6	mg/kg	23464	16.9		0.713	0.356	6010B

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH11-1	3/21/2012	0	2	Arsenic	7440-38-2	mg/kg	3.90	1.21	J	1.45	0.724	6020
80-BH11-1	3/21/2012	0	2	Barium	7440-39-3	mg/kg	15558	39.4		1.45	0.724	6020
80-BH11-1	3/21/2012	0	2	Cadmium	7440-43-9	mg/kg	70.3	0.483	U	0.483	0.241	6020
80-BH11-1	3/21/2012	0	2	Chromium	7440-47-3	mg/kg	117321	2.21		1.93	0.966	6020
80-BH11-1	3/21/2012	0	2	Cobalt	7440-48-4	mg/kg		3.25		2.41	1.21	6020
80-BH11-1	3/21/2012	0	2	Copper	7440-50-8	mg/kg	3129	5.26		2.90	1.45	6020
80-BH11-1	3/21/2012	0	2	Lead (Pb)	7439-92-1	mg/kg	400	6.77		0.966	0.483	6020
80-BH11-1	3/21/2012	0	2	Manganese	7439-96-5	mg/kg	1865	165		0.966	0.483	6020
80-BH11-1	3/21/2012	0	2	Nickel	7440-02-0	mg/kg	1560	3.22	J	3.86	1.93	6020
80-BH11-1	3/21/2012	0	2	Selenium	7782-49-2	mg/kg	391	0.966	U	0.966	0.483	6020
80-BH11-1	3/21/2012	0	2	Silver	7440-22-4	mg/kg	391	2.85	U	2.85	1.43	6020
80-BH11-1	3/21/2012	0	2	Thallium	7440-28-0	mg/kg	0.782	0.168	J	0.193	0.0966	6020
80-BH11-1	3/21/2012	0	2	Vanadium	7440-62-2	mg/kg	391	8.72		2.41	1.21	6020
80-BH11-1	3/21/2012	0	2	Mercury	7439-97-6	mg/kg	15.6	0.0994	U	0.0994	0.00994	7471A
80-BH11-1	3/21/2012	0	2	Percent Solids	10-02-6	%		97.9		1.00	1.00	D2216-90
80-BH11-2	3/21/2012	5	6	Aluminum	7429-90-5	mg/kg	78002	6930		14.8	7.41	6010B

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH11-2	3/21/2012	5	6	Antimony	7440-36-0	mg/kg	31.3	0.741	U	0.741	0.370	6010B
80-BH11-2	3/21/2012	5	6	Beryllium	7440-41-7	mg/kg	156	0.121		0.0741	0.0370	6010B
80-BH11-2	3/21/2012	5	6	Calcium	7440-70-2	mg/kg		2920		7.41	3.70	6010B
80-BH11-2	3/21/2012	5	6	Iron (Ferrous)	7439-89-6	mg/kg	54750	15500		2.22	1.11	6010B
80-BH11-2	3/21/2012	5	6	Magnesium	7439-95-4	mg/kg		2820		18.5	9.26	6010B
80-BH11-2	3/21/2012	5	6	Potassium	7440-09-7	mg/kg		1900		37.0	18.5	6010B
80-BH11-2	3/21/2012	5	6	Sodium	7440-23-5	mg/kg		65.9		18.5	9.26	6010B
80-BH11-2	3/21/2012	5	6	Zinc	7440-66-6	mg/kg	23464	27.5		0.741	0.370	6010B
80-BH11-2	3/21/2012	5	6	Arsenic	7440-38-2	mg/kg	3.90	2.44		1.49	0.743	6020
80-BH11-2	3/21/2012	5	6	Barium	7440-39-3	mg/kg	15558	72.0		1.49	0.743	6020
80-BH11-2	3/21/2012	5	6	Cadmium	7440-43-9	mg/kg	70.3	0.496	U	0.496	0.248	6020
80-BH11-2	3/21/2012	5	6	Chromium	7440-47-3	mg/kg	117321	4.21		1.98	0.991	6020
80-BH11-2	3/21/2012	5	6	Cobalt	7440-48-4	mg/kg		6.10		2.48	1.24	6020
80-BH11-2	3/21/2012	5	6	Copper	7440-50-8	mg/kg	3129	7.01		2.97	1.49	6020
80-BH11-2	3/21/2012	5	6	Lead (Pb)	7439-92-1	mg/kg	400	10.5		0.991	0.496	6020
80-BH11-2	3/21/2012	5	6	Manganese	7439-96-5	mg/kg	1865	253		9.91	4.96	6020

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH11-2	3/21/2012	5	6	Nickel	7440-02-0	mg/kg	1560	6.42		3.97	1.98	6020
80-BH11-2	3/21/2012	5	6	Selenium	7782-49-2	mg/kg	391	0.991	U	0.991	0.496	6020
80-BH11-2	3/21/2012	5	6	Silver	7440-22-4	mg/kg	391	2.96	U	2.96	1.48	6020
80-BH11-2	3/21/2012	5	6	Thallium	7440-28-0	mg/kg	0.782	0.150	J	0.198	0.0991	6020
80-BH11-2	3/21/2012	5	6	Vanadium	7440-62-2	mg/kg	391	19.9		2.48	1.24	6020
80-BH11-2	3/21/2012	5	6	Mercury	7439-97-6	mg/kg	15.6	0.0997	U	0.0997	0.00997	7471A
80-BH11-2	3/21/2012	5	6	Percent Solids	10-02-6	%		97.2		1.00	1.00	D2216-90
80-BH11-3	3/21/2012	9	10	Aluminum	7429-90-5	mg/kg	78002	1660		14.2	7.09	6010B
80-BH11-3	3/21/2012	9	10	Antimony	7440-36-0	mg/kg	31.3	0.709	U	0.709	0.355	6010B
80-BH11-3	3/21/2012	9	10	Beryllium	7440-41-7	mg/kg	156	0.179		0.142	0.0709	6010B
80-BH11-3	3/21/2012	9	10	Calcium	7440-70-2	mg/kg		1520		7.09	3.55	6010B
80-BH11-3	3/21/2012	9	10	Iron (Ferrous)	7439-89-6	mg/kg	54750	7630		2.13	1.06	6010B
80-BH11-3	3/21/2012	9	10	Magnesium	7439-95-4	mg/kg		732		17.7	8.87	6010B
80-BH11-3	3/21/2012	9	10	Potassium	7440-09-7	mg/kg		572		35.5	17.7	6010B
80-BH11-3	3/21/2012	9	10	Sodium	7440-23-5	mg/kg		35.7		17.7	8.87	6010B
80-BH11-3	3/21/2012	9	10	Zinc	7440-66-6	mg/kg	23464	9.23		0.709	0.355	6010B

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH11-3	3/21/2012	9	10	Arsenic	7440-38-2	mg/kg	3.90	0.880	J	1.42	0.712	6020
80-BH11-3	3/21/2012	9	10	Barium	7440-39-3	mg/kg	15558	32.8		1.42	0.712	6020
80-BH11-3	3/21/2012	9	10	Cadmium	7440-43-9	mg/kg	70.3	0.474	U	0.474	0.237	6020
80-BH11-3	3/21/2012	9	10	Chromium	7440-47-3	mg/kg	117321	2.78		1.90	0.949	6020
80-BH11-3	3/21/2012	9	10	Cobalt	7440-48-4	mg/kg		2.57		2.37	1.19	6020
80-BH11-3	3/21/2012	9	10	Copper	7440-50-8	mg/kg	3129	3.45		2.85	1.42	6020
80-BH11-3	3/21/2012	9	10	Lead (Pb)	7439-92-1	mg/kg	400	6.12		0.949	0.474	6020
80-BH11-3	3/21/2012	9	10	Manganese	7439-96-5	mg/kg	1865	140		0.949	0.474	6020
80-BH11-3	3/21/2012	9	10	Nickel	7440-02-0	mg/kg	1560	2.44	J	3.80	1.90	6020
80-BH11-3	3/21/2012	9	10	Selenium	7782-49-2	mg/kg	391	0.949	U	0.949	0.474	6020
80-BH11-3	3/21/2012	9	10	Silver	7440-22-4	mg/kg	391	2.84	U	2.84	1.42	6020
80-BH11-3	3/21/2012	9	10	Thallium	7440-28-0	mg/kg	0.782	0.190	U	0.190	0.0949	6020
80-BH11-3	3/21/2012	9	10	Vanadium	7440-62-2	mg/kg	391	7.78		2.37	1.19	6020
80-BH11-3	3/21/2012	9	10	Mercury	7439-97-6	mg/kg	15.6	0.0953	U	0.0953	0.00953	7471A
80-BH11-3	3/21/2012	9	10	Percent Solids	10-02-6	%		99.4		1.00	1.00	D2216-90
80-BH11-FD3	3/21/2012	9	10	Aluminum	7429-90-5	mg/kg	78002	2180		14.7	7.35	6010B

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH11-FD3	3/21/2012	9	10	Antimony	7440-36-0	mg/kg	31.3	0.735	U	0.735	0.367	6010B
80-BH11-FD3	3/21/2012	9	10	Beryllium	7440-41-7	mg/kg	156	0.222		0.147	0.0735	6010B
80-BH11-FD3	3/21/2012	9	10	Calcium	7440-70-2	mg/kg		2040		7.35	3.67	6010B
80-BH11-FD3	3/21/2012	9	10	Iron (Ferrous)	7439-89-6	mg/kg	54750	9230		2.20	1.10	6010B
80-BH11-FD3	3/21/2012	9	10	Magnesium	7439-95-4	mg/kg		1020		18.4	9.18	6010B
80-BH11-FD3	3/21/2012	9	10	Potassium	7440-09-7	mg/kg		719		36.7	18.4	6010B
80-BH11-FD3	3/21/2012	9	10	Sodium	7440-23-5	mg/kg		44.0		18.4	9.18	6010B
80-BH11-FD3	3/21/2012	9	10	Zinc	7440-66-6	mg/kg	23464	11.0		0.735	0.367	6010B
80-BH11-FD3	3/21/2012	9	10	Arsenic	7440-38-2	mg/kg	3.90	1.45	U	1.45	0.726	6020
80-BH11-FD3	3/21/2012	9	10	Barium	7440-39-3	mg/kg	15558	24.3		1.45	0.726	6020
80-BH11-FD3	3/21/2012	9	10	Cadmium	7440-43-9	mg/kg	70.3	0.484	U	0.484	0.242	6020
80-BH11-FD3	3/21/2012	9	10	Chromium	7440-47-3	mg/kg	117321	2.04		1.94	0.968	6020
80-BH11-FD3	3/21/2012	9	10	Cobalt	7440-48-4	mg/kg		1.84	J	2.42	1.21	6020
80-BH11-FD3	3/21/2012	9	10	Copper	7440-50-8	mg/kg	3129	2.10	J	2.90	1.45	6020
80-BH11-FD3	3/21/2012	9	10	Lead (Pb)	7439-92-1	mg/kg	400	4.30		0.968	0.484	6020
80-BH11-FD3	3/21/2012	9	10	Manganese	7439-96-5	mg/kg	1865	98.5		0.968	0.484	6020

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH11-FD3	3/21/2012	9	10	Nickel	7440-02-0	mg/kg	1560	3.87	U	3.87	1.94	6020
80-BH11-FD3	3/21/2012	9	10	Selenium	7782-49-2	mg/kg	391	0.968	U	0.968	0.484	6020
80-BH11-FD3	3/21/2012	9	10	Silver	7440-22-4	mg/kg	391	2.94	U	2.94	1.47	6020
80-BH11-FD3	3/21/2012	9	10	Thallium	7440-28-0	mg/kg	0.782	0.194	U	0.194	0.0968	6020
80-BH11-FD3	3/21/2012	9	10	Vanadium	7440-62-2	mg/kg	391	4.44		2.42	1.21	6020
80-BH11-FD3	3/21/2012	9	10	Mercury	7439-97-6	mg/kg	15.6	0.0987	U	0.0987	0.00987	7471A
80-BH11-FD3	3/21/2012	9	10	Percent Solids	10-02-6	%		99.1		1.00	1.00	D2216-90
80-BH12-1	3/21/2012	0	2	Aluminum	7429-90-5	mg/kg	78002	6210		14.0	7.01	6010B
80-BH12-1	3/21/2012	0	2	Antimony	7440-36-0	mg/kg	31.3	0.701	U	0.701	0.350	6010B
80-BH12-1	3/21/2012	0	2	Beryllium	7440-41-7	mg/kg	156	0.0701	U	0.0701	0.0350	6010B
80-BH12-1	3/21/2012	0	2	Calcium	7440-70-2	mg/kg		2660		7.01	3.50	6010B
80-BH12-1	3/21/2012	0	2	Iron (Ferrous)	7439-89-6	mg/kg	54750	14300		2.10	1.05	6010B
80-BH12-1	3/21/2012	0	2	Magnesium	7439-95-4	mg/kg		2690		17.5	8.76	6010B
80-BH12-1	3/21/2012	0	2	Potassium	7440-09-7	mg/kg		2140		35.0	17.5	6010B
80-BH12-1	3/21/2012	0	2	Sodium	7440-23-5	mg/kg		37.9		17.5	8.76	6010B
80-BH12-1	3/21/2012	0	2	Zinc	7440-66-6	mg/kg	23464	25.6		0.701	0.350	6010B

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH12-1	3/21/2012	0	2	Arsenic	7440-38-2	mg/kg	3.90	1.68		1.47	0.736	6020
80-BH12-1	3/21/2012	0	2	Barium	7440-39-3	mg/kg	15558	65.9		1.47	0.736	6020
80-BH12-1	3/21/2012	0	2	Cadmium	7440-43-9	mg/kg	70.3	0.491	U	0.491	0.245	6020
80-BH12-1	3/21/2012	0	2	Chromium	7440-47-3	mg/kg	117321	3.68		1.96	0.982	6020
80-BH12-1	3/21/2012	0	2	Cobalt	7440-48-4	mg/kg		5.80		2.45	1.23	6020
80-BH12-1	3/21/2012	0	2	Copper	7440-50-8	mg/kg	3129	8.46		2.95	1.47	6020
80-BH12-1	3/21/2012	0	2	Lead (Pb)	7439-92-1	mg/kg	400	10.3		0.982	0.491	6020
80-BH12-1	3/21/2012	0	2	Manganese	7439-96-5	mg/kg	1865	238		9.82	4.91	6020
80-BH12-1	3/21/2012	0	2	Nickel	7440-02-0	mg/kg	1560	5.5		3.93	1.96	6020
80-BH12-1	3/21/2012	0	2	Selenium	7782-49-2	mg/kg	391	0.982	U	0.982	0.491	6020
80-BH12-1	3/21/2012	0	2	Silver	7440-22-4	mg/kg	391	2.80	U	2.80	1.40	6020
80-BH12-1	3/21/2012	0	2	Thallium	7440-28-0	mg/kg	0.782	0.135	J	0.196	0.0982	6020
80-BH12-1	3/21/2012	0	2	Vanadium	7440-62-2	mg/kg	391	15.2		2.45	1.23	6020
80-BH12-1	3/21/2012	0	2	Mercury	7439-97-6	mg/kg	15.6	0.0994	U	0.0994	0.00994	7471A
80-BH12-1	3/21/2012	0	2	Percent Solids	10-02-6	%		98.1		1.00	1.00	D2216-90
80-BH12-2	3/21/2012	5	6	Aluminum	7429-90-5	mg/kg	78002	7560		14.5	7.24	6010B

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH12-2	3/21/2012	5	6	Antimony	7440-36-0	mg/kg	31.3	0.724	U	0.724	0.362	6010B
80-BH12-2	3/21/2012	5	6	Beryllium	7440-41-7	mg/kg	156	0.0956		0.0724	0.0362	6010B
80-BH12-2	3/21/2012	5	6	Calcium	7440-70-2	mg/kg		4940		7.24	3.62	6010B
80-BH12-2	3/21/2012	5	6	Iron (Ferrous)	7439-89-6	mg/kg	54750	15500		2.17	1.09	6010B
80-BH12-2	3/21/2012	5	6	Magnesium	7439-95-4	mg/kg		2970		18.1	9.05	6010B
80-BH12-2	3/21/2012	5	6	Potassium	7440-09-7	mg/kg		1780		36.2	18.1	6010B
80-BH12-2	3/21/2012	5	6	Sodium	7440-23-5	mg/kg		83.3		18.1	9.05	6010B
80-BH12-2	3/21/2012	5	6	Zinc	7440-66-6	mg/kg	23464	30.7		0.724	0.362	6010B
80-BH12-2	3/21/2012	5	6	Arsenic	7440-38-2	mg/kg	3.90	2.46		1.52	0.762	6020
80-BH12-2	3/21/2012	5	6	Barium	7440-39-3	mg/kg	15558	118		1.52	0.762	6020
80-BH12-2	3/21/2012	5	6	Cadmium	7440-43-9	mg/kg	70.3	0.508	U	0.508	0.254	6020
80-BH12-2	3/21/2012	5	6	Chromium	7440-47-3	mg/kg	117321	5.33		2.03	1.02	6020
80-BH12-2	3/21/2012	5	6	Cobalt	7440-48-4	mg/kg		8.85		2.54	1.27	6020
80-BH12-2	3/21/2012	5	6	Copper	7440-50-8	mg/kg	3129	9.25		3.05	1.52	6020
80-BH12-2	3/21/2012	5	6	Lead (Pb)	7439-92-1	mg/kg	400	15.8		1.02	0.508	6020
80-BH12-2	3/21/2012	5	6	Manganese	7439-96-5	mg/kg	1865	295		10.2	5.08	6020

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH12-2	3/21/2012	5	6	Nickel	7440-02-0	mg/kg	1560	8.05		4.06	2.03	6020
80-BH12-2	3/21/2012	5	6	Selenium	7782-49-2	mg/kg	391	1.02	U	1.02	0.508	6020
80-BH12-2	3/21/2012	5	6	Silver	7440-22-4	mg/kg	391	2.90	U	2.90	1.45	6020
80-BH12-2	3/21/2012	5	6	Thallium	7440-28-0	mg/kg	0.782	0.176	J	0.203	0.102	6020
80-BH12-2	3/21/2012	5	6	Vanadium	7440-62-2	mg/kg	391	20.0		2.54	1.27	6020
80-BH12-2	3/21/2012	5	6	Mercury	7439-97-6	mg/kg	15.6	0.0105	J	0.101	0.0101	7471A
80-BH12-2	3/21/2012	5	6	Percent Solids	10-02-6	%		96.9		1.00	1.00	D2216-90
80-BH12-3	3/21/2012	9	10	Aluminum	7429-90-5	mg/kg	78002	1330		13.5	6.77	6010B
80-BH12-3	3/21/2012	9	10	Antimony	7440-36-0	mg/kg	31.3	0.677	U	0.677	0.339	6010B
80-BH12-3	3/21/2012	9	10	Beryllium	7440-41-7	mg/kg	156	0.184		0.0677	0.0339	6010B
80-BH12-3	3/21/2012	9	10	Calcium	7440-70-2	mg/kg		2130		6.77	3.39	6010B
80-BH12-3	3/21/2012	9	10	Iron (Ferrous)	7439-89-6	mg/kg	54750	11000		20.3	10.2	6010B
80-BH12-3	3/21/2012	9	10	Magnesium	7439-95-4	mg/kg		701		16.9	8.47	6010B
80-BH12-3	3/21/2012	9	10	Potassium	7440-09-7	mg/kg		417		33.9	16.9	6010B
80-BH12-3	3/21/2012	9	10	Silver	7440-22-4	mg/kg	391	0.384		0.135	0.0677	6010B
80-BH12-3	3/21/2012	9	10	Sodium	7440-23-5	mg/kg		48.3		16.9	8.47	6010B

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH12-3	3/21/2012	9	10	Zinc	7440-66-6	mg/kg	23464	10.2		0.677	0.339	6010B
80-BH12-3	3/21/2012	9	10	Arsenic	7440-38-2	mg/kg	3.90	1.46	U	1.46	0.730	6020
80-BH12-3	3/21/2012	9	10	Barium	7440-39-3	mg/kg	15558	21.5		1.46	0.730	6020
80-BH12-3	3/21/2012	9	10	Cadmium	7440-43-9	mg/kg	70.3	0.487	U	0.487	0.243	6020
80-BH12-3	3/21/2012	9	10	Chromium	7440-47-3	mg/kg	117321	1.54	J	1.95	0.973	6020
80-BH12-3	3/21/2012	9	10	Cobalt	7440-48-4	mg/kg		2.22	J	2.43	1.22	6020
80-BH12-3	3/21/2012	9	10	Copper	7440-50-8	mg/kg	3129	2.74	J	2.92	1.46	6020
80-BH12-3	3/21/2012	9	10	Lead (Pb)	7439-92-1	mg/kg	400	4.91		0.973	0.487	6020
80-BH12-3	3/21/2012	9	10	Manganese	7439-96-5	mg/kg	1865	112		0.973	0.487	6020
80-BH12-3	3/21/2012	9	10	Nickel	7440-02-0	mg/kg	1560	2.06	J	3.89	1.95	6020
80-BH12-3	3/21/2012	9	10	Selenium	7782-49-2	mg/kg	391	0.973	U	0.973	0.487	6020
80-BH12-3	3/21/2012	9	10	Silver	7440-22-4	mg/kg	391	2.71	U	2.71	1.35	6020
80-BH12-3	3/21/2012	9	10	Thallium	7440-28-0	mg/kg	0.782	0.195	U	0.195	0.0973	6020
80-BH12-3	3/21/2012	9	10	Vanadium	7440-62-2	mg/kg	391	5.96		2.43	1.22	6020
80-BH12-3	3/21/2012	9	10	Mercury	7439-97-6	mg/kg	15.6	0.0955	U	0.0955	0.00955	7471A
80-BH12-3	3/21/2012	9	10	Percent Solids	10-02-6	%		99.4		1.00	1.00	D2216-90

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH12-FD1	3/21/2012	0	2	Aluminum	7429-90-5	mg/kg	78002	4580		14.5	7.24	6010B
80-BH12-FD1	3/21/2012	0	2	Antimony	7440-36-0	mg/kg	31.3	0.724	U	0.724	0.362	6010B
80-BH12-FD1	3/21/2012	0	2	Beryllium	7440-41-7	mg/kg	156	0.442		0.0724	0.0362	6010B
80-BH12-FD1	3/21/2012	0	2	Calcium	7440-70-2	mg/kg		2560		7.24	3.62	6010B
80-BH12-FD1	3/21/2012	0	2	Iron (Ferrous)	7439-89-6	mg/kg	54750	16400		217	109	6010B
80-BH12-FD1	3/21/2012	0	2	Magnesium	7439-95-4	mg/kg		2010		18.1	9.05	6010B
80-BH12-FD1	3/21/2012	0	2	Potassium	7440-09-7	mg/kg		1680		36.2	18.1	6010B
80-BH12-FD1	3/21/2012	0	2	Silver	7440-22-4	mg/kg	391	0.853		0.145	0.0724	6010B
80-BH12-FD1	3/21/2012	0	2	Sodium	7440-23-5	mg/kg		32.4		18.1	9.05	6010B
80-BH12-FD1	3/21/2012	0	2	Zinc	7440-66-6	mg/kg	23464	20.2		0.724	0.362	6010B
80-BH12-FD1	3/21/2012	0	2	Arsenic	7440-38-2	mg/kg	3.90	1.54		1.44	0.722	6020
80-BH12-FD1	3/21/2012	0	2	Barium	7440-39-3	mg/kg	15558	65.3		1.44	0.722	6020
80-BH12-FD1	3/21/2012	0	2	Cadmium	7440-43-9	mg/kg	70.3	0.481	U	0.481	0.241	6020
80-BH12-FD1	3/21/2012	0	2	Chromium	7440-47-3	mg/kg	117321	3.13		1.92	0.962	6020
80-BH12-FD1	3/21/2012	0	2	Cobalt	7440-48-4	mg/kg		5.37		2.41	1.20	6020
80-BH12-FD1	3/21/2012	0	2	Copper	7440-50-8	mg/kg	3129	9.49		2.89	1.44	6020

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH12-FD1	3/21/2012	0	2	Lead (Pb)	7439-92-1	mg/kg	400	10.8		0.962	0.481	6020
80-BH12-FD1	3/21/2012	0	2	Manganese	7439-96-5	mg/kg	1865	205		9.62	4.81	6020
80-BH12-FD1	3/21/2012	0	2	Nickel	7440-02-0	mg/kg	1560	5.07		3.85	1.92	6020
80-BH12-FD1	3/21/2012	0	2	Selenium	7782-49-2	mg/kg	391	0.962	U	0.962	0.481	6020
80-BH12-FD1	3/21/2012	0	2	Silver	7440-22-4	mg/kg	391	2.89	U	2.89	1.45	6020
80-BH12-FD1	3/21/2012	0	2	Thallium	7440-28-0	mg/kg	0.782	0.108	J	0.192	0.0962	6020
80-BH12-FD1	3/21/2012	0	2	Vanadium	7440-62-2	mg/kg	391	11.9		2.41	1.20	6020
80-BH12-FD1	3/21/2012	0	2	Mercury	7439-97-6	mg/kg	15.6	0.0967	U	0.0967	0.00967	7471A
80-BH12-FD1	3/21/2012	0	2	Percent Solids	10-02-6	%		98.2		1.00	1.00	D2216-90
80-BH13-1	3/21/2012	0	2	Aluminum	7429-90-5	mg/kg	78002	3330		15.3	7.64	6010B
80-BH13-1	3/21/2012	0	2	Antimony	7440-36-0	mg/kg	31.3	0.764	U	0.764	0.382	6010B
80-BH13-1	3/21/2012	0	2	Beryllium	7440-41-7	mg/kg	156	0.377		0.0764	0.0382	6010B
80-BH13-1	3/21/2012	0	2	Calcium	7440-70-2	mg/kg		2370		7.64	3.82	6010B
80-BH13-1	3/21/2012	0	2	Iron (Ferrous)	7439-89-6	mg/kg	54750	12000		229	115	6010B
80-BH13-1	3/21/2012	0	2	Magnesium	7439-95-4	mg/kg		1840		19.1	9.55	6010B
80-BH13-1	3/21/2012	0	2	Potassium	7440-09-7	mg/kg		1710		38.2	19.1	6010B

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH13-1	3/21/2012	0	2	Silver	7440-22-4	mg/kg	391	0.551		0.153	0.0764	6010B
80-BH13-1	3/21/2012	0	2	Sodium	7440-23-5	mg/kg		25.2		19.1	9.55	6010B
80-BH13-1	3/21/2012	0	2	Zinc	7440-66-6	mg/kg	23464	18.2		0.764	0.382	6010B
80-BH13-1	3/21/2012	0	2	Arsenic	7440-38-2	mg/kg	3.90	1.31	J	1.52	0.759	6020
80-BH13-1	3/21/2012	0	2	Barium	7440-39-3	mg/kg	15558	50.6		1.52	0.759	6020
80-BH13-1	3/21/2012	0	2	Cadmium	7440-43-9	mg/kg	70.3	0.506	U	0.506	0.253	6020
80-BH13-1	3/21/2012	0	2	Chromium	7440-47-3	mg/kg	117321	2.40		2.02	1.01	6020
80-BH13-1	3/21/2012	0	2	Cobalt	7440-48-4	mg/kg		4.18		2.53	1.26	6020
80-BH13-1	3/21/2012	0	2	Copper	7440-50-8	mg/kg	3129	6.03		3.04	1.52	6020
80-BH13-1	3/21/2012	0	2	Lead (Pb)	7439-92-1	mg/kg	400	8.26		1.01	0.506	6020
80-BH13-1	3/21/2012	0	2	Manganese	7439-96-5	mg/kg	1865	189		10.1	5.06	6020
80-BH13-1	3/21/2012	0	2	Nickel	7440-02-0	mg/kg	1560	3.99	J	4.05	2.02	6020
80-BH13-1	3/21/2012	0	2	Selenium	7782-49-2	mg/kg	391	1.01	U	1.01	0.506	6020
80-BH13-1	3/21/2012	0	2	Silver	7440-22-4	mg/kg	391	3.06	U	3.06	1.53	6020
80-BH13-1	3/21/2012	0	2	Thallium	7440-28-0	mg/kg	0.782	0.202	U	0.202	0.101	6020
80-BH13-1	3/21/2012	0	2	Vanadium	7440-62-2	mg/kg	391	9.24		2.53	1.26	6020

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH13-1	3/21/2012	0	2	Mercury	7439-97-6	mg/kg	15.6	0.0962	U	0.0962	0.00962	7471A
80-BH13-1	3/21/2012	0	2	Percent Solids	10-02-6	%		98.2		1.00	1.00	D2216-90
80-BH13-2	3/21/2012	5	6	Aluminum	7429-90-5	mg/kg	78002	9520		14.7	7.34	6010B
80-BH13-2	3/21/2012	5	6	Antimony	7440-36-0	mg/kg	31.3	0.734	U	0.734	0.367	6010B
80-BH13-2	3/21/2012	5	6	Beryllium	7440-41-7	mg/kg	156	0.879		0.0734	0.0367	6010B
80-BH13-2	3/21/2012	5	6	Calcium	7440-70-2	mg/kg		4100		7.34	3.67	6010B
80-BH13-2	3/21/2012	5	6	Iron (Ferrous)	7439-89-6	mg/kg	54750	25600		220	110	6010B
80-BH13-2	3/21/2012	5	6	Magnesium	7439-95-4	mg/kg		3710		18.3	9.17	6010B
80-BH13-2	3/21/2012	5	6	Potassium	7440-09-7	mg/kg		2390		36.7	18.3	6010B
80-BH13-2	3/21/2012	5	6	Silver	7440-22-4	mg/kg	391	1.06		0.147	0.0734	6010B
80-BH13-2	3/21/2012	5	6	Sodium	7440-23-5	mg/kg		103		18.3	9.17	6010B
80-BH13-2	3/21/2012	5	6	Zinc	7440-66-6	mg/kg	23464	39		0.734	0.367	6010B
80-BH13-2	3/21/2012	5	6	Arsenic	7440-38-2	mg/kg	3.90	3.32		1.55	0.777	6020
80-BH13-2	3/21/2012	5	6	Barium	7440-39-3	mg/kg	15558	123		1.55	0.777	6020
80-BH13-2	3/21/2012	5	6	Cadmium	7440-43-9	mg/kg	70.3	0.518	U	0.518	0.259	6020
80-BH13-2	3/21/2012	5	6	Chromium	7440-47-3	mg/kg	117321	7.72		2.07	1.04	6020

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH13-2	3/21/2012	5	6	Cobalt	7440-48-4	mg/kg		9.90		2.59	1.29	6020
80-BH13-2	3/21/2012	5	6	Copper	7440-50-8	mg/kg	3129	12.6		3.11	1.55	6020
80-BH13-2	3/21/2012	5	6	Lead (Pb)	7439-92-1	mg/kg	400	17.0		1.04	0.518	6020
80-BH13-2	3/21/2012	5	6	Manganese	7439-96-5	mg/kg	1865	489		10.4	5.18	6020
80-BH13-2	3/21/2012	5	6	Nickel	7440-02-0	mg/kg	1560	10.7		4.14	2.07	6020
80-BH13-2	3/21/2012	5	6	Selenium	7782-49-2	mg/kg	391	1.04	U	1.04	0.518	6020
80-BH13-2	3/21/2012	5	6	Silver	7440-22-4	mg/kg	391	2.93	U	2.93	1.47	6020
80-BH13-2	3/21/2012	5	6	Thallium	7440-28-0	mg/kg	0.782	0.236		0.207	0.104	6020
80-BH13-2	3/21/2012	5	6	Vanadium	7440-62-2	mg/kg	391	28.4		2.59	1.29	6020
80-BH13-2	3/21/2012	5	6	Mercury	7439-97-6	mg/kg	15.6	0.0111	J	0.104	0.0104	7471A
80-BH13-2	3/21/2012	5	6	Percent Solids	10-02-6	%		95.2		1.00	1.00	D2216-90
80-BH13-3	3/21/2012	9	10	Aluminum	7429-90-5	mg/kg	78002	4170		14.6	7.30	6010B
80-BH13-3	3/21/2012	9	10	Antimony	7440-36-0	mg/kg	31.3	0.730	U	0.730	0.365	6010B
80-BH13-3	3/21/2012	9	10	Beryllium	7440-41-7	mg/kg	156	0.473		0.0730	0.0365	6010B
80-BH13-3	3/21/2012	9	10	Calcium	7440-70-2	mg/kg		2870		7.30	3.65	6010B
80-BH13-3	3/21/2012	9	10	Iron (Ferrous)	7439-89-6	mg/kg	54750	13700		219	109	6010B

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH13-3	3/21/2012	9	10	Magnesium	7439-95-4	mg/kg		2080		18.2	9.12	6010B
80-BH13-3	3/21/2012	9	10	Potassium	7440-09-7	mg/kg		1380		36.5	18.2	6010B
80-BH13-3	3/21/2012	9	10	Silver	7440-22-4	mg/kg	391	0.734		0.146	0.0730	6010B
80-BH13-3	3/21/2012	9	10	Sodium	7440-23-5	mg/kg		80.300003		18.2	9.12	6010B
80-BH13-3	3/21/2012	9	10	Zinc	7440-66-6	mg/kg	23464	21.8		0.730	0.365	6010B
80-BH13-3	3/21/2012	9	10	Arsenic	7440-38-2	mg/kg	3.90	1.14	J	1.45	0.726	6020
80-BH13-3	3/21/2012	9	10	Barium	7440-39-3	mg/kg	15558	54.2		1.45	0.726	6020
80-BH13-3	3/21/2012	9	10	Cadmium	7440-43-9	mg/kg	70.3	0.484	U	0.484	0.242	6020
80-BH13-3	3/21/2012	9	10	Chromium	7440-47-3	mg/kg	117321	2.58		1.94	0.969	6020
80-BH13-3	3/21/2012	9	10	Cobalt	7440-48-4	mg/kg		4.51		2.42	1.21	6020
80-BH13-3	3/21/2012	9	10	Copper	7440-50-8	mg/kg	3129	5.12		2.91	1.45	6020
80-BH13-3	3/21/2012	9	10	Lead (Pb)	7439-92-1	mg/kg	400	7.67		0.969	0.484	6020
80-BH13-3	3/21/2012	9	10	Manganese	7439-96-5	mg/kg	1865	198		9.69	4.84	6020
80-BH13-3	3/21/2012	9	10	Nickel	7440-02-0	mg/kg	1560	4.26		3.87	1.94	6020
80-BH13-3	3/21/2012	9	10	Selenium	7782-49-2	mg/kg	391	0.969	U	0.969	0.484	6020
80-BH13-3	3/21/2012	9	10	Silver	7440-22-4	mg/kg	391	2.92	U	2.92	1.46	6020

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH13-3	3/21/2012	9	10	Thallium	7440-28-0	mg/kg	0.782	0.115	J	0.194	0.0969	6020
80-BH13-3	3/21/2012	9	10	Vanadium	7440-62-2	mg/kg	391	10.0		2.42	1.21	6020
80-BH13-3	3/21/2012	9	10	Mercury	7439-97-6	mg/kg	15.6	0.0996	U	0.0996	0.00996	7471A
80-BH13-3	3/21/2012	9	10	Percent Solids	10-02-6	%		98.1		1.00	1.00	D2216-90
80-BH14-1	3/21/2012	0	2	Aluminum	7429-90-5	mg/kg	78002	5330		14.2	7.08	6010B
80-BH14-1	3/21/2012	0	2	Antimony	7440-36-0	mg/kg	31.3	0.708	U	0.708	0.354	6010B
80-BH14-1	3/21/2012	0	2	Beryllium	7440-41-7	mg/kg	156	0.435		0.0708	0.0354	6010B
80-BH14-1	3/21/2012	0	2	Calcium	7440-70-2	mg/kg		2780		7.08	3.54	6010B
80-BH14-1	3/21/2012	0	2	Iron (Ferrous)	7439-89-6	mg/kg	54750	19100		213	106	6010B
80-BH14-1	3/21/2012	0	2	Magnesium	7439-95-4	mg/kg		2040		17.7	8.85	6010B
80-BH14-1	3/21/2012	0	2	Potassium	7440-09-7	mg/kg		1680		35.4	17.7	6010B
80-BH14-1	3/21/2012	0	2	Silver	7440-22-4	mg/kg	391	1.29		0.142	0.0708	6010B
80-BH14-1	3/21/2012	0	2	Sodium	7440-23-5	mg/kg		36.4		17.7	8.85	6010B
80-BH14-1	3/21/2012	0	2	Zinc	7440-66-6	mg/kg	23464	24.2		0.708	0.354	6010B
80-BH14-1	3/21/2012	0	2	Arsenic	7440-38-2	mg/kg	3.90	1.27	J	1.45	0.727	6020
80-BH14-1	3/21/2012	0	2	Barium	7440-39-3	mg/kg	15558	58.0		1.45	0.727	6020

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH14-1	3/21/2012	0	2	Cadmium	7440-43-9	mg/kg	70.3	0.485	U	0.485	0.242	6020
80-BH14-1	3/21/2012	0	2	Chromium	7440-47-3	mg/kg	117321	2.92		1.94	0.969	6020
80-BH14-1	3/21/2012	0	2	Cobalt	7440-48-4	mg/kg		4.79		2.42	1.21	6020
80-BH14-1	3/21/2012	0	2	Copper	7440-50-8	mg/kg	3129	7.29		2.91	1.45	6020
80-BH14-1	3/21/2012	0	2	Lead (Pb)	7439-92-1	mg/kg	400	8.26		0.969	0.485	6020
80-BH14-1	3/21/2012	0	2	Manganese	7439-96-5	mg/kg	1865	202		9.69	4.85	6020
80-BH14-1	3/21/2012	0	2	Nickel	7440-02-0	mg/kg	1560	4.99		3.88	1.94	6020
80-BH14-1	3/21/2012	0	2	Selenium	7782-49-2	mg/kg	391	0.969	U	0.969	0.485	6020
80-BH14-1	3/21/2012	0	2	Silver	7440-22-4	mg/kg	391	2.83	U	2.83	1.42	6020
80-BH14-1	3/21/2012	0	2	Thallium	7440-28-0	mg/kg	0.782	0.124	J	0.194	0.0969	6020
80-BH14-1	3/21/2012	0	2	Vanadium	7440-62-2	mg/kg	391	13.6		2.42	1.21	6020
80-BH14-1	3/21/2012	0	2	Mercury	7439-97-6	mg/kg	15.6	0.0989	U	0.0989	0.00989	7471A
80-BH14-1	3/21/2012	0	2	Percent Solids	10-02-6	%		97.7		1.00	1.00	D2216-90
80-BH14-2	3/21/2012	5	6	Aluminum	7429-90-5	mg/kg	78002	4500		14.4	7.20	6010B
80-BH14-2	3/21/2012	5	6	Antimony	7440-36-0	mg/kg	31.3	0.720	U	0.720	0.360	6010B
80-BH14-2	3/21/2012	5	6	Beryllium	7440-41-7	mg/kg	156	0.441		0.0720	0.0360	6010B

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH14-2	3/21/2012	5	6	Calcium	7440-70-2	mg/kg		3570		7.20	3.60	6010B
80-BH14-2	3/21/2012	5	6	Iron (Ferrous)	7439-89-6	mg/kg	54750	15000		216	108	6010B
80-BH14-2	3/21/2012	5	6	Magnesium	7439-95-4	mg/kg		2200		18.0	9.00	6010B
80-BH14-2	3/21/2012	5	6	Potassium	7440-09-7	mg/kg		1120		36	18.0	6010B
80-BH14-2	3/21/2012	5	6	Silver	7440-22-4	mg/kg	391	1.14		0.144	0.0720	6010B
80-BH14-2	3/21/2012	5	6	Sodium	7440-23-5	mg/kg		60.2		18.0	9.00	6010B
80-BH14-2	3/21/2012	5	6	Zinc	7440-66-6	mg/kg	23464	21.6		0.720	0.360	6010B
80-BH14-2	3/21/2012	5	6	Arsenic	7440-38-2	mg/kg	3.90	1.92		1.51	0.756	6020
80-BH14-2	3/21/2012	5	6	Barium	7440-39-3	mg/kg	15558	52.0		1.51	0.756	6020
80-BH14-2	3/21/2012	5	6	Cadmium	7440-43-9	mg/kg	70.3	0.504	U	0.504	0.252	6020
80-BH14-2	3/21/2012	5	6	Chromium	7440-47-3	mg/kg	117321	3.25		2.02	1.01	6020
80-BH14-2	3/21/2012	5	6	Cobalt	7440-48-4	mg/kg		4.39		2.52	1.26	6020
80-BH14-2	3/21/2012	5	6	Copper	7440-50-8	mg/kg	3129	6.43		3.03	1.51	6020
80-BH14-2	3/21/2012	5	6	Lead (Pb)	7439-92-1	mg/kg	400	10.2		1.01	0.504	6020
80-BH14-2	3/21/2012	5	6	Manganese	7439-96-5	mg/kg	1865	216		10.1	5.04	6020
80-BH14-2	3/21/2012	5	6	Nickel	7440-02-0	mg/kg	1560	4.60		4.03	2.02	6020

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH14-2	3/21/2012	5	6	Selenium	7782-49-2	mg/kg	391	1.01	U	1.01	0.504	6020
80-BH14-2	3/21/2012	5	6	Silver	7440-22-4	mg/kg	391	2.88	U	2.88	1.44	6020
80-BH14-2	3/21/2012	5	6	Thallium	7440-28-0	mg/kg	0.782	0.107	J	0.202	0.101	6020
80-BH14-2	3/21/2012	5	6	Vanadium	7440-62-2	mg/kg	391	12.4		2.52	1.26	6020
80-BH14-2	3/21/2012	5	6	Mercury	7439-97-6	mg/kg	15.6	0.0956	U	0.0956	0.00956	7471A
80-BH14-2	3/21/2012	5	6	Percent Solids	10-02-6	%		98.2		1.00	1.00	D2216-90
80-BH14-3	3/21/2012	9	10	Aluminum	7429-90-5	mg/kg	78002	3290		13.7	6.86	6010B
80-BH14-3	3/21/2012	9	10	Antimony	7440-36-0	mg/kg	31.3	0.686	U	0.686	0.343	6010B
80-BH14-3	3/21/2012	9	10	Beryllium	7440-41-7	mg/kg	156	0.322		0.0686	0.0343	6010B
80-BH14-3	3/21/2012	9	10	Calcium	7440-70-2	mg/kg		3480		6.86	3.43	6010B
80-BH14-3	3/21/2012	9	10	Iron (Ferrous)	7439-89-6	mg/kg	54750	16100		206	103	6010B
80-BH14-3	3/21/2012	9	10	Magnesium	7439-95-4	mg/kg		1690		17.1	8.57	6010B
80-BH14-3	3/21/2012	9	10	Potassium	7440-09-7	mg/kg		1020		34.3	17.1	6010B
80-BH14-3	3/21/2012	9	10	Silver	7440-22-4	mg/kg	391	0.956		0.137	0.0686	6010B
80-BH14-3	3/21/2012	9	10	Sodium	7440-23-5	mg/kg		86.9		17.1	8.57	6010B
80-BH14-3	3/21/2012	9	10	Zinc	7440-66-6	mg/kg	23464	17.9		0.686	0.343	6010B

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
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Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH14-3	3/21/2012	9	10	Arsenic	7440-38-2	mg/kg	3.90	0.989	J	1.410	0.704	6020
80-BH14-3	3/21/2012	9	10	Barium	7440-39-3	mg/kg	15558	38.6		1.41	0.704	6020
80-BH14-3	3/21/2012	9	10	Cadmium	7440-43-9	mg/kg	70.3	0.469	U	0.469	0.235	6020
80-BH14-3	3/21/2012	9	10	Chromium	7440-47-3	mg/kg	117321	1.94		1.88	0.939	6020
80-BH14-3	3/21/2012	9	10	Cobalt	7440-48-4	mg/kg		3.10		2.35	1.17	6020
80-BH14-3	3/21/2012	9	10	Copper	7440-50-8	mg/kg	3129	3.95		2.82	1.41	6020
80-BH14-3	3/21/2012	9	10	Lead (Pb)	7439-92-1	mg/kg	400	6.09		0.939	0.469	6020
80-BH14-3	3/21/2012	9	10	Manganese	7439-96-5	mg/kg	1865	136		0.939	0.469	6020
80-BH14-3	3/21/2012	9	10	Nickel	7440-02-0	mg/kg	1560	3.02	J	3.76	1.88	6020
80-BH14-3	3/21/2012	9	10	Selenium	7782-49-2	mg/kg	391	0.939	U	0.939	0.469	6020
80-BH14-3	3/21/2012	9	10	Silver	7440-22-4	mg/kg	391	2.74	U	2.74	1.37	6020
80-BH14-3	3/21/2012	9	10	Thallium	7440-28-0	mg/kg	0.782	0.188	U	0.188	0.0939	6020
80-BH14-3	3/21/2012	9	10	Vanadium	7440-62-2	mg/kg	391	9.71		2.35	1.17	6020
80-BH14-3	3/21/2012	9	10	Mercury	7439-97-6	mg/kg	15.6	0.100	U	0.100	0.0100	7471A
80-BH14-3	3/21/2012	9	10	Percent Solids	10-02-6	%		98.6		1.00	1.00	D2216-90
80-BH15-1	3/21/2012	0	2	Aluminum	7429-90-5	mg/kg	78002	2100		15.4	7.70	6010B

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH15-1	3/21/2012	0	2	Antimony	7440-36-0	mg/kg	31.3	0.770	U	0.770	0.385	6010B
80-BH15-1	3/21/2012	0	2	Beryllium	7440-41-7	mg/kg	156	0.0770	U	0.0770	0.0385	6010B
80-BH15-1	3/21/2012	0	2	Calcium	7440-70-2	mg/kg		2000		77.0	38.5	6010B
80-BH15-1	3/21/2012	0	2	Iron (Ferrous)	7439-89-6	mg/kg	54750	9820		23.1	11.6	6010B
80-BH15-1	3/21/2012	0	2	Magnesium	7439-95-4	mg/kg		1410		193	96.3	6010B
80-BH15-1	3/21/2012	0	2	Potassium	7440-09-7	mg/kg		889		38.5	19.3	6010B
80-BH15-1	3/21/2012	0	2	Silver	7440-22-4	mg/kg	391	0.599		0.154	0.0770	6010B
80-BH15-1	3/21/2012	0	2	Sodium	7440-23-5	mg/kg		23.2		19.3	9.63	6010B
80-BH15-1	3/21/2012	0	2	Zinc	7440-66-6	mg/kg	23464	11.7		0.770	0.385	6010B
80-BH15-1	3/21/2012	0	2	Arsenic	7440-38-2	mg/kg	3.90	0.935	J	1.45	0.724	6020
80-BH15-1	3/21/2012	0	2	Barium	7440-39-3	mg/kg	15558	39.8		1.45	0.724	6020
80-BH15-1	3/21/2012	0	2	Cadmium	7440-43-9	mg/kg	70.3	0.483	U	0.483	0.241	6020
80-BH15-1	3/21/2012	0	2	Chromium	7440-47-3	mg/kg	117321	1.69	J	1.93	0.965	6020
80-BH15-1	3/21/2012	0	2	Cobalt	7440-48-4	mg/kg		3.15		2.41	1.21	6020
80-BH15-1	3/21/2012	0	2	Copper	7440-50-8	mg/kg	3129	3.98		2.90	1.45	6020
80-BH15-1	3/21/2012	0	2	Lead (Pb)	7439-92-1	mg/kg	400	6.36		0.965	0.483	6020

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH15-1	3/21/2012	0	2	Manganese	7439-96-5	mg/kg	1865	155		0.965	0.483	6020
80-BH15-1	3/21/2012	0	2	Nickel	7440-02-0	mg/kg	1560	2.72	J	3.86	1.93	6020
80-BH15-1	3/21/2012	0	2	Selenium	7782-49-2	mg/kg	391	0.965	U	0.965	0.483	6020
80-BH15-1	3/21/2012	0	2	Silver	7440-22-4	mg/kg	391	3.08	U	3.08	1.54	6020
80-BH15-1	3/21/2012	0	2	Thallium	7440-28-0	mg/kg	0.782	0.193	U	0.193	0.0965	6020
80-BH15-1	3/21/2012	0	2	Vanadium	7440-62-2	mg/kg	391	8.18		2.41	1.21	6020
80-BH15-1	3/21/2012	0	2	Mercury	7439-97-6	mg/kg	15.6	0.0991	U	0.0991	0.00991	7471A
80-BH15-1	3/21/2012	0	2	Percent Solids	10-02-6	%		98.5		1.00	1.00	D2216-90
80-BH15-2	3/21/2012	5	6	Aluminum	7429-90-5	mg/kg	78002	5150		14.3	7.14	6010B
80-BH15-2	3/21/2012	5	6	Antimony	7440-36-0	mg/kg	31.3	0.714	U	0.714	0.357	6010B
80-BH15-2	3/21/2012	5	6	Beryllium	7440-41-7	mg/kg	156	0.0729		0.0714	0.0357	6010B
80-BH15-2	3/21/2012	5	6	Calcium	7440-70-2	mg/kg		3690		71.4	35.7	6010B
80-BH15-2	3/21/2012	5	6	Iron (Ferrous)	7439-89-6	mg/kg	54750	14400		21.4	10.7	6010B
80-BH15-2	3/21/2012	5	6	Magnesium	7439-95-4	mg/kg		3060		179	89.3	6010B
80-BH15-2	3/21/2012	5	6	Potassium	7440-09-7	mg/kg		1710		35.7	17.9	6010B
80-BH15-2	3/21/2012	5	6	Silver	7440-22-4	mg/kg	391	1.08		0.143	0.0714	6010B

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH15-2	3/21/2012	5	6	Sodium	7440-23-5	mg/kg		43.5		17.9	8.93	6010B
80-BH15-2	3/21/2012	5	6	Zinc	7440-66-6	mg/kg	23464	23.3		0.714	0.357	6010B
80-BH15-2	3/21/2012	5	6	Arsenic	7440-38-2	mg/kg	3.90	1.11	J	1.45	0.726	6020
80-BH15-2	3/21/2012	5	6	Barium	7440-39-3	mg/kg	15558	74.5		1.45	0.726	6020
80-BH15-2	3/21/2012	5	6	Cadmium	7440-43-9	mg/kg	70.3	0.484	U	0.484	0.242	6020
80-BH15-2	3/21/2012	5	6	Chromium	7440-47-3	mg/kg	117321	2.28		1.94	0.968	6020
80-BH15-2	3/21/2012	5	6	Cobalt	7440-48-4	mg/kg		5.63		2.42	1.21	6020
80-BH15-2	3/21/2012	5	6	Copper	7440-50-8	mg/kg	3129	5.99		2.90	1.45	6020
80-BH15-2	3/21/2012	5	6	Lead (Pb)	7439-92-1	mg/kg	400	9.97		0.968	0.484	6020
80-BH15-2	3/21/2012	5	6	Manganese	7439-96-5	mg/kg	1865	251		9.68	4.84	6020
80-BH15-2	3/21/2012	5	6	Nickel	7440-02-0	mg/kg	1560	5.07		3.87	1.94	6020
80-BH15-2	3/21/2012	5	6	Selenium	7782-49-2	mg/kg	391	0.968	U	0.968	0.484	6020
80-BH15-2	3/21/2012	5	6	Silver	7440-22-4	mg/kg	391	2.86	U	2.86	1.43	6020
80-BH15-2	3/21/2012	5	6	Thallium	7440-28-0	mg/kg	0.782	0.107	J	0.194	0.0968	6020
80-BH15-2	3/21/2012	5	6	Vanadium	7440-62-2	mg/kg	391	10.4		2.42	1.21	6020
80-BH15-2	3/21/2012	5	6	Mercury	7439-97-6	mg/kg	15.6	0.100	U	0.100	0.0100	7471A

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH15-2	3/21/2012	5	6	Percent Solids	10-02-6	%		97.6		1.00	1.00	D2216-90
80-BH15-3	3/21/2012	9	10	Aluminum	7429-90-5	mg/kg	78002	2900		15.2	7.58	6010B
80-BH15-3	3/21/2012	9	10	Antimony	7440-36-0	mg/kg	31.3	0.758	U	0.758	0.379	6010B
80-BH15-3	3/21/2012	9	10	Beryllium	7440-41-7	mg/kg	156	0.196		0.0758	0.0379	6010B
80-BH15-3	3/21/2012	9	10	Calcium	7440-70-2	mg/kg		3710		75.8	37.9	6010B
80-BH15-3	3/21/2012	9	10	Iron (Ferrous)	7439-89-6	mg/kg	54750	9280		22.8	11.4	6010B
80-BH15-3	3/21/2012	9	10	Magnesium	7439-95-4	mg/kg		2170		190	94.8	6010B
80-BH15-3	3/21/2012	9	10	Potassium	7440-09-7	mg/kg		1200		37.9	19.0	6010B
80-BH15-3	3/21/2012	9	10	Silver	7440-22-4	mg/kg	391	0.345		0.152	0.0758	6010B
80-BH15-3	3/21/2012	9	10	Sodium	7440-23-5	mg/kg		33.4		19.0	9.48	6010B
80-BH15-3	3/21/2012	9	10	Zinc	7440-66-6	mg/kg	23464	14.5		0.758	0.379	6010B
80-BH15-3	3/21/2012	9	10	Arsenic	7440-38-2	mg/kg	3.90	0.912	J	1.40	0.699	6020
80-BH15-3	3/21/2012	9	10	Barium	7440-39-3	mg/kg	15558	48.6		1.40	0.699	6020
80-BH15-3	3/21/2012	9	10	Cadmium	7440-43-9	mg/kg	70.3	0.466	U	0.466	0.233	6020
80-BH15-3	3/21/2012	9	10	Chromium	7440-47-3	mg/kg	117321	1.99		1.86	0.931	6020
80-BH15-3	3/21/2012	9	10	Cobalt	7440-48-4	mg/kg		3.26		2.33	1.16	6020

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH15-3	3/21/2012	9	10	Copper	7440-50-8	mg/kg	3129	3.61		2.79	1.40	6020
80-BH15-3	3/21/2012	9	10	Lead (Pb)	7439-92-1	mg/kg	400	6.41		0.931	0.466	6020
80-BH15-3	3/21/2012	9	10	Manganese	7439-96-5	mg/kg	1865	142		0.931	0.466	6020
80-BH15-3	3/21/2012	9	10	Nickel	7440-02-0	mg/kg	1560	3.48	J	3.73	1.86	6020
80-BH15-3	3/21/2012	9	10	Selenium	7782-49-2	mg/kg	391	0.931	U	0.931	0.466	6020
80-BH15-3	3/21/2012	9	10	Silver	7440-22-4	mg/kg	391	3.03	U	3.03	1.52	6020
80-BH15-3	3/21/2012	9	10	Thallium	7440-28-0	mg/kg	0.782	0.186	U	0.186	0.0931	6020
80-BH15-3	3/21/2012	9	10	Vanadium	7440-62-2	mg/kg	391	6.59		2.33	1.16	6020
80-BH15-3	3/21/2012	9	10	Mercury	7439-97-6	mg/kg	15.6	0.100	U	0.100	0.0100	7471A
80-BH15-3	3/21/2012	9	10	Percent Solids	10-02-6	%		98.3		1.00	1.00	D2216-90
80-BH15-FD2	3/21/2012	5	6	Aluminum	7429-90-5	mg/kg	78002	6390		14.0	7.02	6010B
80-BH15-FD2	3/21/2012	5	6	Antimony	7440-36-0	mg/kg	31.3	0.702	U	0.702	0.351	6010B
80-BH15-FD2	3/21/2012	5	6	Beryllium	7440-41-7	mg/kg	156	0.0702	U	0.0702	0.0351	6010B
80-BH15-FD2	3/21/2012	5	6	Calcium	7440-70-2	mg/kg		4190		70.2	35.1	6010B
80-BH15-FD2	3/21/2012	5	6	Iron (Ferrous)	7439-89-6	mg/kg	54750	16500		21.0	10.5	6010B
80-BH15-FD2	3/21/2012	5	6	Magnesium	7439-95-4	mg/kg		3320		175	87.7	6010B

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH15-FD2	3/21/2012	5	6	Potassium	7440-09-7	mg/kg		1840		35.1	17.5	6010B
80-BH15-FD2	3/21/2012	5	6	Silver	7440-22-4	mg/kg	391	1.5		0.140	0.0702	6010B
80-BH15-FD2	3/21/2012	5	6	Sodium	7440-23-5	mg/kg		50.8		17.5	8.77	6010B
80-BH15-FD2	3/21/2012	5	6	Zinc	7440-66-6	mg/kg	23464	26.0		0.702	0.351	6010B
80-BH15-FD2	3/21/2012	5	6	Arsenic	7440-38-2	mg/kg	3.90	1.29	J	1.48	0.740	6020
80-BH15-FD2	3/21/2012	5	6	Barium	7440-39-3	mg/kg	15558	63.5		1.48	0.740	6020
80-BH15-FD2	3/21/2012	5	6	Cadmium	7440-43-9	mg/kg	70.3	0.493	U	0.493	0.247	6020
80-BH15-FD2	3/21/2012	5	6	Chromium	7440-47-3	mg/kg	117321	2.63		1.97	0.986	6020
80-BH15-FD2	3/21/2012	5	6	Cobalt	7440-48-4	mg/kg		4.87		2.47	1.23	6020
80-BH15-FD2	3/21/2012	5	6	Copper	7440-50-8	mg/kg	3129	6.28		2.96	1.48	6020
80-BH15-FD2	3/21/2012	5	6	Lead (Pb)	7439-92-1	mg/kg	400	8.72		0.986	0.493	6020
80-BH15-FD2	3/21/2012	5	6	Manganese	7439-96-5	mg/kg	1865	230		9.86	4.93	6020
80-BH15-FD2	3/21/2012	5	6	Nickel	7440-02-0	mg/kg	1560	4.71		3.95	1.97	6020
80-BH15-FD2	3/21/2012	5	6	Selenium	7782-49-2	mg/kg	391	0.986	U	0.986	0.493	6020
80-BH15-FD2	3/21/2012	5	6	Silver	7440-22-4	mg/kg	391	2.81	U	2.81	1.40	6020
80-BH15-FD2	3/21/2012	5	6	Thallium	7440-28-0	mg/kg	0.782	0.158	J	0.197	0.0986	6020

Table C-1 (continued)
Solid Waste Management Unit 80 (WSMR-30) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
80-BH15-FD2	3/21/2012	5	6	Vanadium	7440-62-2	mg/kg	391	12.4		2.47	1.23	6020
80-BH15-FD2	3/21/2012	5	6	Mercury	7439-97-6	mg/kg	15.6	0.100	U	0.100	0.0100	7471A
80-BH15-FD2	3/21/2012	5	6	Percent Solids	10-02-6	%		97.3		1.00	1.00	D2216-90

% = *Percentage.*
CAS = *Chemical Abstract Service.*
DL = *Detection Limit.*
ft = *Foot (feet).*
ID = *Identification.*
LOQ = *Limit of Quantitation.*
NMED = *New Mexico Environment Department.*
mg/kg = *Milligrams per kilogram.*
J = *Estimated. The analyte was detected and positively identified. The associated numerical value is the approximate concentration of the analyte in the sample and the bias is indeterminable.*
U = *Not detected. The analyte was analyzed for but was not detected above the level of the associated value. The associated value is the LOQ.*
UN = *Tentatively not detected, the LOQ is estimated. The analyte was analyzed for but was not detected above the reported LOQ. However, the reported LOQ is an estimate and may not be accurate or precise.*
WSMR = *White Sands Missile Range.*

Appendix C2
Complete Analytical Results for Main Post Sites

Table C-2
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH01-1	3/22/2012	0	2	Aluminum	7429-90-5	mg/kg	78002	7270		74.7	37.3	6010B
MP-BH01-1	3/22/2012	0	2	Antimony	7440-36-0	mg/kg	31.3	0.747	U	0.747	0.373	6010B
MP-BH01-1	3/22/2012	0	2	Beryllium	7440-41-7	mg/kg	156	0.215		0.0747	0.0373	6010B
MP-BH01-1	3/22/2012	0	2	Calcium	7440-70-2	mg/kg		2300		74.7	37.3	6010B
MP-BH01-1	3/22/2012	0	2	Iron (Ferrous)	7439-89-6	mg/kg	54750	14200		22.4	11.2	6010B
MP-BH01-1	3/22/2012	0	2	Magnesium	7439-95-4	mg/kg		2890		187	93.3	6010B
MP-BH01-1	3/22/2012	0	2	Potassium	7440-09-7	mg/kg		2270		37.3	18.7	6010B
MP-BH01-1	3/22/2012	0	2	Sodium	7440-23-5	mg/kg		34.3		18.7	9.33	6010B
MP-BH01-1	3/22/2012	0	2	Zinc	7440-66-6	mg/kg	23464	28.8		0.747	0.373	6010B
MP-BH01-1	3/22/2012	0	2	Arsenic	7440-38-2	mg/kg	3.90	2.10		1.53	0.764	6020
MP-BH01-1	3/22/2012	0	2	Barium	7440-39-3	mg/kg	15558	46.4		1.53	0.764	6020
MP-BH01-1	3/22/2012	0	2	Cadmium	7440-43-9	mg/kg	70.3	0.509	U	0.509	0.255	6020
MP-BH01-1	3/22/2012	0	2	Chromium	7440-47-3	mg/kg	117321	2.79		2.04	1.02	6020
MP-BH01-1	3/22/2012	0	2	Cobalt	7440-48-4	mg/kg		4.51		2.55	1.27	6020
MP-BH01-1	3/22/2012	0	2	Copper	7440-50-8	mg/kg	3129	13.5		3.05	1.53	6020

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH01-1	3/22/2012	0	2	Lead (Pb)	7439-92-1	mg/kg	400	12.7		1.02	0.509	6020
MP-BH01-1	3/22/2012	0	2	Manganese	7439-96-5	mg/kg	1865	299		10.2	5.09	6020
MP-BH01-1	3/22/2012	0	2	Nickel	7440-02-0	mg/kg	1560	4.25		4.07	2.04	6020
MP-BH01-1	3/22/2012	0	2	Selenium	7782-49-2	mg/kg	391	1.02	U	1.02	0.509	6020
MP-BH01-1	3/22/2012	0	2	Silver	7440-22-4	mg/kg	391	2.99	U	2.99	1.49	6020
MP-BH01-1	3/22/2012	0	2	Thallium	7440-28-0	mg/kg	0.782	0.105	J	0.204	0.102	6020
MP-BH01-1	3/22/2012	0	2	Vanadium	7440-62-2	mg/kg	391	10.8		2.55	1.27	6020
MP-BH01-1	3/22/2012	0	2	Mercury	7439-97-6	mg/kg	15.6	0.0988	U	0.0988	0.00988	7471A
MP-BH01-1	3/22/2012	0	2	Percent Solids	10-02-6	%		95.0		1.00	1.00	D2216-90
MP-BH01-2	3/22/2012	5	6	Aluminum	7429-90-5	mg/kg	78002	3470		14.4	7.21	6010B
MP-BH01-2	3/22/2012	5	6	Antimony	7440-36-0	mg/kg	31.3	0.721	U	0.721	0.361	6010B
MP-BH01-2	3/22/2012	5	6	Beryllium	7440-41-7	mg/kg	156	0.299		0.0721	0.0361	6010B
MP-BH01-2	3/22/2012	5	6	Calcium	7440-70-2	mg/kg		3810		72.1	36.1	6010B
MP-BH01-2	3/22/2012	5	6	Iron (Ferrous)	7439-89-6	mg/kg	54750	12600		21.6	10.8	6010B
MP-BH01-2	3/22/2012	5	6	Magnesium	7439-95-4	mg/kg		2860		180	90.2	6010B
MP-BH01-2	3/22/2012	5	6	Potassium	7440-09-7	mg/kg		1360		36.1	18.0	6010B

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH01-2	3/22/2012	5	6	Sodium	7440-23-5	mg/kg		79.2		18.0	9.02	6010B
MP-BH01-2	3/22/2012	5	6	Zinc	7440-66-6	mg/kg	23464	20.3		0.721	0.361	6010B
MP-BH01-2	3/22/2012	5	6	Arsenic	7440-38-2	mg/kg	3.90	0.795	J	1.48	0.742	6020
MP-BH01-2	3/22/2012	5	6	Barium	7440-39-3	mg/kg	15558	38.7		1.48	0.742	6020
MP-BH01-2	3/22/2012	5	6	Cadmium	7440-43-9	mg/kg	70.3	0.495	U	0.495	0.247	6020
MP-BH01-2	3/22/2012	5	6	Chromium	7440-47-3	mg/kg	117321	2.10		1.98	0.990	6020
MP-BH01-2	3/22/2012	5	6	Cobalt	7440-48-4	mg/kg		3.84		2.47	1.24	6020
MP-BH01-2	3/22/2012	5	6	Copper	7440-50-8	mg/kg	3129	9.48		2.97	1.48	6020
MP-BH01-2	3/22/2012	5	6	Lead (Pb)	7439-92-1	mg/kg	400	8.57		0.990	0.495	6020
MP-BH01-2	3/22/2012	5	6	Manganese	7439-96-5	mg/kg	1865	233		4.95	2.47	6020
MP-BH01-2	3/22/2012	5	6	Nickel	7440-02-0	mg/kg	1560	3.97		3.96	1.98	6020
MP-BH01-2	3/22/2012	5	6	Selenium	7782-49-2	mg/kg	391	0.990	U	0.990	0.495	6020
MP-BH01-2	3/22/2012	5	6	Silver	7440-22-4	mg/kg	391	2.89	U	2.89	1.44	6020
MP-BH01-2	3/22/2012	5	6	Thallium	7440-28-0	mg/kg	0.782	0.198	U	0.198	0.0990	6020
MP-BH01-2	3/22/2012	5	6	Vanadium	7440-62-2	mg/kg	391	6.54		2.47	1.24	6020
MP-BH01-2	3/22/2012	5	6	Mercury	7439-97-6	mg/kg	15.6	0.0998	U	0.0998	0.0100	7471A

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH01-2	3/22/2012	5	6	Percent Solids	10-02-6	%		97.9		1.00	1.00	D2216-90
MP-BH01-3	3/22/2012	9	10	Aluminum	7429-90-5	mg/kg	78002	4760		15.3	7.63	6010B
MP-BH01-3	3/22/2012	9	10	Antimony	7440-36-0	mg/kg	31.3	0.763	U	0.763	0.382	6010B
MP-BH01-3	3/22/2012	9	10	Beryllium	7440-41-7	mg/kg	156	0.240		0.0763	0.0382	6010B
MP-BH01-3	3/22/2012	9	10	Calcium	7440-70-2	mg/kg		4290		76.3	38.2	6010B
MP-BH01-3	3/22/2012	9	10	Iron (Ferrous)	7439-89-6	mg/kg	54750	13300		22.9	11.4	6010B
MP-BH01-3	3/22/2012	9	10	Magnesium	7439-95-4	mg/kg		3060		191	95.4	6010B
MP-BH01-3	3/22/2012	9	10	Potassium	7440-09-7	mg/kg		1370		38.2	19.1	6010B
MP-BH01-3	3/22/2012	9	10	Sodium	7440-23-5	mg/kg		178		19.1	9.54	6010B
MP-BH01-3	3/22/2012	9	10	Zinc	7440-66-6	mg/kg	23464	23.8		0.763	0.382	6010B
MP-BH01-3	3/22/2012	9	10	Arsenic	7440-38-2	mg/kg	3.90	1.51	J	1.54	0.771	6020
MP-BH01-3	3/22/2012	9	10	Barium	7440-39-3	mg/kg	15558	47.8		1.54	0.771	6020
MP-BH01-3	3/22/2012	9	10	Cadmium	7440-43-9	mg/kg	70.3	0.514	U	0.514	0.257	6020
MP-BH01-3	3/22/2012	9	10	Chromium	7440-47-3	mg/kg	117321	2.40		2.05	1.03	6020
MP-BH01-3	3/22/2012	9	10	Cobalt	7440-48-4	mg/kg		3.32		2.57	1.28	6020
MP-BH01-3	3/22/2012	9	10	Copper	7440-50-8	mg/kg	3129	5.97		3.08	1.54	6020

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH01-3	3/22/2012	9	10	Lead (Pb)	7439-92-1	mg/kg	400	8.55		1.03	0.514	6020
MP-BH01-3	3/22/2012	9	10	Manganese	7439-96-5	mg/kg	1865	193		1.03	0.514	6020
MP-BH01-3	3/22/2012	9	10	Nickel	7440-02-0	mg/kg	1560	3.46	J	4.11	2.05	6020
MP-BH01-3	3/22/2012	9	10	Selenium	7782-49-2	mg/kg	391	1.03	U	1.03	0.514	6020
MP-BH01-3	3/22/2012	9	10	Silver	7440-22-4	mg/kg	391	3.05	U	3.05	1.53	6020
MP-BH01-3	3/22/2012	9	10	Thallium	7440-28-0	mg/kg	0.782	0.205	U	0.205	0.103	6020
MP-BH01-3	3/22/2012	9	10	Vanadium	7440-62-2	mg/kg	391	9.75		2.57	1.28	6020
MP-BH01-3	3/22/2012	9	10	Mercury	7439-97-6	mg/kg	15.6	0.0980	U	0.0980	0.00980	7471A
MP-BH01-3	3/22/2012	9	10	Percent Solids	10-02-6	%		97.3		1.00	1.00	D2216-90
MP-BH02-1	3/22/2012	0	2	Aluminum	7429-90-5	mg/kg	78002	7230		14.3	7.13	6010B
MP-BH02-1	3/22/2012	0	2	Antimony	7440-36-0	mg/kg	31.3	0.713	U	0.713	0.357	6010B
MP-BH02-1	3/22/2012	0	2	Beryllium	7440-41-7	mg/kg	156	0.533		0.0713	0.0357	6010B
MP-BH02-1	3/22/2012	0	2	Calcium	7440-70-2	mg/kg		2890		71.3	35.7	6010B
MP-BH02-1	3/22/2012	0	2	Iron (Ferrous)	7439-89-6	mg/kg	54750	17700		21.4	10.7	6010B
MP-BH02-1	3/22/2012	0	2	Magnesium	7439-95-4	mg/kg		3480		178	89.2	6010B
MP-BH02-1	3/22/2012	0	2	Potassium	7440-09-7	mg/kg		2060		35.7	17.8	6010B

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH02-1	3/22/2012	0	2	Sodium	7440-23-5	mg/kg		37.3		17.8	8.92	6010B
MP-BH02-1	3/22/2012	0	2	Zinc	7440-66-6	mg/kg	23464	27.5		0.713	0.357	6010B
MP-BH02-1	3/22/2012	0	2	Arsenic	7440-38-2	mg/kg	3.90	2.31		1.48	0.739	6020
MP-BH02-1	3/22/2012	0	2	Barium	7440-39-3	mg/kg	15558	60.0		1.48	0.739	6020
MP-BH02-1	3/22/2012	0	2	Cadmium	7440-43-9	mg/kg	70.3	0.493	U	0.493	0.246	6020
MP-BH02-1	3/22/2012	0	2	Chromium	7440-47-3	mg/kg	117321	3.66		1.97	0.986	6020
MP-BH02-1	3/22/2012	0	2	Cobalt	7440-48-4	mg/kg		5.13		2.46	1.23	6020
MP-BH02-1	3/22/2012	0	2	Copper	7440-50-8	mg/kg	3129	13.4		2.96	1.48	6020
MP-BH02-1	3/22/2012	0	2	Lead (Pb)	7439-92-1	mg/kg	400	14.1		0.986	0.493	6020
MP-BH02-1	3/22/2012	0	2	Manganese	7439-96-5	mg/kg	1865	362		9.86	4.93	6020
MP-BH02-1	3/22/2012	0	2	Nickel	7440-02-0	mg/kg	1560	5.32		3.94	1.97	6020
MP-BH02-1	3/22/2012	0	2	Selenium	7782-49-2	mg/kg	391	0.986	U	0.986	0.493	6020
MP-BH02-1	3/22/2012	0	2	Silver	7440-22-4	mg/kg	391	2.85	U	2.85	1.43	6020
MP-BH02-1	3/22/2012	0	2	Thallium	7440-28-0	mg/kg	0.782	0.110	J	0.197	0.0986	6020
MP-BH02-1	3/22/2012	0	2	Vanadium	7440-62-2	mg/kg	391	12.2	J	2.46	1.23	6020
MP-BH02-1	3/22/2012	0	2	Mercury	7439-97-6	mg/kg	15.6	0.0114	J	0.103	0.0103	7471A

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH02-1	3/22/2012	0	2	Percent Solids	10-02-6	%		95.2		1.00	1.00	D2216-90
MP-BH02-2	3/22/2012	5	6	Aluminum	7429-90-5	mg/kg	78002	3910		13.8	6.92	6010B
MP-BH02-2	3/22/2012	5	6	Antimony	7440-36-0	mg/kg	31.3	0.692	U	0.692	0.346	6010B
MP-BH02-2	3/22/2012	5	6	Beryllium	7440-41-7	mg/kg	156	0.132		0.0692	0.0346	6010B
MP-BH02-2	3/22/2012	5	6	Calcium	7440-70-2	mg/kg		4340		69.2	34.6	6010B
MP-BH02-2	3/22/2012	5	6	Iron (Ferrous)	7439-89-6	mg/kg	54750	13600		20.8	10.4	6010B
MP-BH02-2	3/22/2012	5	6	Magnesium	7439-95-4	mg/kg		2930		173	86.5	6010B
MP-BH02-2	3/22/2012	5	6	Potassium	7440-09-7	mg/kg		1140		34.6	17.3	6010B
MP-BH02-2	3/22/2012	5	6	Sodium	7440-23-5	mg/kg		59.5		17.3	8.65	6010B
MP-BH02-2	3/22/2012	5	6	Zinc	7440-66-6	mg/kg	23464	20.7		0.692	0.346	6010B
MP-BH02-2	3/22/2012	5	6	Arsenic	7440-38-2	mg/kg	3.90	1.60		1.50	0.748	6020
MP-BH02-2	3/22/2012	5	6	Barium	7440-39-3	mg/kg	15558	56.8		1.50	0.748	6020
MP-BH02-2	3/22/2012	5	6	Cadmium	7440-43-9	mg/kg	70.3	0.499	U	0.499	0.249	6020
MP-BH02-2	3/22/2012	5	6	Chromium	7440-47-3	mg/kg	117321	2.52		1.99	0.997	6020
MP-BH02-2	3/22/2012	5	6	Cobalt	7440-48-4	mg/kg		3.95		2.49	1.25	6020
MP-BH02-2	3/22/2012	5	6	Copper	7440-50-8	mg/kg	3129	7.45		2.99	1.50	6020

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH02-2	3/22/2012	5	6	Lead (Pb)	7439-92-1	mg/kg	400	9.80		0.997	0.499	6020
MP-BH02-2	3/22/2012	5	6	Manganese	7439-96-5	mg/kg	1865	224		9.97	4.99	6020
MP-BH02-2	3/22/2012	5	6	Nickel	7440-02-0	mg/kg	1560	3.89	J	3.99	1.99	6020
MP-BH02-2	3/22/2012	5	6	Selenium	7782-49-2	mg/kg	391	1.00	U	0.997	0.499	6020
MP-BH02-2	3/22/2012	5	6	Silver	7440-22-4	mg/kg	391	2.77	U	2.77	1.38	6020
MP-BH02-2	3/22/2012	5	6	Thallium	7440-28-0	mg/kg	0.782	0.199	U	0.199	0.0997	6020
MP-BH02-2	3/22/2012	5	6	Vanadium	7440-62-2	mg/kg	391	13.1		2.49	1.25	6020
MP-BH02-2	3/22/2012	5	6	Mercury	7439-97-6	mg/kg	15.6	0.0965	U	0.0965	0.00965	7471A
MP-BH02-2	3/22/2012	5	6	Percent Solids	10-02-6	%		98.1		1.00	1.00	D2216-90
MP-BH02-3	3/22/2012	9	10	Aluminum	7429-90-5	mg/kg	78002	3190		15.3	7.67	6010B
MP-BH02-3	3/22/2012	9	10	Antimony	7440-36-0	mg/kg	31.3	0.767	U	0.767	0.383	6010B
MP-BH02-3	3/22/2012	9	10	Beryllium	7440-41-7	mg/kg	156	0.0767	U	0.0767	0.0383	6010B
MP-BH02-3	3/22/2012	9	10	Calcium	7440-70-2	mg/kg		6500		76.7	38.3	6010B
MP-BH02-3	3/22/2012	9	10	Iron (Ferrous)	7439-89-6	mg/kg	54750	11700		23.0	11.5	6010B
MP-BH02-3	3/22/2012	9	10	Magnesium	7439-95-4	mg/kg		2760		192	95.9	6010B
MP-BH02-3	3/22/2012	9	10	Potassium	7440-09-7	mg/kg		833		38.3	19.2	6010B

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH02-3	3/22/2012	9	10	Sodium	7440-23-5	mg/kg		96.6		19.2	9.59	6010B
MP-BH02-3	3/22/2012	9	10	Zinc	7440-66-6	mg/kg	23464	17.8		0.767	0.383	6010B
MP-BH02-3	3/22/2012	9	10	Arsenic	7440-38-2	mg/kg	3.90	1.20	J	1.51	0.754	6020
MP-BH02-3	3/22/2012	9	10	Barium	7440-39-3	mg/kg	15558	35.6		1.51	0.754	6020
MP-BH02-3	3/22/2012	9	10	Cadmium	7440-43-9	mg/kg	70.3	0.503	U	0.503	0.251	6020
MP-BH02-3	3/22/2012	9	10	Chromium	7440-47-3	mg/kg	117321	1.95	J	2.01	1.01	6020
MP-BH02-3	3/22/2012	9	10	Cobalt	7440-48-4	mg/kg		3.49		2.51	1.26	6020
MP-BH02-3	3/22/2012	9	10	Copper	7440-50-8	mg/kg	3129	5.02		3.02	1.51	6020
MP-BH02-3	3/22/2012	9	10	Lead (Pb)	7439-92-1	mg/kg	400	7.50		1.01	0.503	6020
MP-BH02-3	3/22/2012	9	10	Manganese	7439-96-5	mg/kg	1865	166		1.01	0.503	6020
MP-BH02-3	3/22/2012	9	10	Nickel	7440-02-0	mg/kg	1560	3.21	J	4.02	2.01	6020
MP-BH02-3	3/22/2012	9	10	Selenium	7782-49-2	mg/kg	391	1.01	U	1.01	0.503	6020
MP-BH02-3	3/22/2012	9	10	Silver	7440-22-4	mg/kg	391	3.07	U	3.07	1.53	6020
MP-BH02-3	3/22/2012	9	10	Thallium	7440-28-0	mg/kg	0.782	0.201	U	0.201	0.101	6020
MP-BH02-3	3/22/2012	9	10	Vanadium	7440-62-2	mg/kg	391	11.0		2.51	1.26	6020
MP-BH02-3	3/22/2012	9	10	Mercury	7439-97-6	mg/kg	15.6	0.0968	U	0.0968	0.00968	7471A

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH02-3	3/22/2012	9	10	Percent Solids	10-02-6	%		98.9		1.00	1.00	D2216-90
MP-BH02-FD1	3/22/2012	0	2	Aluminum	7429-90-5	mg/kg	78002	5940		14.6	7.32	6010B
MP-BH02-FD1	3/22/2012	0	2	Antimony	7440-36-0	mg/kg	31.3	0.732	U	0.732	0.366	6010B
MP-BH02-FD1	3/22/2012	0	2	Beryllium	7440-41-7	mg/kg	156	0.565		0.0732	0.0366	6010B
MP-BH02-FD1	3/22/2012	0	2	Calcium	7440-70-2	mg/kg		2600		73.2	36.6	6010B
MP-BH02-FD1	3/22/2012	0	2	Iron (Ferrous)	7439-89-6	mg/kg	54750	14800		22.0	11.0	6010B
MP-BH02-FD1	3/22/2012	0	2	Magnesium	7439-95-4	mg/kg		2970		183	91.5	6010B
MP-BH02-FD1	3/22/2012	0	2	Potassium	7440-09-7	mg/kg		1800		36.6	18.3	6010B
MP-BH02-FD1	3/22/2012	0	2	Sodium	7440-23-5	mg/kg		36.8		18.3	9.15	6010B
MP-BH02-FD1	3/22/2012	0	2	Zinc	7440-66-6	mg/kg	23464	25.9		0.732	0.366	6010B
MP-BH02-FD1	3/22/2012	0	2	Arsenic	7440-38-2	mg/kg	3.90	1.44	J	1.48	0.740	6020
MP-BH02-FD1	3/22/2012	0	2	Barium	7440-39-3	mg/kg	15558	48.5		1.48	0.740	6020
MP-BH02-FD1	3/22/2012	0	2	Cadmium	7440-43-9	mg/kg	70.3	0.493	U	0.493	0.247	6020
MP-BH02-FD1	3/22/2012	0	2	Chromium	7440-47-3	mg/kg	117321	1.95	J	1.97	0.986	6020
MP-BH02-FD1	3/22/2012	0	2	Cobalt	7440-48-4	mg/kg		3.94		2.47	1.23	6020
MP-BH02-FD1	3/22/2012	0	2	Copper	7440-50-8	mg/kg	3129	8.72		2.96	1.48	6020

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH02-FD1	3/22/2012	0	2	Lead (Pb)	7439-92-1	mg/kg	400	11.8		0.986	0.493	6020
MP-BH02-FD1	3/22/2012	0	2	Manganese	7439-96-5	mg/kg	1865	257		9.86	4.93	6020
MP-BH02-FD1	3/22/2012	0	2	Nickel	7440-02-0	mg/kg	1560	3.48	J	3.94	1.97	6020
MP-BH02-FD1	3/22/2012	0	2	Selenium	7782-49-2	mg/kg	391	0.986	U	0.986	0.493	6020
MP-BH02-FD1	3/22/2012	0	2	Silver	7440-22-4	mg/kg	391	2.93	U	2.93	1.46	6020
MP-BH02-FD1	3/22/2012	0	2	Thallium	7440-28-0	mg/kg	0.782	0.197	U	0.197	0.0986	6020
MP-BH02-FD1	3/22/2012	0	2	Vanadium	7440-62-2	mg/kg	391	6.79	J	2.47	1.23	6020
MP-BH02-FD1	3/22/2012	0	2	Mercury	7439-97-6	mg/kg	15.6	0.0107	J	0.104	0.0104	7471A
MP-BH02-FD1	3/22/2012	0	2	Percent Solids	10-02-6	%		95.5		1.00	1.00	D2216-90
MP-BH03-1	3/22/2012	0	2	Aluminum	7429-90-5	mg/kg	78002	4690		14.5	7.27	6010B
MP-BH03-1	3/22/2012	0	2	Antimony	7440-36-0	mg/kg	31.3	0.727	U	0.727	0.363	6010B
MP-BH03-1	3/22/2012	0	2	Beryllium	7440-41-7	mg/kg	156	0.211		0.0727	0.0363	6010B
MP-BH03-1	3/22/2012	0	2	Calcium	7440-70-2	mg/kg		1800		72.7	36.3	6010B
MP-BH03-1	3/22/2012	0	2	Iron (Ferrous)	7439-89-6	mg/kg	54750	12600		21.8	10.9	6010B
MP-BH03-1	3/22/2012	0	2	Magnesium	7439-95-4	mg/kg		1820		182	90.8	6010B
MP-BH03-1	3/22/2012	0	2	Potassium	7440-09-7	mg/kg		1460		36.3	18.2	6010B

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH03-1	3/22/2012	0	2	Sodium	7440-23-5	mg/kg		28.2		18.2	9.08	6010B
MP-BH03-1	3/22/2012	0	2	Zinc	7440-66-6	mg/kg	23464	18.8		0.727	0.363	6010B
MP-BH03-1	3/22/2012	0	2	Arsenic	7440-38-2	mg/kg	3.90	1.54		1.50	0.752	6020
MP-BH03-1	3/22/2012	0	2	Barium	7440-39-3	mg/kg	15558	45.2		1.50	0.752	6020
MP-BH03-1	3/22/2012	0	2	Cadmium	7440-43-9	mg/kg	70.3	0.502	U	0.502	0.251	6020
MP-BH03-1	3/22/2012	0	2	Chromium	7440-47-3	mg/kg	117321	3.59		2.01	1.00	6020
MP-BH03-1	3/22/2012	0	2	Cobalt	7440-48-4	mg/kg		3.83		2.51	1.25	6020
MP-BH03-1	3/22/2012	0	2	Copper	7440-50-8	mg/kg	3129	8.30		3.01	1.50	6020
MP-BH03-1	3/22/2012	0	2	Lead (Pb)	7439-92-1	mg/kg	400	9.24		1.00	0.502	6020
MP-BH03-1	3/22/2012	0	2	Manganese	7439-96-5	mg/kg	1865	210		10.0	5.02	6020
MP-BH03-1	3/22/2012	0	2	Nickel	7440-02-0	mg/kg	1560	3.97	J	4.01	2.01	6020
MP-BH03-1	3/22/2012	0	2	Selenium	7782-49-2	mg/kg	391	1.00	U	1.00	0.502	6020
MP-BH03-1	3/22/2012	0	2	Silver	7440-22-4	mg/kg	391	2.91	U	2.91	1.45	6020
MP-BH03-1	3/22/2012	0	2	Thallium	7440-28-0	mg/kg	0.782	0.201	U	0.201	0.100	6020
MP-BH03-1	3/22/2012	0	2	Vanadium	7440-62-2	mg/kg	391	10.9		2.51	1.25	6020
MP-BH03-1	3/22/2012	0	2	Mercury	7439-97-6	mg/kg	15.6	0.0136	J	0.0969	0.00969	7471A

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH03-1	3/22/2012	0	2	Percent Solids	10-02-6	%		98.7		1.00	1.00	D2216-90
MP-BH03-2	3/22/2012	5	6	Aluminum	7429-90-5	mg/kg	78002	2770		13.5	6.77	6010B
MP-BH03-2	3/22/2012	5	6	Antimony	7440-36-0	mg/kg	31.3	0.677	U	0.677	0.339	6010B
MP-BH03-2	3/22/2012	5	6	Beryllium	7440-41-7	mg/kg	156	0.214		0.0677	0.0339	6010B
MP-BH03-2	3/22/2012	5	6	Calcium	7440-70-2	mg/kg		1740		67.7	33.9	6010B
MP-BH03-2	3/22/2012	5	6	Iron (Ferrous)	7439-89-6	mg/kg	54750	9980		20.3	10.2	6010B
MP-BH03-2	3/22/2012	5	6	Magnesium	7439-95-4	mg/kg		1270		169	84.7	6010B
MP-BH03-2	3/22/2012	5	6	Potassium	7440-09-7	mg/kg		840		33.9	16.9	6010B
MP-BH03-2	3/22/2012	5	6	Sodium	7440-23-5	mg/kg		33.4		16.9	8.47	6010B
MP-BH03-2	3/22/2012	5	6	Zinc	7440-66-6	mg/kg	23464	13.6		0.677	0.339	6010B
MP-BH03-2	3/22/2012	5	6	Arsenic	7440-38-2	mg/kg	3.90	0.811	J	1.45	0.724	6020
MP-BH03-2	3/22/2012	5	6	Barium	7440-39-3	mg/kg	15558	24.3		1.45	0.724	6020
MP-BH03-2	3/22/2012	5	6	Cadmium	7440-43-9	mg/kg	70.3	0.483	U	0.483	0.241	6020
MP-BH03-2	3/22/2012	5	6	Chromium	7440-47-3	mg/kg	117321	1.93	U	1.93	0.966	6020
MP-BH03-2	3/22/2012	5	6	Cobalt	7440-48-4	mg/kg		2.47		2.41	1.21	6020
MP-BH03-2	3/22/2012	5	6	Copper	7440-50-8	mg/kg	3129	4.35		2.90	1.45	6020

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH03-2	3/22/2012	5	6	Lead (Pb)	7439-92-1	mg/kg	400	4.82		0.966	0.483	6020
MP-BH03-2	3/22/2012	5	6	Manganese	7439-96-5	mg/kg	1865	100		0.966	0.483	6020
MP-BH03-2	3/22/2012	5	6	Nickel	7440-02-0	mg/kg	1560	2.05	J	3.86	1.93	6020
MP-BH03-2	3/22/2012	5	6	Selenium	7782-49-2	mg/kg	391	0.966	U	0.966	0.483	6020
MP-BH03-2	3/22/2012	5	6	Silver	7440-22-4	mg/kg	391	2.71	U	2.71	1.35	6020
MP-BH03-2	3/22/2012	5	6	Thallium	7440-28-0	mg/kg	0.782	0.193	U	0.193	0.0966	6020
MP-BH03-2	3/22/2012	5	6	Vanadium	7440-62-2	mg/kg	391	7.62		2.41	1.21	6020
MP-BH03-2	3/22/2012	5	6	Mercury	7439-97-6	mg/kg	15.6	0.0995	U	0.0995	0.00995	7471A
MP-BH03-2	3/22/2012	5	6	Percent Solids	10-02-6	%		98.4		1.00	1.00	D2216-90
MP-BH03-3	3/22/2012	9	10	Aluminum	7429-90-5	mg/kg	78002	879		14.7	7.36	6010B
MP-BH03-3	3/22/2012	9	10	Antimony	7440-36-0	mg/kg	31.3	0.736	U	0.736	0.368	6010B
MP-BH03-3	3/22/2012	9	10	Beryllium	7440-41-7	mg/kg	156	0.0736	U	0.0736	0.0368	6010B
MP-BH03-3	3/22/2012	9	10	Calcium	7440-70-2	mg/kg		1330		73.6	36.8	6010B
MP-BH03-3	3/22/2012	9	10	Iron (Ferrous)	7439-89-6	mg/kg	54750	4500		22.1	11.0	6010B
MP-BH03-3	3/22/2012	9	10	Magnesium	7439-95-4	mg/kg		626		184	92.0	6010B
MP-BH03-3	3/22/2012	9	10	Potassium	7440-09-7	mg/kg		349		36.8	18.4	6010B

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH03-3	3/22/2012	9	10	Sodium	7440-23-5	mg/kg		27.6		18.4	9.20	6010B
MP-BH03-3	3/22/2012	9	10	Zinc	7440-66-6	mg/kg	23464	7.39		0.736	0.368	6010B
MP-BH03-3	3/22/2012	9	10	Arsenic	7440-38-2	mg/kg	3.90	1.39	U	1.39	0.693	6020
MP-BH03-3	3/22/2012	9	10	Barium	7440-39-3	mg/kg	15558	27.9		1.39	0.693	6020
MP-BH03-3	3/22/2012	9	10	Cadmium	7440-43-9	mg/kg	70.3	0.462	U	0.462	0.231	6020
MP-BH03-3	3/22/2012	9	10	Chromium	7440-47-3	mg/kg	117321	1.38	J	1.85	0.925	6020
MP-BH03-3	3/22/2012	9	10	Cobalt	7440-48-4	mg/kg		2.01	J	2.31	1.16	6020
MP-BH03-3	3/22/2012	9	10	Copper	7440-50-8	mg/kg	3129	2.98		2.77	1.39	6020
MP-BH03-3	3/22/2012	9	10	Lead (Pb)	7439-92-1	mg/kg	400	5.96		0.925	0.462	6020
MP-BH03-3	3/22/2012	9	10	Manganese	7439-96-5	mg/kg	1865	146		0.925	0.462	6020
MP-BH03-3	3/22/2012	9	10	Nickel	7440-02-0	mg/kg	1560	3.70	U	3.70	1.85	6020
MP-BH03-3	3/22/2012	9	10	Selenium	7782-49-2	mg/kg	391	0.925	U	0.925	0.462	6020
MP-BH03-3	3/22/2012	9	10	Silver	7440-22-4	mg/kg	391	2.94	U	2.94	1.47	6020
MP-BH03-3	3/22/2012	9	10	Thallium	7440-28-0	mg/kg	0.782	0.185	U	0.185	0.0925	6020
MP-BH03-3	3/22/2012	9	10	Vanadium	7440-62-2	mg/kg	391	3.54		2.31	1.16	6020
MP-BH03-3	3/22/2012	9	10	Mercury	7439-97-6	mg/kg	15.6	0.0984	U	0.0984	0.00984	7471A

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH03-3	3/22/2012	9	10	Percent Solids	10-02-6	%		98.9		1.00	1.00	D2216-90
MP-BH04-1	3/23/2012	0	2	Aluminum	7429-90-5	mg/kg	78002	3910		13.7	6.85	6010B
MP-BH04-1	3/23/2012	0	2	Antimony	7440-36-0	mg/kg	31.3	0.685	U	0.685	0.343	6010B
MP-BH04-1	3/23/2012	0	2	Beryllium	7440-41-7	mg/kg	156	0.252		0.0685	0.0343	6010B
MP-BH04-1	3/23/2012	0	2	Calcium	7440-70-2	mg/kg		1770		68.5	34.3	6010B
MP-BH04-1	3/23/2012	0	2	Iron (Ferrous)	7439-89-6	mg/kg	54750	10700		20.6	10.3	6010B
MP-BH04-1	3/23/2012	0	2	Magnesium	7439-95-4	mg/kg		1830		171	85.7	6010B
MP-BH04-1	3/23/2012	0	2	Potassium	7440-09-7	mg/kg		1240		34.3	17.1	6010B
MP-BH04-1	3/23/2012	0	2	Sodium	7440-23-5	mg/kg		24.3		17.1	8.57	6010B
MP-BH04-1	3/23/2012	0	2	Zinc	7440-66-6	mg/kg	23464	16.3		0.685	0.343	6010B
MP-BH04-1	3/23/2012	0	2	Arsenic	7440-38-2	mg/kg	3.90	1.45	U	1.45	0.726	6020
MP-BH04-1	3/23/2012	0	2	Barium	7440-39-3	mg/kg	15558	10.8		1.45	0.726	6020
MP-BH04-1	3/23/2012	0	2	Cadmium	7440-43-9	mg/kg	70.3	0.484	U	0.484	0.242	6020
MP-BH04-1	3/23/2012	0	2	Chromium	7440-47-3	mg/kg	117321	1.93	U	1.93	0.967	6020
MP-BH04-1	3/23/2012	0	2	Cobalt	7440-48-4	mg/kg		2.42	U	2.42	1.21	6020
MP-BH04-1	3/23/2012	0	2	Copper	7440-50-8	mg/kg	3129	1.67	J	2.90	1.45	6020

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH04-1	3/23/2012	0	2	Lead (Pb)	7439-92-1	mg/kg	400	3.24		0.967	0.484	6020
MP-BH04-1	3/23/2012	0	2	Manganese	7439-96-5	mg/kg	1865	52.7		0.967	0.484	6020
MP-BH04-1	3/23/2012	0	2	Nickel	7440-02-0	mg/kg	1560	3.87	U	3.87	1.93	6020
MP-BH04-1	3/23/2012	0	2	Selenium	7782-49-2	mg/kg	391	0.967	U	0.967	0.484	6020
MP-BH04-1	3/23/2012	0	2	Silver	7440-22-4	mg/kg	391	2.74	U	2.74	1.37	6020
MP-BH04-1	3/23/2012	0	2	Thallium	7440-28-0	mg/kg	0.782	0.193	U	0.193	0.0967	6020
MP-BH04-1	3/23/2012	0	2	Vanadium	7440-62-2	mg/kg	391	2.54		2.42	1.21	6020
MP-BH04-1	3/23/2012	0	2	Mercury	7439-97-6	mg/kg	15.6	0.0991	U	0.0991	0.00991	7471A
MP-BH04-1	3/23/2012	0	2	Percent Solids	10-02-6	%		99.6		1.00	1.00	D2216-90
MP-BH04-2	3/23/2012	5	6	Aluminum	7429-90-5	mg/kg	78002	4520		13.7	6.83	6010B
MP-BH04-2	3/23/2012	5	6	Antimony	7440-36-0	mg/kg	31.3	0.683	U	0.683	0.341	6010B
MP-BH04-2	3/23/2012	5	6	Beryllium	7440-41-7	mg/kg	156	0.325		0.0683	0.0341	6010B
MP-BH04-2	3/23/2012	5	6	Calcium	7440-70-2	mg/kg		5190		68.3	34.1	6010B
MP-BH04-2	3/23/2012	5	6	Iron (Ferrous)	7439-89-6	mg/kg	54750	11700		20.5	10.2	6010B
MP-BH04-2	3/23/2012	5	6	Magnesium	7439-95-4	mg/kg		2940		171	85.4	6010B
MP-BH04-2	3/23/2012	5	6	Potassium	7440-09-7	mg/kg		1170		34.1	17.1	6010B

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH04-2	3/23/2012	5	6	Sodium	7440-23-5	mg/kg		71.5		17.1	8.54	6010B
MP-BH04-2	3/23/2012	5	6	Zinc	7440-66-6	mg/kg	23464	26.6		0.683	0.341	6010B
MP-BH04-2	3/23/2012	5	6	Arsenic	7440-38-2	mg/kg	3.90	1.25	J	1.52	0.761	6020
MP-BH04-2	3/23/2012	5	6	Barium	7440-39-3	mg/kg	15558	37.9		1.52	0.761	6020
MP-BH04-2	3/23/2012	5	6	Cadmium	7440-43-9	mg/kg	70.3	0.507	U	0.507	0.254	6020
MP-BH04-2	3/23/2012	5	6	Chromium	7440-47-3	mg/kg	117321	2.13		2.03	1.01	6020
MP-BH04-2	3/23/2012	5	6	Cobalt	7440-48-4	mg/kg		3.31		2.54	1.27	6020
MP-BH04-2	3/23/2012	5	6	Copper	7440-50-8	mg/kg	3129	5.10		3.04	1.52	6020
MP-BH04-2	3/23/2012	5	6	Lead (Pb)	7439-92-1	mg/kg	400	7.97		1.01	0.507	6020
MP-BH04-2	3/23/2012	5	6	Manganese	7439-96-5	mg/kg	1865	199		1.01	0.507	6020
MP-BH04-2	3/23/2012	5	6	Nickel	7440-02-0	mg/kg	1560	3.13	J	4.06	2.03	6020
MP-BH04-2	3/23/2012	5	6	Selenium	7782-49-2	mg/kg	391	1.01	U	1.01	0.507	6020
MP-BH04-2	3/23/2012	5	6	Silver	7440-22-4	mg/kg	391	2.73	U	2.73	1.37	6020
MP-BH04-2	3/23/2012	5	6	Thallium	7440-28-0	mg/kg	0.782	0.203	U	0.203	0.101	6020
MP-BH04-2	3/23/2012	5	6	Vanadium	7440-62-2	mg/kg	391	7.18		2.54	1.27	6020
MP-BH04-2	3/23/2012	5	6	Mercury	7439-97-6	mg/kg	15.6	0.0113	J	0.0973	0.00973	7471A

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH04-2	3/23/2012	5	6	Percent Solids	10-02-6	%		97.6		1.00	1.00	D2216-90
MP-BH04-3	3/23/2012	9	10	Aluminum	7429-90-5	mg/kg	78002	2020		14.7	7.34	6010B
MP-BH04-3	3/23/2012	9	10	Antimony	7440-36-0	mg/kg	31.3	0.734	U	0.734	0.367	6010B
MP-BH04-3	3/23/2012	9	10	Beryllium	7440-41-7	mg/kg	156	0.0734	UN	0.0734	0.0367	6010B
MP-BH04-3	3/23/2012	9	10	Calcium	7440-70-2	mg/kg		3670		73.4	36.7	6010B
MP-BH04-3	3/23/2012	9	10	Iron (Ferrous)	7439-89-6	mg/kg	54750	10300		22.0	11.0	6010B
MP-BH04-3	3/23/2012	9	10	Magnesium	7439-95-4	mg/kg		1260		184	91.8	6010B
MP-BH04-3	3/23/2012	9	10	Potassium	7440-09-7	mg/kg		528		36.7	18.4	6010B
MP-BH04-3	3/23/2012	9	10	Sodium	7440-23-5	mg/kg		97.0		18.4	9.18	6010B
MP-BH04-3	3/23/2012	9	10	Zinc	7440-66-6	mg/kg	23464	13.1		0.734	0.367	6010B
MP-BH04-3	3/23/2012	9	10	Arsenic	7440-38-2	mg/kg	3.90	2.12		1.46	0.729	6020
MP-BH04-3	3/23/2012	9	10	Barium	7440-39-3	mg/kg	15558	79.0		1.46	0.729	6020
MP-BH04-3	3/23/2012	9	10	Cadmium	7440-43-9	mg/kg	70.3	0.486	U	0.486	0.243	6020
MP-BH04-3	3/23/2012	9	10	Chromium	7440-47-3	mg/kg	117321	2.95	J-	1.94	0.972	6020
MP-BH04-3	3/23/2012	9	10	Cobalt	7440-48-4	mg/kg		4.76	J-	2.43	1.21	6020
MP-BH04-3	3/23/2012	9	10	Copper	7440-50-8	mg/kg	3129	8.18	J-	2.92	1.46	6020

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH04-3	3/23/2012	9	10	Lead (Pb)	7439-92-1	mg/kg	400	11.0	J-	0.972	0.486	6020
MP-BH04-3	3/23/2012	9	10	Manganese	7439-96-5	mg/kg	1865	274		9.72	4.86	6020
MP-BH04-3	3/23/2012	9	10	Nickel	7440-02-0	mg/kg	1560	4.92	J-	3.89	1.94	6020
MP-BH04-3	3/23/2012	9	10	Selenium	7782-49-2	mg/kg	391	0.972	U	0.972	0.486	6020
MP-BH04-3	3/23/2012	9	10	Silver	7440-22-4	mg/kg	391	2.94	U	2.94	1.47	6020
MP-BH04-3	3/23/2012	9	10	Thallium	7440-28-0	mg/kg	0.782	0.120	J	0.194	0.0972	6020
MP-BH04-3	3/23/2012	9	10	Vanadium	7440-62-2	mg/kg	391	14.5	J-	2.43	1.21	6020
MP-BH04-3	3/23/2012	9	10	Mercury	7439-97-6	mg/kg	15.6	0.101	U	0.101	0.0101	7471A
MP-BH04-3	3/23/2012	9	10	Percent Solids	10-02-6	%		97.4		1.00	1.00	D2216-90
MP-BH05-1	3/23/2012	0	2	Aluminum	7429-90-5	mg/kg	78002	1820		15.3	7.63	6010B
MP-BH05-1	3/23/2012	0	2	Antimony	7440-36-0	mg/kg	31.3	0.763	U	0.763	0.381	6010B
MP-BH05-1	3/23/2012	0	2	Beryllium	7440-41-7	mg/kg	156	0.188		0.153	0.0763	6010B
MP-BH05-1	3/23/2012	0	2	Calcium	7440-70-2	mg/kg		1780		15.3	7.63	6010B
MP-BH05-1	3/23/2012	0	2	Iron (Ferrous)	7439-89-6	mg/kg	54750	7490		4.58	2.29	6010B
MP-BH05-1	3/23/2012	0	2	Magnesium	7439-95-4	mg/kg		1400		38.1	19.1	6010B
MP-BH05-1	3/23/2012	0	2	Potassium	7440-09-7	mg/kg		875		38.1	19.1	6010B

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH05-1	3/23/2012	0	2	Sodium	7440-23-5	mg/kg		26.2		19.1	9.53	6010B
MP-BH05-1	3/23/2012	0	2	Zinc	7440-66-6	mg/kg	23464	11.2		0.763	0.381	6010B
MP-BH05-1	3/23/2012	0	2	Arsenic	7440-38-2	mg/kg	3.90	0.766	J	1.51	0.754	6020
MP-BH05-1	3/23/2012	0	2	Barium	7440-39-3	mg/kg	15558	15.6		1.51	0.754	6020
MP-BH05-1	3/23/2012	0	2	Cadmium	7440-43-9	mg/kg	70.3	0.502	U	0.502	0.251	6020
MP-BH05-1	3/23/2012	0	2	Chromium	7440-47-3	mg/kg	117321	2.01	U	2.01	1.00	6020
MP-BH05-1	3/23/2012	0	2	Cobalt	7440-48-4	mg/kg		1.72	J	2.51	1.26	6020
MP-BH05-1	3/23/2012	0	2	Copper	7440-50-8	mg/kg	3129	3.12		3.01	1.51	6020
MP-BH05-1	3/23/2012	0	2	Lead (Pb)	7439-92-1	mg/kg	400	4.59		1.00	0.502	6020
MP-BH05-1	3/23/2012	0	2	Manganese	7439-96-5	mg/kg	1865	93.2		1.00	0.502	6020
MP-BH05-1	3/23/2012	0	2	Nickel	7440-02-0	mg/kg	1560	4.02	U	4.02	2.01	6020
MP-BH05-1	3/23/2012	0	2	Selenium	7782-49-2	mg/kg	391	1.00	U	1.00	0.502	6020
MP-BH05-1	3/23/2012	0	2	Silver	7440-22-4	mg/kg	391	3.05	U	3.05	1.53	6020
MP-BH05-1	3/23/2012	0	2	Thallium	7440-28-0	mg/kg	0.782	0.201	U	0.201	0.100	6020
MP-BH05-1	3/23/2012	0	2	Vanadium	7440-62-2	mg/kg	391	5.91		2.51	1.26	6020
MP-BH05-1	3/23/2012	0	2	Mercury	7439-97-6	mg/kg	15.6	0.102	U	0.102	0.0102	7471A

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH05-1	3/23/2012	0	2	Percent Solids	10-02-6	%		97.9		1.00	1.00	D2216-90
MP-BH05-2	3/22/2012	5	6	Aluminum	7429-90-5	mg/kg	78002	1470	J	15.3	7.64	6010B
MP-BH05-2	3/22/2012	5	6	Antimony	7440-36-0	mg/kg	31.3	0.764	U	0.764	0.382	6010B
MP-BH05-2	3/22/2012	5	6	Beryllium	7440-41-7	mg/kg	156	0.153	U	0.153	0.0764	6010B
MP-BH05-2	3/22/2012	5	6	Calcium	7440-70-2	mg/kg		1690		15.3	7.64	6010B
MP-BH05-2	3/22/2012	5	6	Iron (Ferrous)	7439-89-6	mg/kg	54750	5860		4.58	2.29	6010B
MP-BH05-2	3/22/2012	5	6	Magnesium	7439-95-4	mg/kg		1240		38.2	19.1	6010B
MP-BH05-2	3/22/2012	5	6	Potassium	7440-09-7	mg/kg		698		38.2	19.1	6010B
MP-BH05-2	3/22/2012	5	6	Sodium	7440-23-5	mg/kg		21.8		19.1	9.55	6010B
MP-BH05-2	3/22/2012	5	6	Zinc	7440-66-6	mg/kg	23464	9.29		0.764	0.382	6010B
MP-BH05-2	3/22/2012	5	6	Arsenic	7440-38-2	mg/kg	3.90	1.52	U	1.52	0.760	6020
MP-BH05-2	3/22/2012	5	6	Barium	7440-39-3	mg/kg	15558	15.4		1.52	0.760	6020
MP-BH05-2	3/22/2012	5	6	Cadmium	7440-43-9	mg/kg	70.3	0.507	U	0.507	0.253	6020
MP-BH05-2	3/22/2012	5	6	Chromium	7440-47-3	mg/kg	117321	2.03	U	2.03	1.01	6020
MP-BH05-2	3/22/2012	5	6	Cobalt	7440-48-4	mg/kg		1.71	J	2.53	1.27	6020
MP-BH05-2	3/22/2012	5	6	Copper	7440-50-8	mg/kg	3129	1.98	J	3.04	1.52	6020

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH05-2	3/22/2012	5	6	Lead (Pb)	7439-92-1	mg/kg	400	3.50		1.01	0.507	6020
MP-BH05-2	3/22/2012	5	6	Manganese	7439-96-5	mg/kg	1865	71.5		1.01	0.507	6020
MP-BH05-2	3/22/2012	5	6	Nickel	7440-02-0	mg/kg	1560	4.05	U	4.05	2.03	6020
MP-BH05-2	3/22/2012	5	6	Selenium	7782-49-2	mg/kg	391	1.01	U	1.01	0.507	6020
MP-BH05-2	3/22/2012	5	6	Silver	7440-22-4	mg/kg	391	3.06	U	3.06	1.53	6020
MP-BH05-2	3/22/2012	5	6	Thallium	7440-28-0	mg/kg	0.782	0.203	U	0.203	0.101	6020
MP-BH05-2	3/22/2012	5	6	Vanadium	7440-62-2	mg/kg	391	4.25		2.53	1.27	6020
MP-BH05-2	3/22/2012	5	6	Mercury	7439-97-6	mg/kg	15.6	0.102	U	0.102	0.0102	7471A
MP-BH05-2	3/22/2012	5	6	Percent Solids	10-02-6	%		97.9		1.00	1.00	D2216-90
MP-BH05-3	3/22/2012	9	10	Aluminum	7429-90-5	mg/kg	78002	2010		14.0	7.02	6010B
MP-BH05-3	3/22/2012	9	10	Antimony	7440-36-0	mg/kg	31.3	0.702	U	0.702	0.351	6010B
MP-BH05-3	3/22/2012	9	10	Beryllium	7440-41-7	mg/kg	156	0.230		0.140	0.0702	6010B
MP-BH05-3	3/22/2012	9	10	Calcium	7440-70-2	mg/kg		2020		7.02	3.51	6010B
MP-BH05-3	3/22/2012	9	10	Iron (Ferrous)	7439-89-6	mg/kg	54750	8390		4.21	2.11	6010B
MP-BH05-3	3/22/2012	9	10	Magnesium	7439-95-4	mg/kg		1300		17.6	8.78	6010B
MP-BH05-3	3/22/2012	9	10	Potassium	7440-09-7	mg/kg		906		35.1	17.6	6010B

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH05-3	3/22/2012	9	10	Sodium	7440-23-5	mg/kg		29.5		17.6	8.78	6010B
MP-BH05-3	3/22/2012	9	10	Zinc	7440-66-6	mg/kg	23464	13.2		1.40	0.702	6010B
MP-BH05-3	3/22/2012	9	10	Arsenic	7440-38-2	mg/kg	3.90	1.38	U	1.38	0.692	6020
MP-BH05-3	3/22/2012	9	10	Barium	7440-39-3	mg/kg	15558	16.8		1.38	0.692	6020
MP-BH05-3	3/22/2012	9	10	Cadmium	7440-43-9	mg/kg	70.3	0.461	U	0.461	0.231	6020
MP-BH05-3	3/22/2012	9	10	Chromium	7440-47-3	mg/kg	117321	1.84	U	1.84	0.922	6020
MP-BH05-3	3/22/2012	9	10	Cobalt	7440-48-4	mg/kg		2.01	J	2.31	1.15	6020
MP-BH05-3	3/22/2012	9	10	Copper	7440-50-8	mg/kg	3129	2.36	J	2.77	1.38	6020
MP-BH05-3	3/22/2012	9	10	Lead (Pb)	7439-92-1	mg/kg	400	3.92		0.922	0.461	6020
MP-BH05-3	3/22/2012	9	10	Manganese	7439-96-5	mg/kg	1865	83.1		0.922	0.461	6020
MP-BH05-3	3/22/2012	9	10	Nickel	7440-02-0	mg/kg	1560	3.69	U	3.69	1.84	6020
MP-BH05-3	3/22/2012	9	10	Selenium	7782-49-2	mg/kg	391	0.922	U	0.922	0.461	6020
MP-BH05-3	3/22/2012	9	10	Silver	7440-22-4	mg/kg	391	2.81	U	2.81	1.40	6020
MP-BH05-3	3/22/2012	9	10	Thallium	7440-28-0	mg/kg	0.782	0.184	U	0.184	0.0922	6020
MP-BH05-3	3/22/2012	9	10	Vanadium	7440-62-2	mg/kg	391	6.02		2.31	1.15	6020
MP-BH05-3	3/22/2012	9	10	Mercury	7439-97-6	mg/kg	15.6	0.0957	U	0.0957	0.00957	7471A

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH05-3	3/22/2012	9	10	Percent Solids	10-02-6	%		98.7		1.00	1.00	D2216-90
MP-BH05-FD2	3/22/2012	5	6	Aluminum	7429-90-5	mg/kg	78002	2460	J	14.7	7.35	6010B
MP-BH05-FD2	3/22/2012	5	6	Antimony	7440-36-0	mg/kg	31.3	0.735	U	0.735	0.367	6010B
MP-BH05-FD2	3/22/2012	5	6	Beryllium	7440-41-7	mg/kg	156	0.260		0.147	0.0735	6010B
MP-BH05-FD2	3/22/2012	5	6	Calcium	7440-70-2	mg/kg		1900		7.35	3.67	6010B
MP-BH05-FD2	3/22/2012	5	6	Iron (Ferrous)	7439-89-6	mg/kg	54750	8380		4.41	2.20	6010B
MP-BH05-FD2	3/22/2012	5	6	Magnesium	7439-95-4	mg/kg		1570		18.4	9.18	6010B
MP-BH05-FD2	3/22/2012	5	6	Potassium	7440-09-7	mg/kg		1120		36.7	18.4	6010B
MP-BH05-FD2	3/22/2012	5	6	Sodium	7440-23-5	mg/kg		29.6		18.4	9.18	6010B
MP-BH05-FD2	3/22/2012	5	6	Zinc	7440-66-6	mg/kg	23464	15.1		1.47	0.735	6010B
MP-BH05-FD2	3/22/2012	5	6	Arsenic	7440-38-2	mg/kg	3.90	1.42	U	1.42	0.708	6020
MP-BH05-FD2	3/22/2012	5	6	Barium	7440-39-3	mg/kg	15558	15.8		1.42	0.708	6020
MP-BH05-FD2	3/22/2012	5	6	Cadmium	7440-43-9	mg/kg	70.3	0.472	U	0.472	0.236	6020
MP-BH05-FD2	3/22/2012	5	6	Chromium	7440-47-3	mg/kg	117321	1.89	U	1.89	0.944	6020
MP-BH05-FD2	3/22/2012	5	6	Cobalt	7440-48-4	mg/kg		1.77	J	2.36	1.18	6020
MP-BH05-FD2	3/22/2012	5	6	Copper	7440-50-8	mg/kg	3129	3.30		2.83	1.42	6020

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH05-FD2	3/22/2012	5	6	Lead (Pb)	7439-92-1	mg/kg	400	3.42		0.944	0.472	6020
MP-BH05-FD2	3/22/2012	5	6	Manganese	7439-96-5	mg/kg	1865	71.8		0.944	0.472	6020
MP-BH05-FD2	3/22/2012	5	6	Nickel	7440-02-0	mg/kg	1560	3.78	U	3.78	1.89	6020
MP-BH05-FD2	3/22/2012	5	6	Selenium	7782-49-2	mg/kg	391	0.944	U	0.944	0.472	6020
MP-BH05-FD2	3/22/2012	5	6	Silver	7440-22-4	mg/kg	391	2.94	U	2.94	1.47	6020
MP-BH05-FD2	3/22/2012	5	6	Thallium	7440-28-0	mg/kg	0.782	0.189	U	0.189	0.0944	6020
MP-BH05-FD2	3/22/2012	5	6	Vanadium	7440-62-2	mg/kg	391	4.38		2.36	1.18	6020
MP-BH05-FD2	3/22/2012	5	6	Mercury	7439-97-6	mg/kg	15.6	0.0972	U	0.0972	0.00972	7471A
MP-BH05-FD2	3/22/2012	5	6	Percent Solids	10-02-6	%		97.5		1.00	1.00	D2216-90
MP-BH06-1	3/22/2012	0	2	Aluminum	7429-90-5	mg/kg	78002	2470		15.1	7.54	6010B
MP-BH06-1	3/22/2012	0	2	Antimony	7440-36-0	mg/kg	31.3	0.754	U	0.754	0.377	6010B
MP-BH06-1	3/22/2012	0	2	Beryllium	7440-41-7	mg/kg	156	0.255		0.151	0.0754	6010B
MP-BH06-1	3/22/2012	0	2	Calcium	7440-70-2	mg/kg		2050		7.54	3.77	6010B
MP-BH06-1	3/22/2012	0	2	Iron (Ferrous)	7439-89-6	mg/kg	54750	7390		4.52	2.26	6010B
MP-BH06-1	3/22/2012	0	2	Magnesium	7439-95-4	mg/kg		1670		18.8	9.42	6010B
MP-BH06-1	3/22/2012	0	2	Potassium	7440-09-7	mg/kg		1330		37.7	18.8	6010B

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH06-1	3/22/2012	0	2	Sodium	7440-23-5	mg/kg		22.6		18.8	9.42	6010B
MP-BH06-1	3/22/2012	0	2	Zinc	7440-66-6	mg/kg	23464	17.3		1.51	0.754	6010B
MP-BH06-1	3/22/2012	0	2	Arsenic	7440-38-2	mg/kg	3.90	1.14	J	1.46	0.731	6020
MP-BH06-1	3/22/2012	0	2	Barium	7440-39-3	mg/kg	15558	31.6		1.46	0.731	6020
MP-BH06-1	3/22/2012	0	2	Cadmium	7440-43-9	mg/kg	70.3	0.487	U	0.487	0.244	6020
MP-BH06-1	3/22/2012	0	2	Chromium	7440-47-3	mg/kg	117321	1.46	J	1.95	0.975	6020
MP-BH06-1	3/22/2012	0	2	Cobalt	7440-48-4	mg/kg		3.26		2.44	1.22	6020
MP-BH06-1	3/22/2012	0	2	Copper	7440-50-8	mg/kg	3129	5.35		2.92	1.46	6020
MP-BH06-1	3/22/2012	0	2	Lead (Pb)	7439-92-1	mg/kg	400	6.55		0.975	0.487	6020
MP-BH06-1	3/22/2012	0	2	Manganese	7439-96-5	mg/kg	1865	140		0.975	0.487	6020
MP-BH06-1	3/22/2012	0	2	Nickel	7440-02-0	mg/kg	1560	2.77	J	3.90	1.95	6020
MP-BH06-1	3/22/2012	0	2	Selenium	7782-49-2	mg/kg	391	0.975	U	0.975	0.487	6020
MP-BH06-1	3/22/2012	0	2	Silver	7440-22-4	mg/kg	391	3.02	U	3.02	1.51	6020
MP-BH06-1	3/22/2012	0	2	Thallium	7440-28-0	mg/kg	0.782	0.195	U	0.195	0.0975	6020
MP-BH06-1	3/22/2012	0	2	Vanadium	7440-62-2	mg/kg	391	8.35		2.44	1.22	6020
MP-BH06-1	3/22/2012	0	2	Mercury	7439-97-6	mg/kg	15.6	0.101	U	0.101	0.0101	7471A

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH06-1	3/22/2012	0	2	Percent Solids	10-02-6	%		97.3		1.00	1.00	D2216-90
MP-BH06-2	3/22/2012	5	6	Aluminum	7429-90-5	mg/kg	78002	4840		15.5	7.77	6010B
MP-BH06-2	3/22/2012	5	6	Antimony	7440-36-0	mg/kg	31.3	0.777	U	0.777	0.389	6010B
MP-BH06-2	3/22/2012	5	6	Beryllium	7440-41-7	mg/kg	156	0.0777	U	0.0777	0.0389	6010B
MP-BH06-2	3/22/2012	5	6	Calcium	7440-70-2	mg/kg		2440		7.77	3.89	6010B
MP-BH06-2	3/22/2012	5	6	Iron (Ferrous)	7439-89-6	mg/kg	54750	11800		2.33	1.17	6010B
MP-BH06-2	3/22/2012	5	6	Magnesium	7439-95-4	mg/kg		2760		19.4	9.71	6010B
MP-BH06-2	3/22/2012	5	6	Potassium	7440-09-7	mg/kg		1980		38.9	19.4	6010B
MP-BH06-2	3/22/2012	5	6	Sodium	7440-23-5	mg/kg		37.0		19.4	9.71	6010B
MP-BH06-2	3/22/2012	5	6	Zinc	7440-66-6	mg/kg	23464	22.4		0.777	0.389	6010B
MP-BH06-2	3/22/2012	5	6	Arsenic	7440-38-2	mg/kg	3.90	1.59		1.52	0.760	6020
MP-BH06-2	3/22/2012	5	6	Barium	7440-39-3	mg/kg	15558	44.4		1.52	0.760	6020
MP-BH06-2	3/22/2012	5	6	Cadmium	7440-43-9	mg/kg	70.3	0.506	U	0.506	0.253	6020
MP-BH06-2	3/22/2012	5	6	Chromium	7440-47-3	mg/kg	117321	2.31		2.03	1.01	6020
MP-BH06-2	3/22/2012	5	6	Cobalt	7440-48-4	mg/kg		5.59		2.53	1.27	6020
MP-BH06-2	3/22/2012	5	6	Copper	7440-50-8	mg/kg	3129	6.42		3.04	1.52	6020

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH06-2	3/22/2012	5	6	Lead (Pb)	7439-92-1	mg/kg	400	7.90		1.01	0.506	6020
MP-BH06-2	3/22/2012	5	6	Manganese	7439-96-5	mg/kg	1865	191		1.01	0.506	6020
MP-BH06-2	3/22/2012	5	6	Nickel	7440-02-0	mg/kg	1560	4.57		4.05	2.03	6020
MP-BH06-2	3/22/2012	5	6	Selenium	7782-49-2	mg/kg	391	1.01	U	1.01	0.506	6020
MP-BH06-2	3/22/2012	5	6	Silver	7440-22-4	mg/kg	391	3.11	U	3.11	1.55	6020
MP-BH06-2	3/22/2012	5	6	Thallium	7440-28-0	mg/kg	0.782	0.129	J	0.203	0.101	6020
MP-BH06-2	3/22/2012	5	6	Vanadium	7440-62-2	mg/kg	391	15.8		2.53	1.27	6020
MP-BH06-2	3/22/2012	5	6	Mercury	7439-97-6	mg/kg	15.6	0.0965	U	0.0965	0.00965	7471A
MP-BH06-2	3/22/2012	5	6	Percent Solids	10-02-6	%		97.9		1.00	1.00	D2216-90
MP-BH06-3	3/22/2012	9	10	Aluminum	7429-90-5	mg/kg	78002	5320		15.3	7.65	6010B
MP-BH06-3	3/22/2012	9	10	Antimony	7440-36-0	mg/kg	31.3	0.765	U	0.765	0.383	6010B
MP-BH06-3	3/22/2012	9	10	Beryllium	7440-41-7	mg/kg	156	0.418		0.0765	0.0383	6010B
MP-BH06-3	3/22/2012	9	10	Calcium	7440-70-2	mg/kg		3770		7.65	3.83	6010B
MP-BH06-3	3/22/2012	9	10	Iron (Ferrous)	7439-89-6	mg/kg	54750	10300		2.30	1.15	6010B
MP-BH06-3	3/22/2012	9	10	Magnesium	7439-95-4	mg/kg		1930		19.1	9.57	6010B
MP-BH06-3	3/22/2012	9	10	Potassium	7440-09-7	mg/kg		1300		38.3	19.1	6010B

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH06-3	3/22/2012	9	10	Sodium	7440-23-5	mg/kg		64.2		19.1	9.57	6010B
MP-BH06-3	3/22/2012	9	10	Zinc	7440-66-6	mg/kg	23464	19.9		0.765	0.383	6010B
MP-BH06-3	3/22/2012	9	10	Arsenic	7440-38-2	mg/kg	3.90	1.61		1.47	0.733	6020
MP-BH06-3	3/22/2012	9	10	Barium	7440-39-3	mg/kg	15558	51.2		1.47	0.733	6020
MP-BH06-3	3/22/2012	9	10	Cadmium	7440-43-9	mg/kg	70.3	0.488	U	0.488	0.244	6020
MP-BH06-3	3/22/2012	9	10	Chromium	7440-47-3	mg/kg	117321	3.05		1.95	0.977	6020
MP-BH06-3	3/22/2012	9	10	Cobalt	7440-48-4	mg/kg		3.44		2.44	1.22	6020
MP-BH06-3	3/22/2012	9	10	Copper	7440-50-8	mg/kg	3129	4.93		2.93	1.47	6020
MP-BH06-3	3/22/2012	9	10	Lead (Pb)	7439-92-1	mg/kg	400	7.30		0.977	0.488	6020
MP-BH06-3	3/22/2012	9	10	Manganese	7439-96-5	mg/kg	1865	145		0.977	0.488	6020
MP-BH06-3	3/22/2012	9	10	Nickel	7440-02-0	mg/kg	1560	4.04		3.91	1.95	6020
MP-BH06-3	3/22/2012	9	10	Selenium	7782-49-2	mg/kg	391	0.977	U	0.977	0.488	6020
MP-BH06-3	3/22/2012	9	10	Silver	7440-22-4	mg/kg	391	3.06	U	3.06	1.53	6020
MP-BH06-3	3/22/2012	9	10	Thallium	7440-28-0	mg/kg	0.782	0.195	U	0.195	0.0977	6020
MP-BH06-3	3/22/2012	9	10	Vanadium	7440-62-2	mg/kg	391	10.0		2.44	1.22	6020
MP-BH06-3	3/22/2012	9	10	Mercury	7439-97-6	mg/kg	15.6	0.101	U	0.101	0.0101	7471A

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH06-3	3/22/2012	9	10	Percent Solids	10-02-6	%		96.8		1.00	1.00	D2216-90
MP-BH07-1	3/22/2012	0	2	Aluminum	7429-90-5	mg/kg	78002	4160		15.1	7.56	6010B
MP-BH07-1	3/22/2012	0	2	Antimony	7440-36-0	mg/kg	31.3	0.756	U	0.756	0.378	6010B
MP-BH07-1	3/22/2012	0	2	Beryllium	7440-41-7	mg/kg	156	0.389		0.151	0.0756	6010B
MP-BH07-1	3/22/2012	0	2	Calcium	7440-70-2	mg/kg		2570		7.56	3.78	6010B
MP-BH07-1	3/22/2012	0	2	Iron (Ferrous)	7439-89-6	mg/kg	54750	10000		4.53	2.27	6010B
MP-BH07-1	3/22/2012	0	2	Magnesium	7439-95-4	mg/kg		2260		18.9	9.44	6010B
MP-BH07-1	3/22/2012	0	2	Potassium	7440-09-7	mg/kg		1800		37.8	18.9	6010B
MP-BH07-1	3/22/2012	0	2	Sodium	7440-23-5	mg/kg		28.7		18.9	9.44	6010B
MP-BH07-1	3/22/2012	0	2	Zinc	7440-66-6	mg/kg	23464	23.5		1.51	0.756	6010B
MP-BH07-1	3/22/2012	0	2	Arsenic	7440-38-2	mg/kg	3.90	1.39	J	1.46	0.728	6020
MP-BH07-1	3/22/2012	0	2	Barium	7440-39-3	mg/kg	15558	40.2		1.46	0.728	6020
MP-BH07-1	3/22/2012	0	2	Cadmium	7440-43-9	mg/kg	70.3	0.485	U	0.485	0.243	6020
MP-BH07-1	3/22/2012	0	2	Chromium	7440-47-3	mg/kg	117321	1.72	J	1.94	0.971	6020
MP-BH07-1	3/22/2012	0	2	Cobalt	7440-48-4	mg/kg		3.99		2.43	1.21	6020
MP-BH07-1	3/22/2012	0	2	Copper	7440-50-8	mg/kg	3129	7.00		2.91	1.46	6020

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH07-1	3/22/2012	0	2	Lead (Pb)	7439-92-1	mg/kg	400	8.61		0.971	0.485	6020
MP-BH07-1	3/22/2012	0	2	Manganese	7439-96-5	mg/kg	1865	180		0.971	0.485	6020
MP-BH07-1	3/22/2012	0	2	Nickel	7440-02-0	mg/kg	1560	3.38	J	3.88	1.94	6020
MP-BH07-1	3/22/2012	0	2	Selenium	7782-49-2	mg/kg	391	0.971	U	0.971	0.485	6020
MP-BH07-1	3/22/2012	0	2	Silver	7440-22-4	mg/kg	391	3.02	U	3.02	1.51	6020
MP-BH07-1	3/22/2012	0	2	Thallium	7440-28-0	mg/kg	0.782	0.113	J	0.194	0.0971	6020
MP-BH07-1	3/22/2012	0	2	Vanadium	7440-62-2	mg/kg	391	10.4		2.43	1.21	6020
MP-BH07-1	3/22/2012	0	2	Mercury	7439-97-6	mg/kg	15.6	0.0108	J	0.0966	0.00966	7471A
MP-BH07-1	3/22/2012	0	2	Percent Solids	10-02-6	%		98.5		1.00	1.00	D2216-90
MP-BH07-2	3/22/2012	5	6	Aluminum	7429-90-5	mg/kg	78002	4500		14.4	7.21	6010B
MP-BH07-2	3/22/2012	5	6	Antimony	7440-36-0	mg/kg	31.3	0.721	U	0.721	0.361	6010B
MP-BH07-2	3/22/2012	5	6	Beryllium	7440-41-7	mg/kg	156	0.275		0.0721	0.0361	6010B
MP-BH07-2	3/22/2012	5	6	Calcium	7440-70-2	mg/kg		1720		7.21	3.61	6010B
MP-BH07-2	3/22/2012	5	6	Iron (Ferrous)	7439-89-6	mg/kg	54750	10500		2.16	1.08	6010B
MP-BH07-2	3/22/2012	5	6	Magnesium	7439-95-4	mg/kg		1460		18.0	9.01	6010B
MP-BH07-2	3/22/2012	5	6	Potassium	7440-09-7	mg/kg		1120		36.1	18.0	6010B

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH07-2	3/22/2012	5	6	Sodium	7440-23-5	mg/kg		33.9		18.0	9.01	6010B
MP-BH07-2	3/22/2012	5	6	Zinc	7440-66-6	mg/kg	23464	16.4		0.721	0.361	6010B
MP-BH07-2	3/22/2012	5	6	Arsenic	7440-38-2	mg/kg	3.90	1.44	J	1.48	0.741	6020
MP-BH07-2	3/22/2012	5	6	Barium	7440-39-3	mg/kg	15558	49.8		1.48	0.741	6020
MP-BH07-2	3/22/2012	5	6	Cadmium	7440-43-9	mg/kg	70.3	0.494	U	0.494	0.247	6020
MP-BH07-2	3/22/2012	5	6	Chromium	7440-47-3	mg/kg	117321	3.84		1.98	0.988	6020
MP-BH07-2	3/22/2012	5	6	Cobalt	7440-48-4	mg/kg		4.98		2.47	1.23	6020
MP-BH07-2	3/22/2012	5	6	Copper	7440-50-8	mg/kg	3129	5.99		2.96	1.48	6020
MP-BH07-2	3/22/2012	5	6	Lead (Pb)	7439-92-1	mg/kg	400	8.13		0.988	0.494	6020
MP-BH07-2	3/22/2012	5	6	Manganese	7439-96-5	mg/kg	1865	219		9.88	4.94	6020
MP-BH07-2	3/22/2012	5	6	Nickel	7440-02-0	mg/kg	1560	4.95		3.95	1.98	6020
MP-BH07-2	3/22/2012	5	6	Selenium	7782-49-2	mg/kg	391	0.526	J	0.988	0.494	6020
MP-BH07-2	3/22/2012	5	6	Silver	7440-22-4	mg/kg	391	2.88	U	2.88	1.44	6020
MP-BH07-2	3/22/2012	5	6	Thallium	7440-28-0	mg/kg	0.782	0.119	J	0.198	0.0988	6020
MP-BH07-2	3/22/2012	5	6	Vanadium	7440-62-2	mg/kg	391	11.8		2.47	1.23	6020
MP-BH07-2	3/22/2012	5	6	Mercury	7439-97-6	mg/kg	15.6	0.0982	U	0.0982	0.00982	7471A

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH07-2	3/22/2012	5	6	Percent Solids	10-02-6	%		97.2		1.00	1.00	D2216-90
MP-BH07-3	3/22/2012	9	10	Aluminum	7429-90-5	mg/kg	78002	3110		15.1	7.55	6010B
MP-BH07-3	3/22/2012	9	10	Antimony	7440-36-0	mg/kg	31.3	0.755	U	0.755	0.377	6010B
MP-BH07-3	3/22/2012	9	10	Beryllium	7440-41-7	mg/kg	156	0.112		0.0755	0.0377	6010B
MP-BH07-3	3/22/2012	9	10	Calcium	7440-70-2	mg/kg		2270		7.55	3.77	6010B
MP-BH07-3	3/22/2012	9	10	Iron (Ferrous)	7439-89-6	mg/kg	54750	11000		2.26	1.13	6010B
MP-BH07-3	3/22/2012	9	10	Magnesium	7439-95-4	mg/kg		1250		18.9	9.44	6010B
MP-BH07-3	3/22/2012	9	10	Potassium	7440-09-7	mg/kg		775		37.7	18.9	6010B
MP-BH07-3	3/22/2012	9	10	Sodium	7440-23-5	mg/kg		40.8		18.9	9.44	6010B
MP-BH07-3	3/22/2012	9	10	Zinc	7440-66-6	mg/kg	23464	14.9		0.755	0.377	6010B
MP-BH07-3	3/22/2012	9	10	Arsenic	7440-38-2	mg/kg	3.90	0.825	J	1.49	0.746	6020
MP-BH07-3	3/22/2012	9	10	Barium	7440-39-3	mg/kg	15558	37.1		1.49	0.746	6020
MP-BH07-3	3/22/2012	9	10	Cadmium	7440-43-9	mg/kg	70.3	0.498	U	0.498	0.249	6020
MP-BH07-3	3/22/2012	9	10	Chromium	7440-47-3	mg/kg	117321	1.14	J	1.99	0.995	6020
MP-BH07-3	3/22/2012	9	10	Cobalt	7440-48-4	mg/kg		2.13	J	2.49	1.24	6020
MP-BH07-3	3/22/2012	9	10	Copper	7440-50-8	mg/kg	3129	2.96	J	2.99	1.49	6020

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH07-3	3/22/2012	9	10	Lead (Pb)	7439-92-1	mg/kg	400	5.05		0.995	0.498	6020
MP-BH07-3	3/22/2012	9	10	Manganese	7439-96-5	mg/kg	1865	92.9		0.995	0.498	6020
MP-BH07-3	3/22/2012	9	10	Nickel	7440-02-0	mg/kg	1560	2.25	J	3.98	1.99	6020
MP-BH07-3	3/22/2012	9	10	Selenium	7782-49-2	mg/kg	391	1.00	U	0.995	0.498	6020
MP-BH07-3	3/22/2012	9	10	Silver	7440-22-4	mg/kg	391	3.02	U	3.02	1.51	6020
MP-BH07-3	3/22/2012	9	10	Thallium	7440-28-0	mg/kg	0.782	0.199	U	0.199	0.0995	6020
MP-BH07-3	3/22/2012	9	10	Vanadium	7440-62-2	mg/kg	391	5.70		2.49	1.24	6020
MP-BH07-3	3/22/2012	9	10	Mercury	7439-97-6	mg/kg	15.6	0.0997	U	0.0997	0.0100	7471A
MP-BH07-3	3/22/2012	9	10	Percent Solids	10-02-6	%		98.1		1.00	1.00	D2216-90
MP-BH08-1	3/22/2012	0	2	Aluminum	7429-90-5	mg/kg	78002	3540		14.4	7.22	6010B
MP-BH08-1	3/22/2012	0	2	Antimony	7440-36-0	mg/kg	31.3	0.722	UN	0.722	0.361	6010B
MP-BH08-1	3/22/2012	0	2	Beryllium	7440-41-7	mg/kg	156	0.369		0.144	0.0722	6010B
MP-BH08-1	3/22/2012	0	2	Calcium	7440-70-2	mg/kg		2100		7.22	3.61	6010B
MP-BH08-1	3/22/2012	0	2	Iron (Ferrous)	7439-89-6	mg/kg	54750	8980		4.33	2.17	6010B
MP-BH08-1	3/22/2012	0	2	Magnesium	7439-95-4	mg/kg		1940		18.0	9.02	6010B
MP-BH08-1	3/22/2012	0	2	Potassium	7440-09-7	mg/kg		1430		36.1	18.0	6010B

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH08-1	3/22/2012	0	2	Sodium	7440-23-5	mg/kg		26.6		18.0	9.02	6010B
MP-BH08-1	3/22/2012	0	2	Zinc	7440-66-6	mg/kg	23464	20.5	J-	1.44	0.722	6010B
MP-BH08-1	3/22/2012	0	2	Arsenic	7440-38-2	mg/kg	3.90	1.09	J	1.49	0.745	6020
MP-BH08-1	3/22/2012	0	2	Barium	7440-39-3	mg/kg	15558	40.9		1.49	0.745	6020
MP-BH08-1	3/22/2012	0	2	Cadmium	7440-43-9	mg/kg	70.3	0.496	U	0.496	0.248	6020
MP-BH08-1	3/22/2012	0	2	Chromium	7440-47-3	mg/kg	117321	1.64	J	1.99	0.993	6020
MP-BH08-1	3/22/2012	0	2	Cobalt	7440-48-4	mg/kg		3.81		2.48	1.24	6020
MP-BH08-1	3/22/2012	0	2	Copper	7440-50-8	mg/kg	3129	6.22		2.98	1.49	6020
MP-BH08-1	3/22/2012	0	2	Lead (Pb)	7439-92-1	mg/kg	400	7.33		0.993	0.496	6020
MP-BH08-1	3/22/2012	0	2	Manganese	7439-96-5	mg/kg	1865	166		9.93	4.96	6020
MP-BH08-1	3/22/2012	0	2	Nickel	7440-02-0	mg/kg	1560	3.13	J	3.97	1.99	6020
MP-BH08-1	3/22/2012	0	2	Selenium	7782-49-2	mg/kg	391	0.993	U	0.993	0.496	6020
MP-BH08-1	3/22/2012	0	2	Silver	7440-22-4	mg/kg	391	2.89	U	2.89	1.44	6020
MP-BH08-1	3/22/2012	0	2	Thallium	7440-28-0	mg/kg	0.782	0.199	U	0.199	0.0993	6020
MP-BH08-1	3/22/2012	0	2	Vanadium	7440-62-2	mg/kg	391	8.92		2.48	1.24	6020
MP-BH08-1	3/22/2012	0	2	Mercury	7439-97-6	mg/kg	15.6	0.101	U	0.101	0.0101	7471A

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH08-1	3/22/2012	0	2	Percent Solids	10-02-6	%		97.2		1.00	1.00	D2216-90
MP-BH08-2	3/22/2012	0	0	Aluminum	7429-90-5	mg/kg	78002	2360		14.7	7.35	6010B
MP-BH08-2	3/22/2012	0	0	Antimony	7440-36-0	mg/kg	31.3	0.735	U	0.735	0.367	6010B
MP-BH08-2	3/22/2012	0	0	Beryllium	7440-41-7	mg/kg	156	0.243		0.147	0.0735	6010B
MP-BH08-2	3/22/2012	0	0	Calcium	7440-70-2	mg/kg		2010		7.35	3.67	6010B
MP-BH08-2	3/22/2012	0	0	Iron (Ferrous)	7439-89-6	mg/kg	54750	8230		4.41	2.20	6010B
MP-BH08-2	3/22/2012	0	0	Magnesium	7439-95-4	mg/kg		1530		18.4	9.19	6010B
MP-BH08-2	3/22/2012	0	0	Potassium	7440-09-7	mg/kg		994		36.7	18.4	6010B
MP-BH08-2	3/22/2012	0	0	Sodium	7440-23-5	mg/kg		33.9		18.4	9.19	6010B
MP-BH08-2	3/22/2012	0	0	Zinc	7440-66-6	mg/kg	23464	14.4		1.47	0.735	6010B
MP-BH08-2	3/22/2012	0	0	Arsenic	7440-38-2	mg/kg	3.90	1.46	U	1.46	0.732	6020
MP-BH08-2	3/22/2012	0	0	Barium	7440-39-3	mg/kg	15558	22.5		1.46	0.732	6020
MP-BH08-2	3/22/2012	0	0	Cadmium	7440-43-9	mg/kg	70.3	0.488	U	0.488	0.244	6020
MP-BH08-2	3/22/2012	0	0	Chromium	7440-47-3	mg/kg	117321	1.95	U	1.95	0.976	6020
MP-BH08-2	3/22/2012	0	0	Cobalt	7440-48-4	mg/kg		2.45		2.44	1.22	6020
MP-BH08-2	3/22/2012	0	0	Copper	7440-50-8	mg/kg	3129	2.58	J	2.93	1.46	6020

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH08-2	3/22/2012	0	0	Lead (Pb)	7439-92-1	mg/kg	400	5.12		0.976	0.488	6020
MP-BH08-2	3/22/2012	0	0	Manganese	7439-96-5	mg/kg	1865	107		0.976	0.488	6020
MP-BH08-2	3/22/2012	0	0	Nickel	7440-02-0	mg/kg	1560	3.91	U	3.91	1.95	6020
MP-BH08-2	3/22/2012	0	0	Selenium	7782-49-2	mg/kg	391	0.976	U	0.976	0.488	6020
MP-BH08-2	3/22/2012	0	0	Silver	7440-22-4	mg/kg	391	2.94	U	2.94	1.47	6020
MP-BH08-2	3/22/2012	0	0	Thallium	7440-28-0	mg/kg	0.782	0.195	U	0.195	0.0976	6020
MP-BH08-2	3/22/2012	0	0	Vanadium	7440-62-2	mg/kg	391	5.98		2.44	1.22	6020
MP-BH08-2	3/22/2012	0	0	Mercury	7439-97-6	mg/kg	15.6	0.0983	U	0.0983	0.00983	7471A
MP-BH08-2	3/22/2012	0	0	Percent Solids	10-02-6	%		99.2		1.00	1.00	D2216-90
MP-BH08-3	3/22/2012	9	10	Aluminum	7429-90-5	mg/kg	78002	2650		13.6	6.82	6010B
MP-BH08-3	3/22/2012	9	10	Antimony	7440-36-0	mg/kg	31.3	0.682	U	0.682	0.341	6010B
MP-BH08-3	3/22/2012	9	10	Beryllium	7440-41-7	mg/kg	156	0.266		0.136	0.0682	6010B
MP-BH08-3	3/22/2012	9	10	Calcium	7440-70-2	mg/kg		2240		6.82	3.41	6010B
MP-BH08-3	3/22/2012	9	10	Iron (Ferrous)	7439-89-6	mg/kg	54750	9210		4.09	2.05	6010B
MP-BH08-3	3/22/2012	9	10	Magnesium	7439-95-4	mg/kg		1810		17.1	8.53	6010B
MP-BH08-3	3/22/2012	9	10	Potassium	7440-09-7	mg/kg		1090		34.1	17.1	6010B

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH08-3	3/22/2012	9	10	Sodium	7440-23-5	mg/kg		42.3		17.1	8.53	6010B
MP-BH08-3	3/22/2012	9	10	Zinc	7440-66-6	mg/kg	23464	16.2		1.36	0.682	6010B
MP-BH08-3	3/22/2012	9	10	Arsenic	7440-38-2	mg/kg	3.90	0.816	J	1.41	0.707	6020
MP-BH08-3	3/22/2012	9	10	Barium	7440-39-3	mg/kg	15558	26.1		1.41	0.707	6020
MP-BH08-3	3/22/2012	9	10	Cadmium	7440-43-9	mg/kg	70.3	0.471	U	0.471	0.236	6020
MP-BH08-3	3/22/2012	9	10	Chromium	7440-47-3	mg/kg	117321	1.26	J	1.88	0.942	6020
MP-BH08-3	3/22/2012	9	10	Cobalt	7440-48-4	mg/kg		3.08		2.36	1.18	6020
MP-BH08-3	3/22/2012	9	10	Copper	7440-50-8	mg/kg	3129	3.57		2.83	1.41	6020
MP-BH08-3	3/22/2012	9	10	Lead (Pb)	7439-92-1	mg/kg	400	5.10		0.942	0.471	6020
MP-BH08-3	3/22/2012	9	10	Manganese	7439-96-5	mg/kg	1865	105		0.942	0.471	6020
MP-BH08-3	3/22/2012	9	10	Nickel	7440-02-0	mg/kg	1560	2.47	J	3.77	1.88	6020
MP-BH08-3	3/22/2012	9	10	Selenium	7782-49-2	mg/kg	391	0.942	U	0.942	0.471	6020
MP-BH08-3	3/22/2012	9	10	Silver	7440-22-4	mg/kg	391	2.73	U	2.73	1.36	6020
MP-BH08-3	3/22/2012	9	10	Thallium	7440-28-0	mg/kg	0.782	0.188	U	0.188	0.0942	6020
MP-BH08-3	3/22/2012	9	10	Vanadium	7440-62-2	mg/kg	391	9.77		2.36	1.18	6020
MP-BH08-3	3/22/2012	9	10	Mercury	7439-97-6	mg/kg	15.6	0.0971	U	0.0971	0.00971	7471A

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH08-3	3/22/2012	9	10	Percent Solids	10-02-6	%		99.2		1.00	1.00	D2216-90
MP-BH09-1	3/22/2012	0	2	Aluminum	7429-90-5	mg/kg	78002	4290		15.2	7.62	6010B
MP-BH09-1	3/22/2012	0	2	Antimony	7440-36-0	mg/kg	31.3	0.762	U	0.762	0.381	6010B
MP-BH09-1	3/22/2012	0	2	Beryllium	7440-41-7	mg/kg	156	0.0762	U	0.0762	0.0381	6010B
MP-BH09-1	3/22/2012	0	2	Calcium	7440-70-2	mg/kg		2240		7.62	3.81	6010B
MP-BH09-1	3/22/2012	0	2	Iron (Ferrous)	7439-89-6	mg/kg	54750	9960		2.29	1.14	6010B
MP-BH09-1	3/22/2012	0	2	Magnesium	7439-95-4	mg/kg		2130		19.1	9.53	6010B
MP-BH09-1	3/22/2012	0	2	Potassium	7440-09-7	mg/kg		1540		38.1	19.1	6010B
MP-BH09-1	3/22/2012	0	2	Sodium	7440-23-5	mg/kg		33.2		19.1	9.53	6010B
MP-BH09-1	3/22/2012	0	2	Zinc	7440-66-6	mg/kg	23464	21.7		0.762	0.381	6010B
MP-BH09-1	3/22/2012	0	2	Arsenic	7440-38-2	mg/kg	3.90	1.63		1.50	0.750	6020
MP-BH09-1	3/22/2012	0	2	Barium	7440-39-3	mg/kg	15558	53.0		1.50	0.750	6020
MP-BH09-1	3/22/2012	0	2	Cadmium	7440-43-9	mg/kg	70.3	0.500	U	0.500	0.250	6020
MP-BH09-1	3/22/2012	0	2	Chromium	7440-47-3	mg/kg	117321	2.35		2.00	1.00	6020
MP-BH09-1	3/22/2012	0	2	Cobalt	7440-48-4	mg/kg		5.09		2.50	1.25	6020
MP-BH09-1	3/22/2012	0	2	Copper	7440-50-8	mg/kg	3129	8.40		3.00	1.50	6020

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH09-1	3/22/2012	0	2	Lead (Pb)	7439-92-1	mg/kg	400	10.7		1.00	0.500	6020
MP-BH09-1	3/22/2012	0	2	Manganese	7439-96-5	mg/kg	1865	213		10.0	5.00	6020
MP-BH09-1	3/22/2012	0	2	Nickel	7440-02-0	mg/kg	1560	4.32		4.00	2.00	6020
MP-BH09-1	3/22/2012	0	2	Selenium	7782-49-2	mg/kg	391	1.00	U	1.00	0.500	6020
MP-BH09-1	3/22/2012	0	2	Silver	7440-22-4	mg/kg	391	3.05	U	3.05	1.52	6020
MP-BH09-1	3/22/2012	0	2	Thallium	7440-28-0	mg/kg	0.782	0.110	J	0.200	0.100	6020
MP-BH09-1	3/22/2012	0	2	Vanadium	7440-62-2	mg/kg	391	12.3		2.50	1.25	6020
MP-BH09-1	3/22/2012	0	2	Mercury	7439-97-6	mg/kg	15.6	0.153		0.0972	0.00972	7471A
MP-BH09-1	3/22/2012	0	2	Percent Solids	10-02-6	%		96.7		1.00	1.00	D2216-90
MP-BH09-2	3/22/2012	5	6	Aluminum	7429-90-5	mg/kg	78002	3250		14.2	7.09	6010B
MP-BH09-2	3/22/2012	5	6	Antimony	7440-36-0	mg/kg	31.3	0.709	U	0.709	0.355	6010B
MP-BH09-2	3/22/2012	5	6	Beryllium	7440-41-7	mg/kg	156	0.336		0.142	0.0709	6010B
MP-BH09-2	3/22/2012	5	6	Calcium	7440-70-2	mg/kg		2270		7.09	3.55	6010B
MP-BH09-2	3/22/2012	5	6	Iron (Ferrous)	7439-89-6	mg/kg	54750	10200		4.26	2.13	6010B
MP-BH09-2	3/22/2012	5	6	Magnesium	7439-95-4	mg/kg		1920		17.7	8.87	6010B
MP-BH09-2	3/22/2012	5	6	Potassium	7440-09-7	mg/kg		1330		35.5	17.7	6010B

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH09-2	3/22/2012	5	6	Sodium	7440-23-5	mg/kg		37.7		17.7	8.87	6010B
MP-BH09-2	3/22/2012	5	6	Zinc	7440-66-6	mg/kg	23464	21.5		1.42	0.709	6010B
MP-BH09-2	3/22/2012	5	6	Arsenic	7440-38-2	mg/kg	3.90	1.46	U	1.46	0.731	6020
MP-BH09-2	3/22/2012	5	6	Barium	7440-39-3	mg/kg	15558	23.2		1.46	0.731	6020
MP-BH09-2	3/22/2012	5	6	Cadmium	7440-43-9	mg/kg	70.3	0.487	U	0.487	0.244	6020
MP-BH09-2	3/22/2012	5	6	Chromium	7440-47-3	mg/kg	117321	1.88	J	1.95	0.975	6020
MP-BH09-2	3/22/2012	5	6	Cobalt	7440-48-4	mg/kg		2.56		2.44	1.22	6020
MP-BH09-2	3/22/2012	5	6	Copper	7440-50-8	mg/kg	3129	3.69		2.92	1.46	6020
MP-BH09-2	3/22/2012	5	6	Lead (Pb)	7439-92-1	mg/kg	400	5.78		0.975	0.487	6020
MP-BH09-2	3/22/2012	5	6	Manganese	7439-96-5	mg/kg	1865	121		0.975	0.487	6020
MP-BH09-2	3/22/2012	5	6	Nickel	7440-02-0	mg/kg	1560	2.00	J	3.90	1.95	6020
MP-BH09-2	3/22/2012	5	6	Selenium	7782-49-2	mg/kg	391	0.975	U	0.975	0.487	6020
MP-BH09-2	3/22/2012	5	6	Silver	7440-22-4	mg/kg	391	2.84	U	2.84	1.42	6020
MP-BH09-2	3/22/2012	5	6	Thallium	7440-28-0	mg/kg	0.782	0.195	U	0.195	0.0975	6020
MP-BH09-2	3/22/2012	5	6	Vanadium	7440-62-2	mg/kg	391	6.34		2.44	1.22	6020
MP-BH09-2	3/22/2012	5	6	Mercury	7439-97-6	mg/kg	15.6	0.0992	U	0.0992	0.00992	7471A

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH09-2	3/22/2012	5	6	Percent Solids	10-02-6	%		99.0		1.00	1.00	D2216-90
MP-BH09-3	3/22/2012	9	10	Aluminum	7429-90-5	mg/kg	78002	1820		15.3	7.65	6010B
MP-BH09-3	3/22/2012	9	10	Antimony	7440-36-0	mg/kg	31.3	0.765	U	0.765	0.383	6010B
MP-BH09-3	3/22/2012	9	10	Beryllium	7440-41-7	mg/kg	156	0.202		0.153	0.0765	6010B
MP-BH09-3	3/22/2012	9	10	Calcium	7440-70-2	mg/kg		1480		7.65	3.83	6010B
MP-BH09-3	3/22/2012	9	10	Iron (Ferrous)	7439-89-6	mg/kg	54750	6500		4.59	2.30	6010B
MP-BH09-3	3/22/2012	9	10	Magnesium	7439-95-4	mg/kg		1050		19.1	9.56	6010B
MP-BH09-3	3/22/2012	9	10	Potassium	7440-09-7	mg/kg		677		38.3	19.1	6010B
MP-BH09-3	3/22/2012	9	10	Sodium	7440-23-5	mg/kg		37.1		19.1	9.56	6010B
MP-BH09-3	3/22/2012	9	10	Zinc	7440-66-6	mg/kg	23464	11.0		1.53	0.765	6010B
MP-BH09-3	3/22/2012	9	10	Arsenic	7440-38-2	mg/kg	3.90	0.699	J	1.39	0.697	6020
MP-BH09-3	3/22/2012	9	10	Barium	7440-39-3	mg/kg	15558	16.5		1.39	0.697	6020
MP-BH09-3	3/22/2012	9	10	Cadmium	7440-43-9	mg/kg	70.3	0.465	U	0.465	0.232	6020
MP-BH09-3	3/22/2012	9	10	Chromium	7440-47-3	mg/kg	117321	1.86	U	1.86	0.929	6020
MP-BH09-3	3/22/2012	9	10	Cobalt	7440-48-4	mg/kg		1.63	J	2.32	1.16	6020
MP-BH09-3	3/22/2012	9	10	Copper	7440-50-8	mg/kg	3129	2.60	J	2.79	1.39	6020

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH09-3	3/22/2012	9	10	Lead (Pb)	7439-92-1	mg/kg	400	4.22		0.929	0.465	6020
MP-BH09-3	3/22/2012	9	10	Manganese	7439-96-5	mg/kg	1865	78.8		0.929	0.465	6020
MP-BH09-3	3/22/2012	9	10	Nickel	7440-02-0	mg/kg	1560	3.72	U	3.72	1.86	6020
MP-BH09-3	3/22/2012	9	10	Selenium	7782-49-2	mg/kg	391	0.929	U	0.929	0.465	6020
MP-BH09-3	3/22/2012	9	10	Silver	7440-22-4	mg/kg	391	3.06	U	3.06	1.53	6020
MP-BH09-3	3/22/2012	9	10	Thallium	7440-28-0	mg/kg	0.782	0.186	U	0.186	0.0929	6020
MP-BH09-3	3/22/2012	9	10	Vanadium	7440-62-2	mg/kg	391	5.19		2.32	1.16	6020
MP-BH09-3	3/22/2012	9	10	Mercury	7439-97-6	mg/kg	15.6	0.0988	U	0.0988	0.00988	7471A
MP-BH09-3	3/22/2012	9	10	Percent Solids	10-02-6	%		99.1		1.00	1.00	D2216-90
MP-BH10-1	3/22/2012	0	2	Aluminum	7429-90-5	mg/kg	78002	1740		15.5	7.77	6010B
MP-BH10-1	3/22/2012	0	2	Antimony	7440-36-0	mg/kg	31.3	0.777	U	0.777	0.389	6010B
MP-BH10-1	3/22/2012	0	2	Beryllium	7440-41-7	mg/kg	156	0.139		0.0777	0.0389	6010B
MP-BH10-1	3/22/2012	0	2	Calcium	7440-70-2	mg/kg		1620		7.77	3.89	6010B
MP-BH10-1	3/22/2012	0	2	Iron (Ferrous)	7439-89-6	mg/kg	54750	5650		2.33	1.17	6010B
MP-BH10-1	3/22/2012	0	2	Magnesium	7439-95-4	mg/kg		996		19.4	9.72	6010B
MP-BH10-1	3/22/2012	0	2	Potassium	7440-09-7	mg/kg		825		38.9	19.4	6010B

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH10-1	3/22/2012	0	2	Sodium	7440-23-5	mg/kg		18.0	J	19.4	9.72	6010B
MP-BH10-1	3/22/2012	0	2	Zinc	7440-66-6	mg/kg	23464	12.6		0.777	0.389	6010B
MP-BH10-1	3/22/2012	0	2	Arsenic	7440-38-2	mg/kg	3.90	1.27	J	1.46	0.729	6020
MP-BH10-1	3/22/2012	0	2	Barium	7440-39-3	mg/kg	15558	38.0		1.46	0.729	6020
MP-BH10-1	3/22/2012	0	2	Cadmium	7440-43-9	mg/kg	70.3	0.486	U	0.486	0.243	6020
MP-BH10-1	3/22/2012	0	2	Chromium	7440-47-3	mg/kg	117321	1.89	J	1.94	0.972	6020
MP-BH10-1	3/22/2012	0	2	Cobalt	7440-48-4	mg/kg		3.18		2.43	1.21	6020
MP-BH10-1	3/22/2012	0	2	Copper	7440-50-8	mg/kg	3129	7.61		2.92	1.46	6020
MP-BH10-1	3/22/2012	0	2	Lead (Pb)	7439-92-1	mg/kg	400	8.46		0.972	0.486	6020
MP-BH10-1	3/22/2012	0	2	Manganese	7439-96-5	mg/kg	1865	192		0.972	0.486	6020
MP-BH10-1	3/22/2012	0	2	Nickel	7440-02-0	mg/kg	1560	2.89	J	3.89	1.94	6020
MP-BH10-1	3/22/2012	0	2	Selenium	7782-49-2	mg/kg	391	0.972	U	0.972	0.486	6020
MP-BH10-1	3/22/2012	0	2	Silver	7440-22-4	mg/kg	391	3.11	U	3.11	1.55	6020
MP-BH10-1	3/22/2012	0	2	Thallium	7440-28-0	mg/kg	0.782	0.194	U	0.194	0.0972	6020
MP-BH10-1	3/22/2012	0	2	Vanadium	7440-62-2	mg/kg	391	7.19		2.43	1.21	6020
MP-BH10-1	3/22/2012	0	2	Mercury	7439-97-6	mg/kg	15.6	0.0108	J	0.0975	0.00975	7471A

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH10-1	3/22/2012	0	2	Percent Solids	10-02-6	%		98.2		1.00	1.00	D2216-90
MP-BH10-2	3/22/2012	5	6	Aluminum	7429-90-5	mg/kg	78002	2740		15.5	7.74	6010B
MP-BH10-2	3/22/2012	5	6	Antimony	7440-36-0	mg/kg	31.3	0.774	U	0.774	0.387	6010B
MP-BH10-2	3/22/2012	5	6	Beryllium	7440-41-7	mg/kg	156	0.304		0.155	0.0774	6010B
MP-BH10-2	3/22/2012	5	6	Calcium	7440-70-2	mg/kg		1390		7.74	3.87	6010B
MP-BH10-2	3/22/2012	5	6	Iron (Ferrous)	7439-89-6	mg/kg	54750	7140		4.64	2.32	6010B
MP-BH10-2	3/22/2012	5	6	Magnesium	7439-95-4	mg/kg		1580		19.3	9.67	6010B
MP-BH10-2	3/22/2012	5	6	Potassium	7440-09-7	mg/kg		1140		38.7	19.3	6010B
MP-BH10-2	3/22/2012	5	6	Sodium	7440-23-5	mg/kg		27.5		19.3	9.67	6010B
MP-BH10-2	3/22/2012	5	6	Zinc	7440-66-6	mg/kg	23464	15.9		1.55	0.774	6010B
MP-BH10-2	3/22/2012	5	6	Arsenic	7440-38-2	mg/kg	3.90	1.48	U	1.48	0.739	6020
MP-BH10-2	3/22/2012	5	6	Barium	7440-39-3	mg/kg	15558	20.4		1.48	0.739	6020
MP-BH10-2	3/22/2012	5	6	Cadmium	7440-43-9	mg/kg	70.3	0.493	U	0.493	0.246	6020
MP-BH10-2	3/22/2012	5	6	Chromium	7440-47-3	mg/kg	117321	1.97	U	1.97	0.986	6020
MP-BH10-2	3/22/2012	5	6	Cobalt	7440-48-4	mg/kg		1.96	J	2.46	1.23	6020
MP-BH10-2	3/22/2012	5	6	Copper	7440-50-8	mg/kg	3129	3.17		2.96	1.48	6020

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH10-2	3/22/2012	5	6	Lead (Pb)	7439-92-1	mg/kg	400	4.95		0.986	0.493	6020
MP-BH10-2	3/22/2012	5	6	Manganese	7439-96-5	mg/kg	1865	101		0.986	0.493	6020
MP-BH10-2	3/22/2012	5	6	Nickel	7440-02-0	mg/kg	1560	3.94	U	3.94	1.97	6020
MP-BH10-2	3/22/2012	5	6	Selenium	7782-49-2	mg/kg	391	0.986	U	0.986	0.493	6020
MP-BH10-2	3/22/2012	5	6	Silver	7440-22-4	mg/kg	391	3.10	U	3.10	1.55	6020
MP-BH10-2	3/22/2012	5	6	Thallium	7440-28-0	mg/kg	0.782	0.197	U	0.197	0.0986	6020
MP-BH10-2	3/22/2012	5	6	Vanadium	7440-62-2	mg/kg	391	4.86		2.46	1.23	6020
MP-BH10-2	3/22/2012	5	6	Mercury	7439-97-6	mg/kg	15.6	0.0960	U	0.0960	0.00960	7471A
MP-BH10-2	3/22/2012	5	6	Percent Solids	10-02-6	%		98.7		1.00	1.00	D2216-90
MP-BH10-3	3/22/2012	9	10	Aluminum	7429-90-5	mg/kg	78002	5850		14.5	7.25	6010B
MP-BH10-3	3/22/2012	9	10	Antimony	7440-36-0	mg/kg	31.3	0.725	U	0.725	0.362	6010B
MP-BH10-3	3/22/2012	9	10	Beryllium	7440-41-7	mg/kg	156	0.362		0.0725	0.0362	6010B
MP-BH10-3	3/22/2012	9	10	Calcium	7440-70-2	mg/kg		1960		7.25	3.62	6010B
MP-BH10-3	3/22/2012	9	10	Iron (Ferrous)	7439-89-6	mg/kg	54750	10900		2.17	1.09	6010B
MP-BH10-3	3/22/2012	9	10	Magnesium	7439-95-4	mg/kg		1970		18.1	9.06	6010B
MP-BH10-3	3/22/2012	9	10	Potassium	7440-09-7	mg/kg		1390		36.2	18.1	6010B

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH10-3	3/22/2012	9	10	Sodium	7440-23-5	mg/kg		52.5		18.1	9.06	6010B
MP-BH10-3	3/22/2012	9	10	Zinc	7440-66-6	mg/kg	23464	24.7		0.725	0.362	6010B
MP-BH10-3	3/22/2012	9	10	Arsenic	7440-38-2	mg/kg	3.90	2.19		1.53	0.765	6020
MP-BH10-3	3/22/2012	9	10	Barium	7440-39-3	mg/kg	15558	75.2		1.53	0.765	6020
MP-BH10-3	3/22/2012	9	10	Cadmium	7440-43-9	mg/kg	70.3	0.510	U	0.510	0.255	6020
MP-BH10-3	3/22/2012	9	10	Chromium	7440-47-3	mg/kg	117321	4.40		2.04	1.02	6020
MP-BH10-3	3/22/2012	9	10	Cobalt	7440-48-4	mg/kg		6.01		2.55	1.27	6020
MP-BH10-3	3/22/2012	9	10	Copper	7440-50-8	mg/kg	3129	14.0		3.06	1.53	6020
MP-BH10-3	3/22/2012	9	10	Lead (Pb)	7439-92-1	mg/kg	400	14.0		1.02	0.510	6020
MP-BH10-3	3/22/2012	9	10	Manganese	7439-96-5	mg/kg	1865	291		10.2	5.10	6020
MP-BH10-3	3/22/2012	9	10	Nickel	7440-02-0	mg/kg	1560	6.37		4.08	2.04	6020
MP-BH10-3	3/22/2012	9	10	Selenium	7782-49-2	mg/kg	391	0.529	J	1.02	0.510	6020
MP-BH10-3	3/22/2012	9	10	Silver	7440-22-4	mg/kg	391	2.90	U	2.90	1.45	6020
MP-BH10-3	3/22/2012	9	10	Thallium	7440-28-0	mg/kg	0.782	0.120	J	0.204	0.102	6020
MP-BH10-3	3/22/2012	9	10	Vanadium	7440-62-2	mg/kg	391	13.3		2.55	1.27	6020
MP-BH10-3	3/22/2012	9	10	Mercury	7439-97-6	mg/kg	15.6	0.102	U	0.102	0.0102	7471A

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH10-3	3/22/2012	9	10	Percent Solids	10-02-6	%		96.7		1.00	1.00	D2216-90
MP-BH10-FD3	3/22/2012	9	10	Aluminum	7429-90-5	mg/kg	78002	4660		14.5	7.23	6010B
MP-BH10-FD3	3/22/2012	9	10	Antimony	7440-36-0	mg/kg	31.3	0.723	U	0.723	0.361	6010B
MP-BH10-FD3	3/22/2012	9	10	Beryllium	7440-41-7	mg/kg	156	0.478		0.0723	0.0361	6010B
MP-BH10-FD3	3/22/2012	9	10	Calcium	7440-70-2	mg/kg		1930		7.23	3.61	6010B
MP-BH10-FD3	3/22/2012	9	10	Iron (Ferrous)	7439-89-6	mg/kg	54750	9970		2.17	1.08	6010B
MP-BH10-FD3	3/22/2012	9	10	Magnesium	7439-95-4	mg/kg		1970		18.1	9.04	6010B
MP-BH10-FD3	3/22/2012	9	10	Potassium	7440-09-7	mg/kg		1280		36.1	18.1	6010B
MP-BH10-FD3	3/22/2012	9	10	Sodium	7440-23-5	mg/kg		49.2		18.1	9.04	6010B
MP-BH10-FD3	3/22/2012	9	10	Zinc	7440-66-6	mg/kg	23464	23.0		0.723	0.361	6010B
MP-BH10-FD3	3/22/2012	9	10	Arsenic	7440-38-2	mg/kg	3.90	2.54		1.55	0.774	6020
MP-BH10-FD3	3/22/2012	9	10	Barium	7440-39-3	mg/kg	15558	80.8		1.55	0.774	6020
MP-BH10-FD3	3/22/2012	9	10	Cadmium	7440-43-9	mg/kg	70.3	0.516	U	0.516	0.258	6020
MP-BH10-FD3	3/22/2012	9	10	Chromium	7440-47-3	mg/kg	117321	5.10		2.06	1.03	6020
MP-BH10-FD3	3/22/2012	9	10	Cobalt	7440-48-4	mg/kg		6.27		2.58	1.29	6020
MP-BH10-FD3	3/22/2012	9	10	Copper	7440-50-8	mg/kg	3129	15.0		3.09	1.55	6020

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH10-FD3	3/22/2012	9	10	Lead (Pb)	7439-92-1	mg/kg	400	15.4		1.03	0.516	6020
MP-BH10-FD3	3/22/2012	9	10	Manganese	7439-96-5	mg/kg	1865	274		10.3	5.16	6020
MP-BH10-FD3	3/22/2012	9	10	Nickel	7440-02-0	mg/kg	1560	6.76		4.13	2.06	6020
MP-BH10-FD3	3/22/2012	9	10	Selenium	7782-49-2	mg/kg	391	1.03	U	1.03	0.516	6020
MP-BH10-FD3	3/22/2012	9	10	Silver	7440-22-4	mg/kg	391	2.89	U	2.89	1.45	6020
MP-BH10-FD3	3/22/2012	9	10	Thallium	7440-28-0	mg/kg	0.782	0.134	J	0.206	0.103	6020
MP-BH10-FD3	3/22/2012	9	10	Vanadium	7440-62-2	mg/kg	391	15.4		2.58	1.29	6020
MP-BH10-FD3	3/22/2012	9	10	Mercury	7439-97-6	mg/kg	15.6	0.0122	J	0.101	0.0101	7471A
MP-BH10-FD3	3/22/2012	9	10	Percent Solids	10-02-6	%		96.2		1.00	1.00	D2216-90
MP-BH11-1	3/22/2012	0	2	Aluminum	7429-90-5	mg/kg	78002	4670		14.5	7.23	6010B
MP-BH11-1	3/22/2012	0	2	Antimony	7440-36-0	mg/kg	31.3	0.723	U	0.723	0.361	6010B
MP-BH11-1	3/22/2012	0	2	Beryllium	7440-41-7	mg/kg	156	0.0553	J	0.0723	0.0361	6010B
MP-BH11-1	3/22/2012	0	2	Calcium	7440-70-2	mg/kg		1740		7.23	3.61	6010B
MP-BH11-1	3/22/2012	0	2	Iron (Ferrous)	7439-89-6	mg/kg	54750	11000		2.17	1.08	6010B
MP-BH11-1	3/22/2012	0	2	Magnesium	7439-95-4	mg/kg		1430		18.1	9.04	6010B
MP-BH11-1	3/22/2012	0	2	Potassium	7440-09-7	mg/kg		1490		36.1	18.1	6010B

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH11-1	3/22/2012	0	2	Sodium	7440-23-5	mg/kg		25.0		18.1	9.04	6010B
MP-BH11-1	3/22/2012	0	2	Zinc	7440-66-6	mg/kg	23464	19.1		0.723	0.361	6010B
MP-BH11-1	3/22/2012	0	2	Arsenic	7440-38-2	mg/kg	3.90	1.59		1.51	0.754	6020
MP-BH11-1	3/22/2012	0	2	Barium	7440-39-3	mg/kg	15558	40.4		1.51	0.754	6020
MP-BH11-1	3/22/2012	0	2	Cadmium	7440-43-9	mg/kg	70.3	0.503	U	0.503	0.251	6020
MP-BH11-1	3/22/2012	0	2	Chromium	7440-47-3	mg/kg	117321	2.82		2.01	1.01	6020
MP-BH11-1	3/22/2012	0	2	Cobalt	7440-48-4	mg/kg		3.84		2.51	1.26	6020
MP-BH11-1	3/22/2012	0	2	Copper	7440-50-8	mg/kg	3129	6.26		3.02	1.51	6020
MP-BH11-1	3/22/2012	0	2	Lead (Pb)	7439-92-1	mg/kg	400	10.7		1.01	0.503	6020
MP-BH11-1	3/22/2012	0	2	Manganese	7439-96-5	mg/kg	1865	164		10.1	5.03	6020
MP-BH11-1	3/22/2012	0	2	Nickel	7440-02-0	mg/kg	1560	3.98	J	4.02	2.01	6020
MP-BH11-1	3/22/2012	0	2	Selenium	7782-49-2	mg/kg	391	1.01	U	1.01	0.503	6020
MP-BH11-1	3/22/2012	0	2	Silver	7440-22-4	mg/kg	391	2.89	U	2.89	1.45	6020
MP-BH11-1	3/22/2012	0	2	Thallium	7440-28-0	mg/kg	0.782	0.201	U	0.201	0.101	6020
MP-BH11-1	3/22/2012	0	2	Vanadium	7440-62-2	mg/kg	391	9.76		2.51	1.26	6020
MP-BH11-1	3/22/2012	0	2	Mercury	7439-97-6	mg/kg	15.6	0.0977	U	0.0977	0.00977	7471A

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH11-1	3/22/2012	0	2	Percent Solids	10-02-6	%		97.9		1.00	1.00	D2216-90
MP-BH11-2	3/22/2012	5	6	Aluminum	7429-90-5	mg/kg	78002	2300		14.2	7.11	6010B
MP-BH11-2	3/22/2012	5	6	Antimony	7440-36-0	mg/kg	31.3	0.711	U	0.711	0.356	6010B
MP-BH11-2	3/22/2012	5	6	Beryllium	7440-41-7	mg/kg	156	0.165		0.0711	0.0356	6010B
MP-BH11-2	3/22/2012	5	6	Calcium	7440-70-2	mg/kg		4750		7.11	3.56	6010B
MP-BH11-2	3/22/2012	5	6	Iron (Ferrous)	7439-89-6	mg/kg	54750	7040		2.13	1.07	6010B
MP-BH11-2	3/22/2012	5	6	Magnesium	7439-95-4	mg/kg		1400		17.8	8.89	6010B
MP-BH11-2	3/22/2012	5	6	Potassium	7440-09-7	mg/kg		917		35.6	17.8	6010B
MP-BH11-2	3/22/2012	5	6	Sodium	7440-23-5	mg/kg		34.6		17.8	8.89	6010B
MP-BH11-2	3/22/2012	5	6	Zinc	7440-66-6	mg/kg	23464	15.1		0.711	0.356	6010B
MP-BH11-2	3/22/2012	5	6	Arsenic	7440-38-2	mg/kg	3.90	1.09	J	1.51	0.753	6020
MP-BH11-2	3/22/2012	5	6	Barium	7440-39-3	mg/kg	15558	37.9		1.51	0.753	6020
MP-BH11-2	3/22/2012	5	6	Cadmium	7440-43-9	mg/kg	70.3	0.502	U	0.502	0.251	6020
MP-BH11-2	3/22/2012	5	6	Chromium	7440-47-3	mg/kg	117321	1.75	J	2.01	1.00	6020
MP-BH11-2	3/22/2012	5	6	Cobalt	7440-48-4	mg/kg		3.01		2.51	1.26	6020
MP-BH11-2	3/22/2012	5	6	Copper	7440-50-8	mg/kg	3129	4.74		3.01	1.51	6020

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH11-2	3/22/2012	5	6	Lead (Pb)	7439-92-1	mg/kg	400	7.13		1.00	0.502	6020
MP-BH11-2	3/22/2012	5	6	Manganese	7439-96-5	mg/kg	1865	170		1.00	0.502	6020
MP-BH11-2	3/22/2012	5	6	Nickel	7440-02-0	mg/kg	1560	3.02	J	4.02	2.01	6020
MP-BH11-2	3/22/2012	5	6	Selenium	7782-49-2	mg/kg	391	1.00	U	1.00	0.502	6020
MP-BH11-2	3/22/2012	5	6	Silver	7440-22-4	mg/kg	391	2.84	U	2.84	1.42	6020
MP-BH11-2	3/22/2012	5	6	Thallium	7440-28-0	mg/kg	0.782	0.201	U	0.201	0.100	6020
MP-BH11-2	3/22/2012	5	6	Vanadium	7440-62-2	mg/kg	391	8.37		2.51	1.26	6020
MP-BH11-2	3/22/2012	5	6	Mercury	7439-97-6	mg/kg	15.6	0.0969	U	0.0969	0.00969	7471A
MP-BH11-2	3/22/2012	5	6	Percent Solids	10-02-6	%		98.6		1.00	1.00	D2216-90
MP-BH11-3	3/22/2012	9	10	Aluminum	7429-90-5	mg/kg	78002	2250		15.6	7.79	6010B
MP-BH11-3	3/22/2012	9	10	Antimony	7440-36-0	mg/kg	31.3	0.779	U	0.779	0.390	6010B
MP-BH11-3	3/22/2012	9	10	Beryllium	7440-41-7	mg/kg	156	0.210		0.0779	0.0390	6010B
MP-BH11-3	3/22/2012	9	10	Calcium	7440-70-2	mg/kg		1720		7.79	3.90	6010B
MP-BH11-3	3/22/2012	9	10	Iron (Ferrous)	7439-89-6	mg/kg	54750	5500		2.34	1.17	6010B
MP-BH11-3	3/22/2012	9	10	Magnesium	7439-95-4	mg/kg		1240		19.5	9.74	6010B
MP-BH11-3	3/22/2012	9	10	Potassium	7440-09-7	mg/kg		628		39.0	19.5	6010B

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH11-3	3/22/2012	9	10	Sodium	7440-23-5	mg/kg		58.8		19.5	9.74	6010B
MP-BH11-3	3/22/2012	9	10	Zinc	7440-66-6	mg/kg	23464	12.2		0.779	0.390	6010B
MP-BH11-3	3/22/2012	9	10	Arsenic	7440-38-2	mg/kg	3.90	1.30	J	1.44	0.720	6020
MP-BH11-3	3/22/2012	9	10	Barium	7440-39-3	mg/kg	15558	43.0		1.44	0.720	6020
MP-BH11-3	3/22/2012	9	10	Cadmium	7440-43-9	mg/kg	70.3	0.480	U	0.480	0.240	6020
MP-BH11-3	3/22/2012	9	10	Chromium	7440-47-3	mg/kg	117321	2.19		1.92	0.960	6020
MP-BH11-3	3/22/2012	9	10	Cobalt	7440-48-4	mg/kg		3.70		2.40	1.20	6020
MP-BH11-3	3/22/2012	9	10	Copper	7440-50-8	mg/kg	3129	6.74		2.88	1.44	6020
MP-BH11-3	3/22/2012	9	10	Lead (Pb)	7439-92-1	mg/kg	400	8.04		0.960	0.480	6020
MP-BH11-3	3/22/2012	9	10	Manganese	7439-96-5	mg/kg	1865	146		9.60	4.80	6020
MP-BH11-3	3/22/2012	9	10	Nickel	7440-02-0	mg/kg	1560	3.69	J	3.84	1.92	6020
MP-BH11-3	3/22/2012	9	10	Selenium	7782-49-2	mg/kg	391	0.960	U	0.960	0.480	6020
MP-BH11-3	3/22/2012	9	10	Silver	7440-22-4	mg/kg	391	3.12	U	3.12	1.56	6020
MP-BH11-3	3/22/2012	9	10	Thallium	7440-28-0	mg/kg	0.782	0.192	U	0.192	0.0960	6020
MP-BH11-3	3/22/2012	9	10	Vanadium	7440-62-2	mg/kg	391	8.61		2.40	1.20	6020
MP-BH11-3	3/22/2012	9	10	Mercury	7439-97-6	mg/kg	15.6	0.0999	U	0.0999	0.0100	7471A

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH11-3	3/22/2012	9	10	Percent Solids	10-02-6	%		98.4		1.00	1.00	D2216-90
MP-BH12-1	3/22/2012	0	2	Aluminum	7429-90-5	mg/kg	78002	4630		14.4	7.18	6010B
MP-BH12-1	3/22/2012	0	2	Antimony	7440-36-0	mg/kg	31.3	0.718	U	0.718	0.359	6010B
MP-BH12-1	3/22/2012	0	2	Beryllium	7440-41-7	mg/kg	156	0.195		0.0718	0.0359	6010B
MP-BH12-1	3/22/2012	0	2	Calcium	7440-70-2	mg/kg		1390		7.18	3.59	6010B
MP-BH12-1	3/22/2012	0	2	Iron (Ferrous)	7439-89-6	mg/kg	54750	10100		2.15	1.08	6010B
MP-BH12-1	3/22/2012	0	2	Magnesium	7439-95-4	mg/kg		1460		18.0	8.98	6010B
MP-BH12-1	3/22/2012	0	2	Potassium	7440-09-7	mg/kg		1470		35.9	18.0	6010B
MP-BH12-1	3/22/2012	0	2	Sodium	7440-23-5	mg/kg		23.3		18.0	8.98	6010B
MP-BH12-1	3/22/2012	0	2	Zinc	7440-66-6	mg/kg	23464	18.2		0.718	0.359	6010B
MP-BH12-1	3/22/2012	0	2	Arsenic	7440-38-2	mg/kg	3.90	1.70		1.53	0.767	6020
MP-BH12-1	3/22/2012	0	2	Barium	7440-39-3	mg/kg	15558	50.0		1.53	0.767	6020
MP-BH12-1	3/22/2012	0	2	Cadmium	7440-43-9	mg/kg	70.3	0.511	U	0.511	0.256	6020
MP-BH12-1	3/22/2012	0	2	Chromium	7440-47-3	mg/kg	117321	3.35		2.05	1.02	6020
MP-BH12-1	3/22/2012	0	2	Cobalt	7440-48-4	mg/kg		4.66		2.56	1.28	6020
MP-BH12-1	3/22/2012	0	2	Copper	7440-50-8	mg/kg	3129	6.87		3.07	1.53	6020

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH12-1	3/22/2012	0	2	Lead (Pb)	7439-92-1	mg/kg	400	11.3		1.02	0.511	6020
MP-BH12-1	3/22/2012	0	2	Manganese	7439-96-5	mg/kg	1865	243		10.2	5.11	6020
MP-BH12-1	3/22/2012	0	2	Nickel	7440-02-0	mg/kg	1560	4.75		4.09	2.05	6020
MP-BH12-1	3/22/2012	0	2	Selenium	7782-49-2	mg/kg	391	1.02	U	1.02	0.511	6020
MP-BH12-1	3/22/2012	0	2	Silver	7440-22-4	mg/kg	391	2.87	U	2.87	1.44	6020
MP-BH12-1	3/22/2012	0	2	Thallium	7440-28-0	mg/kg	0.782	0.205	U	0.205	0.102	6020
MP-BH12-1	3/22/2012	0	2	Vanadium	7440-62-2	mg/kg	391	10.9		2.56	1.28	6020
MP-BH12-1	3/22/2012	0	2	Mercury	7439-97-6	mg/kg	15.6	0.103	U	0.103	0.0103	7471A
MP-BH12-1	3/22/2012	0	2	Percent Solids	10-02-6	%		96.8		1.00	1.00	D2216-90
MP-BH12-2	3/22/2012	5	6	Aluminum	7429-90-5	mg/kg	78002	3000		14.2	7.08	6010B
MP-BH12-2	3/22/2012	5	6	Antimony	7440-36-0	mg/kg	31.3	0.708	U	0.708	0.354	6010B
MP-BH12-2	3/22/2012	5	6	Beryllium	7440-41-7	mg/kg	156	0.275		0.0708	0.0354	6010B
MP-BH12-2	3/22/2012	5	6	Calcium	7440-70-2	mg/kg		5520		7.08	3.54	6010B
MP-BH12-2	3/22/2012	5	6	Iron (Ferrous)	7439-89-6	mg/kg	54750	7770		2.12	1.06	6010B
MP-BH12-2	3/22/2012	5	6	Magnesium	7439-95-4	mg/kg		2000		17.7	8.85	6010B
MP-BH12-2	3/22/2012	5	6	Potassium	7440-09-7	mg/kg		811		35.4	17.7	6010B

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH12-2	3/22/2012	5	6	Sodium	7440-23-5	mg/kg		103		17.7	8.85	6010B
MP-BH12-2	3/22/2012	5	6	Zinc	7440-66-6	mg/kg	23464	20.0		0.708	0.354	6010B
MP-BH12-2	3/22/2012	5	6	Arsenic	7440-38-2	mg/kg	3.90	1.35	J	1.51	0.756	6020
MP-BH12-2	3/22/2012	5	6	Barium	7440-39-3	mg/kg	15558	46.8		1.51	0.756	6020
MP-BH12-2	3/22/2012	5	6	Cadmium	7440-43-9	mg/kg	70.3	0.504	U	0.504	0.252	6020
MP-BH12-2	3/22/2012	5	6	Chromium	7440-47-3	mg/kg	117321	2.22		2.01	1.01	6020
MP-BH12-2	3/22/2012	5	6	Cobalt	7440-48-4	mg/kg		4.27		2.52	1.26	6020
MP-BH12-2	3/22/2012	5	6	Copper	7440-50-8	mg/kg	3129	5.41		3.02	1.51	6020
MP-BH12-2	3/22/2012	5	6	Lead (Pb)	7439-92-1	mg/kg	400	8.73		1.01	0.504	6020
MP-BH12-2	3/22/2012	5	6	Manganese	7439-96-5	mg/kg	1865	224		10.1	5.04	6020
MP-BH12-2	3/22/2012	5	6	Nickel	7440-02-0	mg/kg	1560	3.98	J	4.03	2.01	6020
MP-BH12-2	3/22/2012	5	6	Selenium	7782-49-2	mg/kg	391	1.01	U	1.01	0.504	6020
MP-BH12-2	3/22/2012	5	6	Silver	7440-22-4	mg/kg	391	2.83	U	2.83	1.42	6020
MP-BH12-2	3/22/2012	5	6	Thallium	7440-28-0	mg/kg	0.782	0.201	U	0.201	0.101	6020
MP-BH12-2	3/22/2012	5	6	Vanadium	7440-62-2	mg/kg	391	9.76		2.52	1.26	6020
MP-BH12-2	3/22/2012	5	6	Mercury	7439-97-6	mg/kg	15.6	0.101	U	0.101	0.0101	7471A

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH12-2	3/22/2012	5	6	Percent Solids	10-02-6	%		97.7		1.00	1.00	D2216-90
MP-BH12-3	3/22/2012	9	10	Aluminum	7429-90-5	mg/kg	78002	2500		14.3	7.16	6010B
MP-BH12-3	3/22/2012	9	10	Antimony	7440-36-0	mg/kg	31.3	0.716	U	0.716	0.358	6010B
MP-BH12-3	3/22/2012	9	10	Beryllium	7440-41-7	mg/kg	156	0.136		0.0716	0.0358	6010B
MP-BH12-3	3/22/2012	9	10	Calcium	7440-70-2	mg/kg		2670		7.16	3.58	6010B
MP-BH12-3	3/22/2012	9	10	Iron (Ferrous)	7439-89-6	mg/kg	54750	8480		2.15	1.07	6010B
MP-BH12-3	3/22/2012	9	10	Magnesium	7439-95-4	mg/kg		1330		17.9	8.95	6010B
MP-BH12-3	3/22/2012	9	10	Potassium	7440-09-7	mg/kg		673		35.8	17.9	6010B
MP-BH12-3	3/22/2012	9	10	Sodium	7440-23-5	mg/kg		167		17.9	8.95	6010B
MP-BH12-3	3/22/2012	9	10	Zinc	7440-66-6	mg/kg	23464	15.2		0.716	0.358	6010B
MP-BH12-3	3/22/2012	9	10	Arsenic	7440-38-2	mg/kg	3.90	1.52	U	1.52	0.761	6020
MP-BH12-3	3/22/2012	9	10	Barium	7440-39-3	mg/kg	15558	21.4		1.52	0.761	6020
MP-BH12-3	3/22/2012	9	10	Cadmium	7440-43-9	mg/kg	70.3	0.507	U	0.507	0.254	6020
MP-BH12-3	3/22/2012	9	10	Chromium	7440-47-3	mg/kg	117321	2.03	U	2.03	1.01	6020
MP-BH12-3	3/22/2012	9	10	Cobalt	7440-48-4	mg/kg		2.21	J	2.54	1.27	6020
MP-BH12-3	3/22/2012	9	10	Copper	7440-50-8	mg/kg	3129	3.74		3.04	1.52	6020

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH12-3	3/22/2012	9	10	Lead (Pb)	7439-92-1	mg/kg	400	6.97		1.01	0.507	6020
MP-BH12-3	3/22/2012	9	10	Manganese	7439-96-5	mg/kg	1865	147		1.01	0.507	6020
MP-BH12-3	3/22/2012	9	10	Nickel	7440-02-0	mg/kg	1560	4.06	U	4.06	2.03	6020
MP-BH12-3	3/22/2012	9	10	Selenium	7782-49-2	mg/kg	391	1.01	U	1.01	0.507	6020
MP-BH12-3	3/22/2012	9	10	Silver	7440-22-4	mg/kg	391	2.86	U	2.86	1.43	6020
MP-BH12-3	3/22/2012	9	10	Thallium	7440-28-0	mg/kg	0.782	0.203	U	0.203	0.101	6020
MP-BH12-3	3/22/2012	9	10	Vanadium	7440-62-2	mg/kg	391	5.90		2.54	1.27	6020
MP-BH12-3	3/22/2012	9	10	Mercury	7439-97-6	mg/kg	15.6	0.101	U	0.101	0.0101	7471A
MP-BH12-3	3/22/2012	9	10	Percent Solids	10-02-6	%		98.4		1.00	1.00	D2216-90
MP-BH12-FD1	3/22/2012	0	2	Aluminum	7429-90-5	mg/kg	78002	4350		13.8	6.88	6010B
MP-BH12-FD1	3/22/2012	0	2	Antimony	7440-36-0	mg/kg	31.3	0.688	U	0.688	0.344	6010B
MP-BH12-FD1	3/22/2012	0	2	Beryllium	7440-41-7	mg/kg	156	0.283		0.0688	0.0344	6010B
MP-BH12-FD1	3/22/2012	0	2	Calcium	7440-70-2	mg/kg		1510		6.88	3.44	6010B
MP-BH12-FD1	3/22/2012	0	2	Iron (Ferrous)	7439-89-6	mg/kg	54750	10100		2.07	1.03	6010B
MP-BH12-FD1	3/22/2012	0	2	Magnesium	7439-95-4	mg/kg		1530		17.2	8.60	6010B
MP-BH12-FD1	3/22/2012	0	2	Potassium	7440-09-7	mg/kg		1500		34.4	17.2	6010B

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH12-FD1	3/22/2012	0	2	Sodium	7440-23-5	mg/kg		23.3		17.2	8.60	6010B
MP-BH12-FD1	3/22/2012	0	2	Zinc	7440-66-6	mg/kg	23464	18.5		0.688	0.344	6010B
MP-BH12-FD1	3/22/2012	0	2	Arsenic	7440-38-2	mg/kg	3.90	1.62		1.44	0.722	6020
MP-BH12-FD1	3/22/2012	0	2	Barium	7440-39-3	mg/kg	15558	42.9		1.44	0.722	6020
MP-BH12-FD1	3/22/2012	0	2	Cadmium	7440-43-9	mg/kg	70.3	0.481	U	0.481	0.241	6020
MP-BH12-FD1	3/22/2012	0	2	Chromium	7440-47-3	mg/kg	117321	2.95		1.93	0.963	6020
MP-BH12-FD1	3/22/2012	0	2	Cobalt	7440-48-4	mg/kg		3.88		2.41	1.20	6020
MP-BH12-FD1	3/22/2012	0	2	Copper	7440-50-8	mg/kg	3129	6.48		2.89	1.44	6020
MP-BH12-FD1	3/22/2012	0	2	Lead (Pb)	7439-92-1	mg/kg	400	9.24		0.963	0.481	6020
MP-BH12-FD1	3/22/2012	0	2	Manganese	7439-96-5	mg/kg	1865	184		9.63	4.81	6020
MP-BH12-FD1	3/22/2012	0	2	Nickel	7440-02-0	mg/kg	1560	3.95		3.85	1.93	6020
MP-BH12-FD1	3/22/2012	0	2	Selenium	7782-49-2	mg/kg	391	0.963	U	0.963	0.481	6020
MP-BH12-FD1	3/22/2012	0	2	Silver	7440-22-4	mg/kg	391	2.75	U	2.75	1.38	6020
MP-BH12-FD1	3/22/2012	0	2	Thallium	7440-28-0	mg/kg	0.782	0.193	U	0.193	0.0963	6020
MP-BH12-FD1	3/22/2012	0	2	Vanadium	7440-62-2	mg/kg	391	9.51		2.41	1.20	6020
MP-BH12-FD1	3/22/2012	0	2	Mercury	7439-97-6	mg/kg	15.6	0.0106	J	0.102	0.0102	7471A

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH12-FD1	3/22/2012	0	2	Percent Solids	10-02-6	%		97.4		1.00	1.00	D2216-90
MP-BH13-1	3/22/2012	0	2	Aluminum	7429-90-5	mg/kg	78002	4150		14.1	7.03	6010B
MP-BH13-1	3/22/2012	0	2	Antimony	7440-36-0	mg/kg	31.3	0.703	U	0.703	0.351	6010B
MP-BH13-1	3/22/2012	0	2	Beryllium	7440-41-7	mg/kg	156	0.519		0.0703	0.0351	6010B
MP-BH13-1	3/22/2012	0	2	Calcium	7440-70-2	mg/kg		1530		7.03	3.51	6010B
MP-BH13-1	3/22/2012	0	2	Iron (Ferrous)	7439-89-6	mg/kg	54750	8820		2.11	1.05	6010B
MP-BH13-1	3/22/2012	0	2	Magnesium	7439-95-4	mg/kg		1570		17.6	8.79	6010B
MP-BH13-1	3/22/2012	0	2	Potassium	7440-09-7	mg/kg		1210		35.1	17.6	6010B
MP-BH13-1	3/22/2012	0	2	Sodium	7440-23-5	mg/kg		24.1		17.6	8.79	6010B
MP-BH13-1	3/22/2012	0	2	Zinc	7440-66-6	mg/kg	23464	18.0		0.703	0.351	6010B
MP-BH13-1	3/22/2012	0	2	Arsenic	7440-38-2	mg/kg	3.90	2.02		1.45	0.723	6020
MP-BH13-1	3/22/2012	0	2	Barium	7440-39-3	mg/kg	15558	57.1		1.45	0.723	6020
MP-BH13-1	3/22/2012	0	2	Cadmium	7440-43-9	mg/kg	70.3	0.482	U	0.482	0.241	6020
MP-BH13-1	3/22/2012	0	2	Chromium	7440-47-3	mg/kg	117321	3.70		1.93	0.964	6020
MP-BH13-1	3/22/2012	0	2	Cobalt	7440-48-4	mg/kg		4.43		2.41	1.21	6020
MP-BH13-1	3/22/2012	0	2	Copper	7440-50-8	mg/kg	3129	7.14		2.89	1.45	6020

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH13-1	3/22/2012	0	2	Lead (Pb)	7439-92-1	mg/kg	400	9.31		0.964	0.482	6020
MP-BH13-1	3/22/2012	0	2	Manganese	7439-96-5	mg/kg	1865	244		9.64	4.82	6020
MP-BH13-1	3/22/2012	0	2	Nickel	7440-02-0	mg/kg	1560	5.14		3.86	1.93	6020
MP-BH13-1	3/22/2012	0	2	Selenium	7782-49-2	mg/kg	391	0.964	U	0.964	0.482	6020
MP-BH13-1	3/22/2012	0	2	Silver	7440-22-4	mg/kg	391	2.81	U	2.81	1.41	6020
MP-BH13-1	3/22/2012	0	2	Thallium	7440-28-0	mg/kg	0.782	0.193	U	0.193	0.0964	6020
MP-BH13-1	3/22/2012	0	2	Vanadium	7440-62-2	mg/kg	391	11.9		2.41	1.21	6020
MP-BH13-1	3/22/2012	0	2	Mercury	7439-97-6	mg/kg	15.6	0.0109	J	0.103	0.0103	7471A
MP-BH13-1	3/22/2012	0	2	Percent Solids	10-02-6	%		95.9		1.00	1.00	D2216-90
MP-BH13-2	3/22/2012	5	6	Aluminum	7429-90-5	mg/kg	78002	4220		15.4	7.68	6010B
MP-BH13-2	3/22/2012	5	6	Antimony	7440-36-0	mg/kg	31.3	0.768	U	0.768	0.384	6010B
MP-BH13-2	3/22/2012	5	6	Beryllium	7440-41-7	mg/kg	156	0.569		0.0768	0.0384	6010B
MP-BH13-2	3/22/2012	5	6	Calcium	7440-70-2	mg/kg		4600		7.68	3.84	6010B
MP-BH13-2	3/22/2012	5	6	Iron (Ferrous)	7439-89-6	mg/kg	54750	10300		2.30	1.15	6010B
MP-BH13-2	3/22/2012	5	6	Magnesium	7439-95-4	mg/kg		2430		19.2	9.60	6010B
MP-BH13-2	3/22/2012	5	6	Potassium	7440-09-7	mg/kg		1270		38.4	19.2	6010B

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH13-2	3/22/2012	5	6	Sodium	7440-23-5	mg/kg		36.5		19.2	9.60	6010B
MP-BH13-2	3/22/2012	5	6	Zinc	7440-66-6	mg/kg	23464	21.8		0.768	0.384	6010B
MP-BH13-2	3/22/2012	5	6	Arsenic	7440-38-2	mg/kg	3.90	1.01	J	1.44	0.719	6020
MP-BH13-2	3/22/2012	5	6	Barium	7440-39-3	mg/kg	15558	61.2		1.44	0.719	6020
MP-BH13-2	3/22/2012	5	6	Cadmium	7440-43-9	mg/kg	70.3	0.480	U	0.480	0.240	6020
MP-BH13-2	3/22/2012	5	6	Chromium	7440-47-3	mg/kg	117321	2.61		1.92	0.959	6020
MP-BH13-2	3/22/2012	5	6	Cobalt	7440-48-4	mg/kg		5.14		2.40	1.20	6020
MP-BH13-2	3/22/2012	5	6	Copper	7440-50-8	mg/kg	3129	7.16		2.88	1.44	6020
MP-BH13-2	3/22/2012	5	6	Lead (Pb)	7439-92-1	mg/kg	400	10.3		0.959	0.480	6020
MP-BH13-2	3/22/2012	5	6	Manganese	7439-96-5	mg/kg	1865	259		9.59	4.80	6020
MP-BH13-2	3/22/2012	5	6	Nickel	7440-02-0	mg/kg	1560	4.59		3.84	1.92	6020
MP-BH13-2	3/22/2012	5	6	Selenium	7782-49-2	mg/kg	391	0.959	U	0.959	0.480	6020
MP-BH13-2	3/22/2012	5	6	Silver	7440-22-4	mg/kg	391	3.07	U	3.07	1.54	6020
MP-BH13-2	3/22/2012	5	6	Thallium	7440-28-0	mg/kg	0.782	0.102	J	0.192	0.0959	6020
MP-BH13-2	3/22/2012	5	6	Vanadium	7440-62-2	mg/kg	391	10.1		2.40	1.20	6020
MP-BH13-2	3/22/2012	5	6	Mercury	7439-97-6	mg/kg	15.6	0.0960	U	0.0960	0.00960	7471A

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH13-2	3/22/2012	5	6	Percent Solids	10-02-6	%		97.6		1.00	1.00	D2216-90
MP-BH13-3	3/22/2012	9	10	Aluminum	7429-90-5	mg/kg	78002	2550		13.7	6.87	6010B
MP-BH13-3	3/22/2012	9	10	Antimony	7440-36-0	mg/kg	31.3	0.687	U	0.687	0.344	6010B
MP-BH13-3	3/22/2012	9	10	Beryllium	7440-41-7	mg/kg	156	0.298		0.137	0.0687	6010B
MP-BH13-3	3/22/2012	9	10	Calcium	7440-70-2	mg/kg		2760		6.87	3.44	6010B
MP-BH13-3	3/22/2012	9	10	Iron (Ferrous)	7439-89-6	mg/kg	54750	6850		4.12	2.06	6010B
MP-BH13-3	3/22/2012	9	10	Magnesium	7439-95-4	mg/kg		1960		17.2	8.59	6010B
MP-BH13-3	3/22/2012	9	10	Potassium	7440-09-7	mg/kg		1110		34.4	17.2	6010B
MP-BH13-3	3/22/2012	9	10	Sodium	7440-23-5	mg/kg		40.1		17.2	8.59	6010B
MP-BH13-3	3/22/2012	9	10	Zinc	7440-66-6	mg/kg	23464	15.9		0.687	0.344	6010B
MP-BH13-3	3/22/2012	9	10	Arsenic	7440-38-2	mg/kg	3.90	1.24	J	1.44	0.718	6020
MP-BH13-3	3/22/2012	9	10	Barium	7440-39-3	mg/kg	15558	68.8		1.44	0.718	6020
MP-BH13-3	3/22/2012	9	10	Cadmium	7440-43-9	mg/kg	70.3	0.479	U	0.479	0.239	6020
MP-BH13-3	3/22/2012	9	10	Chromium	7440-47-3	mg/kg	117321	2.34		1.92	0.958	6020
MP-BH13-3	3/22/2012	9	10	Cobalt	7440-48-4	mg/kg		4.90		2.39	1.20	6020
MP-BH13-3	3/22/2012	9	10	Copper	7440-50-8	mg/kg	3129	5.66		2.87	1.44	6020

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH13-3	3/22/2012	9	10	Lead (Pb)	7439-92-1	mg/kg	400	7.33		0.958	0.479	6020
MP-BH13-3	3/22/2012	9	10	Manganese	7439-96-5	mg/kg	1865	199		9.58	4.79	6020
MP-BH13-3	3/22/2012	9	10	Nickel	7440-02-0	mg/kg	1560	4.60		3.83	1.92	6020
MP-BH13-3	3/22/2012	9	10	Selenium	7782-49-2	mg/kg	391	0.958	U	0.958	0.479	6020
MP-BH13-3	3/22/2012	9	10	Silver	7440-22-4	mg/kg	391	2.75	U	2.75	1.37	6020
MP-BH13-3	3/22/2012	9	10	Thallium	7440-28-0	mg/kg	0.782	0.144	J	0.192	0.0958	6020
MP-BH13-3	3/22/2012	9	10	Vanadium	7440-62-2	mg/kg	391	12.3		2.39	1.20	6020
MP-BH13-3	3/22/2012	9	10	Mercury	7439-97-6	mg/kg	15.6	0.0985	U	0.0985	0.00985	7471A
MP-BH13-3	3/22/2012	9	10	Percent Solids	10-02-6	%		98.7		1.00	1.00	D2216-90
MP-BH14-1	3/22/2012	0	2	Aluminum	7429-90-5	mg/kg	78002	3790		15.6	7.81	6010B
MP-BH14-1	3/22/2012	0	2	Antimony	7440-36-0	mg/kg	31.3	0.781	U	0.781	0.391	6010B
MP-BH14-1	3/22/2012	0	2	Beryllium	7440-41-7	mg/kg	156	0.440		0.0781	0.0391	6010B
MP-BH14-1	3/22/2012	0	2	Calcium	7440-70-2	mg/kg		1610		7.81	3.91	6010B
MP-BH14-1	3/22/2012	0	2	Iron (Ferrous)	7439-89-6	mg/kg	54750	9110		2.34	1.17	6010B
MP-BH14-1	3/22/2012	0	2	Magnesium	7439-95-4	mg/kg		1410		19.5	9.76	6010B
MP-BH14-1	3/22/2012	0	2	Potassium	7440-09-7	mg/kg		1210		39.1	19.5	6010B

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH14-1	3/22/2012	0	2	Sodium	7440-23-5	mg/kg		25.7		19.5	9.76	6010B
MP-BH14-1	3/22/2012	0	2	Zinc	7440-66-6	mg/kg	23464	16.7		0.781	0.391	6010B
MP-BH14-1	3/22/2012	0	2	Arsenic	7440-38-2	mg/kg	3.90	0.980	J	1.47	0.736	6020
MP-BH14-1	3/22/2012	0	2	Barium	7440-39-3	mg/kg	15558	44.9		1.47	0.736	6020
MP-BH14-1	3/22/2012	0	2	Cadmium	7440-43-9	mg/kg	70.3	0.490	U	0.490	0.245	6020
MP-BH14-1	3/22/2012	0	2	Chromium	7440-47-3	mg/kg	117321	1.68	J	1.96	0.981	6020
MP-BH14-1	3/22/2012	0	2	Cobalt	7440-48-4	mg/kg		3.08		2.45	1.23	6020
MP-BH14-1	3/22/2012	0	2	Copper	7440-50-8	mg/kg	3129	4.06		2.94	1.47	6020
MP-BH14-1	3/22/2012	0	2	Lead (Pb)	7439-92-1	mg/kg	400	7.81		0.981	0.490	6020
MP-BH14-1	3/22/2012	0	2	Manganese	7439-96-5	mg/kg	1865	191		9.81	4.90	6020
MP-BH14-1	3/22/2012	0	2	Nickel	7440-02-0	mg/kg	1560	2.60	J	3.92	1.96	6020
MP-BH14-1	3/22/2012	0	2	Selenium	7782-49-2	mg/kg	391	0.981	U	0.981	0.490	6020
MP-BH14-1	3/22/2012	0	2	Silver	7440-22-4	mg/kg	391	3.12	U	3.12	1.56	6020
MP-BH14-1	3/22/2012	0	2	Thallium	7440-28-0	mg/kg	0.782	0.196	U	0.196	0.0981	6020
MP-BH14-1	3/22/2012	0	2	Vanadium	7440-62-2	mg/kg	391	5.41		2.45	1.23	6020
MP-BH14-1	3/22/2012	0	2	Mercury	7439-97-6	mg/kg	15.6	0.102	U	0.102	0.0102	7471A

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH14-1	3/22/2012	0	2	Percent Solids	10-02-6	%		96.9		1.00	1.00	D2216-90
MP-BH14-2	3/22/2012	5	6	Aluminum	7429-90-5	mg/kg	78002	1710		14.3	7.13	6010B
MP-BH14-2	3/22/2012	5	6	Antimony	7440-36-0	mg/kg	31.3	0.713	U	0.713	0.357	6010B
MP-BH14-2	3/22/2012	5	6	Beryllium	7440-41-7	mg/kg	156	0.237		0.143	0.0713	6010B
MP-BH14-2	3/22/2012	5	6	Calcium	7440-70-2	mg/kg		2320		7.13	3.57	6010B
MP-BH14-2	3/22/2012	5	6	Iron (Ferrous)	7439-89-6	mg/kg	54750	5710		4.28	2.14	6010B
MP-BH14-2	3/22/2012	5	6	Magnesium	7439-95-4	mg/kg		1200		17.8	8.92	6010B
MP-BH14-2	3/22/2012	5	6	Potassium	7440-09-7	mg/kg		582		35.7	17.8	6010B
MP-BH14-2	3/22/2012	5	6	Sodium	7440-23-5	mg/kg		29.2		17.8	8.92	6010B
MP-BH14-2	3/22/2012	5	6	Zinc	7440-66-6	mg/kg	23464	11.2		0.713	0.357	6010B
MP-BH14-2	3/22/2012	5	6	Arsenic	7440-38-2	mg/kg	3.90	0.865	J	1.44	0.722	6020
MP-BH14-2	3/22/2012	5	6	Barium	7440-39-3	mg/kg	15558	36.9		1.44	0.722	6020
MP-BH14-2	3/22/2012	5	6	Cadmium	7440-43-9	mg/kg	70.3	0.482	U	0.482	0.241	6020
MP-BH14-2	3/22/2012	5	6	Chromium	7440-47-3	mg/kg	117321	1.06	J	1.93	0.963	6020
MP-BH14-2	3/22/2012	5	6	Cobalt	7440-48-4	mg/kg		2.69		2.41	1.20	6020
MP-BH14-2	3/22/2012	5	6	Copper	7440-50-8	mg/kg	3129	3.99		2.89	1.44	6020

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH14-2	3/22/2012	5	6	Lead (Pb)	7439-92-1	mg/kg	400	5.08		0.963	0.482	6020
MP-BH14-2	3/22/2012	5	6	Manganese	7439-96-5	mg/kg	1865	130		0.963	0.482	6020
MP-BH14-2	3/22/2012	5	6	Nickel	7440-02-0	mg/kg	1560	2.34	J	3.85	1.93	6020
MP-BH14-2	3/22/2012	5	6	Selenium	7782-49-2	mg/kg	391	0.963	U	0.963	0.482	6020
MP-BH14-2	3/22/2012	5	6	Silver	7440-22-4	mg/kg	391	2.85	U	2.85	1.43	6020
MP-BH14-2	3/22/2012	5	6	Thallium	7440-28-0	mg/kg	0.782	0.193	U	0.193	0.0963	6020
MP-BH14-2	3/22/2012	5	6	Vanadium	7440-62-2	mg/kg	391	7.14		2.41	1.20	6020
MP-BH14-2	3/22/2012	5	6	Mercury	7439-97-6	mg/kg	15.6	0.0977	U	0.0977	0.00977	7471A
MP-BH14-2	3/22/2012	5	6	Percent Solids	10-02-6	%		99.1		1.00	1.00	D2216-90
MP-BH14-3	3/22/2012	9	10	Aluminum	7429-90-5	mg/kg	78002	4290		14.1	7.07	6010B
MP-BH14-3	3/22/2012	9	10	Antimony	7440-36-0	mg/kg	31.3	0.707	U	0.707	0.353	6010B
MP-BH14-3	3/22/2012	9	10	Beryllium	7440-41-7	mg/kg	156	0.560		0.0707	0.0353	6010B
MP-BH14-3	3/22/2012	9	10	Calcium	7440-70-2	mg/kg		3600		7.07	3.53	6010B
MP-BH14-3	3/22/2012	9	10	Iron (Ferrous)	7439-89-6	mg/kg	54750	9220		2.12	1.06	6010B
MP-BH14-3	3/22/2012	9	10	Magnesium	7439-95-4	mg/kg		2050		17.7	8.84	6010B
MP-BH14-3	3/22/2012	9	10	Potassium	7440-09-7	mg/kg		1130		35.3	17.7	6010B

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH14-3	3/22/2012	9	10	Sodium	7440-23-5	mg/kg		87.0		17.7	8.84	6010B
MP-BH14-3	3/22/2012	9	10	Zinc	7440-66-6	mg/kg	23464	21.9		0.707	0.353	6010B
MP-BH14-3	3/22/2012	9	10	Arsenic	7440-38-2	mg/kg	3.90	0.832	J	1.50	0.750	6020
MP-BH14-3	3/22/2012	9	10	Barium	7440-39-3	mg/kg	15558	45.1		1.50	0.750	6020
MP-BH14-3	3/22/2012	9	10	Cadmium	7440-43-9	mg/kg	70.3	0.500	U	0.500	0.250	6020
MP-BH14-3	3/22/2012	9	10	Chromium	7440-47-3	mg/kg	117321	1.22	J	2.00	1.00	6020
MP-BH14-3	3/22/2012	9	10	Cobalt	7440-48-4	mg/kg		3.28		2.50	1.25	6020
MP-BH14-3	3/22/2012	9	10	Copper	7440-50-8	mg/kg	3129	4.05		3.00	1.50	6020
MP-BH14-3	3/22/2012	9	10	Lead (Pb)	7439-92-1	mg/kg	400	7.83		1.00	0.500	6020
MP-BH14-3	3/22/2012	9	10	Manganese	7439-96-5	mg/kg	1865	226		10.0	5.00	6020
MP-BH14-3	3/22/2012	9	10	Nickel	7440-02-0	mg/kg	1560	2.72	J	4.00	2.00	6020
MP-BH14-3	3/22/2012	9	10	Selenium	7782-49-2	mg/kg	391	1.00	U	1.00	0.500	6020
MP-BH14-3	3/22/2012	9	10	Silver	7440-22-4	mg/kg	391	2.83	U	2.83	1.41	6020
MP-BH14-3	3/22/2012	9	10	Thallium	7440-28-0	mg/kg	0.782	0.200	U	0.200	0.100	6020
MP-BH14-3	3/22/2012	9	10	Vanadium	7440-62-2	mg/kg	391	7.12		2.50	1.25	6020
MP-BH14-3	3/22/2012	9	10	Mercury	7439-97-6	mg/kg	15.6	0.102	U	0.102	0.0102	7471A

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH14-3	3/22/2012	9	10	Percent Solids	10-02-6	%		97.6		1.00	1.00	D2216-90
MP-BH15-1	3/23/2012	0	2	Aluminum	7429-90-5	mg/kg	78002	3930		15.3	7.67	6010B
MP-BH15-1	3/23/2012	0	2	Antimony	7440-36-0	mg/kg	31.3	0.767	U	0.767	0.384	6010B
MP-BH15-1	3/23/2012	0	2	Beryllium	7440-41-7	mg/kg	156	0.527		0.0767	0.0384	6010B
MP-BH15-1	3/23/2012	0	2	Calcium	7440-70-2	mg/kg		1640		7.67	3.84	6010B
MP-BH15-1	3/23/2012	0	2	Iron (Ferrous)	7439-89-6	mg/kg	54750	8200		2.30	1.15	6010B
MP-BH15-1	3/23/2012	0	2	Magnesium	7439-95-4	mg/kg		1540		19.2	9.59	6010B
MP-BH15-1	3/23/2012	0	2	Potassium	7440-09-7	mg/kg		1200		38.4	19.2	6010B
MP-BH15-1	3/23/2012	0	2	Sodium	7440-23-5	mg/kg		22.9		19.2	9.59	6010B
MP-BH15-1	3/23/2012	0	2	Zinc	7440-66-6	mg/kg	23464	17.2		0.767	0.384	6010B
MP-BH15-1	3/23/2012	0	2	Arsenic	7440-38-2	mg/kg	3.90	2.12		1.47	0.734	6020
MP-BH15-1	3/23/2012	0	2	Barium	7440-39-3	mg/kg	15558	59.4		1.47	0.734	6020
MP-BH15-1	3/23/2012	0	2	Cadmium	7440-43-9	mg/kg	70.3	0.489	U	0.489	0.245	6020
MP-BH15-1	3/23/2012	0	2	Chromium	7440-47-3	mg/kg	117321	3.54		1.96	0.979	6020
MP-BH15-1	3/23/2012	0	2	Cobalt	7440-48-4	mg/kg		4.70		2.45	1.22	6020
MP-BH15-1	3/23/2012	0	2	Copper	7440-50-8	mg/kg	3129	7.41		2.94	1.47	6020

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH15-1	3/23/2012	0	2	Lead (Pb)	7439-92-1	mg/kg	400	10.7		0.979	0.489	6020
MP-BH15-1	3/23/2012	0	2	Manganese	7439-96-5	mg/kg	1865	245		9.79	4.89	6020
MP-BH15-1	3/23/2012	0	2	Nickel	7440-02-0	mg/kg	1560	5.04		3.91	1.96	6020
MP-BH15-1	3/23/2012	0	2	Selenium	7782-49-2	mg/kg	391	0.979	U	0.979	0.489	6020
MP-BH15-1	3/23/2012	0	2	Silver	7440-22-4	mg/kg	391	3.07	U	3.07	1.53	6020
MP-BH15-1	3/23/2012	0	2	Thallium	7440-28-0	mg/kg	0.782	0.196	U	0.196	0.0979	6020
MP-BH15-1	3/23/2012	0	2	Vanadium	7440-62-2	mg/kg	391	11.9		2.45	1.22	6020
MP-BH15-1	3/23/2012	0	2	Mercury	7439-97-6	mg/kg	15.6	0.0124	J	0.0998	0.0100	7471A
MP-BH15-1	3/23/2012	0	2	Percent Solids	10-02-6	%		97.1		1.00	1.00	D2216-90
MP-BH15-2	3/23/2012	5	6	Aluminum	7429-90-5	mg/kg	78002	3320		14.5	7.27	6010B
MP-BH15-2	3/23/2012	5	6	Antimony	7440-36-0	mg/kg	31.3	0.727	U	0.727	0.364	6010B
MP-BH15-2	3/23/2012	5	6	Beryllium	7440-41-7	mg/kg	156	0.420		0.0727	0.0364	6010B
MP-BH15-2	3/23/2012	5	6	Calcium	7440-70-2	mg/kg		3500		7.27	3.64	6010B
MP-BH15-2	3/23/2012	5	6	Iron (Ferrous)	7439-89-6	mg/kg	54750	7030		2.18	1.09	6010B
MP-BH15-2	3/23/2012	5	6	Magnesium	7439-95-4	mg/kg		1320		18.2	9.09	6010B
MP-BH15-2	3/23/2012	5	6	Potassium	7440-09-7	mg/kg		677		36.4	18.2	6010B

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH15-2	3/23/2012	5	6	Sodium	7440-23-5	mg/kg		56.3		18.2	9.09	6010B
MP-BH15-2	3/23/2012	5	6	Zinc	7440-66-6	mg/kg	23464	15.5		0.727	0.364	6010B
MP-BH15-2	3/23/2012	5	6	Arsenic	7440-38-2	mg/kg	3.90	0.801	J	1.42	0.711	6020
MP-BH15-2	3/23/2012	5	6	Barium	7440-39-3	mg/kg	15558	43.7		1.42	0.711	6020
MP-BH15-2	3/23/2012	5	6	Cadmium	7440-43-9	mg/kg	70.3	0.474	U	0.474	0.237	6020
MP-BH15-2	3/23/2012	5	6	Chromium	7440-47-3	mg/kg	117321	1.91		1.90	0.948	6020
MP-BH15-2	3/23/2012	5	6	Cobalt	7440-48-4	mg/kg		2.57		2.37	1.19	6020
MP-BH15-2	3/23/2012	5	6	Copper	7440-50-8	mg/kg	3129	4.36		2.84	1.42	6020
MP-BH15-2	3/23/2012	5	6	Lead (Pb)	7439-92-1	mg/kg	400	5.40		0.948	0.474	6020
MP-BH15-2	3/23/2012	5	6	Manganese	7439-96-5	mg/kg	1865	152		0.948	0.474	6020
MP-BH15-2	3/23/2012	5	6	Nickel	7440-02-0	mg/kg	1560	2.97	J	3.79	1.90	6020
MP-BH15-2	3/23/2012	5	6	Selenium	7782-49-2	mg/kg	391	0.948	U	0.948	0.474	6020
MP-BH15-2	3/23/2012	5	6	Silver	7440-22-4	mg/kg	391	2.91	U	2.91	1.45	6020
MP-BH15-2	3/23/2012	5	6	Thallium	7440-28-0	mg/kg	0.782	0.190	U	0.190	0.0948	6020
MP-BH15-2	3/23/2012	5	6	Vanadium	7440-62-2	mg/kg	391	4.75		2.37	1.19	6020
MP-BH15-2	3/23/2012	5	6	Mercury	7439-97-6	mg/kg	15.6	0.0141	J	0.0975	0.00975	7471A

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH15-2	3/23/2012	5	6	Percent Solids	10-02-6	%		98.2		1.00	1.00	D2216-90
MP-BH15-3	3/23/2012	9	10	Aluminum	7429-90-5	mg/kg	78002	4790		13.8	6.90	6010B
MP-BH15-3	3/23/2012	9	10	Antimony	7440-36-0	mg/kg	31.3	0.690	U	0.690	0.345	6010B
MP-BH15-3	3/23/2012	9	10	Beryllium	7440-41-7	mg/kg	156	0.532		0.0690	0.0345	6010B
MP-BH15-3	3/23/2012	9	10	Calcium	7440-70-2	mg/kg		4490		6.90	3.45	6010B
MP-BH15-3	3/23/2012	9	10	Iron (Ferrous)	7439-89-6	mg/kg	54750	10000		2.07	1.04	6010B
MP-BH15-3	3/23/2012	9	10	Magnesium	7439-95-4	mg/kg		2890		17.3	8.63	6010B
MP-BH15-3	3/23/2012	9	10	Potassium	7440-09-7	mg/kg		1670		34.5	17.3	6010B
MP-BH15-3	3/23/2012	9	10	Sodium	7440-23-5	mg/kg		277		17.3	8.63	6010B
MP-BH15-3	3/23/2012	9	10	Zinc	7440-66-6	mg/kg	23464	22.8		0.690	0.345	6010B
MP-BH15-3	3/23/2012	9	10	Arsenic	7440-38-2	mg/kg	3.90	1.71		1.52	0.758	6020
MP-BH15-3	3/23/2012	9	10	Barium	7440-39-3	mg/kg	15558	53.8		1.52	0.758	6020
MP-BH15-3	3/23/2012	9	10	Cadmium	7440-43-9	mg/kg	70.3	0.505	U	0.505	0.253	6020
MP-BH15-3	3/23/2012	9	10	Chromium	7440-47-3	mg/kg	117321	3.43		2.02	1.01	6020
MP-BH15-3	3/23/2012	9	10	Cobalt	7440-48-4	mg/kg		5.19		2.53	1.26	6020
MP-BH15-3	3/23/2012	9	10	Copper	7440-50-8	mg/kg	3129	7.40		3.03	1.52	6020

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH15-3	3/23/2012	9	10	Lead (Pb)	7439-92-1	mg/kg	400	8.94		1.01	0.505	6020
MP-BH15-3	3/23/2012	9	10	Manganese	7439-96-5	mg/kg	1865	248		10.1	5.05	6020
MP-BH15-3	3/23/2012	9	10	Nickel	7440-02-0	mg/kg	1560	5.55		4.04	2.02	6020
MP-BH15-3	3/23/2012	9	10	Selenium	7782-49-2	mg/kg	391	1.01	U	1.01	0.505	6020
MP-BH15-3	3/23/2012	9	10	Silver	7440-22-4	mg/kg	391	2.76	U	2.76	1.38	6020
MP-BH15-3	3/23/2012	9	10	Thallium	7440-28-0	mg/kg	0.782	0.112	J	0.202	0.101	6020
MP-BH15-3	3/23/2012	9	10	Vanadium	7440-62-2	mg/kg	391	13.3		2.53	1.26	6020
MP-BH15-3	3/23/2012	9	10	Mercury	7439-97-6	mg/kg	15.6	0.0140	J	0.0997	0.0100	7471A
MP-BH15-3	3/23/2012	9	10	Percent Solids	10-02-6	%		97.1		1.00	1.00	D2216-90
MP-BH15-FD2	3/23/2012	5	6	Aluminum	7429-90-5	mg/kg	78002	3660		13.8	6.90	6010B
MP-BH15-FD2	3/23/2012	5	6	Antimony	7440-36-0	mg/kg	31.3	0.690	U	0.690	0.345	6010B
MP-BH15-FD2	3/23/2012	5	6	Beryllium	7440-41-7	mg/kg	156	0.452		0.0690	0.0345	6010B
MP-BH15-FD2	3/23/2012	5	6	Calcium	7440-70-2	mg/kg		3840		6.90	3.45	6010B
MP-BH15-FD2	3/23/2012	5	6	Iron (Ferrous)	7439-89-6	mg/kg	54750	7590		2.07	1.04	6010B
MP-BH15-FD2	3/23/2012	5	6	Magnesium	7439-95-4	mg/kg		1400		17.3	8.63	6010B
MP-BH15-FD2	3/23/2012	5	6	Potassium	7440-09-7	mg/kg		744		34.5	17.3	6010B

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH15-FD2	3/23/2012	5	6	Sodium	7440-23-5	mg/kg		62.7		17.3	8.63	6010B
MP-BH15-FD2	3/23/2012	5	6	Zinc	7440-66-6	mg/kg	23464	16.3		0.690	0.345	6010B
MP-BH15-FD2	3/23/2012	5	6	Arsenic	7440-38-2	mg/kg	3.90	1.00	J	1.49	0.745	6020
MP-BH15-FD2	3/23/2012	5	6	Barium	7440-39-3	mg/kg	15558	51.6		1.49	0.745	6020
MP-BH15-FD2	3/23/2012	5	6	Cadmium	7440-43-9	mg/kg	70.3	0.497	U	0.497	0.248	6020
MP-BH15-FD2	3/23/2012	5	6	Chromium	7440-47-3	mg/kg	117321	2.29		1.99	0.993	6020
MP-BH15-FD2	3/23/2012	5	6	Cobalt	7440-48-4	mg/kg		2.90		2.48	1.24	6020
MP-BH15-FD2	3/23/2012	5	6	Copper	7440-50-8	mg/kg	3129	5.21		2.98	1.49	6020
MP-BH15-FD2	3/23/2012	5	6	Lead (Pb)	7439-92-1	mg/kg	400	6.22		0.993	0.497	6020
MP-BH15-FD2	3/23/2012	5	6	Manganese	7439-96-5	mg/kg	1865	177		0.993	0.497	6020
MP-BH15-FD2	3/23/2012	5	6	Nickel	7440-02-0	mg/kg	1560	3.57	J	3.97	1.99	6020
MP-BH15-FD2	3/23/2012	5	6	Selenium	7782-49-2	mg/kg	391	0.993	U	0.993	0.497	6020
MP-BH15-FD2	3/23/2012	5	6	Silver	7440-22-4	mg/kg	391	2.76	U	2.76	1.38	6020
MP-BH15-FD2	3/23/2012	5	6	Thallium	7440-28-0	mg/kg	0.782	0.199	U	0.199	0.0993	6020
MP-BH15-FD2	3/23/2012	5	6	Vanadium	7440-62-2	mg/kg	391	5.69		2.48	1.24	6020
MP-BH15-FD2	3/23/2012	5	6	Mercury	7439-97-6	mg/kg	15.6	0.0107	J	0.0979	0.00979	7471A

Table C-2 (continued)
Main Post Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
MP-BH15-FD2	3/23/2012	5	6	Percent Solids	10-02-6	%		97.7		1.00	1.00	D2216-90

% = *Percentage.*
CAS = *Chemical Abstract Service.*
DL = *Detection Limit.*
ft = *Foot (feet).*
ID = *Identification.*
mg/kg = *Milligrams per kilogram.*
NMED = *New Mexico Environment Department.*
J = *Estimated. The analyte was detected and positively identified. The associated numerical value is the approximate concentration of the analyte in the sample and the bias is indeterminable.*
J- = *Estimated. The analyte was detected and positively identified. The associated numerical value is the approximate concentration of the analyte in the sample and the bias is determined low due to associated quality control indicators.*
LOQ = *Limit of Quantitation.*
U = *Not detected. The analyte was analyzed for but was not detected above the level of the associated value. The associated value is the LOQ.*
UN = *Tentatively not detected, the LOQ is estimated. The analyte was analyzed for but was not detected above the reported LOQ. However, the reported LOQ is an estimate and may not be accurate or precise.*

Appendix C3
Complete Analytical Results for
Solid Waste Management Unit 140 (WSMR-84)

Table C-3
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH01-1	3/20/2012	0	2	Aluminum	7429-90-5	mg/kg	78002	4640		16.1	8.03	6010B
140-BH01-1	3/20/2012	0	2	Antimony	7440-36-0	mg/kg	31.3	0.803	U	0.803	0.401	6010B
140-BH01-1	3/20/2012	0	2	Beryllium	7440-41-7	mg/kg	156	0.228		0.0803	0.0401	6010B
140-BH01-1	3/20/2012	0	2	Calcium	7440-70-2	mg/kg	NA	92900		803	401	6010B
140-BH01-1	3/20/2012	0	2	Iron (Ferrous)	7439-89-6	mg/kg	54750	5290		2.41	1.20	6010B
140-BH01-1	3/20/2012	0	2	Magnesium	7439-95-4	mg/kg	NA	2630		20.1	10.0	6010B
140-BH01-1	3/20/2012	0	2	Potassium	7440-09-7	mg/kg	NA	960		40.1	20.1	6010B
140-BH01-1	3/20/2012	0	2	Sodium	7440-23-5	mg/kg	NA	62.7		20.1	10.0	6010B
140-BH01-1	3/20/2012	0	2	Zinc	7440-66-6	mg/kg	23464	10.3		0.803	0.401	6010B
140-BH01-1	3/20/2012	0	2	Arsenic	7440-38-2	mg/kg	3.90	3.62		1.62	0.808	6020
140-BH01-1	3/20/2012	0	2	Barium	7440-39-3	mg/kg	15558	333		16.2	8.08	6020
140-BH01-1	3/20/2012	0	2	Cadmium	7440-43-9	mg/kg	70.3	0.538	U	0.538	0.269	6020
140-BH01-1	3/20/2012	0	2	Chromium	7440-47-3	mg/kg	117321	3.20		2.15	1.08	6020
140-BH01-1	3/20/2012	0	2	Cobalt	7440-48-4	mg/kg	NA	1.88	J	2.69	1.35	6020
140-BH01-1	3/20/2012	0	2	Copper	7440-50-8	mg/kg	3129	2.77	J	3.23	1.62	6020

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH01-1	3/20/2012	0	2	Lead (Pb)	7439-92-1	mg/kg	400	3.27		1.08	0.538	6020
140-BH01-1	3/20/2012	0	2	Manganese	7439-96-5	mg/kg	1865	42.4		1.08	0.538	6020
140-BH01-1	3/20/2012	0	2	Nickel	7440-02-0	mg/kg	1560	6.88		4.31	2.15	6020
140-BH01-1	3/20/2012	0	2	Selenium	7782-49-2	mg/kg	391	0.771	J	1.08	0.538	6020
140-BH01-1	3/20/2012	0	2	Silver	7440-22-4	mg/kg	391	3.21	U	3.21	1.61	6020
140-BH01-1	3/20/2012	0	2	Thallium	7440-28-0	mg/kg	0.782	0.215	U	0.215	0.108	6020
140-BH01-1	3/20/2012	0	2	Vanadium	7440-62-2	mg/kg	391	8.07		2.69	1.35	6020
140-BH01-1	3/20/2012	0	2	Mercury	7439-97-6	mg/kg	15.6	0.107		0.107	0.0107	7471A
140-BH01-1	3/20/2012	0	2	Percent Solids	10-02-6	%	NA	91.6		1.00	1.00	D2216-90
140-BH01-2	3/20/2012	5	6	Aluminum	7429-90-5	mg/kg	78002	8510		16.4	8.18	6010B
140-BH01-2	3/20/2012	5	6	Antimony	7440-36-0	mg/kg	31.3	0.818	U	0.818	0.409	6010B
140-BH01-2	3/20/2012	5	6	Beryllium	7440-41-7	mg/kg	156	0.584		0.0818	0.0409	6010B
140-BH01-2	3/20/2012	5	6	Calcium	7440-70-2	mg/kg	NA	36600		8.18	4.09	6010B
140-BH01-2	3/20/2012	5	6	Iron (Ferrous)	7439-89-6	mg/kg	54750	9120		2.45	1.23	6010B
140-BH01-2	3/20/2012	5	6	Magnesium	7439-95-4	mg/kg	NA	8320		20.4	10.2	6010B
140-BH01-2	3/20/2012	5	6	Potassium	7440-09-7	mg/kg	NA	1740		40.9	20.4	6010B

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH01-2	3/20/2012	5	6	Sodium	7440-23-5	mg/kg	NA	1480		20.4	10.2	6010B
140-BH01-2	3/20/2012	5	6	Zinc	7440-66-6	mg/kg	23464	21.5		0.818	0.409	6010B
140-BH01-2	3/20/2012	5	6	Arsenic	7440-38-2	mg/kg	3.90	3.21		1.58	0.792	6020
140-BH01-2	3/20/2012	5	6	Barium	7440-39-3	mg/kg	15558	108		1.58	0.792	6020
140-BH01-2	3/20/2012	5	6	Cadmium	7440-43-9	mg/kg	70.3	0.528	U	0.528	0.264	6020
140-BH01-2	3/20/2012	5	6	Chromium	7440-47-3	mg/kg	117321	4.15		2.11	1.06	6020
140-BH01-2	3/20/2012	5	6	Cobalt	7440-48-4	mg/kg	NA	3.71		2.64	1.32	6020
140-BH01-2	3/20/2012	5	6	Copper	7440-50-8	mg/kg	3129	3.77		3.17	1.58	6020
140-BH01-2	3/20/2012	5	6	Lead (Pb)	7439-92-1	mg/kg	400	6.75		1.06	0.528	6020
140-BH01-2	3/20/2012	5	6	Manganese	7439-96-5	mg/kg	1865	162		1.06	0.528	6020
140-BH01-2	3/20/2012	5	6	Nickel	7440-02-0	mg/kg	1560	7.80		4.23	2.11	6020
140-BH01-2	3/20/2012	5	6	Selenium	7782-49-2	mg/kg	391	1.06	U	1.06	0.528	6020
140-BH01-2	3/20/2012	5	6	Silver	7440-22-4	mg/kg	391	3.27	U	3.27	1.64	6020
140-BH01-2	3/20/2012	5	6	Thallium	7440-28-0	mg/kg	0.782	0.211	U	0.211	0.106	6020
140-BH01-2	3/20/2012	5	6	Vanadium	7440-62-2	mg/kg	391	16.7		2.64	1.32	6020
140-BH01-2	3/20/2012	5	6	Mercury	7439-97-6	mg/kg	15.6	0.108		0.108	0.0108	7471A

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH01-2	3/20/2012	5	6	Percent Solids	10-02-6	%	NA	91.2		1.00	1.00	D2216-90
140-BH01-3	3/20/2012	9	10	Aluminum	7429-90-5	mg/kg	78002	7200		16.2	8.11	6010B
140-BH01-3	3/20/2012	9	10	Antimony	7440-36-0	mg/kg	31.3	0.811	U	0.811	0.405	6010B
140-BH01-3	3/20/2012	9	10	Beryllium	7440-41-7	mg/kg	156	0.557		0.0811	0.0405	6010B
140-BH01-3	3/20/2012	9	10	Calcium	7440-70-2	mg/kg	NA	35600		8.11	4.05	6010B
140-BH01-3	3/20/2012	9	10	Iron (Ferrous)	7439-89-6	mg/kg	54750	9780		2.43	1.22	6010B
140-BH01-3	3/20/2012	9	10	Magnesium	7439-95-4	mg/kg	NA	4660		20.3	10.1	6010B
140-BH01-3	3/20/2012	9	10	Potassium	7440-09-7	mg/kg	NA	1400		40.5	20.3	6010B
140-BH01-3	3/20/2012	9	10	Sodium	7440-23-5	mg/kg	NA	1420		20.3	10.1	6010B
140-BH01-3	3/20/2012	9	10	Zinc	7440-66-6	mg/kg	23464	25.5		0.811	0.405	6010B
140-BH01-3	3/20/2012	9	10	Arsenic	7440-38-2	mg/kg	3.90	6.28		1.65	0.826	6020
140-BH01-3	3/20/2012	9	10	Barium	7440-39-3	mg/kg	15558	15.4		1.65	0.826	6020
140-BH01-3	3/20/2012	9	10	Cadmium	7440-43-9	mg/kg	70.3	0.550	U	0.550	0.275	6020
140-BH01-3	3/20/2012	9	10	Chromium	7440-47-3	mg/kg	117321	3.18		2.20	1.10	6020
140-BH01-3	3/20/2012	9	10	Cobalt	7440-48-4	mg/kg	NA	2.23	J	2.75	1.38	6020
140-BH01-3	3/20/2012	9	10	Copper	7440-50-8	mg/kg	3129	4.40		3.30	1.65	6020

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH01-3	3/20/2012	9	10	Lead (Pb)	7439-92-1	mg/kg	400	3.72		1.10	0.550	6020
140-BH01-3	3/20/2012	9	10	Manganese	7439-96-5	mg/kg	1865	77.7		1.10	0.550	6020
140-BH01-3	3/20/2012	9	10	Nickel	7440-02-0	mg/kg	1560	6.16		4.40	2.20	6020
140-BH01-3	3/20/2012	9	10	Selenium	7782-49-2	mg/kg	391	1.10	U	1.10	0.550	6020
140-BH01-3	3/20/2012	9	10	Silver	7440-22-4	mg/kg	391	3.24	U	3.24	1.62	6020
140-BH01-3	3/20/2012	9	10	Thallium	7440-28-0	mg/kg	0.782	0.220	U	0.220	0.110	6020
140-BH01-3	3/20/2012	9	10	Vanadium	7440-62-2	mg/kg	391	26.2		2.75	1.38	6020
140-BH01-3	3/20/2012	9	10	Mercury	7439-97-6	mg/kg	15.6	0.114		0.114	0.0114	7471A
140-BH01-3	3/20/2012	9	10	Percent Solids	10-02-6	%	NA	86.9		1.00	1.00	D2216-90
140-BH02-1	3/19/2012	0	2	Aluminum	7429-90-5	mg/kg	78002	3000		15.6	7.81	6010B
140-BH02-1	3/19/2012	0	2	Antimony	7440-36-0	mg/kg	31.3	0.781	U	0.781	0.390	6010B
140-BH02-1	3/19/2012	0	2	Beryllium	7440-41-7	mg/kg	156	0.194		0.0781	0.0390	6010B
140-BH02-1	3/19/2012	0	2	Calcium	7440-70-2	mg/kg	NA	1550		7.81	3.90	6010B
140-BH02-1	3/19/2012	0	2	Iron (Ferrous)	7439-89-6	mg/kg	54750	5260		2.34	1.17	6010B
140-BH02-1	3/19/2012	0	2	Magnesium	7439-95-4	mg/kg	NA	877		19.5	9.76	6010B
140-BH02-1	3/19/2012	0	2	Potassium	7440-09-7	mg/kg	NA	843		39.0	19.5	6010B

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH02-1	3/19/2012	0	2	Sodium	7440-23-5	mg/kg	NA	11.8	J	19.5	9.76	6010B
140-BH02-1	3/19/2012	0	2	Zinc	7440-66-6	mg/kg	23464	9.83		0.781	0.390	6010B
140-BH02-1	3/19/2012	0	2	Arsenic	7440-38-2	mg/kg	3.90	1.43	J	1.54	0.769	6020
140-BH02-1	3/19/2012	0	2	Barium	7440-39-3	mg/kg	15558	23.1		1.54	0.769	6020
140-BH02-1	3/19/2012	0	2	Cadmium	7440-43-9	mg/kg	70.3	0.513	U	0.513	0.256	6020
140-BH02-1	3/19/2012	0	2	Chromium	7440-47-3	mg/kg	117321	2.64		2.05	1.03	6020
140-BH02-1	3/19/2012	0	2	Cobalt	7440-48-4	mg/kg	NA	2.56	U	2.56	1.28	6020
140-BH02-1	3/19/2012	0	2	Copper	7440-50-8	mg/kg	3129	2.03	J	3.08	1.54	6020
140-BH02-1	3/19/2012	0	2	Lead (Pb)	7439-92-1	mg/kg	400	3.59		1.03	0.513	6020
140-BH02-1	3/19/2012	0	2	Manganese	7439-96-5	mg/kg	1865	56.3		1.03	0.513	6020
140-BH02-1	3/19/2012	0	2	Nickel	7440-02-0	mg/kg	1560	2.72	J	4.10	2.05	6020
140-BH02-1	3/19/2012	0	2	Selenium	7782-49-2	mg/kg	391	1.03	U	1.03	0.513	6020
140-BH02-1	3/19/2012	0	2	Silver	7440-22-4	mg/kg	391	3.12	U	3.12	1.56	6020
140-BH02-1	3/19/2012	0	2	Thallium	7440-28-0	mg/kg	0.782	0.205	U	0.205	0.103	6020
140-BH02-1	3/19/2012	0	2	Vanadium	7440-62-2	mg/kg	391	5.17		2.56	1.28	6020
140-BH02-1	3/19/2012	0	2	Mercury	7439-97-6	mg/kg	15.6	0.101		0.101	0.0101	7471A

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH02-1	3/19/2012	0	2	Percent Solids	10-02-6	%	NA	96.9		1.00	1.00	D2216-90
140-BH02-2	3/19/2012	5	6	Aluminum	7429-90-5	mg/kg	78002	4780		16.4	8.19	6010B
140-BH02-2	3/19/2012	5	6	Antimony	7440-36-0	mg/kg	31.3	0.819	U	0.819	0.410	6010B
140-BH02-2	3/19/2012	5	6	Beryllium	7440-41-7	mg/kg	156	0.243		0.0819	0.0410	6010B
140-BH02-2	3/19/2012	5	6	Calcium	7440-70-2	mg/kg	NA	156000		81.9	41.0	6010B
140-BH02-2	3/19/2012	5	6	Iron (Ferrous)	7439-89-6	mg/kg	54750	3820		2.46	1.23	6010B
140-BH02-2	3/19/2012	5	6	Magnesium	7439-95-4	mg/kg	NA	4930		20.5	10.2	6010B
140-BH02-2	3/19/2012	5	6	Potassium	7440-09-7	mg/kg	NA	587		41.0	20.5	6010B
140-BH02-2	3/19/2012	5	6	Sodium	7440-23-5	mg/kg	NA	212		20.5	10.2	6010B
140-BH02-2	3/19/2012	5	6	Zinc	7440-66-6	mg/kg	23464	7.74		0.819	0.410	6010B
140-BH02-2	3/19/2012	5	6	Arsenic	7440-38-2	mg/kg	3.90	2.65		1.62	0.809	6020
140-BH02-2	3/19/2012	5	6	Barium	7440-39-3	mg/kg	15558	196		1.62	0.809	6020
140-BH02-2	3/19/2012	5	6	Cadmium	7440-43-9	mg/kg	70.3	0.539	U	0.539	0.270	6020
140-BH02-2	3/19/2012	5	6	Chromium	7440-47-3	mg/kg	117321	3.82		2.16	1.08	6020
140-BH02-2	3/19/2012	5	6	Cobalt	7440-48-4	mg/kg	NA	1.80	J	2.70	1.35	6020
140-BH02-2	3/19/2012	5	6	Copper	7440-50-8	mg/kg	3129	3.23	U	3.23	1.62	6020

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH02-2	3/19/2012	5	6	Lead (Pb)	7439-92-1	mg/kg	400	3.58		1.08	0.539	6020
140-BH02-2	3/19/2012	5	6	Manganese	7439-96-5	mg/kg	1865	33.1		1.08	0.539	6020
140-BH02-2	3/19/2012	5	6	Nickel	7440-02-0	mg/kg	1560	9.66		4.31	2.16	6020
140-BH02-2	3/19/2012	5	6	Selenium	7782-49-2	mg/kg	391	0.750	J	1.08	0.539	6020
140-BH02-2	3/19/2012	5	6	Silver	7440-22-4	mg/kg	391	3.28	U	3.28	1.64	6020
140-BH02-2	3/19/2012	5	6	Thallium	7440-28-0	mg/kg	0.782	0.216	U	0.216	0.108	6020
140-BH02-2	3/19/2012	5	6	Vanadium	7440-62-2	mg/kg	391	12.7		2.70	1.35	6020
140-BH02-2	3/19/2012	5	6	Mercury	7439-97-6	mg/kg	15.6	0.106		0.106	0.0106	7471A
140-BH02-2	3/19/2012	5	6	Percent Solids	10-02-6	%	NA	92.7		1.00	1.00	D2216-90
140-BH02-3	3/19/2012	9	10	Aluminum	7429-90-5	mg/kg	78002	7870		16.7	8.35	6010B
140-BH02-3	3/19/2012	9	10	Antimony	7440-36-0	mg/kg	31.3	0.835	U	0.835	0.418	6010B
140-BH02-3	3/19/2012	9	10	Beryllium	7440-41-7	mg/kg	156	0.464		0.0835	0.0418	6010B
140-BH02-3	3/19/2012	9	10	Calcium	7440-70-2	mg/kg	NA	106000		83.5	41.8	6010B
140-BH02-3	3/19/2012	9	10	Iron (Ferrous)	7439-89-6	mg/kg	54750	7670		2.51	1.25	6010B
140-BH02-3	3/19/2012	9	10	Magnesium	7439-95-4	mg/kg	NA	11300		20.9	10.4	6010B
140-BH02-3	3/19/2012	9	10	Potassium	7440-09-7	mg/kg	NA	1280		41.8	20.9	6010B

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH02-3	3/19/2012	9	10	Sodium	7440-23-5	mg/kg	NA	721		20.9	10.4	6010B
140-BH02-3	3/19/2012	9	10	Zinc	7440-66-6	mg/kg	23464	18.6		0.835	0.418	6010B
140-BH02-3	3/19/2012	9	10	Arsenic	7440-38-2	mg/kg	3.90	3.27		1.66	0.831	6020
140-BH02-3	3/19/2012	9	10	Barium	7440-39-3	mg/kg	15558	114		1.66	0.831	6020
140-BH02-3	3/19/2012	9	10	Cadmium	7440-43-9	mg/kg	70.3	0.554	U	0.554	0.277	6020
140-BH02-3	3/19/2012	9	10	Chromium	7440-47-3	mg/kg	117321	4.90		2.22	1.11	6020
140-BH02-3	3/19/2012	9	10	Cobalt	7440-48-4	mg/kg	NA	4.10		2.77	1.38	6020
140-BH02-3	3/19/2012	9	10	Copper	7440-50-8	mg/kg	3129	4.60		3.32	1.66	6020
140-BH02-3	3/19/2012	9	10	Lead (Pb)	7439-92-1	mg/kg	400	6.54		1.11	0.554	6020
140-BH02-3	3/19/2012	9	10	Manganese	7439-96-5	mg/kg	1865	175		1.11	0.554	6020
140-BH02-3	3/19/2012	9	10	Nickel	7440-02-0	mg/kg	1560	10.3		4.43	2.22	6020
140-BH02-3	3/19/2012	9	10	Selenium	7782-49-2	mg/kg	391	0.613	J	1.11	0.554	6020
140-BH02-3	3/19/2012	9	10	Silver	7440-22-4	mg/kg	391	3.34	U	3.34	1.67	6020
140-BH02-3	3/19/2012	9	10	Thallium	7440-28-0	mg/kg	0.782	0.222	U	0.222	0.111	6020
140-BH02-3	3/19/2012	9	10	Vanadium	7440-62-2	mg/kg	391	15.8		2.77	1.38	6020
140-BH02-3	3/19/2012	9	10	Mercury	7439-97-6	mg/kg	15.6	0.110		0.110	0.0110	7471A

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH02-3	3/19/2012	9	10	Percent Solids	10-02-6	%	NA	88.5		1.00	1.00	D2216-90
140-BH03-1	3/19/2012	0	2	Aluminum	7429-90-5	mg/kg	78002	2940		13.7	6.84	6010B
140-BH03-1	3/19/2012	0	2	Antimony	7440-36-0	mg/kg	31.3	0.684	U	0.684	0.342	6010B
140-BH03-1	3/19/2012	0	2	Beryllium	7440-41-7	mg/kg	156	0.175		0.0684	0.0342	6010B
140-BH03-1	3/19/2012	0	2	Calcium	7440-70-2	mg/kg	NA	930		6.84	3.42	6010B
140-BH03-1	3/19/2012	0	2	Iron (Ferrous)	7439-89-6	mg/kg	54750	5040		2.05	1.03	6010B
140-BH03-1	3/19/2012	0	2	Magnesium	7439-95-4	mg/kg	NA	824		17.1	8.55	6010B
140-BH03-1	3/19/2012	0	2	Potassium	7440-09-7	mg/kg	NA	779		34.2	17.1	6010B
140-BH03-1	3/19/2012	0	2	Sodium	7440-23-5	mg/kg	NA	12.9	J	17.1	8.55	6010B
140-BH03-1	3/19/2012	0	2	Zinc	7440-66-6	mg/kg	23464	9.71		0.684	0.342	6010B
140-BH03-1	3/19/2012	0	2	Arsenic	7440-38-2	mg/kg	3.90	1.31	J	1.49	0.743	6020
140-BH03-1	3/19/2012	0	2	Barium	7440-39-3	mg/kg	15558	24.4		1.49	0.743	6020
140-BH03-1	3/19/2012	0	2	Cadmium	7440-43-9	mg/kg	70.3	0.495	U	0.495	0.248	6020
140-BH03-1	3/19/2012	0	2	Chromium	7440-47-3	mg/kg	117321	2.73		1.98	0.991	6020
140-BH03-1	3/19/2012	0	2	Cobalt	7440-48-4	mg/kg	NA	2.48	U	2.48	1.24	6020
140-BH03-1	3/19/2012	0	2	Copper	7440-50-8	mg/kg	3129	1.87	J	2.97	1.49	6020

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH03-1	3/19/2012	0	2	Lead (Pb)	7439-92-1	mg/kg	400	3.31		0.991	0.495	6020
140-BH03-1	3/19/2012	0	2	Manganese	7439-96-5	mg/kg	1865	55.3		0.991	0.495	6020
140-BH03-1	3/19/2012	0	2	Nickel	7440-02-0	mg/kg	1560	2.41	J	3.96	1.98	6020
140-BH03-1	3/19/2012	0	2	Selenium	7782-49-2	mg/kg	391	0.991	U	0.991	0.495	6020
140-BH03-1	3/19/2012	0	2	Silver	7440-22-4	mg/kg	391	2.74	U	2.74	1.37	6020
140-BH03-1	3/19/2012	0	2	Thallium	7440-28-0	mg/kg	0.782	0.198	U	0.198	0.0991	6020
140-BH03-1	3/19/2012	0	2	Vanadium	7440-62-2	mg/kg	391	4.49		2.48	1.24	6020
140-BH03-1	3/19/2012	0	2	Mercury	7439-97-6	mg/kg	15.6	0.0993		0.0993	0.00993	7471A
140-BH03-1	3/19/2012	0	2	Percent Solids	10-02-6	%	NA	97.8		1.00	1.00	D2216-90
140-BH03-2	3/19/2012	5	6	Aluminum	7429-90-5	mg/kg	78002	6160		16.2	8.10	6010B
140-BH03-2	3/19/2012	5	6	Antimony	7440-36-0	mg/kg	31.3	0.810	U	0.810	0.405	6010B
140-BH03-2	3/19/2012	5	6	Beryllium	7440-41-7	mg/kg	156	0.456		0.0810	0.0405	6010B
140-BH03-2	3/19/2012	5	6	Calcium	7440-70-2	mg/kg	NA	87400		81.0	40.5	6010B
140-BH03-2	3/19/2012	5	6	Iron (Ferrous)	7439-89-6	mg/kg	54750	6800		2.43	1.22	6010B
140-BH03-2	3/19/2012	5	6	Magnesium	7439-95-4	mg/kg	NA	5550		20.3	10.1	6010B
140-BH03-2	3/19/2012	5	6	Potassium	7440-09-7	mg/kg	NA	777	J	40.5	20.3	6010B

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH03-2	3/19/2012	5	6	Sodium	7440-23-5	mg/kg	NA	852		20.3	10.1	6010B
140-BH03-2	3/19/2012	5	6	Zinc	7440-66-6	mg/kg	23464	15.8	J	0.810	0.405	6010B
140-BH03-2	3/19/2012	5	6	Arsenic	7440-38-2	mg/kg	3.90	4.57		1.53	0.765	6020
140-BH03-2	3/19/2012	5	6	Barium	7440-39-3	mg/kg	15558	132		1.53	0.765	6020
140-BH03-2	3/19/2012	5	6	Cadmium	7440-43-9	mg/kg	70.3	0.510	U	0.510	0.255	6020
140-BH03-2	3/19/2012	5	6	Chromium	7440-47-3	mg/kg	117321	5.41		2.04	1.02	6020
140-BH03-2	3/19/2012	5	6	Cobalt	7440-48-4	mg/kg	NA	3.40		2.55	1.28	6020
140-BH03-2	3/19/2012	5	6	Copper	7440-50-8	mg/kg	3129	3.88		3.06	1.53	6020
140-BH03-2	3/19/2012	5	6	Lead (Pb)	7439-92-1	mg/kg	400	5.96		1.02	0.510	6020
140-BH03-2	3/19/2012	5	6	Manganese	7439-96-5	mg/kg	1865	119		1.02	0.510	6020
140-BH03-2	3/19/2012	5	6	Nickel	7440-02-0	mg/kg	1560	8.73		4.08	2.04	6020
140-BH03-2	3/19/2012	5	6	Selenium	7782-49-2	mg/kg	391	1.02	U	1.02	0.510	6020
140-BH03-2	3/19/2012	5	6	Silver	7440-22-4	mg/kg	391	3.24	U	3.24	1.62	6020
140-BH03-2	3/19/2012	5	6	Thallium	7440-28-0	mg/kg	0.782	0.204	U	0.204	0.102	6020
140-BH03-2	3/19/2012	5	6	Vanadium	7440-62-2	mg/kg	391	20.7		2.55	1.28	6020
140-BH03-2	3/19/2012	5	6	Mercury	7439-97-6	mg/kg	15.6	0.108		0.108	0.0108	7471A

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH03-2	3/19/2012	5	6	Percent Solids	10-02-6	%	NA	90.7		1.00	1.00	D2216-90
140-BH03-3	3/19/2012	9	10	Aluminum	7429-90-5	mg/kg	78002	7120		15.2	7.62	6010B
140-BH03-3	3/19/2012	9	10	Antimony	7440-36-0	mg/kg	31.3	0.762	U	0.762	0.381	6010B
140-BH03-3	3/19/2012	9	10	Beryllium	7440-41-7	mg/kg	156	0.397		0.0762	0.0381	6010B
140-BH03-3	3/19/2012	9	10	Calcium	7440-70-2	mg/kg	NA	25200		7.62	3.81	6010B
140-BH03-3	3/19/2012	9	10	Iron (Ferrous)	7439-89-6	mg/kg	54750	8300		2.29	1.14	6010B
140-BH03-3	3/19/2012	9	10	Magnesium	7439-95-4	mg/kg	NA	3520		19.0	9.52	6010B
140-BH03-3	3/19/2012	9	10	Potassium	7440-09-7	mg/kg	NA	1270		38.1	19.0	6010B
140-BH03-3	3/19/2012	9	10	Sodium	7440-23-5	mg/kg	NA	848		19.0	9.52	6010B
140-BH03-3	3/19/2012	9	10	Zinc	7440-66-6	mg/kg	23464	19.0		0.762	0.381	6010B
140-BH03-3	3/19/2012	9	10	Arsenic	7440-38-2	mg/kg	3.90	7.29		1.63	0.814	6020
140-BH03-3	3/19/2012	9	10	Barium	7440-39-3	mg/kg	15558	62.8		1.63	0.814	6020
140-BH03-3	3/19/2012	9	10	Cadmium	7440-43-9	mg/kg	70.3	0.542	U	0.542	0.271	6020
140-BH03-3	3/19/2012	9	10	Chromium	7440-47-3	mg/kg	117321	4.43		2.17	1.08	6020
140-BH03-3	3/19/2012	9	10	Cobalt	7440-48-4	mg/kg	NA	2.95		2.71	1.36	6020
140-BH03-3	3/19/2012	9	10	Copper	7440-50-8	mg/kg	3129	4.83		3.25	1.63	6020

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH03-3	3/19/2012	9	10	Lead (Pb)	7439-92-1	mg/kg	400	5.39		1.08	0.542	6020
140-BH03-3	3/19/2012	9	10	Manganese	7439-96-5	mg/kg	1865	172		1.08	0.542	6020
140-BH03-3	3/19/2012	9	10	Nickel	7440-02-0	mg/kg	1560	6.63		4.34	2.17	6020
140-BH03-3	3/19/2012	9	10	Selenium	7782-49-2	mg/kg	391	1.08	U	1.08	0.542	6020
140-BH03-3	3/19/2012	9	10	Silver	7440-22-4	mg/kg	391	3.05	U	3.05	1.52	6020
140-BH03-3	3/19/2012	9	10	Thallium	7440-28-0	mg/kg	0.782	0.217	U	0.217	0.108	6020
140-BH03-3	3/19/2012	9	10	Vanadium	7440-62-2	mg/kg	391	31.7		2.71	1.36	6020
140-BH03-3	3/19/2012	9	10	Mercury	7439-97-6	mg/kg	15.6	0.108		0.108	0.0108	7471A
140-BH03-3	3/19/2012	9	10	Percent Solids	10-02-6	%	NA	92.2		1.00	1.00	D2216-90
140-BH03-FD2	3/19/2012	5	6	Aluminum	7429-90-5	mg/kg	78002	8450		15.4	7.71	6010B
140-BH03-FD2	3/19/2012	5	6	Antimony	7440-36-0	mg/kg	31.3	0.771	U	0.771	0.386	6010B
140-BH03-FD2	3/19/2012	5	6	Beryllium	7440-41-7	mg/kg	156	0.511		0.0771	0.0386	6010B
140-BH03-FD2	3/19/2012	5	6	Calcium	7440-70-2	mg/kg	NA	59300		38.6	19.3	6010B
140-BH03-FD2	3/19/2012	5	6	Iron (Ferrous)	7439-89-6	mg/kg	54750	8530		2.31	1.16	6010B
140-BH03-FD2	3/19/2012	5	6	Magnesium	7439-95-4	mg/kg	NA	5820		19.3	9.64	6010B
140-BH03-FD2	3/19/2012	5	6	Potassium	7440-09-7	mg/kg	NA	1300	J	38.6	19.3	6010B

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH03-FD2	3/19/2012	5	6	Sodium	7440-23-5	mg/kg	NA	869		19.3	9.64	6010B
140-BH03-FD2	3/19/2012	5	6	Zinc	7440-66-6	mg/kg	23464	19.5	J	0.771	0.386	6010B
140-BH03-FD2	3/19/2012	5	6	Arsenic	7440-38-2	mg/kg	3.90	4.52		1.63	0.814	6020
140-BH03-FD2	3/19/2012	5	6	Barium	7440-39-3	mg/kg	15558	139		1.63	0.814	6020
140-BH03-FD2	3/19/2012	5	6	Cadmium	7440-43-9	mg/kg	70.3	0.543	U	0.543	0.271	6020
140-BH03-FD2	3/19/2012	5	6	Chromium	7440-47-3	mg/kg	117321	5.00		2.17	1.09	6020
140-BH03-FD2	3/19/2012	5	6	Cobalt	7440-48-4	mg/kg	NA	3.36		2.71	1.36	6020
140-BH03-FD2	3/19/2012	5	6	Copper	7440-50-8	mg/kg	3129	3.69		3.26	1.63	6020
140-BH03-FD2	3/19/2012	5	6	Lead (Pb)	7439-92-1	mg/kg	400	5.93		1.09	0.543	6020
140-BH03-FD2	3/19/2012	5	6	Manganese	7439-96-5	mg/kg	1865	115		1.09	0.543	6020
140-BH03-FD2	3/19/2012	5	6	Nickel	7440-02-0	mg/kg	1560	8.40		4.34	2.17	6020
140-BH03-FD2	3/19/2012	5	6	Selenium	7782-49-2	mg/kg	391	1.09	U	1.09	0.543	6020
140-BH03-FD2	3/19/2012	5	6	Silver	7440-22-4	mg/kg	391	3.09	U	3.09	1.54	6020
140-BH03-FD2	3/19/2012	5	6	Thallium	7440-28-0	mg/kg	0.782	0.217	U	0.217	0.109	6020
140-BH03-FD2	3/19/2012	5	6	Vanadium	7440-62-2	mg/kg	391	20.4		2.71	1.36	6020
140-BH03-FD2	3/19/2012	5	6	Mercury	7439-97-6	mg/kg	15.6	0.107		0.107	0.0107	7471A

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH03-FD2	3/19/2012	5	6	Percent Solids	10-02-6	%	NA	90.7		1.00	1.00	D2216-90
140-BH04-1	3/20/2012	0	2	Aluminum	7429-90-5	mg/kg	78002	4170		14.1	7.05	6010B
140-BH04-1	3/20/2012	0	2	Antimony	7440-36-0	mg/kg	31.3	0.705	U	0.705	0.352	6010B
140-BH04-1	3/20/2012	0	2	Beryllium	7440-41-7	mg/kg	156	0.268		0.0705	0.0352	6010B
140-BH04-1	3/20/2012	0	2	Calcium	7440-70-2	mg/kg	NA	16800		7.05	3.52	6010B
140-BH04-1	3/20/2012	0	2	Iron (Ferrous)	7439-89-6	mg/kg	54750	5610		2.11	1.06	6010B
140-BH04-1	3/20/2012	0	2	Magnesium	7439-95-4	mg/kg	NA	1590		17.6	8.81	6010B
140-BH04-1	3/20/2012	0	2	Potassium	7440-09-7	mg/kg	NA	955		35.2	17.6	6010B
140-BH04-1	3/20/2012	0	2	Sodium	7440-23-5	mg/kg	NA	36.0		17.6	8.81	6010B
140-BH04-1	3/20/2012	0	2	Zinc	7440-66-6	mg/kg	23464	11.0		0.705	0.352	6010B
140-BH04-1	3/20/2012	0	2	Arsenic	7440-38-2	mg/kg	3.90	3.73		1.51	0.757	6020
140-BH04-1	3/20/2012	0	2	Barium	7440-39-3	mg/kg	15558	321		15.1	7.57	6020
140-BH04-1	3/20/2012	0	2	Cadmium	7440-43-9	mg/kg	70.3	0.505	U	0.505	0.252	6020
140-BH04-1	3/20/2012	0	2	Chromium	7440-47-3	mg/kg	117321	3.44		2.02	1.01	6020
140-BH04-1	3/20/2012	0	2	Cobalt	7440-48-4	mg/kg	NA	1.89	J	2.52	1.26	6020
140-BH04-1	3/20/2012	0	2	Copper	7440-50-8	mg/kg	3129	2.71	J	3.03	1.51	6020

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH04-1	3/20/2012	0	2	Lead (Pb)	7439-92-1	mg/kg	400	4.05		1.01	0.505	6020
140-BH04-1	3/20/2012	0	2	Manganese	7439-96-5	mg/kg	1865	59.1		1.01	0.505	6020
140-BH04-1	3/20/2012	0	2	Nickel	7440-02-0	mg/kg	1560	5.15		4.04	2.02	6020
140-BH04-1	3/20/2012	0	2	Selenium	7782-49-2	mg/kg	391	1.01	U	1.01	0.505	6020
140-BH04-1	3/20/2012	0	2	Silver	7440-22-4	mg/kg	391	2.82	U	2.82	1.41	6020
140-BH04-1	3/20/2012	0	2	Thallium	7440-28-0	mg/kg	0.782	0.202	U	0.202	0.101	6020
140-BH04-1	3/20/2012	0	2	Vanadium	7440-62-2	mg/kg	391	10.4		2.52	1.26	6020
140-BH04-1	3/20/2012	0	2	Mercury	7439-97-6	mg/kg	15.6	0.101		0.101	0.0101	7471A
140-BH04-1	3/20/2012	0	2	Percent Solids	10-02-6	%	NA	95.6		1.00	1.00	D2216-90
140-BH04-2	3/20/2012	5	6	Aluminum	7429-90-5	mg/kg	78002	8660		15.2	7.58	6010B
140-BH04-2	3/20/2012	5	6	Antimony	7440-36-0	mg/kg	31.3	0.758	U	0.758	0.379	6010B
140-BH04-2	3/20/2012	5	6	Beryllium	7440-41-7	mg/kg	156	0.484		0.0758	0.0379	6010B
140-BH04-2	3/20/2012	5	6	Calcium	7440-70-2	mg/kg	NA	47500		75.8	37.9	6010B
140-BH04-2	3/20/2012	5	6	Iron (Ferrous)	7439-89-6	mg/kg	54750	8270		2.27	1.14	6010B
140-BH04-2	3/20/2012	5	6	Magnesium	7439-95-4	mg/kg	NA	6200		18.9	9.47	6010B
140-BH04-2	3/20/2012	5	6	Potassium	7440-09-7	mg/kg	NA	1530		37.9	18.9	6010B

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH04-2	3/20/2012	5	6	Sodium	7440-23-5	mg/kg	NA	909		18.9	9.47	6010B
140-BH04-2	3/20/2012	5	6	Zinc	7440-66-6	mg/kg	23464	19.3		0.758	0.379	6010B
140-BH04-2	3/20/2012	5	6	Arsenic	7440-38-2	mg/kg	3.90	5.92		1.63	0.815	6020
140-BH04-2	3/20/2012	5	6	Barium	7440-39-3	mg/kg	15558	128		1.63	0.815	6020
140-BH04-2	3/20/2012	5	6	Cadmium	7440-43-9	mg/kg	70.3	0.543	U	0.543	0.272	6020
140-BH04-2	3/20/2012	5	6	Chromium	7440-47-3	mg/kg	117321	5.97		2.17	1.09	6020
140-BH04-2	3/20/2012	5	6	Cobalt	7440-48-4	mg/kg	NA	3.47		2.72	1.36	6020
140-BH04-2	3/20/2012	5	6	Copper	7440-50-8	mg/kg	3129	4.30		3.26	1.63	6020
140-BH04-2	3/20/2012	5	6	Lead (Pb)	7439-92-1	mg/kg	400	5.56		1.09	0.543	6020
140-BH04-2	3/20/2012	5	6	Manganese	7439-96-5	mg/kg	1865	129		1.09	0.543	6020
140-BH04-2	3/20/2012	5	6	Nickel	7440-02-0	mg/kg	1560	7.95		4.35	2.17	6020
140-BH04-2	3/20/2012	5	6	Selenium	7782-49-2	mg/kg	391	0.585	J	1.09	0.543	6020
140-BH04-2	3/20/2012	5	6	Silver	7440-22-4	mg/kg	391	3.03	U	3.03	1.52	6020
140-BH04-2	3/20/2012	5	6	Thallium	7440-28-0	mg/kg	0.782	0.217	U	0.217	0.109	6020
140-BH04-2	3/20/2012	5	6	Vanadium	7440-62-2	mg/kg	391	21.4		2.72	1.36	6020
140-BH04-2	3/20/2012	5	6	Mercury	7439-97-6	mg/kg	15.6	0.108		0.108	0.0108	7471A

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH04-2	3/20/2012	5	6	Percent Solids	10-02-6	%	NA	91.8		1.00	1.00	D2216-90
140-BH04-3	3/20/2012	9	10	Aluminum	7429-90-5	mg/kg	78002	8880		17.2	8.62	6010B
140-BH04-3	3/20/2012	9	10	Antimony	7440-36-0	mg/kg	31.3	0.862	U	0.862	0.431	6010B
140-BH04-3	3/20/2012	9	10	Beryllium	7440-41-7	mg/kg	156	0.750		0.0862	0.0431	6010B
140-BH04-3	3/20/2012	9	10	Calcium	7440-70-2	mg/kg	NA	28000		8.62	4.31	6010B
140-BH04-3	3/20/2012	9	10	Iron (Ferrous)	7439-89-6	mg/kg	54750	12700		2.59	1.29	6010B
140-BH04-3	3/20/2012	9	10	Magnesium	7439-95-4	mg/kg	NA	5840		21.6	10.8	6010B
140-BH04-3	3/20/2012	9	10	Potassium	7440-09-7	mg/kg	NA	1680		43.1	21.6	6010B
140-BH04-3	3/20/2012	9	10	Sodium	7440-23-5	mg/kg	NA	1540		21.6	10.8	6010B
140-BH04-3	3/20/2012	9	10	Zinc	7440-66-6	mg/kg	23464	34.5		0.862	0.431	6010B
140-BH04-3	3/20/2012	9	10	Arsenic	7440-38-2	mg/kg	3.90	6.84		1.70	0.850	6020
140-BH04-3	3/20/2012	9	10	Barium	7440-39-3	mg/kg	15558	25.1		1.70	0.850	6020
140-BH04-3	3/20/2012	9	10	Cadmium	7440-43-9	mg/kg	70.3	0.567	U	0.567	0.283	6020
140-BH04-3	3/20/2012	9	10	Chromium	7440-47-3	mg/kg	117321	4.07		2.27	1.13	6020
140-BH04-3	3/20/2012	9	10	Cobalt	7440-48-4	mg/kg	NA	3.27		2.83	1.42	6020
140-BH04-3	3/20/2012	9	10	Copper	7440-50-8	mg/kg	3129	9.35		3.40	1.70	6020

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH04-3	3/20/2012	9	10	Lead (Pb)	7439-92-1	mg/kg	400	8.38		1.13	0.567	6020
140-BH04-3	3/20/2012	9	10	Manganese	7439-96-5	mg/kg	1865	144		1.13	0.567	6020
140-BH04-3	3/20/2012	9	10	Nickel	7440-02-0	mg/kg	1560	8.12		4.53	2.27	6020
140-BH04-3	3/20/2012	9	10	Selenium	7782-49-2	mg/kg	391	0.585	J	1.13	0.567	6020
140-BH04-3	3/20/2012	9	10	Silver	7440-22-4	mg/kg	391	3.45	U	3.45	1.72	6020
140-BH04-3	3/20/2012	9	10	Thallium	7440-28-0	mg/kg	0.782	0.227	U	0.227	0.113	6020
140-BH04-3	3/20/2012	9	10	Vanadium	7440-62-2	mg/kg	391	19.7		2.83	1.42	6020
140-BH04-3	3/20/2012	9	10	Mercury	7439-97-6	mg/kg	15.6	0.112		0.112	0.0112	7471A
140-BH04-3	3/20/2012	9	10	Percent Solids	10-02-6	%	NA	84.8		1.00	1.00	D2216-90
140-BH05-1	3/20/2012	0	2	Aluminum	7429-90-5	mg/kg	78002	3230		15.3	7.64	6010B
140-BH05-1	3/20/2012	0	2	Antimony	7440-36-0	mg/kg	31.3	0.764	U	0.764	0.382	6010B
140-BH05-1	3/20/2012	0	2	Beryllium	7440-41-7	mg/kg	156	0.220		0.0764	0.0382	6010B
140-BH05-1	3/20/2012	0	2	Calcium	7440-70-2	mg/kg	NA	4890		7.64	3.82	6010B
140-BH05-1	3/20/2012	0	2	Iron (Ferrous)	7439-89-6	mg/kg	54750	5300		2.29	1.15	6010B
140-BH05-1	3/20/2012	0	2	Magnesium	7439-95-4	mg/kg	NA	1040		19.1	9.55	6010B
140-BH05-1	3/20/2012	0	2	Potassium	7440-09-7	mg/kg	NA	1010		38.2	19.1	6010B

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH05-1	3/20/2012	0	2	Sodium	7440-23-5	mg/kg	NA	15.9	J	19.1	9.55	6010B
140-BH05-1	3/20/2012	0	2	Zinc	7440-66-6	mg/kg	23464	10.3		0.764	0.382	6010B
140-BH05-1	3/20/2012	0	2	Arsenic	7440-38-2	mg/kg	3.90	1.49	J	1.51	0.756	6020
140-BH05-1	3/20/2012	0	2	Barium	7440-39-3	mg/kg	15558	24.8		1.51	0.756	6020
140-BH05-1	3/20/2012	0	2	Cadmium	7440-43-9	mg/kg	70.3	0.504	U	0.504	0.252	6020
140-BH05-1	3/20/2012	0	2	Chromium	7440-47-3	mg/kg	117321	2.12		2.01	1.01	6020
140-BH05-1	3/20/2012	0	2	Cobalt	7440-48-4	mg/kg	NA	2.52	U	2.52	1.26	6020
140-BH05-1	3/20/2012	0	2	Copper	7440-50-8	mg/kg	3129	1.81	J	3.02	1.51	6020
140-BH05-1	3/20/2012	0	2	Lead (Pb)	7439-92-1	mg/kg	400	3.39		1.01	0.504	6020
140-BH05-1	3/20/2012	0	2	Manganese	7439-96-5	mg/kg	1865	44.5		1.01	0.504	6020
140-BH05-1	3/20/2012	0	2	Nickel	7440-02-0	mg/kg	1560	2.55	J	4.03	2.01	6020
140-BH05-1	3/20/2012	0	2	Selenium	7782-49-2	mg/kg	391	1.01	U	1.01	0.504	6020
140-BH05-1	3/20/2012	0	2	Silver	7440-22-4	mg/kg	391	3.06	U	3.06	1.53	6020
140-BH05-1	3/20/2012	0	2	Thallium	7440-28-0	mg/kg	0.782	0.201	U	0.201	0.101	6020
140-BH05-1	3/20/2012	0	2	Vanadium	7440-62-2	mg/kg	391	3.84		2.52	1.26	6020
140-BH05-1	3/20/2012	0	2	Mercury	7439-97-6	mg/kg	15.6	0.0993		0.0993	0.00993	7471A

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
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White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH05-1	3/20/2012	0	2	Percent Solids	10-02-6	%	NA	97.1		1.00	1.00	D2216-90
140-BH05-2	3/20/2012	5	6	Aluminum	7429-90-5	mg/kg	78002	4450		15.7	7.83	6010B
140-BH05-2	3/20/2012	5	6	Antimony	7440-36-0	mg/kg	31.3	0.783	U	0.783	0.391	6010B
140-BH05-2	3/20/2012	5	6	Beryllium	7440-41-7	mg/kg	156	0.276		0.0783	0.0391	6010B
140-BH05-2	3/20/2012	5	6	Calcium	7440-70-2	mg/kg	NA	189000		78.3	39.1	6010B
140-BH05-2	3/20/2012	5	6	Iron (Ferrous)	7439-89-6	mg/kg	54750	4630		23.5	11.7	6010B
140-BH05-2	3/20/2012	5	6	Magnesium	7439-95-4	mg/kg	NA	5140		19.6	9.79	6010B
140-BH05-2	3/20/2012	5	6	Potassium	7440-09-7	mg/kg	NA	511		39.1	19.6	6010B
140-BH05-2	3/20/2012	5	6	Sodium	7440-23-5	mg/kg	NA	430		19.6	9.79	6010B
140-BH05-2	3/20/2012	5	6	Zinc	7440-66-6	mg/kg	23464	8.82		0.783	0.391	6010B
140-BH05-2	3/20/2012	5	6	Arsenic	7440-38-2	mg/kg	3.90	3.28		1.55	0.776	6020
140-BH05-2	3/20/2012	5	6	Barium	7440-39-3	mg/kg	15558	158		1.55	0.776	6020
140-BH05-2	3/20/2012	5	6	Cadmium	7440-43-9	mg/kg	70.3	0.517	U	0.517	0.259	6020
140-BH05-2	3/20/2012	5	6	Chromium	7440-47-3	mg/kg	117321	3.24		2.07	1.03	6020
140-BH05-2	3/20/2012	5	6	Cobalt	7440-48-4	mg/kg	NA	2.70		2.59	1.29	6020
140-BH05-2	3/20/2012	5	6	Copper	7440-50-8	mg/kg	3129	1.81	J	3.10	1.55	6020

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
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Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH05-2	3/20/2012	5	6	Lead (Pb)	7439-92-1	mg/kg	400	3.97		1.03	0.517	6020
140-BH05-2	3/20/2012	5	6	Manganese	7439-96-5	mg/kg	1865	54.8		1.03	0.517	6020
140-BH05-2	3/20/2012	5	6	Nickel	7440-02-0	mg/kg	1560	11.9		4.14	2.07	6020
140-BH05-2	3/20/2012	5	6	Selenium	7782-49-2	mg/kg	391	1.05		1.03	0.517	6020
140-BH05-2	3/20/2012	5	6	Silver	7440-22-4	mg/kg	391	3.13	U	3.13	1.57	6020
140-BH05-2	3/20/2012	5	6	Thallium	7440-28-0	mg/kg	0.782	0.207	U	0.207	0.103	6020
140-BH05-2	3/20/2012	5	6	Vanadium	7440-62-2	mg/kg	391	8.46		2.59	1.29	6020
140-BH05-2	3/20/2012	5	6	Mercury	7439-97-6	mg/kg	15.6	0.104		0.104	0.0104	7471A
140-BH05-2	3/20/2012	5	6	Percent Solids	10-02-6	%	NA	92.0		1.00	1.00	D2216-90
140-BH05-3	3/20/2012	9	10	Aluminum	7429-90-5	mg/kg	78002	2640		15.1	7.54	6010B
140-BH05-3	3/20/2012	9	10	Antimony	7440-36-0	mg/kg	31.3	0.754	U	0.754	0.377	6010B
140-BH05-3	3/20/2012	9	10	Beryllium	7440-41-7	mg/kg	156	0.250		0.0754	0.0377	6010B
140-BH05-3	3/20/2012	9	10	Calcium	7440-70-2	mg/kg	NA	9880	J	75.4	37.7	6010B
140-BH05-3	3/20/2012	9	10	Iron (Ferrous)	7439-89-6	mg/kg	54750	5200		22.6	11.3	6010B
140-BH05-3	3/20/2012	9	10	Magnesium	7439-95-4	mg/kg	NA	1810		18.9	9.43	6010B
140-BH05-3	3/20/2012	9	10	Potassium	7440-09-7	mg/kg	NA	480		37.7	18.9	6010B

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH05-3	3/20/2012	9	10	Sodium	7440-23-5	mg/kg	NA	370		18.9	9.43	6010B
140-BH05-3	3/20/2012	9	10	Zinc	7440-66-6	mg/kg	23464	11.7		0.754	0.377	6010B
140-BH05-3	3/20/2012	9	10	Arsenic	7440-38-2	mg/kg	3.90	2.02		1.43	0.714	6020
140-BH05-3	3/20/2012	9	10	Barium	7440-39-3	mg/kg	15558	68.0		1.43	0.714	6020
140-BH05-3	3/20/2012	9	10	Cadmium	7440-43-9	mg/kg	70.3	0.476	U	0.476	0.238	6020
140-BH05-3	3/20/2012	9	10	Chromium	7440-47-3	mg/kg	117321	1.07	J	1.90	0.952	6020
140-BH05-3	3/20/2012	9	10	Cobalt	7440-48-4	mg/kg	NA	2.78		2.38	1.19	6020
140-BH05-3	3/20/2012	9	10	Copper	7440-50-8	mg/kg	3129	1.53	J	2.86	1.43	6020
140-BH05-3	3/20/2012	9	10	Lead (Pb)	7439-92-1	mg/kg	400	3.19		0.952	0.476	6020
140-BH05-3	3/20/2012	9	10	Manganese	7439-96-5	mg/kg	1865	120		0.952	0.476	6020
140-BH05-3	3/20/2012	9	10	Nickel	7440-02-0	mg/kg	1560	3.81		3.81	1.90	6020
140-BH05-3	3/20/2012	9	10	Selenium	7782-49-2	mg/kg	391	0.952	U	0.952	0.476	6020
140-BH05-3	3/20/2012	9	10	Silver	7440-22-4	mg/kg	391	3.02	U	3.02	1.51	6020
140-BH05-3	3/20/2012	9	10	Thallium	7440-28-0	mg/kg	0.782	0.190	U	0.190	0.0952	6020
140-BH05-3	3/20/2012	9	10	Vanadium	7440-62-2	mg/kg	391	8.12		2.38	1.19	6020
140-BH05-3	3/20/2012	9	10	Mercury	7439-97-6	mg/kg	15.6	0.0996		0.0996	0.0100	7471A

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH05-3	3/20/2012	9	10	Percent Solids	10-02-6	%	NA	97.4		1.00	1.00	D2216-90
140-BH05-FD3	3/20/2012	9	10	Aluminum	7429-90-5	mg/kg	78002	2990		14.7	7.35	6010B
140-BH05-FD3	3/20/2012	9	10	Antimony	7440-36-0	mg/kg	31.3	0.735	U	0.735	0.368	6010B
140-BH05-FD3	3/20/2012	9	10	Beryllium	7440-41-7	mg/kg	156	0.272		0.0735	0.0368	6010B
140-BH05-FD3	3/20/2012	9	10	Calcium	7440-70-2	mg/kg	NA	19300	J	73.5	36.8	6010B
140-BH05-FD3	3/20/2012	9	10	Iron (Ferrous)	7439-89-6	mg/kg	54750	6120		22.1	11.0	6010B
140-BH05-FD3	3/20/2012	9	10	Magnesium	7439-95-4	mg/kg	NA	2030		18.4	9.19	6010B
140-BH05-FD3	3/20/2012	9	10	Potassium	7440-09-7	mg/kg	NA	551		36.8	18.4	6010B
140-BH05-FD3	3/20/2012	9	10	Sodium	7440-23-5	mg/kg	NA	381		18.4	9.19	6010B
140-BH05-FD3	3/20/2012	9	10	Zinc	7440-66-6	mg/kg	23464	12.5		0.735	0.368	6010B
140-BH05-FD3	3/20/2012	9	10	Arsenic	7440-38-2	mg/kg	3.90	3.01		1.52	0.761	6020
140-BH05-FD3	3/20/2012	9	10	Barium	7440-39-3	mg/kg	15558	86.1		1.52	0.761	6020
140-BH05-FD3	3/20/2012	9	10	Cadmium	7440-43-9	mg/kg	70.3	0.507	U	0.507	0.254	6020
140-BH05-FD3	3/20/2012	9	10	Chromium	7440-47-3	mg/kg	117321	2.03		2.03	1.01	6020
140-BH05-FD3	3/20/2012	9	10	Cobalt	7440-48-4	mg/kg	NA	4.16		2.54	1.27	6020
140-BH05-FD3	3/20/2012	9	10	Copper	7440-50-8	mg/kg	3129	2.79	J	3.04	1.52	6020

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH05-FD3	3/20/2012	9	10	Lead (Pb)	7439-92-1	mg/kg	400	4.36		1.01	0.507	6020
140-BH05-FD3	3/20/2012	9	10	Manganese	7439-96-5	mg/kg	1865	177		1.01	0.507	6020
140-BH05-FD3	3/20/2012	9	10	Nickel	7440-02-0	mg/kg	1560	6.08		4.06	2.03	6020
140-BH05-FD3	3/20/2012	9	10	Selenium	7782-49-2	mg/kg	391	1.01	U	1.01	0.507	6020
140-BH05-FD3	3/20/2012	9	10	Silver	7440-22-4	mg/kg	391	2.94	U	2.94	1.47	6020
140-BH05-FD3	3/20/2012	9	10	Thallium	7440-28-0	mg/kg	0.782	0.203	U	0.203	0.101	6020
140-BH05-FD3	3/20/2012	9	10	Vanadium	7440-62-2	mg/kg	391	11.9		2.54	1.27	6020
140-BH05-FD3	3/20/2012	9	10	Mercury	7439-97-6	mg/kg	15.6	0.00982	J	0.0982	0.00982	7471A
140-BH05-FD3	3/20/2012	9	10	Percent Solids	10-02-6	%	NA	97.4		1.00	1.00	D2216-90
140-BH06-1	3/20/2012	0	2	Aluminum	7429-90-5	mg/kg	78002	1590		14.3	7.17	6010B
140-BH06-1	3/20/2012	0	2	Antimony	7440-36-0	mg/kg	31.3	0.717	U	0.717	0.358	6010B
140-BH06-1	3/20/2012	0	2	Beryllium	7440-41-7	mg/kg	156	0.137		0.0717	0.0358	6010B
140-BH06-1	3/20/2012	0	2	Calcium	7440-70-2	mg/kg	NA	1100		71.7	35.8	6010B
140-BH06-1	3/20/2012	0	2	Iron (Ferrous)	7439-89-6	mg/kg	54750	4070		21.5	10.8	6010B
140-BH06-1	3/20/2012	0	2	Magnesium	7439-95-4	mg/kg	NA	571		17.9	8.96	6010B
140-BH06-1	3/20/2012	0	2	Potassium	7440-09-7	mg/kg	NA	544		35.8	17.9	6010B

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH06-1	3/20/2012	0	2	Sodium	7440-23-5	mg/kg	NA	9.59	J	17.9	8.96	6010B
140-BH06-1	3/20/2012	0	2	Zinc	7440-66-6	mg/kg	23464	6.94		0.717	0.358	6010B
140-BH06-1	3/20/2012	0	2	Arsenic	7440-38-2	mg/kg	3.90	0.774	J	1.46	0.728	6020
140-BH06-1	3/20/2012	0	2	Barium	7440-39-3	mg/kg	15558	15.4		1.46	0.728	6020
140-BH06-1	3/20/2012	0	2	Cadmium	7440-43-9	mg/kg	70.3	0.485	U	0.485	0.243	6020
140-BH06-1	3/20/2012	0	2	Chromium	7440-47-3	mg/kg	117321	1.36	J	1.94	0.971	6020
140-BH06-1	3/20/2012	0	2	Cobalt	7440-48-4	mg/kg	NA	2.43	U	2.43	1.21	6020
140-BH06-1	3/20/2012	0	2	Copper	7440-50-8	mg/kg	3129	2.91	U	2.91	1.46	6020
140-BH06-1	3/20/2012	0	2	Lead (Pb)	7439-92-1	mg/kg	400	3.08		0.971	0.485	6020
140-BH06-1	3/20/2012	0	2	Manganese	7439-96-5	mg/kg	1865	37.0		0.971	0.485	6020
140-BH06-1	3/20/2012	0	2	Nickel	7440-02-0	mg/kg	1560	3.88	U	3.88	1.94	6020
140-BH06-1	3/20/2012	0	2	Selenium	7782-49-2	mg/kg	391	0.971	U	0.971	0.485	6020
140-BH06-1	3/20/2012	0	2	Silver	7440-22-4	mg/kg	391	2.87	U	2.87	1.43	6020
140-BH06-1	3/20/2012	0	2	Thallium	7440-28-0	mg/kg	0.782	0.194	U	0.194	0.0971	6020
140-BH06-1	3/20/2012	0	2	Vanadium	7440-62-2	mg/kg	391	2.12	J	2.43	1.21	6020
140-BH06-1	3/20/2012	0	2	Mercury	7439-97-6	mg/kg	15.6	0.0975		0.0975	0.00975	7471A

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH06-1	3/20/2012	0	2	Percent Solids	10-02-6	%	NA	98.3		1.00	1.00	D2216-90
140-BH06-2	3/20/2012	5	6	Aluminum	7429-90-5	mg/kg	78002	5620		15.8	7.92	6010B
140-BH06-2	3/20/2012	5	6	Antimony	7440-36-0	mg/kg	31.3	0.792	U	0.792	0.396	6010B
140-BH06-2	3/20/2012	5	6	Beryllium	7440-41-7	mg/kg	156	0.411		0.0792	0.0396	6010B
140-BH06-2	3/20/2012	5	6	Calcium	7440-70-2	mg/kg	NA	12200		79.2	39.6	6010B
140-BH06-2	3/20/2012	5	6	Iron (Ferrous)	7439-89-6	mg/kg	54750	8390		23.8	11.9	6010B
140-BH06-2	3/20/2012	5	6	Magnesium	7439-95-4	mg/kg	NA	1890		19.8	9.91	6010B
140-BH06-2	3/20/2012	5	6	Potassium	7440-09-7	mg/kg	NA	1040		39.6	19.8	6010B
140-BH06-2	3/20/2012	5	6	Sodium	7440-23-5	mg/kg	NA	218		19.8	9.91	6010B
140-BH06-2	3/20/2012	5	6	Zinc	7440-66-6	mg/kg	23464	14.8		0.792	0.396	6010B
140-BH06-2	3/20/2012	5	6	Arsenic	7440-38-2	mg/kg	3.90	2.91		1.56	0.780	6020
140-BH06-2	3/20/2012	5	6	Barium	7440-39-3	mg/kg	15558	58.0		1.56	0.780	6020
140-BH06-2	3/20/2012	5	6	Cadmium	7440-43-9	mg/kg	70.3	0.520	U	0.520	0.260	6020
140-BH06-2	3/20/2012	5	6	Chromium	7440-47-3	mg/kg	117321	5.44		2.08	1.04	6020
140-BH06-2	3/20/2012	5	6	Cobalt	7440-48-4	mg/kg	NA	2.79		2.60	1.30	6020
140-BH06-2	3/20/2012	5	6	Copper	7440-50-8	mg/kg	3129	3.71		3.12	1.56	6020

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH06-2	3/20/2012	5	6	Lead (Pb)	7439-92-1	mg/kg	400	5.91		1.04	0.520	6020
140-BH06-2	3/20/2012	5	6	Manganese	7439-96-5	mg/kg	1865	102		1.04	0.520	6020
140-BH06-2	3/20/2012	5	6	Nickel	7440-02-0	mg/kg	1560	5.93		4.16	2.08	6020
140-BH06-2	3/20/2012	5	6	Selenium	7782-49-2	mg/kg	391	1.04	U	1.04	0.520	6020
140-BH06-2	3/20/2012	5	6	Silver	7440-22-4	mg/kg	391	3.17	U	3.17	1.58	6020
140-BH06-2	3/20/2012	5	6	Thallium	7440-28-0	mg/kg	0.782	0.208	U	0.208	0.104	6020
140-BH06-2	3/20/2012	5	6	Vanadium	7440-62-2	mg/kg	391	12.8		2.60	1.30	6020
140-BH06-2	3/20/2012	5	6	Mercury	7439-97-6	mg/kg	15.6	0.102		0.102	0.0102	7471A
140-BH06-2	3/20/2012	5	6	Percent Solids	10-02-6	%	NA	94.7		1.00	1.00	D2216-90
140-BH06-3	3/20/2012	9	10	Aluminum	7429-90-5	mg/kg	78002	2920		15.8	7.89	6010B
140-BH06-3	3/20/2012	9	10	Antimony	7440-36-0	mg/kg	31.3	0.789	U	0.789	0.394	6010B
140-BH06-3	3/20/2012	9	10	Beryllium	7440-41-7	mg/kg	156	0.222		0.0789	0.0394	6010B
140-BH06-3	3/20/2012	9	10	Calcium	7440-70-2	mg/kg	NA	94400		78.9	39.4	6010B
140-BH06-3	3/20/2012	9	10	Iron (Ferrous)	7439-89-6	mg/kg	54750	4170		23.7	11.8	6010B
140-BH06-3	3/20/2012	9	10	Magnesium	7439-95-4	mg/kg	NA	2900		19.7	9.86	6010B
140-BH06-3	3/20/2012	9	10	Potassium	7440-09-7	mg/kg	NA	374		39.4	19.7	6010B

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH06-3	3/20/2012	9	10	Sodium	7440-23-5	mg/kg	NA	441		19.7	9.86	6010B
140-BH06-3	3/20/2012	9	10	Zinc	7440-66-6	mg/kg	23464	6.24		0.789	0.394	6010B
140-BH06-3	3/20/2012	9	10	Arsenic	7440-38-2	mg/kg	3.90	1.71		1.54	0.768	6020
140-BH06-3	3/20/2012	9	10	Barium	7440-39-3	mg/kg	15558	84.6		1.54	0.768	6020
140-BH06-3	3/20/2012	9	10	Cadmium	7440-43-9	mg/kg	70.3	0.512	U	0.512	0.256	6020
140-BH06-3	3/20/2012	9	10	Chromium	7440-47-3	mg/kg	117321	1.99	J	2.05	1.02	6020
140-BH06-3	3/20/2012	9	10	Cobalt	7440-48-4	mg/kg	NA	1.52	J	2.56	1.28	6020
140-BH06-3	3/20/2012	9	10	Copper	7440-50-8	mg/kg	3129	3.07	U	3.07	1.54	6020
140-BH06-3	3/20/2012	9	10	Lead (Pb)	7439-92-1	mg/kg	400	2.95		1.02	0.512	6020
140-BH06-3	3/20/2012	9	10	Manganese	7439-96-5	mg/kg	1865	31.7		1.02	0.512	6020
140-BH06-3	3/20/2012	9	10	Nickel	7440-02-0	mg/kg	1560	5.17		4.09	2.05	6020
140-BH06-3	3/20/2012	9	10	Selenium	7782-49-2	mg/kg	391	1.02	U	1.02	0.512	6020
140-BH06-3	3/20/2012	9	10	Silver	7440-22-4	mg/kg	391	3.16	U	3.16	1.58	6020
140-BH06-3	3/20/2012	9	10	Thallium	7440-28-0	mg/kg	0.782	0.205	U	0.205	0.102	6020
140-BH06-3	3/20/2012	9	10	Vanadium	7440-62-2	mg/kg	391	6.52		2.56	1.28	6020
140-BH06-3	3/20/2012	9	10	Mercury	7439-97-6	mg/kg	15.6	0.104		0.104	0.0104	7471A

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
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Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH06-3	3/20/2012	9	10	Percent Solids	10-02-6	%	NA	93.4		1.00	1.00	D2216-90
140-BH07-1	3/20/2012	0	2	Aluminum	7429-90-5	mg/kg	78002	1590		14.3	7.16	6010B
140-BH07-1	3/20/2012	0	2	Antimony	7440-36-0	mg/kg	31.3	0.716	U	0.716	0.358	6010B
140-BH07-1	3/20/2012	0	2	Beryllium	7440-41-7	mg/kg	156	0.135		0.0716	0.0358	6010B
140-BH07-1	3/20/2012	0	2	Calcium	7440-70-2	mg/kg	NA	2760		71.6	35.8	6010B
140-BH07-1	3/20/2012	0	2	Iron (Ferrous)	7439-89-6	mg/kg	54750	4550		21.5	10.7	6010B
140-BH07-1	3/20/2012	0	2	Magnesium	7439-95-4	mg/kg	NA	600		17.9	8.95	6010B
140-BH07-1	3/20/2012	0	2	Potassium	7440-09-7	mg/kg	NA	483		35.8	17.9	6010B
140-BH07-1	3/20/2012	0	2	Sodium	7440-23-5	mg/kg	NA	19.8		17.9	8.95	6010B
140-BH07-1	3/20/2012	0	2	Zinc	7440-66-6	mg/kg	23464	6.67		0.716	0.358	6010B
140-BH07-1	3/20/2012	0	2	Arsenic	7440-38-2	mg/kg	3.90	0.868	J	1.51	0.754	6020
140-BH07-1	3/20/2012	0	2	Barium	7440-39-3	mg/kg	15558	15.1		1.51	0.754	6020
140-BH07-1	3/20/2012	0	2	Cadmium	7440-43-9	mg/kg	70.3	0.503	U	0.503	0.251	6020
140-BH07-1	3/20/2012	0	2	Chromium	7440-47-3	mg/kg	117321	1.72	J	2.01	1.01	6020
140-BH07-1	3/20/2012	0	2	Cobalt	7440-48-4	mg/kg	NA	2.51	U	2.51	1.26	6020
140-BH07-1	3/20/2012	0	2	Copper	7440-50-8	mg/kg	3129	1.92	J	3.02	1.51	6020

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH07-1	3/20/2012	0	2	Lead (Pb)	7439-92-1	mg/kg	400	2.15		1.01	0.503	6020
140-BH07-1	3/20/2012	0	2	Manganese	7439-96-5	mg/kg	1865	25.5		1.01	0.503	6020
140-BH07-1	3/20/2012	0	2	Nickel	7440-02-0	mg/kg	1560	4.02	U	4.02	2.01	6020
140-BH07-1	3/20/2012	0	2	Selenium	7782-49-2	mg/kg	391	1.01	U	1.01	0.503	6020
140-BH07-1	3/20/2012	0	2	Silver	7440-22-4	mg/kg	391	2.86	U	2.86	1.43	6020
140-BH07-1	3/20/2012	0	2	Thallium	7440-28-0	mg/kg	0.782	0.201	U	0.201	0.101	6020
140-BH07-1	3/20/2012	0	2	Vanadium	7440-62-2	mg/kg	391	3.89		2.51	1.26	6020
140-BH07-1	3/20/2012	0	2	Mercury	7439-97-6	mg/kg	15.6	0.0980		0.0980	0.00980	7471A
140-BH07-1	3/20/2012	0	2	Percent Solids	10-02-6	%	NA	98.3		1.00	1.00	D2216-90
140-BH07-2	3/20/2012	5	6	Aluminum	7429-90-5	mg/kg	78002	4400		15.4	7.70	6010B
140-BH07-2	3/20/2012	5	6	Antimony	7440-36-0	mg/kg	31.3	0.770	U	0.770	0.385	6010B
140-BH07-2	3/20/2012	5	6	Beryllium	7440-41-7	mg/kg	156	0.311		0.0770	0.0385	6010B
140-BH07-2	3/20/2012	5	6	Calcium	7440-70-2	mg/kg	NA	70100		77.0	38.5	6010B
140-BH07-2	3/20/2012	5	6	Iron (Ferrous)	7439-89-6	mg/kg	54750	5710		23.1	11.6	6010B
140-BH07-2	3/20/2012	5	6	Magnesium	7439-95-4	mg/kg	NA	4230		19.3	9.63	6010B
140-BH07-2	3/20/2012	5	6	Potassium	7440-09-7	mg/kg	NA	601		38.5	19.3	6010B

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH07-2	3/20/2012	5	6	Sodium	7440-23-5	mg/kg	NA	375		19.3	9.63	6010B
140-BH07-2	3/20/2012	5	6	Zinc	7440-66-6	mg/kg	23464	10.3		0.770	0.385	6010B
140-BH07-2	3/20/2012	5	6	Arsenic	7440-38-2	mg/kg	3.90	3.13		1.60	0.799	6020
140-BH07-2	3/20/2012	5	6	Barium	7440-39-3	mg/kg	15558	204		16.0	7.99	6020
140-BH07-2	3/20/2012	5	6	Cadmium	7440-43-9	mg/kg	70.3	0.533	U	0.533	0.266	6020
140-BH07-2	3/20/2012	5	6	Chromium	7440-47-3	mg/kg	117321	2.19		2.13	1.07	6020
140-BH07-2	3/20/2012	5	6	Cobalt	7440-48-4	mg/kg	NA	1.88	J	2.66	1.33	6020
140-BH07-2	3/20/2012	5	6	Copper	7440-50-8	mg/kg	3129	1.85	J	3.20	1.60	6020
140-BH07-2	3/20/2012	5	6	Lead (Pb)	7439-92-1	mg/kg	400	3.73		1.07	0.533	6020
140-BH07-2	3/20/2012	5	6	Manganese	7439-96-5	mg/kg	1865	50.2		1.07	0.533	6020
140-BH07-2	3/20/2012	5	6	Nickel	7440-02-0	mg/kg	1560	5.35		4.26	2.13	6020
140-BH07-2	3/20/2012	5	6	Selenium	7782-49-2	mg/kg	391	1.07	U	1.07	0.533	6020
140-BH07-2	3/20/2012	5	6	Silver	7440-22-4	mg/kg	391	3.08	UN	3.08	1.54	6020
140-BH07-2	3/20/2012	5	6	Thallium	7440-28-0	mg/kg	0.782	0.213	U	0.213	0.107	6020
140-BH07-2	3/20/2012	5	6	Vanadium	7440-62-2	mg/kg	391	13.1		2.66	1.33	6020
140-BH07-2	3/20/2012	5	6	Mercury	7439-97-6	mg/kg	15.6	0.106		0.106	0.0106	7471A

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH07-2	3/20/2012	5	6	Percent Solids	10-02-6	%	NA	93.7		1.00	1.00	D2216-90
140-BH07-3	3/20/2012	9	10	Aluminum	7429-90-5	mg/kg	78002	1810		13.6	6.79	6010B
140-BH07-3	3/20/2012	9	10	Antimony	7440-36-0	mg/kg	31.3	0.679	U	0.679	0.339	6010B
140-BH07-3	3/20/2012	9	10	Beryllium	7440-41-7	mg/kg	156	0.171		0.0679	0.0339	6010B
140-BH07-3	3/20/2012	9	10	Calcium	7440-70-2	mg/kg	NA	1980		67.9	33.9	6010B
140-BH07-3	3/20/2012	9	10	Iron (Ferrous)	7439-89-6	mg/kg	54750	5410		20.4	10.2	6010B
140-BH07-3	3/20/2012	9	10	Magnesium	7439-95-4	mg/kg	NA	1130		17.0	8.48	6010B
140-BH07-3	3/20/2012	9	10	Potassium	7440-09-7	mg/kg	NA	370		33.9	17.0	6010B
140-BH07-3	3/20/2012	9	10	Sodium	7440-23-5	mg/kg	NA	255		17.0	8.48	6010B
140-BH07-3	3/20/2012	9	10	Zinc	7440-66-6	mg/kg	23464	10.6		0.679	0.339	6010B
140-BH07-3	3/20/2012	9	10	Arsenic	7440-38-2	mg/kg	3.90	1.28	J	1.52	0.761	6020
140-BH07-3	3/20/2012	9	10	Barium	7440-39-3	mg/kg	15558	35.7		1.52	0.761	6020
140-BH07-3	3/20/2012	9	10	Cadmium	7440-43-9	mg/kg	70.3	0.507	U	0.507	0.254	6020
140-BH07-3	3/20/2012	9	10	Chromium	7440-47-3	mg/kg	117321	2.03	U	2.03	1.01	6020
140-BH07-3	3/20/2012	9	10	Cobalt	7440-48-4	mg/kg	NA	1.48	J	2.54	1.27	6020
140-BH07-3	3/20/2012	9	10	Copper	7440-50-8	mg/kg	3129	1.57	J	3.04	1.52	6020

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH07-3	3/20/2012	9	10	Lead (Pb)	7439-92-1	mg/kg	400	2.53		1.01	0.507	6020
140-BH07-3	3/20/2012	9	10	Manganese	7439-96-5	mg/kg	1865	47.7		1.01	0.507	6020
140-BH07-3	3/20/2012	9	10	Nickel	7440-02-0	mg/kg	1560	2.38	J	4.06	2.03	6020
140-BH07-3	3/20/2012	9	10	Selenium	7782-49-2	mg/kg	391	1.01	U	1.01	0.507	6020
140-BH07-3	3/20/2012	9	10	Silver	7440-22-4	mg/kg	391	2.71	U	2.71	1.36	6020
140-BH07-3	3/20/2012	9	10	Thallium	7440-28-0	mg/kg	0.782	0.203	U	0.203	0.101	6020
140-BH07-3	3/20/2012	9	10	Vanadium	7440-62-2	mg/kg	391	8.45		2.54	1.27	6020
140-BH07-3	3/20/2012	9	10	Mercury	7439-97-6	mg/kg	15.6	0.0999		0.0999	0.0100	7471A
140-BH07-3	3/20/2012	9	10	Percent Solids	10-02-6	%	NA	98.6		1.00	1.00	D2216-90
140-BH08-1	3/20/2012	0	2	Aluminum	7429-90-5	mg/kg	78002	2370		14.9	7.47	6010B
140-BH08-1	3/20/2012	0	2	Antimony	7440-36-0	mg/kg	31.3	0.747	U	0.747	0.373	6010B
140-BH08-1	3/20/2012	0	2	Beryllium	7440-41-7	mg/kg	156	0.175		0.0747	0.0373	6010B
140-BH08-1	3/20/2012	0	2	Calcium	7440-70-2	mg/kg	NA	7790		74.7	37.3	6010B
140-BH08-1	3/20/2012	0	2	Iron (Ferrous)	7439-89-6	mg/kg	54750	4860		22.4	11.2	6010B
140-BH08-1	3/20/2012	0	2	Magnesium	7439-95-4	mg/kg	NA	951		18.7	9.34	6010B
140-BH08-1	3/20/2012	0	2	Potassium	7440-09-7	mg/kg	NA	730		37.3	18.7	6010B

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
Soil Background Study Report
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Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH08-1	3/20/2012	0	2	Sodium	7440-23-5	mg/kg	NA	18.0	J	18.7	9.34	6010B
140-BH08-1	3/20/2012	0	2	Zinc	7440-66-6	mg/kg	23464	8.35		0.747	0.373	6010B
140-BH08-1	3/20/2012	0	2	Arsenic	7440-38-2	mg/kg	3.90	0.788	J	1.43	0.713	6020
140-BH08-1	3/20/2012	0	2	Barium	7440-39-3	mg/kg	15558	22.2		1.43	0.713	6020
140-BH08-1	3/20/2012	0	2	Cadmium	7440-43-9	mg/kg	70.3	0.475	U	0.475	0.238	6020
140-BH08-1	3/20/2012	0	2	Chromium	7440-47-3	mg/kg	117321	1.32	J	1.90	0.951	6020
140-BH08-1	3/20/2012	0	2	Cobalt	7440-48-4	mg/kg	NA	2.38	U	2.38	1.19	6020
140-BH08-1	3/20/2012	0	2	Copper	7440-50-8	mg/kg	3129	2.85	U	2.85	1.43	6020
140-BH08-1	3/20/2012	0	2	Lead (Pb)	7439-92-1	mg/kg	400	4.11		0.951	0.475	6020
140-BH08-1	3/20/2012	0	2	Manganese	7439-96-5	mg/kg	1865	34.4		0.951	0.475	6020
140-BH08-1	3/20/2012	0	2	Nickel	7440-02-0	mg/kg	1560	3.80	U	3.80	1.90	6020
140-BH08-1	3/20/2012	0	2	Selenium	7782-49-2	mg/kg	391	0.951	U	0.951	0.475	6020
140-BH08-1	3/20/2012	0	2	Silver	7440-22-4	mg/kg	391	2.99	U	2.99	1.49	6020
140-BH08-1	3/20/2012	0	2	Thallium	7440-28-0	mg/kg	0.782	0.190	U	0.190	0.0951	6020
140-BH08-1	3/20/2012	0	2	Vanadium	7440-62-2	mg/kg	391	2.38		2.38	1.19	6020
140-BH08-1	3/20/2012	0	2	Mercury	7439-97-6	mg/kg	15.6	0.101		0.101	0.0101	7471A

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH08-1	3/20/2012	0	2	Percent Solids	10-02-6	%	NA	98.1		1.00	1.00	D2216-90
140-BH08-2	3/20/2012	5	6	Aluminum	7429-90-5	mg/kg	78002	7330		16.3	8.17	6010B
140-BH08-2	3/20/2012	5	6	Antimony	7440-36-0	mg/kg	31.3	0.817	U	0.817	0.408	6010B
140-BH08-2	3/20/2012	5	6	Beryllium	7440-41-7	mg/kg	156	0.395		0.0817	0.0408	6010B
140-BH08-2	3/20/2012	5	6	Calcium	7440-70-2	mg/kg	NA	159000		81.7	40.8	6010B
140-BH08-2	3/20/2012	5	6	Iron (Ferrous)	7439-89-6	mg/kg	54750	7270		24.5	12.2	6010B
140-BH08-2	3/20/2012	5	6	Magnesium	7439-95-4	mg/kg	NA	6550		20.4	10.2	6010B
140-BH08-2	3/20/2012	5	6	Potassium	7440-09-7	mg/kg	NA	872		40.8	20.4	6010B
140-BH08-2	3/20/2012	5	6	Sodium	7440-23-5	mg/kg	NA	143		20.4	10.2	6010B
140-BH08-2	3/20/2012	5	6	Zinc	7440-66-6	mg/kg	23464	12.8		0.817	0.408	6010B
140-BH08-2	3/20/2012	5	6	Arsenic	7440-38-2	mg/kg	3.90	6.60		1.57	0.783	6020
140-BH08-2	3/20/2012	5	6	Barium	7440-39-3	mg/kg	15558	342		15.7	7.83	6020
140-BH08-2	3/20/2012	5	6	Cadmium	7440-43-9	mg/kg	70.3	0.522	U	0.522	0.261	6020
140-BH08-2	3/20/2012	5	6	Chromium	7440-47-3	mg/kg	117321	3.45		2.09	1.04	6020
140-BH08-2	3/20/2012	5	6	Cobalt	7440-48-4	mg/kg	NA	2.40	J	2.61	1.30	6020
140-BH08-2	3/20/2012	5	6	Copper	7440-50-8	mg/kg	3129	2.22	J	3.13	1.57	6020

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH08-2	3/20/2012	5	6	Lead (Pb)	7439-92-1	mg/kg	400	4.37		1.04	0.522	6020
140-BH08-2	3/20/2012	5	6	Manganese	7439-96-5	mg/kg	1865	54.6		1.04	0.522	6020
140-BH08-2	3/20/2012	5	6	Nickel	7440-02-0	mg/kg	1560	8.54		4.18	2.09	6020
140-BH08-2	3/20/2012	5	6	Selenium	7782-49-2	mg/kg	391	1.08		1.04	0.522	6020
140-BH08-2	3/20/2012	5	6	Silver	7440-22-4	mg/kg	391	3.27	U	3.27	1.63	6020
140-BH08-2	3/20/2012	5	6	Thallium	7440-28-0	mg/kg	0.782	0.209	U	0.209	0.104	6020
140-BH08-2	3/20/2012	5	6	Vanadium	7440-62-2	mg/kg	391	27.1		2.61	1.30	6020
140-BH08-2	3/20/2012	5	6	Mercury	7439-97-6	mg/kg	15.6	0.108		0.108	0.0108	7471A
140-BH08-2	3/20/2012	5	6	Percent Solids	10-02-6	%	NA	91.6		1.00	1.00	D2216-90
140-BH08-3	3/20/2012	9	10	Aluminum	7429-90-5	mg/kg	78002	2380		14.6	7.29	6010B
140-BH08-3	3/20/2012	9	10	Antimony	7440-36-0	mg/kg	31.3	0.729	U	0.729	0.365	6010B
140-BH08-3	3/20/2012	9	10	Beryllium	7440-41-7	mg/kg	156	0.257		0.0729	0.0365	6010B
140-BH08-3	3/20/2012	9	10	Calcium	7440-70-2	mg/kg	NA	4080		7.29	3.65	6010B
140-BH08-3	3/20/2012	9	10	Iron (Ferrous)	7439-89-6	mg/kg	54750	4950		21.9	10.9	6010B
140-BH08-3	3/20/2012	9	10	Magnesium	7439-95-4	mg/kg	NA	1600		18.2	9.12	6010B
140-BH08-3	3/20/2012	9	10	Potassium	7440-09-7	mg/kg	NA	490		36.5	18.2	6010B

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
Soil Background Study Report
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Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH08-3	3/20/2012	9	10	Sodium	7440-23-5	mg/kg	NA	276		18.2	9.12	6010B
140-BH08-3	3/20/2012	9	10	Zinc	7440-66-6	mg/kg	23464	11.8		0.729	0.365	6010B
140-BH08-3	3/20/2012	9	10	Arsenic	7440-38-2	mg/kg	3.90	1.55		1.47	0.737	6020
140-BH08-3	3/20/2012	9	10	Barium	7440-39-3	mg/kg	15558	20.4		1.47	0.737	6020
140-BH08-3	3/20/2012	9	10	Cadmium	7440-43-9	mg/kg	70.3	0.491	U	0.491	0.246	6020
140-BH08-3	3/20/2012	9	10	Chromium	7440-47-3	mg/kg	117321	1.41	J	1.96	0.982	6020
140-BH08-3	3/20/2012	9	10	Cobalt	7440-48-4	mg/kg	NA	2.11	J	2.46	1.23	6020
140-BH08-3	3/20/2012	9	10	Copper	7440-50-8	mg/kg	3129	2.16	J	2.95	1.47	6020
140-BH08-3	3/20/2012	9	10	Lead (Pb)	7439-92-1	mg/kg	400	3.35		0.982	0.491	6020
140-BH08-3	3/20/2012	9	10	Manganese	7439-96-5	mg/kg	1865	105		0.982	0.491	6020
140-BH08-3	3/20/2012	9	10	Nickel	7440-02-0	mg/kg	1560	3.41	J	3.93	1.96	6020
140-BH08-3	3/20/2012	9	10	Selenium	7782-49-2	mg/kg	391	0.982	U	0.982	0.491	6020
140-BH08-3	3/20/2012	9	10	Silver	7440-22-4	mg/kg	391	2.92	U	2.92	1.46	6020
140-BH08-3	3/20/2012	9	10	Thallium	7440-28-0	mg/kg	0.782	0.196	U	0.196	0.0982	6020
140-BH08-3	3/20/2012	9	10	Vanadium	7440-62-2	mg/kg	391	9.68		2.46	1.23	6020
140-BH08-3	3/20/2012	9	10	Mercury	7439-97-6	mg/kg	15.6	0.101		0.101	0.0101	7471A

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
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White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH08-3	3/20/2012	9	10	Percent Solids	10-02-6	%	NA	97.7		1.00	1.00	D2216-90
140-BH09-1	3/20/2012	0	2	Aluminum	7429-90-5	mg/kg	78002	6090		15.5	7.76	6010B
140-BH09-1	3/20/2012	0	2	Antimony	7440-36-0	mg/kg	31.3	0.776	U	0.776	0.388	6010B
140-BH09-1	3/20/2012	0	2	Beryllium	7440-41-7	mg/kg	156	0.400		0.0776	0.0388	6010B
140-BH09-1	3/20/2012	0	2	Calcium	7440-70-2	mg/kg	NA	31800		7.76	3.88	6010B
140-BH09-1	3/20/2012	0	2	Iron (Ferrous)	7439-89-6	mg/kg	54750	7520		23.3	11.6	6010B
140-BH09-1	3/20/2012	0	2	Magnesium	7439-95-4	mg/kg	NA	2300		19.4	9.70	6010B
140-BH09-1	3/20/2012	0	2	Potassium	7440-09-7	mg/kg	NA	1380		38.8	19.4	6010B
140-BH09-1	3/20/2012	0	2	Sodium	7440-23-5	mg/kg	NA	41.0		19.4	9.70	6010B
140-BH09-1	3/20/2012	0	2	Zinc	7440-66-6	mg/kg	23464	14.6		0.776	0.388	6010B
140-BH09-1	3/20/2012	0	2	Arsenic	7440-38-2	mg/kg	3.90	3.89		1.57	0.783	6020
140-BH09-1	3/20/2012	0	2	Barium	7440-39-3	mg/kg	15558	56.3		1.57	0.783	6020
140-BH09-1	3/20/2012	0	2	Cadmium	7440-43-9	mg/kg	70.3	0.522	U	0.522	0.261	6020
140-BH09-1	3/20/2012	0	2	Chromium	7440-47-3	mg/kg	117321	3.84		2.09	1.04	6020
140-BH09-1	3/20/2012	0	2	Cobalt	7440-48-4	mg/kg	NA	2.26	J	2.61	1.31	6020
140-BH09-1	3/20/2012	0	2	Copper	7440-50-8	mg/kg	3129	3.66		3.13	1.57	6020

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
Soil Background Study Report
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Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH09-1	3/20/2012	0	2	Lead (Pb)	7439-92-1	mg/kg	400	4.64		1.04	0.522	6020
140-BH09-1	3/20/2012	0	2	Manganese	7439-96-5	mg/kg	1865	70.2		1.04	0.522	6020
140-BH09-1	3/20/2012	0	2	Nickel	7440-02-0	mg/kg	1560	5.44		4.18	2.09	6020
140-BH09-1	3/20/2012	0	2	Selenium	7782-49-2	mg/kg	391	1.04	U	1.04	0.522	6020
140-BH09-1	3/20/2012	0	2	Silver	7440-22-4	mg/kg	391	3.10	U	3.10	1.55	6020
140-BH09-1	3/20/2012	0	2	Thallium	7440-28-0	mg/kg	0.782	0.209	U	0.209	0.104	6020
140-BH09-1	3/20/2012	0	2	Vanadium	7440-62-2	mg/kg	391	10.8		2.61	1.31	6020
140-BH09-1	3/20/2012	0	2	Mercury	7439-97-6	mg/kg	15.6	0.104		0.104	0.0104	7471A
140-BH09-1	3/20/2012	0	2	Percent Solids	10-02-6	%	NA	93.2		1.00	1.00	D2216-90
140-BH09-2	3/20/2012	5	6	Aluminum	7429-90-5	mg/kg	78002	6560		17.0	8.49	6010B
140-BH09-2	3/20/2012	5	6	Antimony	7440-36-0	mg/kg	31.3	0.849	U	0.849	0.425	6010B
140-BH09-2	3/20/2012	5	6	Beryllium	7440-41-7	mg/kg	156	0.523		0.0849	0.0425	6010B
140-BH09-2	3/20/2012	5	6	Calcium	7440-70-2	mg/kg	NA	30600		8.49	4.25	6010B
140-BH09-2	3/20/2012	5	6	Iron (Ferrous)	7439-89-6	mg/kg	54750	8620		25.5	12.7	6010B
140-BH09-2	3/20/2012	5	6	Magnesium	7439-95-4	mg/kg	NA	4200		21.2	10.6	6010B
140-BH09-2	3/20/2012	5	6	Potassium	7440-09-7	mg/kg	NA	997		42.5	21.2	6010B

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH09-2	3/20/2012	5	6	Sodium	7440-23-5	mg/kg	NA	1210		21.2	10.6	6010B
140-BH09-2	3/20/2012	5	6	Zinc	7440-66-6	mg/kg	23464	21.9		0.849	0.425	6010B
140-BH09-2	3/20/2012	5	6	Arsenic	7440-38-2	mg/kg	3.90	11.0		1.69	0.845	6020
140-BH09-2	3/20/2012	5	6	Barium	7440-39-3	mg/kg	15558	23.3	J	1.69	0.845	6020
140-BH09-2	3/20/2012	5	6	Cadmium	7440-43-9	mg/kg	70.3	0.564	U	0.564	0.282	6020
140-BH09-2	3/20/2012	5	6	Chromium	7440-47-3	mg/kg	117321	5.49	J	2.25	1.13	6020
140-BH09-2	3/20/2012	5	6	Cobalt	7440-48-4	mg/kg	NA	5.08		2.82	1.41	6020
140-BH09-2	3/20/2012	5	6	Copper	7440-50-8	mg/kg	3129	6.65	J	3.38	1.69	6020
140-BH09-2	3/20/2012	5	6	Lead (Pb)	7439-92-1	mg/kg	400	9.90		1.13	0.564	6020
140-BH09-2	3/20/2012	5	6	Manganese	7439-96-5	mg/kg	1865	179		1.13	0.564	6020
140-BH09-2	3/20/2012	5	6	Nickel	7440-02-0	mg/kg	1560	9.73		4.51	2.25	6020
140-BH09-2	3/20/2012	5	6	Selenium	7782-49-2	mg/kg	391	0.601	J	1.13	0.564	6020
140-BH09-2	3/20/2012	5	6	Silver	7440-22-4	mg/kg	391	3.40	U	3.40	1.70	6020
140-BH09-2	3/20/2012	5	6	Thallium	7440-28-0	mg/kg	0.782	0.127	J	0.225	0.113	6020
140-BH09-2	3/20/2012	5	6	Vanadium	7440-62-2	mg/kg	391	47.2		2.82	1.41	6020
140-BH09-2	3/20/2012	5	6	Mercury	7439-97-6	mg/kg	15.6	0.114	UN	0.114	0.0114	7471A

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH09-2	3/20/2012	5	6	Percent Solids	10-02-6	%	NA	84.8		1.00	1.00	D2216-90
140-BH09-3	3/20/2012	9	10	Aluminum	7429-90-5	mg/kg	78002	1390		14.1	7.07	6010B
140-BH09-3	3/20/2012	9	10	Antimony	7440-36-0	mg/kg	31.3	0.707	U	0.707	0.354	6010B
140-BH09-3	3/20/2012	9	10	Beryllium	7440-41-7	mg/kg	156	0.133		0.0707	0.0354	6010B
140-BH09-3	3/20/2012	9	10	Calcium	7440-70-2	mg/kg	NA	7480		7.07	3.54	6010B
140-BH09-3	3/20/2012	9	10	Iron (Ferrous)	7439-89-6	mg/kg	54750	4000		21.2	10.6	6010B
140-BH09-3	3/20/2012	9	10	Magnesium	7439-95-4	mg/kg	NA	919		17.7	8.84	6010B
140-BH09-3	3/20/2012	9	10	Potassium	7440-09-7	mg/kg	NA	306	J+	35.4	17.7	6010B
140-BH09-3	3/20/2012	9	10	Sodium	7440-23-5	mg/kg	NA	259	J+	17.7	8.84	6010B
140-BH09-3	3/20/2012	9	10	Zinc	7440-66-6	mg/kg	23464	8.50	J+	0.707	0.354	6010B
140-BH09-3	3/20/2012	9	10	Arsenic	7440-38-2	mg/kg	3.90	1.39	J	1.46	0.732	6020
140-BH09-3	3/20/2012	9	10	Barium	7440-39-3	mg/kg	15558	7.20		1.46	0.732	6020
140-BH09-3	3/20/2012	9	10	Cadmium	7440-43-9	mg/kg	70.3	0.488	U	0.488	0.244	6020
140-BH09-3	3/20/2012	9	10	Chromium	7440-47-3	mg/kg	117321	1.95	U	1.95	0.976	6020
140-BH09-3	3/20/2012	9	10	Cobalt	7440-48-4	mg/kg	NA	1.41	J	2.44	1.22	6020
140-BH09-3	3/20/2012	9	10	Copper	7440-50-8	mg/kg	3129	1.67	J	2.93	1.46	6020

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH09-3	3/20/2012	9	10	Lead (Pb)	7439-92-1	mg/kg	400	2.59		0.976	0.488	6020
140-BH09-3	3/20/2012	9	10	Manganese	7439-96-5	mg/kg	1865	47.6		0.976	0.488	6020
140-BH09-3	3/20/2012	9	10	Nickel	7440-02-0	mg/kg	1560	2.27	J	3.90	1.95	6020
140-BH09-3	3/20/2012	9	10	Selenium	7782-49-2	mg/kg	391	0.976	U	0.976	0.488	6020
140-BH09-3	3/20/2012	9	10	Silver	7440-22-4	mg/kg	391	2.83	U	2.83	1.41	6020
140-BH09-3	3/20/2012	9	10	Thallium	7440-28-0	mg/kg	0.782	0.195	U	0.195	0.0976	6020
140-BH09-3	3/20/2012	9	10	Vanadium	7440-62-2	mg/kg	391	6.32		2.44	1.22	6020
140-BH09-3	3/20/2012	9	10	Mercury	7439-97-6	mg/kg	15.6	0.0985		0.0985	0.00985	7471A
140-BH09-3	3/20/2012	9	10	Percent Solids	10-02-6	%	NA	98.9		1.00	1.00	D2216-90
140-BH10-1	3/20/2012	0	2	Aluminum	7429-90-5	mg/kg	78002	5700		14.7	7.35	6010B
140-BH10-1	3/20/2012	0	2	Antimony	7440-36-0	mg/kg	31.3	0.735	U	0.735	0.368	6010B
140-BH10-1	3/20/2012	0	2	Beryllium	7440-41-7	mg/kg	156	0.371		0.0735	0.0368	6010B
140-BH10-1	3/20/2012	0	2	Calcium	7440-70-2	mg/kg	NA	40400		73.5	36.8	6010B
140-BH10-1	3/20/2012	0	2	Iron (Ferrous)	7439-89-6	mg/kg	54750	7350		22.1	11.0	6010B
140-BH10-1	3/20/2012	0	2	Magnesium	7439-95-4	mg/kg	NA	2010		18.4	9.19	6010B
140-BH10-1	3/20/2012	0	2	Potassium	7440-09-7	mg/kg	NA	1290		36.8	18.4	6010B

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
Soil Background Study Report
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Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH10-1	3/20/2012	0	2	Sodium	7440-23-5	mg/kg	NA	37.1		18.4	9.19	6010B
140-BH10-1	3/20/2012	0	2	Zinc	7440-66-6	mg/kg	23464	13.5		0.735	0.368	6010B
140-BH10-1	3/20/2012	0	2	Arsenic	7440-38-2	mg/kg	3.90	4.60		1.55	0.777	6020
140-BH10-1	3/20/2012	0	2	Barium	7440-39-3	mg/kg	15558	93.7		1.55	0.777	6020
140-BH10-1	3/20/2012	0	2	Cadmium	7440-43-9	mg/kg	70.3	0.518	U	0.518	0.259	6020
140-BH10-1	3/20/2012	0	2	Chromium	7440-47-3	mg/kg	117321	4.23		2.07	1.04	6020
140-BH10-1	3/20/2012	0	2	Cobalt	7440-48-4	mg/kg	NA	2.37	J	2.59	1.30	6020
140-BH10-1	3/20/2012	0	2	Copper	7440-50-8	mg/kg	3129	3.70		3.11	1.55	6020
140-BH10-1	3/20/2012	0	2	Lead (Pb)	7439-92-1	mg/kg	400	4.95		1.04	0.518	6020
140-BH10-1	3/20/2012	0	2	Manganese	7439-96-5	mg/kg	1865	61.0		1.04	0.518	6020
140-BH10-1	3/20/2012	0	2	Nickel	7440-02-0	mg/kg	1560	6.03		4.14	2.07	6020
140-BH10-1	3/20/2012	0	2	Selenium	7782-49-2	mg/kg	391	1.04	U	1.04	0.518	6020
140-BH10-1	3/20/2012	0	2	Silver	7440-22-4	mg/kg	391	2.94	U	2.94	1.47	6020
140-BH10-1	3/20/2012	0	2	Thallium	7440-28-0	mg/kg	0.782	0.106	J	0.207	0.104	6020
140-BH10-1	3/20/2012	0	2	Vanadium	7440-62-2	mg/kg	391	11.3		2.59	1.30	6020
140-BH10-1	3/20/2012	0	2	Mercury	7439-97-6	mg/kg	15.6	0.104		0.104	0.0104	7471A

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
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White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH10-1	3/20/2012	0	2	Percent Solids	10-02-6	%	NA	93.5		1.00	1.00	D2216-90
140-BH10-2	3/20/2012	5	6	Aluminum	7429-90-5	mg/kg	78002	3000		14.6	7.28	6010B
140-BH10-2	3/20/2012	5	6	Antimony	7440-36-0	mg/kg	31.3	0.728	U	0.728	0.364	6010B
140-BH10-2	3/20/2012	5	6	Beryllium	7440-41-7	mg/kg	156	0.232		0.0728	0.0364	6010B
140-BH10-2	3/20/2012	5	6	Calcium	7440-70-2	mg/kg	NA	10000		7.28	3.64	6010B
140-BH10-2	3/20/2012	5	6	Iron (Ferrous)	7439-89-6	mg/kg	54750	5730		21.8	10.9	6010B
140-BH10-2	3/20/2012	5	6	Magnesium	7439-95-4	mg/kg	NA	2650		18.2	9.10	6010B
140-BH10-2	3/20/2012	5	6	Potassium	7440-09-7	mg/kg	NA	473		36.4	18.2	6010B
140-BH10-2	3/20/2012	5	6	Sodium	7440-23-5	mg/kg	NA	391		18.2	9.10	6010B
140-BH10-2	3/20/2012	5	6	Zinc	7440-66-6	mg/kg	23464	12.0		0.728	0.364	6010B
140-BH10-2	3/20/2012	5	6	Arsenic	7440-38-2	mg/kg	3.90	2.21		1.50	0.749	6020
140-BH10-2	3/20/2012	5	6	Barium	7440-39-3	mg/kg	15558	252		15.0	7.49	6020
140-BH10-2	3/20/2012	5	6	Cadmium	7440-43-9	mg/kg	70.3	0.499	U	0.499	0.250	6020
140-BH10-2	3/20/2012	5	6	Chromium	7440-47-3	mg/kg	117321	1.51	J	2.00	0.999	6020
140-BH10-2	3/20/2012	5	6	Cobalt	7440-48-4	mg/kg	NA	1.49	J	2.50	1.25	6020
140-BH10-2	3/20/2012	5	6	Copper	7440-50-8	mg/kg	3129	1.53	J	3.00	1.50	6020

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
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Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH10-2	3/20/2012	5	6	Lead (Pb)	7439-92-1	mg/kg	400	3.31		0.999	0.499	6020
140-BH10-2	3/20/2012	5	6	Manganese	7439-96-5	mg/kg	1865	37.6		0.999	0.499	6020
140-BH10-2	3/20/2012	5	6	Nickel	7440-02-0	mg/kg	1560	2.93	J	3.99	2.00	6020
140-BH10-2	3/20/2012	5	6	Selenium	7782-49-2	mg/kg	391	0.999	U	0.999	0.499	6020
140-BH10-2	3/20/2012	5	6	Silver	7440-22-4	mg/kg	391	2.91	U	2.91	1.46	6020
140-BH10-2	3/20/2012	5	6	Thallium	7440-28-0	mg/kg	0.782	0.200	U	0.200	0.0999	6020
140-BH10-2	3/20/2012	5	6	Vanadium	7440-62-2	mg/kg	391	12.0		2.50	1.25	6020
140-BH10-2	3/20/2012	5	6	Mercury	7439-97-6	mg/kg	15.6	0.0977		0.0977	0.00977	7471A
140-BH10-2	3/20/2012	5	6	Percent Solids	10-02-6	%	NA	97.8		1.00	1.00	D2216-90
140-BH10-3	3/20/2012	9	10	Aluminum	7429-90-5	mg/kg	78002	2950		14.9	7.44	6010B
140-BH10-3	3/20/2012	9	10	Antimony	7440-36-0	mg/kg	31.3	0.744	U	0.744	0.372	6010B
140-BH10-3	3/20/2012	9	10	Beryllium	7440-41-7	mg/kg	156	0.276		0.0744	0.0372	6010B
140-BH10-3	3/20/2012	9	10	Calcium	7440-70-2	mg/kg	NA	5710		7.44	3.72	6010B
140-BH10-3	3/20/2012	9	10	Iron (Ferrous)	7439-89-6	mg/kg	54750	5340		22.3	11.2	6010B
140-BH10-3	3/20/2012	9	10	Magnesium	7439-95-4	mg/kg	NA	1950		18.6	9.30	6010B
140-BH10-3	3/20/2012	9	10	Potassium	7440-09-7	mg/kg	NA	584		37.2	18.6	6010B

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
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Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH10-3	3/20/2012	9	10	Sodium	7440-23-5	mg/kg	NA	551		18.6	9.30	6010B
140-BH10-3	3/20/2012	9	10	Zinc	7440-66-6	mg/kg	23464	13.1		0.744	0.372	6010B
140-BH10-3	3/20/2012	9	10	Arsenic	7440-38-2	mg/kg	3.90	1.84		1.46	0.730	6020
140-BH10-3	3/20/2012	9	10	Barium	7440-39-3	mg/kg	15558	31.7		1.46	0.730	6020
140-BH10-3	3/20/2012	9	10	Cadmium	7440-43-9	mg/kg	70.3	0.487	U	0.487	0.243	6020
140-BH10-3	3/20/2012	9	10	Chromium	7440-47-3	mg/kg	117321	1.56	J	1.95	0.974	6020
140-BH10-3	3/20/2012	9	10	Cobalt	7440-48-4	mg/kg	NA	3.31		2.43	1.22	6020
140-BH10-3	3/20/2012	9	10	Copper	7440-50-8	mg/kg	3129	2.34	J	2.92	1.46	6020
140-BH10-3	3/20/2012	9	10	Lead (Pb)	7439-92-1	mg/kg	400	4.10		0.974	0.487	6020
140-BH10-3	3/20/2012	9	10	Manganese	7439-96-5	mg/kg	1865	57.5		0.974	0.487	6020
140-BH10-3	3/20/2012	9	10	Nickel	7440-02-0	mg/kg	1560	4.51		3.90	1.95	6020
140-BH10-3	3/20/2012	9	10	Selenium	7782-49-2	mg/kg	391	0.974	U	0.974	0.487	6020
140-BH10-3	3/20/2012	9	10	Silver	7440-22-4	mg/kg	391	2.98	U	2.98	1.49	6020
140-BH10-3	3/20/2012	9	10	Thallium	7440-28-0	mg/kg	0.782	0.195	U	0.195	0.0974	6020
140-BH10-3	3/20/2012	9	10	Vanadium	7440-62-2	mg/kg	391	11.3		2.43	1.22	6020
140-BH10-3	3/20/2012	9	10	Mercury	7439-97-6	mg/kg	15.6	0.0978		0.0978	0.00978	7471A

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
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White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH10-3	3/20/2012	9	10	Percent Solids	10-02-6	%	NA	97.4		1.00	1.00	D2216-90
140-BH10-FD1	3/20/2012	0	2	Aluminum	7429-90-5	mg/kg	78002	5630		16.0	8.00	6010B
140-BH10-FD1	3/20/2012	0	2	Antimony	7440-36-0	mg/kg	31.3	0.800	U	0.800	0.400	6010B
140-BH10-FD1	3/20/2012	0	2	Beryllium	7440-41-7	mg/kg	156	0.384		0.0800	0.0400	6010B
140-BH10-FD1	3/20/2012	0	2	Calcium	7440-70-2	mg/kg	NA	48000		80.0	40.0	6010B
140-BH10-FD1	3/20/2012	0	2	Iron (Ferrous)	7439-89-6	mg/kg	54750	7140		24.0	12.0	6010B
140-BH10-FD1	3/20/2012	0	2	Magnesium	7439-95-4	mg/kg	NA	2140		20.0	10.0	6010B
140-BH10-FD1	3/20/2012	0	2	Potassium	7440-09-7	mg/kg	NA	1250		40.0	20.0	6010B
140-BH10-FD1	3/20/2012	0	2	Sodium	7440-23-5	mg/kg	NA	38.8		20.0	10.0	6010B
140-BH10-FD1	3/20/2012	0	2	Zinc	7440-66-6	mg/kg	23464	13.4		0.800	0.400	6010B
140-BH10-FD1	3/20/2012	0	2	Arsenic	7440-38-2	mg/kg	3.90	4.14		1.59	0.794	6020
140-BH10-FD1	3/20/2012	0	2	Barium	7440-39-3	mg/kg	15558	105		1.59	0.794	6020
140-BH10-FD1	3/20/2012	0	2	Cadmium	7440-43-9	mg/kg	70.3	0.529	U	0.529	0.265	6020
140-BH10-FD1	3/20/2012	0	2	Chromium	7440-47-3	mg/kg	117321	3.49		2.12	1.06	6020
140-BH10-FD1	3/20/2012	0	2	Cobalt	7440-48-4	mg/kg	NA	2.06	J	2.65	1.32	6020
140-BH10-FD1	3/20/2012	0	2	Copper	7440-50-8	mg/kg	3129	3.04	J	3.18	1.59	6020

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH10-FD1	3/20/2012	0	2	Lead (Pb)	7439-92-1	mg/kg	400	4.37		1.06	0.529	6020
140-BH10-FD1	3/20/2012	0	2	Manganese	7439-96-5	mg/kg	1865	56.9		1.06	0.529	6020
140-BH10-FD1	3/20/2012	0	2	Nickel	7440-02-0	mg/kg	1560	5.90		4.23	2.12	6020
140-BH10-FD1	3/20/2012	0	2	Selenium	7782-49-2	mg/kg	391	1.06	U	1.06	0.529	6020
140-BH10-FD1	3/20/2012	0	2	Silver	7440-22-4	mg/kg	391	3.20	U	3.20	1.60	6020
140-BH10-FD1	3/20/2012	0	2	Thallium	7440-28-0	mg/kg	0.782	0.212	U	0.212	0.106	6020
140-BH10-FD1	3/20/2012	0	2	Vanadium	7440-62-2	mg/kg	391	10.7		2.65	1.32	6020
140-BH10-FD1	3/20/2012	0	2	Mercury	7439-97-6	mg/kg	15.6	0.105		0.105	0.0105	7471A
140-BH10-FD1	3/20/2012	0	2	Percent Solids	10-02-6	%	NA	93.9		1.00	1.00	D2216-90
140-BH11-1	3/20/2012	0	2	Aluminum	7429-90-5	mg/kg	78002	4400		15.4	7.71	6010B
140-BH11-1	3/20/2012	0	2	Antimony	7440-36-0	mg/kg	31.3	0.771	U	0.771	0.386	6010B
140-BH11-1	3/20/2012	0	2	Beryllium	7440-41-7	mg/kg	156	0.311		0.0771	0.0386	6010B
140-BH11-1	3/20/2012	0	2	Calcium	7440-70-2	mg/kg	NA	11400		7.71	3.86	6010B
140-BH11-1	3/20/2012	0	2	Iron (Ferrous)	7439-89-6	mg/kg	54750	6370		23.1	11.6	6010B
140-BH11-1	3/20/2012	0	2	Magnesium	7439-95-4	mg/kg	NA	1400		19.3	9.64	6010B
140-BH11-1	3/20/2012	0	2	Potassium	7440-09-7	mg/kg	NA	973		38.6	19.3	6010B

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH11-1	3/20/2012	0	2	Sodium	7440-23-5	mg/kg	NA	24.1		19.3	9.64	6010B
140-BH11-1	3/20/2012	0	2	Zinc	7440-66-6	mg/kg	23464	12.3		0.771	0.386	6010B
140-BH11-1	3/20/2012	0	2	Arsenic	7440-38-2	mg/kg	3.90	2.26		1.54	0.770	6020
140-BH11-1	3/20/2012	0	2	Barium	7440-39-3	mg/kg	15558	44.9		1.54	0.770	6020
140-BH11-1	3/20/2012	0	2	Cadmium	7440-43-9	mg/kg	70.3	0.514	U	0.514	0.257	6020
140-BH11-1	3/20/2012	0	2	Chromium	7440-47-3	mg/kg	117321	3.01		2.05	1.03	6020
140-BH11-1	3/20/2012	0	2	Cobalt	7440-48-4	mg/kg	NA	1.82	J	2.57	1.28	6020
140-BH11-1	3/20/2012	0	2	Copper	7440-50-8	mg/kg	3129	2.72	J	3.08	1.54	6020
140-BH11-1	3/20/2012	0	2	Lead (Pb)	7439-92-1	mg/kg	400	4.19		1.03	0.514	6020
140-BH11-1	3/20/2012	0	2	Manganese	7439-96-5	mg/kg	1865	59.2		1.03	0.514	6020
140-BH11-1	3/20/2012	0	2	Nickel	7440-02-0	mg/kg	1560	4.24		4.11	2.05	6020
140-BH11-1	3/20/2012	0	2	Selenium	7782-49-2	mg/kg	391	1.03	U	1.03	0.514	6020
140-BH11-1	3/20/2012	0	2	Silver	7440-22-4	mg/kg	391	3.09	U	3.09	1.54	6020
140-BH11-1	3/20/2012	0	2	Thallium	7440-28-0	mg/kg	0.782	0.205	U	0.205	0.103	6020
140-BH11-1	3/20/2012	0	2	Vanadium	7440-62-2	mg/kg	391	6.00		2.57	1.28	6020
140-BH11-1	3/20/2012	0	2	Mercury	7439-97-6	mg/kg	15.6	0.102		0.102	0.0102	7471A

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
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Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH11-1	3/20/2012	0	2	Percent Solids	10-02-6	%	NA	95.5		1.00	1.00	D2216-90
140-BH11-2	3/20/2012	5	6	Aluminum	7429-90-5	mg/kg	78002	5520		15.2	7.59	6010B
140-BH11-2	3/20/2012	5	6	Antimony	7440-36-0	mg/kg	31.3	0.759	U	0.759	0.379	6010B
140-BH11-2	3/20/2012	5	6	Beryllium	7440-41-7	mg/kg	156	0.305		0.0759	0.0379	6010B
140-BH11-2	3/20/2012	5	6	Calcium	7440-70-2	mg/kg	NA	40600		75.9	37.9	6010B
140-BH11-2	3/20/2012	5	6	Iron (Ferrous)	7439-89-6	mg/kg	54750	6700		22.8	11.4	6010B
140-BH11-2	3/20/2012	5	6	Magnesium	7439-95-4	mg/kg	NA	2210		19.0	9.48	6010B
140-BH11-2	3/20/2012	5	6	Potassium	7440-09-7	mg/kg	NA	894		37.9	19.0	6010B
140-BH11-2	3/20/2012	5	6	Sodium	7440-23-5	mg/kg	NA	471		19.0	9.48	6010B
140-BH11-2	3/20/2012	5	6	Zinc	7440-66-6	mg/kg	23464	12.2		0.759	0.379	6010B
140-BH11-2	3/20/2012	5	6	Arsenic	7440-38-2	mg/kg	3.90	2.24		1.50	0.750	6020
140-BH11-2	3/20/2012	5	6	Barium	7440-39-3	mg/kg	15558	51.8		1.50	0.750	6020
140-BH11-2	3/20/2012	5	6	Cadmium	7440-43-9	mg/kg	70.3	0.500	U	0.500	0.250	6020
140-BH11-2	3/20/2012	5	6	Chromium	7440-47-3	mg/kg	117321	2.72		2.00	1.00	6020
140-BH11-2	3/20/2012	5	6	Cobalt	7440-48-4	mg/kg	NA	1.44	J	2.50	1.25	6020
140-BH11-2	3/20/2012	5	6	Copper	7440-50-8	mg/kg	3129	3.00	U	3.00	1.50	6020

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
Soil Background Study Report
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Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH11-2	3/20/2012	5	6	Lead (Pb)	7439-92-1	mg/kg	400	3.40		1.00	0.500	6020
140-BH11-2	3/20/2012	5	6	Manganese	7439-96-5	mg/kg	1865	40.0		1.00	0.500	6020
140-BH11-2	3/20/2012	5	6	Nickel	7440-02-0	mg/kg	1560	4.46		4.00	2.00	6020
140-BH11-2	3/20/2012	5	6	Selenium	7782-49-2	mg/kg	391	1.00	U	1.00	0.500	6020
140-BH11-2	3/20/2012	5	6	Silver	7440-22-4	mg/kg	391	3.03	U	3.03	1.52	6020
140-BH11-2	3/20/2012	5	6	Thallium	7440-28-0	mg/kg	0.782	0.200	U	0.200	0.100	6020
140-BH11-2	3/20/2012	5	6	Vanadium	7440-62-2	mg/kg	391	7.27		2.50	1.25	6020
140-BH11-2	3/20/2012	5	6	Mercury	7439-97-6	mg/kg	15.6	0.104		0.104	0.0104	7471A
140-BH11-2	3/20/2012	5	6	Percent Solids	10-02-6	%	NA	94.8		1.00	1.00	D2216-90
140-BH11-3	3/20/2012	9	10	Aluminum	7429-90-5	mg/kg	78002	2450		14.4	7.19	6010B
140-BH11-3	3/20/2012	9	10	Antimony	7440-36-0	mg/kg	31.3	0.719	U	0.719	0.359	6010B
140-BH11-3	3/20/2012	9	10	Beryllium	7440-41-7	mg/kg	156	0.171		0.0719	0.0359	6010B
140-BH11-3	3/20/2012	9	10	Calcium	7440-70-2	mg/kg	NA	25500		7.19	3.59	6010B
140-BH11-3	3/20/2012	9	10	Iron (Ferrous)	7439-89-6	mg/kg	54750	4220		21.6	10.8	6010B
140-BH11-3	3/20/2012	9	10	Magnesium	7439-95-4	mg/kg	NA	2150		18.0	8.98	6010B
140-BH11-3	3/20/2012	9	10	Potassium	7440-09-7	mg/kg	NA	505		35.9	18.0	6010B

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
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Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH11-3	3/20/2012	9	10	Sodium	7440-23-5	mg/kg	NA	561		18.0	8.98	6010B
140-BH11-3	3/20/2012	9	10	Zinc	7440-66-6	mg/kg	23464	8.46		0.719	0.359	6010B
140-BH11-3	3/20/2012	9	10	Arsenic	7440-38-2	mg/kg	3.90	2.68		1.48	0.740	6020
140-BH11-3	3/20/2012	9	10	Barium	7440-39-3	mg/kg	15558	82.0		1.48	0.740	6020
140-BH11-3	3/20/2012	9	10	Cadmium	7440-43-9	mg/kg	70.3	0.494	U	0.494	0.247	6020
140-BH11-3	3/20/2012	9	10	Chromium	7440-47-3	mg/kg	117321	2.44		1.97	0.987	6020
140-BH11-3	3/20/2012	9	10	Cobalt	7440-48-4	mg/kg	NA	1.78	J	2.47	1.23	6020
140-BH11-3	3/20/2012	9	10	Copper	7440-50-8	mg/kg	3129	1.68	J	2.96	1.48	6020
140-BH11-3	3/20/2012	9	10	Lead (Pb)	7439-92-1	mg/kg	400	3.66		0.987	0.494	6020
140-BH11-3	3/20/2012	9	10	Manganese	7439-96-5	mg/kg	1865	65.1		0.987	0.494	6020
140-BH11-3	3/20/2012	9	10	Nickel	7440-02-0	mg/kg	1560	4.15		3.95	1.97	6020
140-BH11-3	3/20/2012	9	10	Selenium	7782-49-2	mg/kg	391	0.987	U	0.987	0.494	6020
140-BH11-3	3/20/2012	9	10	Silver	7440-22-4	mg/kg	391	2.87	U	2.87	1.44	6020
140-BH11-3	3/20/2012	9	10	Thallium	7440-28-0	mg/kg	0.782	0.197	U	0.197	0.0987	6020
140-BH11-3	3/20/2012	9	10	Vanadium	7440-62-2	mg/kg	391	10.9		2.47	1.23	6020
140-BH11-3	3/20/2012	9	10	Mercury	7439-97-6	mg/kg	15.6	0.0994		0.0994	0.00994	7471A

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
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Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH11-3	3/20/2012	9	10	Percent Solids	10-02-6	%	NA	96.9		1.00	1.00	D2216-90
140-BH12-1	3/20/2012	0	2	Aluminum	7429-90-5	mg/kg	78002	1970		14.5	7.26	6010B
140-BH12-1	3/20/2012	0	2	Antimony	7440-36-0	mg/kg	31.3	0.726	U	0.726	0.363	6010B
140-BH12-1	3/20/2012	0	2	Beryllium	7440-41-7	mg/kg	156	0.152		0.0726	0.0363	6010B
140-BH12-1	3/20/2012	0	2	Calcium	7440-70-2	mg/kg	NA	1710		7.26	3.63	6010B
140-BH12-1	3/20/2012	0	2	Iron (Ferrous)	7439-89-6	mg/kg	54750	3540		2.18	1.09	6010B
140-BH12-1	3/20/2012	0	2	Magnesium	7439-95-4	mg/kg	NA	678		18.1	9.07	6010B
140-BH12-1	3/20/2012	0	2	Potassium	7440-09-7	mg/kg	NA	592		36.3	18.1	6010B
140-BH12-1	3/20/2012	0	2	Sodium	7440-23-5	mg/kg	NA	13.0	J	18.1	9.07	6010B
140-BH12-1	3/20/2012	0	2	Zinc	7440-66-6	mg/kg	23464	7.17		0.726	0.363	6010B
140-BH12-1	3/20/2012	0	2	Arsenic	7440-38-2	mg/kg	3.90	1.50	U	1.50	0.749	6020
140-BH12-1	3/20/2012	0	2	Barium	7440-39-3	mg/kg	15558	15.4		1.50	0.749	6020
140-BH12-1	3/20/2012	0	2	Cadmium	7440-43-9	mg/kg	70.3	0.499	U	0.499	0.250	6020
140-BH12-1	3/20/2012	0	2	Chromium	7440-47-3	mg/kg	117321	1.13	J	2.00	0.998	6020
140-BH12-1	3/20/2012	0	2	Cobalt	7440-48-4	mg/kg	NA	2.50	U	2.50	1.25	6020
140-BH12-1	3/20/2012	0	2	Copper	7440-50-8	mg/kg	3129	3.00	U	3.00	1.50	6020

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
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Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH12-1	3/20/2012	0	2	Lead (Pb)	7439-92-1	mg/kg	400	2.29		0.998	0.499	6020
140-BH12-1	3/20/2012	0	2	Manganese	7439-96-5	mg/kg	1865	28.1		0.998	0.499	6020
140-BH12-1	3/20/2012	0	2	Nickel	7440-02-0	mg/kg	1560	3.99	U	3.99	2.00	6020
140-BH12-1	3/20/2012	0	2	Selenium	7782-49-2	mg/kg	391	1.00	U	0.998	0.499	6020
140-BH12-1	3/20/2012	0	2	Silver	7440-22-4	mg/kg	391	2.90	U	2.90	1.45	6020
140-BH12-1	3/20/2012	0	2	Thallium	7440-28-0	mg/kg	0.782	0.200	U	0.200	0.0998	6020
140-BH12-1	3/20/2012	0	2	Vanadium	7440-62-2	mg/kg	391	2.12	J	2.50	1.25	6020
140-BH12-1	3/20/2012	0	2	Mercury	7439-97-6	mg/kg	15.6	0.0953		0.0953	0.00953	7471A
140-BH12-1	3/20/2012	0	2	Percent Solids	10-02-6	%	NA	98.4		1.00	1.00	D2216-90
140-BH12-2	3/20/2012	5	6	Aluminum	7429-90-5	mg/kg	78002	2410		15.0	7.51	6010B
140-BH12-2	3/20/2012	5	6	Antimony	7440-36-0	mg/kg	31.3	0.751	U	0.751	0.376	6010B
140-BH12-2	3/20/2012	5	6	Beryllium	7440-41-7	mg/kg	156	0.220		0.0751	0.0376	6010B
140-BH12-2	3/20/2012	5	6	Calcium	7440-70-2	mg/kg	NA	2640		7.51	3.76	6010B
140-BH12-2	3/20/2012	5	6	Iron (Ferrous)	7439-89-6	mg/kg	54750	4950		2.25	1.13	6010B
140-BH12-2	3/20/2012	5	6	Magnesium	7439-95-4	mg/kg	NA	898		18.8	9.39	6010B
140-BH12-2	3/20/2012	5	6	Potassium	7440-09-7	mg/kg	NA	472		37.6	18.8	6010B

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
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Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH12-2	3/20/2012	5	6	Sodium	7440-23-5	mg/kg	NA	235		18.8	9.39	6010B
140-BH12-2	3/20/2012	5	6	Zinc	7440-66-6	mg/kg	23464	9.27		0.751	0.376	6010B
140-BH12-2	3/20/2012	5	6	Arsenic	7440-38-2	mg/kg	3.90	1.43	J	1.50	0.750	6020
140-BH12-2	3/20/2012	5	6	Barium	7440-39-3	mg/kg	15558	24.7		1.50	0.750	6020
140-BH12-2	3/20/2012	5	6	Cadmium	7440-43-9	mg/kg	70.3	0.500	U	0.500	0.250	6020
140-BH12-2	3/20/2012	5	6	Chromium	7440-47-3	mg/kg	117321	3.20		2.00	1.00	6020
140-BH12-2	3/20/2012	5	6	Cobalt	7440-48-4	mg/kg	NA	1.77	J	2.50	1.25	6020
140-BH12-2	3/20/2012	5	6	Copper	7440-50-8	mg/kg	3129	2.13	J	3.00	1.50	6020
140-BH12-2	3/20/2012	5	6	Lead (Pb)	7439-92-1	mg/kg	400	3.93		1.00	0.500	6020
140-BH12-2	3/20/2012	5	6	Manganese	7439-96-5	mg/kg	1865	74.1		1.00	0.500	6020
140-BH12-2	3/20/2012	5	6	Nickel	7440-02-0	mg/kg	1560	3.25	J	4.00	2.00	6020
140-BH12-2	3/20/2012	5	6	Selenium	7782-49-2	mg/kg	391	1.00	U	1.00	0.500	6020
140-BH12-2	3/20/2012	5	6	Silver	7440-22-4	mg/kg	391	3.00	U	3.00	1.50	6020
140-BH12-2	3/20/2012	5	6	Thallium	7440-28-0	mg/kg	0.782	0.200	U	0.200	0.100	6020
140-BH12-2	3/20/2012	5	6	Vanadium	7440-62-2	mg/kg	391	6.02		2.50	1.25	6020
140-BH12-2	3/20/2012	5	6	Mercury	7439-97-6	mg/kg	15.6	0.100		0.100	0.0100	7471A

Table C-3 (continued)
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Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH12-2	3/20/2012	5	6	Percent Solids	10-02-6	%	NA	97.5		1.00	1.00	D2216-90
140-BH12-3	3/20/2012	9	10	Aluminum	7429-90-5	mg/kg	78002	5200		15.3	7.64	6010B
140-BH12-3	3/20/2012	9	10	Antimony	7440-36-0	mg/kg	31.3	0.764	U	0.764	0.382	6010B
140-BH12-3	3/20/2012	9	10	Beryllium	7440-41-7	mg/kg	156	0.350		0.0764	0.0382	6010B
140-BH12-3	3/20/2012	9	10	Calcium	7440-70-2	mg/kg	NA	64600		76.4	38.2	6010B
140-BH12-3	3/20/2012	9	10	Iron (Ferrous)	7439-89-6	mg/kg	54750	6050		22.9	11.5	6010B
140-BH12-3	3/20/2012	9	10	Magnesium	7439-95-4	mg/kg	NA	3990		19.1	9.55	6010B
140-BH12-3	3/20/2012	9	10	Potassium	7440-09-7	mg/kg	NA	989		38.2	19.1	6010B
140-BH12-3	3/20/2012	9	10	Sodium	7440-23-5	mg/kg	NA	934		19.1	9.55	6010B
140-BH12-3	3/20/2012	9	10	Zinc	7440-66-6	mg/kg	23464	13.2		0.764	0.382	6010B
140-BH12-3	3/20/2012	9	10	Arsenic	7440-38-2	mg/kg	3.90	3.49		1.55	0.777	6020
140-BH12-3	3/20/2012	9	10	Barium	7440-39-3	mg/kg	15558	194		1.55	0.777	6020
140-BH12-3	3/20/2012	9	10	Cadmium	7440-43-9	mg/kg	70.3	0.518	U	0.518	0.259	6020
140-BH12-3	3/20/2012	9	10	Chromium	7440-47-3	mg/kg	117321	3.98		2.07	1.04	6020
140-BH12-3	3/20/2012	9	10	Cobalt	7440-48-4	mg/kg	NA	1.94	J	2.59	1.29	6020
140-BH12-3	3/20/2012	9	10	Copper	7440-50-8	mg/kg	3129	2.33	J	3.11	1.55	6020

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH12-3	3/20/2012	9	10	Lead (Pb)	7439-92-1	mg/kg	400	4.07		1.04	0.518	6020
140-BH12-3	3/20/2012	9	10	Manganese	7439-96-5	mg/kg	1865	58.9		1.04	0.518	6020
140-BH12-3	3/20/2012	9	10	Nickel	7440-02-0	mg/kg	1560	7.06		4.14	2.07	6020
140-BH12-3	3/20/2012	9	10	Selenium	7782-49-2	mg/kg	391	0.700	J	1.04	0.518	6020
140-BH12-3	3/20/2012	9	10	Silver	7440-22-4	mg/kg	391	3.05	U	3.05	1.53	6020
140-BH12-3	3/20/2012	9	10	Thallium	7440-28-0	mg/kg	0.782	0.207	U	0.207	0.104	6020
140-BH12-3	3/20/2012	9	10	Vanadium	7440-62-2	mg/kg	391	11.5		2.59	1.29	6020
140-BH12-3	3/20/2012	9	10	Mercury	7439-97-6	mg/kg	15.6	0.104		0.104	0.0104	7471A
140-BH12-3	3/20/2012	9	10	Percent Solids	10-02-6	%	NA	94.3		1.00	1.00	D2216-90
140-BH12-FD2	3/20/2012	5	6	Aluminum	7429-90-5	mg/kg	78002	3010		14.6	7.28	6010B
140-BH12-FD2	3/20/2012	5	6	Antimony	7440-36-0	mg/kg	31.3	0.728	U	0.728	0.364	6010B
140-BH12-FD2	3/20/2012	5	6	Beryllium	7440-41-7	mg/kg	156	0.239		0.0728	0.0364	6010B
140-BH12-FD2	3/20/2012	5	6	Calcium	7440-70-2	mg/kg	NA	2860		7.28	3.64	6010B
140-BH12-FD2	3/20/2012	5	6	Iron (Ferrous)	7439-89-6	mg/kg	54750	5500		2.18	1.09	6010B
140-BH12-FD2	3/20/2012	5	6	Magnesium	7439-95-4	mg/kg	NA	993		18.2	9.10	6010B
140-BH12-FD2	3/20/2012	5	6	Potassium	7440-09-7	mg/kg	NA	562		36.4	18.2	6010B

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH12-FD2	3/20/2012	5	6	Sodium	7440-23-5	mg/kg	NA	232		18.2	9.10	6010B
140-BH12-FD2	3/20/2012	5	6	Zinc	7440-66-6	mg/kg	23464	10.5		0.728	0.364	6010B
140-BH12-FD2	3/20/2012	5	6	Arsenic	7440-38-2	mg/kg	3.90	1.28	J	1.50	0.749	6020
140-BH12-FD2	3/20/2012	5	6	Barium	7440-39-3	mg/kg	15558	22.4		1.50	0.749	6020
140-BH12-FD2	3/20/2012	5	6	Cadmium	7440-43-9	mg/kg	70.3	0.499	U	0.499	0.250	6020
140-BH12-FD2	3/20/2012	5	6	Chromium	7440-47-3	mg/kg	117321	2.54		2.00	0.999	6020
140-BH12-FD2	3/20/2012	5	6	Cobalt	7440-48-4	mg/kg	NA	1.44	J	2.50	1.25	6020
140-BH12-FD2	3/20/2012	5	6	Copper	7440-50-8	mg/kg	3129	1.66	J	3.00	1.50	6020
140-BH12-FD2	3/20/2012	5	6	Lead (Pb)	7439-92-1	mg/kg	400	3.03		0.999	0.499	6020
140-BH12-FD2	3/20/2012	5	6	Manganese	7439-96-5	mg/kg	1865	57.0		0.999	0.499	6020
140-BH12-FD2	3/20/2012	5	6	Nickel	7440-02-0	mg/kg	1560	2.54	J	4.00	2.00	6020
140-BH12-FD2	3/20/2012	5	6	Selenium	7782-49-2	mg/kg	391	1.00	U	0.999	0.499	6020
140-BH12-FD2	3/20/2012	5	6	Silver	7440-22-4	mg/kg	391	2.91	U	2.91	1.46	6020
140-BH12-FD2	3/20/2012	5	6	Thallium	7440-28-0	mg/kg	0.782	0.200	U	0.200	0.0999	6020
140-BH12-FD2	3/20/2012	5	6	Vanadium	7440-62-2	mg/kg	391	5.52		2.50	1.25	6020
140-BH12-FD2	3/20/2012	5	6	Mercury	7439-97-6	mg/kg	15.6	0.0996		0.0996	0.0100	7471A

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH12-FD2	3/20/2012	5	6	Percent Solids	10-02-6	%	NA	97.6		1.00	1.00	D2216-90
140-BH13-1	3/20/2012	0	2	Aluminum	7429-90-5	mg/kg	78002	3360		14.7	7.35	6010B
140-BH13-1	3/20/2012	0	2	Antimony	7440-36-0	mg/kg	31.3	0.735	U	0.735	0.368	6010B
140-BH13-1	3/20/2012	0	2	Beryllium	7440-41-7	mg/kg	156	0.214		0.0735	0.0368	6010B
140-BH13-1	3/20/2012	0	2	Calcium	7440-70-2	mg/kg	NA	2890		7.35	3.68	6010B
140-BH13-1	3/20/2012	0	2	Iron (Ferrous)	7439-89-6	mg/kg	54750	5270		2.21	1.10	6010B
140-BH13-1	3/20/2012	0	2	Magnesium	7439-95-4	mg/kg	NA	985		18.4	9.19	6010B
140-BH13-1	3/20/2012	0	2	Potassium	7440-09-7	mg/kg	NA	958		36.8	18.4	6010B
140-BH13-1	3/20/2012	0	2	Sodium	7440-23-5	mg/kg	NA	15.1	J	18.4	9.19	6010B
140-BH13-1	3/20/2012	0	2	Zinc	7440-66-6	mg/kg	23464	10.5		0.735	0.368	6010B
140-BH13-1	3/20/2012	0	2	Arsenic	7440-38-2	mg/kg	3.90	1.52		1.46	0.732	6020
140-BH13-1	3/20/2012	0	2	Barium	7440-39-3	mg/kg	15558	22.7		1.46	0.732	6020
140-BH13-1	3/20/2012	0	2	Cadmium	7440-43-9	mg/kg	70.3	0.488	U	0.488	0.244	6020
140-BH13-1	3/20/2012	0	2	Chromium	7440-47-3	mg/kg	117321	2.42		1.95	0.976	6020
140-BH13-1	3/20/2012	0	2	Cobalt	7440-48-4	mg/kg	NA	2.44	U	2.44	1.22	6020
140-BH13-1	3/20/2012	0	2	Copper	7440-50-8	mg/kg	3129	1.95	J	2.93	1.46	6020

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH13-1	3/20/2012	0	2	Lead (Pb)	7439-92-1	mg/kg	400	3.06		0.976	0.488	6020
140-BH13-1	3/20/2012	0	2	Manganese	7439-96-5	mg/kg	1865	52.3		0.976	0.488	6020
140-BH13-1	3/20/2012	0	2	Nickel	7440-02-0	mg/kg	1560	2.52	J	3.90	1.95	6020
140-BH13-1	3/20/2012	0	2	Selenium	7782-49-2	mg/kg	391	0.976	U	0.976	0.488	6020
140-BH13-1	3/20/2012	0	2	Silver	7440-22-4	mg/kg	391	2.94	U	2.94	1.47	6020
140-BH13-1	3/20/2012	0	2	Thallium	7440-28-0	mg/kg	0.782	0.195	U	0.195	0.0976	6020
140-BH13-1	3/20/2012	0	2	Vanadium	7440-62-2	mg/kg	391	4.75		2.44	1.22	6020
140-BH13-1	3/20/2012	0	2	Mercury	7439-97-6	mg/kg	15.6	0.0976		0.0976	0.00976	7471A
140-BH13-1	3/20/2012	0	2	Percent Solids	10-02-6	%	NA	97.4		1.00	1.00	D2216-90
140-BH13-2	3/20/2012	5	6	Aluminum	7429-90-5	mg/kg	78002	3710		15.7	7.84	6010B
140-BH13-2	3/20/2012	5	6	Antimony	7440-36-0	mg/kg	31.3	0.784	U	0.784	0.392	6010B
140-BH13-2	3/20/2012	5	6	Beryllium	7440-41-7	mg/kg	156	0.210		0.0784	0.0392	6010B
140-BH13-2	3/20/2012	5	6	Calcium	7440-70-2	mg/kg	NA	195000		78.4	39.2	6010B
140-BH13-2	3/20/2012	5	6	Iron (Ferrous)	7439-89-6	mg/kg	54750	3510		23.5	11.8	6010B
140-BH13-2	3/20/2012	5	6	Magnesium	7439-95-4	mg/kg	NA	4570		19.6	9.80	6010B
140-BH13-2	3/20/2012	5	6	Potassium	7440-09-7	mg/kg	NA	311		39.2	19.6	6010B

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH13-2	3/20/2012	5	6	Sodium	7440-23-5	mg/kg	NA	653		19.6	9.80	6010B
140-BH13-2	3/20/2012	5	6	Zinc	7440-66-6	mg/kg	23464	5.98		0.784	0.392	6010B
140-BH13-2	3/20/2012	5	6	Arsenic	7440-38-2	mg/kg	3.90	2.34		1.62	0.811	6020
140-BH13-2	3/20/2012	5	6	Barium	7440-39-3	mg/kg	15558	133		1.62	0.811	6020
140-BH13-2	3/20/2012	5	6	Cadmium	7440-43-9	mg/kg	70.3	0.541	U	0.541	0.270	6020
140-BH13-2	3/20/2012	5	6	Chromium	7440-47-3	mg/kg	117321	3.31		2.16	1.08	6020
140-BH13-2	3/20/2012	5	6	Cobalt	7440-48-4	mg/kg	NA	2.15	J	2.70	1.35	6020
140-BH13-2	3/20/2012	5	6	Copper	7440-50-8	mg/kg	3129	3.24	U	3.24	1.62	6020
140-BH13-2	3/20/2012	5	6	Lead (Pb)	7439-92-1	mg/kg	400	2.63		1.08	0.541	6020
140-BH13-2	3/20/2012	5	6	Manganese	7439-96-5	mg/kg	1865	32.1		1.08	0.541	6020
140-BH13-2	3/20/2012	5	6	Nickel	7440-02-0	mg/kg	1560	9.64		4.33	2.16	6020
140-BH13-2	3/20/2012	5	6	Selenium	7782-49-2	mg/kg	391	0.551	J	1.08	0.541	6020
140-BH13-2	3/20/2012	5	6	Silver	7440-22-4	mg/kg	391	3.14	U	3.14	1.57	6020
140-BH13-2	3/20/2012	5	6	Thallium	7440-28-0	mg/kg	0.782	0.216	U	0.216	0.108	6020
140-BH13-2	3/20/2012	5	6	Vanadium	7440-62-2	mg/kg	391	11.0		2.70	1.35	6020
140-BH13-2	3/20/2012	5	6	Mercury	7439-97-6	mg/kg	15.6	0.103		0.103	0.0103	7471A

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH13-2	3/20/2012	5	6	Percent Solids	10-02-6	%	NA	91.6		1.00	1.00	D2216-90
140-BH13-3	3/20/2012	9	10	Aluminum	7429-90-5	mg/kg	78002	5790		16.1	8.04	6010B
140-BH13-3	3/20/2012	9	10	Antimony	7440-36-0	mg/kg	31.3	0.804	U	0.804	0.402	6010B
140-BH13-3	3/20/2012	9	10	Beryllium	7440-41-7	mg/kg	156	0.307		0.0804	0.0402	6010B
140-BH13-3	3/20/2012	9	10	Calcium	7440-70-2	mg/kg	NA	129000		80.4	40.2	6010B
140-BH13-3	3/20/2012	9	10	Iron (Ferrous)	7439-89-6	mg/kg	54750	5740		24.1	12.1	6010B
140-BH13-3	3/20/2012	9	10	Magnesium	7439-95-4	mg/kg	NA	7520		20.1	10.1	6010B
140-BH13-3	3/20/2012	9	10	Potassium	7440-09-7	mg/kg	NA	873		40.2	20.1	6010B
140-BH13-3	3/20/2012	9	10	Sodium	7440-23-5	mg/kg	NA	758		20.1	10.1	6010B
140-BH13-3	3/20/2012	9	10	Zinc	7440-66-6	mg/kg	23464	9.79		0.804	0.402	6010B
140-BH13-3	3/20/2012	9	10	Arsenic	7440-38-2	mg/kg	3.90	5.69		1.60	0.799	6020
140-BH13-3	3/20/2012	9	10	Barium	7440-39-3	mg/kg	15558	196		1.60	0.799	6020
140-BH13-3	3/20/2012	9	10	Cadmium	7440-43-9	mg/kg	70.3	0.533	U	0.533	0.266	6020
140-BH13-3	3/20/2012	9	10	Chromium	7440-47-3	mg/kg	117321	7.56		2.13	1.07	6020
140-BH13-3	3/20/2012	9	10	Cobalt	7440-48-4	mg/kg	NA	2.23	J	2.66	1.33	6020
140-BH13-3	3/20/2012	9	10	Copper	7440-50-8	mg/kg	3129	2.77	J	3.20	1.60	6020

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
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Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH13-3	3/20/2012	9	10	Lead (Pb)	7439-92-1	mg/kg	400	3.31		1.07	0.533	6020
140-BH13-3	3/20/2012	9	10	Manganese	7439-96-5	mg/kg	1865	63.2		1.07	0.533	6020
140-BH13-3	3/20/2012	9	10	Nickel	7440-02-0	mg/kg	1560	8.16		4.26	2.13	6020
140-BH13-3	3/20/2012	9	10	Selenium	7782-49-2	mg/kg	391	0.923	J	1.07	0.533	6020
140-BH13-3	3/20/2012	9	10	Silver	7440-22-4	mg/kg	391	3.22	U	3.22	1.61	6020
140-BH13-3	3/20/2012	9	10	Thallium	7440-28-0	mg/kg	0.782	0.213	U	0.213	0.107	6020
140-BH13-3	3/20/2012	9	10	Vanadium	7440-62-2	mg/kg	391	16.7		2.66	1.33	6020
140-BH13-3	3/20/2012	9	10	Mercury	7439-97-6	mg/kg	15.6	0.102		0.102	0.0102	7471A
140-BH13-3	3/20/2012	9	10	Percent Solids	10-02-6	%	NA	93.6		1.00	1.00	D2216-90
140-BH14-1	3/20/2012	0	2	Aluminum	7429-90-5	mg/kg	78002	6910		15.0	7.52	6010B
140-BH14-1	3/20/2012	0	2	Antimony	7440-36-0	mg/kg	31.3	0.752	U	0.752	0.376	6010B
140-BH14-1	3/20/2012	0	2	Beryllium	7440-41-7	mg/kg	156	0.417		0.0752	0.0376	6010B
140-BH14-1	3/20/2012	0	2	Calcium	7440-70-2	mg/kg	NA	74800		75.2	37.6	6010B
140-BH14-1	3/20/2012	0	2	Iron (Ferrous)	7439-89-6	mg/kg	54750	7960		22.6	11.3	6010B
140-BH14-1	3/20/2012	0	2	Magnesium	7439-95-4	mg/kg	NA	3110		18.8	9.40	6010B
140-BH14-1	3/20/2012	0	2	Potassium	7440-09-7	mg/kg	NA	1660		37.6	18.8	6010B

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH14-1	3/20/2012	0	2	Sodium	7440-23-5	mg/kg	NA	55.1		18.8	9.40	6010B
140-BH14-1	3/20/2012	0	2	Zinc	7440-66-6	mg/kg	23464	15.7		0.752	0.376	6010B
140-BH14-1	3/20/2012	0	2	Arsenic	7440-38-2	mg/kg	3.90	4.62		1.55	0.777	6020
140-BH14-1	3/20/2012	0	2	Barium	7440-39-3	mg/kg	15558	142		1.55	0.777	6020
140-BH14-1	3/20/2012	0	2	Cadmium	7440-43-9	mg/kg	70.3	0.518	U	0.518	0.259	6020
140-BH14-1	3/20/2012	0	2	Chromium	7440-47-3	mg/kg	117321	4.49		2.07	1.04	6020
140-BH14-1	3/20/2012	0	2	Cobalt	7440-48-4	mg/kg	NA	2.50	J	2.59	1.30	6020
140-BH14-1	3/20/2012	0	2	Copper	7440-50-8	mg/kg	3129	3.76		3.11	1.55	6020
140-BH14-1	3/20/2012	0	2	Lead (Pb)	7439-92-1	mg/kg	400	4.69		1.04	0.518	6020
140-BH14-1	3/20/2012	0	2	Manganese	7439-96-5	mg/kg	1865	78.3		1.04	0.518	6020
140-BH14-1	3/20/2012	0	2	Nickel	7440-02-0	mg/kg	1560	7.73		4.15	2.07	6020
140-BH14-1	3/20/2012	0	2	Selenium	7782-49-2	mg/kg	391	0.560	J	1.04	0.518	6020
140-BH14-1	3/20/2012	0	2	Silver	7440-22-4	mg/kg	391	3.01	U	3.01	1.50	6020
140-BH14-1	3/20/2012	0	2	Thallium	7440-28-0	mg/kg	0.782	0.207	U	0.207	0.104	6020
140-BH14-1	3/20/2012	0	2	Vanadium	7440-62-2	mg/kg	391	13.0		2.59	1.30	6020
140-BH14-1	3/20/2012	0	2	Mercury	7439-97-6	mg/kg	15.6	0.103		0.103	0.0103	7471A

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
Soil Background Study Report
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Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH14-1	3/20/2012	0	2	Percent Solids	10-02-6	%	NA	93.5		1.00	1.00	D2216-90
140-BH14-2	3/20/2012	5	6	Aluminum	7429-90-5	mg/kg	78002	7670		16.2	8.10	6010B
140-BH14-2	3/20/2012	5	6	Antimony	7440-36-0	mg/kg	31.3	0.810	U	0.810	0.405	6010B
140-BH14-2	3/20/2012	5	6	Beryllium	7440-41-7	mg/kg	156	0.498		0.0810	0.0405	6010B
140-BH14-2	3/20/2012	5	6	Calcium	7440-70-2	mg/kg	NA	20600		8.10	4.05	6010B
140-BH14-2	3/20/2012	5	6	Iron (Ferrous)	7439-89-6	mg/kg	54750	7510		2.43	1.21	6010B
140-BH14-2	3/20/2012	5	6	Magnesium	7439-95-4	mg/kg	NA	6350		20.2	10.1	6010B
140-BH14-2	3/20/2012	5	6	Potassium	7440-09-7	mg/kg	NA	1390		40.5	20.2	6010B
140-BH14-2	3/20/2012	5	6	Sodium	7440-23-5	mg/kg	NA	1350		20.2	10.1	6010B
140-BH14-2	3/20/2012	5	6	Zinc	7440-66-6	mg/kg	23464	18.3		0.810	0.405	6010B
140-BH14-2	3/20/2012	5	6	Arsenic	7440-38-2	mg/kg	3.90	7.73		1.55	0.774	6020
140-BH14-2	3/20/2012	5	6	Barium	7440-39-3	mg/kg	15558	25.6		1.55	0.774	6020
140-BH14-2	3/20/2012	5	6	Cadmium	7440-43-9	mg/kg	70.3	0.516	U	0.516	0.258	6020
140-BH14-2	3/20/2012	5	6	Chromium	7440-47-3	mg/kg	117321	6.58		2.06	1.03	6020
140-BH14-2	3/20/2012	5	6	Cobalt	7440-48-4	mg/kg	NA	3.87		2.58	1.29	6020
140-BH14-2	3/20/2012	5	6	Copper	7440-50-8	mg/kg	3129	5.45		3.10	1.55	6020

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH14-2	3/20/2012	5	6	Lead (Pb)	7439-92-1	mg/kg	400	7.19		1.03	0.516	6020
140-BH14-2	3/20/2012	5	6	Manganese	7439-96-5	mg/kg	1865	136		1.03	0.516	6020
140-BH14-2	3/20/2012	5	6	Nickel	7440-02-0	mg/kg	1560	8.33		4.13	2.06	6020
140-BH14-2	3/20/2012	5	6	Selenium	7782-49-2	mg/kg	391	1.03	U	1.03	0.516	6020
140-BH14-2	3/20/2012	5	6	Silver	7440-22-4	mg/kg	391	3.24	U	3.24	1.62	6020
140-BH14-2	3/20/2012	5	6	Thallium	7440-28-0	mg/kg	0.782	0.206	U	0.206	0.103	6020
140-BH14-2	3/20/2012	5	6	Vanadium	7440-62-2	mg/kg	391	29.1		2.58	1.29	6020
140-BH14-2	3/20/2012	5	6	Mercury	7439-97-6	mg/kg	15.6	0.106		0.106	0.0106	7471A
140-BH14-2	3/20/2012	5	6	Percent Solids	10-02-6	%	NA	92.7		1.00	1.00	D2216-90
140-BH14-3	3/20/2012	9	10	Aluminum	7429-90-5	mg/kg	78002	7250		16.6	8.29	6010B
140-BH14-3	3/20/2012	9	10	Antimony	7440-36-0	mg/kg	31.3	0.570	J-	0.829	0.414	6010B
140-BH14-3	3/20/2012	9	10	Beryllium	7440-41-7	mg/kg	156	0.709	J-	0.0829	0.0414	6010B
140-BH14-3	3/20/2012	9	10	Calcium	7440-70-2	mg/kg	NA	31500		82.9	41.4	6010B
140-BH14-3	3/20/2012	9	10	Iron (Ferrous)	7439-89-6	mg/kg	54750	11200		2.49	1.24	6010B
140-BH14-3	3/20/2012	9	10	Magnesium	7439-95-4	mg/kg	NA	5550		20.7	10.4	6010B
140-BH14-3	3/20/2012	9	10	Potassium	7440-09-7	mg/kg	NA	1240		41.4	20.7	6010B

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH14-3	3/20/2012	9	10	Silver	7440-22-4	mg/kg	391	0.463		0.166	0.0829	6010B
140-BH14-3	3/20/2012	9	10	Sodium	7440-23-5	mg/kg	23464	2500	J-	20.7	10.4	6010B
140-BH14-3	3/20/2012	9	10	Zinc	7440-66-6	mg/kg	23464	29.9	J-	0.829	0.414	6010B
140-BH14-3	3/20/2012	9	10	Arsenic	7440-38-2	mg/kg	3.90	21.8		1.76	0.881	6020
140-BH14-3	3/20/2012	9	10	Barium	7440-39-3	mg/kg	15558	18.3	J	1.76	0.881	6020
140-BH14-3	3/20/2012	9	10	Cadmium	7440-43-9	mg/kg	70.3	0.587	U	0.587	0.294	6020
140-BH14-3	3/20/2012	9	10	Chromium	7440-47-3	mg/kg	117321	8.46	J	2.35	1.17	6020
140-BH14-3	3/20/2012	9	10	Cobalt	7440-48-4	mg/kg	3129	5.87	J	2.94	1.47	6020
140-BH14-3	3/20/2012	9	10	Copper	7440-50-8	mg/kg	3129	10.6	J	3.52	1.76	6020
140-BH14-3	3/20/2012	9	10	Lead (Pb)	7439-92-1	mg/kg	400	10.6	J	1.17	0.587	6020
140-BH14-3	3/20/2012	9	10	Manganese	7439-96-5	mg/kg	1865	181		11.7	5.87	6020
140-BH14-3	3/20/2012	9	10	Nickel	7440-02-0	mg/kg	1560	12.5	J	4.70	2.35	6020
140-BH14-3	3/20/2012	9	10	Selenium	7782-49-2	mg/kg	391	0.795	J	1.17	0.587	6020
140-BH14-3	3/20/2012	9	10	Silver	7440-22-4	mg/kg	391	3.32	UN	3.32	1.66	6020
140-BH14-3	3/20/2012	9	10	Thallium	7440-28-0	mg/kg	0.782	0.149	J	0.235	0.117	6020
140-BH14-3	3/20/2012	9	10	Vanadium	7440-62-2	mg/kg	391	82.0		2.94	1.47	6020

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH14-3	3/20/2012	9	10	Mercury	7439-97-6	mg/kg	15.6	0.113	UN	0.113	0.0113	7471A
140-BH14-3	3/20/2012	9	10	Percent Solids	10-02-6	%	NA	83.0		1.00	1.00	D2216-90
140-BH15-1	3/20/2012	0	2	Aluminum	7429-90-5	mg/kg	78002	3100		14.0	7.00	6010B
140-BH15-1	3/20/2012	0	2	Antimony	7440-36-0	mg/kg	31.3	0.700	U	0.700	0.350	6010B
140-BH15-1	3/20/2012	0	2	Beryllium	7440-41-7	mg/kg	156	0.259		0.0700	0.0350	6010B
140-BH15-1	3/20/2012	0	2	Calcium	7440-70-2	mg/kg	NA	23800		7.00	3.50	6010B
140-BH15-1	3/20/2012	0	2	Iron (Ferrous)	7439-89-6	mg/kg	54750	5020		2.10	1.05	6010B
140-BH15-1	3/20/2012	0	2	Magnesium	7439-95-4	mg/kg	NA	1380		17.5	8.75	6010B
140-BH15-1	3/20/2012	0	2	Potassium	7440-09-7	mg/kg	NA	885		35.0	17.5	6010B
140-BH15-1	3/20/2012	0	2	Sodium	7440-23-5	mg/kg	NA	27.7		17.5	8.75	6010B
140-BH15-1	3/20/2012	0	2	Zinc	7440-66-6	mg/kg	23464	9.95		0.700	0.350	6010B
140-BH15-1	3/20/2012	0	2	Arsenic	7440-38-2	mg/kg	3.90	3.96		1.55	0.774	6020
140-BH15-1	3/20/2012	0	2	Barium	7440-39-3	mg/kg	15558	62.3		1.55	0.774	6020
140-BH15-1	3/20/2012	0	2	Cadmium	7440-43-9	mg/kg	70.3	0.516	U	0.516	0.258	6020
140-BH15-1	3/20/2012	0	2	Chromium	7440-47-3	mg/kg	117321	4.36		2.06	1.03	6020
140-BH15-1	3/20/2012	0	2	Cobalt	7440-48-4	mg/kg	NA	2.65		2.58	1.29	6020

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
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Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH15-1	3/20/2012	0	2	Copper	7440-50-8	mg/kg	3129	3.94		3.10	1.55	6020
140-BH15-1	3/20/2012	0	2	Lead (Pb)	7439-92-1	mg/kg	400	5.05		1.03	0.516	6020
140-BH15-1	3/20/2012	0	2	Manganese	7439-96-5	mg/kg	1865	94.0		1.03	0.516	6020
140-BH15-1	3/20/2012	0	2	Nickel	7440-02-0	mg/kg	1560	5.59		4.13	2.06	6020
140-BH15-1	3/20/2012	0	2	Selenium	7782-49-2	mg/kg	391	1.03	U	1.03	0.516	6020
140-BH15-1	3/20/2012	0	2	Silver	7440-22-4	mg/kg	391	2.80	U	2.80	1.40	6020
140-BH15-1	3/20/2012	0	2	Thallium	7440-28-0	mg/kg	0.782	0.206	U	0.206	0.103	6020
140-BH15-1	3/20/2012	0	2	Vanadium	7440-62-2	mg/kg	391	10.6		2.58	1.29	6020
140-BH15-1	3/20/2012	0	2	Mercury	7439-97-6	mg/kg	15.6	0.0979		0.0979	0.00979	7471A
140-BH15-1	3/20/2012	0	2	Percent Solids	10-02-6	%	NA	96.7		1.00	1.00	D2216-90
140-BH15-2	3/20/2012	5	6	Aluminum	7429-90-5	mg/kg	78002	3980		15.2	7.60	6010B
140-BH15-2	3/20/2012	5	6	Antimony	7440-36-0	mg/kg	31.3	0.760	U	0.760	0.380	6010B
140-BH15-2	3/20/2012	5	6	Beryllium	7440-41-7	mg/kg	156	0.449		0.0760	0.0380	6010B
140-BH15-2	3/20/2012	5	6	Calcium	7440-70-2	mg/kg	NA	11000		7.60	3.80	6010B
140-BH15-2	3/20/2012	5	6	Iron (Ferrous)	7439-89-6	mg/kg	54750	5650		2.28	1.14	6010B
140-BH15-2	3/20/2012	5	6	Magnesium	7439-95-4	mg/kg	NA	2900		19.0	9.50	6010B

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
Soil Background Study Report
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Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH15-2	3/20/2012	5	6	Potassium	7440-09-7	mg/kg	NA	772		38.0	19.0	6010B
140-BH15-2	3/20/2012	5	6	Sodium	7440-23-5	mg/kg	NA	1130		19.0	9.50	6010B
140-BH15-2	3/20/2012	5	6	Zinc	7440-66-6	mg/kg	23464	14.1		0.760	0.380	6010B
140-BH15-2	3/20/2012	5	6	Arsenic	7440-38-2	mg/kg	3.90	4.21		1.49	0.746	6020
140-BH15-2	3/20/2012	5	6	Barium	7440-39-3	mg/kg	15558	125		1.49	0.746	6020
140-BH15-2	3/20/2012	5	6	Cadmium	7440-43-9	mg/kg	70.3	0.497	U	0.497	0.249	6020
140-BH15-2	3/20/2012	5	6	Chromium	7440-47-3	mg/kg	117321	4.70		1.99	0.994	6020
140-BH15-2	3/20/2012	5	6	Cobalt	7440-48-4	mg/kg	NA	2.97		2.49	1.24	6020
140-BH15-2	3/20/2012	5	6	Copper	7440-50-8	mg/kg	3129	3.69		2.98	1.49	6020
140-BH15-2	3/20/2012	5	6	Lead (Pb)	7439-92-1	mg/kg	400	5.90		0.994	0.497	6020
140-BH15-2	3/20/2012	5	6	Manganese	7439-96-5	mg/kg	1865	120		0.994	0.497	6020
140-BH15-2	3/20/2012	5	6	Nickel	7440-02-0	mg/kg	1560	5.86		3.98	1.99	6020
140-BH15-2	3/20/2012	5	6	Selenium	7782-49-2	mg/kg	391	0.994	U	0.994	0.497	6020
140-BH15-2	3/20/2012	5	6	Silver	7440-22-4	mg/kg	391	3.04	U	3.04	1.52	6020
140-BH15-2	3/20/2012	5	6	Thallium	7440-28-0	mg/kg	0.782	0.199	U	0.199	0.0994	6020
140-BH15-2	3/20/2012	5	6	Vanadium	7440-62-2	mg/kg	391	14.2		2.49	1.24	6020

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
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Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH15-2	3/20/2012	5	6	Mercury	7439-97-6	mg/kg	15.6	0.105		0.105	0.0105	7471A
140-BH15-2	3/20/2012	5	6	Percent Solids	10-02-6	%	NA	92.8		1.00	1.00	D2216-90
140-BH15-3	3/20/2012	9	10	Aluminum	7429-90-5	mg/kg	78002	3810		15.8	7.91	6010B
140-BH15-3	3/20/2012	9	10	Antimony	7440-36-0	mg/kg	31.3	0.791	U	0.791	0.395	6010B
140-BH15-3	3/20/2012	9	10	Beryllium	7440-41-7	mg/kg	156	0.361		0.0791	0.0395	6010B
140-BH15-3	3/20/2012	9	10	Calcium	7440-70-2	mg/kg	NA	27400		7.91	3.95	6010B
140-BH15-3	3/20/2012	9	10	Iron (Ferrous)	7439-89-6	mg/kg	54750	5470		2.37	1.19	6010B
140-BH15-3	3/20/2012	9	10	Magnesium	7439-95-4	mg/kg	NA	3070		19.8	9.88	6010B
140-BH15-3	3/20/2012	9	10	Potassium	7440-09-7	mg/kg	NA	884		39.5	19.8	6010B
140-BH15-3	3/20/2012	9	10	Sodium	7440-23-5	mg/kg	NA	1150		19.8	9.88	6010B
140-BH15-3	3/20/2012	9	10	Zinc	7440-66-6	mg/kg	23464	13.2		0.791	0.395	6010B
140-BH15-3	3/20/2012	9	10	Arsenic	7440-38-2	mg/kg	3.90	4.00		1.57	0.783	6020
140-BH15-3	3/20/2012	9	10	Barium	7440-39-3	mg/kg	15558	66.8		1.57	0.783	6020
140-BH15-3	3/20/2012	9	10	Cadmium	7440-43-9	mg/kg	70.3	0.522	U	0.522	0.261	6020
140-BH15-3	3/20/2012	9	10	Chromium	7440-47-3	mg/kg	117321	4.87		2.09	1.04	6020
140-BH15-3	3/20/2012	9	10	Cobalt	7440-48-4	mg/kg	NA	3.05		2.61	1.30	6020

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
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Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH15-3	3/20/2012	9	10	Copper	7440-50-8	mg/kg	3129	3.17		3.13	1.57	6020
140-BH15-3	3/20/2012	9	10	Lead (Pb)	7439-92-1	mg/kg	400	4.99		1.04	0.522	6020
140-BH15-3	3/20/2012	9	10	Manganese	7439-96-5	mg/kg	1865	93.8		1.04	0.522	6020
140-BH15-3	3/20/2012	9	10	Nickel	7440-02-0	mg/kg	1560	5.90		4.17	2.09	6020
140-BH15-3	3/20/2012	9	10	Selenium	7782-49-2	mg/kg	391	1.04	U	1.04	0.522	6020
140-BH15-3	3/20/2012	9	10	Silver	7440-22-4	mg/kg	391	3.16	U	3.16	1.58	6020
140-BH15-3	3/20/2012	9	10	Thallium	7440-28-0	mg/kg	0.782	0.209	U	0.209	0.104	6020
140-BH15-3	3/20/2012	9	10	Vanadium	7440-62-2	mg/kg	391	13.7		2.61	1.30	6020
140-BH15-3	3/20/2012	9	10	Mercury	7439-97-6	mg/kg	15.6	0.106		0.106	0.0106	7471A
140-BH15-3	3/20/2012	9	10	Percent Solids	10-02-6	%	NA	92.8		1.00	1.00	D2216-90
140-BH15-FD3	3/20/2012	9	10	Aluminum	7429-90-5	mg/kg	78002	3890		16.1	8.03	6010B
140-BH15-FD3	3/20/2012	9	10	Antimony	7440-36-0	mg/kg	31.3	0.803	U	0.803	0.401	6010B
140-BH15-FD3	3/20/2012	9	10	Beryllium	7440-41-7	mg/kg	156	0.359		0.0803	0.0401	6010B
140-BH15-FD3	3/20/2012	9	10	Calcium	7440-70-2	mg/kg	NA	20700		8.03	4.01	6010B
140-BH15-FD3	3/20/2012	9	10	Iron (Ferrous)	7439-89-6	mg/kg	54750	5430		2.41	1.20	6010B
140-BH15-FD3	3/20/2012	9	10	Magnesium	7439-95-4	mg/kg	NA	2990		20.1	10.0	6010B

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
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Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH15-FD3	3/20/2012	9	10	Potassium	7440-09-7	mg/kg	NA	902		40.1	20.1	6010B
140-BH15-FD3	3/20/2012	9	10	Sodium	7440-23-5	mg/kg	NA	1110		20.1	10.0	6010B
140-BH15-FD3	3/20/2012	9	10	Zinc	7440-66-6	mg/kg	23464	12.8		0.803	0.401	6010B
140-BH15-FD3	3/20/2012	9	10	Arsenic	7440-38-2	mg/kg	3.90	4.43		1.60	0.801	6020
140-BH15-FD3	3/20/2012	9	10	Barium	7440-39-3	mg/kg	15558	73.6		1.60	0.801	6020
140-BH15-FD3	3/20/2012	9	10	Cadmium	7440-43-9	mg/kg	70.3	0.534	U	0.534	0.267	6020
140-BH15-FD3	3/20/2012	9	10	Chromium	7440-47-3	mg/kg	117321	5.93		2.14	1.07	6020
140-BH15-FD3	3/20/2012	9	10	Cobalt	7440-48-4	mg/kg	NA	2.73		2.67	1.34	6020
140-BH15-FD3	3/20/2012	9	10	Copper	7440-50-8	mg/kg	3129	3.46		3.20	1.60	6020
140-BH15-FD3	3/20/2012	9	10	Lead (Pb)	7439-92-1	mg/kg	400	4.89		1.07	0.534	6020
140-BH15-FD3	3/20/2012	9	10	Manganese	7439-96-5	mg/kg	1865	78.4		1.07	0.534	6020
140-BH15-FD3	3/20/2012	9	10	Nickel	7440-02-0	mg/kg	1560	6.10		4.27	2.14	6020
140-BH15-FD3	3/20/2012	9	10	Selenium	7782-49-2	mg/kg	391	0.540	J	1.07	0.534	6020
140-BH15-FD3	3/20/2012	9	10	Silver	7440-22-4	mg/kg	391	3.21	U	3.21	1.61	6020
140-BH15-FD3	3/20/2012	9	10	Thallium	7440-28-0	mg/kg	0.782	0.214	U	0.214	0.107	6020
140-BH15-FD3	3/20/2012	9	10	Vanadium	7440-62-2	mg/kg	391	17.2		2.67	1.34	6020

Table C-3 (continued)
Solid Waste Management Unit 140 (WSMR-84) Background Soil Results
Soil Background Study Report
White Sands Missile Range, New Mexico

Field Sample ID	Sample Date	Top of Sample (ft)	Bottom of Sample (ft)	Parameter	CAS Number	Units	Residential Soil Regulatory Limit (NMED, 2012)	Result	Data Validation Qualifier	LOQ	DL	Analytical Method
140-BH15-FD3	3/20/2012	9	10	Mercury	7439-97-6	mg/kg	15.6	0.107		0.107	0.0107	7471A
140-BH15-FD3	3/20/2012	9	10	Percent Solids	10-02-6	%	NA	92.7		1.00	1.00	D2216-90

CAS = Chemical Abstract Service.
DL = Detection Limit.
ID = Identification.
ft = Foot (feet).
LOQ = Limit of Quantitation.
mg/kg = Milligrams per kilogram.
NA = Not applicable.
NMED = New Mexico Environment Department.
J = Estimated. The analyte was detected and positively identified. The associated numerical value is the approximate concentration of the analyte in the sample and the bias is indeterminable.
J- = Estimated. The analyte was detected and positively identified. The associated numerical value is the approximate concentration of the analyte in the sample and the bias is determined low due to associated quality control indicators.
J+ = Estimated. The analyte was detected and positively identified. The associated numerical value is the approximate concentration of the analyte in the sample and the bias is determined high due to associated quality control indicators.
U = Not detected. The analyte was analyzed for but was not detected above the level of the associated value. The associated value is the LOQ.
UN = Tentatively not detected, the LOQ is estimated. The analyte was analyzed for but was not detected above the reported LOQ. However, the reported LOQ is an estimate and may not be accurate or precise.
WSMR = White Sands Missile Range.

Appendix D
Soil Classification Logs

Boring ID: 80-BH01

Client: U.S. Army White Sands Missile Range
Project Location: White Sands Missile Range, New Mexico
Project Name: WSMR projects
Project Number: 139791

Ground Elevation AMSL (ft): 4111.6
Y Coordinate: 497107.46
X Coordinate: 1578838.13

Boring Diameter (in.): 2
Date Completed: 3/21/2012
Drillling Contractor: JR Drilling
Drilling Method: Direct Push (Geoprobe)
Logged By: Dale Flores

Depth (ft)	Sample Type	Number	Headspace PID	Lithologic Log	Material Description	U.S.C.S.	Remarks
0							
		80-BH01-1			Well graded SAND (SW); strong brown (7.5YR 4/6); moist; 95% fine to medium sand to 1mm; 5% very fine sand; subrounded to rounded. Note: trace roots.	SW	Began drilling @ 1437 on 3/21/12.
5							
		80-BH01-2			Same as above (0 ft).		
10		80-BH01-3			Same as above (0 ft).		
15							Total depth = 10 ft. Reached total depth @ 1500 on 3/21/12.
20							
25							
30							

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Boring ID: 80-BH02

Client: U.S. Army White Sands Missile Range
Project Location: White Sands Missile Range, New Mexico
Project Name: WSMR projects
Project Number: 139791

Ground Elevation AMSL (ft): 4108.7
Y Coordinate: 497143.69
X Coordinate: 1579014.24

Boring Diameter (in.): 2
Date Completed: 3/21/2012
Drillling Contractor: JR Drilling
Drilling Method: Direct Push (Geoprobe)
Logged By: Dale Flores

Depth (ft)	Sample Type	Number	Headspace PID	Lithologic Log	Material Description	U.S.C.S.	Remarks
0							
		80-BH02-1 80-BH02-FD1			Poorly graded SAND (SP); very dark brown (7.5YR 2.5/3); slightly moist; 95% fine sand; 5% fine gravel; subrounded; trace silt.		Began drilling @ 1506 on 3/21/12.
5							
		80-BH02-2			Same as above (0 ft).	SP	
					Same as above (0 ft); pink (5YR 7/4); dry; 95% medium to coarse sand to 3mm; 5% fine sand; angular to subangular.		Total Depth = 10 ft. Reached total depth @ 1526 on 3/21/12.
10		80-BH02-3					
15							
20							
25							
30							

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Boring ID: 80-BH03

Client: U.S. Army White Sands Missile Range
Project Location: White Sands Missile Range, New Mexico
Project Name: WSMR projects
Project Number: 139791

Ground Elevation AMSL (ft): 4116.9
Y Coordinate: 497199.41
X Coordinate: 1578417.39

Boring Diameter (in.): 2
Date Completed: 3/21/2012
Drillling Contractor: JR Drilling
Drilling Method: Direct Push (Geoprobe)
Logged By: Dale Flores

Depth (ft)	Sample Type	Number	Headspace PID	Lithologic Log	Material Description	U.S.C.S.	Remarks
0							
		80-BH03-1			Poorly graded SAND (SP); brown (7.5YR 5/4); moist; 95% fine to medium sand to 0.5mm; 5% very fine sand to silt. Note: trace roots present in upper 1 ft of soil boring.	SP	Began drilling @ 1320 on 3/21/12.
5							
		80-BH03-2			Same as above (0 ft); dry to slightly moist; 75% medium to coarse sand to 2cm; 25% very fine sand.		
10		80-BH03-3			Same as above (0 ft).		
15							Total depth = 10 ft. Reached total depth @ 1405 on 3/21/12.
20							
25							
30							

FFOR_BOREHOLE_LOG - SHAW_DRILLING.GDT - 6/11/12 07:35 - N:\WSMR\GINT\WSMR GINT PROJECT\WSMR.GPJ

Boring ID: 80-BH04

Client: U.S. Army White Sands Missile Range
Project Location: White Sands Missile Range, New Mexico
Project Name: WSMR projects
Project Number: 139791

Ground Elevation AMSL (ft): 4118.3
Y Coordinate: 497486.20
X Coordinate: 1578364.28

Boring Diameter (in.): 2
Date Completed: 3/21/2012
Drillling Contractor: JR Drilling
Drilling Method: Direct Push (Geoprobe)
Logged By: Caitlin LaChance

Depth (ft)	Sample Type	Number	Headspace PID	Lithologic Log	Material Description	U.S.C.S.	Remarks
0							
		80-BH04-1 80-BH04-MS1 80-BH04-MSD1			Sandy SILT (ML); dark brown (7.5YR 3/4); dry; soft; nonplastic; 60% silt; 40% very fine to coarse sand; trace gravel to 5mm; subrounded.	ML	Began drilling @ 1152 on 3/21/12.
5							
		80-BH04-2			Same as above (0 ft); 55% silt; 45% very fine to coarse sand to 4mm; subrounded.		
					Same as above (0 ft); brown (7.5YR 5/3); 50% silt; 50% fine to coarse sand to 4.5mm; subrounded.		
10		80-BH04-3			Silty SAND (SM); brown (7.5YR 5/3); dry; loose; 80% fine to coarse sand to 3mm; subrounded; 20% silt.	SM	Total depth = 10 ft. Reached total depth @ 1201 on 3/21/12.
15							
20							
25							
30							

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Boring ID: 80-BH05

Client: U.S. Army White Sands Missile Range
Project Location: White Sands Missile Range, New Mexico
Project Name: WSMR projects
Project Number: 139791

Ground Elevation AMSL (ft): 4119.0
Y Coordinate: 497680.19
X Coordinate: 1578404.89

Boring Diameter (in.): 2
Date Completed: 3/21/2012
Drillling Contractor: JR Drilling
Drilling Method: Direct Push (Geoprobe)
Logged By: Jason Tarbert

Depth (ft)	Sample Type	Number	Headspace PID	Lithologic Log	Material Description	U.S.C.S.	Remarks
0							
		80-BH05-1			Sandy SILT (ML); strong brown (7.5YR 4/6); moist; loose; nonplastic; 60% silt; 40% very fine to coarse sand to 4mm; subrounded.	ML	Began drilling @ 1126 on 3/21/12.
5							
		80-BH05-2 80-BH05-FD2			Same as above (0 ft).		
					Same as above (0 ft); 70% silt; 30% very fine to coarse sand; trace fine gravel to 1cm.		
10		80-BH05-3			Same as above (0 ft); trace fine gravel to 8mm.		Total depth = 10 ft. Reached total depth @ 1133 on 3/21/12.
15							
20							
25							
30							

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Boring ID: 80-BH06

Client: U.S. Army White Sands Missile Range
Project Location: White Sands Missile Range, New Mexico
Project Name: WSMR projects
Project Number: 139791

Ground Elevation AMSL (ft): 4119.7
Y Coordinate: 497950.33
X Coordinate: 1578424.82

Boring Diameter (in.): 2
Date Completed: 3/21/2012
Drillling Contractor: JR Drilling
Drilling Method: Direct Push (Geoprobe)
Logged By: Caitlin LaChance

Depth (ft)	Sample Type	Number	Headspace PID	Lithologic Log	Material Description	U.S.C.S.	Remarks
0							
		80-BH06-1			Sandy SILT (ML); strong brown (7.5YR 4/6); moist; soft; nonplastic; 60% silt; 40% very fine to medium sand to 3mm; subrounded.	ML	Began drilling @ 1053 on 3/21/12.
5							
		80-BH06-2			Same as above (0 ft); reddish yellow (7.5YR 6/6); dry; 50% silt; 45% very fine to coarse sand; 5% fine gravel to 5mm; subrounded.		
10		80-BH06-3			Same as above (0 ft); strong brown (7.5YR 5/6); dry; 50% silt; 50% very fine to medium sand; trace fine gravel to 5mm; subrounded.		Total depth = 10 ft. Reached total depth @ 1100 on 3/21/12.
15							
20							
25							
30							

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Boring ID: 80-BH07

Client: U.S. Army White Sands Missile Range
Project Location: White Sands Missile Range, New Mexico
Project Name: WSMR projects
Project Number: 139791

Ground Elevation AMSL (ft): 4113.9
Y Coordinate: 497531.84
X Coordinate: 1578680.37

Boring Diameter (in.): 2
Date Completed: 3/21/2012
Drillling Contractor: JR Drilling
Drilling Method: Direct Push (Geoprobe)
Logged By: Caitlin LaChance

Depth (ft)	Sample Type	Number	Headspace PID	Lithologic Log	Material Description	U.S.C.S.	Remarks
0							
	■	80-BH07-1			Sandy SILT (ML); strong brown (7.5YR 4/6); dry; soft; nonplastic; 55% silt; 45% very fine to medium sand to 3mm; subangular.	ML	Began drilling @ 1615 on 3/21/12.
5					Same as above (0 ft); 65% silt; 35% very fine to coarse sand to 4mm; subrounded.		
	■	80-BH07-2					
10	■	80-BH07-3			Same as above (0 ft); dark brown (7.5YR 3/4); 50% silt; 50% very fine to coarse sand to 3mm; subrounded.		Increase in coarse grains.
15							Total depth = 10 ft. Reached total depth @ 1624 on 3/21/12.
20							
25							
30							

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Boring ID: 80-BH08

Client: U.S. Army White Sands Missile Range
Project Location: White Sands Missile Range, New Mexico
Project Name: WSMR projects
Project Number: 139791

Ground Elevation AMSL (ft): 4112.6
Y Coordinate: 497253.60
X Coordinate: 1578695.33

Boring Diameter (in.): 2
Date Completed: 3/21/2012
Drillling Contractor: JR Drilling
Drilling Method: Direct Push (Geoprobe)
Logged By: Dale Flores

Depth (ft)	Sample Type	Number	Headspace PID	Lithologic Log	Material Description	U.S.C.S.	Remarks
0							
		80-BH08-1			Well graded SAND (SW); dark brown (7.5YR 3/4); moist; 95% fine to medium sand; 5% very fine sand; subrounded. Note: trace roots present in upper 1 ft of soil boring.	SW	Began drilling @ 1406 on 3/21/12.
5							
		80-BH08-2 80-BH08-MS2 80-BH08-MSD2			Poorly graded SAND (SP); dark brown (7.5YR 3/4); dry; 95% very fine to fine sand; 5% silt.	SP	
10		80-BH08-3					Total depth = 10 ft. Reached total depth @ 1427 on 3/21/12.
15							
20							
25							
30							

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Boring ID: 80-BH09

Client: U.S. Army White Sands Missile Range
Project Location: White Sands Missile Range, New Mexico
Project Name: WSMR projects
Project Number: 139791

Ground Elevation AMSL (ft): 4114.4
Y Coordinate: 498012.61
X Coordinate: 1578740.97

Boring Diameter (in.): 2
Date Completed: 3/21/2012
Drillling Contractor: JR Drilling
Drilling Method: Direct Push (Geoprobe)
Logged By: Jason Tarbert

Depth (ft)	Sample Type	Number	Headspace PID	Lithologic Log	Material Description	U.S.C.S.	Remarks
0							
		80-BH09-1			Sandy SILT (ML); strong brown (7.5YR 4/6); moist; soft; nonplastic; 60% silt; 40% very fine to medium sand to 1mm; rounded.	ML	Began drilling @ 1026 on 3/21/12.
5							
		80-BH09-2			Same as above (0 ft); trace fine gravel to 6mm.		
					Well graded SAND (SW); strong brown (7.5YR 5/6); dry; very loose; 95% very fine to very coarse sand; 5% fine gravel to 1cm; subrounded.	SW	
10		80-BH09-3					Total depth = 10 ft. Reached total depth @ 1033 on 3/21/12.
15							
20							
25							
30							

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Boring ID: 80-BH10

Client: U.S. Army White Sands Missile Range
Project Location: White Sands Missile Range, New Mexico
Project Name: WSMR projects
Project Number: 139791

Ground Elevation AMSL (ft): 4117.7
Y Coordinate: 498172.67
X Coordinate: 1578574.72

Boring Diameter (in.): 2
Date Completed: 3/21/2012
Drillling Contractor: JR Drilling
Drilling Method: Direct Push (Geoprobe)
Logged By: Jason Tarbert

Depth (ft)	Sample Type	Number	Headspace PID	Lithologic Log	Material Description	U.S.C.S.	Remarks
0							
		80-BH10-1			Sandy SILT (ML); brown (7.5YR 4/3); moist; soft; low to nonplastic; 60% silt; 40% very fine to medium sand to 1mm; trace fine gravel to 1.2cm.	ML	Began drilling @ 0838 on 3/21/12.
5							
		80-BH10-2			Same as above (0 ft); 40% very fine to very coarse sand.		
10		80-BH10-3			Same as above (0 ft); 55% silt; 40% very fine to very coarse sand; 5% fine gravel to 7mm; subrounded.		Total depth = 10 ft. Reached total depth @ 0847 on 3/21/12.
15							
20							
25							
30							

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Boring ID: 80-BH11

Client: U.S. Army White Sands Missile Range
Project Location: White Sands Missile Range, New Mexico
Project Name: WSMR projects
Project Number: 139791

Ground Elevation AMSL (ft): 4114.7
Y Coordinate: 498242.67
X Coordinate: 1578816.36

Boring Diameter (in.): 2
Date Completed: 3/21/2012
Drillling Contractor: JR Drilling
Drilling Method: Direct Push (Geoprobe)
Logged By: Jason Tarbert

Depth (ft)	Sample Type	Number	Headspace PID	Lithologic Log	Material Description	U.S.C.S.	Remarks
0							
		80-BH11-1			Silty SAND (SM); brown (7.5YR 4/3); moist; very loose; 80% fine to very coarse sand to 3mm; rounded; 20% silt.	SM	Began drilling @ 0900 on 3/21/12.
					Well graded SAND (SW); brown (7.5YR 5/3); dry; very loose; 90% fine to very coarse sand; 10% fine gravel to 1cm; subrounded.	SW	Borehole collapsed when tube was removed.
5							
		80-BH11-2					
					Silty SAND (SM); yellowish red (5YR 5/6); dry; very loose; 80% very fine to medium sand to 2mm; subrounded; 20% silt.	SM	
					Well graded SAND (SW); brown (7.5YR 5/3); dry; very loose; 95% very fine to very coarse sand; 5% fine gravel to 7mm; subrounded.	SW	
10		80-BH11-3 80-BH11-FD3					Total depth = 10 ft. Reached total depth @ 0920 on 3/21/12.
15							
20							
25							
30							

FFOR_BOREHOLE_LOG - SHAW_DRILLING.GDT - 6/11/12 07:36 - N:\WSMR\GINT\WSMR GINT PROJECT\WSMR.GPJ

Boring ID: 80-BH12

Client: U.S. Army White Sands Missile Range
Project Location: White Sands Missile Range, New Mexico
Project Name: WSMR projects
Project Number: 139791

Ground Elevation AMSL (ft): 4112.0
Y Coordinate: 498083.75
X Coordinate: 1578937.30

Boring Diameter (in.): 2
Date Completed: 3/21/2012
Drillling Contractor: JR Drilling
Drilling Method: Direct Push (Geoprobe)
Logged By: Jason Tarbert

Depth (ft)	Sample Type	Number	Headspace PID	Lithologic Log	Material Description	U.S.C.S.	Remarks
0							
		80-BH12-1 80-BH12-FD1			Silty SAND (SM); brown (7.5YR 4/3); moist; very loose; 85% very fine to medium sand to 2mm; rounded; 15% silt.	SM	Began drilling @ 0933 on 3/21/12.
5							
		80-BH12-2			Same as above (0 ft).		
					Poorly graded SAND (SP); strong brown (7.5YR 5/6); dry; very loose; 90% very fine to medium sand; 10% fine gravel to 8mm; rounded; trace silt.	SP	
10		80-BH12-3					Total depth = 10 ft. Reached total depth @ 0940 on 3/21/12.
15							
20							
25							
30							

FFOR_BOREHOLE_LOG - SHAW_DRILLING.GDT - 6/11/12 07:36 - N:\WSMR\GINT\WSMR GINT PROJECT\WSMR.GPJ

Boring ID: 80-BH13

Client: U.S. Army White Sands Missile Range
Project Location: White Sands Missile Range, New Mexico
Project Name: WSMR projects
Project Number: 139791

Ground Elevation AMSL (ft): 4109.7
Y Coordinate: 498201.65
X Coordinate: 1579133.45

Boring Diameter (in.): 2
Date Completed: 3/21/2012
Drillling Contractor: JR Drilling
Drilling Method: Direct Push (Geoprobe)
Logged By: Jason Tarbert

Depth (ft)	Sample Type	Number	Headspace PID	Lithologic Log	Material Description	U.S.C.S.	Remarks
0							
		80-BH13-1			Sandy SILT (ML); strong brown (7.5YR 4/6); dry; soft; nonplastic; 60% silt; 40% very fine to coarse sand to 3mm; rounded.	ML	Began drilling @ 1002 on 3/21/12.
5							
		80-BH13-2			Same as above (0 ft); strong brown (7.5YR 5/6); 75% silt; 25% very fine to fine sand.		
10		80-BH13-3			Same as above (0 ft); trace fine gravel to 1cm.		Total depth = 10 ft. Reached total depth @ 1008 on 3/21/12.
15							
20							
25							
30							

FFOR_BOREHOLE_LOG - SHAW_DRILLING.GDT - 6/11/12 07:37 - N:\WSMR\GINT\WSMR GINT PROJECT\WSMR.GPJ

Boring ID: 80-BH14

Client: U.S. Army White Sands Missile Range
Project Location: White Sands Missile Range, New Mexico
Project Name: WSMR projects
Project Number: 139791

Ground Elevation AMSL (ft): 4110.2
Y Coordinate: 497672.91
X Coordinate: 1578914.92

Boring Diameter (in.): 2
Date Completed: 3/21/2012
Drillling Contractor: JR Drilling
Drilling Method: Direct Push (Geoprobe)
Logged By: Jason Tarbert

Depth (ft)	Sample Type	Number	Headspace PID	Lithologic Log	Material Description	U.S.C.S.	Remarks
0							
		80-BH14-1			Silty SAND (SM); strong brown (7.5YR 5/6); moist; loose; 80% very fine to medium sand to 1mm; subrounded; 20% silt.	SM	Began drilling @ 0813 on 3/21/12.
5							
		80-BH14-2			Same as above (0 ft); 30% to 40% silt; trace fine gravel to 8mm.		
10		80-BH14-3			Same as above (0 ft); 65% very fine to coarse sand; 5% fine gravel to 1cm; 30% silt.		Total depth = 10 ft. Reached total depth @ 0822 on 3/21/12.
15							
20							
25							
30							

FFOR_BOREHOLE_LOG - SHAW_DRILLING.GDT - 6/11/12 07:37 - N:\WSMR\GINT\WSMR GINT PROJECT\WSMR.GPJ

Boring ID: 80-BH15

Client: U.S. Army White Sands Missile Range
Project Location: White Sands Missile Range, New Mexico
Project Name: WSMR projects
Project Number: 139791

Ground Elevation AMSL (ft): 4105.8
Y Coordinate: 497340.67
X Coordinate: 1578946.52

Boring Diameter (in.): 2
Date Completed: 3/21/2012
Drillling Contractor: JR Drilling
Drilling Method: Direct Push (Geoprobe)
Logged By: Caitlin LaChance

Depth (ft)	Sample Type	Number	Headspace PID	Lithologic Log	Material Description	U.S.C.S.	Remarks
0							
		80-BH15-1			Poorly graded SAND (SP); strong brown (7.5YR 4/6); slightly moist to moist; loose; 95% medium to coarse sand to 3mm; 5% fine sand; angular to subangular.	SP	Began drilling @ 1540 on 3/21/12.
5					Sandy SILT (ML); strong brown (7.5YR 5/6); dry; soft; nonplastic; 70% silt; 30% very fine to medium sand to 2mm; subangular.	ML	
		80-BH15-2 80-BH15-FD2					
10		80-BH15-3			Same as above (4 ft); 60% silt; 40% very fine to medium sand; trace coarse sand to 3mm; subangular.		Total depth = 10 ft. Reached total depth @ 1550 on 3/21/12.
15							
20							
25							
30							

FFOR_BOREHOLE_LOG - SHAW_DRILLING.GDT - 6/11/12 07:37 - N:\WSMR\GINT\WSMR GINT PROJECT\WSMR.GPJ

Boring ID: MP-BH01

Client: U.S. Army White Sands Missile Range
Project Location: White Sands Missile Range, New Mexico
Project Name: WSMR projects
Project Number: 139791

Ground Elevation AMSL (ft): 4333.3
Y Coordinate: 507204.43
X Coordinate: 1566149.24

Boring Diameter (in.): 2
Date Completed: 3/22/2012
Drillling Contractor: JR Drilling
Drilling Method: Direct Push (Geoprobe)
Logged By: Jason Tarbert

Depth (ft)	Sample Type	Number	Headspace PID	Lithologic Log	Material Description	U.S.C.S.	Remarks
0							
		MP-BH01-1			Sandy SILT (ML); strong brown (7.5YR 4/6); moist; soft; low plasticity; 70% silt; trace clay; 30% very fine to medium sand to 2mm; subrounded.	ML	Began drilling @ 1226 on 3/22/12.
5					SILT with Sand (ML); strong brown (7.5YR 5/6); dry; soft; low plasticity; 85% silt; 15% very fine to medium sand to 2mm; subrounded.		
		MP-BH01-2					
					Same as above (4 ft); 75% silt; 25% fine to coarse sand; trace fine gravel to 1cm.		
10		MP-BH01-3					
							Total depth = 10 ft. Reached total depth @ 1231 on 3/22/12.
15							
20							
25							
30							

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Boring ID: MP-BH02

Client: U.S. Army White Sands Missile Range
Project Location: White Sands Missile Range, New Mexico
Project Name: WSMR projects
Project Number: 139791

Ground Elevation AMSL (ft): 4320.6
Y Coordinate: 507446.13
X Coordinate: 1566885.09

Boring Diameter (in.): 2
Date Completed: 3/22/2012
Drillling Contractor: JR Drilling
Drilling Method: Direct Push (Geoprobe)
Logged By: Jason Tarbert

Depth (ft)	Sample Type	Number	Headspace PID	Lithologic Log	Material Description	U.S.C.S.	Remarks
0							
		MP-BH02-1 MP-BH02-FD1			Sandy SILT (ML); strong brown (7.5YR 4/6); moist; firm; low plasticity; 70% silt; trace clay; 30% fine to medium sand; trace fine gravel to 1cm; rounded. Same as above (0 ft); 65% silt; 35% fine to medium sand.	ML	Began drilling @ 1415 on 3/22/12.
5							
		MP-BH02-2			Same as above (0 ft).		
					Same as above (0 ft); strong brown (7.5YR 5/6).		
10		MP-BH02-3					
15							Total depth = 10 ft. Reached total depth @ 1423 on 3/22/12.
20							
25							
30							

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Boring ID: MP-BH03

Client: U.S. Army White Sands Missile Range
Project Location: White Sands Missile Range, New Mexico
Project Name: WSMR projects
Project Number: 139791

Ground Elevation AMSL (ft): 4308.5
Y Coordinate: 507552.54
X Coordinate: 1568037.84

Boring Diameter (in.): 2
Date Completed: 3/22/2012
Drillling Contractor: JR Drilling
Drilling Method: Direct Push (Geoprobe)
Logged By: Jason Tarbert

Depth (ft)	Sample Type	Number	Headspace PID	Lithologic Log	Material Description	U.S.C.S.	Remarks
0							
		MP-BH03-1			Sandy SILT (ML); strong brown (7.5YR 4/6); moist; soft; low plasticity; 70% silt; 30% very fine to medium sand; trace fine gravel to 1cm; rounded.	ML	Began drilling @ 1447 on 3/22/12.
5					Same as above (0 ft); 60% silt; 35% very fine to medium sand; 5% fine gravel.		
		MP-BH03-2					
					Well graded SAND (SW); brown (7.5YR 5/4); dry; loose; 100% very fine to coarse sand; trace fine gravel to 1.2cm; subrounded.	SW	
10		MP-BH03-3			Same as above (6 ft).		
15							Total depth = 10 ft. Reached total depth @ 1455 on 3/22/12.
20							
25							
30							

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Boring ID: MP-BH04

Client: U.S. Army White Sands Missile Range
Project Location: White Sands Missile Range, New Mexico
Project Name: WSMR projects
Project Number: 139791

Ground Elevation AMSL (ft): 4274.2
Y Coordinate: 507696.70
X Coordinate: 1569806.15

Boring Diameter (in.): 2
Date Completed: 3/23/2012
Drillling Contractor: JR Drilling
Drilling Method: Direct Push (Geoprobe)
Logged By: Caitlin LaChance

Depth (ft)	Sample Type	Number	Headspace PID	Lithologic Log	Material Description	U.S.C.S.	Remarks
0							
		MP-BH04-1			Silty SAND (SM); strong brown (7.5YR 4/6); moist; loose; 70% very fine to medium sand to 1.5mm; 25% silt; 5% clay.	SM	Began drilling @ 1135 on 3/23/12.
5					SILT with Sand (ML); strong brown (7.5YR 5/6); dry; soft; nonplastic; 80% silt; 20% very fine to medium sand; trace coarse sand to 4mm; subrounded.	ML	Kept encountering cobbles @ 4 ft. Moved to a location NE of the original borehole. Began drilling @ 1245 on 3/23/12. Description is from the final NE borehole.
		MP-BH04-2					
10		MP-BH04-3 MP-BH04-MS3 MP-BH04-MSD3			Silty SAND (SM); strong brown (7.5YR 5/6); dry; loose; 75% very fine to coarse sand; trace fine gravel to 5mm; subangular to subrounded; 25% silt.	SM	Total depth = 10 ft. Reached total depth @ 1256 on 3/23/12.
15							
20							
25							
30							

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Boring ID: MP-BH05

Client: U.S. Army White Sands Missile Range
Project Location: White Sands Missile Range, New Mexico
Project Name: WSMR projects
Project Number: 139791

Ground Elevation AMSL (ft): 4410.7
Y Coordinate: 501543.95
X Coordinate: 1562628.44

Boring Diameter (in.): 2
Date Completed: 3/22/2012
Drillling Contractor: JR Drilling
Drilling Method: Direct Push (Geoprobe)
Logged By: Jason Tarbert

Depth (ft)	Sample Type	Number	Headspace PID	Lithologic Log	Material Description	U.S.C.S.	Remarks
0							
		MP-BH05-1			Poorly graded SAND (SP); brown (7.5YR 4/4); damp; very loose; 95% fine to medium sand; 5% coarse sand; trace fine gravel to 8mm; rounded.	SP	Began drilling @ 0838 on 3/22/12.
5							
		MP-BH05-2 MP-BH05-FD2			Same as above (0 ft); 90% fine to medium sand; 5% coarse sand; 5% silt.		
					Well graded SAND (SW); brown (7.5YR 5/3); dry; very loose; 100% very fine to coarse sand; trace gravel to 6mm; subrounded; trace silt.	SW	
10		MP-BH05-3					Total depth = 10 ft. Reached total depth @ 0850 on 3/22/12.
15							
20							
25							
30							

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Boring ID: MP-BH06

Client: U.S. Army White Sands Missile Range
Project Location: White Sands Missile Range, New Mexico
Project Name: WSMR projects
Project Number: 139791

Ground Elevation AMSL (ft): 4422.1
Y Coordinate: 502847.74
X Coordinate: 1562478.71

Boring Diameter (in.): 2
Date Completed: 3/22/2012
Drillling Contractor: JR Drilling
Drilling Method: Direct Push (Geoprobe)
Logged By: Jason Tarbert

Depth (ft)	Sample Type	Number	Headspace PID	Lithologic Log	Material Description	U.S.C.S.	Remarks
0							
		MP-BH06-1			Well graded SAND (SW); brown (7.5YR 4/2); damp; loose; 95% very fine to very coarse sand to 4mm; rounded; 5% silt. Note: plant material.	SW	Began drilling @ 0916 on 3/22/12.
5					Same as above (0 ft); brown (7.5YR 5/4).		
		MP-BH06-2			Well graded SAND with Silt (SW-SM); brown (7.5YR 5/4); dry; loose; 90% very fine to coarse sand; trace fine gravel to 6mm; rounded; 10% silt.	SW-SM	
10		MP-BH06-3			Silty SAND (SM); yellowish red (5YR 5/6); dry; medium dense; 70% very fine to coarse sand to 3mm; rounded; 30% silt; trace clay.	SM	Total depth = 10 ft. Reached total depth @ 0936 on 3/22/12.
15							
20							
25							
30							

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Boring ID: MP-BH07

Client: U.S. Army White Sands Missile Range
Project Location: White Sands Missile Range, New Mexico
Project Name: WSMR projects
Project Number: 139791

Ground Elevation AMSL (ft): 4420.1
Y Coordinate: 502925.38
X Coordinate: 1562484.53

Boring Diameter (in.): 2
Date Completed: 3/22/2012
Drillling Contractor: JR Drilling
Drilling Method: Direct Push (Geoprobe)
Logged By: Jason Tarbert

Depth (ft)	Sample Type	Number	Headspace PID	Lithologic Log	Material Description	U.S.C.S.	Remarks
0							
		MP-BH07-1			Well graded SAND (SW); brown (7.5YR 4/4); moist; loose; 95% very fine to coarse sand to 4.5mm; rounded; 5% silt.	SW	Began drilling @ 0938 on 3/22/12.
5					Same as above (0 ft); trace gravel to 2cm.		
		MP-BH07-2			Sandy SILT (ML); yellowish red (5YR 5/6); dry; firm; low plasticity; 60% silt; 40% very fine to coarse sand to 3mm; rounded.	ML	
					Same as above (5 ft); brown (7.5YR 5/2); nonplastic; trace fine gravel to 1cm; rounded.		
10		MP-BH07-3			Silty SAND (SM); strong brown (7.5YR 5/6); dry; medium dense; 80% very fine to coarse sand; trace fine gravel to 7mm; rounded; 20% silt.	SM	Total depth = 10 ft. Reached total depth @ 0946 on 3/22/12.
15							
20							
25							
30							

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Boring ID: MP-BH08

Client: U.S. Army White Sands Missile Range
Project Location: White Sands Missile Range, New Mexico
Project Name: WSMR projects
Project Number: 139791

Ground Elevation AMSL (ft): 4416.6
Y Coordinate: 504517.47
X Coordinate: 1562735.06

Boring Diameter (in.): 2
Date Completed: 3/22/2012
Drillling Contractor: JR Drilling
Drilling Method: Direct Push (Geoprobe)
Logged By: Jason Tarbert

Depth (ft)	Sample Type	Number	Headspace PID	Lithologic Log	Material Description	U.S.C.S.	Remarks
0							
		MP-BH08-1 MP-BH08-MS1 MP-BH08-MSD1			Silty SAND (SM); dark brown (7.5YR 3/3); moist; loose; 75% very fine to medium sand to 2mm; rounded; 25% silt; trace clay.	SM	Began drilling @ 1035 on 3/22/12.
5					Well graded SAND with Silt (SW-SM); dark brown (7.5YR 3/3); moist; loose; 90% very fine to coarse sand to 3mm; rounded; 10% silt.	SW-SM	
		MP-BH08-2			Same as above (4 ft); trace fine gravel to 1.5cm.		
10		MP-BH08-3			Same as above (4 ft).		
15							Total depth = 10 ft. Reached total depth @ 1040 on 3/22/12.
20							
25							
30							

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Boring ID: MP-BH09

Client: U.S. Army White Sands Missile Range
Project Location: White Sands Missile Range, New Mexico
Project Name: WSMR projects
Project Number: 139791

Ground Elevation AMSL (ft): 4413.9
Y Coordinate: 504593.96
X Coordinate: 1562818.79

Boring Diameter (in.): 2
Date Completed: 3/22/2012
Drillling Contractor: JR Drilling
Drilling Method: Direct Push (Geoprobe)
Logged By: Jason Tarbert

Depth (ft)	Sample Type	Number	Headspace PID	Lithologic Log	Material Description	U.S.C.S.	Remarks
0							
		MP-BH09-1			Silty SAND (SM); brown (7.5YR 4/2); moist; loose; 80% very fine to coarse sand; trace fine gravel to 8mm; rounded; 20% silt.	SM	Began drilling @ 1054 on 3/22/12.
5							
		MP-BH09-2			Well graded SAND (SW); strong brown (7.5YR 5/6); dry; loose; 95% very fine to very coarse sand; 5% fine gravel to 1.5cm; subrounded.	SW	
10		MP-BH09-3			Same as above (5 ft).		
15							Total depth = 10 ft. Reached total depth @ 1100 on 3/22/12.
20							
25							
30							

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Boring ID: MP-BH10

Client: U.S. Army White Sands Missile Range
Project Location: White Sands Missile Range, New Mexico
Project Name: WSMR projects
Project Number: 139791

Ground Elevation AMSL (ft): 4382.2
Y Coordinate: 506450.40
X Coordinate: 1564116.97

Boring Diameter (in.): 2
Date Completed: 3/22/2012
Drillling Contractor: JR Drilling
Drilling Method: Direct Push (Geoprobe)
Logged By: Jason Tarbert

Depth (ft)	Sample Type	Number	Headspace PID	Lithologic Log	Material Description	U.S.C.S.	Remarks
0							
		MP-BH10-1			Silty SAND (SM); dark brown (7.5YR 3/3); moist; very loose; 85% very fine to very coarse sand; trace fine gravel to 1cm; rounded; 15% silt.	SM	Began drilling @ 1146 on 3/22/12.
5					Same as above (0 ft); strong brown (7.5YR 5/6).		
		MP-BH10-2			Same as above (0 ft); 70% very fine to very coarse sand; 30% silt.		
					Well graded SAND (SW); strong brown (7.5YR 5/6); dry; very loose; 100% very fine to coarse sand; trace fine gravel to 1cm; subrounded.	SW	
10		MP-BH10-3 MP-BH10-FD3			Sandy SILT (ML); strong brown (7.5YR 5/8); dry; soft; nonplastic; 60% silt; 40% fine to medium sand to 2mm; rounded.	ML	Total depth = 10 ft. Reached total depth @ 1153 on 3/22/12.
15							
20							
25							
30							

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Boring ID: MP-BH11

Client: U.S. Army White Sands Missile Range
Project Location: White Sands Missile Range, New Mexico
Project Name: WSMR projects
Project Number: 139791

Ground Elevation AMSL (ft): 4246.1
Y Coordinate: 506471.34
X Coordinate: 1571507.21

Boring Diameter (in.): 2
Date Completed: 3/22/2012
Drillling Contractor: JR Drilling
Drilling Method: Direct Push (Geoprobe)
Logged By: Jason Tarbert

Depth (ft)	Sample Type	Number	Headspace PID	Lithologic Log	Material Description	U.S.C.S.	Remarks
0							
		MP-BH11-1			Silty SAND (SM); strong brown (7.5YR 4/6); moist; loose; 80% very fine to medium sand to 2mm; subrounded; 20% silt.	SM	Began drilling @ 1536 on 3/22/12.
5					Same as above (0 ft); trace fine gravel to 1.5cm.		
		MP-BH11-2			Same as above (0 ft); 70% very fine to medium sand; 30% silt.		
					Sandy SILT (ML); strong brown (7.5YR 5/8); dry; soft; nonplastic; 65% silt; 35% fine to very coarse sand to 3mm; rounded.	ML	
10		MP-BH11-3			Same as above (7 ft); 60% silt; 40% fine to very coarse sand.		Total depth = 10 ft. Reached total depth @ 1542 on 3/22/12.
15							
20							
25							
30							

FFOR_BOREHOLE_LOG - SHAW_DRILLING.GDT - 6/11/12 07:39 - N:\WSMR\GINT\WSMR GINT PROJECT\WSMR.GPJ

Boring ID: MP-BH12

Client: U.S. Army White Sands Missile Range
Project Location: White Sands Missile Range, New Mexico
Project Name: WSMR projects
Project Number: 139791

Ground Elevation AMSL (ft): 4232.8
Y Coordinate: 507069.25
X Coordinate: 1571887.54

Boring Diameter (in.): 2
Date Completed: 3/22/2012
Drillling Contractor: JR Drilling
Drilling Method: Direct Push (Geoprobe)
Logged By: Jason Tarbert

Depth (ft)	Sample Type	Number	Headspace PID	Lithologic Log	Material Description	U.S.C.S.	Remarks
0							
	■	MP-BH12-1 MP-BH12-FD1			Silty SAND (SM); reddish brown (5YR 4/4); moist; loose; 75% very fine to coarse sand to 2mm; rounded; 25% silt.	SM	Began drilling @ 1608 on 3/22/12.
5					Sandy SILT (ML); strong brown (7.5YR 4/6); moist; soft; low plasticity; 60% silt; trace clay; 40% fine to medium sand to 2mm; rounded.	ML	
	■	MP-BH12-2			Same as above (2 ft).		
10	■	MP-BH12-3			Same as above (2 ft).		
15							Total depth = 10 ft. Reached total depth @ 1615 on 3/22/12.
20							
25							
30							

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Boring ID: MP-BH13

Client: U.S. Army White Sands Missile Range
Project Location: White Sands Missile Range, New Mexico
Project Name: WSMR projects
Project Number: 139791

Ground Elevation AMSL (ft): 4231.9
Y Coordinate: 506070.58
X Coordinate: 1572133.87

Boring Diameter (in.): 2
Date Completed: 3/23/2012
Drillling Contractor: JR Drilling
Drilling Method: Direct Push (Geoprobe)
Logged By: Caitlin LaChance

Depth (ft)	Sample Type	Number	Headspace PID	Lithologic Log	Material Description	U.S.C.S.	Remarks
0							
		MP-BH13-1			Sandy SILT (ML); strong brown (7.5YR 4/6); dry to moist; soft; nonplastic; 60% silt; 10% clay; 30% very fine to medium sand to 3mm; subrounded.	ML	Began drilling @ 1007 on 3/23/12.
					Same as above (0 ft); 60% silt; 40% fine to coarse sand; trace gravel to 5mm.		
5					Same as above (0 ft); 70% silt; 30% very fine to medium sand; trace coarse sand.		
		MP-BH13-2					
					Well graded SAND with Silt (SW-SM); strong brown (7.5YR 4/6); dry; loose; 90% fine to coarse sand; subangular; 10% silt.	SW-SM	
10		MP-BH13-3			Sandy SILT (ML); strong brown (7.5YR 4/6); dry; soft; nonplastic; 60% silt; 40% very fine to coarse sand; subangular.	ML	Total depth = 10 ft. Reached total depth @ 1018 on 3/23/12.
15							
20							
25							
30							

FFOR_BOREHOLE_LOG - SHAW_DRILLING.GDT - 6/11/12 07:39 - N:\WSMR\GINT\WSMR GINT PROJECT\WSMR.GPJ

Boring ID: MP-BH14

Client: U.S. Army White Sands Missile Range
Project Location: White Sands Missile Range, New Mexico
Project Name: WSMR projects
Project Number: 139791

Ground Elevation AMSL (ft): 4217.6
Y Coordinate: 506965.41
X Coordinate: 1572732.18

Boring Diameter (in.): 2
Date Completed: 3/22/2012
Drillling Contractor: JR Drilling
Drilling Method: Direct Push (Geoprobe)
Logged By: Jason Tarbert

Depth (ft)	Sample Type	Number	Headspace PID	Lithologic Log	Material Description	U.S.C.S.	Remarks
0							
		MP-BH14-1			Silty SAND (SM); strong brown (7.5YR 4/6); moist; loose; 75% fine to medium sand to 2mm; subrounded; 25% silt; trace clay.	SM	Began drilling @ 1635 on 3/22/12.
5					Sandy SILT (ML); strong brown (7.5YR 5/6); dry; soft; nonplastic; 70% silt; 25% fine to coarse sand; 5% fine gravel to 2cm; rounded.	ML	
		MP-BH14-2			Same as above (4 ft); 70% silt; 30% fine to coarse sand to 3mm.		
10		MP-BH14-3			SILT with Sand (ML); strong brown (7.5YR 4/6); dry; soft; low plasticity; 85% silt; 15% very fine to medium sand to 1mm; rounded.		Total depth = 10 ft. Reached total depth @ 1650 on 3/22/12.
15							
20							
25							
30							

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Boring ID: MP-BH15

Client: U.S. Army White Sands Missile Range
Project Location: White Sands Missile Range, New Mexico
Project Name: WSMR projects
Project Number: 139791

Ground Elevation AMSL (ft): 4213.5
Y Coordinate: 506300.73
X Coordinate: 1572953.02

Boring Diameter (in.): 2
Date Completed: 3/23/2012
Drillling Contractor: JR Drilling
Drilling Method: Direct Push (Geoprobe)
Logged By: Caitlin LaChance

Depth (ft)	Sample Type	Number	Headspace PID	Lithologic Log	Material Description	U.S.C.S.	Remarks
0							
		MP-BH15-1			Silty SAND (SM); dark brown (7.5YR 3/4); dry to moist; loose; 75% fine to coarse sand to 4mm; trace fine gravel; subangular to subrounded; 20% silt; 5% clay.	SM	Began drilling @ 1044 on 3/23/12.
5					Sandy SILT (ML); strong brown (7.5YR 4/6); dry; soft; nonplastic; 70% silt; 30% very fine to medium sand; subrounded. Same as above (2 ft); trace coarse sand.	ML	
		MP-BH15-2 MP-BH15-FD2			Same as above (2 ft); 55% silt; 45% fine to coarse sand to 4mm; subangular to subrounded. Same as above (2 ft); trace coarse sand.		
10		MP-BH15-3					Total depth = 10 ft. Reached total depth @ 1056 on 3/23/12.
15							
20							
25							
30							

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Boring ID: 140-BH01

Client: U.S. Army White Sands Missile Range
Project Location: White Sands Missile Range, New Mexico
Project Name: WSMR projects
Project Number: 139791

Ground Elevation AMSL (ft): 4068.6
Y Coordinate: 513842.83
X Coordinate: 1625977.65

Boring Diameter (in.): 2
Date Completed: 3/20/2012
Drillling Contractor: JR Drilling
Drilling Method: Direct Push (Geoprobe)
Logged By: Jason Tarbert

Depth (ft)	Sample Type	Number	Headspace PID	Lithologic Log	Material Description	U.S.C.S.	Remarks
0							
		140-BH01-1			Silty SAND (SM); pink (5YR 7/4); dry; medium dense; 85% very fine to fine sand to 0.5mm; rounded; 15% silt.	SM	Began drilling @ 0942 on 3/20/12.
							Increasing silt content.
5							
		140-BH01-2			Same as above (0 ft); trace lean clay.		
					Poorly graded SAND (SP); brown (7.5YR 5/4); dry; loose; 100% very fine sand to 0.1mm; rounded; trace silt and clay.	SP	
10		140-BH01-3			SILT with Sand (ML). brown (7.5YR 5/3); dry; hard; low plasticity; 70% silt; 15% lean clay; 15% fine to medium sand to 1mm. Note: gypsum crystals present.	ML	
							Total depth = 10 ft. Reached total depth @ 0951 on 3/20/12.
15							
20							
25							
30							

FFOR_BOREHOLE_LOG - SHAW_DRILLING.GDT - 6/11/12 07:32 - N:\WSMR\GINT\WSMR GINT PROJECT\WSMR.GPJ

Boring ID: 140-BH02

Client: U.S. Army White Sands Missile Range
Project Location: White Sands Missile Range, New Mexico
Project Name: WSMR projects
Project Number: 139791

Ground Elevation AMSL (ft): 4069.0
Y Coordinate: 513748.71
X Coordinate: 1626266.08

Boring Diameter (in.): 2
Date Completed: 3/19/2012
Drillling Contractor: JR Drilling
Drilling Method: Direct Push (Geoprobe)
Logged By: Jason Tarbert

Depth (ft)	Sample Type	Number	Headspace PID	Lithologic Log	Material Description	U.S.C.S.	Remarks
0							
		140-BH02-1			Poorly graded SAND (SP); yellowish red (5YR 4/6); moist; dense; 95% fine sand to 1mm; rounded; 5% silt.	SP	Began drilling @ 1450 on 3/19/12.
5					SILT (ML); pink (5YR 7/4); dry; firm; 95% silt; 5% fine sand to 0.5mm; rounded. Note: caliche present.	ML	
		140-BH02-2					
					Same as above (4 ft); trace fine gravel to 1cm; subrounded.		
10		140-BH02-3					Total depth = 10 ft. Reached total depth @ 1500 on 3/19/12.
15							
20							
25							
30							

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Boring ID: 140-BH03

Client: U.S. Army White Sands Missile Range
Project Location: White Sands Missile Range, New Mexico
Project Name: WSMR projects
Project Number: 139791

Ground Elevation AMSL (ft): 4069.3
Y Coordinate: 513649.87
X Coordinate: 1626227.76

Boring Diameter (in.): 2
Date Completed: 3/19/2012
Drillling Contractor: JR Drilling
Drilling Method: Direct Push (Geoprobe)
Logged By: Jason Tarbert

Depth (ft)	Sample Type	Number	Headspace PID	Lithologic Log	Material Description	U.S.C.S.	Remarks
0							
		140-BH03-1			Poorly graded SAND (SP); yellowish red (5YR 5/6); moist; loose; 100% very fine to fine sand to 1mm; rounded.	SP	Began drilling @ 1520 on 3/19/12.
5					SILT (ML); pink (5YR 7/3); dry; hard; 90% silt; 10% very fine to fine sand to 1mm. Note: trace caliche. Same as above (4 ft); yellowish red (5YR 5/6).	ML	
		140-BH03-2 140-BH03-FD2					
10		140-BH03-3			Same as above (5 ft).		
15							Total depth = 10 ft. Reached total depth @ 1540 on 3/19/12.
20							
25							
30							

FFOR_BOREHOLE_LOG - SHAW_DRILLING.GDT - 6/11/12 07:32 - N:\WSMR\GINT\WSMR GINT PROJECT\WSMR.GPJ

Boring ID: 140-BH04

Client: U.S. Army White Sands Missile Range
Project Location: White Sands Missile Range, New Mexico
Project Name: WSMR projects
Project Number: 139791

Ground Elevation AMSL (ft): 4068.1
Y Coordinate: 513622.91
X Coordinate: 1626112.29

Boring Diameter (in.): 2
Date Completed: 3/20/2012
Drillling Contractor: JR Drilling
Drilling Method: Direct Push (Geoprobe)
Logged By: Jason Tarbert

Depth (ft)	Sample Type	Number	Headspace PID	Lithologic Log	Material Description	U.S.C.S.	Remarks
0							
		140-BH04-1			Poorly graded SAND (SP); light reddish brown (5YR 6/4); dry; loose; 95% very fine to fine sand to 0.5mm; subrounded; 5% silt.	SP	Began drilling @ 0816 on 3/20/12.
5					Poorly graded SAND with Silt (SP-SM); pinkish white (5YR 8/2); dry; medium dense; 90% very fine to fine sand to 0.5mm; subrounded; 10% silt. Note: trace caliche.	SP-SM	
		140-BH04-2					
					SILT with Sand (ML); reddish brown (5YR 5/4); dry; firm; 60% silt; 15% lean clay; 25% very fine to fine sand to 0.5mm.	ML	Increasing clay content.
10		140-BH04-3			Lean CLAY with Sand (CL); reddish brown (5YR 4/4); dry; very hard; 85% lean clay; trace silt; 15% very fine to fine sand to 1mm. Note: sand is composed of gypsum crystals.	CL	
							Total depth = 10 ft. Reached total depth @ 0850 on 3/20/12.
15							
20							
25							
30							

FFOR_BOREHOLE_LOG - SHAW_DRILLING.GDT - 6/11/12 07:32 - N:\WSMR\GINT\WSMR GINT PROJECT\WSMR.GPJ

Boring ID: 140-BH05

Client: U.S. Army White Sands Missile Range
Project Location: White Sands Missile Range, New Mexico
Project Name: WSMR projects
Project Number: 139791

Ground Elevation AMSL (ft): 4069.7
Y Coordinate: 513750.29
X Coordinate: 1626158.32

Boring Diameter (in.): 2
Date Completed: 3/20/2012
Drillling Contractor: JR Drilling
Drilling Method: Direct Push (Geoprobe)
Logged By: Jason Tarbert

Depth (ft)	Sample Type	Number	Headspace PID	Lithologic Log	Material Description	U.S.C.S.	Remarks
0							
		140-BH05-1			Poorly graded SAND (SP); yellowish red (5YR 5/6); moist; loose; 95% very fine to medium sand to 1mm; rounded; 5% silt.	SP	Began drilling @ 0915 on 3/20/12.
5		140-BH05-2			SILT with Sand (ML); pinkish white (5YR 8/2); dry; soft; 85% silt; 15% very fine to medium sand; trace fine gravel to 1cm.	ML	
10		140-BH05-3 140-BH05-FD3			Poorly graded SAND (SP); brown (7.5YR 5/4); dry; loose; 95% very fine to medium sand to 2mm; rounded; 5% silt.	SP	Total depth = 10 ft. Reached total depth @ 0930 on 3/20/12.
15							
20							
25							
30							

FFOR_BOREHOLE_LOG - SHAW_DRILLING.GDT - 6/11/12 07:32 - N:\WSMR\GINT\WSMR GINT PROJECT\WSMR.GPJ

Boring ID: 140-BH06

Client: U.S. Army White Sands Missile Range
Project Location: White Sands Missile Range, New Mexico
Project Name: WSMR projects
Project Number: 139791

Ground Elevation AMSL (ft): 4071.2
Y Coordinate: 513851.52
X Coordinate: 1626603.74

Boring Diameter (in.): 2
Date Completed: 3/20/2012
Drillling Contractor: JR Drilling
Drilling Method: Direct Push (Geoprobe)
Logged By: Jason Tarbert

Depth (ft)	Sample Type	Number	Headspace PID	Lithologic Log	Material Description	U.S.C.S.	Remarks
0							
		140-BH06-1			Poorly graded SAND (SP); yellowish red (5YR 4/6); moist; loose; 100% very fine to medium sand to 1mm; rounded; trace silt.	SP	Began drilling @ 1015 on 3/20/12.
5							
		140-BH06-2			Same as above (0 ft); medium dense.		
10		140-BH06-3			Sandy SILT (ML); pink (5YR 7/3); dry; soft; low plasticity; 70% silt; 30% very fine to medium sand to 1mm. Note: caliche grains present.	ML	Total depth = 10 ft. Reached total depth @ 1025 on 3/20/12.
15							
20							
25							
30							

FFOR_BOREHOLE_LOG - SHAW_DRILLING.GDT - 6/11/12 07:33 - N:\WSMR\GINT\WSMR GINT PROJECT\WSMR.GPJ

Boring ID: 140-BH07

Client: U.S. Army White Sands Missile Range
Project Location: White Sands Missile Range, New Mexico
Project Name: WSMR projects
Project Number: 139791

Ground Elevation AMSL (ft): 4067.2
Y Coordinate: 513974.31
X Coordinate: 1626623.14

Boring Diameter (in.): 2
Date Completed: 3/20/2012
Drillling Contractor: JR Drilling
Drilling Method: Direct Push (Geoprobe)
Logged By: Jason Tarbert

Depth (ft)	Sample Type	Number	Headspace PID	Lithologic Log	Material Description	U.S.C.S.	Remarks
0							
		140-BH07-1			Poorly graded SAND (SP); yellowish red (5YR 5/6); dry; very loose; 100% very fine to medium sand to 1mm; rounded.	SP	Began drilling @ 1040 on 3/20/12.
5					Sandy SILT (ML); pink (5YR 7/3); dry; hard; low plasticity; 70% silt; 30% very fine to fine sand to 0.5mm. Note: caliche grains present.	ML	
		140-BH07-2 140-BH07-MS2 140-BH07-MSD2			Poorly graded SAND with Silt (SP-SM); reddish brown (5YR 5/4); dry; loose; 90% very fine to medium sand to 1mm; subrounded; 10% silt.	SP-SM	
10		140-BH07-3			Poorly graded SAND (SP); brown (7.5YR 5/4); dry; very loose; 100% very fine to medium sand to 1mm; rounded.	SP	Total depth = 10 ft. Reached total depth @ 1052 on 3/20/12.
15							
20							
25							
30							

FFOR_BOREHOLE_LOG - SHAW_DRILLING.GDT - 6/11/12 07:33 - N:\WSMR\GINT\WSMR GINT PROJECT\WSMR.GPJ

Boring ID: 140-BH08

Client: U.S. Army White Sands Missile Range
Project Location: White Sands Missile Range, New Mexico
Project Name: WSMR projects
Project Number: 139791

Ground Elevation AMSL (ft): 4068.3
Y Coordinate: 514102.32
X Coordinate: 1626681.91

Boring Diameter (in.): 2
Date Completed: 3/20/2012
Drillling Contractor: JR Drilling
Drilling Method: Direct Push (Geoprobe)
Logged By: Jason Tarbert

Depth (ft)	Sample Type	Number	Headspace PID	Lithologic Log	Material Description	U.S.C.S.	Remarks
0							
		140-BH08-1			Poorly graded SAND (SP); yellowish red (5YR 5/6); dry; very loose; 100% very fine to fine sand to 0.5mm; rounded; trace silt and clay.	SP	Began drilling @ 1108 on 3/20/12.
5					Silty SAND (SM); dry; medium dense; 75% very fine to fine sand to 0.5mm; rounded; 25% silt. Note: trace caliche.	SM	
		140-BH08-2					
					Same as above (3.5 ft); strong brown (7.5YR 4/6); 65% very fine to fine sand; 20% silt; 15% lean clay.		
10		140-BH08-3			Poorly graded SAND (SP); light brown (7.5YR 6/3); dry; very loose; 100% very fine to fine sand to 0.5mm; rounded; trace silt and clay.	SP	Total depth = 10 ft. Reached total depth @ 1127 on 3/20/12.
15							
20							
25							
30							

FFOR_BOREHOLE_LOG - SHAW_DRILLING.GDT - 6/11/12 07:33 - N:\WSMR\GINT\WSMR GINT PROJECT\WSMR.GPJ

Boring ID: 140-BH09

Client: U.S. Army White Sands Missile Range
Project Location: White Sands Missile Range, New Mexico
Project Name: WSMR projects
Project Number: 139791

Ground Elevation AMSL (ft): 4067.9
Y Coordinate: 514238.34
X Coordinate: 1626624.67

Boring Diameter (in.): 2
Date Completed: 3/20/2012
Drillling Contractor: JR Drilling
Drilling Method: Direct Push (Geoprobe)
Logged By: Jason Tarbert

Depth (ft)	Sample Type	Number	Headspace PID	Lithologic Log	Material Description	U.S.C.S.	Remarks
0							Began drilling @ 1132 on 3/20/12.
		140-BH09-1			Poorly graded SAND (SP); yellowish red (5YR 5/6); moist; loose; 95% very fine to fine sand to 0.5mm; rounded; 5% silt.	SP	
5					Same as above (0 ft); light reddish brown (5YR 6/4).		
		140-BH09-2 140-BH09-MS2 140-BH09-MSD2			Sandy SILT (ML); brown (7.5YR 5/4); dry; firm; low plasticity; 50% silt; 20% lean clay; 30% very fine to medium sand to 1mm. Note: gypsum crystals present in lean clay.	ML	
10		140-BH09-3			Poorly graded SAND (SP); brown (7.5YR 5/3); dry; loose; 100% very fine to medium sand to 1mm; rounded.	SP	
							Total depth = 10 ft. Reached total depth @ 1142 on 3/20/12.
15							
20							
25							
30							

FFOR_BOREHOLE_LOG - SHAW_DRILLING.GDT - 6/11/12 07:33 - N:\WSMR\GINT\WSMR GINT PROJECT\WSMR.GPJ

Boring ID: 140-BH10

Client: U.S. Army White Sands Missile Range
Project Location: White Sands Missile Range, New Mexico
Project Name: WSMR projects
Project Number: 139791

Ground Elevation AMSL (ft): 4067.0
Y Coordinate: 514322.46
X Coordinate: 1626258.82

Boring Diameter (in.): 2
Date Completed: 3/20/2012
Drillling Contractor: JR Drilling
Drilling Method: Direct Push (Geoprobe)
Logged By: Jason Tarbert

Depth (ft)	Sample Type	Number	Headspace PID	Lithologic Log	Material Description	U.S.C.S.	Remarks
0							
		140-BH10-1 140-BH10-FD1			Poorly graded SAND (SP); reddish yellow (5YR 6/6); dry; medium dense; 95% very fine to fine sand to 0.5mm; rounded; 5% silt.	SP	Began drilling @ 1205 on 3/20/12.
5					Poorly graded SAND with Silt (SP-SM); reddish yellow (5YR 6/6); dry; medium dense; 90% very fine to fine sand to 0.5mm; rounded; 10% silt.	SP-SM	
		140-BH10-2			Silty SAND (SM); yellowish red (5YR 5/6); dry; medium dense; 70% very fine to fine sand to 0.5mm; rounded; 30% silt. Note: trace clay nodules.	SM	
10		140-BH10-3			Poorly graded SAND (SP); brown (7.5YR 5/4); dry; loose; 95% very fine to medium sand to 1mm; rounded; 5% silt.	SP	
15							Total depth = 10 ft. Reached total depth @ 1218 on 3/20/12.
20							
25							
30							

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Boring ID: 140-BH11

Client: U.S. Army White Sands Missile Range
Project Location: White Sands Missile Range, New Mexico
Project Name: WSMR projects
Project Number: 139791

Ground Elevation AMSL (ft): 4070.5
Y Coordinate: 515408.33
X Coordinate: 1626512.20

Boring Diameter (in.): 2
Date Completed: 3/20/2012
Drillling Contractor: JR Drilling
Drilling Method: Direct Push (Geoprobe)
Logged By: Jason Tarbert

Depth (ft)	Sample Type	Number	Headspace PID	Lithologic Log	Material Description	U.S.C.S.	Remarks
0							
		140-BH11-1			Poorly graded SAND (SP); yellowish red (5YR 5/6); moist; medium dense; 95% very fine to fine sand to 0.5mm; rounded; 5% silt.	SP	Began drilling @ 1415 on 3/20/12.
5							
		140-BH11-2			Same as above (0 ft).		Increasing silt content.
					Silty SAND (SM); light reddish brown (5YR 6/4); dry; medium dense; 70% very fine to fine sand to 0.5mm; subrounded; 30% silt.	SM	
10		140-BH11-3			Same as above (6 ft).		
							Total depth = 10 ft. Reached total depth @ 1425 on 3/20/12.
15							
20							
25							
30							

FFOR_BOREHOLE_LOG - SHAW_DRILLING.GDT - 6/11/12 07:33 - N:\WSMR\GINT\WSMR GINT PROJECT\WSMR.GPJ

Boring ID: 140-BH12

Client: U.S. Army White Sands Missile Range
Project Location: White Sands Missile Range, New Mexico
Project Name: WSMR projects
Project Number: 139791

Ground Elevation AMSL (ft): 4070.1
Y Coordinate: 515579.10
X Coordinate: 1626779.87

Boring Diameter (in.): 2
Date Completed: 3/20/2012
Drillling Contractor: JR Drilling
Drilling Method: Direct Push (Geoprobe)
Logged By: Rachel Daly

Depth (ft)	Sample Type	Number	Headspace PID	Lithologic Log	Material Description	U.S.C.S.	Remarks
0							
		140-BH12-1			Poorly graded SAND (SP); yellowish red (5YR 5/6); dry; firm; 95% fine to medium sand; rounded; 5% silt.	SP	Began drilling @ 1400 on 3/20/12.
5							
		140-BH12-2 140-BH12-FD2			Same as above (0 ft); trace caliche clasts.		
10		140-BH12-3			Silty SAND (SM); pinkish white (5YR 8/2); dry; soft; 70% fine to medium sand; 30% silt. Note: grains are often cemented into to 2cm caliche clasts.	SM	Total depth = 10 ft. Reached total depth @ 1415 on 3/20/12.
15							
20							
25							
30							

FFOR_BOREHOLE_LOG - SHAW_DRILLING.GDT - 6/11/12 07:34 - N:\WSMR\GINT\WSMR GINT PROJECT\WSMR.GPJ

Boring ID: 140-BH13

Client: U.S. Army White Sands Missile Range
Project Location: White Sands Missile Range, New Mexico
Project Name: WSMR projects
Project Number: 139791

Ground Elevation AMSL (ft): 4070.3
Y Coordinate: 515362.98
X Coordinate: 1627214.38

Boring Diameter (in.): 2
Date Completed: 3/20/2012
Drillling Contractor: JR Drilling
Drilling Method: Direct Push (Geoprobe)
Logged By: Rachel Daly

Depth (ft)	Sample Type	Number	Headspace PID	Lithologic Log	Material Description	U.S.C.S.	Remarks
0							
		140-BH13-1			Poorly graded SAND with Silt (SP-SM); reddish brown (5YR 4/4); dry; firm; 90% fine to medium sand; round; 10% silt. Note: trace organic material.	SP-SM	Began drilling @ 1305 on 3/20/12.
5					SILT with Sand (ML); white (5YR 8/1); dry; firm; 80% silt; 20% fine to medium sand. Note: trace caliche.	ML	
		140-BH13-2					
10		140-BH13-3			Poorly graded SAND (SP); light reddish brown (5YR 6/3); dry; loose; 90% fine to medium sand; 5% silt.	SP	Total depth = 10 ft. Reached total depth @ 1315 on 3/20/12.
15							
20							
25							
30							

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Boring ID: 140-BH14

Client: U.S. Army White Sands Missile Range
Project Location: White Sands Missile Range, New Mexico
Project Name: WSMR projects
Project Number: 139791

Ground Elevation AMSL (ft): 4067.1
Y Coordinate: 515399.14
X Coordinate: 1625810.92

Boring Diameter (in.): 2
Date Completed: 3/20/2012
Drillling Contractor: JR Drilling
Drilling Method: Direct Push (Geoprobe)
Logged By: Jason Tarbert

Depth (ft)	Sample Type	Number	Headspace PID	Lithologic Log	Material Description	U.S.C.S.	Remarks
0							
		140-BH14-1			Poorly graded SAND with Silt (SP-SM); reddish brown (5YR 5/6); dry; loose; 90% very fine to fine sand to 0.5mm; rounded; 10% silt.	SP-SM	Began drilling @ 1519 on 3/20/12.
5					Silty SAND (SM); light reddish brown (5YR 6/4); dry; medium dense; 60% very fine to fine sand to 0.5 mm; rounded; 40% silt.	SM	
		140-BH14-2					
					Sandy SILT (ML); reddish brown (5YR 5/4); dry; firm; low to medium plasticity; 60% silt; 10% lean clay; 30% very fine to fine sand to 0.5mm.	ML	Several silt lenses.
10		140-BH14-3 140-BH14-MS3 140-BH14-MSD3			Sandy lean CLAY (CL); dry; firm; low to medium plasticity; 60% lean clay; trace silt; 40% very fine to fine sand to 0.5mm. Note: gypsum crystals present in the lean clay.	CL	Total depth = 10 ft. Reached total depth @ 1530 on 3/20/12.
15							
20							
25							
30							

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Boring ID: 140-BH15

Client: U.S. Army White Sands Missile Range
Project Location: White Sands Missile Range, New Mexico
Project Name: WSMR projects
Project Number: 139791

Ground Elevation AMSL (ft): 4069.3
Y Coordinate: 515646.26
X Coordinate: 1626099.29

Boring Diameter (in.): 2
Date Completed: 3/20/2012
Drillling Contractor: JR Drilling
Drilling Method: Direct Push (Geoprobe)
Logged By: Jason Tarbert

Depth (ft)	Sample Type	Number	Headspace PID	Lithologic Log	Material Description	U.S.C.S.	Remarks
0							
		140-BH15-1			Poorly graded SAND (SP); yellowish brown (5YR 5/6); dry; medium dense; 100% very fine to fine sand to 0.5mm; subrounded; trace silt. Note: trace caliche nodules.	SP	Began drilling @ 1448 on 3/20/12.
5					Silty SAND (SM); reddish brown (5YR 5/4); dry; medium dense; 70% very fine to fine sand to 0.5mm; rounded; 30% silt.	SM	
		140-BH15-2					
10		140-BH15-3 140-BH15-FD3			Same as above (4 ft).		
							Total depth = 10 ft. Reached total depth @ 1457 on 3/20/12.
15							
20							
25							
30							

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Historic Well Logs

INTERNATIONAL TECHNOLOGY CORPORATION

VISUAL CLASSIFICATION OF SOILS

PROJECT NUMBER: 421552	PROJECT NAME: WSMR	
BORING NUMBER: MW-1	TOC COORDINATES: N499822.6994 x E430037.7736 (4)	DATE: 5/24/91
TOC ELEVATION: 4224.20 (1) (4222.77)(1)(2)	(N499821.9725 x E430037.7971)(4)(5)	DATE STARTED: 5/24/91
ENGINEER/GEOLOGIST: DFC	GWL: Depth 340.02 (3) Date/Time 6/3/91 @ 11:30	DATE COMPLETED: 5/27/91
DRILLING METHOD: MUD ROTARY		PAGE 1 OF 6

DEPTH	SAMPLE TYPE & NO.	PROFILE	DESCRIPTION	REMARKS
0				
10			SAND w/abundant granules and pebbles; unconsolidated; poorly-sorted; red-brown.	
20			PEBBLE/COBBLE lens.	
30				
40				
50			Silty SAND w/abundant granules and pebbles; unconsolidated; poorly-sorted; red-brown.	
60			Decrease in granules and pebbles.	

NOTES: Well Location: North side of SWMU-64.
(1) Values are in feet, msl.
(2) Elevation of brass survey dome marker set in well pad.
(3) Depth below TOC, in feet.
(4) Values are in feet.
(5) Coordinates of brass survey dome marker set in well pad.

1552 10/03/91 9:29am DRS *

INTERNATIONAL TECHNOLOGY CORPORATION

VISUAL CLASSIFICATION OF SOILS

PROJECT NUMBER: 421552	PROJECT NAME: WSMR	
BORING NUMBER: MW-1	TOC COORDINATES: N499822.6994 x E430037.7736 (4)	DATE: 5/24/91
TOC ELEVATION: 4224.20 (1) (4222.77)(1)(2)	(N499821.9725 x E430037.7971)(4)(5)	DATE STARTED: 5/24/91
ENGINEER/GEOLOGIST: DFC	GWL: Depth 340.02 (3) Date/Time 6/3/91 @ 11:30	DATE COMPLETED: 5/27/91
DRILLING METHOD: MUD ROTARY		PAGE 2 OF 6

DEPTH	SAMPLE TYPE & NO.	PROFILE	DESCRIPTION	REMARKS
60				
70			PEBBLE/COBBLE lens.	
80			SAND w/abundant granules and pebbles; unconsolidated; poorly-sorted.	
90			PEBBLE/COBBLE lens.	
100				
110			PEBBLE/COBBLE lens.	
120			Silty SAND w/occasional granules; unconsolidated; poorly-sorted; red-brown.	

NOTES: Well Location: North side of SWMU-64.
(1) Values are in feet, msl.
(2) Elevation of brass survey dome marker set in well pad.
(3) Depth below TOC, in feet.
(4) Values are in feet.
(5) Coordinates of brass survey dome marker set in well pad.

1552L 10/03/91 9:37am DRS

INTERNATIONAL TECHNOLOGY CORPORATION

VISUAL CLASSIFICATION OF SOILS

PROJECT NUMBER: 421552	PROJECT NAME: WSMR	
BORING NUMBER: MW-1	TOC COORDINATES: N499822.6994 x E430037.7736 (4)	DATE: 5/24/91
TOC ELEVATION: 4224.20 (1) (4222.77)(1)(2)	(N499821.9725 x E430037.7971)(4)(5)	DATE STARTED: 5/24/91
ENGINEER/GEOLOGIST: DFC	GWL: Depth 340.02 (3) Date/Time 6/3/91 @ 11:30	DATE COMPLETED: 5/27/91
DRILLING METHOD: MUD ROTARY		PAGE 3 OF 6

DEPTH	SAMPLE TYPE & NO.	PROFILE	DESCRIPTION	REMARKS
120				
			SAND w/abundant granules; unconsolidated; poorly-sorted; grayish-white.	
130			Pebble/Cobble lens.	
			Silty SAND; firm; red-brown.	
140				First mud change at 142'
150			Pebble/Cobble lens.	
160				
			SAND; unconsolidated; poorly-sorted; grayish-white.	
170			Pebble/Cobble lens.	
			Pebble/Cobble lens.	
180			Silty SAND; unconsolidated; poorly-sorted; red-brown.	

NOTES: Well Location: North side of SWMU-64.
(1) Values are in feet, msl.
(2) Elevation of brass survey dome marker set in well pad.
(3) Depth below TOC, in feet.
(4) Values are in feet.
(5) Coordinates of brass survey dome marker set in well pad.

10/03/91 8:49am DRS *
15521

INTERNATIONAL TECHNOLOGY CORPORATION

VISUAL CLASSIFICATION OF SOILS

PROJECT NUMBER: 421552	PROJECT NAME: WSMR	
BORING NUMBER: MW-1	TOC COORDINATES: N499822.6994 x E430037.7736 (4)	DATE: 5/25/91
TOC ELEVATION: 4224.20 (1) (4222.77)(1)(2)	(N499821.9725 x E430037.7971)(4)(5)	DATE STARTED: 5/24/91
ENGINEER/GEOLOGIST: DFC	GWL: Depth 340.02 (3) Date/Time 6/3/91 @ 11:30	DATE COMPLETED: 5/27/91
DRILLING METHOD: MUD ROTARY		PAGE 4 OF 6

DEPTH	SAMPLE TYPE & NO.	PROFILE	DESCRIPTION	REMARKS
180				
190				
			SAND w/occasional granules; unconsolidated; poorly-sorted; grayish-white.	Abundant Feldspar
200				
			Silty SAND w/abundant granules; unconsolidated; poorly-sorted; red-brown.	
210				
			Increase in silt.	
220			SAND; unconsolidated; poorly-sorted; grayish-white.	
230			Pebble/Cobble lens.	
			Silty SAND; unconsolidated; poorly-sorted; red-brown.	
240				

NOTES: Well Location: North side of SWMU-64.
(1) Values are in feet, msl.
(2) Elevation of brass survey dome marker set in well pad.
(3) Depth below TOC, in feet.
(4) Values are in feet.
(5) Coordinates of brass survey dome marker set in well pad.

10/03/91 8:59am DRS *
15521

INTERNATIONAL TECHNOLOGY CORPORATION

VISUAL CLASSIFICATION OF SOILS

PROJECT NUMBER: 421552	PROJECT NAME: WSMR	
BORING NUMBER: MW-1	TOC COORDINATES: N499822.6994 x E430037.7736 (4)	DATE: 5/25/91
TOC ELEVATION: 4224.20 (1) (4222.77)(1)(2)	(N499821.9725 x E430037.7971)(4)(5)	DATE STARTED: 5/24/91
ENGINEER/GEOLOGIST: DFC	GWL: Depth 340.02 (3) Date/Time 6/3/91 ● 11:30	DATE COMPLETED: 5/27/91
DRILLING METHOD: MUD ROTARY		PAGE 5 OF 6

DEPTH	SAMPLE TYPE & NO.	PROFILE	DESCRIPTION	REMARKS
240				
250			Sandy SILT; firm; red-brown.	
260			Silty SAND w/occasional granules; unconsolidated; poorly-sorted; red-brown.	
270			Increase in silt.	
280				
290			Sandy SILT; firm; red-brown.	
300				

NOTES: Well Location: North side of SWMU-64.
(1) Values are in feet, msl.
(2) Elevation of brass survey dome marker set in well pad.
(3) Depth below TOC, in feet.
(4) Values are in feet.
(5) Coordinates of brass survey dome marker set in well pad.

10/03/91 9:12am DRS *
15521

INTERNATIONAL TECHNOLOGY CORPORATION

VISUAL CLASSIFICATION OF SOILS

PROJECT NUMBER: 421552	PROJECT NAME: WSMR	
BORING NUMBER: MW-1	TOC COORDINATES: N499822.6994 x E430037.7736 (4)	DATE: 5/25/91
TOC ELEVATION: 4224.20 (1) (4222.77)(1)(2)	(N499821.9725 x E430037.7971)(4)(5)	DATE STARTED: 5/24/91
ENGINEER/GEOLOGIST: DFC	GWL: Depth 340.02 (3) Date/Time 6/3/91 @ 11:30	DATE COMPLETED: 5/27/91
DRILLING METHOD: MUD ROTARY		PAGE 6 OF 6

DEPTH	SAMPLE TYPE & NO.	PROFILE	DESCRIPTION	REMARKS
300				
			SAND; unconsolidated; poorly-sorted; grayish-white.	Second mud change at 302'.
310			Silty SAND; unconsolidated; poorly-sorted; red-brown.	
320			Decrease in silt.	
			SAND; unconsolidated; poorly-sorted; grayish-white.	
330			Silty SAND; unconsolidated; poorly-sorted; red-brown.	
340				
	MW1SAQ		Silty SAND; unconsolidated; poorly-sorted; red-brown.	100% recovery
350				
			Total Depth = 352'	
360				

NOTES: Well Location: North side of SWMU-64.
(1) Values are in feet, msl.
(2) Elevation of brass survey dome marker set in well pad.
(3) Depth below TOC, in feet.
(4) Values are in feet.
(5) Coordinates of brass survey dome marker set in well pad.

MW1SAQ = Sample retained for geotechnical and sieve analyses.

1552L35 10/09/91 8:24am BSM *

NATIONAL
NOLOGY
PORATION

VISUAL CLASSIFICATION OF SOILS

NUMBER: 421552	PROJECT NAME: WSMR	
G NUMBER: MW-2	TOC COORDINATES: N499677.8558 x E430230.8237[4]	DATE: 5/10/91
OC ELEVATION: 4229.00[1] (4227.78)[1][2]	(N499677.7728 x E430230.0028)[4][5]	DATE STARTED: 5/10/91
ENGINEER/GEOLOGIST: DFC/AES	GWL: Depth 335.4[3] Date/Time 6/3/91 @ 15:45	DATE COMPLETED: 5/13/91
DRILLING METHOD: MUD ROTARY		PAGE 1 OF 6

DEPTH	SAMPLE TYPE & NO.	PROFILE	DESCRIPTION	REMARKS
0				
			SAND, GRANULES and PEBBLES; unconsolidated; poorly sorted; red-brown.	
10				
20				
30				
40				
50				
60				

NOTES: Well Location: East side of SWMU-64.
(1) Values are in feet, msl.
(2) Elevation of brass survey dome marker set in well pad.
(3) Depth below TOC, in feet.
(4) Values are in feet.
(5) Coordinates of brass survey dome marker set in well pad.

10/09/91 8:13am BSM *
1552L3

INTERNATIONAL TECHNOLOGY CORPORATION

VISUAL CLASSIFICATION OF SOILS

PROJECT NUMBER: 421552	PROJECT NAME: WSMR	
BORING NUMBER: MW-2	TOC COORDINATES: N499677.8558 x E430230.8237[4]	DATE: 5/10/91
TOC ELEVATION: 4229.00[1] (4227.78)[1][2]	(N499677.7728 x E430230.0028)[4][5]	DATE STARTED: 5/10/91
ENGINEER/GEOLOGIST: DFC/AES	GWL: Depth 335.4[3] Date/Time 6/3/91 @ 15:45	DATE COMPLETED: 5/13/91
DRILLING METHOD: MUD ROTARY		PAGE 2 OF 6

DEPTH	SAMPLE TYPE & NO.	PROFILE	DESCRIPTION	REMARKS
60				
			Pebble/Cobble lens.	
70			Silty SAND w/occasional granules; unconsolidated; poorly sorted; red-brown.	
80			Sandy SILT with occasional granules; firm; poorly-sorted; red-brown.	
90			Silty SAND w/abundant granules; unconsolidated; poorly-sorted; red-brown. Large Pebble/Cobble lens as per drilling rate. Pebble/Cobble lens.	
100			Sandy SILT w/occasional granules; firm; poorly-sorted; red-brown.	
110			Silty SAND with occasional granules; unconsolidated; poorly-sorted; red-brown. Pebble/Cobble lens.	
120				

NOTES: Well Location: East side of SWMU-64.
(1) Values are in feet, msl.
(2) Elevation of brass survey dome marker set in well pad.
(3) Depth below TOC, in feet.
(4) Values are in feet.
(5) Coordinates of brass survey dome marker set in well pad.

1552L33B.DWG 10/05/91 11:44am BSM

INTERNATIONAL TECHNOLOGY CORPORATION

VISUAL CLASSIFICATION OF SOILS

PROJECT NUMBER: 421552	PROJECT NAME: WSMR	
BORING NUMBER: MW-2	TOC COORDINATES: N499677.8558 x E430230.8237[4]	DATE: 5/11/91
TOC ELEVATION: 4229.00[1] (4227.78)[1][2]	(N499677.7728 x E430230.0028)[4][5]	DATE STARTED: 5/10/91
ENGINEER/GEOLOGIST: DFC/AES	GWL: Depth 335.4[3] Date/Time 6/3/91 @ 15:45	DATE COMPLETED: 5/13/91
DRILLING METHOD: MUD ROTARY		PAGE 3 OF 6

DEPTH	SAMPLE TYPE & NO.	PROFILE	DESCRIPTION	REMARKS
120				
130			Pebble/Cobble lens.	
140			Sandy SILT with occasional granules; firm; poorly-sorted; red-brown.	
150			Silty SAND with abundant Granules; unconsolidated; poorly-sorted; grayish-white. Pebble/Cobble lens.	
160			Pebble/Cobble lens.	
170			Pebble/Cobble lens. (~ 2' thick)	First mud change at 162' Sediment consist of abundant grayish-white Feldspar
180			Sandy SILT; firm; red-brown.	

NOTES: Well Location: East side of SWMU-64.
(1) Values are in feet, msl.
(2) Elevation of brass survey dome marker set in well pad.
(3) Depth below TOC, in feet.
(4) Values are in feet.
(5) Coordinates of brass survey dome marker set in well pad.

1552L.5, 10/05/91 11:46am BSM *

INTERNATIONAL TECHNOLOGY CORPORATION

VISUAL CLASSIFICATION OF SOILS

PROJECT NUMBER: 421552	PROJECT NAME: WSMR	
BORING NUMBER: MW-2	TOC COORDINATES: N499677.8558 x E430230.8237[4]	DATE: 5/11/91
TOC ELEVATION: 4229.00[1] (4227.78)[1][2]	(N499677.7728 x E430230.0028)[4][5]	DATE STARTED: 5/10/91
ENGINEER/GEOLOGIST: DFC/AES	GWL: Depth 335.4[3] Date/Time 6/3/91 @ 15:45	DATE COMPLETED: 5/13/91
DRILLING METHOD: MUD ROTARY		PAGE 4 OF 6

DEPTH	SAMPLE TYPE & NO.	PROFILE	DESCRIPTION	REMARKS
180				
			Silty SAND with abundant granules; unconsolidated; poorly-sorted; grayish-white.	
190			Pebble/Cobble lens.	
			Pebble/Cobble lens.	
200				
			Increase in silt.	
210				
			Increase in sand.	
220			Pebble/Cobble lens.	
			Sandy SILT with occasional granules; firm; poorly-sorted; red-brown.	
230			Silty SAND with abundant granules and pebbles; unconsolidated; poorly-sorted; grayish-white.	
			Increase in silt.	
240				

NOTES: Well Location: East side of SWMU-64.
(1) Values are in feet, msl.
(2) Elevation of brass survey dome marker set in well pad.
(3) Depth below TOC, in feet.
(4) Values are in feet.
(5) Coordinates of brass survey dome marker set in well pad.

1552L3.3 10/05/91 11:48am BSM *

INTERNATIONAL TECHNOLOGY CORPORATION

VISUAL CLASSIFICATION OF SOILS

PROJECT NUMBER: 421552	PROJECT NAME: WSMR	
BORING NUMBER: MW-2	TOC COORDINATES: N499677.8558 x E430230.8237[4]	DATE: 5/12/91
TOC ELEVATION: 4229.00[1] (4227.78)[1][2]	(N499677.7728 x E430230.0028)[4][5]	DATE STARTED: 5/10/91
ENGINEER/GEOLOGIST: DFC/AES	GWL: Depth 335.4[3] Date/Time 6/3/91 @ 15:45	DATE COMPLETED: 5/13/91
DRILLING METHOD: MUD ROTARY		PAGE 5 OF 6

DEPTH	SAMPLE TYPE & NO.	PROFILE	DESCRIPTION	REMARKS
240				
			Sandy SILT with granules; firm; poorly-sorted; red-brown.	
250			increase in sand and granules	
			Silty SAND with granules and pebbles; unconsolidated; poorly-sorted; grayish-white.	
			Increase in silt.	
260			Significant increase in sand and granules.	
			Pebble/Cobble lens.	
270			Sandy SILT; firm; red-brown.	
			Increase in sand.	
280			Silty SAND; unconsolidated; poorly-sorted; grayish-white.	
			Increase in silt.	
290				
300				Second mud change at 300'.

NOTES: Well Location: East side of SWMU-64.
(1) Values are in feet, msl.
(2) Elevation of brass survey dome marker set in well pad.
(3) Depth below TOC, in feet.
(4) Values are in feet.
(5) Coordinates of brass survey dome marker set in well pad.

1552L33E 10/05/91 11:50am BSM *

INTERNATIONAL TECHNOLOGY CORPORATION

VISUAL CLASSIFICATION OF SOILS

PROJECT NUMBER: 421552	PROJECT NAME: WSMR	
BORING NUMBER: MW-2	TOC COORDINATES: N499677.8558 x E430230.8237[4]	DATE: 5/12/91
TOC ELEVATION: 4229.00[1] (4227.78)[1][2]	(N499677.7728 x E430230.0028)[4][5]	DATE STARTED: 5/10/91
ENGINEER/GEOLOGIST: DFC/AES	GWL: Depth 335.4[3] Date/Time 6/3/91 @ 15:45	DATE COMPLETED: 5/13/91
DRILLING METHOD: MUD ROTARY		PAGE 6 OF 6

DEPTH	SAMPLE TYPE & NO.	PROFILE	DESCRIPTION	REMARKS
300				
310			Increase in silt.	
320			Pebble/Cobble lens.	
330			Sandy SILT; firm; red-brown.	
340			Silty SAND; unconsolidated; poorly-sorted; red-brown. Increase in granules.	
	MW2SAQ		Upper 1' of sample is moderately well sorted, very moist SAND; unconsilidated; red-brown. Bottom 1' is a clayey sandy SILT w/occasional granules; red-brown; firm; moist.	100% Recovery
350			Total Depth = 345'	
360				

NOTES: Well Location: East side of SWMU-64.
MW2SAQ=Sample retained for geotechnical analysis.
(1) Values are in feet, msl.
(2) Elevation of brass survey dome marker set in well pad.
(3) Depth below TOC, in feet.
(4) Values are in feet.
(5) Coordinates of brass survey dome marker set in well pad.

Location: White Sands Missile Range, New Mexico	Site Id: 0084MW09	Well No.: MW-9
Date(s): 12/02/93 - 12/05/93	X Coordinate: 1569895	Y Coordinate: 499812
Logged By: K. Ratzlaff	Elevation: 4229.08'	Datum: MSL
Contractor: Stewart Brothers	Total Depth: 353.00'	Measuring Point: 4231.14'
Drilling Method: Air Rotary Casing Hammer	Completed Depth: 350.00'	Static Water Level: 321.05'
Isolator Casing: type: N/A dia: .00" fm: .00' to: .00'	Well Casing: type: Sch 80 PVC dia: 5.00" fm: -2.1' to: 330.00'	
Remarks: Drilled with a 8.5 inch tricone bit followed by a temporary steel isolator casing with a 10.75 inch OD Drive Shoe. Started adding water to aid in cuttings removal at 313 feet.	Screens: type: Slotted size: .010" dia: 5.00" fm: 330.00' to: 350.00'	
	Annular Fill:	

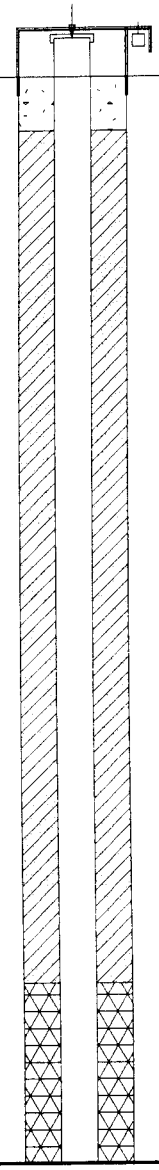
Annular Fill:		
type: Cement-Sand Grout	fm: .00'	to: 3.00'
type: Cement-Bentonite Grout	fm: 3.00'	to: 50.00'
type: High-Solids Bent. Grout	fm: 50.00'	to: 320.00'
type: Sec. Fltr. Pack 40-60	fm: 320.00'	to: 322.00'
type: Prim. Fltr. Pack 20-40	fm: 322.00'	to: 353.00'
type:	fm:	to:
type:	fm:	to:

US Army Corps of Engineers
Tulsa District

Sverdrup ENVIRONMENTAL

Elev. (ft)	Depth (ft)	Recovery	Sample No.	Water Level	Graphic Log	USCS Code	Material Description	Notes
						SW	SAND - reddish-brown, well graded, slightly moist	
	5							
4220	10						-some gravel, dry	
	15							
4210	20							
	25							
4200	30						-gravel layer	
						SP	SAND - reddish-brown, poorly graded, some gravel	
	35						-gravel and cobble layer	
4190	40					SM	-increase in fine grained sand SILTY SAND - reddish-brown	
						SP	SAND - reddish-brown, poorly graded, slightly moist	
	45						-some gravel	
4180	50					SW	SAND - reddish-brown, well graded, some gravel, moist	
	55							
4170							-slightly moist	

Well Construction
MP. EL. 4231.14



Location: White Sands Missile Range, New Mexico	Site Id: 006+MW09	Well No.: MW-9
Date(s): 12/02/93 - 12/05/93	X Coordinate: 1569895	Y Coordinate: 499812
Logged By: K. Ratzlaff	Elevation: 4229.08'	Datum: MSL
Contractor: Stewart Brothers	Total Depth: 353.00'	Measuring Point: 4231.14'
Drilling Method: Air Rotary Casing Hammer	Completed Depth: 350.00'	Static Water Level: 321.05'

Isolator Casing:
type: N/A dia: .00" fm: .00' to: .00'

Well Casing:
type: Sch 80 PVC dia: 5.00" fm: -2.1' to: 330.00'

Remarks:
Drilled with a 8.5 inch tricone bit followed by a temporary steel isolator casing with a 10.75 inch OD Drive Shoe. Started adding water to aid in cuttings removal at 313 feet.

Screens:
type: Slotted size: .010" dia: 5.00" fm: 330.00' to: 350.00'

Annular Fill:

type: Cement-Sand Grout	fm: .00'	to: 3.00'
type: Cement-Bentonite Grout	fm: 3.00'	to: 50.00'
type: High-Solids Bent. Grout	fm: 50.00'	to: 320.00'
type: Sec. Fltr. Pack 40-60	fm: 320.00'	to: 322.00'
type: Prim. Fltr. Pack 20-40	fm: 322.00'	to: 353.00'
type:	fm:	to:
type:	fm:	to:

US Army Corps of Engineers
Tulsa District

Sverdrup ENVIRONMENTAL

Elev. (ft)	Depth (ft)	Recovery	Sample No.	Water Level	Graphic Log	USCS Code	Material Description	Well Construction	Notes
							-increase in gravel		
	65								
4160	70								
	75								
4150							-dry		
	80								
	85								
4140	90						-hard layer -cobble or boulder encountered		
							-tan		
	95								
							-some gravel		
4130	100						-reddish-brown, decrease in grain size, with trace silt, slightly moist		
	105						-tan, dry		
4120	110								
	115						-no silt		
4110						SM	SILTY SAND - reddish-brown, slightly moist		

Location: White Sands Missile Range, New Mexico	Site Id: 006-MW03	Well No.: MW-3
Date(s): 12/02/93 - 12/05/93	X Coordinate: 1569895	Y Coordinate: 499812
Logged By: K. Ratzlaff	Elevation: 4229.08'	Datum: MSL
Contractor: Stewart Brothers	Total Depth: 353.00'	Measuring Point: 4231.14'
Drilling Method: Air Rotary Casing Hammer	Completed Depth: 350.00'	Static Water Level: 321.05'
Isolator Casing: type: N/A dia: .00" fm: .00' to: .00'	Well Casing: type: Sch 80 PVC dia: 5.00" fm: -2.1' to: 330.00'	
Remarks: Drilled with a 8.5 inch tricone bit followed by a temporary steel isolator casing with a 10.75 inch OD Drive Shoe. Started adding water to aid in cuttings removal at 313 feet.	Screens: type: Slotted size: .010" dia: 5.00" fm: 330.00' to: 350.00'	
US Army Corps of Engineers Tulsa District / Sverdrup ENVIRONMENTAL	Annular Fill: type: Cement-Sand Grout fm: .00' to: 3.00' type: Cement-Bentonite Grout fm: 3.00' to: 50.00' type: High-Solids Bent. Grout fm: 50.00' to: 320.00' type: Sec. Fltr. Pack 40-60 fm: 320.00' to: 322.00' type: Prim. Fltr. Pack 20-40 fm: 322.00' to: 353.00' type: fm: to: type: fm: to:	

Elev. (ft)	Depth (ft)	Recovery	Sample No.	Water Level	Graphic Log	USCS Code	Material Description	Well Construction	Notes
							-dry		
	125								
4100	130								
	135					SW	SAND - tan, well graded, with trace of silt, dry		
4090	140						-increase in grain size		
	145						-reddish-brown, decrease in grain size, slightly moist		
						SM	SILTY SAND - reddish-brown, slightly moist		
4080	150					SW	SAND - tan, well graded, dry		
	155						-some gravel		
4070	160								
	165						-reddish-brown, finer grained, slightly moist		
4060	170								
	175								
4050									

Location: White Sands Missile Range, New Mexico	Site Id: 006-MW09	Well No.: MW-9
Date(s): 12/02/93 – 12/05/93	X Coordinate: 1569895	Y Coordinate: 499812
Logged By: K. Ratzlaff	Elevation: 4229.08'	Datum: MSL
Contractor: Stewart Brothers	Total Depth: 353.00'	Measuring Point: 4231.14'
Drilling Method: Air Rotary Casing Hammer	Completed Depth: 350.00'	Static Water Level: 321.05'

Isolator Casing:
type: N/A dia: .00" fm: .00' to: .00'

Well Casing:
type: Sch 80 PVC dia: 5.00" fm: -2.1' to: 330.00'

Remarks:
Drilled with a 8.5 inch tricone bit followed by a temporary steel isolator casing with a 10.75 inch OD Drive Shoe. Started adding water to aid in cuttings removal at 313 feet.

Screens:
type: Slotted size: .010" dia: 5.00" fm: 330.00' to: 350.00'

Annular Fill:

type: Cement-Sand Grout	fm: .00'	to: 3.00'
type: Cement-Bentonite Grout	fm: 3.00'	to: 50.00'
type: High-Solids Bent. Grout	fm: 50.00'	to: 320.00'
type: Sec. Fltr. Pack 40-60	fm: 320.00'	to: 322.00'
type: Prim. Fltr. Pack 20-40	fm: 322.00'	to: 353.00'
type:	fm:	to:
type:	fm:	to:

US Army Corps of Engineers
Tulsa District

Sverdrup ENVIRONMENTAL

Elev. (ft)	Depth (ft)	Recovery	Sample No.	Water Level	Graphic Log	USCS Code	Material Description	Well Construction	Notes
	185						-some gravel		
4040	190								
	195						-trace silt, some gravel		
4030	200						-gravel layer		
	205						-gravel layer		
4020	210								
	215								
4010	220						-increase in silt		
	225						-gravel layer		
4000	230								
	235						-tan, little silt, dry		
3990									

Location: White Sands Missile Range, New Mexico	Site Id: 0064MW09	Well No.: MW-9
Date(s): 12/02/93 - 12/05/93	X Coordinate: 1569895	Y Coordinate: 499812
Logged By: K. Ratzlaff	Elevation: 4229.08'	Datum: MSL
Contractor: Stewart Brothers	Total Depth: 353.00'	Measuring Point: 4231.14'
Drilling Method: Air Rotary Casing Hammer	Completed Depth: 350.00'	Static Water Level: 321.05'

Isolator Casing:
type: N/A dia: .00" fm: .00' to: .00'

Well Casing:
type: Sch 80 PVC dia: 5.00" fm: -2.1' to: 330.00'

Remarks:
Drilled with a 8.5 inch tricone bit followed by a temporary steel isolator casing with a 10.75 inch OD Drive Shoe. Started adding water to aid in cuttings removal at 313 feet.

Screens:
type: Slotted size: .010" dia: 5.00" fm: 330.00' to: 350.00'

Annular Fill:

type: Cement-Sand Grout	fm: .00'	to: 3.00'
type: Cement-Bentonite Grout	fm: 3.00'	to: 50.00'
type: High-Solids Bent. Grout	fm: 50.00'	to: 320.00'
type: Sec. Fltr. Pack 40-60	fm: 320.00'	to: 322.00'
type: Prim. Fltr. Pack 20-40	fm: 322.00'	to: 353.00'
type:	fm:	to:
type:	fm:	to:

US Army Corps of Engineers
Tulsa District

Sverdrup ENVIRONMENTAL

Elev. (ft)	Depth (ft)	Recovery	Sample No.	Water Level	Graphic Log	USCS Code	Material Description	Well Construction	Notes
	245						-gravel layer		
							-reddish-brown		
3980	250								
							-tan, fine grained, poorly graded layer		
							-brown, well graded		
	255								
							-little silt, slightly moist		
3970	260								
	265								
							-no silt		
3960	270								
							-trace silt		
	275								
						SP	SAND - reddish-brown, poorly graded, trace silt, slightly moist		
3950	280						-increase in silt, dry		
	285						-brown		
3940	290								
	295						-reddish-brown		
							-some gravel		
3930									

Location: White Sands Missile Range, New Mexico	Site ID: 0364WW09	Well No: MW-9
Date(s): 12/02/93 – 12/05/93	X Coordinate: 1569895	Y Coordinate: 499812
Logged By: K. Ratzlaff	Elevation: 4229.08'	Datum: MSL
Contractor: Stewart Brothers	Total Depth: 353.00'	Measuring Point: 4231.14'
Drilling Method: Air Rotary Casing Hammer	Completed Depth: 350.00'	Static Water Level: 321.05'
Isolator Casing: type: N/A dia: .00" fm: .00' to: .00'	Well Casing: type: Sch 80 PVC dia: 5.00" fm: −2.1' to: 330.00'	
Remarks: Drilled with a 8.5 inch tricone bit followed by a temporary steel isolator casing with a 10.75 inch OD Drive Shoe. Started adding water to aid in cuttings removal at 313 feet.	Screens: type: Slotted size: .010" dia: 5.00" fm: 330.00' to: 350.00'	
US Army Corps of Engineers Tulsa District / Sverdrup ENVIRONMENTAL	Annular Fill: type: Cement−Sand Grout fm: .00' to: 3.00' type: Cement−Bentonite Grout fm: 3.00' to: 50.00' type: High−Solids Bent. Grout fm: 50.00' to: 320.00' type: Sec. Fltr. Pack 40−60 fm: 320.00' to: 322.00' type: Prim. Fltr. Pack 20−40 fm: 322.00' to: 353.00' type: fm: to: type: fm: to:	

Elev. (ft)	Depth (ft)	Recovery	Sample No.	Water Level	Graphic Log	USCS Code	Material Description	Well Construction	Notes
	305								
3920	310						−moist		
	315								Started adding water at 313'
3910	320					SW	SAND − reddish−brown, well graded		
	325								
3900	330						−increase in grain size		
	335						−silt layer		
3890	340								340'−342' Geotechnical sample was SP
	345						−brown		
3880	350								
	355								
3870									

Location: White Sands Missile Range, New Mexico	Site Id: 0064MW10	Well No.: MW-10
Date(s): 12/06/93 - 12/08/93	X Coordinate: 1570243	Y Coordinate: 499409
Logged By: K. Ratzlaff	Elevation: 4222.66'	Datum: MSL
Contractor: Stewart Brothers	Total Depth: 356.00'	Measuring Point: 4224.67'
Drilling Method: Air Rotary Casing Hammer	Completed Depth: 353.00'	Static Water Level: 339.46'

Isolator Casing:
type: N/A dia: .00" fm: .00' to: .00'

Well Casing:
type: Sch 80 PVC dia: 5.00" fm: -2.0' to: 333.00'

Remarks:
Drilled with a 8.5 inch tricone bit followed by a temporary steel isolator casing with a 10.75 inch OD Drive Shoe. Started adding water to aid in cuttings removal at 329 feet.

Screens:
type: Slotted size: .010" dia: 5.00" fm: 333.00' to: 353.00'

Annular Fill:

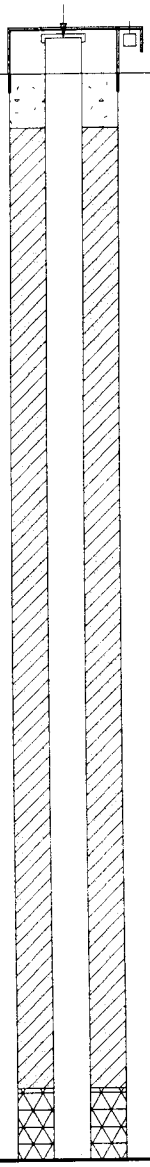
type: Cement-Sand Grout	fm: .00'	to: 3.00'
type: Cement-Bentonite Grout	fm: 3.00'	to: 56.00'
type: High-Solids Bent. Grout	fm: 56.00'	to: 321.00'
type: Sec. Fltr. Pack 40-60	fm: 321.00'	to: 323.00'
type: Prim. Fltr. Pack 20-40	fm: 323.00'	to: 356.00'
type:	fm:	to:
type:	fm:	to:

US Army Corps of Engineers
Tulsa District

Sverdrup ENVIRONMENTAL

Elev. (ft)	Depth (ft)	Recovery	Sample No.	Water Level	Graphic Log	USCS Code	Material Description
						SW	SAND - reddish-brown, well graded
4220							
	5						-some gravel
	10						
4210							
	15						-brown, dry -some gravel
	20						
4200							
	25						-reddish-brown
	30						-gravel layer
4190							
	35					SM	SILTY SAND - reddish-brown, slightly moist
						SW	SAND - reddish-brown, well graded, trace silt, dry
	40						
4180							
	45						-gravel layer -brown, slightly moist -gravel layer -reddish-brown
	50						
4170							
	55					SP	SAND - brown, poorly graded, fine grained, dry -tan, some well graded sand

Well Construction
MP. EL. 4224.67



Notes

Location: White Sands Missile Range, New Mexico	Site Id: 0064MW10	Well No.: MW-10
Date(s): 12/06/93 - 12/08/93	X Coordinate: 1570243	Y Coordinate: 499409
Logged By: K. Ratzlaff	Elevation: 4222.66'	Datum: MSL
Contractor: Stewart Brothers	Total Depth: 356.00'	Measuring Point: 4224.67'
Drilling Method: Air Rotary Casing Hammer	Completed Depth: 353.00'	Static Water Level: 339.46'

Isolator Casing:
type: N/A dia: .00" fm: .00' to: .00'

Well Casing:
type: Sch 80 PVC dia: 5.00" fm: -2.0' to: 333.00'

Remarks:
Drilled with a 8.5 inch tricone bit followed by a temporary steel isolator casing with a 10.75 inch OD Drive Shoe. Started adding water to aid in cuttings removal at 329 feet.

Screens:
type: Slotted size: .010" dia: 5.00" fm: 333.00' to: 353.00'

Annular Fill:

type: Cement-Sand Grout	fm: .00'	to: 3.00'
type: Cement-Bentonite Grout	fm: 3.00'	to: 56.00'
type: High-Solids Bent. Grout	fm: 56.00'	to: 321.00'
type: Sec. Fltr. Pack 40-60	fm: 321.00'	to: 323.00'
type: Prim. Fltr. Pack 20-40	fm: 323.00'	to: 356.00'
type:	fm:	to:
type:	fm:	to:

US Army Corps of Engineers
Tulsa District

Sverdrup ENVIRONMENTAL

Elev. (ft)	Depth (ft)	Recovery	Sample No.	Water Level	Graphic Log	USCS Code	Material Description	Well Construction	Notes
							-reddish-brown, fine grained with some rock chips		
4160									
	65					SW	SAND - reddish-brown, well graded, trace silt, slightly moist		
	70						-no silt		
4150									
	75					SP	SAND - reddish-brown, poorly graded, slightly moist		
						SM	SILTY SAND - reddish-brown, slightly moist		
	80								
4140									
	85					SW	SAND - brown, well graded, slightly moist		
	90								
4130									
	95					SP	SAND - brown, poorly graded, slightly moist		
	100								
4120						SW	SAND - brown, well graded, dry		
	105								
	110								
4110							-reddish-brown, slightly moist		
	115								
							-little silt		

Location: White Sands Missile Range, New Mexico	Site Id: 0064MW10	Well No.: MW-10
Date(s): 12/06/93 - 12/08/93	X Coordinate: 1570243	Y Coordinate: 499409
Logged By: K. Ratzlaff	Elevation: 4222.66'	Datum: MSL
Contractor: Stewart Brothers	Total Depth: 356.00'	Measuring Point: 4224.67'
Drilling Method: Air Rotary Casing Hammer	Completed Depth: 353.00'	Static Water Level: 339.46'

Isolator Casing:
type: N/A dia: .00" fm: .00' to: .00'

Well Casing:
type: Sch 80 PVC dia: 5.00" fm: -2.0' to: 333.00'

Remarks:
Drilled with a 8.5 inch tricone bit followed by a temporary steel isolator casing with a 10.75 inch OD Drive Shoe. Started adding water to aid in cuttings removal at 329 feet.

Screens:
type: Slotted size: .010" dia: 5.00" fm: 333.00' to: 353.00'

Annular Fill:

type: Cement-Sand Grout	fm: .00'	to: 3.00'
type: Cement-Bentonite Grout	fm: 3.00'	to: 56.00'
type: High-Solids Bent. Grout	fm: 56.00'	to: 321.00'
type: Sec. Fltr. Pack 40-60	fm: 321.00'	to: 323.00'
type: Prim. Fltr. Pack 20-40	fm: 323.00'	to: 356.00'
type:	fm:	to:
type:	fm:	to:

US Army Corps of Engineers
Tulsa District

Sverdrup ENVIRONMENTAL

Elev. (ft)	Depth (ft)	Recovery	Sample No.	Water Level	Graphic Log	USCS Code	Material Description	Well Construction	Notes
4100									
	125						-little silt, slightly moist		
	130								
4090									
	135					SP	SAND - reddish-brown, poorly graded, little silt, slightly moist		
	140					SW	SAND - brown, well graded, dry		
4080									
	145						-reddish-brown, trace silt, slightly moist		
	150					ML	SANDY SILT - reddish-brown, slightly moist		
4070									
	155					SW	SAND - brown, well graded, dry		
	160					ML	SANDY SILT - reddish-brown, slightly moist		
4060						SM	SILTY SAND - reddish-brown, dry		
	165								
	170					SP	SAND - brown, fine grained, slightly moist		
4050									
	175								
						SM	SILTY SAND - reddish-brown, dry		

Location: White Sands Missile Range, New Mexico	Site Id: 0064MW10	Well No.: MW-10
Date(s): 12/06/93 - 12/08/93	X Coordinate: 1570243	Y Coordinate: 499409
Logged By: K. Ratzlaff	Elevation: 4222.66'	Datum: MSL
Contractor: Stewart Brothers	Total Depth: 356.00'	Measuring Point: 4224.67'
Drilling Method: Air Rotary Casing Hammer	Completed Depth: 353.00'	Static Water Level: 339.46'

Isolator Casing:
type: N/A dia: .00" fm: .00' to: .00'

Well Casing:
type: Sch 80 PVC dia: 5.00" fm: -2.0' to: 333.00'

Remarks:
Drilled with a 8.5 inch tricone bit followed by a temporary steel isolator casing with a 10.75 inch OD Drive Shoe. Started adding water to aid in cuttings removal at 329 feet.

Screens:
type: Slotted size: .010" dia: 5.00" fm: 333.00' to: 353.00'

Annular Fill:

type: Cement-Sand Grout	fm: .00'	to: 3.00'
type: Cement-Bentonite Grout	fm: 3.00'	to: 56.00'
type: High-Solids Bent. Grout	fm: 56.00'	to: 321.00'
type: Sec. Fltr. Pack 40-60	fm: 321.00'	to: 323.00'
type: Prim. Fltr. Pack 20-40	fm: 323.00'	to: 356.00'
type:	fm:	to:
type:	fm:	to:

US Army Corps of Engineers
Tulsa District

Sverdrup
ENVIRONMENTAL

Elev. (ft)	Depth (ft)	Recovery	Sample No.	Water Level	Graphic Log	USCS Code	Material Description	Well Construction	Notes
						SP	SAND - reddish-brown, fine grained, poorly graded, trace silt, little gravel, slightly moist		
4040	185								
	190								
4030						SW	SAND - brown, well graded, dry		
	195					ML	SANDY SILT - reddish-brown, slightly moist		
						SP	SAND - brown, poorly graded, slightly moist		
	200								
4020						SW	SAND - brown, well graded, slightly moist		
	205						-decreased moisture		
	210								
4010									
	215								
	220					SP	SAND - reddish-brown, poorly graded, trace of silt slightly moist		
4000							-gravel lense		
						SW	SAND - brown, well graded, some gravel, dry		
	225								
	230								
3990									
	235								

Location: White Sands Missile Range, New Mexico	Site Id: 0084MW10	Well No.: MW-10
Date(s): 12/06/93 - 12/08/93	X Coordinate: 1570243	Y Coordinate: 499409
Logged By: K. Ratzlaff	Elevation: 4222.66'	Datum: MSL
Contractor: Stewart Brothers	Total Depth: 356.00'	Measuring Point: 4224.67'
Drilling Method: Air Rotary Casing Hammer	Completed Depth: 353.00'	Static Water Level: 339.46'
Isolator Casing: type: N/A dia: .00" fm: .00' to: .00'	Well Casing: type: Sch 80 PVC dia: 5.00" fm: -2.0' to: 333.00'	
Remarks: Drilled with a 8.5 inch tricone bit followed by a temporary steel isolator casing with a 10.75 inch OD Drive Shoe. Started adding water to aid in cuttings removal at 329 feet.	Screens: type: Slotted size: .010" dia: 5.00" fm: 333.00' to: 353.00'	
	Annular Fill: type: Cement-Sand Grout fm: .00' to: 3.00' type: Cement-Bentonite Grout fm: 3.00' to: 56.00' type: High-Solids Bent. Grout fm: 56.00' to: 321.00' type: Sec. Fltr. Pack 40-60 fm: 321.00' to: 323.00' type: Prim. Fltr. Pack 20-40 fm: 323.00' to: 356.00' type: fm: to: type: fm: to:	

US Army Corps of Engineers
Tulsa District

Sverdrup ENVIRONMENTAL

Elev. (ft)	Depth (ft)	Recovery	Sample No.	Water Level	Graphic Log	USCS Code	Material Description	Well Construction	Notes
3980									
	245								
	250								
3970									
	255								
	260								
3960									
	265						-tan, dry		
	270								
3950									
	275								
	280								
3940									
	285					SM	SILTY SAND - reddish-brown, slightly moist		
	290								
3930									
	295					SP	SAND - brown, poorly graded, dry		

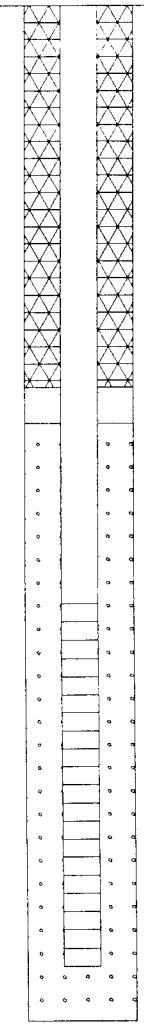
Location: White Sands Missile Range, New Mexico	Site ID: 0284MW10	Well No.: MW-10
Date(s): 12/06/93 – 12/08/93	X Coordinate: 1570243	Y Coordinate: 499409
Logged By: K. Ratzlaff	Elevation: 4222.66'	Datum: MSL
Contractor: Stewart Brothers	Total Depth: 356.00'	Measuring Point: 4224.67'
Drilling Method: Air Rotary Casing Hammer	Completed Depth: 353.00'	Static Water Level: 339.46'
Isolator Casing: type: N/A dia: .00" fm: .00' to: .00'	Well Casing: type: Sch 80 PVC dia: 5.00" fm: −2.0' to: 333.00'	
Remarks: Drilled with a 8.5 inch tricone bit followed by a temporary steel isolator casing with a 10.75 inch OD Drive Shoe. Started adding water to aid in cuttings removal at 329 feet.	Screens: type: Slotted size: .010" dia: 5.00" fm: 333.00' to: 353.00'	
	Annular Fill:	
	type: Cement–Sand Grout fm: .00' to: 3.00'	
	type: Cement–Bentonite Grout fm: 3.00' to: 56.00'	
	type: High–Solids Bent. Grout fm: 56.00' to: 321.00'	
	type: Sec. Fltr. Pack 40–60 fm: 321.00' to: 323.00'	
	type: Prim. Fltr. Pack 20–40 fm: 323.00' to: 356.00'	
	type: fm: to:	
	type: fm: to:	

US Army Corps of Engineers
Tulsa District

Sverdrup ENVIRONMENTAL

Elev. (ft)	Depth (ft)	Recovery	Sample No.	Water Level	Graphic Log	USCS Code	Material Description	Notes
						SW	SAND – reddish-brown, well graded, moist	
3920								
	305							
	310							
3910								
	315							
	320						–some silt	
3900						SM	SILTY SAND – reddish-brown, moist	
	325					SP	SAND – reddish-brown, poorly graded, moist	
						SW	SAND – reddish-brown, well graded	
	330							
3890								
	335							
	340			▼				340'–342' Geotechnical sample was SP–SM/SC
3880							–rock fragments	
	345							
							–some gravel	
	350							
3870								
	355							

Well Construction



SWMU 21 (WSMR-31)
Phase II Soil Boring Logs

Location: White Sands Missile Range, New Mexico	Site Id: 0021SB01
Date(s): 12/05/93 - 12/05/93	X Coordinate: 1569263
Logged By: S. Brunton	Y Coordinate: 498600
Contractor: GEOPROJECTS INTERNATIONAL, Inc.	Elevation: 4234.88'
Drilling Method: 3.25" I.D. Hollow Stem Auger	Datum: MSL
US Army Corps of Engineers Tulsa District / Sverdrup ENVIRONMENTAL	Total Depth: 5.00'
	Borehole Dia.: 8.00"
	Static Water Level:
	Remarks:

Elevation (ft)	Depth (ft)	Recovery	Sample No.	Water Level	Graphic Log	USCS Code	Material Description	Vapor (ppm)	Notes
			SS-01			SM	SILTY SAND - reddish-brown, some gravel, dry	0	0'-1' Chemical analysis sample
			SS-02					0	2'-3' Chemical analysis sample
4230	5							0	3.5'-4.5' Chemical analysis sample
	10								
4220	15								
	20								
4210	25								
	30								
4200	35								
	40								
4190	45								
	50								
4180	55								

Location: White Sands Missile Range, New Mexico	Site Id: 0021SB02
Date(s): 12/05/93 – 12/05/93	X Coordinate: 1569235
Logged By: S. Brunton	Y Coordinate: 498595
Contractor: GEOPROJECTS INTERNATIONAL, Inc.	Elevation: 4235.89'
Drilling Method: 3.25" I.D. Hollow Stem Auger	Datum: MSL
US Army Corps of Engineers Tulsa District — Sverdrup ENVIRONMENTAL	Total Depth: 5.00'
	Borehole Dia.: 8.00"
	Static Water Level:
	Remarks:

Elevation (ft)	Depth (ft)	Recovery	Sample No.	Water Level	Graphic Log	USCS Code	Material Description	Vapor (ppm)	Notes
			SS-01			SM	SILTY SAND – black to gray stained layer to 2.5', with fuel/oil odor; reddish-brown to brown, some gravel, no odor detected, dry	2	0'–1' Chemical analysis sample
			SS-02					0	2'–2.5' Chemical analysis sample
4230	5							2	3.5'–4.5' Chemical analysis sample
	10								
4220	15								
	20								
4210	25								
	30								
4200	35								
	40								
4190	45								
	50								
4180	55								

Location: White Sands Missile Range, New Mexico	Site Id: 0021SB03
Date(s): 12/05/93 – 12/05/93	X Coordinate: 1569221
Logged By: S. Brunton	Y Coordinate: 498564
Contractor: GEOPROJECTS INTERNATIONAL, Inc.	Elevation: 4235.54'
Drilling Method: 3.25" I.D. Hollow Stem Auger	Datum: MSL
US Army Corps of Engineers Tulsa District / Sverdrup ENVIRONMENTAL	Total Depth: 5.00'
	Borehole Dia.: 8.00"
	Static Water Level:
	Remarks:

Elevation (ft)	Depth (ft)	Recovery	Sample No.	Water Level	Graphic Log	USCS Code	Material Description	Vapor (ppm)	Notes
			SS-01			SM	SILTY SAND – reddish-brown, some gravel, dry	0	0'–1' Chemical analysis sample
			SS-02				– brown	0	2'–2.5' Chemical analysis sample
4230	5							0	4'–4.7' Chemical analysis sample
	10								
4220	15								
	20								
4210	25								
	30								
4200	35								
	40								
4190	45								
	50								
4180	55								

Location: White Sands Missile Range, New Mexico	Site Id: 0021SB04
Date(s): 12/05/93 – 12/05/93	X Coordinate: 1569236
Logged By: S. Brunton	Y Coordinate: 498566
Contractor: GEOPROJECTS INTERNATIONAL, Inc.	Elevation: 4235.39'
Drilling Method: 3.25" I.D Hollow Stem Auger	Datum: MSL
US Army Corps of Engineers Tulsa District — Sverdrup ENVIRONMENTAL	Total Depth: 5.00'
	Borehole Dia.: 8.00"
	Static Water Level:
	Remarks:

Elevation (ft)	Depth (ft)	Recovery	Sample No.	Water Level	Graphic Log	USCS Code	Material Description	Vapor (ppm)	Notes
			SS-01			SM	SILTY SAND – reddish-brown to brown, some gravel, dry	0	0'–1' Chemical analysis sample, collected by hand auger
			SS-02					0	2'–3' Chemical analysis sample, composite from cuttings
4230	5							0	4'–5' Chemical analysis sample, composite from cuttings
	10								
4220	15								
	20								
4210	25								
	30								
4200	35								
	40								
4190	45								
	50								
4180	55								

Location: White Sands Missile Range, New Mexico	Site Id: 0021SB05
Date(s): 12/05/93 – 12/05/93	X Coordinate: 1569242
Logged By: S. Brunton	Y Coordinate: 498546
Contractor: GEOPROJECTS INTERNATIONAL, Inc.	Elevation: 4235.00'
Drilling Method: 3.25" I.D. Hollow Stem Auger	Datum: MSL
US Army Corps of Engineers Tulsa District — Sverdrup ENVIRONMENTAL	Total Depth: 5.00'
	Borehole Dia.: 8.00"
	Static Water Level:
	Remarks:

Elevation (ft)	Depth (ft)	Recovery	Sample No.	Water Level	Graphic Log	USCS Code	Material Description	Vapor (ppm)	Notes
			SS-01			SM	SILTY SAND – reddish-brown to brown, some gravel, dry	0	0'–1' Chemical analysis sample, collected by hand auger
								0	2'–3.5' Chemical analysis sample
			SS-02					0	4'–5' Chemical analysis sample
4230	5								
	10								
4220	15								
	20								
4210	25								
	30								
4200	35								
	40								
4190	45								
	50								
4180	55								

Location: White Sands Missile Range, New Mexico	Site Id: 0021SB06
Date(s): 12/05/93 – 12/05/93	X Coordinate: 1569257
Logged By: S. Brunton	Y Coordinate: 498558
Contractor: GEOPROJECTS INTERNATIONAL, Inc.	Elevation: 4234.85'
Drilling Method: 3.25" I.D. Hollow Stem Auger	Datum: MSL
US Army Corps of Engineers Tulsa District / Sverdrup ENVIRONMENTAL	Total Depth: 5.00'
	Borehole Dia.: 8.00"
	Static Water Level:
	Remarks:

Elevation (ft)	Depth (ft)	Recovery	Sample No.	Water Level	Graphic Log	USCS Code	Material Description	Vapor (ppm)	Notes
			SS-01			SM	SILTY SAND – reddish-brown, some gravel, dry	0	0'–1' Chemical analysis sample
									2'–3' Chemical analysis sample
			SS-02					0	
4230	5							0	3.5'–4.5' Chemical analysis sample
	10								
4220	15								
	20								
4210	25								
	30								
4200	35								
	40								
4190	45								
	50								
4180	55								

Location: White Sands Missile Range, New Mexico	Site Id: 0021SB07
Date(s): 12/05/93 – 12/05/93	X Coordinate: 1569303
Logged By: S. Brunton	Y Coordinate: 498434
Contractor: GEOPROJECTS INTERNATIONAL, Inc.	Elevation: 4235.09'
Drilling Method: 3.25" I.D. Hollow Stem Auger	Datum: MSL
US Army Corps of Engineers Tulsa District — Sverdrup ENVIRONMENTAL	Total Depth: 5.00'
	Borehole Dia.: 8.00"
	Static Water Level:
	Remarks:

Elevation (ft)	Depth (ft)	Recovery	Sample No.	Water Level	Graphic Log	USCS Code	Material Description	Vapor (ppm)	Notes
			SS-01			SM	SILTY SAND – reddish-brown, some gravel, dry	0	0'–1' Chemical analysis sample, collected by hand auger
			SS-02					0	2'–3' Chemical analysis sample, composite from cuttings. 3.5'–4' Chemical analysis sample
4230	5								
	10								
4220	15								
	20								
4210	25								
	30								
4200	35								
	40								
4190	45								
	50								
4180	55								

SWMU 14 (WSMR-33)
Phase II Soil Boring Logs

Location: White Sands Missile Range, New Mexico	Site Id: 1415SB01
Date(s): 12/08/93 - 12/08/93	X Coordinate: 1570645
Logged By: S. Brunton	Y Coordinate: 501822
Contractor: GEOPROJECTS INTERNATIONAL, Inc.	Elevation: 4214.00'
Drilling Method: 3.25" I.D. Hollow Stem Auger	Datum: MSL
US Army Corps of Engineers Tulsa District / Sverdrup ENVIRONMENTAL	Total Depth: 5.00'
	Borehole Dia.: 8.00"
	Static Water Level:
	Remarks:

Elevation (ft)	Depth (ft)	Recovery	Sample No.	Water Level	Graphic Log	USCS Code	Material Description	Vapor (ppm)	Notes
			SS-01			SW	SAND - reddish-brown, well graded, some [illegible] and gravel, damp	0	0'-1' Chemical analysis sample
							- brown, moist		2'-3' Chemical analysis sample
4210	5		SS-02				- grayish brown to gray	0	4'-4.7' Chemical analysis sample
								0	
	10								
4200	15								
	20								
4190	25								
	30								
4180	35								
	40								
4170	45								
	50								
4160	55								

SWMU 12 (WSMR-60)
Phase II Soil Boring Logs

Location: White Sands Missile Range, New Mexico	Site ID: 12175901
Date(s): 12/07/93 – 12/07/93	X Coordinate: 1570513
Logged By: S. Brunton	Y Coordinate: 501850
Contractor: GEOPROJECTS INTERNATIONAL, Inc.	Elevation: 4218.44'
Drilling Method: 3.25" I.D. Hollow Stem Auger	Datum: MSL
US Army Corps of Engineers Tulsa District — Sverdrup ENVIRONMENTAL	Total Depth: 10.00'
	Borehole Dia.: 8.00"
	Static Water Level:
	Remarks:

Elevation (ft)	Depth (ft)	Recovery	Sample No.	Water Level	Graphic Log	USCS Code	Material Description	Vapor (ppm)	Notes
			SS-01			SM	SILTY SAND – asphalt in top 0.2', oil/diesel odor and stained fill gravel to 0.7', stained to reddish-brown, some gravel, moist	1–5	1'–2' Chemical analysis sample
	5		SS-02			SP	FINE SAND – brown, some gravel, moist	0	4'–5' Chemical analysis sample
4210						GP	SANDY GRAVEL – brown, moist	0	
	10		SS-03			ML	SILTY SAND – red, some gravel, moist	1–2	9'–10' Chemical analysis sample
	15								
4200	20								
	25								
4190	30								
	35								
4180	40								
	45								
4170	50								
	55								
4160									

Location: White Sands Missile Range, New Mexico	Site ID: 12175B01
Date(s): 12/08/93 - 12/08/93	X Coordinate: 1570536
Logged By: S. Brunton	Y Coordinate: 501852
Contractor: GEOPROJECTS INTERNATIONAL, Inc.	Elevation: 4217.66'
Drilling Method: 3.25" I.D. Hollow Stem Auger	Datum: MSL
US Army Corps of Engineers Tulsa District — Sverdrup ENVIRONMENTAL	Total Depth: 10.00'
	Borehole Dia.: 8.00"
	Static Water Level:
	Remarks:

Elevation (ft)	Depth (ft)	Recovery	Sample No.	Water Level	Graphic Log	USCS Code	Material Description	Vapor (ppm)	Notes
			SS-01			SM	SILTY SAND - asphalt in top 0.2, staining and diesel odor to 0.75', red to brown, damp	1-2	1'-2' Chemical analysis sample
	5		SS-02			SW	SAND - brown, well graded, moist	0	4'-5' Chemical analysis sample
4210									
	10		SS-03			GP SM	SANDY GRAVEL - brown, coarse grained sand, dry SILTY SAND - red, fine grained sand, dry		9'-9.5' Chemical analysis sample
	15								
4200									
	20								
	25								
4190									
	30								
	35								
4180									
	40								
	45								
4170									
	50								
	55								
4160									

Location: White Sands Missile Range, New Mexico	Site Id: 1213SB03
Date(s): 12/13/93 – 12/15/93	X Coordinate: 1570554
Logged By: S. Brunton	Y Coordinate: 501789
Contractor: GEOPROJECTS INTERNATIONAL, Inc.	Elevation: 4216.54'
Drilling Method: 3.25" I.D. Hollow Stem Auger	Datum: MSL
US Army Corps of Engineers Tulsa District / Sverdrup ENVIRONMENTAL	Total Depth: 10.50'
	Borehole Dia.: 8.00"
	Static Water Level:
	Remarks:

Elevation (ft)	Depth (ft)	Recovery	Sample No.	Water Level	Graphic Log	USCS Code	Material Description	Vapor (ppm)	Notes
			SS-01			SM	SILTY SAND – asphalt and gravel sub-base to 0.3'; reddish-brown, fine grained, some gravel, dry	0	1'–2' Chemical analysis sample
						SP	SAND – brown, poorly graded, fine grained, some gravel, dry		
	5		SS-02					0	4.5'–5.5' Chemical analysis sample
4210						ML	SANDY SILT – reddish-brown, some clay and small gravel to cobbles, dry		
	10		SS-03					0 0	9.5'–10.5' Chemical analysis sample
	15								
4200									
	20								
	25								
4190									
	30								
	35								
4180									
	40								
	45								
4170									
	50								
	55								
4160									

SWMU 16 (WSMR-79)
Phase II Soil Boring Logs

Location: White Sands Missile Range, New Mexico	Site Id: 0016SB01
Date(s): 12/04/93 – 12/04/93	X Coordinate: 1570373
Logged By: J. Niffenegger	Y Coordinate: 499538
Contractor: GEOPROJECTS INTERNATIONAL, Inc.	Elevation: 4218.53'
Drilling Method: 3.25" I.D. Hollow Stem Auger	Datum: MSL
US Army Corps of Engineers Tulsa District / Sverdrup ENVIRONMENTAL	Total Depth: 20.00'
	Borehole Dia.: 7.00"
	Static Water Level:
	Remarks:

Elevation (ft)	Depth (ft)	Recovery	Sample No.	Water Level	Graphic Log	USCS Code	Material Description	Vapor (ppm)	Notes
			SS-01			SW	Asphalt and gravel sub-base SAND – reddish-brown, medium to fine grained, with little coarse sand and silt		0.5'–2' Chemical analysis sample
			SS-02					0	
	5		SS-03						4'–6' Chemical analysis sample
			SS-04					0	
4210			SS-05						9'–10' Chemical analysis sample
	10		SS-06					0	
			SS-07						14'–15' Chemical analysis sample
	15		SS-08					0	
			SS-09						
4200			SS-10						19'–20' Chemical analysis sample
	20							0	
	25								
4190									
	30								
	35								
4180									
	40								
	45								
4170									
	50								
	55								
4160									

Appendix E
Civil Survey Data

Appendix E
Civil Survey Data

Point No.	Description	Shaw ID	NMSP - Central		NAVD88	WGS 1984 UTM Zone 13N	
			Northing (ft)	Easting (ft)	Elevation (ft)	Northing (m)	Easting (m)
1520	WSMR30/003	80-BH01	497107.4557	1578838.129	4111.574	3581981.151	363633.0663
1521	WSMR30/004	80-BH02	497143.6866	1579014.236	4108.6816	3581991.566	363686.865
1523	WSMR30/006	80-BH03	497199.4117	1578417.39	4116.8666	3582010.673	363505.1705
1525	WSMR30/007	80-BH04	497486.2032	1578364.282	4118.2865	3582098.264	363490.0063
1526	WSMR30/008	80-BH05	497680.1867	1578404.888	4119.0317	3582157.238	363503.0719
1527	WSMR30/009	80-BH06	497950.3314	1578424.819	4119.6628	3582239.495	363510.1079
1524	WSMR30/015	80-BH07	497531.8363	1578680.365	4113.9358	3582111.046	363586.4973
1522	WSMR30/005	80-BH08	497253.5987	1578695.334	4112.5544	3582026.198	363590.0687
1529	WSMR30/014	80-BH09	498012.6141	1578740.967	4114.3783	3582257.351	363606.678
1528	WSMR30/010	80-BH10	498172.6691	1578574.721	4117.7104	3582306.72	363556.5831
1531	WSMR30/011	80-BH11	498242.6708	1578816.357	4114.6783	3582327.193	363630.4725
1530	WSMR30/013	80-BH12	498083.7505	1578937.297	4112.0423	3582278.331	363666.7641
1532	WSMR30/012	80-BH13	498201.6543	1579133.448	4109.6718	3582313.564	363726.9622
1518	WSMR30/001	80-BH14	497672.9117	1578914.917	4110.172	3582153.205	363658.481
1519	WRMR30/002	80-BH15	497340.6706	1578946.52	4105.7751	3582051.839	363666.9294
1541	MP/BH01	MP-BH01	507204.4292	1566149.244	4333.3275	3585103.483	359801.9794
1540	MP/BH02	MP-BH02	507446.1304	1566885.086	4320.6136	3585174.522	360027.0961
1539	MP/BH03	MP-BH03	507552.5366	1568037.836	4308.5248	3585202.843	360378.7871

Appendix E (continued)
Civil Survey Data

Point No.	Description	Shaw ID	NMSP - Central		NAVD88	WGS 1984 UTM Zone 13N	
			Northing (ft)	Easting (ft)	Elevation (ft)	Northing (m)	Easting (m)
1538	MP/BH04	MP-BH04	507696.6995	1569806.147	4274.2189	3585240.477	360918.2104
1547	MP/BH05	MP-BH05	501543.9484	1562628.435	4410.6829	3583390.932	358708.8114
1546	MP/BH06	MP-BH06	502847.7378	1562478.705	4422.1239	3583788.809	358667.8232
1545	MP/BH07	MP-BH07	502925.3797	1562484.526	4420.1189	3583812.451	358669.8736
1544	MP/BH08	MP-BH08	504517.4687	1562735.061	4416.6052	3584296.766	358751.8979
1543	MP/BH09	MP-BH09	504593.9632	1562818.789	4413.8594	3584319.78	358777.6875
1542	MP/BH10	MP-BH10	506450.4010	1564116.972	4382.2083	3584880.925	359179.9366
1537	MP/BH011	MP-BH11	506471.3359	1571507.205	4246.0882	3584860.976	361432.2574
1536	MP/BH12	MP-BH12	507069.2544	1571887.54	4232.8491	3585041.842	361550.2983
1535	MP/BH13	MP-BH13	506070.5785	1572133.873	4231.929	3584736.609	361621.8124
1534	MP/BH14	MP-BH14	506965.4141	1572732.175	4217.5783	3585007.186	361807.338
1533	MP/BH15	MP-BH15	506300.7335	1572953.021	4213.4868	3584803.833	361872.2747
1553	LC37/001	140-BH01	513842.8323	1625977.652	4068.5839	3586913.346	378058.4762
1549	LC37/002	140-BH02	513748.7061	1626266.084	4068.9585	3586883.634	378146.0385
1550	LC37/003	140-BH03	513649.8708	1626227.755	4069.3181	3586853.651	378134.0058
1551	LC37/004	140-BH04	513622.9098	1626112.29	4068.1235	3586845.846	378098.7223
1552	LC37/005	140-BH05	513750.2909	1626158.321	4069.734	3586884.501	378113.204
1554	LC37/006	140-BH06	513851.5156	1626603.736	4071.1561	3586913.761	378249.3022

Appendix E (continued)
Civil Survey Data

Point No.	Description	Shaw ID	NMSP - Central		NAVD88	WGS 1984 UTM Zone 13N	
			Northing (ft)	Easting (ft)	Elevation (ft)	Northing (m)	Easting (m)
1555	LC37/007	140-BH07	513974.3085	1626623.142	4067.1769	3586951.112	378255.6537
1556	LC37/008	140-BH08	514102.3236	1626681.909	4068.2564	3586989.914	378274.0192
1557	LC37/009	140-BH09	514238.3358	1626624.666	4067.8739	3587031.567	378257.0595
1558	LC37/010	140-BH10	514322.4604	1626258.82	4066.9818	3587058.508	378145.8699
1561	LC37/011	140-BH11	515408.3315	1626512.197	4070.5426	3587388.517	378226.9556
1560	LC37/012	140-BH12	515579.1032	1626779.873	4070.0933	3587439.605	378309.137
1559	LC37/013	140-BH13	515362.9833	1627214.379	4070.3415	3587372.195	378440.7797
1563	LC37/014	140-BH14	515399.1373	1625810.921	4067.081	3587388.215	378013.2133
1562	LC37/015	140-BH15	515646.2628	1626099.292	4069.2775	3587462.497	378101.9736

Surveying performed by Del Sur Surveying, LLC, HC 30 Box 61, Mesilla Park, NM 88047, 575-496-7042.

ft = Feet.
ID = Identification.
m = Meters.
NAVD88 = North American Vertical Datum of 1988
NMSP = New Mexico State Plane.
No. = Number.
UTM = Universal Transverse Mercator.
WGS = World Geodetic System.

Appendix F
Laboratory Data Reports

Microbac

Laboratory Report Number: L12030945

Mark Lyon
Environmental Waste Solutions
2440 Louisiana Blvd
Albuquerque, NM 87110

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac's Ohio Valley Division (OVD). If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed below.

Laboratory Contact:
Stephanie Mossburg – Team Chemist/Data Specialist
(740) 373-4071
Stephanie.Mossburg@microbac.com

I certify that all test results meet all of the requirements of the DoD QSM and other applicable contract terms and conditions. Any exceptions are attached to this cover page or addressed in the method narratives presented in the report. All results for soil samples are reported on a 'dry-weight' basis unless specified otherwise. Analytical results for water and wastes are reported on a 'as received' basis unless specified otherwise. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories, DoD ELAP certification number 2936.01. The reported results are related only to the samples analyzed as received.

This report was certified on April 13 2012

David Vandenberg – Managing Director

State of Origin: NM
Accrediting Authority: N/A ID:N/A
QAPP: DOD Ver 4.1

Microbac

Lab Report #: L12030945
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Record of Sample Receipt and Inspection

Comments/Discrepancies

This is the record of the shipment conditions and the inspection records for the samples received and reported as a sample delivery group (SDG). All of the samples were inspected and observed to conform to our receipt policies, except as noted below.

There were no discrepancies.

Discrepancy	Resolution

Coolers

Cooler #	Temperature Gun	Temperature	COC #	Airbill #
0016050	H	1.0		1015923873910004575000795544106768
0016873	H	2.0		1015923873910004575000795544106780
0015972	H	2.0		1015923873910004575000795544106779
0016692	H	2.0		1015923873910004575000795544106757
0016599	H	2.0		1002239573910004575000873013169518

Inspection Checklist

#	Question	Result
1	Were shipping coolers sealed?	Yes
2	Were custody seals intact?	Yes
3	Were cooler temperatures in range of 0-6?	Yes
4	Was ice present?	Yes
5	Were COC's received/information complete/signed and dated?	Yes
6	Were sample containers intact and match COC?	Yes
7	Were sample labels intact and match COC?	Yes
8	Were the correct containers and volumes received?	Yes
9	Were samples received within EPA hold times?	Yes
10	Were correct perservatives used? (water only)	NA
11	Were pH ranges acceptable? (voa's excluded)	NA
12	Were VOA samples free of headspace (less than 6mm)?	NA

Microbac Laboratories ● Ohio Valley Division
158 Starlite Drive, Marietta, OH 45750 ● T: (740)373-4071 F: (740)373-4835
www.microbac.com

Microbac

Lab Report #: L12030945
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Samples Received

Client ID	Laboratory ID	Date Collected	Date Received
MP-BH01-1	L12030945-01	03/22/2012 12:29	03/27/2012 11:24
MP-BH01-2	L12030945-02	03/22/2012 12:31	03/27/2012 11:24
MP-BH01-3	L12030945-03	03/22/2012 12:35	03/27/2012 11:24
MP-BH02-1	L12030945-04	03/22/2012 14:18	03/27/2012 11:24
MP-BH02-2	L12030945-05	03/22/2012 14:20	03/27/2012 11:24
MP-BH02-3	L12030945-06	03/22/2012 14:25	03/27/2012 11:24
MP-BH02-FD1	L12030945-07	03/22/2012 14:18	03/27/2012 11:24
MP-BH03-1	L12030945-08	03/22/2012 14:49	03/27/2012 11:24
MP-BH03-2	L12030945-09	03/22/2012 14:52	03/27/2012 11:24
MP-BH03-3	L12030945-10	03/22/2012 14:56	03/27/2012 11:24
MP-BH04-1	L12030945-11	03/23/2012 12:42	03/27/2012 11:24
MP-BH04-2	L12030945-12	03/23/2012 12:50	03/27/2012 11:24
MP-BH04-3	L12030945-13	03/23/2012 12:53	03/27/2012 11:24
MP-BH04-MS3	L12030945-14	03/23/2012 12:53	03/27/2012 11:24
MP-BH04-MSD3	L12030945-15	03/23/2012 12:53	03/27/2012 11:24
MP-BH05-1	L12030945-16	03/23/2012 08:43	03/27/2012 11:24
MP-BH05-2	L12030945-17	03/22/2012 08:48	03/27/2012 11:24
MP-BH05-3	L12030945-18	03/22/2012 08:53	03/27/2012 11:24
MP-BH05-FD2	L12030945-19	03/22/2012 08:48	03/27/2012 11:24
MP-BH05-RB	L12030945-20	03/22/2012 12:56	03/27/2012 11:24
MP-BH06-1	L12030945-21	03/22/2012 09:19	03/27/2012 11:24
MP-BH06-2	L12030945-22	03/22/2012 09:23	03/27/2012 11:24
MP-BH06-3	L12030945-23	03/22/2012 09:26	03/27/2012 11:24
MP-BH07-1	L12030945-24	03/22/2012 09:39	03/27/2012 11:24
MP-BH07-2	L12030945-25	03/22/2012 09:45	03/27/2012 11:24
MP-BH07-3	L12030945-26	03/22/2012 09:48	03/27/2012 11:24
MP-BH08-1	L12030945-27	03/22/2012 10:32	03/27/2012 11:24
MP-BH08-2	L12030945-28	03/22/2012 10:38	03/27/2012 11:24
MP-BH08-3	L12030945-29	03/22/2012 10:41	03/27/2012 11:24
MP-BH08-MS1	L12030945-30	03/22/2012 10:32	03/27/2012 11:24
MP-BH08-MSD1	L12030945-31	03/22/2012 10:32	03/27/2012 11:24
MP-BH09-1	L12030945-32	03/22/2012 10:57	03/27/2012 11:24
MP-BH09-2	L12030945-33	03/22/2012 10:59	03/27/2012 11:24
MP-BH09-3	L12030945-34	03/22/2012 11:02	03/27/2012 11:24
MP-BH10-1	L12030945-35	03/22/2012 11:47	03/27/2012 11:24
MP-BH10-2	L12030945-36	03/22/2012 11:51	03/27/2012 11:24
MP-BH10-3	L12030945-37	03/22/2012 11:55	03/27/2012 11:24

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MP-BH10-FD3	L12030945-38	03/22/2012 11:55	03/27/2012 11:24
MP-BH11-1	L12030945-39	03/22/2012 15:36	03/27/2012 11:24
MP-BH11-2	L12030945-40	03/22/2012 15:42	03/27/2012 11:24
MP-BH11-3	L12030945-41	03/22/2012 15:46	03/27/2012 11:24
MP-BH12-1	L12030945-42	03/22/2012 16:07	03/27/2012 11:24
MP-BH12-2	L12030945-43	03/22/2012 16:13	03/27/2012 11:24
MP-BH12-3	L12030945-44	03/22/2012 16:17	03/27/2012 11:24
MP-BH12-FD1	L12030945-45	03/22/2012 16:07	03/27/2012 11:24
MP-BH13-1	L12030945-46	03/22/2012 10:11	03/27/2012 11:24
MP-BH13-2	L12030945-47	03/22/2012 10:18	03/27/2012 11:24
MP-BH13-3	L12030945-48	03/22/2012 10:23	03/27/2012 11:24
MP-BH14-1	L12030945-49	03/22/2012 16:37	03/27/2012 11:24
MP-BH14-2	L12030945-50	03/22/2012 16:41	03/27/2012 11:24
MP-BH14-3	L12030945-51	03/22/2012 16:44	03/27/2012 11:24
MP-BH15-1	L12030945-52	03/23/2012 10:49	03/27/2012 11:24
MP-BH15-2	L12030945-53	03/23/2012 10:54	03/27/2012 11:24
MP-BH15-3	L12030945-54	03/23/2012 11:00	03/27/2012 11:24
MP-BH15-FD2	L12030945-55	03/23/2012 10:54	03/27/2012 11:24
MP-BH15-RB	L12030945-56	03/22/2012 16:50	03/27/2012 11:24

Login Number: L12030945
Department: Metals
Analyst: Pierce Morris
Analyst #2: Sheri Pfalzgraf

METHOD

Preparation: SW-846 3051/3005

Analysis: SW-846 6010

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Interference Check Standards: All acceptance criteria were met.

Continuing Calibration Verification: WG393670 - Due to continuing calibration verification failure for calcium, iron and magnesium on 02-APR-2012 at 19:58, client samples 01 through 17 and batch QA/QC were reanalyzed on a later calibration which was compliant for calcium, iron and magnesium. Due to continuing calibration verification failure for beryllium on 04-APR-2012 at 12:14, client sample16 was reanalyzed on a later calibration which was compliant for beryllium.

WG393671 - Due to continuing calibration verification failure for iron on 02-APR-2012 at 22:44, client samples 18 through 40 and batch QA/QC were reanalyzed on a later calibration which was compliant for iron.

WG393672 - Due to continuing calibration verification failure for iron on 03-APR-2012 at 00:01, client sample 41 through 55 and batch QA/QC were reanalyzed on a later calibration which was compliant for iron. Due to continuing calibration verification failure for beryllium on 03-APR-2012 at 01:29, client samples 46 through 55 were reanalyzed on a later calibration which was compliant for beryllium.

Continuing Calibration Blank: All acceptance criteria were met.

BATCH QA/QC

Method Blank: WG393671 - On initial analysis, the method blank associated with this analytical batch yielded a result for zinc which exceeded the LOD. All QA/QC and client samples were reanalyzed for zinc with a compliant method blank.

WG393777 - Due to method blank failure, client samples 20 and 56 as well as the batch QA/QC were reanalyzed for calcium on a later calibration.

Laboratory Control Sample: All acceptance criteria were met.

Serial Dilution/Post Digestion Spikes: WG393670 - Aluminum for client sample 01 was reported from a five-fold dilution where the 25-fold serial dilution was compliant.

WG393671 - All acceptance criteria were met.

WG393672 - All acceptance criteria were met.

WG393777 - All acceptance criteria were met.

Matrix Spikes: WG393671 - Sample 27 was chosen by the client for MS/MSD analysis. Samples 30 (MS) and 31 (MSD) yielded noncompliant recoveries for seven analytes.

WG393670 - Sample 13 was chosen by the client for MS/MSD analysis. Samples 14 (MS) and 15 (MSD) yielded noncompliant recoveries for five analytes and a noncompliant RPD for calcium.
.

SAMPLES

Samples: WG393670 - Due to results that were noncompliant on the negative side upon initial analysis, beryllium for client samples 16 and 17 was reported from two fold dilution analyses. Due to lack of remaining digestate volume, reanalyses for calcium, iron and magnesium were performed at dilutions.

WG393671 - Due to results that were noncompliant on the negative side upon initial analysis, beryllium for client samples 18,19 ,21 ,24, 27, 28, 29, 33, 34 and 36 was reported from two fold dilution analyses. For consistency with reference sample 27, client samples 30(MS) and 31(MSD) were also reanalyzed at dilutions for beryllium. The iron and zinc results were also reported from the dilution analyses.

WG393672 - Due to a result that was noncompliant on the negative side upon initial analysis, beryllium for client samples 48 and 50 was reported from two fold dilution analyses.

Narrative ID: 44274
Approved By: Sheri Pfalzgraf

Login Number: L12030945
Department: Metals
Analyst: Ji Hu

METHOD

Preparation: SW-846 3015/3051

Analysis: SW-846 6020

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Interference Check Standards: All acceptance criteria were met.

Continuing Calibration: All acceptance criteria were met.

Continuing Calibration Blank: All acceptance criteria were met.

Low Level Check: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Serial Dilution/Post Digestion Spikes: WG393616 - All acceptance criteria were met.

WG393740 - All acceptance criteria were met.

WG393741 - All acceptance criteria were met.

WG394021 - All acceptance criteria were met.

WG394120 - All acceptance criteria were met.

WG394181 - All acceptance criteria were met.

WG394302 - All acceptance criteria were met.

Matrix Spikes: WG393740 - Sample 13 was chosen by the client for MS/MSD analysis. Samples 14(MS) and 15(MSD) yielded noncompliant recoveries for eight analytes.

WG393741 - Sample 27 was chosen by the client for MS/MSD analysis. Samples 30(MS) and 31(MSD) yielded noncompliant recoveries for four analytes.

WG394120 - Sample 13 was chosen by the client for MS/MSD analysis. Samples 14(MS) and 15(MSD) yielded a noncompliant recovery for silver.

WG394302 - Sample 27 was chosen by the client for MS/MSD analysis. Samples 30(MS) and 31(MSD) yielded noncompliant recoveries for silver.

SAMPLES

Samples: WG393740 - Due to high levels of nontarget analytes, all client samples were analyzed at dilutions for all analytes. Client samples 01, 02, 04, 05, 07, 08, and 13 required greater dilution analyses in order to obtain results for manganese within the calibration range. For consistency with the reference 13, batch QC samples 14(MS) and 15(MSD) were also reanalyzed at greater dilutions for manganese.

WG393741 - Due to high levels of nontarget analytes, all client samples were analyzed at dilutions for all analytes. Client samples 25, 31(MSD), 32, 37, 38, 39, 41, 42, 43, and 45 required greater dilution analyses in order to obtain results for manganese within the calibration range. For consistency with sample 31(MSD), reference sample 27 and sample 30(MS) were also reanalyzed at greater dilutions for manganese.

WG394021 - Due to high levels of nontarget analytes, all client samples were analyzed at dilutions for all analytes. Client samples 46, 47, 48, 49, 51, 52 and 54 required further dilution analyses in order to obtain results for manganese within the calibration range.

WG394120 - Due to high levels of nontarget analytes, all client samples were analyzed at dilutions for silver.

WG394181 - Due to high levels of nontarget analytes, all client samples were analyzed at dilutions for all analytes.

WG394302 - Due to high levels of nontarget analytes, all client samples were analyzed at dilutions for all analytes.

Narrative ID: 44122
Approved By: Sheri Pfalzgraf
Sheri L. Pfalzgraf

Login Number: L12030945
Department: Metals - AA
Analyst: Pierce Morris

METHOD

Preparation: SW-846 7470/7471

Analysis: SW-846 7470/7471

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Interference Check Standards: All acceptance criteria were met.

Continuing Calibration Verification: All acceptance criteria were met.

Continuing Calibration Blank: WG393836 - The continuing calibration blank analyzed on 02-APR-12 at 13:25 yielded a result for mercury of 0.1 ug/L which equals the limit of detection. However, since all the samples were non-detect for mercury, no further action was taken.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Serial Dilution/Post Digestion Spikes: WG393633 - All acceptance criteria were met.

WG393636 - All acceptance criteria were met.

WG393836 - All acceptance criteria were met.

WG394265 - All acceptance criteria were met.

Matrix Spikes: WG393633 - Sample 13 was chosen by the client for MS/MSD analysis. Samples 14(MS) and 15(MSD) met all acceptance criteria.

WG393636 - Sample 27 was chosen by the client for MS/MSD analysis. Samples 30(MS) and 31(MSD) met all acceptance criteria.

SAMPLES

Samples: WG393636 - The stannous chloride reducing agent ran out during the analysis of client samples 27 through 45. The samples were reanalyzed on a later calibration.

Narrative ID: 44237
Approved By: Sheri Pfalzgraf

Certificate of Analysis

Sample #:	L12030945-01	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH01-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 07:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393670	**Analyst:**	PDM	**Run Date:**	04/02/2012 20:17
Collect Date:	03/22/2012 12:29	**Dilution:**	1	**File ID:**	T1.040212.201713
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	95.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0		U	0.747	0.373
Beryllium, Total	7440-41-7	0.215		0.0747	0.0373
Potassium, Total	7440-09-7	2270		37.3	18.7
Silver, Total	7440-22-4	1.06		0.149	0.0747
Sodium, Total	7440-23-5	34.3		18.7	9.33
Zinc, Total	7440-66-6	28.8		0.747	0.373

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-01	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH01-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 07:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393670	**Analyst:**	PDM	**Run Date:**	04/02/2012 20:24
Collect Date:	03/22/2012 12:29	**Dilution:**	5	**File ID:**	T1.040212.202442
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	95.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	7270		74.7	37.3

Sample #:	L12030945-01	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH01-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 07:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/04/2012 09:22
Workgroup #:	WG393670	**Analyst:**	PDM	**Run Date:**	04/04/2012 11:44
Collect Date:	03/22/2012 12:29	**Dilution:**	10	**File ID:**	T1.040412.114401
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	95.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	2300		74.7	37.3
Iron, Total	7439-89-6	14200		22.4	11.2
Magnesium, Total	7439-95-4	2890		187	93.3

Certificate of Analysis

Sample #:	L12030945-01	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH01-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:17
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/30/2012 15:08
Workgroup #:	WG393740	**Analyst:**	JYH	**Run Date:**	03/30/2012 15:58
Collect Date:	03/22/2012 12:29	**Dilution:**	5	**File ID:**	NI.033012.155830
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	95.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	2.10		1.53	0.764
Barium, Total	7440-39-3	46.4		1.53	0.764
Cadmium, Total	7440-43-9		U	0.509	0.255
Chromium, Total	7440-47-3	2.79		2.04	1.02
Cobalt, Total	7440-48-4	4.51		2.55	1.27
Copper, Total	7440-50-8	13.5		3.05	1.53
Lead, Total	7439-92-1	12.7		1.02	0.509
Nickel, Total	7440-02-0	4.25		4.07	2.04
Selenium, Total	7782-49-2		U	1.02	0.509
Thallium, Total	7440-28-0	0.105	J	0.204	0.102
Vanadium, Total	7440-62-2	10.8		2.55	1.27

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-01	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH01-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 07:42
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394120	**Analyst:**	JYH	**Run Date:**	04/04/2012 11:37
Collect Date:	03/22/2012 12:29	**Dilution:**	20	**File ID:**	NI.040412.113733
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	95.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.99	1.49

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-01	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH01-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:17
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393740	**Analyst:**	JYH	**Run Date:**	04/02/2012 14:30
Collect Date:	03/22/2012 12:29	**Dilution:**	50	**File ID:**	NI.040212.143021
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	95.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	299		10.2	5.09

Certificate of Analysis

Sample #:	L12030945-01	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MP-BH01-1	**Prep Method:**	7471	**Prep Date:**	03/28/2012 13:49
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/30/2012 09:42
Workgroup #:	WG393633	**Analyst:**	PDM	**Run Date:**	03/30/2012 10:20
Collect Date:	03/22/2012 12:29	**Dilution:**	1	**File ID:**	HY.033012.102056
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	95.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0988	0.00988

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-02	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH01-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 07:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393670	**Analyst:**	PDM	**Run Date:**	04/02/2012 20:32
Collect Date:	03/22/2012 12:31	**Dilution:**	1	**File ID:**	T1.040212.203207
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	3470		14.4	7.21
Antimony, Total	7440-36-0		U	0.721	0.361
Beryllium, Total	7440-41-7	0.299		0.0721	0.0361
Potassium, Total	7440-09-7	1360		36.1	18.0
Silver, Total	7440-22-4	0.352		0.144	0.0721
Sodium, Total	7440-23-5	79.2		18.0	9.02
Zinc, Total	7440-66-6	20.3		0.721	0.361

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-02	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH01-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 07:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/04/2012 09:22
Workgroup #:	WG393670	**Analyst:**	PDM	**Run Date:**	04/04/2012 11:55
Collect Date:	03/22/2012 12:31	**Dilution:**	10	**File ID:**	T1.040412.115525
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	3810		72.1	36.1
Iron, Total	7439-89-6	12600		21.6	10.8
Magnesium, Total	7439-95-4	2860		180	90.2

Certificate of Analysis

Sample #:	L12030945-02	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH01-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:17
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/30/2012 15:08
Workgroup #:	WG393740	**Analyst:**	JYH	**Run Date:**	03/30/2012 16:01
Collect Date:	03/22/2012 12:31	**Dilution:**	5	**File ID:**	NI.033012.160117
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	0.795	J	1.48	0.742
Barium, Total	7440-39-3	38.7		1.48	0.742
Cadmium, Total	7440-43-9		U	0.495	0.247
Chromium, Total	7440-47-3	2.10		1.98	0.990
Cobalt, Total	7440-48-4	3.84		2.47	1.24
Copper, Total	7440-50-8	9.48		2.97	1.48
Lead, Total	7439-92-1	8.57		0.990	0.495
Nickel, Total	7440-02-0	3.97		3.96	1.98
Selenium, Total	7782-49-2		U	0.990	0.495
Thallium, Total	7440-28-0		U	0.198	0.0990
Vanadium, Total	7440-62-2	6.54		2.47	1.24

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-02	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH01-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 07:42
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394120	**Analyst:**	JYH	**Run Date:**	04/04/2012 11:40
Collect Date:	03/22/2012 12:31	**Dilution:**	20	**File ID:**	NI.040412.114020
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.89	1.44

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-02	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH01-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:17
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393740	**Analyst:**	JYH	**Run Date:**	04/02/2012 15:09
Collect Date:	03/22/2012 12:31	**Dilution:**	25	**File ID:**	NI.040212.150953
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	233		4.95	2.47

Certificate of Analysis

Sample #:	L12030945-02	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MP-BH01-2	**Prep Method:**	7471	**Prep Date:**	03/28/2012 13:50
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/30/2012 09:42
Workgroup #:	WG393633	**Analyst:**	PDM	**Run Date:**	03/30/2012 10:24
Collect Date:	03/22/2012 12:31	**Dilution:**	1	**File ID:**	HY.033012.102442
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0998	0.00998

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-03	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH01-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 07:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393670	**Analyst:**	PDM	**Run Date:**	04/02/2012 20:35
Collect Date:	03/22/2012 12:35	**Dilution:**	1	**File ID:**	T1.040212.203547
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.3

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	4760		15.3	7.63
Antimony, Total	7440-36-0		U	0.763	0.382
Beryllium, Total	7440-41-7	0.240		0.0763	0.0382
Potassium, Total	7440-09-7	1370		38.2	19.1
Silver, Total	7440-22-4	0.745		0.153	0.0763
Sodium, Total	7440-23-5	178		19.1	9.54
Zinc, Total	7440-66-6	23.8		0.763	0.382

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-03	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH01-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 07:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/04/2012 09:22
Workgroup #:	WG393670	**Analyst:**	PDM	**Run Date:**	04/04/2012 11:59
Collect Date:	03/22/2012 12:35	**Dilution:**	10	**File ID:**	T1.040412.115913
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.3

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	4290		76.3	38.2
Iron, Total	7439-89-6	13300		22.9	11.4
Magnesium, Total	7439-95-4	3060		191	95.4

Certificate of Analysis

Sample #:	L12030945-03	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH01-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:17
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/30/2012 15:08
Workgroup #:	WG393740	**Analyst:**	JYH	**Run Date:**	03/30/2012 16:15
Collect Date:	03/22/2012 12:35	**Dilution:**	5	**File ID:**	NI.033012.161512
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.3

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.51	J	1.54	0.771
Barium, Total	7440-39-3	47.8		1.54	0.771
Cadmium, Total	7440-43-9		U	0.514	0.257
Chromium, Total	7440-47-3	2.40		2.05	1.03
Cobalt, Total	7440-48-4	3.32		2.57	1.28
Copper, Total	7440-50-8	5.97		3.08	1.54
Lead, Total	7439-92-1	8.55		1.03	0.514
Manganese, Total	7439-96-5	193		1.03	0.514
Nickel, Total	7440-02-0	3.46	J	4.11	2.05
Selenium, Total	7782-49-2		U	1.03	0.514
Thallium, Total	7440-28-0		U	0.205	0.103
Vanadium, Total	7440-62-2	9.75		2.57	1.28

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-03	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH01-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 07:42
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394120	**Analyst:**	JYH	**Run Date:**	04/04/2012 11:54
Collect Date:	03/22/2012 12:35	**Dilution:**	20	**File ID:**	NI.040412.115414
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	97.3

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.05	1.53

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030945-03	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MP-BH01-3	**Prep Method:**	7471	**Prep Date:**	03/28/2012 13:50
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/30/2012 09:42
Workgroup #:	WG393633	**Analyst:**	PDM	**Run Date:**	03/30/2012 10:26
Collect Date:	03/22/2012 12:35	**Dilution:**	1	**File ID:**	HY.033012.102646
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.3

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0980	0.00980

U — Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-04	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH02-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 07:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393670	**Analyst:**	PDM	**Run Date:**	04/02/2012 20:39
Collect Date:	03/22/2012 14:18	**Dilution:**	1	**File ID:**	T1.040212.203924
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	95.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	7230		14.3	7.13
Antimony, Total	7440-36-0		U	0.713	0.357
Beryllium, Total	7440-41-7	0.533		0.0713	0.0357
Potassium, Total	7440-09-7	2060		35.7	17.8
Silver, Total	7440-22-4	0.405		0.143	0.0713
Sodium, Total	7440-23-5	37.3		17.8	8.92
Zinc, Total	7440-66-6	27.5		0.713	0.357

U — Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-04	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH02-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 07:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/04/2012 09:22
Workgroup #:	WG393670	**Analyst:**	PDM	**Run Date:**	04/04/2012 12:03
Collect Date:	03/22/2012 14:18	**Dilution:**	10	**File ID:**	T1.040412.120303
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	95.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	2890		71.3	35.7
Iron, Total	7439-89-6	17700		21.4	10.7
Magnesium, Total	7439-95-4	3480		178	89.2

Certificate of Analysis

Sample #:	L12030945-04	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH02-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:17
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/30/2012 15:08
Workgroup #:	WG393740	**Analyst:**	JYH	**Run Date:**	03/30/2012 16:17
Collect Date:	03/22/2012 14:18	**Dilution:**	5	**File ID:**	NI.033012.161759
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	95.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	2.31		1.48	0.739
Barium, Total	7440-39-3	60.0		1.48	0.739
Cadmium, Total	7440-43-9		U	0.493	0.246
Chromium, Total	7440-47-3	3.66		1.97	0.986
Cobalt, Total	7440-48-4	5.13		2.46	1.23
Copper, Total	7440-50-8	13.4		2.96	1.48
Lead, Total	7439-92-1	14.1		0.986	0.493
Nickel, Total	7440-02-0	5.32		3.94	1.97
Selenium, Total	7782-49-2		U	0.986	0.493
Thallium, Total	7440-28-0	0.110	J	0.197	0.0986
Vanadium, Total	7440-62-2	12.2		2.46	1.23

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-04	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH02-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 07:42
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394120	**Analyst:**	JYH	**Run Date:**	04/04/2012 11:57
Collect Date:	03/22/2012 14:18	**Dilution:**	20	**File ID:**	NI.040412.115701
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	95.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.85	1.43

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-04	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH02-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:17
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393740	**Analyst:**	JYH	**Run Date:**	04/02/2012 14:49
Collect Date:	03/22/2012 14:18	**Dilution:**	50	**File ID:**	NI.040212.144951
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	95.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	362		9.86	4.93

Certificate of Analysis

Sample #:	L12030945-04	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MP-BH02-1	**Prep Method:**	7471	**Prep Date:**	03/28/2012 13:51
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/30/2012 09:42
Workgroup #:	WG393633	**Analyst:**	PDM	**Run Date:**	03/30/2012 10:28
Collect Date:	03/22/2012 14:18	**Dilution:**	1	**File ID:**	HY.033012.102829
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	95.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6	0.0114	J	0.103	0.0103

J	Estimated value ; the analyte concentration was less than the LOQ.

Sample #:	L12030945-05	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH02-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 07:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393670	**Analyst:**	PDM	**Run Date:**	04/02/2012 20:50
Collect Date:	03/22/2012 14:20	**Dilution:**	1	**File ID:**	T1.040212.205032
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	3910		13.8	6.92
Antimony, Total	7440-36-0		U	0.692	0.346
Beryllium, Total	7440-41-7	0.132		0.0692	0.0346
Potassium, Total	7440-09-7	1140		34.6	17.3
Silver, Total	7440-22-4	0.745		0.138	0.0692
Sodium, Total	7440-23-5	59.5		17.3	8.65
Zinc, Total	7440-66-6	20.7		0.692	0.346

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-05	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH02-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 07:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/04/2012 09:22
Workgroup #:	WG393670	**Analyst:**	PDM	**Run Date:**	04/04/2012 12:06
Collect Date:	03/22/2012 14:20	**Dilution:**	10	**File ID:**	T1.040412.120650
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	4340		69.2	34.6
Iron, Total	7439-89-6	13600		20.8	10.4
Magnesium, Total	7439-95-4	2930		173	86.5

Certificate of Analysis

Sample #:	L12030945-05	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH02-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:17
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/30/2012 15:08
Workgroup #:	WG393740	**Analyst:**	JYH	**Run Date:**	03/30/2012 16:20
Collect Date:	03/22/2012 14:20	**Dilution:**	5	**File ID:**	NI.033012.162046
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.60		1.50	0.748
Barium, Total	7440-39-3	56.8		1.50	0.748
Cadmium, Total	7440-43-9		U	0.499	0.249
Chromium, Total	7440-47-3	2.52		1.99	0.997
Cobalt, Total	7440-48-4	3.95		2.49	1.25
Copper, Total	7440-50-8	7.45		2.99	1.50
Lead, Total	7439-92-1	9.80		0.997	0.499
Nickel, Total	7440-02-0	3.89	J	3.99	1.99
Selenium, Total	7782-49-2		U	0.997	0.499
Thallium, Total	7440-28-0		U	0.199	0.0997
Vanadium, Total	7440-62-2	13.1		2.49	1.25

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-05	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH02-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 07:42
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394120	**Analyst:**	JYH	**Run Date:**	04/04/2012 11:59
Collect Date:	03/22/2012 14:20	**Dilution:**	20	**File ID:**	NI.040412.115947
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	98.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.77	1.38

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-05	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH02-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:17
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393740	**Analyst:**	JYH	**Run Date:**	04/02/2012 14:52
Collect Date:	03/22/2012 14:20	**Dilution:**	50	**File ID:**	NI.040212.145236
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	98.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	224		9.97	4.99

Certificate of Analysis

Sample #:	L12030945-05	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MP-BH02-2	**Prep Method:**	7471	**Prep Date:**	03/28/2012 13:51
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/30/2012 09:42
Workgroup #:	WG393633	**Analyst:**	PDM	**Run Date:**	03/30/2012 10:30
Collect Date:	03/22/2012 14:20	**Dilution:**	1	**File ID:**	HY.033012.103011
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0965	0.00965

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-06	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH02-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 07:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393670	**Analyst:**	PDM	**Run Date:**	04/02/2012 20:54
Collect Date:	03/22/2012 14:25	**Dilution:**	1	**File ID:**	T1.040212.205410
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	3190		15.3	7.67
Antimony, Total	7440-36-0		U	0.767	0.383
Beryllium, Total	7440-41-7		U	0.0767	0.0383
Potassium, Total	7440-09-7	833		38.3	19.2
Silver, Total	7440-22-4	0.864		0.153	0.0767
Sodium, Total	7440-23-5	96.6		19.2	9.59
Zinc, Total	7440-66-6	17.8		0.767	0.383

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-06	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH02-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 07:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/04/2012 09:22
Workgroup #:	WG393670	**Analyst:**	PDM	**Run Date:**	04/04/2012 12:10
Collect Date:	03/22/2012 14:25	**Dilution:**	10	**File ID:**	T1.040412.121038
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	6500		76.7	38.3
Iron, Total	7439-89-6	11700		23.0	11.5
Magnesium, Total	7439-95-4	2760		192	95.9

Certificate of Analysis

Sample #:	L12030945-06	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH02-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:17
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/30/2012 15:08
Workgroup #:	WG393740	**Analyst:**	JYH	**Run Date:**	03/30/2012 16:23
Collect Date:	03/22/2012 14:25	**Dilution:**	5	**File ID:**	NI.033012.162332
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.20	J	1.51	0.754
Barium, Total	7440-39-3	35.6		1.51	0.754
Cadmium, Total	7440-43-9		U	0.503	0.251
Chromium, Total	7440-47-3	1.95	J	2.01	1.01
Cobalt, Total	7440-48-4	3.49		2.51	1.26
Copper, Total	7440-50-8	5.02		3.02	1.51
Lead, Total	7439-92-1	7.50		1.01	0.503
Manganese, Total	7439-96-5	166		1.01	0.503
Nickel, Total	7440-02-0	3.21	J	4.02	2.01
Selenium, Total	7782-49-2		U	1.01	0.503
Thallium, Total	7440-28-0		U	0.201	0.101
Vanadium, Total	7440-62-2	11.0		2.51	1.26

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-06	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH02-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 07:42
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394120	**Analyst:**	JYH	**Run Date:**	04/04/2012 12:02
Collect Date:	03/22/2012 14:25	**Dilution:**	20	**File ID:**	NI.040412.120232
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	98.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.07	1.53

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030945-06	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MP-BH02-3	**Prep Method:**	7471	**Prep Date:**	03/28/2012 13:52
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/30/2012 09:42
Workgroup #:	WG393633	**Analyst:**	PDM	**Run Date:**	03/30/2012 10:32
Collect Date:	03/22/2012 14:25	**Dilution:**	1	**File ID:**	HY.033012.103208
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0968	0.00968

U — Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-07	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH02-FD1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 07:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393670	**Analyst:**	PDM	**Run Date:**	04/02/2012 20:57
Collect Date:	03/22/2012 14:18	**Dilution:**	1	**File ID:**	T1.040212.205748
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	95.5

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	5940		14.6	7.32
Antimony, Total	7440-36-0		U	0.732	0.366
Beryllium, Total	7440-41-7	0.565		0.0732	0.0366
Potassium, Total	7440-09-7	1800		36.6	18.3
Silver, Total	7440-22-4	0.233		0.146	0.0732
Sodium, Total	7440-23-5	36.8		18.3	9.15
Zinc, Total	7440-66-6	25.9		0.732	0.366

U — Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-07	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH02-FD1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 07:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/04/2012 09:22
Workgroup #:	WG393670	**Analyst:**	PDM	**Run Date:**	04/04/2012 12:22
Collect Date:	03/22/2012 14:18	**Dilution:**	10	**File ID:**	T1.040412.122214
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	95.5

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	2600		73.2	36.6
Iron, Total	7439-89-6	14800		22.0	11.0
Magnesium, Total	7439-95-4	2970		183	91.5

Certificate of Analysis

Sample #:	L12030945-07	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH02-FD1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:17
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/30/2012 15:08
Workgroup #:	WG393740	**Analyst:**	JYH	**Run Date:**	03/30/2012 16:26
Collect Date:	03/22/2012 14:18	**Dilution:**	5	**File ID:**	NI.033012.162617
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	95.5

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.44	J	1.48	0.740
Barium, Total	7440-39-3	48.5		1.48	0.740
Cadmium, Total	7440-43-9		U	0.493	0.247
Chromium, Total	7440-47-3	1.95	J	1.97	0.986
Cobalt, Total	7440-48-4	3.94		2.47	1.23
Copper, Total	7440-50-8	8.72		2.96	1.48
Lead, Total	7439-92-1	11.8		0.986	0.493
Nickel, Total	7440-02-0	3.48	J	3.94	1.97
Selenium, Total	7782-49-2		U	0.986	0.493
Thallium, Total	7440-28-0		U	0.197	0.0986
Vanadium, Total	7440-62-2	6.79		2.47	1.23

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-07	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH02-FD1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 07:42
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394120	**Analyst:**	JYH	**Run Date:**	04/04/2012 12:05
Collect Date:	03/22/2012 14:18	**Dilution:**	20	**File ID:**	NI.040412.120519
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	95.5

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.93	1.46

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-07	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH02-FD1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:17
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393740	**Analyst:**	JYH	**Run Date:**	04/02/2012 14:55
Collect Date:	03/22/2012 14:18	**Dilution:**	50	**File ID:**	NI.040212.145522
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	95.5

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	257		9.86	4.93

Certificate of Analysis

Sample #:	L12030945-07	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MP-BH02-FD1	**Prep Method:**	7471	**Prep Date:**	03/28/2012 13:52
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/30/2012 09:42
Workgroup #:	WG393633	**Analyst:**	PDM	**Run Date:**	03/30/2012 10:33
Collect Date:	03/22/2012 14:18	**Dilution:**	1	**File ID:**	HY.033012.103350
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	95.5

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6	0.0107	J	0.104	0.0104

J	Estimated value ; the analyte concentration was less than the LOQ.

Sample #:	L12030945-08	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH03-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 07:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393670	**Analyst:**	PDM	**Run Date:**	04/02/2012 21:01
Collect Date:	03/22/2012 14:49	**Dilution:**	1	**File ID:**	T1.040212.210134
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	4690		14.5	7.27
Antimony, Total	7440-36-0		U	0.727	0.363
Beryllium, Total	7440-41-7	0.211		0.0727	0.0363
Potassium, Total	7440-09-7	1460		36.3	18.2
Silver, Total	7440-22-4	0.567		0.145	0.0727
Sodium, Total	7440-23-5	28.2		18.2	9.08
Zinc, Total	7440-66-6	18.8		0.727	0.363

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-08	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH03-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 07:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/04/2012 09:22
Workgroup #:	WG393670	**Analyst:**	PDM	**Run Date:**	04/04/2012 12:26
Collect Date:	03/22/2012 14:49	**Dilution:**	10	**File ID:**	T1.040412.122602
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	1800		72.7	36.3
Iron, Total	7439-89-6	12600		21.8	10.9
Magnesium, Total	7439-95-4	1820		182	90.8

Certificate of Analysis

Sample #:	L12030945-08	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH03-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:17
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/30/2012 15:08
Workgroup #:	WG393740	**Analyst:**	JYH	**Run Date:**	03/30/2012 16:29
Collect Date:	03/22/2012 14:49	**Dilution:**	5	**File ID:**	NI.033012.162903
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.54		1.50	0.752
Barium, Total	7440-39-3	45.2		1.50	0.752
Cadmium, Total	7440-43-9		U	0.502	0.251
Chromium, Total	7440-47-3	3.59		2.01	1.00
Cobalt, Total	7440-48-4	3.83		2.51	1.25
Copper, Total	7440-50-8	8.30		3.01	1.50
Lead, Total	7439-92-1	9.24		1.00	0.502
Nickel, Total	7440-02-0	3.97	J	4.01	2.01
Selenium, Total	7782-49-2		U	1.00	0.502
Thallium, Total	7440-28-0		U	0.201	0.100
Vanadium, Total	7440-62-2	10.9		2.51	1.25

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-08	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH03-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 07:42
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394120	**Analyst:**	JYH	**Run Date:**	04/04/2012 12:08
Collect Date:	03/22/2012 14:49	**Dilution:**	20	**File ID:**	NI.040412.120805
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	98.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.91	1.45

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-08	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH03-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:17
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393740	**Analyst:**	JYH	**Run Date:**	04/02/2012 14:58
Collect Date:	03/22/2012 14:49	**Dilution:**	50	**File ID:**	NI.040212.145808
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	98.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	210		10.0	5.02

Certificate of Analysis

Sample #:	L12030945-08	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MP-BH03-1	**Prep Method:**	7471	**Prep Date:**	03/28/2012 13:52
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/30/2012 09:42
Workgroup #:	WG393633	**Analyst:**	PDM	**Run Date:**	03/30/2012 10:39
Collect Date:	03/22/2012 14:49	**Dilution:**	1	**File ID:**	HY.033012.103923
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6	0.0136	J	0.0969	0.00969

J	Estimated value ; the analyte concentration was less than the LOQ.

Sample #:	L12030945-09	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH03-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 07:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393670	**Analyst:**	PDM	**Run Date:**	04/02/2012 21:05
Collect Date:	03/22/2012 14:52	**Dilution:**	1	**File ID:**	T1.040212.210518
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	2770		13.5	6.77
Antimony, Total	7440-36-0		U	0.677	0.339
Beryllium, Total	7440-41-7	0.214		0.0677	0.0339
Potassium, Total	7440-09-7	840		33.9	16.9
Silver, Total	7440-22-4	0.298		0.135	0.0677
Sodium, Total	7440-23-5	33.4		16.9	8.47
Zinc, Total	7440-66-6	13.6		0.677	0.339

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-09	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH03-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 07:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/04/2012 09:22
Workgroup #:	WG393670	**Analyst:**	PDM	**Run Date:**	04/04/2012 12:29
Collect Date:	03/22/2012 14:52	**Dilution:**	10	**File ID:**	T1.040412.122952
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	1740		67.7	33.9
Iron, Total	7439-89-6	9980		20.3	10.2
Magnesium, Total	7439-95-4	1270		169	84.7

Certificate of Analysis

Sample #:	L12030945-09	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH03-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:17
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/30/2012 15:08
Workgroup #:	WG393740	**Analyst:**	JYH	**Run Date:**	03/30/2012 16:31
Collect Date:	03/22/2012 14:52	**Dilution:**	5	**File ID:**	NI.033012.163150
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	0.811	J	1.45	0.724
Barium, Total	7440-39-3	24.3		1.45	0.724
Cadmium, Total	7440-43-9		U	0.483	0.241
Chromium, Total	7440-47-3		U	1.93	0.966
Cobalt, Total	7440-48-4	2.47		2.41	1.21
Copper, Total	7440-50-8	4.35		2.90	1.45
Lead, Total	7439-92-1	4.82		0.966	0.483
Manganese, Total	7439-96-5	100		0.966	0.483
Nickel, Total	7440-02-0	2.05	J	3.86	1.93
Selenium, Total	7782-49-2		U	0.966	0.483
Thallium, Total	7440-28-0		U	0.193	0.0966
Vanadium, Total	7440-62-2	7.62		2.41	1.21

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-09	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH03-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 07:42
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394120	**Analyst:**	JYH	**Run Date:**	04/04/2012 12:10
Collect Date:	03/22/2012 14:52	**Dilution:**	20	**File ID:**	NI.040412.121050
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	98.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.71	1.35

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030945-09	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MP-BH03-2	**Prep Method:**	7471	**Prep Date:**	03/28/2012 13:53
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/30/2012 09:42
Workgroup #:	WG393633	**Analyst:**	PDM	**Run Date:**	03/30/2012 10:41
Collect Date:	03/22/2012 14:52	**Dilution:**	1	**File ID:**	HY.033012.104125
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0995	0.00995

U — Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-10	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH03-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 07:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393670	**Analyst:**	PDM	**Run Date:**	04/02/2012 21:08
Collect Date:	03/22/2012 14:56	**Dilution:**	1	**File ID:**	T1.040212.210856
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	879		14.7	7.36
Antimony, Total	7440-36-0		U	0.736	0.368
Beryllium, Total	7440-41-7		U	0.0736	0.0368
Potassium, Total	7440-09-7	349		36.8	18.4
Silver, Total	7440-22-4	0.335		0.147	0.0736
Sodium, Total	7440-23-5	27.6		18.4	9.20
Zinc, Total	7440-66-6	7.39		0.736	0.368

U — Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-10	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH03-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 07:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/04/2012 09:22
Workgroup #:	WG393670	**Analyst:**	PDM	**Run Date:**	04/04/2012 12:33
Collect Date:	03/22/2012 14:56	**Dilution:**	10	**File ID:**	T1.040412.123346
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	1330		73.6	36.8
Iron, Total	7439-89-6	4500		22.1	11.0
Magnesium, Total	7439-95-4	626		184	92.0

Certificate of Analysis

Sample #:	L12030945-10	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH03-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:17
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/30/2012 15:08
Workgroup #:	WG393740	**Analyst:**	JYH	**Run Date:**	03/30/2012 16:34
Collect Date:	03/22/2012 14:56	**Dilution:**	5	**File ID:**	NI.033012.163436
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2		U	1.39	0.693
Barium, Total	7440-39-3	27.9		1.39	0.693
Cadmium, Total	7440-43-9		U	0.462	0.231
Chromium, Total	7440-47-3	1.38	J	1.85	0.925
Cobalt, Total	7440-48-4	2.01	J	2.31	1.16
Copper, Total	7440-50-8	2.98		2.77	1.39
Lead, Total	7439-92-1	5.96		0.925	0.462
Manganese, Total	7439-96-5	146		0.925	0.462
Nickel, Total	7440-02-0		U	3.70	1.85
Selenium, Total	7782-49-2		U	0.925	0.462
Thallium, Total	7440-28-0		U	0.185	0.0925
Vanadium, Total	7440-62-2	3.54		2.31	1.16

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-10	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH03-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 07:42
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394120	**Analyst:**	JYH	**Run Date:**	04/04/2012 12:13
Collect Date:	03/22/2012 14:56	**Dilution:**	20	**File ID:**	NI.040412.121337
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	98.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.94	1.47

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030945-10	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MP-BH03-3	**Prep Method:**	7471	**Prep Date:**	03/28/2012 13:54
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/30/2012 09:42
Workgroup #:	WG393633	**Analyst:**	PDM	**Run Date:**	03/30/2012 10:43
Collect Date:	03/22/2012 14:56	**Dilution:**	1	**File ID:**	HY.033012.104336
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0984	0.00984

U — Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-11	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH04-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 07:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393670	**Analyst:**	PDM	**Run Date:**	04/02/2012 21:12
Collect Date:	03/23/2012 12:42	**Dilution:**	1	**File ID:**	T1.040212.211235
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	99.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	3910		13.7	6.85
Antimony, Total	7440-36-0		U	0.685	0.343
Beryllium, Total	7440-41-7	0.252		0.0685	0.0343
Potassium, Total	7440-09-7	1240		34.3	17.1
Silver, Total	7440-22-4	0.319		0.137	0.0685
Sodium, Total	7440-23-5	24.3		17.1	8.57
Zinc, Total	7440-66-6	16.3		0.685	0.343

U — Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-11	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH04-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 07:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/04/2012 09:22
Workgroup #:	WG393670	**Analyst:**	PDM	**Run Date:**	04/04/2012 12:37
Collect Date:	03/23/2012 12:42	**Dilution:**	10	**File ID:**	T1.040412.123737
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	99.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	1770		68.5	34.3
Iron, Total	7439-89-6	10700		20.6	10.3
Magnesium, Total	7439-95-4	1830		171	85.7

Certificate of Analysis

Sample #:	L12030945-11	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH04-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:17
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/30/2012 15:08
Workgroup #:	WG393740	**Analyst:**	JYH	**Run Date:**	03/30/2012 16:37
Collect Date:	03/23/2012 12:42	**Dilution:**	5	**File ID:**	NI.033012.163723
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	99.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2		U	1.45	0.726
Barium, Total	7440-39-3	10.8		1.45	0.726
Cadmium, Total	7440-43-9		U	0.484	0.242
Chromium, Total	7440-47-3		U	1.93	0.967
Cobalt, Total	7440-48-4		U	2.42	1.21
Copper, Total	7440-50-8	1.67	J	2.90	1.45
Lead, Total	7439-92-1	3.24		0.967	0.484
Manganese, Total	7439-96-5	52.7		0.967	0.484
Nickel, Total	7440-02-0		U	3.87	1.93
Selenium, Total	7782-49-2		U	0.967	0.484
Thallium, Total	7440-28-0		U	0.193	0.0967
Vanadium, Total	7440-62-2	2.54		2.42	1.21

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-11	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH04-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 07:42
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394120	**Analyst:**	JYH	**Run Date:**	04/04/2012 12:16
Collect Date:	03/23/2012 12:42	**Dilution:**	20	**File ID:**	NI.040412.121623
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	99.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.74	1.37

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030945-11	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MP-BH04-1	**Prep Method:**	7471	**Prep Date:**	03/28/2012 13:54
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/30/2012 09:42
Workgroup #:	WG393633	**Analyst:**	PDM	**Run Date:**	03/30/2012 10:45
Collect Date:	03/23/2012 12:42	**Dilution:**	1	**File ID:**	HY.033012.104529
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	99.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0991	0.00991

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-12	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH04-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 07:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393670	**Analyst:**	PDM	**Run Date:**	04/02/2012 21:16
Collect Date:	03/23/2012 12:50	**Dilution:**	1	**File ID:**	T1.040212.211613
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	4520		13.7	6.83
Antimony, Total	7440-36-0		U	0.683	0.341
Beryllium, Total	7440-41-7	0.325		0.0683	0.0341
Potassium, Total	7440-09-7	1170		34.1	17.1
Silver, Total	7440-22-4	0.527		0.137	0.0683
Sodium, Total	7440-23-5	71.5		17.1	8.54
Zinc, Total	7440-66-6	26.6		0.683	0.341

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-12	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH04-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 07:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/04/2012 09:22
Workgroup #:	WG393670	**Analyst:**	PDM	**Run Date:**	04/04/2012 12:41
Collect Date:	03/23/2012 12:50	**Dilution:**	10	**File ID:**	T1.040412.124124
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	5190		68.3	34.1
Iron, Total	7439-89-6	11700		20.5	10.2
Magnesium, Total	7439-95-4	2940		171	85.4

Certificate of Analysis

Sample #:	L12030945-12	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH04-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:17
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/30/2012 15:08
Workgroup #:	WG393740	**Analyst:**	JYH	**Run Date:**	03/30/2012 16:40
Collect Date:	03/23/2012 12:50	**Dilution:**	5	**File ID:**	NI.033012.164009
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.25	J	1.52	0.761
Barium, Total	7440-39-3	37.9		1.52	0.761
Cadmium, Total	7440-43-9		U	0.507	0.254
Chromium, Total	7440-47-3	2.13		2.03	1.01
Cobalt, Total	7440-48-4	3.31		2.54	1.27
Copper, Total	7440-50-8	5.10		3.04	1.52
Lead, Total	7439-92-1	7.97		1.01	0.507
Manganese, Total	7439-96-5	199		1.01	0.507
Nickel, Total	7440-02-0	3.13	J	4.06	2.03
Selenium, Total	7782-49-2		U	1.01	0.507
Thallium, Total	7440-28-0		U	0.203	0.101
Vanadium, Total	7440-62-2	7.18		2.54	1.27

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-12	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH04-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 07:42
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394120	**Analyst:**	JYH	**Run Date:**	04/04/2012 12:19
Collect Date:	03/23/2012 12:50	**Dilution:**	20	**File ID:**	NI.040412.121908
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	97.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.73	1.37

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030945-12	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MP-BH04-2	**Prep Method:**	7471	**Prep Date:**	03/28/2012 13:54
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/30/2012 09:42
Workgroup #:	WG393633	**Analyst:**	PDM	**Run Date:**	03/30/2012 10:47
Collect Date:	03/23/2012 12:50	**Dilution:**	1	**File ID:**	HY.033012.104711
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6	0.0113	J	0.0973	0.00973

J	Estimated value ; the analyte concentration was less than the LOQ.

Sample #:	L12030945-13	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH04-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 07:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393670	**Analyst:**	PDM	**Run Date:**	04/02/2012 21:19
Collect Date:	03/23/2012 12:53	**Dilution:**	1	**File ID:**	T1.040212.211959
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	2020		14.7	7.34
Antimony, Total	7440-36-0		U	0.734	0.367
Beryllium, Total	7440-41-7		U	0.0734	0.0367
Potassium, Total	7440-09-7	528		36.7	18.4
Silver, Total	7440-22-4	0.680		0.147	0.0734
Sodium, Total	7440-23-5	97.0		18.4	9.18
Zinc, Total	7440-66-6	13.1		0.734	0.367

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-13	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH04-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 07:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/04/2012 09:22
Workgroup #:	WG393670	**Analyst:**	PDM	**Run Date:**	04/04/2012 12:45
Collect Date:	03/23/2012 12:53	**Dilution:**	10	**File ID:**	T1.040412.124512
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	3670		73.4	36.7
Iron, Total	7439-89-6	10300		22.0	11.0
Magnesium, Total	7439-95-4	1260		184	91.8

Certificate of Analysis

Sample #:	L12030945-13	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH04-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:17
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/30/2012 15:08
Workgroup #:	WG393740	**Analyst:**	JYH	**Run Date:**	03/30/2012 15:50
Collect Date:	03/23/2012 12:53	**Dilution:**	5	**File ID:**	NI.033012.155012
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	2.12		1.46	0.729
Barium, Total	7440-39-3	79.0		1.46	0.729
Cadmium, Total	7440-43-9		U	0.486	0.243
Chromium, Total	7440-47-3	2.95		1.94	0.972
Cobalt, Total	7440-48-4	4.76		2.43	1.21
Copper, Total	7440-50-8	8.18		2.92	1.46
Lead, Total	7439-92-1	11.0		0.972	0.486
Nickel, Total	7440-02-0	4.92		3.89	1.94
Selenium, Total	7782-49-2		U	0.972	0.486
Thallium, Total	7440-28-0	0.120	J	0.194	0.0972
Vanadium, Total	7440-62-2	14.5		2.43	1.21

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-13	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH04-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 07:42
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394120	**Analyst:**	JYH	**Run Date:**	04/04/2012 11:29
Collect Date:	03/23/2012 12:53	**Dilution:**	20	**File ID:**	NI.040412.112915
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	97.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.94	1.47

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-13	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH04-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:17
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393740	**Analyst:**	JYH	**Run Date:**	04/02/2012 15:00
Collect Date:	03/23/2012 12:53	**Dilution:**	50	**File ID:**	NI.040212.150054
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	97.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	274		9.72	4.86

Certificate of Analysis

Sample #:	L12030945-13	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MP-BH04-3	**Prep Method:**	7471	**Prep Date:**	03/28/2012 13:55
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/30/2012 09:42
Workgroup #:	WG393633	**Analyst:**	PDM	**Run Date:**	03/30/2012 10:48
Collect Date:	03/23/2012 12:53	**Dilution:**	1	**File ID:**	HY.033012.104859
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.101	0.0101

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-14	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH04-MS3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 07:41
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393670	**Analyst:**	PDM	**Run Date:**	04/02/2012 21:23
Collect Date:	03/23/2012 12:53	**Dilution:**	1	**File ID:**	T1.040212.212337
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	2380		14.9	7.44
Antimony, Total	7440-36-0	18.3		0.744	0.372
Beryllium, Total	7440-41-7	0.562		0.0744	0.0372
Potassium, Total	7440-09-7	1300		37.2	18.6
Silver, Total	7440-22-4	7.73		0.149	0.0744
Sodium, Total	7440-23-5	894		18.6	9.30
Zinc, Total	7440-66-6	29.9		0.744	0.372

Sample #:	L12030945-14	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH04-MS3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 07:41
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/04/2012 09:22
Workgroup #:	WG393670	**Analyst:**	PDM	**Run Date:**	04/04/2012 12:49
Collect Date:	03/23/2012 12:53	**Dilution:**	10	**File ID:**	T1.040412.124901
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	3940		74.4	37.2
Iron, Total	7439-89-6	16800		22.3	11.2
Magnesium, Total	7439-95-4	1580		186	93.0

Certificate of Analysis

Sample #:	L12030945-14	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH04-MS3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:17
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/30/2012 15:08
Workgroup #:	WG393740	**Analyst:**	JYH	**Run Date:**	03/30/2012 15:52
Collect Date:	03/23/2012 12:53	**Dilution:**	5	**File ID:**	NI.033012.155258
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	11.5		1.45	0.723
Barium, Total	7440-39-3	27.8		1.45	0.723
Cadmium, Total	7440-43-9	10.3		0.482	0.241
Chromium, Total	7440-47-3	10.3		1.93	0.964
Cobalt, Total	7440-48-4	10.8		2.41	1.21
Copper, Total	7440-50-8	12.3		2.89	1.45
Lead, Total	7439-92-1	14.0		0.964	0.482
Nickel, Total	7440-02-0	10.7		3.86	1.93
Selenium, Total	7782-49-2	11.4		0.964	0.482
Thallium, Total	7440-28-0	8.83		0.193	0.0964
Vanadium, Total	7440-62-2	14.5		2.41	1.21

Sample #:	L12030945-14	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH04-MS3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 07:41
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394120	**Analyst:**	JYH	**Run Date:**	04/04/2012 11:32
Collect Date:	03/23/2012 12:53	**Dilution:**	20	**File ID:**	NI.040412.113202
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	97.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4	5.75		2.97	1.49

Sample #:	L12030945-14	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH04-MS3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:17
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393740	**Analyst:**	JYH	**Run Date:**	04/02/2012 15:03
Collect Date:	03/23/2012 12:53	**Dilution:**	50	**File ID:**	NI.040212.150340
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	97.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	136		9.64	4.82

Certificate of Analysis

Sample #:	L12030945-14	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MP-BH04-MS3	**Prep Method:**	7471	**Prep Date:**	03/28/2012 13:30
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/30/2012 09:42
Workgroup #:	WG393633	**Analyst:**	PDM	**Run Date:**	03/30/2012 10:50
Collect Date:	03/23/2012 12:53	**Dilution:**	1	**File ID:**	HY.033012.105041
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6	0.254		0.0996	0.00996

Sample #:	L12030945-15	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH04-MSD3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 07:41
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393670	**Analyst:**	PDM	**Run Date:**	04/02/2012 21:34
Collect Date:	03/23/2012 12:53	**Dilution:**	1	**File ID:**	T1.040212.213433
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	2300		14.8	7.40
Antimony, Total	7440-36-0	18.5		0.740	0.370
Beryllium, Total	7440-41-7	0.630		0.0740	0.0370
Potassium, Total	7440-09-7	1330		37.0	18.5
Silver, Total	7440-22-4	7.53		0.148	0.0740
Sodium, Total	7440-23-5	886		18.5	9.25
Zinc, Total	7440-66-6	28.7		0.740	0.370

Sample #:	L12030945-15	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH04-MSD3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 07:41
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/04/2012 09:22
Workgroup #:	WG393670	**Analyst:**	PDM	**Run Date:**	04/04/2012 12:52
Collect Date:	03/23/2012 12:53	**Dilution:**	10	**File ID:**	T1.040412.125248
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	5250		74.0	37.0
Iron, Total	7439-89-6	15100		22.2	11.1
Magnesium, Total	7439-95-4	1850		185	92.5

Certificate of Analysis

Sample #:	L12030945-15	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH04-MSD3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:17
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/30/2012 15:08
Workgroup #:	WG393740	**Analyst:**	JYH	**Run Date:**	03/30/2012 15:55
Collect Date:	03/23/2012 12:53	**Dilution:**	5	**File ID:**	NI.033012.155544
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	12.1		1.50	0.752
Barium, Total	7440-39-3	30.0		1.50	0.752
Cadmium, Total	7440-43-9	10.3		0.501	0.251
Chromium, Total	7440-47-3	10.6		2.00	1.00
Cobalt, Total	7440-48-4	11.6		2.51	1.25
Copper, Total	7440-50-8	13.1		3.01	1.50
Lead, Total	7439-92-1	14.6		1.00	0.501
Nickel, Total	7440-02-0	11.1		4.01	2.00
Selenium, Total	7782-49-2	11.9		1.00	0.501
Thallium, Total	7440-28-0	8.98		0.200	0.100
Vanadium, Total	7440-62-2	15.7		2.51	1.25

Sample #:	L12030945-15	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH04-MSD3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 07:41
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394120	**Analyst:**	JYH	**Run Date:**	04/04/2012 11:34
Collect Date:	03/23/2012 12:53	**Dilution:**	20	**File ID:**	NI.040412.113448
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	97.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4	6.52		2.96	1.48

Sample #:	L12030945-15	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH04-MSD3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:17
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393740	**Analyst:**	JYH	**Run Date:**	04/02/2012 15:06
Collect Date:	03/23/2012 12:53	**Dilution:**	50	**File ID:**	NI.040212.150626
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	97.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	148		10.0	5.01

Certificate of Analysis

Sample #:	L12030945-15	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MP-BH04-MSD3	**Prep Method:**	7471	**Prep Date:**	03/28/2012 13:30
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/30/2012 09:42
Workgroup #:	WG393633	**Analyst:**	PDM	**Run Date:**	03/30/2012 10:52
Collect Date:	03/23/2012 12:53	**Dilution:**	1	**File ID:**	HY.033012.105229
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6	0.255		0.101	0.0101

Sample #:	L12030945-16	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH05-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 07:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393670	**Analyst:**	PDM	**Run Date:**	04/02/2012 21:38
Collect Date:	03/23/2012 08:43	**Dilution:**	1	**File ID:**	T1.040212.213806
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	1820		15.3	7.63
Antimony, Total	7440-36-0		U	0.763	0.381
Potassium, Total	7440-09-7	875		38.1	19.1
Silver, Total	7440-22-4	0.813		0.153	0.0763
Sodium, Total	7440-23-5	26.2		19.1	9.53
Zinc, Total	7440-66-6	11.2		0.763	0.381

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-16	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH05-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 07:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/04/2012 09:22
Workgroup #:	WG393670	**Analyst:**	PDM	**Run Date:**	04/04/2012 12:56
Collect Date:	03/23/2012 08:43	**Dilution:**	2	**File ID:**	T1.040412.125634
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	1780		15.3	7.63
Iron, Total	7439-89-6	7490		4.58	2.29
Magnesium, Total	7439-95-4	1400		38.1	19.1

Certificate of Analysis

Sample #:	L12030945-16	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH05-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 07:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/10/2012 09:48
Workgroup #:	WG393670	**Analyst:**	PDM	**Run Date:**	04/10/2012 19:08
Collect Date:	03/23/2012 08:43	**Dilution:**	2	**File ID:**	T1.041012.190833
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.188		0.153	0.0763

Sample #:	L12030945-16	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH05-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:17
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/30/2012 15:08
Workgroup #:	WG393740	**Analyst:**	JYH	**Run Date:**	03/30/2012 16:48
Collect Date:	03/23/2012 08:43	**Dilution:**	5	**File ID:**	NI.033012.164831
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	0.766	J	1.51	0.754
Barium, Total	7440-39-3	15.6		1.51	0.754
Cadmium, Total	7440-43-9		U	0.502	0.251
Chromium, Total	7440-47-3		U	2.01	1.00
Cobalt, Total	7440-48-4	1.72	J	2.51	1.26
Copper, Total	7440-50-8	3.12		3.01	1.51
Lead, Total	7439-92-1	4.59		1.00	0.502
Manganese, Total	7439-96-5	93.2		1.00	0.502
Nickel, Total	7440-02-0		U	4.02	2.01
Selenium, Total	7782-49-2		U	1.00	0.502
Thallium, Total	7440-28-0		U	0.201	0.100
Vanadium, Total	7440-62-2	5.91		2.51	1.26

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-16	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH05-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 07:42
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394120	**Analyst:**	JYH	**Run Date:**	04/04/2012 12:27
Collect Date:	03/23/2012 08:43	**Dilution:**	20	**File ID:**	NI.040412.122732
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.05	1.53

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-16	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MP-BH05-1	**Prep Method:**	7471	**Prep Date:**	03/28/2012 13:57
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/30/2012 09:42
Workgroup #:	WG393633	**Analyst:**	PDM	**Run Date:**	03/30/2012 10:54
Collect Date:	03/23/2012 08:43	**Dilution:**	1	**File ID:**	HY.033012.105412
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.102	0.0102
U	Analyte was not detected. The concentration is below the reported LOD.				

Sample #:	L12030945-17	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH05-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 07:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393670	**Analyst:**	PDM	**Run Date:**	04/02/2012 21:41
Collect Date:	03/22/2012 08:48	**Dilution:**	1	**File ID:**	T1.040212.214144
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	1470		15.3	7.64
Antimony, Total	7440-36-0		U	0.764	0.382
Potassium, Total	7440-09-7	698		38.2	19.1
Silver, Total	7440-22-4	0.682		0.153	0.0764
Sodium, Total	7440-23-5	21.8		19.1	9.55
Zinc, Total	7440-66-6	9.29		0.764	0.382
U	Analyte was not detected. The concentration is below the reported LOD.				

Sample #:	L12030945-17	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH05-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 07:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/04/2012 09:22
Workgroup #:	WG393670	**Analyst:**	PDM	**Run Date:**	04/04/2012 13:08
Collect Date:	03/22/2012 08:48	**Dilution:**	2	**File ID:**	T1.040412.130807
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7		U	0.153	0.0764
Calcium, Total	7440-70-2	1690		15.3	7.64
Iron, Total	7439-89-6	5860		4.58	2.29
Magnesium, Total	7439-95-4	1240		38.2	19.1
U	Analyte was not detected. The concentration is below the reported LOD.				

Certificate of Analysis

Sample #:	L12030945-17	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH05-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:17
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/30/2012 15:08
Workgroup #:	WG393740	**Analyst:**	JYH	**Run Date:**	03/30/2012 16:51
Collect Date:	03/22/2012 08:48	**Dilution:**	5	**File ID:**	NI.033012.165117
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2		U	1.52	0.760
Barium, Total	7440-39-3	15.4		1.52	0.760
Cadmium, Total	7440-43-9		U	0.507	0.253
Chromium, Total	7440-47-3		U	2.03	1.01
Cobalt, Total	7440-48-4	1.71	J	2.53	1.27
Copper, Total	7440-50-8	1.98	J	3.04	1.52
Lead, Total	7439-92-1	3.50		1.01	0.507
Manganese, Total	7439-96-5	71.5		1.01	0.507
Nickel, Total	7440-02-0		U	4.05	2.03
Selenium, Total	7782-49-2		U	1.01	0.507
Thallium, Total	7440-28-0		U	0.203	0.101
Vanadium, Total	7440-62-2	4.25		2.53	1.27

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-17	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH05-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 07:42
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394120	**Analyst:**	JYH	**Run Date:**	04/04/2012 12:30
Collect Date:	03/22/2012 08:48	**Dilution:**	20	**File ID:**	NI.040412.123018
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.06	1.53

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030945-17	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MP-BH05-2	**Prep Method:**	7471	**Prep Date:**	03/28/2012 13:57
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/30/2012 09:42
Workgroup #:	WG393633	**Analyst:**	PDM	**Run Date:**	03/30/2012 10:56
Collect Date:	03/22/2012 08:48	**Dilution:**	1	**File ID:**	HY.033012.105620
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.102	0.0102

U — Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-18	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH05-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393671	**Analyst:**	PDM	**Run Date:**	04/02/2012 22:15
Collect Date:	03/22/2012 08:53	**Dilution:**	1	**File ID:**	T1.040212.221528
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	2010		14.0	7.02
Antimony, Total	7440-36-0		U	0.702	0.351
Calcium, Total	7440-70-2	2020		7.02	3.51
Magnesium, Total	7439-95-4	1300		17.6	8.78
Potassium, Total	7440-09-7	906		35.1	17.6
Silver, Total	7440-22-4	0.789		0.140	0.0702
Sodium, Total	7440-23-5	29.5		17.6	8.78

U — Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-18	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH05-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG393671	**Analyst:**	PDM	**Run Date:**	04/05/2012 20:36
Collect Date:	03/22/2012 08:53	**Dilution:**	2	**File ID:**	T1.040512.203649
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.230		0.140	0.0702
Iron, Total	7439-89-6	8390		4.21	2.11
Zinc, Total	7440-66-6	13.2		1.40	0.702

Certificate of Analysis

Sample #:	L12030945-18	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH05-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:17
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/30/2012 15:08
Workgroup #:	WG393740	**Analyst:**	JYH	**Run Date:**	03/30/2012 16:54
Collect Date:	03/22/2012 08:53	**Dilution:**	5	**File ID:**	NI.033012.165403
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2		U	1.38	0.692
Barium, Total	7440-39-3	16.8		1.38	0.692
Cadmium, Total	7440-43-9		U	0.461	0.231
Chromium, Total	7440-47-3		U	1.84	0.922
Cobalt, Total	7440-48-4	2.01	J	2.31	1.15
Copper, Total	7440-50-8	2.36	J	2.77	1.38
Lead, Total	7439-92-1	3.92		0.922	0.461
Manganese, Total	7439-96-5	83.1		0.922	0.461
Nickel, Total	7440-02-0		U	3.69	1.84
Selenium, Total	7782-49-2		U	0.922	0.461
Thallium, Total	7440-28-0		U	0.184	0.0922
Vanadium, Total	7440-62-2	6.02		2.31	1.15

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-18	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH05-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/05/2012 09:55
Workgroup #:	WG394302	**Analyst:**	JYH	**Run Date:**	04/05/2012 13:09
Collect Date:	03/22/2012 08:53	**Dilution:**	20	**File ID:**	NI.040512.130939
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	98.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.81	1.40

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030945-18	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MP-BH05-3	**Prep Method:**	7471	**Prep Date:**	03/28/2012 13:58
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/30/2012 09:42
Workgroup #:	WG393633	**Analyst:**	PDM	**Run Date:**	03/30/2012 11:02
Collect Date:	03/22/2012 08:53	**Dilution:**	1	**File ID:**	HY.033012.110200
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0957	0.00957

U — Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-19	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH05-FD2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393671	**Analyst:**	PDM	**Run Date:**	04/02/2012 22:30
Collect Date:	03/22/2012 08:48	**Dilution:**	1	**File ID:**	T1.040212.223005
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.5

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	2460		14.7	7.35
Antimony, Total	7440-36-0		U	0.735	0.367
Calcium, Total	7440-70-2	1900		7.35	3.67
Magnesium, Total	7439-95-4	1570		18.4	9.18
Potassium, Total	7440-09-7	1120		36.7	18.4
Silver, Total	7440-22-4	1.34		0.147	0.0735
Sodium, Total	7440-23-5	29.6		18.4	9.18

U — Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-19	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH05-FD2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG393671	**Analyst:**	PDM	**Run Date:**	04/05/2012 20:47
Collect Date:	03/22/2012 08:48	**Dilution:**	2	**File ID:**	T1.040512.204747
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.5

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.260		0.147	0.0735
Iron, Total	7439-89-6	8380		4.41	2.20
Zinc, Total	7440-66-6	15.1		1.47	0.735

Certificate of Analysis

Sample #:	L12030945-19	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH05-FD2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:17
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/30/2012 15:08
Workgroup #:	WG393740	**Analyst:**	JYH	**Run Date:**	03/30/2012 16:56
Collect Date:	03/22/2012 08:48	**Dilution:**	5	**File ID:**	NI.033012.165650
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.5

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2		U	1.42	0.708
Barium, Total	7440-39-3	15.8		1.42	0.708
Cadmium, Total	7440-43-9		U	0.472	0.236
Chromium, Total	7440-47-3		U	1.89	0.944
Cobalt, Total	7440-48-4	1.77	J	2.36	1.18
Copper, Total	7440-50-8	3.30		2.83	1.42
Lead, Total	7439-92-1	3.42		0.944	0.472
Manganese, Total	7439-96-5	71.8		0.944	0.472
Nickel, Total	7440-02-0		U	3.78	1.89
Selenium, Total	7782-49-2		U	0.944	0.472
Thallium, Total	7440-28-0		U	0.189	0.0944
Vanadium, Total	7440-62-2	4.38		2.36	1.18

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-19	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH05-FD2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/05/2012 09:55
Workgroup #:	WG394302	**Analyst:**	JYH	**Run Date:**	04/05/2012 13:12
Collect Date:	03/22/2012 08:48	**Dilution:**	20	**File ID:**	NI.040512.131225
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	97.5

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.94	1.47

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030945-19	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MP-BH05-FD2	**Prep Method:**	7471	**Prep Date:**	03/28/2012 13:58
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/30/2012 09:42
Workgroup #:	WG393633	**Analyst:**	PDM	**Run Date:**	03/30/2012 11:03
Collect Date:	03/22/2012 08:48	**Dilution:**	1	**File ID:**	HY.033012.110344
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.5

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0972	0.00972

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-20	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	MP-BH05-RB	**Prep Method:**	3005A	**Prep Date:**	03/30/2012 06:44
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 08:37
Workgroup #:	WG393777	**Analyst:**	KHR	**Run Date:**	04/05/2012 13:53
Collect Date:	03/22/2012 12:56	**Dilution:**	1	**File ID:**	P2.040512.135343
Sample Tag:	02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	0.264		0.200	0.100

Sample #:	L12030945-20	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	MP-BH05-RB	**Prep Method:**	3005A	**Prep Date:**	03/30/2012 06:44
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	04/04/2012 09:02
Workgroup #:	WG393777	**Analyst:**	SLP	**Run Date:**	04/04/2012 12:53
Collect Date:	03/22/2012 12:56	**Dilution:**	1	**File ID:**	P2.040412.125304
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	0.114		0.100	0.0500
Beryllium, Total	7440-41-7		U	0.00200	0.00100
Iron, Total	7439-89-6	0.0977	J	0.100	0.0500
Magnesium, Total	7439-95-4		U	0.500	0.250
Potassium, Total	7440-09-7		U	1.00	0.500
Sodium, Total	7440-23-5	0.672		0.500	0.250
Zinc, Total	7440-66-6		U	0.0200	0.0100

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030945-20	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH05-RB	**Prep Method:**	3015	**Prep Date:**	03/29/2012 10:26
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	03/29/2012 09:57
Workgroup #:	WG393616	**Analyst:**	JYH	**Run Date:**	03/29/2012 13:39
Collect Date:	03/22/2012 12:56	**Dilution:**	1	**File ID:**	NI.032912.133917
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0		U	0.00100	0.000500
Arsenic, Total	7440-38-2		U	0.00100	0.000500
Barium, Total	7440-39-3		U	0.00300	0.00150
Cadmium, Total	7440-43-9		U	0.000600	0.000300
Chromium, Total	7440-47-3		U	0.00200	0.00100
Cobalt, Total	7440-48-4		U	0.00100	0.000500
Copper, Total	7440-50-8		U	0.00200	0.00100
Lead, Total	7439-92-1		U	0.00100	0.000500
Manganese, Total	7439-96-5	0.00292		0.00200	0.00100
Nickel, Total	7440-02-0		U	0.00400	0.00200
Selenium, Total	7782-49-2		U	0.00100	0.000500
Silver, Total	7440-22-4		U	0.00100	0.000500
Thallium, Total	7440-28-0	0.000193	J	0.000200	0.000100
Vanadium, Total	7440-62-2		U	0.00100	0.000500

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-20	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MP-BH05-RB	**Prep Method:**	7470A	**Prep Date:**	03/29/2012 09:26
Matrix:	Water	**Analytical Method:**	7470A	**Cal Date:**	04/02/2012 13:06
Workgroup #:	WG393836	**Analyst:**	PDM	**Run Date:**	04/02/2012 14:04
Collect Date:	03/22/2012 12:56	**Dilution:**	1	**File ID:**	HY.040212.140448
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury	7439-97-6		U	0.000200	0.000100

U	Analyte was not detected. The concentration is below the reported LOD.

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Sample #:	L12030945-21	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH06-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393671	**Analyst:**	PDM	**Run Date:**	04/02/2012 22:33
Collect Date:	03/22/2012 09:19	**Dilution:**	1	**File ID:**	T1.040212.223343
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.3

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	2470		15.1	7.54
Antimony, Total	7440-36-0		U	0.754	0.377
Calcium, Total	7440-70-2	2050		7.54	3.77
Magnesium, Total	7439-95-4	1670		18.8	9.42
Potassium, Total	7440-09-7	1330		37.7	18.8
Silver, Total	7440-22-4	0.847		0.151	0.0754
Sodium, Total	7440-23-5	22.6		18.8	9.42

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-21	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH06-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG393671	**Analyst:**	PDM	**Run Date:**	04/05/2012 20:51
Collect Date:	03/22/2012 09:19	**Dilution:**	2	**File ID:**	T1.040512.205126
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.3

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.255		0.151	0.0754
Iron, Total	7439-89-6	7390		4.52	2.26
Zinc, Total	7440-66-6	17.3		1.51	0.754

Sample #:	L12030945-21	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH06-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:17
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/30/2012 15:08
Workgroup #:	WG393740	**Analyst:**	JYH	**Run Date:**	03/30/2012 16:59
Collect Date:	03/22/2012 09:19	**Dilution:**	5	**File ID:**	NI.033012.165936
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.3

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.14	J	1.46	0.731
Barium, Total	7440-39-3	31.6		1.46	0.731
Cadmium, Total	7440-43-9		U	0.487	0.244
Chromium, Total	7440-47-3	1.46	J	1.95	0.975
Cobalt, Total	7440-48-4	3.26		2.44	1.22

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Analyte	CAS #	Result	Qual	LOQ	LOD
Copper, Total	7440-50-8	5.35		2.92	1.46
Lead, Total	7439-92-1	6.55		0.975	0.487
Manganese, Total	7439-96-5	140		0.975	0.487
Nickel, Total	7440-02-0	2.77	J	3.90	1.95
Selenium, Total	7782-49-2		U	0.975	0.487
Thallium, Total	7440-28-0		U	0.195	0.0975
Vanadium, Total	7440-62-2	8.35		2.44	1.22

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-21	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH06-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/05/2012 09:55
Workgroup #:	WG394302	**Analyst:**	JYH	**Run Date:**	04/05/2012 13:26
Collect Date:	03/22/2012 09:19	**Dilution:**	20	**File ID:**	NI.040512.132619
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	97.3

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.02	1.51

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-21	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MP-BH06-1	**Prep Method:**	7471	**Prep Date:**	03/28/2012 13:59
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/30/2012 09:42
Workgroup #:	WG393633	**Analyst:**	PDM	**Run Date:**	03/30/2012 11:05
Collect Date:	03/22/2012 09:19	**Dilution:**	1	**File ID:**	HY.033012.110526
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.3

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.101	0.0101

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-22	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH06-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393671	**Analyst:**	PDM	**Run Date:**	04/02/2012 22:37
Collect Date:	03/22/2012 09:23	**Dilution:**	1	**File ID:**	T1.040212.223722
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	4840		15.5	7.77

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Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0		U	0.777	0.389
Beryllium, Total	7440-41-7		U	0.0777	0.0389
Calcium, Total	7440-70-2	2440		7.77	3.89
Magnesium, Total	7439-95-4	2760		19.4	9.71
Potassium, Total	7440-09-7	1980		38.9	19.4
Silver, Total	7440-22-4	1.78		0.155	0.0777
Sodium, Total	7440-23-5	37.0		19.4	9.71

U Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-22	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH06-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG393671	**Analyst:**	PDM	**Run Date:**	04/05/2012 20:55
Collect Date:	03/22/2012 09:23	**Dilution:**	1	**File ID:**	T1.040512.205504
Sample Tag:	02	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Iron, Total	7439-89-6	11800		2.33	1.17
Zinc, Total	7440-66-6	22.4		0.777	0.389

Sample #:	L12030945-22	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH06-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:17
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/30/2012 15:08
Workgroup #:	WG393740	**Analyst:**	JYH	**Run Date:**	03/30/2012 17:02
Collect Date:	03/22/2012 09:23	**Dilution:**	5	**File ID:**	NI.033012.170223
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.59		1.52	0.760
Barium, Total	7440-39-3	44.4		1.52	0.760
Cadmium, Total	7440-43-9		U	0.506	0.253
Chromium, Total	7440-47-3	2.31		2.03	1.01
Cobalt, Total	7440-48-4	5.59		2.53	1.27
Copper, Total	7440-50-8	6.42		3.04	1.52
Lead, Total	7439-92-1	7.90		1.01	0.506
Manganese, Total	7439-96-5	191		1.01	0.506
Nickel, Total	7440-02-0	4.57		4.05	2.03
Selenium, Total	7782-49-2		U	1.01	0.506
Thallium, Total	7440-28-0	0.129	J	0.203	0.101
Vanadium, Total	7440-62-2	15.8		2.53	1.27

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-22	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH06-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/05/2012 09:55
Workgroup #:	WG394302	**Analyst:**	JYH	**Run Date:**	04/05/2012 13:29
Collect Date:	03/22/2012 09:23	**Dilution:**	20	**File ID:**	NI.040512.132906
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.11	1.55

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-22	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MP-BH06-2	**Prep Method:**	7471	**Prep Date:**	03/28/2012 13:59
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/30/2012 09:42
Workgroup #:	WG393633	**Analyst:**	PDM	**Run Date:**	03/30/2012 11:07
Collect Date:	03/22/2012 09:23	**Dilution:**	1	**File ID:**	HY.033012.110707
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0965	0.00965

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-23	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH06-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG393671	**Analyst:**	PDM	**Run Date:**	04/05/2012 20:58
Collect Date:	03/22/2012 09:26	**Dilution:**	1	**File ID:**	T1.040512.205842
Sample Tag:	02	**Units:**	mg/kg	**Percent Solid:**	96.8

Analyte	CAS #	Result	Qual	LOQ	LOD
Iron, Total	7439-89-6	10300		2.30	1.15
Zinc, Total	7440-66-6	19.9		0.765	0.383

Certificate of Analysis

Sample #:	L12030945-23	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH06-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393671	**Analyst:**	PDM	**Run Date:**	04/02/2012 22:41
Collect Date:	03/22/2012 09:26	**Dilution:**	1	**File ID:**	T1.040212.224100
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	96.8

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	5320		15.3	7.65
Antimony, Total	7440-36-0		U	0.765	0.383
Beryllium, Total	7440-41-7	0.418		0.0765	0.0383
Calcium, Total	7440-70-2	3770		7.65	3.83
Magnesium, Total	7439-95-4	1930		19.1	9.57
Potassium, Total	7440-09-7	1300		38.3	19.1
Silver, Total	7440-22-4	0.381		0.153	0.0765
Sodium, Total	7440-23-5	64.2		19.1	9.57

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-23	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH06-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:17
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/30/2012 15:08
Workgroup #:	WG393740	**Analyst:**	JYH	**Run Date:**	03/30/2012 17:05
Collect Date:	03/22/2012 09:26	**Dilution:**	5	**File ID:**	NI.033012.170510
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	96.8

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.61		1.47	0.733
Barium, Total	7440-39-3	51.2		1.47	0.733
Cadmium, Total	7440-43-9		U	0.488	0.244
Chromium, Total	7440-47-3	3.05		1.95	0.977
Cobalt, Total	7440-48-4	3.44		2.44	1.22
Copper, Total	7440-50-8	4.93		2.93	1.47
Lead, Total	7439-92-1	7.30		0.977	0.488
Manganese, Total	7439-96-5	145		0.977	0.488
Nickel, Total	7440-02-0	4.04		3.91	1.95
Selenium, Total	7782-49-2		U	0.977	0.488
Thallium, Total	7440-28-0		U	0.195	0.0977
Vanadium, Total	7440-62-2	10.0		2.44	1.22

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030945-23	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH06-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/05/2012 09:55
Workgroup #:	WG394302	**Analyst:**	JYH	**Run Date:**	04/05/2012 13:31
Collect Date:	03/22/2012 09:26	**Dilution:**	20	**File ID:**	NI.040512.133152
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	96.8

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.06	1.53

U — Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-23	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MP-BH06-3	**Prep Method:**	7471	**Prep Date:**	03/28/2012 14:00
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/30/2012 09:42
Workgroup #:	WG393633	**Analyst:**	PDM	**Run Date:**	03/30/2012 11:08
Collect Date:	03/22/2012 09:26	**Dilution:**	1	**File ID:**	HY.033012.110855
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	96.8

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.101	0.0101

U — Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-24	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH07-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393671	**Analyst:**	PDM	**Run Date:**	04/02/2012 22:52
Collect Date:	03/22/2012 09:39	**Dilution:**	1	**File ID:**	T1.040212.225209
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.5

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	4160		15.1	7.56
Antimony, Total	7440-36-0		U	0.756	0.378
Calcium, Total	7440-70-2	2570		7.56	3.78
Magnesium, Total	7439-95-4	2260		18.9	9.44
Potassium, Total	7440-09-7	1800		37.8	18.9
Silver, Total	7440-22-4	1.24		0.151	0.0756
Sodium, Total	7440-23-5	28.7		18.9	9.44

U — Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030945-24	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH07-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG393671	**Analyst:**	PDM	**Run Date:**	04/05/2012 21:09
Collect Date:	03/22/2012 09:39	**Dilution:**	2	**File ID:**	T1.040512.210952
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.5

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.389		0.151	0.0756
Iron, Total	7439-89-6	10000		4.53	2.27
Zinc, Total	7440-66-6	23.5		1.51	0.756

Sample #:	L12030945-24	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH07-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:57
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/30/2012 15:08
Workgroup #:	WG393741	**Analyst:**	JYH	**Run Date:**	03/30/2012 17:27
Collect Date:	03/22/2012 09:39	**Dilution:**	5	**File ID:**	NI.033012.172727
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.5

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.39	J	1.46	0.728
Barium, Total	7440-39-3	40.2		1.46	0.728
Cadmium, Total	7440-43-9		U	0.485	0.243
Chromium, Total	7440-47-3	1.72	J	1.94	0.971
Cobalt, Total	7440-48-4	3.99		2.43	1.21
Copper, Total	7440-50-8	7.00		2.91	1.46
Lead, Total	7439-92-1	8.61		0.971	0.485
Manganese, Total	7439-96-5	180		0.971	0.485
Nickel, Total	7440-02-0	3.38	J	3.88	1.94
Selenium, Total	7782-49-2		U	0.971	0.485
Thallium, Total	7440-28-0	0.113	J	0.194	0.0971
Vanadium, Total	7440-62-2	10.4		2.43	1.21

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030945-24	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH07-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/05/2012 09:55
Workgroup #:	WG394302	**Analyst:**	JYH	**Run Date:**	04/05/2012 13:34
Collect Date:	03/22/2012 09:39	**Dilution:**	20	**File ID:**	NI.040512.133437
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	98.5

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.02	1.51

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-24	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MP-BH07-1	**Prep Method:**	7471	**Prep Date:**	03/28/2012 14:27
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/30/2012 09:42
Workgroup #:	WG393636	**Analyst:**	PDM	**Run Date:**	03/30/2012 11:18
Collect Date:	03/22/2012 09:39	**Dilution:**	1	**File ID:**	HY.033012.111852
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.5

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6	0.0108	J	0.0966	0.00966

J	Estimated value ; the analyte concentration was less than the LOQ.

Sample #:	L12030945-25	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH07-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393671	**Analyst:**	PDM	**Run Date:**	04/02/2012 22:55
Collect Date:	03/22/2012 09:45	**Dilution:**	1	**File ID:**	T1.040212.225547
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	4500		14.4	7.21
Antimony, Total	7440-36-0		U	0.721	0.361
Beryllium, Total	7440-41-7	0.275		0.0721	0.0361
Calcium, Total	7440-70-2	1720		7.21	3.61
Magnesium, Total	7439-95-4	1460		18.0	9.01
Potassium, Total	7440-09-7	1120		36.1	18.0
Silver, Total	7440-22-4	0.397		0.144	0.0721
Sodium, Total	7440-23-5	33.9		18.0	9.01

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030945-25	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH07-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG393671	**Analyst:**	PDM	**Run Date:**	04/05/2012 21:13
Collect Date:	03/22/2012 09:45	**Dilution:**	1	**File ID:**	T1.040512.211331
Sample Tag:	02	**Units:**	mg/kg	**Percent Solid:**	97.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Iron, Total	7439-89-6	10500		2.16	1.08
Zinc, Total	7440-66-6	16.4		0.721	0.361

Sample #:	L12030945-25	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH07-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:57
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/30/2012 15:08
Workgroup #:	WG393741	**Analyst:**	JYH	**Run Date:**	03/30/2012 17:30
Collect Date:	03/22/2012 09:45	**Dilution:**	5	**File ID:**	NI.033012.173013
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.44	J	1.48	0.741
Barium, Total	7440-39-3	49.8		1.48	0.741
Cadmium, Total	7440-43-9		U	0.494	0.247
Chromium, Total	7440-47-3	3.84		1.98	0.988
Cobalt, Total	7440-48-4	4.98		2.47	1.23
Copper, Total	7440-50-8	5.99		2.96	1.48
Lead, Total	7439-92-1	8.13		0.988	0.494
Nickel, Total	7440-02-0	4.95		3.95	1.98
Selenium, Total	7782-49-2	0.526	J	0.988	0.494
Thallium, Total	7440-28-0	0.119	J	0.198	0.0988
Vanadium, Total	7440-62-2	11.8		2.47	1.23

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-25	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH07-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/05/2012 09:55
Workgroup #:	WG394302	**Analyst:**	JYH	**Run Date:**	04/05/2012 13:37
Collect Date:	03/22/2012 09:45	**Dilution:**	20	**File ID:**	NI.040512.133723
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	97.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.88	1.44

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-25	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH07-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:57
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393741	**Analyst:**	JYH	**Run Date:**	04/02/2012 19:28
Collect Date:	03/22/2012 09:45	**Dilution:**	50	**File ID:**	NI.040212.192834
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	97.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	219		9.88	4.94

Sample #:	L12030945-25	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MP-BH07-2	**Prep Method:**	7471	**Prep Date:**	03/28/2012 14:27
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/30/2012 09:42
Workgroup #:	WG393636	**Analyst:**	PDM	**Run Date:**	03/30/2012 11:23
Collect Date:	03/22/2012 09:45	**Dilution:**	1	**File ID:**	HY.033012.112300
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0982	0.00982

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-26	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH07-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG393671	**Analyst:**	PDM	**Run Date:**	04/05/2012 21:17
Collect Date:	03/22/2012 09:48	**Dilution:**	1	**File ID:**	T1.040512.211709
Sample Tag:	02	**Units:**	mg/kg	**Percent Solid:**	98.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Iron, Total	7439-89-6	11000		2.26	1.13
Zinc, Total	7440-66-6	14.9		0.755	0.377

Certificate of Analysis

Sample #:	L12030945-26	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH07-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393671	**Analyst:**	PDM	**Run Date:**	04/02/2012 22:59
Collect Date:	03/22/2012 09:48	**Dilution:**	1	**File ID:**	T1.040212.225925
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	3110		15.1	7.55
Antimony, Total	7440-36-0		U	0.755	0.377
Beryllium, Total	7440-41-7	0.112		0.0755	0.0377
Calcium, Total	7440-70-2	2270		7.55	3.77
Magnesium, Total	7439-95-4	1250		18.9	9.44
Potassium, Total	7440-09-7	775		37.7	18.9
Silver, Total	7440-22-4	0.426		0.151	0.0755
Sodium, Total	7440-23-5	40.8		18.9	9.44

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-26	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH07-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:57
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/30/2012 15:08
Workgroup #:	WG393741	**Analyst:**	JYH	**Run Date:**	03/30/2012 17:44
Collect Date:	03/22/2012 09:48	**Dilution:**	5	**File ID:**	NI.033012.174409
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	0.825	J	1.49	0.746
Barium, Total	7440-39-3	37.1		1.49	0.746
Cadmium, Total	7440-43-9		U	0.498	0.249
Chromium, Total	7440-47-3	1.14	J	1.99	0.995
Cobalt, Total	7440-48-4	2.13	J	2.49	1.24
Copper, Total	7440-50-8	2.96	J	2.99	1.49
Lead, Total	7439-92-1	5.05		0.995	0.498
Manganese, Total	7439-96-5	92.9		0.995	0.498
Nickel, Total	7440-02-0	2.25	J	3.98	1.99
Selenium, Total	7782-49-2		U	0.995	0.498
Thallium, Total	7440-28-0		U	0.199	0.0995
Vanadium, Total	7440-62-2	5.70		2.49	1.24

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030945-26	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH07-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/05/2012 09:55
Workgroup #:	WG394302	**Analyst:**	JYH	**Run Date:**	04/05/2012 13:40
Collect Date:	03/22/2012 09:48	**Dilution:**	20	**File ID:**	NI.040512.134010
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	98.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.02	1.51

U — Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-26	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MP-BH07-3	**Prep Method:**	7471	**Prep Date:**	03/28/2012 14:27
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/30/2012 09:42
Workgroup #:	WG393636	**Analyst:**	PDM	**Run Date:**	03/30/2012 11:25
Collect Date:	03/22/2012 09:48	**Dilution:**	1	**File ID:**	HY.033012.112514
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0997	0.00997

U — Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-27	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH08-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393671	**Analyst:**	PDM	**Run Date:**	04/02/2012 23:03
Collect Date:	03/22/2012 10:32	**Dilution:**	1	**File ID:**	T1.040212.230303
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	3540		14.4	7.22
Antimony, Total	7440-36-0		U	0.722	0.361
Calcium, Total	7440-70-2	2100		7.22	3.61
Magnesium, Total	7439-95-4	1940		18.0	9.02
Potassium, Total	7440-09-7	1430		36.1	18.0
Silver, Total	7440-22-4	1.02		0.144	0.0722
Sodium, Total	7440-23-5	26.6		18.0	9.02

U — Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030945-27	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH08-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG393671	**Analyst:**	PDM	**Run Date:**	04/05/2012 21:20
Collect Date:	03/22/2012 10:32	**Dilution:**	2	**File ID:**	T1.040512.212047
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.369		0.144	0.0722
Iron, Total	7439-89-6	8980		4.33	2.17
Zinc, Total	7440-66-6	20.5		1.44	0.722

Sample #:	L12030945-27	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH08-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:57
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/30/2012 15:08
Workgroup #:	WG393741	**Analyst:**	JYH	**Run Date:**	03/30/2012 17:19
Collect Date:	03/22/2012 10:32	**Dilution:**	5	**File ID:**	NI.033012.171907
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.09	J	1.49	0.745
Barium, Total	7440-39-3	40.9		1.49	0.745
Cadmium, Total	7440-43-9		U	0.496	0.248
Chromium, Total	7440-47-3	1.64	J	1.99	0.993
Cobalt, Total	7440-48-4	3.81		2.48	1.24
Copper, Total	7440-50-8	6.22		2.98	1.49
Lead, Total	7439-92-1	7.33		0.993	0.496
Nickel, Total	7440-02-0	3.13	J	3.97	1.99
Selenium, Total	7782-49-2		U	0.993	0.496
Thallium, Total	7440-28-0		U	0.199	0.0993
Vanadium, Total	7440-62-2	8.92		2.48	1.24

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030945-27	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH08-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/05/2012 09:55
Workgroup #:	WG394302	**Analyst:**	JYH	**Run Date:**	04/05/2012 13:01
Collect Date:	03/22/2012 10:32	**Dilution:**	20	**File ID:**	NI.040512.130121
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	97.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.89	1.44

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-27	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH08-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:57
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393741	**Analyst:**	JYH	**Run Date:**	04/02/2012 19:20
Collect Date:	03/22/2012 10:32	**Dilution:**	50	**File ID:**	NI.040212.192015
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	97.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	166		9.93	4.96

Sample #:	L12030945-27	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MP-BH08-1	**Prep Method:**	7471	**Prep Date:**	03/28/2012 14:28
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/10/2012 12:53
Workgroup #:	WG393636	**Analyst:**	PDM	**Run Date:**	04/10/2012 13:19
Collect Date:	03/22/2012 10:32	**Dilution:**	1	**File ID:**	HY.041012.131929
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.101	0.0101

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-28	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH08-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393671	**Analyst:**	PDM	**Run Date:**	04/02/2012 23:06
Collect Date:	03/22/2012 10:38	**Dilution:**	1	**File ID:**	T1.040212.230641
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	99.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	2360		14.7	7.35
Antimony, Total	7440-36-0		U	0.735	0.367
Calcium, Total	7440-70-2	2010		7.35	3.67

Certificate of Analysis

Analyte	CAS #	Result	Qual	LOQ	LOD
Magnesium, Total	7439-95-4	1530		18.4	9.19
Potassium, Total	7440-09-7	994		36.7	18.4
Silver, Total	7440-22-4	0.843		0.147	0.0735
Sodium, Total	7440-23-5	33.9		18.4	9.19

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-28	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH08-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG393671	**Analyst:**	PDM	**Run Date:**	04/05/2012 21:24
Collect Date:	03/22/2012 10:38	**Dilution:**	2	**File ID:**	T1.040512.212426
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	99.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.243		0.147	0.0735
Iron, Total	7439-89-6	8230		4.41	2.20
Zinc, Total	7440-66-6	14.4		1.47	0.735

Sample #:	L12030945-28	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH08-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:57
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/30/2012 15:08
Workgroup #:	WG393741	**Analyst:**	JYH	**Run Date:**	03/30/2012 17:46
Collect Date:	03/22/2012 10:38	**Dilution:**	5	**File ID:**	NI.033012.174655
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	99.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2		U	1.46	0.732
Barium, Total	7440-39-3	22.5		1.46	0.732
Cadmium, Total	7440-43-9		U	0.488	0.244
Chromium, Total	7440-47-3		U	1.95	0.976
Cobalt, Total	7440-48-4	2.45		2.44	1.22
Copper, Total	7440-50-8	2.58	J	2.93	1.46
Lead, Total	7439-92-1	5.12		0.976	0.488
Manganese, Total	7439-96-5	107		0.976	0.488
Nickel, Total	7440-02-0		U	3.91	1.95
Selenium, Total	7782-49-2		U	0.976	0.488
Thallium, Total	7440-28-0		U	0.195	0.0976
Vanadium, Total	7440-62-2	5.98		2.44	1.22

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030945-28	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH08-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/05/2012 09:55
Workgroup #:	WG394302	**Analyst:**	JYH	**Run Date:**	04/05/2012 13:42
Collect Date:	03/22/2012 10:38	**Dilution:**	20	**File ID:**	NI.040512.134256
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	99.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.94	1.47

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-28	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MP-BH08-2	**Prep Method:**	7471	**Prep Date:**	03/28/2012 14:28
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/30/2012 09:42
Workgroup #:	WG393636	**Analyst:**	PDM	**Run Date:**	03/30/2012 11:28
Collect Date:	03/22/2012 10:38	**Dilution:**	1	**File ID:**	HY.033012.112840
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	99.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0983	0.00983

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-29	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH08-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393671	**Analyst:**	PDM	**Run Date:**	04/02/2012 23:10
Collect Date:	03/22/2012 10:41	**Dilution:**	1	**File ID:**	T1.040212.231019
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	99.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	2650		13.6	6.82
Antimony, Total	7440-36-0		U	0.682	0.341
Calcium, Total	7440-70-2	2240		6.82	3.41
Magnesium, Total	7439-95-4	1810		17.1	8.53
Potassium, Total	7440-09-7	1090		34.1	17.1
Silver, Total	7440-22-4	1.34		0.136	0.0682
Sodium, Total	7440-23-5	42.3		17.1	8.53

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030945-29	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH08-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG393671	**Analyst:**	PDM	**Run Date:**	04/05/2012 21:28
Collect Date:	03/22/2012 10:41	**Dilution:**	2	**File ID:**	T1.040512.212805
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	99.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.266		0.136	0.0682
Iron, Total	7439-89-6	9210		4.09	2.05
Zinc, Total	7440-66-6	16.2		1.36	0.682

Sample #:	L12030945-29	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH08-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:57
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/30/2012 15:08
Workgroup #:	WG393741	**Analyst:**	JYH	**Run Date:**	03/30/2012 17:49
Collect Date:	03/22/2012 10:41	**Dilution:**	5	**File ID:**	NI.033012.174940
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	99.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	0.816	J	1.41	0.707
Barium, Total	7440-39-3	26.1		1.41	0.707
Cadmium, Total	7440-43-9		U	0.471	0.236
Chromium, Total	7440-47-3	1.26	J	1.88	0.942
Cobalt, Total	7440-48-4	3.08		2.36	1.18
Copper, Total	7440-50-8	3.57		2.83	1.41
Lead, Total	7439-92-1	5.10		0.942	0.471
Manganese, Total	7439-96-5	105		0.942	0.471
Nickel, Total	7440-02-0	2.47	J	3.77	1.88
Selenium, Total	7782-49-2		U	0.942	0.471
Thallium, Total	7440-28-0		U	0.188	0.0942
Vanadium, Total	7440-62-2	9.77		2.36	1.18

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030945-29	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH08-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/05/2012 09:55
Workgroup #:	WG394302	**Analyst:**	JYH	**Run Date:**	04/05/2012 13:45
Collect Date:	03/22/2012 10:41	**Dilution:**	20	**File ID:**	NI.040512.134542
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	99.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.73	1.36

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-29	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MP-BH08-3	**Prep Method:**	7471	**Prep Date:**	03/28/2012 14:29
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/30/2012 09:42
Workgroup #:	WG393636	**Analyst:**	PDM	**Run Date:**	03/30/2012 11:30
Collect Date:	03/22/2012 10:41	**Dilution:**	1	**File ID:**	HY.033012.113043
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	99.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0971	0.00971

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-30	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH08-MS1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393671	**Analyst:**	PDM	**Run Date:**	04/02/2012 23:13
Collect Date:	03/22/2012 10:32	**Dilution:**	1	**File ID:**	T1.040212.231357
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	75.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	7550		18.6	9.29
Antimony, Total	7440-36-0	21.1		0.929	0.464
Calcium, Total	7440-70-2	3740		9.29	4.64
Magnesium, Total	7439-95-4	3690		23.2	11.6
Potassium, Total	7440-09-7	3530		46.4	23.2
Silver, Total	7440-22-4	10.8		0.186	0.0929
Sodium, Total	7440-23-5	965		23.2	11.6

Certificate of Analysis

Sample #:	L12030945-30	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH08-MS1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG393671	**Analyst:**	PDM	**Run Date:**	04/05/2012 21:31
Collect Date:	03/22/2012 10:32	**Dilution:**	2	**File ID:**	T1.040512.213143
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	75.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	1.77		0.186	0.0929
Iron, Total	7439-89-6	17200		5.57	2.79
Zinc, Total	7440-66-6	62.8		1.86	0.929

Sample #:	L12030945-30	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH08-MS1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:57
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/30/2012 15:08
Workgroup #:	WG393741	**Analyst:**	JYH	**Run Date:**	03/30/2012 17:21
Collect Date:	03/22/2012 10:32	**Dilution:**	5	**File ID:**	NI.033012.172154
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	75.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	16.1		1.98	0.989
Barium, Total	7440-39-3	70.0		1.98	0.989
Cadmium, Total	7440-43-9	14.8		0.659	0.330
Chromium, Total	7440-47-3	15.3		2.64	1.32
Cobalt, Total	7440-48-4	17.7		3.30	1.65
Copper, Total	7440-50-8	21.2		3.95	1.98
Lead, Total	7439-92-1	22.7		1.32	0.659
Nickel, Total	7440-02-0	17.1		5.27	2.64
Selenium, Total	7782-49-2	15.7		1.32	0.659
Thallium, Total	7440-28-0	12.5		0.264	0.132
Vanadium, Total	7440-62-2	22.8		3.30	1.65

Sample #:	L12030945-30	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH08-MS1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/05/2012 09:55
Workgroup #:	WG394302	**Analyst:**	JYH	**Run Date:**	04/05/2012 13:04
Collect Date:	03/22/2012 10:32	**Dilution:**	20	**File ID:**	NI.040512.130408
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	75.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4	6.72		3.71	1.86

Certificate of Analysis

Sample #:	L12030945-30	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH08-MS1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:57
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393741	**Analyst:**	JYH	**Run Date:**	04/02/2012 19:23
Collect Date:	03/22/2012 10:32	**Dilution:**	50	**File ID:**	NI.040212.192302
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	75.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	242		13.2	6.59

Sample #:	L12030945-30	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MP-BH08-MS1	**Prep Method:**	7471	**Prep Date:**	03/28/2012 14:23
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/10/2012 12:53
Workgroup #:	WG393636	**Analyst:**	PDM	**Run Date:**	04/10/2012 13:21
Collect Date:	03/22/2012 10:32	**Dilution:**	1	**File ID:**	HY.041012.132110
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	75.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6	0.388		0.130	0.0130

Sample #:	L12030945-31	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH08-MSD1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393671	**Analyst:**	PDM	**Run Date:**	04/02/2012 23:17
Collect Date:	03/22/2012 10:32	**Dilution:**	1	**File ID:**	T1.040212.231739
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	75.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	6340		18.5	9.25
Antimony, Total	7440-36-0	21.4		0.925	0.463
Calcium, Total	7440-70-2	3240		9.25	4.63
Magnesium, Total	7439-95-4	3120		23.1	11.6
Potassium, Total	7440-09-7	3060		46.3	23.1
Silver, Total	7440-22-4	10.7		0.185	0.0925
Sodium, Total	7440-23-5	982		23.1	11.6

Certificate of Analysis

Sample #:	L12030945-31	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH08-MSD1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG393671	**Analyst:**	PDM	**Run Date:**	04/05/2012 21:35
Collect Date:	03/22/2012 10:32	**Dilution:**	2	**File ID:**	T1.040512.213518
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	75.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	1.61		0.185	0.0925
Iron, Total	7439-89-6	15300		5.55	2.78
Zinc, Total	7440-66-6	53.7		1.85	0.925

Sample #:	L12030945-31	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH08-MSD1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:57
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/30/2012 15:08
Workgroup #:	WG393741	**Analyst:**	JYH	**Run Date:**	03/30/2012 17:24
Collect Date:	03/22/2012 10:32	**Dilution:**	5	**File ID:**	NI.033012.172440
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	75.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	16.9		1.96	0.981
Barium, Total	7440-39-3	71.0		1.96	0.981
Cadmium, Total	7440-43-9	14.8		0.654	0.327
Chromium, Total	7440-47-3	16.5		2.62	1.31
Cobalt, Total	7440-48-4	18.9		3.27	1.63
Copper, Total	7440-50-8	22.6		3.92	1.96
Lead, Total	7439-92-1	23.6		1.31	0.654
Nickel, Total	7440-02-0	18.1		5.23	2.62
Selenium, Total	7782-49-2	17.0		1.31	0.654
Thallium, Total	7440-28-0	13.1		0.262	0.131
Vanadium, Total	7440-62-2	27.8		3.27	1.63

Sample #:	L12030945-31	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH08-MSD1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/05/2012 09:55
Workgroup #:	WG394302	**Analyst:**	JYH	**Run Date:**	04/05/2012 13:06
Collect Date:	03/22/2012 10:32	**Dilution:**	20	**File ID:**	NI.040512.130654
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	75.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4	6.63		3.70	1.85

Certificate of Analysis

Sample #:	L12030945-31	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH08-MSD1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:57
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393741	**Analyst:**	JYH	**Run Date:**	04/02/2012 19:25
Collect Date:	03/22/2012 10:32	**Dilution:**	50	**File ID:**	NI.040212.192549
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	75.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	253		13.1	6.54

Sample #:	L12030945-31	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MP-BH08-MSD1	**Prep Method:**	7471	**Prep Date:**	03/28/2012 14:23
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/10/2012 12:53
Workgroup #:	WG393636	**Analyst:**	PDM	**Run Date:**	04/10/2012 13:23
Collect Date:	03/22/2012 10:32	**Dilution:**	1	**File ID:**	HY.041012.132313
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	75.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6	0.366		0.127	0.0127

Sample #:	L12030945-32	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH09-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393671	**Analyst:**	PDM	**Run Date:**	04/02/2012 23:21
Collect Date:	03/22/2012 10:57	**Dilution:**	1	**File ID:**	T1.040212.232122
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	96.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	4290		15.2	7.62
Antimony, Total	7440-36-0		U	0.762	0.381
Beryllium, Total	7440-41-7		U	0.0762	0.0381
Calcium, Total	7440-70-2	2240		7.62	3.81
Magnesium, Total	7439-95-4	2130		19.1	9.53
Potassium, Total	7440-09-7	1540		38.1	19.1
Silver, Total	7440-22-4	1.16		0.152	0.0762
Sodium, Total	7440-23-5	33.2		19.1	9.53

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030945-32	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH09-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG393671	**Analyst:**	PDM	**Run Date:**	04/05/2012 21:38
Collect Date:	03/22/2012 10:57	**Dilution:**	1	**File ID:**	T1.040512.213855
Sample Tag:	02	**Units:**	mg/kg	**Percent Solid:**	96.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Iron, Total	7439-89-6	9960		2.29	1.14
Zinc, Total	7440-66-6	21.7		0.762	0.381

Sample #:	L12030945-32	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH09-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:57
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/30/2012 15:08
Workgroup #:	WG393741	**Analyst:**	JYH	**Run Date:**	03/30/2012 17:52
Collect Date:	03/22/2012 10:57	**Dilution:**	5	**File ID:**	NI.033012.175227
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	96.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.63		1.50	0.750
Barium, Total	7440-39-3	53.0		1.50	0.750
Cadmium, Total	7440-43-9		U	0.500	0.250
Chromium, Total	7440-47-3	2.35		2.00	1.00
Cobalt, Total	7440-48-4	5.09		2.50	1.25
Copper, Total	7440-50-8	8.40		3.00	1.50
Lead, Total	7439-92-1	10.7		1.00	0.500
Nickel, Total	7440-02-0	4.32		4.00	2.00
Selenium, Total	7782-49-2		U	1.00	0.500
Thallium, Total	7440-28-0	0.110	J	0.200	0.100
Vanadium, Total	7440-62-2	12.3		2.50	1.25

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-32	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH09-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/05/2012 09:55
Workgroup #:	WG394302	**Analyst:**	JYH	**Run Date:**	04/05/2012 13:48
Collect Date:	03/22/2012 10:57	**Dilution:**	20	**File ID:**	NI.040512.134828
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	96.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.05	1.52

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-32	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH09-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:57
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393741	**Analyst:**	JYH	**Run Date:**	04/02/2012 19:36
Collect Date:	03/22/2012 10:57	**Dilution:**	50	**File ID:**	NI.040212.193654
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	96.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	213		10.0	5.00

Sample #:	L12030945-32	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MP-BH09-1	**Prep Method:**	7471	**Prep Date:**	03/28/2012 14:30
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/10/2012 12:53
Workgroup #:	WG393636	**Analyst:**	PDM	**Run Date:**	04/10/2012 13:24
Collect Date:	03/22/2012 10:57	**Dilution:**	1	**File ID:**	HY.041012.132458
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	96.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6	0.153		0.0972	0.00972

Sample #:	L12030945-33	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH09-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393671	**Analyst:**	PDM	**Run Date:**	04/02/2012 23:25
Collect Date:	03/22/2012 10:59	**Dilution:**	1	**File ID:**	T1.040212.232501
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	99.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	3250		14.2	7.09
Antimony, Total	7440-36-0		U	0.709	0.355
Calcium, Total	7440-70-2	2270		7.09	3.55
Magnesium, Total	7439-95-4	1920		17.7	8.87
Potassium, Total	7440-09-7	1330		35.5	17.7
Silver, Total	7440-22-4	1.14		0.142	0.0709
Sodium, Total	7440-23-5	37.7		17.7	8.87

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030945-33	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH09-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG393671	**Analyst:**	PDM	**Run Date:**	04/05/2012 21:42
Collect Date:	03/22/2012 10:59	**Dilution:**	2	**File ID:**	T1.040512.214233
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	99.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.336		0.142	0.0709
Iron, Total	7439-89-6	10200		4.26	2.13
Zinc, Total	7440-66-6	21.5		1.42	0.709

Sample #:	L12030945-33	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH09-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:57
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/30/2012 15:08
Workgroup #:	WG393741	**Analyst:**	JYH	**Run Date:**	03/30/2012 17:55
Collect Date:	03/22/2012 10:59	**Dilution:**	5	**File ID:**	NI.033012.175514
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	99.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2		U	1.46	0.731
Barium, Total	7440-39-3	23.2		1.46	0.731
Cadmium, Total	7440-43-9		U	0.487	0.244
Chromium, Total	7440-47-3	1.88	J	1.95	0.975
Cobalt, Total	7440-48-4	2.56		2.44	1.22
Copper, Total	7440-50-8	3.69		2.92	1.46
Lead, Total	7439-92-1	5.78		0.975	0.487
Manganese, Total	7439-96-5	121		0.975	0.487
Nickel, Total	7440-02-0	2.00	J	3.90	1.95
Selenium, Total	7782-49-2		U	0.975	0.487
Thallium, Total	7440-28-0		U	0.195	0.0975
Vanadium, Total	7440-62-2	6.34		2.44	1.22

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030945-33	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH09-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/05/2012 09:55
Workgroup #:	WG394302	**Analyst:**	JYH	**Run Date:**	04/05/2012 13:51
Collect Date:	03/22/2012 10:59	**Dilution:**	20	**File ID:**	NI.040512.135114
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	99.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.84	1.42

U — Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-33	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MP-BH09-2	**Prep Method:**	7471	**Prep Date:**	03/28/2012 14:31
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/10/2012 12:53
Workgroup #:	WG393636	**Analyst:**	PDM	**Run Date:**	04/10/2012 13:26
Collect Date:	03/22/2012 10:59	**Dilution:**	1	**File ID:**	HY.041012.132640
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	99.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0992	0.00992

U — Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-34	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH09-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393671	**Analyst:**	PDM	**Run Date:**	04/02/2012 23:36
Collect Date:	03/22/2012 11:02	**Dilution:**	1	**File ID:**	T1.040212.233602
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	99.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	1820		15.3	7.65
Antimony, Total	7440-36-0		U	0.765	0.383
Calcium, Total	7440-70-2	1480		7.65	3.83
Magnesium, Total	7439-95-4	1050		19.1	9.56
Potassium, Total	7440-09-7	677		38.3	19.1
Silver, Total	7440-22-4	0.915		0.153	0.0765
Sodium, Total	7440-23-5	37.1		19.1	9.56

U — Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030945-34	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH09-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG393671	**Analyst:**	PDM	**Run Date:**	04/05/2012 21:53
Collect Date:	03/22/2012 11:02	**Dilution:**	2	**File ID:**	T1.040512.215333
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	99.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.202		0.153	0.0765
Iron, Total	7439-89-6	6500		4.59	2.30
Zinc, Total	7440-66-6	11.0		1.53	0.765

Sample #:	L12030945-34	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH09-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:57
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/30/2012 15:08
Workgroup #:	WG393741	**Analyst:**	JYH	**Run Date:**	03/30/2012 17:58
Collect Date:	03/22/2012 11:02	**Dilution:**	5	**File ID:**	NI.033012.175800
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	99.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	0.699	J	1.39	0.697
Barium, Total	7440-39-3	16.5		1.39	0.697
Cadmium, Total	7440-43-9		U	0.465	0.232
Chromium, Total	7440-47-3		U	1.86	0.929
Cobalt, Total	7440-48-4	1.63	J	2.32	1.16
Copper, Total	7440-50-8	2.60	J	2.79	1.39
Lead, Total	7439-92-1	4.22		0.929	0.465
Manganese, Total	7439-96-5	78.8		0.929	0.465
Nickel, Total	7440-02-0		U	3.72	1.86
Selenium, Total	7782-49-2		U	0.929	0.465
Thallium, Total	7440-28-0		U	0.186	0.0929
Vanadium, Total	7440-62-2	5.19		2.32	1.16

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030945-34	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH09-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/05/2012 09:55
Workgroup #:	WG394302	**Analyst:**	JYH	**Run Date:**	04/05/2012 13:59
Collect Date:	03/22/2012 11:02	**Dilution:**	20	**File ID:**	NI.040512.135937
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	99.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.06	1.53

U — Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-34	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MP-BH09-3	**Prep Method:**	7471	**Prep Date:**	03/28/2012 14:31
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/10/2012 12:53
Workgroup #:	WG393636	**Analyst:**	PDM	**Run Date:**	04/10/2012 13:28
Collect Date:	03/22/2012 11:02	**Dilution:**	1	**File ID:**	HY.041012.132836
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	99.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0988	0.00988

U — Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-35	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH10-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG393671	**Analyst:**	PDM	**Run Date:**	04/05/2012 21:57
Collect Date:	03/22/2012 11:47	**Dilution:**	1	**File ID:**	T1.040512.215712
Sample Tag:	02	**Units:**	mg/kg	**Percent Solid:**	98.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Iron, Total	7439-89-6	5650		2.33	1.17
Zinc, Total	7440-66-6	12.6		0.777	0.389

Sample #:	L12030945-35	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH10-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393671	**Analyst:**	PDM	**Run Date:**	04/02/2012 23:39
Collect Date:	03/22/2012 11:47	**Dilution:**	1	**File ID:**	T1.040212.233940
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	1740		15.5	7.77
Antimony, Total	7440-36-0		U	0.777	0.389

Certificate of Analysis

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.139		0.0777	0.0389
Calcium, Total	7440-70-2	1620		7.77	3.89
Magnesium, Total	7439-95-4	996		19.4	9.72
Potassium, Total	7440-09-7	825		38.9	19.4
Silver, Total	7440-22-4	0.228		0.155	0.0777
Sodium, Total	7440-23-5	18.0	J	19.4	9.72

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-35	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH10-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:57
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/30/2012 15:08
Workgroup #:	WG393741	**Analyst:**	JYH	**Run Date:**	03/30/2012 18:00
Collect Date:	03/22/2012 11:47	**Dilution:**	5	**File ID:**	NI.033012.180046
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.27	J	1.46	0.729
Barium, Total	7440-39-3	38.0		1.46	0.729
Cadmium, Total	7440-43-9		U	0.486	0.243
Chromium, Total	7440-47-3	1.89	J	1.94	0.972
Cobalt, Total	7440-48-4	3.18		2.43	1.21
Copper, Total	7440-50-8	7.61		2.92	1.46
Lead, Total	7439-92-1	8.46		0.972	0.486
Manganese, Total	7439-96-5	192		0.972	0.486
Nickel, Total	7440-02-0	2.89	J	3.89	1.94
Selenium, Total	7782-49-2		U	0.972	0.486
Thallium, Total	7440-28-0		U	0.194	0.0972
Vanadium, Total	7440-62-2	7.19		2.43	1.21

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030945-35	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH10-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/05/2012 09:55
Workgroup #:	WG394302	**Analyst:**	JYH	**Run Date:**	04/05/2012 14:02
Collect Date:	03/22/2012 11:47	**Dilution:**	20	**File ID:**	NI.040512.140222
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	98.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.11	1.55

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-35	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MP-BH10-1	**Prep Method:**	7471	**Prep Date:**	03/28/2012 14:33
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/10/2012 12:53
Workgroup #:	WG393636	**Analyst:**	PDM	**Run Date:**	04/10/2012 13:30
Collect Date:	03/22/2012 11:47	**Dilution:**	1	**File ID:**	HY.041012.133018
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6	0.0108	J	0.0975	0.00975

J	Estimated value ; the analyte concentration was less than the LOQ.

Sample #:	L12030945-36	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH10-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393671	**Analyst:**	PDM	**Run Date:**	04/02/2012 23:43
Collect Date:	03/22/2012 11:51	**Dilution:**	1	**File ID:**	T1.040212.234318
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	2740		15.5	7.74
Antimony, Total	7440-36-0		U	0.774	0.387
Calcium, Total	7440-70-2	1390		7.74	3.87
Magnesium, Total	7439-95-4	1580		19.3	9.67
Potassium, Total	7440-09-7	1140		38.7	19.3
Silver, Total	7440-22-4	0.890		0.155	0.0774
Sodium, Total	7440-23-5	27.5		19.3	9.67

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030945-36	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH10-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG393671	**Analyst:**	PDM	**Run Date:**	04/05/2012 22:00
Collect Date:	03/22/2012 11:51	**Dilution:**	2	**File ID:**	T1.040512.220050
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.304		0.155	0.0774
Iron, Total	7439-89-6	7140		4.64	2.32
Zinc, Total	7440-66-6	15.9		1.55	0.774

Sample #:	L12030945-36	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH10-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:57
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/30/2012 15:08
Workgroup #:	WG393741	**Analyst:**	JYH	**Run Date:**	03/30/2012 18:03
Collect Date:	03/22/2012 11:51	**Dilution:**	5	**File ID:**	NI.033012.180332
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2		U	1.48	0.739
Barium, Total	7440-39-3	20.4		1.48	0.739
Cadmium, Total	7440-43-9		U	0.493	0.246
Chromium, Total	7440-47-3		U	1.97	0.986
Cobalt, Total	7440-48-4	1.96	J	2.46	1.23
Copper, Total	7440-50-8	3.17		2.96	1.48
Lead, Total	7439-92-1	4.95		0.986	0.493
Manganese, Total	7439-96-5	101		0.986	0.493
Nickel, Total	7440-02-0		U	3.94	1.97
Selenium, Total	7782-49-2		U	0.986	0.493
Thallium, Total	7440-28-0		U	0.197	0.0986
Vanadium, Total	7440-62-2	4.86		2.46	1.23

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030945-36	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH10-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/05/2012 09:55
Workgroup #:	WG394302	**Analyst:**	JYH	**Run Date:**	04/05/2012 14:05
Collect Date:	03/22/2012 11:51	**Dilution:**	20	**File ID:**	NI.040512.140509
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	98.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.10	1.55

U — Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-36	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MP-BH10-2	**Prep Method:**	7471	**Prep Date:**	03/28/2012 14:34
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/10/2012 12:53
Workgroup #:	WG393636	**Analyst:**	PDM	**Run Date:**	04/10/2012 13:32
Collect Date:	03/22/2012 11:51	**Dilution:**	1	**File ID:**	HY.041012.133202
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0960	0.00960

U — Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-37	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH10-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393671	**Analyst:**	PDM	**Run Date:**	04/02/2012 23:46
Collect Date:	03/22/2012 11:55	**Dilution:**	1	**File ID:**	T1.040212.234656
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	96.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	5850		14.5	7.25
Antimony, Total	7440-36-0		U	0.725	0.362
Beryllium, Total	7440-41-7	0.362		0.0725	0.0362
Calcium, Total	7440-70-2	1960		7.25	3.62
Magnesium, Total	7439-95-4	1970		18.1	9.06
Potassium, Total	7440-09-7	1390		36.2	18.1
Silver, Total	7440-22-4	0.548		0.145	0.0725
Sodium, Total	7440-23-5	52.5		18.1	9.06

U — Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030945-37	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH10-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG393671	**Analyst:**	PDM	**Run Date:**	04/05/2012 22:04
Collect Date:	03/22/2012 11:55	**Dilution:**	1	**File ID:**	T1.040512.220428
Sample Tag:	02	**Units:**	mg/kg	**Percent Solid:**	96.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Iron, Total	7439-89-6	10900		2.17	1.09
Zinc, Total	7440-66-6	24.7		0.725	0.362

Sample #:	L12030945-37	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH10-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:57
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/30/2012 15:08
Workgroup #:	WG393741	**Analyst:**	JYH	**Run Date:**	03/30/2012 18:06
Collect Date:	03/22/2012 11:55	**Dilution:**	5	**File ID:**	NI.033012.180619
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	96.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	2.19		1.53	0.765
Barium, Total	7440-39-3	75.2		1.53	0.765
Cadmium, Total	7440-43-9		U	0.510	0.255
Chromium, Total	7440-47-3	4.40		2.04	1.02
Cobalt, Total	7440-48-4	6.01		2.55	1.27
Copper, Total	7440-50-8	14.0		3.06	1.53
Lead, Total	7439-92-1	14.0		1.02	0.510
Nickel, Total	7440-02-0	6.37		4.08	2.04
Selenium, Total	7782-49-2	0.529	J	1.02	0.510
Thallium, Total	7440-28-0	0.120	J	0.204	0.102
Vanadium, Total	7440-62-2	13.3		2.55	1.27

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-37	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH10-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/05/2012 09:55
Workgroup #:	WG394302	**Analyst:**	JYH	**Run Date:**	04/05/2012 14:07
Collect Date:	03/22/2012 11:55	**Dilution:**	20	**File ID:**	NI.040512.140755
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	96.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.90	1.45

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-37	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH10-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:57
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393741	**Analyst:**	JYH	**Run Date:**	04/02/2012 19:39
Collect Date:	03/22/2012 11:55	**Dilution:**	50	**File ID:**	NI.040212.193940
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	96.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	291		10.2	5.10

Sample #:	L12030945-37	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MP-BH10-3	**Prep Method:**	7471	**Prep Date:**	03/28/2012 14:37
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/10/2012 12:53
Workgroup #:	WG393636	**Analyst:**	PDM	**Run Date:**	04/10/2012 13:33
Collect Date:	03/22/2012 11:55	**Dilution:**	1	**File ID:**	HY.041012.133344
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	96.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.102	0.0102

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-38	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH10-FD3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393671	**Analyst:**	PDM	**Run Date:**	04/02/2012 23:50
Collect Date:	03/22/2012 11:55	**Dilution:**	1	**File ID:**	T1.040212.235043
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	96.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	4660		14.5	7.23
Antimony, Total	7440-36-0		U	0.723	0.361
Beryllium, Total	7440-41-7	0.478		0.0723	0.0361
Calcium, Total	7440-70-2	1930		7.23	3.61
Magnesium, Total	7439-95-4	1970		18.1	9.04
Potassium, Total	7440-09-7	1280		36.1	18.1
Silver, Total	7440-22-4	0.283		0.145	0.0723
Sodium, Total	7440-23-5	49.2		18.1	9.04

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030945-38	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH10-FD3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG393671	**Analyst:**	PDM	**Run Date:**	04/05/2012 22:08
Collect Date:	03/22/2012 11:55	**Dilution:**	1	**File ID:**	T1.040512.220815
Sample Tag:	02	**Units:**	mg/kg	**Percent Solid:**	96.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Iron, Total	7439-89-6	9970		2.17	1.08
Zinc, Total	7440-66-6	23.0		0.723	0.361

Sample #:	L12030945-38	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH10-FD3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:57
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/30/2012 15:08
Workgroup #:	WG393741	**Analyst:**	JYH	**Run Date:**	03/30/2012 18:09
Collect Date:	03/22/2012 11:55	**Dilution:**	5	**File ID:**	NI.033012.180905
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	96.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	2.54		1.55	0.774
Barium, Total	7440-39-3	80.8		1.55	0.774
Cadmium, Total	7440-43-9		U	0.516	0.258
Chromium, Total	7440-47-3	5.10		2.06	1.03
Cobalt, Total	7440-48-4	6.27		2.58	1.29
Copper, Total	7440-50-8	15.0		3.09	1.55
Lead, Total	7439-92-1	15.4		1.03	0.516
Nickel, Total	7440-02-0	6.76		4.13	2.06
Selenium, Total	7782-49-2		U	1.03	0.516
Thallium, Total	7440-28-0	0.134	J	0.206	0.103
Vanadium, Total	7440-62-2	15.4		2.58	1.29

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-38	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH10-FD3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/05/2012 09:55
Workgroup #:	WG394302	**Analyst:**	JYH	**Run Date:**	04/05/2012 14:10
Collect Date:	03/22/2012 11:55	**Dilution:**	20	**File ID:**	NI.040512.141041
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	96.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.89	1.45

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-38	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH10-FD3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:57
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393741	**Analyst:**	JYH	**Run Date:**	04/02/2012 19:42
Collect Date:	03/22/2012 11:55	**Dilution:**	50	**File ID:**	NI.040212.194226
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	96.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	274		10.3	5.16

Sample #:	L12030945-38	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MP-BH10-FD3	**Prep Method:**	7471	**Prep Date:**	03/28/2012 14:37
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/10/2012 12:53
Workgroup #:	WG393636	**Analyst:**	PDM	**Run Date:**	04/10/2012 13:35
Collect Date:	03/22/2012 11:55	**Dilution:**	1	**File ID:**	HY.041012.133527
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	96.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6	0.0122	J	0.101	0.0101

J	Estimated value ; the analyte concentration was less than the LOQ.

Sample #:	L12030945-39	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH11-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393671	**Analyst:**	PDM	**Run Date:**	04/02/2012 23:54
Collect Date:	03/22/2012 15:36	**Dilution:**	1	**File ID:**	T1.040212.235430
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	4670		14.5	7.23
Antimony, Total	7440-36-0		U	0.723	0.361
Beryllium, Total	7440-41-7	0.0553	J	0.0723	0.0361
Calcium, Total	7440-70-2	1740		7.23	3.61
Magnesium, Total	7439-95-4	1430		18.1	9.04
Potassium, Total	7440-09-7	1490		36.1	18.1
Silver, Total	7440-22-4	0.787		0.145	0.0723
Sodium, Total	7440-23-5	25.0		18.1	9.04

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030945-39	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH11-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG393671	**Analyst:**	PDM	**Run Date:**	04/05/2012 22:11
Collect Date:	03/22/2012 15:36	**Dilution:**	1	**File ID:**	T1.040512.221154
Sample Tag:	02	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Iron, Total	7439-89-6	11000		2.17	1.08
Zinc, Total	7440-66-6	19.1		0.723	0.361

Sample #:	L12030945-39	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH11-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:57
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/30/2012 15:08
Workgroup #:	WG393741	**Analyst:**	JYH	**Run Date:**	03/30/2012 18:17
Collect Date:	03/22/2012 15:36	**Dilution:**	5	**File ID:**	NI.033012.181728
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.59		1.51	0.754
Barium, Total	7440-39-3	40.4		1.51	0.754
Cadmium, Total	7440-43-9		U	0.503	0.251
Chromium, Total	7440-47-3	2.82		2.01	1.01
Cobalt, Total	7440-48-4	3.84		2.51	1.26
Copper, Total	7440-50-8	6.26		3.02	1.51
Lead, Total	7439-92-1	10.7		1.01	0.503
Nickel, Total	7440-02-0	3.98	J	4.02	2.01
Selenium, Total	7782-49-2		U	1.01	0.503
Thallium, Total	7440-28-0		U	0.201	0.101
Vanadium, Total	7440-62-2	9.76		2.51	1.26

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-39	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH11-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/05/2012 09:55
Workgroup #:	WG394302	**Analyst:**	JYH	**Run Date:**	04/05/2012 14:13
Collect Date:	03/22/2012 15:36	**Dilution:**	20	**File ID:**	NI.040512.141326
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.89	1.45

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-39	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH11-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:57
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393741	**Analyst:**	JYH	**Run Date:**	04/02/2012 19:45
Collect Date:	03/22/2012 15:36	**Dilution:**	50	**File ID:**	NI.040212.194512
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	164		10.1	5.03

Sample #:	L12030945-39	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MP-BH11-1	**Prep Method:**	7471	**Prep Date:**	03/28/2012 14:38
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/10/2012 12:53
Workgroup #:	WG393636	**Analyst:**	PDM	**Run Date:**	04/10/2012 13:40
Collect Date:	03/22/2012 15:36	**Dilution:**	1	**File ID:**	HY.041012.134044
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0977	0.00977

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-40	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH11-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG393671	**Analyst:**	PDM	**Run Date:**	04/05/2012 22:15
Collect Date:	03/22/2012 15:42	**Dilution:**	1	**File ID:**	T1.040512.221532
Sample Tag:	02	**Units:**	mg/kg	**Percent Solid:**	98.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Iron, Total	7439-89-6	7040		2.13	1.07
Zinc, Total	7440-66-6	15.1		0.711	0.356

Certificate of Analysis

Sample #:	L12030945-40	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH11-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393671	**Analyst:**	PDM	**Run Date:**	04/02/2012 23:58
Collect Date:	03/22/2012 15:42	**Dilution:**	1	**File ID:**	T1.040212.235808
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	2300		14.2	7.11
Antimony, Total	7440-36-0		U	0.711	0.356
Beryllium, Total	7440-41-7	0.165		0.0711	0.0356
Calcium, Total	7440-70-2	4750		7.11	3.56
Magnesium, Total	7439-95-4	1400		17.8	8.89
Potassium, Total	7440-09-7	917		35.6	17.8
Silver, Total	7440-22-4	0.356		0.142	0.0711
Sodium, Total	7440-23-5	34.6		17.8	8.89

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-40	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH11-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:57
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/30/2012 15:08
Workgroup #:	WG393741	**Analyst:**	JYH	**Run Date:**	03/30/2012 18:20
Collect Date:	03/22/2012 15:42	**Dilution:**	5	**File ID:**	NI.033012.182014
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.09	J	1.51	0.753
Barium, Total	7440-39-3	37.9		1.51	0.753
Cadmium, Total	7440-43-9		U	0.502	0.251
Chromium, Total	7440-47-3	1.75	J	2.01	1.00
Cobalt, Total	7440-48-4	3.01		2.51	1.26
Copper, Total	7440-50-8	4.74		3.01	1.51
Lead, Total	7439-92-1	7.13		1.00	0.502
Manganese, Total	7439-96-5	170		1.00	0.502
Nickel, Total	7440-02-0	3.02	J	4.02	2.01
Selenium, Total	7782-49-2		U	1.00	0.502
Thallium, Total	7440-28-0		U	0.201	0.100
Vanadium, Total	7440-62-2	8.37		2.51	1.26

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030945-40	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH11-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:20
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/05/2012 09:55
Workgroup #:	WG394302	**Analyst:**	JYH	**Run Date:**	04/05/2012 14:16
Collect Date:	03/22/2012 15:42	**Dilution:**	20	**File ID:**	NI.040512.141613
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	98.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.84	1.42

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-40	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MP-BH11-2	**Prep Method:**	7471	**Prep Date:**	03/28/2012 14:39
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/10/2012 12:53
Workgroup #:	WG393636	**Analyst:**	PDM	**Run Date:**	04/10/2012 13:42
Collect Date:	03/22/2012 15:42	**Dilution:**	1	**File ID:**	HY.041012.134226
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0969	0.00969

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-41	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH11-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG393672	**Analyst:**	PDM	**Run Date:**	04/05/2012 22:33
Collect Date:	03/22/2012 15:46	**Dilution:**	1	**File ID:**	T1.040512.223354
Sample Tag:	02	**Units:**	mg/kg	**Percent Solid:**	98.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Iron, Total	7439-89-6	5500		2.34	1.17

Sample #:	L12030945-41	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH11-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393672	**Analyst:**	PDM	**Run Date:**	04/03/2012 00:16
Collect Date:	03/22/2012 15:46	**Dilution:**	1	**File ID:**	T1.040312.001629
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	2250		15.6	7.79
Antimony, Total	7440-36-0		U	0.779	0.390
Beryllium, Total	7440-41-7	0.210		0.0779	0.0390

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Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	1720		7.79	3.90
Magnesium, Total	7439-95-4	1240		19.5	9.74
Potassium, Total	7440-09-7	628		39.0	19.5
Silver, Total	7440-22-4	0.313		0.156	0.0779
Sodium, Total	7440-23-5	58.8		19.5	9.74
Zinc, Total	7440-66-6	12.2		0.779	0.390
U	Analyte was not detected. The concentration is below the reported LOD.				

Sample #:	L12030945-41	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH11-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:57
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/30/2012 15:08
Workgroup #:	WG393741	**Analyst:**	JYH	**Run Date:**	03/30/2012 18:23
Collect Date:	03/22/2012 15:46	**Dilution:**	5	**File ID:**	NI.033012.182301
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.30	J	1.44	0.720
Barium, Total	7440-39-3	43.0		1.44	0.720
Cadmium, Total	7440-43-9		U	0.480	0.240
Chromium, Total	7440-47-3	2.19		1.92	0.960
Cobalt, Total	7440-48-4	3.70		2.40	1.20
Copper, Total	7440-50-8	6.74		2.88	1.44
Lead, Total	7439-92-1	8.04		0.960	0.480
Nickel, Total	7440-02-0	3.69	J	3.84	1.92
Selenium, Total	7782-49-2		U	0.960	0.480
Thallium, Total	7440-28-0		U	0.192	0.0960
Vanadium, Total	7440-62-2	8.61		2.40	1.20
J	Estimated value ; the analyte concentration was less than the LOQ.				
U	Analyte was not detected. The concentration is below the reported LOD.				

Sample #:	L12030945-41	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH11-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394181	**Analyst:**	JYH	**Run Date:**	04/04/2012 16:29
Collect Date:	03/22/2012 15:46	**Dilution:**	20	**File ID:**	NI.040412.162904
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	98.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.12	1.56
U	Analyte was not detected. The concentration is below the reported LOD.				

Certificate of Analysis

Sample #:	L12030945-41	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH11-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:57
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393741	**Analyst:**	JYH	**Run Date:**	04/02/2012 19:53
Collect Date:	03/22/2012 15:46	**Dilution:**	50	**File ID:**	NI.040212.195336
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	98.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	146		9.60	4.80

Sample #:	L12030945-41	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MP-BH11-3	**Prep Method:**	7471	**Prep Date:**	03/28/2012 14:40
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/10/2012 12:53
Workgroup #:	WG393636	**Analyst:**	PDM	**Run Date:**	04/10/2012 13:44
Collect Date:	03/22/2012 15:46	**Dilution:**	1	**File ID:**	HY.041012.134408
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0999	0.00999

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-42	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH12-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG393672	**Analyst:**	PDM	**Run Date:**	04/05/2012 22:48
Collect Date:	03/22/2012 16:07	**Dilution:**	1	**File ID:**	T1.040512.224834
Sample Tag:	02	**Units:**	mg/kg	**Percent Solid:**	96.8

Analyte	CAS #	Result	Qual	LOQ	LOD
Iron, Total	7439-89-6	10100		2.15	1.08

Sample #:	L12030945-42	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH12-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393672	**Analyst:**	PDM	**Run Date:**	04/03/2012 00:31
Collect Date:	03/22/2012 16:07	**Dilution:**	1	**File ID:**	T1.040312.003107
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	96.8

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	4630		14.4	7.18
Antimony, Total	7440-36-0		U	0.718	0.359

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Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.195		0.0718	0.0359
Calcium, Total	7440-70-2	1390		7.18	3.59
Magnesium, Total	7439-95-4	1460		18.0	8.98
Potassium, Total	7440-09-7	1470		35.9	18.0
Silver, Total	7440-22-4	0.577		0.144	0.0718
Sodium, Total	7440-23-5	23.3		18.0	8.98
Zinc, Total	7440-66-6	18.2		0.718	0.359
U	Analyte was not detected. The concentration is below the reported LOD.				

Sample #:	L12030945-42	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH12-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:57
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/30/2012 15:08
Workgroup #:	WG393741	**Analyst:**	JYH	**Run Date:**	03/30/2012 18:25
Collect Date:	03/22/2012 16:07	**Dilution:**	5	**File ID:**	NI.033012.182548
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	96.8

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.70		1.53	0.767
Barium, Total	7440-39-3	50.0		1.53	0.767
Cadmium, Total	7440-43-9		U	0.511	0.256
Chromium, Total	7440-47-3	3.35		2.05	1.02
Cobalt, Total	7440-48-4	4.66		2.56	1.28
Copper, Total	7440-50-8	6.87		3.07	1.53
Lead, Total	7439-92-1	11.3		1.02	0.511
Nickel, Total	7440-02-0	4.75		4.09	2.05
Selenium, Total	7782-49-2		U	1.02	0.511
Thallium, Total	7440-28-0		U	0.205	0.102
Vanadium, Total	7440-62-2	10.9		2.56	1.28
U	Analyte was not detected. The concentration is below the reported LOD.				

Sample #:	L12030945-42	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH12-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394181	**Analyst:**	JYH	**Run Date:**	04/04/2012 16:31
Collect Date:	03/22/2012 16:07	**Dilution:**	20	**File ID:**	NI.040412.163151
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	96.8

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.87	1.44
U	Analyte was not detected. The concentration is below the reported LOD.				

Certificate of Analysis

Sample #:	L12030945-42	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH12-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:57
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393741	**Analyst:**	JYH	**Run Date:**	04/02/2012 19:56
Collect Date:	03/22/2012 16:07	**Dilution:**	50	**File ID:**	NI.040212.195623
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	96.8

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	243		10.2	5.11

Sample #:	L12030945-42	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MP-BH12-1	**Prep Method:**	7471	**Prep Date:**	03/28/2012 14:41
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/10/2012 12:53
Workgroup #:	WG393636	**Analyst:**	PDM	**Run Date:**	04/10/2012 13:46
Collect Date:	03/22/2012 16:07	**Dilution:**	1	**File ID:**	HY.041012.134604
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	96.8

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.103	0.0103

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-43	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH12-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG393672	**Analyst:**	PDM	**Run Date:**	04/05/2012 22:52
Collect Date:	03/22/2012 16:13	**Dilution:**	1	**File ID:**	T1.040512.225212
Sample Tag:	02	**Units:**	mg/kg	**Percent Solid:**	97.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Iron, Total	7439-89-6	7770		2.12	1.06

Sample #:	L12030945-43	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH12-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393672	**Analyst:**	PDM	**Run Date:**	04/03/2012 00:34
Collect Date:	03/22/2012 16:13	**Dilution:**	1	**File ID:**	T1.040312.003450
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	3000		14.2	7.08
Antimony, Total	7440-36-0		U	0.708	0.354

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Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.275		0.0708	0.0354
Calcium, Total	7440-70-2	5520		7.08	3.54
Magnesium, Total	7439-95-4	2000		17.7	8.85
Potassium, Total	7440-09-7	811		35.4	17.7
Silver, Total	7440-22-4	0.380		0.142	0.0708
Sodium, Total	7440-23-5	103		17.7	8.85
Zinc, Total	7440-66-6	20.0		0.708	0.354

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-43	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH12-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:57
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/30/2012 15:08
Workgroup #:	WG393741	**Analyst:**	JYH	**Run Date:**	03/30/2012 18:28
Collect Date:	03/22/2012 16:13	**Dilution:**	5	**File ID:**	NI.033012.182834
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.35	J	1.51	0.756
Barium, Total	7440-39-3	46.8		1.51	0.756
Cadmium, Total	7440-43-9		U	0.504	0.252
Chromium, Total	7440-47-3	2.22		2.01	1.01
Cobalt, Total	7440-48-4	4.27		2.52	1.26
Copper, Total	7440-50-8	5.41		3.02	1.51
Lead, Total	7439-92-1	8.73		1.01	0.504
Nickel, Total	7440-02-0	3.98	J	4.03	2.01
Selenium, Total	7782-49-2		U	1.01	0.504
Thallium, Total	7440-28-0		U	0.201	0.101
Vanadium, Total	7440-62-2	9.76		2.52	1.26

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-43	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH12-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394181	**Analyst:**	JYH	**Run Date:**	04/04/2012 17:06
Collect Date:	03/22/2012 16:13	**Dilution:**	20	**File ID:**	NI.040412.170603
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	97.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.83	1.42

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-43	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH12-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:57
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393741	**Analyst:**	JYH	**Run Date:**	04/02/2012 19:59
Collect Date:	03/22/2012 16:13	**Dilution:**	50	**File ID:**	NI.040212.195910
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	97.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	224		10.1	5.04

Sample #:	L12030945-43	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MP-BH12-2	**Prep Method:**	7471	**Prep Date:**	03/28/2012 14:42
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/10/2012 12:53
Workgroup #:	WG393636	**Analyst:**	PDM	**Run Date:**	04/10/2012 13:47
Collect Date:	03/22/2012 16:13	**Dilution:**	1	**File ID:**	HY.041012.134747
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.101	0.0101

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-44	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH12-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393672	**Analyst:**	PDM	**Run Date:**	04/03/2012 00:38
Collect Date:	03/22/2012 16:17	**Dilution:**	1	**File ID:**	T1.040312.003828
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	2500		14.3	7.16
Antimony, Total	7440-36-0		U	0.716	0.358
Beryllium, Total	7440-41-7	0.136		0.0716	0.0358
Calcium, Total	7440-70-2	2670		7.16	3.58
Magnesium, Total	7439-95-4	1330		17.9	8.95
Potassium, Total	7440-09-7	673		35.8	17.9
Silver, Total	7440-22-4	0.468		0.143	0.0716
Sodium, Total	7440-23-5	167		17.9	8.95
Zinc, Total	7440-66-6	15.2		0.716	0.358

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030945-44	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH12-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG393672	**Analyst:**	PDM	**Run Date:**	04/05/2012 22:55
Collect Date:	03/22/2012 16:17	**Dilution:**	1	**File ID:**	T1.040512.225551
Sample Tag:	02	**Units:**	mg/kg	**Percent Solid:**	98.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Iron, Total	7439-89-6	8480		2.15	1.07

Sample #:	L12030945-44	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH12-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:57
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/30/2012 15:08
Workgroup #:	WG393741	**Analyst:**	JYH	**Run Date:**	03/30/2012 18:31
Collect Date:	03/22/2012 16:17	**Dilution:**	5	**File ID:**	NI.033012.183121
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2		U	1.52	0.761
Barium, Total	7440-39-3	21.4		1.52	0.761
Cadmium, Total	7440-43-9		U	0.507	0.254
Chromium, Total	7440-47-3		U	2.03	1.01
Cobalt, Total	7440-48-4	2.21	J	2.54	1.27
Copper, Total	7440-50-8	3.74		3.04	1.52
Lead, Total	7439-92-1	6.97		1.01	0.507
Manganese, Total	7439-96-5	147		1.01	0.507
Nickel, Total	7440-02-0		U	4.06	2.03
Selenium, Total	7782-49-2		U	1.01	0.507
Thallium, Total	7440-28-0		U	0.203	0.101
Vanadium, Total	7440-62-2	5.90		2.54	1.27

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-44	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH12-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394181	**Analyst:**	JYH	**Run Date:**	04/04/2012 17:08
Collect Date:	03/22/2012 16:17	**Dilution:**	20	**File ID:**	NI.040412.170848
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	98.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.86	1.43

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-44	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MP-BH12-3	**Prep Method:**	7471	**Prep Date:**	03/28/2012 14:43
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/10/2012 12:53
Workgroup #:	WG393636	**Analyst:**	PDM	**Run Date:**	04/10/2012 13:49
Collect Date:	03/22/2012 16:17	**Dilution:**	1	**File ID:**	HY.041012.134931
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.101	0.0101
U	Analyte was not detected. The concentration is below the reported LOD.				

Sample #:	L12030945-45	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH12-FD1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393672	**Analyst:**	PDM	**Run Date:**	04/03/2012 00:42
Collect Date:	03/22/2012 16:07	**Dilution:**	1	**File ID:**	T1.040312.004206
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	4350		13.8	6.88
Antimony, Total	7440-36-0		U	0.688	0.344
Beryllium, Total	7440-41-7	0.283		0.0688	0.0344
Calcium, Total	7440-70-2	1510		6.88	3.44
Magnesium, Total	7439-95-4	1530		17.2	8.60
Potassium, Total	7440-09-7	1500		34.4	17.2
Silver, Total	7440-22-4	1.27		0.138	0.0688
Sodium, Total	7440-23-5	23.3		17.2	8.60
Zinc, Total	7440-66-6	18.5		0.688	0.344
U	Analyte was not detected. The concentration is below the reported LOD.				

Sample #:	L12030945-45	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH12-FD1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG393672	**Analyst:**	PDM	**Run Date:**	04/05/2012 22:59
Collect Date:	03/22/2012 16:07	**Dilution:**	1	**File ID:**	T1.040512.225929
Sample Tag:	02	**Units:**	mg/kg	**Percent Solid:**	97.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Iron, Total	7439-89-6	10100		2.07	1.03

Certificate of Analysis

Sample #:	L12030945-45	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH12-FD1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:57
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/30/2012 15:08
Workgroup #:	WG393741	**Analyst:**	JYH	**Run Date:**	03/30/2012 18:34
Collect Date:	03/22/2012 16:07	**Dilution:**	5	**File ID:**	NI.033012.183408
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.62		1.44	0.722
Barium, Total	7440-39-3	42.9		1.44	0.722
Cadmium, Total	7440-43-9		U	0.481	0.241
Chromium, Total	7440-47-3	2.95		1.93	0.963
Cobalt, Total	7440-48-4	3.88		2.41	1.20
Copper, Total	7440-50-8	6.48		2.89	1.44
Lead, Total	7439-92-1	9.24		0.963	0.481
Nickel, Total	7440-02-0	3.95		3.85	1.93
Selenium, Total	7782-49-2		U	0.963	0.481
Thallium, Total	7440-28-0		U	0.193	0.0963
Vanadium, Total	7440-62-2	9.51		2.41	1.20

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-45	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH12-FD1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394181	**Analyst:**	JYH	**Run Date:**	04/04/2012 17:11
Collect Date:	03/22/2012 16:07	**Dilution:**	20	**File ID:**	NI.040412.171135
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	97.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.75	1.38

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-45	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH12-FD1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 12:57
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393741	**Analyst:**	JYH	**Run Date:**	04/02/2012 20:01
Collect Date:	03/22/2012 16:07	**Dilution:**	50	**File ID:**	NI.040212.200155
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	97.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	184		9.63	4.81

Certificate of Analysis

Sample #:	L12030945-45	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MP-BH12-FD1	**Prep Method:**	7471	**Prep Date:**	03/28/2012 14:43
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/10/2012 12:53
Workgroup #:	WG393636	**Analyst:**	PDM	**Run Date:**	04/10/2012 13:51
Collect Date:	03/22/2012 16:07	**Dilution:**	1	**File ID:**	HY.041012.135115
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6	0.0106	J	0.102	0.0102

J	Estimated value ; the analyte concentration was less than the LOQ.

Sample #:	L12030945-46	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH13-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393672	**Analyst:**	PDM	**Run Date:**	04/03/2012 00:53
Collect Date:	03/22/2012 10:11	**Dilution:**	1	**File ID:**	T1.040312.005313
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	95.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	4150		14.1	7.03
Antimony, Total	7440-36-0		U	0.703	0.351
Calcium, Total	7440-70-2	1530		7.03	3.51
Magnesium, Total	7439-95-4	1570		17.6	8.79
Potassium, Total	7440-09-7	1210		35.1	17.6
Silver, Total	7440-22-4	0.140	J	0.141	0.0703
Sodium, Total	7440-23-5	24.1		17.6	8.79
Zinc, Total	7440-66-6	18.0		0.703	0.351

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-46	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH13-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG393672	**Analyst:**	PDM	**Run Date:**	04/05/2012 23:10
Collect Date:	03/22/2012 10:11	**Dilution:**	1	**File ID:**	T1.040512.231034
Sample Tag:	02	**Units:**	mg/kg	**Percent Solid:**	95.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.519		0.0703	0.0351
Iron, Total	7439-89-6	8820		2.11	1.05

Certificate of Analysis

Sample #:	L12030945-46	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH13-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:53
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/03/2012 14:57
Workgroup #:	WG394021	**Analyst:**	JYH	**Run Date:**	04/03/2012 15:36
Collect Date:	03/22/2012 10:11	**Dilution:**	5	**File ID:**	NI.040312.153644
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	95.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	2.02		1.45	0.723
Barium, Total	7440-39-3	57.1		1.45	0.723
Cadmium, Total	7440-43-9		U	0.482	0.241
Chromium, Total	7440-47-3	3.70		1.93	0.964
Cobalt, Total	7440-48-4	4.43		2.41	1.21
Copper, Total	7440-50-8	7.14		2.89	1.45
Lead, Total	7439-92-1	9.31		0.964	0.482
Nickel, Total	7440-02-0	5.14		3.86	1.93
Selenium, Total	7782-49-2		U	0.964	0.482
Thallium, Total	7440-28-0		U	0.193	0.0964
Vanadium, Total	7440-62-2	11.9		2.41	1.21

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-46	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH13-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394181	**Analyst:**	JYH	**Run Date:**	04/04/2012 17:14
Collect Date:	03/22/2012 10:11	**Dilution:**	20	**File ID:**	NI.040412.171422
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	95.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.81	1.41

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-46	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH13-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:53
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/03/2012 14:57
Workgroup #:	WG394021	**Analyst:**	JYH	**Run Date:**	04/03/2012 17:16
Collect Date:	03/22/2012 10:11	**Dilution:**	50	**File ID:**	NI.040312.171628
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	95.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	244		9.64	4.82

Certificate of Analysis

Sample #:	L12030945-46	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MP-BH13-1	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:06
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394265	**Analyst:**	PDM	**Run Date:**	04/05/2012 09:27
Collect Date:	03/22/2012 10:11	**Dilution:**	1	**File ID:**	HY.040512.092734
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	95.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6	0.0109	J	0.103	0.0103

J	Estimated value ; the analyte concentration was less than the LOQ.

Sample #:	L12030945-47	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH13-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393672	**Analyst:**	PDM	**Run Date:**	04/03/2012 00:56
Collect Date:	03/22/2012 10:18	**Dilution:**	1	**File ID:**	T1.040312.005651
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	4220		15.4	7.68
Antimony, Total	7440-36-0		U	0.768	0.384
Calcium, Total	7440-70-2	4600		7.68	3.84
Magnesium, Total	7439-95-4	2430		19.2	9.60
Potassium, Total	7440-09-7	1270		38.4	19.2
Silver, Total	7440-22-4	0.870		0.154	0.0768
Sodium, Total	7440-23-5	36.5		19.2	9.60
Zinc, Total	7440-66-6	21.8		0.768	0.384

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-47	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH13-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG393672	**Analyst:**	PDM	**Run Date:**	04/05/2012 23:14
Collect Date:	03/22/2012 10:18	**Dilution:**	1	**File ID:**	T1.040512.231412
Sample Tag:	02	**Units:**	mg/kg	**Percent Solid:**	97.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.569		0.0768	0.0384
Iron, Total	7439-89-6	10300		2.30	1.15

Certificate of Analysis

Sample #:	L12030945-47	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH13-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:53
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/03/2012 14:57
Workgroup #:	WG394021	**Analyst:**	JYH	**Run Date:**	04/03/2012 15:39
Collect Date:	03/22/2012 10:18	**Dilution:**	5	**File ID:**	NI.040312.153930
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.01	J	1.44	0.719
Barium, Total	7440-39-3	61.2		1.44	0.719
Cadmium, Total	7440-43-9		U	0.480	0.240
Chromium, Total	7440-47-3	2.61		1.92	0.959
Cobalt, Total	7440-48-4	5.14		2.40	1.20
Copper, Total	7440-50-8	7.16		2.88	1.44
Lead, Total	7439-92-1	10.3		0.959	0.480
Nickel, Total	7440-02-0	4.59		3.84	1.92
Selenium, Total	7782-49-2		U	0.959	0.480
Thallium, Total	7440-28-0	0.102	J	0.192	0.0959
Vanadium, Total	7440-62-2	10.1		2.40	1.20

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-47	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH13-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394181	**Analyst:**	JYH	**Run Date:**	04/04/2012 17:17
Collect Date:	03/22/2012 10:18	**Dilution:**	20	**File ID:**	NI.040412.171708
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	97.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.07	1.54

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-47	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH13-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:53
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/03/2012 14:57
Workgroup #:	WG394021	**Analyst:**	JYH	**Run Date:**	04/03/2012 17:19
Collect Date:	03/22/2012 10:18	**Dilution:**	50	**File ID:**	NI.040312.171913
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	97.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	259		9.59	4.80

Certificate of Analysis

Sample #:	L12030945-47	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MP-BH13-2	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:06
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394265	**Analyst:**	PDM	**Run Date:**	04/05/2012 09:31
Collect Date:	03/22/2012 10:18	**Dilution:**	1	**File ID:**	HY.040512.093112
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0960	0.00960

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-48	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH13-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393672	**Analyst:**	PDM	**Run Date:**	04/03/2012 01:00
Collect Date:	03/22/2012 10:23	**Dilution:**	1	**File ID:**	T1.040312.010029
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	2550		13.7	6.87
Antimony, Total	7440-36-0		U	0.687	0.344
Calcium, Total	7440-70-2	2760		6.87	3.44
Magnesium, Total	7439-95-4	1960		17.2	8.59
Potassium, Total	7440-09-7	1110		34.4	17.2
Silver, Total	7440-22-4	0.922		0.137	0.0687
Sodium, Total	7440-23-5	40.1		17.2	8.59
Zinc, Total	7440-66-6	15.9		0.687	0.344

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-48	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH13-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG393672	**Analyst:**	PDM	**Run Date:**	04/05/2012 23:17
Collect Date:	03/22/2012 10:23	**Dilution:**	2	**File ID:**	T1.040512.231752
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.298		0.137	0.0687
Iron, Total	7439-89-6	6850		4.12	2.06

Certificate of Analysis

Sample #:	L12030945-48	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH13-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:54
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/03/2012 14:57
Workgroup #:	WG394021	**Analyst:**	JYH	**Run Date:**	04/03/2012 15:53
Collect Date:	03/22/2012 10:23	**Dilution:**	5	**File ID:**	NI.040312.155323
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.24	J	1.44	0.718
Barium, Total	7440-39-3	68.8		1.44	0.718
Cadmium, Total	7440-43-9		U	0.479	0.239
Chromium, Total	7440-47-3	2.34		1.92	0.958
Cobalt, Total	7440-48-4	4.90		2.39	1.20
Copper, Total	7440-50-8	5.66		2.87	1.44
Lead, Total	7439-92-1	7.33		0.958	0.479
Nickel, Total	7440-02-0	4.60		3.83	1.92
Selenium, Total	7782-49-2		U	0.958	0.479
Thallium, Total	7440-28-0	0.144	J	0.192	0.0958
Vanadium, Total	7440-62-2	12.3		2.39	1.20

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-48	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH13-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394181	**Analyst:**	JYH	**Run Date:**	04/04/2012 17:19
Collect Date:	03/22/2012 10:23	**Dilution:**	20	**File ID:**	NI.040412.171953
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	98.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.75	1.37

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-48	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH13-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:54
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/03/2012 14:57
Workgroup #:	WG394021	**Analyst:**	JYH	**Run Date:**	04/03/2012 17:27
Collect Date:	03/22/2012 10:23	**Dilution:**	50	**File ID:**	NI.040312.172731
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	98.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	199		9.58	4.79

Certificate of Analysis

Sample #:	L12030945-48	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MP-BH13-3	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:06
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394265	**Analyst:**	PDM	**Run Date:**	04/05/2012 09:32
Collect Date:	03/22/2012 10:23	**Dilution:**	1	**File ID:**	HY.040512.093257
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0985	0.00985

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-49	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH14-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393672	**Analyst:**	PDM	**Run Date:**	04/03/2012 01:04
Collect Date:	03/22/2012 16:37	**Dilution:**	1	**File ID:**	T1.040312.010407
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	96.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	3790		15.6	7.81
Antimony, Total	7440-36-0		U	0.781	0.391
Calcium, Total	7440-70-2	1610		7.81	3.91
Magnesium, Total	7439-95-4	1410		19.5	9.76
Potassium, Total	7440-09-7	1210		39.1	19.5
Silver, Total	7440-22-4	0.297		0.156	0.0781
Sodium, Total	7440-23-5	25.7		19.5	9.76
Zinc, Total	7440-66-6	16.7		0.781	0.391

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-49	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH14-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG393672	**Analyst:**	PDM	**Run Date:**	04/05/2012 23:21
Collect Date:	03/22/2012 16:37	**Dilution:**	1	**File ID:**	T1.040512.232131
Sample Tag:	02	**Units:**	mg/kg	**Percent Solid:**	96.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.440		0.0781	0.0391
Iron, Total	7439-89-6	9110		2.34	1.17

Certificate of Analysis

Sample #:	L12030945-49	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH14-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:54
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/03/2012 14:57
Workgroup #:	WG394021	**Analyst:**	JYH	**Run Date:**	04/03/2012 15:56
Collect Date:	03/22/2012 16:37	**Dilution:**	5	**File ID:**	NI.040312.155609
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	96.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	0.980	J	1.47	0.736
Barium, Total	7440-39-3	44.9		1.47	0.736
Cadmium, Total	7440-43-9		U	0.490	0.245
Chromium, Total	7440-47-3	1.68	J	1.96	0.981
Cobalt, Total	7440-48-4	3.08		2.45	1.23
Copper, Total	7440-50-8	4.06		2.94	1.47
Lead, Total	7439-92-1	7.81		0.981	0.490
Nickel, Total	7440-02-0	2.60	J	3.92	1.96
Selenium, Total	7782-49-2		U	0.981	0.490
Thallium, Total	7440-28-0		U	0.196	0.0981
Vanadium, Total	7440-62-2	5.41		2.45	1.23

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-49	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH14-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394181	**Analyst:**	JYH	**Run Date:**	04/04/2012 17:22
Collect Date:	03/22/2012 16:37	**Dilution:**	20	**File ID:**	NI.040412.172239
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	96.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.12	1.56

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-49	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH14-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:54
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/03/2012 14:57
Workgroup #:	WG394021	**Analyst:**	JYH	**Run Date:**	04/03/2012 17:30
Collect Date:	03/22/2012 16:37	**Dilution:**	50	**File ID:**	NI.040312.173018
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	96.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	191		9.81	4.90

Certificate of Analysis

Sample #:	L12030945-49	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MP-BH14-1	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:06
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394265	**Analyst:**	PDM	**Run Date:**	04/05/2012 09:34
Collect Date:	03/22/2012 16:37	**Dilution:**	1	**File ID:**	HY.040512.093454
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	96.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.102	0.0102

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-50	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH14-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393672	**Analyst:**	PDM	**Run Date:**	04/03/2012 01:07
Collect Date:	03/22/2012 16:41	**Dilution:**	1	**File ID:**	T1.040312.010745
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	99.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	1710		14.3	7.13
Antimony, Total	7440-36-0		U	0.713	0.357
Calcium, Total	7440-70-2	2320		7.13	3.57
Magnesium, Total	7439-95-4	1200		17.8	8.92
Potassium, Total	7440-09-7	582		35.7	17.8
Silver, Total	7440-22-4	0.652		0.143	0.0713
Sodium, Total	7440-23-5	29.2		17.8	8.92
Zinc, Total	7440-66-6	11.2		0.713	0.357

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-50	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH14-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG393672	**Analyst:**	PDM	**Run Date:**	04/05/2012 23:25
Collect Date:	03/22/2012 16:41	**Dilution:**	2	**File ID:**	T1.040512.232509
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	99.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.237		0.143	0.0713
Iron, Total	7439-89-6	5710		4.28	2.14

Certificate of Analysis

Sample #:	L12030945-50	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH14-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:54
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/03/2012 14:57
Workgroup #:	WG394021	**Analyst:**	JYH	**Run Date:**	04/03/2012 15:58
Collect Date:	03/22/2012 16:41	**Dilution:**	5	**File ID:**	NI.040312.155855
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	99.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	0.865	J	1.44	0.722
Barium, Total	7440-39-3	36.9		1.44	0.722
Cadmium, Total	7440-43-9		U	0.482	0.241
Chromium, Total	7440-47-3	1.06	J	1.93	0.963
Cobalt, Total	7440-48-4	2.69		2.41	1.20
Copper, Total	7440-50-8	3.99		2.89	1.44
Lead, Total	7439-92-1	5.08		0.963	0.482
Manganese, Total	7439-96-5	130		0.963	0.482
Nickel, Total	7440-02-0	2.34	J	3.85	1.93
Selenium, Total	7782-49-2		U	0.963	0.482
Thallium, Total	7440-28-0		U	0.193	0.0963
Vanadium, Total	7440-62-2	7.14		2.41	1.20

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-50	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH14-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394181	**Analyst:**	JYH	**Run Date:**	04/04/2012 17:25
Collect Date:	03/22/2012 16:41	**Dilution:**	20	**File ID:**	NI.040412.172526
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	99.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.85	1.43

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030945-50	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MP-BH14-2	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:06
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394265	**Analyst:**	PDM	**Run Date:**	04/05/2012 09:36
Collect Date:	03/22/2012 16:41	**Dilution:**	1	**File ID:**	HY.040512.093638
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	99.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0977	0.00977

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-51	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH14-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG393672	**Analyst:**	PDM	**Run Date:**	04/05/2012 23:28
Collect Date:	03/22/2012 16:44	**Dilution:**	1	**File ID:**	T1.040512.232849
Sample Tag:	02	**Units:**	mg/kg	**Percent Solid:**	97.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.560		0.0707	0.0353
Iron, Total	7439-89-6	9220		2.12	1.06

Sample #:	L12030945-51	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH14-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393672	**Analyst:**	PDM	**Run Date:**	04/03/2012 01:11
Collect Date:	03/22/2012 16:44	**Dilution:**	1	**File ID:**	T1.040312.011124
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	4290		14.1	7.07
Antimony, Total	7440-36-0		U	0.707	0.353
Calcium, Total	7440-70-2	3600		7.07	3.53
Magnesium, Total	7439-95-4	2050		17.7	8.84
Potassium, Total	7440-09-7	1130		35.3	17.7
Silver, Total	7440-22-4	0.659		0.141	0.0707
Sodium, Total	7440-23-5	87.0		17.7	8.84
Zinc, Total	7440-66-6	21.9		0.707	0.353

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030945-51	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH14-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:55
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/03/2012 14:57
Workgroup #:	WG394021	**Analyst:**	JYH	**Run Date:**	04/03/2012 16:01
Collect Date:	03/22/2012 16:44	**Dilution:**	5	**File ID:**	NI.040312.160140
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	0.832	J	1.50	0.750
Barium, Total	7440-39-3	45.1		1.50	0.750
Cadmium, Total	7440-43-9		U	0.500	0.250
Chromium, Total	7440-47-3	1.22	J	2.00	1.00
Cobalt, Total	7440-48-4	3.28		2.50	1.25
Copper, Total	7440-50-8	4.05		3.00	1.50
Lead, Total	7439-92-1	7.83		1.00	0.500
Nickel, Total	7440-02-0	2.72	J	4.00	2.00
Selenium, Total	7782-49-2		U	1.00	0.500
Thallium, Total	7440-28-0		U	0.200	0.100
Vanadium, Total	7440-62-2	7.12		2.50	1.25

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-51	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH14-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394181	**Analyst:**	JYH	**Run Date:**	04/04/2012 17:28
Collect Date:	03/22/2012 16:44	**Dilution:**	20	**File ID:**	NI.040412.172811
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	97.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.83	1.41

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-51	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH14-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:55
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/03/2012 14:57
Workgroup #:	WG394021	**Analyst:**	JYH	**Run Date:**	04/03/2012 17:33
Collect Date:	03/22/2012 16:44	**Dilution:**	50	**File ID:**	NI.040312.173304
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	97.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	226		10.0	5.00

Certificate of Analysis

Sample #:	L12030945-51	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MP-BH14-3	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:06
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394265	**Analyst:**	PDM	**Run Date:**	04/05/2012 09:38
Collect Date:	03/22/2012 16:44	**Dilution:**	1	**File ID:**	HY.040512.093821
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.102	0.0102

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-52	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH15-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393672	**Analyst:**	PDM	**Run Date:**	04/03/2012 01:15
Collect Date:	03/23/2012 10:49	**Dilution:**	1	**File ID:**	T1.040312.011502
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	3930		15.3	7.67
Antimony, Total	7440-36-0		U	0.767	0.384
Calcium, Total	7440-70-2	1640		7.67	3.84
Magnesium, Total	7439-95-4	1540		19.2	9.59
Potassium, Total	7440-09-7	1200		38.4	19.2
Silver, Total	7440-22-4	0.137	J	0.153	0.0767
Sodium, Total	7440-23-5	22.9		19.2	9.59
Zinc, Total	7440-66-6	17.2		0.767	0.384

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-52	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH15-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG393672	**Analyst:**	PDM	**Run Date:**	04/05/2012 23:32
Collect Date:	03/23/2012 10:49	**Dilution:**	1	**File ID:**	T1.040512.233228
Sample Tag:	02	**Units:**	mg/kg	**Percent Solid:**	97.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.527		0.0767	0.0384
Iron, Total	7439-89-6	8200		2.30	1.15

Certificate of Analysis

Sample #:	L12030945-52	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH15-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:56
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/03/2012 14:57
Workgroup #:	WG394021	**Analyst:**	JYH	**Run Date:**	04/03/2012 16:12
Collect Date:	03/23/2012 10:49	**Dilution:**	5	**File ID:**	NI.040312.161202
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	2.12		1.47	0.734
Barium, Total	7440-39-3	59.4		1.47	0.734
Cadmium, Total	7440-43-9		U	0.489	0.245
Chromium, Total	7440-47-3	3.54		1.96	0.979
Cobalt, Total	7440-48-4	4.70		2.45	1.22
Copper, Total	7440-50-8	7.41		2.94	1.47
Lead, Total	7439-92-1	10.7		0.979	0.489
Nickel, Total	7440-02-0	5.04		3.91	1.96
Selenium, Total	7782-49-2		U	0.979	0.489
Thallium, Total	7440-28-0		U	0.196	0.0979
Vanadium, Total	7440-62-2	11.9		2.45	1.22

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-52	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH15-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394181	**Analyst:**	JYH	**Run Date:**	04/04/2012 17:30
Collect Date:	03/23/2012 10:49	**Dilution:**	20	**File ID:**	NI.040412.173057
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	97.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.07	1.53

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-52	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH15-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:56
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394021	**Analyst:**	JYH	**Run Date:**	04/04/2012 15:50
Collect Date:	03/23/2012 10:49	**Dilution:**	50	**File ID:**	NI.040412.155052
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	97.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	245		9.79	4.89

Certificate of Analysis

Sample #:	L12030945-52	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MP-BH15-1	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:06
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394265	**Analyst:**	PDM	**Run Date:**	04/05/2012 09:40
Collect Date:	03/23/2012 10:49	**Dilution:**	1	**File ID:**	HY.040512.094003
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6	0.0124	J	0.0998	0.00998

J	Estimated value ; the analyte concentration was less than the LOQ.

Sample #:	L12030945-53	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH15-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393672	**Analyst:**	PDM	**Run Date:**	04/03/2012 01:18
Collect Date:	03/23/2012 10:54	**Dilution:**	1	**File ID:**	T1.040312.011841
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	3320		14.5	7.27
Antimony, Total	7440-36-0		U	0.727	0.364
Calcium, Total	7440-70-2	3500		7.27	3.64
Magnesium, Total	7439-95-4	1320		18.2	9.09
Potassium, Total	7440-09-7	677		36.4	18.2
Silver, Total	7440-22-4	0.258		0.145	0.0727
Sodium, Total	7440-23-5	56.3		18.2	9.09
Zinc, Total	7440-66-6	15.5		0.727	0.364

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-53	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH15-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG393672	**Analyst:**	PDM	**Run Date:**	04/05/2012 23:36
Collect Date:	03/23/2012 10:54	**Dilution:**	1	**File ID:**	T1.040512.233606
Sample Tag:	02	**Units:**	mg/kg	**Percent Solid:**	98.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.420		0.0727	0.0364
Iron, Total	7439-89-6	7030		2.18	1.09

Certificate of Analysis

Sample #:	L12030945-53	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH15-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:56
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/03/2012 14:57
Workgroup #:	WG394021	**Analyst:**	JYH	**Run Date:**	04/03/2012 16:14
Collect Date:	03/23/2012 10:54	**Dilution:**	5	**File ID:**	NI.040312.161447
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	0.801	J	1.42	0.711
Barium, Total	7440-39-3	43.7		1.42	0.711
Cadmium, Total	7440-43-9		U	0.474	0.237
Chromium, Total	7440-47-3	1.91		1.90	0.948
Cobalt, Total	7440-48-4	2.57		2.37	1.19
Copper, Total	7440-50-8	4.36		2.84	1.42
Lead, Total	7439-92-1	5.40		0.948	0.474
Manganese, Total	7439-96-5	152		0.948	0.474
Nickel, Total	7440-02-0	2.97	J	3.79	1.90
Selenium, Total	7782-49-2		U	0.948	0.474
Thallium, Total	7440-28-0		U	0.190	0.0948
Vanadium, Total	7440-62-2	4.75		2.37	1.19

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-53	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH15-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394181	**Analyst:**	JYH	**Run Date:**	04/04/2012 17:39
Collect Date:	03/23/2012 10:54	**Dilution:**	20	**File ID:**	NI.040412.173918
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	98.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.91	1.45

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030945-53	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MP-BH15-2	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:06
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394265	**Analyst:**	PDM	**Run Date:**	04/05/2012 09:45
Collect Date:	03/23/2012 10:54	**Dilution:**	1	**File ID:**	HY.040512.094513
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6	0.0141	J	0.0975	0.00975

J	Estimated value ; the analyte concentration was less than the LOQ.

Sample #:	L12030945-54	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH15-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG393672	**Analyst:**	PDM	**Run Date:**	04/05/2012 23:39
Collect Date:	03/23/2012 11:00	**Dilution:**	1	**File ID:**	T1.040512.233945
Sample Tag:	02	**Units:**	mg/kg	**Percent Solid:**	97.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.532		0.0690	0.0345
Iron, Total	7439-89-6	10000		2.07	1.04

Sample #:	L12030945-54	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH15-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393672	**Analyst:**	PDM	**Run Date:**	04/03/2012 01:22
Collect Date:	03/23/2012 11:00	**Dilution:**	1	**File ID:**	T1.040312.012219
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	4790		13.8	6.90
Antimony, Total	7440-36-0		U	0.690	0.345
Calcium, Total	7440-70-2	4490		6.90	3.45
Magnesium, Total	7439-95-4	2890		17.3	8.63
Potassium, Total	7440-09-7	1670		34.5	17.3
Silver, Total	7440-22-4	0.799		0.138	0.0690
Sodium, Total	7440-23-5	277		17.3	8.63
Zinc, Total	7440-66-6	22.8		0.690	0.345

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030945-54	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH15-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:57
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/03/2012 14:57
Workgroup #:	WG394021	**Analyst:**	JYH	**Run Date:**	04/03/2012 16:17
Collect Date:	03/23/2012 11:00	**Dilution:**	5	**File ID:**	NI.040312.161733
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.71		1.52	0.758
Barium, Total	7440-39-3	53.8		1.52	0.758
Cadmium, Total	7440-43-9		U	0.505	0.253
Chromium, Total	7440-47-3	3.43		2.02	1.01
Cobalt, Total	7440-48-4	5.19		2.53	1.26
Copper, Total	7440-50-8	7.40		3.03	1.52
Lead, Total	7439-92-1	8.94		1.01	0.505
Nickel, Total	7440-02-0	5.55		4.04	2.02
Selenium, Total	7782-49-2		U	1.01	0.505
Thallium, Total	7440-28-0	0.112	J	0.202	0.101
Vanadium, Total	7440-62-2	13.3		2.53	1.26

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-54	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH15-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394181	**Analyst:**	JYH	**Run Date:**	04/04/2012 17:42
Collect Date:	03/23/2012 11:00	**Dilution:**	20	**File ID:**	NI.040412.174204
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	97.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.76	1.38

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-54	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH15-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:57
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394021	**Analyst:**	JYH	**Run Date:**	04/04/2012 15:53
Collect Date:	03/23/2012 11:00	**Dilution:**	50	**File ID:**	NI.040412.155339
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	97.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	248		10.1	5.05

Certificate of Analysis

Sample #:	L12030945-54	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MP-BH15-3	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:06
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394265	**Analyst:**	PDM	**Run Date:**	04/05/2012 09:46
Collect Date:	03/23/2012 11:00	**Dilution:**	1	**File ID:**	HY.040512.094658
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6	0.0140	J	0.0997	0.00997

J	Estimated value ; the analyte concentration was less than the LOQ.

Sample #:	L12030945-55	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH15-FD2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG393672	**Analyst:**	PDM	**Run Date:**	04/05/2012 23:43
Collect Date:	03/23/2012 10:54	**Dilution:**	1	**File ID:**	T1.040512.234333
Sample Tag:	02	**Units:**	mg/kg	**Percent Solid:**	97.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.452		0.0690	0.0345
Iron, Total	7439-89-6	7590		2.07	1.04

Sample #:	L12030945-55	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MP-BH15-FD2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393672	**Analyst:**	PDM	**Run Date:**	04/03/2012 01:26
Collect Date:	03/23/2012 10:54	**Dilution:**	1	**File ID:**	T1.040312.012606
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	3660		13.8	6.90
Antimony, Total	7440-36-0		U	0.690	0.345
Calcium, Total	7440-70-2	3840		6.90	3.45
Magnesium, Total	7439-95-4	1400		17.3	8.63
Potassium, Total	7440-09-7	744		34.5	17.3
Silver, Total	7440-22-4	0.263		0.138	0.0690
Sodium, Total	7440-23-5	62.7		17.3	8.63
Zinc, Total	7440-66-6	16.3		0.690	0.345

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030945-55	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH15-FD2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:57
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/03/2012 14:57
Workgroup #:	WG394021	**Analyst:**	JYH	**Run Date:**	04/03/2012 16:20
Collect Date:	03/23/2012 10:54	**Dilution:**	5	**File ID:**	NI.040312.162020
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.00	J	1.49	0.745
Barium, Total	7440-39-3	51.6		1.49	0.745
Cadmium, Total	7440-43-9		U	0.497	0.248
Chromium, Total	7440-47-3	2.29		1.99	0.993
Cobalt, Total	7440-48-4	2.90		2.48	1.24
Copper, Total	7440-50-8	5.21		2.98	1.49
Lead, Total	7439-92-1	6.22		0.993	0.497
Manganese, Total	7439-96-5	177		0.993	0.497
Nickel, Total	7440-02-0	3.57	J	3.97	1.99
Selenium, Total	7782-49-2		U	0.993	0.497
Thallium, Total	7440-28-0		U	0.199	0.0993
Vanadium, Total	7440-62-2	5.69		2.48	1.24

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-55	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH15-FD2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394181	**Analyst:**	JYH	**Run Date:**	04/04/2012 17:44
Collect Date:	03/23/2012 10:54	**Dilution:**	20	**File ID:**	NI.040412.174451
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	97.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.76	1.38

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030945-55	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MP-BH15-FD2	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:06
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394265	**Analyst:**	PDM	**Run Date:**	04/05/2012 09:48
Collect Date:	03/23/2012 10:54	**Dilution:**	1	**File ID:**	HY.040512.094840
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6	0.0107	J	0.0979	0.00979

J	Estimated value ; the analyte concentration was less than the LOQ.

Sample #:	L12030945-56	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	MP-BH15-RB	**Prep Method:**	3005A	**Prep Date:**	03/30/2012 06:44
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 08:37
Workgroup #:	WG393777	**Analyst:**	KHR	**Run Date:**	04/05/2012 14:07
Collect Date:	03/22/2012 16:50	**Dilution:**	1	**File ID:**	P2.040512.140723
Sample Tag:	02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2		U	0.200	0.100

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-56	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	MP-BH15-RB	**Prep Method:**	3005A	**Prep Date:**	03/30/2012 06:44
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	04/04/2012 09:02
Workgroup #:	WG393777	**Analyst:**	SLP	**Run Date:**	04/04/2012 13:12
Collect Date:	03/22/2012 16:50	**Dilution:**	1	**File ID:**	P2.040412.131236
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5		U	0.100	0.0500
Beryllium, Total	7440-41-7		U	0.00200	0.00100
Iron, Total	7439-89-6		U	0.100	0.0500
Magnesium, Total	7439-95-4		U	0.500	0.250
Potassium, Total	7440-09-7		U	1.00	0.500
Sodium, Total	7440-23-5		U	0.500	0.250
Zinc, Total	7440-66-6		U	0.0200	0.0100

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030945-56	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MP-BH15-RB	**Prep Method:**	3015	**Prep Date:**	03/29/2012 10:26
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	03/29/2012 09:57
Workgroup #:	WG393616	**Analyst:**	JYH	**Run Date:**	03/29/2012 13:42
Collect Date:	03/22/2012 16:50	**Dilution:**	1	**File ID:**	NI.032912.134204
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0		U	0.00100	0.000500
Arsenic, Total	7440-38-2		U	0.00100	0.000500
Barium, Total	7440-39-3		U	0.00300	0.00150
Cadmium, Total	7440-43-9		U	0.000600	0.000300
Chromium, Total	7440-47-3		U	0.00200	0.00100
Cobalt, Total	7440-48-4		U	0.00100	0.000500
Copper, Total	7440-50-8		U	0.00200	0.00100
Lead, Total	7439-92-1		U	0.00100	0.000500
Manganese, Total	7439-96-5	0.00104	J	0.00200	0.00100
Nickel, Total	7440-02-0		U	0.00400	0.00200
Selenium, Total	7782-49-2		U	0.00100	0.000500
Silver, Total	7440-22-4		U	0.00100	0.000500
Thallium, Total	7440-28-0		U	0.000200	0.000100
Vanadium, Total	7440-62-2		U	0.00100	0.000500

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030945-56	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MP-BH15-RB	**Prep Method:**	7470A	**Prep Date:**	03/29/2012 09:26
Matrix:	Water	**Analytical Method:**	7470A	**Cal Date:**	04/02/2012 13:06
Workgroup #:	WG393836	**Analyst:**	PDM	**Run Date:**	04/02/2012 14:10
Collect Date:	03/22/2012 16:50	**Dilution:**	1	**File ID:**	HY.040212.141027
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury	7439-97-6		U	0.000200	0.000100

U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L12030945
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Sample #: L12030945-01 **Client ID:** MP-BH01-1 **Matrix:** Soil **Collect Date:** 03/22/2012 12:29

Analyte	Result	Units	Qualifier
Percent Solids	95.0	weight %	

Sample #: L12030945-02 **Client ID:** MP-BH01-2 **Matrix:** Soil **Collect Date:** 03/22/2012 12:31

Analyte	Result	Units	Qualifier
Percent Solids	97.9	weight %	

Sample #: L12030945-03 **Client ID:** MP-BH01-3 **Matrix:** Soil **Collect Date:** 03/22/2012 12:35

Analyte	Result	Units	Qualifier
Percent Solids	97.3	weight %	

Sample #: L12030945-04 **Client ID:** MP-BH02-1 **Matrix:** Soil **Collect Date:** 03/22/2012 14:18

Analyte	Result	Units	Qualifier
Percent Solids	95.2	weight %	

Sample #: L12030945-05 **Client ID:** MP-BH02-2 **Matrix:** Soil **Collect Date:** 03/22/2012 14:20

Analyte	Result	Units	Qualifier
Percent Solids	98.1	weight %	

Sample #: L12030945-06 **Client ID:** MP-BH02-3 **Matrix:** Soil **Collect Date:** 03/22/2012 14:25

Analyte	Result	Units	Qualifier
Percent Solids	98.9	weight %	

Sample #: L12030945-07 **Client ID:** MP-BH02-FD1 **Matrix:** Soil **Collect Date:** 03/22/2012 14:18

Analyte	Result	Units	Qualifier
Percent Solids	95.5	weight %	

Sample #: L12030945-08 **Client ID:** MP-BH03-1 **Matrix:** Soil **Collect Date:** 03/22/2012 14:49

Analyte	Result	Units	Qualifier
Percent Solids	98.7	weight %	

Sample #: L12030945-09 **Client ID:** MP-BH03-2 **Matrix:** Soil **Collect Date:** 03/22/2012 14:52

Analyte	Result	Units	Qualifier
Percent Solids	98.4	weight %	

Sample #: L12030945-10 **Client ID:** MP-BH03-3 **Matrix:** Soil **Collect Date:** 03/22/2012 14:56

Analyte	Result	Units	Qualifier
Percent Solids	98.9	weight %	

Sample #: L12030945-11 **Client ID:** MP-BH04-1 **Matrix:** Soil **Collect Date:** 03/23/2012 12:42

Analyte	Result	Units	Qualifier
Percent Solids	99.6	weight %	

Sample #: L12030945-12 **Client ID:** MP-BH04-2 **Matrix:** Soil **Collect Date:** 03/23/2012 12:50

Analyte	Result	Units	Qualifier
Percent Solids	97.6	weight %	

Sample #: L12030945-13 **Client ID:** MP-BH04-3 **Matrix:** Soil **Collect Date:** 03/23/2012 12:53

Analyte	Result	Units	Qualifier
Percent Solids	97.4	weight %	

Sample #: L12030945-14 **Client ID:** MP-BH04-MS3 **Matrix:** Soil **Collect Date:** 03/23/2012 12:53

Analyte	Result	Units	Qualifier
Percent Solids	97.4	weight %	

Sample #: L12030945-15 **Client ID:** MP-BH04-MSD3 **Matrix:** Soil **Collect Date:** 03/23/2012 12:53

Analyte	Result	Units	Qualifier
Percent Solids	97.4	weight %	

Sample #: L12030945-16 **Client ID:** MP-BH05-1 **Matrix:** Soil **Collect Date:** 03/23/2012 08:43

Analyte	Result	Units	Qualifier
Percent Solids	97.9	weight %	

Sample #: L12030945-17 **Client ID:** MP-BH05-2 **Matrix:** Soil **Collect Date:** 03/22/2012 08:48

Analyte	Result	Units	Qualifier
Percent Solids	97.9	weight %	

Sample #: L12030945-18 **Client ID:** MP-BH05-3 **Matrix:** Soil **Collect Date:** 03/22/2012 08:53

Analyte	Result	Units	Qualifier
Percent Solids	98.7	weight %	

Sample #: L12030945-19 **Client ID:** MP-BH05-FD2 **Matrix:** Soil **Collect Date:** 03/22/2012 08:48

Analyte	Result	Units	Qualifier
Percent Solids	97.5	weight %	

Sample #: L12030945-21 **Client ID:** MP-BH06-1 **Matrix:** Soil **Collect Date:** 03/22/2012 09:19

Analyte	Result	Units	Qualifier
Percent Solids	97.3	weight %	

Sample #: L12030945-22 **Client ID:** MP-BH06-2 **Matrix:** Soil **Collect Date:** 03/22/2012 09:23

Analyte	Result	Units	Qualifier
Percent Solids	97.9	weight %	

Sample #: L12030945-23 **Client ID:** MP-BH06-3 **Matrix:** Soil **Collect Date:** 03/22/2012 09:26

Analyte	Result	Units	Qualifier
Percent Solids	96.8	weight %	

Sample #: L12030945-24 **Client ID:** MP-BH07-1 **Matrix:** Soil **Collect Date:** 03/22/2012 09:39

Analyte	Result	Units	Qualifier
Percent Solids	98.5	weight %	

Sample #: L12030945-25 **Client ID:** MP-BH07-2 **Matrix:** Soil **Collect Date:** 03/22/2012 09:45

Analyte	Result	Units	Qualifier
Percent Solids	97.2	weight %	

Sample #: L12030945-26 **Client ID:** MP-BH07-3 **Matrix:** Soil **Collect Date:** 03/22/2012 09:48

Analyte	Result	Units	Qualifier
Percent Solids	98.1	weight %	

Sample #: L12030945-27 **Client ID:** MP-BH08-1 **Matrix:** Soil **Collect Date:** 03/22/2012 10:32

Analyte	Result	Units	Qualifier
Percent Solids	97.2	weight %	

Sample #: L12030945-28 **Client ID:** MP-BH08-2 **Matrix:** Soil **Collect Date:** 03/22/2012 10:38

Analyte	Result	Units	Qualifier
Percent Solids	99.2	weight %	

Sample #: L12030945-29 **Client ID:** MP-BH08-3 **Matrix:** Soil **Collect Date:** 03/22/2012 10:41

Analyte	Result	Units	Qualifier
Percent Solids	99.2	weight %	

Sample #: L12030945-30 **Client ID:** MP-BH08-MS1 **Matrix:** Soil **Collect Date:** 03/22/2012 10:32

Analyte	Result	Units	Qualifier
Percent Solids	75.6	weight %	

Sample #: L12030945-31 **Client ID:** MP-BH08-MSD1 **Matrix:** Soil **Collect Date:** 03/22/2012 10:32

Analyte	Result	Units	Qualifier
Percent Solids	75.6	weight %	

Sample #: L12030945-32 **Client ID:** MP-BH09-1 **Matrix:** Soil **Collect Date:** 03/22/2012 10:57

Analyte	Result	Units	Qualifier
Percent Solids	96.7	weight %	

Sample #: L12030945-33 **Client ID:** MP-BH09-2 **Matrix:** Soil **Collect Date:** 03/22/2012 10:59

Analyte	Result	Units	Qualifier
Percent Solids	99.0	weight %	

Sample #: L12030945-34 **Client ID:** MP-BH09-3 **Matrix:** Soil **Collect Date:** 03/22/2012 11:02

Analyte	Result	Units	Qualifier
Percent Solids	99.1	weight %	

Sample #: L12030945-35 **Client ID:** MP-BH10-1 **Matrix:** Soil **Collect Date:** 03/22/2012 11:47

Analyte	Result	Units	Qualifier
Percent Solids	98.2	weight %	

Sample #: L12030945-36 **Client ID:** MP-BH10-2 **Matrix:** Soil **Collect Date:** 03/22/2012 11:51

Analyte	Result	Units	Qualifier
Percent Solids	98.7	weight %	

Sample #: L12030945-37 **Client ID:** MP-BH10-3 **Matrix:** Soil **Collect Date:** 03/22/2012 11:55

Analyte	Result	Units	Qualifier
Percent Solids	96.7	weight %	

Sample #: L12030945-38 **Client ID:** MP-BH10-FD3 **Matrix:** Soil **Collect Date:** 03/22/2012 11:55

Analyte	Result	Units	Qualifier
Percent Solids	96.2	weight %	

Sample #: L12030945-39 **Client ID:** MP-BH11-1 **Matrix:** Soil **Collect Date:** 03/22/2012 15:36

Analyte	Result	Units	Qualifier
Percent Solids	97.9	weight %	

Sample #: L12030945-40 **Client ID:** MP-BH11-2 **Matrix:** Soil **Collect Date:** 03/22/2012 15:42

Analyte	Result	Units	Qualifier
Percent Solids	98.6	weight %	

Sample #: L12030945-41 **Client ID:** MP-BH11-3 **Matrix:** Soil **Collect Date:** 03/22/2012 15:46

Analyte	Result	Units	Qualifier
Percent Solids	98.4	weight %	

Sample #: L12030945-42 **Client ID:** MP-BH12-1 **Matrix:** Soil **Collect Date:** 03/22/2012 16:07

Analyte	Result	Units	Qualifier
Percent Solids	96.8	weight %	

Sample #: L12030945-43 **Client ID:** MP-BH12-2 **Matrix:** Soil **Collect Date:** 03/22/2012 16:13

Analyte	Result	Units	Qualifier
Percent Solids	97.7	weight %	

Sample #: L12030945-44 **Client ID:** MP-BH12-3 **Matrix:** Soil **Collect Date:** 03/22/2012 16:17

Analyte	Result	Units	Qualifier
Percent Solids	98.4	weight %	

Sample #: L12030945-45 **Client ID:** MP-BH12-FD1 **Matrix:** Soil **Collect Date:** 03/22/2012 16:07

Analyte	Result	Units	Qualifier
Percent Solids	97.4	weight %	

Sample #: L12030945-46 **Client ID:** MP-BH13-1 **Matrix:** Soil **Collect Date:** 03/22/2012 10:11

Analyte	Result	Units	Qualifier
Percent Solids	95.9	weight %	

Sample #: L12030945-47 **Client ID:** MP-BH13-2 **Matrix:** Soil **Collect Date:** 03/22/2012 10:18

Analyte	Result	Units	Qualifier
Percent Solids	97.6	weight %	

Sample #: L12030945-48 **Client ID:** MP-BH13-3 **Matrix:** Soil **Collect Date:** 03/22/2012 10:23

Analyte	Result	Units	Qualifier
Percent Solids	98.7	weight %	

Sample #: L12030945-49 **Client ID:** MP-BH14-1 **Matrix:** Soil **Collect Date:** 03/22/2012 16:37

Analyte	Result	Units	Qualifier
Percent Solids	96.9	weight %	

Sample #: L12030945-50 **Client ID:** MP-BH14-2 **Matrix:** Soil **Collect Date:** 03/22/2012 16:41

Analyte	Result	Units	Qualifier
Percent Solids	99.1	weight %	

Sample #: L12030945-51 **Client ID:** MP-BH14-3 **Matrix:** Soil **Collect Date:** 03/22/2012 16:44

Analyte	Result	Units	Qualifier
Percent Solids	97.6	weight %	

Sample #: L12030945-52 **Client ID:** MP-BH15-1 **Matrix:** Soil **Collect Date:** 03/23/2012 10:49

Analyte	Result	Units	Qualifier
Percent Solids	97.1	weight %	

Sample #: L12030945-53 **Client ID:** MP-BH15-2 **Matrix:** Soil **Collect Date:** 03/23/2012 10:54

Analyte	Result	Units	Qualifier
Percent Solids	98.2	weight %	

Sample #: L12030945-54 **Client ID:** MP-BH15-3 **Matrix:** Soil **Collect Date:** 03/23/2012 11:00

Analyte	Result	Units	Qualifier
Percent Solids	97.1	weight %	

Sample #: L12030945-55 **Client ID:** MP-BH15-FD2 **Matrix:** Soil **Collect Date:** 03/23/2012 10:54

Analyte	Result	Units	Qualifier
Percent Solids	97.7	weight %	

Microbac Laboratories Inc.
Ohio Valley Division Analyst List
April 13, 2012

ADC - ANTHONY D. CANTER	AJF - AMANDA J. FICKIESEN	ALB - ANNIE L. BROWN
ALV - AMY L. VALENTINE	AML - TONY M. LONG	AZH - AFTER HOURS
BLG - BRENDA L. GREENWALT	BRG - BRENDA R. GREGORY	CAA - CASSIE A. AUGENSTEIN
CAF - CHERYL A. FLOWERS	CEB - CHAD E. BARNES	CLC - CHRYS L. CRAWFORD
CLS - CARA L. STRICKLER	CLW - CHARISSA L. WINTERS	CPD - CHAD P. DAVIS
CS - CODY M. STRAHLER	CSH - CHRIS S. HILL	DDE - DEBRA D. ELLIOTT
DEV - DAVID E. VANDENBERG	DGB - DOUGLAS G. BUTCHER	DIH - DEANNA I. HESSON
DLB - DAVID L. BUMGARNER	DLP - DOROTHY L. PAYNE	DLR - DIANNA L. RAUCH
DSM - DAVID S. MOSSOR	ECL - ERIC C. LAWSON	EDL - ERIN D. LONG
ERP - ERIN R. PORTER	FJB - FRANCES J. BOLDEN	HAV - HEMA VILASAGAR
HJR - HOLLY J. REED	JAL - JOHN A. LENT	JBK - JEREMY B. KINNEY
JDH - JUSTIN D. HESSON	JKS - JANE K. SCHAAD	JLL - JOHN L. LENT
JWR - JOHN W. RICHARDS	JWS - JACK W. SHEAVES	JYH - JI Y. HU
KEB - KATIE E. BARNES	KHR - KIM H. RHODES	KRA - KATHY R. ALBERTSON
LKN - LINDA K. NEDEFF	LSB - LESLIE S. BUCINA	MDA - MIKE D. ALBERTSON
MDC - MIKE D. COCHRAN	MES - MARY E. SCHILLING	MMB - MAREN M. BEERY
MRT - MICHELLE R. TAYLOR	MSW - MATT S. WILSON	PDM - PIERCE D. MORRIS
PWD - PAUL W. DENT	QX - QIN XU	RAH - ROY A. HALSTEAD
REK - BOB E. KYER	RLB - BOB BUCHANAN	RLK - ROBIN L. KLINGER
RWC - RODNEY W. CAMPBELL	SJP - SUZANNE J. PAUGH	SLM - STEPHANIE L. MOSSBURG
SLP - SHERI L. PFALZGRAF	TIP - TAE I. PARRISH	TMB - TIFFANY M. BAILEY
TMM - TAMMY M. MORRIS	VC - VICKI COLLIER	WJB - WILL J. BEASLEY
WTD - WADE T. DELONG	XXX - UNAVAILABLE OR SUBCONTRACT	

Shaw® a world of Solutions™

COC # 139791-SB006

Chain of Custody

Lab EWS
Lab Contact
Lab Phone 330-720-1061

Client US Army
W. O. WSMR Main Post PO# 6
TAT 14 Days

Site Name WSMR
Contact Name 1
Contact Phone

Bill To: Shaw Environmental and
Phone
Fax
Address Bill Electronically to
City Baton Rouge
State Louisl Zip 70809

Results To: Mark Lyon
Phone 5052628920
Fax 5052628855
Address 2440 Louisiana Blvd Suit
City Albuquerque
State NM Zip 87110

	Mercury by 7471A	Metals by 6010B	Metals by 6020							
Container	P250	P250	P250							
Preservative	HNO3	HNO3	HNO3							

	Sample ID	Matrix	Wt/ Vol	Date-Time Collected	Filtered	Number Containers										
✓	MP-BH01-1	Soil		3/22/2012 12:29:00 PM		1	X	X	X							
✓	MP-BH01-2	Soil		3/22/2012 12:31:00 PM		1	X	X	X							
✓	MP-BH01-3	Soil		3/22/2012 12:35:00 PM		1	X	X	X							
✓	MP-BH02-1	Soil		3/22/2012 2:18:00 PM		1	X	X	X							
✓	MP-BH02-2	Soil		3/22/2012 2:20:00 PM		1	X	X	X							
✓	MP-BH02-3	Soil		3/22/2012 2:25:00 PM		1	X	X	X							
✓	MP-BH02-FD1	Soil		3/22/2012 2:18:00 PM		1	X	X	X							
✓	MP-BH03-1	Soil		3/22/2012 2:49:00 PM		1	X	X	X							
✓	MP-BH03-2	Soil		3/22/2012 2:52:00 PM		1	X	X	X							
✓	MP-BH03-3	Soil		3/22/2012 2:56:00 PM		1	X	X	X							
✓	MP-BH04-1	Soil		3/23/2012 12:42:00 PM		1	X	X	X							
✓	MP-BH04-2	Soil		3/23/2012 12:50:00 PM		1	X	X	X							
✓	MP-BH04-3	Soil		3/23/2012 12:53:00 PM		1	X	X	X							
✓	MP-BH04-MS3	Soil		3/23/2012 12:53:00 PM		1	X	X	X							
✓	MP-BH04-MSD3	Soil		3/23/2012 12:53:00 PM		1	X	X	X							
✓	MP-BH05-1	Soil		3/22/2012 8:43:00 AM		1	X	X	X							
✓	MP-BH05-2	Soil		3/22/2012 8:48:00 AM		1	X	X	X							
✓	MP-BH05-3	Soil		3/22/2012 8:53:00 AM		1	X	X	X							
✓	MP-BH05-FD2	Soil		3/22/2012 8:48:00 AM		1	X	X	X							

Remarks/Comments
Waybill #: 873013169518 Carrier: FEDEX Express

Sampled By

Lab Use Only
Temp of Cooler when Received, C

1	2	3	4	5

COC Tape was present on outer package Y N
COC Tape was unbroken on outer package Y N
COC Tape ws present on sample Y N
COC Tape was unbroken on sample Y N

Received in good condition Y N
Labels indicate Properly Preserved Y N
Received within Holding Time Y N

Relinquished By	Date / Time	Received By	Date
[signature]	3/23/12 1600		

Microbac OVD
Received: 03/27/2012 11:24
By: BOB BUCHANAN 221000023563

RF Buchanan

EIMS Shaw

Shaw® a world of Solutions™

COC # 139791-SB006

Chain of Custody

Lab EWS
Lab Contact
Lab Phone 330-720-1061

Client US Army
W. O. WSMR Main Post PO# 6
TAT 14 Days

Site Name WSMR
Contact Name 1
Contact Phone

Bill To: Shaw Environmental and
Phone
Fax
Address Bill Electronically to
City Baton Rouge
State Louisi Zip 70809

Results To: Mark Lyon
Phone 5052628920
Fax 5052628855
Address 2440 Louisiana Blvd Suit
City Albuquerque
State NM Zip 87110

	Mercury by 7471A	Metals by 6010B	Metals by 6020							
Container	P250	P250	P250							
Preservative	HNO3	HNO3	HNO3							

Sample ID	Matrix	Wt/ Vol	Date-Time Collected	Filtered	Number Containers	Mercury by 7471A	Metals by 6010B	Metals by 6020							
MP-BH05-RB	Water		3/23/2012 12:56:00 PM		1	X	X	X							
MP-BH06-1	Soil		3/22/2012 9:19:00 AM		1	X	X	X							
MP-BH06-2	Soil		3/22/2012 9:23:00 AM		1	X	X	X							
MP-BH06-3	Soil		3/22/2012 9:26:00 AM		1	X	X	X							
MP-BH07-1	Soil		3/22/2012 9:39:00 AM		1	X	X	X							
MP-BH07-2	Soil		3/22/2012 9:45:00 AM		1	X	X	X							
MP-BH07-3	Soil		3/22/2012 9:48:00 AM		1	X	X	X							
MP-BH08-1	Soil		3/22/2012 10:32:00 AM		1	X	X	X							
MP-BH08-2	Soil		3/22/2012 10:38:00 AM		1	X	X	X							
MP-BH08-3	Soil		3/22/2012 10:41:00 AM		1	X	X	X							
MP-BH08-MS1	Soil		3/22/2012 10:32:00 AM		1	X	X	X							
MP-BH08-MSD1	Soil		3/22/2012 10:32:00 AM		1	X	X	X							
MP-BH09-1	Soil		3/22/2012 10:57:00 AM		1	X	X	X							
MP-BH09-2	Soil		3/22/2012 10:59:00 AM		1	X	X	X							
MP-BH09-3	Soil		3/22/2012 11:02:00 AM		1	X	X	X							
MP-BH10-1	Soil		3/22/2012 11:47:00 AM		1	X	X	X							
MP-BH10-2	Soil		3/22/2012 11:51:00 AM		1	X	X	X							
MP-BH10-3	Soil		3/22/2012 11:55:00 AM		1	X	X	X							
MP-BH10-FD3	Soil		3/22/2012 11:55:00 AM		1	X	X	X							

Remarks/Comments
Waybill #: 873013169518 Carrier: FEDEX Express

Lab Use Only
Temp of Cooler when Received, C

1	2	3	4	5

COC Tape was present on outer package Y N
COC Tape was unbroken on outer package Y N
COC Tape ws present on sample Y N
COC Tape was unbroken on sample Y N

Received in good condition Y N
Labels indicate Properly Preserved Y N
Received within Holding Time Y N

Relinquished By	Date / Time	Received By	Date / Time	Relinquished By	Date / Time	Received By	Date / Time

Sampled By

EMS Shaw

Microbac OVD
Received: 03/27/2012 11:24
By: BOB BUCHANAN
221000023563

R F Buchanan

Shaw® a world of Solutions™

COC # 139791-SB006

Chain of Custody

Lab EWS
Lab Contact
Lab Phone 330-720-1061

Client US Army
W. O. WSMR Main Post PO# 6
TAT 14 Days

Site Name WSMR
Contact Name 1
Contact Phone

Bill To: Shaw Environmental and
Phone
Fax
Address Bill Electronically to
City Baton Rouge
State Louisi Zip 70809

Results To: Mark Lyon
Phone 5052628920
Fax 5052628855
Address 2440 Louisiana Blvd Suit
City Albuquerque
State NM Zip 87110

	Mercury by 7471A	Metals by 6010B	Metals by 6020							
Container	P250	P250	P250							
Preservative	HNO3	HNO3	HNO3							

	Sample ID	Matrix	Wt/ Vol	Date-Time Collected	Filtered	Number Containers										
✓	MP-BH11-1	Soil		3/22/2012 3:36:00 PM		1	X	X	X							
✓	MP-BH11-2	Soil		3/22/2012 3:42:00 PM		1	X	X	X							
✓	MP-BH11-3	Soil		3/22/2012 3:46:00 PM		1	X	X	X							
✓	MP-BH12-1	Soil		3/22/2012 4:07:00 PM		1	X	X	X							
✓	MP-BH12-2	Soil		3/22/2012 4:13:00 PM		1	X	X	X							
✓	MP-BH12-3	Soil		3/22/2012 4:17:00 PM		1	X	X	X							
✓	MP-BH12-FD1	Soil		3/22/2012 4:07:00 PM		1	X	X	X							
✓	MP-BH13-1	Soil		3/23/2012 10:11:00 AM		1	X	X	X							
✓	MP-BH13-2	Soil		3/23/2012 10:18:00 AM		1	X	X	X							
✓	MP-BH13-3	Soil		3/23/2012 10:23:00 AM		1	X	X	X							
✓	MP-BH14-1	Soil		3/22/2012 4:37:00 PM		1	X	X	X							
✓	MP-BH14-2	Soil		3/22/2012 4:41:00 PM		1	X	X	X							
✓	MP-BH14-3	Soil		3/22/2012 4:44:00 PM		1	X	X	X							
✓	MP-BH15-1	Soil		3/23/2012 10:49:00 AM		1	X	X	X							
✓	MP-BH15-2	Soil		3/23/2012 10:54:00 AM		1	X	X	X							
✓	MP-BH15-3	Soil		3/23/2012 11:00:00 AM		1	X	X	X							
✓	MP-BH15-FD2	Soil		3/23/2012 10:54:00 AM		1	X	X	X							
✓	MP-BH15-RB	Water		3/22/2012 4:50:00 PM		1	X	X	X							

Remarks/Comments
Waybill #: 873013169518 Carrier: FEDEX Express

Sampled By

Lab Use Only
Temp of Cooler when Received, C

1	2	3	4	5

COC Tape was present on outer package Y N
COC Tape was unbroken on outer package Y N
COC Tape ws present on sample Y N
COC Tape was unbroken on sample Y N

Received in good condition Y N
Labels indicate Properly Preserved Y N
Received within Holding Time Y N

Relinquished By	Date / Time	Received By	Date / Time	Relinquished By	Date / Time	Received By	Date / Time

EIMS Shaw

Microbac OVD
Received: 03/27/2012 11:24
By: BOB BUCHANAN
221000023563

RF Buchanan

Shaw® a world of Solutions™

COC # 139791-SB006

Chain of Custody

Lab EWS
Lab Contact
Lab Phone 330-720-1061

Client US Army
W. O. WSMR Main Post PO# 6
TAT 14 Days

Site Name WSMR
Contact Name 1
Contact Phone

Bill To: Shaw Environmental and
Phone
Fax
Address Bill Electronically to
City Baton Rouge
State Louisi Zip 70809

Results To: Mark Lyon
Phone 5052628920
Fax 5052628855
Address 2440 Louisiana Blvd Suit
City Albuquerque
State NM Zip 87110

	Sample ID	Matrix	Wt/ Vol	Date-Time Collected	Filtered	Number Containers	Mercury by 7471A	Metals by 6010B	Metals by 6020							
Container							P250	P250	P250							
Preservative							HNO3	HNO3	HNO3							

Remarks/Comments
Waybill #: 873013169518 Carrier: FEDEX Express

Sampled By

Lab Use Only
Temp of Cooler when Received, C

1	2	3	4	5

COC Tape was present on outer package Y N
COC Tape was unbroken on outer package Y N
COC Tape ws present on sample Y N
COC Tape was unbroken on sample Y N

Received in good condition Y N
Labels indicate Properly Preserved Y N
Received within Holding Time Y N

Relinquished By	Date / Time	Received By	Date / Time	Relinquished By	Date / Time	Received By	Date / Time

EIMS Shaw

Microbac OVD
Received: 03/27/2012 11:24
By: BOB BUCHANAN
221000023563

R F Buchanan

Microbac

Laboratory Report Number: L12030775

Mark Lyon
Environmental Waste Solutions
2440 Louisiana Blvd
Albuquerque, NM 87110

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac's Ohio Valley Division (OVD). If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed below.

Laboratory Contact:
Stephanie Mossburg – Team Chemist/Data Specialist
(740) 373-4071
Stephanie.Mossburg@microbac.com

I certify that all test results meet all of the requirements of the DoD QSM and other applicable contract terms and conditions. Any exceptions are attached to this cover page or addressed in the method narratives presented in the report. All results for soil samples are reported on a 'dry-weight' basis unless specified otherwise. Analytical results for water and wastes are reported on a 'as received' basis unless specified otherwise. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories, DoD ELAP certification number 2936.01. The reported results are related only to the samples analyzed as received.

This report was certified on April 06 2012

David Vandenberg – Managing Director

State of Origin: NM
Accrediting Authority: N/A ID:N/A
QAPP: DOD Ver 4.1

Microbac

Lab Report #: L12030775
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Record of Sample Receipt and Inspection

Comments/Discrepancies

This is the record of the shipment conditions and the inspection records for the samples received and reported as a sample delivery group (SDG). All of the samples were inspected and observed to conform to our receipt policies, except as noted below.

There were no discrepancies.

Discrepancy	Resolution

Coolers

Cooler #	Temperature Gun	Temperature	COC #	Airbill #
0015013	H	1.0		1002421963160004575000863732108391
0016632	H	1.0		1002239563160004575000873013169492

Inspection Checklist

#	Question	Result
1	Were shipping coolers sealed?	Yes
2	Were custody seals intact?	Yes
3	Were cooler temperatures in range of 0-6?	Yes
4	Was ice present?	Yes
5	Were COC's received/information complete/signed and dated?	Yes
6	Were sample containers intact and match COC?	Yes
7	Were sample labels intact and match COC?	Yes
8	Were the correct containers and volumes received?	Yes
9	Were samples received within EPA hold times?	Yes
10	Were correct perservatives used? (water only)	Yes
11	Were pH ranges acceptable? (voa's excluded)	Yes
12	Were VOA samples free of headspace (less than 6mm)?	NA

Microbac Laboratories ● Ohio Valley Division
158 Starlite Drive, Marietta, OH 45750 ● T: (740)373-4071 F: (740)373-4835
www.microbac.com

Microbac

Lab Report #: L12030775
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Samples Received

Client ID	Laboratory ID	Date Collected	Date Received
140-BH01-1	L12030775-01	03/20/2012 09:47	03/22/2012 10:49
140-BH01-2	L12030775-02	03/20/2012 09:53	03/22/2012 10:49
140-BH01-3	L12030775-03	03/20/2012 09:57	03/22/2012 10:49
140-BH02-1	L12030775-04	03/19/2012 14:55	03/22/2012 10:49
140-BH02-2	L12030775-05	03/19/2012 15:07	03/22/2012 10:49
140-BH02-3	L12030775-06	03/19/2012 12:00	03/22/2012 10:49
140-BH02-RB	L12030775-07	03/20/2012 10:00	03/22/2012 10:49
140-BH03-1	L12030775-08	03/19/2012 15:25	03/22/2012 10:49
140-BH03-2	L12030775-09	03/19/2012 15:32	03/22/2012 10:49
140-BH03-3	L12030775-10	03/19/2012 15:40	03/22/2012 10:49
140-BH03-FD2	L12030775-11	03/19/2012 15:32	03/22/2012 10:49
140-BH04-1	L12030775-12	03/20/2012 08:20	03/22/2012 10:49
140-BH04-2	L12030775-13	03/20/2012 08:28	03/22/2012 10:49
140-BH04-3	L12030775-14	03/20/2012 08:58	03/22/2012 10:49
140-BH05-1	L12030775-15	03/20/2012 09:16	03/22/2012 10:49
140-BH05-2	L12030775-16	03/20/2012 09:22	03/22/2012 10:49
140-BH05-3	L12030775-17	03/20/2012 09:27	03/22/2012 10:49
140-BH05-FD3	L12030775-18	03/20/2012 09:27	03/22/2012 10:49
140-BH06-1	L12030775-19	03/20/2012 10:19	03/22/2012 10:49
140-BH06-2	L12030775-20	03/20/2012 10:24	03/22/2012 10:49
140-BH06-3	L12030775-21	03/20/2012 10:27	03/22/2012 10:49
140-BH07-1	L12030775-22	03/20/2012 10:44	03/22/2012 10:49
140-BH07-2	L12030775-23	03/20/2012 10:49	03/22/2012 10:49
140-BH07-3	L12030775-24	03/20/2012 10:53	03/22/2012 10:49
140-BH07-MS2	L12030775-25	03/20/2012 10:49	03/22/2012 10:49
140-BH07-MSD2	L12030775-26	03/20/2012 10:49	03/22/2012 10:49
140-BH08-1	L12030775-27	03/20/2012 11:10	03/22/2012 10:49
140-BH08-2	L12030775-28	03/20/2012 11:15	03/22/2012 10:49
140-BH08-3	L12030775-29	03/20/2012 11:18	03/22/2012 10:49
140-BH09-1	L12030775-30	03/20/2012 11:38	03/22/2012 10:49
140-BH09-2	L12030775-31	03/20/2012 11:41	03/22/2012 10:49
140-BH09-3	L12030775-32	03/20/2012 11:47	03/22/2012 10:49
140-BH09-MS2	L12030775-33	03/20/2012 11:41	03/22/2012 10:49
140-BH09-MSD2	L12030775-34	03/20/2012 11:41	03/22/2012 10:49
140-BH10-1	L12030775-35	03/20/2012 12:08	03/22/2012 10:49
140-BH10-2	L12030775-36	03/20/2012 12:12	03/22/2012 10:49
140-BH10-3	L12030775-37	03/20/2012 12:15	03/22/2012 10:49

140-BH10-FD1	L12030775-38	03/20/2012 12:08	03/22/2012 10:49
140-BH11-1	L12030775-39	03/20/2012 14:20	03/22/2012 10:49
140-BH11-2	L12030775-40	03/20/2012 14:25	03/22/2012 10:49
140-BH11-3	L12030775-41	03/20/2012 14:28	03/22/2012 10:49
140-BH12-1	L12030775-42	03/20/2012 13:54	03/22/2012 10:49
140-BH12-2	L12030775-43	03/20/2012 13:56	03/22/2012 10:49
140-BH12-3	L12030775-44	03/20/2012 14:01	03/22/2012 10:49
140-BH12-FD2	L12030775-45	03/20/2012 13:56	03/22/2012 10:49
140-BH13-1	L12030775-46	03/20/2012 13:09	03/22/2012 10:49
140-BH13-2	L12030775-47	03/20/2012 13:14	03/22/2012 10:49
140-BH13-3	L12030775-48	03/20/2012 13:19	03/22/2012 10:49
140-BH14-1	L12030775-49	03/20/2012 15:23	03/22/2012 10:49
140-BH14-2	L12030775-50	03/20/2012 15:27	03/22/2012 10:49
140-BH14-3	L12030775-51	03/20/2012 15:31	03/22/2012 10:49
140-BH14-MS3	L12030775-52	03/20/2012 15:31	03/22/2012 10:49
140-BH14-MSD3	L12030775-53	03/20/2012 15:31	03/22/2012 10:49
140-BH15-1	L12030775-54	03/20/2012 14:49	03/22/2012 10:49
140-BH15-2	L12030775-55	03/20/2012 14:57	03/22/2012 10:49
140-BH15-3	L12030775-56	03/20/2012 15:01	03/22/2012 10:49
140-BH15-FD3	L12030775-57	03/20/2012 15:01	03/22/2012 10:49

Login Number: L12030775
Department: Metals
Analyst: Ji Hu
Analyst #2: Kim Rhodes

METHOD

Preparation: SW-846 3051/3005

Analysis: SW-846 6010

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Interference Check Standards: All acceptance criteria were met.

Continuing Calibration Verification: WG393239 - Due to continuing calibration verification failure for beryllium on 26-MAR-2012 at 19:05, client samples 05 through 10 were reanalyzed on a later calibration which was compliant for beryllium.

WG393387 - Due to continuing calibration verification failure for iron and calcium on 27-MAR-2012 at 21:13, client samples 16 through 28 were reanalyzed on a later calibration which was compliant for calcium and iron.

Continuing Calibration Blank: All acceptance criteria were met.

BATCH QA/QC

Method Blank: WG393239 - The method blank analyzed on 26-MAR-2012 at 17:05 yielded a result for iron of 1.78 mg/kg which exceeded the LOD. However, the reported sample results exceeded that of the method blank by greater than a factor of ten. The iron results were reported with a 'B' qualifier to indicate the association with a noncompliant blank.

WG393387 - The method blank analyzed on 27-MAR-2012 at 19:51 yielded a result for iron of 2.06 mg/kg which exceeded the LOD. However, the reported samples results exceeded that of the method blank by greater than a factor of ten. The iron results were reported with a 'B' qualifier to indicate the association with a noncompliant method blank.

WG393481 - The method blank analyzed on 28-MAR-2012 at 12:43 yielded a result for iron of 1.98 mg/kg which exceeded the LOD. However, the reported samples results exceeded that of the method blank by greater than a factor of ten. The iron results were reported with a 'B' qualifier to indicate the association with a noncompliant method blank.

Laboratory Control Sample: All acceptance criteria were met.

Serial Dilution/Post Digestion Spikes: WG393073 - All acceptance criteria were met.

WG393212 - All acceptance criteria were met.

WG393239 - All acceptance criteria were met.

WG393387 - All acceptance criteria were met.

WG393388 - All acceptance criteria were met.

WG393481 - All acceptance criteria were met.

Matrix Spikes: WG392387 - Sample 23 was chosen by the client for MS/MSD analysis. Samples 25 (MS) and 26 (MSD) yielded noncompliant recoveries for four analytes.

WG392388 - Sample 51 was chosen by the client for MS/MSD analysis. Samples 52 (MS) and 53 (MSD) yielded noncompliant recoveries for nine analytes.

WG392481 - Sample 31 was chosen by the client for MS/MSD analysis. Samples 33 (MS) and 34 (MSD) yielded noncompliant recoveries for seven analytes and noncompliant RPDs for three analytes.

SAMPLES

Samples: WG393073 - Client sample 01 required dilution analysis in order to obtain a result for calcium within the linear range.

WG393239 - Client samples 05, 06 and 09 required dilution analyses in order to obtain results for calcium within the linear range.

WG393387 - Client samples 11, 13, 16, 21, 23, 25, 26 and 28 required dilution analyses in order to obtain results for calcium within the linear range.

WG393888 - Client sample 53(MSD) required dilution analysis in order to obtain a result for calcium within the linear range. For consistency with the MSD 53, samples 51 (REF) and 52(MS) were also reanalyzed at dilutions for calcium.

WG393481- Client samples 35, 38, 40, 44 and 47 through 49 required dilution analyses in order to obtain results for calcium within the linear range. All client samples were reanalyzed with a linear range check for iron due to results that were greater then the linear range for iron on initial analysis.

Narrative ID: 43882
Approved By: Sheri Pfalzgraf
Sheri L. Pfalzgraf

Login Number: L12030775
Department: Metals
Analyst: Ji Hu

METHOD

Preparation: SW-846 3051/3015

Analysis: SW-846 6020

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Interference Check Standards: All acceptance criteria were met.

Continuing Calibration: All acceptance criteria were met.

Continuing Calibration Blank: All acceptance criteria were met.

Low Level Check: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Serial Dilution/Post Digestion Spikes: WG393192 - All acceptance criteria were met.

WG393262 - All acceptance criteria were met.

WG393310 - All acceptance criteria were met.

WG393312 - All acceptance criteria were met.

WG393436 - All acceptance criteria were met.

WG393438 - All acceptance criteria were met.

WG393386 - All acceptance criteria were met.

WG393571 - All acceptance criteria were met.

WG393579 - All acceptance criteria were met.

Matrix Spikes: WG393310 - Sample nonhomogeneity was apparent in the initial MSD analysis. Samples 51, 52(MS) and 53(MSD) were reanlyzed on 28-Mar-2012 for verification. Sample 51 was chosen by the client for MS/MSD analysis. Samples 52(MS) and 53(MSD) yielded noncompliant recoveries for 11 analytes and noncompliant RPDs for 10 analytes. Batch QC sample 53(MSD) required a dilution analysis in order to obtain a result for manganese within the linear range. For consistency with 53(MSD), the reference sample 51 and batch QC sample 52(MS) were also reanalyzed at dilutions

for manganese.

WG393436 - Sample 23 was chosen by the client for MS/MSD analysis. Samples 25(MS) and 26(MSD) yielded noncompliant recoveries for two analytes. Sample 31 was chosen by the client for MS/MSD analysis. Samples 33(MS) and 34(MSD) yielded noncompliant recoveries for seven analytes and noncompliant RPDs for two analytes.

WG393386 - Sample 23 was chosen by the client for MS/MSD analysis. Samples 25(MS) and 26(MSD) yielded noncompliant recoveries for silver.

WG393571 - Sample 31 was chosen by the client for MS/MSD analysis. Samples 33(MS) and 34(MSD) met all acceptance criteria.

WG393579 - Sample 51 was chosen by the client for MS/MSD analysis. Samples 52(MS) and 53(MSD) yielded a noncompliant recovery for silver.

SAMPLES

Samples: WG393192 - Due to high levels of nontarget analytes, all client samples were analyzed at dilutions for all analytes.

WG393262 - Due to high levels of nontarget analytes, all client samples were analyzed at dilutions for all analytes.

WG393310 - Due to high levels of nontarget analytes, all client samples were analyzed at dilutions for all analytes.

WG393312 - Due to high levels of nontarget analytes, all client samples were analyzed at dilutions for all analytes. Client samples 01 and 12 required dilution analyses in order to obtain results for barium within the calibration range.

WG393436 - Due to high levels of nontarget analytes, all client samples were analyzed at dilutions for all analytes. Client samples 23, 25, 26, 28, and 36 required additional dilution analyses in order to obtain results for barium within the linear range.

WG393386 - Due to high levels of nontarget analytes, all client samples were analyzed at dilutions for all analytes.

WG393571 - Due to high levels of nontarget analytes, all client samples were analyzed at dilutions for all analytes.

WG393579 - Due to high levels of nontarget analytes, all client samples were analyzed at dilutions for all analytes.

Narrative ID: 43898
Approved By: Sheri Pfalzgraf
Sheri L. Pfalzgraf

Login Number: L12030775
Department: Metals - AA
Analyst: Sheri Pfalzgraf
Analyst #2: Pierce Morris

METHOD

Preparation: SW-846 7470/7471

Analysis: SW-846 7470/7471

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Interference Check Standards: All acceptance criteria were met.

Continuing Calibration Verification: All acceptance criteria were met.

Continuing Calibration Blank: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Serial Dilution/Post Digestion Spikes: WG393108 - All acceptance criteria were met.

WG393338 - All acceptance criteria were met.

WG393340 - All acceptance criteria were met.

WG393363 - All acceptance criteria were met.

WG393370 - All acceptance criteria were met.

Matrix Spikes: WG393340 - Sample 23 was chosen by the client for MS/MSD analysis. Samples 25(MS) and 26(MSD) met all acceptance criteria.

WG393363 - Sample 31 was chosen by the client for MS/MSD analysis. Samples 33(MS) and 34(MSD) yielded noncompliant recoveries for mercury.

WG393370 - Sample 51 was chosen by the client for MS/MSD analysis. Samples 52(MS) and 53(MSD) yielded noncompliant recoveries for mercury.

SAMPLES

Samples: All acceptance criteria were met.

Narrative ID: 43831
Approved By: Sheri Pfalzgraf

Sheri L. Pfahler

Certificate of Analysis

Sample #:	L12030775-01	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH01-1	**Prep Method:**	3051A	**Prep Date:**	03/23/2012 07:41
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/23/2012 09:57
Workgroup #:	WG393073	**Analyst:**	JYH	**Run Date:**	03/23/2012 15:59
Collect Date:	03/20/2012 09:47	**Dilution:**	1	**File ID:**	T1.032312.155917
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	91.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	4640		16.1	8.03
Antimony, Total	7440-36-0		U	0.803	0.401
Beryllium, Total	7440-41-7	0.228		0.0803	0.0401
Iron, Total	7439-89-6	5290		2.41	1.20
Magnesium, Total	7439-95-4	2630		20.1	10.0
Potassium, Total	7440-09-7	960		40.1	20.1
Sodium, Total	7440-23-5	62.7		20.1	10.0
Zinc, Total	7440-66-6	10.3		0.803	0.401

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-01	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH01-1	**Prep Method:**	3051A	**Prep Date:**	03/23/2012 07:41
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/23/2012 09:57
Workgroup #:	WG393073	**Analyst:**	JYH	**Run Date:**	03/23/2012 16:21
Collect Date:	03/20/2012 09:47	**Dilution:**	100	**File ID:**	T1.032312.162128
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	91.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	92900		803	401

Sample #:	L12030775-01	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH01-1	**Prep Method:**	3051A	**Prep Date:**	03/23/2012 09:42
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/27/2012 09:53
Workgroup #:	WG393312	**Analyst:**	JYH	**Run Date:**	03/27/2012 12:33
Collect Date:	03/20/2012 09:47	**Dilution:**	5	**File ID:**	NI.032712.123320
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	91.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	3.62		1.62	0.808
Cadmium, Total	7440-43-9		U	0.538	0.269
Chromium, Total	7440-47-3	3.20		2.15	1.08
Cobalt, Total	7440-48-4	1.88	J	2.69	1.35
Copper, Total	7440-50-8	2.77	J	3.23	1.62
Lead, Total	7439-92-1	3.27		1.08	0.538

Certificate of Analysis

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	42.4		1.08	0.538
Nickel, Total	7440-02-0	6.88		4.31	2.15
Selenium, Total	7782-49-2	0.771	J	1.08	0.538
Thallium, Total	7440-28-0		U	0.215	0.108
Vanadium, Total	7440-62-2	8.07		2.69	1.35

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-01	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH01-1	**Prep Method:**	3051A	**Prep Date:**	03/23/2012 07:41
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/26/2012 10:11
Workgroup #:	WG393192	**Analyst:**	JYH	**Run Date:**	03/26/2012 14:51
Collect Date:	03/20/2012 09:47	**Dilution:**	20	**File ID:**	NI.032612.145155
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	91.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.21	1.61

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-01	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH01-1	**Prep Method:**	3051A	**Prep Date:**	03/23/2012 09:42
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/27/2012 09:53
Workgroup #:	WG393312	**Analyst:**	JYH	**Run Date:**	03/27/2012 15:26
Collect Date:	03/20/2012 09:47	**Dilution:**	50	**File ID:**	NI.032712.152634
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	91.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Barium, Total	7440-39-3	333		16.2	8.08

Sample #:	L12030775-01	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	140-BH01-1	**Prep Method:**	7471	**Prep Date:**	03/23/2012 08:59
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/27/2012 10:57
Workgroup #:	WG393338	**Analyst:**	PDM	**Run Date:**	03/27/2012 12:00
Collect Date:	03/20/2012 09:47	**Dilution:**	1	**File ID:**	HY.032712.120043
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	91.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.107	0.0107

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030775-02	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH01-2	**Prep Method:**	3051A	**Prep Date:**	03/23/2012 07:41
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/23/2012 09:57
Workgroup #:	WG393073	**Analyst:**	JYH	**Run Date:**	03/23/2012 13:07
Collect Date:	03/20/2012 09:53	**Dilution:**	1	**File ID:**	T1.032312.130753
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	91.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	8510		16.4	8.18
Antimony, Total	7440-36-0		U	0.818	0.409
Beryllium, Total	7440-41-7	0.584		0.0818	0.0409
Calcium, Total	7440-70-2	36600		8.18	4.09
Iron, Total	7439-89-6	9120		2.45	1.23
Magnesium, Total	7439-95-4	8320		20.4	10.2
Potassium, Total	7440-09-7	1740		40.9	20.4
Sodium, Total	7440-23-5	1480		20.4	10.2
Zinc, Total	7440-66-6	21.5		0.818	0.409

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-02	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH01-2	**Prep Method:**	3051A	**Prep Date:**	03/23/2012 09:42
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/27/2012 09:53
Workgroup #:	WG393312	**Analyst:**	JYH	**Run Date:**	03/27/2012 12:36
Collect Date:	03/20/2012 09:53	**Dilution:**	5	**File ID:**	NI.032712.123605
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	91.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	3.21		1.58	0.792
Barium, Total	7440-39-3	108		1.58	0.792
Cadmium, Total	7440-43-9		U	0.528	0.264
Chromium, Total	7440-47-3	4.15		2.11	1.06
Cobalt, Total	7440-48-4	3.71		2.64	1.32
Copper, Total	7440-50-8	3.77		3.17	1.58
Lead, Total	7439-92-1	6.75		1.06	0.528
Manganese, Total	7439-96-5	162		1.06	0.528
Nickel, Total	7440-02-0	7.80		4.23	2.11
Selenium, Total	7782-49-2		U	1.06	0.528
Thallium, Total	7440-28-0		U	0.211	0.106
Vanadium, Total	7440-62-2	16.7		2.64	1.32

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030775-02	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH01-2	**Prep Method:**	3051A	**Prep Date:**	03/23/2012 07:41
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/26/2012 10:11
Workgroup #:	WG393192	**Analyst:**	JYH	**Run Date:**	03/26/2012 14:43
Collect Date:	03/20/2012 09:53	**Dilution:**	20	**File ID:**	NI.032612.144337
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	91.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.27	1.64

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-02	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	140-BH01-2	**Prep Method:**	7471	**Prep Date:**	03/23/2012 08:59
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/27/2012 10:57
Workgroup #:	WG393338	**Analyst:**	PDM	**Run Date:**	03/27/2012 12:04
Collect Date:	03/20/2012 09:53	**Dilution:**	1	**File ID:**	HY.032712.120427
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	91.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.108	0.0108

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-03	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH01-3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 09:27
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/26/2012 09:01
Workgroup #:	WG393239	**Analyst:**	PDM	**Run Date:**	03/26/2012 18:17
Collect Date:	03/20/2012 09:57	**Dilution:**	1	**File ID:**	T1.032612.181755
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	86.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	7200		16.2	8.11
Antimony, Total	7440-36-0		U	0.811	0.405
Beryllium, Total	7440-41-7	0.557		0.0811	0.0405
Calcium, Total	7440-70-2	35600		8.11	4.05
Iron, Total	7439-89-6	9780	B	2.43	1.22
Magnesium, Total	7439-95-4	4660		20.3	10.1
Potassium, Total	7440-09-7	1400		40.5	20.3
Sodium, Total	7440-23-5	1420		20.3	10.1
Zinc, Total	7440-66-6	25.5		0.811	0.405

B	The reported result is associated with a contaminated method blank.
U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030775-03	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH01-3	**Prep Method:**	3051A	**Prep Date:**	03/23/2012 09:42
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/27/2012 09:53
Workgroup #:	WG393312	**Analyst:**	JYH	**Run Date:**	03/27/2012 12:51
Collect Date:	03/20/2012 09:57	**Dilution:**	5	**File ID:**	NI.032712.125114
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	86.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	6.28		1.65	0.826
Barium, Total	7440-39-3	15.4		1.65	0.826
Cadmium, Total	7440-43-9		U	0.550	0.275
Chromium, Total	7440-47-3	3.18		2.20	1.10
Cobalt, Total	7440-48-4	2.23	J	2.75	1.38
Copper, Total	7440-50-8	4.40		3.30	1.65
Lead, Total	7439-92-1	3.72		1.10	0.550
Manganese, Total	7439-96-5	77.7		1.10	0.550
Nickel, Total	7440-02-0	6.16		4.40	2.20
Selenium, Total	7782-49-2		U	1.10	0.550
Thallium, Total	7440-28-0		U	0.220	0.110
Vanadium, Total	7440-62-2	26.2		2.75	1.38

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-03	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH01-3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 09:27
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/26/2012 10:11
Workgroup #:	WG393262	**Analyst:**	JYH	**Run Date:**	03/26/2012 15:53
Collect Date:	03/20/2012 09:57	**Dilution:**	20	**File ID:**	NI.032612.155351
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	86.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.24	1.62

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030775-03	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	140-BH01-3	**Prep Method:**	7471	**Prep Date:**	03/23/2012 10:40
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/27/2012 10:57
Workgroup #:	WG393340	**Analyst:**	PDM	**Run Date:**	03/27/2012 12:17
Collect Date:	03/20/2012 09:57	**Dilution:**	1	**File ID:**	HY.032712.121755
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	86.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.114	0.0114

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-04	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH02-1	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 09:27
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/26/2012 09:01
Workgroup #:	WG393239	**Analyst:**	PDM	**Run Date:**	03/26/2012 18:21
Collect Date:	03/19/2012 14:55	**Dilution:**	1	**File ID:**	T1.032612.182143
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	96.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	3000		15.6	7.81
Antimony, Total	7440-36-0		U	0.781	0.390
Beryllium, Total	7440-41-7	0.194		0.0781	0.0390
Calcium, Total	7440-70-2	1550		7.81	3.90
Iron, Total	7439-89-6	5260	B	2.34	1.17
Magnesium, Total	7439-95-4	877		19.5	9.76
Potassium, Total	7440-09-7	843		39.0	19.5
Sodium, Total	7440-23-5	11.8	J	19.5	9.76
Zinc, Total	7440-66-6	9.83		0.781	0.390

B	The reported result is associated with a contaminated method blank.
J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-04	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH02-1	**Prep Method:**	3051A	**Prep Date:**	03/23/2012 09:42
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/27/2012 09:53
Workgroup #:	WG393312	**Analyst:**	JYH	**Run Date:**	03/27/2012 12:54
Collect Date:	03/19/2012 14:55	**Dilution:**	5	**File ID:**	NI.032712.125400
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	96.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.43	J	1.54	0.769
Barium, Total	7440-39-3	23.1		1.54	0.769

Certificate of Analysis

Analyte	CAS #	Result	Qual	LOQ	LOD
Cadmium, Total	7440-43-9		U	0.513	0.256
Chromium, Total	7440-47-3	2.64		2.05	1.03
Cobalt, Total	7440-48-4		U	2.56	1.28
Copper, Total	7440-50-8	2.03	J	3.08	1.54
Lead, Total	7439-92-1	3.59		1.03	0.513
Manganese, Total	7439-96-5	56.3		1.03	0.513
Nickel, Total	7440-02-0	2.72	J	4.10	2.05
Selenium, Total	7782-49-2		U	1.03	0.513
Thallium, Total	7440-28-0		U	0.205	0.103
Vanadium, Total	7440-62-2	5.17		2.56	1.28

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-04	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH02-1	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 09:27
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/26/2012 10:11
Workgroup #:	WG393262	**Analyst:**	JYH	**Run Date:**	03/26/2012 16:07
Collect Date:	03/19/2012 14:55	**Dilution:**	20	**File ID:**	NI.032612.160744
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	96.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.12	1.56

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-04	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	140-BH02-1	**Prep Method:**	7471	**Prep Date:**	03/23/2012 10:40
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/27/2012 10:57
Workgroup #:	WG393340	**Analyst:**	PDM	**Run Date:**	03/27/2012 12:21
Collect Date:	03/19/2012 14:55	**Dilution:**	1	**File ID:**	HY.032712.122142
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	96.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.101	0.0101

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030775-05	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH02-2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 09:27
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/26/2012 09:01
Workgroup #:	WG393239	**Analyst:**	PDM	**Run Date:**	03/26/2012 18:32
Collect Date:	03/19/2012 15:07	**Dilution:**	1	**File ID:**	T1.032612.183227
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	92.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	4780		16.4	8.19
Antimony, Total	7440-36-0		U	0.819	0.410
Iron, Total	7439-89-6	3820	B	2.46	1.23
Magnesium, Total	7439-95-4	4930		20.5	10.2
Potassium, Total	7440-09-7	587		41.0	20.5
Sodium, Total	7440-23-5	212		20.5	10.2
Zinc, Total	7440-66-6	7.74		0.819	0.410

B	The reported result is associated with a contaminated method blank.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-05	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH02-2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 09:27
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/28/2012 10:18
Workgroup #:	WG393239	**Analyst:**	PDM	**Run Date:**	03/28/2012 11:32
Collect Date:	03/19/2012 15:07	**Dilution:**	1	**File ID:**	T1.032812.113255
Sample Tag:	02	**Units:**	mg/kg	**Percent Solid:**	92.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.243		0.0819	0.0410

Sample #:	L12030775-05	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH02-2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 09:27
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/30/2012 08:14
Workgroup #:	WG393239	**Analyst:**	PDM	**Run Date:**	03/30/2012 12:42
Collect Date:	03/19/2012 15:07	**Dilution:**	10	**File ID:**	T1.033012.124246
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	92.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	156000		81.9	41.0

Certificate of Analysis

Sample #:	L12030775-05	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH02-2	**Prep Method:**	3051A	**Prep Date:**	03/23/2012 09:42
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/27/2012 09:53
Workgroup #:	WG393312	**Analyst:**	JYH	**Run Date:**	03/27/2012 12:56
Collect Date:	03/19/2012 15:07	**Dilution:**	5	**File ID:**	NI.032712.125645
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	92.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	2.65		1.62	0.809
Barium, Total	7440-39-3	196		1.62	0.809
Cadmium, Total	7440-43-9		U	0.539	0.270
Chromium, Total	7440-47-3	3.82		2.16	1.08
Cobalt, Total	7440-48-4	1.80	J	2.70	1.35
Copper, Total	7440-50-8		U	3.23	1.62
Lead, Total	7439-92-1	3.58		1.08	0.539
Manganese, Total	7439-96-5	33.1		1.08	0.539
Nickel, Total	7440-02-0	9.66		4.31	2.16
Selenium, Total	7782-49-2	0.750	J	1.08	0.539
Thallium, Total	7440-28-0		U	0.216	0.108
Vanadium, Total	7440-62-2	12.7		2.70	1.35

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-05	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH02-2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 09:27
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/26/2012 10:11
Workgroup #:	WG393262	**Analyst:**	JYH	**Run Date:**	03/26/2012 16:10
Collect Date:	03/19/2012 15:07	**Dilution:**	20	**File ID:**	NI.032612.161031
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	92.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.28	1.64

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030775-05	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	140-BH02-2	**Prep Method:**	7471	**Prep Date:**	03/23/2012 10:41
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/27/2012 10:57
Workgroup #:	WG393340	**Analyst:**	PDM	**Run Date:**	03/27/2012 12:23
Collect Date:	03/19/2012 15:07	**Dilution:**	1	**File ID:**	HY.032712.122327
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	92.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.106	0.0106

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-06	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH02-3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 09:27
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/28/2012 10:18
Workgroup #:	WG393239	**Analyst:**	PDM	**Run Date:**	03/28/2012 11:40
Collect Date:	03/19/2012 12:00	**Dilution:**	1	**File ID:**	T1.032812.114033
Sample Tag:	02	**Units:**	mg/kg	**Percent Solid:**	88.5

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.464		0.0835	0.0418

Sample #:	L12030775-06	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH02-3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 09:27
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/26/2012 09:01
Workgroup #:	WG393239	**Analyst:**	PDM	**Run Date:**	03/26/2012 18:36
Collect Date:	03/19/2012 12:00	**Dilution:**	1	**File ID:**	T1.032612.183615
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	88.5

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	7870		16.7	8.35
Antimony, Total	7440-36-0		U	0.835	0.418
Iron, Total	7439-89-6	7670	B	2.51	1.25
Magnesium, Total	7439-95-4	11300		20.9	10.4
Potassium, Total	7440-09-7	1280		41.8	20.9
Sodium, Total	7440-23-5	721		20.9	10.4
Zinc, Total	7440-66-6	18.6		0.835	0.418

B	The reported result is associated with a contaminated method blank.
U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030775-06	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH02-3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 09:27
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/30/2012 08:14
Workgroup #:	WG393239	**Analyst:**	PDM	**Run Date:**	03/30/2012 12:46
Collect Date:	03/19/2012 12:00	**Dilution:**	10	**File ID:**	T1.033012.124630
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	88.5

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	106000		83.5	41.8

Sample #:	L12030775-06	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH02-3	**Prep Method:**	3051A	**Prep Date:**	03/23/2012 09:42
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/27/2012 09:53
Workgroup #:	WG393312	**Analyst:**	JYH	**Run Date:**	03/27/2012 12:59
Collect Date:	03/19/2012 12:00	**Dilution:**	5	**File ID:**	NI.032712.125930
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	88.5

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	3.27		1.66	0.831
Barium, Total	7440-39-3	114		1.66	0.831
Cadmium, Total	7440-43-9		U	0.554	0.277
Chromium, Total	7440-47-3	4.90		2.22	1.11
Cobalt, Total	7440-48-4	4.10		2.77	1.38
Copper, Total	7440-50-8	4.60		3.32	1.66
Lead, Total	7439-92-1	6.54		1.11	0.554
Manganese, Total	7439-96-5	175		1.11	0.554
Nickel, Total	7440-02-0	10.3		4.43	2.22
Selenium, Total	7782-49-2	0.613	J	1.11	0.554
Thallium, Total	7440-28-0		U	0.222	0.111
Vanadium, Total	7440-62-2	15.8		2.77	1.38

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-06	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH02-3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 09:27
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/26/2012 10:11
Workgroup #:	WG393262	**Analyst:**	JYH	**Run Date:**	03/26/2012 16:13
Collect Date:	03/19/2012 12:00	**Dilution:**	20	**File ID:**	NI.032612.161316
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	88.5

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.34	1.67

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-06	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	140-BH02-3	**Prep Method:**	7471	**Prep Date:**	03/23/2012 10:41
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/27/2012 10:57
Workgroup #:	WG393340	**Analyst:**	PDM	**Run Date:**	03/27/2012 12:25
Collect Date:	03/19/2012 12:00	**Dilution:**	1	**File ID:**	HY.032712.122519
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	88.5

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.110	0.0110

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-07	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	140-BH02-RB	**Prep Method:**	3005A	**Prep Date:**	03/23/2012 11:36
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	03/26/2012 11:13
Workgroup #:	WG393212	**Analyst:**	KHR	**Run Date:**	03/26/2012 14:53
Collect Date:	03/20/2012 10:00	**Dilution:**	1	**File ID:**	P2.032612.145328
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	0.147		0.100	0.0500
Beryllium, Total	7440-41-7		U	0.00200	0.00100
Calcium, Total	7440-70-2	0.731		0.200	0.100
Iron, Total	7439-89-6	0.112		0.100	0.0500
Magnesium, Total	7439-95-4		U	0.500	0.250
Potassium, Total	7440-09-7		U	1.00	0.500
Sodium, Total	7440-23-5	5.46		0.500	0.250
Zinc, Total	7440-66-6		U	0.0200	0.0100

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-07	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH02-RB	**Prep Method:**	3015	**Prep Date:**	03/26/2012 06:46
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	03/28/2012 09:12
Workgroup #:	WG393438	**Analyst:**	JYH	**Run Date:**	03/28/2012 11:26
Collect Date:	03/20/2012 10:00	**Dilution:**	1	**File ID:**	NI.032812.112611
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0		U	0.00100	0.000500
Arsenic, Total	7440-38-2		U	0.00100	0.000500
Barium, Total	7440-39-3	0.00236	J	0.00300	0.00150

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Analyte	CAS #	Result	Qual	LOQ	LOD
Cadmium, Total	7440-43-9		U	0.000600	0.000300
Chromium, Total	7440-47-3		U	0.00200	0.00100
Cobalt, Total	7440-48-4		U	0.00100	0.000500
Copper, Total	7440-50-8		U	0.00200	0.00100
Lead, Total	7439-92-1		U	0.00100	0.000500
Manganese, Total	7439-96-5	0.00212		0.00200	0.00100
Nickel, Total	7440-02-0		U	0.00400	0.00200
Selenium, Total	7782-49-2		U	0.00100	0.000500
Silver, Total	7440-22-4		U	0.00100	0.000500
Thallium, Total	7440-28-0		U	0.000200	0.000100
Vanadium, Total	7440-62-2		U	0.00100	0.000500

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-07	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	140-BH02-RB	**Prep Method:**	7470A	**Prep Date:**	03/23/2012 10:29
Matrix:	Water	**Analytical Method:**	7470A	**Cal Date:**	03/23/2012 14:25
Workgroup #:	WG393108	**Analyst:**	SLP	**Run Date:**	03/23/2012 15:27
Collect Date:	03/20/2012 10:00	**Dilution:**	1	**File ID:**	HY.032312.152714
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury	7439-97-6		U	0.000200	0.000100

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-08	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH03-1	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 09:27
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/26/2012 09:01
Workgroup #:	WG393239	**Analyst:**	PDM	**Run Date:**	03/26/2012 18:40
Collect Date:	03/19/2012 15:25	**Dilution:**	1	**File ID:**	T1.032612.184012
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.8

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	2940		13.7	6.84
Antimony, Total	7440-36-0		U	0.684	0.342
Calcium, Total	7440-70-2	930		6.84	3.42
Iron, Total	7439-89-6	5040	B	2.05	1.03
Magnesium, Total	7439-95-4	824		17.1	8.55
Potassium, Total	7440-09-7	779		34.2	17.1
Sodium, Total	7440-23-5	12.9	J	17.1	8.55

Certificate of Analysis

Analyte	CAS #	Result	Qual	LOQ	LOD
Zinc, Total	7440-66-6	9.71		0.684	0.342

B	The reported result is associated with a contaminated method blank.
J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-08	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH03-1	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 09:27
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/28/2012 10:18
Workgroup #:	WG393239	**Analyst:**	PDM	**Run Date:**	03/28/2012 11:48
Collect Date:	03/19/2012 15:25	**Dilution:**	1	**File ID:**	T1.032812.114818
Sample Tag:	02	**Units:**	mg/kg	**Percent Solid:**	97.8

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.175		0.0684	0.0342

Sample #:	L12030775-08	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH03-1	**Prep Method:**	3051A	**Prep Date:**	03/23/2012 09:42
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/27/2012 09:53
Workgroup #:	WG393312	**Analyst:**	JYH	**Run Date:**	03/27/2012 13:02
Collect Date:	03/19/2012 15:25	**Dilution:**	5	**File ID:**	NI.032712.130216
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	97.8

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.31	J	1.49	0.743
Barium, Total	7440-39-3	24.4		1.49	0.743
Cadmium, Total	7440-43-9		U	0.495	0.248
Chromium, Total	7440-47-3	2.73		1.98	0.991
Cobalt, Total	7440-48-4		U	2.48	1.24
Copper, Total	7440-50-8	1.87	J	2.97	1.49
Lead, Total	7439-92-1	3.31		0.991	0.495
Manganese, Total	7439-96-5	55.3		0.991	0.495
Nickel, Total	7440-02-0	2.41	J	3.96	1.98
Selenium, Total	7782-49-2		U	0.991	0.495
Thallium, Total	7440-28-0		U	0.198	0.0991
Vanadium, Total	7440-62-2	4.49		2.48	1.24

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030775-08	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH03-1	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 09:27
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/26/2012 10:11
Workgroup #:	WG393262	**Analyst:**	JYH	**Run Date:**	03/26/2012 16:16
Collect Date:	03/19/2012 15:25	**Dilution:**	20	**File ID:**	NI.032612.161601
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.8

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.74	1.37

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-08	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	140-BH03-1	**Prep Method:**	7471	**Prep Date:**	03/23/2012 10:47
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/27/2012 10:57
Workgroup #:	WG393340	**Analyst:**	PDM	**Run Date:**	03/27/2012 12:27
Collect Date:	03/19/2012 15:25	**Dilution:**	1	**File ID:**	HY.032712.122703
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.8

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0993	0.00993

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-09	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH03-2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 09:27
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/26/2012 09:01
Workgroup #:	WG393239	**Analyst:**	PDM	**Run Date:**	03/26/2012 18:43
Collect Date:	03/19/2012 15:32	**Dilution:**	1	**File ID:**	T1.032612.184344
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	90.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	6160		16.2	8.10
Antimony, Total	7440-36-0		U	0.810	0.405
Iron, Total	7439-89-6	6800	B	2.43	1.22
Magnesium, Total	7439-95-4	5550		20.3	10.1
Potassium, Total	7440-09-7	777		40.5	20.3
Sodium, Total	7440-23-5	852		20.3	10.1
Zinc, Total	7440-66-6	15.8		0.810	0.405

B	The reported result is associated with a contaminated method blank.
U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030775-09	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH03-2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 09:27
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/28/2012 10:18
Workgroup #:	WG393239	**Analyst:**	PDM	**Run Date:**	03/28/2012 11:59
Collect Date:	03/19/2012 15:32	**Dilution:**	1	**File ID:**	T1.032812.115920
Sample Tag:	02	**Units:**	mg/kg	**Percent Solid:**	90.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.456		0.0810	0.0405

Sample #:	L12030775-09	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH03-2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 09:27
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/29/2012 09:05
Workgroup #:	WG393239	**Analyst:**	PDM	**Run Date:**	03/30/2012 00:49
Collect Date:	03/19/2012 15:32	**Dilution:**	10	**File ID:**	T1.033012.004916
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	90.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	87400		81.0	40.5

Sample #:	L12030775-09	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH03-2	**Prep Method:**	3051A	**Prep Date:**	03/23/2012 09:42
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/27/2012 09:53
Workgroup #:	WG393312	**Analyst:**	JYH	**Run Date:**	03/27/2012 13:05
Collect Date:	03/19/2012 15:32	**Dilution:**	5	**File ID:**	NI.032712.130501
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	90.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	4.57		1.53	0.765
Barium, Total	7440-39-3	132		1.53	0.765
Cadmium, Total	7440-43-9		U	0.510	0.255
Chromium, Total	7440-47-3	5.41		2.04	1.02
Cobalt, Total	7440-48-4	3.40		2.55	1.28
Copper, Total	7440-50-8	3.88		3.06	1.53
Lead, Total	7439-92-1	5.96		1.02	0.510
Manganese, Total	7439-96-5	119		1.02	0.510
Nickel, Total	7440-02-0	8.73		4.08	2.04
Selenium, Total	7782-49-2		U	1.02	0.510
Thallium, Total	7440-28-0		U	0.204	0.102
Vanadium, Total	7440-62-2	20.7		2.55	1.28

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030775-09	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH03-2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 09:27
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/26/2012 10:11
Workgroup #:	WG393262	**Analyst:**	JYH	**Run Date:**	03/26/2012 16:18
Collect Date:	03/19/2012 15:32	**Dilution:**	20	**File ID:**	NI.032612.161847
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	90.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.24	1.62

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-09	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	140-BH03-2	**Prep Method:**	7471	**Prep Date:**	03/23/2012 10:47
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/27/2012 10:57
Workgroup #:	WG393340	**Analyst:**	PDM	**Run Date:**	03/27/2012 12:28
Collect Date:	03/19/2012 15:32	**Dilution:**	1	**File ID:**	HY.032712.122847
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	90.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.108	0.0108

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-10	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH03-3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 09:27
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/28/2012 10:18
Workgroup #:	WG393239	**Analyst:**	PDM	**Run Date:**	03/28/2012 12:07
Collect Date:	03/19/2012 15:40	**Dilution:**	1	**File ID:**	T1.032812.120706
Sample Tag:	02	**Units:**	mg/kg	**Percent Solid:**	92.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.397		0.0762	0.0381

Sample #:	L12030775-10	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH03-3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 09:27
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/26/2012 09:01
Workgroup #:	WG393239	**Analyst:**	PDM	**Run Date:**	03/26/2012 18:47
Collect Date:	03/19/2012 15:40	**Dilution:**	1	**File ID:**	T1.032612.184740
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	92.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	7120		15.2	7.62
Antimony, Total	7440-36-0		U	0.762	0.381
Calcium, Total	7440-70-2	25200		7.62	3.81

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Analyte	CAS #	Result	Qual	LOQ	LOD
Iron, Total	7439-89-6	8300	B	2.29	1.14
Magnesium, Total	7439-95-4	3520		19.0	9.52
Potassium, Total	7440-09-7	1270		38.1	19.0
Sodium, Total	7440-23-5	848		19.0	9.52
Zinc, Total	7440-66-6	19.0		0.762	0.381

B	The reported result is associated with a contaminated method blank.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-10	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH03-3	**Prep Method:**	3051A	**Prep Date:**	03/23/2012 09:42
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/27/2012 09:53
Workgroup #:	WG393312	**Analyst:**	JYH	**Run Date:**	03/27/2012 13:07
Collect Date:	03/19/2012 15:40	**Dilution:**	5	**File ID:**	NI.032712.130747
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	92.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	7.29		1.63	0.814
Barium, Total	7440-39-3	62.8		1.63	0.814
Cadmium, Total	7440-43-9		U	0.542	0.271
Chromium, Total	7440-47-3	4.43		2.17	1.08
Cobalt, Total	7440-48-4	2.95		2.71	1.36
Copper, Total	7440-50-8	4.83		3.25	1.63
Lead, Total	7439-92-1	5.39		1.08	0.542
Manganese, Total	7439-96-5	172		1.08	0.542
Nickel, Total	7440-02-0	6.63		4.34	2.17
Selenium, Total	7782-49-2		U	1.08	0.542
Thallium, Total	7440-28-0		U	0.217	0.108
Vanadium, Total	7440-62-2	31.7		2.71	1.36

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-10	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH03-3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 09:27
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/26/2012 10:11
Workgroup #:	WG393262	**Analyst:**	JYH	**Run Date:**	03/26/2012 16:21
Collect Date:	03/19/2012 15:40	**Dilution:**	20	**File ID:**	NI.032612.162133
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	92.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.05	1.52

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030775-10	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	140-BH03-3	**Prep Method:**	7471	**Prep Date:**	03/23/2012 10:48
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/27/2012 10:57
Workgroup #:	WG393340	**Analyst:**	PDM	**Run Date:**	03/27/2012 12:30
Collect Date:	03/19/2012 15:40	**Dilution:**	1	**File ID:**	HY.032712.123041
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	92.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.108	0.0108

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-11	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH03-FD2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:13
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/27/2012 14:28
Workgroup #:	WG393387	**Analyst:**	PDM	**Run Date:**	03/27/2012 19:59
Collect Date:	03/19/2012 15:32	**Dilution:**	1	**File ID:**	T1.032712.195913
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	90.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	8450		15.4	7.71
Antimony, Total	7440-36-0		U	0.771	0.386
Beryllium, Total	7440-41-7	0.511		0.0771	0.0386
Iron, Total	7439-89-6	8530	B	2.31	1.16
Magnesium, Total	7439-95-4	5820		19.3	9.64
Potassium, Total	7440-09-7	1300		38.6	19.3
Sodium, Total	7440-23-5	869		19.3	9.64
Zinc, Total	7440-66-6	19.5		0.771	0.386

B	The reported result is associated with a contaminated method blank.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-11	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH03-FD2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:13
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/27/2012 14:28
Workgroup #:	WG393387	**Analyst:**	PDM	**Run Date:**	03/27/2012 20:06
Collect Date:	03/19/2012 15:32	**Dilution:**	5	**File ID:**	T1.032712.200651
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	90.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	59300		38.6	19.3

Certificate of Analysis

Sample #:	L12030775-11	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH03-FD2	**Prep Method:**	3051A	**Prep Date:**	03/23/2012 09:42
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/27/2012 09:53
Workgroup #:	WG393312	**Analyst:**	JYH	**Run Date:**	03/27/2012 13:10
Collect Date:	03/19/2012 15:32	**Dilution:**	5	**File ID:**	NI.032712.131033
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	90.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	4.52		1.63	0.814
Barium, Total	7440-39-3	139		1.63	0.814
Cadmium, Total	7440-43-9		U	0.543	0.271
Chromium, Total	7440-47-3	5.00		2.17	1.09
Cobalt, Total	7440-48-4	3.36		2.71	1.36
Copper, Total	7440-50-8	3.69		3.26	1.63
Lead, Total	7439-92-1	5.93		1.09	0.543
Manganese, Total	7439-96-5	115		1.09	0.543
Nickel, Total	7440-02-0	8.40		4.34	2.17
Selenium, Total	7782-49-2		U	1.09	0.543
Thallium, Total	7440-28-0		U	0.217	0.109
Vanadium, Total	7440-62-2	20.4		2.71	1.36

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-11	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH03-FD2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:13
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/28/2012 09:12
Workgroup #:	WG393386	**Analyst:**	JYH	**Run Date:**	03/28/2012 17:04
Collect Date:	03/19/2012 15:32	**Dilution:**	20	**File ID:**	NI.032812.170419
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	90.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.09	1.54

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-11	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	140-BH03-FD2	**Prep Method:**	7471	**Prep Date:**	03/23/2012 10:48
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/27/2012 10:57
Workgroup #:	WG393340	**Analyst:**	PDM	**Run Date:**	03/27/2012 12:37
Collect Date:	03/19/2012 15:32	**Dilution:**	1	**File ID:**	HY.032712.123704
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	90.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.107	0.0107

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-12	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH04-1	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:14
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/27/2012 14:28
Workgroup #:	WG393387	**Analyst:**	PDM	**Run Date:**	03/27/2012 20:14
Collect Date:	03/20/2012 08:20	**Dilution:**	1	**File ID:**	T1.032712.201402
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	95.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	4170		14.1	7.05
Antimony, Total	7440-36-0		U	0.705	0.352
Beryllium, Total	7440-41-7	0.268		0.0705	0.0352
Calcium, Total	7440-70-2	16800		7.05	3.52
Iron, Total	7439-89-6	5610	B	2.11	1.06
Magnesium, Total	7439-95-4	1590		17.6	8.81
Potassium, Total	7440-09-7	955		35.2	17.6
Sodium, Total	7440-23-5	36.0		17.6	8.81
Zinc, Total	7440-66-6	11.0		0.705	0.352

B	The reported result is associated with a contaminated method blank.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-12	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH04-1	**Prep Method:**	3051A	**Prep Date:**	03/23/2012 09:42
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/27/2012 09:53
Workgroup #:	WG393312	**Analyst:**	JYH	**Run Date:**	03/27/2012 13:13
Collect Date:	03/20/2012 08:20	**Dilution:**	5	**File ID:**	NI.032712.131319
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	95.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	3.73		1.51	0.757
Cadmium, Total	7440-43-9		U	0.505	0.252
Chromium, Total	7440-47-3	3.44		2.02	1.01
Cobalt, Total	7440-48-4	1.89	J	2.52	1.26
Copper, Total	7440-50-8	2.71	J	3.03	1.51
Lead, Total	7439-92-1	4.05		1.01	0.505
Manganese, Total	7439-96-5	59.1		1.01	0.505
Nickel, Total	7440-02-0	5.15		4.04	2.02
Selenium, Total	7782-49-2		U	1.01	0.505
Thallium, Total	7440-28-0		U	0.202	0.101
Vanadium, Total	7440-62-2	10.4		2.52	1.26

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-12	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH04-1	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:14
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/28/2012 09:12
Workgroup #:	WG393386	**Analyst:**	JYH	**Run Date:**	03/28/2012 17:07
Collect Date:	03/20/2012 08:20	**Dilution:**	20	**File ID:**	NI.032812.170705
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	95.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.82	1.41

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-12	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH04-1	**Prep Method:**	3051A	**Prep Date:**	03/23/2012 09:42
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/27/2012 09:53
Workgroup #:	WG393312	**Analyst:**	JYH	**Run Date:**	03/27/2012 15:29
Collect Date:	03/20/2012 08:20	**Dilution:**	50	**File ID:**	NI.032712.152919
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	95.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Barium, Total	7440-39-3	321		15.1	7.57

Sample #:	L12030775-12	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	140-BH04-1	**Prep Method:**	7471	**Prep Date:**	03/23/2012 10:49
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/27/2012 10:57
Workgroup #:	WG393340	**Analyst:**	PDM	**Run Date:**	03/27/2012 12:38
Collect Date:	03/20/2012 08:20	**Dilution:**	1	**File ID:**	HY.032712.123847
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	95.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.101	0.0101

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030775-13	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH04-2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:14
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/27/2012 14:28
Workgroup #:	WG393387	**Analyst:**	PDM	**Run Date:**	03/27/2012 20:17
Collect Date:	03/20/2012 08:28	**Dilution:**	1	**File ID:**	T1.032712.201745
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	91.8

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	8660		15.2	7.58
Antimony, Total	7440-36-0		U	0.758	0.379
Beryllium, Total	7440-41-7	0.484		0.0758	0.0379
Iron, Total	7439-89-6	8270	B	2.27	1.14
Magnesium, Total	7439-95-4	6200		18.9	9.47
Potassium, Total	7440-09-7	1530		37.9	18.9
Sodium, Total	7440-23-5	909		18.9	9.47
Zinc, Total	7440-66-6	19.3		0.758	0.379

B	The reported result is associated with a contaminated method blank.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-13	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH04-2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:14
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/29/2012 09:05
Workgroup #:	WG393387	**Analyst:**	PDM	**Run Date:**	03/29/2012 10:01
Collect Date:	03/20/2012 08:28	**Dilution:**	10	**File ID:**	T1.032912.100147
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	91.8

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	47500		75.8	37.9

Sample #:	L12030775-13	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH04-2	**Prep Method:**	3051A	**Prep Date:**	03/23/2012 09:42
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/27/2012 09:53
Workgroup #:	WG393312	**Analyst:**	JYH	**Run Date:**	03/27/2012 13:16
Collect Date:	03/20/2012 08:28	**Dilution:**	5	**File ID:**	NI.032712.131605
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	91.8

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	5.92		1.63	0.815
Barium, Total	7440-39-3	128		1.63	0.815
Cadmium, Total	7440-43-9		U	0.543	0.272
Chromium, Total	7440-47-3	5.97		2.17	1.09
Cobalt, Total	7440-48-4	3.47		2.72	1.36

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Analyte	CAS #	Result	Qual	LOQ	LOD
Copper, Total	7440-50-8	4.30		3.26	1.63
Lead, Total	7439-92-1	5.56		1.09	0.543
Manganese, Total	7439-96-5	129		1.09	0.543
Nickel, Total	7440-02-0	7.95		4.35	2.17
Selenium, Total	7782-49-2	0.585	J	1.09	0.543
Thallium, Total	7440-28-0		U	0.217	0.109
Vanadium, Total	7440-62-2	21.4		2.72	1.36

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-13	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH04-2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:14
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/28/2012 09:12
Workgroup #:	WG393386	**Analyst:**	JYH	**Run Date:**	03/28/2012 17:20
Collect Date:	03/20/2012 08:28	**Dilution:**	20	**File ID:**	NI.032812.172057
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	91.8

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.03	1.52

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-13	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	140-BH04-2	**Prep Method:**	7471	**Prep Date:**	03/23/2012 10:49
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/27/2012 10:57
Workgroup #:	WG393340	**Analyst:**	PDM	**Run Date:**	03/27/2012 12:40
Collect Date:	03/20/2012 08:28	**Dilution:**	1	**File ID:**	HY.032712.124032
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	91.8

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.108	0.0108

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-14	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH04-3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:15
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/27/2012 14:28
Workgroup #:	WG393387	**Analyst:**	PDM	**Run Date:**	03/27/2012 20:21
Collect Date:	03/20/2012 08:58	**Dilution:**	1	**File ID:**	T1.032712.202134
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	84.8

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	8880		17.2	8.62

Certificate of Analysis

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0		U	0.862	0.431
Beryllium, Total	7440-41-7	0.750		0.0862	0.0431
Calcium, Total	7440-70-2	28000		8.62	4.31
Iron, Total	7439-89-6	12700	B	2.59	1.29
Magnesium, Total	7439-95-4	5840		21.6	10.8
Potassium, Total	7440-09-7	1680		43.1	21.6
Sodium, Total	7440-23-5	1540		21.6	10.8
Zinc, Total	7440-66-6	34.5		0.862	0.431

B	The reported result is associated with a contaminated method blank.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-14	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH04-3	**Prep Method:**	3051A	**Prep Date:**	03/23/2012 09:42
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/27/2012 09:53
Workgroup #:	WG393312	**Analyst:**	JYH	**Run Date:**	03/27/2012 13:24
Collect Date:	03/20/2012 08:58	**Dilution:**	5	**File ID:**	NI.032712.132428
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	84.8

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	6.84		1.70	0.850
Barium, Total	7440-39-3	25.1		1.70	0.850
Cadmium, Total	7440-43-9		U	0.567	0.283
Chromium, Total	7440-47-3	4.07		2.27	1.13
Cobalt, Total	7440-48-4	3.27		2.83	1.42
Copper, Total	7440-50-8	9.35		3.40	1.70
Lead, Total	7439-92-1	8.38		1.13	0.567
Manganese, Total	7439-96-5	144		1.13	0.567
Nickel, Total	7440-02-0	8.12		4.53	2.27
Selenium, Total	7782-49-2	0.585	J	1.13	0.567
Thallium, Total	7440-28-0		U	0.227	0.113
Vanadium, Total	7440-62-2	19.7		2.83	1.42

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030775-14	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH04-3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:15
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/28/2012 09:12
Workgroup #:	WG393386	**Analyst:**	JYH	**Run Date:**	03/28/2012 17:23
Collect Date:	03/20/2012 08:58	**Dilution:**	20	**File ID:**	NI.032812.172342
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	84.8

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.45	1.72

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-14	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	140-BH04-3	**Prep Method:**	7471	**Prep Date:**	03/23/2012 10:51
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/27/2012 10:57
Workgroup #:	WG393340	**Analyst:**	PDM	**Run Date:**	03/27/2012 12:42
Collect Date:	03/20/2012 08:58	**Dilution:**	1	**File ID:**	HY.032712.124221
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	84.8

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.112	0.0112

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-15	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH05-1	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:15
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/27/2012 14:28
Workgroup #:	WG393387	**Analyst:**	PDM	**Run Date:**	03/27/2012 20:25
Collect Date:	03/20/2012 09:16	**Dilution:**	1	**File ID:**	T1.032712.202531
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	3230		15.3	7.64
Antimony, Total	7440-36-0		U	0.764	0.382
Beryllium, Total	7440-41-7	0.220		0.0764	0.0382
Calcium, Total	7440-70-2	4890		7.64	3.82
Iron, Total	7439-89-6	5300	B	2.29	1.15
Magnesium, Total	7439-95-4	1040		19.1	9.55
Potassium, Total	7440-09-7	1010		38.2	19.1
Sodium, Total	7440-23-5	15.9	J	19.1	9.55
Zinc, Total	7440-66-6	10.3		0.764	0.382

B	The reported result is associated with a contaminated method blank.
J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030775-15	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH05-1	**Prep Method:**	3051A	**Prep Date:**	03/23/2012 09:42
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/27/2012 09:53
Workgroup #:	WG393312	**Analyst:**	JYH	**Run Date:**	03/27/2012 13:27
Collect Date:	03/20/2012 09:16	**Dilution:**	5	**File ID:**	NI.032712.132714
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.49	J	1.51	0.756
Barium, Total	7440-39-3	24.8		1.51	0.756
Cadmium, Total	7440-43-9		U	0.504	0.252
Chromium, Total	7440-47-3	2.12		2.01	1.01
Cobalt, Total	7440-48-4		U	2.52	1.26
Copper, Total	7440-50-8	1.81	J	3.02	1.51
Lead, Total	7439-92-1	3.39		1.01	0.504
Manganese, Total	7439-96-5	44.5		1.01	0.504
Nickel, Total	7440-02-0	2.55	J	4.03	2.01
Selenium, Total	7782-49-2		U	1.01	0.504
Thallium, Total	7440-28-0		U	0.201	0.101
Vanadium, Total	7440-62-2	3.84		2.52	1.26

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-15	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH05-1	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:15
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/28/2012 09:12
Workgroup #:	WG393386	**Analyst:**	JYH	**Run Date:**	03/28/2012 17:26
Collect Date:	03/20/2012 09:16	**Dilution:**	20	**File ID:**	NI.032812.172628
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	97.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.06	1.53

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030775-15	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	140-BH05-1	**Prep Method:**	7471	**Prep Date:**	03/23/2012 10:52
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/27/2012 10:57
Workgroup #:	WG393340	**Analyst:**	PDM	**Run Date:**	03/27/2012 12:44
Collect Date:	03/20/2012 09:16	**Dilution:**	1	**File ID:**	HY.032712.124405
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0993	0.00993

U — Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-16	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH05-2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:16
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/27/2012 14:28
Workgroup #:	WG393387	**Analyst:**	PDM	**Run Date:**	03/27/2012 20:36
Collect Date:	03/20/2012 09:22	**Dilution:**	1	**File ID:**	T1.032712.203625
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	92.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	4450		15.7	7.83
Antimony, Total	7440-36-0		U	0.783	0.391
Beryllium, Total	7440-41-7	0.276		0.0783	0.0391
Magnesium, Total	7439-95-4	5140		19.6	9.79
Potassium, Total	7440-09-7	511		39.1	19.6
Sodium, Total	7440-23-5	430		19.6	9.79
Zinc, Total	7440-66-6	8.82		0.783	0.391

U — Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-16	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH05-2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:16
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/29/2012 09:05
Workgroup #:	WG393387	**Analyst:**	PDM	**Run Date:**	03/29/2012 10:05
Collect Date:	03/20/2012 09:22	**Dilution:**	10	**File ID:**	T1.032912.100528
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	92.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	189000		78.3	39.1
Iron, Total	7439-89-6	4630		23.5	11.7

Certificate of Analysis

Sample #:	L12030775-16	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH05-2	**Prep Method:**	3051A	**Prep Date:**	03/23/2012 09:42
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/27/2012 09:53
Workgroup #:	WG393312	**Analyst:**	JYH	**Run Date:**	03/27/2012 13:30
Collect Date:	03/20/2012 09:22	**Dilution:**	5	**File ID:**	NI.032712.133000
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	92.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	3.28		1.55	0.776
Barium, Total	7440-39-3	158		1.55	0.776
Cadmium, Total	7440-43-9		U	0.517	0.259
Chromium, Total	7440-47-3	3.24		2.07	1.03
Cobalt, Total	7440-48-4	2.70		2.59	1.29
Copper, Total	7440-50-8	1.81	J	3.10	1.55
Lead, Total	7439-92-1	3.97		1.03	0.517
Manganese, Total	7439-96-5	54.8		1.03	0.517
Nickel, Total	7440-02-0	11.9		4.14	2.07
Selenium, Total	7782-49-2	1.05		1.03	0.517
Thallium, Total	7440-28-0		U	0.207	0.103
Vanadium, Total	7440-62-2	8.46		2.59	1.29

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-16	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH05-2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:16
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/28/2012 09:12
Workgroup #:	WG393386	**Analyst:**	JYH	**Run Date:**	03/28/2012 17:29
Collect Date:	03/20/2012 09:22	**Dilution:**	20	**File ID:**	NI.032812.172914
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	92.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.13	1.57

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030775-16	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	140-BH05-2	**Prep Method:**	7471	**Prep Date:**	03/23/2012 10:52
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/27/2012 10:57
Workgroup #:	WG393340	**Analyst:**	PDM	**Run Date:**	03/27/2012 12:45
Collect Date:	03/20/2012 09:22	**Dilution:**	1	**File ID:**	HY.032712.124549
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	92.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.104	0.0104

U Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-17	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH05-3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:16
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/27/2012 14:28
Workgroup #:	WG393387	**Analyst:**	PDM	**Run Date:**	03/27/2012 20:40
Collect Date:	03/20/2012 09:27	**Dilution:**	1	**File ID:**	T1.032712.204014
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	2640		15.1	7.54
Antimony, Total	7440-36-0		U	0.754	0.377
Beryllium, Total	7440-41-7	0.250		0.0754	0.0377
Magnesium, Total	7439-95-4	1810		18.9	9.43
Potassium, Total	7440-09-7	480		37.7	18.9
Sodium, Total	7440-23-5	370		18.9	9.43
Zinc, Total	7440-66-6	11.7		0.754	0.377

U Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-17	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH05-3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:16
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/29/2012 09:05
Workgroup #:	WG393387	**Analyst:**	PDM	**Run Date:**	03/29/2012 10:09
Collect Date:	03/20/2012 09:27	**Dilution:**	10	**File ID:**	T1.032912.100918
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	9880		75.4	37.7
Iron, Total	7439-89-6	5200		22.6	11.3

Certificate of Analysis

Sample #:	L12030775-17	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH05-3	**Prep Method:**	3051A	**Prep Date:**	03/23/2012 09:42
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/27/2012 09:53
Workgroup #:	WG393312	**Analyst:**	JYH	**Run Date:**	03/27/2012 13:32
Collect Date:	03/20/2012 09:27	**Dilution:**	5	**File ID:**	NI.032712.133245
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	2.02		1.43	0.714
Barium, Total	7440-39-3	68.0		1.43	0.714
Cadmium, Total	7440-43-9		U	0.476	0.238
Chromium, Total	7440-47-3	1.07	J	1.90	0.952
Cobalt, Total	7440-48-4	2.78		2.38	1.19
Copper, Total	7440-50-8	1.53	J	2.86	1.43
Lead, Total	7439-92-1	3.19		0.952	0.476
Manganese, Total	7439-96-5	120		0.952	0.476
Nickel, Total	7440-02-0	3.81		3.81	1.90
Selenium, Total	7782-49-2		U	0.952	0.476
Thallium, Total	7440-28-0		U	0.190	0.0952
Vanadium, Total	7440-62-2	8.12		2.38	1.19

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-17	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH05-3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:16
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/28/2012 09:12
Workgroup #:	WG393386	**Analyst:**	JYH	**Run Date:**	03/28/2012 17:31
Collect Date:	03/20/2012 09:27	**Dilution:**	20	**File ID:**	NI.032812.173159
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	97.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.02	1.51

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030775-17	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	140-BH05-3	**Prep Method:**	7471	**Prep Date:**	03/23/2012 10:53
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/27/2012 10:57
Workgroup #:	WG393340	**Analyst:**	PDM	**Run Date:**	03/27/2012 12:47
Collect Date:	03/20/2012 09:27	**Dilution:**	1	**File ID:**	HY.032712.124745
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0996	0.00996

U — Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-18	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH05-FD3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:17
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/27/2012 14:28
Workgroup #:	WG393387	**Analyst:**	PDM	**Run Date:**	03/27/2012 20:43
Collect Date:	03/20/2012 09:27	**Dilution:**	1	**File ID:**	T1.032712.204348
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	2990		14.7	7.35
Antimony, Total	7440-36-0		U	0.735	0.368
Beryllium, Total	7440-41-7	0.272		0.0735	0.0368
Magnesium, Total	7439-95-4	2030		18.4	9.19
Potassium, Total	7440-09-7	551		36.8	18.4
Sodium, Total	7440-23-5	381		18.4	9.19
Zinc, Total	7440-66-6	12.5		0.735	0.368

U — Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-18	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH05-FD3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:17
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/29/2012 09:05
Workgroup #:	WG393387	**Analyst:**	PDM	**Run Date:**	03/29/2012 10:12
Collect Date:	03/20/2012 09:27	**Dilution:**	10	**File ID:**	T1.032912.101259
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	19300		73.5	36.8
Iron, Total	7439-89-6	6120		22.1	11.0

Certificate of Analysis

Sample #:	L12030775-18	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH05-FD3	**Prep Method:**	3051A	**Prep Date:**	03/23/2012 09:42
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/27/2012 09:53
Workgroup #:	WG393312	**Analyst:**	JYH	**Run Date:**	03/27/2012 13:35
Collect Date:	03/20/2012 09:27	**Dilution:**	5	**File ID:**	NI.032712.133531
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	3.01		1.52	0.761
Barium, Total	7440-39-3	86.1		1.52	0.761
Cadmium, Total	7440-43-9		U	0.507	0.254
Chromium, Total	7440-47-3	2.03		2.03	1.01
Cobalt, Total	7440-48-4	4.16		2.54	1.27
Copper, Total	7440-50-8	2.79	J	3.04	1.52
Lead, Total	7439-92-1	4.36		1.01	0.507
Manganese, Total	7439-96-5	177		1.01	0.507
Nickel, Total	7440-02-0	6.08		4.06	2.03
Selenium, Total	7782-49-2		U	1.01	0.507
Thallium, Total	7440-28-0		U	0.203	0.101
Vanadium, Total	7440-62-2	11.9		2.54	1.27

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-18	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH05-FD3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:17
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/28/2012 09:12
Workgroup #:	WG393386	**Analyst:**	JYH	**Run Date:**	03/28/2012 17:34
Collect Date:	03/20/2012 09:27	**Dilution:**	20	**File ID:**	NI.032812.173445
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	97.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.94	1.47

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030775-18	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	140-BH05-FD3	**Prep Method:**	7471	**Prep Date:**	03/23/2012 10:53
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/27/2012 10:57
Workgroup #:	WG393340	**Analyst:**	PDM	**Run Date:**	03/27/2012 12:49
Collect Date:	03/20/2012 09:27	**Dilution:**	1	**File ID:**	HY.032712.124928
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6	0.00982	J	0.0982	0.00982

J	Estimated value ; the analyte concentration was less than the LOQ.

Sample #:	L12030775-19	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH06-1	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:17
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/27/2012 14:28
Workgroup #:	WG393387	**Analyst:**	PDM	**Run Date:**	03/27/2012 20:47
Collect Date:	03/20/2012 10:19	**Dilution:**	1	**File ID:**	T1.032712.204730
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.3

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	1590		14.3	7.17
Antimony, Total	7440-36-0		U	0.717	0.358
Beryllium, Total	7440-41-7	0.137		0.0717	0.0358
Magnesium, Total	7439-95-4	571		17.9	8.96
Potassium, Total	7440-09-7	544		35.8	17.9
Sodium, Total	7440-23-5	9.59	J	17.9	8.96
Zinc, Total	7440-66-6	6.94		0.717	0.358

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-19	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH06-1	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:17
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/29/2012 09:05
Workgroup #:	WG393387	**Analyst:**	PDM	**Run Date:**	03/29/2012 10:25
Collect Date:	03/20/2012 10:19	**Dilution:**	10	**File ID:**	T1.032912.102500
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.3

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	1100		71.7	35.8
Iron, Total	7439-89-6	4070		21.5	10.8

Certificate of Analysis

Sample #:	L12030775-19	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH06-1	**Prep Method:**	3051A	**Prep Date:**	03/23/2012 09:42
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/27/2012 09:53
Workgroup #:	WG393312	**Analyst:**	JYH	**Run Date:**	03/27/2012 13:38
Collect Date:	03/20/2012 10:19	**Dilution:**	5	**File ID:**	NI.032712.133817
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.3

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	0.774	J	1.46	0.728
Barium, Total	7440-39-3	15.4		1.46	0.728
Cadmium, Total	7440-43-9		U	0.485	0.243
Chromium, Total	7440-47-3	1.36	J	1.94	0.971
Cobalt, Total	7440-48-4		U	2.43	1.21
Copper, Total	7440-50-8		U	2.91	1.46
Lead, Total	7439-92-1	3.08		0.971	0.485
Manganese, Total	7439-96-5	37.0		0.971	0.485
Nickel, Total	7440-02-0		U	3.88	1.94
Selenium, Total	7782-49-2		U	0.971	0.485
Thallium, Total	7440-28-0		U	0.194	0.0971
Vanadium, Total	7440-62-2	2.12	J	2.43	1.21

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-19	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH06-1	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:17
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/28/2012 09:12
Workgroup #:	WG393386	**Analyst:**	JYH	**Run Date:**	03/28/2012 17:43
Collect Date:	03/20/2012 10:19	**Dilution:**	20	**File ID:**	NI.032812.174306
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	98.3

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.87	1.43

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030775-19	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	140-BH06-1	**Prep Method:**	7471	**Prep Date:**	03/23/2012 10:54
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/27/2012 10:57
Workgroup #:	WG393340	**Analyst:**	PDM	**Run Date:**	03/27/2012 12:51
Collect Date:	03/20/2012 10:19	**Dilution:**	1	**File ID:**	HY.032712.125112
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.3

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0975	0.00975

U Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-20	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH06-2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:17
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/27/2012 14:28
Workgroup #:	WG393387	**Analyst:**	PDM	**Run Date:**	03/27/2012 20:51
Collect Date:	03/20/2012 10:24	**Dilution:**	1	**File ID:**	T1.032712.205103
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	94.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	5620		15.8	7.92
Antimony, Total	7440-36-0		U	0.792	0.396
Beryllium, Total	7440-41-7	0.411		0.0792	0.0396
Magnesium, Total	7439-95-4	1890		19.8	9.91
Potassium, Total	7440-09-7	1040		39.6	19.8
Sodium, Total	7440-23-5	218		19.8	9.91
Zinc, Total	7440-66-6	14.8		0.792	0.396

U Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-20	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH06-2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:17
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/29/2012 09:05
Workgroup #:	WG393387	**Analyst:**	PDM	**Run Date:**	03/29/2012 10:28
Collect Date:	03/20/2012 10:24	**Dilution:**	10	**File ID:**	T1.032912.102843
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	94.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	12200		79.2	39.6
Iron, Total	7439-89-6	8390		23.8	11.9

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Sample #:	L12030775-20	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH06-2	**Prep Method:**	3051A	**Prep Date:**	03/23/2012 09:42
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/27/2012 09:53
Workgroup #:	WG393312	**Analyst:**	JYH	**Run Date:**	03/27/2012 13:41
Collect Date:	03/20/2012 10:24	**Dilution:**	5	**File ID:**	NI.032712.134102
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	94.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	2.91		1.56	0.780
Barium, Total	7440-39-3	58.0		1.56	0.780
Cadmium, Total	7440-43-9		U	0.520	0.260
Chromium, Total	7440-47-3	5.44		2.08	1.04
Cobalt, Total	7440-48-4	2.79		2.60	1.30
Copper, Total	7440-50-8	3.71		3.12	1.56
Lead, Total	7439-92-1	5.91		1.04	0.520
Manganese, Total	7439-96-5	102		1.04	0.520
Nickel, Total	7440-02-0	5.93		4.16	2.08
Selenium, Total	7782-49-2		U	1.04	0.520
Thallium, Total	7440-28-0		U	0.208	0.104
Vanadium, Total	7440-62-2	12.8		2.60	1.30

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-20	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH06-2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:17
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/28/2012 09:12
Workgroup #:	WG393386	**Analyst:**	JYH	**Run Date:**	03/28/2012 17:45
Collect Date:	03/20/2012 10:24	**Dilution:**	20	**File ID:**	NI.032812.174552
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	94.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.17	1.58

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-20	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	140-BH06-2	**Prep Method:**	7471	**Prep Date:**	03/23/2012 10:55
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/27/2012 10:57
Workgroup #:	WG393340	**Analyst:**	PDM	**Run Date:**	03/27/2012 12:52
Collect Date:	03/20/2012 10:24	**Dilution:**	1	**File ID:**	HY.032712.125257
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	94.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.102	0.0102

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-21	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH06-3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:18
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/27/2012 14:28
Workgroup #:	WG393387	**Analyst:**	PDM	**Run Date:**	03/27/2012 20:54
Collect Date:	03/20/2012 10:27	**Dilution:**	1	**File ID:**	T1.032712.205446
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	93.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	2920		15.8	7.89
Antimony, Total	7440-36-0		U	0.789	0.394
Beryllium, Total	7440-41-7	0.222		0.0789	0.0394
Magnesium, Total	7439-95-4	2900		19.7	9.86
Potassium, Total	7440-09-7	374		39.4	19.7
Sodium, Total	7440-23-5	441		19.7	9.86
Zinc, Total	7440-66-6	6.24		0.789	0.394

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-21	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH06-3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:18
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/29/2012 09:05
Workgroup #:	WG393387	**Analyst:**	PDM	**Run Date:**	03/29/2012 10:32
Collect Date:	03/20/2012 10:27	**Dilution:**	10	**File ID:**	T1.032912.103224
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	93.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	94400		78.9	39.4
Iron, Total	7439-89-6	4170		23.7	11.8

Sample #:	L12030775-21	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH06-3	**Prep Method:**	3051A	**Prep Date:**	03/23/2012 09:42
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/27/2012 09:53
Workgroup #:	WG393312	**Analyst:**	JYH	**Run Date:**	03/27/2012 12:23
Collect Date:	03/20/2012 10:27	**Dilution:**	5	**File ID:**	NI.032712.122330
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	93.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.71		1.54	0.768
Barium, Total	7440-39-3	84.6		1.54	0.768
Cadmium, Total	7440-43-9		U	0.512	0.256
Chromium, Total	7440-47-3	1.99	J	2.05	1.02

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Analyte	CAS #	Result	Qual	LOQ	LOD
Cobalt, Total	7440-48-4	1.52	J	2.56	1.28
Copper, Total	7440-50-8		U	3.07	1.54
Lead, Total	7439-92-1	2.95		1.02	0.512
Manganese, Total	7439-96-5	31.7		1.02	0.512
Nickel, Total	7440-02-0	5.17		4.09	2.05
Selenium, Total	7782-49-2		U	1.02	0.512
Thallium, Total	7440-28-0		U	0.205	0.102
Vanadium, Total	7440-62-2	6.52		2.56	1.28

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-21	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH06-3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:18
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/28/2012 09:12
Workgroup #:	WG393386	**Analyst:**	JYH	**Run Date:**	03/28/2012 17:48
Collect Date:	03/20/2012 10:27	**Dilution:**	20	**File ID:**	NI.032812.174838
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	93.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.16	1.58

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-21	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	140-BH06-3	**Prep Method:**	7471	**Prep Date:**	03/23/2012 10:55
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/27/2012 10:57
Workgroup #:	WG393340	**Analyst:**	PDM	**Run Date:**	03/27/2012 12:58
Collect Date:	03/20/2012 10:27	**Dilution:**	1	**File ID:**	HY.032712.125814
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	93.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.104	0.0104

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030775-22	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH07-1	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:19
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/27/2012 14:28
Workgroup #:	WG393387	**Analyst:**	PDM	**Run Date:**	03/27/2012 20:58
Collect Date:	03/20/2012 10:44	**Dilution:**	1	**File ID:**	T1.032712.205828
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.3

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	1590		14.3	7.16
Antimony, Total	7440-36-0		U	0.716	0.358
Beryllium, Total	7440-41-7	0.135		0.0716	0.0358
Magnesium, Total	7439-95-4	600		17.9	8.95
Potassium, Total	7440-09-7	483		35.8	17.9
Sodium, Total	7440-23-5	19.8		17.9	8.95
Zinc, Total	7440-66-6	6.67		0.716	0.358

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-22	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH07-1	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:19
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/29/2012 09:05
Workgroup #:	WG393387	**Analyst:**	PDM	**Run Date:**	03/29/2012 10:36
Collect Date:	03/20/2012 10:44	**Dilution:**	10	**File ID:**	T1.032912.103606
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.3

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	2760		71.6	35.8
Iron, Total	7439-89-6	4550		21.5	10.7

Sample #:	L12030775-22	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH07-1	**Prep Method:**	3051A	**Prep Date:**	03/23/2012 13:11
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/28/2012 09:12
Workgroup #:	WG393436	**Analyst:**	JYH	**Run Date:**	03/28/2012 09:51
Collect Date:	03/20/2012 10:44	**Dilution:**	5	**File ID:**	NI.032812.095138
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.3

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	0.868	J	1.51	0.754
Barium, Total	7440-39-3	15.1		1.51	0.754
Cadmium, Total	7440-43-9		U	0.503	0.251
Chromium, Total	7440-47-3	1.72	J	2.01	1.01
Cobalt, Total	7440-48-4		U	2.51	1.26
Copper, Total	7440-50-8	1.92	J	3.02	1.51

Certificate of Analysis

Analyte	CAS #	Result	Qual	LOQ	LOD
Lead, Total	7439-92-1	2.15		1.01	0.503
Manganese, Total	7439-96-5	25.5		1.01	0.503
Nickel, Total	7440-02-0		U	4.02	2.01
Selenium, Total	7782-49-2		U	1.01	0.503
Thallium, Total	7440-28-0		U	0.201	0.101
Vanadium, Total	7440-62-2	3.89		2.51	1.26

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-22	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH07-1	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:19
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/28/2012 09:12
Workgroup #:	WG393386	**Analyst:**	JYH	**Run Date:**	03/28/2012 17:51
Collect Date:	03/20/2012 10:44	**Dilution:**	20	**File ID:**	NI.032812.175123
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	98.3

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.86	1.43

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-22	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	140-BH07-1	**Prep Method:**	7471	**Prep Date:**	03/23/2012 10:56
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/27/2012 10:57
Workgroup #:	WG393340	**Analyst:**	PDM	**Run Date:**	03/27/2012 12:59
Collect Date:	03/20/2012 10:44	**Dilution:**	1	**File ID:**	HY.032712.125957
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.3

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0980	0.00980

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-23	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH07-2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:19
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/27/2012 14:28
Workgroup #:	WG393387	**Analyst:**	PDM	**Run Date:**	03/27/2012 21:02
Collect Date:	03/20/2012 10:49	**Dilution:**	1	**File ID:**	T1.032712.210202
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	93.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	4400		15.4	7.70
Antimony, Total	7440-36-0		U	0.770	0.385

Certificate of Analysis

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.311		0.0770	0.0385
Magnesium, Total	7439-95-4	4230		19.3	9.63
Potassium, Total	7440-09-7	601		38.5	19.3
Sodium, Total	7440-23-5	375		19.3	9.63
Zinc, Total	7440-66-6	10.3		0.770	0.385

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-23	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH07-2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:19
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/29/2012 09:05
Workgroup #:	WG393387	**Analyst:**	PDM	**Run Date:**	03/29/2012 10:39
Collect Date:	03/20/2012 10:49	**Dilution:**	10	**File ID:**	T1.032912.103949
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	93.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	70100		77.0	38.5
Iron, Total	7439-89-6	5710		23.1	11.6

Sample #:	L12030775-23	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH07-2	**Prep Method:**	3051A	**Prep Date:**	03/23/2012 13:11
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/28/2012 09:12
Workgroup #:	WG393436	**Analyst:**	JYH	**Run Date:**	03/28/2012 09:40
Collect Date:	03/20/2012 10:49	**Dilution:**	5	**File ID:**	NI.032812.094034
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	93.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	3.13		1.60	0.799
Cadmium, Total	7440-43-9		U	0.533	0.266
Chromium, Total	7440-47-3	2.19		2.13	1.07
Cobalt, Total	7440-48-4	1.88	J	2.66	1.33
Copper, Total	7440-50-8	1.85	J	3.20	1.60
Lead, Total	7439-92-1	3.73		1.07	0.533
Manganese, Total	7439-96-5	50.2		1.07	0.533
Nickel, Total	7440-02-0	5.35		4.26	2.13
Selenium, Total	7782-49-2		U	1.07	0.533
Thallium, Total	7440-28-0		U	0.213	0.107
Vanadium, Total	7440-62-2	13.1		2.66	1.33

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030775-23	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH07-2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:19
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/28/2012 09:12
Workgroup #:	WG393386	**Analyst:**	JYH	**Run Date:**	03/28/2012 16:53
Collect Date:	03/20/2012 10:49	**Dilution:**	20	**File ID:**	NI.032812.165316
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	93.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.08	1.54

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-23	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH07-2	**Prep Method:**	3051A	**Prep Date:**	03/23/2012 13:11
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/28/2012 09:12
Workgroup #:	WG393436	**Analyst:**	JYH	**Run Date:**	03/28/2012 13:26
Collect Date:	03/20/2012 10:49	**Dilution:**	50	**File ID:**	NI.032812.132637
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	93.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Barium, Total	7440-39-3	204		16.0	7.99

Sample #:	L12030775-23	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	140-BH07-2	**Prep Method:**	7471	**Prep Date:**	03/23/2012 10:56
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/27/2012 10:57
Workgroup #:	WG393340	**Analyst:**	PDM	**Run Date:**	03/27/2012 13:02
Collect Date:	03/20/2012 10:49	**Dilution:**	1	**File ID:**	HY.032712.130224
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	93.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.106	0.0106

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-24	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH07-3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:19
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/27/2012 14:28
Workgroup #:	WG393387	**Analyst:**	PDM	**Run Date:**	03/27/2012 21:05
Collect Date:	03/20/2012 10:53	**Dilution:**	1	**File ID:**	T1.032712.210552
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	1810		13.6	6.79
Antimony, Total	7440-36-0		U	0.679	0.339
Beryllium, Total	7440-41-7	0.171		0.0679	0.0339

Certificate of Analysis

Analyte	CAS #	Result	Qual	LOQ	LOD
Magnesium, Total	7439-95-4	1130		17.0	8.48
Potassium, Total	7440-09-7	370		33.9	17.0
Sodium, Total	7440-23-5	255		17.0	8.48
Zinc, Total	7440-66-6	10.6		0.679	0.339

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-24	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH07-3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:19
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/29/2012 09:05
Workgroup #:	WG393387	**Analyst:**	PDM	**Run Date:**	03/29/2012 10:43
Collect Date:	03/20/2012 10:53	**Dilution:**	10	**File ID:**	T1.032912.104331
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	1980		67.9	33.9
Iron, Total	7439-89-6	5410		20.4	10.2

Sample #:	L12030775-24	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH07-3	**Prep Method:**	3051A	**Prep Date:**	03/23/2012 13:11
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/28/2012 09:12
Workgroup #:	WG393436	**Analyst:**	JYH	**Run Date:**	03/28/2012 09:43
Collect Date:	03/20/2012 10:53	**Dilution:**	5	**File ID:**	NI.032812.094320
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.28	J	1.52	0.761
Barium, Total	7440-39-3	35.7		1.52	0.761
Cadmium, Total	7440-43-9		U	0.507	0.254
Chromium, Total	7440-47-3		U	2.03	1.01
Cobalt, Total	7440-48-4	1.48	J	2.54	1.27
Copper, Total	7440-50-8	1.57	J	3.04	1.52
Lead, Total	7439-92-1	2.53		1.01	0.507
Manganese, Total	7439-96-5	47.7		1.01	0.507
Nickel, Total	7440-02-0	2.38	J	4.06	2.03
Selenium, Total	7782-49-2		U	1.01	0.507
Thallium, Total	7440-28-0		U	0.203	0.101
Vanadium, Total	7440-62-2	8.45		2.54	1.27

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030775-24	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH07-3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:19
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/28/2012 09:12
Workgroup #:	WG393386	**Analyst:**	JYH	**Run Date:**	03/28/2012 16:56
Collect Date:	03/20/2012 10:53	**Dilution:**	20	**File ID:**	NI.032812.165602
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	98.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.71	1.36

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-24	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	140-BH07-3	**Prep Method:**	7471	**Prep Date:**	03/23/2012 12:36
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/27/2012 10:57
Workgroup #:	WG393363	**Analyst:**	PDM	**Run Date:**	03/27/2012 13:15
Collect Date:	03/20/2012 10:53	**Dilution:**	1	**File ID:**	HY.032712.131547
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0999	0.00999

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-25	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH07-MS2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:11
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/27/2012 14:28
Workgroup #:	WG393387	**Analyst:**	PDM	**Run Date:**	03/27/2012 21:09
Collect Date:	03/20/2012 10:49	**Dilution:**	1	**File ID:**	T1.032712.210926
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	93.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	5540		15.7	7.85
Antimony, Total	7440-36-0	20.3		0.785	0.393
Beryllium, Total	7440-41-7	1.19		0.0785	0.0393
Magnesium, Total	7439-95-4	4550		19.6	9.82
Potassium, Total	7440-09-7	1600		39.3	19.6
Sodium, Total	7440-23-5	1280		19.6	9.82
Zinc, Total	7440-66-6	26.9		0.785	0.393

Certificate of Analysis

Sample #:	L12030775-25	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH07-MS2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:11
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/29/2012 09:05
Workgroup #:	WG393387	**Analyst:**	PDM	**Run Date:**	03/29/2012 10:47
Collect Date:	03/20/2012 10:49	**Dilution:**	10	**File ID:**	T1.032912.104714
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	93.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	75100		78.5	39.3
Iron, Total	7439-89-6	6490		23.6	11.8

Sample #:	L12030775-25	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH07-MS2	**Prep Method:**	3051A	**Prep Date:**	03/23/2012 13:11
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/28/2012 09:12
Workgroup #:	WG393436	**Analyst:**	JYH	**Run Date:**	03/28/2012 09:46
Collect Date:	03/20/2012 10:49	**Dilution:**	5	**File ID:**	NI.032812.094606
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	93.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	15.1		1.55	0.776
Cadmium, Total	7440-43-9	11.2		0.517	0.259
Chromium, Total	7440-47-3	12.7		2.07	1.03
Cobalt, Total	7440-48-4	11.8		2.59	1.29
Copper, Total	7440-50-8	11.8		3.10	1.55
Lead, Total	7439-92-1	13.7		1.03	0.517
Manganese, Total	7439-96-5	59.1		1.03	0.517
Nickel, Total	7440-02-0	15.4		4.14	2.07
Selenium, Total	7782-49-2	13.7		1.03	0.517
Thallium, Total	7440-28-0	10.2		0.207	0.103
Vanadium, Total	7440-62-2	23.6		2.59	1.29

Sample #:	L12030775-25	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH07-MS2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:11
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/28/2012 09:12
Workgroup #:	WG393386	**Analyst:**	JYH	**Run Date:**	03/28/2012 16:58
Collect Date:	03/20/2012 10:49	**Dilution:**	20	**File ID:**	NI.032812.165847
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	93.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4	6.18		3.14	1.57

Certificate of Analysis

Sample #:	L12030775-25	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH07-MS2	**Prep Method:**	3051A	**Prep Date:**	03/23/2012 13:11
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/28/2012 09:12
Workgroup #:	WG393436	**Analyst:**	JYH	**Run Date:**	03/28/2012 13:29
Collect Date:	03/20/2012 10:49	**Dilution:**	50	**File ID:**	NI.032812.132922
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	93.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Barium, Total	7440-39-3	241		15.5	7.76

Sample #:	L12030775-25	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	140-BH07-MS2	**Prep Method:**	7471	**Prep Date:**	03/23/2012 10:38
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/27/2012 10:57
Workgroup #:	WG393340	**Analyst:**	PDM	**Run Date:**	03/27/2012 13:04
Collect Date:	03/20/2012 10:49	**Dilution:**	1	**File ID:**	HY.032712.130419
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	93.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6	0.275		0.102	0.0102

Sample #:	L12030775-26	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH07-MSD2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:11
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/27/2012 14:28
Workgroup #:	WG393387	**Analyst:**	PDM	**Run Date:**	03/27/2012 21:20
Collect Date:	03/20/2012 10:49	**Dilution:**	1	**File ID:**	T1.032712.212031
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	93.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	5480		15.6	7.80
Antimony, Total	7440-36-0	19.9		0.780	0.390
Beryllium, Total	7440-41-7	1.21		0.0780	0.0390
Magnesium, Total	7439-95-4	4420		19.5	9.75
Potassium, Total	7440-09-7	1570		39.0	19.5
Sodium, Total	7440-23-5	1280		19.5	9.75
Zinc, Total	7440-66-6	26.9		0.780	0.390

Certificate of Analysis

Sample #:	L12030775-26	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH07-MSD2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:11
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/29/2012 09:05
Workgroup #:	WG393387	**Analyst:**	PDM	**Run Date:**	03/29/2012 10:50
Collect Date:	03/20/2012 10:49	**Dilution:**	10	**File ID:**	T1.032912.105052
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	93.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	67900		78.0	39.0
Iron, Total	7439-89-6	6540		23.4	11.7

Sample #:	L12030775-26	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH07-MSD2	**Prep Method:**	3051A	**Prep Date:**	03/23/2012 13:11
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/28/2012 09:12
Workgroup #:	WG393436	**Analyst:**	JYH	**Run Date:**	03/28/2012 09:48
Collect Date:	03/20/2012 10:49	**Dilution:**	5	**File ID:**	NI.032812.094852
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	93.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	14.8		1.56	0.779
Cadmium, Total	7440-43-9	10.9		0.519	0.260
Chromium, Total	7440-47-3	12.3		2.08	1.04
Cobalt, Total	7440-48-4	11.8		2.60	1.30
Copper, Total	7440-50-8	11.8		3.11	1.56
Lead, Total	7439-92-1	13.6		1.04	0.519
Manganese, Total	7439-96-5	59.6		1.04	0.519
Nickel, Total	7440-02-0	15.1		4.15	2.08
Selenium, Total	7782-49-2	13.0		1.04	0.519
Thallium, Total	7440-28-0	9.78		0.208	0.104
Vanadium, Total	7440-62-2	22.3		2.60	1.30

Sample #:	L12030775-26	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH07-MSD2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:11
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/28/2012 09:12
Workgroup #:	WG393386	**Analyst:**	JYH	**Run Date:**	03/28/2012 17:01
Collect Date:	03/20/2012 10:49	**Dilution:**	20	**File ID:**	NI.032812.170133
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	93.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4	6.08		3.12	1.56

Certificate of Analysis

Sample #:	L12030775-26	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH07-MSD2	**Prep Method:**	3051A	**Prep Date:**	03/23/2012 13:11
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/28/2012 09:12
Workgroup #:	WG393436	**Analyst:**	JYH	**Run Date:**	03/28/2012 13:32
Collect Date:	03/20/2012 10:49	**Dilution:**	50	**File ID:**	NI.032812.133208
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	93.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Barium, Total	7440-39-3	229		15.6	7.79

Sample #:	L12030775-26	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	140-BH07-MSD2	**Prep Method:**	7471	**Prep Date:**	03/23/2012 10:38
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/27/2012 10:57
Workgroup #:	WG393340	**Analyst:**	PDM	**Run Date:**	03/27/2012 13:06
Collect Date:	03/20/2012 10:49	**Dilution:**	1	**File ID:**	HY.032712.130625
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	93.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6	0.271		0.102	0.0102

Sample #:	L12030775-27	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH08-1	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:21
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/27/2012 14:28
Workgroup #:	WG393387	**Analyst:**	PDM	**Run Date:**	03/27/2012 21:24
Collect Date:	03/20/2012 11:10	**Dilution:**	1	**File ID:**	T1.032712.212417
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	2370		14.9	7.47
Antimony, Total	7440-36-0		U	0.747	0.373
Beryllium, Total	7440-41-7	0.175		0.0747	0.0373
Magnesium, Total	7439-95-4	951		18.7	9.34
Potassium, Total	7440-09-7	730		37.3	18.7
Sodium, Total	7440-23-5	18.0	J	18.7	9.34
Zinc, Total	7440-66-6	8.35		0.747	0.373

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030775-27	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH08-1	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:21
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/29/2012 09:05
Workgroup #:	WG393387	**Analyst:**	PDM	**Run Date:**	03/29/2012 10:54
Collect Date:	03/20/2012 11:10	**Dilution:**	10	**File ID:**	T1.032912.105429
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	7790		74.7	37.3
Iron, Total	7439-89-6	4860		22.4	11.2

Sample #:	L12030775-27	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH08-1	**Prep Method:**	3051A	**Prep Date:**	03/23/2012 13:11
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/28/2012 09:12
Workgroup #:	WG393436	**Analyst:**	JYH	**Run Date:**	03/28/2012 10:05
Collect Date:	03/20/2012 11:10	**Dilution:**	5	**File ID:**	NI.032812.100531
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	0.788	J	1.43	0.713
Barium, Total	7440-39-3	22.2		1.43	0.713
Cadmium, Total	7440-43-9		U	0.475	0.238
Chromium, Total	7440-47-3	1.32	J	1.90	0.951
Cobalt, Total	7440-48-4		U	2.38	1.19
Copper, Total	7440-50-8		U	2.85	1.43
Lead, Total	7439-92-1	4.11		0.951	0.475
Manganese, Total	7439-96-5	34.4		0.951	0.475
Nickel, Total	7440-02-0		U	3.80	1.90
Selenium, Total	7782-49-2		U	0.951	0.475
Thallium, Total	7440-28-0		U	0.190	0.0951
Vanadium, Total	7440-62-2	2.38		2.38	1.19

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030775-27	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH08-1	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:21
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/28/2012 09:12
Workgroup #:	WG393386	**Analyst:**	JYH	**Run Date:**	03/28/2012 17:54
Collect Date:	03/20/2012 11:10	**Dilution:**	20	**File ID:**	NI.032812.175409
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	98.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.99	1.49

U — Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-27	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	140-BH08-1	**Prep Method:**	7471	**Prep Date:**	03/23/2012 12:37
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/27/2012 10:57
Workgroup #:	WG393363	**Analyst:**	PDM	**Run Date:**	03/27/2012 13:19
Collect Date:	03/20/2012 11:10	**Dilution:**	1	**File ID:**	HY.032712.131913
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.101	0.0101

U — Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-28	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH08-2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:21
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/27/2012 14:28
Workgroup #:	WG393387	**Analyst:**	PDM	**Run Date:**	03/27/2012 21:27
Collect Date:	03/20/2012 11:15	**Dilution:**	1	**File ID:**	T1.032712.212751
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	91.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	7330		16.3	8.17
Antimony, Total	7440-36-0		U	0.817	0.408
Beryllium, Total	7440-41-7	0.395		0.0817	0.0408
Magnesium, Total	7439-95-4	6550		20.4	10.2
Potassium, Total	7440-09-7	872		40.8	20.4
Sodium, Total	7440-23-5	143		20.4	10.2
Zinc, Total	7440-66-6	12.8		0.817	0.408

U — Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030775-28	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH08-2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:21
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/29/2012 09:05
Workgroup #:	WG393387	**Analyst:**	PDM	**Run Date:**	03/29/2012 10:58
Collect Date:	03/20/2012 11:15	**Dilution:**	10	**File ID:**	T1.032912.105812
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	91.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	159000		81.7	40.8
Iron, Total	7439-89-6	7270		24.5	12.2

Sample #:	L12030775-28	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH08-2	**Prep Method:**	3051A	**Prep Date:**	03/23/2012 13:11
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/28/2012 09:12
Workgroup #:	WG393436	**Analyst:**	JYH	**Run Date:**	03/28/2012 10:08
Collect Date:	03/20/2012 11:15	**Dilution:**	5	**File ID:**	NI.032812.100818
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	91.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	6.60		1.57	0.783
Cadmium, Total	7440-43-9		U	0.522	0.261
Chromium, Total	7440-47-3	3.45		2.09	1.04
Cobalt, Total	7440-48-4	2.40	J	2.61	1.30
Copper, Total	7440-50-8	2.22	J	3.13	1.57
Lead, Total	7439-92-1	4.37		1.04	0.522
Manganese, Total	7439-96-5	54.6		1.04	0.522
Nickel, Total	7440-02-0	8.54		4.18	2.09
Selenium, Total	7782-49-2	1.08		1.04	0.522
Thallium, Total	7440-28-0		U	0.209	0.104
Vanadium, Total	7440-62-2	27.1		2.61	1.30

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-28	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH08-2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:21
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/28/2012 09:12
Workgroup #:	WG393386	**Analyst:**	JYH	**Run Date:**	03/28/2012 17:56
Collect Date:	03/20/2012 11:15	**Dilution:**	20	**File ID:**	NI.032812.175655
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	91.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.27	1.63

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-28	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH08-2	**Prep Method:**	3051A	**Prep Date:**	03/23/2012 13:11
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/28/2012 09:12
Workgroup #:	WG393436	**Analyst:**	JYH	**Run Date:**	03/28/2012 13:40
Collect Date:	03/20/2012 11:15	**Dilution:**	50	**File ID:**	NI.032812.134031
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	91.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Barium, Total	7440-39-3	342		15.7	7.83

Sample #:	L12030775-28	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	140-BH08-2	**Prep Method:**	7471	**Prep Date:**	03/23/2012 12:37
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/27/2012 10:57
Workgroup #:	WG393363	**Analyst:**	PDM	**Run Date:**	03/27/2012 13:20
Collect Date:	03/20/2012 11:15	**Dilution:**	1	**File ID:**	HY.032712.132058
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	91.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.108	0.0108

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-29	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH08-3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:34
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/28/2012 10:18
Workgroup #:	WG393481	**Analyst:**	PDM	**Run Date:**	03/28/2012 12:51
Collect Date:	03/20/2012 11:18	**Dilution:**	1	**File ID:**	T1.032812.125115
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	2380		14.6	7.29
Antimony, Total	7440-36-0		U	0.729	0.365
Beryllium, Total	7440-41-7	0.257		0.0729	0.0365
Calcium, Total	7440-70-2	4080		7.29	3.65
Magnesium, Total	7439-95-4	1600		18.2	9.12
Potassium, Total	7440-09-7	490		36.5	18.2
Sodium, Total	7440-23-5	276		18.2	9.12
Zinc, Total	7440-66-6	11.8		0.729	0.365

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030775-29	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH08-3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:34
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/30/2012 08:14
Workgroup #:	WG393481	**Analyst:**	PDM	**Run Date:**	03/30/2012 14:13
Collect Date:	03/20/2012 11:18	**Dilution:**	10	**File ID:**	T1.033012.141305
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Iron, Total	7439-89-6	4950		21.9	10.9

Sample #:	L12030775-29	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH08-3	**Prep Method:**	3051A	**Prep Date:**	03/23/2012 13:11
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/28/2012 09:12
Workgroup #:	WG393436	**Analyst:**	JYH	**Run Date:**	03/28/2012 10:11
Collect Date:	03/20/2012 11:18	**Dilution:**	5	**File ID:**	NI.032812.101103
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.55		1.47	0.737
Barium, Total	7440-39-3	20.4		1.47	0.737
Cadmium, Total	7440-43-9		U	0.491	0.246
Chromium, Total	7440-47-3	1.41	J	1.96	0.982
Cobalt, Total	7440-48-4	2.11	J	2.46	1.23
Copper, Total	7440-50-8	2.16	J	2.95	1.47
Lead, Total	7439-92-1	3.35		0.982	0.491
Manganese, Total	7439-96-5	105		0.982	0.491
Nickel, Total	7440-02-0	3.41	J	3.93	1.96
Selenium, Total	7782-49-2		U	0.982	0.491
Thallium, Total	7440-28-0		U	0.196	0.0982
Vanadium, Total	7440-62-2	9.68		2.46	1.23

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-29	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH08-3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:34
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/29/2012 09:57
Workgroup #:	WG393571	**Analyst:**	JYH	**Run Date:**	03/29/2012 10:36
Collect Date:	03/20/2012 11:18	**Dilution:**	20	**File ID:**	NI.032912.103601
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	97.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.92	1.46

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-29	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	140-BH08-3	**Prep Method:**	7471	**Prep Date:**	03/23/2012 12:38
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/27/2012 10:57
Workgroup #:	WG393363	**Analyst:**	PDM	**Run Date:**	03/27/2012 13:23
Collect Date:	03/20/2012 11:18	**Dilution:**	1	**File ID:**	HY.032712.132310
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.101	0.0101
U	Analyte was not detected. The concentration is below the reported LOD.				

Sample #:	L12030775-30	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH09-1	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:34
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/28/2012 10:18
Workgroup #:	WG393481	**Analyst:**	PDM	**Run Date:**	03/28/2012 13:05
Collect Date:	03/20/2012 11:38	**Dilution:**	1	**File ID:**	T1.032812.130544
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	93.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	6090		15.5	7.76
Antimony, Total	7440-36-0		U	0.776	0.388
Beryllium, Total	7440-41-7	0.400		0.0776	0.0388
Calcium, Total	7440-70-2	31800		7.76	3.88
Magnesium, Total	7439-95-4	2300		19.4	9.70
Potassium, Total	7440-09-7	1380		38.8	19.4
Sodium, Total	7440-23-5	41.0		19.4	9.70
Zinc, Total	7440-66-6	14.6		0.776	0.388
U	Analyte was not detected. The concentration is below the reported LOD.				

Sample #:	L12030775-30	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH09-1	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:34
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/30/2012 08:14
Workgroup #:	WG393481	**Analyst:**	PDM	**Run Date:**	03/30/2012 14:24
Collect Date:	03/20/2012 11:38	**Dilution:**	10	**File ID:**	T1.033012.142410
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	93.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Iron, Total	7439-89-6	7520		23.3	11.6

Certificate of Analysis

Sample #:	L12030775-30	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH09-1	**Prep Method:**	3051A	**Prep Date:**	03/23/2012 13:11
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/28/2012 09:12
Workgroup #:	WG393436	**Analyst:**	JYH	**Run Date:**	03/28/2012 10:13
Collect Date:	03/20/2012 11:38	**Dilution:**	5	**File ID:**	NI.032812.101350
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	93.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	3.89		1.57	0.783
Barium, Total	7440-39-3	56.3		1.57	0.783
Cadmium, Total	7440-43-9		U	0.522	0.261
Chromium, Total	7440-47-3	3.84		2.09	1.04
Cobalt, Total	7440-48-4	2.26	J	2.61	1.31
Copper, Total	7440-50-8	3.66		3.13	1.57
Lead, Total	7439-92-1	4.64		1.04	0.522
Manganese, Total	7439-96-5	70.2		1.04	0.522
Nickel, Total	7440-02-0	5.44		4.18	2.09
Selenium, Total	7782-49-2		U	1.04	0.522
Thallium, Total	7440-28-0		U	0.209	0.104
Vanadium, Total	7440-62-2	10.8		2.61	1.31

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-30	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH09-1	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:34
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/29/2012 09:57
Workgroup #:	WG393571	**Analyst:**	JYH	**Run Date:**	03/29/2012 10:38
Collect Date:	03/20/2012 11:38	**Dilution:**	20	**File ID:**	NI.032912.103847
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	93.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.10	1.55

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030775-30	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	140-BH09-1	**Prep Method:**	7471	**Prep Date:**	03/23/2012 12:38
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/27/2012 10:57
Workgroup #:	WG393363	**Analyst:**	PDM	**Run Date:**	03/27/2012 13:24
Collect Date:	03/20/2012 11:38	**Dilution:**	1	**File ID:**	HY.032712.132453
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	93.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.104	0.0104

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-31	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH09-2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:35
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/28/2012 10:18
Workgroup #:	WG393481	**Analyst:**	PDM	**Run Date:**	03/28/2012 13:09
Collect Date:	03/20/2012 11:41	**Dilution:**	1	**File ID:**	T1.032812.130940
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	84.8

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	6560		17.0	8.49
Antimony, Total	7440-36-0		U	0.849	0.425
Beryllium, Total	7440-41-7	0.523		0.0849	0.0425
Calcium, Total	7440-70-2	30600		8.49	4.25
Magnesium, Total	7439-95-4	4200		21.2	10.6
Potassium, Total	7440-09-7	997		42.5	21.2
Sodium, Total	7440-23-5	1210		21.2	10.6
Zinc, Total	7440-66-6	21.9		0.849	0.425

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-31	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH09-2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:35
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/30/2012 08:14
Workgroup #:	WG393481	**Analyst:**	PDM	**Run Date:**	03/30/2012 14:27
Collect Date:	03/20/2012 11:41	**Dilution:**	10	**File ID:**	T1.033012.142752
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	84.8

Analyte	CAS #	Result	Qual	LOQ	LOD
Iron, Total	7439-89-6	8620		25.5	12.7

Certificate of Analysis

Sample #:	L12030775-31	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH09-2	**Prep Method:**	3051A	**Prep Date:**	03/23/2012 13:11
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/28/2012 09:12
Workgroup #:	WG393436	**Analyst:**	JYH	**Run Date:**	03/28/2012 10:16
Collect Date:	03/20/2012 11:41	**Dilution:**	5	**File ID:**	NI.032812.101635
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	84.8

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	11.0		1.69	0.845
Barium, Total	7440-39-3	23.3		1.69	0.845
Cadmium, Total	7440-43-9		U	0.564	0.282
Chromium, Total	7440-47-3	5.49		2.25	1.13
Cobalt, Total	7440-48-4	5.08		2.82	1.41
Copper, Total	7440-50-8	6.65		3.38	1.69
Lead, Total	7439-92-1	9.90		1.13	0.564
Manganese, Total	7439-96-5	179		1.13	0.564
Nickel, Total	7440-02-0	9.73		4.51	2.25
Selenium, Total	7782-49-2	0.601	J	1.13	0.564
Thallium, Total	7440-28-0	0.127	J	0.225	0.113
Vanadium, Total	7440-62-2	47.2		2.82	1.41

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-31	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH09-2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:35
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/29/2012 09:57
Workgroup #:	WG393571	**Analyst:**	JYH	**Run Date:**	03/29/2012 10:24
Collect Date:	03/20/2012 11:41	**Dilution:**	20	**File ID:**	NI.032912.102456
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	84.8

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.40	1.70

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030775-31	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	140-BH09-2	**Prep Method:**	7471	**Prep Date:**	03/23/2012 12:39
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/27/2012 10:57
Workgroup #:	WG393363	**Analyst:**	PDM	**Run Date:**	03/27/2012 13:26
Collect Date:	03/20/2012 11:41	**Dilution:**	1	**File ID:**	HY.032712.132640
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	84.8

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.114	0.0114

U — Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-32	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH09-3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:35
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/28/2012 10:18
Workgroup #:	WG393481	**Analyst:**	PDM	**Run Date:**	03/28/2012 13:13
Collect Date:	03/20/2012 11:47	**Dilution:**	1	**File ID:**	T1.032812.131332
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	1390		14.1	7.07
Antimony, Total	7440-36-0		U	0.707	0.354
Beryllium, Total	7440-41-7	0.133		0.0707	0.0354
Calcium, Total	7440-70-2	7480		7.07	3.54
Magnesium, Total	7439-95-4	919		17.7	8.84
Potassium, Total	7440-09-7	306		35.4	17.7
Sodium, Total	7440-23-5	259		17.7	8.84
Zinc, Total	7440-66-6	8.50		0.707	0.354

U — Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-32	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH09-3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:35
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/30/2012 08:14
Workgroup #:	WG393481	**Analyst:**	PDM	**Run Date:**	03/30/2012 14:31
Collect Date:	03/20/2012 11:47	**Dilution:**	10	**File ID:**	T1.033012.143134
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Iron, Total	7439-89-6	4000		21.2	10.6

Certificate of Analysis

Sample #:	L12030775-32	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH09-3	**Prep Method:**	3051A	**Prep Date:**	03/23/2012 13:11
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/28/2012 09:12
Workgroup #:	WG393436	**Analyst:**	JYH	**Run Date:**	03/28/2012 10:19
Collect Date:	03/20/2012 11:47	**Dilution:**	5	**File ID:**	NI.032812.101921
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.39	J	1.46	0.732
Barium, Total	7440-39-3	7.20		1.46	0.732
Cadmium, Total	7440-43-9		U	0.488	0.244
Chromium, Total	7440-47-3		U	1.95	0.976
Cobalt, Total	7440-48-4	1.41	J	2.44	1.22
Copper, Total	7440-50-8	1.67	J	2.93	1.46
Lead, Total	7439-92-1	2.59		0.976	0.488
Manganese, Total	7439-96-5	47.6		0.976	0.488
Nickel, Total	7440-02-0	2.27	J	3.90	1.95
Selenium, Total	7782-49-2		U	0.976	0.488
Thallium, Total	7440-28-0		U	0.195	0.0976
Vanadium, Total	7440-62-2	6.32		2.44	1.22

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-32	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH09-3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:35
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/29/2012 09:57
Workgroup #:	WG393571	**Analyst:**	JYH	**Run Date:**	03/29/2012 10:27
Collect Date:	03/20/2012 11:47	**Dilution:**	20	**File ID:**	NI.032912.102742
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	98.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.83	1.41

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030775-32	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	140-BH09-3	**Prep Method:**	7471	**Prep Date:**	03/23/2012 12:40
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/27/2012 10:57
Workgroup #:	WG393363	**Analyst:**	PDM	**Run Date:**	03/27/2012 13:28
Collect Date:	03/20/2012 11:47	**Dilution:**	1	**File ID:**	HY.032712.132825
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0985	0.00985

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-33	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH09-MS2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:30
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/28/2012 10:18
Workgroup #:	WG393481	**Analyst:**	PDM	**Run Date:**	03/28/2012 13:17
Collect Date:	03/20/2012 11:41	**Dilution:**	1	**File ID:**	T1.032812.131742
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	84.8

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	9850		17.2	8.62
Antimony, Total	7440-36-0	22.0		0.862	0.431
Beryllium, Total	7440-41-7	1.65		0.0862	0.0431
Calcium, Total	7440-70-2	36600		8.62	4.31
Magnesium, Total	7439-95-4	6220		21.6	10.8
Potassium, Total	7440-09-7	2240		43.1	21.6
Sodium, Total	7440-23-5	2750		21.6	10.8
Zinc, Total	7440-66-6	47.9		0.862	0.431

Sample #:	L12030775-33	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH09-MS2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:30
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/30/2012 08:14
Workgroup #:	WG393481	**Analyst:**	PDM	**Run Date:**	03/30/2012 14:35
Collect Date:	03/20/2012 11:41	**Dilution:**	10	**File ID:**	T1.033012.143518
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	84.8

Analyte	CAS #	Result	Qual	LOQ	LOD
Iron, Total	7439-89-6	12500		25.9	12.9

Certificate of Analysis

Sample #:	L12030775-33	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH09-MS2	**Prep Method:**	3051A	**Prep Date:**	03/23/2012 13:11
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/28/2012 09:12
Workgroup #:	WG393436	**Analyst:**	JYH	**Run Date:**	03/28/2012 10:22
Collect Date:	03/20/2012 11:41	**Dilution:**	5	**File ID:**	NI.032812.102208
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	84.8

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	22.0		1.68	0.841
Barium, Total	7440-39-3	38.8		1.68	0.841
Cadmium, Total	7440-43-9	13.9		0.560	0.280
Chromium, Total	7440-47-3	17.6		2.24	1.12
Cobalt, Total	7440-48-4	16.4		2.80	1.40
Copper, Total	7440-50-8	17.4		3.36	1.68
Lead, Total	7439-92-1	19.5		1.12	0.560
Manganese, Total	7439-96-5	151		1.12	0.560
Nickel, Total	7440-02-0	20.9		4.48	2.24
Selenium, Total	7782-49-2	16.0		1.12	0.560
Thallium, Total	7440-28-0	12.3		0.224	0.112
Vanadium, Total	7440-62-2	48.9		2.80	1.40

Sample #:	L12030775-33	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH09-MS2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:30
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/29/2012 09:57
Workgroup #:	WG393571	**Analyst:**	JYH	**Run Date:**	03/29/2012 10:30
Collect Date:	03/20/2012 11:41	**Dilution:**	20	**File ID:**	NI.032912.103029
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	84.8

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4	7.68		3.45	1.72

Sample #:	L12030775-33	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	140-BH09-MS2	**Prep Method:**	7471	**Prep Date:**	03/23/2012 12:35
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/27/2012 10:57
Workgroup #:	WG393363	**Analyst:**	PDM	**Run Date:**	03/27/2012 13:33
Collect Date:	03/20/2012 11:41	**Dilution:**	1	**File ID:**	HY.032712.133351
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	84.8

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6	0.175		0.114	0.0114

Certificate of Analysis

Sample #:	L12030775-34	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH09-MSD2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:30
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/28/2012 10:18
Workgroup #:	WG393481	**Analyst:**	PDM	**Run Date:**	03/28/2012 13:28
Collect Date:	03/20/2012 11:41	**Dilution:**	1	**File ID:**	T1.032812.132859
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	84.8

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	13000		17.0	8.50
Antimony, Total	7440-36-0	20.9		0.850	0.425
Beryllium, Total	7440-41-7	1.76		0.0850	0.0425
Calcium, Total	7440-70-2	29100		8.50	4.25
Magnesium, Total	7439-95-4	7260		21.3	10.6
Potassium, Total	7440-09-7	2670		42.5	21.3
Sodium, Total	7440-23-5	2960		21.3	10.6
Zinc, Total	7440-66-6	53.4		0.850	0.425

Sample #:	L12030775-34	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH09-MSD2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:30
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/30/2012 08:14
Workgroup #:	WG393481	**Analyst:**	PDM	**Run Date:**	03/30/2012 14:38
Collect Date:	03/20/2012 11:41	**Dilution:**	10	**File ID:**	T1.033012.143857
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	84.8

Analyte	CAS #	Result	Qual	LOQ	LOD
Iron, Total	7439-89-6	15700		25.5	12.8

Sample #:	L12030775-34	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH09-MSD2	**Prep Method:**	3051A	**Prep Date:**	03/23/2012 13:11
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/28/2012 09:12
Workgroup #:	WG393436	**Analyst:**	JYH	**Run Date:**	03/28/2012 10:24
Collect Date:	03/20/2012 11:41	**Dilution:**	5	**File ID:**	NI.032812.102454
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	84.8

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	24.1		1.74	0.870
Barium, Total	7440-39-3	24.2		1.74	0.870
Cadmium, Total	7440-43-9	13.2		0.580	0.290
Chromium, Total	7440-47-3	14.8		2.32	1.16
Cobalt, Total	7440-48-4	15.9		2.90	1.45
Copper, Total	7440-50-8	15.6		3.48	1.74
Lead, Total	7439-92-1	19.8		1.16	0.580

Certificate of Analysis

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	187		1.16	0.580
Nickel, Total	7440-02-0	19.1		4.64	2.32
Selenium, Total	7782-49-2	14.1		1.16	0.580
Thallium, Total	7440-28-0	11.5		0.232	0.116
Vanadium, Total	7440-62-2	56.8		2.90	1.45

Sample #:	L12030775-34	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH09-MSD2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:30
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/29/2012 09:57
Workgroup #:	WG393571	**Analyst:**	JYH	**Run Date:**	03/29/2012 10:33
Collect Date:	03/20/2012 11:41	**Dilution:**	20	**File ID:**	NI.032912.103315
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	84.8

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4	7.60		3.40	1.70

Sample #:	L12030775-34	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	140-BH09-MSD2	**Prep Method:**	7471	**Prep Date:**	03/23/2012 12:35
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/27/2012 10:57
Workgroup #:	WG393363	**Analyst:**	PDM	**Run Date:**	03/27/2012 13:35
Collect Date:	03/20/2012 11:41	**Dilution:**	1	**File ID:**	HY.032712.133535
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	84.8

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6	0.178		0.116	0.0116

Sample #:	L12030775-35	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH10-1	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:37
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/28/2012 10:18
Workgroup #:	WG393481	**Analyst:**	PDM	**Run Date:**	03/28/2012 13:32
Collect Date:	03/20/2012 12:08	**Dilution:**	1	**File ID:**	T1.032812.133251
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	93.5

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	5700		14.7	7.35
Antimony, Total	7440-36-0		U	0.735	0.368
Beryllium, Total	7440-41-7	0.371		0.0735	0.0368
Magnesium, Total	7439-95-4	2010		18.4	9.19
Potassium, Total	7440-09-7	1290		36.8	18.4
Sodium, Total	7440-23-5	37.1		18.4	9.19
Zinc, Total	7440-66-6	13.5		0.735	0.368

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-35	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH10-1	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:37
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/29/2012 09:05
Workgroup #:	WG393481	**Analyst:**	PDM	**Run Date:**	03/30/2012 00:52
Collect Date:	03/20/2012 12:08	**Dilution:**	10	**File ID:**	T1.033012.005257
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	93.5

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	40400		73.5	36.8
Iron, Total	7439-89-6	7350		22.1	11.0

Sample #:	L12030775-35	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH10-1	**Prep Method:**	3051A	**Prep Date:**	03/23/2012 13:11
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/28/2012 09:12
Workgroup #:	WG393436	**Analyst:**	JYH	**Run Date:**	03/28/2012 10:27
Collect Date:	03/20/2012 12:08	**Dilution:**	5	**File ID:**	NI.032812.102740
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	93.5

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	4.60		1.55	0.777
Barium, Total	7440-39-3	93.7		1.55	0.777
Cadmium, Total	7440-43-9		U	0.518	0.259
Chromium, Total	7440-47-3	4.23		2.07	1.04
Cobalt, Total	7440-48-4	2.37	J	2.59	1.30
Copper, Total	7440-50-8	3.70		3.11	1.55
Lead, Total	7439-92-1	4.95		1.04	0.518
Manganese, Total	7439-96-5	61.0		1.04	0.518
Nickel, Total	7440-02-0	6.03		4.14	2.07
Selenium, Total	7782-49-2		U	1.04	0.518
Thallium, Total	7440-28-0	0.106	J	0.207	0.104
Vanadium, Total	7440-62-2	11.3		2.59	1.30

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030775-35	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH10-1	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:37
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/29/2012 09:57
Workgroup #:	WG393571	**Analyst:**	JYH	**Run Date:**	03/29/2012 10:52
Collect Date:	03/20/2012 12:08	**Dilution:**	20	**File ID:**	NI.032912.105241
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	93.5

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.94	1.47

U — Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-35	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	140-BH10-1	**Prep Method:**	7471	**Prep Date:**	03/23/2012 12:42
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/27/2012 10:57
Workgroup #:	WG393363	**Analyst:**	PDM	**Run Date:**	03/27/2012 13:37
Collect Date:	03/20/2012 12:08	**Dilution:**	1	**File ID:**	HY.032712.133719
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	93.5

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.104	0.0104

U — Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-36	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH10-2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:38
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/28/2012 10:18
Workgroup #:	WG393481	**Analyst:**	PDM	**Run Date:**	03/28/2012 13:37
Collect Date:	03/20/2012 12:12	**Dilution:**	1	**File ID:**	T1.032812.133755
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.8

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	3000		14.6	7.28
Antimony, Total	7440-36-0		U	0.728	0.364
Beryllium, Total	7440-41-7	0.232		0.0728	0.0364
Calcium, Total	7440-70-2	10000		7.28	3.64
Magnesium, Total	7439-95-4	2650		18.2	9.10
Potassium, Total	7440-09-7	473		36.4	18.2
Sodium, Total	7440-23-5	391		18.2	9.10
Zinc, Total	7440-66-6	12.0		0.728	0.364

U — Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030775-36	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH10-2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:38
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/30/2012 08:14
Workgroup #:	WG393481	**Analyst:**	PDM	**Run Date:**	03/30/2012 14:53
Collect Date:	03/20/2012 12:12	**Dilution:**	10	**File ID:**	T1.033012.145348
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.8

Analyte	CAS #	Result	Qual	LOQ	LOD
Iron, Total	7439-89-6	5730		21.8	10.9

Sample #:	L12030775-36	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH10-2	**Prep Method:**	3051A	**Prep Date:**	03/23/2012 13:11
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/28/2012 09:12
Workgroup #:	WG393436	**Analyst:**	JYH	**Run Date:**	03/28/2012 10:30
Collect Date:	03/20/2012 12:12	**Dilution:**	5	**File ID:**	NI.032812.103026
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.8

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	2.21		1.50	0.749
Cadmium, Total	7440-43-9		U	0.499	0.250
Chromium, Total	7440-47-3	1.51	J	2.00	0.999
Cobalt, Total	7440-48-4	1.49	J	2.50	1.25
Copper, Total	7440-50-8	1.53	J	3.00	1.50
Lead, Total	7439-92-1	3.31		0.999	0.499
Manganese, Total	7439-96-5	37.6		0.999	0.499
Nickel, Total	7440-02-0	2.93	J	3.99	2.00
Selenium, Total	7782-49-2		U	0.999	0.499
Thallium, Total	7440-28-0		U	0.200	0.0999
Vanadium, Total	7440-62-2	12.0		2.50	1.25

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-36	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH10-2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:38
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/29/2012 09:57
Workgroup #:	WG393571	**Analyst:**	JYH	**Run Date:**	03/29/2012 10:55
Collect Date:	03/20/2012 12:12	**Dilution:**	20	**File ID:**	NI.032912.105527
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	97.8

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.91	1.46

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030775-36	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH10-2	**Prep Method:**	3051A	**Prep Date:**	03/23/2012 13:11
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/28/2012 09:12
Workgroup #:	WG393436	**Analyst:**	JYH	**Run Date:**	03/28/2012 13:43
Collect Date:	03/20/2012 12:12	**Dilution:**	50	**File ID:**	NI.032812.134318
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	97.8

Analyte	CAS #	Result	Qual	LOQ	LOD
Barium, Total	7440-39-3	252		15.0	7.49

Sample #:	L12030775-36	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	140-BH10-2	**Prep Method:**	7471	**Prep Date:**	03/23/2012 12:42
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/27/2012 10:57
Workgroup #:	WG393363	**Analyst:**	PDM	**Run Date:**	03/27/2012 13:39
Collect Date:	03/20/2012 12:12	**Dilution:**	1	**File ID:**	HY.032712.133920
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.8

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0977	0.00977

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-37	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH10-3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:38
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/28/2012 10:18
Workgroup #:	WG393481	**Analyst:**	PDM	**Run Date:**	03/28/2012 13:41
Collect Date:	03/20/2012 12:15	**Dilution:**	1	**File ID:**	T1.032812.134140
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	2950		14.9	7.44
Antimony, Total	7440-36-0		U	0.744	0.372
Beryllium, Total	7440-41-7	0.276		0.0744	0.0372
Calcium, Total	7440-70-2	5710		7.44	3.72
Magnesium, Total	7439-95-4	1950		18.6	9.30
Potassium, Total	7440-09-7	584		37.2	18.6
Sodium, Total	7440-23-5	551		18.6	9.30
Zinc, Total	7440-66-6	13.1		0.744	0.372

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030775-37	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH10-3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:38
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/30/2012 08:14
Workgroup #:	WG393481	**Analyst:**	PDM	**Run Date:**	03/30/2012 14:57
Collect Date:	03/20/2012 12:15	**Dilution:**	10	**File ID:**	T1.033012.145732
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Iron, Total	7439-89-6	5340		22.3	11.2

Sample #:	L12030775-37	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH10-3	**Prep Method:**	3051A	**Prep Date:**	03/23/2012 13:11
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/28/2012 09:12
Workgroup #:	WG393436	**Analyst:**	JYH	**Run Date:**	03/28/2012 10:38
Collect Date:	03/20/2012 12:15	**Dilution:**	5	**File ID:**	NI.032812.103849
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.84		1.46	0.730
Barium, Total	7440-39-3	31.7		1.46	0.730
Cadmium, Total	7440-43-9		U	0.487	0.243
Chromium, Total	7440-47-3	1.56	J	1.95	0.974
Cobalt, Total	7440-48-4	3.31		2.43	1.22
Copper, Total	7440-50-8	2.34	J	2.92	1.46
Lead, Total	7439-92-1	4.10		0.974	0.487
Manganese, Total	7439-96-5	57.5		0.974	0.487
Nickel, Total	7440-02-0	4.51		3.90	1.95
Selenium, Total	7782-49-2		U	0.974	0.487
Thallium, Total	7440-28-0		U	0.195	0.0974
Vanadium, Total	7440-62-2	11.3		2.43	1.22

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-37	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH10-3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:38
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/29/2012 09:57
Workgroup #:	WG393571	**Analyst:**	JYH	**Run Date:**	03/29/2012 10:58
Collect Date:	03/20/2012 12:15	**Dilution:**	20	**File ID:**	NI.032912.105813
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	97.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.98	1.49

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-37	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	140-BH10-3	**Prep Method:**	7471	**Prep Date:**	03/23/2012 12:43
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/27/2012 10:57
Workgroup #:	WG393363	**Analyst:**	PDM	**Run Date:**	03/27/2012 13:41
Collect Date:	03/20/2012 12:15	**Dilution:**	1	**File ID:**	HY.032712.134105
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0978	0.00978
U	Analyte was not detected. The concentration is below the reported LOD.				

Sample #:	L12030775-38	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH10-FD1	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:38
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/28/2012 10:18
Workgroup #:	WG393481	**Analyst:**	PDM	**Run Date:**	03/28/2012 13:45
Collect Date:	03/20/2012 12:08	**Dilution:**	1	**File ID:**	T1.032812.134515
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	93.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	5630		16.0	8.00
Antimony, Total	7440-36-0		U	0.800	0.400
Beryllium, Total	7440-41-7	0.384		0.0800	0.0400
Magnesium, Total	7439-95-4	2140		20.0	10.0
Potassium, Total	7440-09-7	1250		40.0	20.0
Sodium, Total	7440-23-5	38.8		20.0	10.0
Zinc, Total	7440-66-6	13.4		0.800	0.400
U	Analyte was not detected. The concentration is below the reported LOD.				

Sample #:	L12030775-38	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH10-FD1	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:38
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/29/2012 09:05
Workgroup #:	WG393481	**Analyst:**	PDM	**Run Date:**	03/30/2012 00:56
Collect Date:	03/20/2012 12:08	**Dilution:**	10	**File ID:**	T1.033012.005638
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	93.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	48000		80.0	40.0
Iron, Total	7439-89-6	7140		24.0	12.0

Certificate of Analysis

Sample #:	L12030775-38	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH10-FD1	**Prep Method:**	3051A	**Prep Date:**	03/23/2012 13:11
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/28/2012 09:12
Workgroup #:	WG393436	**Analyst:**	JYH	**Run Date:**	03/28/2012 10:41
Collect Date:	03/20/2012 12:08	**Dilution:**	5	**File ID:**	NI.032812.104134
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	93.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	4.14		1.59	0.794
Barium, Total	7440-39-3	105		1.59	0.794
Cadmium, Total	7440-43-9		U	0.529	0.265
Chromium, Total	7440-47-3	3.49		2.12	1.06
Cobalt, Total	7440-48-4	2.06	J	2.65	1.32
Copper, Total	7440-50-8	3.04	J	3.18	1.59
Lead, Total	7439-92-1	4.37		1.06	0.529
Manganese, Total	7439-96-5	56.9		1.06	0.529
Nickel, Total	7440-02-0	5.90		4.23	2.12
Selenium, Total	7782-49-2		U	1.06	0.529
Thallium, Total	7440-28-0		U	0.212	0.106
Vanadium, Total	7440-62-2	10.7		2.65	1.32

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-38	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH10-FD1	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:38
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/29/2012 09:57
Workgroup #:	WG393571	**Analyst:**	JYH	**Run Date:**	03/29/2012 11:01
Collect Date:	03/20/2012 12:08	**Dilution:**	20	**File ID:**	NI.032912.110100
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	93.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.20	1.60

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030775-38	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	140-BH10-FD1	**Prep Method:**	7471	**Prep Date:**	03/23/2012 12:43
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/27/2012 10:57
Workgroup #:	WG393363	**Analyst:**	PDM	**Run Date:**	03/27/2012 13:42
Collect Date:	03/20/2012 12:08	**Dilution:**	1	**File ID:**	HY.032712.134251
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	93.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.105	0.0105

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-39	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH11-1	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:39
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/28/2012 10:18
Workgroup #:	WG393481	**Analyst:**	PDM	**Run Date:**	03/28/2012 13:49
Collect Date:	03/20/2012 14:20	**Dilution:**	1	**File ID:**	T1.032812.134909
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	95.5

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	4400		15.4	7.71
Antimony, Total	7440-36-0		U	0.771	0.386
Beryllium, Total	7440-41-7	0.311		0.0771	0.0386
Calcium, Total	7440-70-2	11400		7.71	3.86
Magnesium, Total	7439-95-4	1400		19.3	9.64
Potassium, Total	7440-09-7	973		38.6	19.3
Sodium, Total	7440-23-5	24.1		19.3	9.64
Zinc, Total	7440-66-6	12.3		0.771	0.386

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-39	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH11-1	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:39
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/30/2012 08:14
Workgroup #:	WG393481	**Analyst:**	PDM	**Run Date:**	03/30/2012 15:01
Collect Date:	03/20/2012 14:20	**Dilution:**	10	**File ID:**	T1.033012.150116
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	95.5

Analyte	CAS #	Result	Qual	LOQ	LOD
Iron, Total	7439-89-6	6370		23.1	11.6

Certificate of Analysis

Sample #:	L12030775-39	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH11-1	**Prep Method:**	3051A	**Prep Date:**	03/23/2012 13:11
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/28/2012 09:12
Workgroup #:	WG393436	**Analyst:**	JYH	**Run Date:**	03/28/2012 10:44
Collect Date:	03/20/2012 14:20	**Dilution:**	5	**File ID:**	NI.032812.104419
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	95.5

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	2.26		1.54	0.770
Barium, Total	7440-39-3	44.9		1.54	0.770
Cadmium, Total	7440-43-9		U	0.514	0.257
Chromium, Total	7440-47-3	3.01		2.05	1.03
Cobalt, Total	7440-48-4	1.82	J	2.57	1.28
Copper, Total	7440-50-8	2.72	J	3.08	1.54
Lead, Total	7439-92-1	4.19		1.03	0.514
Manganese, Total	7439-96-5	59.2		1.03	0.514
Nickel, Total	7440-02-0	4.24		4.11	2.05
Selenium, Total	7782-49-2		U	1.03	0.514
Thallium, Total	7440-28-0		U	0.205	0.103
Vanadium, Total	7440-62-2	6.00		2.57	1.28

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-39	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH11-1	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:39
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/29/2012 09:57
Workgroup #:	WG393571	**Analyst:**	JYH	**Run Date:**	03/29/2012 11:03
Collect Date:	03/20/2012 14:20	**Dilution:**	20	**File ID:**	NI.032912.110345
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	95.5

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.09	1.54

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030775-39	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	140-BH11-1	**Prep Method:**	7471	**Prep Date:**	03/23/2012 12:43
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/27/2012 10:57
Workgroup #:	WG393363	**Analyst:**	PDM	**Run Date:**	03/27/2012 13:44
Collect Date:	03/20/2012 14:20	**Dilution:**	1	**File ID:**	HY.032712.134433
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	95.5

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.102	0.0102

U — Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-40	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH11-2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:39
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/28/2012 10:18
Workgroup #:	WG393481	**Analyst:**	PDM	**Run Date:**	03/28/2012 13:52
Collect Date:	03/20/2012 14:25	**Dilution:**	1	**File ID:**	T1.032812.135246
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	94.8

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	5520		15.2	7.59
Antimony, Total	7440-36-0		U	0.759	0.379
Beryllium, Total	7440-41-7	0.305		0.0759	0.0379
Magnesium, Total	7439-95-4	2210		19.0	9.48
Potassium, Total	7440-09-7	894		37.9	19.0
Sodium, Total	7440-23-5	471		19.0	9.48
Zinc, Total	7440-66-6	12.2		0.759	0.379

U — Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-40	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH11-2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:39
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/29/2012 09:05
Workgroup #:	WG393481	**Analyst:**	PDM	**Run Date:**	03/30/2012 01:00
Collect Date:	03/20/2012 14:25	**Dilution:**	10	**File ID:**	T1.033012.010020
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	94.8

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	40600		75.9	37.9
Iron, Total	7439-89-6	6700		22.8	11.4

Certificate of Analysis

Sample #:	L12030775-40	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH11-2	**Prep Method:**	3051A	**Prep Date:**	03/23/2012 13:11
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/28/2012 09:12
Workgroup #:	WG393436	**Analyst:**	JYH	**Run Date:**	03/28/2012 10:47
Collect Date:	03/20/2012 14:25	**Dilution:**	5	**File ID:**	NI.032812.104706
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	94.8

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	2.24		1.50	0.750
Barium, Total	7440-39-3	51.8		1.50	0.750
Cadmium, Total	7440-43-9		U	0.500	0.250
Chromium, Total	7440-47-3	2.72		2.00	1.00
Cobalt, Total	7440-48-4	1.44	J	2.50	1.25
Copper, Total	7440-50-8		U	3.00	1.50
Lead, Total	7439-92-1	3.40		1.00	0.500
Manganese, Total	7439-96-5	40.0		1.00	0.500
Nickel, Total	7440-02-0	4.46		4.00	2.00
Selenium, Total	7782-49-2		U	1.00	0.500
Thallium, Total	7440-28-0		U	0.200	0.100
Vanadium, Total	7440-62-2	7.27		2.50	1.25

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-40	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH11-2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:39
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/29/2012 09:57
Workgroup #:	WG393571	**Analyst:**	JYH	**Run Date:**	03/29/2012 11:06
Collect Date:	03/20/2012 14:25	**Dilution:**	20	**File ID:**	NI.032912.110631
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	94.8

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.03	1.52

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030775-40	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	140-BH11-2	**Prep Method:**	7471	**Prep Date:**	03/23/2012 12:44
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/27/2012 10:57
Workgroup #:	WG393363	**Analyst:**	PDM	**Run Date:**	03/27/2012 13:46
Collect Date:	03/20/2012 14:25	**Dilution:**	1	**File ID:**	HY.032712.134620
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	94.8

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.104	0.0104

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-41	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH11-3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:40
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/28/2012 10:18
Workgroup #:	WG393481	**Analyst:**	PDM	**Run Date:**	03/28/2012 13:56
Collect Date:	03/20/2012 14:28	**Dilution:**	1	**File ID:**	T1.032812.135647
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	96.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	2450		14.4	7.19
Antimony, Total	7440-36-0		U	0.719	0.359
Beryllium, Total	7440-41-7	0.171		0.0719	0.0359
Calcium, Total	7440-70-2	25500		7.19	3.59
Magnesium, Total	7439-95-4	2150		18.0	8.98
Potassium, Total	7440-09-7	505		35.9	18.0
Sodium, Total	7440-23-5	561		18.0	8.98
Zinc, Total	7440-66-6	8.46		0.719	0.359

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-41	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH11-3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:40
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/30/2012 08:14
Workgroup #:	WG393481	**Analyst:**	PDM	**Run Date:**	03/30/2012 15:04
Collect Date:	03/20/2012 14:28	**Dilution:**	10	**File ID:**	T1.033012.150459
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	96.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Iron, Total	7439-89-6	4220		21.6	10.8

Certificate of Analysis

Sample #:	L12030775-41	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH11-3	**Prep Method:**	3051A	**Prep Date:**	03/23/2012 13:11
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/28/2012 09:12
Workgroup #:	WG393436	**Analyst:**	JYH	**Run Date:**	03/28/2012 10:49
Collect Date:	03/20/2012 14:28	**Dilution:**	5	**File ID:**	NI.032812.104951
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	96.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	2.68		1.48	0.740
Barium, Total	7440-39-3	82.0		1.48	0.740
Cadmium, Total	7440-43-9		U	0.494	0.247
Chromium, Total	7440-47-3	2.44		1.97	0.987
Cobalt, Total	7440-48-4	1.78	J	2.47	1.23
Copper, Total	7440-50-8	1.68	J	2.96	1.48
Lead, Total	7439-92-1	3.66		0.987	0.494
Manganese, Total	7439-96-5	65.1		0.987	0.494
Nickel, Total	7440-02-0	4.15		3.95	1.97
Selenium, Total	7782-49-2		U	0.987	0.494
Thallium, Total	7440-28-0		U	0.197	0.0987
Vanadium, Total	7440-62-2	10.9		2.47	1.23

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-41	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH11-3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:40
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/29/2012 09:57
Workgroup #:	WG393571	**Analyst:**	JYH	**Run Date:**	03/29/2012 11:09
Collect Date:	03/20/2012 14:28	**Dilution:**	20	**File ID:**	NI.032912.110917
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	96.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.87	1.44

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030775-41	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	140-BH11-3	**Prep Method:**	7471	**Prep Date:**	03/23/2012 12:45
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/27/2012 10:57
Workgroup #:	WG393363	**Analyst:**	PDM	**Run Date:**	03/27/2012 13:48
Collect Date:	03/20/2012 14:28	**Dilution:**	1	**File ID:**	HY.032712.134805
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	96.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0994	0.00994

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-42	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH12-1	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:40
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/30/2012 08:14
Workgroup #:	WG393481	**Analyst:**	PDM	**Run Date:**	03/30/2012 15:08
Collect Date:	03/20/2012 13:54	**Dilution:**	1	**File ID:**	T1.033012.150843
Sample Tag:	02	**Units:**	mg/kg	**Percent Solid:**	98.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Iron, Total	7439-89-6	3540		2.18	1.09

Sample #:	L12030775-42	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH12-1	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:40
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/28/2012 10:18
Workgroup #:	WG393481	**Analyst:**	PDM	**Run Date:**	03/28/2012 14:00
Collect Date:	03/20/2012 13:54	**Dilution:**	1	**File ID:**	T1.032812.140032
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	1970		14.5	7.26
Antimony, Total	7440-36-0		U	0.726	0.363
Beryllium, Total	7440-41-7	0.152		0.0726	0.0363
Calcium, Total	7440-70-2	1710		7.26	3.63
Magnesium, Total	7439-95-4	678		18.1	9.07
Potassium, Total	7440-09-7	592		36.3	18.1
Sodium, Total	7440-23-5	13.0	J	18.1	9.07
Zinc, Total	7440-66-6	7.17		0.726	0.363

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030775-42	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH12-1	**Prep Method:**	3051A	**Prep Date:**	03/23/2012 13:11
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/28/2012 09:12
Workgroup #:	WG393436	**Analyst:**	JYH	**Run Date:**	03/28/2012 10:52
Collect Date:	03/20/2012 13:54	**Dilution:**	5	**File ID:**	NI.032812.105237
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2		U	1.50	0.749
Barium, Total	7440-39-3	15.4		1.50	0.749
Cadmium, Total	7440-43-9		U	0.499	0.250
Chromium, Total	7440-47-3	1.13	J	2.00	0.998
Cobalt, Total	7440-48-4		U	2.50	1.25
Copper, Total	7440-50-8		U	3.00	1.50
Lead, Total	7439-92-1	2.29		0.998	0.499
Manganese, Total	7439-96-5	28.1		0.998	0.499
Nickel, Total	7440-02-0		U	3.99	2.00
Selenium, Total	7782-49-2		U	0.998	0.499
Thallium, Total	7440-28-0		U	0.200	0.0998
Vanadium, Total	7440-62-2	2.12	J	2.50	1.25

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-42	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH12-1	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:40
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/29/2012 09:57
Workgroup #:	WG393571	**Analyst:**	JYH	**Run Date:**	03/29/2012 11:12
Collect Date:	03/20/2012 13:54	**Dilution:**	20	**File ID:**	NI.032912.111202
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	98.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.90	1.45

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030775-42	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	140-BH12-1	**Prep Method:**	7471	**Prep Date:**	03/23/2012 12:45
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/27/2012 10:57
Workgroup #:	WG393363	**Analyst:**	PDM	**Run Date:**	03/27/2012 13:49
Collect Date:	03/20/2012 13:54	**Dilution:**	1	**File ID:**	HY.032712.134958
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0953	0.00953

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-43	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH12-2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:40
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/30/2012 08:14
Workgroup #:	WG393481	**Analyst:**	PDM	**Run Date:**	03/30/2012 15:12
Collect Date:	03/20/2012 13:56	**Dilution:**	1	**File ID:**	T1.033012.151222
Sample Tag:	02	**Units:**	mg/kg	**Percent Solid:**	97.5

Analyte	CAS #	Result	Qual	LOQ	LOD
Iron, Total	7439-89-6	4950		2.25	1.13

Sample #:	L12030775-43	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH12-2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:40
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/28/2012 10:18
Workgroup #:	WG393481	**Analyst:**	PDM	**Run Date:**	03/28/2012 14:04
Collect Date:	03/20/2012 13:56	**Dilution:**	1	**File ID:**	T1.032812.140409
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.5

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	2410		15.0	7.51
Antimony, Total	7440-36-0		U	0.751	0.376
Beryllium, Total	7440-41-7	0.220		0.0751	0.0376
Calcium, Total	7440-70-2	2640		7.51	3.76
Magnesium, Total	7439-95-4	898		18.8	9.39
Potassium, Total	7440-09-7	472		37.6	18.8
Sodium, Total	7440-23-5	235		18.8	9.39
Zinc, Total	7440-66-6	9.27		0.751	0.376

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030775-43	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH12-2	**Prep Method:**	3051A	**Prep Date:**	03/23/2012 13:11
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/28/2012 09:12
Workgroup #:	WG393436	**Analyst:**	JYH	**Run Date:**	03/28/2012 10:55
Collect Date:	03/20/2012 13:56	**Dilution:**	5	**File ID:**	NI.032812.105523
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.5

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.43	J	1.50	0.750
Barium, Total	7440-39-3	24.7		1.50	0.750
Cadmium, Total	7440-43-9		U	0.500	0.250
Chromium, Total	7440-47-3	3.20		2.00	1.00
Cobalt, Total	7440-48-4	1.77	J	2.50	1.25
Copper, Total	7440-50-8	2.13	J	3.00	1.50
Lead, Total	7439-92-1	3.93		1.00	0.500
Manganese, Total	7439-96-5	74.1		1.00	0.500
Nickel, Total	7440-02-0	3.25	J	4.00	2.00
Selenium, Total	7782-49-2		U	1.00	0.500
Thallium, Total	7440-28-0		U	0.200	0.100
Vanadium, Total	7440-62-2	6.02		2.50	1.25

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-43	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH12-2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:40
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/29/2012 09:57
Workgroup #:	WG393571	**Analyst:**	JYH	**Run Date:**	03/29/2012 11:14
Collect Date:	03/20/2012 13:56	**Dilution:**	20	**File ID:**	NI.032912.111448
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	97.5

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.00	1.50

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030775-43	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	140-BH12-2	**Prep Method:**	7471	**Prep Date:**	03/23/2012 12:46
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/27/2012 10:57
Workgroup #:	WG393363	**Analyst:**	PDM	**Run Date:**	03/27/2012 13:55
Collect Date:	03/20/2012 13:56	**Dilution:**	1	**File ID:**	HY.032712.135550
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.5

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.100	0.0100

U — Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-44	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH12-3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:41
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/28/2012 10:18
Workgroup #:	WG393481	**Analyst:**	PDM	**Run Date:**	03/28/2012 14:15
Collect Date:	03/20/2012 14:01	**Dilution:**	1	**File ID:**	T1.032812.141513
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	94.3

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	5200		15.3	7.64
Antimony, Total	7440-36-0		U	0.764	0.382
Beryllium, Total	7440-41-7	0.350		0.0764	0.0382
Magnesium, Total	7439-95-4	3990		19.1	9.55
Potassium, Total	7440-09-7	989		38.2	19.1
Sodium, Total	7440-23-5	934		19.1	9.55
Zinc, Total	7440-66-6	13.2		0.764	0.382

U — Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-44	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH12-3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:41
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/29/2012 09:05
Workgroup #:	WG393481	**Analyst:**	PDM	**Run Date:**	03/30/2012 01:04
Collect Date:	03/20/2012 14:01	**Dilution:**	10	**File ID:**	T1.033012.010400
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	94.3

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	64600		76.4	38.2
Iron, Total	7439-89-6	6050		22.9	11.5

Certificate of Analysis

Sample #:	L12030775-44	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH12-3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:04
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/27/2012 09:53
Workgroup #:	WG393310	**Analyst:**	JYH	**Run Date:**	03/27/2012 10:45
Collect Date:	03/20/2012 14:01	**Dilution:**	5	**File ID:**	NI.032712.104559
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	94.3

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	3.49		1.55	0.777
Barium, Total	7440-39-3	194		1.55	0.777
Cadmium, Total	7440-43-9		U	0.518	0.259
Chromium, Total	7440-47-3	3.98		2.07	1.04
Cobalt, Total	7440-48-4	1.94	J	2.59	1.29
Copper, Total	7440-50-8	2.33	J	3.11	1.55
Lead, Total	7439-92-1	4.07		1.04	0.518
Manganese, Total	7439-96-5	58.9		1.04	0.518
Nickel, Total	7440-02-0	7.06		4.14	2.07
Selenium, Total	7782-49-2	0.700	J	1.04	0.518
Thallium, Total	7440-28-0		U	0.207	0.104
Vanadium, Total	7440-62-2	11.5		2.59	1.29

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-44	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH12-3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:41
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/29/2012 09:57
Workgroup #:	WG393571	**Analyst:**	JYH	**Run Date:**	03/29/2012 11:17
Collect Date:	03/20/2012 14:01	**Dilution:**	20	**File ID:**	NI.032912.111734
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	94.3

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.05	1.53

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030775-44	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	140-BH12-3	**Prep Method:**	7471	**Prep Date:**	03/23/2012 12:46
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/27/2012 10:57
Workgroup #:	WG393363	**Analyst:**	PDM	**Run Date:**	03/27/2012 13:57
Collect Date:	03/20/2012 14:01	**Dilution:**	1	**File ID:**	HY.032712.135746
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	94.3

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.104	0.0104

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-45	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH12-FD2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:41
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/28/2012 10:18
Workgroup #:	WG393481	**Analyst:**	PDM	**Run Date:**	03/28/2012 14:19
Collect Date:	03/20/2012 13:56	**Dilution:**	1	**File ID:**	T1.032812.141914
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	3010		14.6	7.28
Antimony, Total	7440-36-0		U	0.728	0.364
Beryllium, Total	7440-41-7	0.239		0.0728	0.0364
Calcium, Total	7440-70-2	2860		7.28	3.64
Magnesium, Total	7439-95-4	993		18.2	9.10
Potassium, Total	7440-09-7	562		36.4	18.2
Sodium, Total	7440-23-5	232		18.2	9.10
Zinc, Total	7440-66-6	10.5		0.728	0.364

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-45	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH12-FD2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:41
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/30/2012 08:14
Workgroup #:	WG393481	**Analyst:**	PDM	**Run Date:**	03/30/2012 15:16
Collect Date:	03/20/2012 13:56	**Dilution:**	1	**File ID:**	T1.033012.151601
Sample Tag:	02	**Units:**	mg/kg	**Percent Solid:**	97.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Iron, Total	7439-89-6	5500		2.18	1.09

Certificate of Analysis

Sample #:	L12030775-45	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH12-FD2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:04
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/27/2012 09:53
Workgroup #:	WG393310	**Analyst:**	JYH	**Run Date:**	03/27/2012 10:59
Collect Date:	03/20/2012 13:56	**Dilution:**	5	**File ID:**	NI.032712.105953
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.28	J	1.50	0.749
Barium, Total	7440-39-3	22.4		1.50	0.749
Cadmium, Total	7440-43-9		U	0.499	0.250
Chromium, Total	7440-47-3	2.54		2.00	0.999
Cobalt, Total	7440-48-4	1.44	J	2.50	1.25
Copper, Total	7440-50-8	1.66	J	3.00	1.50
Lead, Total	7439-92-1	3.03		0.999	0.499
Manganese, Total	7439-96-5	57.0		0.999	0.499
Nickel, Total	7440-02-0	2.54	J	4.00	2.00
Selenium, Total	7782-49-2		U	0.999	0.499
Thallium, Total	7440-28-0		U	0.200	0.0999
Vanadium, Total	7440-62-2	5.52		2.50	1.25

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-45	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH12-FD2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:41
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/29/2012 09:57
Workgroup #:	WG393571	**Analyst:**	JYH	**Run Date:**	03/29/2012 11:25
Collect Date:	03/20/2012 13:56	**Dilution:**	20	**File ID:**	NI.032912.112556
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	97.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.91	1.46

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030775-45	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	140-BH12-FD2	**Prep Method:**	7471	**Prep Date:**	03/23/2012 12:47
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/27/2012 10:57
Workgroup #:	WG393363	**Analyst:**	PDM	**Run Date:**	03/27/2012 13:59
Collect Date:	03/20/2012 13:56	**Dilution:**	1	**File ID:**	HY.032712.135929
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0996	0.00996

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-46	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH13-1	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/28/2012 10:18
Workgroup #:	WG393481	**Analyst:**	PDM	**Run Date:**	03/28/2012 14:22
Collect Date:	03/20/2012 13:09	**Dilution:**	1	**File ID:**	T1.032812.142252
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	3360		14.7	7.35
Antimony, Total	7440-36-0		U	0.735	0.368
Beryllium, Total	7440-41-7	0.214		0.0735	0.0368
Calcium, Total	7440-70-2	2890		7.35	3.68
Magnesium, Total	7439-95-4	985		18.4	9.19
Potassium, Total	7440-09-7	958		36.8	18.4
Sodium, Total	7440-23-5	15.1	J	18.4	9.19
Zinc, Total	7440-66-6	10.5		0.735	0.368

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-46	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH13-1	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/30/2012 08:14
Workgroup #:	WG393481	**Analyst:**	PDM	**Run Date:**	03/30/2012 15:19
Collect Date:	03/20/2012 13:09	**Dilution:**	1	**File ID:**	T1.033012.151940
Sample Tag:	02	**Units:**	mg/kg	**Percent Solid:**	97.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Iron, Total	7439-89-6	5270		2.21	1.10

Certificate of Analysis

Sample #:	L12030775-46	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH13-1	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:04
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/27/2012 09:53
Workgroup #:	WG393310	**Analyst:**	JYH	**Run Date:**	03/27/2012 11:02
Collect Date:	03/20/2012 13:09	**Dilution:**	5	**File ID:**	NI.032712.110238
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.52		1.46	0.732
Barium, Total	7440-39-3	22.7		1.46	0.732
Cadmium, Total	7440-43-9		U	0.488	0.244
Chromium, Total	7440-47-3	2.42		1.95	0.976
Cobalt, Total	7440-48-4		U	2.44	1.22
Copper, Total	7440-50-8	1.95	J	2.93	1.46
Lead, Total	7439-92-1	3.06		0.976	0.488
Manganese, Total	7439-96-5	52.3		0.976	0.488
Nickel, Total	7440-02-0	2.52	J	3.90	1.95
Selenium, Total	7782-49-2		U	0.976	0.488
Thallium, Total	7440-28-0		U	0.195	0.0976
Vanadium, Total	7440-62-2	4.75		2.44	1.22

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-46	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH13-1	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:42
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/29/2012 09:57
Workgroup #:	WG393571	**Analyst:**	JYH	**Run Date:**	03/29/2012 11:28
Collect Date:	03/20/2012 13:09	**Dilution:**	20	**File ID:**	NI.032912.112843
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	97.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.94	1.47

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030775-46	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	140-BH13-1	**Prep Method:**	7471	**Prep Date:**	03/23/2012 12:47
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/27/2012 10:57
Workgroup #:	WG393363	**Analyst:**	PDM	**Run Date:**	03/27/2012 14:01
Collect Date:	03/20/2012 13:09	**Dilution:**	1	**File ID:**	HY.032712.140114
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0976	0.00976

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-47	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH13-2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/28/2012 10:18
Workgroup #:	WG393481	**Analyst:**	PDM	**Run Date:**	03/28/2012 14:26
Collect Date:	03/20/2012 13:14	**Dilution:**	1	**File ID:**	T1.032812.142628
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	91.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	3710		15.7	7.84
Antimony, Total	7440-36-0		U	0.784	0.392
Beryllium, Total	7440-41-7	0.210		0.0784	0.0392
Magnesium, Total	7439-95-4	4570		19.6	9.80
Potassium, Total	7440-09-7	311		39.2	19.6
Sodium, Total	7440-23-5	653		19.6	9.80
Zinc, Total	7440-66-6	5.98		0.784	0.392

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-47	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH13-2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/29/2012 09:05
Workgroup #:	WG393481	**Analyst:**	PDM	**Run Date:**	03/30/2012 01:07
Collect Date:	03/20/2012 13:14	**Dilution:**	10	**File ID:**	T1.033012.010740
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	91.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	195000		78.4	39.2
Iron, Total	7439-89-6	3510		23.5	11.8

Certificate of Analysis

Sample #:	L12030775-47	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH13-2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:04
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/27/2012 09:53
Workgroup #:	WG393310	**Analyst:**	JYH	**Run Date:**	03/27/2012 11:05
Collect Date:	03/20/2012 13:14	**Dilution:**	5	**File ID:**	NI.032712.110524
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	91.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	2.34		1.62	0.811
Barium, Total	7440-39-3	133		1.62	0.811
Cadmium, Total	7440-43-9		U	0.541	0.270
Chromium, Total	7440-47-3	3.31		2.16	1.08
Cobalt, Total	7440-48-4	2.15	J	2.70	1.35
Copper, Total	7440-50-8		U	3.24	1.62
Lead, Total	7439-92-1	2.63		1.08	0.541
Manganese, Total	7439-96-5	32.1		1.08	0.541
Nickel, Total	7440-02-0	9.64		4.33	2.16
Selenium, Total	7782-49-2	0.551	J	1.08	0.541
Thallium, Total	7440-28-0		U	0.216	0.108
Vanadium, Total	7440-62-2	11.0		2.70	1.35

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-47	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH13-2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:42
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/29/2012 09:57
Workgroup #:	WG393571	**Analyst:**	JYH	**Run Date:**	03/29/2012 11:31
Collect Date:	03/20/2012 13:14	**Dilution:**	20	**File ID:**	NI.032912.113128
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	91.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.14	1.57

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030775-47	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	140-BH13-2	**Prep Method:**	7471	**Prep Date:**	03/23/2012 12:48
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/27/2012 10:57
Workgroup #:	WG393363	**Analyst:**	PDM	**Run Date:**	03/27/2012 14:02
Collect Date:	03/20/2012 13:14	**Dilution:**	1	**File ID:**	HY.032712.140256
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	91.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.103	0.0103

U — Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-48	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH13-3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/28/2012 10:18
Workgroup #:	WG393481	**Analyst:**	PDM	**Run Date:**	03/28/2012 14:30
Collect Date:	03/20/2012 13:19	**Dilution:**	1	**File ID:**	T1.032812.143021
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	93.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	5790		16.1	8.04
Antimony, Total	7440-36-0		U	0.804	0.402
Beryllium, Total	7440-41-7	0.307		0.0804	0.0402
Magnesium, Total	7439-95-4	7520		20.1	10.1
Potassium, Total	7440-09-7	873		40.2	20.1
Sodium, Total	7440-23-5	758		20.1	10.1
Zinc, Total	7440-66-6	9.79		0.804	0.402

U — Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-48	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH13-3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/29/2012 09:05
Workgroup #:	WG393481	**Analyst:**	PDM	**Run Date:**	03/30/2012 01:11
Collect Date:	03/20/2012 13:19	**Dilution:**	10	**File ID:**	T1.033012.011132
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	93.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	129000		80.4	40.2
Iron, Total	7439-89-6	5740		24.1	12.1

Certificate of Analysis

Sample #:	L12030775-48	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH13-3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:04
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/27/2012 09:53
Workgroup #:	WG393310	**Analyst:**	JYH	**Run Date:**	03/27/2012 11:08
Collect Date:	03/20/2012 13:19	**Dilution:**	5	**File ID:**	NI.032712.110810
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	93.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	5.69		1.60	0.799
Barium, Total	7440-39-3	196		1.60	0.799
Cadmium, Total	7440-43-9		U	0.533	0.266
Chromium, Total	7440-47-3	7.56		2.13	1.07
Cobalt, Total	7440-48-4	2.23	J	2.66	1.33
Copper, Total	7440-50-8	2.77	J	3.20	1.60
Lead, Total	7439-92-1	3.31		1.07	0.533
Manganese, Total	7439-96-5	63.2		1.07	0.533
Nickel, Total	7440-02-0	8.16		4.26	2.13
Selenium, Total	7782-49-2	0.923	J	1.07	0.533
Thallium, Total	7440-28-0		U	0.213	0.107
Vanadium, Total	7440-62-2	16.7		2.66	1.33

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-48	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH13-3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:42
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/29/2012 09:57
Workgroup #:	WG393571	**Analyst:**	JYH	**Run Date:**	03/29/2012 11:34
Collect Date:	03/20/2012 13:19	**Dilution:**	20	**File ID:**	NI.032912.113415
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	93.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.22	1.61

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030775-48	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	140-BH13-3	**Prep Method:**	7471	**Prep Date:**	03/23/2012 12:49
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/27/2012 10:57
Workgroup #:	WG393370	**Analyst:**	PDM	**Run Date:**	03/27/2012 14:40
Collect Date:	03/20/2012 13:19	**Dilution:**	1	**File ID:**	HY.032712.144056
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	93.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.102	0.0102

U — Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-49	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH14-1	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:43
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/28/2012 10:18
Workgroup #:	WG393481	**Analyst:**	PDM	**Run Date:**	03/28/2012 14:34
Collect Date:	03/20/2012 15:23	**Dilution:**	1	**File ID:**	T1.032812.143423
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	93.5

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	6910		15.0	7.52
Antimony, Total	7440-36-0		U	0.752	0.376
Beryllium, Total	7440-41-7	0.417		0.0752	0.0376
Magnesium, Total	7439-95-4	3110		18.8	9.40
Potassium, Total	7440-09-7	1660		37.6	18.8
Sodium, Total	7440-23-5	55.1		18.8	9.40
Zinc, Total	7440-66-6	15.7		0.752	0.376

U — Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-49	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH14-1	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:43
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/29/2012 09:05
Workgroup #:	WG393481	**Analyst:**	PDM	**Run Date:**	03/30/2012 01:15
Collect Date:	03/20/2012 15:23	**Dilution:**	10	**File ID:**	T1.033012.011513
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	93.5

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	74800		75.2	37.6
Iron, Total	7439-89-6	7960		22.6	11.3

Certificate of Analysis

Sample #:	L12030775-49	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH14-1	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:04
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/27/2012 09:53
Workgroup #:	WG393310	**Analyst:**	JYH	**Run Date:**	03/27/2012 11:10
Collect Date:	03/20/2012 15:23	**Dilution:**	5	**File ID:**	NI.032712.111056
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	93.5

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	4.62		1.55	0.777
Barium, Total	7440-39-3	142		1.55	0.777
Cadmium, Total	7440-43-9		U	0.518	0.259
Chromium, Total	7440-47-3	4.49		2.07	1.04
Cobalt, Total	7440-48-4	2.50	J	2.59	1.30
Copper, Total	7440-50-8	3.76		3.11	1.55
Lead, Total	7439-92-1	4.69		1.04	0.518
Manganese, Total	7439-96-5	78.3		1.04	0.518
Nickel, Total	7440-02-0	7.73		4.15	2.07
Selenium, Total	7782-49-2	0.560	J	1.04	0.518
Thallium, Total	7440-28-0		U	0.207	0.104
Vanadium, Total	7440-62-2	13.0		2.59	1.30

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-49	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH14-1	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:43
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/29/2012 09:57
Workgroup #:	WG393571	**Analyst:**	JYH	**Run Date:**	03/29/2012 11:37
Collect Date:	03/20/2012 15:23	**Dilution:**	20	**File ID:**	NI.032912.113702
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	93.5

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.01	1.50

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030775-49	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	140-BH14-1	**Prep Method:**	7471	**Prep Date:**	03/23/2012 12:50
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/27/2012 10:57
Workgroup #:	WG393370	**Analyst:**	PDM	**Run Date:**	03/27/2012 14:44
Collect Date:	03/20/2012 15:23	**Dilution:**	1	**File ID:**	HY.032712.144443
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	93.5

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.103	0.0103

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-50	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH14-2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:43
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/30/2012 08:14
Workgroup #:	WG393481	**Analyst:**	PDM	**Run Date:**	03/30/2012 15:23
Collect Date:	03/20/2012 15:27	**Dilution:**	1	**File ID:**	T1.033012.152324
Sample Tag:	02	**Units:**	mg/kg	**Percent Solid:**	92.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Iron, Total	7439-89-6	7510		2.43	1.21

Sample #:	L12030775-50	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH14-2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:43
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/28/2012 10:18
Workgroup #:	WG393481	**Analyst:**	PDM	**Run Date:**	03/28/2012 14:38
Collect Date:	03/20/2012 15:27	**Dilution:**	1	**File ID:**	T1.032812.143820
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	92.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	7670		16.2	8.10
Antimony, Total	7440-36-0		U	0.810	0.405
Beryllium, Total	7440-41-7	0.498		0.0810	0.0405
Calcium, Total	7440-70-2	20600		8.10	4.05
Magnesium, Total	7439-95-4	6350		20.2	10.1
Potassium, Total	7440-09-7	1390		40.5	20.2
Sodium, Total	7440-23-5	1350		20.2	10.1
Zinc, Total	7440-66-6	18.3		0.810	0.405

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030775-50	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH14-2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:04
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/27/2012 09:53
Workgroup #:	WG393310	**Analyst:**	JYH	**Run Date:**	03/27/2012 11:13
Collect Date:	03/20/2012 15:27	**Dilution:**	5	**File ID:**	NI.032712.111341
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	92.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	7.73		1.55	0.774
Barium, Total	7440-39-3	25.6		1.55	0.774
Cadmium, Total	7440-43-9		U	0.516	0.258
Chromium, Total	7440-47-3	6.58		2.06	1.03
Cobalt, Total	7440-48-4	3.87		2.58	1.29
Copper, Total	7440-50-8	5.45		3.10	1.55
Lead, Total	7439-92-1	7.19		1.03	0.516
Manganese, Total	7439-96-5	136		1.03	0.516
Nickel, Total	7440-02-0	8.33		4.13	2.06
Selenium, Total	7782-49-2		U	1.03	0.516
Thallium, Total	7440-28-0		U	0.206	0.103
Vanadium, Total	7440-62-2	29.1		2.58	1.29

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-50	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH14-2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 12:43
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/29/2012 09:57
Workgroup #:	WG393571	**Analyst:**	JYH	**Run Date:**	03/29/2012 11:39
Collect Date:	03/20/2012 15:27	**Dilution:**	20	**File ID:**	NI.032912.113948
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	92.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.24	1.62

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-50	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	140-BH14-2	**Prep Method:**	7471	**Prep Date:**	03/23/2012 12:51
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/27/2012 10:57
Workgroup #:	WG393370	**Analyst:**	PDM	**Run Date:**	03/27/2012 14:46
Collect Date:	03/20/2012 15:27	**Dilution:**	1	**File ID:**	HY.032712.144652
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	92.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.106	0.0106

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-51	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH14-3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 13:06
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/27/2012 14:28
Workgroup #:	WG393388	**Analyst:**	PDM	**Run Date:**	03/27/2012 22:00
Collect Date:	03/20/2012 15:31	**Dilution:**	1	**File ID:**	T1.032712.220054
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	83.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	7250		16.6	8.29
Antimony, Total	7440-36-0	0.570	J	0.829	0.414
Beryllium, Total	7440-41-7	0.709		0.0829	0.0414
Iron, Total	7439-89-6	11200		2.49	1.24
Magnesium, Total	7439-95-4	5550		20.7	10.4
Potassium, Total	7440-09-7	1240		41.4	20.7
Silver, Total	7440-22-4	0.463		0.166	0.0829
Sodium, Total	7440-23-5	2500		20.7	10.4
Zinc, Total	7440-66-6	29.9		0.829	0.414

J	Estimated value ; the analyte concentration was less than the LOQ.

Sample #:	L12030775-51	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH14-3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 13:06
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/29/2012 09:05
Workgroup #:	WG393388	**Analyst:**	PDM	**Run Date:**	03/29/2012 11:13
Collect Date:	03/20/2012 15:31	**Dilution:**	10	**File ID:**	T1.032912.111303
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	83.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	31500		82.9	41.4

Sample #:	L12030775-51	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH14-3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:04
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/28/2012 09:12
Workgroup #:	WG393310	**Analyst:**	JYH	**Run Date:**	03/28/2012 11:00
Collect Date:	03/20/2012 15:31	**Dilution:**	5	**File ID:**	NI.032812.110000
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	83.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	21.8		1.76	0.881
Barium, Total	7440-39-3	18.3		1.76	0.881
Cadmium, Total	7440-43-9		U	0.587	0.294

Certificate of Analysis

Analyte	CAS #	Result	Qual	LOQ	LOD
Chromium, Total	7440-47-3	8.46		2.35	1.17
Cobalt, Total	7440-48-4	5.87		2.94	1.47
Copper, Total	7440-50-8	10.6		3.52	1.76
Lead, Total	7439-92-1	10.6		1.17	0.587
Nickel, Total	7440-02-0	12.5		4.70	2.35
Selenium, Total	7782-49-2	0.795	J	1.17	0.587
Thallium, Total	7440-28-0	0.149	J	0.235	0.117
Vanadium, Total	7440-62-2	82.0		2.94	1.47

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-51	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH14-3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 13:06
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/29/2012 09:57
Workgroup #:	WG393579	**Analyst:**	JYH	**Run Date:**	03/29/2012 11:53
Collect Date:	03/20/2012 15:31	**Dilution:**	20	**File ID:**	NI.032912.115345
Sample Tag:	DL04	**Units:**	mg/kg	**Percent Solid:**	83.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.32	1.66

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-51	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH14-3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:04
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/27/2012 09:53
Workgroup #:	WG393310	**Analyst:**	JYH	**Run Date:**	03/27/2012 13:44
Collect Date:	03/20/2012 15:31	**Dilution:**	50	**File ID:**	NI.032712.134456
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	83.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	181		11.7	5.87

Sample #:	L12030775-51	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	140-BH14-3	**Prep Method:**	7471	**Prep Date:**	03/23/2012 12:52
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/27/2012 10:57
Workgroup #:	WG393370	**Analyst:**	PDM	**Run Date:**	03/27/2012 14:48
Collect Date:	03/20/2012 15:31	**Dilution:**	1	**File ID:**	HY.032712.144835
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	83.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.113	0.0113

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-52	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH14-MS3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 13:02
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/27/2012 14:28
Workgroup #:	WG393388	**Analyst:**	PDM	**Run Date:**	03/27/2012 22:04
Collect Date:	03/20/2012 15:31	**Dilution:**	1	**File ID:**	T1.032712.220443
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	83.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	10300		16.7	8.33
Antimony, Total	7440-36-0	19.7		0.833	0.417
Beryllium, Total	7440-41-7	1.46		0.0833	0.0417
Iron, Total	7439-89-6	11900		2.50	1.25
Magnesium, Total	7439-95-4	5550		20.8	10.4
Potassium, Total	7440-09-7	2640		41.7	20.8
Silver, Total	7440-22-4	7.55		0.167	0.0833
Sodium, Total	7440-23-5	2820		20.8	10.4
Zinc, Total	7440-66-6	44.5		0.833	0.417

Sample #:	L12030775-52	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH14-MS3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 13:02
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/29/2012 09:05
Workgroup #:	WG393388	**Analyst:**	PDM	**Run Date:**	03/29/2012 11:16
Collect Date:	03/20/2012 15:31	**Dilution:**	10	**File ID:**	T1.032912.111642
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	83.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	40200		83.3	41.7

Sample #:	L12030775-52	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH14-MS3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:04
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/28/2012 09:12
Workgroup #:	WG393310	**Analyst:**	JYH	**Run Date:**	03/28/2012 11:02
Collect Date:	03/20/2012 15:31	**Dilution:**	5	**File ID:**	NI.032812.110246
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	83.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	32.5		1.74	0.871
Barium, Total	7440-39-3	22.4		1.74	0.871
Cadmium, Total	7440-43-9	11.3		0.581	0.290
Chromium, Total	7440-47-3	16.7		2.32	1.16

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Analyte	CAS #	Result	Qual	LOQ	LOD
Cobalt, Total	7440-48-4	15.6		2.90	1.45
Copper, Total	7440-50-8	19.6		3.48	1.74
Lead, Total	7439-92-1	18.7		1.16	0.581
Nickel, Total	7440-02-0	20.8		4.64	2.32
Selenium, Total	7782-49-2	10.5		1.16	0.581
Thallium, Total	7440-28-0	11.7		0.232	0.116
Vanadium, Total	7440-62-2	94.3		2.90	1.45

Sample #:	L12030775-52	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH14-MS3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 13:02
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/29/2012 09:57
Workgroup #:	WG393579	**Analyst:**	JYH	**Run Date:**	03/29/2012 11:56
Collect Date:	03/20/2012 15:31	**Dilution:**	20	**File ID:**	NI.032912.115631
Sample Tag:	DL04	**Units:**	mg/kg	**Percent Solid:**	83.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4	6.92		3.33	1.67

Sample #:	L12030775-52	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH14-MS3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:04
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/27/2012 09:53
Workgroup #:	WG393310	**Analyst:**	JYH	**Run Date:**	03/27/2012 13:47
Collect Date:	03/20/2012 15:31	**Dilution:**	50	**File ID:**	NI.032712.134742
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	83.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	150		11.6	5.81

Sample #:	L12030775-52	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	140-BH14-MS3	**Prep Method:**	7471	**Prep Date:**	03/23/2012 12:48
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/27/2012 10:57
Workgroup #:	WG393370	**Analyst:**	PDM	**Run Date:**	03/27/2012 14:50
Collect Date:	03/20/2012 15:31	**Dilution:**	1	**File ID:**	HY.032712.145018
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	83.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6	0.175		0.114	0.0114

Certificate of Analysis

Sample #:	L12030775-53	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH14-MSD3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 13:02
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/27/2012 14:28
Workgroup #:	WG393388	**Analyst:**	PDM	**Run Date:**	03/27/2012 22:08
Collect Date:	03/20/2012 15:31	**Dilution:**	1	**File ID:**	T1.032712.220829
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	83.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	10500		16.4	8.22
Antimony, Total	7440-36-0	19.4		0.822	0.411
Beryllium, Total	7440-41-7	1.46		0.0822	0.0411
Iron, Total	7439-89-6	12400		2.47	1.23
Magnesium, Total	7439-95-4	5520		20.6	10.3
Potassium, Total	7440-09-7	2630		41.1	20.6
Silver, Total	7440-22-4	7.61		0.164	0.0822
Sodium, Total	7440-23-5	2820		20.6	10.3
Zinc, Total	7440-66-6	44.4		0.822	0.411

Sample #:	L12030775-53	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH14-MSD3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 13:02
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/29/2012 09:05
Workgroup #:	WG393388	**Analyst:**	PDM	**Run Date:**	03/29/2012 11:20
Collect Date:	03/20/2012 15:31	**Dilution:**	10	**File ID:**	T1.032912.112022
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	83.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	50500		82.2	41.1

Sample #:	L12030775-53	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH14-MSD3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:04
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/28/2012 09:12
Workgroup #:	WG393310	**Analyst:**	JYH	**Run Date:**	03/28/2012 11:05
Collect Date:	03/20/2012 15:31	**Dilution:**	5	**File ID:**	NI.032812.110532
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	83.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	34.3		1.72	0.859
Barium, Total	7440-39-3	35.3		1.72	0.859
Cadmium, Total	7440-43-9	15.6		0.573	0.286
Chromium, Total	7440-47-3	22.3		2.29	1.15
Cobalt, Total	7440-48-4	23.8		2.86	1.43
Copper, Total	7440-50-8	24.8		3.44	1.72

Certificate of Analysis

Analyte	CAS #	Result	Qual	LOQ	LOD
Lead, Total	7439-92-1	32.5		1.15	0.573
Nickel, Total	7440-02-0	30.8		4.58	2.29
Selenium, Total	7782-49-2	14.8		1.15	0.573
Thallium, Total	7440-28-0	15.8		0.229	0.115
Vanadium, Total	7440-62-2	102		2.86	1.43

Sample #:	L12030775-53	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH14-MSD3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 13:02
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/29/2012 09:57
Workgroup #:	WG393579	**Analyst:**	JYH	**Run Date:**	03/29/2012 11:59
Collect Date:	03/20/2012 15:31	**Dilution:**	20	**File ID:**	NI.032912.115918
Sample Tag:	DL04	**Units:**	mg/kg	**Percent Solid:**	83.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4	6.42		3.29	1.64

Sample #:	L12030775-53	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH14-MSD3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:04
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/27/2012 09:53
Workgroup #:	WG393310	**Analyst:**	JYH	**Run Date:**	03/27/2012 13:50
Collect Date:	03/20/2012 15:31	**Dilution:**	50	**File ID:**	NI.032712.135027
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	83.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	364		11.5	5.73

Sample #:	L12030775-53	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	140-BH14-MSD3	**Prep Method:**	7471	**Prep Date:**	03/23/2012 12:48
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/27/2012 10:57
Workgroup #:	WG393370	**Analyst:**	PDM	**Run Date:**	03/27/2012 14:52
Collect Date:	03/20/2012 15:31	**Dilution:**	1	**File ID:**	HY.032712.145221
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	83.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6	0.155		0.113	0.0113

Certificate of Analysis

Sample #:	L12030775-54	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH15-1	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 13:07
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/27/2012 14:28
Workgroup #:	WG393388	**Analyst:**	PDM	**Run Date:**	03/27/2012 22:12
Collect Date:	03/20/2012 14:49	**Dilution:**	1	**File ID:**	T1.032712.221214
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	96.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	3100		14.0	7.00
Antimony, Total	7440-36-0		U	0.700	0.350
Beryllium, Total	7440-41-7	0.259		0.0700	0.0350
Calcium, Total	7440-70-2	23800		7.00	3.50
Iron, Total	7439-89-6	5020		2.10	1.05
Magnesium, Total	7439-95-4	1380		17.5	8.75
Potassium, Total	7440-09-7	885		35.0	17.5
Sodium, Total	7440-23-5	27.7		17.5	8.75
Zinc, Total	7440-66-6	9.95		0.700	0.350

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-54	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH15-1	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:04
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/27/2012 09:53
Workgroup #:	WG393310	**Analyst:**	JYH	**Run Date:**	03/27/2012 11:24
Collect Date:	03/20/2012 14:49	**Dilution:**	5	**File ID:**	NI.032712.112444
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	96.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	3.96		1.55	0.774
Barium, Total	7440-39-3	62.3		1.55	0.774
Cadmium, Total	7440-43-9		U	0.516	0.258
Chromium, Total	7440-47-3	4.36		2.06	1.03
Cobalt, Total	7440-48-4	2.65		2.58	1.29
Copper, Total	7440-50-8	3.94		3.10	1.55
Lead, Total	7439-92-1	5.05		1.03	0.516
Manganese, Total	7439-96-5	94.0		1.03	0.516
Nickel, Total	7440-02-0	5.59		4.13	2.06
Selenium, Total	7782-49-2		U	1.03	0.516
Thallium, Total	7440-28-0		U	0.206	0.103
Vanadium, Total	7440-62-2	10.6		2.58	1.29

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030775-54	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH15-1	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 13:07
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/29/2012 09:57
Workgroup #:	WG393579	**Analyst:**	JYH	**Run Date:**	03/29/2012 12:02
Collect Date:	03/20/2012 14:49	**Dilution:**	20	**File ID:**	NI.032912.120205
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	96.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.80	1.40

U — Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-54	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	140-BH15-1	**Prep Method:**	7471	**Prep Date:**	03/23/2012 12:54
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/27/2012 10:57
Workgroup #:	WG393370	**Analyst:**	PDM	**Run Date:**	03/27/2012 15:00
Collect Date:	03/20/2012 14:49	**Dilution:**	1	**File ID:**	HY.032712.150013
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	96.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0979	0.00979

U — Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-55	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH15-2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 13:08
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/27/2012 14:28
Workgroup #:	WG393388	**Analyst:**	PDM	**Run Date:**	03/27/2012 22:15
Collect Date:	03/20/2012 14:57	**Dilution:**	1	**File ID:**	T1.032712.221556
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	92.8

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	3980		15.2	7.60
Antimony, Total	7440-36-0		U	0.760	0.380
Beryllium, Total	7440-41-7	0.449		0.0760	0.0380
Calcium, Total	7440-70-2	11000		7.60	3.80
Iron, Total	7439-89-6	5650		2.28	1.14
Magnesium, Total	7439-95-4	2900		19.0	9.50
Potassium, Total	7440-09-7	772		38.0	19.0
Sodium, Total	7440-23-5	1130		19.0	9.50
Zinc, Total	7440-66-6	14.1		0.760	0.380

U — Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030775-55	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH15-2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:04
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/27/2012 09:53
Workgroup #:	WG393310	**Analyst:**	JYH	**Run Date:**	03/27/2012 11:33
Collect Date:	03/20/2012 14:57	**Dilution:**	5	**File ID:**	NI.032712.113308
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	92.8

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	4.21		1.49	0.746
Barium, Total	7440-39-3	125		1.49	0.746
Cadmium, Total	7440-43-9		U	0.497	0.249
Chromium, Total	7440-47-3	4.70		1.99	0.994
Cobalt, Total	7440-48-4	2.97		2.49	1.24
Copper, Total	7440-50-8	3.69		2.98	1.49
Lead, Total	7439-92-1	5.90		0.994	0.497
Manganese, Total	7439-96-5	120		0.994	0.497
Nickel, Total	7440-02-0	5.86		3.98	1.99
Selenium, Total	7782-49-2		U	0.994	0.497
Thallium, Total	7440-28-0		U	0.199	0.0994
Vanadium, Total	7440-62-2	14.2		2.49	1.24

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-55	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH15-2	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 13:08
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/29/2012 09:57
Workgroup #:	WG393579	**Analyst:**	JYH	**Run Date:**	03/29/2012 12:13
Collect Date:	03/20/2012 14:57	**Dilution:**	20	**File ID:**	NI.032912.121326
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	92.8

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.04	1.52

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-55	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	140-BH15-2	**Prep Method:**	7471	**Prep Date:**	03/23/2012 12:55
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/27/2012 10:57
Workgroup #:	WG393370	**Analyst:**	PDM	**Run Date:**	03/27/2012 15:05
Collect Date:	03/20/2012 14:57	**Dilution:**	1	**File ID:**	HY.032712.150535
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	92.8

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.105	0.0105

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-56	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH15-3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 13:08
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/27/2012 14:28
Workgroup #:	WG393388	**Analyst:**	PDM	**Run Date:**	03/27/2012 22:37
Collect Date:	03/20/2012 15:01	**Dilution:**	1	**File ID:**	T1.032712.223731
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	92.8

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	3810		15.8	7.91
Antimony, Total	7440-36-0		U	0.791	0.395
Beryllium, Total	7440-41-7	0.361		0.0791	0.0395
Calcium, Total	7440-70-2	27400		7.91	3.95
Iron, Total	7439-89-6	5470		2.37	1.19
Magnesium, Total	7439-95-4	3070		19.8	9.88
Potassium, Total	7440-09-7	884		39.5	19.8
Sodium, Total	7440-23-5	1150		19.8	9.88
Zinc, Total	7440-66-6	13.2		0.791	0.395

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-56	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH15-3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:04
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/27/2012 09:53
Workgroup #:	WG393310	**Analyst:**	JYH	**Run Date:**	03/27/2012 11:35
Collect Date:	03/20/2012 15:01	**Dilution:**	5	**File ID:**	NI.032712.113554
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	92.8

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	4.00		1.57	0.783
Barium, Total	7440-39-3	66.8		1.57	0.783
Cadmium, Total	7440-43-9		U	0.522	0.261
Chromium, Total	7440-47-3	4.87		2.09	1.04
Cobalt, Total	7440-48-4	3.05		2.61	1.30
Copper, Total	7440-50-8	3.17		3.13	1.57
Lead, Total	7439-92-1	4.99		1.04	0.522
Manganese, Total	7439-96-5	93.8		1.04	0.522
Nickel, Total	7440-02-0	5.90		4.17	2.09
Selenium, Total	7782-49-2		U	1.04	0.522
Thallium, Total	7440-28-0		U	0.209	0.104
Vanadium, Total	7440-62-2	13.7		2.61	1.30

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-56	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH15-3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 13:08
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/29/2012 09:57
Workgroup #:	WG393579	**Analyst:**	JYH	**Run Date:**	03/29/2012 12:21
Collect Date:	03/20/2012 15:01	**Dilution:**	20	**File ID:**	NI.032912.122149
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	92.8

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.16	1.58
U	Analyte was not detected. The concentration is below the reported LOD.				

Sample #:	L12030775-56	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	140-BH15-3	**Prep Method:**	7471	**Prep Date:**	03/23/2012 12:55
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/27/2012 10:57
Workgroup #:	WG393370	**Analyst:**	PDM	**Run Date:**	03/27/2012 15:07
Collect Date:	03/20/2012 15:01	**Dilution:**	1	**File ID:**	HY.032712.150740
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	92.8

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.106	0.0106
U	Analyte was not detected. The concentration is below the reported LOD.				

Sample #:	L12030775-57	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	140-BH15-FD3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 13:08
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	03/27/2012 14:28
Workgroup #:	WG393388	**Analyst:**	PDM	**Run Date:**	03/27/2012 22:41
Collect Date:	03/20/2012 15:01	**Dilution:**	1	**File ID:**	T1.032712.224113
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	92.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	3890		16.1	8.03
Antimony, Total	7440-36-0		U	0.803	0.401
Beryllium, Total	7440-41-7	0.359		0.0803	0.0401
Calcium, Total	7440-70-2	20700		8.03	4.01
Iron, Total	7439-89-6	5430		2.41	1.20
Magnesium, Total	7439-95-4	2990		20.1	10.0
Potassium, Total	7440-09-7	902		40.1	20.1
Sodium, Total	7440-23-5	1110		20.1	10.0
Zinc, Total	7440-66-6	12.8		0.803	0.401
U	Analyte was not detected. The concentration is below the reported LOD.				

Certificate of Analysis

Sample #:	L12030775-57	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH15-FD3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 11:04
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/27/2012 09:53
Workgroup #:	WG393310	**Analyst:**	JYH	**Run Date:**	03/27/2012 11:38
Collect Date:	03/20/2012 15:01	**Dilution:**	5	**File ID:**	NI.032712.113840
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	92.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	4.43		1.60	0.801
Barium, Total	7440-39-3	73.6		1.60	0.801
Cadmium, Total	7440-43-9		U	0.534	0.267
Chromium, Total	7440-47-3	5.93		2.14	1.07
Cobalt, Total	7440-48-4	2.73		2.67	1.34
Copper, Total	7440-50-8	3.46		3.20	1.60
Lead, Total	7439-92-1	4.89		1.07	0.534
Manganese, Total	7439-96-5	78.4		1.07	0.534
Nickel, Total	7440-02-0	6.10		4.27	2.14
Selenium, Total	7782-49-2	0.540	J	1.07	0.534
Thallium, Total	7440-28-0		U	0.214	0.107
Vanadium, Total	7440-62-2	17.2		2.67	1.34

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030775-57	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	140-BH15-FD3	**Prep Method:**	3051A	**Prep Date:**	03/26/2012 13:08
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	03/29/2012 09:57
Workgroup #:	WG393579	**Analyst:**	JYH	**Run Date:**	03/29/2012 12:24
Collect Date:	03/20/2012 15:01	**Dilution:**	20	**File ID:**	NI.032912.122434
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	92.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.21	1.61

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030775-57	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	140-BH15-FD3	**Prep Method:**	7471	**Prep Date:**	03/23/2012 12:56
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	03/27/2012 10:57
Workgroup #:	WG393370	**Analyst:**	PDM	**Run Date:**	03/27/2012 15:09
Collect Date:	03/20/2012 15:01	**Dilution:**	1	**File ID:**	HY.032712.150923
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	92.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.107	0.0107

U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L12030775
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Sample #: L12030775-01 **Client ID:** 140-BH01-1 **Matrix:** Soil **Collect Date:** 03/20/2012 09:47

Analyte	Result	Units	Qualifier
Percent Solids	91.6	weight %	

Sample #: L12030775-02 **Client ID:** 140-BH01-2 **Matrix:** Soil **Collect Date:** 03/20/2012 09:53

Analyte	Result	Units	Qualifier
Percent Solids	91.2	weight %	

Sample #: L12030775-03 **Client ID:** 140-BH01-3 **Matrix:** Soil **Collect Date:** 03/20/2012 09:57

Analyte	Result	Units	Qualifier
Percent Solids	86.9	weight %	

Sample #: L12030775-04 **Client ID:** 140-BH02-1 **Matrix:** Soil **Collect Date:** 03/19/2012 14:55

Analyte	Result	Units	Qualifier
Percent Solids	96.9	weight %	

Sample #: L12030775-05 **Client ID:** 140-BH02-2 **Matrix:** Soil **Collect Date:** 03/19/2012 15:07

Analyte	Result	Units	Qualifier
Percent Solids	92.7	weight %	

Sample #: L12030775-06 **Client ID:** 140-BH02-3 **Matrix:** Soil **Collect Date:** 03/19/2012 12:00

Analyte	Result	Units	Qualifier
Percent Solids	88.5	weight %	

Sample #: L12030775-08 **Client ID:** 140-BH03-1 **Matrix:** Soil **Collect Date:** 03/19/2012 15:25

Analyte	Result	Units	Qualifier
Percent Solids	97.8	weight %	

Sample #: L12030775-09 **Client ID:** 140-BH03-2 **Matrix:** Soil **Collect Date:** 03/19/2012 15:32

Analyte	Result	Units	Qualifier
Percent Solids	90.7	weight %	

Sample #: L12030775-10 **Client ID:** 140-BH03-3 **Matrix:** Soil **Collect Date:** 03/19/2012 15:40

Analyte	Result	Units	Qualifier
Percent Solids	92.2	weight %	

Sample #: L12030775-11 **Client ID:** 140-BH03-FD2 **Matrix:** Soil **Collect Date:** 03/19/2012 15:32

Analyte	Result	Units	Qualifier
Percent Solids	90.7	weight %	

Sample #: L12030775-12 **Client ID:** 140-BH04-1 **Matrix:** Soil **Collect Date:** 03/20/2012 08:20

Analyte	Result	Units	Qualifier
Percent Solids	95.6	weight %	

Sample #: L12030775-13 **Client ID:** 140-BH04-2 **Matrix:** Soil **Collect Date:** 03/20/2012 08:28

Analyte	Result	Units	Qualifier
Percent Solids	91.8	weight %	

Sample #: L12030775-14 **Client ID:** 140-BH04-3 **Matrix:** Soil **Collect Date:** 03/20/2012 08:58

Analyte	Result	Units	Qualifier
Percent Solids	84.8	weight %	

Sample #: L12030775-15 **Client ID:** 140-BH05-1 **Matrix:** Soil **Collect Date:** 03/20/2012 09:16

Analyte	Result	Units	Qualifier
Percent Solids	97.1	weight %	

Sample #: L12030775-16 **Client ID:** 140-BH05-2 **Matrix:** Soil **Collect Date:** 03/20/2012 09:22

Analyte	Result	Units	Qualifier
Percent Solids	92.0	weight %	

Sample #: L12030775-17 **Client ID:** 140-BH05-3 **Matrix:** Soil **Collect Date:** 03/20/2012 09:27

Analyte	Result	Units	Qualifier
Percent Solids	97.4	weight %	

Sample #: L12030775-18 **Client ID:** 140-BH05-FD3 **Matrix:** Soil **Collect Date:** 03/20/2012 09:27

Analyte	Result	Units	Qualifier
Percent Solids	97.4	weight %	

Sample #: L12030775-19 **Client ID:** 140-BH06-1 **Matrix:** Soil **Collect Date:** 03/20/2012 10:19

Analyte	Result	Units	Qualifier
Percent Solids	98.3	weight %	

Sample #: L12030775-20 **Client ID:** 140-BH06-2 **Matrix:** Soil **Collect Date:** 03/20/2012 10:24

Analyte	Result	Units	Qualifier
Percent Solids	94.7	weight %	

Sample #: L12030775-21 **Client ID:** 140-BH06-3 **Matrix:** Soil **Collect Date:** 03/20/2012 10:27

Analyte	Result	Units	Qualifier
Percent Solids	93.4	weight %	

Sample #: L12030775-22 **Client ID:** 140-BH07-1 **Matrix:** Soil **Collect Date:** 03/20/2012 10:44

Analyte	Result	Units	Qualifier
Percent Solids	98.3	weight %	

Sample #: L12030775-23 **Client ID:** 140-BH07-2 **Matrix:** Soil **Collect Date:** 03/20/2012 10:49

Analyte	Result	Units	Qualifier
Percent Solids	93.7	weight %	

Sample #: L12030775-24 **Client ID:** 140-BH07-3 **Matrix:** Soil **Collect Date:** 03/20/2012 10:53

Analyte	Result	Units	Qualifier
Percent Solids	98.6	weight %	

Sample #: L12030775-25 **Client ID:** 140-BH07-MS2 **Matrix:** Soil **Collect Date:** 03/20/2012 10:49

Analyte	Result	Units	Qualifier
Percent Solids	93.7	weight %	

Sample #: L12030775-26 **Client ID:** 140-BH07-MSD2 **Matrix:** Soil **Collect Date:** 03/20/2012 10:49

Analyte	Result	Units	Qualifier
Percent Solids	93.7	weight %	

Sample #: L12030775-27 **Client ID:** 140-BH08-1 **Matrix:** Soil **Collect Date:** 03/20/2012 11:10

Analyte	Result	Units	Qualifier
Percent Solids	98.1	weight %	

Sample #: L12030775-28 **Client ID:** 140-BH08-2 **Matrix:** Soil **Collect Date:** 03/20/2012 11:15

Analyte	Result	Units	Qualifier
Percent Solids	91.6	weight %	

Sample #: L12030775-29 **Client ID:** 140-BH08-3 **Matrix:** Soil **Collect Date:** 03/20/2012 11:18

Analyte	Result	Units	Qualifier
Percent Solids	97.7	weight %	

Sample #: L12030775-30 **Client ID:** 140-BH09-1 **Matrix:** Soil **Collect Date:** 03/20/2012 11:38

Analyte	Result	Units	Qualifier
Percent Solids	93.2	weight %	

Sample #: L12030775-31 **Client ID:** 140-BH09-2 **Matrix:** Soil **Collect Date:** 03/20/2012 11:41

Analyte	Result	Units	Qualifier
Percent Solids	84.8	weight %	

Sample #: L12030775-32 **Client ID:** 140-BH09-3 **Matrix:** Soil **Collect Date:** 03/20/2012 11:47

Analyte	Result	Units	Qualifier
Percent Solids	98.9	weight %	

Sample #: L12030775-33 **Client ID:** 140-BH09-MS2 **Matrix:** Soil **Collect Date:** 03/20/2012 11:41

Analyte	Result	Units	Qualifier
Percent Solids	84.8	weight %	

Sample #: L12030775-34 **Client ID:** 140-BH09-MSD2 **Matrix:** Soil **Collect Date:** 03/20/2012 11:41

Analyte	Result	Units	Qualifier
Percent Solids	84.8	weight %	

Sample #: L12030775-35 **Client ID:** 140-BH10-1 **Matrix:** Soil **Collect Date:** 03/20/2012 12:08

Analyte	Result	Units	Qualifier
Percent Solids	93.5	weight %	

Sample #: L12030775-36 **Client ID:** 140-BH10-2 **Matrix:** Soil **Collect Date:** 03/20/2012 12:12

Analyte	Result	Units	Qualifier
Percent Solids	97.8	weight %	

Sample #: L12030775-37 **Client ID:** 140-BH10-3 **Matrix:** Soil **Collect Date:** 03/20/2012 12:15

Analyte	Result	Units	Qualifier
Percent Solids	97.4	weight %	

Sample #: L12030775-38 **Client ID:** 140-BH10-FD1 **Matrix:** Soil **Collect Date:** 03/20/2012 12:08

Analyte	Result	Units	Qualifier
Percent Solids	93.9	weight %	

Sample #: L12030775-39 **Client ID:** 140-BH11-1 **Matrix:** Soil **Collect Date:** 03/20/2012 14:20

Analyte	Result	Units	Qualifier
Percent Solids	95.5	weight %	

Sample #: L12030775-40 **Client ID:** 140-BH11-2 **Matrix:** Soil **Collect Date:** 03/20/2012 14:25

Analyte	Result	Units	Qualifier
Percent Solids	94.8	weight %	

Sample #: L12030775-41 **Client ID:** 140-BH11-3 **Matrix:** Soil **Collect Date:** 03/20/2012 14:28

Analyte	Result	Units	Qualifier
Percent Solids	96.9	weight %	

Sample #: L12030775-42 **Client ID:** 140-BH12-1 **Matrix:** Soil **Collect Date:** 03/20/2012 13:54

Analyte	Result	Units	Qualifier
Percent Solids	98.4	weight %	

Sample #: L12030775-43 **Client ID:** 140-BH12-2 **Matrix:** Soil **Collect Date:** 03/20/2012 13:56

Analyte	Result	Units	Qualifier
Percent Solids	97.5	weight %	

Sample #: L12030775-44 **Client ID:** 140-BH12-3 **Matrix:** Soil **Collect Date:** 03/20/2012 14:01

Analyte	Result	Units	Qualifier
Percent Solids	94.3	weight %	

Sample #: L12030775-45 **Client ID:** 140-BH12-FD2 **Matrix:** Soil **Collect Date:** 03/20/2012 13:56

Analyte	Result	Units	Qualifier
Percent Solids	97.6	weight %	

Sample #: L12030775-46 **Client ID:** 140-BH13-1 **Matrix:** Soil **Collect Date:** 03/20/2012 13:09

Analyte	Result	Units	Qualifier
Percent Solids	97.4	weight %	

Sample #: L12030775-47 **Client ID:** 140-BH13-2 **Matrix:** Soil **Collect Date:** 03/20/2012 13:14

Analyte	Result	Units	Qualifier
Percent Solids	91.6	weight %	

Sample #: L12030775-48 **Client ID:** 140-BH13-3 **Matrix:** Soil **Collect Date:** 03/20/2012 13:19

Analyte	Result	Units	Qualifier
Percent Solids	93.6	weight %	

Sample #: L12030775-49 **Client ID:** 140-BH14-1 **Matrix:** Soil **Collect Date:** 03/20/2012 15:23

Analyte	Result	Units	Qualifier
Percent Solids	93.5	weight %	

Sample #: L12030775-50 **Client ID:** 140-BH14-2 **Matrix:** Soil **Collect Date:** 03/20/2012 15:27

Analyte	Result	Units	Qualifier
Percent Solids	92.7	weight %	

Sample #: L12030775-51 **Client ID:** 140-BH14-3 **Matrix:** Soil **Collect Date:** 03/20/2012 15:31

Analyte	Result	Units	Qualifier
Percent Solids	83.0	weight %	

Sample #: L12030775-52 **Client ID:** 140-BH14-MS3 **Matrix:** Soil **Collect Date:** 03/20/2012 15:31

Analyte	Result	Units	Qualifier
Percent Solids	83.0	weight %	

Sample #: L12030775-53 **Client ID:** 140-BH14-MSD3 **Matrix:** Soil **Collect Date:** 03/20/2012 15:31

Analyte	Result	Units	Qualifier
Percent Solids	83.0	weight %	

Sample #: L12030775-54 **Client ID:** 140-BH15-1 **Matrix:** Soil **Collect Date:** 03/20/2012 14:49

Analyte	Result	Units	Qualifier
Percent Solids	96.7	weight %	

Sample #: L12030775-55 **Client ID:** 140-BH15-2 **Matrix:** Soil **Collect Date:** 03/20/2012 14:57

Analyte	Result	Units	Qualifier
Percent Solids	92.8	weight %	

Sample #: L12030775-56 **Client ID:** 140-BH15-3 **Matrix:** Soil **Collect Date:** 03/20/2012 15:01

Analyte	Result	Units	Qualifier
Percent Solids	92.8	weight %	

Sample #: L12030775-57 **Client ID:** 140-BH15-FD3 **Matrix:** Soil **Collect Date:** 03/20/2012 15:01

Analyte	Result	Units	Qualifier
Percent Solids	92.7	weight %	

Microbac Laboratories Inc.
Ohio Valley Division Analyst List
April 13, 2012

ADC - ANTHONY D. CANTER	AJF - AMANDA J. FICKIESEN	ALB - ANNIE L. BROWN
ALV - AMY L. VALENTINE	AML - TONY M. LONG	AZH - AFTER HOURS
BLG - BRENDA L. GREENWALT	BRG - BRENDA R. GREGORY	CAA - CASSIE A. AUGENSTEIN
CAF - CHERYL A. FLOWERS	CEB - CHAD E. BARNES	CLC - CHRYS L. CRAWFORD
CLS - CARA L. STRICKLER	CLW - CHARISSA L. WINTERS	CPD - CHAD P. DAVIS
CS - CODY M. STRAHLER	CSH - CHRIS S. HILL	DDE - DEBRA D. ELLIOTT
DEV - DAVID E. VANDENBERG	DGB - DOUGLAS G. BUTCHER	DIH - DEANNA I. HESSON
DLB - DAVID L. BUMGARNER	DLP - DOROTHY L. PAYNE	DLR - DIANNA L. RAUCH
DSM - DAVID S. MOSSOR	ECL - ERIC C. LAWSON	EDL - ERIN D. LONG
ERP - ERIN R. PORTER	FJB - FRANCES J. BOLDEN	HAV - HEMA VILASAGAR
HJR - HOLLY J. REED	JAL - JOHN A. LENT	JBK - JEREMY B. KINNEY
JDH - JUSTIN D. HESSON	JKS - JANE K. SCHAAD	JLL - JOHN L. LENT
JWR - JOHN W. RICHARDS	JWS - JACK W. SHEAVES	JYH - JI Y. HU
KEB - KATIE E. BARNES	KHR - KIM H. RHODES	KRA - KATHY R. ALBERTSON
LKN - LINDA K. NEDEFF	LSB - LESLIE S. BUCINA	MDA - MIKE D. ALBERTSON
MDC - MIKE D. COCHRAN	MES - MARY E. SCHILLING	MMB - MAREN M. BEERY
MRT - MICHELLE R. TAYLOR	MSW - MATT S. WILSON	PDM - PIERCE D. MORRIS
PWD - PAUL W. DENT	QX - QIN XU	RAH - ROY A. HALSTEAD
REK - BOB E. KYER	RLB - BOB BUCHANAN	RLK - ROBIN L. KLINGER
RWC - RODNEY W. CAMPBELL	SJP - SUZANNE J. PAUGH	SLM - STEPHANIE L. MOSSBURG
SLP - SHERI L. PFALZGRAF	TIP - TAE I. PARRISH	TMB - TIFFANY M. BAILEY
TMM - TAMMY M. MORRIS	VC - VICKI COLLIER	WJB - WILL J. BEASLEY
WTD - WADE T. DELONG	XXX - UNAVAILABLE OR SUBCONTRACT	

Shaw a world of Solutions

Chain of Custody

COC # 139791-SB004

Lab EWS
Lab Contact
Lab Phone 330-720-1061

Client US Army
W. O. TO-08, PO:620349
TAT 14 Days

Site Name WSMR - 84
Contact Name 1
Contact Phone

Bill To: Shaw Environmental and
Phone
Fax
Address Bill electronically to
City Baton Rouge
State Louisi Zip 70809

Results To: Mark Lyon
Phone 5052628920
Fax 5052628955
Address 2440 Louisiana Blvd NE
City Albuquerque
State NM Zip 87110

	Sample ID	Matrix	Wt/ Vol	Date-Time Collected	Filtered	Number Containers	Mercury by 7471A	Metals by 6010B	Metals by 6020						
						Container	G60W	G60W	G60W						
						Preservative	n	n	n						
✓	140-BH01-1	Soil		3/20/2012 9:47:00 AM		1	X	X	X						
✓	140-BH01-2	Soil		3/20/2012 9:53:00 AM		1	X	X	X						
✓	140-BH01-3	Soil		3/20/2012 9:57:00 AM		1	X	X	X						
✓	140-BH02-1	Soil		3/19/2012 2:55:00 PM		1	X	X	X						
✓	140-BH02-2	Soil		3/19/2012 3:07:00 PM		1	X	X	X						
✓	140-BH02-3	Soil		3/19/2012 3:12:00 PM		1	X	X	X						
✓	140-BH02-RB	Water		3/20/2012 3:10:00 PM		1	X	X	X						
✓	140-BH03-1	Soil		3/19/2012 3:25:00 PM		1	X	X	X						
✓	140-BH03-2	Soil		3/19/2012 3:32:00 PM		~~0~~ 1	X	X	X						
✓	140-BH03-3	Soil		3/19/2012 3:40:00 PM		1	X	X	X						
✓	140-BH03-FD2	Soil		3/19/2012 3:32:00 PM		1	X	X	X						
✓	140-BH04-1	Soil		3/20/2012 8:20:00 AM		1	X	X	X						
✓	140-BH04-2	Soil		3/20/2012 8:28:00 AM		1	X	X	X						
✓	140-BH04-3	Soil		3/20/2012 8:54:00 AM		1	X	X	X						
✓	140-BH05-1	Soil		3/20/2012 9:16:00 AM		1	X	X	X						
✓	140-BH05-2	Soil		3/20/2012 9:22:00 AM		1	X	X	X						
✓	140-BH05-3	Soil		3/20/2012 9:27:00 AM		1	X	X	X						
✓	140-BH05-FD3	Soil		3/20/2012 9:27:00 AM		~~0~~ 1	X	X	X						
✓	140-BH06-1	Soil		3/20/2012 10:19:00 AM		1	X	X	X						

Remarks/Comments
FedEx Express
Waybill No:
873013169492

Sampled By

Lab Use Only
Temp of Cooler when Received, C

1	2	3	4	5

COC Tape was present on outer package Y N
COC Tape was unbroken on outer package Y N
COC Tape ws present on sample Y N
COC Tape was unbroken on sample Y N

Received in good condition Y N
Labels indicate Properly Preserved Y N
Received within Holding Time Y N

Relinquished By	Date / Time	Received By	Date / Time	Relinquish
Rachel Daly	1600 3/22/12			

Shaw

Microbac OVD
Received: 03/22/2012 10:49
By: CARA STRICKLER
221000023417

Cara Strickler

Shaw a world of Solutions

COC # 139791-SB004

Chain of Custody

Lab EWS
Lab Contact
Lab Phone 330-720-1061

Client US Army
W. O. TO-08, PO:620349
TAT 14 Days

Site Name WSMR
Contact Name 1
Contact Phone

Bill To: Shaw Environmental and
Phone
Fax
Address Bill electronically to
City Baton Rouge
State Louisi Zip 70809

Results To: Mark Lyon
Phone 5052628920
Fax 5052628955
Address 2440 Louisiana Blvd NE
City Albuquerque
State NM Zip 87110

	Sample ID	Matrix	Wt/ Vol	Date-Time Collected	Filtered	Number Containers	Mercury by 7471A	Metals by 6010B	Metals by 6020						
						Container	G60W	G60W	G60W						
						Preservative	n	n	n						
✓	140-BH06-2	Soil		3/20/2012 10:24:00 AM		1	X	X	X						
✓	140-BH06-3	Soil		3/20/2012 10:27:00 AM		1	X	X	X						
✓	140-BH07-1	Soil		3/20/2012 10:44:00 AM		1	X	X	X						
✓	140-BH07-2	Soil		3/20/2012 10:49:00 AM		1	X	X	X						
✓	140-BH07-3	Soil		3/20/2012 10:53:00 AM		1	X	X	X						
✓	140-BH07-MS2	Soil		3/20/2012 10:49:00 AM		1	X	X	X						
✓	140-BH07-MSD2	Soil		3/20/2012 10:49:00 AM		1	X	X	X						
✓	140-BH08-1	Soil		3/20/2012 11:10:00 AM		1	X	X	X						
✓	140-BH08-2	Soil		3/20/2012 11:15:00 AM		1	X	X	X						
✓	140-BH08-3	Soil		3/20/2012 11:18:00 AM		1	X	X	X						
✓	140-BH09-1	Soil		3/20/2012 11:38:00 AM		1	X	X	X						
✓	140-BH09-2	Soil		3/20/2012 11:41:00 AM		1	X	X	X						
✓	140-BH09-3	Soil		3/20/2012 11:47:00 AM		1	X	X	X						
✓	140-BH09-MS2	Soil		3/20/2012 11:41:00 AM		1	X	X	X						
✓	140-BH09-MSD2	Soil		3/20/2012 11:41:00 AM		1	X	X	X						
✓	140-BH10-1	Soil		3/20/2012 12:08:00 PM		1	X	X	X						
✓	140-BH10-2	Soil		3/20/2012 12:12:00 PM		1	X	X	X						
✓	140-BH10-3	Soil		3/20/2012 12:15:00 PM		1	X	X	X						
✓	140-BH10-FD1	Soil		3/20/2012 12:08:00 PM		1	X	X	X						

Remarks/Comments
FedEx Express

Sampled By _____

Lab Use Only
Temp of Cooler when Received, C

1	2	3	4	5

COC Tape was present on outer package Y N
COC Tape was unbroken on outer package Y N
COC Tape ws present on sample Y N
COC Tape was unbroken on sample Y N

Received in good condition Y N
Labels indicate Properly Preserved Y N
Received within Holding Time Y N

Relinquished By	Date / Time	Received By	Date / Time	Relinquishe

Microbac OVD
Received: 03/22/2012 10:49
By: CARA STRICKLER 221000023417

Cara Strickler

Shaw® a world of Solutions™

COC # 139791-SB004

Chain of Custody

Lab EWS
Lab Contact
Lab Phone 330-720-1061

Client US Army
W. O. TO-08, PO:620349
TAT 14 Days

Site Name WSMR
Contact Name 1
Contact Phone

Bill To: Shaw Environmental and
Phone
Fax
Address Bill electronically to
City Baton Rouge
State Louisi Zip 70809

Results To: Mark Lyon
Phone 5052628920
Fax 5052628955
Address 2440 Louisiana Blvd NE
City Albuquerque
State NM Zip 87110

	Sample ID	Matrix	Wt/ Vol	Date-Time Collected	Filtered	Number Containers	Mercury by 7471A	Metals by 6010B	Metals by 6020							
						Container	G60W	G60W	G60W							
						Preservative	n	n	n							
✓	140-BH11-1	Soil		3/20/2012 2:20:00 PM		1	X	X	X							
✓	140-BH11-2	Soil		3/20/2012 2:25:00 PM		1	X	X	X							
✓	140-BH11-3	Soil		3/20/2012 2:28:00 PM		1	X	X	X							
✓	140-BH12-1	Soil		3/20/2012 1:54:00 PM		1	X	X	X							
✓	140-BH12-2	Soil		3/20/2012 1:56:00 PM		1	X	X	X							
✓	140-BH12-3	Soil		3/20/2012 2:01:00 PM		1	X	X	X							
✓	140-BH12-FD2	Soil		3/20/2012 1:56:00 PM		1	X	X	X							
✓	140-BH13-1	Soil		3/20/2012 1:09:00 PM		1	X	X	X							
✓	140-BH13-2	Soil		3/20/2012 1:14:00 PM		1	X	X	X							
✓	140-BH13-3	Soil		3/20/2012 1:19:00 PM		1	X	X	X							
✓	140-BH14-1	Soil		3/20/2012 3:23:00 PM		1	X	X	X							
✓	140-BH14-2	Soil		3/20/2012 3:27:00 PM		1	X	X	X							
✓	140-BH14-3	Soil		3/20/2012 3:31:00 PM		1	X	X	X							
✓	140-BH14-MS3	Soil		3/20/2012 3:31:00 PM		1	X	X	X							
✓	140-BH14-MSD3	Soil		3/20/2012 3:31:00 PM		1	X	X	X							
✓	140-BH15-1	Soil		3/20/2012 2:49:00 PM		1	X	X	X							
✓	140-BH15-2	Soil		3/20/2012 2:57:00 PM		1	X	X	X							
✓	140-BH15-3	Soil		3/20/2012 3:01:00 PM		1	X	X	X							
✓	140-BH15-FD3	Soil		3/20/2012 3:01:00 PM		1	X	X	X							

Remarks/Comments
FedEx Express

Sampled By _____

Lab Use Only
Temp of Cooler when Received, C

1	2	3	4	5

COC Tape was present on outer package Y N
COC Tape was unbroken on outer package Y N
COC Tape ws present on sample Y N
COC Tape was unbroken on sample Y N

Received in good condition Y N
Labels indicate Properly Preserved Y N
Received within Holding Time Y N

Relinquished By	Date / Time	Received By	Date / Time	Relinquis

Microbac OVD
Received: 03/22/2012 10:49
By: CARA STRICKLER
221000023417

Cara Strickler

Shaw a world of Solutions

COC # 139791-SB004

Chain of Custody

Lab EWS
Lab Contact

Lab Phone 330-720-1061

Client US Army
W. O. TO-08, PO:620349
TAT 14 Days

Site Name WSMR
Contact Name 1
Contact Phone

Bill To: Shaw Environmental and
Phone
Fax
Address Bill electronically to
City Baton Rouge
State Louisi Zip 70809

Results To: Mark Lyon
Phone 5052628920
Fax 5052628955
Address 2440 Louisiana Blvd NE
City Albuquerque
State NM Zip 87110

Sample ID	Matrix	Wt/ Vol	Date-Time Collected	Filtered	Number Containers	Mercury by 7471A	Metals by 6010B	Metals by 6020							
					Container	G60W	G60W	G60W							
					Preservative	n	n	n							

Remarks/Comments
FedEx Express

Sampled By

Lab Use Only
Temp of Cooler when Received, C

1	2	3	4	5

COC Tape was present on outer package Y N
COC Tape was unbroken on outer package Y N
COC Tape was present on sample Y N
COC Tape was unbroken on sample Y N

Received in good condition Y N
Labels indicate Properly Preserved Y N
Received within Holding Time Y N

Relinquished By	Date / Time	Received By	Date / Time	Relinquished

Microbac OVD
Received: 03/22/2012 10:49
By: CARA STRICKLER
221000023417

Cara Strickler

Shaw

Microbac

Laboratory Report Number: L12030946

Mark Lyon
Environmental Waste Solutions
2440 Louisiana Blvd
Albuquerque, NM 87110

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac's Ohio Valley Division (OVD). If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed below.

Laboratory Contact:
Stephanie Mossburg – Team Chemist/Data Specialist
(740) 373-4071
Stephanie.Mossburg@microbac.com

I certify that all test results meet all of the requirements of the DoD QSM and other applicable contract terms and conditions. Any exceptions are attached to this cover page or addressed in the method narratives presented in the report. All results for soil samples are reported on a 'dry-weight' basis unless specified otherwise. Analytical results for water and wastes are reported on a 'as received' basis unless specified otherwise. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories, DoD ELAP certification number 2936.01. The reported results are related only to the samples analyzed as received.

This report was certified on April 13 2012

David Vandenberg – Managing Director

State of Origin: NM
Accrediting Authority: N/A ID:N/A
QAPP: DOD Ver 4.1

Microbac

Lab Report #: L12030946
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Record of Sample Receipt and Inspection

Comments/Discrepancies

This is the record of the shipment conditions and the inspection records for the samples received and reported as a sample delivery group (SDG). All of the samples were inspected and observed to conform to our receipt policies, except as noted below.

There were no discrepancies.

Discrepancy	Resolution

Coolers

Cooler #	Temperature Gun	Temperature	COC #	Airbill #
0016050	H	1.0		1015923873910004575000795544106768
0016873	H	2.0		1015923873910004575000795544106780
0015972	H	2.0		1015923873910004575000795544106779
0016692	H	2.0		1015923873910004575000795544106757
0016599	H	2.0		1002239573910004575000873013169518

Inspection Checklist

#	Question	Result
1	Were shipping coolers sealed?	Yes
2	Were custody seals intact?	Yes
3	Were cooler temperatures in range of 0-6?	Yes
4	Was ice present?	Yes
5	Were COC's received/information complete/signed and dated?	Yes
6	Were sample containers intact and match COC?	Yes
7	Were sample labels intact and match COC?	Yes
8	Were the correct containers and volumes received?	Yes
9	Were samples received within EPA hold times?	Yes
10	Were correct perservatives used? (water only)	NA
11	Were pH ranges acceptable? (voa's excluded)	NA
12	Were VOA samples free of headspace (less than 6mm)?	NA

Microbac

Lab Report #: L12030946
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Samples Received

Client ID	Laboratory ID	Date Collected	Date Received
80-BH01-1	L12030946-01	03/21/2012 14:43	03/27/2012 11:24
80-BH01-2	L12030946-02	03/21/2012 14:48	03/27/2012 11:24
80-BH01-3	L12030946-03	03/21/2012 14:49	03/27/2012 11:24
80-BH02-1	L12030946-04	03/21/2012 15:06	03/27/2012 11:24
80-BH02-2	L12030946-05	03/21/2012 15:15	03/27/2012 11:24
80-BH02-3	L12030946-06	03/21/2012 15:16	03/27/2012 11:24
80-BH02-FD1	L12030946-07	03/21/2012 15:06	03/27/2012 11:24
80-BH03-1	L12030946-08	03/21/2012 13:26	03/27/2012 11:24
80-BH03-2	L12030946-09	03/21/2012 13:29	03/27/2012 11:24
80-BH03-3	L12030946-10	03/21/2012 13:55	03/27/2012 11:24
80-BH04-1	L12030946-11	03/21/2012 11:58	03/27/2012 11:24
80-BH04-2	L12030946-12	03/21/2012 12:03	03/27/2012 11:24
80-BH04-3	L12030946-13	03/21/2012 12:07	03/27/2012 11:24
80-BH04-MS1	L12030946-14	03/21/2012 11:58	03/27/2012 11:24
80-BH04-MSD1	L12030946-15	03/21/2012 11:58	03/27/2012 11:24
80-BH05-1	L12030946-16	03/21/2012 11:29	03/27/2012 11:24
80-BH05-2	L12030946-17	03/21/2012 11:32	03/27/2012 11:24
80-BH05-3	L12030946-18	03/21/2012 11:38	03/27/2012 11:24
80-BH05-FD2	L12030946-19	03/21/2012 11:32	03/27/2012 11:24
80-BH06-1	L12030946-20	03/21/2012 11:00	03/27/2012 11:24
80-BH06-2	L12030946-21	03/21/2012 11:05	03/27/2012 11:24
80-BH06-3	L12030946-22	03/21/2012 11:07	03/27/2012 11:24
80-BH07-1	L12030946-23	03/21/2012 16:20	03/27/2012 11:24
80-BH07-2	L12030946-24	03/21/2012 16:23	03/27/2012 11:24
80-BH07-3	L12030946-25	03/21/2012 16:27	03/27/2012 11:24
80-BH08-1	L12030946-26	03/21/2012 14:11	03/27/2012 11:24
80-BH08-2	L12030946-27	03/21/2012 14:18	03/27/2012 11:24
80-BH08-3	L12030946-28	03/21/2012 14:25	03/27/2012 11:24
80-BH08-MS2	L12030946-29	03/21/2012 14:18	03/27/2012 11:24
80-BH08-MSD2	L12030946-30	03/21/2012 14:18	03/27/2012 11:24
80-BH09-1	L12030946-31	03/21/2012 10:29	03/27/2012 11:24
80-BH09-2	L12030946-32	03/21/2012 10:33	03/27/2012 11:24
80-BH09-3	L12030946-33	03/21/2012 10:37	03/27/2012 11:24
80-BH10-1	L12030946-34	03/21/2012 08:42	03/27/2012 11:24
80-BH10-2	L12030946-35	03/21/2012 08:47	03/27/2012 11:24
80-BH10-3	L12030946-36	03/21/2012 08:50	03/27/2012 11:24
80-BH11-1	L12030946-37	03/21/2012 09:05	03/27/2012 11:24

80-BH11-2	L12030946-38	03/21/2012 09:10	03/27/2012 11:24
80-BH11-3	L12030946-39	03/21/2012 09:20	03/27/2012 11:24
80-BH11-FD3	L12030946-40	03/21/2012 09:20	03/27/2012 11:24
80-BH12-1	L12030946-41	03/21/2012 09:36	03/27/2012 11:24
80-BH12-2	L12030946-42	03/21/2012 09:43	03/27/2012 11:24
80-BH12-3	L12030946-43	03/21/2012 09:46	03/27/2012 11:24
80-BH12-FD1	L12030946-44	03/21/2012 09:36	03/27/2012 11:24
80-BH13-1	L12030946-45	03/21/2012 10:05	03/27/2012 11:24
80-BH13-2	L12030946-46	03/21/2012 10:09	03/27/2012 11:24
80-BH13-3	L12030946-47	03/21/2012 10:13	03/27/2012 11:24
80-BH14-1	L12030946-48	03/21/2012 08:16	03/27/2012 11:24
80-BH14-2	L12030946-49	03/21/2012 08:21	03/27/2012 11:24
80-BH14-3	L12030946-50	03/21/2012 08:24	03/27/2012 11:24
80-BH15-1	L12030946-51	03/21/2012 15:44	03/27/2012 11:24
80-BH15-2	L12030946-52	03/21/2012 05:50	03/27/2012 11:24
80-BH15-3	L12030946-53	03/21/2012 15:56	03/27/2012 11:24
80-BH15-FD2	L12030946-54	03/21/2012 15:50	03/27/2012 11:24
80-BH15-RB	L12030946-55	03/21/2012 16:32	03/27/2012 11:24

Login Number: L12030946
Department: Metals
Analyst: Pierce Morris
Analyst #2: Sheri Pfalzgraf

METHOD

Preparation: SW-846 3051/3005

Analysis: SW-846 6010

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Interference Check Standards: All acceptance criteria were met.

Continuing Calibration Verification: WG393870 - Due to continuing calibration verification failure for iron on 02-APR-2012 at 18:40, client samples 51 through 54 and batch QA/QC were reanalyzed on a later calibration which was compliant for iron. Due to continuing calibration verification failure for calcium and magnesium on 02-APR-2012 at 19:25, client samples 51 through 54 and batch MS/MSD were reanalyzed on a later calibration which was compliant for calcium and magnesium.

WG393672- Due to continuing calibration verification failure for iron on 03-APR-2012 at 00:01, client samples 01 through 05 and batch QA/QC were reanalyzed on a later calibration which was compliant for iron. Due to continuing calibration verification failure for beryllium and calcium on 03-APR-2012 at 02:02, client samples 01 through 05 and batch MS/MSD were reanalyzed on a later calibration which was compliant for beryllium and calcium. Due to continuing calibration verification failure for iron on 06-APR-2012 at 00:20, client samples 01 through 05 and batch MS/MSD were reanalyzed on a later calibration which was compliant for iron

WG393869 - Due to continuing calibration verification failure for beryllium, calcium, and iron on 03-APR-2012 at 02:02, client samples 43 through 50 and batch QA/QC were reanalyzed on later calibrations which were compliant for beryllium, calcium, and iron. Due to continuing calibration verification failure for magnesium 03-APR-2012 at 04:06, client samples 46 through 50 and batch MS/MSD were reanalyzed on a later calibration which was compliant for magnesium. Due to continuing calibration verification failure for iron on 06-APR-2012 at 00:20, client samples 43 through 50 and batch QA/QC were reanalyzed on a later calibration which was compliant for iron.

WG394022- Due to continuing calibration verification failure for aluminum and beryllium on 03-APR-2012 at 20:13, client samples 06 through 20 and batch QA/QC were reanalyzed on a later calibration which was compliant for aluminum and beryllium. Due to continuing calibration verification failure for sodium on 03-APR-2012 at 20:57, client samples 06 through 20 and batch QA/QC were reanalyzed on a later calibration which was compliant for sodium Due to continuing calibration verification failure for aluminum on 05-APR-2012 at 18:34, client samples 06 through 20 and batch QA/QC were reanalyzed on a later calibration which was compliant for aluminum.

Continuing Calibration Blank: WG394022 - The continuing calibration blank on 04-APR-2012 at 21:01 yielded a result for zinc of 0.0109 mg/L which exceeded the LOD, however, the reported sample results for zinc exceeded that of the CCB by greater than a factor of ten. The zinc results were reported with a 'B' qualifier to indicate the association with a noncompliant CCB.

BATCH QA/QC

Method Blank: WG393777 - Due to method blank failure, client sample 55 as well as the batch QA/QC were reanalyzed for calcium on a later calibration.

Laboratory Control Sample: All acceptance criteria were met.

Serial Dilution/Post Digestion Spikes: WG393870 - All acceptance criteria were met.

WG393872 - All acceptance criteria were met.

WG393869 - Due to post-digestion spike failure on 10-APR-2012, client sample 43 as well as the batch post spike and serial dilution were reanalyzed on 11-APR-2012 for iron and yielded compliant results.

WG394023 - Magnesium for client sample 21 was reported from the five fold dilution where the twenty-five fold serial dilution was compliant. Due to post-digestion spike failure on 03-APR-2012, client sample 23 was reanalyzed with a post spike for beryllium and yielded compliant results.

WG393777 - All acceptance criteria were met.

WG394022 - All acceptance criteria were met.

WG394265 - All acceptance criteria were met.

WG394266 - All acceptance criteria were met.

WG394289 - Due to suspected pipetting error causing too much spike to be added to the post-digestion spike. The post-digestion spike was reanalyzed at the end of analysis. All acceptance criteria were met upon reanalysis.

Matrix Spikes: WG394022 - Sample 11 was chosen by the client for MS/MSD analysis. Samples 14 (MS) and 15 (MSD) yielded noncompliant recoveries for five analytes.

WG394023 - Sample 27 was chosen by the client for MS/MSD analysis. Samples 29 (MS) and 30 (MSD) yielded noncompliant recoveries for five analytes and noncompliant RPDs for two analytes.

SAMPLES

Samples: WG394023 - Due to results that were noncompliant on the negative side upon initial analysis, beryllium for client samples 26, 33 , 34, 36, 37, 39 and 40 was reported from dilution analyses.

WG394022 - Due to results that were noncompliant on the negative side upon initial analysis, beryllium for client samples 06, 07, 10 and 20 was reported from dilution analyses. Aluminum for client samples 06 through 10 and 12 was reported from dilution analyses due to lack of digestate volume.

WG393869 - Client samples 44 through 50 were reanalyzed for iron at dilutions in order to obtain results within the calibration range.

WG393870 - Due to lack of digestate volume remaining, client samples 51 through 54 as well as the batch MS/MSD were reanalyzed at dilutions for calcium, iron and magnesium.

Narrative ID: 44275
Approved By: Sheri Pfalzgraf

Login Number: L12030946
Department: Metals
Analyst: Ji Hu

METHOD

Preparation: SW-846 3015/3051

Analysis: SW-846 6020

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Interference Check Standards: All acceptance criteria were met.

Continuing Calibration: WG393894 - Due to continuing calibration verification failure for manganese on 03-APR-2012 at 14:34, client samples 31, 32 and 34 were reanalyzed on a later calibration which was compliant for manganese.

Continuing Calibration Blank: All acceptance criteria were met.

Low Level Check: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Serial Dilution/Post Digestion Spikes: WG393616 - All acceptance criteria were met.

WG393894 - All acceptance criteria were met.

WG393917 - All acceptance criteria were met.

WG394021 - All acceptance criteria were met.

WG394181 - All acceptance criteria were met.

WG394190 - All acceptance criteria were met.

WG394333 - All acceptance criteria were met.

WG394335 - All acceptance criteria were met.

WG394336 - All acceptance criteria were met.

Matrix Spikes: WG393894 - Sample 27 was chosen by the client for MS/MSD analysis. Inconsistency was apparent in the initial MS analysis possibly due to a pipetting error, therefore, samples 27, 29(MS) and 30(MSD) were reanlyzed on 03-APR-2012. Samples 29(MS) and 30(MSD) yielded noncompliant recoveries for five analytes and a noncompliant RPD for lead.

WG394021 - Sample 11 was chosen by the client for MS/MSD analysis. Samples 14(MS) and 15(MSD) yielded noncompliant recoveries for four analytes.

WG394190 - Sample 27 was chosen by the client for MS/MSD analysis. Samples 29(MS) and 30(MSD) yielded noncompliant recoveries for silver.

WG394333 - Sample 11 was chosen by the client for MS/MSD analysis. Samples 14(MS) and 15(MSD) yielded noncompliant recoveries for silver.

SAMPLES

Samples: WG393894 - Due to high levels of nontarget analytes, all client samples were analyzed at dilutions for all analytes. Client samples 12, 21, 22, 24, 25, 27 through 32 and 34 required additional dilution analyses in order to obtain results for manganese within the calibration range.

WG393917 - Client samples 35, 38, 41, 42, 44 through 49, 52 and 54 required dilution analyses in order to obtain results for manganese within the linear range.

WG394021 - Due to high levels of nontarget analytes, all client samples were analyzed at dilutions for all analytes. Client sample 14(MS) required further dilution analysis in order to obtain a result for manganese within the calibration range. For consistency with sample 14(MS), the reference 11 and 15(MSD) were also reanalyzed at further dilutions for manganese.

WG394181 - Due to high levels of nontarget analytes, all client samples were analyzed at dilutions for all analytes.

WG394190 - Due to high levels of nontarget analytes, all client samples were analyzed at dilutions for all analytes.

WG394333 - Due to high levels of nontarget analytes, all client samples were analyzed at dilutions for all analytes

WG394335 - Due to high levels of nontarget analytes, all client samples were analyzed at dilutions for all analytes.

WG394336 - Due to high levels of nontarget analytes, all client samples were analyzed at dilutions for all analytes.

Narrative ID: 44128
Approved By: Sheri Pfalzgraf

Login Number: L12030946
Department: Metals - AA
Analyst: Pierce Morris

METHOD

Preparation: SW-846 7470/7471

Analysis: SW-846 7470/7471

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Interference Check Standards: All acceptance criteria were met.

Continuing Calibration Verification: All acceptance criteria were met.

Continuing Calibration Blank: WG393836 - The continuing calibration blank analyzed on 02-APR-12 at 13:25 yielded a result for mercury of 0.1 ug/L which equals the limit of detection. However, since the sample was non-detect for mercury, no further action was taken.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Serial Dilution/Post Digestion Spikes: WG393836 - All acceptance criteria were met.

WG394265 - All acceptance criteria were met.

WG394266 - All acceptance criteria were met.

WG394289 - All acceptance criteria were met.

Matrix Spikes: WG394265 - Sample 11 was chosen by the client for MS/MSD analysis. Samples 14(MS) and 15(MSD) met all acceptance criteria.

WG394266 - Sample 27 was chosen by the client for MS/MSD analysis. Samples 29(MS) and 30(MSD) met all acceptance criteria.

SAMPLES

Samples: All acceptance criteria were met.

Narrative ID: 44247
Approved By: Sheri Pfalzgraf

Certificate of Analysis

Sample #:	L12030946-01	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH01-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG393672	**Analyst:**	PDM	**Run Date:**	04/05/2012 23:54
Collect Date:	03/21/2012 14:43	**Dilution:**	1	**File ID:**	T1.040512.235436
Sample Tag:	02	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.371		0.0749	0.0374
Calcium, Total	7440-70-2	2170		7.49	3.74

Sample #:	L12030946-01	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH01-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393672	**Analyst:**	PDM	**Run Date:**	04/03/2012 01:37
Collect Date:	03/21/2012 14:43	**Dilution:**	1	**File ID:**	T1.040312.013707
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	3590		15.0	7.49
Antimony, Total	7440-36-0		U	0.749	0.374
Magnesium, Total	7439-95-4	1470		18.7	9.36
Potassium, Total	7440-09-7	1360		37.4	18.7
Silver, Total	7440-22-4	0.494		0.150	0.0749
Sodium, Total	7440-23-5	23.1		18.7	9.36
Zinc, Total	7440-66-6	16.2		0.749	0.374

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-01	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH01-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/10/2012 09:48
Workgroup #:	WG393672	**Analyst:**	PDM	**Run Date:**	04/10/2012 18:41
Collect Date:	03/21/2012 14:43	**Dilution:**	100	**File ID:**	T1.041012.184134
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Iron, Total	7439-89-6	13400		225	112

Certificate of Analysis

Sample #:	L12030946-01	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH01-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:57
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/03/2012 14:57
Workgroup #:	WG394021	**Analyst:**	JYH	**Run Date:**	04/03/2012 16:23
Collect Date:	03/21/2012 14:43	**Dilution:**	5	**File ID:**	NI.040312.162341
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.12	J	1.46	0.732
Barium, Total	7440-39-3	41.2		1.46	0.732
Cadmium, Total	7440-43-9		U	0.488	0.244
Chromium, Total	7440-47-3	2.12		1.95	0.976
Cobalt, Total	7440-48-4	3.25		2.44	1.22
Copper, Total	7440-50-8	4.37		2.93	1.46
Lead, Total	7439-92-1	6.40		0.976	0.488
Manganese, Total	7439-96-5	177		0.976	0.488
Nickel, Total	7440-02-0	3.23	J	3.90	1.95
Selenium, Total	7782-49-2		U	0.976	0.488
Thallium, Total	7440-28-0		U	0.195	0.0976
Vanadium, Total	7440-62-2	7.47		2.44	1.22

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-01	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH01-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394181	**Analyst:**	JYH	**Run Date:**	04/04/2012 17:47
Collect Date:	03/21/2012 14:43	**Dilution:**	20	**File ID:**	NI.040412.174736
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.99	1.50

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030946-01	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	80-BH01-1	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:06
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394265	**Analyst:**	PDM	**Run Date:**	04/05/2012 09:50
Collect Date:	03/21/2012 14:43	**Dilution:**	1	**File ID:**	HY.040512.095033
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0998	0.00998

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-02	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH01-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG393672	**Analyst:**	PDM	**Run Date:**	04/05/2012 23:58
Collect Date:	03/21/2012 14:48	**Dilution:**	1	**File ID:**	T1.040512.235814
Sample Tag:	02	**Units:**	mg/kg	**Percent Solid:**	98.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.337		0.0678	0.0339
Calcium, Total	7440-70-2	4440		6.78	3.39

Sample #:	L12030946-02	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH01-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393672	**Analyst:**	PDM	**Run Date:**	04/03/2012 01:40
Collect Date:	03/21/2012 14:48	**Dilution:**	1	**File ID:**	T1.040312.014045
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	2170		13.6	6.78
Antimony, Total	7440-36-0		U	0.678	0.339
Magnesium, Total	7439-95-4	1190		17.0	8.48
Potassium, Total	7440-09-7	743		33.9	17.0
Silver, Total	7440-22-4	0.142		0.136	0.0678
Sodium, Total	7440-23-5	28.0		17.0	8.48
Zinc, Total	7440-66-6	13.5		0.678	0.339

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030946-02	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH01-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/10/2012 09:48
Workgroup #:	WG393672	**Analyst:**	PDM	**Run Date:**	04/10/2012 18:45
Collect Date:	03/21/2012 14:48	**Dilution:**	100	**File ID:**	T1.041012.184525
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Iron, Total	7439-89-6	9590		203	102

Sample #:	L12030946-02	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH01-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:57
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/03/2012 14:57
Workgroup #:	WG394021	**Analyst:**	JYH	**Run Date:**	04/03/2012 16:26
Collect Date:	03/21/2012 14:48	**Dilution:**	5	**File ID:**	NI.040312.162627
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.11	J	1.45	0.727
Barium, Total	7440-39-3	47.9		1.45	0.727
Cadmium, Total	7440-43-9		U	0.485	0.242
Chromium, Total	7440-47-3	1.83	J	1.94	0.970
Cobalt, Total	7440-48-4	2.59		2.42	1.21
Copper, Total	7440-50-8	3.95		2.91	1.45
Lead, Total	7439-92-1	5.27		0.970	0.485
Manganese, Total	7439-96-5	138		0.970	0.485
Nickel, Total	7440-02-0	2.74	J	3.88	1.94
Selenium, Total	7782-49-2		U	0.970	0.485
Thallium, Total	7440-28-0		U	0.194	0.0970
Vanadium, Total	7440-62-2	7.87		2.42	1.21

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-02	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH01-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394181	**Analyst:**	JYH	**Run Date:**	04/04/2012 17:50
Collect Date:	03/21/2012 14:48	**Dilution:**	20	**File ID:**	NI.040412.175022
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	98.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.71	1.36

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-02	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	80-BH01-2	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:06
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394265	**Analyst:**	PDM	**Run Date:**	04/05/2012 09:53
Collect Date:	03/21/2012 14:48	**Dilution:**	1	**File ID:**	HY.040512.095358
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0991	0.00991
U	Analyte was not detected. The concentration is below the reported LOD.				

Sample #:	L12030946-03	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH01-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG393672	**Analyst:**	PDM	**Run Date:**	04/06/2012 00:01
Collect Date:	03/21/2012 14:49	**Dilution:**	1	**File ID:**	T1.040612.000152
Sample Tag:	02	**Units:**	mg/kg	**Percent Solid:**	97.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.448		0.0758	0.0379
Calcium, Total	7440-70-2	2880		7.58	3.79

Sample #:	L12030946-03	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH01-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393672	**Analyst:**	PDM	**Run Date:**	04/03/2012 01:44
Collect Date:	03/21/2012 14:49	**Dilution:**	1	**File ID:**	T1.040312.014423
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	3500		15.2	7.58
Antimony, Total	7440-36-0		U	0.758	0.379
Magnesium, Total	7439-95-4	2030		19.0	9.48
Potassium, Total	7440-09-7	1400		37.9	19.0
Silver, Total	7440-22-4	0.643		0.152	0.0758
Sodium, Total	7440-23-5	50.1		19.0	9.48
Zinc, Total	7440-66-6	19.9		0.758	0.379
U	Analyte was not detected. The concentration is below the reported LOD.				

Certificate of Analysis

Sample #:	L12030946-03	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH01-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/10/2012 09:48
Workgroup #:	WG393672	**Analyst:**	PDM	**Run Date:**	04/10/2012 18:49
Collect Date:	03/21/2012 14:49	**Dilution:**	100	**File ID:**	T1.041012.184916
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Iron, Total	7439-89-6	10300		227	114

Sample #:	L12030946-03	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH01-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:57
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/03/2012 14:57
Workgroup #:	WG394021	**Analyst:**	JYH	**Run Date:**	04/03/2012 16:34
Collect Date:	03/21/2012 14:49	**Dilution:**	5	**File ID:**	NI.040312.163451
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2		U	1.50	0.749
Barium, Total	7440-39-3	27.3		1.50	0.749
Cadmium, Total	7440-43-9		U	0.499	0.250
Chromium, Total	7440-47-3		U	2.00	0.998
Cobalt, Total	7440-48-4	2.48	J	2.50	1.25
Copper, Total	7440-50-8	3.22		2.99	1.50
Lead, Total	7439-92-1	5.50		0.998	0.499
Manganese, Total	7439-96-5	139		0.998	0.499
Nickel, Total	7440-02-0	2.15	J	3.99	2.00
Selenium, Total	7782-49-2		U	0.998	0.499
Thallium, Total	7440-28-0		U	0.200	0.0998
Vanadium, Total	7440-62-2	4.64		2.50	1.25

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-03	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH01-3	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394181	**Analyst:**	JYH	**Run Date:**	04/04/2012 17:53
Collect Date:	03/21/2012 14:49	**Dilution:**	20	**File ID:**	NI.040412.175309
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	97.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.03	1.52

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-03	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	80-BH01-3	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:06
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394265	**Analyst:**	PDM	**Run Date:**	04/05/2012 09:55
Collect Date:	03/21/2012 14:49	**Dilution:**	1	**File ID:**	HY.040512.095541
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.102	0.0102

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-04	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH02-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG393672	**Analyst:**	PDM	**Run Date:**	04/06/2012 00:05
Collect Date:	03/21/2012 15:06	**Dilution:**	1	**File ID:**	T1.040612.000531
Sample Tag:	02	**Units:**	mg/kg	**Percent Solid:**	98.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.371		0.0744	0.0372
Calcium, Total	7440-70-2	2580		7.44	3.72

Sample #:	L12030946-04	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH02-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393672	**Analyst:**	PDM	**Run Date:**	04/03/2012 01:48
Collect Date:	03/21/2012 15:06	**Dilution:**	1	**File ID:**	T1.040312.014801
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	3600		14.9	7.44
Antimony, Total	7440-36-0		U	0.744	0.372
Magnesium, Total	7439-95-4	1810		18.6	9.30
Potassium, Total	7440-09-7	1560		37.2	18.6
Silver, Total	7440-22-4	0.830		0.149	0.0744
Sodium, Total	7440-23-5	23.8		18.6	9.30
Zinc, Total	7440-66-6	18.3		0.744	0.372

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030946-04	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH02-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/10/2012 09:48
Workgroup #:	WG393672	**Analyst:**	PDM	**Run Date:**	04/10/2012 18:53
Collect Date:	03/21/2012 15:06	**Dilution:**	100	**File ID:**	T1.041012.185307
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Iron, Total	7439-89-6	14200		223	112

Sample #:	L12030946-04	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH02-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:57
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/03/2012 14:57
Workgroup #:	WG394021	**Analyst:**	JYH	**Run Date:**	04/03/2012 16:37
Collect Date:	03/21/2012 15:06	**Dilution:**	5	**File ID:**	NI.040312.163737
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.01	J	1.51	0.755
Barium, Total	7440-39-3	32.8		1.51	0.755
Cadmium, Total	7440-43-9		U	0.503	0.252
Chromium, Total	7440-47-3	1.75	J	2.01	1.01
Cobalt, Total	7440-48-4	2.76		2.52	1.26
Copper, Total	7440-50-8	3.88		3.02	1.51
Lead, Total	7439-92-1	5.38		1.01	0.503
Manganese, Total	7439-96-5	143		1.01	0.503
Nickel, Total	7440-02-0	2.61	J	4.03	2.01
Selenium, Total	7782-49-2		U	1.01	0.503
Thallium, Total	7440-28-0		U	0.201	0.101
Vanadium, Total	7440-62-2	8.60		2.52	1.26

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-04	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH02-1	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394181	**Analyst:**	JYH	**Run Date:**	04/04/2012 17:55
Collect Date:	03/21/2012 15:06	**Dilution:**	20	**File ID:**	NI.040412.175556
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	98.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.98	1.49

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-04	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	80-BH02-1	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:06
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394265	**Analyst:**	PDM	**Run Date:**	04/05/2012 09:57
Collect Date:	03/21/2012 15:06	**Dilution:**	1	**File ID:**	HY.040512.095723
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0990	0.00990
U	Analyte was not detected. The concentration is below the reported LOD.				

Sample #:	L12030946-05	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH02-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393672	**Analyst:**	PDM	**Run Date:**	04/03/2012 01:51
Collect Date:	03/21/2012 15:15	**Dilution:**	1	**File ID:**	T1.040312.015140
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	4650		15.4	7.69
Antimony, Total	7440-36-0		U	0.769	0.384
Magnesium, Total	7439-95-4	2490		19.2	9.61
Potassium, Total	7440-09-7	1090		38.4	19.2
Silver, Total	7440-22-4	1.02		0.154	0.0769
Sodium, Total	7440-23-5	71.9		19.2	9.61
Zinc, Total	7440-66-6	22.6		0.769	0.384
U	Analyte was not detected. The concentration is below the reported LOD.				

Sample #:	L12030946-05	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH02-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG393672	**Analyst:**	PDM	**Run Date:**	04/06/2012 00:09
Collect Date:	03/21/2012 15:15	**Dilution:**	1	**File ID:**	T1.040612.000909
Sample Tag:	02	**Units:**	mg/kg	**Percent Solid:**	98.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.478		0.0769	0.0384
Calcium, Total	7440-70-2	7240		7.69	3.84

Certificate of Analysis

Sample #:	L12030946-05	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH02-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/10/2012 09:48
Workgroup #:	WG393672	**Analyst:**	PDM	**Run Date:**	04/10/2012 18:56
Collect Date:	03/21/2012 15:15	**Dilution:**	100	**File ID:**	T1.041012.185659
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Iron, Total	7439-89-6	16000		231	115

Sample #:	L12030946-05	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH02-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:57
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/03/2012 14:57
Workgroup #:	WG394021	**Analyst:**	JYH	**Run Date:**	04/03/2012 16:40
Collect Date:	03/21/2012 15:15	**Dilution:**	5	**File ID:**	NI.040312.164023
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.13	J	1.48	0.739
Barium, Total	7440-39-3	63.7		1.48	0.739
Cadmium, Total	7440-43-9		U	0.493	0.246
Chromium, Total	7440-47-3	1.90	J	1.97	0.985
Cobalt, Total	7440-48-4	4.33		2.46	1.23
Copper, Total	7440-50-8	4.54		2.96	1.48
Lead, Total	7439-92-1	7.10		0.985	0.493
Manganese, Total	7439-96-5	196		0.985	0.493
Nickel, Total	7440-02-0	4.09		3.94	1.97
Selenium, Total	7782-49-2		U	0.985	0.493
Thallium, Total	7440-28-0		U	0.197	0.0985
Vanadium, Total	7440-62-2	9.71		2.46	1.23

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-05	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH02-2	**Prep Method:**	3051A	**Prep Date:**	03/29/2012 13:01
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394181	**Analyst:**	JYH	**Run Date:**	04/04/2012 16:20
Collect Date:	03/21/2012 15:15	**Dilution:**	20	**File ID:**	NI.040412.162045
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	98.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.07	1.54

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-05	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	80-BH02-2	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:06
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394265	**Analyst:**	PDM	**Run Date:**	04/05/2012 09:59
Collect Date:	03/21/2012 15:15	**Dilution:**	1	**File ID:**	HY.040512.095919
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0993	0.00993

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-06	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH02-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/03/2012 09:15
Workgroup #:	WG394022	**Analyst:**	PDM	**Run Date:**	04/03/2012 20:27
Collect Date:	03/21/2012 15:16	**Dilution:**	1	**File ID:**	T1.040312.202752
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	99.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0		U	0.774	0.387
Calcium, Total	7440-70-2	2140		7.74	3.87
Iron, Total	7439-89-6	12100		2.32	1.16
Magnesium, Total	7439-95-4	970		19.4	9.68
Potassium, Total	7440-09-7	560		38.7	19.4
Zinc, Total	7440-66-6	12.8	B	0.774	0.387

B	The reported result is associated with a contaminated method blank.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-06	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH02-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG394022	**Analyst:**	PDM	**Run Date:**	04/05/2012 18:05
Collect Date:	03/21/2012 15:16	**Dilution:**	2	**File ID:**	T1.040512.180510
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	99.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.214		0.155	0.0774
Sodium, Total	7440-23-5	66.3		38.7	19.4

Certificate of Analysis

Sample #:	L12030946-06	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH02-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/10/2012 09:48
Workgroup #:	WG394022	**Analyst:**	PDM	**Run Date:**	04/10/2012 17:47
Collect Date:	03/21/2012 15:16	**Dilution:**	100	**File ID:**	T1.041012.174737
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	99.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	2250		1550	774

Sample #:	L12030946-06	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH02-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:57
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/03/2012 14:57
Workgroup #:	WG394021	**Analyst:**	JYH	**Run Date:**	04/03/2012 16:43
Collect Date:	03/21/2012 15:16	**Dilution:**	5	**File ID:**	NI.040312.164310
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	99.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2		U	1.47	0.734
Barium, Total	7440-39-3	14.5		1.47	0.734
Cadmium, Total	7440-43-9		U	0.489	0.245
Chromium, Total	7440-47-3		U	1.96	0.979
Cobalt, Total	7440-48-4	1.56	J	2.45	1.22
Copper, Total	7440-50-8	2.06	J	2.94	1.47
Lead, Total	7439-92-1	3.56		0.979	0.489
Manganese, Total	7439-96-5	78.6		0.979	0.489
Nickel, Total	7440-02-0		U	3.92	1.96
Selenium, Total	7782-49-2		U	0.979	0.489
Thallium, Total	7440-28-0		U	0.196	0.0979
Vanadium, Total	7440-62-2	4.78		2.45	1.22

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-06	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH02-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/05/2012 09:55
Workgroup #:	WG394333	**Analyst:**	JYH	**Run Date:**	04/05/2012 16:06
Collect Date:	03/21/2012 15:16	**Dilution:**	20	**File ID:**	NI.040512.160637
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	99.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.10	1.55

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-06	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	80-BH02-3	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:06
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394265	**Analyst:**	PDM	**Run Date:**	04/05/2012 10:01
Collect Date:	03/21/2012 15:16	**Dilution:**	1	**File ID:**	HY.040512.100103
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	99.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0972	0.00972

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-07	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH02-FD1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/03/2012 09:15
Workgroup #:	WG394022	**Analyst:**	PDM	**Run Date:**	04/03/2012 20:42
Collect Date:	03/21/2012 15:06	**Dilution:**	1	**File ID:**	T1.040312.204238
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.3

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0		U	0.742	0.371
Calcium, Total	7440-70-2	2260		7.42	3.71
Iron, Total	7439-89-6	13400		2.23	1.11
Magnesium, Total	7439-95-4	1990		18.6	9.28
Potassium, Total	7440-09-7	1790		37.1	18.6
Zinc, Total	7440-66-6	20.0	B	0.742	0.371

B	The reported result is associated with a contaminated method blank.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-07	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH02-FD1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG394022	**Analyst:**	PDM	**Run Date:**	04/05/2012 18:16
Collect Date:	03/21/2012 15:06	**Dilution:**	2	**File ID:**	T1.040512.181605
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.3

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.454		0.148	0.0742
Sodium, Total	7440-23-5	36.3	J	37.1	18.6

J	Estimated value ; the analyte concentration was less than the LOQ.

Certificate of Analysis

Sample #:	L12030946-07	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH02-FD1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/10/2012 09:48
Workgroup #:	WG394022	**Analyst:**	PDM	**Run Date:**	04/10/2012 17:51
Collect Date:	03/21/2012 15:06	**Dilution:**	100	**File ID:**	T1.041012.175129
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	98.3

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	6000		1480	742

Sample #:	L12030946-07	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH02-FD1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:57
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/03/2012 14:57
Workgroup #:	WG394021	**Analyst:**	JYH	**Run Date:**	04/03/2012 16:45
Collect Date:	03/21/2012 15:06	**Dilution:**	5	**File ID:**	NI.040312.164555
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.3

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.19	J	1.48	0.742
Barium, Total	7440-39-3	39.8		1.48	0.742
Cadmium, Total	7440-43-9		U	0.495	0.247
Chromium, Total	7440-47-3	1.80	J	1.98	0.990
Cobalt, Total	7440-48-4	3.29		2.47	1.24
Copper, Total	7440-50-8	4.27		2.97	1.48
Lead, Total	7439-92-1	7.05		0.990	0.495
Manganese, Total	7439-96-5	171		0.990	0.495
Nickel, Total	7440-02-0	2.91	J	3.96	1.98
Selenium, Total	7782-49-2		U	0.990	0.495
Thallium, Total	7440-28-0		U	0.198	0.0990
Vanadium, Total	7440-62-2	8.01		2.47	1.24

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-07	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH02-FD1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/05/2012 09:55
Workgroup #:	WG394333	**Analyst:**	JYH	**Run Date:**	04/05/2012 16:09
Collect Date:	03/21/2012 15:06	**Dilution:**	20	**File ID:**	NI.040512.160923
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	98.3

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.97	1.48

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-07	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	80-BH02-FD1	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:06
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394265	**Analyst:**	PDM	**Run Date:**	04/05/2012 10:06
Collect Date:	03/21/2012 15:06	**Dilution:**	1	**File ID:**	HY.040512.100615
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.3

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0968	0.00968

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-08	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH03-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG394022	**Analyst:**	PDM	**Run Date:**	04/05/2012 18:19
Collect Date:	03/21/2012 13:26	**Dilution:**	1	**File ID:**	T1.040512.181943
Sample Tag:	02	**Units:**	mg/kg	**Percent Solid:**	97.5

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.292		0.0780	0.0390
Sodium, Total	7440-23-5	28.6		19.5	9.75

Sample #:	L12030946-08	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH03-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/03/2012 09:15
Workgroup #:	WG394022	**Analyst:**	PDM	**Run Date:**	04/03/2012 20:46
Collect Date:	03/21/2012 13:26	**Dilution:**	1	**File ID:**	T1.040312.204626
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.5

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0		U	0.780	0.390
Calcium, Total	7440-70-2	1810		7.80	3.90
Iron, Total	7439-89-6	8360		2.34	1.17
Magnesium, Total	7439-95-4	1330		19.5	9.75
Potassium, Total	7440-09-7	1160		39.0	19.5
Zinc, Total	7440-66-6	14.3	B	0.780	0.390

B	The reported result is associated with a contaminated method blank.
U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030946-08	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH03-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/10/2012 09:48
Workgroup #:	WG394022	**Analyst:**	PDM	**Run Date:**	04/10/2012 17:55
Collect Date:	03/21/2012 13:26	**Dilution:**	100	**File ID:**	T1.041012.175522
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.5

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	3740		1560	780

Sample #:	L12030946-08	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH03-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:57
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/03/2012 14:57
Workgroup #:	WG394021	**Analyst:**	JYH	**Run Date:**	04/03/2012 16:48
Collect Date:	03/21/2012 13:26	**Dilution:**	5	**File ID:**	NI.040312.164842
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.5

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	0.954	J	1.52	0.759
Barium, Total	7440-39-3	28.8		1.52	0.759
Cadmium, Total	7440-43-9		U	0.506	0.253
Chromium, Total	7440-47-3	1.20	J	2.02	1.01
Cobalt, Total	7440-48-4	2.26	J	2.53	1.26
Copper, Total	7440-50-8	3.12		3.03	1.52
Lead, Total	7439-92-1	5.14		1.01	0.506
Manganese, Total	7439-96-5	117		1.01	0.506
Nickel, Total	7440-02-0		U	4.05	2.02
Selenium, Total	7782-49-2		U	1.01	0.506
Thallium, Total	7440-28-0		U	0.202	0.101
Vanadium, Total	7440-62-2	6.41		2.53	1.26

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-08	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH03-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/05/2012 09:55
Workgroup #:	WG394333	**Analyst:**	JYH	**Run Date:**	04/05/2012 16:23
Collect Date:	03/21/2012 13:26	**Dilution:**	20	**File ID:**	NI.040512.162317
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	97.5

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.12	1.56

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-08	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	80-BH03-1	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:06
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394265	**Analyst:**	PDM	**Run Date:**	04/05/2012 10:07
Collect Date:	03/21/2012 13:26	**Dilution:**	1	**File ID:**	HY.040512.100758
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.5

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.102	0.0102

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-09	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH03-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/03/2012 09:15
Workgroup #:	WG394022	**Analyst:**	PDM	**Run Date:**	04/03/2012 20:50
Collect Date:	03/21/2012 13:29	**Dilution:**	1	**File ID:**	T1.040312.205006
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0		U	0.730	0.365
Calcium, Total	7440-70-2	1660		7.30	3.65
Iron, Total	7439-89-6	6890		2.19	1.09
Magnesium, Total	7439-95-4	1230		18.2	9.12
Potassium, Total	7440-09-7	706		36.5	18.2
Zinc, Total	7440-66-6	13.2	B	0.730	0.365

B	The reported result is associated with a contaminated method blank.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-09	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH03-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG394022	**Analyst:**	PDM	**Run Date:**	04/05/2012 18:23
Collect Date:	03/21/2012 13:29	**Dilution:**	1	**File ID:**	T1.040512.182321
Sample Tag:	02	**Units:**	mg/kg	**Percent Solid:**	98.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.276		0.0730	0.0365
Sodium, Total	7440-23-5	33.4		18.2	9.12

Certificate of Analysis

Sample #:	L12030946-09	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH03-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/10/2012 09:48
Workgroup #:	WG394022	**Analyst:**	PDM	**Run Date:**	04/10/2012 17:59
Collect Date:	03/21/2012 13:29	**Dilution:**	100	**File ID:**	T1.041012.175915
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	3000		1460	730

Sample #:	L12030946-09	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH03-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:57
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/03/2012 14:57
Workgroup #:	WG394021	**Analyst:**	JYH	**Run Date:**	04/03/2012 16:51
Collect Date:	03/21/2012 13:29	**Dilution:**	5	**File ID:**	NI.040312.165128
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.01	J	1.49	0.743
Barium, Total	7440-39-3	44.0		1.49	0.743
Cadmium, Total	7440-43-9		U	0.496	0.248
Chromium, Total	7440-47-3	2.65		1.98	0.991
Cobalt, Total	7440-48-4	3.37		2.48	1.24
Copper, Total	7440-50-8	4.05		2.97	1.49
Lead, Total	7439-92-1	6.61		0.991	0.496
Manganese, Total	7439-96-5	185		0.991	0.496
Nickel, Total	7440-02-0	2.89	J	3.97	1.98
Selenium, Total	7782-49-2		U	0.991	0.496
Thallium, Total	7440-28-0		U	0.198	0.0991
Vanadium, Total	7440-62-2	8.98		2.48	1.24

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-09	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH03-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/05/2012 09:55
Workgroup #:	WG394333	**Analyst:**	JYH	**Run Date:**	04/05/2012 16:26
Collect Date:	03/21/2012 13:29	**Dilution:**	20	**File ID:**	NI.040512.162603
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	98.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.92	1.46

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-09	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	80-BH03-2	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:06
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394265	**Analyst:**	PDM	**Run Date:**	04/05/2012 10:09
Collect Date:	03/21/2012 13:29	**Dilution:**	1	**File ID:**	HY.040512.100946
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0978	0.00978

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-10	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH03-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/03/2012 09:15
Workgroup #:	WG394022	**Analyst:**	PDM	**Run Date:**	04/03/2012 20:53
Collect Date:	03/21/2012 13:55	**Dilution:**	1	**File ID:**	T1.040312.205346
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	99.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0		U	0.771	0.386
Calcium, Total	7440-70-2	1650		7.71	3.86
Iron, Total	7439-89-6	9130		2.31	1.16
Magnesium, Total	7439-95-4	1230		19.3	9.64
Potassium, Total	7440-09-7	933		38.6	19.3
Zinc, Total	7440-66-6	12.2	B	0.771	0.386

B	The reported result is associated with a contaminated method blank.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-10	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH03-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG394022	**Analyst:**	PDM	**Run Date:**	04/05/2012 18:26
Collect Date:	03/21/2012 13:55	**Dilution:**	2	**File ID:**	T1.040512.182659
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	99.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.246		0.154	0.0771
Sodium, Total	7440-23-5	37.4	J	38.6	19.3

J	Estimated value ; the analyte concentration was less than the LOQ.

Certificate of Analysis

Sample #:	L12030946-10	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH03-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/10/2012 09:48
Workgroup #:	WG394022	**Analyst:**	PDM	**Run Date:**	04/10/2012 18:03
Collect Date:	03/21/2012 13:55	**Dilution:**	100	**File ID:**	T1.041012.180307
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	99.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	2630		1540	771

Sample #:	L12030946-10	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH03-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:50
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393894	**Analyst:**	JYH	**Run Date:**	04/02/2012 15:50
Collect Date:	03/21/2012 13:55	**Dilution:**	5	**File ID:**	NI.040212.155018
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	99.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2		U	1.46	0.729
Barium, Total	7440-39-3	20.1		1.46	0.729
Cadmium, Total	7440-43-9		U	0.486	0.243
Chromium, Total	7440-47-3		U	1.95	0.973
Cobalt, Total	7440-48-4	1.64	J	2.43	1.22
Copper, Total	7440-50-8	1.58	J	2.92	1.46
Lead, Total	7439-92-1	3.87		0.973	0.486
Manganese, Total	7439-96-5	87.7		0.973	0.486
Nickel, Total	7440-02-0		U	3.89	1.95
Selenium, Total	7782-49-2		U	0.973	0.486
Thallium, Total	7440-28-0		U	0.195	0.0973
Vanadium, Total	7440-62-2	3.59		2.43	1.22

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-10	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH03-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/05/2012 09:55
Workgroup #:	WG394333	**Analyst:**	JYH	**Run Date:**	04/05/2012 16:28
Collect Date:	03/21/2012 13:55	**Dilution:**	20	**File ID:**	NI.040512.162850
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	99.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.08	1.54

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-10	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	80-BH03-3	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:11
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394266	**Analyst:**	PDM	**Run Date:**	04/05/2012 10:24
Collect Date:	03/21/2012 13:55	**Dilution:**	1	**File ID:**	HY.040512.102428
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	99.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0953	0.00953

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-11	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH04-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/03/2012 09:15
Workgroup #:	WG394022	**Analyst:**	PDM	**Run Date:**	04/03/2012 21:04
Collect Date:	03/21/2012 11:58	**Dilution:**	1	**File ID:**	T1.040312.210451
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	96.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0		U	0.746	0.373
Calcium, Total	7440-70-2	1920		7.46	3.73
Iron, Total	7439-89-6	10700		2.24	1.12
Magnesium, Total	7439-95-4	1760		18.7	9.33
Potassium, Total	7440-09-7	1580		37.3	18.7
Zinc, Total	7440-66-6	18.2	B	0.746	0.373

B	The reported result is associated with a contaminated method blank.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-11	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH04-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/06/2012 11:26
Workgroup #:	WG394022	**Analyst:**	PDM	**Run Date:**	04/06/2012 13:47
Collect Date:	03/21/2012 11:58	**Dilution:**	1	**File ID:**	T1.040612.134755
Sample Tag:	03	**Units:**	mg/kg	**Percent Solid:**	96.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	5020		14.9	7.46

Certificate of Analysis

Sample #:	L12030946-11	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH04-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG394022	**Analyst:**	PDM	**Run Date:**	04/05/2012 18:30
Collect Date:	03/21/2012 11:58	**Dilution:**	1	**File ID:**	T1.040512.183038
Sample Tag:	02	**Units:**	mg/kg	**Percent Solid:**	96.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.465		0.0746	0.0373
Sodium, Total	7440-23-5	30.6		18.7	9.33

Sample #:	L12030946-11	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH04-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:57
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/03/2012 14:57
Workgroup #:	WG394021	**Analyst:**	JYH	**Run Date:**	04/03/2012 15:28
Collect Date:	03/21/2012 11:58	**Dilution:**	5	**File ID:**	NI.040312.152827
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	96.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.26	J	1.56	0.778
Barium, Total	7440-39-3	42.4		1.56	0.778
Cadmium, Total	7440-43-9		U	0.519	0.259
Chromium, Total	7440-47-3	1.99	J	2.08	1.04
Cobalt, Total	7440-48-4	3.52		2.59	1.30
Copper, Total	7440-50-8	4.20		3.11	1.56
Lead, Total	7439-92-1	6.49		1.04	0.519
Nickel, Total	7440-02-0	3.33	J	4.15	2.08
Selenium, Total	7782-49-2		U	1.04	0.519
Thallium, Total	7440-28-0		U	0.208	0.104
Vanadium, Total	7440-62-2	7.29		2.59	1.30

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-11	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH04-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/05/2012 09:55
Workgroup #:	WG394333	**Analyst:**	JYH	**Run Date:**	04/05/2012 15:58
Collect Date:	03/21/2012 11:58	**Dilution:**	20	**File ID:**	NI.040512.155817
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	96.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.99	1.49

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-11	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH04-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:57
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/03/2012 14:57
Workgroup #:	WG394021	**Analyst:**	JYH	**Run Date:**	04/03/2012 17:08
Collect Date:	03/21/2012 11:58	**Dilution:**	50	**File ID:**	NI.040312.170809
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	96.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	187		10.4	5.19

Sample #:	L12030946-11	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	80-BH04-1	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:06
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394265	**Analyst:**	PDM	**Run Date:**	04/05/2012 10:11
Collect Date:	03/21/2012 11:58	**Dilution:**	1	**File ID:**	HY.040512.101137
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	96.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6	0.0103	J	0.101	0.0101

J	Estimated value ; the analyte concentration was less than the LOQ.

Sample #:	L12030946-12	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH04-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/03/2012 09:15
Workgroup #:	WG394022	**Analyst:**	PDM	**Run Date:**	04/03/2012 21:08
Collect Date:	03/21/2012 12:03	**Dilution:**	1	**File ID:**	T1.040312.210840
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0		U	0.775	0.388
Calcium, Total	7440-70-2	4030		7.75	3.88
Iron, Total	7439-89-6	13500		2.33	1.16
Magnesium, Total	7439-95-4	3120		19.4	9.69
Potassium, Total	7440-09-7	1570		38.8	19.4
Zinc, Total	7440-66-6	27.9	B	0.775	0.388

B	The reported result is associated with a contaminated method blank.
U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030946-12	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH04-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG394022	**Analyst:**	PDM	**Run Date:**	04/05/2012 18:41
Collect Date:	03/21/2012 12:03	**Dilution:**	1	**File ID:**	T1.040512.184134
Sample Tag:	02	**Units:**	mg/kg	**Percent Solid:**	97.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.637		0.0775	0.0388
Sodium, Total	7440-23-5	119		19.4	9.69

Sample #:	L12030946-12	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH04-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/10/2012 09:48
Workgroup #:	WG394022	**Analyst:**	PDM	**Run Date:**	04/10/2012 18:07
Collect Date:	03/21/2012 12:03	**Dilution:**	100	**File ID:**	T1.041012.180700
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	8320		1550	775

Sample #:	L12030946-12	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH04-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:50
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393894	**Analyst:**	JYH	**Run Date:**	04/02/2012 15:53
Collect Date:	03/21/2012 12:03	**Dilution:**	5	**File ID:**	NI.040212.155304
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	0.925	J	1.49	0.744
Barium, Total	7440-39-3	55.8		1.49	0.744
Cadmium, Total	7440-43-9		U	0.496	0.248
Chromium, Total	7440-47-3	2.86		1.99	0.993
Cobalt, Total	7440-48-4	6.06		2.48	1.24
Copper, Total	7440-50-8	4.95		2.98	1.49
Lead, Total	7439-92-1	9.78		0.993	0.496
Nickel, Total	7440-02-0	5.15		3.97	1.99
Selenium, Total	7782-49-2		U	0.993	0.496
Thallium, Total	7440-28-0	0.130	J	0.199	0.0993
Vanadium, Total	7440-62-2	11.8		2.48	1.24

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030946-12	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH04-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/05/2012 09:55
Workgroup #:	WG394333	**Analyst:**	JYH	**Run Date:**	04/05/2012 16:31
Collect Date:	03/21/2012 12:03	**Dilution:**	20	**File ID:**	NI.040512.163136
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	97.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.10	1.55

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-12	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH04-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:50
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393894	**Analyst:**	JYH	**Run Date:**	04/02/2012 17:06
Collect Date:	03/21/2012 12:03	**Dilution:**	50	**File ID:**	NI.040212.170658
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	97.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	276		9.93	4.96

Sample #:	L12030946-12	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	80-BH04-2	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:11
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394266	**Analyst:**	PDM	**Run Date:**	04/05/2012 10:28
Collect Date:	03/21/2012 12:03	**Dilution:**	1	**File ID:**	HY.040512.102827
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.102	0.0102

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-13	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH04-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/03/2012 09:15
Workgroup #:	WG394022	**Analyst:**	PDM	**Run Date:**	04/03/2012 21:12
Collect Date:	03/21/2012 12:07	**Dilution:**	1	**File ID:**	T1.040312.211229
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0		U	0.708	0.354

Certificate of Analysis

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	4640		7.08	3.54
Iron, Total	7439-89-6	11100		2.13	1.06
Magnesium, Total	7439-95-4	1380		17.7	8.86
Potassium, Total	7440-09-7	910		35.4	17.7
Zinc, Total	7440-66-6	16.4	B	0.708	0.354

B	The reported result is associated with a contaminated method blank.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-13	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH04-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG394022	**Analyst:**	PDM	**Run Date:**	04/05/2012 18:45
Collect Date:	03/21/2012 12:07	**Dilution:**	1	**File ID:**	T1.040512.184519
Sample Tag:	02	**Units:**	mg/kg	**Percent Solid:**	98.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.364		0.0708	0.0354
Sodium, Total	7440-23-5	92.2		17.7	8.86

Sample #:	L12030946-13	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH04-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/10/2012 09:48
Workgroup #:	WG394022	**Analyst:**	PDM	**Run Date:**	04/10/2012 18:10
Collect Date:	03/21/2012 12:07	**Dilution:**	100	**File ID:**	T1.041012.181052
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	5230		1420	708

Sample #:	L12030946-13	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH04-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:50
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393894	**Analyst:**	JYH	**Run Date:**	04/02/2012 16:08
Collect Date:	03/21/2012 12:07	**Dilution:**	5	**File ID:**	NI.040212.160815
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	0.805	J	1.45	0.727
Barium, Total	7440-39-3	36.6		1.45	0.727
Cadmium, Total	7440-43-9		U	0.485	0.242
Chromium, Total	7440-47-3	2.12		1.94	0.969

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Analyte	CAS #	Result	Qual	LOQ	LOD
Cobalt, Total	7440-48-4	3.04		2.42	1.21
Copper, Total	7440-50-8	4.04		2.91	1.45
Lead, Total	7439-92-1	5.84		0.969	0.485
Manganese, Total	7439-96-5	187		0.969	0.485
Nickel, Total	7440-02-0	3.10	J	3.88	1.94
Selenium, Total	7782-49-2		U	0.969	0.485
Thallium, Total	7440-28-0		U	0.194	0.0969
Vanadium, Total	7440-62-2	6.47		2.42	1.21

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-13	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH04-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/05/2012 09:55
Workgroup #:	WG394333	**Analyst:**	JYH	**Run Date:**	04/05/2012 16:34
Collect Date:	03/21/2012 12:07	**Dilution:**	20	**File ID:**	NI.040512.163423
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	98.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.83	1.42

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-13	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	80-BH04-3	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:11
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394266	**Analyst:**	PDM	**Run Date:**	04/05/2012 10:30
Collect Date:	03/21/2012 12:07	**Dilution:**	1	**File ID:**	HY.040512.103010
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0983	0.00983

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030946-14	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH04-MS1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/03/2012 09:15
Workgroup #:	WG394022	**Analyst:**	PDM	**Run Date:**	04/03/2012 21:16
Collect Date:	03/21/2012 11:58	**Dilution:**	1	**File ID:**	T1.040312.211608
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	96.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0	16.9		0.759	0.380
Calcium, Total	7440-70-2	2160		7.59	3.80
Iron, Total	7439-89-6	14100		2.28	1.14
Magnesium, Total	7439-95-4	2190		19.0	9.49
Potassium, Total	7440-09-7	2690		38.0	19.0
Zinc, Total	7440-66-6	37.5	B	0.759	0.380

B	The reported result is associated with a contaminated method blank.

Sample #:	L12030946-14	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH04-MS1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG394022	**Analyst:**	PDM	**Run Date:**	04/05/2012 18:48
Collect Date:	03/21/2012 11:58	**Dilution:**	1	**File ID:**	T1.040512.184856
Sample Tag:	02	**Units:**	mg/kg	**Percent Solid:**	96.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	1.36		0.0759	0.0380
Sodium, Total	7440-23-5	861		19.0	9.49

Sample #:	L12030946-14	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH04-MS1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/06/2012 11:26
Workgroup #:	WG394022	**Analyst:**	PDM	**Run Date:**	04/06/2012 13:51
Collect Date:	03/21/2012 11:58	**Dilution:**	1	**File ID:**	T1.040612.135139
Sample Tag:	03	**Units:**	mg/kg	**Percent Solid:**	96.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	8980		15.2	7.59

Certificate of Analysis

Sample #:	L12030946-14	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH04-MS1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:49
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/03/2012 14:57
Workgroup #:	WG394021	**Analyst:**	JYH	**Run Date:**	04/03/2012 15:31
Collect Date:	03/21/2012 11:58	**Dilution:**	5	**File ID:**	NI.040312.153113
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	96.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	12.9		1.53	0.766
Barium, Total	7440-39-3	57.5		1.53	0.766
Cadmium, Total	7440-43-9	11.7		0.511	0.255
Chromium, Total	7440-47-3	12.8		2.04	1.02
Cobalt, Total	7440-48-4	13.8		2.55	1.28
Copper, Total	7440-50-8	15.5		3.06	1.53
Lead, Total	7439-92-1	17.0		1.02	0.511
Nickel, Total	7440-02-0	14.7		4.09	2.04
Selenium, Total	7782-49-2	12.6		1.02	0.511
Thallium, Total	7440-28-0	9.66		0.204	0.102
Vanadium, Total	7440-62-2	19.8		2.55	1.28

Sample #:	L12030946-14	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH04-MS1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/05/2012 09:55
Workgroup #:	WG394333	**Analyst:**	JYH	**Run Date:**	04/05/2012 16:01
Collect Date:	03/21/2012 11:58	**Dilution:**	20	**File ID:**	NI.040512.160104
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	96.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4	5.07		3.04	1.52

Sample #:	L12030946-14	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH04-MS1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:49
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/03/2012 14:57
Workgroup #:	WG394021	**Analyst:**	JYH	**Run Date:**	04/03/2012 17:10
Collect Date:	03/21/2012 11:58	**Dilution:**	50	**File ID:**	NI.040312.171056
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	96.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	195		10.2	5.11

Certificate of Analysis

Sample #:	L12030946-14	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	80-BH04-MS1	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:06
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394265	**Analyst:**	PDM	**Run Date:**	04/05/2012 10:13
Collect Date:	03/21/2012 11:58	**Dilution:**	1	**File ID:**	HY.040512.101321
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	96.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6	0.294		0.100	0.0100

Sample #:	L12030946-15	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH04-MSD1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG394022	**Analyst:**	PDM	**Run Date:**	04/05/2012 18:52
Collect Date:	03/21/2012 11:58	**Dilution:**	1	**File ID:**	T1.040512.185239
Sample Tag:	02	**Units:**	mg/kg	**Percent Solid:**	96.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	1.37		0.0748	0.0374
Sodium, Total	7440-23-5	877		18.7	9.35

Sample #:	L12030946-15	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH04-MSD1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/03/2012 09:15
Workgroup #:	WG394022	**Analyst:**	PDM	**Run Date:**	04/03/2012 21:19
Collect Date:	03/21/2012 11:58	**Dilution:**	1	**File ID:**	T1.040312.211952
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	96.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0	16.9		0.748	0.374
Calcium, Total	7440-70-2	2170		7.48	3.74
Iron, Total	7439-89-6	13400		2.24	1.12
Magnesium, Total	7439-95-4	2120		18.7	9.35
Potassium, Total	7440-09-7	2570		37.4	18.7
Zinc, Total	7440-66-6	36.7	B	0.748	0.374

B	The reported result is associated with a contaminated method blank.

Certificate of Analysis

Sample #:	L12030946-15	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH04-MSD1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/06/2012 11:26
Workgroup #:	WG394022	**Analyst:**	PDM	**Run Date:**	04/06/2012 13:55
Collect Date:	03/21/2012 11:58	**Dilution:**	1	**File ID:**	T1.040612.135526
Sample Tag:	03	**Units:**	mg/kg	**Percent Solid:**	96.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	8160		15.0	7.48

Sample #:	L12030946-15	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH04-MSD1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:49
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/03/2012 14:57
Workgroup #:	WG394021	**Analyst:**	JYH	**Run Date:**	04/03/2012 15:33
Collect Date:	03/21/2012 11:58	**Dilution:**	5	**File ID:**	NI.040312.153358
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	96.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	11.4		1.51	0.756
Barium, Total	7440-39-3	50.5		1.51	0.756
Cadmium, Total	7440-43-9	10.4		0.504	0.252
Chromium, Total	7440-47-3	11.6		2.02	1.01
Cobalt, Total	7440-48-4	12.4		2.52	1.26
Copper, Total	7440-50-8	14.0		3.02	1.51
Lead, Total	7439-92-1	15.2		1.01	0.504
Nickel, Total	7440-02-0	12.9		4.03	2.02
Selenium, Total	7782-49-2	10.7		1.01	0.504
Thallium, Total	7440-28-0	8.82		0.202	0.101
Vanadium, Total	7440-62-2	17.4		2.52	1.26

Sample #:	L12030946-15	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH04-MSD1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/05/2012 09:55
Workgroup #:	WG394333	**Analyst:**	JYH	**Run Date:**	04/05/2012 16:03
Collect Date:	03/21/2012 11:58	**Dilution:**	20	**File ID:**	NI.040512.160351
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	96.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4	5.12		2.99	1.50

Certificate of Analysis

Sample #:	L12030946-15	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH04-MSD1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:49
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/03/2012 14:57
Workgroup #:	WG394021	**Analyst:**	JYH	**Run Date:**	04/03/2012 17:13
Collect Date:	03/21/2012 11:58	**Dilution:**	50	**File ID:**	NI.040312.171342
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	96.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	193		10.1	5.04

Sample #:	L12030946-15	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	80-BH04-MSD1	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:06
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394265	**Analyst:**	PDM	**Run Date:**	04/05/2012 10:15
Collect Date:	03/21/2012 11:58	**Dilution:**	1	**File ID:**	HY.040512.101517
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	96.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6	0.295		0.103	0.0103

Sample #:	L12030946-16	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH05-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/03/2012 09:15
Workgroup #:	WG394022	**Analyst:**	PDM	**Run Date:**	04/03/2012 21:23
Collect Date:	03/21/2012 11:29	**Dilution:**	1	**File ID:**	T1.040312.212336
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	82.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0		U	0.875	0.437
Calcium, Total	7440-70-2	1710		8.75	4.37
Iron, Total	7439-89-6	10300		2.62	1.31
Magnesium, Total	7439-95-4	1630		21.9	10.9
Potassium, Total	7440-09-7	1580		43.7	21.9
Zinc, Total	7440-66-6	16.9	B	0.875	0.437

B	The reported result is associated with a contaminated method blank.
U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030946-16	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH05-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG394022	**Analyst:**	PDM	**Run Date:**	04/05/2012 18:56
Collect Date:	03/21/2012 11:29	**Dilution:**	1	**File ID:**	T1.040512.185621
Sample Tag:	02	**Units:**	mg/kg	**Percent Solid:**	82.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.395		0.0875	0.0437
Sodium, Total	7440-23-5	31.2		21.9	10.9

Sample #:	L12030946-16	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH05-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/10/2012 09:48
Workgroup #:	WG394022	**Analyst:**	PDM	**Run Date:**	04/10/2012 18:14
Collect Date:	03/21/2012 11:29	**Dilution:**	100	**File ID:**	T1.041012.181445
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	82.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	5610		1750	875

Sample #:	L12030946-16	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH05-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:50
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393894	**Analyst:**	JYH	**Run Date:**	04/02/2012 16:11
Collect Date:	03/21/2012 11:29	**Dilution:**	5	**File ID:**	NI.040212.161102
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	82.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	0.929	J	1.82	0.908
Barium, Total	7440-39-3	33.8		1.82	0.908
Cadmium, Total	7440-43-9		U	0.605	0.303
Chromium, Total	7440-47-3		U	2.42	1.21
Cobalt, Total	7440-48-4	2.54	J	3.03	1.51
Copper, Total	7440-50-8	3.32	J	3.63	1.82
Lead, Total	7439-92-1	6.23		1.21	0.605
Manganese, Total	7439-96-5	147		1.21	0.605
Nickel, Total	7440-02-0	2.47	J	4.84	2.42
Selenium, Total	7782-49-2		U	1.21	0.605
Thallium, Total	7440-28-0		U	0.242	0.121
Vanadium, Total	7440-62-2	4.86		3.03	1.51

J	Estimated value ; the analyte concentration was less than the LOQ.

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-16	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH05-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/05/2012 09:55
Workgroup #:	WG394333	**Analyst:**	JYH	**Run Date:**	04/05/2012 16:37
Collect Date:	03/21/2012 11:29	**Dilution:**	20	**File ID:**	NI.040512.163709
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	82.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.50	1.75
U	Analyte was not detected. The concentration is below the reported LOD.				

Sample #:	L12030946-16	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	80-BH05-1	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:11
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394266	**Analyst:**	PDM	**Run Date:**	04/05/2012 10:31
Collect Date:	03/21/2012 11:29	**Dilution:**	1	**File ID:**	HY.040512.103154
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	82.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.120	0.0120
U	Analyte was not detected. The concentration is below the reported LOD.				

Sample #:	L12030946-17	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH05-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG394022	**Analyst:**	PDM	**Run Date:**	04/05/2012 18:59
Collect Date:	03/21/2012 11:32	**Dilution:**	1	**File ID:**	T1.040512.185959
Sample Tag:	02	**Units:**	mg/kg	**Percent Solid:**	98.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.305		0.0724	0.0362
Sodium, Total	7440-23-5	34.4		18.1	9.05

Certificate of Analysis

Sample #:	L12030946-17	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH05-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/03/2012 09:15
Workgroup #:	WG394022	**Analyst:**	PDM	**Run Date:**	04/03/2012 21:27
Collect Date:	03/21/2012 11:32	**Dilution:**	1	**File ID:**	T1.040312.212716
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0		U	0.724	0.362
Calcium, Total	7440-70-2	4140		7.24	3.62
Iron, Total	7439-89-6	8810		2.17	1.09
Magnesium, Total	7439-95-4	1490		18.1	9.05
Potassium, Total	7440-09-7	968		36.2	18.1
Zinc, Total	7440-66-6	14.2	B	0.724	0.362

B	The reported result is associated with a contaminated method blank.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-17	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH05-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/10/2012 09:48
Workgroup #:	WG394022	**Analyst:**	PDM	**Run Date:**	04/10/2012 18:18
Collect Date:	03/21/2012 11:32	**Dilution:**	100	**File ID:**	T1.041012.181839
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	3450		1450	724

Sample #:	L12030946-17	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH05-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:50
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393894	**Analyst:**	JYH	**Run Date:**	04/02/2012 16:13
Collect Date:	03/21/2012 11:32	**Dilution:**	5	**File ID:**	NI.040212.161349
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	0.955	J	1.52	0.758
Barium, Total	7440-39-3	41.2		1.52	0.758
Cadmium, Total	7440-43-9		U	0.505	0.253
Chromium, Total	7440-47-3	1.58	J	2.02	1.01
Cobalt, Total	7440-48-4	2.84		2.53	1.26
Copper, Total	7440-50-8	3.56		3.03	1.52
Lead, Total	7439-92-1	5.21		1.01	0.505

Certificate of Analysis

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	136		1.01	0.505
Nickel, Total	7440-02-0	2.80	J	4.04	2.02
Selenium, Total	7782-49-2		U	1.01	0.505
Thallium, Total	7440-28-0		U	0.202	0.101
Vanadium, Total	7440-62-2	7.68		2.53	1.26

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-17	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH05-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/05/2012 09:55
Workgroup #:	WG394333	**Analyst:**	JYH	**Run Date:**	04/05/2012 16:39
Collect Date:	03/21/2012 11:32	**Dilution:**	20	**File ID:**	NI.040512.163956
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	98.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.90	1.45

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-17	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	80-BH05-2	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:11
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394266	**Analyst:**	PDM	**Run Date:**	04/05/2012 10:34
Collect Date:	03/21/2012 11:32	**Dilution:**	1	**File ID:**	HY.040512.103401
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0998	0.00998

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-18	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH05-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG394022	**Analyst:**	PDM	**Run Date:**	04/05/2012 19:03
Collect Date:	03/21/2012 11:38	**Dilution:**	1	**File ID:**	T1.040512.190337
Sample Tag:	02	**Units:**	mg/kg	**Percent Solid:**	98.3

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.330		0.0735	0.0368
Sodium, Total	7440-23-5	77.6		18.4	9.19

Certificate of Analysis

Sample #:	L12030946-18	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH05-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/03/2012 09:15
Workgroup #:	WG394022	**Analyst:**	PDM	**Run Date:**	04/03/2012 21:30
Collect Date:	03/21/2012 11:38	**Dilution:**	1	**File ID:**	T1.040312.213056
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.3

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0		U	0.735	0.368
Calcium, Total	7440-70-2	2410		7.35	3.68
Iron, Total	7439-89-6	9980		2.21	1.10
Magnesium, Total	7439-95-4	1720		18.4	9.19
Potassium, Total	7440-09-7	851		36.8	18.4
Zinc, Total	7440-66-6	15.0	B	0.735	0.368

B	The reported result is associated with a contaminated method blank.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-18	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH05-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/10/2012 09:48
Workgroup #:	WG394022	**Analyst:**	PDM	**Run Date:**	04/10/2012 18:22
Collect Date:	03/21/2012 11:38	**Dilution:**	100	**File ID:**	T1.041012.182232
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.3

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	3730		1470	735

Sample #:	L12030946-18	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH05-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:50
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393894	**Analyst:**	JYH	**Run Date:**	04/02/2012 16:16
Collect Date:	03/21/2012 11:38	**Dilution:**	5	**File ID:**	NI.040212.161634
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.3

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	0.970	J	1.47	0.733
Barium, Total	7440-39-3	50.5		1.47	0.733
Cadmium, Total	7440-43-9		U	0.489	0.244
Chromium, Total	7440-47-3	1.97		1.96	0.978
Cobalt, Total	7440-48-4	3.84		2.44	1.22
Copper, Total	7440-50-8	4.65		2.93	1.47
Lead, Total	7439-92-1	6.61		0.978	0.489

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Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	161		0.978	0.489
Nickel, Total	7440-02-0	3.83	J	3.91	1.96
Selenium, Total	7782-49-2		U	0.978	0.489
Thallium, Total	7440-28-0	0.107	J	0.196	0.0978
Vanadium, Total	7440-62-2	9.63		2.44	1.22

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-18	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH05-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/05/2012 09:55
Workgroup #:	WG394333	**Analyst:**	JYH	**Run Date:**	04/05/2012 16:42
Collect Date:	03/21/2012 11:38	**Dilution:**	20	**File ID:**	NI.040512.164242
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	98.3

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.94	1.47

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-18	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	80-BH05-3	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:11
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394266	**Analyst:**	PDM	**Run Date:**	04/05/2012 10:35
Collect Date:	03/21/2012 11:38	**Dilution:**	1	**File ID:**	HY.040512.103545
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.3

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6	0.0116	J	0.0968	0.00968

J	Estimated value ; the analyte concentration was less than the LOQ.

Sample #:	L12030946-19	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH05-FD2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG394022	**Analyst:**	PDM	**Run Date:**	04/05/2012 19:14
Collect Date:	03/21/2012 11:32	**Dilution:**	1	**File ID:**	T1.040512.191436
Sample Tag:	02	**Units:**	mg/kg	**Percent Solid:**	98.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.310		0.0743	0.0371
Sodium, Total	7440-23-5	36.3		18.6	9.28

Certificate of Analysis

Sample #:	L12030946-19	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH05-FD2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/03/2012 09:15
Workgroup #:	WG394022	**Analyst:**	PDM	**Run Date:**	04/03/2012 21:34
Collect Date:	03/21/2012 11:32	**Dilution:**	1	**File ID:**	T1.040312.213436
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0		U	0.743	0.371
Calcium, Total	7440-70-2	4150		7.43	3.71
Iron, Total	7439-89-6	9250		2.23	1.11
Magnesium, Total	7439-95-4	1510		18.6	9.28
Potassium, Total	7440-09-7	972		37.1	18.6
Zinc, Total	7440-66-6	15.2	B	0.743	0.371

B	The reported result is associated with a contaminated method blank.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-19	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH05-FD2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/10/2012 09:48
Workgroup #:	WG394022	**Analyst:**	PDM	**Run Date:**	04/10/2012 18:33
Collect Date:	03/21/2012 11:32	**Dilution:**	100	**File ID:**	T1.041012.183353
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	3530		1490	743

Sample #:	L12030946-19	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH05-FD2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:50
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393894	**Analyst:**	JYH	**Run Date:**	04/02/2012 16:19
Collect Date:	03/21/2012 11:32	**Dilution:**	5	**File ID:**	NI.040212.161920
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2		U	1.48	0.741
Barium, Total	7440-39-3	33.7		1.48	0.741
Cadmium, Total	7440-43-9		U	0.494	0.247
Chromium, Total	7440-47-3	1.14	J	1.98	0.988
Cobalt, Total	7440-48-4	2.32	J	2.47	1.23
Copper, Total	7440-50-8	2.78	J	2.96	1.48
Lead, Total	7439-92-1	4.48		0.988	0.494

Certificate of Analysis

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	112		0.988	0.494
Nickel, Total	7440-02-0	2.24	J	3.95	1.98
Selenium, Total	7782-49-2		U	0.988	0.494
Thallium, Total	7440-28-0		U	0.198	0.0988
Vanadium, Total	7440-62-2	5.22		2.47	1.23

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-19	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH05-FD2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/05/2012 09:55
Workgroup #:	WG394333	**Analyst:**	JYH	**Run Date:**	04/05/2012 16:45
Collect Date:	03/21/2012 11:32	**Dilution:**	20	**File ID:**	NI.040512.164529
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	98.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.97	1.49

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-19	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	80-BH05-FD2	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:11
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394266	**Analyst:**	PDM	**Run Date:**	04/05/2012 10:37
Collect Date:	03/21/2012 11:32	**Dilution:**	1	**File ID:**	HY.040512.103729
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0973	0.00973

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-20	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH06-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/03/2012 09:15
Workgroup #:	WG394022	**Analyst:**	PDM	**Run Date:**	04/03/2012 21:38
Collect Date:	03/21/2012 11:00	**Dilution:**	1	**File ID:**	T1.040312.213816
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0		U	0.709	0.354
Calcium, Total	7440-70-2	2030		7.09	3.54
Iron, Total	7439-89-6	12800		2.13	1.06

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Analyte	CAS #	Result	Qual	LOQ	LOD
Magnesium, Total	7439-95-4	1870		17.7	8.86
Potassium, Total	7440-09-7	1760		35.4	17.7
Zinc, Total	7440-66-6	20.0	B	0.709	0.354

B	The reported result is associated with a contaminated method blank.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-20	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH06-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG394022	**Analyst:**	PDM	**Run Date:**	04/05/2012 19:18
Collect Date:	03/21/2012 11:00	**Dilution:**	2	**File ID:**	T1.040512.191815
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.430		0.142	0.0709
Sodium, Total	7440-23-5	32.4	J	35.4	17.7

J	Estimated value ; the analyte concentration was less than the LOQ.

Sample #:	L12030946-20	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH06-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/10/2012 09:48
Workgroup #:	WG394022	**Analyst:**	PDM	**Run Date:**	04/10/2012 18:37
Collect Date:	03/21/2012 11:00	**Dilution:**	100	**File ID:**	T1.041012.183744
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	98.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	6560		1420	709

Sample #:	L12030946-20	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH06-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:50
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393894	**Analyst:**	JYH	**Run Date:**	04/02/2012 16:22
Collect Date:	03/21/2012 11:00	**Dilution:**	5	**File ID:**	NI.040212.162207
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.50		1.47	0.733
Barium, Total	7440-39-3	43.7		1.47	0.733
Cadmium, Total	7440-43-9		U	0.488	0.244
Chromium, Total	7440-47-3	2.50		1.95	0.977
Cobalt, Total	7440-48-4	3.58		2.44	1.22

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Analyte	CAS #	Result	Qual	LOQ	LOD
Copper, Total	7440-50-8	5.76		2.93	1.47
Lead, Total	7439-92-1	7.89		0.977	0.488
Manganese, Total	7439-96-5	175		0.977	0.488
Nickel, Total	7440-02-0	3.59	J	3.91	1.95
Selenium, Total	7782-49-2		U	0.977	0.488
Thallium, Total	7440-28-0		U	0.195	0.0977
Vanadium, Total	7440-62-2	10.1		2.44	1.22

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-20	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH06-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 07:50
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/05/2012 09:55
Workgroup #:	WG394333	**Analyst:**	JYH	**Run Date:**	04/05/2012 16:48
Collect Date:	03/21/2012 11:00	**Dilution:**	20	**File ID:**	NI.040512.164816
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	98.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.83	1.42

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-20	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	80-BH06-1	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:11
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394266	**Analyst:**	PDM	**Run Date:**	04/05/2012 10:42
Collect Date:	03/21/2012 11:00	**Dilution:**	1	**File ID:**	HY.040512.104244
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0962	0.00962

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-21	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH06-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:08
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/03/2012 09:15
Workgroup #:	WG394023	**Analyst:**	PDM	**Run Date:**	04/03/2012 22:31
Collect Date:	03/21/2012 11:05	**Dilution:**	1	**File ID:**	T1.040312.223134
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	7140		14.7	7.34

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Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0		U	0.734	0.367
Beryllium, Total	7440-41-7		U	0.0734	0.0367
Calcium, Total	7440-70-2	8400		7.34	3.67
Iron, Total	7439-89-6	13600		2.20	1.10
Potassium, Total	7440-09-7	1530		36.7	18.4
Sodium, Total	7440-23-5	75.1		18.4	9.18
Zinc, Total	7440-66-6	30.5		0.734	0.367

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-21	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH06-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:08
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/03/2012 09:15
Workgroup #:	WG394023	**Analyst:**	PDM	**Run Date:**	04/03/2012 22:39
Collect Date:	03/21/2012 11:05	**Dilution:**	5	**File ID:**	T1.040312.223907
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Magnesium, Total	7439-95-4	4000		91.8	45.9

Sample #:	L12030946-21	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH06-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:50
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393894	**Analyst:**	JYH	**Run Date:**	04/02/2012 16:24
Collect Date:	03/21/2012 11:05	**Dilution:**	5	**File ID:**	NI.040212.162453
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.59		1.53	0.767
Barium, Total	7440-39-3	137		1.53	0.767
Cadmium, Total	7440-43-9		U	0.511	0.256
Chromium, Total	7440-47-3	3.08		2.04	1.02
Cobalt, Total	7440-48-4	7.12		2.56	1.28
Copper, Total	7440-50-8	7.33		3.07	1.53
Lead, Total	7439-92-1	11.2		1.02	0.511
Nickel, Total	7440-02-0	6.40		4.09	2.04
Selenium, Total	7782-49-2		U	1.02	0.511
Thallium, Total	7440-28-0	0.147	J	0.204	0.102
Vanadium, Total	7440-62-2	15.9		2.56	1.28

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

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Sample #:	L12030946-21	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH06-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:08
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394190	**Analyst:**	JYH	**Run Date:**	04/04/2012 18:20
Collect Date:	03/21/2012 11:05	**Dilution:**	20	**File ID:**	NI.040412.182052
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	97.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.94	1.47

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-21	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH06-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:50
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393894	**Analyst:**	JYH	**Run Date:**	04/02/2012 17:15
Collect Date:	03/21/2012 11:05	**Dilution:**	50	**File ID:**	NI.040212.171517
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	97.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	290		10.2	5.11

Sample #:	L12030946-21	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	80-BH06-2	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:11
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394266	**Analyst:**	PDM	**Run Date:**	04/05/2012 10:44
Collect Date:	03/21/2012 11:05	**Dilution:**	1	**File ID:**	HY.040512.104429
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.0

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6	0.0111	J	0.101	0.0101

J	Estimated value ; the analyte concentration was less than the LOQ.

Sample #:	L12030946-22	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH06-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:08
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/03/2012 09:15
Workgroup #:	WG394023	**Analyst:**	PDM	**Run Date:**	04/03/2012 22:46
Collect Date:	03/21/2012 11:07	**Dilution:**	1	**File ID:**	T1.040312.224631
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	96.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	4620		13.8	6.92

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Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0		U	0.692	0.346
Beryllium, Total	7440-41-7	0.181		0.0692	0.0346
Calcium, Total	7440-70-2	3660		6.92	3.46
Iron, Total	7439-89-6	11500		2.08	1.04
Magnesium, Total	7439-95-4	3080		17.3	8.65
Potassium, Total	7440-09-7	1560		34.6	17.3
Sodium, Total	7440-23-5	180		17.3	8.65
Zinc, Total	7440-66-6	26.8		0.692	0.346

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-22	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH06-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:50
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393894	**Analyst:**	JYH	**Run Date:**	04/02/2012 16:27
Collect Date:	03/21/2012 11:07	**Dilution:**	5	**File ID:**	NI.040212.162739
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	96.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.47	J	1.51	0.753
Barium, Total	7440-39-3	82.2		1.51	0.753
Cadmium, Total	7440-43-9		U	0.502	0.251
Chromium, Total	7440-47-3	3.03		2.01	1.00
Cobalt, Total	7440-48-4	6.95		2.51	1.25
Copper, Total	7440-50-8	7.23		3.01	1.51
Lead, Total	7439-92-1	11.0		1.00	0.502
Nickel, Total	7440-02-0	5.69		4.02	2.01
Selenium, Total	7782-49-2		U	1.00	0.502
Thallium, Total	7440-28-0	0.158	J	0.201	0.100
Vanadium, Total	7440-62-2	13.7		2.51	1.25

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030946-22	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH06-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:08
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394190	**Analyst:**	JYH	**Run Date:**	04/04/2012 18:23
Collect Date:	03/21/2012 11:07	**Dilution:**	20	**File ID:**	NI.040412.182338
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	96.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.77	1.38

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-22	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH06-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:50
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393894	**Analyst:**	JYH	**Run Date:**	04/02/2012 17:18
Collect Date:	03/21/2012 11:07	**Dilution:**	50	**File ID:**	NI.040212.171803
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	96.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	361		10.0	5.02

Sample #:	L12030946-22	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	80-BH06-3	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:12
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394266	**Analyst:**	PDM	**Run Date:**	04/05/2012 10:46
Collect Date:	03/21/2012 11:07	**Dilution:**	1	**File ID:**	HY.040512.104612
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	96.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.101	0.0101

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-23	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH07-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:08
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/03/2012 09:15
Workgroup #:	WG394023	**Analyst:**	PDM	**Run Date:**	04/03/2012 22:50
Collect Date:	03/21/2012 16:20	**Dilution:**	1	**File ID:**	T1.040312.225020
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	4630		15.3	7.67
Antimony, Total	7440-36-0		U	0.767	0.384
Beryllium, Total	7440-41-7		U	0.0767	0.0384

Certificate of Analysis

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	2000		7.67	3.84
Iron, Total	7439-89-6	12700		2.30	1.15
Magnesium, Total	7439-95-4	1760		19.2	9.59
Potassium, Total	7440-09-7	1670		38.4	19.2
Sodium, Total	7440-23-5	29.4		19.2	9.59
Zinc, Total	7440-66-6	18.2		0.767	0.384

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-23	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH07-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:08
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/12/2012 09:57
Workgroup #:	WG394023	**Analyst:**	PDM	**Run Date:**	04/12/2012 10:34
Collect Date:	03/21/2012 16:20	**Dilution:**	1	**File ID:**	T1.041212.103449
Sample Tag:	02	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.385		0.0767	0.0384

Sample #:	L12030946-23	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH07-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:50
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393894	**Analyst:**	JYH	**Run Date:**	04/02/2012 16:30
Collect Date:	03/21/2012 16:20	**Dilution:**	5	**File ID:**	NI.040212.163025
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	0.859	J	1.49	0.746
Barium, Total	7440-39-3	36.6		1.49	0.746
Cadmium, Total	7440-43-9		U	0.498	0.249
Chromium, Total	7440-47-3	1.38	J	1.99	0.995
Cobalt, Total	7440-48-4	2.85		2.49	1.24
Copper, Total	7440-50-8	3.32		2.99	1.49
Lead, Total	7439-92-1	6.10		0.995	0.498
Manganese, Total	7439-96-5	161		0.995	0.498
Nickel, Total	7440-02-0	2.30	J	3.98	1.99
Selenium, Total	7782-49-2		U	0.995	0.498
Thallium, Total	7440-28-0		U	0.199	0.0995
Vanadium, Total	7440-62-2	5.20		2.49	1.24

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030946-23	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH07-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:08
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394190	**Analyst:**	JYH	**Run Date:**	04/04/2012 18:37
Collect Date:	03/21/2012 16:20	**Dilution:**	20	**File ID:**	NI.040412.183732
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.07	1.53

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-23	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	80-BH07-1	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:12
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394266	**Analyst:**	PDM	**Run Date:**	04/05/2012 10:48
Collect Date:	03/21/2012 16:20	**Dilution:**	1	**File ID:**	HY.040512.104820
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0990	0.00990

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-24	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH07-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:08
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/03/2012 09:15
Workgroup #:	WG394023	**Analyst:**	PDM	**Run Date:**	04/03/2012 22:54
Collect Date:	03/21/2012 16:23	**Dilution:**	1	**File ID:**	T1.040312.225400
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	5660		14.7	7.36
Antimony, Total	7440-36-0		U	0.736	0.368
Beryllium, Total	7440-41-7	0.0379	J	0.0736	0.0368
Calcium, Total	7440-70-2	4180		7.36	3.68
Iron, Total	7439-89-6	13400		2.21	1.10
Magnesium, Total	7439-95-4	2750		18.4	9.19
Potassium, Total	7440-09-7	1750		36.8	18.4
Sodium, Total	7440-23-5	58.0		18.4	9.19
Zinc, Total	7440-66-6	26.0		0.736	0.368

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030946-24	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH07-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:50
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393894	**Analyst:**	JYH	**Run Date:**	04/02/2012 17:26
Collect Date:	03/21/2012 16:23	**Dilution:**	5	**File ID:**	NI.040212.172625
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.48		1.47	0.733
Barium, Total	7440-39-3	70.4		1.47	0.733
Cadmium, Total	7440-43-9		U	0.489	0.244
Chromium, Total	7440-47-3	2.57		1.96	0.978
Cobalt, Total	7440-48-4	4.93		2.44	1.22
Copper, Total	7440-50-8	5.90		2.93	1.47
Lead, Total	7439-92-1	8.68		0.978	0.489
Nickel, Total	7440-02-0	4.61		3.91	1.96
Selenium, Total	7782-49-2		U	0.978	0.489
Thallium, Total	7440-28-0	0.131	J	0.196	0.0978
Vanadium, Total	7440-62-2	13.1		2.44	1.22

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-24	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH07-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:08
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394190	**Analyst:**	JYH	**Run Date:**	04/04/2012 18:40
Collect Date:	03/21/2012 16:23	**Dilution:**	20	**File ID:**	NI.040412.184018
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.94	1.47

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030946-24	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH07-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:50
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/03/2012 10:11
Workgroup #:	WG393894	**Analyst:**	JYH	**Run Date:**	04/03/2012 14:01
Collect Date:	03/21/2012 16:23	**Dilution:**	50	**File ID:**	NI.040312.140140
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	217		9.78	4.89

Sample #:	L12030946-24	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	80-BH07-2	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:12
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394266	**Analyst:**	PDM	**Run Date:**	04/05/2012 10:50
Collect Date:	03/21/2012 16:23	**Dilution:**	1	**File ID:**	HY.040512.105014
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0975	0.00975

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-25	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH07-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:08
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/03/2012 09:15
Workgroup #:	WG394023	**Analyst:**	PDM	**Run Date:**	04/03/2012 22:57
Collect Date:	03/21/2012 16:27	**Dilution:**	1	**File ID:**	T1.040312.225748
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	96.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	6510		15.3	7.63
Antimony, Total	7440-36-0		U	0.763	0.381
Beryllium, Total	7440-41-7		U	0.0763	0.0381
Calcium, Total	7440-70-2	5450		7.63	3.81
Iron, Total	7439-89-6	13000		2.29	1.14
Magnesium, Total	7439-95-4	3240		19.1	9.53
Potassium, Total	7440-09-7	1200		38.1	19.1
Sodium, Total	7440-23-5	137		19.1	9.53
Zinc, Total	7440-66-6	29.7		0.763	0.381

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030946-25	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH07-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:50
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393894	**Analyst:**	JYH	**Run Date:**	04/02/2012 17:29
Collect Date:	03/21/2012 16:27	**Dilution:**	5	**File ID:**	NI.040212.172911
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	96.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.55		1.49	0.746
Barium, Total	7440-39-3	114		1.49	0.746
Cadmium, Total	7440-43-9		U	0.497	0.249
Chromium, Total	7440-47-3	3.77		1.99	0.995
Cobalt, Total	7440-48-4	7.86		2.49	1.24
Copper, Total	7440-50-8	9.92		2.98	1.49
Lead, Total	7439-92-1	12.5		0.995	0.497
Nickel, Total	7440-02-0	7.14		3.98	1.99
Selenium, Total	7782-49-2		U	0.995	0.497
Thallium, Total	7440-28-0	0.162	J	0.199	0.0995
Vanadium, Total	7440-62-2	17.7		2.49	1.24

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-25	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH07-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:08
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394190	**Analyst:**	JYH	**Run Date:**	04/04/2012 18:43
Collect Date:	03/21/2012 16:27	**Dilution:**	20	**File ID:**	NI.040412.184304
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	96.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.05	1.53

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-25	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH07-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:50
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/03/2012 10:11
Workgroup #:	WG393894	**Analyst:**	JYH	**Run Date:**	04/03/2012 14:04
Collect Date:	03/21/2012 16:27	**Dilution:**	50	**File ID:**	NI.040312.140426
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	96.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	318		9.95	4.97

Certificate of Analysis

Sample #:	L12030946-25	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	80-BH07-3	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:12
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394266	**Analyst:**	PDM	**Run Date:**	04/05/2012 10:52
Collect Date:	03/21/2012 16:27	**Dilution:**	1	**File ID:**	HY.040512.105202
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	96.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6	0.0110	J	0.102	0.0102

J	Estimated value ; the analyte concentration was less than the LOQ.

Sample #:	L12030946-26	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH08-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:08
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/03/2012 09:15
Workgroup #:	WG394023	**Analyst:**	PDM	**Run Date:**	04/03/2012 23:09
Collect Date:	03/21/2012 14:11	**Dilution:**	1	**File ID:**	T1.040312.230903
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	3540		14.8	7.39
Antimony, Total	7440-36-0		U	0.739	0.369
Calcium, Total	7440-70-2	2230		7.39	3.69
Iron, Total	7439-89-6	13400		2.22	1.11
Magnesium, Total	7439-95-4	1700		18.5	9.24
Potassium, Total	7440-09-7	1500		36.9	18.5
Sodium, Total	7440-23-5	26.9		18.5	9.24
Zinc, Total	7440-66-6	17.8		0.739	0.369

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-26	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH08-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:08
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG394023	**Analyst:**	PDM	**Run Date:**	04/05/2012 19:56
Collect Date:	03/21/2012 14:11	**Dilution:**	2	**File ID:**	T1.040512.195631
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.364		0.148	0.0739

Certificate of Analysis

Sample #:	L12030946-26	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH08-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:50
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393894	**Analyst:**	JYH	**Run Date:**	04/02/2012 17:31
Collect Date:	03/21/2012 14:11	**Dilution:**	5	**File ID:**	NI.040212.173158
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.11	J	1.49	0.745
Barium, Total	7440-39-3	39.2		1.49	0.745
Cadmium, Total	7440-43-9		U	0.496	0.248
Chromium, Total	7440-47-3	1.85	J	1.99	0.993
Cobalt, Total	7440-48-4	3.25		2.48	1.24
Copper, Total	7440-50-8	4.74		2.98	1.49
Lead, Total	7439-92-1	7.31		0.993	0.496
Manganese, Total	7439-96-5	160		0.993	0.496
Nickel, Total	7440-02-0	2.95	J	3.97	1.99
Selenium, Total	7782-49-2		U	0.993	0.496
Thallium, Total	7440-28-0		U	0.199	0.0993
Vanadium, Total	7440-62-2	8.04		2.48	1.24

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-26	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH08-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:08
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394190	**Analyst:**	JYH	**Run Date:**	04/04/2012 18:45
Collect Date:	03/21/2012 14:11	**Dilution:**	20	**File ID:**	NI.040412.184550
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	98.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.96	1.48

U	Analyte was not detected. The concentration is below the reported LOD.

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Sample #:	L12030946-26	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	80-BH08-1	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:12
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394266	**Analyst:**	PDM	**Run Date:**	04/05/2012 10:53
Collect Date:	03/21/2012 14:11	**Dilution:**	1	**File ID:**	HY.040512.105357
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.100	0.0100

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-27	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH08-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:08
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/03/2012 09:15
Workgroup #:	WG394023	**Analyst:**	PDM	**Run Date:**	04/03/2012 23:12
Collect Date:	03/21/2012 14:18	**Dilution:**	1	**File ID:**	T1.040312.231244
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	4740		14.4	7.19
Antimony, Total	7440-36-0		U	0.719	0.360
Beryllium, Total	7440-41-7		U	0.0719	0.0360
Calcium, Total	7440-70-2	2780		7.19	3.60
Iron, Total	7439-89-6	12200		2.16	1.08
Magnesium, Total	7439-95-4	2150		18.0	8.99
Potassium, Total	7440-09-7	1150		36.0	18.0
Sodium, Total	7440-23-5	49.3		18.0	8.99
Zinc, Total	7440-66-6	24.3		0.719	0.360

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-27	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH08-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:50
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/03/2012 14:57
Workgroup #:	WG393894	**Analyst:**	JYH	**Run Date:**	04/03/2012 16:54
Collect Date:	03/21/2012 14:18	**Dilution:**	5	**File ID:**	NI.040312.165414
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	0.830	J	1.49	0.746
Barium, Total	7440-39-3	59.0		1.49	0.746
Cadmium, Total	7440-43-9		U	0.497	0.249
Chromium, Total	7440-47-3	2.21		1.99	0.994

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Analyte	CAS #	Result	Qual	LOQ	LOD
Cobalt, Total	7440-48-4	4.42		2.49	1.24
Copper, Total	7440-50-8	5.04		2.98	1.49
Lead, Total	7439-92-1	7.93		0.994	0.497
Nickel, Total	7440-02-0	3.66	J	3.98	1.99
Selenium, Total	7782-49-2		U	0.994	0.497
Thallium, Total	7440-28-0		U	0.199	0.0994
Vanadium, Total	7440-62-2	9.72		2.49	1.24

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-27	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH08-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:08
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394190	**Analyst:**	JYH	**Run Date:**	04/04/2012 18:09
Collect Date:	03/21/2012 14:18	**Dilution:**	20	**File ID:**	NI.040412.180947
Sample Tag:	DL04	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.88	1.44

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-27	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH08-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:50
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393894	**Analyst:**	JYH	**Run Date:**	04/02/2012 16:58
Collect Date:	03/21/2012 14:18	**Dilution:**	50	**File ID:**	NI.040212.165841
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	234		9.94	4.97

Sample #:	L12030946-27	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	80-BH08-2	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:12
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394266	**Analyst:**	PDM	**Run Date:**	04/05/2012 10:55
Collect Date:	03/21/2012 14:18	**Dilution:**	1	**File ID:**	HY.040512.105541
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0970	0.00970

U	Analyte was not detected. The concentration is below the reported LOD.

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Sample #:	L12030946-28	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH08-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:08
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/03/2012 09:15
Workgroup #:	WG394023	**Analyst:**	PDM	**Run Date:**	04/03/2012 23:16
Collect Date:	03/21/2012 14:25	**Dilution:**	1	**File ID:**	T1.040312.231632
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	96.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	6260		15.8	7.88
Antimony, Total	7440-36-0		U	0.788	0.394
Beryllium, Total	7440-41-7	0.360		0.0788	0.0394
Calcium, Total	7440-70-2	2350		7.88	3.94
Iron, Total	7439-89-6	14400		2.36	1.18
Magnesium, Total	7439-95-4	1920		19.7	9.85
Potassium, Total	7440-09-7	1290		39.4	19.7
Sodium, Total	7440-23-5	67.8		19.7	9.85
Zinc, Total	7440-66-6	21.0		0.788	0.394

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-28	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH08-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:50
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393894	**Analyst:**	JYH	**Run Date:**	04/02/2012 15:39
Collect Date:	03/21/2012 14:25	**Dilution:**	5	**File ID:**	NI.040212.153913
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	96.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.75		1.46	0.728
Barium, Total	7440-39-3	59.5		1.46	0.728
Cadmium, Total	7440-43-9		U	0.485	0.243
Chromium, Total	7440-47-3	4.51		1.94	0.970
Cobalt, Total	7440-48-4	4.56		2.43	1.21
Copper, Total	7440-50-8	7.21		2.91	1.46
Lead, Total	7439-92-1	9.24		0.970	0.485
Nickel, Total	7440-02-0	5.81		3.88	1.94
Selenium, Total	7782-49-2		U	0.970	0.485
Thallium, Total	7440-28-0	0.135	J	0.194	0.0970
Vanadium, Total	7440-62-2	13.0		2.43	1.21

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030946-28	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH08-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:08
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394190	**Analyst:**	JYH	**Run Date:**	04/04/2012 18:12
Collect Date:	03/21/2012 14:25	**Dilution:**	20	**File ID:**	NI.040412.181234
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	96.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.15	1.58

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-28	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH08-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:50
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/09/2012 16:36
Workgroup #:	WG393894	**Analyst:**	JYH	**Run Date:**	04/09/2012 17:08
Collect Date:	03/21/2012 14:25	**Dilution:**	50	**File ID:**	NI.040912.170828
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	96.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	174		9.70	4.85

Sample #:	L12030946-28	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	80-BH08-3	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:12
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394266	**Analyst:**	PDM	**Run Date:**	04/05/2012 10:57
Collect Date:	03/21/2012 14:25	**Dilution:**	1	**File ID:**	HY.040512.105726
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	96.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6	0.0106	J	0.0982	0.00982

J	Estimated value ; the analyte concentration was less than the LOQ.

Sample #:	L12030946-29	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH08-MS2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:07
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/03/2012 09:15
Workgroup #:	WG394023	**Analyst:**	PDM	**Run Date:**	04/03/2012 23:20
Collect Date:	03/21/2012 14:18	**Dilution:**	1	**File ID:**	T1.040312.232021
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	6530		14.0	7.00

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Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0	17.3		0.700	0.350
Beryllium, Total	7440-41-7		U	0.0700	0.0350
Calcium, Total	7440-70-2	3290		7.00	3.50
Iron, Total	7439-89-6	15500		2.10	1.05
Magnesium, Total	7439-95-4	2610		17.5	8.75
Potassium, Total	7440-09-7	2090		35.0	17.5
Sodium, Total	7440-23-5	809		17.5	8.75
Zinc, Total	7440-66-6	41.7		0.700	0.350

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-29	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH08-MS2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:48
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/03/2012 14:57
Workgroup #:	WG393894	**Analyst:**	JYH	**Run Date:**	04/03/2012 16:56
Collect Date:	03/21/2012 14:18	**Dilution:**	5	**File ID:**	NI.040312.165659
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	10.6		1.49	0.747
Barium, Total	7440-39-3	78.9		1.49	0.747
Cadmium, Total	7440-43-9	9.79		0.498	0.249
Chromium, Total	7440-47-3	13.1		1.99	0.996
Cobalt, Total	7440-48-4	15.4		2.49	1.24
Copper, Total	7440-50-8	18.0		2.99	1.49
Lead, Total	7439-92-1	21.7		0.996	0.498
Nickel, Total	7440-02-0	14.4		3.98	1.99
Selenium, Total	7782-49-2	9.72		0.996	0.498
Thallium, Total	7440-28-0	9.94		0.199	0.0996
Vanadium, Total	7440-62-2	22.6		2.49	1.24

Sample #:	L12030946-29	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH08-MS2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:07
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394190	**Analyst:**	JYH	**Run Date:**	04/04/2012 18:15
Collect Date:	03/21/2012 14:18	**Dilution:**	20	**File ID:**	NI.040412.181521
Sample Tag:	DL04	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4	5.48		2.80	1.40

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Sample #:	L12030946-29	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH08-MS2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:48
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393894	**Analyst:**	JYH	**Run Date:**	04/02/2012 17:01
Collect Date:	03/21/2012 14:18	**Dilution:**	50	**File ID:**	NI.040212.170127
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	325		9.96	4.98

Sample #:	L12030946-29	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	80-BH08-MS2	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:11
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394266	**Analyst:**	PDM	**Run Date:**	04/05/2012 10:59
Collect Date:	03/21/2012 14:18	**Dilution:**	1	**File ID:**	HY.040512.105911
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6	0.280		0.0984	0.00984

Sample #:	L12030946-30	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH08-MSD2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:08
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/03/2012 09:15
Workgroup #:	WG394023	**Analyst:**	PDM	**Run Date:**	04/03/2012 23:24
Collect Date:	03/21/2012 14:18	**Dilution:**	1	**File ID:**	T1.040312.232413
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	4400		14.7	7.35
Antimony, Total	7440-36-0	18.6		0.735	0.367
Beryllium, Total	7440-41-7	0.680		0.0735	0.0367
Calcium, Total	7440-70-2	3200		7.35	3.67
Iron, Total	7439-89-6	12700		2.20	1.10
Magnesium, Total	7439-95-4	2470		18.4	9.18
Potassium, Total	7440-09-7	1970		36.7	18.4
Sodium, Total	7440-23-5	834		18.4	9.18
Zinc, Total	7440-66-6	39.9		0.735	0.367

Certificate of Analysis

Sample #:	L12030946-30	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH08-MSD2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:48
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/03/2012 14:57
Workgroup #:	WG393894	**Analyst:**	JYH	**Run Date:**	04/03/2012 16:59
Collect Date:	03/21/2012 14:18	**Dilution:**	5	**File ID:**	NI.040312.165946
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	9.75		1.44	0.722
Barium, Total	7440-39-3	66.4		1.44	0.722
Cadmium, Total	7440-43-9	9.25		0.481	0.241
Chromium, Total	7440-47-3	12.0		1.92	0.962
Cobalt, Total	7440-48-4	14.0		2.41	1.20
Copper, Total	7440-50-8	14.7		2.89	1.44
Lead, Total	7439-92-1	17.1		0.962	0.481
Nickel, Total	7440-02-0	13.3		3.85	1.92
Selenium, Total	7782-49-2	8.65		0.962	0.481
Thallium, Total	7440-28-0	9.32		0.192	0.0962
Vanadium, Total	7440-62-2	19.1		2.41	1.20

Sample #:	L12030946-30	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH08-MSD2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:08
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394190	**Analyst:**	JYH	**Run Date:**	04/04/2012 18:18
Collect Date:	03/21/2012 14:18	**Dilution:**	20	**File ID:**	NI.040412.181807
Sample Tag:	DL04	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4	5.69		2.94	1.47

Sample #:	L12030946-30	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH08-MSD2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:48
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393894	**Analyst:**	JYH	**Run Date:**	04/02/2012 17:04
Collect Date:	03/21/2012 14:18	**Dilution:**	50	**File ID:**	NI.040212.170413
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	278		9.62	4.81

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Sample #:	L12030946-30	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	80-BH08-MSD2	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:11
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394266	**Analyst:**	PDM	**Run Date:**	04/05/2012 11:04
Collect Date:	03/21/2012 14:18	**Dilution:**	1	**File ID:**	HY.040512.110453
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6	0.275		0.0992	0.00992

Sample #:	L12030946-31	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH09-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:08
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/03/2012 09:15
Workgroup #:	WG394023	**Analyst:**	PDM	**Run Date:**	04/03/2012 23:27
Collect Date:	03/21/2012 10:29	**Dilution:**	1	**File ID:**	T1.040312.232752
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.5

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	6350		15.1	7.54
Antimony, Total	7440-36-0		U	0.754	0.377
Beryllium, Total	7440-41-7		U	0.0754	0.0377
Calcium, Total	7440-70-2	2280		7.54	3.77
Iron, Total	7439-89-6	15400		2.26	1.13
Magnesium, Total	7439-95-4	2210		18.9	9.43
Potassium, Total	7440-09-7	2120		37.7	18.9
Sodium, Total	7440-23-5	34.0		18.9	9.43
Zinc, Total	7440-66-6	23.1		0.754	0.377

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-31	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH09-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:50
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393894	**Analyst:**	JYH	**Run Date:**	04/02/2012 17:34
Collect Date:	03/21/2012 10:29	**Dilution:**	5	**File ID:**	NI.040212.173443
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.5

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.68		1.46	0.730
Barium, Total	7440-39-3	50.4		1.46	0.730
Cadmium, Total	7440-43-9		U	0.487	0.243
Chromium, Total	7440-47-3	3.32		1.95	0.973
Cobalt, Total	7440-48-4	4.22		2.43	1.22

Certificate of Analysis

Analyte	CAS #	Result	Qual	LOQ	LOD
Copper, Total	7440-50-8	6.14		2.92	1.46
Lead, Total	7439-92-1	8.05		0.973	0.487
Nickel, Total	7440-02-0	4.57		3.89	1.95
Selenium, Total	7782-49-2		U	0.973	0.487
Thallium, Total	7440-28-0	0.103	J	0.195	0.0973
Vanadium, Total	7440-62-2	12.1		2.43	1.22

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-31	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH09-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:08
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394190	**Analyst:**	JYH	**Run Date:**	04/04/2012 18:48
Collect Date:	03/21/2012 10:29	**Dilution:**	20	**File ID:**	NI.040412.184836
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	97.5

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.02	1.51

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-31	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH09-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:50
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/03/2012 14:57
Workgroup #:	WG393894	**Analyst:**	JYH	**Run Date:**	04/03/2012 18:03
Collect Date:	03/21/2012 10:29	**Dilution:**	50	**File ID:**	NI.040312.180334
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	97.5

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	184		9.73	4.87

Sample #:	L12030946-31	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	80-BH09-1	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:12
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394266	**Analyst:**	PDM	**Run Date:**	04/05/2012 11:06
Collect Date:	03/21/2012 10:29	**Dilution:**	1	**File ID:**	HY.040512.110637
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.5

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0986	0.00986

U	Analyte was not detected. The concentration is below the reported LOD.

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Sample #:	L12030946-32	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH09-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:08
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/03/2012 09:15
Workgroup #:	WG394023	**Analyst:**	PDM	**Run Date:**	04/03/2012 23:31
Collect Date:	03/21/2012 10:33	**Dilution:**	1	**File ID:**	T1.040312.233140
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.3

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	3160		14.2	7.08
Antimony, Total	7440-36-0		U	0.708	0.354
Beryllium, Total	7440-41-7	0.0736		0.0708	0.0354
Calcium, Total	7440-70-2	6940		7.08	3.54
Iron, Total	7439-89-6	9800		2.12	1.06
Magnesium, Total	7439-95-4	2350		17.7	8.85
Potassium, Total	7440-09-7	819		35.4	17.7
Sodium, Total	7440-23-5	90.0		17.7	8.85
Zinc, Total	7440-66-6	18.8		0.708	0.354

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-32	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH09-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:50
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393894	**Analyst:**	JYH	**Run Date:**	04/02/2012 17:37
Collect Date:	03/21/2012 10:33	**Dilution:**	5	**File ID:**	NI.040212.173730
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.3

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.15	J	1.46	0.728
Barium, Total	7440-39-3	55.5		1.46	0.728
Cadmium, Total	7440-43-9		U	0.485	0.243
Chromium, Total	7440-47-3	2.70		1.94	0.971
Cobalt, Total	7440-48-4	4.27		2.43	1.21
Copper, Total	7440-50-8	5.08		2.91	1.46
Lead, Total	7439-92-1	7.19		0.971	0.485
Nickel, Total	7440-02-0	4.41		3.88	1.94
Selenium, Total	7782-49-2		U	0.971	0.485
Thallium, Total	7440-28-0	0.103	J	0.194	0.0971
Vanadium, Total	7440-62-2	12.7		2.43	1.21

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030946-32	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH09-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:08
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394190	**Analyst:**	JYH	**Run Date:**	04/04/2012 18:51
Collect Date:	03/21/2012 10:33	**Dilution:**	20	**File ID:**	NI.040412.185123
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	98.3

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.83	1.42

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-32	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH09-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:50
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/03/2012 14:57
Workgroup #:	WG393894	**Analyst:**	JYH	**Run Date:**	04/03/2012 18:06
Collect Date:	03/21/2012 10:33	**Dilution:**	50	**File ID:**	NI.040312.180620
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	98.3

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	180		9.71	4.85

Sample #:	L12030946-32	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	80-BH09-2	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:12
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394266	**Analyst:**	PDM	**Run Date:**	04/05/2012 11:08
Collect Date:	03/21/2012 10:33	**Dilution:**	1	**File ID:**	HY.040512.110823
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.3

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0981	0.00981

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-33	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH09-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:08
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/03/2012 09:15
Workgroup #:	WG394023	**Analyst:**	PDM	**Run Date:**	04/03/2012 23:35
Collect Date:	03/21/2012 10:37	**Dilution:**	1	**File ID:**	T1.040312.233520
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	99.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	1610		14.9	7.43
Antimony, Total	7440-36-0		U	0.743	0.372
Calcium, Total	7440-70-2	2890		7.43	3.72

Certificate of Analysis

Analyte	CAS #	Result	Qual	LOQ	LOD
Iron, Total	7439-89-6	16400		2.23	1.11
Magnesium, Total	7439-95-4	893		18.6	9.29
Potassium, Total	7440-09-7	509		37.2	18.6
Sodium, Total	7440-23-5	54.4		18.6	9.29
Zinc, Total	7440-66-6	11.3		0.743	0.372

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-33	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH09-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:08
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG394023	**Analyst:**	PDM	**Run Date:**	04/05/2012 20:00
Collect Date:	03/21/2012 10:37	**Dilution:**	2	**File ID:**	T1.040512.200009
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	99.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.185		0.149	0.0743

Sample #:	L12030946-33	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH09-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:50
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393894	**Analyst:**	JYH	**Run Date:**	04/02/2012 17:40
Collect Date:	03/21/2012 10:37	**Dilution:**	5	**File ID:**	NI.040212.174017
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	99.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2		U	1.48	0.740
Barium, Total	7440-39-3	14.4		1.48	0.740
Cadmium, Total	7440-43-9		U	0.493	0.247
Chromium, Total	7440-47-3		U	1.97	0.986
Cobalt, Total	7440-48-4	1.32	J	2.47	1.23
Copper, Total	7440-50-8	2.10	J	2.96	1.48
Lead, Total	7439-92-1	3.04		0.986	0.493
Manganese, Total	7439-96-5	64.9		0.986	0.493
Nickel, Total	7440-02-0		U	3.94	1.97
Selenium, Total	7782-49-2		U	0.986	0.493
Thallium, Total	7440-28-0		U	0.197	0.0986
Vanadium, Total	7440-62-2	4.78		2.47	1.23

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030946-33	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH09-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:08
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394190	**Analyst:**	JYH	**Run Date:**	04/04/2012 18:54
Collect Date:	03/21/2012 10:37	**Dilution:**	20	**File ID:**	NI.040412.185409
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	99.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.97	1.49

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-33	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	80-BH09-3	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:12
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394266	**Analyst:**	PDM	**Run Date:**	04/05/2012 11:10
Collect Date:	03/21/2012 10:37	**Dilution:**	1	**File ID:**	HY.040512.111006
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	99.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0971	0.00971

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-34	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH10-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:08
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/03/2012 09:15
Workgroup #:	WG394023	**Analyst:**	PDM	**Run Date:**	04/03/2012 23:39
Collect Date:	03/21/2012 08:42	**Dilution:**	1	**File ID:**	T1.040312.233900
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	4580		14.4	7.21
Antimony, Total	7440-36-0		U	0.721	0.361
Calcium, Total	7440-70-2	2260		7.21	3.61
Iron, Total	7439-89-6	11600		2.16	1.08
Magnesium, Total	7439-95-4	2160		18.0	9.01
Potassium, Total	7440-09-7	1880		36.1	18.0
Sodium, Total	7440-23-5	31.1		18.0	9.01
Zinc, Total	7440-66-6	20.9		0.721	0.361

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030946-34	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH10-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:08
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG394023	**Analyst:**	PDM	**Run Date:**	04/05/2012 20:03
Collect Date:	03/21/2012 08:42	**Dilution:**	2	**File ID:**	T1.040512.200347
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.467		0.144	0.0721

Sample #:	L12030946-34	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH10-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:50
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393894	**Analyst:**	JYH	**Run Date:**	04/02/2012 17:43
Collect Date:	03/21/2012 08:42	**Dilution:**	5	**File ID:**	NI.040212.174303
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.25	J	1.42	0.708
Barium, Total	7440-39-3	48.1		1.42	0.708
Cadmium, Total	7440-43-9		U	0.472	0.236
Chromium, Total	7440-47-3	2.89		1.89	0.944
Cobalt, Total	7440-48-4	3.99		2.36	1.18
Copper, Total	7440-50-8	6.08		2.83	1.42
Lead, Total	7439-92-1	8.03		0.944	0.472
Nickel, Total	7440-02-0	4.07		3.78	1.89
Selenium, Total	7782-49-2		U	0.944	0.472
Thallium, Total	7440-28-0	0.103	J	0.189	0.0944
Vanadium, Total	7440-62-2	11.6		2.36	1.18

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-34	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH10-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:08
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394190	**Analyst:**	JYH	**Run Date:**	04/04/2012 18:56
Collect Date:	03/21/2012 08:42	**Dilution:**	20	**File ID:**	NI.040412.185656
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	98.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.88	1.44

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030946-34	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH10-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:50
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/03/2012 14:57
Workgroup #:	WG393894	**Analyst:**	JYH	**Run Date:**	04/03/2012 18:17
Collect Date:	03/21/2012 08:42	**Dilution:**	50	**File ID:**	NI.040312.181731
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	98.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	177		9.44	4.72

Sample #:	L12030946-34	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	80-BH10-1	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:12
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394266	**Analyst:**	PDM	**Run Date:**	04/05/2012 11:12
Collect Date:	03/21/2012 08:42	**Dilution:**	1	**File ID:**	HY.040512.111200
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.101	0.0101

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-35	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH10-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:08
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/03/2012 09:15
Workgroup #:	WG394023	**Analyst:**	PDM	**Run Date:**	04/03/2012 23:42
Collect Date:	03/21/2012 08:47	**Dilution:**	1	**File ID:**	T1.040312.234248
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	6870		14.1	7.04
Antimony, Total	7440-36-0		U	0.704	0.352
Beryllium, Total	7440-41-7	0.114		0.0704	0.0352
Calcium, Total	7440-70-2	3830		7.04	3.52
Iron, Total	7439-89-6	15800		2.11	1.06
Magnesium, Total	7439-95-4	2810		17.6	8.81
Potassium, Total	7440-09-7	1630		35.2	17.6
Sodium, Total	7440-23-5	74.2		17.6	8.81
Zinc, Total	7440-66-6	27.3		0.704	0.352

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030946-35	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH10-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 11:33
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393917	**Analyst:**	JYH	**Run Date:**	04/02/2012 18:05
Collect Date:	03/21/2012 08:47	**Dilution:**	5	**File ID:**	NI.040212.180518
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	2.34		1.46	0.731
Barium, Total	7440-39-3	84.4		1.46	0.731
Cadmium, Total	7440-43-9		U	0.487	0.244
Chromium, Total	7440-47-3	4.33		1.95	0.974
Cobalt, Total	7440-48-4	6.47		2.44	1.22
Copper, Total	7440-50-8	7.63		2.92	1.46
Lead, Total	7439-92-1	10.7		0.974	0.487
Nickel, Total	7440-02-0	6.73		3.90	1.95
Selenium, Total	7782-49-2		U	0.974	0.487
Thallium, Total	7440-28-0	0.152	J	0.195	0.0974
Vanadium, Total	7440-62-2	19.9		2.44	1.22

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-35	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH10-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:08
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394190	**Analyst:**	JYH	**Run Date:**	04/04/2012 18:59
Collect Date:	03/21/2012 08:47	**Dilution:**	20	**File ID:**	NI.040412.185941
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	97.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.82	1.41

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-35	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH10-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 11:33
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/03/2012 10:11
Workgroup #:	WG393917	**Analyst:**	JYH	**Run Date:**	04/03/2012 12:09
Collect Date:	03/21/2012 08:47	**Dilution:**	50	**File ID:**	NI.040312.120951
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	97.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	323		9.74	4.87

Certificate of Analysis

Sample #:	L12030946-35	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	80-BH10-2	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:12
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394289	**Analyst:**	PDM	**Run Date:**	04/05/2012 11:20
Collect Date:	03/21/2012 08:47	**Dilution:**	1	**File ID:**	HY.040512.112053
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0974	0.00974

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-36	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH10-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:08
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/03/2012 09:15
Workgroup #:	WG394023	**Analyst:**	PDM	**Run Date:**	04/03/2012 23:54
Collect Date:	03/21/2012 08:50	**Dilution:**	1	**File ID:**	T1.040312.235413
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	2910		14.7	7.36
Antimony, Total	7440-36-0		U	0.736	0.368
Calcium, Total	7440-70-2	3970		7.36	3.68
Iron, Total	7439-89-6	9750		2.21	1.10
Magnesium, Total	7439-95-4	1560		18.4	9.20
Potassium, Total	7440-09-7	761		36.8	18.4
Sodium, Total	7440-23-5	83.7		18.4	9.20
Zinc, Total	7440-66-6	15.8		0.736	0.368

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-36	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH10-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:08
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG394023	**Analyst:**	PDM	**Run Date:**	04/05/2012 20:07
Collect Date:	03/21/2012 08:50	**Dilution:**	2	**File ID:**	T1.040512.200725
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.314		0.147	0.0736

Certificate of Analysis

Sample #:	L12030946-36	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH10-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 11:34
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393917	**Analyst:**	JYH	**Run Date:**	04/02/2012 18:08
Collect Date:	03/21/2012 08:50	**Dilution:**	5	**File ID:**	NI.040212.180805
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2		U	1.41	0.707
Barium, Total	7440-39-3	29.0		1.41	0.707
Cadmium, Total	7440-43-9		U	0.472	0.236
Chromium, Total	7440-47-3	1.63	J	1.89	0.943
Cobalt, Total	7440-48-4	2.91		2.36	1.18
Copper, Total	7440-50-8	3.12		2.83	1.41
Lead, Total	7439-92-1	5.09		0.943	0.472
Manganese, Total	7439-96-5	141		0.943	0.472
Nickel, Total	7440-02-0	2.61	J	3.77	1.89
Selenium, Total	7782-49-2		U	0.943	0.472
Thallium, Total	7440-28-0		U	0.189	0.0943
Vanadium, Total	7440-62-2	5.90		2.36	1.18

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-36	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH10-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:08
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394190	**Analyst:**	JYH	**Run Date:**	04/04/2012 19:02
Collect Date:	03/21/2012 08:50	**Dilution:**	20	**File ID:**	NI.040412.190227
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	98.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.95	1.47

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030946-36	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	80-BH10-3	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:12
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394289	**Analyst:**	PDM	**Run Date:**	04/05/2012 11:24
Collect Date:	03/21/2012 08:50	**Dilution:**	1	**File ID:**	HY.040512.112421
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0988	0.00988

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-37	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH11-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:08
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/03/2012 09:15
Workgroup #:	WG394023	**Analyst:**	PDM	**Run Date:**	04/03/2012 23:57
Collect Date:	03/21/2012 09:05	**Dilution:**	1	**File ID:**	T1.040312.235753
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	3900		14.3	7.13
Antimony, Total	7440-36-0		U	0.713	0.356
Calcium, Total	7440-70-2	1970		7.13	3.56
Iron, Total	7439-89-6	10600		2.14	1.07
Magnesium, Total	7439-95-4	1640		17.8	8.91
Potassium, Total	7440-09-7	1440		35.6	17.8
Sodium, Total	7440-23-5	28.2		17.8	8.91
Zinc, Total	7440-66-6	16.9		0.713	0.356

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-37	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH11-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:08
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG394023	**Analyst:**	PDM	**Run Date:**	04/05/2012 20:11
Collect Date:	03/21/2012 09:05	**Dilution:**	2	**File ID:**	T1.040512.201104
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.382		0.143	0.0713

Certificate of Analysis

Sample #:	L12030946-37	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH11-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 11:34
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393917	**Analyst:**	JYH	**Run Date:**	04/02/2012 18:22
Collect Date:	03/21/2012 09:05	**Dilution:**	5	**File ID:**	NI.040212.182200
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.21	J	1.45	0.724
Barium, Total	7440-39-3	39.4		1.45	0.724
Cadmium, Total	7440-43-9		U	0.483	0.241
Chromium, Total	7440-47-3	2.21		1.93	0.966
Cobalt, Total	7440-48-4	3.25		2.41	1.21
Copper, Total	7440-50-8	5.26		2.90	1.45
Lead, Total	7439-92-1	6.77		0.966	0.483
Manganese, Total	7439-96-5	165		0.966	0.483
Nickel, Total	7440-02-0	3.22	J	3.86	1.93
Selenium, Total	7782-49-2		U	0.966	0.483
Thallium, Total	7440-28-0	0.168	J	0.193	0.0966
Vanadium, Total	7440-62-2	8.72		2.41	1.21

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-37	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH11-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:08
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394190	**Analyst:**	JYH	**Run Date:**	04/04/2012 19:10
Collect Date:	03/21/2012 09:05	**Dilution:**	20	**File ID:**	NI.040412.191050
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.85	1.43

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030946-37	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	80-BH11-1	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:12
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394289	**Analyst:**	PDM	**Run Date:**	04/05/2012 11:26
Collect Date:	03/21/2012 09:05	**Dilution:**	1	**File ID:**	HY.040512.112622
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0994	0.00994

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-38	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH11-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:08
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/03/2012 09:15
Workgroup #:	WG394023	**Analyst:**	PDM	**Run Date:**	04/04/2012 00:01
Collect Date:	03/21/2012 09:10	**Dilution:**	1	**File ID:**	T1.040412.000133
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	6930		14.8	7.41
Antimony, Total	7440-36-0		U	0.741	0.370
Beryllium, Total	7440-41-7	0.121		0.0741	0.0370
Calcium, Total	7440-70-2	2920		7.41	3.70
Iron, Total	7439-89-6	15500		2.22	1.11
Magnesium, Total	7439-95-4	2820		18.5	9.26
Potassium, Total	7440-09-7	1900		37.0	18.5
Sodium, Total	7440-23-5	65.9		18.5	9.26
Zinc, Total	7440-66-6	27.5		0.741	0.370

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-38	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH11-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 11:37
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393917	**Analyst:**	JYH	**Run Date:**	04/02/2012 18:24
Collect Date:	03/21/2012 09:10	**Dilution:**	5	**File ID:**	NI.040212.182445
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	2.44		1.49	0.743
Barium, Total	7440-39-3	72.0		1.49	0.743
Cadmium, Total	7440-43-9		U	0.496	0.248
Chromium, Total	7440-47-3	4.21		1.98	0.991

Certificate of Analysis

Analyte	CAS #	Result	Qual	LOQ	LOD
Cobalt, Total	7440-48-4	6.10		2.48	1.24
Copper, Total	7440-50-8	7.01		2.97	1.49
Lead, Total	7439-92-1	10.5		0.991	0.496
Nickel, Total	7440-02-0	6.42		3.97	1.98
Selenium, Total	7782-49-2		U	0.991	0.496
Thallium, Total	7440-28-0	0.150	J	0.198	0.0991
Vanadium, Total	7440-62-2	19.9		2.48	1.24

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-38	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH11-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:08
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394190	**Analyst:**	JYH	**Run Date:**	04/04/2012 19:13
Collect Date:	03/21/2012 09:10	**Dilution:**	20	**File ID:**	NI.040412.191336
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	97.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.96	1.48

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-38	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH11-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 11:37
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/03/2012 10:11
Workgroup #:	WG393917	**Analyst:**	JYH	**Run Date:**	04/03/2012 12:12
Collect Date:	03/21/2012 09:10	**Dilution:**	50	**File ID:**	NI.040312.121238
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	97.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	253		9.91	4.96

Sample #:	L12030946-38	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	80-BH11-2	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:12
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394289	**Analyst:**	PDM	**Run Date:**	04/05/2012 11:28
Collect Date:	03/21/2012 09:10	**Dilution:**	1	**File ID:**	HY.040512.112815
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0997	0.00997

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030946-39	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH11-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:08
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/03/2012 09:15
Workgroup #:	WG394023	**Analyst:**	PDM	**Run Date:**	04/04/2012 00:05
Collect Date:	03/21/2012 09:20	**Dilution:**	1	**File ID:**	T1.040412.000524
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	99.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	1660		14.2	7.09
Antimony, Total	7440-36-0		U	0.709	0.355
Calcium, Total	7440-70-2	1520		7.09	3.55
Iron, Total	7439-89-6	7630		2.13	1.06
Magnesium, Total	7439-95-4	732		17.7	8.87
Potassium, Total	7440-09-7	572		35.5	17.7
Sodium, Total	7440-23-5	35.7		17.7	8.87
Zinc, Total	7440-66-6	9.23		0.709	0.355

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-39	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH11-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:08
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG394023	**Analyst:**	PDM	**Run Date:**	04/05/2012 20:14
Collect Date:	03/21/2012 09:20	**Dilution:**	2	**File ID:**	T1.040512.201448
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	99.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.179		0.142	0.0709

Sample #:	L12030946-39	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH11-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 11:37
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393917	**Analyst:**	JYH	**Run Date:**	04/02/2012 18:27
Collect Date:	03/21/2012 09:20	**Dilution:**	5	**File ID:**	NI.040212.182731
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	99.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	0.880	J	1.42	0.712
Barium, Total	7440-39-3	32.8		1.42	0.712
Cadmium, Total	7440-43-9		U	0.474	0.237
Chromium, Total	7440-47-3	2.78		1.90	0.949
Cobalt, Total	7440-48-4	2.57		2.37	1.19

Certificate of Analysis

Analyte	CAS #	Result	Qual	LOQ	LOD
Copper, Total	7440-50-8	3.45		2.85	1.42
Lead, Total	7439-92-1	6.12		0.949	0.474
Manganese, Total	7439-96-5	140		0.949	0.474
Nickel, Total	7440-02-0	2.44	J	3.80	1.90
Selenium, Total	7782-49-2		U	0.949	0.474
Thallium, Total	7440-28-0		U	0.190	0.0949
Vanadium, Total	7440-62-2	7.78		2.37	1.19

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-39	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH11-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:08
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394190	**Analyst:**	JYH	**Run Date:**	04/04/2012 19:16
Collect Date:	03/21/2012 09:20	**Dilution:**	20	**File ID:**	NI.040412.191623
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	99.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.84	1.42

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-39	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	80-BH11-3	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:12
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394289	**Analyst:**	PDM	**Run Date:**	04/05/2012 11:30
Collect Date:	03/21/2012 09:20	**Dilution:**	1	**File ID:**	HY.040512.113012
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	99.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0953	0.00953

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-40	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH11-FD3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:08
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/03/2012 09:15
Workgroup #:	WG394023	**Analyst:**	PDM	**Run Date:**	04/04/2012 00:09
Collect Date:	03/21/2012 09:20	**Dilution:**	1	**File ID:**	T1.040412.000904
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	99.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	2180		14.7	7.35

Certificate of Analysis

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0		U	0.735	0.367
Calcium, Total	7440-70-2	2040		7.35	3.67
Iron, Total	7439-89-6	9230		2.20	1.10
Magnesium, Total	7439-95-4	1020		18.4	9.18
Potassium, Total	7440-09-7	719		36.7	18.4
Sodium, Total	7440-23-5	44.0		18.4	9.18
Zinc, Total	7440-66-6	11.0		0.735	0.367

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-40	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH11-FD3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:08
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG394023	**Analyst:**	PDM	**Run Date:**	04/05/2012 20:18
Collect Date:	03/21/2012 09:20	**Dilution:**	2	**File ID:**	T1.040512.201827
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	99.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.222		0.147	0.0735

Sample #:	L12030946-40	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH11-FD3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 11:38
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393917	**Analyst:**	JYH	**Run Date:**	04/02/2012 18:30
Collect Date:	03/21/2012 09:20	**Dilution:**	5	**File ID:**	NI.040212.183018
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	99.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2		U	1.45	0.726
Barium, Total	7440-39-3	24.3		1.45	0.726
Cadmium, Total	7440-43-9		U	0.484	0.242
Chromium, Total	7440-47-3	2.04		1.94	0.968
Cobalt, Total	7440-48-4	1.84	J	2.42	1.21
Copper, Total	7440-50-8	2.10	J	2.90	1.45
Lead, Total	7439-92-1	4.30		0.968	0.484
Manganese, Total	7439-96-5	98.5		0.968	0.484
Nickel, Total	7440-02-0		U	3.87	1.94
Selenium, Total	7782-49-2		U	0.968	0.484
Thallium, Total	7440-28-0		U	0.194	0.0968
Vanadium, Total	7440-62-2	4.44		2.42	1.21

J	Estimated value ; the analyte concentration was less than the LOQ.

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-40	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH11-FD3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:08
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394190	**Analyst:**	JYH	**Run Date:**	04/04/2012 19:19
Collect Date:	03/21/2012 09:20	**Dilution:**	20	**File ID:**	NI.040412.191909
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	99.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.94	1.47

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-40	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	80-BH11-FD3	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:13
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394289	**Analyst:**	PDM	**Run Date:**	04/05/2012 11:31
Collect Date:	03/21/2012 09:20	**Dilution:**	1	**File ID:**	HY.040512.113154
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	99.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0987	0.00987

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-41	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH12-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:08
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/03/2012 09:15
Workgroup #:	WG394023	**Analyst:**	PDM	**Run Date:**	04/04/2012 00:12
Collect Date:	03/21/2012 09:36	**Dilution:**	1	**File ID:**	T1.040412.001244
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	6210		14.0	7.01
Antimony, Total	7440-36-0		U	0.701	0.350
Beryllium, Total	7440-41-7		U	0.0701	0.0350
Calcium, Total	7440-70-2	2660		7.01	3.50
Iron, Total	7439-89-6	14300		2.10	1.05
Magnesium, Total	7439-95-4	2690		17.5	8.76
Potassium, Total	7440-09-7	2140		35.0	17.5
Sodium, Total	7440-23-5	37.9		17.5	8.76
Zinc, Total	7440-66-6	25.6		0.701	0.350

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030946-41	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH12-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 11:38
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393917	**Analyst:**	JYH	**Run Date:**	04/02/2012 18:33
Collect Date:	03/21/2012 09:36	**Dilution:**	5	**File ID:**	NI.040212.183303
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.68		1.47	0.736
Barium, Total	7440-39-3	65.9		1.47	0.736
Cadmium, Total	7440-43-9		U	0.491	0.245
Chromium, Total	7440-47-3	3.68		1.96	0.982
Cobalt, Total	7440-48-4	5.80		2.45	1.23
Copper, Total	7440-50-8	8.46		2.95	1.47
Lead, Total	7439-92-1	10.3		0.982	0.491
Nickel, Total	7440-02-0	5.50		3.93	1.96
Selenium, Total	7782-49-2		U	0.982	0.491
Thallium, Total	7440-28-0	0.135	J	0.196	0.0982
Vanadium, Total	7440-62-2	15.2		2.45	1.23

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-41	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH12-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:08
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394190	**Analyst:**	JYH	**Run Date:**	04/04/2012 19:21
Collect Date:	03/21/2012 09:36	**Dilution:**	20	**File ID:**	NI.040412.192154
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	98.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.80	1.40

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030946-41	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH12-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 11:38
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/03/2012 10:11
Workgroup #:	WG393917	**Analyst:**	JYH	**Run Date:**	04/03/2012 12:15
Collect Date:	03/21/2012 09:36	**Dilution:**	50	**File ID:**	NI.040312.121525
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	98.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	238		9.82	4.91

Sample #:	L12030946-41	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	80-BH12-1	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:13
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394289	**Analyst:**	PDM	**Run Date:**	04/05/2012 11:33
Collect Date:	03/21/2012 09:36	**Dilution:**	1	**File ID:**	HY.040512.113336
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0994	0.00994

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-42	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH12-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:08
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/03/2012 09:15
Workgroup #:	WG394023	**Analyst:**	PDM	**Run Date:**	04/04/2012 00:16
Collect Date:	03/21/2012 09:43	**Dilution:**	1	**File ID:**	T1.040412.001633
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	96.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	7560		14.5	7.24
Antimony, Total	7440-36-0		U	0.724	0.362
Beryllium, Total	7440-41-7	0.0956		0.0724	0.0362
Calcium, Total	7440-70-2	4940		7.24	3.62
Iron, Total	7439-89-6	15500		2.17	1.09
Magnesium, Total	7439-95-4	2970		18.1	9.05
Potassium, Total	7440-09-7	1780		36.2	18.1
Sodium, Total	7440-23-5	83.3		18.1	9.05
Zinc, Total	7440-66-6	30.7		0.724	0.362

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030946-42	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH12-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 11:39
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393917	**Analyst:**	JYH	**Run Date:**	04/02/2012 18:35
Collect Date:	03/21/2012 09:43	**Dilution:**	5	**File ID:**	NI.040212.183550
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	96.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	2.46		1.52	0.762
Barium, Total	7440-39-3	118		1.52	0.762
Cadmium, Total	7440-43-9		U	0.508	0.254
Chromium, Total	7440-47-3	5.33		2.03	1.02
Cobalt, Total	7440-48-4	8.85		2.54	1.27
Copper, Total	7440-50-8	9.25		3.05	1.52
Lead, Total	7439-92-1	15.8		1.02	0.508
Nickel, Total	7440-02-0	8.05		4.06	2.03
Selenium, Total	7782-49-2		U	1.02	0.508
Thallium, Total	7440-28-0	0.176	J	0.203	0.102
Vanadium, Total	7440-62-2	20.0		2.54	1.27

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-42	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH12-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:08
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/04/2012 10:45
Workgroup #:	WG394190	**Analyst:**	JYH	**Run Date:**	04/04/2012 19:24
Collect Date:	03/21/2012 09:43	**Dilution:**	20	**File ID:**	NI.040412.192440
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	96.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.90	1.45

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-42	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH12-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 11:39
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/03/2012 10:11
Workgroup #:	WG393917	**Analyst:**	JYH	**Run Date:**	04/03/2012 12:23
Collect Date:	03/21/2012 09:43	**Dilution:**	50	**File ID:**	NI.040312.122346
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	96.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	295		10.2	5.08

Certificate of Analysis

Sample #:	L12030946-42	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	80-BH12-2	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:13
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394289	**Analyst:**	PDM	**Run Date:**	04/05/2012 11:38
Collect Date:	03/21/2012 09:43	**Dilution:**	1	**File ID:**	HY.040512.113849
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	96.9

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6	0.0105	J	0.101	0.0101

J	Estimated value ; the analyte concentration was less than the LOQ.

Sample #:	L12030946-43	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH12-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393869	**Analyst:**	PDM	**Run Date:**	04/03/2012 03:22
Collect Date:	03/21/2012 09:46	**Dilution:**	1	**File ID:**	T1.040312.032248
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	99.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	1330		13.5	6.77
Antimony, Total	7440-36-0		U	0.677	0.339
Magnesium, Total	7439-95-4	701		16.9	8.47
Potassium, Total	7440-09-7	417		33.9	16.9
Silver, Total	7440-22-4	0.384		0.135	0.0677
Sodium, Total	7440-23-5	48.3		16.9	8.47
Zinc, Total	7440-66-6	10.2		0.677	0.339

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-43	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH12-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG393869	**Analyst:**	PDM	**Run Date:**	04/06/2012 00:42
Collect Date:	03/21/2012 09:46	**Dilution:**	1	**File ID:**	T1.040612.004234
Sample Tag:	02	**Units:**	mg/kg	**Percent Solid:**	99.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.184		0.0677	0.0339
Calcium, Total	7440-70-2	2130		6.77	3.39

Certificate of Analysis

Sample #:	L12030946-43	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH12-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/11/2012 09:00
Workgroup #:	WG393869	**Analyst:**	PDM	**Run Date:**	04/11/2012 12:44
Collect Date:	03/21/2012 09:46	**Dilution:**	10	**File ID:**	T1.041112.124449
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	99.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Iron, Total	7439-89-6	11000		20.3	10.2

Sample #:	L12030946-43	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH12-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 11:39
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393917	**Analyst:**	JYH	**Run Date:**	04/02/2012 18:38
Collect Date:	03/21/2012 09:46	**Dilution:**	5	**File ID:**	NI.040212.183837
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	99.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2		U	1.46	0.730
Barium, Total	7440-39-3	21.5		1.46	0.730
Cadmium, Total	7440-43-9		U	0.487	0.243
Chromium, Total	7440-47-3	1.54	J	1.95	0.973
Cobalt, Total	7440-48-4	2.22	J	2.43	1.22
Copper, Total	7440-50-8	2.74	J	2.92	1.46
Lead, Total	7439-92-1	4.91		0.973	0.487
Manganese, Total	7439-96-5	112		0.973	0.487
Nickel, Total	7440-02-0	2.06	J	3.89	1.95
Selenium, Total	7782-49-2		U	0.973	0.487
Thallium, Total	7440-28-0		U	0.195	0.0973
Vanadium, Total	7440-62-2	5.96		2.43	1.22

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-43	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH12-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:42
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/05/2012 09:55
Workgroup #:	WG394335	**Analyst:**	JYH	**Run Date:**	04/05/2012 17:10
Collect Date:	03/21/2012 09:46	**Dilution:**	20	**File ID:**	NI.040512.171029
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	99.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.71	1.35

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-43	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	80-BH12-3	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:13
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394289	**Analyst:**	PDM	**Run Date:**	04/05/2012 11:40
Collect Date:	03/21/2012 09:46	**Dilution:**	1	**File ID:**	HY.040512.114032
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	99.4

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0955	0.00955

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-44	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH12-FD1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG393869	**Analyst:**	PDM	**Run Date:**	04/06/2012 00:57
Collect Date:	03/21/2012 09:36	**Dilution:**	1	**File ID:**	T1.040612.005713
Sample Tag:	02	**Units:**	mg/kg	**Percent Solid:**	98.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.442		0.0724	0.0362
Calcium, Total	7440-70-2	2560		7.24	3.62

Sample #:	L12030946-44	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH12-FD1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393869	**Analyst:**	PDM	**Run Date:**	04/03/2012 03:26
Collect Date:	03/21/2012 09:36	**Dilution:**	1	**File ID:**	T1.040312.032627
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	4580		14.5	7.24
Antimony, Total	7440-36-0		U	0.724	0.362
Magnesium, Total	7439-95-4	2010		18.1	9.05
Potassium, Total	7440-09-7	1680		36.2	18.1
Silver, Total	7440-22-4	0.853		0.145	0.0724
Sodium, Total	7440-23-5	32.4		18.1	9.05
Zinc, Total	7440-66-6	20.2		0.724	0.362

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030946-44	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH12-FD1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/10/2012 09:48
Workgroup #:	WG393869	**Analyst:**	PDM	**Run Date:**	04/10/2012 16:10
Collect Date:	03/21/2012 09:36	**Dilution:**	100	**File ID:**	T1.041012.161043
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Iron, Total	7439-89-6	16400		217	109

Sample #:	L12030946-44	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH12-FD1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 11:40
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393917	**Analyst:**	JYH	**Run Date:**	04/02/2012 18:41
Collect Date:	03/21/2012 09:36	**Dilution:**	5	**File ID:**	NI.040212.184123
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.54		1.44	0.722
Barium, Total	7440-39-3	65.3		1.44	0.722
Cadmium, Total	7440-43-9		U	0.481	0.241
Chromium, Total	7440-47-3	3.13		1.92	0.962
Cobalt, Total	7440-48-4	5.37		2.41	1.20
Copper, Total	7440-50-8	9.49		2.89	1.44
Lead, Total	7439-92-1	10.8		0.962	0.481
Nickel, Total	7440-02-0	5.07		3.85	1.92
Selenium, Total	7782-49-2		U	0.962	0.481
Thallium, Total	7440-28-0	0.108	J	0.192	0.0962
Vanadium, Total	7440-62-2	11.9		2.41	1.20

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-44	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH12-FD1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:42
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/05/2012 09:55
Workgroup #:	WG394335	**Analyst:**	JYH	**Run Date:**	04/05/2012 17:13
Collect Date:	03/21/2012 09:36	**Dilution:**	20	**File ID:**	NI.040512.171315
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	98.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.89	1.45

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030946-44	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH12-FD1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 11:40
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/03/2012 10:11
Workgroup #:	WG393917	**Analyst:**	JYH	**Run Date:**	04/03/2012 12:26
Collect Date:	03/21/2012 09:36	**Dilution:**	50	**File ID:**	NI.040312.122632
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	98.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	205		9.62	4.81

Sample #:	L12030946-44	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	80-BH12-FD1	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:13
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394289	**Analyst:**	PDM	**Run Date:**	04/05/2012 11:42
Collect Date:	03/21/2012 09:36	**Dilution:**	1	**File ID:**	HY.040512.114214
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0967	0.00967

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-45	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH13-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393869	**Analyst:**	PDM	**Run Date:**	04/03/2012 03:30
Collect Date:	03/21/2012 10:05	**Dilution:**	1	**File ID:**	T1.040312.033008
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	3330		15.3	7.64
Antimony, Total	7440-36-0		U	0.764	0.382
Magnesium, Total	7439-95-4	1840		19.1	9.55
Potassium, Total	7440-09-7	1710		38.2	19.1
Silver, Total	7440-22-4	0.551		0.153	0.0764
Sodium, Total	7440-23-5	25.2		19.1	9.55
Zinc, Total	7440-66-6	18.2		0.764	0.382

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030946-45	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH13-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG393869	**Analyst:**	PDM	**Run Date:**	04/06/2012 01:00
Collect Date:	03/21/2012 10:05	**Dilution:**	1	**File ID:**	T1.040612.010051
Sample Tag:	02	**Units:**	mg/kg	**Percent Solid:**	98.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.377		0.0764	0.0382
Calcium, Total	7440-70-2	2370		7.64	3.82

Sample #:	L12030946-45	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH13-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/10/2012 09:48
Workgroup #:	WG393869	**Analyst:**	PDM	**Run Date:**	04/10/2012 16:14
Collect Date:	03/21/2012 10:05	**Dilution:**	100	**File ID:**	T1.041012.161438
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Iron, Total	7439-89-6	12000		229	115

Sample #:	L12030946-45	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH13-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 11:40
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393917	**Analyst:**	JYH	**Run Date:**	04/02/2012 18:44
Collect Date:	03/21/2012 10:05	**Dilution:**	5	**File ID:**	NI.040212.184409
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.31	J	1.52	0.759
Barium, Total	7440-39-3	50.6		1.52	0.759
Cadmium, Total	7440-43-9		U	0.506	0.253
Chromium, Total	7440-47-3	2.40		2.02	1.01
Cobalt, Total	7440-48-4	4.18		2.53	1.26
Copper, Total	7440-50-8	6.03		3.04	1.52
Lead, Total	7439-92-1	8.26		1.01	0.506
Nickel, Total	7440-02-0	3.99	J	4.05	2.02
Selenium, Total	7782-49-2		U	1.01	0.506
Thallium, Total	7440-28-0		U	0.202	0.101
Vanadium, Total	7440-62-2	9.24		2.53	1.26

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030946-45	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH13-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:42
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/05/2012 09:55
Workgroup #:	WG394335	**Analyst:**	JYH	**Run Date:**	04/05/2012 17:27
Collect Date:	03/21/2012 10:05	**Dilution:**	20	**File ID:**	NI.040512.172710
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	98.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.06	1.53

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-45	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH13-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 11:40
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/03/2012 10:11
Workgroup #:	WG393917	**Analyst:**	JYH	**Run Date:**	04/03/2012 12:29
Collect Date:	03/21/2012 10:05	**Dilution:**	50	**File ID:**	NI.040312.122918
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	98.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	189		10.1	5.06

Sample #:	L12030946-45	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	80-BH13-1	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:13
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394289	**Analyst:**	PDM	**Run Date:**	04/05/2012 11:44
Collect Date:	03/21/2012 10:05	**Dilution:**	1	**File ID:**	HY.040512.114418
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0962	0.00962

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-46	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH13-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393869	**Analyst:**	PDM	**Run Date:**	04/03/2012 03:41
Collect Date:	03/21/2012 10:09	**Dilution:**	1	**File ID:**	T1.040312.034111
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	95.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	9520		14.7	7.34

Certificate of Analysis

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0		U	0.734	0.367
Potassium, Total	7440-09-7	2390		36.7	18.3
Silver, Total	7440-22-4	1.06		0.147	0.0734
Sodium, Total	7440-23-5	103		18.3	9.17
Zinc, Total	7440-66-6	39.0		0.734	0.367

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-46	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH13-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG393869	**Analyst:**	PDM	**Run Date:**	04/06/2012 01:11
Collect Date:	03/21/2012 10:09	**Dilution:**	1	**File ID:**	T1.040612.011153
Sample Tag:	02	**Units:**	mg/kg	**Percent Solid:**	95.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.879		0.0734	0.0367
Calcium, Total	7440-70-2	4100		7.34	3.67
Magnesium, Total	7439-95-4	3710		18.3	9.17

Sample #:	L12030946-46	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH13-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/10/2012 09:48
Workgroup #:	WG393869	**Analyst:**	PDM	**Run Date:**	04/10/2012 16:18
Collect Date:	03/21/2012 10:09	**Dilution:**	100	**File ID:**	T1.041012.161832
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	95.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Iron, Total	7439-89-6	25600		220	110

Sample #:	L12030946-46	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH13-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 11:41
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393917	**Analyst:**	JYH	**Run Date:**	04/02/2012 18:46
Collect Date:	03/21/2012 10:09	**Dilution:**	5	**File ID:**	NI.040212.184655
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	95.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	3.32		1.55	0.777
Barium, Total	7440-39-3	123		1.55	0.777
Cadmium, Total	7440-43-9		U	0.518	0.259
Chromium, Total	7440-47-3	7.72		2.07	1.04

Certificate of Analysis

Analyte	CAS #	Result	Qual	LOQ	LOD
Cobalt, Total	7440-48-4	9.90		2.59	1.29
Copper, Total	7440-50-8	12.6		3.11	1.55
Lead, Total	7439-92-1	17.0		1.04	0.518
Nickel, Total	7440-02-0	10.7		4.14	2.07
Selenium, Total	7782-49-2		U	1.04	0.518
Thallium, Total	7440-28-0	0.236		0.207	0.104
Vanadium, Total	7440-62-2	28.4		2.59	1.29

U Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-46	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH13-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:42
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/05/2012 09:55
Workgroup #:	WG394335	**Analyst:**	JYH	**Run Date:**	04/05/2012 17:29
Collect Date:	03/21/2012 10:09	**Dilution:**	20	**File ID:**	NI.040512.172957
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	95.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.93	1.47

U Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-46	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH13-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 11:41
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/03/2012 10:11
Workgroup #:	WG393917	**Analyst:**	JYH	**Run Date:**	04/03/2012 12:32
Collect Date:	03/21/2012 10:09	**Dilution:**	50	**File ID:**	NI.040312.123204
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	95.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	489		10.4	5.18

Sample #:	L12030946-46	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	80-BH13-2	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:13
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394289	**Analyst:**	PDM	**Run Date:**	04/05/2012 11:46
Collect Date:	03/21/2012 10:09	**Dilution:**	1	**File ID:**	HY.040512.114639
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	95.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6	0.0111	J	0.104	0.0104

J Estimated value ; the analyte concentration was less than the LOQ.

Certificate of Analysis

Sample #:	L12030946-47	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH13-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393869	**Analyst:**	PDM	**Run Date:**	04/03/2012 03:45
Collect Date:	03/21/2012 10:13	**Dilution:**	1	**File ID:**	T1.040312.034504
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	4170		14.6	7.30
Antimony, Total	7440-36-0		U	0.730	0.365
Potassium, Total	7440-09-7	1380		36.5	18.2
Silver, Total	7440-22-4	0.734		0.146	0.0730
Sodium, Total	7440-23-5	80.3		18.2	9.12
Zinc, Total	7440-66-6	21.8		0.730	0.365

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-47	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH13-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG393869	**Analyst:**	PDM	**Run Date:**	04/06/2012 01:15
Collect Date:	03/21/2012 10:13	**Dilution:**	1	**File ID:**	T1.040612.011547
Sample Tag:	02	**Units:**	mg/kg	**Percent Solid:**	98.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.473		0.0730	0.0365
Calcium, Total	7440-70-2	2870		7.30	3.65
Magnesium, Total	7439-95-4	2080		18.2	9.12

Sample #:	L12030946-47	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH13-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/10/2012 09:48
Workgroup #:	WG393869	**Analyst:**	PDM	**Run Date:**	04/10/2012 16:22
Collect Date:	03/21/2012 10:13	**Dilution:**	100	**File ID:**	T1.041012.162225
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Iron, Total	7439-89-6	13700		219	109

Certificate of Analysis

Sample #:	L12030946-47	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH13-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 11:41
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393917	**Analyst:**	JYH	**Run Date:**	04/02/2012 18:55
Collect Date:	03/21/2012 10:13	**Dilution:**	5	**File ID:**	NI.040212.185517
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.14	J	1.45	0.726
Barium, Total	7440-39-3	54.2		1.45	0.726
Cadmium, Total	7440-43-9		U	0.484	0.242
Chromium, Total	7440-47-3	2.58		1.94	0.969
Cobalt, Total	7440-48-4	4.51		2.42	1.21
Copper, Total	7440-50-8	5.12		2.91	1.45
Lead, Total	7439-92-1	7.67		0.969	0.484
Nickel, Total	7440-02-0	4.26		3.87	1.94
Selenium, Total	7782-49-2		U	0.969	0.484
Thallium, Total	7440-28-0	0.115	J	0.194	0.0969
Vanadium, Total	7440-62-2	10.0		2.42	1.21

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-47	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH13-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:42
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/05/2012 09:55
Workgroup #:	WG394335	**Analyst:**	JYH	**Run Date:**	04/05/2012 17:32
Collect Date:	03/21/2012 10:13	**Dilution:**	20	**File ID:**	NI.040512.173243
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	98.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.92	1.46

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-47	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH13-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 11:41
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/03/2012 10:11
Workgroup #:	WG393917	**Analyst:**	JYH	**Run Date:**	04/03/2012 12:34
Collect Date:	03/21/2012 10:13	**Dilution:**	50	**File ID:**	NI.040312.123451
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	98.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	198		9.69	4.84

Certificate of Analysis

Sample #:	L12030946-47	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	80-BH13-3	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:13
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394289	**Analyst:**	PDM	**Run Date:**	04/05/2012 11:48
Collect Date:	03/21/2012 10:13	**Dilution:**	1	**File ID:**	HY.040512.114843
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.1

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0996	0.00996

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-48	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH14-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG393869	**Analyst:**	PDM	**Run Date:**	04/06/2012 01:19
Collect Date:	03/21/2012 08:16	**Dilution:**	1	**File ID:**	T1.040612.011925
Sample Tag:	02	**Units:**	mg/kg	**Percent Solid:**	97.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.435		0.0708	0.0354
Calcium, Total	7440-70-2	2780		7.08	3.54
Magnesium, Total	7439-95-4	2040		17.7	8.85

Sample #:	L12030946-48	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH14-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393869	**Analyst:**	PDM	**Run Date:**	04/03/2012 03:48
Collect Date:	03/21/2012 08:16	**Dilution:**	1	**File ID:**	T1.040312.034843
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	5330		14.2	7.08
Antimony, Total	7440-36-0		U	0.708	0.354
Potassium, Total	7440-09-7	1680		35.4	17.7
Silver, Total	7440-22-4	1.29		0.142	0.0708
Sodium, Total	7440-23-5	36.4		17.7	8.85
Zinc, Total	7440-66-6	24.2		0.708	0.354

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030946-48	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH14-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/10/2012 09:48
Workgroup #:	WG393869	**Analyst:**	PDM	**Run Date:**	04/10/2012 16:33
Collect Date:	03/21/2012 08:16	**Dilution:**	100	**File ID:**	T1.041012.163352
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Iron, Total	7439-89-6	19100		213	106

Sample #:	L12030946-48	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH14-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 11:42
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393917	**Analyst:**	JYH	**Run Date:**	04/02/2012 18:58
Collect Date:	03/21/2012 08:16	**Dilution:**	5	**File ID:**	NI.040212.185804
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.27	J	1.45	0.727
Barium, Total	7440-39-3	58.0		1.45	0.727
Cadmium, Total	7440-43-9		U	0.485	0.242
Chromium, Total	7440-47-3	2.92		1.94	0.969
Cobalt, Total	7440-48-4	4.79		2.42	1.21
Copper, Total	7440-50-8	7.29		2.91	1.45
Lead, Total	7439-92-1	8.26		0.969	0.485
Nickel, Total	7440-02-0	4.99		3.88	1.94
Selenium, Total	7782-49-2		U	0.969	0.485
Thallium, Total	7440-28-0	0.124	J	0.194	0.0969
Vanadium, Total	7440-62-2	13.6		2.42	1.21

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-48	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH14-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:42
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/05/2012 09:55
Workgroup #:	WG394335	**Analyst:**	JYH	**Run Date:**	04/05/2012 17:35
Collect Date:	03/21/2012 08:16	**Dilution:**	20	**File ID:**	NI.040512.173530
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	97.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.83	1.42

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030946-48	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH14-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 11:42
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/03/2012 10:11
Workgroup #:	WG393917	**Analyst:**	JYH	**Run Date:**	04/03/2012 12:37
Collect Date:	03/21/2012 08:16	**Dilution:**	50	**File ID:**	NI.040312.123737
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	97.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	202		9.69	4.85

Sample #:	L12030946-48	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	80-BH14-1	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:13
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394289	**Analyst:**	PDM	**Run Date:**	04/05/2012 11:50
Collect Date:	03/21/2012 08:16	**Dilution:**	1	**File ID:**	HY.040512.115026
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.7

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0989	0.00989

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-49	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH14-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG393869	**Analyst:**	PDM	**Run Date:**	04/06/2012 01:23
Collect Date:	03/21/2012 08:21	**Dilution:**	1	**File ID:**	T1.040612.012312
Sample Tag:	02	**Units:**	mg/kg	**Percent Solid:**	98.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.441		0.0720	0.0360
Calcium, Total	7440-70-2	3570		7.20	3.60
Magnesium, Total	7439-95-4	2200		18.0	9.00

Certificate of Analysis

Sample #:	L12030946-49	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH14-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393869	**Analyst:**	PDM	**Run Date:**	04/03/2012 03:52
Collect Date:	03/21/2012 08:21	**Dilution:**	1	**File ID:**	T1.040312.035230
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	4500		14.4	7.20
Antimony, Total	7440-36-0		U	0.720	0.360
Potassium, Total	7440-09-7	1120		36.0	18.0
Silver, Total	7440-22-4	1.14		0.144	0.0720
Sodium, Total	7440-23-5	60.2		18.0	9.00
Zinc, Total	7440-66-6	21.6		0.720	0.360

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-49	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH14-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/10/2012 09:48
Workgroup #:	WG393869	**Analyst:**	PDM	**Run Date:**	04/10/2012 16:37
Collect Date:	03/21/2012 08:21	**Dilution:**	100	**File ID:**	T1.041012.163743
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Iron, Total	7439-89-6	15000		216	108

Sample #:	L12030946-49	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH14-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 11:42
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393917	**Analyst:**	JYH	**Run Date:**	04/02/2012 19:00
Collect Date:	03/21/2012 08:21	**Dilution:**	5	**File ID:**	NI.040212.190049
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.92		1.51	0.756
Barium, Total	7440-39-3	52.0		1.51	0.756
Cadmium, Total	7440-43-9		U	0.504	0.252
Chromium, Total	7440-47-3	3.25		2.02	1.01
Cobalt, Total	7440-48-4	4.39		2.52	1.26
Copper, Total	7440-50-8	6.43		3.03	1.51
Lead, Total	7439-92-1	10.2		1.01	0.504
Nickel, Total	7440-02-0	4.60		4.03	2.02

Certificate of Analysis

Analyte	CAS #	Result	Qual	LOQ	LOD
Selenium, Total	7782-49-2		U	1.01	0.504
Thallium, Total	7440-28-0	0.107	J	0.202	0.101
Vanadium, Total	7440-62-2	12.4		2.52	1.26

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-49	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH14-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:42
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/05/2012 09:55
Workgroup #:	WG394335	**Analyst:**	JYH	**Run Date:**	04/05/2012 17:38
Collect Date:	03/21/2012 08:21	**Dilution:**	20	**File ID:**	NI.040512.173817
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	98.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.88	1.44

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-49	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH14-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 11:42
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/03/2012 10:11
Workgroup #:	WG393917	**Analyst:**	JYH	**Run Date:**	04/03/2012 12:40
Collect Date:	03/21/2012 08:21	**Dilution:**	50	**File ID:**	NI.040312.124024
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	98.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	216		10.1	5.04

Sample #:	L12030946-49	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	80-BH14-2	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:13
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394289	**Analyst:**	PDM	**Run Date:**	04/05/2012 11:52
Collect Date:	03/21/2012 08:21	**Dilution:**	1	**File ID:**	HY.040512.115224
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.2

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0956	0.00956

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030946-50	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH14-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393869	**Analyst:**	PDM	**Run Date:**	04/03/2012 03:56
Collect Date:	03/21/2012 08:24	**Dilution:**	1	**File ID:**	T1.040312.035608
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	3290		13.7	6.86
Antimony, Total	7440-36-0		U	0.686	0.343
Potassium, Total	7440-09-7	1020		34.3	17.1
Silver, Total	7440-22-4	0.956		0.137	0.0686
Sodium, Total	7440-23-5	86.9		17.1	8.57
Zinc, Total	7440-66-6	17.9		0.686	0.343

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-50	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH14-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 12:02
Workgroup #:	WG393869	**Analyst:**	PDM	**Run Date:**	04/06/2012 01:26
Collect Date:	03/21/2012 08:24	**Dilution:**	1	**File ID:**	T1.040612.012650
Sample Tag:	02	**Units:**	mg/kg	**Percent Solid:**	98.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.322		0.0686	0.0343
Calcium, Total	7440-70-2	3480		6.86	3.43
Magnesium, Total	7439-95-4	1690		17.1	8.57

Sample #:	L12030946-50	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH14-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:42
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/10/2012 09:48
Workgroup #:	WG393869	**Analyst:**	PDM	**Run Date:**	04/10/2012 16:41
Collect Date:	03/21/2012 08:24	**Dilution:**	100	**File ID:**	T1.041012.164134
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Iron, Total	7439-89-6	16100		206	103

Certificate of Analysis

Sample #:	L12030946-50	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH14-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 11:43
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393917	**Analyst:**	JYH	**Run Date:**	04/02/2012 19:03
Collect Date:	03/21/2012 08:24	**Dilution:**	5	**File ID:**	NI.040212.190336
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	0.989	J	1.41	0.704
Barium, Total	7440-39-3	38.6		1.41	0.704
Cadmium, Total	7440-43-9		U	0.469	0.235
Chromium, Total	7440-47-3	1.94		1.88	0.939
Cobalt, Total	7440-48-4	3.10		2.35	1.17
Copper, Total	7440-50-8	3.95		2.82	1.41
Lead, Total	7439-92-1	6.09		0.939	0.469
Manganese, Total	7439-96-5	136		0.939	0.469
Nickel, Total	7440-02-0	3.02	J	3.76	1.88
Selenium, Total	7782-49-2		U	0.939	0.469
Thallium, Total	7440-28-0		U	0.188	0.0939
Vanadium, Total	7440-62-2	9.71		2.35	1.17

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-50	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH14-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 08:42
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/05/2012 09:55
Workgroup #:	WG394335	**Analyst:**	JYH	**Run Date:**	04/05/2012 17:02
Collect Date:	03/21/2012 08:24	**Dilution:**	20	**File ID:**	NI.040512.170210
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	98.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.74	1.37

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030946-50	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	80-BH14-3	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:13
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394289	**Analyst:**	PDM	**Run Date:**	04/05/2012 11:54
Collect Date:	03/21/2012 08:24	**Dilution:**	1	**File ID:**	HY.040512.115409
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.100	0.0100

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-51	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH15-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 09:13
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393870	**Analyst:**	PDM	**Run Date:**	04/02/2012 19:36
Collect Date:	03/21/2012 15:44	**Dilution:**	1	**File ID:**	T1.040212.193634
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.5

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	2100		15.4	7.70
Antimony, Total	7440-36-0		U	0.770	0.385
Beryllium, Total	7440-41-7		U	0.0770	0.0385
Potassium, Total	7440-09-7	889		38.5	19.3
Silver, Total	7440-22-4	0.599		0.154	0.0770
Sodium, Total	7440-23-5	23.2		19.3	9.63
Zinc, Total	7440-66-6	11.7		0.770	0.385

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-51	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH15-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 09:13
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/04/2012 09:22
Workgroup #:	WG393870	**Analyst:**	PDM	**Run Date:**	04/04/2012 10:58
Collect Date:	03/21/2012 15:44	**Dilution:**	10	**File ID:**	T1.040412.105811
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.5

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	2000		77.0	38.5
Iron, Total	7439-89-6	9820		23.1	11.6
Magnesium, Total	7439-95-4	1410		193	96.3

Certificate of Analysis

Sample #:	L12030946-51	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH15-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 11:43
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393917	**Analyst:**	JYH	**Run Date:**	04/02/2012 19:06
Collect Date:	03/21/2012 15:44	**Dilution:**	5	**File ID:**	NI.040212.190622
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.5

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	0.935	J	1.45	0.724
Barium, Total	7440-39-3	39.8		1.45	0.724
Cadmium, Total	7440-43-9		U	0.483	0.241
Chromium, Total	7440-47-3	1.69	J	1.93	0.965
Cobalt, Total	7440-48-4	3.15		2.41	1.21
Copper, Total	7440-50-8	3.98		2.90	1.45
Lead, Total	7439-92-1	6.36		0.965	0.483
Manganese, Total	7439-96-5	155		0.965	0.483
Nickel, Total	7440-02-0	2.72	J	3.86	1.93
Selenium, Total	7782-49-2		U	0.965	0.483
Thallium, Total	7440-28-0		U	0.193	0.0965
Vanadium, Total	7440-62-2	8.18		2.41	1.21

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-51	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH15-1	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 09:13
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/05/2012 09:55
Workgroup #:	WG394336	**Analyst:**	JYH	**Run Date:**	04/05/2012 18:00
Collect Date:	03/21/2012 15:44	**Dilution:**	20	**File ID:**	NI.040512.180029
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	98.5

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.08	1.54

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030946-51	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	80-BH15-1	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:13
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394289	**Analyst:**	PDM	**Run Date:**	04/05/2012 11:55
Collect Date:	03/21/2012 15:44	**Dilution:**	1	**File ID:**	HY.040512.115551
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.5

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.0991	0.00991

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-52	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH15-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 09:13
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393870	**Analyst:**	PDM	**Run Date:**	04/02/2012 19:40
Collect Date:	03/21/2012 05:50	**Dilution:**	1	**File ID:**	T1.040212.194012
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	5150		14.3	7.14
Antimony, Total	7440-36-0		U	0.714	0.357
Beryllium, Total	7440-41-7	0.0729		0.0714	0.0357
Potassium, Total	7440-09-7	1710		35.7	17.9
Silver, Total	7440-22-4	1.08		0.143	0.0714
Sodium, Total	7440-23-5	43.5		17.9	8.93
Zinc, Total	7440-66-6	23.3		0.714	0.357

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-52	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH15-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 09:13
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/04/2012 09:22
Workgroup #:	WG393870	**Analyst:**	PDM	**Run Date:**	04/04/2012 11:09
Collect Date:	03/21/2012 05:50	**Dilution:**	10	**File ID:**	T1.040412.110937
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	3690		71.4	35.7
Iron, Total	7439-89-6	14400		21.4	10.7
Magnesium, Total	7439-95-4	3060		179	89.3

Certificate of Analysis

Sample #:	L12030946-52	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH15-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 11:44
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393917	**Analyst:**	JYH	**Run Date:**	04/02/2012 19:09
Collect Date:	03/21/2012 05:50	**Dilution:**	5	**File ID:**	NI.040212.190907
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.11	J	1.45	0.726
Barium, Total	7440-39-3	74.5		1.45	0.726
Cadmium, Total	7440-43-9		U	0.484	0.242
Chromium, Total	7440-47-3	2.28		1.94	0.968
Cobalt, Total	7440-48-4	5.63		2.42	1.21
Copper, Total	7440-50-8	5.99		2.90	1.45
Lead, Total	7439-92-1	9.97		0.968	0.484
Nickel, Total	7440-02-0	5.07		3.87	1.94
Selenium, Total	7782-49-2		U	0.968	0.484
Thallium, Total	7440-28-0	0.107	J	0.194	0.0968
Vanadium, Total	7440-62-2	10.4		2.42	1.21

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-52	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH15-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 09:13
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/05/2012 09:55
Workgroup #:	WG394336	**Analyst:**	JYH	**Run Date:**	04/05/2012 18:03
Collect Date:	03/21/2012 05:50	**Dilution:**	20	**File ID:**	NI.040512.180314
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	97.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.86	1.43

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-52	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH15-2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 11:44
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/03/2012 10:11
Workgroup #:	WG393917	**Analyst:**	JYH	**Run Date:**	04/03/2012 12:43
Collect Date:	03/21/2012 05:50	**Dilution:**	50	**File ID:**	NI.040312.124311
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	97.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	251		9.68	4.84

Certificate of Analysis

Sample #:	L12030946-52	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	80-BH15-2	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:13
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394289	**Analyst:**	PDM	**Run Date:**	04/05/2012 12:01
Collect Date:	03/21/2012 05:50	**Dilution:**	1	**File ID:**	HY.040512.120105
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.6

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.100	0.0100

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-53	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH15-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 09:13
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393870	**Analyst:**	PDM	**Run Date:**	04/02/2012 19:43
Collect Date:	03/21/2012 15:56	**Dilution:**	1	**File ID:**	T1.040212.194359
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.3

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	2900		15.2	7.58
Antimony, Total	7440-36-0		U	0.758	0.379
Beryllium, Total	7440-41-7	0.196		0.0758	0.0379
Potassium, Total	7440-09-7	1200		37.9	19.0
Silver, Total	7440-22-4	0.345		0.152	0.0758
Sodium, Total	7440-23-5	33.4		19.0	9.48
Zinc, Total	7440-66-6	14.5		0.758	0.379

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-53	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH15-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 09:13
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/04/2012 09:22
Workgroup #:	WG393870	**Analyst:**	PDM	**Run Date:**	04/04/2012 11:13
Collect Date:	03/21/2012 15:56	**Dilution:**	10	**File ID:**	T1.040412.111325
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.3

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	3710		75.8	37.9
Iron, Total	7439-89-6	9280		22.8	11.4
Magnesium, Total	7439-95-4	2170		190	94.8

Certificate of Analysis

Sample #:	L12030946-53	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH15-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 11:44
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393917	**Analyst:**	JYH	**Run Date:**	04/02/2012 19:11
Collect Date:	03/21/2012 15:56	**Dilution:**	5	**File ID:**	NI.040212.191153
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	98.3

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	0.912	J	1.40	0.699
Barium, Total	7440-39-3	48.6		1.40	0.699
Cadmium, Total	7440-43-9		U	0.466	0.233
Chromium, Total	7440-47-3	1.99		1.86	0.931
Cobalt, Total	7440-48-4	3.26		2.33	1.16
Copper, Total	7440-50-8	3.61		2.79	1.40
Lead, Total	7439-92-1	6.41		0.931	0.466
Manganese, Total	7439-96-5	142		0.931	0.466
Nickel, Total	7440-02-0	3.48	J	3.73	1.86
Selenium, Total	7782-49-2		U	0.931	0.466
Thallium, Total	7440-28-0		U	0.186	0.0931
Vanadium, Total	7440-62-2	6.59		2.33	1.16

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-53	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH15-3	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 09:13
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/05/2012 09:55
Workgroup #:	WG394336	**Analyst:**	JYH	**Run Date:**	04/05/2012 18:06
Collect Date:	03/21/2012 15:56	**Dilution:**	20	**File ID:**	NI.040512.180600
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	98.3

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	3.03	1.52

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12030946-53	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	80-BH15-3	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:13
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394289	**Analyst:**	PDM	**Run Date:**	04/05/2012 12:03
Collect Date:	03/21/2012 15:56	**Dilution:**	1	**File ID:**	HY.040512.120303
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	98.3

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.100	0.0100

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-54	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH15-FD2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 09:13
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/02/2012 08:45
Workgroup #:	WG393870	**Analyst:**	PDM	**Run Date:**	04/02/2012 19:47
Collect Date:	03/21/2012 15:50	**Dilution:**	1	**File ID:**	T1.040212.194736
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.3

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	6390		14.0	7.02
Antimony, Total	7440-36-0		U	0.702	0.351
Beryllium, Total	7440-41-7		U	0.0702	0.0351
Potassium, Total	7440-09-7	1840		35.1	17.5
Silver, Total	7440-22-4	1.50		0.140	0.0702
Sodium, Total	7440-23-5	50.8		17.5	8.77
Zinc, Total	7440-66-6	26.0		0.702	0.351

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-54	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	80-BH15-FD2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 09:13
Matrix:	Soil	**Analytical Method:**	6010B	**Cal Date:**	04/04/2012 09:22
Workgroup #:	WG393870	**Analyst:**	PDM	**Run Date:**	04/04/2012 11:17
Collect Date:	03/21/2012 15:50	**Dilution:**	10	**File ID:**	T1.040412.111714
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.3

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	4190		70.2	35.1
Iron, Total	7439-89-6	16500		21.0	10.5
Magnesium, Total	7439-95-4	3320		175	87.7

Certificate of Analysis

Sample #:	L12030946-54	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH15-FD2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 11:44
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/02/2012 13:04
Workgroup #:	WG393917	**Analyst:**	JYH	**Run Date:**	04/02/2012 17:57
Collect Date:	03/21/2012 15:50	**Dilution:**	5	**File ID:**	NI.040212.175700
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.3

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	1.29	J	1.48	0.740
Barium, Total	7440-39-3	63.5		1.48	0.740
Cadmium, Total	7440-43-9		U	0.493	0.247
Chromium, Total	7440-47-3	2.63		1.97	0.986
Cobalt, Total	7440-48-4	4.87		2.47	1.23
Copper, Total	7440-50-8	6.28		2.96	1.48
Lead, Total	7439-92-1	8.72		0.986	0.493
Nickel, Total	7440-02-0	4.71		3.95	1.97
Selenium, Total	7782-49-2		U	0.986	0.493
Thallium, Total	7440-28-0	0.158	J	0.197	0.0986
Vanadium, Total	7440-62-2	12.4		2.47	1.23

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-54	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH15-FD2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 09:13
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/05/2012 09:55
Workgroup #:	WG394336	**Analyst:**	JYH	**Run Date:**	04/05/2012 17:52
Collect Date:	03/21/2012 15:50	**Dilution:**	20	**File ID:**	NI.040512.175211
Sample Tag:	DL03	**Units:**	mg/kg	**Percent Solid:**	97.3

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	2.81	1.40

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-54	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH15-FD2	**Prep Method:**	3051A	**Prep Date:**	03/30/2012 11:44
Matrix:	Soil	**Analytical Method:**	6020	**Cal Date:**	04/03/2012 10:11
Workgroup #:	WG393917	**Analyst:**	JYH	**Run Date:**	04/03/2012 12:45
Collect Date:	03/21/2012 15:50	**Dilution:**	50	**File ID:**	NI.040312.124558
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	97.3

Analyte	CAS #	Result	Qual	LOQ	LOD
Manganese, Total	7439-96-5	230		9.86	4.93

Certificate of Analysis

Sample #:	L12030946-54	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	80-BH15-FD2	**Prep Method:**	7471	**Prep Date:**	03/29/2012 13:13
Matrix:	Soil	**Analytical Method:**	7471A	**Cal Date:**	04/05/2012 09:13
Workgroup #:	WG394289	**Analyst:**	PDM	**Run Date:**	04/05/2012 12:04
Collect Date:	03/21/2012 15:50	**Dilution:**	1	**File ID:**	HY.040512.120445
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.3

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Total	7439-97-6		U	0.100	0.0100

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-55	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	80-BH15-RB	**Prep Method:**	3005A	**Prep Date:**	03/30/2012 06:44
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	04/04/2012 09:02
Workgroup #:	WG393777	**Analyst:**	SLP	**Run Date:**	04/04/2012 13:19
Collect Date:	03/21/2012 16:32	**Dilution:**	1	**File ID:**	P2.040412.131925
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	0.0851	J	0.100	0.0500
Beryllium, Total	7440-41-7		U	0.00200	0.00100
Iron, Total	7439-89-6	0.0559	J	0.100	0.0500
Magnesium, Total	7439-95-4		U	0.500	0.250
Potassium, Total	7440-09-7		U	1.00	0.500
Sodium, Total	7440-23-5		U	0.500	0.250
Zinc, Total	7440-66-6		U	0.0200	0.0100

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-55	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	80-BH15-RB	**Prep Method:**	3005A	**Prep Date:**	03/30/2012 06:44
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	04/05/2012 08:37
Workgroup #:	WG393777	**Analyst:**	KHR	**Run Date:**	04/05/2012 14:00
Collect Date:	03/21/2012 16:32	**Dilution:**	1	**File ID:**	P2.040512.140033
Sample Tag:	02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	0.111	J	0.200	0.100

J	Estimated value ; the analyte concentration was less than the LOQ.

Certificate of Analysis

Sample #:	L12030946-55	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	80-BH15-RB	**Prep Method:**	3015	**Prep Date:**	03/29/2012 10:26
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	03/29/2012 09:57
Workgroup #:	WG393616	**Analyst:**	JYH	**Run Date:**	03/29/2012 13:44
Collect Date:	03/21/2012 16:32	**Dilution:**	1	**File ID:**	NI.032912.134450
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0		U	0.00100	0.000500
Arsenic, Total	7440-38-2		U	0.00100	0.000500
Barium, Total	7440-39-3		U	0.00300	0.00150
Cadmium, Total	7440-43-9		U	0.000600	0.000300
Chromium, Total	7440-47-3		U	0.00200	0.00100
Cobalt, Total	7440-48-4		U	0.00100	0.000500
Copper, Total	7440-50-8		U	0.00200	0.00100
Lead, Total	7439-92-1		U	0.00100	0.000500
Manganese, Total	7439-96-5	0.00164	J	0.00200	0.00100
Nickel, Total	7440-02-0		U	0.00400	0.00200
Selenium, Total	7782-49-2		U	0.00100	0.000500
Silver, Total	7440-22-4		U	0.00100	0.000500
Thallium, Total	7440-28-0		U	0.000200	0.000100
Vanadium, Total	7440-62-2		U	0.00100	0.000500

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12030946-55	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	80-BH15-RB	**Prep Method:**	7470A	**Prep Date:**	03/29/2012 09:26
Matrix:	Water	**Analytical Method:**	7470A	**Cal Date:**	04/02/2012 13:06
Workgroup #:	WG393836	**Analyst:**	PDM	**Run Date:**	04/02/2012 14:12
Collect Date:	03/21/2012 16:32	**Dilution:**	1	**File ID:**	HY.040212.141210
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury	7439-97-6		U	0.000200	0.000100

U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L12030946
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Sample #: L12030946-01 **Client ID:** 80-BH01-1 **Matrix:** Soil **Collect Date:** 03/21/2012 14:43

Analyte	Result	Units	Qualifier
Percent Solids	97.9	weight %	

Sample #: L12030946-02 **Client ID:** 80-BH01-2 **Matrix:** Soil **Collect Date:** 03/21/2012 14:48

Analyte	Result	Units	Qualifier
Percent Solids	98.6	weight %	

Sample #: L12030946-03 **Client ID:** 80-BH01-3 **Matrix:** Soil **Collect Date:** 03/21/2012 14:49

Analyte	Result	Units	Qualifier
Percent Solids	97.6	weight %	

Sample #: L12030946-04 **Client ID:** 80-BH02-1 **Matrix:** Soil **Collect Date:** 03/21/2012 15:06

Analyte	Result	Units	Qualifier
Percent Solids	98.4	weight %	

Sample #: L12030946-05 **Client ID:** 80-BH02-2 **Matrix:** Soil **Collect Date:** 03/21/2012 15:15

Analyte	Result	Units	Qualifier
Percent Solids	98.0	weight %	

Sample #: L12030946-06 **Client ID:** 80-BH02-3 **Matrix:** Soil **Collect Date:** 03/21/2012 15:16

Analyte	Result	Units	Qualifier
Percent Solids	99.4	weight %	

Sample #: L12030946-07 **Client ID:** 80-BH02-FD1 **Matrix:** Soil **Collect Date:** 03/21/2012 15:06

Analyte	Result	Units	Qualifier
Percent Solids	98.3	weight %	

Sample #: L12030946-08 **Client ID:** 80-BH03-1 **Matrix:** Soil **Collect Date:** 03/21/2012 13:26

Analyte	Result	Units	Qualifier
Percent Solids	97.5	weight %	

Sample #: L12030946-09 **Client ID:** 80-BH03-2 **Matrix:** Soil **Collect Date:** 03/21/2012 13:29

Analyte	Result	Units	Qualifier
Percent Solids	98.1	weight %	

Sample #: L12030946-10 **Client ID:** 80-BH03-3 **Matrix:** Soil **Collect Date:** 03/21/2012 13:55

Analyte	Result	Units	Qualifier
Percent Solids	99.4	weight %	

Sample #: L12030946-11 **Client ID:** 80-BH04-1 **Matrix:** Soil **Collect Date:** 03/21/2012 11:58

Analyte	Result	Units	Qualifier
Percent Solids	96.0	weight %	

Sample #: L12030946-12 **Client ID:** 80-BH04-2 **Matrix:** Soil **Collect Date:** 03/21/2012 12:03

Analyte	Result	Units	Qualifier
Percent Solids	97.2	weight %	

Sample #: L12030946-13 **Client ID:** 80-BH04-3 **Matrix:** Soil **Collect Date:** 03/21/2012 12:07

Analyte	Result	Units	Qualifier
Percent Solids	98.1	weight %	

Sample #: L12030946-14 **Client ID:** 80-BH04-MS1 **Matrix:** Soil **Collect Date:** 03/21/2012 11:58

Analyte	Result	Units	Qualifier
Percent Solids	96.0	weight %	

Sample #: L12030946-15 **Client ID:** 80-BH04-MSD1 **Matrix:** Soil **Collect Date:** 03/21/2012 11:58

Analyte	Result	Units	Qualifier
Percent Solids	96.0	weight %	

Sample #: L12030946-16 **Client ID:** 80-BH05-1 **Matrix:** Soil **Collect Date:** 03/21/2012 11:29

Analyte	Result	Units	Qualifier
Percent Solids	82.1	weight %	

Sample #: L12030946-17 **Client ID:** 80-BH05-2 **Matrix:** Soil **Collect Date:** 03/21/2012 11:32

Analyte	Result	Units	Qualifier
Percent Solids	98.7	weight %	

Sample #: L12030946-18 **Client ID:** 80-BH05-3 **Matrix:** Soil **Collect Date:** 03/21/2012 11:38

Analyte	Result	Units	Qualifier
Percent Solids	98.3	weight %	

Sample #: L12030946-19 **Client ID:** 80-BH05-FD2 **Matrix:** Soil **Collect Date:** 03/21/2012 11:32

Analyte	Result	Units	Qualifier
Percent Solids	98.9	weight %	

Sample #: L12030946-20 **Client ID:** 80-BH06-1 **Matrix:** Soil **Collect Date:** 03/21/2012 11:00

Analyte	Result	Units	Qualifier
Percent Solids	98.1	weight %	

Sample #: L12030946-21 **Client ID:** 80-BH06-2 **Matrix:** Soil **Collect Date:** 03/21/2012 11:05

Analyte	Result	Units	Qualifier
Percent Solids	97.0	weight %	

Sample #: L12030946-22 **Client ID:** 80-BH06-3 **Matrix:** Soil **Collect Date:** 03/21/2012 11:07

Analyte	Result	Units	Qualifier
Percent Solids	96.7	weight %	

Sample #: L12030946-23 **Client ID:** 80-BH07-1 **Matrix:** Soil **Collect Date:** 03/21/2012 16:20

Analyte	Result	Units	Qualifier
Percent Solids	97.9	weight %	

Sample #: L12030946-24 **Client ID:** 80-BH07-2 **Matrix:** Soil **Collect Date:** 03/21/2012 16:23

Analyte	Result	Units	Qualifier
Percent Solids	97.9	weight %	

Sample #: L12030946-25 **Client ID:** 80-BH07-3 **Matrix:** Soil **Collect Date:** 03/21/2012 16:27

Analyte	Result	Units	Qualifier
Percent Solids	96.9	weight %	

Sample #: L12030946-26 **Client ID:** 80-BH08-1 **Matrix:** Soil **Collect Date:** 03/21/2012 14:11

Analyte	Result	Units	Qualifier
Percent Solids	98.4	weight %	

Sample #: L12030946-27 **Client ID:** 80-BH08-2 **Matrix:** Soil **Collect Date:** 03/21/2012 14:18

Analyte	Result	Units	Qualifier
Percent Solids	97.9	weight %	

Sample #: L12030946-28 **Client ID:** 80-BH08-3 **Matrix:** Soil **Collect Date:** 03/21/2012 14:25

Analyte	Result	Units	Qualifier
Percent Solids	96.9	weight %	

Sample #: L12030946-29 **Client ID:** 80-BH08-MS2 **Matrix:** Soil **Collect Date:** 03/21/2012 14:18

Analyte	Result	Units	Qualifier
Percent Solids	97.9	weight %	

Sample #: L12030946-30 **Client ID:** 80-BH08-MSD2 **Matrix:** Soil **Collect Date:** 03/21/2012 14:18

Analyte	Result	Units	Qualifier
Percent Solids	97.9	weight %	

Sample #: L12030946-31 **Client ID:** 80-BH09-1 **Matrix:** Soil **Collect Date:** 03/21/2012 10:29

Analyte	Result	Units	Qualifier
Percent Solids	97.5	weight %	

Sample #: L12030946-32 **Client ID:** 80-BH09-2 **Matrix:** Soil **Collect Date:** 03/21/2012 10:33

Analyte	Result	Units	Qualifier
Percent Solids	98.3	weight %	

Sample #: L12030946-33 **Client ID:** 80-BH09-3 **Matrix:** Soil **Collect Date:** 03/21/2012 10:37

Analyte	Result	Units	Qualifier
Percent Solids	99.2	weight %	

Sample #: L12030946-34 **Client ID:** 80-BH10-1 **Matrix:** Soil **Collect Date:** 03/21/2012 08:42

Analyte	Result	Units	Qualifier
Percent Solids	98.4	weight %	

Sample #: L12030946-35 **Client ID:** 80-BH10-2 **Matrix:** Soil **Collect Date:** 03/21/2012 08:47

Analyte	Result	Units	Qualifier
Percent Solids	97.4	weight %	

Sample #: L12030946-36 **Client ID:** 80-BH10-3 **Matrix:** Soil **Collect Date:** 03/21/2012 08:50

Analyte	Result	Units	Qualifier
Percent Solids	98.9	weight %	

Sample #: L12030946-37 **Client ID:** 80-BH11-1 **Matrix:** Soil **Collect Date:** 03/21/2012 09:05

Analyte	Result	Units	Qualifier
Percent Solids	97.9	weight %	

Sample #: L12030946-38 **Client ID:** 80-BH11-2 **Matrix:** Soil **Collect Date:** 03/21/2012 09:10

Analyte	Result	Units	Qualifier
Percent Solids	97.2	weight %	

Sample #: L12030946-39 **Client ID:** 80-BH11-3 **Matrix:** Soil **Collect Date:** 03/21/2012 09:20

Analyte	Result	Units	Qualifier
Percent Solids	99.4	weight %	

Sample #: L12030946-40 **Client ID:** 80-BH11-FD3 **Matrix:** Soil **Collect Date:** 03/21/2012 09:20

Analyte	Result	Units	Qualifier
Percent Solids	99.1	weight %	

Sample #: L12030946-41 **Client ID:** 80-BH12-1 **Matrix:** Soil **Collect Date:** 03/21/2012 09:36

Analyte	Result	Units	Qualifier
Percent Solids	98.1	weight %	

Sample #: L12030946-42 **Client ID:** 80-BH12-2 **Matrix:** Soil **Collect Date:** 03/21/2012 09:43

Analyte	Result	Units	Qualifier
Percent Solids	96.9	weight %	

Sample #: L12030946-43 **Client ID:** 80-BH12-3 **Matrix:** Soil **Collect Date:** 03/21/2012 09:46

Analyte	Result	Units	Qualifier
Percent Solids	99.4	weight %	

Sample #: L12030946-44 **Client ID:** 80-BH12-FD1 **Matrix:** Soil **Collect Date:** 03/21/2012 09:36

Analyte	Result	Units	Qualifier
Percent Solids	98.2	weight %	

Sample #: L12030946-45 **Client ID:** 80-BH13-1 **Matrix:** Soil **Collect Date:** 03/21/2012 10:05

Analyte	Result	Units	Qualifier
Percent Solids	98.2	weight %	

Sample #: L12030946-46 **Client ID:** 80-BH13-2 **Matrix:** Soil **Collect Date:** 03/21/2012 10:09

Analyte	Result	Units	Qualifier
Percent Solids	95.2	weight %	

Sample #: L12030946-47 **Client ID:** 80-BH13-3 **Matrix:** Soil **Collect Date:** 03/21/2012 10:13

Analyte	Result	Units	Qualifier
Percent Solids	98.1	weight %	

Sample #: L12030946-48 **Client ID:** 80-BH14-1 **Matrix:** Soil **Collect Date:** 03/21/2012 08:16

Analyte	Result	Units	Qualifier
Percent Solids	97.7	weight %	

Sample #: L12030946-49 **Client ID:** 80-BH14-2 **Matrix:** Soil **Collect Date:** 03/21/2012 08:21

Analyte	Result	Units	Qualifier
Percent Solids	98.2	weight %	

Sample #: L12030946-50 **Client ID:** 80-BH14-3 **Matrix:** Soil **Collect Date:** 03/21/2012 08:24

Analyte	Result	Units	Qualifier
Percent Solids	98.6	weight %	

Sample #: L12030946-51 **Client ID:** 80-BH15-1 **Matrix:** Soil **Collect Date:** 03/21/2012 15:44

Analyte	Result	Units	Qualifier
Percent Solids	98.5	weight %	

Sample #: L12030946-52 **Client ID:** 80-BH15-2 **Matrix:** Soil **Collect Date:** 03/21/2012 05:50

Analyte	Result	Units	Qualifier
Percent Solids	97.6	weight %	

Sample #: L12030946-53 **Client ID:** 80-BH15-3 **Matrix:** Soil **Collect Date:** 03/21/2012 15:56

Analyte	Result	Units	Qualifier
Percent Solids	98.3	weight %	

Sample #: L12030946-54 **Client ID:** 80-BH15-FD2 **Matrix:** Soil **Collect Date:** 03/21/2012 15:50

Analyte	Result	Units	Qualifier
Percent Solids	97.3	weight %	

Microbac Laboratories Inc.
Ohio Valley Division Analyst List
April 13, 2012

ADC - ANTHONY D. CANTER	AJF - AMANDA J. FICKIESEN	ALB - ANNIE L. BROWN
ALV - AMY L. VALENTINE	AML - TONY M. LONG	AZH - AFTER HOURS
BLG - BRENDA L. GREENWALT	BRG - BRENDA R. GREGORY	CAA - CASSIE A. AUGENSTEIN
CAF - CHERYL A. FLOWERS	CEB - CHAD E. BARNES	CLC - CHRYS L. CRAWFORD
CLS - CARA L. STRICKLER	CLW - CHARISSA L. WINTERS	CPD - CHAD P. DAVIS
CS - CODY M. STRAHLER	CSH - CHRIS S. HILL	DDE - DEBRA D. ELLIOTT
DEV - DAVID E. VANDENBERG	DGB - DOUGLAS G. BUTCHER	DIH - DEANNA I. HESSON
DLB - DAVID L. BUMGARNER	DLP - DOROTHY L. PAYNE	DLR - DIANNA L. RAUCH
DSM - DAVID S. MOSSOR	ECL - ERIC C. LAWSON	EDL - ERIN D. LONG
ERP - ERIN R. PORTER	FJB - FRANCES J. BOLDEN	HAV - HEMA VILASAGAR
HJR - HOLLY J. REED	JAL - JOHN A. LENT	JBK - JEREMY B. KINNEY
JDH - JUSTIN D. HESSON	JKS - JANE K. SCHAAD	JLL - JOHN L. LENT
JWR - JOHN W. RICHARDS	JWS - JACK W. SHEAVES	JYH - JI Y. HU
KEB - KATIE E. BARNES	KHR - KIM H. RHODES	KRA - KATHY R. ALBERTSON
LKN - LINDA K. NEDEFF	LSB - LESLIE S. BUCINA	MDA - MIKE D. ALBERTSON
MDC - MIKE D. COCHRAN	MES - MARY E. SCHILLING	MMB - MAREN M. BEERY
MRT - MICHELLE R. TAYLOR	MSW - MATT S. WILSON	PDM - PIERCE D. MORRIS
PWD - PAUL W. DENT	QX - QIN XU	RAH - ROY A. HALSTEAD
REK - BOB E. KYER	RLB - BOB BUCHANAN	RLK - ROBIN L. KLINGER
RWC - RODNEY W. CAMPBELL	SJP - SUZANNE J. PAUGH	SLM - STEPHANIE L. MOSSBURG
SLP - SHERI L. PFALZGRAF	TIP - TAE I. PARRISH	TMB - TIFFANY M. BAILEY
TMM - TAMMY M. MORRIS	VC - VICKI COLLIER	WJB - WILL J. BEASLEY
WTD - WADE T. DELONG	XXX - UNAVAILABLE OR SUBCONTRACT	

Shaw® a world of Solutions™

COC # 139791-SB005

Chain of Custody

Lab EWS
Lab Contact
Lab Phone 330-720-1061

Client US Army
W. O. WSMR-30 PO 620349
TAT 14 Days

Site Name WSMR
Contact Name 1
Contact Phone

Bill To: Shaw Environmental & In
Phone
Fax
Address Bill electronically to
City Baton Rouge
State LA Zip 70809

Results To: Mark Lyon
Phone
Fax
Address 2440 Louisiana Blvd NE
City Albuquerque
State NM Zip 87110

	Sample ID	Matrix	Wt/ Vol	Date-Time Collected	Filtered	Number Containers	Mercury by 7471A	Metals by 6010B	Metals by 6020							
						Container	G60W	G60W	G60W							
						Preservative	n	n	n							
✓	80-BH01-1	Soil		3/21/2012 2:43:00 PM		1	X	X	X							
✓	80-BH01-2	Soil		3/21/2012 2:48:00 PM		1	X	X	X							
✓	80-BH01-3	Soil		3/21/2012 2:49:00 PM		1	X	X	X							
✓	80-BH02-1	Soil		3/21/2012 3:06:00 PM		1	X	X	X							
✓	80-BH02-2	Soil		3/21/2012 3:13:00 PM		1	X	X	X							
✓	80-BH02-3	Soil		3/21/2012 3:16:00 PM		1	X	X	X							
✓	80-BH02-FD1	Soil		3/21/2012 3:06:00 PM		1	X	X	X							
✓	80-BH03-1	Soil		3/21/2012 1:26:00 PM		1	X	X	X							
✓	80-BH03-2	Soil		3/21/2012 1:29:00 PM		1	X	X	X							
✓	80-BH03-3	Soil		3/21/2012 1:55:00 PM		1	X	X	X							
✓	80-BH04-1	Soil		3/21/2012 11:58:00 AM		1	X	X	X							
✓	80-BH04-2	Soil		3/21/2012 12:03:00 PM		1	X	X	X							
✓	80-BH04-3	Soil		3/21/2012 12:07:00 PM		1	X	X	X							
✓	80-BH04-MS1	Soil		3/21/2012 11:58:00 AM		1	X	X	X							
✓	80-BH04-MSD1	Soil		3/21/2012 11:58:00 AM		1	X	X	X							
✓	80-BH05-1	Soil		3/21/2012 11:29:00 AM		1	X	X	X							
✓	80-BH05-2	Soil		3/21/2012 11:32:00 AM		1	X	X	X							
✓	80-BH05-3	Soil		3/21/2012 11:38:00 AM		1	X	X	X							
✓	80-BH05-FD2	Soil		3/21/2012 11:32:00 AM		1	X	X	X							

Remarks/Comments
Waybill # 873013169507 FedEx Express

Sampled By

Lab Use Only
Temp of Cooler when Received, C

1	2	3	4	5

COC Tape was present on outer package Y N
COC Tape was unbroken on outer package Y N
COC Tape ws present on sample Y N
COC Tape was unbroken on sample Y N

Received in good condition Y N
Labels indicate Properly Preserved Y N
Received within Holding Time Y N

Relinquished By	Date / Time	Received By	Date /
[illegible]	3/23/12 1600		

Microbac OVD
Received: 03/27/2012 11:24
By: BOB BUCHANAN 221000023564

RF Buchanan

Shaw® a world of Solutions®

COC # 139791-SB005

Chain of Custody

Lab EWS
Lab Contact
Lab Phone 330-720-1061

Client US Army
W. O. WSMR-30 PO 620349
TAT 14 Days

Site Name WSMR
Contact Name 1
Contact Phone

Bill To: Shaw Environmental & In
Phone
Fax
Address Bill electronically to
City Baton Rouge
State LA Zip 70809

Results To: Mark Lyon
Phone
Fax
Address 2440 Louisiana Blvd NE
City Albuquerque
State NM Zip 87110

	Sample ID	Matrix	Wt/ Vol	Date-Time Collected	Filtered	Number Containers	Mercury by 7471A	Metals by 6010B	Metals by 6020							
						Container	G60W	G60W	G60W							
						Preservative	n	n	n							
✓	80-BH06-1	Soil		3/21/2012 11:00:00 AM		1	X	X	X							
✓	80-BH06-2	Soil		3/21/2012 11:05:00 AM		1	X	X	X							
✓	80-BH06-3	Soil		3/21/2012 11:07:00 AM		1	X	X	X							
✓	80-BH07-1	Soil		3/21/2012 4:20:00 PM		1	X	X	X							
✓	80-BH07-2	Soil		3/21/2012 4:23:00 PM		1	X	X	X							
✓	80-BH07-3	Soil		3/21/2012 4:27:00 PM		1	X	X	X							
✓	80-BH08-1	Soil		3/21/2012 2:11:00 PM		1	X	X	X							
✓	80-BH08-2	Soil		3/21/2012 2:18:00 PM		1	X	X	X							
✓	80-BH08-3	Soil		3/21/2012 2:25:00 PM		1	X	X	X							
✓	80-BH08-MS2	Soil		3/21/2012 2:18:00 PM		1	X	X	X							
✓	80-BH08-MSD2	Soil		3/21/2012 2:18:00 PM		1	X	X	X							
✓	80-BH09-1	Soil		3/21/2012 10:29:00 AM		1	X	X	X							
✓	80-BH09-2	Soil		3/21/2012 10:33:00 AM		1	X	X	X							
✓	80-BH09-3	Soil		3/21/2012 10:37:00 AM		1	X	X	X							
✓	80-BH10-1	Soil		3/21/2012 8:42:00 AM		1	X	X	X							
✓	80-BH10-2	Soil		3/21/2012 8:47:00 AM		1	X	X	X							
✓	80-BH10-3	Soil		3/21/2012 8:50:00 AM		1	X	X	X							
✓	80-BH11-1	Soil		3/21/2012 9:05:00 AM		1	X	X	X							
✓	80-BH11-2	Soil		3/21/2012 9:10:00 AM		1	X	X	X							

Remarks/Comments
Waybill # 873013169507 FedEx Express

Sampled By

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1	2	3	4	5

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COC Tape was unbroken on sample Y N

Received in good condition Y N
Labels indicate Properly Preserved Y N
Received within Holding Time Y N

Relinquished By	Date / Time	Received By	Date / Time	Relinquished By	Date / Time	Received By	Date / Time

EIMS Shaw

Microbac OVD
Received: 03/27/2012 11:24
By: BOB BUCHANAN 221000023564

RF Buchanan

Shaw® a world of Solutions™

COC # 139791-SB005

Chain of Custody

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Client US Army
W. O. WSMR-30 PO 620349
TAT 14 Days

Site Name WSMR
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Contact Phone

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Results To: Mark Lyon
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City Albuquerque
State NM Zip 87110

Sample ID	Matrix	Wt/ Vol	Date-Time Collected	Filtered	Number Containers	Mercury by 7471A	Metals by 6010B	Metals by 6020							
					Container	G60W	G60W	G60W							
					Preservative	n	n	n							
80-BH11-3	Soil		3/21/2012 9:20:00 AM		1	X	X	X							
80-BH11-FD3	Soil		3/21/2012 9:20:00 AM		1	X	X	X							
80-BH12-1	Soil		3/21/2012 9:36:00 AM		1	X	X	X							
80-BH12-2	Soil		3/21/2012 9:43:00 AM		1	X	X	X							
80-BH12-3	Soil		3/21/2012 9:46:00 AM		1	X	X	X							
80-BH12-FD1	Soil		3/21/2012 9:36:00 AM		1	X	X	X							
80-BH13-1	Soil		3/21/2012 10:05:00 AM		1	X	X	X							
80-BH13-2	Soil		3/21/2012 10:09:00 AM		1	X	X	X							
80-BH13-3	Soil		3/21/2012 10:13:00 AM		1	X	X	X							
80-BH14-1	Soil		3/21/2012 8:16:00 AM		1	X	X	X							
80-BH14-2	Soil		3/21/2012 8:21:00 AM		1	X	X	X							
80-BH14-3	Soil		3/21/2012 8:24:00 AM		1	X	X	X							
80-BH15-1	Soil		3/21/2012 3:44:00 PM		1	X	X	X							
80-BH15-2	Soil		3/21/2012 3:50:00 PM		1	X	X	X							
80-BH15-3	Soil		3/21/2012 3:56:00 PM		1	X	X	X							
80-BH15-FD2	Soil		3/21/2012 3:50:00 PM		1	X	X	X							
80-BH15-RB	Water		3/21/2012 4:32:00 PM		1	X	X	X							

Remarks/Comments
Waybill # 873013169507 FedEx Express

Sampled By

Lab Use Only
Temp of Cooler when Received, C

1	2	3	4	5

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COC Tape ws present on sample Y N
COC Tape was unbroken on sample Y N

Received in good condition Y N
Labels indicate Properly Preserved Y N
Received within Holding Time Y N

Relinquished By	Date / Time	Received By	Date / Time	Relinquished By	Date / Time	Received By	Date / Time

Microbac OVD
Received: 03/27/2012 11:24
By: BOB BUCHANAN 221000023564

RF Buchanan

Shaw® a world of Solutions™

COC # 139791-SB005

Chain of Custody

Lab EWS
Lab Contact
Lab Phone 330-720-1061

Client US Army
W. O. WSMR-30 PO 620349
TAT 14 Days

Site Name WSMR
Contact Name 1
Contact Phone

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Address Bill electronically to
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State LA Zip 70809

Results To: Mark Lyon
Phone
Fax
Address 2440 Louisiana Blvd NE
City Albuquerque
State NM Zip 87110

Sample ID	Matrix	Wt/ Vol	Date-Time Collected	Filtered	Number Containers	Mercury by 7471A	Metals by 6010B	Metals by 6020							
					Container	G60W	G60W	G60W							
					Preservative	n	n	n							

Remarks/Comments
Waybill # 873013169507 FedEx Express

Sampled By _____

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Relinquished By	Date / Time	Received By	Date / Time	Relinquished By	Date / Time	Received By	Date / Time

Microbac OVD
Received: 03/27/2012 11:24
By: BOB BUCHANAN 221000023564

RF Buchanan

Appendix G
Field Work Variances

Shaw® Shaw Environmental, Inc.

Field Work Variance No. WSMR-FWV-03

FIELD WORK VARIANCE

Project Name/Number	139791		
Contract No.	Army Contract No. W91ZLK-05-D-0017 Task Order 08		
Applicable Document(s)	SOIL BACKGROUND STUDY WORK PLAN SWMU 80, Sewage Treatment Plant Sludge Waste Pile (WSMR-30) SWMUs 12, 14, 16, 17, 21, and 22, Main Post Sites (WSMR-60, WSMR-33, WSMR-79, WSMR-73, WSMR-31, and WSMR-32), and SWMU 140, Former LC-37 Paint Dump (WSMR--84)	Date	3/2/2012

Problem Description:

Borehole abandonment at background sampling locations. The Work Plan states that "The soil borings will not be completed as groundwater or vapor monitoring wells and will be properly abandoned in accordance with the methods listed in Appendix 6, Section 6.4 of the Permit (NMED, 2009a). The soil borings will be abandoned by pressure grouting to a minimum of 2 feet bgs. Once the grout has cured, the top 2 feet of the borehole will be filled with concrete as a surface seal."

Recommended solution:

The background soil borings are located in undisturbed remote areas of WSMR and outside the boundary of any SWMU areas. The background soil boring locations will be advanced to a depth of no greater than 10 feet below ground surface. The pressure grouting requirement as described in the WSMR permit is intended for deeper soil borings advanced to the water table or close to the water table. Therefore, pressure grouting is not necessary and Section 5.1.1.3 of the background work plan will be revised as follows:

Each borehole will be abandoned by placing bentonite chips into the soil boring and hydrated every one-foot to 2 ft bgs. The remaining 2 ft will be backfilled with the clean native soil cuttings removed from the soil boring. Any remaining soil cuttings will be thin spread around the borehole to match the elevation of the ground surface.

Impact on present and completed work:

None.

Requested by: Jason Tarbert

Recommended solution/disposition:

The Project Geologist will communicate these verifications to field staff, and copies of this FWV will be available on site for field staff.

Clarification ☐ Minor Change ☒ Major Change ☐

Signature		Date	4/3/12
	Technical Reviewer		

Shaw Environmental Inc, Approvals:				*If Major Change:*			
Signature		Date	4/2/12	Signature		Date	04/03/12
	Project/Task Manager				*Sr. Project Manager*		
Signature		Date					