Draft
Site Inspection
CC RVAAP-77 Building 1037 Laundry Waste Water Sump
Revision 0

Former Ravenna Army Ammunition Plant
Portage and Trumbull Counties, Ohio

November 21, 2014

Contract No. W912QR-04-D-0039
Delivery Order: 0004

Prepared for:



United States Army Corps of Engineers
Louisville District
600 Martin Luther King Jr. Place
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14. ABSTRACT
This Site Inspection (SI) report documents the SI activities conducted at CC RVAAP-77 Building 1037 Laundry Waste Water Sump at the former Ravenna Army Ammunition Plant, Portage and Trumbull counties, Ohio. The purpose of the SI was to determine the presence or absence of contamination and whether the Building 1037 Laundry Waste Water Sump Area of Concern (AOC) warranted further investigation pursuant to the Comprehensice Environmental Response, compensation and liability act (CERCLA) of 1980. THe sampling completed for this SI indicates there is no contamination present at Building 1037 Laundry Waste Water Sump AOC that would warrant further investigation. This SI report recommends No Further Action.

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CONTRACTOR'S STATEMENT OF INDEPENDENT TECHNICAL REVIEW

Environmental Chemical Corporation has completed the *Draft Site Inspection at the CC RVAAP-77 Building 1037 Laundry Waste Water Sump, Revision 0 at the Former Ravenna Army Ammunition Plant, Portage and Trumbull Counties, Ohio.* Notice is hereby given that an independent technical review has been conducted that is appropriate to the level of risk and complexity inherent in the project. During the independent technical review, compliance with established policy principles and procedures, utilizing justified and valid assumptions, was verified. This included review of project data quality objectives, technical assumptions, methods, procedures, and materials used. The appropriateness of the data used, level of data obtained, and reasonableness of the results, including whether the product meets the customer's needs, are consistent with law and existing U.S. Army Corps of Engineers policy.



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November 4, 2014

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ACRONYMS AND ABBREVIATIONS

ºF	Degrees Fahrenheit
µg/kg	Microgram per kilogram
amsl	Above mean sea level
AOC	Area of concern
ARNG	Army National Guard
bgs	Below ground surface
BHC	Hexachlorocyclohexane
BTEX	Benzene, toluene, ethylbenzene, and xylene
CC	Army Environmental Compliance-Related Cleanup Program
CERCLA	Comprehensive Environmental Response, Compensation Liability Act
CI	Cast iron
cm	Centimeter
CR	Compliance Restoration
DDD	Dichlorodiphenyldichloroethane
DDE	p,p′-Dichlorodiphenyldichloroethylene
DDT	1,1,1-Trichloro-2,2-di(4-chlorophenyl)ethane
DI	Deionized
DRO	Diesel Range Organics
DSB	Deep soil boring
DU	Decision unit
DUP	Duplicate
ECC	Environmental Chemical Corporation
EQM	Environmental Quality Management, Inc.
ER	Equipment rinsate
FD	Field duplicate
ft	Feet
FWCUG	Facility-Wide Cleanup Goal
FWSAP	Facility-Wide Sampling and Analysis Plan
gpm	Gallon per minute
GRO	Gasoline range organics

ACRONYMS AND ABBREVIATIONS (CONTINUED)

HQ	Hazard Quotient
HMX	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine
HRR	Historical Records Review
ID	Identification
IDW	Investigation-derived waste
IRP	Installation Restoration Program
ISM	Incremental sampling methodology
J	Estimated value
km	Kilometer
km^2	Square kilometer
LOD	Limit of Detection
m	Meter
mg/kg	Milligram per kilogram
MgA	Mahoning silt loam, 0-2 percent Slopes
MIBK	4-Methyl-2-pentanone
MS	Matrix spike
MSD	Matrix spike duplicate
MTBE	Methyl tertiary butyl ether
NA	Not applicable
ND	Not detected
NFA	No Further Action
OHARNG	Ohio Army National Guard
Ohio EPA	Ohio Environmental Protection Agency
PAH	Polycyclic aromatic hydrocarbon
PCB	Polychlorinated biphenyl
PWS	Performance Work Statement

ACRONYMS AND ABBREVIATIONS (CONTINUED)

QA	Quality assurance
QC	Quality control
R	Result not usable
RDX	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine
RI	Remedial investigation
RSL	Regional Screening Level
RVAAP	Ravenna Army Ammunition Plant
SAIC	Science Applications International Corporation
SB	Soil boring
SI	Site inspection
SorW	Source water
sq ft	Square feet
SRC	Site-related chemical
SS	Surface sample
SVOC	Semi-volatile organic compound
TAL	Target Analyte List
TB	Trip blank
TCE	Trichloroethene
TCR	Target Cancer Risk
THQ	Target Hazard Quotient
TPH	Total petroleum hydrocarbons
U	Not detected
UJ	Not detected, Reporting Limit estimated
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
UXO	Unexploded ordnance
VOC	Volatile organic compound
VP	Vitrified pipe

ACRONYMS AND ABBREVIATIONS (CONTINUED)

WOE	Weight-of-evidence

EXECUTIVE SUMMARY

Environmental Chemical Corporation (ECC) has been contracted by the United States Army Corps of Engineers (USACE)–Louisville District to complete a Site Inspection (SI) at the Compliance Restoration (CR) Site CC (Army Environmental Compliance-Related Cleanup Program) RVAAP-77 Building 1037 Laundry Waste Water Sump at the former Ravenna Army Ammunition Plant (RVAAP), in Portage and Trumbull counties, Ohio. This SI was completed under Contract Number W912QR-04-D-0039, Delivery Order Number 0004, Modification Number 1.

This SI was completed in accordance with the *Final SI/Remedial Investigation (RI) Work Plan at CR Sites* (ECC 2012), and the United States Environmental Protection Agency's (USEPA) *Interim Final Guidance for Performing Site Inspections Under CERCLA* (USEPA 1992).

This SI was conducted to investigate the former waste water sump that received discharge (rinse) water from the former laundry operations within Building 1037. The waste water sump was used from World War II through 1954. Based on the findings of the *Historical Records Review (HRR) Report for the 2010 Phase I RI Services at CR Sites (9 Areas of Concern [AOCs])* (Science Applications International Corporation [SAIC]. 2011a), an SI was recommended because past operations may have resulted in a release of contaminants from the waste water sump to subsurface soil at this AOC. As stated in the HRR (SAIC 2011a), the former laundry building was used from World War II through 1992 to launder workers' overalls that were potentially contaminated with explosives and propellants used during munitions production.

The laundry rinse water discharged to the sump located on the exterior, north side, of Building 1037 prior to entering the sanitary sewer. The waste water sump was used as a settling basin to remove solids from discharged laundry operations water prior to entering the sanitary sewer. The size of the waste water sump was 13 feet (ft) by 16 ft with an area of 208 square feet (sq ft). The top of the waste water sump was at ground surface and the bottom of the waste water sump was at approximately 11.5 ft below ground surface (bgs). The sump was excavated between October and September 2009. However, no confirmation soil samples were collected from the sump excavation during the time the sump was removed to determine if the subsurface soil was contaminated.

The water level in the sump was approximately 4 ft bgs (due to the elevation of the discharge pipe to the sanitary sewer); therefore, any contamination released from the waste water sump would have entered into surrounding subsurface soil below this depth. Based on the past operations in the building and history of the sump, further investigation, specifically for explosive and propellant chemicals in the subsurface soil around the waste water sump area, was recommended in the HRR to determine the presence or absence of contamination (SAIC 2011a).

As the water level in the waste water sump was below the ground surface, no surface soil contamination is expected; therefore, this SI focuses on investigating the subsurface soil.

One decision unit (DU) was defined as the soil sampling area. The DU was sized to encompass the former waste water sump area and is smaller than a typical one-quarter acre exposure unit (USACE 2005). The DU was centered on the waste water sump area (208 sq ft) and extended approximately 2-8 ft outside of the original sump boundaries where contamination may have been released to the subsurface soil. The DU area is 478 sq ft. This smaller DU (less than one-quarter acre) was established around the waste water sump area to increase the likelihood of identifying potential contamination. Therefore, the footprint of the former laundry sump occupied approximately 208 sq ft of the 478-sq ft area that was sampled.

In addition to the subsurface soil sample collection, one surface soil sample and a duplicate surface soil sample were collected as part of this SI. Sediment and surface water are not present at this AOC, and groundwater is being evaluated on a facility-wide basis (RVAAP-66 Facility-Wide Groundwater). Therefore, samples were not collected from sediment, surface water, or groundwater during this SI.

The objectives of this SI were as follows:

The primary objective of this SI was to determine the presence of potential contamination in soil at the AOC. In order to determine potential contamination, the following steps were included as part of this SI:

- Collect soil samples for laboratory analysis at CC RVAAP-77.

- Identify whether Site-Related Chemicals (SRCs) are present in the soil at the AOC. SRCs are identified following the process outlined in the Facility-wide Human Health Cleanup Goals document (SAIC 2010).

- Compare the maximum reported concentrations of the SRCs to the most stringent Resident Receptor Facility-Wide Cleanup Goals (FWCUGs), between the adult and the child receptor, using the Target Cancer Risk (TCR) level of 10^{-6} and the Target Hazard Quotient (THQ) for non-carcinogenic risks of THQ = 0.1. For the purposes of this SI, potential contamination at CC RVAAP-77 is defined by an exceedance of the most stringent Resident Receptor FWCUG.

- Complete a weight-of-evidence (WOE) approach to further evaluate the SRCs reported at concentrations exceeding the most stringent Resident Receptor FWCUG using the TCR level of 10^{-6} or the THQ for non-carcinogenic risks at THQ = 0.1.

- Provide a recommendation for either further investigation under CERCLA, in the form of an RI, if potential contamination has been identified, or No Further Action (NFA) if no potential contamination has been identified at this AOC.

The soil sampling was conducted at Building 1037 Laundry Waste Water Sump at CC RVAAP-77 within an approximate 478-sq ft sampling area encompassing the waste water sump area. One surface soil sample and a duplicate sample were also collected and analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), Target Analyte List (TAL) metals, explosives, polychlorinated biphenyls (PCBs), pesticides, and propellants. The subsurface soil samples were only analyzed for explosive and propellant chemicals. The following surface and subsurface soil samples were collected during this SI:

- One surface soil incremental sampling method (ISM) sample (0-1 ft bgs) was collected.

- Two horizontal subsurface soil ISM samples were collected (depths of 1-4 and 4-7 ft bgs).

- Five vertical subsurface soil ISM samples were collected (1-7 ft bgs).

- One subsurface soil sample was collected as a composite sample between 7 and 13 ft bgs to characterize the soil to 13 ft bgs.

The analytical results from the SI samples were used to determine if potential contamination was present by first identifying the SRCs. Per the *RVAAP's Facility-Wide Human Health Risk Assessment Manual* (USACE 2005), a chemical detected at a concentration greater than the established background value, is not an essential nutrient, and has not been screened out through a frequency of detection, is identified as an SRC. An SRC may, or may not be, related to the former operations at the site. The resulting maximum detected concentration of each SRC identified in this SI was compared to the most stringent FWCUG for the Resident Receptor (between the adult and child receptors) using the TCR level of 10^{-6} or the THQ for non-carcinogenic risks of THQ = 0.1 for each SRC to determine the presence of potential contamination.

The SRCs that exceeded the most stringent value (between adult and child receptors) Resident Receptor FWCUG, using a TCR level of 10^{-6} or the THQ = 0.1 for non-carcinogenic risks, were then evaluated using a WOE approach. The WOE evaluation considers the SRCs that exceed their Resident Receptor FWCUGs, as described above, to determine if the chemical should be identified as potential contamination.

A summary of the SI results for CC RVAAP-77 Building 1037 Laundry Waste Water Sump is as follows.

Surface Soil Results

- SRCs were identified in the one surface soil sample. A total of 529 constituents were analyzed and the following SRCs were identified in surface soil: one VOC (4-methyl-2-pentanone); fifteen SVOCs (polycyclic aromatic hydrocarbon [PAH] compounds); one pesticide (p,p′-dichlorodiphenyldichloroethylene [p,p′-DDE]); seven metals (cadmium, chromium, mercury, nickel, silver, thallium, and zinc); one explosive, tetryl; and two propellants (nitroglycerin and nitroguanidine).

- No metals, explosives, propellants, VOCs, PCBs, or pesticides were detected at concentrations which exceed their respective Resident Receptor FWCUGs in the ISM surface soil samples collected.

- One SVOC (benzo[a]pyrene) was reported at a concentration of 88 micrograms per kilogram (µg/kg), exceeding the Resident Receptor FWCUG of 22 µg/kg. A WOE evaluation determined that the presence of this PAH is not related to the historical activities and operations conducted at the former laundry building specifically used for washing overalls potentially contaminated with explosives and/or propellants, as stated in the HRR report (SAIC 2011a). The reported concentration of benzo(a)pyrene in surface soil is expected to be associated with overland drainage from adjacent asphalt roadways and other potential sources nearby this AOC. Therefore, benzo(a)pyrene is not identified as a potential contaminant in surface soil at this AOC.

- Therefore, no potential contaminants related to site operations were identified in the surface soil at this AOC.

Subsurface Soil Results

- No SRCs were identified in subsurface soil sampled to a maximum depth of 13 ft bgs. All subsurface soil were non-detect for explosives and propellants.

- No explosive derivative or propellant chemicals were detected in the vertical or horizontal subsurface soil ISM samples collected at this AOC. No other organic chemicals detected in the subsurface soil ISM samples exceeded their respective Resident Receptor FWCUGs.

- No potential contaminants related to site operations were identified in subsurface soil at this AOC.

The conclusions of this SI are as follows:

- No potential contaminants were identified in the surface or subsurface soil sampled at this AOC.

- The results of this SI indicate that the subsurface soil is not contaminated; therefore, soil is not a source of groundwater contamination at this AOC.

The results of this SI indicate that NFA is warranted for soil at CC RVAAP-77 Building 1037 Laundry Waste Water Sump.

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1.0 INTRODUCTION

Environmental Chemical Corporation (ECC) was contracted by the United States Army Corps of Engineers (USACE)–Louisville District to complete a Site Inspection (SI) for Compliance Restoration (CR) Site CC (Army Environmental Compliance-Related Cleanup Program) RVAAP-77 Building 1037 Laundry Waste Water Sump at the former Ravenna Army Ammunition Plant (RVAAP) in Portage and Trumbull counties, Ohio. The location of the former RVAAP is provided in Figure 1-1 and the location of the CR sites at the facility is shown in Figure 1-2. This SI was completed and this document was prepared under Contract Number W912QR-04-D-0039, Delivery Order Number 0004, Modification Number 1.

Planning and performance of all elements of this contract are in accordance with the requirements of the *Ohio Environmental Protection Agency (Ohio EPA) Director's Final Findings and Orders for RVAAP* (Ohio EPA 2004). The *Director's Final Findings and Orders* require conformance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the National Oil and Hazardous Substances Pollution Contingency Plan to complete this SI for Area of Concern (AOC) CC RVAAP-77. The location of CC RVAAP-77 is shown on Figure 1-3.

This SI for CC RVAAP-77 was conducted in accordance with the United States Environmental Protection Agency's (USEPA) *Interim Final Guidance for Performing Site Inspection Under CERCLA* (USEPA 1992), as well as the *Final SI and Remedial Investigation (RI) Work Plan at CR Sites (Revision 0), RVAAP, Ravenna, Ohio* (ECC 2012).

This SI includes the following components:

- Site descriptions and operational histories
- Waste characteristics and management practices
- Summary of field investigation and pre-mobilization activities
- Summary of the analytical data and results of the field investigation activities
- Determination of Site-Related Chemicals (SRCs)
- Comparison of SRC maximum concentrations to the most stringent Resident Receptor Facility-Wide Cleanup Goals (FWCUGs)

- A weight-of-evidence (WOE) evaluation of the SRCs to determine if potential contamination is present

- Evaluation of the exposure pathways for surface soil, subsurface soil, air, surface water, and groundwater

- Conclusions

- References.

1.1 PURPOSE AND SCOPE

ECC is submitting this SI report to the Army in accordance with the Performance Work Statement (PWS), Multiple Award Remediation Contract Number W912QR-04-D-0039, Delivery Order Number 0004 under a firm-fixed price Performance-Based Acquisition to provide environmental investigation and remediation services at 14 CR sites at the RVAAP, Ravenna, Ohio (Figures 1-1 and 1-2). The Delivery Order was issued by the USACE–Louisville District on August 15, 2011.

Environmental work at the former RVAAP under the Installation Restoration Program began in 1989, with 32 environmental AOCs. The U.S. Army Center for Health Promotion and Preventive Medicine collected environmental samples at each AOC and performed a Relative Risk Site Evaluation, which prioritized each AOC into one of three groups: low, medium, and high priorities. Environmental restoration work has proceeded primarily by addressing the highest priority sites first. In 1998, the number of environmental AOCs was increased from 32 to 51. Relative risk rankings were conducted to further prioritize those additional environmental AOCs. Since 1998, new environmental AOCs have been added. This SI discusses one of these AOCs: CC RVAAP-77 Building 1037 Laundry Waste Water Sump.

Historical information for CC RVAAP-77 is presented in the *Final Historical Records Review (HRR) Report for the 2010 Phase I RI Services at CR Sites (9 AOCs) at the RVAAP, Ravenna, Ohio*, dated December 22, 2011 (Science Applications International Corporation [SAIC]. 2011a). The HRR followed the U.S. EPA guidance document that establishes the minimum requirements for conducting an Abbreviated Preliminary Assessment, as outlined in *Improving Site Assessment: Abbreviated Preliminary Assessments* (USEPA 1999).

1.2 FACILITY DESCRIPTION

The facility, consisting of 21,683 acres, is located in northeastern Ohio within Portage and Trumbull counties, approximately 4.8 kilometers (km) (3 miles) east/northeast of the City of Ravenna and approximately 1.6 km (1 mile) northwest of the City of Newton Falls. The facility, previously known as the RVAAP, was formerly used as a load, assemble, and pack facility for munitions production. As of September 2013, administrative accountability for the entire acreage of the facility has been transferred to the United States Property and Fiscal Office for Ohio and subsequently licensed to the Ohio Army National Guard (OHARNG) for use as a military training site (Camp Ravenna). References in this document to the former RVAAP relate to previous activities at the facility as related to former munitions production activities or to activities being conducted under the restoration/cleanup program.

1.3 DEMOGRAPHY AND LAND USE

The facility consists of 21,683 acres in northeastern Ohio, approximately 37 km (23 miles) east-northeast of Akron and 30 miles (48.3 km) west-northwest of Youngstown. The facility occupies east-central Portage County and southwestern Trumbull County. The 2010 Census reports that the populations of Portage and Trumbull counties are 161,419 and 210,312, respectively. Population centers closest to the facility are Ravenna, with a population of 11,724, and Newton Falls, with a population of 4,795.

The facility is located in a rural area and is not close to any major industrial or developed areas. Approximately 55 percent of Portage County, in which the majority of the facility is located, consists of either woodland or farmland acreage. The closest major recreational area, the Michael J. Kirwan Reservoir (also known as West Branch Reservoir), is south of the facility.

The facility is licensed to the OHARNG for use as a military training site. Training and related activities at Camp Ravenna include field operations and bivouac training, convoy training, equipment maintenance, C-130 aircraft drop zone operations, helicopter operations, and storage of heavy equipment.

1.4 FACILITY ENVIRONMENTAL SETTING

This section describes the physical features, topography, geology, hydrogeology, and environmental characteristics of the facility. The environmental setting specific to Building 1037 Laundry Waste Water Sump CC RVAAP-77 is included in Section 6.0.

1.4.1 Physiographic Setting

The facility is located within the Southern New York Section of the Appalachian Plateaus physiographic province (U.S. Geological Survey 1968). This province is characterized by elevated uplands underlain primarily by Mississippian and Pennsylvanian-age bedrock units that are horizontal or gently dipping. The province is characterized by its rolling topography with incised streams having dendritic drainage patterns. The Southern New York Section has been modified by glaciation, which rounded ridges, filled major valleys, and blanketed many areas with glacially-derived unconsolidated surficial deposits (e.g., sand, gravel, and finer-grained outwash deposits). As a result of glacial activity, old stream drainage patterns were disrupted in many locales, and extensive wetland areas developed.

1.4.2 Surface Features and Topography

The topography of the facility is gently undulating with an overall decrease in ground surface elevation from a topographic high of approximately 1,220 feet (ft) above mean sea level (amsl) in the far western portion of the facility to low areas at approximately 930 ft amsl in the far eastern portion of the facility. The average surface elevation for CC RVAAP-77 is 1,025 ft amsl.

USACE mapped the facility topography in February 1998 using a 2-ft (60.1-centimeter [cm]) contour interval with an accuracy of 0.02 ft (0.61 cm). USACE based the topographic information on aerial photographs taken during the spring of 1997. The USACE survey is the basis for the topographical information illustrated in figures included in this report.

1.4.3 Soil and Geology

1.4.3.1 Regional Geology

The regional geology at the facility consists of horizontal to gently dipping bedrock strata of Mississippian and Pennsylvanian-age overlain by unconsolidated glacial deposits of varying thicknesses. The unconsolidated surficial deposits and bedrock geology are described in the following subsections.

1.4.3.2 Soil and Glacial Deposits

Bedrock at the facility is overlain by deposits of the Wisconsin-age Lavery Till in the western portion of the facility and the younger Hiram Till and associated outwash deposits in the eastern two-thirds of the facility (Figure 1-4). Unconsolidated glacial deposits vary considerably in thickness across the facility, from non-existent in some of the eastern portions of the facility to an estimated 150 ft (46 meters [m]) in the south-central portion.

Thin surface glacial deposits have been completely removed as a consequence of human activities at locations such as Ramsdell Quarry. Bedrock is present at or near the ground surface in locations such as Load Line 1 and the Erie Burning Grounds (USACE 2001).

Where glacial sediments remain, their distribution and character indicate their origin as a ground moraine. These tills consist of laterally discontinuous assemblages of yellow-brown, brown, and gray silty clays to clayey silts, with sand and rock fragments. Lacustrine sediment from bodies of glacial-age standing water has also been encountered in the form of deposits of uniform light gray silt greater than 50 ft thick in some areas (USACE 2001).

Soil at the facility is generally derived from the Wisconsin-age silty clay glacial till. Distributions of soil types are discussed and mapped in the *Soil Survey of Portage County, Ohio,* which describes soil as nearly level to gently sloping and poor to moderately well drained (U.S. Department of Agriculture [USDA] 1978). Much of the native soil was disturbed during construction activities in former production and operational areas of the facility.

Several soil types are present at the facility as shown in Figure 1-5 and described in Figure 1-6. The primary soil type present at CC RVAAP-77 is shown in Figure 1-7 and summarized in Table 1-1.

Table 1-1: Soil Type at CC RVAAP-77

Soil Series Classification	Parent Material	Geographic Setting	Slope Percent	Drainage	Surface Runoff	Permeability
Mahoning silt loams (MgA)	Silty clay loam or clay loam glacial till, generally where bedrock is greater than 6 ft below ground surface (bgs)	Gently sloping highland areas	0-2	Poorly drained	Rapid and seasonal wetness	Low

1.4.3.3 Bedrock Geology

The Sharon Sandstone Member, informally referred to as the Sharon Conglomerate, of the Pennsylvanian Pottsville Formation, is the primary bedrock beneath the facility (Figure 1-8). The Sharon Sandstone Member, the lowest unit of the Pottsville Formation, is a highly porous, loosely cemented, permeable, cross-bedded, frequently fractured and weathered, orthoquartzite sandstone, which is locally conglomeratic. Thin shale lenses occur in the upper portion of the unit (Winslow and White 1966).

In the western portion of the facility, the upper members of the Pottsville Formation, including the Sharon Member, Connoquennissing Sandstone Member, Mercer Member, and uppermost

Homewood Sandstone Member, are present (Figure 1-8). The regional dip of the Pottsville Formation measured in the west portion of the facility is between 1.5 and 3.5 m per 1.6 km (5-11.5 ft per mile) to the south.

The Sharon Member is a gray to black, sandy to micaceous shale containing thin coal, underclay, and sandstone lenses. The Mercer Member of the Pottsville Formation consists of silty to carbonaceous shale with abundant thin, discontinuous sandstone lenses in the upper portion. Regionally, the Mercer Member has also been noted to contain interbeds of coal.

The Homewood Sandstone Member is the uppermost unit of the Pottsville Formation. It typically occurs as a caprock on bedrock highs in the subsurface, and ranges from well-sorted, coarse-grained, white quartzose sandstone to a tan, poorly sorted, clay-bonded, micaceous, medium- to fine-grained sandstone. Thin shale layers are prevalent in the Homewood member as indicated by a darker gray color.

1.4.4 Hydrogeology

1.4.4.1 Regional Hydrogeology

Sand and gravel aquifers are present in the buried-valley and outwash deposits in Portage County, as described in the *Phase I RI Report for High Priority AOCs at the RVAAP, Ravenna, Ohio* (USACE 1998). Generally, these saturated zones are too thin and localized to provide large quantities of water for industrial or public water supplies; however, yields are sufficient for residential water supplies. Lateral extent and continuity of these aquifers are unknown. Recharge of these units is derived from surface water infiltration of precipitation and surface streams. Specific groundwater recharge and discharge areas at the facility have not been delineated. The regional potentiometric surface at the facility for unconsolidated surficial deposits and bedrock are presented in Figures 1-9 and 1-10, respectively (Environmental Quality Management, Inc. [EQM] 2013).

The thickness of unconsolidated surficial deposits at the facility ranges from thin to absent in the eastern and northeastern portion of the facility to an estimated 150 ft (46 m) in the central portion of the facility. The water table (Figure 1-9) is encountered within the unconsolidated zone in many areas of the facility. Because of the heterogeneous nature of the unconsolidated glacial material, groundwater flow patterns are difficult to determine. Laterally, most groundwater flow in the surficial deposits likely follows topographic contours and stream drainage patterns (Figure 1-9), with preferential flow along pathways (e.g., sand seams, channel deposits, or other stratigraphic discontinuities) having higher permeability than surrounding clay or silt-rich material. Aquifer recharge from precipitation likely occurs via infiltration along root zones, desiccation cracks, and partings within the soil column.

Beneath the facility, the principal bedrock aquifer is within the Sharon Sandstone Conglomerate Unit (referred to as the Sharon Conglomerate Aquifer) (Figure 1-11) (EQM 2013). Depending on overburden thickness, the Sharon Conglomerate aquifer ranges from an unconfined to a leaky artesian aquifer hydraulically. According to one source, yields from on-site supply wells completed within the Sharon Conglomerate range from 30 to 400 gallons per minute (gpm) (United States Army Toxic and Hazardous Materials Agency 1978). Yields of 5-200 gpm have also been reported for on-site bedrock wells completed in the Sharon Conglomerate.

Other, less important, local bedrock aquifers include the Homewood Sandstone (Figure 1-10), which is generally thinner and only capable of well yields less than 10 gpm, and the Connoquennissing Sandstone. Wells completed in the Connoquennissing Sandstone in Portage County yield from 5 to 100 gpm, but are typically less productive than the Sharon Conglomerate due to lower permeability in the sandstone.

In general, the hydraulic gradient in the Sharon Conglomerate aquifer results in a regional eastward flow of groundwater (Figure 1-11) that appears to be more uniform than flow directions in unconsolidated deposits (Figure 1-9) because local surface topography influences the latter. Due to the lack of well data in the western portion of the facility, general flow patterns are difficult to discern. For much of the eastern half of the facility, hydraulic head elevations in bedrock are higher than those in overlying unconsolidated deposits, indicating an upward vertical hydraulic gradient. These data suggest there is a confining layer separating the two aquifers in some areas. In the far eastern area, there is little difference in the head elevations, suggesting a hydraulic connection exists between the two.

1.4.4.2 Groundwater Usage and Domestic Water Supply

The former RVAAP historically used groundwater for both domestic and industrial supplies. Groundwater utilized at the former RVAAP during past operations was obtained from production wells located throughout the facility, with most wells screened in the Sharon Conglomerate. The Army discontinued use of most of the groundwater production wells prior to 1993, when the facility was placed in modified caretaker status. Currently, one of the four original groundwater production wells remains in use by the OHARNG. This well, located in the former Administration Area, is not used as a potable water source, but supplies non-potable water for sanitary purposes for active-use buildings on the facility.

In addition, as of 2011, the OHARNG has installed two bedrock aquifer production wells at the facility. These two OHARNG supply wells were completed in the Sharon Conglomerate near Buildings 1067 and 1068 within the former Administration Area. There is also one inactive non-potable supply well just south of Winklepeck Burning Grounds along the east side of George Road, which was formerly used to supply water for environmental restoration activities.

The closest population center to the facility, the City of Newton Falls, obtains municipal water supplies from the east branch of the Mahoning River. Currently, most groundwater use in the area surrounding the facility is for domestic and livestock supply, with the Sharon Conglomerate acting as the major producing aquifer in the area. The Connoquennissing Sandstone Member and Homewood Sandstone Member also provide limited groundwater supplies, primarily to the western half of the facility. Unconsolidated deposits can also be an important source of groundwater. Many of the domestic wells and small public water supplies located near the facility obtain sustainable quantities of water from wells completed in unconsolidated, surficial deposits.

In the unconsolidated aquifer, groundwater flows predominantly eastward; however, the unconsolidated zone shows numerous local flow variations influenced by topography and drainage patterns (Figure 1-9). The local variations in flow direction suggest the following: (1) groundwater in the unconsolidated deposits is generally in direct hydraulic communication with surface water, and (2) surface water drainage ways may also act as groundwater discharge locations. In addition, topographic ridges between surface water drainage features act as groundwater divides in the unconsolidated deposits.

Local groundwater within and surrounding the facility contains proportionately high levels of iron, manganese, and naturally occurring carbonate compounds. As such, it is classified as "hard" water. Hard water has an associated metallic taste that can be unpalatable if not properly treated for human consumption (OHARNG 2008).

1.4.4.3 Regional Surface Water

The facility resides within the Mahoning River watershed, which is part of the Ohio River basin. The west branch of the Mahoning River is the main surface stream in the area. The west branch flows adjacent to the west end of the facility, generally north to south, before flowing into the Michael J. Kirwan Reservoir south of State Route 5 (Figure 1-1). The west branch flows out of the reservoir and parallels the southern facility boundary before joining the Mahoning River east of the facility.

The western and northern portions of the facility display low hills and a dendritic surface drainage pattern. The eastern and southern portions are characterized by an undulating to moderately level surface, with less dissection of the surface drainage. The facility is marked with marshy areas and flowing and intermittent streams whose headwaters are located in the upland areas of the facility.
The three primary watercourses that drain the facility are as follows (Figure 1-3):

- South fork of Eagle Creek
- Sand Creek
- Hinkley Creek.

All of these watercourses have many associated tributaries. Sand Creek, with a drainage area of 13.9 square miles (36 square kilometers [km^2]), flows generally in a northeast direction to its confluence with the south fork of Eagle Creek. In turn, the south fork of Eagle Creek continues in a northerly direction for 2.7 miles (4.3 km) to its confluence with Eagle Creek. The drainage area of the south fork of Eagle Creek is 26.2 square miles (67.8 km^2), including the area drained by Sand Creek. Hinkley Creek originates just southeast of the intersection between State Route 88 and State Route 303 to the north of the facility. Hinkley Creek, with a drainage area of 11.0 square miles (28.5 km^2), flows in a southerly direction through the facility, and converges with the west branch of the Mahoning River south of the facility (USACE 2001).

Approximately one-third of the facility meets the regulatory definition of a wetland, with the majority of the wetland areas located in the eastern portion of the facility. Wetland areas at the facility include seasonal wetlands, wet fields, and forested wetlands. Many of the wetland areas are the result of natural drainage or beaver activity; however, some wetland areas are associated with anthropogenic settling ponds and drainage areas.

Approximately 50 ponds are scattered throughout the facility. Many were constructed within natural drainage ways to function as settling ponds or basins for process effluent and runoff. Others are natural in origin, resulting from glacial action or beaver activity. Water bodies at the facility support aquatic vegetation and biota. Storm water runoff is controlled primarily by natural drainage, except in former operations areas where an extensive storm sewer network helps to direct runoff to drainage ditches and settling ponds. Additionally, the storm sewer system was one of the primary drainage mechanisms for process effluent during the period that production facilities were in operation.

1.4.5 Climate

The general climate of the area where the facility is located is continental and characterized by moderately warm and humid summers, reasonably cold and cloudy winters, and wide variations in precipitation from year to year. Climate data for the facility, presented below, were obtained from available National Weather Service records for the 30-year period of record from 1981 to 2010 at the Youngstown Regional Airport, Ohio (*http://www.nws.noaa.gov/climate/xmacis.php?wfo=cle*). Wind speed data for Youngstown, Ohio, are from the National Climatic Data Center (*http://www.ncdc.noaa.gov/data-access/quick-links#wind*) for the available 66-year period of record from 1930 through 1996.

Average annual rainfall in the area is 38.86 inches (98.7 cm), with the highest monthly average occurring in July (4.31 inches [10.9 cm]) and the lowest monthly average occurring in February (2.15 inches [5.46 cm]). Average annual snowfall totals approximately 63.4 inches (161.0 cm) with the highest monthly average occurring in January (17.1 inches [43.43 cm]). Due to the influence of lake-effect snowfall events associated with Lake Erie, located approximately 35 miles (56.3 km) northwest of the facility, snowfall totals vary widely throughout northeastern Ohio.

The average annual daily temperature in the area is 49.3 degrees Fahrenheit (ºF), with an average daily high temperature of 59.0ºF and an average daily low temperature of 39.7ºF. The record high temperature of 100ºF occurred in July 1988, and the record low temperature of -22ºF occurred in January 1994. The prevailing wind direction at the former RVAAP is from the west-southwest, with the highest average wind speed occurring in January (12 miles [19.3 km] per hour) and the lowest average wind speed occurring in August (7 miles [11.3 km] per hour). As per the National Climatic Data Center, 20 storm events (category Thunderstorm Wind) were reported between January 1, 1996 and July 31, 2013 *(http://tinyurl.com/k2kn47o).* The area is susceptible to tornadoes; minor structural damage to several buildings on facility property occurred as the result of a tornado in 1985.

1.5 REPORT ORGANIZATION

This SI report is organized into the following sections:

- Chapter 1 (Introduction) – Provides an overview of the purpose and scope of this SI, a general facility description, demography, and land use of the facility. This section provides an overview of the environmental setting at the facility.

- Chapter 2 (Site Description and Operational History) – Provides the site descriptions and land use history of the site. The physical property characteristics, military operations, and summary of past investigations are included.

- Chapter 3 (Historical Operations) – Summarizes the historical operations, investigations, and removal actions at the AOC.

- Chapter 4 (Field Investigation) – Addresses the scope of activities performed under this SI. This section discusses sampling rationale for placement of environmental media sampling locations, field activity procedures, laboratory methods, and protocols. Included in this section are descriptions of the pre-mobilization activities and field sampling methodologies for surface and subsurface soil incremental sampling methodology (ISM) sampling. Deviations from the work plan are outlined. Site

surveying and collection and characterization of investigation-derived wastes (IDW) generated during this SI are discussed.

- Chapter 5 (Data Evaluation and Summary of Analytical Results) – Provides the data evaluation process used for this SI, a summary of surface and subsurface soil sampling results, and a presentation of the comparison of the SRCs to the most stringent Resident Receptor FWCUGs to identify the presence of potential contamination. The results of the WOE evaluation are provided in this section, as well as a discussion of the IDW characterization results.

- Chapter 6 (Exposure Pathways) – Summarizes physical conditions, and hydrological and hydrogeological settings; and provides conclusions for the exposure pathways identified for soil, air, surface water, and groundwater.

- Chapter 7 (Summary and Conclusions) – Summarizes findings and conclusions of this SI.

- Chapter 8 (References) – Lists references used for this report.

Report appendices contain the summarized investigation data as follows:

- Appendix A – Historical Aerial Photographs

- Appendix B – Activity Field Logs

- Appendix C – Boring Logs

- Appendix D – Data Verification Report

- Appendix E – Laboratory Analytical Results, Laboratory Data, and Chain-of-Custody Forms

- Appendix F – Data Validation Report

- Appendix G – IDW Disposal Letter Report

- Appendix H – Site Photographs.

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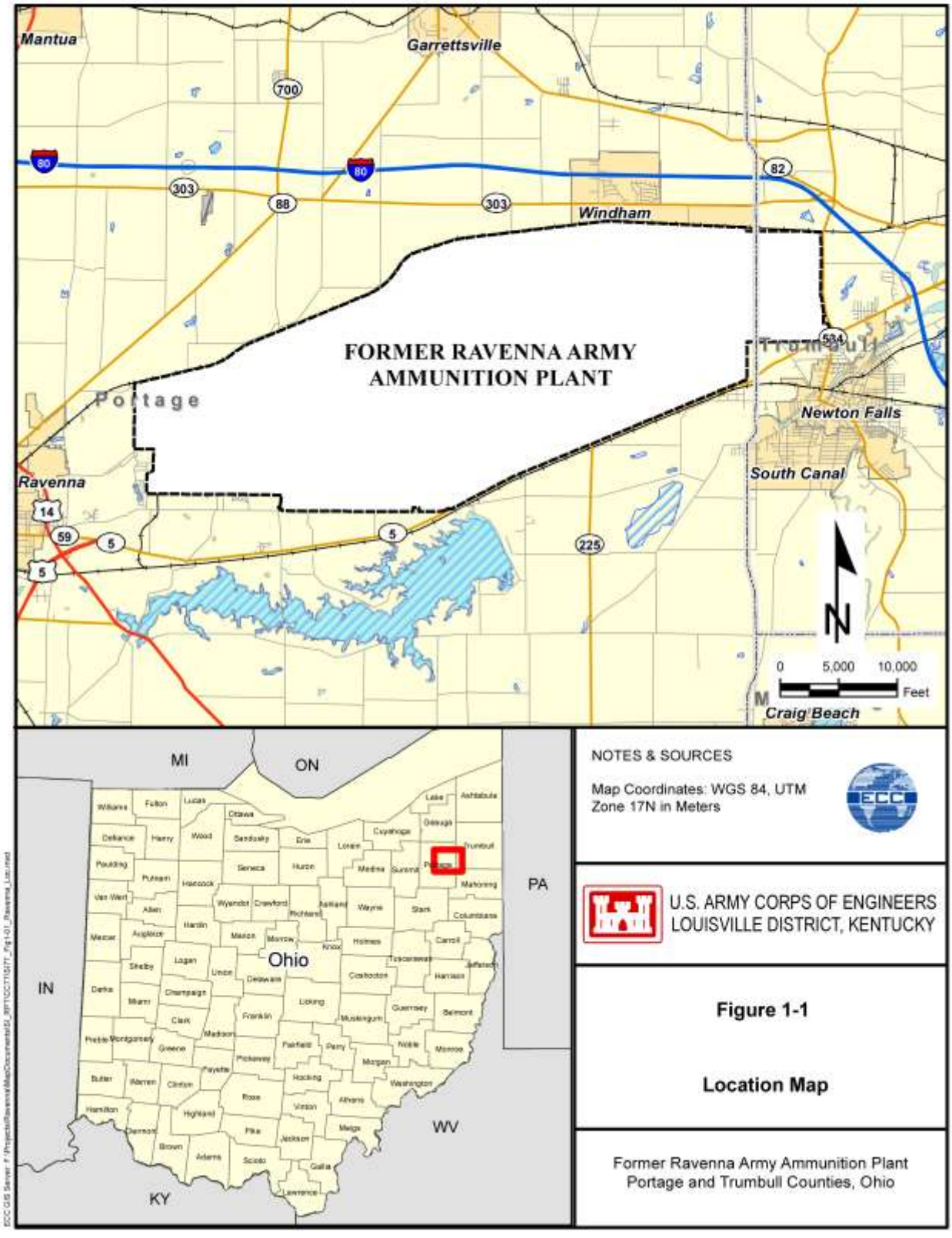
Mantua
Garrettsville
700
80
303
88
82
Windham
FORMER RAVENNA ARMY
AMMUNITION PLANT
Portage
Trumbull
534
Newton Falls
South Canal
Ravenna
14
59
5
225
N
0
5,000
10,000
Feet
Craig Beach
MI
ON
PA
IN
WV
KY
Ohio
NOTES & SOURCES
Map Coordinates: WGS 84, UTM
Zone 17N in Meters
ECC
U.S. ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT, KENTUCKY
Figure 1-1
Location Map
Former Ravenna Army Ammunition Plant
Portage and Trumbull Counties, Ohio

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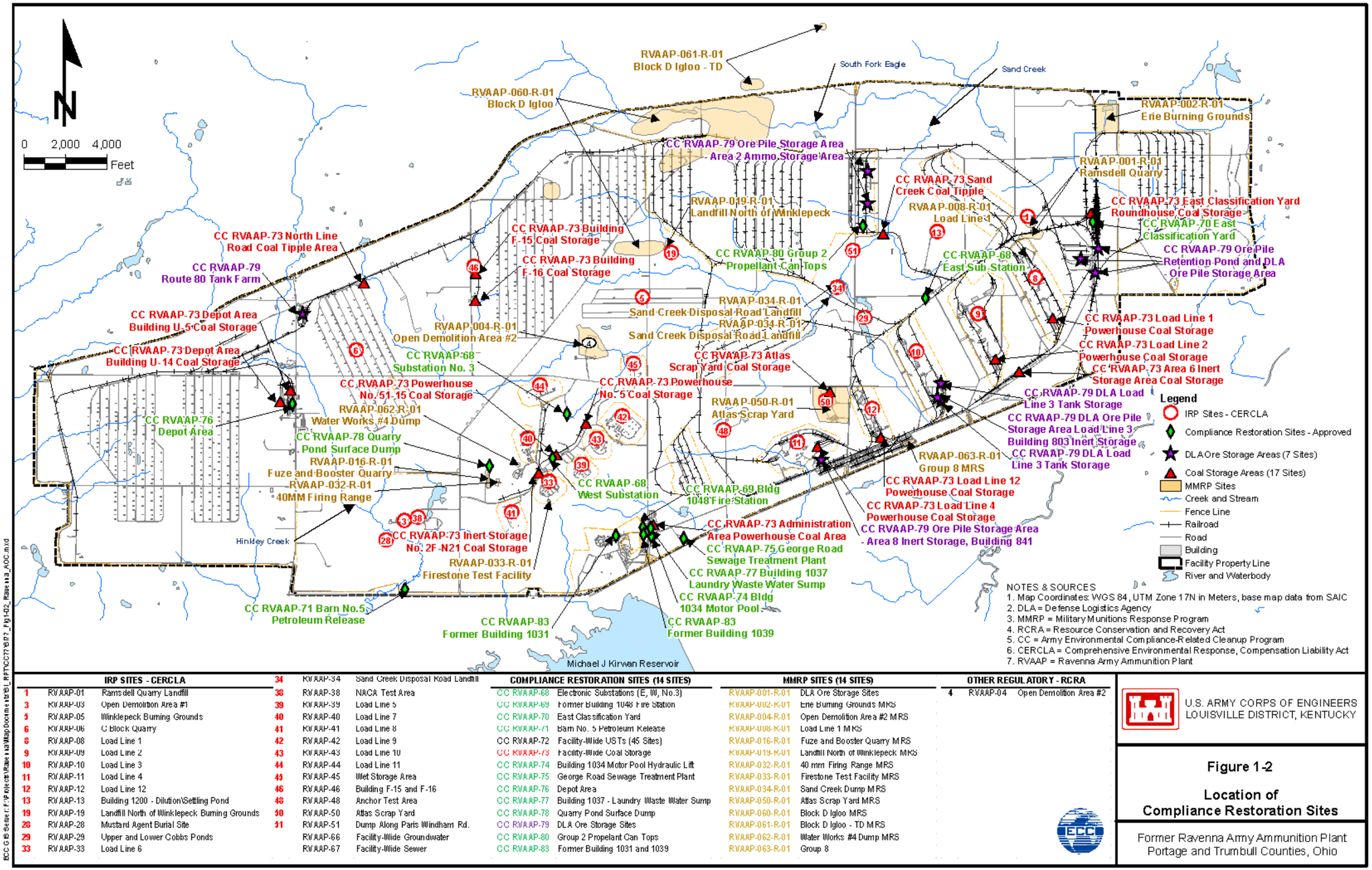

NOTES & SOURCES
1. Map Coordinates: WGS 84, UTM Zone 17N in Meters, base map data from SAIC
2. DLA = Defense Logistics Agency
3. MMRP = Military Munitions Response Program
4. RCRA = Resource Conservation and Recovery Act
5. CC = Army Environmental Compliance-Related Cleanup Program
6. CERCLA = Comprehensive Environmental Response, Compensation Liability Act
7. RVAAP = Ravenna Army Ammunition Plant

IRP SITES - CERCLA									
1	RVAAP-01	Ramsdell Quarry Landfill	34	RVAAP-34	Sand Creek Disposal Road Landfill
3	RVAAP-03	Open Demolition Area #1	38	RVAAP-38	NACA Test Area
5	RVAAP-05	Winklepeck Burning Grounds	39	RVAAP-39	Load Line 5
6	RVAAP-06	C Block Quarry	40	RVAAP-40	Load Line 7
8	RVAAP-08	Load Line 1	41	RVAAP-41	Load Line 8
9	RVAAP-09	Load Line 2	42	RVAAP-42	Load Line 9
10	RVAAP-10	Load Line 3	43	RVAAP-43	Load Line 10
11	RVAAP-11	Load Line 4	44	RVAAP-44	Load Line 11
12	RVAAP-12	Load Line 12	45	RVAAP-45	Wet Storage Area
13	RVAAP-13	Building 1200 - Dilution\Settling Pond	46	RVAAP-46	Building F-15 and F-16
19	RVAAP-19	Landfill North of Winklepeck Burning Grounds	48	RVAAP-48	Anchor Test Area
28	RVAAP-28	Mustard Agent Burial Site	50	RVAAP-50	Atlas Scrap Yard
29	RVAAP-29	Upper and Lower Cobbs Ponds	51	RVAAP-51	Dump Along Paris Windham Rd.
33	RVAAP-33	Load Line 6		RVAAP-66	Facility-Wide Groundwater
				RVAAP-67	Facility-Wide Sewer

COMPLIANCE RESTORATION SITES (14 SITES)		
CC RVAAP-68	Electronic Substations (E, W, No.3)
CC RVAAP-69	Former Building 1048 Fire Station
CC RVAAP-70	East Classification Yard
CC RVAAP-71	Barn No. 5 Petroleum Release
CC RVAAP-72	Facility-Wide USTs (45 Sites)
CC RVAAP-73	Facility-Wide Coal Storage
CC RVAAP-74	Building 1034 Motor Pool Hydraulic Lift
CC RVAAP-75	George Road Sewage Treatment Plant
CC RVAAP-76	Depot Area
CC RVAAP-77	Building 1037 - Laundry Waste Water Sump
CC RVAAP-78	Quarry Pond Surface Dump
CC RVAAP-79	DLA Ore Storage Sites
CC RVAAP-80	Group 2 Propelant Can Tops
CC RVAAP-83	Former Building 1031 and 1039

MMRP SITES (14 SITES)	
RVAAP-001-R-01	DLA Ore Storage Sites
RVAAP-002-R-01	Erie Burning Grounds MRS
RVAAP-004-R-01	Open Demolition Area #2 MRS
RVAAP-008-R-01	Load Line 1 MRS
RVAAP-016-R-01	Fuze and Booster Quarry MRS
RVAAP-019-R-01	Landfill North of Winklepeck MRS
RVAAP-032-R-01	40 mm Firing Range MRS
RVAAP-033-R-01	Firestone Test Facility MRS
RVAAP-034-R-01	Sand Creek Dump MRS
RVAAP-050-R-01	Atlas Scrap Yard MRS
RVAAP-060-R-01	Block D Igloo MRS
RVAAP-061-R-01	Block D Igloo - TD MRS
RVAAP-062-R-01	Water Works #4 Dump MRS
RVAAP-063-R-01	Group 8

OTHER REGULATORY - RCRA		
4	RVAAP-04	Open Demolition Area #2

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LOUISVILLE DISTRICT, KENTUCKY

Figure 1-2

Location of Compliance Restoration Sites

Former Ravenna Army Ammunition Plant
Portage and Trumbull Counties, Ohio

ECC

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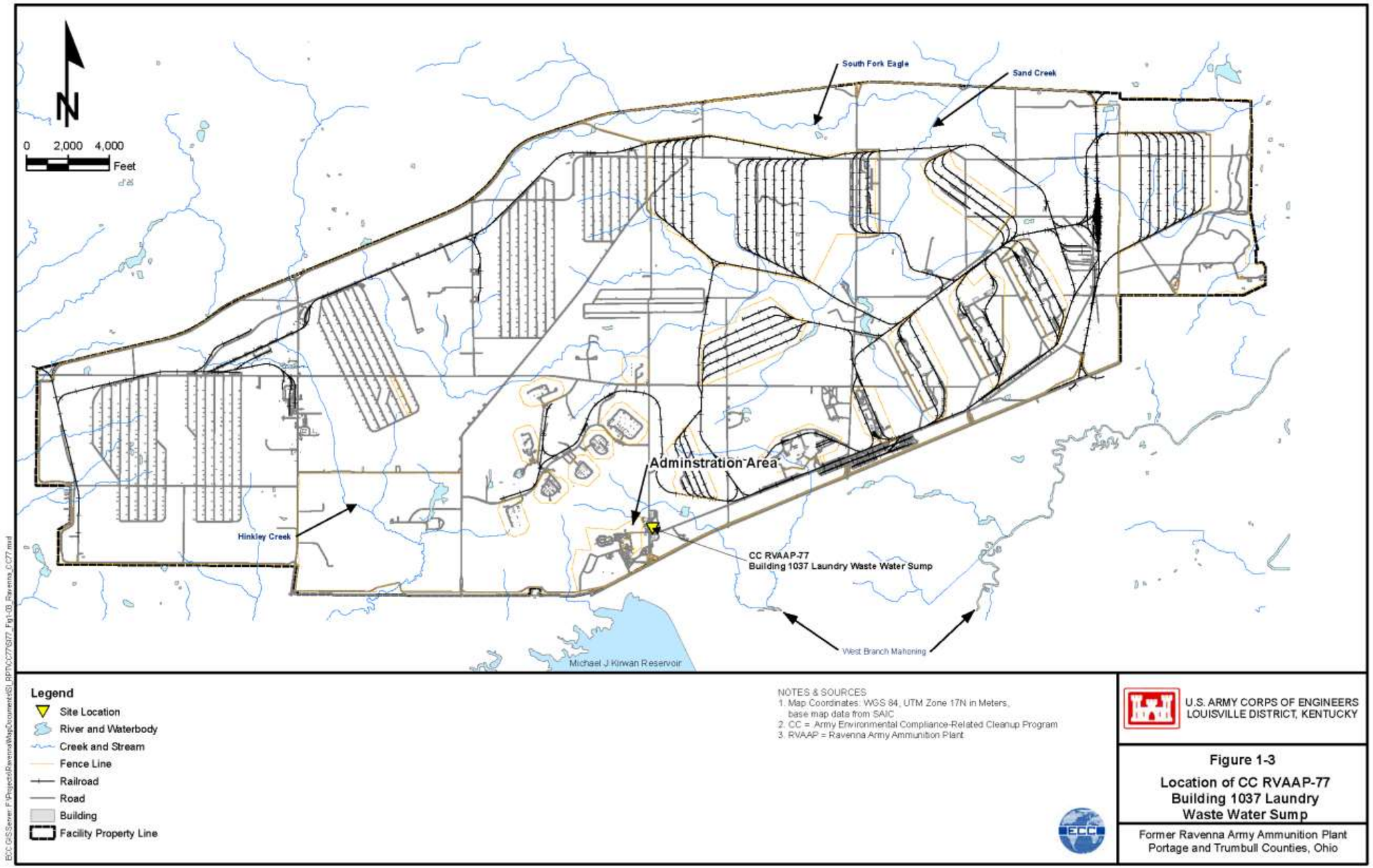
N
0 2,000 4,000
Feet
South Fork Eagle
Sand Creek
Adminstration Area
Hinkley Creek
CC RVAAP-77
Building 1037 Laundry Waste Water Sump
West Branch Mahoning
Michael J Kirwan Reservoir
Legend
Site Location
River and Waterbody
Creek and Stream
Fence Line
Railroad
Road
Building
Facility Property Line
NOTES & SOURCES
1. Map Coordinates: WGS 84, UTM Zone 17N in Meters, base map data from SAIC
2. CC = Army Environmental Compliance-Related Cleanup Program
3. RVAAP = Ravenna Army Ammunition Plant
U.S. ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT, KENTUCKY
Figure 1-3
Location of CC RVAAP-77
Building 1037 Laundry
Waste Water Sump
Former Ravenna Army Ammunition Plant
Portage and Trumbull Counties, Ohio
ECC
I:\DC GIS\Server: F:\Projects\RavennaWapDocuments\SLRPT\CC77\SI77_Fig1-03_Ravenna_CC77.mxd

1157

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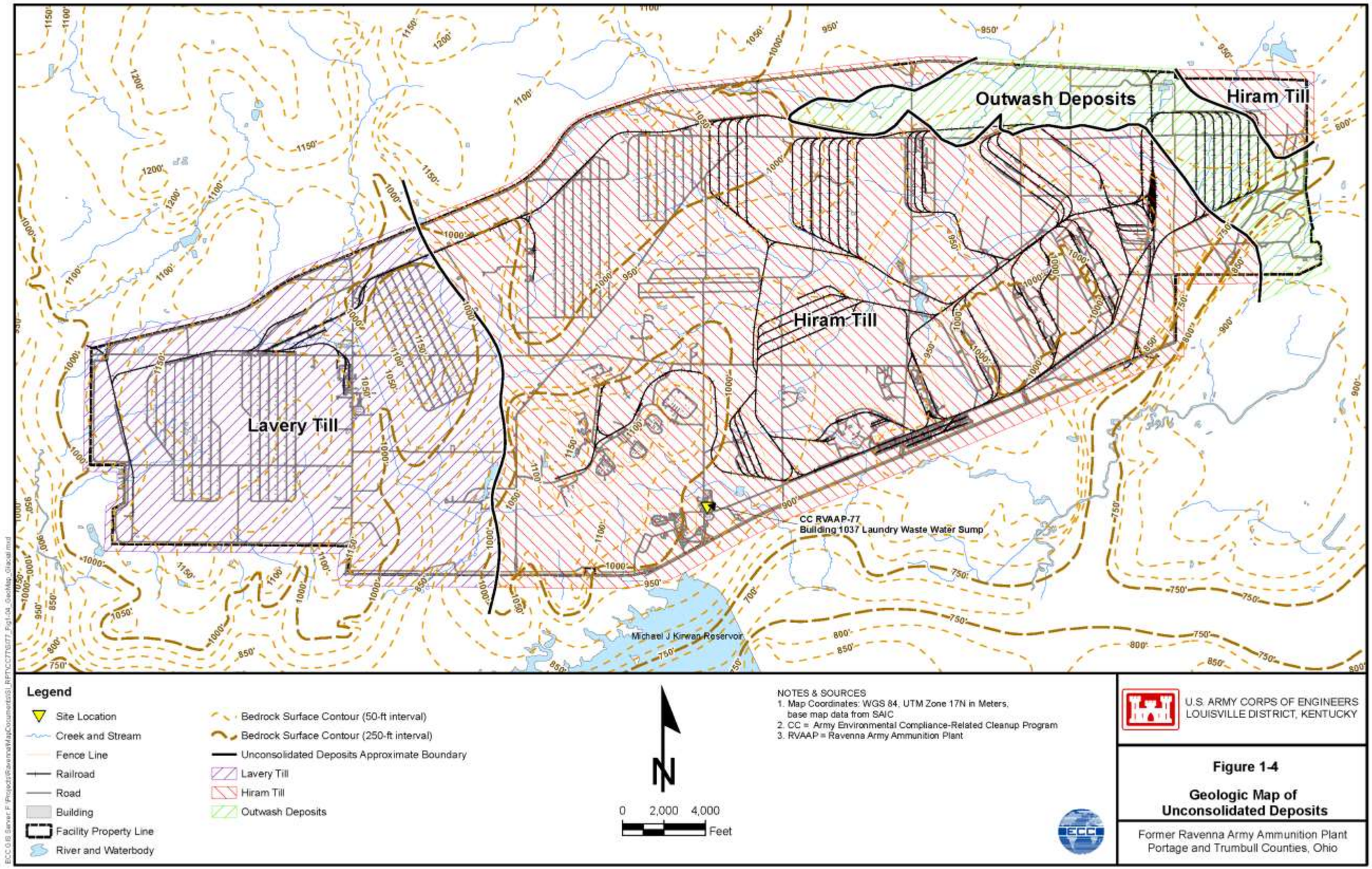
Outwash Deposits
Hiram Till
Hiram Till
Lavery Till
CC RVAAP-77
Building 1037 Laundry Waste Water Sump
Michael J Kirwan Reservoir
Legend
Site Location
Creek and Stream
Fence Line
Railroad
Road
Building
Facility Property Line
River and Waterbody
Bedrock Surface Contour (50-ft interval)
Bedrock Surface Contour (250-ft interval)
Unconsolidated Deposits Approximate Boundary
Lavery Till
Hiram Till
Outwash Deposits
N
0 2,000 4,000
Feet
NOTES & SOURCES
1. Map Coordinates: WGS 84, UTM Zone 17N in Meters, base map data from SAIC
2. CC = Army Environmental Compliance-Related Cleanup Program
3. RVAAP = Ravenna Army Ammunition Plant
U.S. ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT, KENTUCKY
Figure 1-4
Geologic Map of Unconsolidated Deposits
Former Ravenna Army Ammunition Plant
Portage and Trumbull Counties, Ohio

1169

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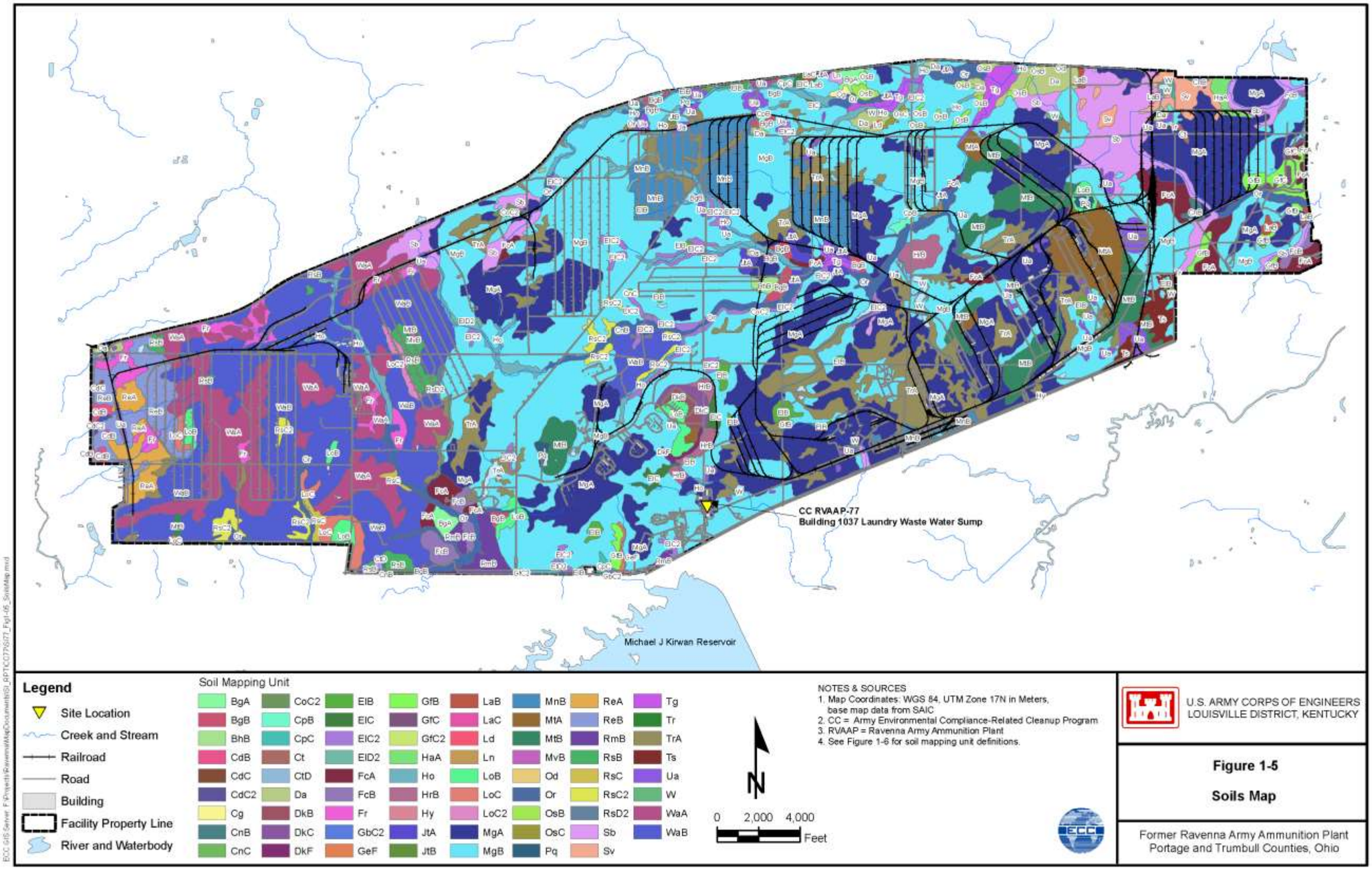
CC RVAAP-77
Building 1037 Laundry Waste Water Sump
Michael J Kirwan Reservoir
Legend
Site Location
Creek and Stream
Railroad
Road
Building
Facility Property Line
River and Waterbody
Soil Mapping Unit
BgA BgB BhB CdB CdC CdC2 Cg CnB CnC CoC2 CpB CpC Ct CtD Da DkB DkC DkF ElB ElC ElC2 ElD2 FcA FcB Fr GbC2 GeF GfB GfC GfC2 HaA Ho HrB Hy JtA JtB LaB LaC Ld Ln LoB LoC LoC2 MgA MgB MnB MtA MtB MvB Od Or OsB OsC Pq ReA ReB RmB RsB RsC RsC2 RsD2 Sb Sv Tg Tr TrA Ts Ua W WaA WaB
NOTES & SOURCES
1. Map Coordinates: WGS 84, UTM Zone 17N in Meters, base map data from SAIC
2. CC = Army Environmental Compliance-Related Cleanup Program
3. RVAAP = Ravenna Army Ammunition Plant
4. See Figure 1-6 for soil mapping unit definitions.
N
0 2,000 4,000
Feet
U.S. ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT, KENTUCKY
Figure 1-5
Soils Map
Former Ravenna Army Ammunition Plant
Portage and Trumbull Counties, Ohio

1181

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Legend

Soil Mapping Unit

- BgA, Bogart silt loam, 0-2% slopes
- BgB, Bogart silt loam, 2-6% slopes
- BhB, Bogart-Haskins complex, 2-6% slopes
- CdB, Canfield silt loam, 2-6% slopes
- CdC, Canfield silt loam, 6-12% slopes
- CdC2, Canfield silt loam, 6-12% slopes, moderately eroded
- Cg, Carlisle muck
- CnB, Chili loam, 2-6% slopes
- CnC, Chili loam, 6-12% slopes
- CoC2, Chili gravelly loam, 6-12% slopes, moderately eroded
- CpB, Chili silt loam, 2-6% slopes
- CpC, Chili silt loam, 6-12% slopes
- Ct, Chili-Oshtemo complex
- CtD, Chili-Oshtemo complex, 12-18% slopes
- Da, Damascus loam
- DkB, Dekalb channery loam, 2-6% slopes
- DkC, Dekalb channery loam, 6-12% slopes
- DkF, Dekalb channery loam, 25-70% slopes
- ElB, Ellsworth silt loam, 2-6% slopes
- ElC, Ellsworth silt loam, 6-12% slopes
- ElC2, Ellsworth silt loam, 6-12% slopes, moderately eroded
- ElD2, Ellsworth silt loam, 12-18% slopes, moderately eroded
- FcA, Fitchville silt loam, 0-2% slopes
- FcB, Fitchville silt loam, 2-6% slopes
- Fr, Frenchtown silt loam
- GbC2, Geeburg silt loam, 6-12% slopes, moderately eroded
- GeF, Geeburg and Glenford silt loams, steep
- GfB, Glenford silt loam, 2-6% slopes
- GfC, Glenford silt loam, 6-12% slopes
- GfC2, Glenford silt loam, 6-12% slopes, moderately eroded
- HaA, Haskins loam, 0-2% slopes
- Ho, Holly silt loam
- HrB, Hornell silt loam, 3-8% slopes
- Hy, Holly silt loam, frequently flooded
- JtA, Jimtown loam, 0-2% slopes
- JtB, Jimtown loam, 2-6% slopes
- LaB, Lakin loamy sand, 2-6% slopes
- LaC, Lakin loamy sand, 6-12% slopes
- Ld, Linwood muck
- Ln, Lorain silty clay loam
- LoB, Loudonville silt loam, 2-6% slopes
- LoC, Loudonville silt loam, 6-12% slopes
- LoC2, Loudonville silt loam, 6-12% slopes, moderately eroded
- MgA, Mahoning silt loam, 0-2% slopes
- MgB, Mahoning silt loam, 2-6% slopes
- MnB, Mahoning-Urban land complex, undulating
- MtA, Mitiwanga silt loam, 0-2% slopes
- MtB, Mitiwanga silt loam, 2-6% slopes
- MvB, Mitiwanga silt loam, 2-6% slopes, moderately well drained variant
- Od, Olmsted loam
- Or, Orrville silt loam
- OsB, Oshtemo sandy loam, 2-6% slopes
- OsC, Oshtemo sandy loam, 6-12% slopes
- Pq, Pits, quarries
- ReA, Ravenna silt loam, 0-2% slopes
- ReB, Ravenna silt loam, 2-6% slopes
- RmB, Remsen silt loam, 2-6% slopes
- RsB, Rittman silt loam, 2-6% slopes
- RsC, Rittman silt loam, 6-12% slopes
- RsC2, Rittman silt loam, 6-12% slopes, moderately eroded
- RsD2, Rittman silt loam, 12-18% slopes, moderately eroded
- Sb, Sebring slit loam
- Sv, Sebring silt loam, dark surface variant
- Tg, Tioga loam
- Tr, Trumbull silt loam
- TrA, Trumbull silt loam, 0-2% slopes
- Ts, Trumbull silty clay loam
- Ua, Udorthents
- W, Water
- WaA, Wadsworth silt loam, 0-2% slopes
- WaB, Wadsworth silt loam, 2-6% slopes

NOTES & SOURCES

1. Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at http://websoilsurvey.nrcs.usda.gov/. Accessed 12/28/2012.
2. See Figure 1-5 for soils map.

U.S. ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT, KENTUCKY

Figure 1-6

Description of Soil Mapping Units

Former Ravenna Army Ammunition Plant
Portage and Trumbull Counties, Ohio

ECC GIS Server: F:\Projects\Ravenna\MapDocuments\SI_RPT\CC77NS97_Fig1-06_SoilsMapLegend.mxd

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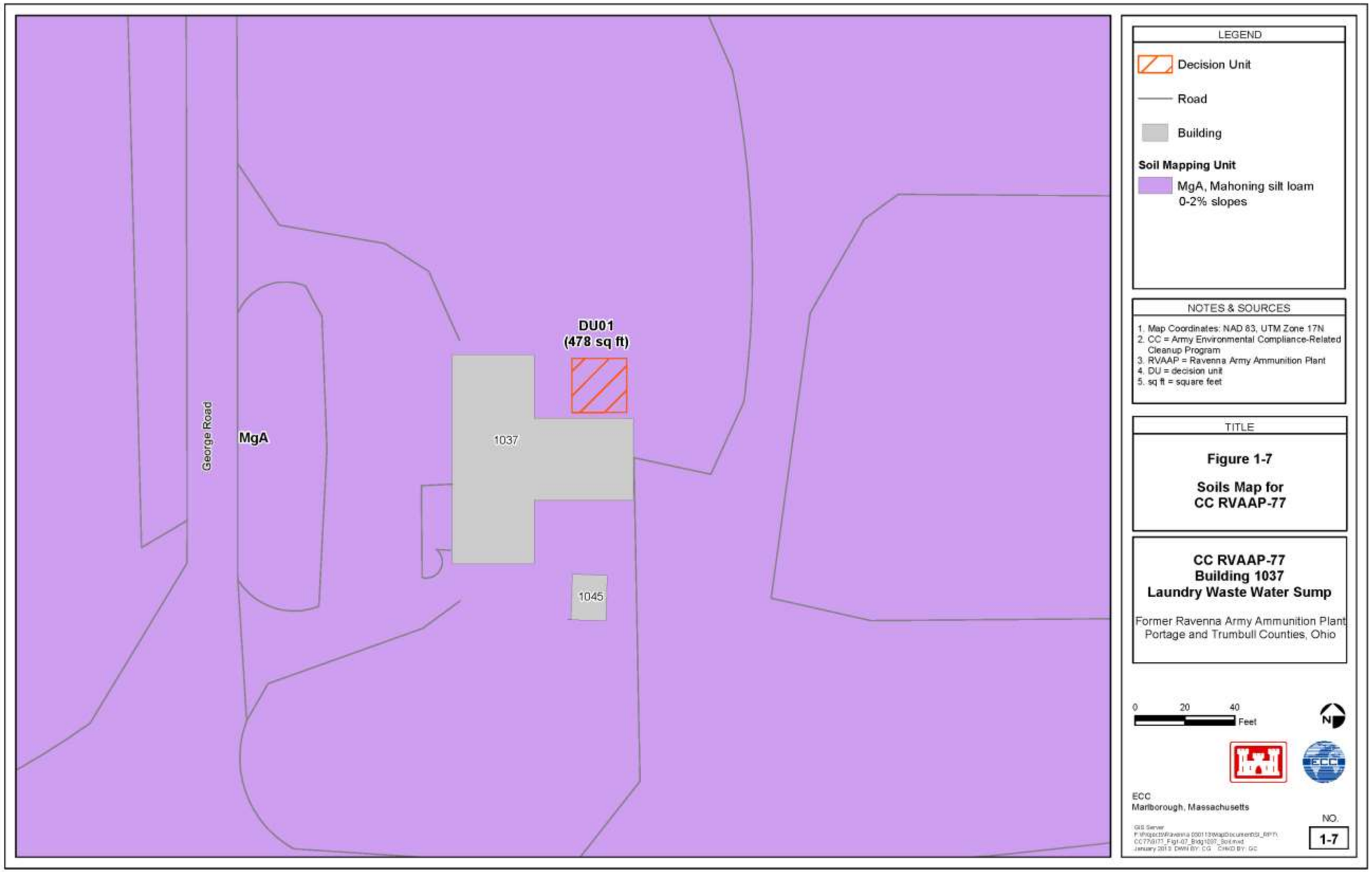
DU01
(478 sq ft)
George Road
MgA
1037
1045
LEGEND
Decision Unit
Road
Building
Soil Mapping Unit
MgA, Mahoning silt loam
0-2% slopes
NOTES & SOURCES
1. Map Coordinates: NAD 83, UTM Zone 17N
2. CC = Army Environmental Compliance-Related Cleanup Program
3. RVAAP = Ravenna Army Ammunition Plant
4. DU = decision unit
5. sq ft = square feet
TITLE
Figure 1-7
Soils Map for
CC RVAAP-77
CC RVAAP-77
Building 1037
Laundry Waste Water Sump
Former Ravenna Army Ammunition Plant
Portage and Trumbull Counties, Ohio
0
20
40
Feet
N
ECC
Marlborough, Massachusetts
NO.
1-7

1205

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CC RVAAP-77
Building 1037 Laundry Waste Water Sump

Michael J Kirwan Reservoir

Legend

- Site Location
- Creek and Stream
- Fence Line
- Railroad
- Road
- Building
- Facility Property Line
- River and Waterbody
- Berea Sandstone
- Connoquennissing Sandstone Member
- Cuyahoga Group
- Homewood Sandstone Member
- Mercer Member
- Sharon Member
- Sharon Sandstone - Conglomerate Unit

N

0 2,000 4,000
Feet

NOTES & SOURCES
1. Map Coordinates: WGS 84, UTM Zone 17N in Meters, base map data from SAIC
2. CC = Army Environmental Compliance-Related Cleanup Program
3. RVAAP = Ravenna Army Ammunition Plant

U.S. ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT, KENTUCKY

Figure 1-8

Geologic Bedrock Map

Former Ravenna Army Ammunition Plant
Portage and Trumbull Counties, Ohio

ECC GIS Server: F:\Projects\Ravenna\MapDocuments\SI_RPTCC77\SI77_Fig1-08_GeoMap_Bedrock.mxd

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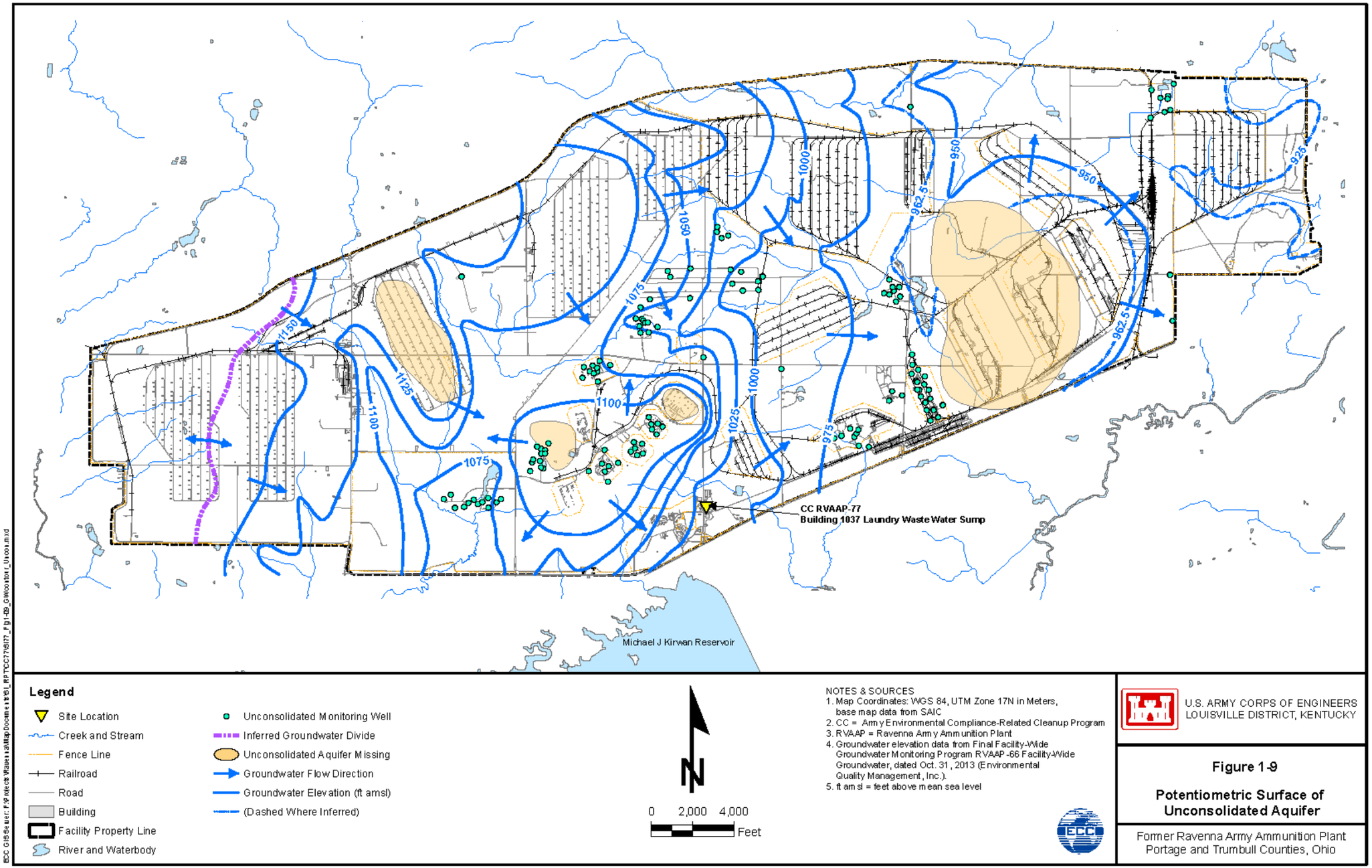
1150
1125
1100
1075
1050
1000
975
962.5
950
925
CC RVAAP-77
Building 1037 Laundry Waste Water Sump
Michael J Kirwan Reservoir
Legend
Site Location
Creek and Stream
Fence Line
Railroad
Road
Building
Facility Property Line
River and Waterbody
Unconsolidated Monitoring Well
Inferred Groundwater Divide
Unconsolidated Aquifer Missing
Groundwater Flow Direction
Groundwater Elevation (ft amsl)
(Dashed Where Inferred)
N
0 2,000 4,000
Feet
NOTES & SOURCES
1. Map Coordinates: WGS 84, UTM Zone 17N in Meters, base map data from SAIC
2. CC = Army Environmental Compliance-Related Cleanup Program
3. RVAAP = Ravenna Army Ammunition Plant
4. Groundwater elevation data from Final Facility-Wide Groundwater Monitoring Program RVAAP-66 Facility-Wide Groundwater, dated Oct. 31, 2013 (Environmental Quality Management, Inc.).
5. ft amsl = feet above mean sea level
U.S. ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT, KENTUCKY
Figure 1-9
Potentiometric Surface of Unconsolidated Aquifer
Former Ravenna Army Ammunition Plant
Portage and Trumbull Counties, Ohio
ECC GIS Server: F:\Projects\RavennaArsenal\MapDocuments\SI_RPT\CC77\5177_Fig1-09_GWMonitor_Unconsol.mxd

1229

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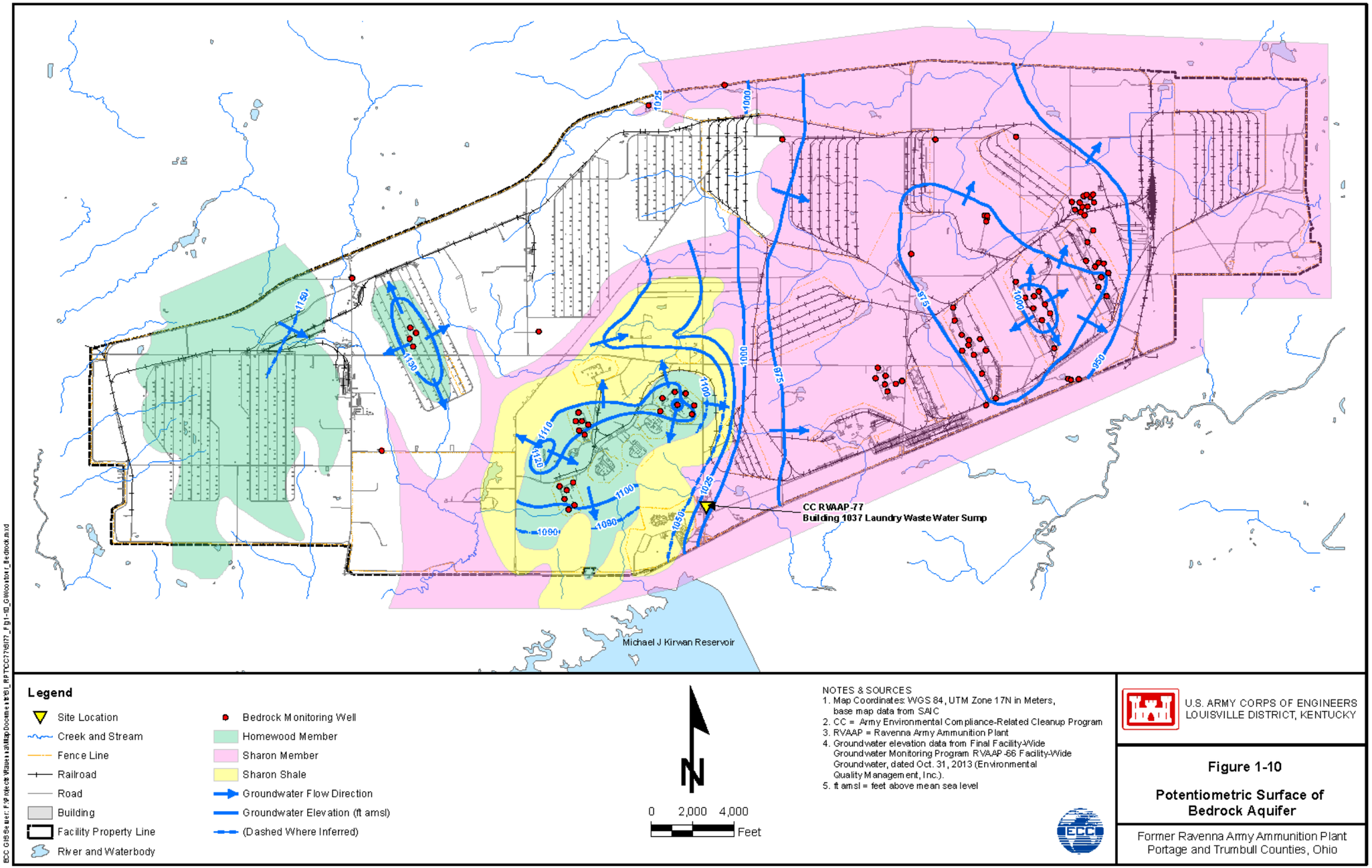
CC RVAAP-77
Building 1037 Laundry Waste Water Sump
Michael J Kirwan Reservoir
Legend
Site Location
Creek and Stream
Fence Line
Railroad
Road
Building
Facility Property Line
River and Waterbody
Bedrock Monitoring Well
Homewood Member
Sharon Member
Sharon Shale
Groundwater Flow Direction
Groundwater Elevation (ft amsl)
(Dashed Where Inferred)
N
0 2,000 4,000
Feet
NOTES & SOURCES
1. Map Coordinates: WGS 84, UTM Zone 17N in Meters, base map data from SAIC
2. CC = Army Environmental Compliance-Related Cleanup Program
3. RVAAP = Ravenna Army Ammunition Plant
4. Groundwater elevation data from Final Facility-Wide Groundwater Monitoring Program RVAAP-66 Facility-Wide Groundwater, dated Oct. 31, 2013 (Environmental Quality Management, Inc.).
5. ft amsl = feet above mean sea level
U.S. ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT, KENTUCKY
Figure 1-10
Potentiometric Surface of Bedrock Aquifer
Former Ravenna Army Ammunition Plant
Portage and Trumbull Counties, Ohio

1240

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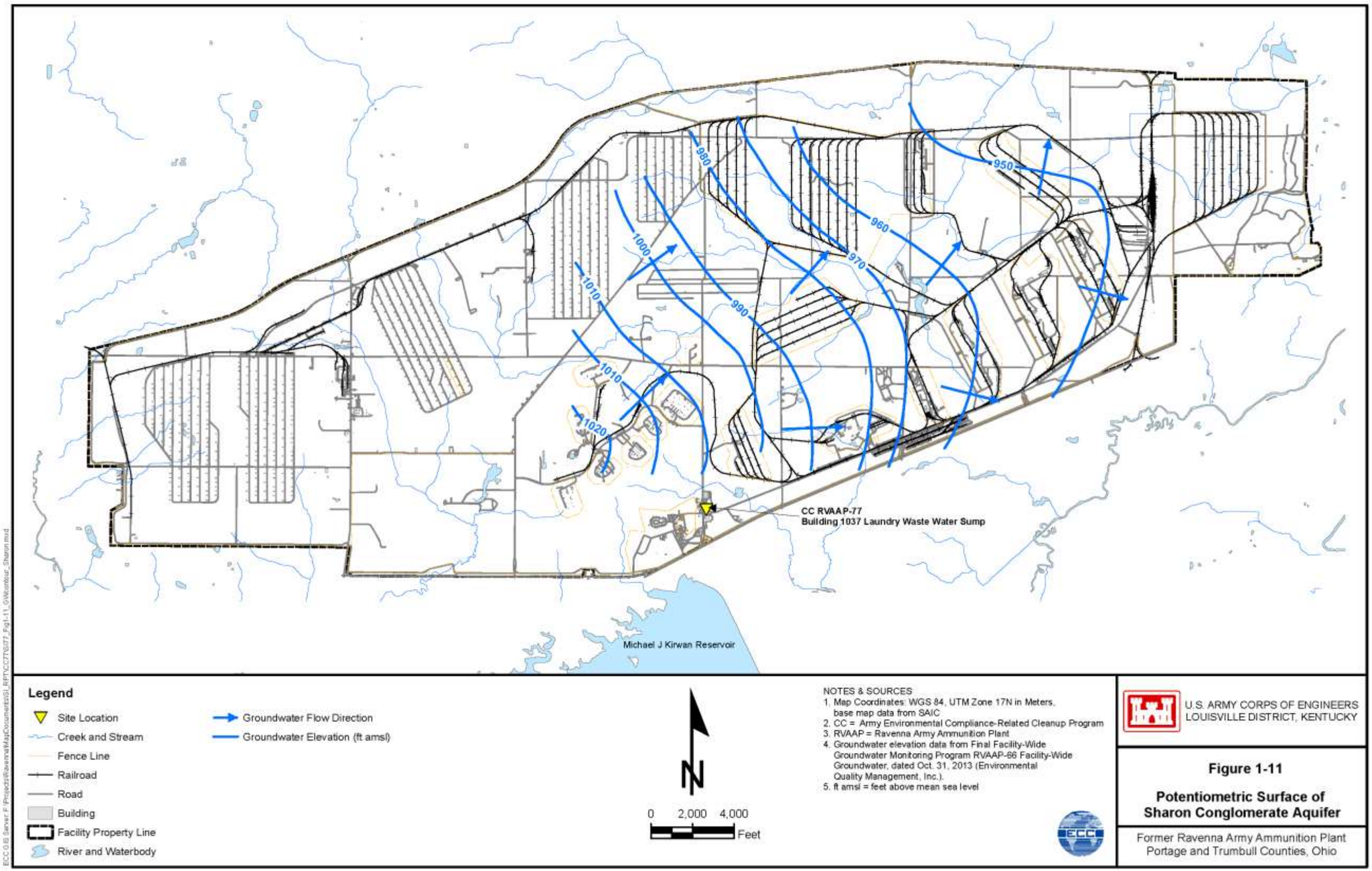
980
1000
1010
990
1010
1020
960
970
950
CC RVAAP-77
Building 1037 Laundry Waste Water Sump
Michael J Kirwan Reservoir
Legend
Site Location
Creek and Stream
Fence Line
Railroad
Road
Building
Facility Property Line
River and Waterbody
Groundwater Flow Direction
Groundwater Elevation (ft amsl)
N
0
2,000
4,000
Feet
NOTES & SOURCES
1. Map Coordinates: WGS 84, UTM Zone 17N in Meters, base map data from SAIC
2. CC = Army Environmental Compliance-Related Cleanup Program
3. RVAAP = Ravenna Army Ammunition Plant
4. Groundwater elevation data from Final Facility-Wide Groundwater Monitoring Program RVAAP-66 Facility-Wide Groundwater, dated Oct. 31, 2013 (Environmental Quality Management, Inc.).
5. ft amsl = feet above mean sea level
U.S. ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT, KENTUCKY
Figure 1-11
Potentiometric Surface of Sharon Conglomerate Aquifer
Former Ravenna Army Ammunition Plant
Portage and Trumbull Counties, Ohio

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2.0 SITE DESCRIPTION AND OPERATIONAL HISTORY

2.1 SITE DESCRIPTION

The CR site, CC RVAAP-77 Building 1037 Laundry Waste Water Sump AOC (Figure 2-1), consists of the former concrete sump location at Building 1037. The building was used from World War II until 1992 as the laundry for the facility. As stated in the HRR (SAIC 2011a), "*the former laundry was used to launder workers' overalls that were potentially contaminated with explosive and propellant chemicals used during munitions production."* The laundry area occupied the entire footprint (approximately 3,181 square feet [sq ft]) of Building 1037. The concrete sump was located outside the former laundry building. The size of the waste water sump was 13 ft by 16 ft. The top of the waste water sump was at ground surface and the bottom of the waste water sump was at approximately 11.5 ft bgs. According to the *Final Project Completion Report Disposal of Discarded Munitions Debris & Components; Demolition of RVAAP-35 Building 1037 – Laundry Waste Water Sump and Laundry Flame Proofing Building and Evaluation and Recommendations for Closure of Clean-Hard Fill Sites,* completed by PIKA International, Inc. (PIKA), demolition and removal of the sump occurred between September and October 2009 (PIKA 2010).

The concrete sump served as a settling basin for discharged laundry rinse water prior to entering the sanitary sewer at manhole MH-1-3, as shown in Figure 2-1. The sump was used to capture solids carried by the rinse water, including potentially explosive-contaminated residues, prior to the water being discharged to the sewer. In approximately 1954, the concrete sump was emptied of its contents (sawdust) and backfilled in place with clean soil. The concrete sump was replaced by a small, above ground, stainless steel settling tank. The settling tank was housed inside a small annex attached to the north side of Building 1037 known as the Laundry flame Proofing Building, as shown in the photographs on Figure 2-1 (PIKA 2010).

Building 1037 is located east of George Road and north of South Service Road in the former Administration Area (Figure 2-1). Building 1037 was the former laundry building from World War II through 1992 and used from 1992 to 2013 by the Army Base Realignment and Closure Division for administrative offices. Site topography is generally flat (Figure 2-1). Surface water runoff from Building 1037 Laundry Waste Water Sump drains into the storm sewer system. The acreage of the CR site has not been defined, but is estimated to be less than 1 acre.

2.2 LAND USE AND OWNERSHIP HISTORY

CC RVAAP-77 Building 1037 Laundry Waste Water Sump is located within the former RVAAP. Camp Ravenna is used for military training. Building 1037 is currently used for

administrative purposes and meeting space by the OHARNG. Appendix A contains historical aerial photographs (1940-2009) of the CR site.

2.3 PREVIOUS INVESTIGATIONS

Demolition and removal of the concrete sump was conducted in 2009. Analytical samples of the demolition debris, wood, and concrete slab were collected. These samples were analyzed to certify that the structure and all components could be classified as decontaminated meeting the 5X certification, per Industrial Operations Command (Pamphlet 385-1), Classification and Remediation of Explosive Contamination (United States Army Industrial Operations Command 2008), meaning that the debris is free of explosive residue. All of the 5X certification sampling results verified that no explosive hazards existed for any of the building debris material. The soil excavated from under the floor slab, footer, and basin was inspected by an unexploded ordnance (UXO) technician for bulk explosives. No bulk explosives were identified. No confirmatory soil samples were collected for laboratory analysis in 2009. Following the demolition and removal of the concrete sump, the excavated soil from the site was used as backfill. In addition, 94.5 tons of additional backfill, approved for use by the Ohio EPA, was used to complete the work (PIKA 2010).

An HRR was conducted in 2010 (SAIC 2011a) for this CR site. The report contained the following observations and conclusions:

- The concrete waste water sump was used as a settling basin. The purpose of the concrete sump was to remove solids from the laundry rinse water prior to discharge to the sanitary sewer. Solids were periodically removed from the concrete sump and burned to remove explosive residues, presumably at either Erie Burning Grounds or the Winklepeck Burning Grounds. The concrete sump was used for laundry operations until approximately 1954, and was demolished in 2009 and removed from Building 1037.

- The samples of the resultant wood, concrete, and soil from the demolition debris were collected. The samples were tested to determine if debris could be classified as being decontaminated to 5X certification meaning that the debris is free of explosive residue. All 5X certification sampling results verified that no explosive hazards were associated with any of the building debris material. The excavated soil from under the floor slab, footer, and basin was visually inspected by a UXO technician for bulk explosives. No bulk explosives were identified.

- No confirmatory soil samples were collected for laboratory analysis during the demolition in 2009.

- The excavated site soil was used as backfill, along with approximately 94.5 tons of additional off-site fill material, which was sampled and approved by the Ohio EPA.

- No documented evidence of a spill or release at the laundry building was found during the HRR.

- No visual evidence of impacts (e.g., stained soil, stressed vegetation) were observed during the site visit.

- Further investigation was recommended based on the findings of the HRR, which recommended subsurface soil sampling at the waste water sump location at CC RVAAP-77, specifically for explosive and propellant chemicals (SAIC 2011a).

This SI was completed based on the information and recommendations provided in the HRR report for the former laundry sump located at Building 1037 Laundry Waste Water Sump AOC.

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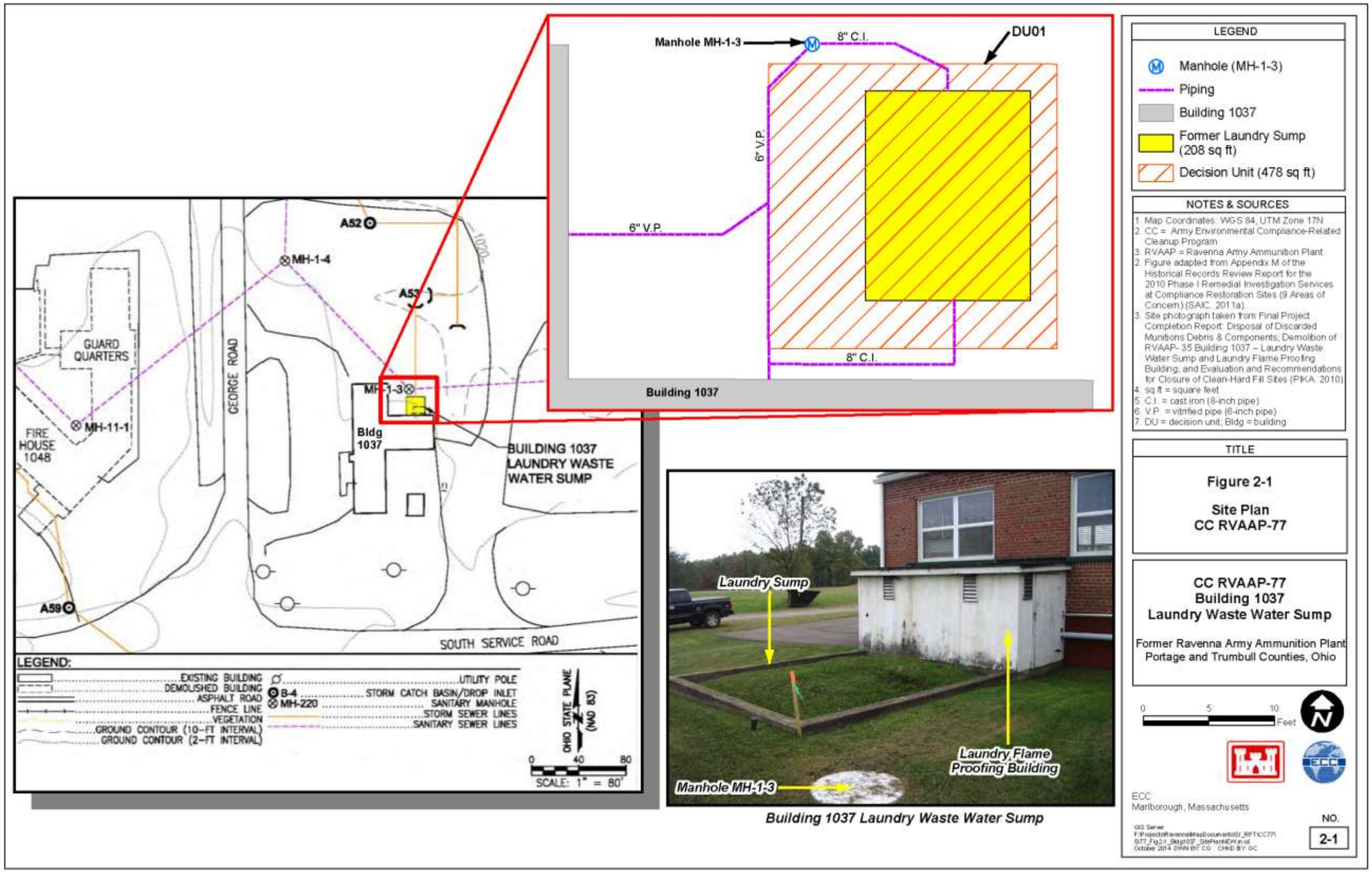
Manhole MH-1-3
8" C.I.
DU01
6" V.P.
6" V.P.
8" C.I.
Building 1037
A52
MH-1-4
A53
GUARD QUARTERS
GEORGE ROAD
MH-11-1
FIRE HOUSE 1048
MH-1-3
Bldg 1037
BUILDING 1037 LAUNDRY WASTE WATER SUMP
A59
SOUTH SERVICE ROAD
LEGEND:
EXISTING BUILDING
DEMOLISHED BUILDING
ASPHALT ROAD
FENCE LINE
VEGETATION
GROUND CONTOUR (10-FT INTERVAL)
GROUND CONTOUR (2-FT INTERVAL)
UTILITY POLE
B-4
MH-220
STORM CATCH BASIN/DROP INLET
SANITARY MANHOLE
STORM SEWER LINES
SANITARY SEWER LINES
OHIO STATE PLANE (NAD 83)
0 40 80
SCALE: 1" = 80'
Laundry Sump
Laundry Flame Proofing Building
Manhole MH-1-3
Building 1037 Laundry Waste Water Sump
LEGEND
Manhole (MH-1-3)
Piping
Building 1037
Former Laundry Sump (208 sq ft)
Decision Unit (478 sq ft)
NOTES & SOURCES
1. Map Coordinates: WGS 84, UTM Zone 17N
2. CC = Army Environmental Compliance-Related Cleanup Program
3. RVAAP = Ravenna Army Ammunition Plant
2. Figure adapted from Appendix M of the Historical Records Review Report for the 2010 Phase I Remedial Investigation Services at Compliance Restoration Sites (9 Areas of Concern) (SAIC, 2011a).
3. Site photograph taken from Final Project Completion Report: Disposal of Discarded Munitions Debris & Components; Demolition of RVAAP- 35 Building 1037 – Laundry Waste Water Sump and Laundry Flame Proofing Building; and Evaluation and Recommendations for Closure of Clean-Hard Fill Sites (PIKA, 2010)
4. sq ft = square feet
5. C.I. = cast iron (8-inch pipe)
6. V.P. = vitrified pipe (6-inch pipe)
7. DU = decision unit; Bldg = building
TITLE
Figure 2-1
Site Plan
CC RVAAP-77
CC RVAAP-77
Building 1037
Laundry Waste Water Sump
Former Ravenna Army Ammunition Plant
Portage and Trumbull Counties, Ohio
0 5 10 Feet
N
ECC
Marlborough, Massachusetts
NO.
2-1

1368

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3.0 HISTORICAL OPERATIONS

As stated in the HRR report (SAIC 2011a), "*the laundry building was used to launder workers' overalls that were potentially contaminated with explosive and propellant chemicals used during munitions production*." The potential contaminants at this AOC are explosive and propellant chemicals.

The concrete sump was used between WWII and approximately 1954 as a settling basin to remove the solids from laundry rinse water prior to entering the sanitary sewer. The system included the use of sawdust to trap explosives. Solids were periodically removed from the sump and burned to remove explosive residues, presumably at either the Erie Burning Grounds or Winklepeck Burning Grounds. The filtered water was discharged to the sanitary sewer for treatment at the George Road Sewage Treatment Plant (CC RVAAP-75). No other information related to historical operations, spills, or releases of chemicals was reported or identified during the completion of the HRR.

The previous operations, investigations, and removal actions at Building 1037 are summarized in Table 3-1, which includes descriptions of potential contaminants associated with these activities.

Table 3-1: Summary of Previous Operations, Investigations, and Removal Actions at CC RVAAP-77

Previous Operations – CC RVAAP-77		
Operations	**Documentation Provided**	**Description/Potential Contaminants**
Operations Involving Hazardous, Toxic, or Radioactive Waste	Yes	– Laundry service provided for workers' overalls potentially contaminated with explosive and propellant chemicals.

Previous Investigations/Removal Actions – CC RVAAP-77		
Year	**Type Investigation/Action**	**Findings**
1954	Abandonment of concrete sump in place	– Concrete waste water sump was emptied and backfilled (in place) with clean soil. – The waste water sump was replaced with a new, stainless steel, settling tank which was then used from 1954 until 1992 for removal of solids from the rinse water.
2009	Removal of concrete sump	– 5X certification sampling indicated no explosive hazards existed in building material. – Visual inspection of excavated soil showed no evidence of bulk explosives.
2011	HHR	– Facility was used to launder workers' overalls that were potentially contaminated with explosive and propellant chemicals used during munitions production. – CC RVAAP-77 Building 1037 Laundry Waste Water Sump was recommended for further investigation.

Source: HRR (SAIC 2011a).

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4.0 FIELD INVESTIGATION

Work for this SI was conducted in accordance with the Final SI/RI Work Plan (ECC 2012) and the *Facility-Wide Sampling and Analysis Plan for Environmental Investigations at the RVAAP, Ravenna, Ohio* (SAIC 2011b) dated February 24, 2011, unless specifically noted otherwise (Section 4.4). The surface and subsurface soil samples collected and analyzed for this SI are summarized in Table 4-1.

4.1 SAMPLING RATIONALE

Surface and subsurface soil sampling was conducted at the CC RVAAP-77 to determine the presence of potential contamination associated with the waste water sump area, as described in the Final SI/RI Work Plan (ECC 2012). Although the sump was removed in 2009, no confirmatory soil samples were collected at that time to verify whether the sump contents had impacted the surrounding subsurface soil (SAIC 2011a). As no confirmation soil samples were collected during the removal of the sump, the soil sampling area for this SI (Decision Unit [DU]01) was established to encompass the former laundry sump area as shown on Figure 4-1. The DU was sized specifically to encompass the waste water sump area and is smaller than a typical one-quarter acre exposure unit (Facility-Wide Human Health Risk Assessment Manual, 2005). The DU was centered on the waste water sump area (208 sq ft) and extended approximately 2-8 ft outside of the original sump boundaries where contamination may have been released to the subsurface soil. The DU area is 478 sq ft. This smaller DU (less than one-quarter acre) was established around the waste water sump area to increase the likelihood of identifying potential contamination.

The Final SI/RI Work Plan (ECC 2012) included collection of a discrete sediment sample from the bottom of the manhole adjacent to DU01 in the event that sediment was found. However, when the manhole was inspected on November 11, 2012, no sediment was observed at the bottom of the manhole; therefore, no sediment samples were collected as part of this SI. During this sampling event, water (approximately 1 inch deep) was observed in the manhole flowing eastward toward the George Road Sewage Treatment Plant. It was also observed that the drainage pipe from the former laundry sump leading to the manhole was sealed with concrete. No historical documents were found that documented the sealing of the pipe; however, it is assumed that the pipe was sealed during the removal of the sump in September 2009. Table 4-2 provides a summary of the sampling rationale for each of the surface and subsurface soil samples collected at CC RVAAP-77.

4.2 PRE-MOBILIZATION ACTIVITIES

Prior to the field investigation, a series of pre-mobilization activities were undertaken to ensure that all applicable requirements were met. These included providing any necessary notifications to the Army, Ohio EPA, and other stakeholders.

ECC personnel mobilized to the facility on October 22, 2012 to conduct a site walk and pre-mark the DU and direct-push boring locations at CC RVAAP-77. The pre-mobilization tasks included the following activities:

- Conducting a site walk
- Locating the DU
- Locating the soil borings
- Decontaminating the sampling equipment

4.2.1 Site Walk

ECC conducted a site walk at CC RVAAP-77 on October 22, 2012 to assess current site conditions and to note any potential health and safety hazards that could affect the SI field work.

4.2.2 Soil Sampling Locations

For this SI, one DU (DU01) was established as the soil sampling area as shown on Figure 4-1. A surface soil ISM sample (0-1 ft bgs), and two horizontal subsurface soil ISM samples from intervals of 1-4 and 4-7 ft bgs were collected at DU01. Five vertical subsurface soil ISM samples were also collected from the interval of 1-7 ft bgs. In addition, one boring (referred to as a "deep" soil boring [DSB]) was advanced to 7-13 ft bgs to identify potential chemicals in the soil down to 13 ft bgs. After the DU was located and marked, the direct-push soil boring locations were marked with wooden stakes with high visibility paint and flagging.

4.2.3 Munitions and Explosives of Concern and Utility Clearance Surveys

Based on HRR findings (SAIC 2011a) and documentation from the sump removal project, munitions and explosives of concern clearances were not required or conducted at the Building 1037 Laundry Waste Water Sump CC RVAAP-77. No documentation of military munitions being historically located or stored on-site was discovered.

ECC met with VISTA Sciences Corporation representatives on October 23, 2012 at Building 1037. During this meeting, ECC inquired of Mr. James D. McGee, VISTA Sciences Corporation Project Manager for the former RVAAP, about utility clearance protocols at the facility.

Mr. McGee initially suggested that ECC contact the OHARNG regarding utility clearance. However, after his review of the sites, Mr. McGee reported that any utility located within these areas would either have been removed or, if still in place, inactive and not energized. Active utilities were not encountered during any of the drilling activities conducted at CC RVAAP-77.

4.2.4 Site Clearing Activities

Site clearing activities were not required at the AOC. This AOC is located in an area with low brush, tall grass, and an access road adjacent to the AOC. Therefore, the site was easily accessible by vehicles and drilling equipment.

4.2.5 Site Security

No specific site security was needed at CC RVAAP-77. However, each work day prior to mobilizing to the AOC, Camp Ravenna Range Control was notified that ECC and subcontractor personnel would be working at the AOC.

4.2.6 Equipment Decontamination

Prior to beginning surface soil sampling, all sampling equipment was decontaminated at a pre-designated area within Building 1036. For this purpose, a 5-sq ft piece of plastic sheeting was placed on the concrete floor of the building in the designated decontamination area.

Five-gallon buckets were used to contain brushes, potable water with Alconox® wash, and potable water rinse. Other decontamination fluids consisted of pesticide grade isopropyl alcohol, a 10 percent nitric acid solution, and laboratory supplied deionized (DI) water contained in spray bottles. Following the Alconox® wash with brushes and potable water rinse, sampling equipment was sprayed with isopropyl alcohol, sprayed with the 10 percent nitric acid solution, rinsed with DI water, and then wrapped in aluminum foil. Sufficient sampling equipment was brought to the site each morning to allow for sampling of the DU area without the need to decontaminate equipment. All sampling equipment was decontaminated inside Building 1036 at the end of each work day in preparation for sampling the following day.

Prior to commencing subsurface soil sampling, all direct-push drilling rods and equipment were decontaminated using a high pressure steam cleaner and brushes. A temporary decontamination pad was constructed outside of Building 1036 and lined with plastic sheeting. The drilling equipment was then placed on a temporary steel rack within the decontamination pad, and the equipment was thoroughly cleaned. Following conclusion of subsurface soil sampling, drilling equipment was decontaminated using a high pressure steam cleaner.

During subsurface soil sampling at the Building 1037 Laundry Waste Water Sump CC RVAAP-77, direct-push steel samplers were decontaminated as necessary using 5-gallon buckets, Alconox® wash and brushes, potable water rinse, pesticide grade isopropyl alcohol, a 10 percent nitric acid solution, and laboratory-supplied DI water contained in spray bottles. The decontamination area was set up on plastic sheeting off the eastern side of Building 1037. All decontamination fluids were containerized in a Department of Transportation-approved 55-gallon closed steel drum located within secondary containment inside Building 1036. The drum was labeled with contents, date of initial generation, and contact information.

All sampling equipment was decontaminated in accordance with the procedures outlined in Section 5.6.2.9 of the *Facility-Wide Sampling and Analysis Plan* (FWSAP) (SAIC 2011b).

4.3 FIELD SAMPLING

At CC RVAAP-77 Building 1037 Former Laundry Waste Water Sump, ISM soil samples were collected to determine whether contamination was present within the AOC. Between November 11 and December 3, 2012, both surface (0-1 ft bgs) and subsurface soil (1-4, 4-7, and 1-7 ft bgs) ISM samples were collected within DU01. One composite subsurface soil sample was also collected from 7 to 13 ft bgs at the AOC, as summarized in Table 4-1.

The subsurface soil samples were analyzed for explosive and propellant chemicals. The surface soil samples were analyzed for the RVAAP full suite, which includes the parameters summarized in Table 4-1 and listed below:

- Volatile organic compounds (VOCs)
- Semi-volatile organic compounds (SVOCs)
- Polychlorinated biphenyls (PCBs)
- Explosives
- Propellants
- Pesticides
- Target Analyte List (TAL) Metals.

Table 4-1 provides a summary of the soil samples collected between November and December 2012. Table 4-2 summarizes the sampling rationale for each sample collected at Building 1037 Laundry Waste Water Sump CC RVAAP-77.

1566 **Table 4-1: Summary of Samples Collected Between November and December 2012 at CC RVAAP-77**

Location	Decision Unit	Sample ID	Matrix	Depth (ft)	Date	Sampling Method	VOC	BTEX/MTBE	SVOC	TPH GRO	TPH DRO	TAL Metals	PCB	Pesticides	Herbicides	Explosives	Propellants
Surface Soil Analytical Program																	
Building 1037 Laundry Sump	DU01	077SS-0001M-0001-SO	SS	0-1	11-Nov-12	ISM	X		X			X	X	X		X	X
Building 1037 Laundry Sump	MS/MSD of 0001M	077SS-0001M-0002-SO	SS	0-1	11-Nov-12	ISM	X		X			X	X	X		X	X
Building 1037 Laundry Sump	Dup of 0001M	077SS-0002M-0001-SO	SS	0-1	11-Nov-12	ISM	X		X			X	X	X		X	X
Subsurface Soil Analytical Program																	
Building 1037 Laundry Sump	DU01 SB-01	077SB-0004M-0001-SO	SB	1-4	3-Dec-12	ISM										X	X
Building 1037 Laundry Sump	DU01 SB-01	077SB-0005M-0001-SO	SB	4-7	3-Dec-12	ISM										X	X
Building 1037 Laundry Sump	DU01 SB-01	077SB-0006M-0001-SO	SB	1-7	3-Dec-12	ISM										X	X
Building 1037 Laundry Sump	DU01 SB-02	077SB-0007M-0001-SO	SB	1-7	3-Dec-12	ISM										X	X
Building 1037 Laundry Sump	DU01 SB-03	077SB-0008M-0001-SO	SB	1-7	3-Dec-12	ISM										X	X
Building 1037 Laundry Sump	DU01 SB-04	077SB-0009M-0001-SO	SB	1-7	3-Dec-12	ISM										X	X
Building 1037 Laundry Sump	DU01 SB-05	077SB-0010M-0001-SO	SB	1-7	3-Dec-12	ISM										X	X
Building 1037 Laundry Sump	DU01 SB-02	077SB-0011-0001-SO	SB	7-13	3-Dec-12	Composite										X	X

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1568 **Table 4-1: Summary of Samples Collected Between November and December 2012 at CC RVAAP-77 (continued)**

Location	Decision Unit	Sample ID	Matrix	Depth (ft)	Date	Sampling Method	VOC	BTEX/MTBE	SVOC	TPH GRO	TPH DRO	TAL Metals	PCB	Pesticides	Herbicides	Explosives	Propellants
Field Quality Control – Trip Blanks																	
TB-1	TB	077SS-0003-0001-TB	QC	NA	11-Nov-12	NA	X										
TB-2	TB	072SB-0006-0001-TB	QC	NA	3-Dec-12	NA	X										
TB-3	TB	072SB-0020-0001-TB	QC	NA	3-Dec-12	NA	X										
QC TB-1	TB	070-0060-0001-TB	QC	SorW-1	12-Dec-12	NA	X										
QC TB-2	TB	070SB-005-0001-TB	QC	SorW-1	12-Dec-12	NA			X								
QC TB-3	TB	070-0060-0001-TB	QC	SorW-2	12-Dec-12	NA	X										
QC TB-4	TB	070SB-005-0001-TB	QC	SorW-2	12-Dec-12	NA			X								
QC TB-7	TB	076-0068-0001-TB	QC	ER-1	15-Nov-12	NA	X										
QC TB-8	TB	076-0141-0001-TB	QC	ER-2	9-Dec-12	NA	X		X								
QC TB-9	TB	076-0142-0001-TB	QC	ER-2	9-Dec-12	NA	X		X								
Field Quality Control - Source Water																	
SorW-1	SorW (ECC bottled decontamination water)	070-0057-0001-SorW	QC	Non-dedicated hand sampling tools	12-Dec-12	NA	X	X	X	X	X	X	X	X	X	X	X

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Table 4-1: Summary of Samples Collected in November and December 2012 at CC RVAAP-77 (continued)

Location	Decision Unit	Sample ID	Matrix	Depth (ft)	Date	Sampling Method	VOC	BTEX/MTBE	SVOC	TPH GRO	TPH DRO	TAL Metals	PCB	Pesticides	Herbicides	Explosives	Propellants
Field Quality Control - Source Water																	
SorW-2	SorW (Driller decontamination water)	070-0056-0001-SorW	QC	Direct-Push Tools	12-Dec-12	NA	X	X	X	X	X	X	X	X	X	X	X
Field Quality Control - Equipment Rinsate																	
ER-1	ER Blank	076-0067-0001-ER	QC	Non-dedicated hand sampling tools during sampling event	15-Nov-12	NA	X	X	X	X	X	X	X	X	X	X	X
ER-2	ER Blank	076-0140-0001-ER	QC	Non-dedicated hand sampling tools during sampling event	9-Dec-12	NA	X	X	X	X	X	X	X	X	X		X

Notes:

Field Duplicate Sample	Matrix Spike/Matrix Spike Duplicate Sample	RVAAP Full Suite Sample

VOC and TPH-GRO soil samples were collected as discrete samples.
Propellants include nitroguanidine, nitrocellulose, and nitroglycerin

BTEX = Benzene, toluene, ethylbenzene, and xylene
DRO = Diesel range organics
DU = Decision Unit
ECC = Environmental Chemical Corporation
ER = Equipment rinsate
FD = Field duplicate
ft = Feet
GRO = Gasoline range organics
ID = Identification
ISM = Incremental sampling methodology
MS = Matrix spike
MSD = Matrix spike duplicate
MTBE = Methyl tertiary butyl ether
NA = Not applicable
PCB = Polychlorinated biphenyl
QC = Quality control
SB = Soil boring
SorW = Source water
SS = Surface sample
SVOC = Semi-volatile organic compound
TAL = Target Analyte List
TB = Trip blank
TPH = Total petroleum hydrocarbons
VOC = Volatile organic compound

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Table 4-2: Summary of Soil Sampling Rationale, November and December 2012 at CC RVAAP-77

Sample Type	Depth (ft bgs)	Location (DU/SB)	Sample ID	Date Sampled	Rationale
ISM	0-1	DU01	077SS-0001M-0001-SO	11-Nov-12	Determine presence or absence of potential contamination in surface soil around the waste water sump location not previously sampled. Analyzed for Ravenna Army Ammunition Plant Full-suite analysis.
ISM	0-1	DU01	077SS-0001M-0002-SO	11-Nov-12	Quality Control. Matrix spike/matrix spike duplicate sample of 077SS-0001M-0001-SO.
ISM	0-1	DU01	077SS-0002M-0001-SO	11-Nov-12	Quality Control. Field duplicate sample of 077SS-0001M-0001-SO.
ISM	1-4	DU01	077SB-0004M-0002-SO	3-Dec-12	Determine presence or absence of potential contamination in soil around the waste water sump location not previously sampled.
ISM	4-7	DU01	077SB-0005M-0001-SO	3-Dec-12	Determine presence or absence of potential contamination in soil around the waste water sump location not previously sampled.
ISM	1-7	SB01	077SB-0006M-0001-SO	3-Dec-12	Determine presence or absence of potential contamination in soil around the waste water sump location not previously sampled.
ISM	1-7	SB02	077SB-0007M-0001-SO	3-Dec-12	Determine presence or absence of potential contamination in soil around the waste water sump location not previously sampled.
ISM	1-7	SB03	077SB-0008M-0001-SO	3-Dec-12	Determine presence or absence of potential contamination in soil around the waste water sump location not previously sampled.
ISM	1-7	SB04	077SB-0009M-0001-SO	3-Dec-12	Determine presence or absence of potential contamination in soil around the waste water sump location not previously sampled.
ISM	1-7	SB05	077SB-0010M-0001-SO	3-Dec-12	Determine presence or absence of potential contamination in soil around the waste water sump location not previously sampled.
Composite	7-13	SB02	077SB-0011M-0001-SO	3-Dec-12	Determine presence or absence of potential contamination in soil around the waste water sump location not previously sampled.
Grab	NA	NA	077SS-0003-0001-TB	11-Nov-12	Quality Control. Trip Blank.

Notes:

bgs = Below ground surface
DU = Decision Unit
ft = Feet
ID = Identification
ISM = Incremental sampling methodology
SB = Soil boring

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Samples collected during this SI at CC RVAAP-77 were analyzed at TestAmerica Laboratories, Inc. of North Canton, Ohio. Quality Control (QC) samples were also collected during this SI, as summarized in Tables 4-1 and 4-2.

All analytical procedures were completed in accordance with applicable professional standards, USEPA requirements, government regulations and guidelines, Department of Defense Quality Systems Manual Version 4.2, USACE–Louisville District analytical Quality Assurance (QA) standards, and specific project goals and requirements. Preparation and analyses for chemical parameters in field samples were completed using the methods listed in Table 4-3.

Table 4-3: Sample Preparation and Analytical Methods
November and December 2012, CC RVAAP-77

Parameter	Soil		Aqueous	
	Preparation	Method	Preparation	Method
Metals	SW-846 3050B	SW-846 6020	NA	NA
Mercury	SW-846 7471A	SW-846 7471A	NA	NA
Explosives	SW-846 8830B	SW-846 8330B	NA	NA
Propellants: - Nitrocellulose - Nitroguanidine	E353.2 Modified SW-846 8330 Modified	E353.2 Modified SW-846 8330 Modified	NA	NA
SVOCs and PAHs	SW-846 3540C	SW-846 8270C	NA	NA
VOCs	SW-846 5035	SW-846 8260B	SW-846 5030B	SW-846 8260B
Pesticides	SW-846 3540C	SW-846 8081A	NA	NA
PCBs	SW-846 3540C	SW-846 8082	NA	NA

Notes:
NA = Not applicable
PAH = Polycyclic aromatic hydrocarbon
PCB = Polychlorinated biphenyl
SVOC = Semi-volatile organic compound
VOC = Volatile organic compound

4.3.1 Surface Soil Incremental Soil Methodology Sampling

One surface soil ISM sample and a duplicate sample were collected at CC RVAAP-77. The surface soil samples (aliquots) were collected from 0 to 1 ft bgs using ISM methods as detailed in the Final SI/RI Work Plan (ECC 2012) in order to identify the presence of contamination in surface soil. Thirty individual soil aliquots were collected to comprise the ISM sample. The surface soil samples were collected using an AMS® Soil Probe which is a 40-inch one-piece soil step probe with a "T" handle attached to the top that collects a soil core sample that is approximately 12 inches in length. The sampler was advanced to 1 ft bgs and then withdrawn. The soil core from the step probe was then transferred into the appropriate sample container. VOC soil samples were collected as discrete soil samples from the center of the DU.

4.3.2 Horizontal Incremental Soil Methodology Soil Sampling

Two horizontal subsurface soil ISM samples were collected. The ISM subsurface soil sample was comprised from five soil borings advanced in the DU. At least 30 aliquots of soil were collected from each sample interval from each soil boring to generate the minimum 1 kilogram of soil for the ISM sample. The first ISM subsurface horizontal soil sample was collected from 1 to 4 ft bgs, and the second from 4 to 7 ft bgs.

Subsurface soil samples were collected using a Geoprobe® Model 6620DT direct-push drill rig. The procedures for hydraulic direct-push sampling were performed in accordance with Section 5.5.2.5.3 of the FWSAP (SAIC 2011b). Samples were collected using 5-ft long stainless steel sampling rods lined with acetate Macro-core® samplers. Each sample was collected using a dedicated liner specific for that interval. The 5-ft stainless steel sampler was advanced twice at each boring location to reach the depth of 7 ft bgs (and three times at one boring location to reach the depth of 13 ft bgs, as described below). The sampler was then retrieved from the desired depth and the liner removed. The liner was cut open length-wise and the soil was immediately field-screened with a photoionization detector. Samples for headspace field screening were collected at 2-ft intervals along the entire sampler using stainless steel scoopulas and placed in 8-ounce glass jars. The jars were then capped with aluminum foil and a plastic lid and allowed to warm for approximately 10 minutes. The tip of the photoionization detector was then inserted into the jar through the aluminum foil and the reading recorded on the boring log.

The liner containing the soil was photographed and soil characteristics for each interval were recorded on a soil boring log. A summary of sampling information was recorded on the field log forms. Field log forms and boring logs from the site investigation are presented in Appendices B and C, respectively. Photographs are presented in Appendix H.

4.3.2.1 Vertical Incremental Soil Methodology Soil Sampling

Five vertical ISM samples were collected from five borings (SB1 through SB5) at CC RVAAP-77. Vertical ISM samples were collected from 1 to 7 ft bgs. The 5-ft stainless steel sampler was advanced twice at each boring location to reach the final depth of 7 ft. A sample consisting of 30 aliquots of soil was collected by cutting open the acetate liner length-wise and running a stainless steel scoopula along the length of the sample from 1 to 5 ft and from 5 to 7 ft to collect a representative ISM vertical sample from that boring.

4.3.3 Deep Soil Boring Sampling

One soil boring (referred to as the DSB) was advanced at CC RVAAP-77 in order to characterize the soil to a depth of 13 ft bgs. The boring was advanced to a depth of 13 ft bgs and a sample

was collected from the 7- to 13-ft bgs interval. Soil was collected by running a stainless steel scoopula along the length of the liner from 7 to 10 ft and from 10 to 13 ft. The soil was then mixed with a stainless steel spoon in a stainless steel bowl to collect a representative composite sample. These samples were collected in accordance with sampling procedures as described in Section 5.5.2.5.1 in the FWSAP (SAIC 2011b) and as presented in Appendix A, Section A.4 of the *Final SI/RI Work Plan* (ECC 2012). The DSB sample was collected from soil boring SB2 within DU01.

4.4 DEVIATIONS FROM WORK PLAN

The one deviation from the Final SI/RI Work Plan (ECC 2012) for fieldwork conducted at CC RVAAP-77 is described below:

- No sediment samples were collected at CC RVAAP-77. A discrete sediment sample was originally proposed for collection from the bottom of the manhole adjacent to DU01. However, when the manhole cover was removed on November 11, 2012, no sediment was observed at the bottom of the manhole. It was also noted during this inspection that the drainage pipe from the former laundry sump to the manhole was sealed with concrete. See Appendix H for photographs of the interior of this manhole.

4.5 SURVEYING

ECC subcontracted the surveying of the soil boring locations at CC RVAAP-77 to Campbell and Associates, Inc., Cuyahoga Falls, Ohio, a licensed surveyor in the state of Ohio. All survey data were reported in North American Datum 1983 Universal Transverse Mercator Zone 17 North in meters.

4.6 INVESTIGATION-DERIVED WASTE

IDW consisted of soil cuttings from subsurface soil sampling; personal protective equipment; used, empty acetate liners; used TerraCore® samplers; and general non-environmental trash. The soil cuttings were primarily collected in plastic garbage liners placed inside 5-gallon buckets.

Additional soil materials were collected on clear 6-millimeter thick plastic sheeting placed on the ground at the end of the cutting table and below the two 5-gallon buckets used for collecting soil cuttings. A large garbage bag contained used nitrile gloves, used TerraCore® samplers, and cut-up pieces of acetate liners. A long-handled steel lopper was used to cut the acetate liners into 12 to 18-inch long pieces for disposal. Finally, a large garbage bag was used to collect general non-environmental waste. The buckets for soil cuttings were brought to Building 1036 and placed in appropriately labeled 55-gallon open-headed drums.

4.6.1 Collection and Containerization

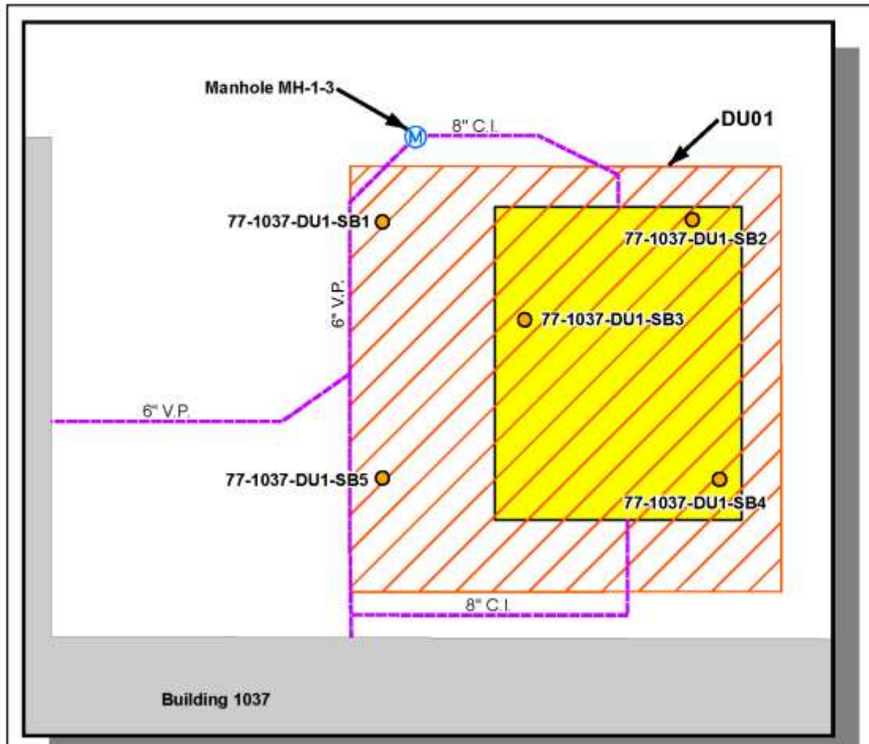
All IDW, including soil cuttings, personal protective equipment, disposable sampling equipment, and decontamination fluids, was properly handled, labeled, characterized, and managed in accordance with Section 8.0 of the FWSAP (SAIC 2011b), federal and state of Ohio large quantity generator requirements, and the former RVAAP's Installation Hazardous Waste Management Plan (Army Base Realignment and Closure Office 2009).

4.6.2 Characterization for Disposal

IDW disposal characterization samples were collected by ECC personnel on December 12, 2012. Samples were comprised of liquid IDW consisting of decontamination fluids, and solid IDW consisting of drill cuttings. IDW analysis included both liquid and solid full Toxicity Characteristic Leaching Procedure, and Reactivity, Corrosivity, and Ignitability analyses.

4.6.3 Transportation and Disposal

On March 15, 2013, the Ohio EPA approved the IDW letter report for the transport and disposal of the accumulated IDW as a result of executed SI tasks. The Ohio EPA approval letter for the IDW is provided in Appendix G. On April 5, 2013, the drummed IDW was transported under a non-hazardous waste manifest by Emerald Environmental Services, Inc. for disposal at Vexor Technology in Medina, Ohio. The manifest is provided in Appendix G.





Manhole MH-1-3 and Laundry Sump



Excavation of Laundry Sump

Laundry Sump Prior to Excavation

LEGEND

- Manhole (MH-1-3)
- Direct-Push Sampling Location
- Piping
- Building 1037
- Former Laundry Sump (208 sq ft)
- Decision Unit (478 sq ft)

NOTES & SOURCES

1. Map Coordinates: NAD 83, UTM Zone 17N
2. CC = Army Environmental Compliance-Related Cleanup Program
3. RVAAP = Ravenna Army Ammunition Plant
4. Surface soil incremental sampling methodology (ISM) sampling was performed at the decision unit (DU) from 0 to 1 feet below ground surface (ft bgs).
5. Horizontal subsurface soil ISM sampling was performed at all direct-push locations from 1 to 4 ft bgs and from 4 to 7 ft bgs.
6. Vertical subsurface soil ISM sampling was performed at all direct-push locations from 1 to 7 ft bgs.
7. A composite sample was also taken at location 77-1037-DU1-SB2 from 7 to 13 ft bgs.
8. Site photographs taken from Final Project Completion Report: Disposal of Discarded Munitions Debris & Components; Demolition of RVAAP- 35 Building 1037 – Laundry Waste Water Sump and Laundry Flame Proofing Building; and Evaluation and Recommendations for Closure of Clean-Hard Fill Sites (PIKA, 2010)
9. sq ft = square feet; C.I. = cast iron (8-inch pipe)
10. V.P. = vitrified pipe (6-inch pipe)

TITLE

Figure 4-1

Soil Boring Locations
CC RVAAP-77

CC RVAAP-77
Building 1037
Laundry Waste Water Sump

Former Ravenna Army Ammunition Plant
Portage and Trumbull Counties, Ohio

0 5 10 Feet

N

ECC
Marlborough, Massachusetts

NO.
4-1

GIS Server
F:\Projects\Ravenna\MapDocuments\SI_RPT\CC77\
977_Fig4-1_Bldg1037_SampLocNEW.mxd
October 2014 DWN BY: CG CHKD BY: GC

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5.0 DATA EVALUATION AND SUMMARY OF ANALYTICAL RESULTS

This section summarizes the analytical sampling results for CC RVAAP-77 Building 1037 Laundry Waste Water Sump. The laboratory analytical data for this SI are provided in Appendix E.

5.1 DATA EVALUATION

The data collected during this SI were verified and validated in accordance with the procedures outlined in the FWSAP (SAIC 2011b). The processes used to evaluate the analytical data are described in this section. The completed data verification report is included in Appendix D and the data validation report (to be provided by USACE–Louisville District) is included as Appendix F of this SI report. Non-detect data were reported as not detected in the summary of analytical results tables included in Section 5 and at the Limit of Detection (LOD) in Appendix D and Appendix E.

5.1.1 Soil Sampling Intervals

The soil sampling intervals defined for this SI are as follows:

- Surface Soil (0-1 ft bgs)*
- Subsurface Soil Horizontal Profile (1-4 and 4-7 ft bgs)
- Soil Boring Vertical Profile (1-7 ft bgs)
- DSB (7-13 ft bgs).

*= One surface soil sample (and a duplicate sample) were collected during this SI to verify the absence of surface soil contamination and as part of the QA/QC sampling for full suite analysis.

5.1.2 Data Verification, Validation, and Determination of Potential Contamination

5.1.2.1 Data Verification and Validation

Data verification was performed on the surface and subsurface soil samples. The analytical results were reported by the laboratory in accordance with the FWSAP (SAIC 2010).

Data qualifiers were assigned to each result based on the laboratory (i.e., TestAmerica of North Canton, Ohio) QA review and verification criteria. The SI analytical results were qualified as follows:

- "U" is not detected

- "UJ" is not detected and the reporting limit is an estimated value

- "J" denotes that the analyte was positively identified, but the associated numerical value is an approximate concentration of the analyte in the sample

- "R" indicates that the result is not usable.

In addition to assigning qualifiers, the verification process also selected the appropriate result to use when re-analyses or dilutions were performed. Where laboratory surrogate recovery data or laboratory QC samples were outside of analytical method specifications, the verification chemist determined whether or not laboratory re-analysis should be used in place of an original reported result. If the laboratory reported results for both diluted and undiluted samples, diluted sample results were used for those analytes that exceeded the calibration range of the undiluted sample. A complete discussion of verification process results is contained in the Data Verification Report (Appendix D).

A data validation report was completed for all six CR sites where ECC conducted site inspections. The *Final Data Validation Report for Compliance Restoration Sites: RVAAP-70 East Classification Yard, RVAAP-71 Barn No. 5 Petroleum Release, RVAAP-72 Facility-Wide USTs, RVAAP-75 George Road Sewer Treatment Plan Mercury Spill, RVAAP-77 Building 1037 Laundry Waste Water Sump and RVAAP-83 Former Buildings 1031 and 1039* was issued by North Wind Services and MEC^{x} in August 2014. The report is provided in Appendix F. In general, the data validation performed for the CC RVAAP-77 SI indicates that no false negatives or false positives were identified, and the results are usable for their intended purposes. Two SVOCs (n-Nitrosodiphenylamine and benzoic acid) were rejected in one sample (i.e., 77 077SS-0001M-0001-SO). These compounds are not site-related chemicals.

5.1.2.2 Determination of Potential Contamination

This section provides an outline of the process used to determine if potential contamination is present at this AOC. Per the *Facility-Wide Human Health Risk Assessment Manual* (USACE 2005), a chemical detected at a concentration greater than the established background value, which is not an essential nutrient, or screened out through a frequency of detection evaluation is identified as an SRC. An SRC may, or may not, be related to the former operations at the site. The maximum detected concentration of each SRC is then compared to the most stringent FWCUGs for the Resident Receptor between the adult and child using the Target Cancer Risk (TCR) level of 10^{-6} or the Target Hazard Quotient (THQ) of 0.1 for each SRC, as outlined in the *Final Facility-Wide Human Health Cleanup Goals for RVAAP* (SAIC 2010). Both risk levels (carcinogenic and non-carcinogenic) were assessed for the Resident Receptor (adult and child) to determine which one was the most stringent for comparison to each SRC. The specific criteria used to identify SRCs are described below:

- **Background screening**: The maximum detected concentrations of inorganic chemicals were compared to the RVAAP background concentrations, where established. If exceedances of background concentrations occurred, the respective inorganic chemicals were identified as SRCs. Several inorganic chemicals were screened against a background concentration of 0 milligrams per kilogram (mg/kg) (e.g., cadmium, silver). A value of 0 mg/kg was assigned as background when the chemical was not detected in any of the samples collected during the background study.

- **Screening of essential human nutrients:** Chemicals that are essential nutrients (e.g., calcium, chloride, iodine, iron, magnesium, potassium, phosphorous, and sodium) are an integral part of the human food supply and often added to foods as supplements. The USEPA recommends these chemicals not be evaluated unless they are grossly elevated relative to background concentrations or would exhibit toxicity at the observed concentrations (USEPA 1989).

- **Frequency of detection/Weight-of-evidence**: A frequency of detection evaluation was not completed as part of the WOE since less than 20 soil samples were collected during this investigation. Therefore, frequency of detection was not used to further screen the identified SRCs as part of this SI. The SRCs that exceeded the most stringent Resident Receptor FWCUGs using the TCR level of 10^{-6} or THQ = 0.1 for non-carcinogenic risks were then evaluated using a WOE approach. Chemicals not detected were eliminated as SRCs. For chemicals with at least 20 samples and a frequency of detection of less than 5 percent, a WOE approach is used to determine if the chemical is AOC-related. A WOE evaluation considers the SRCs that exceeded their FWCUGs, as described above, to determine if the chemical should be identified as potential contamination. If the results of the WOE evaluation indicated that potential contamination was present, then an additional investigation, such as an RI, is recommended. However, if no potential contamination was identified, then No Further Action (NFA) is recommended.

If no FWCUG has been developed for the particular chemical, then the USEPA's Regional Screening Levels (RSLs) (USEPA 2014) for the Residential Receptor were used for comparison using the same TCR of 10^{-6} and THQ of 0.1. The National Guard Trainee FWCUGs and the EPA Industrial RSLs (May 2014) are provided on the data summary tables in this section for comparison purposes only and were not used to determine whether or not chemicals were identified as potential contamination. If potential contamination is identified in this SI, it indicates that further investigation under CERCLA, in the form of an RI, is warranted at this AOC.

Tables 5-1 and 5-2 provide a summary of the SRCs identified in the surface and subsurface soil at CC RVAAP-77, respectively. The complete laboratory analytical data packages, including laboratory analytical results tables with final qualifiers, are included in Appendix E.

1904 **Table 5-1: Site-Related Chemical Determination for Surface Soil Results, November and December 2012, CC RVAAP-77**

Analytes	CAS Number	Frequency of Detect	Minimum Detect	Maximum Detect	Background Criteria[(a)]	SRC (yes/no)	SRC Justification
Volatile Organic Compounds (µg/kg)							
1,1,1-Trichloroethane	71-55-6	0/2	None	None	None	No	Not detected
1,1,2,2-Tetrachloroethane	79-34-5	0/2	None	None	None	No	Not detected
1,1,2-Trichloroethane	79-00-5	0/2	None	None	None	No	Not detected
1,1-Dichloroethane	159-59-2	0/2	None	None	None	No	Not detected
1,1-Dichloroethene	75-35-4	0/2	None	None	None	No	Not detected
1,2-Dibromoethane (EDB)	106-93-4	0/2	None	None	None	No	Not detected
1,2-Dichloroethane	107-06-2	0/2	None	None	None	No	Not detected
1,2-Dichloroethene	156-60-5	0/2	None	None	None	No	Not detected
1,2-Dichloropropane	78-87-5	0/2	None	None	None	No	Not detected
2-Butanone (MEK)	71-55-6	0/2	None	None	None	No	Not detected
2-Hexanone	591-78-6	0/2	None	None	None	No	Not detected
4-Methyl-2-Pentanone	**108-10-1**	**1/2**	**0.9**	**0.9**	**None**	**Yes**	**Detected organic**
Acetone	67-64-1	0/2	None	None	None	No	Not detected
Benzene	71-43-2	0/2	None	None	None	No	Not detected
Bromochloromethane	74-97-5	0/2	None	None	None	No	Not detected
Bromodichloromethane	75-27-4	0/2	None	None	None	No	Not detected
Bromoform	75-25-2	0/2	None	None	None	No	Not detected
Bromomethane	74-83-9	0/2	None	None	None	No	Not detected
Carbon Disulfide	75-15-0	0/2	None	None	None	No	Not detected
Carbon Tetrachloride	56-23-5	0/2	None	None	None	No	Not detected
Chlorobenzene	108-90-7	0/2	None	None	None	No	Not detected
Chloroethane	75-00-3	0/2	None	None	None	No	Not detected
Chloroform	67-66-3	0/2	None	None	None	No	Not detected
Chloromethane	74-87-3	0/2	None	None	None	No	Not detected
cis-1,3-Dichloropropene	10061-01-5	0/2	None	None	None	No	Not detected
Dibromochloromethane	124-48-1	0/2	None	None	None	No	Not detected
Ethylbenzene	100-41-4	0/2	None	None	None	No	Not detected
Methylene Chloride	75-09-2	0/2	None	None	None	No	Not detected
Styrene	100-42-5	0/2	None	None	None	No	Not detected
tert-Butyl Methyl Ether	1634-04-4	0/2	None	None	None	No	Not detected
Tetrachloroethene (PCE)	127-18-4	0/2	None	None	None	No	Not detected
Toluene	108-88-3	0/2	None	None	None	No	Not detected

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Table 5-1: Site-Related Chemical Determination for Surface Soil Results, November and December 2012, CC RVAAP-77 (continued)

Analytes	CAS Number	Frequency of Detect	Minimum Detect	Maximum Detect	Background Criteria[a]	SRC (yes/no)	SRC Justification
Volatile Organic Compounds (µg/kg)							
trans-1,3-Dichloropropene	10061-02-6	0/2	None	None	None	No	Not detected
Trichloroethene (TCE)	79-01-6	0/2	None	None	None	No	Not detected
Vinyl Chloride	75-01-4	0/2	None	None	None	No	Not detected
Xylenes, Total	1330-20-7	0/2	None	None	None	No	Not detected
Semi-volatile Organic Compounds (µg/kg)							
1,2,4-Trichlorobenzene	120-82-1	0/2	None	None	None	No	Not detected
1,2-Dichlorobenzene	95-50-1	0/2	None	None	None	No	Not detected
1,3-Dichlorobenzene	541-73-1	0/2	None	None	None	No	Not detected
1,4-Dichlorobenzene	106-46-7	0/2	None	None	None	No	Not detected
2,4,5-Trichlorophenol	95-95-4	0/2	None	None	None	No	Not detected
2,4,6-Trichlorophenol	88-06-2	0/2	None	None	None	No	Not detected
2,4-Dichlorophenol	120-83-2	0/2	None	None	None	No	Not detected
2,4-Dimethylphenol	105-67-9	0/2	None	None	None	No	Not detected
2,4-Dinitrophenol	51-28-5	0/2	None	None	None	No	Not detected
2,4-Dinitrotoluene	121-14-2	0/2	None	None	None	No	Not detected
2,6-Dinitrotoluene	606-20-2	0/2	None	None	None	No	Not detected
2-Chloronaphthalene	91-58-7	0/2	None	None	None	No	Not detected
2-Chlorophenol	95-57-8	0/2	None	None	None	No	Not detected
2-Methylnaphthalene	**95-48-7**	**2/2**	**54**	**60**	**None**	**Yes**	**Detected organic**
2-Methylphenol (o-Cresol)	202-437-8	0/2	None	None	None	No	Not detected
2-Nitroaniline	88-74-4	0/2	None	None	None	No	Not detected
2-Nitrophenol	88-75-5	0/2	None	None	None	No	Not detected
3,3'-Dichlorobenzidine	91-94-1	0/2	None	None	None	No	Not detected
3-Nitroaniline	99-09-2	0/2	None	None	None	No	Not detected
4,6-Dinitro-2-Methylphenol	534-52-1	0/2	None	None	None	No	Not detected
4-Bromophenyl phenyl ether	101-55-3	0/2	None	None	None	No	Not detected
4-Chloro-3-Methylphenol	59-50-7	0/2	None	None	None	No	Not detected
4-Chloroaniline	106-47-8	0/2	None	None	None	No	Not detected
4-Chlorophenyl Phenyl Ether	7005-72-3	0/2	None	None	None	No	Not detected
4-Nitroaniline	202-437-8	0/2	None	None	None	No	Not detected
4-Nitrophenol	88-74-4	0/2	None	None	None	No	Not detected
Acenaphthene	83-32-9	0/2	None	None	None	No	Not detected

Table 5-1: Site-Related Chemical Determination for Surface Soil Results, November and December 2012, CC RVAAP-77 (continued)

Analytes	CAS Number	Frequency of Detect	Minimum Detect	Maximum Detect	Background Criteria[(a)]	SRC (yes/no)	SRC Justification
Semi-volatile Organic Compounds (µg/kg)							
Acenaphthylene	208-96-8	0/2	None	None	None	No	Not detected
Anthracene	**120-12-7**	**1/2**	**11**	**11**	**None**	**Yes**	**Detected organic**
Benzo(a)anthracene	**56-55-3**	**2/2**	**48**	**57**	**None**	**Yes**	**Detected organic**
Benzo(a)pyrene	**50-32-8**	**2/2**	**65**	**88**	**None**	**Yes**	**Detected organic**
Benzo(b)fluoranthene	**205-99-2**	**2/2**	**81**	**91**	**None**	**Yes**	**Detected organic**
Benzo(g,h,i)perylene	**191-24-2**	**2/2**	**37**	**47**	**None**	**Yes**	**Detected organic**
Benzo(k)fluoranthene	**207-08-9**	**2/2**	**17**	**18**	**None**	**Yes**	**Detected organic**
Benzoic acid	65-85-0	0/2	None	None	None	No	Not detected
Benzyl alcohol	100-51-6	0/2	None	None	None	No	Not detected
Benzyl butyl phthalate	85-68-7	0/2	None	None	None	No	Not detected
bis(2-Chloroethoxy) Methane	111-91-1	0/2	None	None	None	No	Not detected
bis(2-Chloroethyl) Ether (2-Chloroethyl Ether)	111-44-4	0/2	None	None	None	No	Not detected
bis(2-Chloroisopropyl) Ether	108-60-1	0/2	None	None	None	No	Not detected
bis(2-Ethylhexyl) Phthalate	117-81-7	0/2	None	None	None	No	Not detected
Carbazole	86-74-8	0/2	None	None	None	No	Not detected
Chrysene	**218-01-9**	**2/2**	**57**	**66**	**None**	**Yes**	**Detected organic**
Cresols, m & p	8001-28-3	0/2	None	None	None	No	Not detected
Dibenz(a,h)anthracene	53-70-3	0/2	None	None	None	No	Not detected
Dibenzofuran	**132-64-9**	**2/2**	**14**	**14**	**None**	**Yes**	**Detected organic**
Diethyl Phthalate	84-66-2	0/2	None	None	None	No	Not detected
Dimethyl Phthalate	131-11-3	0/2	None	None	None	No	Not detected
Di-n-Butyl Phthalate	84-74-2	0/2	None	None	None	No	Not detected
Di-n-Octylphthalate	117-84-0	0/2	None	None	None	No	Not detected
Fluoranthene	**206-44-0**	**2/2**	**99**	**120**	**None**	**Yes**	**Detected organic**
Fluorene	**86-73-7**	**1/2**	**9.6**	**9.6**	**None**	**Yes**	**Detected organic**
Hexachlorobenzene	118-74-1	0/2	None	None	None	No	Not detected
Hexachlorobutadiene	87-68-3	0/2	None	None	None	No	Not detected
Hexachlorocyclopentadiene	77-47-4	0/2	None	None	None	No	Not detected
Hexachloroethane	67-72-1	0/2	None	None	None	No	Not detected
Indeno(1,2,3-c,d)Pyrene	**193-39-5**	**2/2**	**44**	**55**	**None**	**Yes**	**Detected organic**
Isophorone	78-59-1	0/2	None	None	None	No	Not detected

Table 5-1: Site-Related Chemical Determination for Surface Soil Results, November and December 2012, CC RVAAP-77 (continued)

Analytes	CAS Number	Frequency of Detect	Minimum Detect	Maximum Detect	Background Criteria[(a)]	SRC (yes/no)	SRC Justification
Semi-volatile Organic Compounds (µg/kg)							
Naphthalene	**91-20-3**	**2/2**	**44**	**54**	**None**	**Yes**	**Detected organic**
Nitrobenzene	98-95-3	0/2	None	None	None	No	Not detected
n-Nitrosodi-n-propylamine	621-64-7	0/2	None	None	None	No	Not detected
n-Nitrosodiphenylamine	86-30-6	0/2	None	None	None	No	Not detected
Pentachlorophenol	87-86-5	0/2	None	None	None	No	Not detected
Phenanthrene	**85-01-8**	**2/2**	**64**	**77**	**None**	**Yes**	**Detected organic**
Phenol	108-95-2	0/2	None	None	None	No	Not detected
Pyrene	**129-00-0**	**2/2**	**74**	**95**	**None**	**Yes**	**Detected organic**
Pesticides (µg/kg)							
Aldrin	309-00-2	0/2	None	None	None	No	Not detected
alpha-BHC (alpha-Hexachlorocyclohexane)	319-84-6	0/2	None	None	None	No	Not detected
alpha-Chlordane	959-98-8	0/2	None	None	None	No	Not detected
alpha-Endosulfan	5103-79-9	0/2	None	None	None	No	Not detected
beta-BHC (beta-Hexachlorocyclohexane)	319-85-7	0/2	None	None	None	No	Not detected
beta Endosulfan	33213-65-9	0/2	None	None	None	No	Not detected
delta-BHC (delta-Hexachlorocyclohexane)	319-86-8	0/2	None	None	None	No	Not detected
Dieldrin	60-57-1	0/2	None	None	None	No	Not detected
Endosulfan Sulfate	1031-07-8	0/2	None	None	None	No	Not detected
Endrin	72-20-8	0/2	None	None	None	No	Not detected
Endrin Aldehyde	7421-93-4	0/2	None	None	None	No	Not detected
Endrin Ketone	53494-70-5	0/2	None	None	None	No	Not detected
gamma-BHC (Lindane)	58-89-9	0/2	None	None	None	No	Not detected
gamma-Chlordane	5103-74-2	0/2	None	None	None	No	Not detected
Heptachlor	76-44-8	0/2	None	None	None	No	Not detected
Heptachlor Epoxide	1021-57-3	0/2	None	None	None	No	Not detected
Heptachlor Epoxide	1021-57-3	0/2	None	None	None	No	Not detected
Methoxychlor	72-43-5	0/2	None	None	None	No	Not detected
p,p'-DDD	72-54-8	0/2	None	None	None	No	Not detected
p,p'-DDE	**72-55-9**	**2/2**	**5.2**	**8.6**	**None**	**Yes**	**Detected organic**

Table 5-1: Site-Related Chemical Determination for Surface Soil Results, November and December 2012, CC RVAAP-77 (continued)

Analytes	CAS Number	Frequency of Detect	Minimum Detect	Maximum Detect	Background Criteria[(a)]	SRC (yes/no)	SRC Justification
Pesticides (µg/kg)							
p,p'-DDT	**50-29-3**	0/2	None	None	None	No	Not detected
Toxaphene	8001-35-2	0/2	None	None	None	No	Not detected
Polychlorinated Biphenyls (µg/kg)							
PCB-1016	12674-11-2	0/2	None	None	None	No	Not detected
PCB-1221	11104-28-2	0/2	None	None	None	No	Not detected
PCB-1232	11141-16-5	0/2	None	None	None	No	Not detected
PCB-1242	53469-21-9	0/2	None	None	None	No	Not detected
PCB-1248	12672-29-6	0/2	None	None	None	No	Not detected
PCB-1254	52663-62-4	0/2	None	None	None	No	Not detected
PCB-1260	11096-82-5	0/2	None	None	None	No	Not detected
Metals (mg/kg)							
Aluminum	7429-90-5	2/2	7,700	8,200	17,700	No	Less than background
Antimony	7440-36-0	2/2	0.17	0.2	0.96	No	Less than background
Arsenic	7440-38-2	2/2	12	14	15.4	No	Less than background
Barium	7440-39-3	2/2	48	49	88.4	No	Less than background
Beryllium	7440-41-7	2/2	0.42	0.46	0.88	No	Less than background
Cadmium	**7440-43-9**	**2/2**	**0.19**	**0.2**	**0**	**Yes**	**Exceeds background**
Calcium **	7440-70-2	2/2	4,500	5,200	15,800	No	Essential nutrient
Chromium	**7440-47-3**	**2/2**	**15**	**18**	**17.4**	**Yes**	**Exceeds background**
Cobalt	7440-48-4	2/2	7.4	7.7	10.4	No	Less than background
Copper	7440-50-8	2/2	16	17	17.7	No	Less than background
Iron	7439-89-6	2/2	20,000	22,000	23,100	No	Less than background
Lead	7439-92-1	2/2	21	22	26.1	No	Less than background
Magnesium **	7439-95-4	2/2	2,700	2,800	3,030	No	Essential nutrient
Manganese	7439-96-5	2/2	520	540	1,450	No	Less than background
Mercury	**7439-97-6**	**2/2**	**0.041**	**0.045**	**0.036**	**Yes**	**Exceeds background**
Nickel	**7440-02-0**	**2/2**	**24**	**28**	**21.1**	**Yes**	**Exceeds background**
Potassium **	7440-09-7	2/2	740	830	927	No	Essential nutrient
Selenium	7782-49-2	2/2	0.53	0.56	1.4	No	Less than background
Silver	**7440-22-4**	**2/2**	**0.027**	**0.03**	**0**	**Yes**	**Exceeds background**
Sodium **	7440-23-5	2/2	29	32	123	No	Essential nutrient
Thallium	**7440-28-0**	**2/2**	**0.13**	**0.14**	**0**	**Yes**	**Exceeds background**

Table 5-1: Site-Related Chemical Determination for Surface Soil Results, November and December 2012, CC RVAAP-77 (continued)

Analytes	CAS Number	Frequency of Detect	Minimum Detect	Maximum Detect	Background Criteria[(a)]	SRC (yes/no)	SRC Justification
Metals (mg/kg)							
Vanadium	7440-62-2	2/2	15	16	31.1	No	Less than background
Zinc	**7440-66-6**	**2/2**	**62**	**63**	**61.8**	**Yes**	**Exceeds background**
Explosives (mg/kg)							
1,3,5-Trinitrobenzene	99-35-4	0/2	None	None	None	No	Not detected
1,3-Dinitrobenzene	99-65-0	0/2	None	None	None	No	Not detected
2,4,6-Trinitrotoluene	118-96-7	0/2	None	None	None	No	Not detected
2,4-Dinitrotoluene	121-14-2	0/2	None	None	None	No	Not detected
2,6-Dinitrotoluene	606-20-2	0/2	None	None	None	No	Not detected
2-Amino-4,6-dinitrotoluene	35572-78-2	0/2	None	None	None	No	Not detected
2-Nitrotoluene	88-72-2	0/2	None	None	None	No	Not detected
3-Nitrotoluene	99-08-1	0/2	None	None	None	No	Not detected
4-Amino-2,6-Dinitrotoluene	19406-51-0	0/2	None	None	None	No	Not detected
4-Nitrotoluene	99-99-0	0/2	None	None	None	No	Not detected
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	0/2	None	None	None	No	Not detected
Nitrobenzene	98-95-3	0/2	None	None	None	No	Not detected
Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine (HMX)	2691-41-0	0/2	None	None	None	No	Not detected
Pentaerythritol Tetranitrate	78-11-5	0/2	None	None	None	No	Not detected
Tetryl	**55-63-0**	**1/2**	**0.028**	**0.028**	**None**	**Yes**	**Detected organic**
Propellants (mg/kg)							
Nitrocellulose	9004-70-0	0/2	0	0	None	No	Not detected
Nitroglycerin	**479-45-8**	**1/2**	**0.083**	**0.083**	**None**	**Yes**	**Detected organic**
Nitroguanidine	**556-887-0**	**1/2**	**0.055**	**0.055**	**None**	**Yes**	**Detected organic**

Notes:

(a) The background concentrations for metals shown in this table were obtained from two sources: (1) The *Final Facility-Wide Human Health Cleanup Goals for the Ravenna Army Ammunition Plant* (SAIC 2010), and (2) *Final Phase II Remedial Investigation Report for Winklepeck Burning Grounds at Ravenna Army Ammunition Plant, Ravenna, Ohio* (SAIC 2001).

Bold indicates analyte identified as an SRC.
** Asterisk denotes the chemical is an essential nutrient.
µg/kg = Microgram per kilogram
BHC = Hexachlorocyclohexane
CAS = Chemical abstract number
DDD = p,p'-Dichlorodiphenyldichloroethane
DDE = p,p'-Dichlorodiphenyldichloroethylene
DDT = 1,1,1-trichloro-2,2-di(4-chlorophenyl)ethane
TCE = Trichloroethene
mg/kg = Milligram per kilogram
PCB = Polychlorinated biphenyl
SRC = Site-related chemical
SVOC = Semi-volatile organic compound
VOC = Volatile organic compound

Table 5-2: Site-Related Chemical Determination for Subsurface Soil Results, November and December 2012, CC RVAAP-77

Analytes	CAS Number	Frequency of Detect	Minimum Detect	Maximum Detect	Background Criteria	SRC (yes/no)	SRC Justification
Explosives (mg/kg)							
1,3,5-Trinitrobenzene	99-35-4	0/8	None	None	None	No	Not detected
1,3-Dinitrobenzene	99-65-0	0/8	None	None	None	No	Not detected
2,4,6-Trinitrotoluene	118-96-7	0/8	None	None	None	No	Not detected
2,4-Dinitrotoluene	121-14-2	0/8	None	None	None	No	Not detected
2,6-Dinitrotoluene	606-20-2	0/8	None	None	None	No	Not detected
2-Amino-4,6-dinitrotoluene	35572-78-2	0/8	None	None	None	No	Not detected
2-Nitrotoluene	88-72-2	0/8	None	None	None	No	Not detected
3-Nitrotoluene	99-08-1	0/8	None	None	None	No	Not detected
4-Amino-2,6-Dinitrotoluene	19406-51-0	0/8	None	None	None	No	Not detected
4-Nitrotoluene	99-99-0	0/8	None	None	None	No	Not detected
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	99-35-4	0/8	None	None	None	No	Not detected
Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine (HMX)	2691-41-0	0/8	None	None	None	No	Not detected
Pentaerythritol Tetranitrate	78-11-5	0/8	None	None	None	No	Not detected
Tetryl	479-45-8	0/8	None	None	None	No	Not detected
Propellants (mg/kg)							
Nitrocellulose	9004-70-0	0/8	None	None	None	No	Not detected
Nitroglycerin	55-63-0	0/8	None	None	None	No	Not detected
Nitroguanidine	556-88-7	0/8	None	None	None	No	Not detected

Notes:

Bold indicates analyte identified as an SRC.
CAS = Chemical abstract number
mg/kg = Milligram per kilogram
SRC = Site-related chemical

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5.2 SUMMARY OF SURFACE SOIL ANALYTICAL RESULTS

CC RVAAP-77 surface soil sampling data were evaluated to identify the SRCs at the AOC. One surface soil sample and a duplicate sample were collected from decision unit DU01 in order to verify absence of surface soil contamination and as part of the QA/QC sampling for full suite analysis. As noted previously, the water level in the waste water sump was approximately 4 ft bgs (due to the elevation of the discharge pipe to the sanitary sewer); therefore, any contamination released from the waste water sump would have entered into surrounding subsurface soil below this depth.

The surface soil ISM samples were analyzed for the RVAAP full-suite analytes, including VOCs, SVOCs, PCBs, pesticides, explosives, propellants, and TAL metals. Table 5-1 presents the determination of SRCs in the surface soil at CC RVAAP-77. The identified SRCs in surface soil are shown in Figures 5-1 and 5-2, for organic and inorganic chemicals, respectively.

The following organic and inorganic SRCs have been identified in the surface soil at CC RVAAP-77:

- One VOC (4-methyl-2-pentanone [MIBK]); however, this compound may be a laboratory contaminant.

- Fifteen SVOCs, primarily PAH compounds, were identified as SRCs as these chemicals were detected at low or estimated concentrations in the surface soil ISM sample. No background criteria have been established for these SVOCs.

- One pesticide (p,p′-dichlorodiphenyldichloroethylene [p,p′-DDE]).

- Seven metals (cadmium, chromium, mercury, nickel, silver, thallium, and zinc).

- One explosive (tetryl) and two propellants (nitroglycerin and nitroguanidine) were identified as SRCs.

The analytical results from the surface soil ISM samples are summarized by chemical group in the sections below. Tables 5-3 and 5-4 provide summaries of the analytical results for organic and inorganic chemicals detected in surface soil at CC RVAAP-77, respectively. The organic and inorganic chemicals reported in the surface soil samples are shown in Figures 5-1 and 5-2, respectively.

5.2.1 Volatile Organic Compounds

No VOCs (other than MIBK) were reported in the ISM surface soil samples. The reported MIBK concentration does not exceed the EPA residential RSL. This chemical is not a potential contaminant as the MIBK is not associated with potential releases from this AOC. VOCs were not identified as potential contaminants at this AOC.

5.2.2 Semi-Volatile Organic Compounds

Benzo(a)pyrene was reported at a concentration (88 micrograms per kilogram [µg/kg]) exceeding the Resident Receptor FWCUG of 22 µg/kg in the one surface soil sample. The one reported exceedance of benzo(a)pyrene at sample location 077SS-0001M-0001-SO is not associated with the laundry building waste water sump, but is suspected to be associated with both non-point sources and point sources nearby this AOC. Non-point sources include overland drainage from nearby asphalt roadways, as benzo(a)pyrene is a chemical used in the production of asphalt and railroad ties, and is released to the environment through various mechanisms and pathways, such as leaching from roadways and through motor vehicle exhaust. Surface water runoff from roadways and railroad ties is a common source of PAH compounds detected in surface soil (Kohler et. al. 2000 and USEPA 2013). There are two asphalt paved parking areas associated with Building 1037 located 30 ft southeast and west of DU01 at CC RVAAP-77. Benzo(a)pyrene is also a byproduct of incomplete combustion or burning of organic material, such as wood, gasoline, and coal (USEPA 2007), and is released to the air pathway through emissions from coal, oil, and wood burning furnaces, incinerators.

Therefore, benzo(a)pyrene is not a potential contaminant at this AOC, as the chemical is not related to the historical activities conducted at the former laundry building and can be attributed to several other potential sources of PAH compounds located adjacent to the site.

5.2.3 Pesticides and Polychlorinated Biphenyls

One pesticide, p,p′ DDE, was reported at a low estimated concentration (5.2 J µg/kg) in the primary sample. However, no pesticides or PCBs were reported at concentrations exceeding the most stringent Resident Receptor FWCUGs. Therefore, pesticides and PCBs are not potential contaminants at this AOC.

5.2.4 Explosives and Propellants

One explosive and two propellants were detected in the surface soil ISM samples, but the reported concentrations did not exceed their respective most stringent Resident Receptor FWCUG. Therefore, explosives and propellants are not potential contaminants in the surface soil at this AOC.

5.2.5 Target Analyte List Metals

Metals (cadmium, chromium, mercury, nickel, silver, thallium, and zinc) were reported in ISM surface soil samples at concentrations that slightly exceed their respective background values. However, none of these reported metal concentrations exceeded their respective, most stringent, Resident Receptor FWCUG. Therefore, metals are not potential contaminants at this AOC.

5.3 SUMMARY OF HORIZONTAL SUBSURFACE SOIL ANALYTICAL RESULTS

CC RVAAP-77 subsurface soil sampling data were evaluated to identify the SRCs at the AOC. The subsurface samples were analyzed for only explosive and propellant chemicals. No SRCs were identified in the two horizontal ISM subsurface soil samples collected at DU01. Table 5-2 presents the SRCs determination in subsurface soil at CC RVAAP-77.

Table 5-5 provides a summary of analytical results for the horizontal subsurface soil ISM samples collected at CC RVAAP-77.

- There were no detected concentrations of explosive or propellant chemicals reported in the horizontal subsurface samples.

- Therefore, no potential contaminants were identified in the horizontal subsurface soil samples at this AOC.

5.4 SUMMARY OF VERTICAL SUBSURFACE SOIL ANALYTICAL RESULTS

Five vertical ISM subsurface soil samples were collected at DU01 as part of this SI. These samples were analyzed for explosive and propellant chemicals. No SRCs were identified in the vertical subsurface soil at this AOC. Table 5-2 presents the SRC determination for the subsurface soil ISM samples collected at CC RVAAP-77.

Table 5-5 provides a summary of analytical results for organic compounds detected in subsurface soil collected at CC RVAAP-77.

- Explosive and propellant chemicals were not detected in the vertical subsurface soil ISM samples.

- Therefore, no potential contaminants were identified in the vertical subsurface soil samples at this AOC.

5.5 SUMMARY OF DEEP SOIL BORING SAMPLE ANALYTICAL RESULTS

One composite subsurface soil sample was collected between 7 and 13 ft bgs at soil boring SB02 and analyzed for explosive and propellant chemicals. No SRCs were identified in the DSB subsurface soil sample at this AOC. Table 5-2 provides the SRC determination for the subsurface soil samples collected at CC RVAAP-77. Table 5-5 provides a summary of analytical results from the DSB sample collected at this AOC.

- Explosive and propellant chemicals were not detected in the DSB subsurface soil sample.

- Therefore, no potential contaminants were identified in the DSB subsurface soil sample collected at this AOC.

5.6 INVESTIGATION-DERIVED WASTE ANALYTICAL RESULTS

A description of the IDW steams generated during this SI, along with the Toxicity Characteristic Leaching Procedure waste characterization analysis results and disposal recommendations, are provided in the IDW Letter Report (Appendix G).

Table 5-3: Summary of Analytical Results for Organic Chemicals Detected in Surface Soil Samples Collected November and December 2012, CC RVAAP-77

						Sample Type:	Primary	Duplicate
						Location ID:	77-1037-DU1-SS	77-1037-DU1-SS
						Field Sample ID:	077SS-0001M-0001-SO	077SS-0002M-0001-SO
						Lab Sample ID:	240-17525-5	240-17525-6
						Sample Date:	11/11/2012	11/11/2012
						Location Type:	Horizontal ISM	Horizontal ISM
						Depth (ft):	0-1	0-1
		FWCUGs			**USEPA RSL**			
Method/Chemicals	**Background**	**National Guard Trainee**	**Resident Receptor Resident Child**	**Resident Receptor Resident Adult**	**Industrial**	**Residential**		
Volatile Organic Compounds (µg/kg)								
4-methyl-2-pentanone	None	None	None	None	5,600,000*	530,000*	ND	**0.90 J**
Semi-Volatile Organic Compounds (µg/kg)								
2-Methylnaphthalene	None	2,384,000*	30,600*	238,000*	NA	NA	**54**	**60**
Anthracene	None	None	None	None	23,000,000*	1,700,000*	ND	**11 J**
Benzo(a)anthracene	None	4,770	650	221	NA	NA	**57**	**48**
Benzo(a)pyrene	None	477	65	22	NA	NA	**88**	**65**
Benzo(b)fluoranthene	None	4,770	650	221	NA	NA	**91**	**81**
Benzo(g,h,i)perylene	None	None	None	None	None	None	**47**	**37**
Benzo(k)fluoranthene	None	47,700	6,500	2,210	NA	NA	**18 J**	**17**
Chrysene	None	477,000	65,000	22,100	NA	NA	**66**	**57**
Dibenzofuran	None	1,192,000	15,300*	119,000*	NA	NA	**14 J**	**14 J**
Fluoranthene	None	5,087,00*	163,000*	276,000*	NA	NA	**120**	**99**
Fluorene	None	11,458,000*	243,000*	737,000*	NA	NA	ND	**9.6 J**
Indeno(1,2,3-c,d)Pyrene	None	4,770	650	221	NA	NA	**55**	**44**
Naphthalene	None	1,541,000*	122,000*	368,000*	NA	NA	**44**	**54**
Phenanthrene	None	None	None	None	None	None	**77**	**64**
Pyrene	None	3,815,000*	122,000*	207,000*	NA	NA	**95**	**74**
Pesticides and Polychlorinated Biphenyls (µg/kg)								
beta Endosulfan	None	None	None	None	490,000*	37,000*	ND	ND
Heptachlor Epoxide	None	1,480	98	152	NA	NA	ND	ND
p,p'-DDD	None	None	None	None	9,600	2,200	ND	ND
p,p'-DDE	None	49,100	2,630	4,080	NA	NA	**5.2 J**	**8.6 J**
Propellants (mg/kg)								
Nitroglycerin	None	982	52,500	81,600	NA	NA	ND	**0.083 J**
Nitroguanidine	None	None	None	None	8,200*	620*	ND	**0.055 J**
Explosives (mg/kg)								
Tetryl	None	None	None	None	160*	12*	ND	**0.028 J**

Notes:

Yellow shading of a result indicates concentration is greater than the most stringent Resident Receptor FWCUG.

The FWCUGs used for data comparison are the values for the most stringent Resident Receptor FWCUG between the adult and the child receptor using the Target Cancer Risk (TCR) level of 10^{-6}. The RSLs shown are also the values for the TCR 10^{-6}. Any exceptions are noted with an Asterisk (*).

Asterisk (*) indicates non-carcinogenic FWCUGs and RSLs using the Target Hazard Quotient (THQ) =0.1).

Bold indicates chemical detected.

µg/kg = Microgram per kilogram
DU = Decision Unit
ft = Feet
FWCUG = Facility-Wide Cleanup Goal (SAIC 2010)
HQ = Hazard Quotient
ID = Identification
ISM = Incremental sampling methodology
J = Estimated value less than reporting limits
NA = Not applicable
ND = Not detected at the Limit of Detection (LOD)
RSL = Regional Screening Level (USEPA, May 2014)
USEPA = United States Environmental Protection Agency

Note: The National Guard Trainee FWCUGs and the Industrial RSLs are shown on this table for comparison purposes only.

RSLs are presented only for chemicals without Resident Receptor FWCUGs.

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Table 5-4: Summary of Analytical Results for Inorganic Chemicals Detected in Surface Soil Samples Collected November and December 2012, CC RVAAP-77

						Sample Type:	Primary	Duplicate
						Location ID:	77-1037-DU1-SS	77-1037-DU1-SS
						Field Sample ID:	077SS-0001M-0001-SO	077SS-0002M-0001-SO
						Lab Sample ID:	240-17525-5	240-17525-6
						Sample Date:	11/11/2012	11/11/2012
						Location Type:	Horizontal ISM	Horizontal ISM
						Depth (ft):	0-1	0-1
		FWCUGs			**USEPA RSL**			
Method/Chemicals	**Background**	**National Guard Trainee**	**Resident Receptor**		**Industrial**	**Residential**		
			Resident Child	**Resident Adult**				
Metals (mg/kg)								
Aluminum	17,700	3,496*	7,380*	52,923*	NA	NA	**8,200**	**7,700**
Antimony	0.96	175*	2.82*	13.6*	NA	NA	**0.20 J**	**0.17 J**
Arsenic	15.4	2.78	0.524	0.425	NA	NA	**12**	**14**
Barium	88.4	351*	1,413*	8,966*	NA	NA	**49**	**48**
Beryllium	0.88	None	None	None	230*	16*	**0.46**	**0.42**
Cadmium	0	10.9	6.41*	22.3*	NA	NA	**0.19**	**0.20**
Calcium **	15,800	None	None	None	None	None	**4,500 J**	**5,200 J**
Chromium	17.4	329,763*	8,174*	19,694*	NA	NA	**18**	**15**
Cobalt	10.4	7.03	131*	803	NA	NA	**7.4**	**7.7**
Copper	17.7	25,368*	311*	2,714*	NA	NA	**16 J**	**17 J**
Iron	23,100	184,370*	2,313*	19,010*	NA	NA	**22,000**	**20,000**
Lead	26.1	None	None	None	800	400	**22**	**21**
Magnesium **	3,030	None	None	None	None	None	**2,800 J**	**2,700 J**
Manganese	1,450	35.1*	293*	1,482*	NA	NA	**540**	**520**
Mercury	0.036	172*	2.27*	16.5*	NA	NA	**0.045 J**	**0.041 J**
Nickel	21.1	12,639*	155*	1,346*	NA	NA	**24**	**28**
Potassium **	927	None	None	None	None	None	**830**	**740**
Selenium	1.4	None	None	None	580*	39.0*	**0.56**	**0.53**
Silver	0	3,105*	38.6*	324*	NA	NA	**0.027 J**	**0.030 J**
Sodium **	123	None	None	None	None	None	**29 J**	**32 J**
Thallium	0	47.7*	0.612*	4.76*	NA	NA	**0.13**	**0.14**
Vanadium	31.1	2,304*	44.9*	156*	NA	NA	**16**	**15**
Zinc	61.8	187,269*	2,321*	19,659*	NA	NA	**63**	**62**

Notes:

Yellow shading of a result indicates concentration is greater than the most stringent Resident Receptor FWCUG.

The FWCUGs used for data comparison are the values for the most stringent Resident Receptor FWCUG between the adult and the child receptor using the Target Cancer Risk (TCR) level of 10^{-6}. The RSLs shown are also the values for the TCR 10^{-6}. Any exceptions are noted with an Asterisk (*).

Asterisk (*) indicates non-carcinogenic FWCUGs and RSLs using the Target Hazard Quotient (THQ) =0.1).

** Asterisk denotes the chemical is an essential nutrient.

Bold indicates chemical detected.

DU = Decision Unit

ft = feet

FWCUG = Facility-Wide Cleanup Goal (SAIC 2010)

HQ = Hazard Quotient

ISM = Incremental sampling methodology

J = Estimated value less than reporting limits

mg/kg = Milligram per kilogram

NA = Not applicable

NR = Not reported/not analyzed

RSL = Regional Screening Level (USEPA 2014)

USEPA = United States Environmental Protection Agency

RSLs are presented only for chemicals without Resident Receptor FWCUGs.

Note: The National Guard Trainee FWCUGs and the Industrial RSLs are shown on this table for comparison purposes only.

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Table 5-5: Summary of Analytical Results for Organic Chemicals Detected in Subsurface Soil Samples Collected November and December 2012, CC RVAAP-77

						Sample Type:	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
						Location ID:	77-1037-DU1-SB1-5	77-1037-DU1-SB1-5	77-1037-DU1-SB1	77-1037-DU1-SB2	77-1037-DU1-SB3	77-1037-DU1-SB4	77-1037-DU1-SB5	77-1037-DU1-SB2
						Field Sample ID:	077SB-0004M-0001-SO	077SB-0005M-0001-SO	077SB-0006M-0001-SO	077SB-0007M-0001-SO	077SB-0008M-0001-SO	077SB-0009M-0001-SO	077SB-0010M-0001-SO	077SB-0011-0001-SO
						Lab Sample ID:	240-18297-1	240-18297-2	240-18297-3	240-18297-4	240-18297-1	240-18297-2	240-18297-3	240-18297-4
						Sample Date:	12/3/2012	12/3/2012	12/3/2012	12/3/2012	12/3/2012	12/3/2012	12/3/2012	12/3/2012
						Location Type:	Horizontal ISM	Horizontal ISM	Vertical ISM	Vertical ISM	Vertical ISM	Vertical ISM	Vertical ISM	Deep Soil Boring
						Sample Depth (ft):	1-4	4-7	1-7	1-7	1-7	1-7	1-7	7-13
Method/ Chemicals	**Background**	**FWCUGs**			**USEPA RSL**									
		National Guard Trainee	**Resident Receptor**		**Industrial**	**Residential**								
			Resident Child	**Resident Adult**										
Explosives (mg/kg)														
Tetryl	None	None	None	None	160*	12*	ND	ND	ND	ND	ND	ND	ND	ND
Propellants (mg/kg)														
Nitroglycerin	None	982	52.5	81.6	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
Nitroguanidine	None	None	None	None	8,200*	620*	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

Yellow shading of a result indicates concentration is greater than the FWCUG for the most stringent Resident Receptor.

The FWCUGs used for data comparison are the values for the most stringent Resident Receptor FWCUG between the adult and the child receptor using the Target Cancer Risk (TCR) level of 10^{-6}. The RSLs shown are also the values for the TCR 10^{-6}. Any exceptions are noted with an Asterisk (*).

Asterisk (*) indicates non-carcinogenic FWCUGs and RSLs using the Target Hazard Quotient (THQ) =0.1).

Bold indicates chemical detected.

DU = Decision Unit

ft = Feet

FWCUG = Facility-Wide Cleanup Goal (SAIC 2010)

HQ = Hazard Quotient

ID = Identification

ISM = Incremental sampling methodology

J = Estimated value less than reporting limits

mg/kg = Milligram per kilogram

NA = Not applicable

ND = Not detected at the Limit of Detection (LOD)

RSL = Regional Screening Level (USEPA 2014)

USEPA = United States Environmental Protection Agency

RSLs are presented only for chemicals without Resident Receptor FWCUGs.

Note: The National Guard Trainee FWCUGs and the Industrial RSLs are shown on this table for comparison purposes only.

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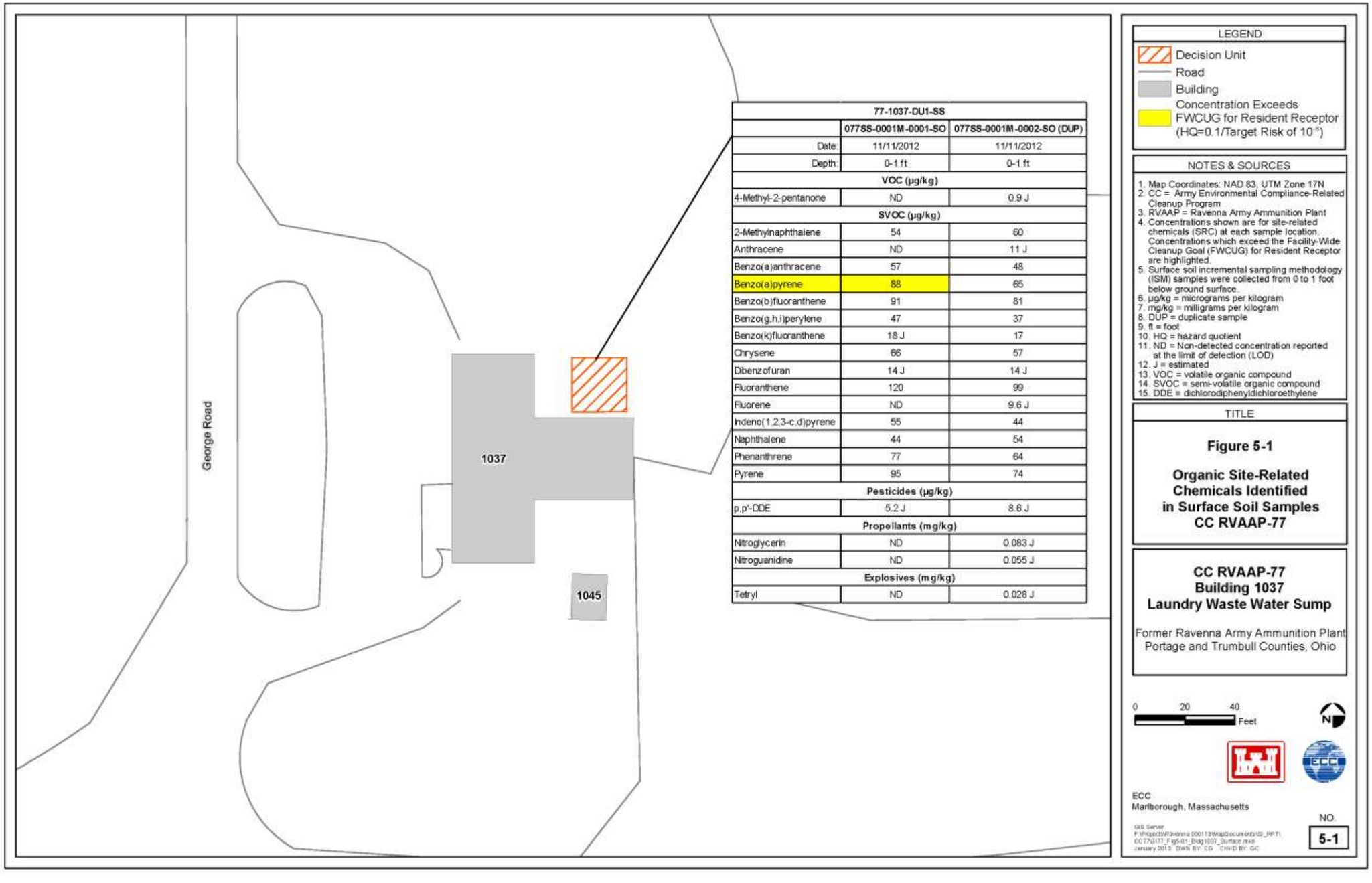

77-1037-DU1-SS		
	077SS-0001M-0001-SO	077SS-0001M-0002-SO (DUP)
Date:	11/11/2012	11/11/2012
Depth:	0-1 ft	0-1 ft
VOC (µg/kg)		
4-Methyl-2-pentanone	ND	0.9 J
SVOC (µg/kg)		
2-Methylnaphthalene	54	60
Anthracene	ND	11 J
Benzo(a)anthracene	57	48
Benzo(a)pyrene	88	65
Benzo(b)fluoranthene	91	81
Benzo(g,h,i)perylene	47	37
Benzo(k)fluoranthene	18 J	17
Chrysene	66	57
Dibenzofuran	14 J	14 J
Fluoranthene	120	99
Fluorene	ND	9.6 J
Indeno(1,2,3-c,d)pyrene	55	44
Naphthalene	44	54
Phenanthrene	77	64
Pyrene	95	74
Pesticides (µg/kg)		
p,p'-DDE	5.2 J	8.6 J
Propellants (mg/kg)		
Nitroglycerin	ND	0.083 J
Nitroguanidine	ND	0.055 J
Explosives (mg/kg)		
Tetryl	ND	0.028 J

LEGEND

- Decision Unit
- Road
- Building
- Concentration Exceeds FWCUG for Resident Receptor (HQ=0.1/Target Risk of 10^{-6})

NOTES & SOURCES

1. Map Coordinates: NAD 83, UTM Zone 17N
2. CC = Army Environmental Compliance-Related Cleanup Program
3. RVAAP = Ravenna Army Ammunition Plant
4. Concentrations shown are for site-related chemicals (SRC) at each sample location. Concentrations which exceed the Facility-Wide Cleanup Goal (FWCUG) for Resident Receptor are highlighted.
5. Surface soil incremental sampling methodology (ISM) samples were collected from 0 to 1 foot below ground surface.
6. µg/kg = micrograms per kilogram
7. mg/kg = milligrams per kilogram
8. DUP = duplicate sample
9. ft = foot
10. HQ = hazard quotient
11. ND = Non-detected concentration reported at the limit of detection (LOD)
12. J = estimated
13. VOC = volatile organic compound
14. SVOC = semi-volatile organic compound
15. DDE = dichlorodiphenyldichloroethylene

TITLE

Figure 5-1

Organic Site-Related Chemicals Identified in Surface Soil Samples CC RVAAP-77

CC RVAAP-77
Building 1037
Laundry Waste Water Sump

Former Ravenna Army Ammunition Plant
Portage and Trumbull Counties, Ohio

0 20 40 Feet

N

ECC
Marlborough, Massachusetts

NO.
5-1

GIS Server
F:\Projects\Ravenna 690113\MapDocuments\GIS_RFI\CC77\077_Fig5-01_Bldg1037_Surface.mxd
January 2013 DRWN BY: CG CHKD BY: GC

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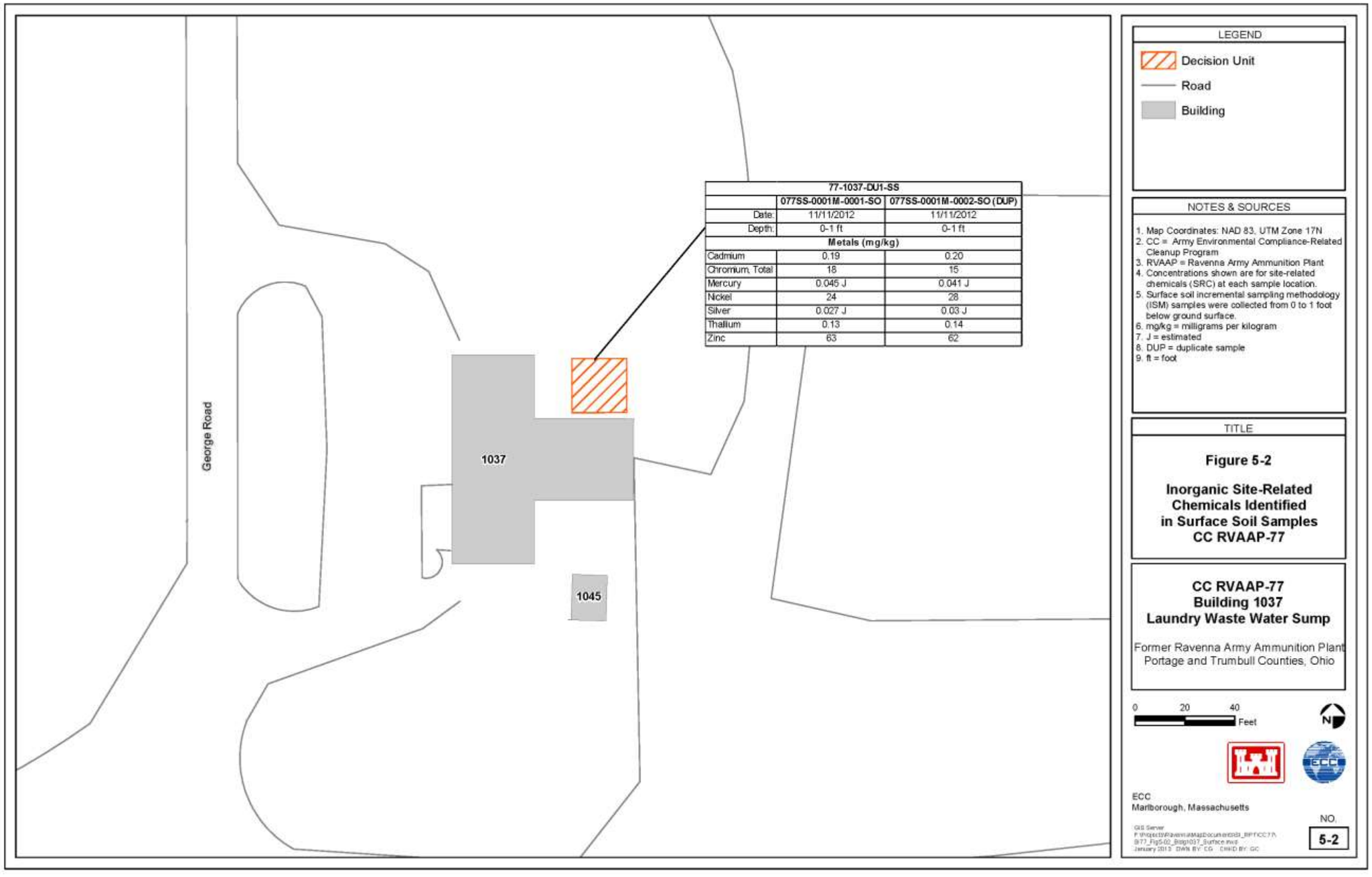
George Road
1037
1045
77-1037-DU1-SS
077SS-0001M-0001-SO
077SS-0001M-0002-SO (DUP)
Date: 11/11/2012 11/11/2012
Depth: 0-1 ft 0-1 ft
Metals (mg/kg)
Cadmium 0.19 0.20
Chromium, Total 18 15
Mercury 0.045 J 0.041 J
Nickel 24 28
Silver 0.027 J 0.03 J
Thallium 0.13 0.14
Zinc 63 62
LEGEND
Decision Unit
Road
Building
NOTES & SOURCES
1. Map Coordinates: NAD 83, UTM Zone 17N
2. CC = Army Environmental Compliance-Related Cleanup Program
3. RVAAP = Ravenna Army Ammunition Plant
4. Concentrations shown are for site-related chemicals (SRC) at each sample location.
5. Surface soil incremental sampling methodology (ISM) samples were collected from 0 to 1 foot below ground surface.
6. mg/kg = milligrams per kilogram
7. J = estimated
8. DUP = duplicate sample
9. ft = foot
TITLE
Figure 5-2
Inorganic Site-Related Chemicals Identified in Surface Soil Samples CC RVAAP-77
CC RVAAP-77
Building 1037
Laundry Waste Water Sump
Former Ravenna Army Ammunition Plant
Portage and Trumbull Counties, Ohio
0 20 40
Feet
N
ECC
Marlborough, Massachusetts
NO.
5-2

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6.0 EXPOSURE PATHWAYS

6.1 SOIL EXPOSURE AND AIR PATHWAYS

6.1.1 Physical Conditions

The site is located within Hiram Till glacial deposits. The soil type found at this AOC is the Mahoning silt loam, 0-2 percent slopes (MgA) (Figure 1-7, Table 1-1). Mahoning silt loam is a gently sloping, poorly drained soil formed in silty clay loam or clay loam glacial till. The Mahoning silt loam has low permeability, with rapid runoff and seasonal wetness (USDA 2012). The bedrock formation at the AOC based on groundwater well installation logs is the Pennsylvanian-age Pottsville Formation, Sharon Sandstone member, informally referred to as the Sharon Conglomerate (Winslow and White 1966). The elevation of the Sharon Sandstone is approximately 980 ft amsl based on the Ohio Department of Natural Resources bedrock topography map (Figure 1-8).

6.1.2 Soil and Air Targets

Current and future human and ecological (animal and plant) receptors may come into contact with contamination in the surface or subsurface soil, if contaminants are present within the DU at this AOC. Considering the design and location of the waste water sump, any releases to soil would most likely have been to subsurface soil, which reduces the potential for exposure to ecological receptors via soil and air targets.

Airborne contamination (e.g., windblown dust) and soil gas vapor are not considered a viable migration or exposure pathway at this AOC. The likely contaminants associated with the Building 1037 Laundry Waste Water Sump CC RVAAP-77 (explosives, propellants) have low volatility, and potential releases of contaminants would likely have been to subsurface soil adjacent to the waste water sump, at or below water level in the sump of 4 ft bgs. The operational areas are currently paved, gravel covered, or currently well vegetated. The facility is located in a humid climate, and soil moisture content is typically high, which reduces the potential for dust generation. Further, as no organic chemicals were detected in the soil samples, there are no risks associated with soil gas vapor emissions.

6.1.3 Soil and Air Pathway Conclusions

The SI analytical results provided in this SI indicate that explosive and propellant chemicals were not detected in the surface soil (0-1 ft bgs), subsurface soil between 1 and 7 ft bgs, or in the subsurface soil collected between 7 and 13 ft bgs at CC RVAAP-77. Therefore, the exposure pathways for soil and air are incomplete.

6.2 SURFACE WATER PATHWAY

6.2.1 Hydrological Setting

No surface water or sediment samples were collected as part of this SI as surface water and sediment are not present at the AOC. Additionally, as reported in Section 4.4, sediment was not observed in the manhole. There are no perennial surface water features at the AOC. The closest perennial feature to receive drainage from the former Administration Area is a tributary to the west branch of the Mahoning River located southeast of the AOC.

6.2.2 Surface Water Targets

Surface water targets include human receptors that use surface water for potable water supply or recreation, as well as environmental (e.g., streams, wetlands, and sensitive aquatic environments) and physical targets (e.g., public or private water distribution system intakes) that may be affected by potential groundwater contamination on or adjacent to the AOC. No perennial streams are located at the AOC. There are no observed springs or groundwater discharge points to a surface water body in the immediate vicinity of the AOC. Therefore, there is no direct exposure pathway for human receptors or ecological targets to surface water at this AOC.

6.2.3 Surface Water Pathway Conclusions

There are no perennial surface water streams or wetlands in the immediate vicinity of CC RVAAP-77. Surface water flow and sediment transport are not migration pathways for potential contamination related to CC RVAAP-77 Building 1037 Laundry Waste Water Sump as they are not present at the AOC.

6.3 GROUNDWATER PATHWAY

6.3.1 Hydrogeological Setting

Section 1.4.4 presents the general hydrogeological setting for the former RVAAP. In April 2011, OHARNG installed two bedrock aquifer wells at the facility within the Sharon Conglomerate for use as a groundwater supply. These potable wells are located near Buildings 1067 and 1068 within the former Administration Area, which are approximately 430 and 1,500 ft from CC RVAAP-77. There is also one inactive non-potable groundwater supply well just south of Winklepeck Burning Grounds along the east side of George Road, which was formerly used to supply water for environmental restoration activities. These groundwater supply wells are used solely for on-site activities and are not used for public distribution or commercial groundwater potable supply.

There are also three monitoring wells located in the vicinity of CC RVAAP-77, south and southwest of Building 1037 and within the former Administration Area (referenced as monitoring wells FWGmw-004, FWGmw-015, and FWGmw-016). Monitoring wells FWGmw-004 and FWGmw015 are screened within the unconsolidated material. These two wells are relatively shallow with well screen bottoms set at 19.5 and 23.5 ft bgs, and are located 2,500 ft southwest and 1,500 ft south of Building 1037, respectively. Monitoring well FWGmw-016 is screened within the Sharon Conglomerate with the well screen bottom set at a depth of 64.5 ft bgs and located approximately 1,500 ft south of Building 1037 (EQM 2013).

Groundwater was not encountered in any of the soil borings completed in December 2012. Therefore, the depth to groundwater is expected to be greater than 13 ft bgs at CC RVAAP-77. Review of July 2012 gauging data from the RVAAP-66 Facility-Wide Groundwater Annual Report for 2012 (EQM 2013) indicates the depth to groundwater in the two monitoring wells (FWGmw-015 and FWGmw-004) screened within the unconsolidated aquifer ranges from approximately 6.33 to 13.76 ft bgs. However, as noted above, these wells are over 1,000 ft from Building 1037.

6.3.2 Groundwater Targets

Groundwater targets include human receptors that use groundwater for potable water supply, as well as environmental receptors (e.g., livestock, fish farms) and physical targets (e.g., springs) that may be affected by potential groundwater contamination on or adjacent to the site. There are no public, livestock, or commercial groundwater supply wells within the facility. Groundwater in the vicinity of Building 1037 at CC RVAAP-77 is currently used for on-site activities by the OHARNG.

6.3.3 Groundwater Pathway Conclusion

The results of this SI indicate that the subsurface soil is not contaminated; therefore, soil is not a source of groundwater contamination at this AOC. The groundwater associated with CC RVAAP-77 is being evaluated under the RVAAP-66 Facility-Wide Groundwater.

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7.0 SUMMARY AND CONCLUSIONS

This section provides a summary of the findings and conclusions of this SI conducted by ECC at the CC RVAAP-77 Building 1037 Laundry Waste Water Sump AOC. Only surface and subsurface soil were sampled as part of this SI, since there are no surface water bodies, wetlands, streams, or sediment onsite, and the groundwater associated with CC RVAAP-77 is currently being addressed separately under RVAAP-66 Facility-Wide Groundwater.

7.1 SUMMARY OF RESULTS

The SI results for CC RVAAP-77 are summarized below:

Surface Soil Results

- SRCs were identified in the one surface soil sample. A total of 529 constituents were analyzed and the following SRCs were identified in surface soil: one VOC (MIBK); fifteen SVOCs (PAH compounds); one pesticide (p,p′-DDE); seven metals (cadmium, chromium, mercury, nickel, silver, thallium, and zinc); one explosive (tetryl); and two propellants (nitroglycerin and nitroguanidine).

- No metals, explosives, propellants, VOCs, PCBs, or pesticides were detected at concentrations exceeding their respective Resident Receptor FWCUGs in the ISM surface soil sample collected.

- One SVOC (benzo[a]pyrene) was reported at a concentration of 88 µg/kg exceeding the most stringent Resident Receptor FWCUG of 22.0 µg/kg in the surface soil sample. However, the presence of this PAH chemical in the surface soil is not related to the historical operations conducted at the laundry building, which was used to wash workers' overalls potentially contaminated with explosives and/or propellants, as stated in the HRR (SAIC 2011a). Benzo(a)pyrene is not a potential contaminant at this AOC and is expected to be associated with overland runoff from the adjacent asphalt roadways and other potential sources nearby the AOC.

- Therefore, no potential contaminants related to site operations were identified in the surface soil at this AOC.

Subsurface Soil Results

- No SRCs were identified in subsurface soil which was sampled to a maximum depth of 13 ft bgs. All subsurface soil samples were non-detect for explosive and propellant chemicals.

- No explosive derivative or propellant chemicals were detected in the vertical or horizontal subsurface soil ISM samples collected at this AOC. No other organic chemicals were detected in the subsurface soil ISM samples exceeding their respective most stringent Resident Receptor FWCUGs.

- No potential contaminants related to site operations were identified in subsurface soil at this AOC.

7.2 CONCLUSIONS

The conclusions of this SI are as follows:

- No potential contaminants were identified in the surface or subsurface soil sampled at this AOC.

- The results of this SI indicate that the subsurface soil is not contaminated; therefore, soil is not a source of groundwater contamination at this AOC.

The results of this SI indicate that NFA is warranted for soil at the CC RVAAP-77 Building 1037 Laundry Waste Water Sump.

8.0 REFERENCES

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APPENDIX A

HISTORICAL AERIAL PHOTOGRAPHS

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NOTES & SOURCES

Map Coordinates: WGS 84, UTM Zone 17N in Meters
Base map data and Aerial Photographs from SAIC

Site Location

N

0 200 400
Feet



U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
LOUISVILLE, KENTUCKY

Figure A-2
CC RVAAP-77
Bldg 1037 Laundry Waste Water Sump
1952 Historical Aerial Photograph
Former Ravenna Army Ammunition Plant
Portage and Trumbull Counties, Ohio

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NOTES & SOURCES

Map Coordinates: WGS 84, UTM Zone 17N in Meters
Base map data and Aerial Photographs from SAIC

Site Location

N

0 200 400
Feet



U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
LOUISVILLE, KENTUCKY

Figure A-2
CC RVAAP-77
Bldg 1037 Laundry Waste Water Sump
1952 Historical Aerial Photograph
Former Ravenna Army Ammunition Plant
Portage and Trumbull Counties, Ohio

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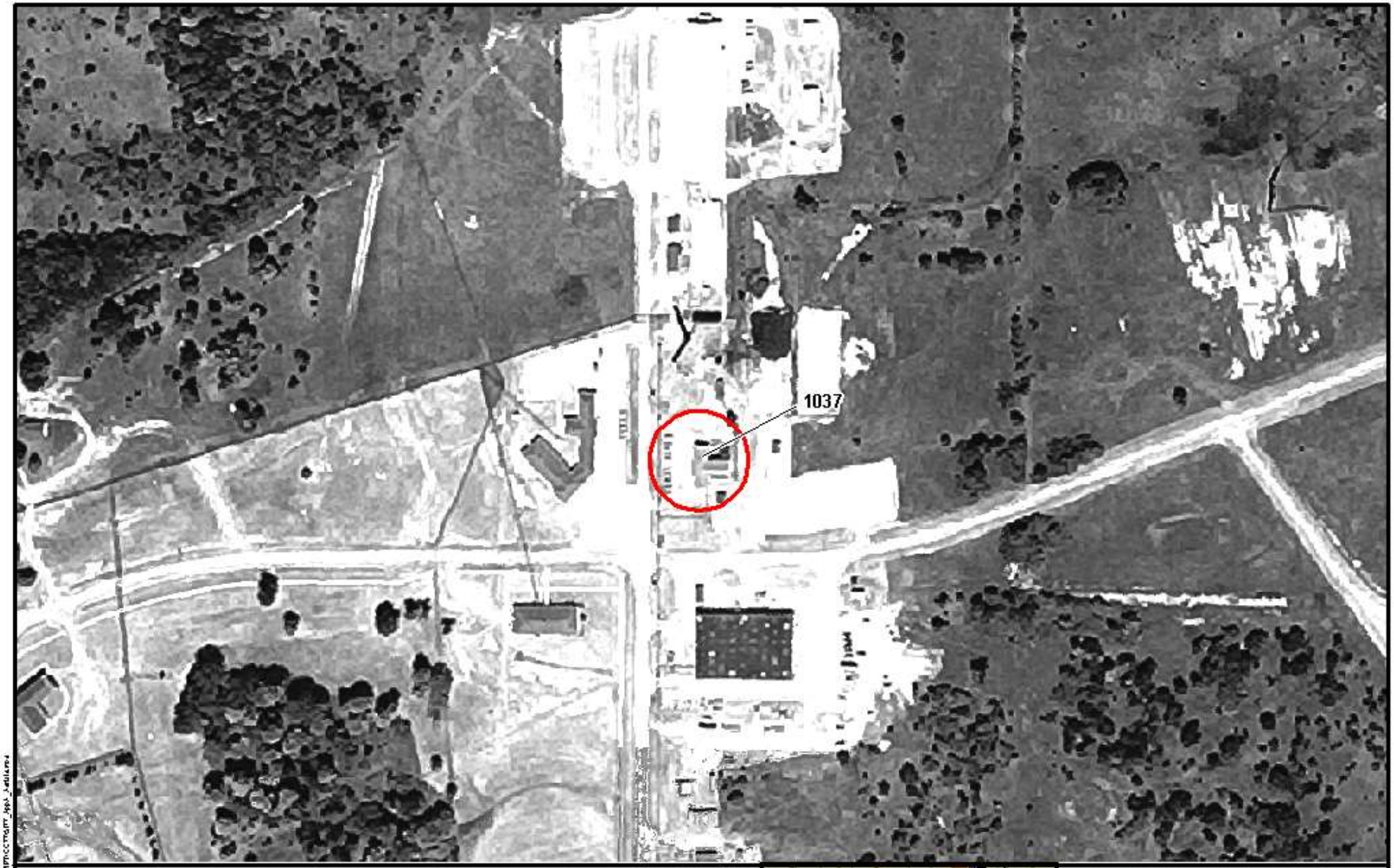

NOTES & SOURCES

Map Coordinates: WGS 84, UTM Zone 17N in Meters
Base map data and Aerial Photographs from SAIC

Site Location

N

0 200 400
Feet



U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
LOUISVILLE, KENTUCKY

Figure A-3
CC RVAAP-77
Bldg 1037 Laundry Waste Water Sump
1966 Historical Aerial Photograph
Former Ravenna Army Ammunition Plant
Portage and Trumbull Counties, Ohio

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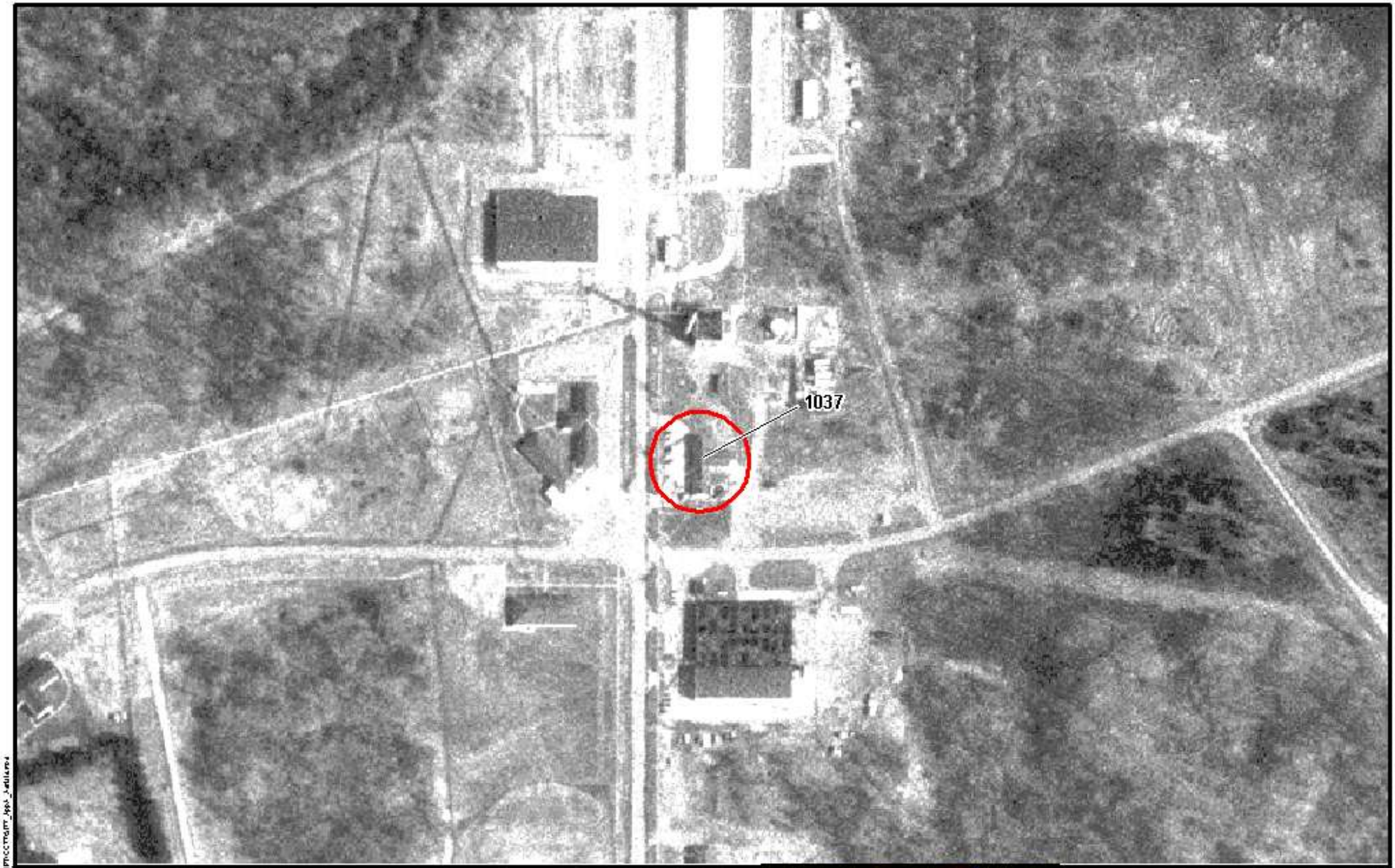

NOTES & SOURCES

Map Coordinates: WGS 84, UTM Zone 17N in Meters
Base map data and Aerial Photographs from SAIC

Site Location

N

0 200 400
Feet



U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
LOUISVILLE, KENTUCKY

Figure A-4
CC RVAAP-77
Bldg 1037 Laundry Waste Water Sump
1985 Historical Aerial Photograph
Former Ravenna Army Ammunition Plant
Portage and Trumbull Counties, Ohio

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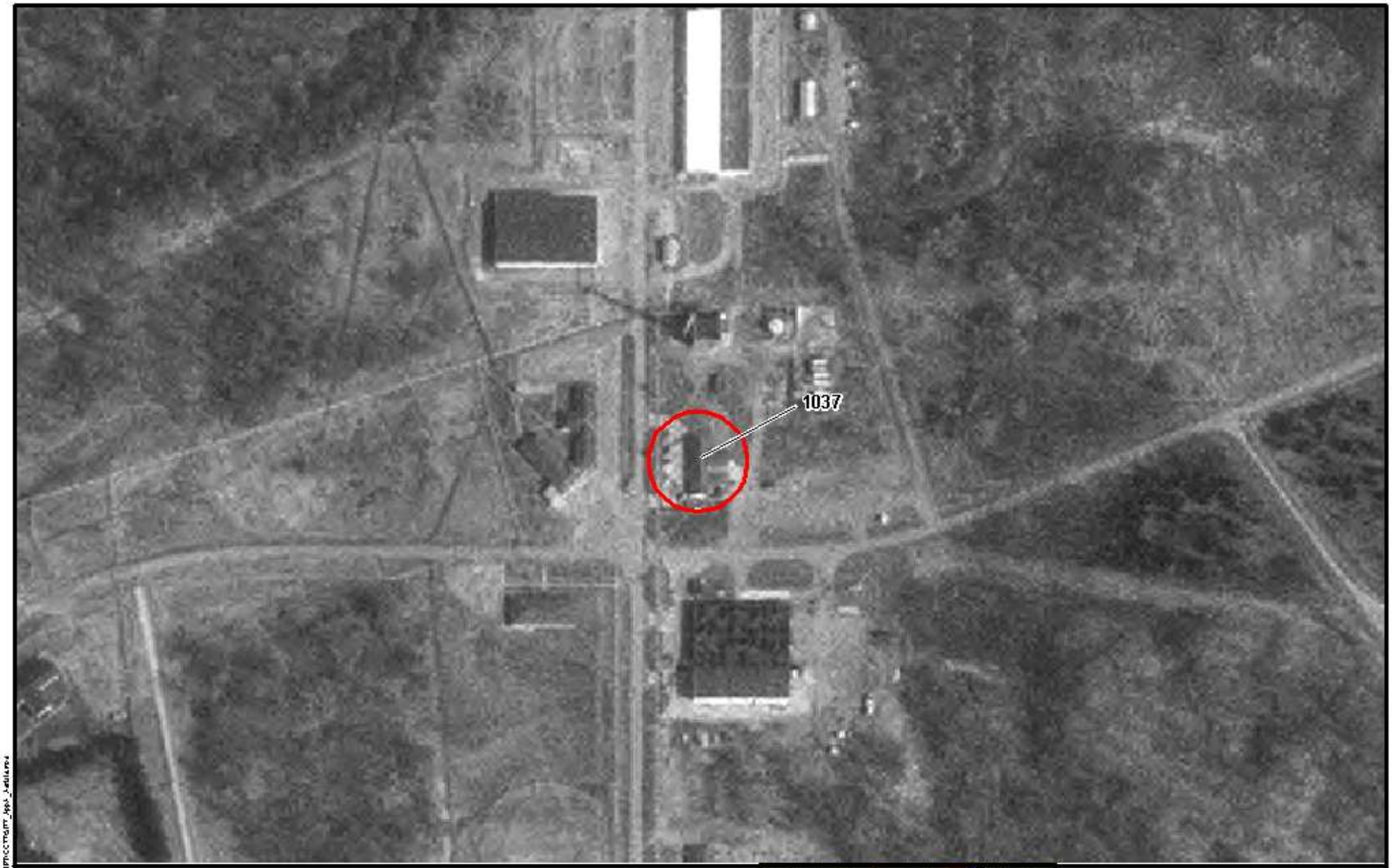

NOTES & SOURCES

Map Coordinates: WGS 84, UTM Zone 17N in Meters
Base map data and Aerial Photographs from SAIC

Site Location

N

0 200 400
Feet



U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
LOUISVILLE, KENTUCKY

Figure A-5
CC RVAAP-77
Bldg 1037 Laundry Waste Water Sump
1997 Historical Aerial Photograph
Former Ravenna Army Ammunition Plant
Portage and Trumbull Counties, Ohio

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NOTES & SOURCES

Map Coordinates: WGS 84, UTM Zone 17N in Meters
Base map data and Aerial Photographs from SAIC

Site Location

N

0 200 400
Feet



U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
LOUISVILLE, KENTUCKY

Figure A-6
CC RVAAP-77
Bldg 1037 Laundry Waste Water Sump
2009 Historical Aerial Photograph
Former Ravenna Army Ammunition Plant
Portage and Trumbull Counties, Ohio

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APPENDIX B

ACTIVITY FIELD LOGS

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FIELD LOG FORM

SURFACE SOIL ISM SAMPLING

2011 PBA ENVIRONMENTAL INVESTIGATION AND REMEDIATION AT 14 CR SITES

USACE Contract No. W91QR-04-D-0039

Ravenna Army Ammunition Plant, Ravenna, Ohio

CR Site No. CC-RVAAP-77 **CR Site Name:** BLD 1037 GASOLINE SUMP

Decision Unit: DU01 **Building No.** 1037

Sample Date: 11-11-12 **Time:** 1045 **Weather:** CLEAR, 50's

Sample ID: 0775S-0001M-0001-SO

Duplicate Sample ID: 0775S-0002M-0001-SO

Field Sampler: ~~TH~~, AM

Depth of Sample: 0-1' BGS

Material: SOIL

Remarks:

Laboratory Analysis:

☐ VOC ☐ TAL METALS ☐ SVOCs ☒ EXPLOSIVES ☐ TPH GRO/DRO ☐ PCBs ☒ PROPELLANTS

☐ FULL SUITE (VOCs, SVOCs, TAL Metals, Explosives, Propellants, PCBs, Pesticides)

☒ MS/MSD Sample Collected 0775S-0001M-0002-SO

☐ QA Sample Collected

RECORDED BY: _____ **DATE:** 11-11-12
(Signature)

FIELD LOG FORM

SUBSURFACE SOIL SAMPLING

2011 PBA ENVIRONMENTAL INVESTIGATION AND REMEDIATION AT 14 CR SITES

USACE Contract No. W91QR-04-D-0039

Ravenna Army Ammunition Plant, Ravenna, Ohio

CR Site No. CC-RVAAP-77 **CR Site Name:** Laundry Sump

Decision Unit: DU 1 **Building No.** 1037 **Vertical Geoprobe No.** SB-1

Subsurface Sample Type: ☐ Horizontal ISM ☑ Vertical ISM ☐ Discrete ☐ Composite

Sample Date: 3 DEC 12 **Time:** 12:00 **Weather:** PC - 50's

Subsurface Sample ID: 0775B-0006M-0001-SO

Duplicate Sample ID: _____

Tube A **Time** 12:00 **Interval Drilled (ft bgs) :** 1-4' **Recovery (ft/in):** 3|11 0775B-0004M-0001-SO

Tube B **Time** _____ **Interval Drilled (ft bgs) :** 4-7 **Recovery (ft/in):** 40" 0775B-0005M-0001-SO

Tube C **Time** _____ **Interval Drilled (ft bgs) :** _____ **Recovery (ft/in):** _____

Field Samplers: TH, RW, AM

Subcontractor (Name/Company): Parsons

Remarks: _____

Laboratory Analysis:

☐ VOC ☐ TAL METALS ☐ SVOCs ☒ EXPLOSIVES ☐ TPH GRO/DRO ☐ PCBs ☒ PROPELLANTS

☐ FULL SUITE (VOCs, SVOCs, TAL Metals, Explosives, Propellants, PCBs, Pesticides)

☐ MS/MSD Sample Collected

RECORDED BY: _____ (Signature) **DATE:** 3 DEC 12

FIELD LOG FORM

SUBSURFACE SOIL SAMPLING

2011 PBA ENVIRONMENTAL INVESTIGATION AND REMEDIATION AT 14 CR SITES

USACE Contract No. W91QR-04-D-0039

Ravenna Army Ammunition Plant, Ravenna, Ohio

CR Site No. CC-RVAAP-77 **CR Site Name:** Laundry Sump

Decision Unit: DU1 **Building No.** 1037 **Vertical Geoprobe No.** SB-2

Subsurface Sample Type: ☐ Horizontal ISM ☑ Vertical ISM ☐ Discrete ☐ Composite

Sample Date: 3 DEC 12 **Time:** 11:03 **Weather:** PC-50's

Subsurface Sample ID: 0775B-0007M-0001-50

Duplicate Sample ID: _____

Tube A **Time** 11:03 **Interval Drilled (ft bgs) :** 1-4' **Recovery (ft/in):** 32"

Tube B **Time** 11:03 **Interval Drilled (ft bgs) :** 4-7' **Recovery (ft/in):** 25"

0775B-0011-0001-50

Tube C **Time** 11:05 **Interval Drilled (ft bgs) :** 7-13' **Recovery (ft/in):** 32"+

Field Samplers: TH, VEW, AM

Subcontractor (Name/Company): PRUDENT

Remarks: _____

Laboratory Analysis:

☐ VOC ☐ TAL METALS ☐ SVOCs ☒ EXPLOSIVES ☐ TPH GRO/DRO ☐ PCBs ☒ PROPELLANTS

☐ FULL SUITE (VOCs, SVOCs, TAL Metals, Explosives, Propellants, PCBs, Pesticides)

☐ MS/MSD Sample Collected

RECORDED BY: [signature] (Signature) **DATE:** 3 DEC 12

FIELD LOG FORM

SUBSURFACE SOIL SAMPLING

2011 PBA ENVIRONMENTAL INVESTIGATION AND REMEDIATION AT 14 CR SITES

USACE Contract No. W91QR-04-D-0039

Ravenna Army Ammunition Plant, Ravenna, Ohio

CR Site No. CC-RVAAP-77 **CR Site Name:** Laundry

Decision Unit: DU 1 **Building No.** 1637 **Vertical Geoprobe No.** SB 3

Subsurface Sample Type: ☐ Horizontal ISM ☑ Vertical ISM ☐ Discrete ☐ Composite

Sample Date: 3 DEC 12 **Time:** 11:37 **Weather:** PC 50's

Subsurface Sample ID: 07758-000FM-0001-SO

Duplicate Sample ID: _____

Tube A **Time** 11:37 **Interval Drilled (ft bgs) :** 1-4' **Recovery (ft/in):** 31"

Tube B **Time** 11:37 **Interval Drilled (ft bgs) :** 4-7' **Recovery (ft/in):** 36"

Tube C **Time** _____ **Interval Drilled (ft bgs) :** _____ **Recovery (ft/in):** _____

Field Samplers: TW, RW, AM

Subcontractor (Name/Company): Parsons

Remarks: _____

Laboratory Analysis:

☐ VOC ☐ TAL METALS ☐ SVOCs ☒ EXPLOSIVES ☐ TPH GRO/DRO ☐ PCBs ☒ PROPELLANTS

☐ FULL SUITE (VOCs, SVOCs, TAL Metals, Explosives, Propellants, PCBs, Pesticides)

☐ MS/MSD Sample Collected

RECORDED BY: _____ **DATE:** 3 DEC 12
(Signature)

FIELD LOG FORM

SUBSURFACE SOIL SAMPLING

2011 PBA ENVIRONMENTAL INVESTIGATION AND REMEDIATION AT 14 CR SITES

USACE Contract No. W91QR-04-D-0039

Ravenna Army Ammunition Plant, Ravenna, Ohio

CR Site No. CC-RVAAP- 77 **CR Site Name:** Lamsom Sump

Decision Unit: DU 1 **Building No.** 1037 **Vertical Geoprobe No.** SB-9

Subsurface Sample Type: ☐ Horizontal ISM ☑ Vertical ISM ☐ Discrete ☐ Composite

Sample Date: 3 DEC 12 **Time:** 11:26 **Weather:** PC 50s

Subsurface Sample ID: 0775B-0009M-0001-SO

Duplicate Sample ID: _____

Tube A **Time** 11:26 **Interval Drilled (ft bgs) :** 1-9' **Recovery (ft/in):** 22"

Tube B **Time** 11:26 **Interval Drilled (ft bgs) :** 4-7' **Recovery (ft/in):** 21"

Tube C **Time** _____ **Interval Drilled (ft bgs) :** _____ **Recovery (ft/in):** _____

Field Samplers: TH, RW, AM

Subcontractor (Name/Company): PARSONS

Remarks: _____

Laboratory Analysis:

☐ VOC ☐ TAL METALS ☐ SVOCs ☒ EXPLOSIVES ☐ TPH GRO/DRO ☐ PCBs ☒ PROPELLANTS

☐ FULL SUITE (VOCs, SVOCs, TAL Metals, Explosives, Propellants, PCBs, Pesticides)

☐ MS/MSD Sample Collected

RECORDED BY: _____ (Signature) **DATE:** 3 DEC 12

FIELD LOG FORM

SUBSURFACE SOIL SAMPLING

2011 PBA ENVIRONMENTAL INVESTIGATION AND REMEDIATION AT 14 CR SITES

USACE Contract No. W91QR-04-D-0039

Ravenna Army Ammunition Plant, Ravenna, Ohio

CR Site No. CC-RVAAP-77 **CR Site Name:** Laundry Sump

Decision Unit: DU1 **Building No.** 1037 **Vertical Geoprobe No.** SB5

Subsurface Sample Type: ☐ Horizontal ISM ☑ Vertical ISM ☐ Discrete ☐ Composite

Sample Date: 3DEC12 **Time:** 11:50 **Weather:** PC 50's

Subsurface Sample ID: 0775B-0010M-0001-50

Duplicate Sample ID: _____

Tube A **Time** 11:50 **Interval Drilled (ft bgs) :** 1-4' **Recovery (ft/in):** 32"

Tube B **Time** 11:50 **Interval Drilled (ft bgs) :** 4-7' **Recovery (ft/in):** 42"

Tube C **Time** _____ **Interval Drilled (ft bgs) :** _____ **Recovery (ft/in):** _____

Field Samplers: TH, RW, AM

Subcontractor (Name/Company): PRUDENT

Remarks: _____

Laboratory Analysis:

☐ VOC ☐ TAL METALS ☐ SVOCs ☒ EXPLOSIVES ☐ TPH GRO/DRO ☐ PCBs ☒ PROPELLANTS

☐ FULL SUITE (VOCs, SVOCs, TAL Metals, Explosives, Propellants, PCBs, Pesticides)

☐ MS/MSD Sample Collected

RECORDED BY: [signature] **DATE:** 3 DEC 12

(Signature)

Vision Integrity Results	ECC	DAILY SAFETY MEETING SIGN-IN SHEET

Date: 11-11-12 Project Name/Location: Ravenna AAP, Ravenna, OH

Company: ECC Person Conducting Briefing: JEFF DONOVAN

1. AWARENESS (e.g., special EHS concerns, pollution prevention, recent incidents, etc.):

VEHICULAR TRAFFIC
TRIPS + FALLS
LIFTING - USE LEGS NOT BACK

2. OTHER ISSUES (HASP changes, new AHAs, attendee comments, etc.):

3. DISCUSSION OF DAILY ACTIVITIES/TASKS AND SAFETY MEASURES TO BE USED:

CONT. IS SURFACE SOIL SAMPLING
WEAR HIGH VIS. SAFETY VEST/SHIRT
LEVEL D PPE.

4. ATTENDEES (Print Name):

1. JEFF DONOVAN	2. Amanda Miller
3. Fred Roche	4. David Comas
5.	6.
7.	8.
9.	10.
11.	12.
13.	14.
15.	16.
17.	18.
19.	20.
21.	22.
23.	24.
25.	26.
27.	28.
29.	30.

Vision Integrity Results	ECC	DAILY SAFETY MEETING SIGN-IN SHEET

Date: 12-3-12 Project Name/Location: Ravenna AAP, Ravenna, OH
Company: ECC Person Conducting Briefing: JEFF DONOVAN

1. AWARENESS (e.g., special EHS concerns, pollution prevention, recent incidents, etc.):

VEHICULAR TRAFFIC
FOGGY CONDITIONS - DRIVING + EQUIP. AWARENESS

2. OTHER ISSUES (HASP changes, new AHAs, attendee comments, etc.):

- utilize vehicle head lights
- obey Base speed limits

3. DISCUSSION OF DAILY ACTIVITIES/TASKS AND SAFETY MEASURES TO BE USED:

WILL BEGIN IS SAMPLING AT BLD 1037 - CC-77
THEN MOVE TO UST RV-5, RV-4, AND RV-86+87

4. ATTENDEES (Print Name):

1. JEFF DONOVAN	2. David Comeau
3. Ryan William	4. Tomas Hernandez Jr.
5. AMANDA MILLER	6. J. Scott Kelly
7. ERIC CHENG	8. Joe Teter
9. Joe Henley	10.
11.	12.
13.	14.
15.	16.
17.	18.
19.	20.
21.	22.
23.	24.
25.	26.
27.	28.
29.	30.

11-9-12 RAVENNA

SUNNY 50's ①

[redacted]

[redacted]

[redacted]

[redacted]

LAUNDRY SUMP

TIME SAMPLE SUMMARY OF CC 77!

1045 0775S-0001M-0001-SO = DUP

-0001M-0002- = MS/MSD

-0002M-0001 = DUP OF 0001M

~~0775S-0003M-0001-SA = MANHOLE SEDIMENT~~

0775S-0004-0001-TB = TRIP BLK

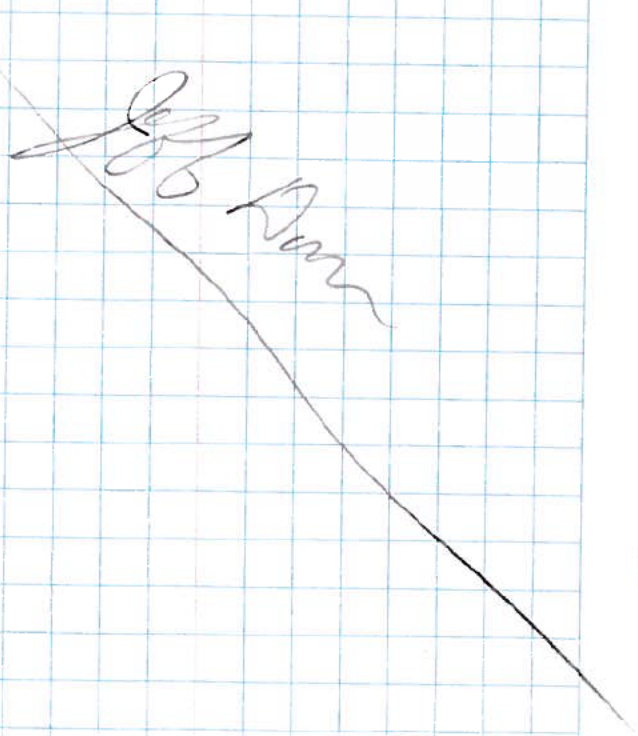
NO SEDIMENT IN MANHOLE, PIPE

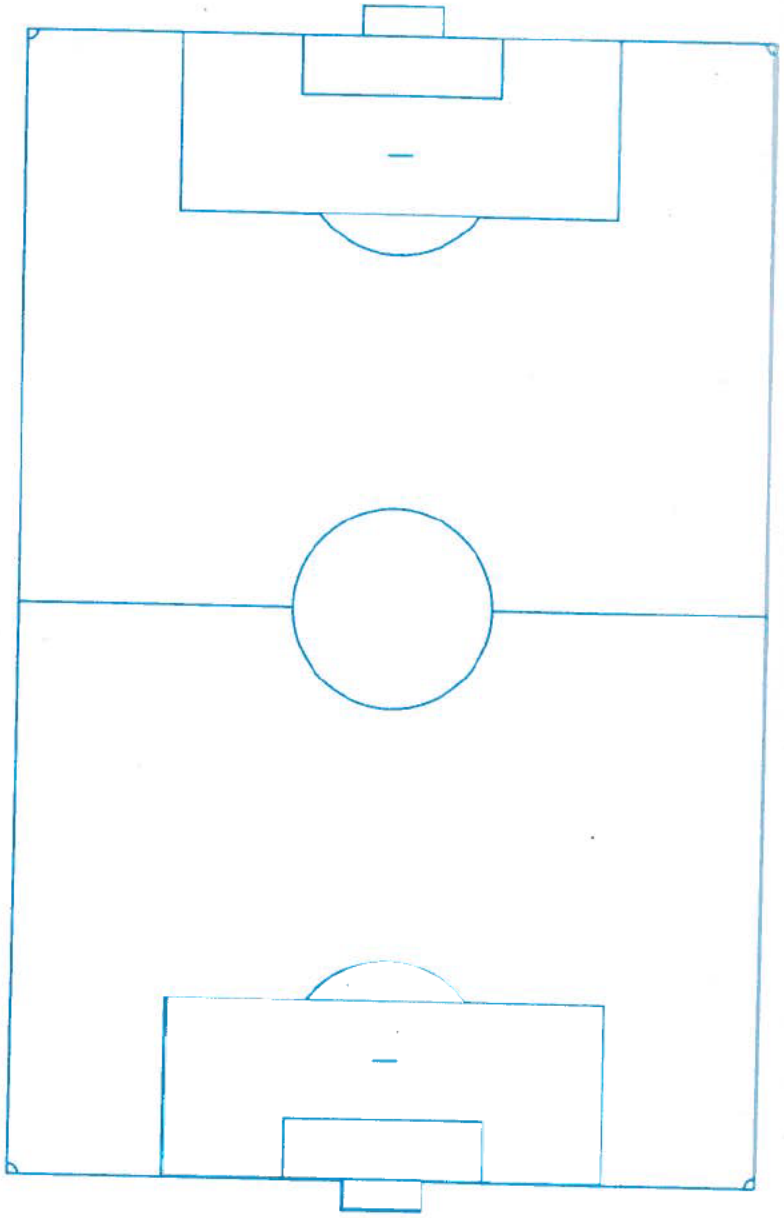
COMING FROM FORMER SUMP
IS 6" DIAMETER VIT. CLAY,
BROKEN OFF APPROX 6"
FROM INSIDE MANHOLE WALL.
PIPE IS APPROX 3 FT
DOWN ALONG SOUTH
EAST WALL GOING IN THE
DIRECTION OF FORMER SUMP,
AS BUILT DWG. SHOWS
PIPE COMING IN AT THIS
APPROX. LOCATION. PIPE
HAS BEEN FILLED WITH
CONCRETE (PHOTOS TAKEN)
MANHOLE IS APPROX 10-12
FT DEEP, TRICKLE OF
WATER FLOWING IN BOTTOM
CHANNEL COMING IN FROM
THE NORT AND FLOWING
DOWN GRADIENT EASTWARD
TOWARDS GEORGES RD, TREAT-
MENT PLANT. NO SEDIMENT
IN BOTTOM OF MANHOLE OR
CHANNEL. FEW 2-3" ROCKS
WILL NOT COLL. A SED. SAMPLE.
AT MANHOLE AT LAUNDRY
SUMP

1200 ALL SAMPLES IN COOLER
ON ICE FOR MONDAY (12TH)
PICKUP

1230 ECC + PRUDENT OFF SITE

Jeff Dunn





Date 3 DEC 12 (25)

T. HERNANDEZ. JR. P.G.

STARTED 7:30 AM

LOADED HSS - ~~EAST~~ AT CC-77 Laundry Building

STANDBY - 10:23 AM

Driller at site - 5 Borings

SB-2 11:03

1-4' BRN SILTY CLAY w/ INTERBEDDED SANDS } FILL

4-7' " " }

7-10' DK BK/BRN FILL @ 10' BRN LT SILTY CLAY (NATIVE)

10-13' SAND SEAM (WATER) BRN LT SILTY CLAY

TRANS TO GRAY CLAY NATIVE

SB-4 11:26

1-4' LT BRN SILTY CLAY NATIVE

4-7' " " @ 6.5' SAND SEAM.

SB-3 11:37

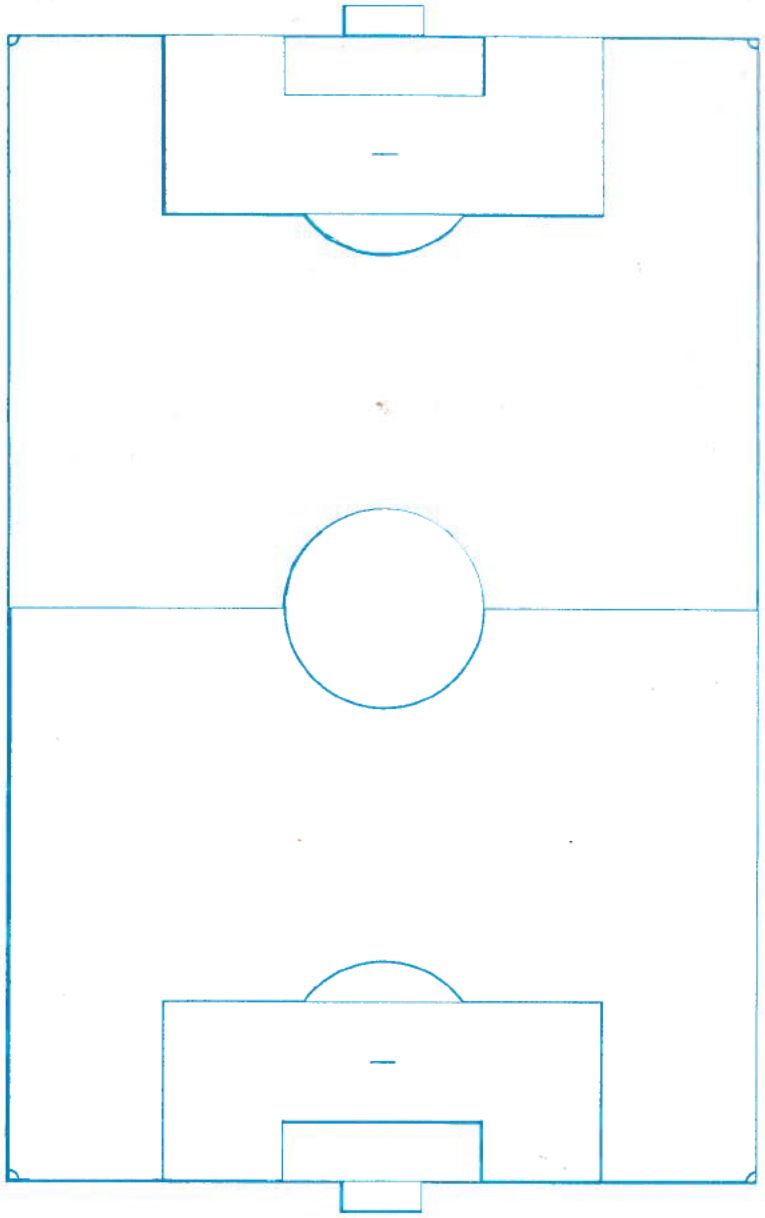
1-4' BRN SLTY CLAY TRANS TO GRAY CLAY } FILL

4-7' SAND SEAM / DK GRAY / GREEN CLAY SLIG. TRANS BRN }

SB-5 11:50

1-4' BRN SILTY CLAY } NATIVE ALL

4-7' " " }



Date 3 DEC 12 (26)

SB-1 12:00
1-4' BRN SILTY CLAY (PEA GRAVEL) @ 21"
4-7' BRN CLAY (MOISTURE)
1-4 + 4-7 @ 1200
MOVED TO RV5 CC 72 1:30pm

1-13' LT BRN CL

[redacted]

INSTRUMENT CALIBRATION LOG

Project/Site Name Ravenna, Ohio **Calibrated By** David Comeau

Instrument/Serial Number	Pre-calibration Reading	Post-calibration Reading	Calibration Gas/Concentration	Date
MiniRae 3000 PID 11805	0.0 \ 99.2	0.0 \ 110	Isobutylene / 100ppm	12-3-12
MiniRae 3000 PID 10899	0.0 \ 102	0.0 \ 102	Isobutylene / 100ppm	12-3-12
MiniRae 3000 PID 11805	0.0 / 100	0.0 / 103	Isobutylene / 100ppm	12-4-12
MiniRae 3000 PID 10899	0.0 / 100	0.0 / 101	Isobutylene / 100ppm	12-4-12
MiniRae 3000 PID 11805	0.0 / 100	0.0 / 107	Isobutylene / 100ppm	12-5-12
MiniRae 3000 PID 11805	0.0 / 99.4	0.0 / 101	Isobutylene / 100ppm	12/6/12
MiniRae 3000 PID 11805	0.0 / 99.7	0.0 / 101	Isobutylene / 100ppm	12/7/12
MiniRae 3000 PID 11805	0.0 / 100	0.0 / 99.3	Isobutylene / 100ppm	12/10/12
MiniRae 3000 PID 10899	0.0 / 100	0.0 / 102	Isobutylene / 100ppm	12/10/12
MiniRae 3000 PID 11805	0.0 / 100	0.0 / 99.9	Isobutylene / 100ppm	12/11/12
MiniRae 3000 PID 10899	0.0 / 100	0.0 / 101	Isobutylene / 100ppm	12/11/12
MiniRae 3000 PID 11805	0.0 / 100	0.0 / 99.7	Isobutylene / 100ppm	12/12/12

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APPENDIX C

BORING LOGS

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Environmental Chemical Corporation

LOG OF SOIL BORING

Coordinates: X 492890.695 Y 4557833.099
Surface Elevation: 1021.795 ft msl
Casing Below Surface:
Reference Elevation:
Reference Description:

Job. No. 5461.004	Client ACOE-Louisville	Location RVAAP	
		CC-77	DU01
Drilling Method:	Direct-Push Geoprobe 6620DT	Boring No. SB01 Laundry Sump	
Sampling Method:	2" diameter-5 ft SS sampler MacroCore liner	Sheet 1 of 1	

					Drilling	
Water Lev.	NA				Start	Finish
Time	NA				3-Dec-12	3-Dec-12
Date	NA					
Reference	NA					

Digital Picture #	Sample Type	In. Drvn / In. Recvrd	Dpth. Csg.	Sample depth	PID (ppm)	Blows per 6 in.	Depth (feet)	USCS Log	Surface Conditions: Grass
		60/31			0.0	NA	0	SM	Dark brown sandy silt, firm, moist
							1	CL	Brown silty clay, firm moist
	ISM			1-4 ft			2		Some pea gravel at 21" bgs
							3		
							4		
							5		
		24/24			0.0	NA		CL	Transition to brown clay (native),firm, moist
	ISM			4-7 ft			6		
	ISM			1-7 ft			7		End of boring at 7 ft bgs
							8		
							9		
							10		
							11		
							12		
							13		
							14		
							15		
							16		
							17		
							18		
							19		
							20		
							21		
							22		
							23		
							24		

Logged by: T. Hernandez P.G. - Prudent Tech.
Drilling Contractor: Frontz Drilling
WELL SPECIFICATIONS: Well not installed
Diam. of casing: 2"
BOH: 7 ft bgs
Screen Interval:
Riser Interval:
Date: 3-Dec-12
Driller: Joe Teter
Sandpack:
Bentonite: 0-7 ft bgs

Notes: NA = Not Applicable
See Sample Summary Sheets for analytical information
ISM = Incremental Sampling Method

Environmental Chemical Corporation

LOG OF SOIL BORING

Coordinates: X 492895.522 Y 4557833.132
Surface Elevation: 1021.615 ft msl
Casing Below Surface:
Reference Elevation:
Reference Description:

Job. No. 5461.004	Client ACOE-Louisville		Location RVAAP CC-77 DU01	
Drilling Method:	Direct-Push Geoprobe 6620DT		Boring No. SB02 Laundry Sump	
Sampling Method:	2" diameter-5 ft SS sampler MacroCore liner		Sheet 1 of 1	
			Drilling	
Water Lev. NA			Start 3-Dec-12	Finish 3-Dec-12
Time NA				
Date NA				
Reference NA				

Digital Picture #	Sample Type	In. Drvn / In. Recvrd	Dpth. Csg.	Sample Depth	PID (ppm)	Blows per 6 in.	Depth (feet)	USCS Log	Surface Conditions: Grass
		60/31			0.0	NA	0		Grass
								SM	Dark brown sandy silt, firm, moist
							1	CL	Brown silty clay with interbedded sand seams with organic roots (fill material),
									firm, moist
							2		
CC77 #1	ISM			1-4 ft					
							3		
							4		
							5		
		60/25			0.0	NA		CL	Dark silty clay with interbedded sand seams with organic roots (fill material),
CC77 #2	ISM			4-7 ft			6		firm, moist
	ISM			1-7 ft			7		
							8		
							9		
							10	CL	Dark silty clay- fill at 10', firm, moist
		36/32			0.0	NA		CL	Brown- light silty clay (native), firm, moist
							11	SM/CL	Sand seam (wet) light brown silty clay transitions to gray clay 10'-13' (native)
							12		
	Comp.			7-13 ft			13		End of boring at 13 ft bgs
							14		
							15		
							16		
							17		
							18		
							19		
							20		
							21		
							22		
							23		
							24		

Logged by: T. Hernandez P.G. - Prudent Tech. Date: 3-Dec-12
Drilling Contractor: Frontz Drilling Driller: Joe Teter
WELL SPECIFICATIONS: Well not installed
Diam. of casing: 2" Screen Interval: Sandpack:
BOH: 13 ft bgs Riser Interval: Bentonite: 0-13 ft bgs

Notes: NA = Not Applicable
See Sample Summary Sheets for analytical information
ISM = Incremental Sampling Method
Comp. = Composite

Environmental Chemical Corporation

LOG OF SOIL BORING

Coordinates: X492892.908 Y 4557831.574
Surface Elevation: 1021.802 ft msl
Casing Below Surface:
Reference Elevation:
Reference Description:

Job. No. 5461.004	Client ACOE-Louisville		Location RVAAP CC-77 DU01	
Drilling Method:	Direct-Push Geoprobe 6620DT		Boring No. SB03 Laundry Sump	
Sampling Method:	2" diameter-5 ft SS sampler MacroCore liner		Sheet 1 of 1	
			Drilling	
Water Lev. NA			Start 3-Dec-12	Finish 3-Dec-12
Time NA				
Date NA				
Reference NA				

Digital Picture #	Sample Type	In. Drvr / In. Recvrd	Dpth. Csg.	Sample depth	PID (ppm)	Blows per 6 in.	Depth (feet)	USCS Log	Surface Conditions: Grass
		60/31			0.0	NA	0		Grass
								SM	Dark brown sandy silt, firm, moist
							1		
								CL	Brown silty clay, gray clay, firm, moist
							2		
	ISM			1-4 ft					
							3		
							4		
								SM	Sand seam at 4.5 ft bgs
							5		
		24/20			0.0	NA		CL	Dark gray / green clay with slag- transitions to brown (fill material), firm, moist
	ISM			4-7 ft			6		
	ISM			1-7 ft			7		End of boring at 7 ft bgs
							8		
							9		
							10		
						NA			
							11		
							12		
							13		
							14		
							15		
							16		
							17		
							18		
							19		
							20		
							21		
							22		
							23		
							24		

Logged by: T. Hernandez P.G. - Prudent Tech. Date: 3-Dec-12
Drilling Contractor: Frontz Drilling Driller: Joe Teter
WELL SPECIFICATIONS: Well not installed
Diam. of casing: 2" Screen Interval: Sandpack:
BOH: 7 ft bgs Riser Interval: Bentonite: 0-7 ft bgs

Notes: NA = Not Applicable
See Sample Summary Sheets for analytical information
ISM = Incremental Sampling Method

Environmental Chemical Corporation

LOG OF SOIL BORING

Coordinates: X 492895.939 Y 4557829.089
Surface Elevation: 1021.461 ft msl
Casing Below Surface:
Reference Elevation:
Reference Description:

Job. No.	5461.004	Client	ACOE-Louisville		Location	RVAAP CC-77 DU01
Drilling Method:		Direct-Push Geoprobe 6620DT			Boring No.	SB04 Laundry Sump
Sampling Method:		2" diameter-5 ft SS sampler MacroCore liner			Sheet 1 of 1	
					Drilling	
Water Lev.	NA				Start	Finish
Time	NA				3-Dec-12	3-Dec-12
Date	NA					
Reference	NA					

Digital Picture #	Sample Type	In. Drvn / In. Recvrd	Dpth. Csg.	Sample depth	PID (ppm)	Blows per 6 in.	Depth (feet)	USCS Log	Surface Conditions: Grass
		60/22			0.0	NA	0		Grass
								SM	Dark brown sandy silt, firm, moist
							1		
								CL	Light brown silty clay, firm, moist
							2		
	ISM			1-4 ft					
							3		
							4		
							5		
		24/21			0.0	NA		CL	Light brown silty clay, firm, miost
	ISM			4-7 ft			6		
								SM	At 6.5 sand seam (native), soft,moist
	ISM			1-7 ft			7		End of boring at 7 ft.
							8		
							9		
							10		
							11		
							12		
							13		
							14		
							15		
							16		
							17		
							18		
							19		
							20		
							21		
							22		
							23		
							24		

Logged by: T. Hernandez P.G. - Prudent Tech.
Drilling Contractor: Frontz Drilling
WELL SPECIFICATIONS: Well not installed
Diam. of casing: 2"
BOH: 7 ft bgs
Screen Interval:
Riser Interval:
Date: 3-Dec-12
Driller: Joe Teter
Sandpack:
Bentonite: 0-7 ft bgs

Notes: NA = Not Applicable
See Sample Summary Sheets for analytical information
ISM = Incremental Sampling Method

Environmental Chemical Corporation

LOG OF SOIL BORING

Coordinates: X 492890.691 Y 4557829.11
Surface Elevation: 1022.196 ft msl
Casing Below Surface:
Reference Elevation:
Reference Description:

Job. No. 5461.004	Client ACOE-Louisville			Location RVAAP	CC-77 DU01
Drilling Method:	Direct-Push Geoprobe 6620DT			Boring No. SB05	Laundry Sump
Sampling Method:	2" diameter-5 ft SS sampler MacroCore liner			Sheet 1 of 1	
				Drilling	
Water Lev. NA				Start 3-Dec-12	Finish 3-Dec-12
Time NA					
Date NA					
Reference NA					

Digital Picture #	Sample Type	In. Drvr / In. Recvrd	Dpth. Csg.	Sample depth	PID (ppm)	Blows per 6 in.	Depth (feet)	USCS Log	Surface Conditions: Grass
		60/32			0.0	NA	0		Grass
								SM	Dark brown sandy silt, firm, moist
							1		
								CL	Brown silty clay (native), firm, moist
							2		
	ISM			1-4 ft					
							3		
CC77 #3							4		
							5		
CC77 #3		24/21			0.0	NA		CL	Brown silty clay (native), firm, moist
	ISM			4-7 ft			6		
	ISM			1-7 ft			7		End of boring at 7 ft bgs
							8		
							9		
							10		
							11		
							12		
							13		
							14		
							15		
							16		
							17		
							18		
							19		
							20		
							21		
							22		
							23		
							24		

Logged by: T. Hernandez P.G. - Prudent Tech. Date: 3-Dec-12
Drilling Contractor: Frontz Drilling Driller: Joe Teter
WELL SPECIFICATIONS: Well not installed
Diam. of casing: 2" Screen Interval: Sandpack:
BOH: 7 bgs Riser Interval: Bentonite: 0-7 ft bgs

Notes: NA = Not Applicable
See Sample Summary Sheets for analytical information
ISM = Incremental Sampling Method

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HTW DRILLING LOG

HOLE NO. SB1

1. COMPANY NAME: ECC	2. DRILLING SUBCONTRACTOR: FRONTZ DRILLING — SHEET 1 OF 2 SHEETS
3. PROJECT: RAVENNA AAP	4. LOCATION: EC 77 Lamping Sump
5. NAME OF DRILLER: J. TETER	6. MANUFACTURER'S DESIGNATION OF DRILL: GEOPROBE 6620 DT
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 5' MACROCORE; 2" OIA SS SAMPLER	8. HOLE LOCATION: SB1
	9. SURFACE ELEVATION: —
	10. DATE STARTED: 3 DEC 12 — 11. DATE COMPLETED: 3 DEC 12
12. OVERBURDEN THICKNESS: —	15. DEPTH GROUNDWATER ENCOUNTERED: NA
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: —
14. TOTAL DEPTH OF HOLE: 7'	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): —
18. GEOTECHNICAL SAMPLES: NA — DISTURBED: — — UNDISTURBED: —	19. TOTAL NUMBER OF CORE BOXES: —

20. SAMPLES FOR CHEMICAL ANALYSIS: SEE SAMPLE SUMMARY SHEET	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %
	—	—	—	—	—	

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
	BENTONITE	—	—	T. HEANUE2

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
CL	0	BRN SILTY CLAY (FEW GRAVEL 2")	0.0				
CL	5	~~THINNS TO~~ BRN CLAY (MOISTURE)	0.0				
		TO 7'					
	10						
	15						
	20						
	25						
	30						
	35						
	40						
	45						

MRK FORM APPROVED 56

PROJECT: RAVENNA AAP — HOLE NO. SB1

HTW DRILLING LOG

HOLE NO. SB-2

1. COMPANY NAME: ECC	2. DRILLING SUBCONTRACTOR: FRONTIER DRILLING — SHEET 1 OF 2 SHEETS
3. PROJECT: RAVENNA AAP	4. LOCATION: CC77 Laundry Sump
5. NAME OF DRILLER: J. TETER	6. MANUFACTURER'S DESIGNATION OF DRILL: GEOPROBE 662c DT
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 5 FT MACROCORE; 2" DIA. SS SAMPLER	8. HOLE LOCATION: SB2
	9. SURFACE ELEVATION: —
	10. DATE STARTED: 3 DEC 17 — 11. DATE COMPLETED: 3 DEC 17
12. OVERBURDEN THICKNESS: —	15. DEPTH GROUNDWATER ENCOUNTERED: NA
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: —
14. TOTAL DEPTH OF HOLE: 13'	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): —
18. GEOTECHNICAL SAMPLES: NA — DISTURBED: — — UNDISTURBED: —	19. TOTAL NUMBER OF CORE BOXES: —
20. SAMPLES FOR CHEMICAL ANALYSIS: SEE SAMPLE SUMMARY SHEETS — VOC: — — METALS: — — OTHER (SPECIFY): — — OTHER (SPECIFY): — — OTHER (SPECIFY): —	21. TOTAL CORE RECOVERY %:
22. DISPOSITION OF HOLE: — — BACKFILLED: BENTONITE — MONITORING WELL: NA — OTHER (SPECIFY): —	23. SIGNATURE OF INSPECTOR: T. HERNANDEZ

REV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h PID
CL	0	BRN SILTY CLAY W/ INTERMITTENT SAND SEAMS W/ ORG ROOTS	FILL MATERIAL				0.0
CL	4'	DARK SILTY CLAY W/ INTERMITTENT SAND SEAMS W/ ORG ROOTS					0.0
CL		DK SILTY CLAY — FILL 10'- BRN-LT SILTY CLAY (NATIVE) 7-10' SAND SEAM (WATER) BRN LT SILTY CLAY TRANS TO GRAY					0.0
	13'	TO 13'		10-13' GRAY (NATIVE)			
	20						
	25						
	30						
	40						
	45						

MPK FORM JUN 86 55

PROJECT: RAVENNA AAP — HOLE NO.: SB2

HTW DRILLING LOG

HOLE NO. SB-3

SHEET 1 OF 2 SHEETS

1. COMPANY NAME: ECC	2. DRILLING SUBCONTRACTOR: FRONTZ DRILLING
3. PROJECT: RAVENNA AAP	4. LOCATION: CC77 Laundry Sump
5. NAME OF DRILLER: J. TETER	6. MANUFACTURER'S DESIGNATION OF DRILL: 6620 DT
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 5' MACROCORE; 2" SS SAMPLER DIA.	8. HOLE LOCATION: SB-3
	9. SURFACE ELEVATION: —
	10. DATE STARTED: 3 DEC 12
	11. DATE COMPLETED: 3 DEC 12
12. OVERBURDEN THICKNESS:	15. DEPTH GROUNDWATER ENCOUNTERED: NA
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: —
14. TOTAL DEPTH OF HOLE: 7'	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): —

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

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %
SEE SAMPLE SUMMARY SHEET	—	—	—	—	—	

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
	BETONITE	—	—	T. HERNANDEZ

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	~~REMARKS~~ h PID
CL		BRN SILTY CLAY GRAY CLAY					0.0
CL	5	@ 4.5 SAND SEAM DK GRAY/GREEN CLAY w/SLAG. TRANS BRN		(FILL MATERIAL)			0.0
	10	TD 7'					
	15						
	20						
	25						
	30						
	35						
	40						
	45						

MRK FORM JUN 80 55

PROJECT: RAVENNA AAP

HOLE NO. SB3

HTW DRILLING LOG

HOLE NO. SB-4

1. COMPANY NAME ECC	2. DRILLING SUBCONTRACTOR FRONTIER DRILLING — SHEET 1 OF 2 SHEETS
3. PROJECT RAVENNA AAP	4. LOCATION CL 77 Lagoon Sump
5. NAME OF DRILLER J. TOTER	6. MANUFACTURER'S DESIGNATION OF DRILL GEOPROBE 6620 DT
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 5' MACROCORE; 2" OD SS SPLIT SPOON	8. HOLE LOCATION SB-A
	9. SURFACE ELEVATION —
	10. DATE STARTED 3 DEC 12 — 11. DATE COMPLETED 3 DEC 12
12. OVERBURDEN THICKNESS —	15. DEPTH GROUNDWATER ENCOUNTERED NA
13. DEPTH DRILLED INTO ROCK NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED —
14. TOTAL DEPTH OF HOLE 7'	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY) —

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

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %
SEE SAMPLE PARTS	—	—	—	—	—	

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
—	BENTONITE	—	—	T. HEANNOCK

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
CL	0	LT BRN SILTY CLAY	0.0				
CL	5'	LT BRN SILTY CLAY MOIST @ 6'5' SAND SEAM	0.0				
	10	TD 7'					
	15						
	20						
	25						
	30						
	35						
	40						
	45						

MRK FORM AMC 55

PROJECT RAVENNA AAP

HOLE NO. SB4

HTW DRILLING LOG

HOLE NO. SB-5

1. COMPANY NAME: ECC	2. DRILLING SUBCONTRACTOR: FRONTIER DRILLING
3. PROJECT: RAVENNA AAP	4. LOCATION: CC 77 Lowering Sump
5. NAME OF DRILLER: J. TATAR	6. MANUFACTURER'S DESIGNATION OF DRILL: CENTAUR 6620 DT
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 5" MACHINE AUGER; 2" DIA SS SPLIT SPOON	8. HOLE LOCATION: SB-5
	9. SURFACE ELEVATION: —
	10. DATE STARTED: 3 DEC 12 / 11. DATE COMPLETED: 3 DEC 12
12. OVERBURDEN THICKNESS: —	15. DEPTH GROUNDWATER ENCOUNTERED: NA
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED
14. TOTAL DEPTH OF HOLE: 7'	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)

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

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %
SEE SAMPLE SUMMARY SHEET	—	—	—	—	—	

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
	BENTONITE	—	—	T. HERNANDEZ

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
CL	0	BRN SILTY CLAY (NATIVE)	0.0				
CL	5	" " "					
	10						
	15	TD 7					
	20						
	25						
	30						
	35						
	40						
	45						

MRK FORM 55

PROJECT: RAVENNA AAP

HOLE NO. SB5

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APPENDIX D

DATA VERIFICATION REPORT

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66 **ACRONYMS AND ABBREVIATIONS**
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°C	Degrees Celsius
% REC	Percent Recovery
µg/kg	Micrograms per kilogram
µg/l	Micrograms per liter
BTEX	Benzene, toluene, ethylbenzene, and xylenes
BHC	Hexachlorocyclohexane
CC	Army Environmental Compliance-Related Cleanup Program
CCB	Continuing Calibration Blank
CCV	Continuing Calibration Verification
DDD	Dichlorodiphenyldichloroethane
DDE	Dichlorodiphenyldichloroethylene
DDT	Dichlorodiphenyltrichloroethane
DL	Detection Limit
DoD	Department of Defense
DRO	Diesel Range Organics
DU	Decision Unit
DVR	Data Verification Report
DVRW	Data Verification Report Worksheet
ECC	Environmental Chemical Corporation
ELAP	Environmental Laboratory Accreditation Program
ER	Equipment Rinsate
FD	Field Duplicate
FWCUG	Facility-Wide Cleanup Goal
FWSAP	Facility-Wide Sampling and Analysis Plan
FWQAPP	Facility-Wide Quality Assurance Project Plan
GRO	Gasoline Range Organics
ICB	Initial Calibration Blank
ICV	Initial Calibration Verification
ID	Identification
ISM	Incremental Sampling Methodology
J	Estimated
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection
LOQ	Limit of Quantitation
MeOH	Methanol
MB	Method Blank
mg/kg	Milligrams per kilogram
MRL	Method Reporting Limit
MS	Matrix Spike
MS/MSD	Matrix Spike/Matrix Spike Duplicate
NA	Not Applicable
No.	Number
PCB	Polychlorinated Biphenyls

ACRONYMS AND ABBREVIATIONS (CONTINUED)

QA	Quality Assurance
QAPP	Quality Assurance Project Plan
QC	Quality Control
QSM	Quality Systems Manual
R	Rejected
RPD	Relative Percent Difference
RI	Remedial Investigation
RVAAP	Ravenna Army Ammunition Plant
SAIC	Science Applications International Corporation
SDG	Sample Delivery Group
SI	Site Inspection
SOP	Standard Operating Procedure
SorW	Source Water
SVOC	Semi-Volatile Organic Compound
TAL	Target Analyte List
TB	Trip Blank
TPH	Total Petroleum Hydrocarbon
U	Undetected
UJ	Not Detected, with estimated reporting limit
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
VOC	Volatile Organic Compound

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1.0 INTRODUCTION

This Data Verification Report (DVR) presents the results of an analytical data review and verification conducted by Environmental Chemical Corporation (ECC) in support of the site investigation at CC (Army Environmental Compliance-Related Cleanup Program) RVAAP (Ravenna Army Ammunition Plant)-77 Building 1037 Laundry Waste Water Sump. Project data verification followed the direction provided in the Facility-Wide Quality Assurance Project Plan (FWQAPP), which is part of the Facility-Wide Sampling and Analysis Plan (FWSAP) (SAIC 2011). Protocol for analytical data verification and validation has been updated to the following references:

- Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, 2010 Version 4.2 (DoD 2010)
- U.S. Army Corps of Engineers (USACE), Louisville District QSM Supplement (USACE 2007)
- United States Environmental Protection Agency (USEPA) National Functional Guidelines for Superfund Organic Methods Data Review, EPA-540/R-08-01, June 2008 (USEPA 2008)
- USEPA National Functional Guidelines for Inorganic Superfund Data Review, EPA-540-R-10-011, January 2010 (USEPA 2010)
- Quality Assurance Project Plan (QAPP) for Site Inspections and Remedial Investigations at Compliance Restoration Sites, July 2012 (ECC 2012)

All data were verified by ECC in accordance with the FWQAPP using ECC's automated electronic verification software and manual methods.

All incremental sampling methodology (ISM) samples were prepared for analysis by TestAmerica of North Canton, Ohio, and all soil analyses were performed by TestAmerica of North Canton, Ohio, except for propellant and explosives analyses, which were performed at TestAmerica of West Sacramento, California, and metals (except mercury), which were performed at TestAmerica of Pittsburgh, Pennsylvania. All three laboratories are DoD Environmental Laboratory Accreditation Program (ELAP) certified. The sample delivery groups (SDG) associated with CC RVAAP-77 field sample data are 240-17525-1/-2 and 240-18297-1. Source water and equipment rinsate analyses were also performed by TestAmerica Laboratories. See Table 1-1 for a sample summary and Table 1-2 for a summary of sampling activities.

The sampling activities conducted in support of this project are presented in Section 1.0 Introduction. The data verification findings are presented Section 2.0 Data Quality Verification Results, and the supporting Data Verification Report Worksheets (DVRW) are provided in Appendix D Worksheets 1 and 2. Section 3.0 Overall Assessment provides the field, analytical,

and project completeness, and Section 4.0 References presents the data verification guidance used for this project. All results with final qualifiers are presented in Appendix E.

1.1 Sampling Activities

The total number of field and quality control (QC) samples collected are summarized below.

Table 1-1: Sample Summary

Matrix	Number of Field Samples	Number of Field Duplicates	Number of MS/MSD	Number of Associated Trip Blanks	Total Number of Samples
Surface Soil	1	1	1	1	4
Subsurface Soil	8	0	0	2	10

Notes:
MS/MSD = Matrix Spike/Matrix Spike Duplicate

A complete list of the sample locations, the corresponding sample identification (ID) numbers, and the requested analyses for the decision units (DU) are presented in Table 1-2. In addition, field duplicate (FD) sample and the matrix spike (MS)/matrix spike duplicate (MSD) sample pair locations are presented.

1.2 Laboratory Activities

A list of extraction and analytical methods are presented in Table 1-3.

130 **Table 1-2: Sampling Activities Summary**
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Site	Depth (ft)	SDG	Sample ID	Decision Unit	Location	Date	COC No.	FD	MS/ MSD	FULL SUITE	VOC	BTEX/ MTBE	SVOC	TPH GRO	TPH DRO	TAL Metals	PCB	Pesticides	Herbicides	Explosives	Propellants
Surface Soil																					
CC-RVAAP-077	0-1	240-17525-1/-2	077SS-0001M-0001-SO	DU01	Bldg 1037 Laundry Sump	11-Nov-12	50740			X	X		X			X	X	X		X	X
CC-RVAAP-077	0-1	240-17525-1/-2	077SS-0001M-0002-SO	MS/MSD of 0001M	Bldg 1037 Laundry Sump	11-Nov-12	50740		X		X		X			X	X	X		X	X
CC-RVAAP-077	0-1	240-17525-1/-2	077SS-0002M-0001-SO	Dup of 0001M	Bldg 1037 Laundry Sump	11-Nov-12	50740	X			X		X			X	X	X		X	X
Sub Surface Soil																					
CC-RVAAP-077	1-4	240-18297-1	077SB-0004M-0001-SO	DU01 SB-01	Bldg 1037 Laundry Sump	3-Dec-12	48829													X	X
CC-RVAAP-077	4-7	240-18297-1	077SB-0005M-0001-SO	DU01 SB-01	Bldg 1037 Laundry Sump	3-Dec-12	48829													X	X
CC-RVAAP-077	1-7 vertical ISM	240-18297-1	077SB-0006M-0001-SO	DU01 SB-01	Bldg 1037 Laundry Sump	3-Dec-12	48829													X	X
CC-RVAAP-077	1-7 vertical ISM	240-18297-1	077SB-0007M-0001-SO	DU01 SB-02	Bldg 1037 Laundry Sump	3-Dec-12	48829													X	X
CC-RVAAP-077	1-7 vertical ISM	240-18297-1	077SB-0008M-0001-SO	DU01 SB-03	Bldg 1037 Laundry Sump	3-Dec-12	48829													X	X
CC-RVAAP-077	1-7 vertical ISM	240-18297-1	077SB-0009M-0001-SO	DU01 SB-04	Bldg 1037 Laundry Sump	3-Dec-12	48829													X	X
CC-RVAAP-077	1-7 vertical ISM	240-18297-1	077SB-0010M-0001-SO	DU01 SB-05	Bldg 1037 Laundry Sump	3-Dec-12	48829													X	X
CC-RVAAP-077	7-13, DSB	240-18297-1	077SB-0011-0001-SO	DU01 SB-02	Bldg 1037 Laundry Sump	3-Dec-12	48829													X	X
Field Quality Control – Trip Blanks																					
CC-RVAAP-077	NA	240-17525-1	077SS-0003-0001-TB	TB-1	NA	11-Nov-12	50740				X										
CC-RVAAP-077	NA	240-18297-1	072SB-0006-0001-TB	TB-2	NA	3-Dec-12	48830				X										
CC-RVAAP-077	NA	240-18297-1	072SB-0020-0001-TB	TB-3	NA	3-Dec-12	48832				X										
2012 Sampling Event	NA	240-18735-1	070-0060-0001-TB	QC TB-1	NA	12-Dec-12	50743				X										
2012 Sampling Event	NA	240-18735-1	070SB-005-0001-TB	QC TB-2	NA	12-Dec-12	50743							X							
2012 Sampling Event	NA	240-17796-1/-2	076-0068-0001-TB	QC TB-7	NA	15-Nov-12	48707				X										

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Table 1-2: Sampling Activities Summary (Continued)

Site	Depth (ft)	SDG	Sample ID	Decision Unit	Location	Date	COC No.	FD	MS/ MSD	FULL SUITE	VOC	BTEX/ MTBE	SVOC	TPH GRO	TPH DRO	TAL Metals	PCB	Pesticides	Herbicides	Explosives	Propellants
2012 Sampling Event	NA	240-18703-1	076-0141-0001-TB	QC TB-8	QC TB-8	9-Dec-12	50746				X			X							
2012 Sampling Event	NA	240-18703-1	076-0142-0001-TB	QC TB-9	QC TB-9	9-Dec-12	50746				X			X							
Field Quality Control - Source Water																					
All 2012 Sampling Events	non-dedicated hand sampling tools	240-18735-1/-2	070-0057-0001-Source Water	Source Water (ECC bottled decontamination water)	SorW-1	12-Dec-12	50743				X	X	X	X	X	X	X	X	X	X	X
2012 Subsurface Sampling Event	Direct Push Tools	240-18735-1/-2	070-0056-0001-Source Water	Source Water (Driller decontamination water)	SorW-2	12-Dec-12	50743				X	X	X	X	X	X	X	X	X	X	X
Field Quality Control -Equipment Rinsate																					
2012 SI Sampling Event	non-dedicated hand sampling tools during sampling event	240-17796-1/-2	076-0067-0001-ER	Equipment Rinsate Blank	ER-1	15-Nov-12	48707				X	X	X	X	X	X	X	X	X	X	X
2012 SI Sampling Event	non-dedicated hand sampling tools during sampling event	240-18703-1	076-0140-0001-ER	Equipment Rinsate Blank	ER-2	9-Dec-12	50746				X	X	X	X	X	X	X	X	X		X

Notes:
Bldg = Building
ISM = Incremental Sampling Methodology
ID = Identification
SB = Soil Boring
DSB = Deep Soil Boring
GRO = Gasoline Range Organic
DRO = Diesel Range Organic
COC = Chain of Custody
TAL = Target Analyte List
No. = Number
PCB = Polychlorinated Biphenyls
FD = Field Duplicate
DU = Decision Unit
Dup = Duplicate
TPH = Total Petroleum Hydrocarbon
MTBE = Methyl Tertiary Butyl Ether
VOC = Volatile Organic Compound
SVOC = Semi-volatile Organic Compound
SDG = Sample Delivery Group
ft = feet
MS/MSD = Matrix Spike/Matrix Spike Duplicate
Propellants include nitroguanidine, nitrocellulose, and nitroglycerin.
ER = Equipment Rinsate
SorW= Source Water
QC = Quality Control
TB = Trip Blank
SI = Site Inspection
RI = Remedial Investigation
NA = Not Applicable
No.= Number
BTEX = Benzene, toluene, ethylbenzene, and xylenes

171 **Table 1-3: Sample Preparation and Analytical Methods**
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Soil/Dry Sediment/Wet Sediment			
Analytical Group	**Analytical Method**	**Sample Preparation Method**	**Holding Time to Extraction/Holding Time to Analysis**
Propellants*	Nitrocellulose E353.2	E353.2	28 days
	Nitroguanidine SW8330 Modified	SW8330	14 days/40 days
TAL Metals	Metals SW6020	SW3050B	180 days
	Mercury SW7471A	SW7471A	28 days
Explosives	SW8330B	SW8330B	14 days/40 days
Pesticides	SW8081	SW3540C	14 days/40 days
PCBs	SW8082	SW3540C	14 days/40 days
VOCs	SW8260B	SW5035	DI Water 48 hours to analysis or freezing MeOH or freezing/14 days
SVOCs	SW8270C	SW3540C	14 days/40 days
Groundwater/Aqueous			
Analytical Group	**Analytical Method**	**Sample Preparation Method**	**Holding Time to Extraction/Holding Time to Analysis**
VOC	SW8260B	SW5030B	14 days
SVOC	SW8270C	SW3510C	7 days/40 days
TPH-GRO	SW8015V Modified	SW5030B	14 days
TPH-DRO	SW8015D Modified	SW3520C	7 days/40 days
TAL Metals	SW6020	SW3050B	180 days
	SW7470A	SW7470A	28 days
PCB	SW8081	SW3520C	7 days/40 days
Pesticides	SW8082	SW3520C	7 days/40 days
Herbicides	SW8151A	SW3510	7 days/40 days
Explosives	SW8330A	SW8330A	7 days/40 days
Propellants*	Nitroguanidine SW8330	SW8330	7 days/40 days
	Nitrocellulose E353.2	E353.2	28 days

Notes:
All soil and dry sediment ISM samples, except for VOCs, undergo incremental sample preparation by air drying, then passed through a rotary hammer mill, and sieved.

DI = Deionized
TAL = Target Analyte List
TPH = Total Petroleum Hydrocarbons
GRO = Gasoline Range Organics
DRO = Diesel Range Organics
SVOC = Semi-volatile organic compound
PCB = Polychlorinated Biphenyls
VOC = Volatile organic compound

*Propellant nitroglycerin reported by explosives method (SW8330B)
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2.0 DATA QUALITY VERIFICATION RESULTS

Data verification is a systematic automated and manual review of all project data for compliance with the FWQAPP Section 10.2.1. This section provides highlights of significant data verification findings (i.e. rejected results, matrix issues), which are discussed in the applicable section below and presented in the reference tables. The reference tables are a summary of all reported data. The DVRWs provide specific details such as acceptance ranges, and spike values for automated parameters. The following parameters are evaluated during data verification:

- Holding time
- Blanks (method blank, initial calibration blank [ICB], and/or continuing calibration blank [CCB])
- Serial Dilution
- Post Digestion Spike
- Internal Standards
- Laboratory control samples (LCS)
- Method Reporting Limit (MRL) check
- Calibration (initial calibration, continuing calibration verification [CCV], and initial calibration verification [ICV])
- Surrogates
- Matrix spike/matrix spike duplicates
- Field duplicate results
- Laboratory case narrative
- Dual column relative percent difference (RPD)
- Sample re-analysis and Secondary dilutions
- Trip Blanks (TB)
- Equipment Rinsate (ER) Blanks
- Source Water (SorW)

2.1 Data Verification Qualifier Definitions

The data verification qualifier flags and their definitions are presented below:

- U Undetected: The analyte was analyzed for, but not detected. Reported at the Limit of Detection (LOD).
- UJ The analyte was not detected with estimated reporting limit: The analyte was not detected; however, the reporting limit is estimated due to discrepancies in meeting certain analyte-specific QC criteria.
- J Estimated: The analyte was positively identified, the quantitation is an estimation due to discrepancies in meeting certain analyte-specific QC criteria. J is also used

to report detections between the detection limit (DL) and the Limit of Quantitation (LOQ).

- R The data are rejected due to deficiencies in meeting QC criteria and may not be used for decision making.
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification".
- NJ The analysis indicates the presence of an analyte that has been “tentatively identified” and the associated numerical value represents its approximate concentration.

The DoD QSM data reporting convention used will be used. Non-detect data will be reported at the LOD in Appendix D and Appendix E. Within the analytical data package, the laboratory reporting forms also use the DoD QSM convention of reporting non-detect data at the LOD. The laboratory reporting forms also present the LOQ for the sample result.

2.2 Sample Receipt at the Laboratory

All sample custodial possession and transfer requirements were met for samples received at the three laboratories. No data required qualification based on sample condition. The sample coolers were received within the recommended temperature range of 4 ± 2 degrees Celsius (°C) or just below 2° C, but not frozen.

2.3 Holding Times

All extractions and analyses were performed within QAPP method-specific holding times.

2.4 Tuning and Calibration

All methods using a mass selective detector must be tuned in accordance with the standard operating procedure (SOP), and method calibrations must meet the DoD QSM criteria. All applicable method tunes met method criteria. Select semi-volatile organic compounds (SVOC) and pesticides had ICV and/or CCV out of limits. See Table 2-1 for qualified data.

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Table 2-1: Calibration – Initial and Continuing Calibration Verification

Sample Identification	Date Sampled	SDG	Lab Number	Parameter	Units	Lab Result	Data Review Qualifier	Comments	Final Result
SVOC									
077SS-0001M-0001-SO	11/11/2012	240-17525-1	240-17525-5	3,3'-Dichlorobenzidine	µg/kg	320	UJ	ICV	320 UJ
077SS-0002M-0001-SO	11/11/2012	240-17525-1	240-17525-6	3,3'-Dichlorobenzidine	µg/kg	200	UJ	ICV	200 UJ
Pesticides									
077SS-0001M-0001-SO	11/11/2012	240-17525-1	240-17525-5	Aldrin	µg/kg	13	UJ	CCV	13 UJ
077SS-0001M-0001-SO	11/11/2012	240-17525-1	240-17525-5	alpha BHC	µg/kg	13	UJ	CCV	13 UJ
077SS-0001M-0001-SO	11/11/2012	240-17525-1	240-17525-5	alpha Endosulfan	µg/kg	6.7	UJ	CCV	6.7 UJ
077SS-0001M-0001-SO	11/11/2012	240-17525-1	240-17525-5	alpha-Chlordane	µg/kg	13	UJ	CCV	13 UJ
077SS-0001M-0001-SO	11/11/2012	240-17525-1	240-17525-5	beta BHC	µg/kg	13	UJ	CCV	13 UJ
077SS-0001M-0001-SO	11/11/2012	240-17525-1	240-17525-5	beta Endosulfan	µg/kg	13	UJ	CCV	13 UJ
077SS-0001M-0001-SO	11/11/2012	240-17525-1	240-17525-5	delta BHC	µg/kg	13	UJ	CCV	13 UJ
077SS-0001M-0001-SO	11/11/2012	240-17525-1	240-17525-5	Dieldrin	µg/kg	6.7	UJ	CCV	6.7 UJ
077SS-0001M-0001-SO	11/11/2012	240-17525-1	240-17525-5	Endosulfan Sulfate	µg/kg	13	UJ	CCV	13 UJ
077SS-0001M-0001-SO	11/11/2012	240-17525-1	240-17525-5	Endrin	µg/kg	6.7	UJ	CCV	6.7 UJ
077SS-0001M-0001-SO	11/11/2012	240-17525-1	240-17525-5	Endrin Aldehyde	µg/kg	13	UJ	CCV	13 UJ
077SS-0001M-0001-SO	11/11/2012	240-17525-1	240-17525-5	Endrin Ketone	µg/kg	6.7	UJ	CCV	6.7 UJ
077SS-0001M-0001-SO	11/11/2012	240-17525-1	240-17525-5	gamma BHC (Lindane)	µg/kg	13	UJ	CCV	13 UJ
077SS-0001M-0001-SO	11/11/2012	240-17525-1	240-17525-5	gamma-Chlordane	µg/kg	6.7	UJ	CCV	6.7 UJ
077SS-0001M-0001-SO	11/11/2012	240-17525-1	240-17525-5	Heptachlor	µg/kg	13	UJ	CCV	13 UJ
077SS-0001M-0001-SO	11/11/2012	240-17525-1	240-17525-5	Heptachlor Epoxide	µg/kg	13	UJ	CCV	13UJ
077SS-0001M-0001-SO	11/11/2012	240-17525-1	240-17525-5	Methoxychlor	µg/kg	33	UJ	CCV	33 UJ
077SS-0001M-0001-SO	11/11/2012	240-17525-1	240-17525-5	4,4'-DDD	µg/kg	6.7	UJ	CCV	6.7 UJ
077SS-0001M-0001-SO	11/11/2012	240-17525-1	240-17525-5	4,4'-DDE	µg/kg	5.2	J	CCV	5.2 J
077SS-0001M-0001-SO	11/11/2012	240-17525-1	240-17525-5	4,4'-DDT	µg/kg	6.7	UJ	CCV	6.7 UJ
077SS-0001M-0001-SO	11/11/2012	240-17525-1	240-17525-5	Toxaphene	µg/kg	200	UJ	CCV	200 UJ
077SS-0002M-0001-SO	11/11/2012	240-17525-1	240-17525-6	Aldrin	µg/kg	13	UJ	CCV	13 UJ
077SS-0002M-0001-SO	11/11/2012	240-17525-1	240-17525-6	alpha BHC	µg/kg	13	UJ	CCV	13 UJ
077SS-0002M-0001-SO	11/11/2012	240-17525-1	240-17525-6	alpha Endosulfan	µg/kg	6.6	UJ	CCV	6.6 UJ
077SS-0002M-0001-SO	11/11/2012	240-17525-1	240-17525-6	alpha-Chlordane	µg/kg	13	UJ	CCV	13 UJ

Table 2-1: Calibration – Initial and Continuing Calibration Verification (Continued)

Sample Identification	Date Sampled	SDG	Lab Number	Parameter	Units	Lab Result	Data Review Qualifier	Comments	Final Result
077SS-0002M-0001-SO	11/11/2012	240-17525-1	240-17525-6	beta BHC	µg/kg	13	UJ	CCV	13 UJ
077SS-0002M-0001-SO	11/11/2012	240-17525-1	240-17525-6	beta Endosulfan	µg/kg	13	UJ	CCV	13 UJ
077SS-0002M-0001-SO	11/11/2012	240-17525-1	240-17525-6	delta BHC	µg/kg	13	UJ	CCV	13 UJ
077SS-0002M-0001-SO	11/11/2012	240-17525-1	240-17525-6	Dieldrin	µg/kg	6.6	UJ	CCV	6.6 UJ
077SS-0002M-0001-SO	11/11/2012	240-17525-1	240-17525-6	Endosulfan Sulfate	µg/kg	13	UJ	CCV	13 UJ
077SS-0002M-0001-SO	11/11/2012	240-17525-1	240-17525-6	Endrin	µg/kg	6.6	UJ	CCV	6.6 UJ
077SS-0002M-0001-SO	11/11/2012	240-17525-1	240-17525-6	Endrin Aldehyde	µg/kg	13	UJ	CCV	13 UJ
077SS-0002M-0001-SO	11/11/2012	240-17525-1	240-17525-6	Endrin Ketone	µg/kg	6.6	UJ	CCV	6.6 UJ
077SS-0002M-0001-SO	11/11/2012	240-17525-1	240-17525-6	gamma BHC (Lindane)	µg/kg	13	UJ	CCV	13 UJ
077SS-0002M-0001-SO	11/11/2012	240-17525-1	240-17525-6	gamma-Chlordane	µg/kg	6.6	UJ	CCV	6.6 UJ
077SS-0002M-0001-SO	11/11/2012	240-17525-1	240-17525-6	Heptachlor	µg/kg	13	UJ	CCV	13 UJ
077SS-0002M-0001-SO	11/11/2012	240-17525-1	240-17525-6	Heptachlor Epoxide	µg/kg	13	UJ	CCV	13UJ
077SS-0002M-0001-SO	11/11/2012	240-17525-1	240-17525-6	Methoxychlor	µg/kg	33	UJ	CCV	33 UJ
077SS-0002M-0001-SO	11/11/2012	240-17525-1	240-17525-6	4,4'-DDD	µg/kg	6.6	UJ	CCV	6.6UJ
077SS-0002M-0001-SO	11/11/2012	240-17525-1	240-17525-6	4,4'-DDE	µg/kg	8.6	J	CCV	8.6 J
077SS-0002M-0001-SO	11/11/2012	240-17525-1	240-17525-6	4,4'-DDT	µg/kg	6.7	UJ	CCV	6.7 UJ
077SS-0002M-0001-SO	11/11/2012	240-17525-1	240-17525-6	Toxaphene	µg/kg	200	UJ	CCV	200 UJ

Notes:
SDG = Sample delivery group
µg/kg = Micrograms per kilogram
ICV = Initial calibration verification
CCV = Continuing calibration verification
J = Estimated
UJ = Not Detected, reporting limit estimated
SVOC = Semi-volatile organic compound
BHC = Hexachlorocyclohexane
DDD = Dichlorodiphenyldichloroethane
DDE = Dichlorodiphenyldichloroethylene
DDT = Dichlorodiphenyltrichloroethane

2.5 Laboratory Method Blanks, Initial Calibration Blanks, Continuing Calibration Blanks

A laboratory method blank (MB) is an analyte-free matrix that is carried through the entire preparation and analysis sequence for the purpose of identifying potential contamination introduced during preparation and analysis. Method blanks were analyzed for each sample batch for all analyses. ICB and CCB are analyzed for metals and nitrocellulose analyses to assess the potential for carry over in the analytical method. If a contaminant is detected below the LOQ and has a result less than 5 times the associated blank level, then the sample value will be U (undetected) flagged at the LOD. If a contaminant is detected above the LOQ and has a result less than 5 times the associated blank level, then the sample value will be U flagged and the LOQ will be changed to that of the contaminant concentration in the sample.

All applicable laboratory blank detections resulting in qualified sample results are presented in Table 2-2.

Table 2-2: Method Blanks

Sample Identification	Date Sampled	SDG	Lab Number	Parameter	Units	Lab Result[1]	Data Review Qualifier	Comments	Final Result
SVOC									
077SS-0002M-0001-SO	11/11/2012	240-17525-1	240-17525-6	bis(2-Ethylhexyl) Phthalate	µg/kg	67	U	Method Blank	67 U
VOC									
077SS-0002M-0001-SO	11/11/2012	240-17525-1	240-17525-6	2-Hexanone	µg/kg	0.92	U	Method Blank	0.92 U
077SS-0003M-0001-TB	11/11/2012	240-17525-1	240-17525-7	Methylene Chloride	µg/l	0.92	U	Method Blank	0.92 U

Notes:
SDG = Sample delivery group
U = Undetected
µg/kg = Micrograms per kilogram
µg/l = Micrograms per liter
SVOC = Semi-volatile organic compound
VOC = Volatile organic compound
TB = Trip Blank
[1]Entries under the lab result column have been adjusted to show the final result. The originally reported data can be found in the laboratory data package provided in Appendix E.

2.6 Field Blank Quality Control – Trip Blanks, Equipment Rinsate Blanks, and Source Water Samples

A trip blank is an analyte-free matrix that accompanies samples through the sample collection and transportation process to identify potential volatile organic compound (VOC) cross-contamination during storage and shipment. No samples were qualified on the basis of the trip blanks. See Attachment A for trip blank data and equipment rinsate blank data.

Source water sample data are used to determine the pre-existing levels of chemicals in decontamination fluids. For the sampling at this site, two source water samples were collected, see Table 1-2. Source water sample SorW-1 was collected from water used to decontaminate hand held tools. Source water sample SorW-2 was collected from drillers water used to decontaminate direct push sampling tools used in 2012. See Attachment B for source water data.

SorW-1 has detections of several metals, barium, calcium, copper, magnesium, and sodium. SorW-1 also has several VOC detections, 2-butanone, acetone, toluene, bromodichloromethane, chloroform, and dibromochloromethane, and a TPH-GRO detection. Source water sample SorW-2 has metal detections, aluminum, arsenic, cobalt, copper, calcium, barium, iron, magnesium, manganese, potassium, sodium, and zinc. SorW-2 also had a trace level TPH-GRO detection. This TPH-GRO detection in source water sample SorW-2 is not attributed to the source water used for drilling tool decontamination, as the associated trip blank, QC TB-4, also had a TPH-GRO detection.

QC trip blanks were collected along with the source water and rinsate blank samples. The trip blank, QC TB-1, associated with source water sample SorW-1, had a trace-level chloroform detection, and QC TB-2 and QC TB-4 both had TPH-GRO detections.

Source water is used as the final rinsate during equipment decontamination, and a sample of this water was submitted as the equipment rinsate sample. The equipment rinsate results are evaluated to determine the effectiveness of equipment decontamination. As the source water was tested, the pre-existing levels of chemicals in the equipment rinsate are known, and these are not further evaluated when assessing the equipment rinsate results.

Comparison of the source water samples, SoRW-1 and SorW-2, results to the equipment rinsate results, ER-1 and ER-2, shows similar chemicals in all samples, except for detected levels of chromium, manganese, thallium, zinc, and nickel, which may be from the stainless steel sampling tools. Soil samples for metals are reported in the part per million range, so these low-level equipment rinsate results show that sampling tools were properly decontaminated. There was no apparent cross-contamination between metal soil samples. The only organic detected in ER-1 and ER-2 was chloroform at trace levels. Chloroform was not detected in site soil samples.

The equipment rinsate results show that sampling tools were properly decontaminated and that there was no apparent cross-contamination between soil samples.

2.7 Surrogates

Surrogates are compounds not normally found in the environment that are added (spiked) into samples prior to extraction (for extractable methods) or prior to analysis (for non-extractable methods). The percent recovery (% REC) of each surrogate is used to assess the success of the sample preparation process for an individual sample. All applicable surrogates were within QAPP limits.

2.8 Laboratory Control Samples and/or Laboratory Control Sample Duplicates

An LCS consists of a matrix, similar to that of the field sample, which is spiked with known concentrations of analytes. The LCS % REC is a measure of the accuracy of the preparation and analytical methods. The laboratory control sample duplicate (LCSD), if analyzed, is a duplicate preparation and analysis of the LCS. The differences between the LCS and LCSD recoveries are used to calculate the relative percent difference (RPD), which is a measure of the precision of the preparation and analytical methods. LCS samples were analyzed for each sample batch for all analyses. All applicable LCS recoveries were within QAPP limits.

2.9 Matrix Spikes and Matrix Spike Duplicates

MS/MSD analyses measure method accuracy and precision for a project-specific matrix. A field sample is split into three portions (original, MS, and MSD) and known amounts of analytes are added (spiked) into the MS and MSD portions of the sample. The analytical results of these two portions are compared to each other for reproducibility using the RPD. These results are also compared against the unspiked portion of the sample for the percent of the spiked analytes. Low matrix spike recovery exceedances for non-detects are qualified as UJ (non-detect with an estimated reporting limit) and detects qualified as J (estimated). High matrix spike recovery exceedances are qualified as J (estimated) for detections.

MS/MSD samples were analyzed for each SDG for all analyses. MS/MSD results were provided for all analyses. All MS and MSD recoveries were within QAPP limits except for antimony, copper, and magnesium. Matrix spike recovery below the lower limit required qualification of antimony and greater than the upper limit required qualification of copper and magnesium. All MS/MSD RPDs were within QAPP limits. See Table 2-3 for a summary of MS/MSDs.

Table 2-3: Matrix Spikes

Sample Identification	Date Sampled	SDG	Lab Number	Parameter	Units	Lab Result	Data Review Qualifier	Comments	Final Result
077SS-0001M-0001-SO	11/11/2012	240-17525-2	240-17525-5	Antimony	mg/kg	0.20	J	MS % REC low	0.17 J
077SS-0001M-0001-SO	11/11/2012	240-17525-2	240-17525-5	Copper	mg/kg	16	J	MS % REC high	17 J
077SS-0001M-0001-SO	11/11/2012	240-17525-2	240-17525-5	Magnesium	mg/kg	2800	J	MS % REC high	2700 J

Notes:
mg/kg = Milligrams per kilogram
J = Estimated
SDG = Sample delivery group
MS = Matrix Spike
% REC = Percent Recovery

2.10 Field Duplicates

Field duplicate analytical results provide information on the ability to reproduce field results and account for error introduced from handling, shipping, preparing, and analyzing field samples. All field duplicate relative percent differences were within limits. See DVRW 8 for field duplicate results.

2.11 Dilutions and Re-Analyses

Secondary dilutions are made as required to stay within the calibration range of the analytical method or to overcome matrix issues. Re-analyses are performed as necessary to confirm QC exceedances in accordance with the method SOP and DoD QSM. Re-extractions were performed for select VOCs within holding time, as corrective action; however, the re-extraction and original results were similar. The original VOCs were reported. Dilutions were necessary for select pesticides and SVOC samples due to the matrix. All LODs were below Facility-Wide Cleanup Goals (FWCUG). The FWCUGs are presented in the FWSAP (SAIC 2011).

2.12 Internal Standards

All methods using internal calibration must have internal standards spiked into them in accordance with the method SOP and DoD QSM. All applicable internal standards were within method criteria.

2.13 Serial Dilution

Serial dilution for metals analysis may be performed if MS recovery is out of limits and analyte results are greater than 50 times the method reporting limit. Serial dilutions were within limits.

2.14 Post Digestion Spikes

Post digestion spikes for metals analysis may be performed if MS recovery is out of limits and analyte results are not greater than 50 times the method reporting limit. All post digestion spikes were within limits.

2.15 Dual Column Relative Percent Difference

All detected results from dual column methods were confirmed on a second column. Dual column comparisons between the detected explosive, pesticides and PCBs results were made using the identification summary forms. All applicable dual-column results were within limits.

2.16 Method Reporting Limit Checks

The ability of the laboratory to quantitatively meet the MRL is verified by analyzing pre-analysis and post-analysis MRL check samples. The MRL check criterion is 70 -130%. If the MRL % REC is less than 70 %, then non-detects are qualified as UJ and detects are qualified as J. If the MRL % REC is greater than 130%, then detects are qualified as J. If MRL % REC less than 10%, then data is qualified as rejected (R). The MRL check is within limits for all methods, except for SVOC n-nitrosodiphenylamine, which had 0% recovery. N-nitroso-diphenylamine was qualified as "R" in sample 077SS-0001M-0001-SO and associated field duplicate 077SS-0002M-0001-S0. See Table 2-4 for a summary of MRL check samples.

Table 2-4: Method Reporting Limit Check

Sample ID	Date Sampled	SDG	Lab No.	Parameter	Units	Lab Result	Data Review Qualifier	Comments	Final Result
077SS-0001M-0001-SO	11/11/12	240-17525-1	240-17525-5	n-Nitroso-diphenylamine	µg/kg	110	R	MRL <10% REC	110 R
077SS-0002M-0001-SO	11/11/12	240-17525-1	240-17525-6	n-Nitroso-diphenylamine	µg/kg	67	R	MRL <10% REC	67 R

Notes:
ID = Identification
No. = Number
R = Rejected
%REC = Percent recovery
µg/kg= Micrograms per kilogram
SDG = Sample delivery group
MRL = Method recovery limit

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3.0 OVERALL ASSESSMENT

The following subsections present the field completeness, analytical completeness, and project completeness determinations for this project.

3.1 Field Completeness

Field completeness for sample collection was assessed by comparing the number of sample points sampled to the number of sample points planned for collection in accordance with FWSAP QAPP Section 13.1. Field completeness was 100%. See Table 3-1 for a summary of field completeness.

3.2 Analytical Completeness

Analytical completeness was assessed by comparing the number of valid (analytes that have not been rejected) laboratory analyte measurements performed to the number of laboratory analyte measurements planned. Analytical completeness was 100% for all analytical methods except for SVOCs due to rejection of n-nitrosodiphenylamine in two samples. SVOC analytical completeness was 98.5%. See Table 3-2 for a summary of analytical completeness.

3.3 Project Completeness

Project completeness combines sampling and analytical protocols to assess the expectations of the project as a whole. Project completeness is determined by comparing the percentage of samples/measurements that are determined to be usable to the total number of samples/ measurements planned. Project completeness is calculated using the field completeness and analytical completeness (quality data completeness) percentages. The overall project completeness exceeds the project completeness goal of 90%. Project completeness was 100% for all but SVOCs, which had a project completeness of 98.5%. See Table 3-3 for a summary of project completeness.

3.4 Data Usability

The overall quality of the CC RVAAP-77 Site Investigation (SI) data meets or exceeds the established project objectives. Through proper implementation of the project data verification and assessment process, 99.6% of the project information has been determined to be acceptable for use. Select analytes had reporting limits greater than FWQAPP requirements, as documented in the DVRWs, but the data with elevated limits is still usable. All undetected analytes were reported at detection levels that were adequate for use during data interpretation and statistical applications.

Data are usable as qualified J, U, or UJ. A single compound has been qualified R in both a primary and duplicate sample. The SVOC n-nitrosodiphenlyamine had a MRL recovery less than criteria (<10%), resulting in the analytes being qualified as rejected "R. Data that have been estimated provide indications of either accuracy, precision, or sensitivity being less than desired but adequate for interpretation. All undetected analytes were reported at detection levels that were adequate for use during data interpretation and statistical applications. Qualifiers have been applied to data as appropriate.

Data produced for this project demonstrate they can withstand scientific scrutiny; are appropriate for its intended purpose; are technically defensible; and are of known and acceptable sensitivity, precision, and accuracy. Data integrity has been documented through proper implementation of quality assurance (QA) and QC measures. A third-party QA data validation report was completed, which is in general concurrence with the data verification findings, and that report is provided in Appendix F. The environmental information presented has an established confidence that allows utilization for the project objectives and provides data for future needs.

534

Table 3-1: Field Completeness Summary

	VOC	SVOC	TAL Metals	PCB	Pesticides	Explosives	Propellants[1]
Collected Field Samples	3	2	2	3	3	10	10
Planned Field Samples	3	2	2	3	3	10	10
% Complete	100	100	100	100	100	100	100

Table 3-2: Analytical Completeness Summary

	VOC	SVOC	TAL Metals	PCB	Pesticides	Explosives	Propellants[1]
Valid Analytes	99	130	46	21	63	150	20
Collected Analytes	99	132	46	21	63	150	20
% Complete	100	98.5	100	100	100	100	100

Table 3-3: Project Completeness Summary

	VOC	SVOC	TAL Metals	PCB	Pesticides	Explosives	Propellants[1]
Valid Analytes	99	130	46	21	63	150	20
Planned Analytes	99	132	46	21	63	150	20
% Complete	100	98.5	100	100	100	100	100

535 Notes for Table 3-1, 3-2, and 3-3:
536 Field Duplicate included in sample count
537 Propellants include nitroguanidine, nitrocellulose, and nitroglycerin.
538 VOC = Volatile Organic Compound
539 SVOC = Semi-volatile Organic Compound
540 TAL = Target Analyte List
541 PCB = Polychlorinated Biphenyls
542 [1] Nitroglycerin counted for completeness as an explosive
543
544

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4.0 REFERENCES

ECC. 2012. *Final Quality Assurance Project Plan for Site Inspections and Remedial Investigations at Compliance Restoration Sites Revision 0 Ravenna Army Ammunition Plant Ravenna, Ohio,* Revision 0. July.

SAIC. 2011. *Final Facility-Wide Sampling and Analysis Plan for Environmental Investigations, Revision 0*. February.

United States Department of Defense (DoD). 2010. *Final Quality Systems Manual for Environmental Laboratories,* Environmental Data Quality Workgroup, Final Version 4.2. October.

United States Army Corp of Engineers (USACE). 2007. *Louisville DoD QSM Supplement Version 1*. Final, March.

United States Environmental Protection Agency (USEPA). 2008. *Final Contract Laboratory Program National Functional Guidelines for Superfund Organic Data Review*, EPA-540/R-08-01. June.

USEPA. 2010. *Final Contract Laboratory Program National Functional Guidelines for Superfund Inorganic Data Review*, EPA-540-R-10-011. January.

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WORKSHEET 1

Automated Data Review Summary for 240-17525-1/-2

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AUTOMATED DATA REVIEW SUMMARY for 240-17525-1_/-2

Facility: Ravenna Army Ammunition Plant

Event: Fall 2012 SI/RI Sampling

Guidance Document: Ravenna Army Ammunition Plant, Quality Assurance Project Plan, Oct. 3, 2012

Contract Laboratory: TestAmerica, Inc., North Canton, OH

Field Contractor: Environmental Chemical Corp., Otis Ang Base, MA

Data Review Contractor: ECC

SDG: 240-17525-1/-2 (77-SS)2, Certified - 1/7/2013 by frederickroche

QC Level: ADR

Project Manager:

Data Reviewer: Veronica Champagne

Data Reviewer Title: Senior QA Chemist

Date of Review Report: January 03, 2013

Samples Included in SDG 240-17525-1_(77-SS)2

Analytical Method/ Leach Method	Normal Soil Samples	Normal Water Samples	Field QC Soil Samples	Field QC Water Samples
E353.2/NONE	1		1	
SW6020/NONE	1		1	
SW7471A/NONE	1		1	
SW8081/NONE	2		1	
SW8082/NONE	1		1	
SW8260B/NONE	1	1	1	0
SW8270C/NONE	2		1	
SW8330B/NONE	1		1	

This report assesses the analytical data quality associated with the analyses listed on the preceding cover page. This assessment has been made through a combination of automated data review (ADR) and supplemental manual review, the details of which are described below. The approach taken in the review of this data set is consistent with the requirements contained in the Ravenna Army Ammunition Plant, Quality Assurance Project Plan, Oct. 3, 2012 to the extent possible. Where definitive guidance is not provided, data has been evaluated in a conservative manner using professional judgment. In cases where two qualifiers are listed as an action, such as 'J/UJ', the first qualifier applies to positive results, and the second to non-detect results.

Samples were collected by Environmental Chemical Corp., Otis Ang Base, MA; analyses were performed by TestAmerica, Inc., North Canton, OH and were reported under sample delivery group (SDG) 240-17525-1_(77-SS)2. Results have been evaluated electronically using electronic data deliverables (EDDs) provided by the laboratory. The laboratory data summary forms (hard copy) have been reviewed during this effort and compared to the automated review output. Findings based on the automated data submission and manual data verification processes are detailed in the ADR narrative.

The following quality control elements were supported by the electronic deliverable and were evaluated during this review effort:

- Blank
- Blank - Negative
- Field Duplicate RPD
- LCS Recovery
- MS Recovery
- MS RPD
- Prep Hold Time
- Surrogate
- Test Hold Time

The following quality control elements were either not applicable to the deliverable, or were not supported by the electronic deliverable, and were therefore not included in the automated data review. Those elements required for the project were reviewed manually, as narrated in the Comment section below.

- Ambient Blank
- Calibration Blank
- Calibration Blank - Negative
- Continuing Calibration Verification
- Equipment Blank
- Field Blank
- Initial Calibration Verification
- Lab Replicate RPD
- LCS RPD

Material Blank

Trip Blank

A representative sampling or ten percent of sample and QC results were manually evaluated for compliance with project specific requirements and consistency with hard copy results. The following summaries were generated during the evaluation of this data set and are included in this report as applicable.

Batch – The analytical batch report is reviewed for completeness and compliance with project specific requirements. Incomplete or non-compliant run sequences are identified and their impact on data quality are discussed in the narrative.

QC Outlier – Results exceeding the evaluation criteria are reviewed for compliance with project requirements and a minimum of ten percent of the non-compliant QC values reported electronically are verified for consistency with hard-copy values.

Qualified Results – Qualified results are evaluated for compliance with project requirements and ten percent of qualified results are verified for consistency with the QC Outliers.

Rejected Results – All rejected results are evaluated for compliance with project requirements. The reason for rejection of the data is verified against hard copy data.

Field Duplicates – Field duplicate comparison results are evaluated for compliance with project requirements and ten percent of values reported are verified for consistency with the hard-copy data.

Data Submission Warnings – Warnings encountered during the data submission process are evaluated and their affect on data quality is discussed in the narrative below.

Analytical deficiencies, project non-compliance issues and inconsistencies with hard copy results observed during ADR evaluation process and their impact on data quality are summarized in the narrative below.

A total of 132 results (34.38%) out of the 384 results (sample and field QC samples) reported are qualified based on review and 3 results (0.78%) have been rejected. Trace values are not counted as qualified results in the above count. The qualified results are detailed in the following tables and discussed in the narrative below, where appropriate.

Narrative Comments

Analytical Method	Comment
E353.2	
SW6020	
SW7471A	
SW8081	
SW8082	

SW8260B	
SW8270C	
SW8330B	

03-Jan-2013

Reviewed by Veronica Champagne, Senior QA Chemist

Reason and Comment Code Definitions

Reasons	
Code	**Definition**
A	Serial dilution
A1	Ambient Blank
B	The analyte was found in an associated blank as well as in the sample.
B2	CCB
B3	CCB - Neg
c	LCS - low
C	LCS Recovery
d	Field Duplicate RPD
D	MS RPD
D1	Lab Replicate RPD
D2	No precision available
F	Field Blank
F1	Hydrocarbon pattern does not match standard
G1	Initial Calibration RRF
G2	Initial Calibration RSD
h	Holding time exceeded by less than 2X.
H	Holding time exceeded by more than 2X.
H1	Test Hold Time
H2	Prep Hold Time
I	Surrogate recovery outside project limits.
J	CRA/CRI Recovery
K	An analyte (non-common laboratory artifact) was detected in the sample at a concentration less than 5X the concentration detected in the associated method blank.
L	Lab Blank
L1	Lab Blank - Neg
m	MS - low
M	MS Recovery
N	Blank - No Action
O	ICS
P	Sample preservation/collection requirement not met.
P1	Column RPD

P2	Improper preparation/extraction
q	Encore sample holding time exceeded by less than 2X.
Q	Encore sample holding time exceeded by more than 2X.
Q1	Material Blank
R	Exceeds Linear Calibration Range
S	Internal standard
T	Trip Blank
TI	Tentatively Identified Compound
TR	Trace Level Detect
U	Receipt Temperature
V	Equipment Blank
V1	ICV
V2	CCV
V3	CCV RRF
V4	Sample Receipt Condition
W	Column breakdown (pesticides)
X	Raised reporting limit
Y	Cooler temperature greater than 10 degrees C.
y	Cooler temperature greater than 4 degrees C, but less than 10 degrees C.
Y1	False Positive
Y2	Data rejected due to radiological anomalies
Z	LCS RPD
Z2	Analyte not confirmed on second column

Flag Code and Definitions

Flag	Definition
U	Undetected: The analyte was analyzed for, but not detected.
UJ	The analyte was not detected; however, the result is estimated due to discrepancies in meeting certain analyte-specific quality control criteria.
J	Estimated: The analyte was positively identified, the quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
R	The data are rejected due to deficiencies in meeting QC criteria and may not be used for decision making.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification".
NJ	The analysis indicates the presence of an analyte that has been “tentatively identified” and the associated numerical value represents its approximate concentration.

AUTOMATED DATA REVIEW SUMMARY for 240-17525-1_(77-SS)2

Batch Report

Test Method: E353.2; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
6863	6824	NA	LABQC	SQ	LABQC	MB 320-6800/1-B		1/1	04-Dec-2012 7:05 AM	04-Dec-2012 7:05 AM	04-Dec-2012 2:12 PM	LB
	6824	NA	LABQC	SQ	LABQC	LCS 320-6800/2-B		1/1	04-Dec-2012 7:05 AM	04-Dec-2012 7:05 AM	04-Dec-2012 2:14 PM	BS
	6824	NA	77-1037-DU1-SS	SO	077SS-0001M-0001-SO	240-17525-5		1/1	11-Nov-2012 10:45 AM	04-Dec-2012 7:05 AM	04-Dec-2012 3:12 PM	N
	6824	NA	77-1037-DU1-SS	SO	077SS-0001M-0002-SO	240-17525-5		1/1	11-Nov-2012 10:45 AM	04-Dec-2012 7:05 AM	04-Dec-2012 3:14 PM	MS
	6824	NA	77-1037-DU1-SS	SO	077SS-0001M-0002-SO	240-17525-5		1/1	11-Nov-2012 10:45 AM	04-Dec-2012 7:05 AM	04-Dec-2012 3:16 PM	SD
	6824	NA	77-1037-DU1-SS	SO	077SS-0002M-0001-SO	240-17525-6		1/1	11-Nov-2012 10:45 AM	04-Dec-2012 7:05 AM	04-Dec-2012 3:26 PM	FD

Test Method: SW6020; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
59218	59046	NA	LABQC	SQ	LABQC	MB 180-59046/1-A		1/1	20-Nov-2012 12:18 PM	20-Nov-2012 12:18 PM	21-Dec-2012 5:59 PM	LB
	59046	NA	LABQC	SQ	LABQC	LCS 180-59046/2-A		1/1	20-Nov-2012 12:18 PM	20-Nov-2012 12:18 PM	21-Dec-2012 6:03 PM	BS
	59046	NA	LABQC	SO	077SS-0001M-0002-SO	240-17525-5		1/1	20-Nov-2012 12:18 PM	20-Nov-2012 12:18 PM	21-Dec-2012 7:00 PM	N
	59046	NA	77-1037-DU1-SS	SO	077SS-0001M-0002-SO	240-17525-5		1/1	11-Nov-2012 10:45 AM	20-Nov-2012 12:18 PM	21-Dec-2012 7:09 PM	SD
	59046	NA	77-1037-DU1-SS	SO	077SS-0001M-0002-SO	240-17525-5		1/1	11-Nov-2012 10:45 AM	20-Nov-2012 12:18 PM	21-Dec-2012 7:13 PM	MS
	59046	NA	77-1037-DU1-SS	SO	077SS-0002M-0001-SO	240-17525-6		1/1	11-Nov-2012 10:45 AM	20-Nov-2012 12:18 PM	21-Dec-2012 7:25 PM	FD

Test Method: SW7471A; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
67078	65780	NA	LABQC	SQ	LABQC	MB 240-65780/1-A		1/1	20-Nov-2012 2:55 PM	20-Nov-2012 2:55 PM	30-Nov-2012 3:00 PM	LB
	65780	NA	LABQC	SQ	LABQC	LCS 240-65780/2-A		1/1	20-Nov-2012 2:55 PM	20-Nov-2012 2:55 PM	30-Nov-2012 3:02 PM	BS
	65780	NA	77-1037-DU1-SS	SO	077SS-0002M-0001-SO	240-17525-6		1/1	11-Nov-2012 10:45 AM	20-Nov-2012 2:55 PM	30-Nov-2012 3:10 PM	FD
	65780	NA	77-1037-DU1-SS	SO	077SS-0001M-0001-SO	240-17525-5		1/1	11-Nov-2012 10:45 AM	20-Nov-2012 2:55 PM	30-Nov-2012 3:13 PM	N

	65780	NA	77-1037-DU1-SS	SO	077SS-0001M-0002-SO	240-17525-5		1/1	11-Nov-2012 10:45 AM	20-Nov-2012 2:55 PM	30-Nov-2012 3:14 PM	MS
	65780	NA	77-1037-DU1-SS	SO	077SS-0001M-0002-SO	240-17525-5		1/1	11-Nov-2012 10:45 AM	20-Nov-2012 2:55 PM	30-Nov-2012 3:15 PM	SD

Test Method: SW8081; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
66500	65759	NA	LABQC	SQ	LABQC	LCS 240-65759/18-A		1/1	20-Nov-2012 11:21 AM	20-Nov-2012 11:21 AM	28-Nov-2012 3:36 PM	BS
	65759	NA	77-1037-DU1-SS	SO	077SS-0001M-0001-SO	240-17525-5		1/10	11-Nov-2012 10:45 AM	20-Nov-2012 11:21 AM	28-Nov-2012 11:00 PM	N
	65759	NA	LABQC	SO	077SS-0001M-0002-SO	240-17525-5		1/10	20-Nov-2012 11:21 AM	20-Nov-2012 11:21 AM	28-Nov-2012 11:00 PM	N
	65759	NA	77-1037-DU1-SS	SO	077SS-0001M-0002-SO	240-17525-5		1/10	11-Nov-2012 10:45 AM	20-Nov-2012 11:21 AM	28-Nov-2012 11:27 PM	MS
	65759	NA	77-1037-DU1-SS	SO	077SS-0001M-0002-SO	240-17525-5		1/10	11-Nov-2012 10:45 AM	20-Nov-2012 11:21 AM	28-Nov-2012 11:27 PM	SD
	65759	NA	77-1037-DU1-SS	SO	077SS-0001M-0001-SO	240-17525-5		1/10	11-Nov-2012 10:45 AM	20-Nov-2012 11:21 AM	28-Nov-2012 11:54 PM	N
	65759	NA	77-1037-DU1-SS	SO	077SS-0001M-0002-SO	240-17525-5		1/10	11-Nov-2012 10:45 AM	20-Nov-2012 11:21 AM	28-Nov-2012 11:54 PM	MS
	65759	NA	77-1037-DU1-SS	SO	077SS-0001M-0002-SO	240-17525-5		1/10	11-Nov-2012 10:45 AM	20-Nov-2012 11:21 AM	28-Nov-2012 11:54 PM	SD
	65759	NA	77-1037-DU1-SS	SO	077SS-0002M-0001-SO	240-17525-6		1/10	11-Nov-2012 10:45 AM	20-Nov-2012 11:21 AM	29-Nov-2012 12:21 AM	FD
	65759	NA	LABQC	SQ	LABQC	MB 240-65759/17-A		1/1	20-Nov-2012 11:21 AM	20-Nov-2012 11:21 AM	29-Nov-2012 12:47 AM	LB

Test Method: SW8082; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
66323	65753	NA	LABQC	SQ	LABQC	MB 240-65753/23-A		1/1	20-Nov-2012 11:06 AM	20-Nov-2012 11:06 AM	27-Nov-2012 5:50 AM	LB
	65753	NA	77-1037-DU1-SS	SO	077SS-0001M-0001-SO	240-17525-5		1/1	11-Nov-2012 10:45 AM	20-Nov-2012 11:06 AM	27-Nov-2012 7:35 AM	N
	65753	NA	77-1037-DU1-SS	SO	077SS-0001M-0002-SO	240-17525-5		1/1	11-Nov-2012 10:45 AM	20-Nov-2012 11:06 AM	27-Nov-2012 7:35 AM	MS
	65753	NA	77-1037-DU1-SS	SO	077SS-0001M-0001-SO	240-17525-5		1/1	11-Nov-2012 10:45 AM	20-Nov-2012 11:06 AM	27-Nov-2012 7:50 AM	N
	65753	NA	77-1037-DU1-SS	SO	077SS-0001M-0002-SO	240-17525-5		1/1	11-Nov-2012 10:45 AM	20-Nov-2012 11:06 AM	27-Nov-2012 7:50 AM	MS
	65753	NA	77-1037-DU1-SS	SO	077SS-0001M-0002-SO	240-17525-5		1/1	11-Nov-2012 10:45 AM	20-Nov-2012 11:06 AM	27-Nov-2012 8:05 AM	SD
	65753	NA	77-1037-DU1-SS	SO	077SS-0002M-0001-SO	240-17525-6		1/1	11-Nov-2012 10:45 AM	20-Nov-2012 11:06 AM	27-Nov-2012 8:20 AM	FD

	65753	NA	LABQC	SQ	LABQC	LCS 240-65753/24-A		1/1	20-Nov-2012 11:06 AM	20-Nov-2012 11:06 AM	27-Nov-2012 8:35 AM	BS

Test Method: SW8260B; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
66014	NA	NA	LABQC	SQ	LABQC	LCS 240-66014/5		1/1	22-Nov-2012 12:18 AM		22-Nov-2012 12:18 AM	BS
	NA	NA	LABQC	SQ	LABQC	MB 240-66014/7		1/1	22-Nov-2012 1:01 AM		22-Nov-2012 1:01 AM	LB
66020	NA	NA	LABQC	SQ	LABQC	LCS 240-66020/7		1/1	22-Nov-2012 11:09 AM		22-Nov-2012 11:09 AM	BS
	NA	NA	LABQC	SQ	LABQC	MB 240-66020/8		1/1	22-Nov-2012 11:31 AM		22-Nov-2012 11:31 AM	LB
66014	65667	NA	77-1037-DU1-SS	SO	077SS-0001M-0001-SO	240-17525-5		1/1	11-Nov-2012 10:45 AM	13-Nov-2012 8:15 AM	22-Nov-2012 3:43 AM	N
	65667	NA	77-1037-DU1-SS	SO	077SS-0001M-0002-SO	240-17525-5		1/1	11-Nov-2012 10:45 AM	13-Nov-2012 8:15 AM	22-Nov-2012 3:43 AM	MS
	65667	NA	77-1037-DU1-SS	SO	077SS-0001M-0002-SO	240-17525-5		1/1	11-Nov-2012 10:45 AM	13-Nov-2012 8:15 AM	22-Nov-2012 3:43 AM	SD
	65667	NA	77-1037-DU1-SS	SO	077SS-0001M-0001-SO	240-17525-5		1/1	11-Nov-2012 10:45 AM	13-Nov-2012 8:15 AM	22-Nov-2012 4:05 AM	N
	65667	NA	77-1037-DU1-SS	SO	077SS-0001M-0002-SO	240-17525-5		1/1	11-Nov-2012 10:45 AM	13-Nov-2012 8:15 AM	22-Nov-2012 4:05 AM	MS
	65667	NA	77-1037-DU1-SS	SO	077SS-0001M-0002-SO	240-17525-5		1/1	11-Nov-2012 10:45 AM	13-Nov-2012 8:15 AM	22-Nov-2012 4:05 AM	SD
	65667	NA	77-1037-DU1-SS	SO	077SS-0001M-0001-SO	240-17525-5		1/1	11-Nov-2012 10:45 AM	13-Nov-2012 8:15 AM	22-Nov-2012 4:26 AM	N
	65667	NA	77-1037-DU1-SS	SO	077SS-0001M-0002-SO	240-17525-5		1/1	11-Nov-2012 10:45 AM	13-Nov-2012 8:15 AM	22-Nov-2012 4:26 AM	MS
	65667	NA	77-1037-DU1-SS	SO	077SS-0001M-0002-SO	240-17525-5		1/1	11-Nov-2012 10:45 AM	13-Nov-2012 8:15 AM	22-Nov-2012 4:26 AM	SD
	65667	NA	77-1037-DU1-SS	SO	077SS-0002M-0001-SO	240-17525-6		1/1	11-Nov-2012 10:45 AM	13-Nov-2012 8:15 AM	22-Nov-2012 4:47 AM	FD
66020	65667	NA	77-1037-DU1-SS	SO	077SS-0001M-0001-SO	240-17525-5		2/1	11-Nov-2012 10:45 AM	13-Nov-2012 8:15 AM	22-Nov-2012 2:02 PM	N
	65667	NA	77-1037-DU1-SS	SO	077SS-0001M-0002-SO	240-17525-5		2/1	11-Nov-2012 10:45 AM	13-Nov-2012 8:15 AM	22-Nov-2012 2:02 PM	MS
	65667	NA	77-1037-DU1-SS	SO	077SS-0001M-0001-SO	240-17525-5		2/1	11-Nov-2012 10:45 AM	13-Nov-2012 8:15 AM	22-Nov-2012 2:23 PM	N
	65667	NA	77-1037-DU1-SS	SO	077SS-0001M-0002-SO	240-17525-5		2/1	11-Nov-2012 10:45 AM	13-Nov-2012 8:15 AM	22-Nov-2012 2:23 PM	MS
	65667	NA	77-1037-DU1-SS	SO	077SS-0001M-0002-SO	240-17525-5		2/1	11-Nov-2012 10:45 AM	13-Nov-2012 8:15 AM	22-Nov-2012 2:45 PM	SD
	65667	NA	77-1037-DU1-SS	SO	077SS-0002M-0001-SO	240-17525-6		2/1	11-Nov-2012 10:45 AM	13-Nov-2012 8:15 AM	22-Nov-2012 3:06 PM	FD

65929	65929	NA	LABQC	WQ	LABQC	LCS 240-65929/4		1/1	21-Nov-2012 11:14 AM	21-Nov-2012 11:14 AM	21-Nov-2012 11:14 AM	BS
	65929	NA	LABQC	WQ	LABQC	MB 240-65929/6		1/1	21-Nov-2012 11:58 AM	21-Nov-2012 11:58 AM	21-Nov-2012 11:58 AM	LB
	65929	NA	77-1037-DU1-SS	WG	077SS-0003M-0001-TB	240-17525-7		1/1	11-Nov-2012 8:00 AM	21-Nov-2012 12:54 PM	21-Nov-2012 12:54 PM	N

Test Method: SW8270C; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
66529	65931	NA	LABQC	SQ	LABQC	MB 240-65931/23-A		1/1	21-Nov-2012 11:29 AM	21-Nov-2012 11:29 AM	28-Nov-2012 9:22 AM	LB
	65931	NA	LABQC	SQ	LABQC	LCS 240-65931/24-A		1/1	21-Nov-2012 11:29 AM	21-Nov-2012 11:29 AM	28-Nov-2012 9:45 AM	BS
	65931	NA	77-1037-DU1-SS	SO	077SS-0001M-0001-SO	240-17525-5		1/4	11-Nov-2012 10:45 AM	21-Nov-2012 11:29 AM	28-Nov-2012 11:19 AM	N
	65931	NA	77-1037-DU1-SS	SO	077SS-0001M-0002-SO	240-17525-5		1/4	11-Nov-2012 10:45 AM	21-Nov-2012 11:29 AM	28-Nov-2012 11:19 AM	SD
	65931	NA	LABQC	SO	077SS-0001M-0002-SO	240-17525-5		1/4	21-Nov-2012 11:29 AM	21-Nov-2012 11:29 AM	28-Nov-2012 11:19 AM	N
	65931	NA	77-1037-DU1-SS	SO	077SS-0001M-0001-SO	240-17525-5		1/4	11-Nov-2012 10:45 AM	21-Nov-2012 11:29 AM	28-Nov-2012 11:42 AM	N
	65931	NA	77-1037-DU1-SS	SO	077SS-0001M-0002-SO	240-17525-5		1/4	11-Nov-2012 10:45 AM	21-Nov-2012 11:29 AM	28-Nov-2012 11:42 AM	MS
	65931	NA	77-1037-DU1-SS	SO	077SS-0001M-0002-SO	240-17525-5		1/4	11-Nov-2012 10:45 AM	21-Nov-2012 11:29 AM	28-Nov-2012 11:42 AM	SD
	65931	NA	77-1037-DU1-SS	SO	077SS-0001M-0001-SO	240-17525-5		1/4	11-Nov-2012 10:45 AM	21-Nov-2012 11:29 AM	28-Nov-2012 12:05 PM	N
	65931	NA	77-1037-DU1-SS	SO	077SS-0001M-0002-SO	240-17525-5		1/4	11-Nov-2012 10:45 AM	21-Nov-2012 11:29 AM	28-Nov-2012 12:05 PM	MS
	65931	NA	77-1037-DU1-SS	SO	077SS-0001M-0002-SO	240-17525-5		1/4	11-Nov-2012 10:45 AM	21-Nov-2012 11:29 AM	28-Nov-2012 12:05 PM	SD
	65931	NA	77-1037-DU1-SS	SO	077SS-0002M-0001-SO	240-17525-6		1/2.5	11-Nov-2012 10:45 AM	21-Nov-2012 11:29 AM	28-Nov-2012 12:28 PM	FD

Test Method: SW8330B; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
6611	6242	NA	LABQC	SQ	LABQC	MB 320-6242/1-A		1/1	21-Nov-2012 2:38 PM	21-Nov-2012 2:38 PM	29-Nov-2012 5:24 PM	LB
	6242	NA	LABQC	SQ	LABQC	LCS 320-6242/2-A		1/1	21-Nov-2012 2:38 PM	21-Nov-2012 2:38 PM	29-Nov-2012 5:38 PM	BS
	6242	NA	77-1037-DU1-SS	SO	077SS-0001M-0001-SO	240-17525-5		1/1	11-Nov-2012 10:45 AM	21-Nov-2012 2:38 PM	29-Nov-2012 8:02 PM	N
	6242	NA	77-1037-DU1-SS	SO	077SS-0001M-0002-SO	240-17525-5		1/1	11-Nov-2012 10:45 AM	21-Nov-2012 2:38 PM	29-Nov-2012 8:16 PM	MS

	6242	NA	77-1037-DU1-SS	SO	077SS-0001M-0002-SO	240-17525-5	1/1	11-Nov-2012 10:45 AM	21-Nov-2012 2:38 PM	29-Nov-2012 8:30 PM	SD
	6242	NA	77-1037-DU1-SS	SO	077SS-0002M-0001-SO	240-17525-6	1/1	11-Nov-2012 10:45 AM	21-Nov-2012 2:38 PM	29-Nov-2012 8:45 PM	FD
6629	6242	NA	LABQC	SQ	LABQC	MB 320-6242/1-A	2/1	21-Nov-2012 2:38 PM	21-Nov-2012 2:38 PM	30-Nov-2012 11:01 AM	LB
6640	6245	NA	LABQC	SQ	LABQC	MB 320-6245/1-A	1/1	21-Nov-2012 3:09 PM	21-Nov-2012 3:09 PM	01-Dec-2012 11:13 AM	LB
	6245	NA	LABQC	SQ	LABQC	LCS 320-6245/2-A	1/1	21-Nov-2012 3:09 PM	21-Nov-2012 3:09 PM	01-Dec-2012 11:53 AM	BS
	6245	NA	77-1037-DU1-SS	SO	077SS-0001M-0001-SO	240-17525-5	2/1	11-Nov-2012 10:45 AM	21-Nov-2012 3:09 PM	01-Dec-2012 6:35 PM	N
	6245	NA	77-1037-DU1-SS	SO	077SS-0001M-0002-SO	240-17525-5	2/1	11-Nov-2012 10:45 AM	21-Nov-2012 3:09 PM	01-Dec-2012 7:15 PM	MS
	6245	NA	77-1037-DU1-SS	SO	077SS-0001M-0002-SO	240-17525-5	2/1	11-Nov-2012 10:45 AM	21-Nov-2012 3:09 PM	01-Dec-2012 7:15 PM	SD
	6245	NA	77-1037-DU1-SS	SO	077SS-0001M-0002-SO	240-17525-5	2/1	11-Nov-2012 10:45 AM	21-Nov-2012 3:09 PM	01-Dec-2012 7:55 PM	MS
	6245	NA	77-1037-DU1-SS	SO	077SS-0001M-0002-SO	240-17525-5	2/1	11-Nov-2012 10:45 AM	21-Nov-2012 3:09 PM	01-Dec-2012 7:55 PM	SD
	6245	NA	77-1037-DU1-SS	SO	077SS-0002M-0001-SO	240-17525-6	3/1	11-Nov-2012 10:45 AM	21-Nov-2012 3:09 PM	01-Dec-2012 8:35 PM	FD

Field Batch Report

--No Records Found--

QC Outlier Report

Test/Prep/Leach	QC Element	Sample ID/ Lab Sample ID	Run# / Dil'n	Analyte	Result (Units)	Qualifier	Warning Limits	Control Limits	Reason	Comment	Rule	Action Level
E353.2 / METHOD/NONE	Test Hold Time	077SS-0001M-0001-SO (N) / 240-17525-5	1 / 1.00	Nitrocellulose	23.2 (Days)	J/UJ	< 14	< 28	H1	Test Exceeds UWL		
E353.2 / METHOD/NONE	Test Hold Time	077SS-0002M-0001-SO (FD) / 240-17525-6	1 / 1.00	Nitrocellulose	23.2 (Days)	J/UJ	< 14	< 28	H1	Test Exceeds UWL		
SW6020 / SW3050B/NONE	Blank	MB 180-59046/1-A (LB) / MB 180-59046/1-A	1 / 1.00	Aluminum	0.50 (MG/KG)	U/None	< 0.28	< 3	L		5	2.49
SW6020 / SW3050B/NONE	Blank	MB 180-59046/1-A (LB) / MB 180-59046/1-A	1 / 1.00	Barium	0.024 (MG/KG)	U/None	< 0.011	< 1	L		5	0.117
SW6020 / SW3050B/NONE	Blank	MB 180-59046/1-A (LB) / MB 180-59046/1-A	1 / 1.00	Calcium	3.1 (MG/KG)	U/None	< 1.3	< 10	L		5	15.5
SW6020 / SW3050B/NONE	Blank	MB 180-59046/1-A (LB) / MB 180-59046/1-A	1 / 1.00	Chromium	0.023 (MG/KG)	U/None	< 0.022	< 0.2	L		5	0.116
SW6020 / SW3050B/NONE	Blank	MB 180-59046/1-A (LB) / MB 180-59046/1-A	1 / 1.00	Iron	2.2 (MG/KG)	U/None	< 1.1	< 5	L		5	11.0
SW6020 / SW3050B/NONE	Blank	MB 180-59046/1-A (LB) / MB 180-59046/1-A	1 / 1.00	Manganese	0.026 (MG/KG)	U/None	< 0.016	< 0.5	L		5	0.130
SW6020 / SW3050B/NONE	Blank	MB 180-59046/1-A (LB) / MB 180-59046/1-A	1 / 1.00	Zinc	0.068 (MG/KG)	U/None	< 0.065	< 0.5	L		5	0.338
SW7471A / TOTAL/NONE	MS Recovery	077SS-0001M-0002-SO (MS) / 240-17525-5	1 / 1.00	Mercury	45.5 (PERCENT)	J/UJ	80 - 120	30 - 125	M	Spike amount Insignificant	4.00	
SW8081 / SW3540C/NONE	MS Recovery	077SS-0001M-0002-SO (MS) / 240-17525-5	1 / 10.00	beta BHC (beta Hexachlorocyclohexane)	323 (PERCENT)	J/None	60 - 125	20 - 125	M	Diluted Out	2.00	
SW8081 / SW3540C/NONE	MS Recovery	077SS-0001M-0002-SO (SD) / 240-17525-5	1 / 10.00	beta BHC (beta Hexachlorocyclohexane)	367 (PERCENT)	J/None	60 - 125	20 - 125	M	Diluted Out	2.00	
SW8081 / SW3540C/NONE	MS Recovery	077SS-0001M-0002-SO (MS) / 240-17525-5	1 / 10.00	beta Endosulfan	-1.1 (PERCENT)	J/R	35 - 140	20 - 140	M	Diluted Out	2.00	
SW8081 / SW3540C/NONE	MS Recovery	077SS-0001M-0002-SO (MS) / 240-17525-5	1 / 10.00	Heptachlor Epoxide	-82.4 (PERCENT)	J/R	65 - 130	20 - 130	M	Spike amount Insignificant	4.00	
SW8081 / SW3540C/NONE	MS Recovery	077SS-0001M-0002-SO (MS) / 240-17525-5	1 / 10.00	p,p'-DDD	-17.1 (PERCENT)	J/R	30 - 135	20 - 135	M	Spike amount Insignificant	4.00	
SW8260B / SW5030B/NONE	Blank	MB 240-65929/6 (LB) / MB 240-65929/6	1 / 1.00	Methylene Chloride	1.7 (UG/L)	U/None	< 0.33	< 1	L		2	3.32
SW8260B / SW5035/NONE	Blank	MB 240-66014/7 (LB) / MB 240-66014/7	1 / 1.00	2-Hexanone	0.78 (UG/KG)	U/None	< 0.63	< 20	L		1	0.780
SW8260B / SW5035/NONE	Blank	MB 240-66014/7 (LB) / MB 240-66014/7	1 / 1.00	Methylene Chloride	2.8 (UG/KG)	U/None	< 0.67	< 5	L		2	5.66
SW8260B / SW5035/NONE	Blank	MB 240-66020/8 (LB) / MB 240-66020/8	1 / 1.00	Acetone	18.3 (UG/KG)	U/None	< 6.3	< 20	L		2	36.6
SW8260B / SW5035/NONE	Surrogate	077SS-0001M-0001-SO (N) / 240-17525-5	1 / 1.00	1-Bromo-4-fluorobenzene (4-Bromofluorobenzene)	82.6 (PERCENT)	J/UJ	85 - 120	10 - 120	I			
SW8260B / SW5035/NONE	Surrogate	077SS-0001M-0001-SO (N) / 240-17525-5	2 / 1.00	Dibromofluoromethane	76.9 (PERCENT)	J/UJ	85 - 115	10 - 115	I			

SW8260B / SW5035/NONE	Surrogate	077SS-0002M-0001-SO (FD) / 240-17525-6	2 / 1.00	Dibromofluoromethane	80.2 (PERCENT)	J/UJ	85 - 115	10 - 115	I			
SW8270C / SW3550/NONE	Blank	MB 240-65931/23-A (LB) / MB 240-65931/23-A	1 / 1.00	bis(2-Ethylhexyl) Phthalate	30.7 (UG/KG)	U/None	< 19	< 50	L		1	30.7
SW8270C / SW3550/NONE	MS Recovery	077SS-0001M-0002-SO (MS) / 240-17525-5	1 / 4.00	Benzo(a)pyrene	-23.6 (PERCENT)	J/R	50 - 110	50 - 110	M	Diluted Out	2.00	
SW8270C / SW3550/NONE	MS Recovery	077SS-0001M-0002-SO (MS) / 240-17525-5	1 / 4.00	Indeno(1,2,3-c,d)Pyrene	14.8 (PERCENT)	J/R	40 - 120	40 - 120	M	Diluted Out	2.00	
SW8270C / SW3550/NONE	MS Recovery	077SS-0001M-0002-SO (MS) / 240-17525-5	1 / 4.00	Naphthalene	-12.8 (PERCENT)	J/R	40 - 105	40 - 105	M	Diluted Out	2.00	

Qualified Results

Test Leach	Matrix	Field Sample ID	Lab Sample ID	Type	Analyte	RL	Lab Result	Qualified Result	Bias	Units	Reason
SW6020/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Antimony	0.18	0.17	0.17 J	-	MG/KG	TR/M
SW6020/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Calcium	8.9	5200	5200 J		MG/KG	D1
SW6020/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Copper	0.18	17.0	17.0 J	+	MG/KG	M
SW6020/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Magnesium	8.9	2700	2700 J	+	MG/KG	M
SW6020/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Silver	0.089	0.030	0.030 J		MG/KG	TR
SW6020/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Sodium	8.9	32.0	32.0 J		MG/KG	D1

Test Leach	Matrix	Field Sample ID	Lab Sample ID	Type	Analyte	RL	Lab Result	Qualified Result	Bias	Units	Reason
SW7471A/NONE	SO	077SS-0001M-0001-SO	240-17525-5	N	Mercury	0.10	0.045	0.045 J		MG/KG	TR
SW7471A/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Mercury	0.098	0.041	0.041 J		MG/KG	TR

Test Leach	Matrix	Field Sample ID	Lab Sample ID	Type	Analyte	RL	Lab Result	Qualified Result	Bias	Units	Reason
SW8081/NONE	SO	077SS-0001M-0001-SO	240-17525-5	N	Aldrin	40.0	40.0	40.0 UJ		UG/KG	V2
SW8081/NONE	SO	077SS-0001M-0001-SO	240-17525-5	N	alpha BHC (alpha Hexachlorocyclohexane)	25.0	25.0	25.0 UJ		UG/KG	V2
SW8081/NONE	SO	077SS-0001M-0001-SO	240-17525-5	N	alpha Endosulfan	17.0	17.0	17.0 UJ		UG/KG	V2
SW8081/NONE	SO	077SS-0001M-0001-SO	240-17525-5	N	alpha-Chlordane	30.0	30.0	30.0 UJ		UG/KG	V2
SW8081/NONE	SO	077SS-0001M-0001-SO	240-17525-5	N	beta BHC (beta Hexachlorocyclohexane)	35.0	35.0	35.0 UJ		UG/KG	V2
SW8081/NONE	SO	077SS-0001M-0001-SO	240-17525-5	N	beta Endosulfan	25.0	23.9	23.9 J		UG/KG	TR/V2
SW8081/NONE	SO	077SS-0001M-0001-SO	240-17525-5	N	delta BHC (delta Hexachlorocyclohexane)	40.0	40.0	40.0 UJ		UG/KG	V2
SW8081/NONE	SO	077SS-0001M-0001-SO	240-17525-5	N	Dieldrin	17.0	17.0	17.0 UJ		UG/KG	V2
SW8081/NONE	SO	077SS-0001M-0001-SO	240-17525-5	N	Endosulfan Sulfate	30.0	30.0	30.0 UJ		UG/KG	V2
SW8081/NONE	SO	077SS-0001M-0001-SO	240-17525-5	N	Endrin	17.0	17.0	17.0 UJ		UG/KG	V2
SW8081/NONE	SO	077SS-0001M-0001-SO	240-17525-5	N	Endrin Aldehyde	30.0	30.0	30.0 UJ		UG/KG	V2
SW8081/NONE	SO	077SS-0001M-0001-SO	240-17525-5	N	Endrin Ketone	20.0	20.0	20.0 UJ		UG/KG	V2
SW8081/NONE	SO	077SS-0001M-0001-SO	240-17525-5	N	gamma BHC (Lindane)	25.0	25.0	25.0 UJ		UG/KG	V2
SW8081/NONE	SO	077SS-0001M-0001-SO	240-17525-5	N	gamma-Chlordane	17.0	17.0	17.0 UJ		UG/KG	V2
SW8081/NONE	SO	077SS-0001M-0001-SO	240-17525-5	N	Heptachlor	35.0	35.0	35.0 UJ		UG/KG	V2
SW8081/NONE	SO	077SS-0001M-0001-SO	240-17525-5	N	Heptachlor Epoxide	25.0	31.7	31.7 J		UG/KG	V2
SW8081/NONE	SO	077SS-0001M-0001-SO	240-17525-5	N	Methoxychlor	50.0	50.0	50.0 UJ		UG/KG	V2

SW8081/NONE	SO	077SS-0001M-0001-SO	240-17525-5	N	p,p'-DDD	20.0	29.3	29.3 J		UG/KG	V2
SW8081/NONE	SO	077SS-0001M-0001-SO	240-17525-5	N	p,p'-DDE	17.0	5.2	5.2 J		UG/KG	TR/V2
SW8081/NONE	SO	077SS-0001M-0001-SO	240-17525-5	N	p,p'-DDT	20.0	20.0	20.0 UJ		UG/KG	V2
SW8081/NONE	SO	077SS-0001M-0001-SO	240-17525-5	N	Toxaphene	670	670	670 UJ		UG/KG	V2
SW8081/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Aldrin	39.0	39.0	39.0 UJ		UG/KG	V2
SW8081/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	alpha BHC (alpha Hexachlorocyclohexane)	25.0	25.0	25.0 UJ		UG/KG	V2
SW8081/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	alpha Endosulfan	17.0	17.0	17.0 UJ		UG/KG	V2
SW8081/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	alpha-Chlordane	30.0	30.0	30.0 UJ		UG/KG	V2
SW8081/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	beta BHC (beta Hexachlorocyclohexane)	34.0	34.0	34.0 UJ		UG/KG	V2
SW8081/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	beta Endosulfan	25.0	25.0	25.0 UJ		UG/KG	V2
SW8081/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	delta BHC (delta Hexachlorocyclohexane)	39.0	39.0	39.0 UJ		UG/KG	V2
SW8081/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Dieldrin	17.0	17.0	17.0 UJ		UG/KG	V2
SW8081/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Endosulfan Sulfate	30.0	30.0	30.0 UJ		UG/KG	V2
SW8081/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Endrin	17.0	17.0	17.0 UJ		UG/KG	V2
SW8081/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Endrin Aldehyde	30.0	30.0	30.0 UJ		UG/KG	V2
SW8081/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Endrin Ketone	20.0	20.0	20.0 UJ		UG/KG	V2
SW8081/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	gamma BHC (Lindane)	25.0	25.0	25.0 UJ		UG/KG	V2
SW8081/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	gamma-Chlordane	17.0	17.0	17.0 UJ		UG/KG	V2
SW8081/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Heptachlor	34.0	34.0	34.0 UJ		UG/KG	V2
SW8081/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Heptachlor Epoxide	25.0	25.0	25.0 UJ		UG/KG	V2
SW8081/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Methoxychlor	49.0	49.0	49.0 UJ		UG/KG	V2
SW8081/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	p,p'-DDD	20.0	20.0	20.0 UJ		UG/KG	V2
SW8081/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	p,p'-DDE	17.0	8.6	8.6 J		UG/KG	TR/V2
SW8081/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	p,p'-DDT	20.0	20.0	20.0 UJ		UG/KG	V2
SW8081/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Toxaphene	660	660	660 UJ		UG/KG	V2

Test Leach	Matrix	Field Sample ID	Lab Sample ID	Type	Analyte	RL	Lab Result	Qualified Result	Bias	Units	Reason
SW8260B/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	2-Hexanone	18.0	1.4	18.0 U	+	UG/KG	L
SW8260B/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Methyl Isobutyl Ketone (4-Methyl-2-pentanone)	18.0	0.90	0.90 J		UG/KG	TR
SW8260B/NONE	WG	077SS-0003M-0001-TB	240-17525-7	N	Methylene Chloride	1.0	0.50	1.0 U	+	UG/L	L

Test Leach	Matrix	Field Sample ID	Lab Sample ID	Type	Analyte	RL	Lab Result	Qualified Result	Bias	Units	Reason
SW8270C/NONE	SO	077SS-0001M-0001-SO	240-17525-5	N	3,3'-Dichlorobenzidine	410	410	410 UJ		UG/KG	V1
SW8270C/NONE	SO	077SS-0001M-0001-SO	240-17525-5	N	Benzo(k)fluoranthene	27.0	18.0	18.0 J		UG/KG	TR

SW8270C/NONE	SO	077SS-0001M-0001-SO	240-17525-5	N	Dibenzofuran	200	14.0	14.0 J		UG/KG	TR
SW8270C/NONE	SO	077SS-0001M-0001-SO	240-17525-5	N	n-Nitrosodiphenylamine	200	200	200 R	-	UG/KG	J
SW8270C/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	3,3'-Dichlorobenzidine	250	250	250 UJ		UG/KG	V1
SW8270C/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Anthracene	17.0	11.0	11.0 J		UG/KG	TR
SW8270C/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	bis(2-Ethylhexyl) Phthalate	120	54.0	120 U	+	UG/KG	L
SW8270C/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Dibenzofuran	120	14.0	14.0 J		UG/KG	TR
SW8270C/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Fluorene	17.0	9.6	9.6 J		UG/KG	TR
SW8270C/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	n-Nitrosodiphenylamine	120	120	120 R	-	UG/KG	J
Test Leach	**Matrix**	**Field Sample ID**	**Lab Sample ID**	**Type**	**Analyte**	**RL**	**Lab Result**	**Qualified Result**	**Bias**	**Units**	**Reason**
SW8330B/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Nitroglycerin	0.50	0.083	0.083 J		MG/KG	TR
SW8330B/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	NITROGUANIDINE	0.24	0.055	0.055 J		MG/KG	TR
SW8330B/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Tetryl	0.25	0.028	0.028 J		MG/KG	TR

AUTOMATED DATA REVIEW SUMMARY for 240-17525-1_(77-SS)2

AUTOMATED DATA REVIEW SUMMARY for 240-17525-1_(77-SS)2

Detected Results

Test Leach	Matrix	Field Sample ID	Lab Sample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW6020/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Silver	0.089	0.030	0.030 J	MG/KG	TR
SW6020/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Aluminum	2.7	7700	7700	MG/KG	
SW6020/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Arsenic	0.089	14.0	14.0	MG/KG	
SW6020/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Barium	0.89	48.0	48.0	MG/KG	
SW6020/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Beryllium	0.089	0.42	0.42	MG/KG	
SW6020/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Calcium	8.9	5200	5200 J	MG/KG	D1
SW6020/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Cadmium	0.089	0.20	0.20	MG/KG	
SW6020/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Cobalt	0.045	7.7	7.7	MG/KG	
SW6020/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Chromium	0.18	15.0	15.0	MG/KG	
SW6020/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Copper	0.18	17.0	17.0 J +	MG/KG	M
SW6020/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Iron	4.5	20000	20000	MG/KG	
SW6020/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Potassium	8.9	740	740	MG/KG	
SW6020/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Magnesium	8.9	2700	2700 J +	MG/KG	M
SW6020/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Manganese	0.45	520	520	MG/KG	
SW6020/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Sodium	8.9	32.0	32.0 J	MG/KG	D1
SW6020/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Nickel	0.089	28.0	28.0	MG/KG	
SW6020/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Lead	0.089	21.0	21.0	MG/KG	
SW6020/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Antimony	0.18	0.17	0.17 J -	MG/KG	TR/M
SW6020/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Selenium	0.45	0.53	0.53	MG/KG	
SW6020/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Thallium	0.089	0.14	0.14	MG/KG	
SW6020/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Vanadium	0.089	15.0	15.0	MG/KG	
SW6020/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Zinc	0.45	62.0	62.0	MG/KG	

Test Leach	Matrix	Field Sample ID	Lab Sample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW7471A/NONE	SO	077SS-0001M-0001-SO	240-17525-5	N	Mercury	0.10	0.045	0.045 J	MG/KG	TR
SW7471A/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Mercury	0.098	0.041	0.041 J	MG/KG	TR

Test Leach	Matrix	Field Sample ID	Lab Sample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW8081/NONE	SO	077SS-0001M-0001-SO	240-17525-5	N	p,p'-DDD	20.0	29.3	29.3 J	UG/KG	V2
SW8081/NONE	SO	077SS-0001M-0001-SO	240-17525-5	N	p,p'-DDE	17.0	5.2	5.2 J	UG/KG	TR/V2
SW8081/NONE	SO	077SS-0001M-0001-SO	240-17525-5	N	beta Endosulfan	25.0	23.9	23.9 J	UG/KG	TR/V2

SW8081/NONE	SO	077SS-0001M-0001-SO	240-17525-5	N	Heptachlor Epoxide	25.0	31.7	31.7 J	UG/KG	V2
SW8081/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	p,p'-DDE	17.0	8.6	8.6 J	UG/KG	TR/V2

Test Leach	Matrix	Field Sample ID	Lab Sample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW8260B/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Methyl Isobutyl Ketone (4-Methyl-2-pentanone)	18.0	0.90	0.90 J	UG/KG	TR

Test Leach	Matrix	Field Sample ID	Lab Sample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW8270C/NONE	SO	077SS-0001M-0001-SO	240-17525-5	N	Benzo(a)anthracene	27.0	57.0	57.0	UG/KG	
SW8270C/NONE	SO	077SS-0001M-0001-SO	240-17525-5	N	Benzo(a)pyrene	27.0	500	500	UG/KG	
SW8270C/NONE	SO	077SS-0001M-0001-SO	240-17525-5	N	Benzo(b)fluoranthene	27.0	91.0	91.0	UG/KG	
SW8270C/NONE	SO	077SS-0001M-0001-SO	240-17525-5	N	Benzo(g,h,i)perylene	27.0	47.0	47.0	UG/KG	
SW8270C/NONE	SO	077SS-0001M-0001-SO	240-17525-5	N	Benzo(k)fluoranthene	27.0	18.0	18.0 J	UG/KG	TR
SW8270C/NONE	SO	077SS-0001M-0001-SO	240-17525-5	N	Chrysene	27.0	66.0	66.0	UG/KG	
SW8270C/NONE	SO	077SS-0001M-0001-SO	240-17525-5	N	Dibenzofuran	200	14.0	14.0 J	UG/KG	TR
SW8270C/NONE	SO	077SS-0001M-0001-SO	240-17525-5	N	Fluoranthene	27.0	120	120	UG/KG	
SW8270C/NONE	SO	077SS-0001M-0001-SO	240-17525-5	N	Indeno(1,2,3-c,d)Pyrene	27.0	441	441	UG/KG	
SW8270C/NONE	SO	077SS-0001M-0001-SO	240-17525-5	N	2-Methylnaphthalene	27.0	54.0	54.0	UG/KG	
SW8270C/NONE	SO	077SS-0001M-0001-SO	240-17525-5	N	Naphthalene	27.0	426	426	UG/KG	
SW8270C/NONE	SO	077SS-0001M-0001-SO	240-17525-5	N	Phenanthrene	27.0	77.0	77.0	UG/KG	
SW8270C/NONE	SO	077SS-0001M-0001-SO	240-17525-5	N	Pyrene	27.0	95.0	95.0	UG/KG	
SW8270C/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Anthracene	17.0	11.0	11.0 J	UG/KG	TR
SW8270C/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Benzo(a)anthracene	17.0	48.0	48.0	UG/KG	
SW8270C/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Benzo(a)pyrene	17.0	65.0	65.0	UG/KG	
SW8270C/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Benzo(b)fluoranthene	17.0	81.0	81.0	UG/KG	
SW8270C/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Benzo(g,h,i)perylene	17.0	37.0	37.0	UG/KG	
SW8270C/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Benzo(k)fluoranthene	17.0	17.0	17.0	UG/KG	
SW8270C/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Chrysene	17.0	57.0	57.0	UG/KG	
SW8270C/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Dibenzofuran	120	14.0	14.0 J	UG/KG	TR
SW8270C/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Fluorene	17.0	9.6	9.6 J	UG/KG	TR
SW8270C/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Fluoranthene	17.0	99.0	99.0	UG/KG	
SW8270C/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Indeno(1,2,3-c,d)Pyrene	17.0	44.0	44.0	UG/KG	
SW8270C/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	2-Methylnaphthalene	17.0	60.0	60.0	UG/KG	

SW8270C/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Naphthalene	17.0	54.0	54.0	UG/KG	
SW8270C/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Phenanthrene	17.0	64.0	64.0	UG/KG	
SW8270C/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Pyrene	17.0	74.0	74.0	UG/KG	

Test Leach	Matrix	Field Sample ID	Lab Sample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW8330B/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	NITROGUANIDINE	0.24	0.055	0.055 J	MG/KG	TR
SW8330B/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Nitroglycerin	0.50	0.083	0.083 J	MG/KG	TR
SW8330B/NONE	SO	077SS-0002M-0001-SO	240-17525-6	FD	Tetryl	0.25	0.028	0.028 J	MG/KG	TR

AUTOMATED DATA REVIEW SUMMARY for 240-17525-1_(77-SS)2

Rejected Results

Test Leach	Matrix	Field Sample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW8270C/NONE	SO	077SS-0001M-0001-SO	N	n-Nitrosodiphenylamine	200	200	R	UG/KG	J
SW8270C/NONE	SO	077SS-0002M-0001-SO	FD	n-Nitrosodiphenylamine	120	120	R	UG/KG	J

Note: Changed to UJ in QC review.

AUTOMATED DATA REVIEW SUMMARY for 240-17525-1_(77-SS)2

Anomalies Count

SDG Name: 240-17525-1_(77-SS)2

Test/Extraction Method/Leach	# of Field Samples Outside of Compliance	# of Analytes Outside of Compliance
E353.2/METHOD/NONE	2	2
SW8081/SW3540C/NONE	2	42
SW8082/SW3540C/NONE	2	14
SW8260B/SW5035/NONE	2	33
SW8270C/SW3550/NONE	2	38

Anomalies are cases where the reported RL exceeds that specified in the governing project document.

AUTOMATED DATA REVIEW SUMMARY for 240-17525-1_(77-SS)2

Worksheet

SDG Name: 240-17525-1_(77-SS)2

Method: E353.2

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	Y			
Were samples preserved properly and received in good condition?	Y			
Were holding times met?	Y			
Were sample receipt temperatures met?	Y			
Were QAPP specified RLs achieved?	Y			
Were all QAPP specified target analytes reported?	Y			
Was the initial calibration curve within QAPP acceptance limits?			•	Not Required
Were the ICV/CCVs analyzed (frequency) as required in the QAPP?	Y			
Were ICV/CCV results within QAPP acceptance limits?	Y			
Were the ICB/CCBs analyzed (frequency) as required in the QAPP?	Y			
Was a method blank prepared and analyzed with each batch?	Y			
Were target analytes detected in the ICB/CCB/method blank?		N		
Was a field blank collected and analyzed?		N		Not Required
Were target analytes reported in the field blank analyses above the MDL?			•	
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	Y			
Was a LCS prepared and analyzed with each batch?	Y			
Were the LCS recoveries within QAPP acceptance limits?	Y			
Was a duplicate sample prepared and analyzed with each batch?			•	Not Required
Was the duplicate RPD within QAPP acceptance limits?			•	Not Required
Was a MS/MSD pair prepared with each batch?	Y			
Is the MS/MSD parent sample the one designated by the sampling team?	Y			
Were the MS/MSD recoveries and RPDs within QAPP acceptance limits?	Y			
Were sample concentrations within calibration range?	Y			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	Y			
Are all samples associated with QC non-compliances flagged appropriately?	Y			
Are the Qualified, Detected, and Rejected tables of the ADR report in agreement?	Y			

Method: SW6020

AUTOMATED DATA REVIEW SUMMARY for 240-17525-1_(77-SS)2

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	Y			
Were samples preserved properly and received in good condition?	Y			
Were holding times met?	Y			
Were sample receipt temperatures met?	Y			
Were QAPP specified RLs achieved?	Y			
Were all QAPP specified target analytes reported?	Y			
Was the initial calibration curve within QAPP acceptance limits?			•	Not Required
Were the ICV/CCVs analyzed (frequency) as required in the QAPP?	Y			
Were ICV/CCV results within QAPP acceptance limits?	Y			
Were the ICB/CCBs analyzed (frequency) as required in the QAPP?	Y			
Was a method blank prepared and analyzed with each batch?	Y			
Were target analytes detected in the ICB/CCB/method blank?	Y			Mn detected in CCBs, Al, Ba, Ca, Cr, Fe, Mn, and Zn detected in MB; No impact on samples
Was a field blank collected and analyzed?		N		Not Required
Were target analytes reported in the field blank analyses above the MDL?			•	
Was an Interference Check Standard (ICS) run at the beginning and end of every run?	Y			
Was the ICS recovery within QAPP acceptance limits?	Y			Ba, Co, Cu, Mn, Ni, and Zn noted in ISCA as having values > MDLs. However, all values were below their CRQLs; no impact on data.
If a field duplicate was analyzed, were the RPDs within criteria?	Y			
Was a LCS prepared and analyzed with each batch?	Y			
Were the LCS recoveries within QAPP acceptance limits?	Y			
Was a MS/MSD pair prepared with each batch?	Y			MS/Lab Duplicate Performed
Is the MS/MSD parent sample the one designated by the sampling team?	Y			
Were the MS/MSD within QAPP acceptance limits?		N		Sb (21%), Cu (317%), Mg (132%) outside QC criteria, impacted 077SS samples, with Sb ND results Rejected; Na RPD for lab duplicate outside criteria, impacted 077SS samples.
Was a serial dilution prepared and analyzed with each batch?	Y			
Was the serial dilution within QAPP acceptance limits?		N		Ca %D outside QC criteria, impacted 077SS samples
Were sample concentrations within calibration range?	Y			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	Y			
Are all samples associated with QC non-compliances flagged appropriately?	Y			

Are the Qualified, Detected, and Rejected tables of the ADR report in agreement?	Y			

Method: SW7471A

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	Y			
Were samples preserved properly and received in good condition?	Y			
Were holding times met?	Y			
Were sample receipt temperatures met?	Y			
Were QAPP specified RLs achieved?	Y			
Were all QAPP specified target analytes reported?	Y			
Was the initial calibration curve within QAPP acceptance limits?			•	Not Required
Were the ICV/CCVs analyzed (frequency) as required in the QAPP?	Y			
Were ICV/CCV results within QAPP acceptance limits?	Y			
Were the ICB/CCBs analyzed (frequency) as required in the QAPP?	Y			
Was a method blank prepared and analyzed with each batch?	Y			
Were target analytes detected in the ICB/CCB/method blank?		N		
Was a field blank collected and analyzed?		N		Not Required
Were target analytes reported in the field blank analyses above the MDL?			•	
Was the ICS recovery within QAPP acceptance limits?			•	Not Required
If a field duplicate was analyzed, were the RPDs within criteria?	Y			
Was a LCS prepared and analyzed with each batch?	Y			
Were the LCS recoveries within QAPP acceptance limits?	Y			
Was a MS/MSD pair prepared with each batch?	Y			MS/Lab Duplicate Performed
Is the MS/MSD parent sample the one designated by the sampling team?	Y			
Were the MS/MSD within QAPP acceptance limits?	Y			
Were sample concentrations within calibration range?	Y			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	Y			
Are all samples associated with QC non-compliances flagged appropriately?	Y			
Are the Qualified, Detected, and Rejected tables of the ADR report in agreement?	Y			

Method: SW8081

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report?	Y			

Were samples preserved properly and received in good condition?	Y			
Were sample receipt temperatures met?	Y			
Were holding times for prep and analysis met?	Y			
Does the initial calibration curve consist of 5 concentration levels, with the low standard near but > MDL?	Y			
Is the ICAL %RSD within acceptance limits (%D =20%) on both columns?	Y			
Was a second source verification analyzed after the ICAL and all analytes within criteria (%D =20%)?	Y			
Was a CCV run at the beginning of the analytical sequence and every 12 hours?	Y			
Was the CCV a mid-level standard from the initial calibration curve?	Y			
Was the CCV %D within criteria (%D =20%)?		N		Numerous recoveries above QC limit in CCVs; all results impacted.
Was a method blank prepared and analyzed with each batch?	Y			
Were target analytes detected in the method blank above the MDL?		N		
Was a field blank (equipment or trip) collected and analyzed?		N		Not Required
Were target analytes reported in the field blank analyses above the MDL?			•	
Were surrogate recoveries within QAPP acceptance limits?	Y			
Was an LCS/LCSD pair prepared and analyzed with each batch? (if applicable)	Y			Single LCS only
Were the LCS recoveries within QAPP acceptance limits?	Y			
Were the LCS/LCSD RPDs within QAPP acceptance limits? (if applicable)			•	
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits (RPD = 30%) ?	Y			
Were the Breakdown products within QAPP acceptance limits?	Y			
Is the MS/MSD parent sample the one designated by the sampling team?	Y			
Were MS/MSD recoveries and RPD within QAPP acceptance limits?		N		Beta-BHC MS and MSD recoveries above QC criteria (potential positive bias); sample result ND, no impact. Methoxychlor RPD above QC criteria; sample result ND, no impact.
Were all QAPP-specified target analytes reported?	Y			
Were reported sample concentrations within calibration range?	Y			
Were RPDs between primary and confirmation columns < 40%?			•	No detections
Are all samples associated with QC non-compliances flagged appropriately?	Y			
Are the Qualified, Detected, and Rejected tables of the ADR report in agreement?	Y			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	Y			
Were sample preparation sheets present and filled out appropriately?	Y			

Were instrument run logs present and filled out appropriately?	Y			

Method: SW8082

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report?	Y			
Were samples preserved properly and received in good condition?	Y			
Were sample receipt temperatures met?	Y			
Were holding times for prep and analysis met?	Y			
Does the initial calibration curve consist of 5 concentration levels, with the low standard near but > MDL?	Y			
Is the ICAL %RSD within acceptance limits (%D =20%) on both columns?	Y			
Was a second source verification analyzed after the ICAL and all analytes within criteria (%D =20%)?	Y			
Was a CCV run at the beginning of the analytical sequence and every 12 hours?	Y			
Was the CCV a mid-level standard from the initial calibration curve?	Y			
Was the CCV %D within criteria (%D =20%)?	Y			
Was a method blank prepared and analyzed with each batch?	Y			
Were target analytes detected in the method blank above the MDL?		N		
Was a field blank (equipment or trip) collected and analyzed?		N		
Were target analytes reported in the field blank analyses above the MDL?			•	Not Required
Were surrogate recoveries within QAPP acceptance limits?	Y			
Was an LCS/LCSD pair prepared and analyzed with each batch? (if applicable)	Y			Single LCS only
Were the LCS recoveries within QAPP acceptance limits?	Y			
Were the LCS/LCSD RPDs within QAPP acceptance limits? (if applicable)			•	
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits (RPD = 30%) ?	Y			
Were the Breakdown products within QAPP acceptance limits?			•	Not Required
Is the MS/MSD parent sample the one designated by the sampling team?	Y			
Were MS/MSD recoveries and RPD within QAPP acceptance limits?	Y			
Were all QAPP-specified target analytes reported?	Y			
Were reported sample concentrations within calibration range?	Y			
Were RPDs between primary and confirmation columns < 40%?			•	No detections
Are all samples associated with QC non-compliances flagged appropriately?	Y			
Are the Qualified, Detected, and Rejected tables of the ADR report in agreement?	Y			
Have all Laboratory Case Narrative comments/findings been addressed in the data	Y			

review process?				
Were sample preparation sheets present and filled out appropriately?	Y			
Were instrument run logs present and filled out appropriately?	Y			

Method: SW8260B

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	Y			
Were samples preserved properly and received in good condition?	Y			
Were holding times met?	Y			
Were sample receipt temperatures met?	Y			
Were QAPP specified PQLs achieved?	Y			
Were all QAPP-specified target analytes reported?	Y			
Was the GC/MS system tuned with bromofluorobenzene (BFB)?	Y			
Was the criteria met during each 12 hour shift (prior to ICAL and Cal Ver.)?	Y			
Does the initial calibration curve consist of 5 concentration levels, with the low standard near but > MDL?	Y			
Did the Calibration Check Compounds (CCCs) have a relative standard deviation within QAPP acceptance limits?	Y			
Were the average response factors (RFs) for the System Performance Check Compounds (SPCCs) within QAPP acceptance limits?	Y			
Were all other target analytes within criteria? OR Was the average across all target analytes within criteria? Was a different calibration option used?	Y			
If a linear regression curve was used, was the correlation coefficient within criteria?	Y			
Was a second source verification analyzed after the ICAL and all analytes within criteria?	Y			
Was a CCV run at the beginning of the analytical sequence and every 12 hours?	Y			
Was the CCV a mid-level standard from the initial calibration curve?	Y			
Did the CCCs have a %Difference within QAPP acceptance limits?	Y			
Were the average RFs for the SPCCs within QAPP acceptance limits?	Y			
Was the average %D (difference or drift) for all target analytes within QAPP acceptance limits?	Y			
Were the internal standards added to every standard, blank, matrix spike, matrix spike duplicate, and sample?	Y			
Were the retention times for all IS compounds within QAPP acceptance limits?	Y			
Are the area counts of all IS compounds within QAPP acceptance limits?	Y			
Was a method blank prepared and analyzed with each batch?	Y			
Were target analytes detected in the method blank above the MDL?	Y			2-Hexanone and methylene chloride detected in MBs < CRQL.

				2-Hexanone impacted in sample 6 (changed to ND).
Was a field blank (equipment or trip) collected and analyzed at the required frequency?	Y			Trip blank submitted
Were target analytes reported in the field blank analyses above the MDL?	Y			Methylene chloride detected in TB; no impact on samples.
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	Y			
Was an LCS/LCSD pair prepared and analyzed with each batch?	Y			Single LCS only
Were the LCS/LCSD recoveries within QAPP acceptance limits?	Y			
Were the LCS/LCSD RPDs within QAPP acceptance limits?			•	
Was the duplicate RPD within QAPP acceptance limits?			•	
Are all samples associated with QC non-compliances flagged appropriately?	Y			
Are the Qualified, Detected, and Rejected tables of the ADR report in agreement?	Y			
Was a MS/MSD pair prepared with each batch?	Y			
Is the MS/MSD parent sample the one designated by the sampling team?	Y			
Were MS/MSD recoveries and RPD within QAPP acceptance limits?	Y			Lab calculated RPDs incorrectly based on MS/MSD concentration, but since spike concentrations were different in the MS and MSD, that is incorrect. Manually calculated, all RPDs ok.
Were surrogate recoveries within QAPP acceptance limits?	Y			
Were reported sample concentrations within calibration range?	Y			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	Y			
Were instrument run logs present and filled out appropriately?	Y			
Were sample preparation sheets present and filled out appropriately?	Y			

Method: SW8270C

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	Y			
Were samples preserved properly and received in good condition?	Y			
Were holding times met?	Y			
Were sample receipt temperatures met?	Y			
Were QAPP specified PQLs achieved?	Y			Sample 5 diluted X 4; Sample 6 diluted X 2.5
Were all QAPP-specified target analytes reported?	Y			
Was the GC/MS system tuned with bromofluorobenzene (BFB)?	Y			
Was the criteria met during each 12 hour shift (prior to ICAL and Cal Ver.)?	Y			
Does the initial calibration curve consist of 5 concentration levels, with the low standard near but > MDL?	Y			

Did the Calibration Check Compounds (CCCs) have a relative standard deviation within QAPP acceptance limits?	Y			
Were the average response factors (RFs) for the System Performance Check Compounds (SPCCs) within QAPP acceptance limits?	Y			
Were all other target analytes within criteria? OR Was the average across all target analytes within criteria? Was a different calibration option used?	Y			
If a linear regression curve was used, was the correlation coefficient within criteria?	Y			
Was a second source verification analyzed after the ICAL and all analytes within criteria?		N		3,3'-DCB %D>20%; All samples impacted.
Was a CCV run at the beginning of the analytical sequence and every 12 hours?	Y			
Was the CCV a mid-level standard from the initial calibration curve?	Y			
Did the CCCs have a %Difference within QAPP acceptance limits?	Y			
Were the average RFs for the SPCCs within QAPP acceptance limits?	Y			
Was the average %D (difference or drift) for all target analytes within QAPP acceptance limits?	Y			
Were the internal standards added to every standard, blank, matrix spike, matrix spike duplicate, and sample?	Y			
Were the retention times for all IS compounds within QAPP acceptance limits?	Y			
Are the area counts of all IS compounds within QAPP acceptance limits?	Y			
Was a method blank prepared and analyzed with each batch?	Y			
Were target analytes detected in the method blank above the MDL?	Y			BEHP detected in MB; impacted result in sample 6 (changed to ND).
Was a field blank (equipment or trip) collected and analyzed at the required frequency?		N		Not Required
Were target analytes reported in the field blank analyses above the MDL?			•	
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	Y			
Was an LCS/LCSD pair prepared and analyzed with each batch?	Y			Single LCS only
Were the LCS/LCSD recoveries within QAPP acceptance limits?	Y			
Were the LCS/LCSD RPDs within QAPP acceptance limits?			•	
Was the duplicate RPD within QAPP acceptance limits?			•	No Lab duplicate
Are all samples associated with QC non-compliances flagged appropriately?	Y			N-Nitrosodiphenylamine %R in closing MRL = 0%; All sample results (ND) Rejected.
Are the Qualified, Detected, and Rejected tables of the ADR report in agreement?	Y			
Was a MS/MSD pair prepared with each batch?	Y			
Is the MS/MSD parent sample the one designated by the sampling team?	Y			
Were MS/MSD recoveries and RPD within QAPP acceptance limits?	Y			
Were surrogate recoveries within QAPP acceptance limits?	Y			

Were reported sample concentrations within calibration range?	Y			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	Y			
Were instrument run logs present and filled out appropriately?	Y			
Were sample preparation sheets present and filled out appropriately?	Y			

Method: SW8330B

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report?	Y			
Were samples preserved properly and received in good condition?	Y			
Were sample receipt temperatures met?	Y			
Were holding times for prep and analysis met?	Y			
Does the initial calibration curve consist of 5 concentration levels, with the low standard near but > MDL?	Y			
Is the ICAL %RSD within acceptance limits (%D =20%) on both columns?	Y			
Was a second source verification analyzed after the ICAL and all analytes within criteria (%D =20%)?	Y			
Was a CCV run at the beginning of the analytical sequence and every 12 hours?	Y			
Was the CCV a mid-level standard from the initial calibration curve?	Y			
Was the CCV %D within criteria (%D =20%)?	Y			CCVLs had results >20%; lab performed required corrective action
Was a method blank prepared and analyzed with each batch?	Y			
Were target analytes detected in the method blank above the MDL?		N		
Was a field blank (equipment or trip) collected and analyzed?		N		Not Required
Were target analytes reported in the field blank analyses above the MDL?			•	
Were surrogate recoveries within QAPP acceptance limits?		N		Surrogate > QC limit in sample 6 in conf. column only; no impact on sample data.
Was an LCS/LCSD pair prepared and analyzed with each batch? (if applicable)	Y			Single LCS only
Were the LCS recoveries within QAPP acceptance limits?	Y			
Were the LCS/LCSD RPDs within QAPP acceptance limits? (if applicable)			•	
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits (RPD = 30%) ?	Y			
Is the MS/MSD parent sample the one designated by the sampling team?	Y			
Were MS/MSD recoveries and RPD within QAPP acceptance limits?	Y			
Were all QAPP-specified target analytes reported?	Y			
Were reported sample concentrations within calibration range?	Y			

Were RPDs between primary and confirmation columns < 40%?		•	All results ND or < CRQL
Did PDA spectra for reported compounds match associated standard spectra?		•	Not required
Are all samples associated with QC non-compliances flagged appropriately?	Y		
Are the Qualified, Detected, and Rejected tables of the ADR report in agreement?	Y		
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	Y		
Were sample preparation sheets present and filled out appropriately?	Y		
Were instrument run logs present and filled out appropriately?	Y		

Field Duplicate Report By SDG
Ravenna Army Ammunition Plant
RVAAP, QAPP Oct. 2012
Field Duplicates for SDG: 240-17525-1_(77-SS)2

Location	Analysis
77-1037-DU1-SS	E353.2

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Check	RL Check
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Nitrocellulose	ND	ND	45.0	NA	NA	OK

Location	Analysis
77-1037-DU1-SS	SW6020

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Check	RL Check
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Aluminum	8200	7700	2.50	6.29	OK	NA
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Antimony	0.200	0.170	0.170	16.2	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Arsenic	12.0	14.0	0.0830	15.4	OK	NA
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Barium	49.0	48.0	0.830	2.06	OK	NA
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Beryllium	0.460	0.420	0.0830	9.09	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Cadmium	0.190	0.200	0.0830	5.13	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Calcium	4500	5200	8.30	14.4	OK	NA
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Chromium	18.0	15.0	0.170	18.2	OK	NA
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Cobalt	7.40	7.70	0.0410	3.97	OK	NA
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Copper	16.0	17.0	0.170	6.06	OK	NA
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Iron	22000	20000	4.10	9.52	OK	NA
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Lead	22.0	21.0	0.0830	4.65	OK	NA
077SS-0001M-0001-SO / 077SS-0002M-0001-	240-17525-5 / 240-17525-6	Magnesium	2800	2700	8.30	3.64	OK	NA

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil

The RPD criteria used for organic analysis is: 50
The RPD criteria used for non-organic analysis is: 50

SO

077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Manganese	540	520	0.410	3.77	OK	NA
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Nickel	24.0	28.0	0.0830	15.4	OK	NA
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Potassium	830	740	8.30	11.5	OK	NA
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Selenium	0.560	0.530	0.410	5.50	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Silver	0.0270	0.0300	0.0830	10.5	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Sodium	29.0	32.0	8.30	9.84	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Thallium	0.130	0.140	0.0830	7.41	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Vanadium	16.0	15.0	0.0830	6.45	OK	NA
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Zinc	63.0	62.0	0.410	1.60	OK	NA

Location	**Analysis**
77-1037-DU1-SS	SW7471A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Check	RL Check
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Mercury	0.0450	0.0410	0.100	9.30	NA	OK

Location	**Analysis**
77-1037-DU1-SS	SW8081

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Check	RL Check
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Aldrin	ND	ND	40.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	alpha BHC (alpha Hexachlorocyclohexane)	ND	ND	25.0	NA	NA	OK

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil

The RPD criteria used for organic analysis is: 50
The RPD criteria used for non-organic analysis is: 50

Field Duplicate Report By SDG
Ravenna Army Ammunition Plant
RVAAP, QAPP Oct. 2012
Field Duplicates for SDG: 240-17525-1_(77-SS)2

077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	alpha Endosulfan	ND	ND	17.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	alpha-Chlordane	ND	ND	30.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	beta BHC (beta Hexachlorocyclohexane)	ND	ND	35.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	beta Endosulfan	ND	ND	25.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	beta Endosulfan	23.9	ND	25.0		NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	delta BHC (delta Hexachlorocyclohexane)	ND	ND	40.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Dieldrin	ND	ND	17.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Endosulfan Sulfate	ND	ND	30.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Endrin	ND	ND	17.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Endrin Aldehyde	ND	ND	30.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Endrin Ketone	ND	ND	20.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	gamma BHC (Lindane)	ND	ND	25.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	gamma-Chlordane	ND	ND	17.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Heptachlor	ND	ND	35.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Heptachlor Epoxide	ND	ND	25.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Heptachlor Epoxide	31.7	ND	25.0		NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Methoxychlor	ND	ND	50.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	p,p'-DDD	ND	ND	20.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	p,p'-DDD	29.3	ND	20.0		NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	p,p'-DDE	5.20	8.60	17.0	49.3	NA	OK

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil

The RPD criteria used for organic analysis is: 50
The RPD criteria used for non-organic analysis is: 50

SO								
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	p,p'-DDT	ND	ND	20.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Toxaphene	ND	ND	670	NA	NA	OK

Location **Analysis**

77-1037-DU1-SS SW8082

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Check	RL Check
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	PCB-1016 (Arochlor 1016)	ND	ND	65.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	PCB-1221 (Arochlor 1221)	ND	ND	50.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	PCB-1232 (Arochlor 1232)	ND	ND	45.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	PCB-1242 (Arochlor 1242)	ND	ND	40.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	PCB-1248 (Arochlor 1248)	ND	ND	55.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	PCB-1254 (Arochlor 1254)	ND	ND	55.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	PCB-1260 (Arochlor 1260)	ND	ND	55.0	NA	NA	OK

Location **Analysis**

77-1037-DU1-SS SW8260B

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Check	RL Check
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	1,1,1-Trichloroethane	ND	ND	4.90	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	1,1,2,2-Tetrachloroethane	ND	ND	5.10	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	1,1,2-Trichloroethane	ND	ND	5.10	NA	NA	OK

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil

The RPD criteria used for organic analysis is: 50
The RPD criteria used for non-organic analysis is: 50

077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	1,1-Dichloroethane	ND	ND	5.10	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	1,1-Dichloroethene	ND	ND	5.10	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	1,2-Dibromoethane (Ethylene Dibromide)	ND	ND	5.10	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	1,2-Dichloroethane	ND	ND	5.10	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	1,2-Dichloropropane	ND	ND	5.10	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	2-Hexanone	ND	ND	21.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Acetone	ND	ND	20.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Benzene	ND	ND	5.10	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Bromochloromethane	ND	ND	5.10	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Bromodichloromethane	ND	ND	5.10	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Bromoform	ND	ND	5.10	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Bromomethane	ND	ND	5.10	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Carbon Disulfide	ND	ND	5.10	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Carbon Tetrachloride	ND	ND	4.90	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Chlorobenzene	ND	ND	5.10	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Chloroethane	ND	ND	5.10	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Chloroform	ND	ND	5.10	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Chloromethane	ND	ND	5.10	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	cis-1,3-Dichloropropene	ND	ND	5.10	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Dibromochloromethane	ND	ND	5.10	NA	NA	OK

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil

The RPD criteria used for organic analysis is: 50
The RPD criteria used for non-organic analysis is: 50

SO								
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Ethylbenzene	ND	ND	5.10	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Methyl Ethyl Ketone (2-Butanone)	ND	ND	21.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Methyl Isobutyl Ketone (4-Methyl-2-pentanone)	ND	0.900	21.0		NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Methylene Chloride	ND	ND	5.10	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Styrene	ND	ND	5.10	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	tert-Butyl Methyl Ether	ND	ND	5.10	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Tetrachloroethylene (PCE)	ND	ND	5.10	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Toluene	ND	ND	5.10	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Total 1,2-Dichloroethene	ND	ND	10.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	trans-1,3-Dichloropropene	ND	ND	5.10	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Trichloroethylene (TCE)	ND	ND	5.10	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Vinyl Chloride	ND	ND	5.10	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Xylenes, Total	ND	ND	10.0	NA	NA	OK

Location	**Analysis**
77-1037-DU1-SS	SW8270C

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Check	RL Check
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	1,2,4-Trichlorobenzene	ND	ND	200	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	1,2-Dichlorobenzene	ND	ND	200	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-	240-17525-5 / 240-17525-6	1,3-Dichlorobenzene	ND	ND	200	NA	NA	OK

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil

The RPD criteria used for organic analysis is: 50
The RPD criteria used for non-organic analysis is: 50

Field Duplicate Report By SDG
Ravenna Army Ammunition Plant
RVAAP, QAPP Oct. 2012
Field Duplicates for SDG: 240-17525-1_(77-SS)2

SO								
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	1,4-Dichlorobenzene	ND	ND	200	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	2,4,5-Trichlorophenol	ND	ND	610	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	2,4,6-Trichlorophenol	ND	ND	610	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	2,4-Dichlorophenol	ND	ND	610	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	2,4-Dimethylphenol	ND	ND	610	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	2,4-Dinitrophenol	ND	ND	1300	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	2,4-Dinitrotoluene	ND	ND	810	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	2,6-Dinitrotoluene	ND	ND	810	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	2-Chloronaphthalene	ND	ND	200	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	2-Chlorophenol	ND	ND	200	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	2-Methylnaphthalene	54.0	60.0	27.0	10.5	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	2-Methylphenol (o-Cresol)	ND	ND	810	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	2-Nitroaniline	ND	ND	810	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	2-Nitrophenol	ND	ND	200	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	3,3'-Dichlorobenzidine	ND	ND	410	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	3-Nitroaniline	ND	ND	810	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	4,6-Dinitro-2-Methylphenol	ND	ND	610	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	4-Bromophenyl phenyl ether	ND	ND	200	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	4-Chloro-3-Methylphenol	ND	ND	610	NA	NA	OK

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil

The RPD criteria used for organic analysis is: 50
The RPD criteria used for non-organic analysis is: 50

077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	4-Chloroaniline	ND	ND	610	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	4-Chlorophenyl Phenyl Ether	ND	ND	200	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	4-Nitroaniline	ND	ND	810	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	4-Nitrophenol	ND	ND	1300	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Acenaphthene	ND	ND	27.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Acenaphthylene	ND	ND	27.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Anthracene	ND	11.0	27.0		NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Benzo(a)anthracene	57.0	48.0	27.0	17.1	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Benzo(a)pyrene	88.0	65.0	27.0	30.1	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Benzo(b)fluoranthene	91.0	81.0	27.0	11.6	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Benzo(g,h,i)perylene	47.0	37.0	27.0	23.8	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Benzo(k)fluoranthene	18.0	17.0	27.0	5.71	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Benzoic acid	ND	ND	2700	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Benzyl alcohol	ND	ND	1300	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Benzyl butyl phthalate	ND	ND	200	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	bis(2-Chloroethoxy) Methane	ND	ND	410	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	bis(2-Chloroethyl) Ether (2-Chloroethyl Ether)	ND	ND	410	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	bis(2-Chloroisopropyl) Ether	ND	ND	410	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	bis(2-Ethylhexyl) Phthalate	ND	ND	200	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Carbazole	ND	ND	200	NA	NA	OK

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil

The RPD criteria used for organic analysis is: 50
The RPD criteria used for non-organic analysis is: 50

Field Duplicate Report By SDG
Ravenna Army Ammunition Plant
RVAAP, QAPP Oct. 2012
Field Duplicates for SDG: 240-17525-1_(77-SS)2

SO								
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Chrysene	66.0	57.0	27.0	14.6	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Cresols, m & p	ND	ND	1600	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Di-n-Butyl Phthalate	ND	ND	200	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Di-n-Octylphthalate	ND	ND	200	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Dibenz(a,h)anthracene	ND	ND	27.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Dibenzofuran	14.0	14.0	200	0.00	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Diethyl Phthalate	ND	ND	200	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Dimethyl Phthalate	ND	ND	200	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Fluoranthene	120	99.0	27.0	19.2	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Fluorene	ND	9.60	27.0		NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Hexachlorobenzene	ND	ND	27.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Hexachlorobutadiene	ND	ND	200	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Hexachlorocyclopentadiene	ND	ND	1300	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Hexachloroethane	ND	ND	200	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Indeno(1,2,3-c,d)Pyrene	441	44.0	27.0	164	NA	397.000000
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Indeno(1,2,3-c,d)Pyrene	55.0	44.0	27.0	22.2	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Isophorone	ND	ND	200	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	n-Nitrosodi-n-propylamine	ND	ND	200	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	n-Nitrosodiphenylamine	ND	ND	200	NA	NA	OK

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil

The RPD criteria used for organic analysis is: 50
The RPD criteria used for non-organic analysis is: 50

077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Naphthalene	44.0	54.0	27.0	20.4	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Nitrobenzene	ND	ND	410	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Pentachlorophenol	ND	ND	610	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Phenanthrene	77.0	64.0	27.0	18.4	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Phenol	ND	ND	200	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Pyrene	95.0	74.0	27.0	24.9	NA	OK

Location	**Analysis**
77-1037-DU1-SS	SW8330B

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Check	RL Check
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	1,3,5-Trinitrobenzene	ND	ND	0.250	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	1,3-Dinitrobenzene	ND	ND	0.250	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	2,4,6-Trinitrotoluene	ND	ND	0.250	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	2,4-Dinitrotoluene	ND	ND	0.250	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	2,6-Dinitrotoluene	ND	ND	0.250	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	2-Amino-4,6-dinitrotoluene	ND	ND	0.250	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	2-Nitrotoluene	ND	ND	0.250	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	3-Nitrotoluene	ND	ND	0.250	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	4-Amino-2,6-dinitrotoluene	ND	ND	0.250	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	4-Nitrotoluene	ND	ND	0.250	NA	NA	OK

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil

The RPD criteria used for organic analysis is: 50
The RPD criteria used for non-organic analysis is: 50

Field Duplicate Report By SDG
Ravenna Army Ammunition Plant
RVAAP, QAPP Oct. 2012
Field Duplicates for SDG: 240-17525-1_(77-SS)2

077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Hexahydro-1,3,5-trinitro-1,3,5-triazine	ND	ND	0.250	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Nitrobenzene	ND	ND	0.250	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Nitroglycerin	ND	0.0830	0.500		NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	NITROGUANIDINE	ND	0.0550	0.250		NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	ND	ND	0.250	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Pentaerythritol Tetranitrate	ND	ND	0.500	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Tetryl	ND	0.0280	0.250		NA	OK

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil

The RPD criteria used for organic analysis is: 50
The RPD criteria used for non-organic analysis is: 50

Field Duplicates for SDG: 240-17525-1_(77-SS)2

Location	Analysis
77-1037-DU1-SS	E353.2

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Check	RL Check
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Nitrocellulose	ND	ND	45.0	NA	NA	OK

Location	Analysis
77-1037-DU1-SS	SW7471A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Check	RL Check
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Mercury	0.0450	0.0410	0.100	9.30	NA	OK

Location	Analysis
77-1037-DU1-SS	SW8081

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Check	RL Check
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Aldrin	ND	ND	40.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	alpha BHC (alpha Hexachlorocyclohexane)	ND	ND	25.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	alpha Endosulfan	ND	ND	17.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	alpha-Chlordane	ND	ND	30.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	beta BHC (beta Hexachlorocyclohexane)	ND	ND	35.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	beta Endosulfan	23.9	ND	25.0		NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	delta BHC (delta Hexachlorocyclohexane)	ND	ND	40.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Dieldrin	ND	ND	17.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Endosulfan Sulfate	ND	ND	30.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Endrin	ND	ND	17.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Endrin Aldehyde	ND	ND	30.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Endrin Ketone	ND	ND	20.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	gamma BHC (Lindane)	ND	ND	25.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	gamma-Chlordane	ND	ND	17.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Heptachlor	ND	ND	35.0	NA	NA	OK

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil

The RPD criteria used for organic analysis is: 50
The RPD criteria used for non-organic analysis is: 35

077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Heptachlor Epoxide	31.7	ND	25.0		NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Methoxychlor	ND	ND	50.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	p,p'-DDD	29.3	ND	20.0		NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	p,p'-DDE	5.20	8.60	17.0	49.3	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	p,p'-DDT	ND	ND	20.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Toxaphene	ND	ND	670	NA	NA	OK

Location **Analysis**

77-1037-DU1-SS SW8082

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Check	RL Check
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	PCB-1016 (Arochlor 1016)	ND	ND	65.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	PCB-1221 (Arochlor 1221)	ND	ND	50.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	PCB-1232 (Arochlor 1232)	ND	ND	45.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	PCB-1242 (Arochlor 1242)	ND	ND	40.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	PCB-1248 (Arochlor 1248)	ND	ND	55.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	PCB-1254 (Arochlor 1254)	ND	ND	55.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	PCB-1260 (Arochlor 1260)	ND	ND	55.0	NA	NA	OK

Location **Analysis**

77-1037-DU1-SS SW8260B

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Check	RL Check
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	1,1,1-Trichloroethane	ND	ND	4.90	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	1,1,2,2-Tetrachloroethane	ND	ND	5.10	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	1,1,2-Trichloroethane	ND	ND	5.10	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	1,1-Dichloroethane	ND	ND	5.10	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	1,1-Dichloroethene	ND	ND	5.10	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	1,2-Dibromoethane (Ethylene Dibromide)	ND	ND	5.10	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	1,2-Dichloroethane	ND	ND	5.10	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	1,2-Dichloropropane	ND	ND	5.10	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	2-Hexanone	ND	ND	21.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Acetone	ND	ND	20.0	NA	NA	OK

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil

The RPD criteria used for organic analysis is: 50
The RPD criteria used for non-organic analysis is: 35

077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Benzene	ND	ND	5.10	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Bromochloromethane	ND	ND	5.10	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Bromodichloromethane	ND	ND	5.10	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Bromoform	ND	ND	5.10	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Bromomethane	ND	ND	5.10	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Carbon Disulfide	ND	ND	5.10	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Carbon Tetrachloride	ND	ND	4.90	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Chlorobenzene	ND	ND	5.10	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Chloroethane	ND	ND	5.10	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Chloroform	ND	ND	5.10	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Chloromethane	ND	ND	5.10	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	cis-1,3-Dichloropropene	ND	ND	5.10	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Dibromochloromethane	ND	ND	5.10	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Ethylbenzene	ND	ND	5.10	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Methyl Ethyl Ketone (2-Butanone)	ND	ND	21.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Methyl Isobutyl Ketone (4-Methyl-2-pentanone)	ND	0.900	21.0		NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Methylene Chloride	ND	ND	5.10	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Styrene	ND	ND	5.10	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	tert-Butyl Methyl Ether	ND	ND	5.10	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Tetrachloroethylene (PCE)	ND	ND	5.10	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Toluene	ND	ND	5.10	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Total 1,2-Dichloroethene	ND	ND	10.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	trans-1,3-Dichloropropene	ND	ND	5.10	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Trichloroethylene (TCE)	ND	ND	5.10	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Vinyl Chloride	ND	ND	5.10	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Xylenes, Total	ND	ND	10.0	NA	NA	OK

Location	Analysis
77-1037-DU1-SS	SW8270C

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Check	RL Check
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	1,2,4-Trichlorobenzene	ND	ND	200	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	1,2-Dichlorobenzene	ND	ND	200	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	1,3-Dichlorobenzene	ND	ND	200	NA	NA	OK

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil

The RPD criteria used for organic analysis is: 50
The RPD criteria used for non-organic analysis is: 35

077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	1,4-Dichlorobenzene	ND	ND	200	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	2,4,5-Trichlorophenol	ND	ND	610	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	2,4,6-Trichlorophenol	ND	ND	610	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	2,4-Dichlorophenol	ND	ND	610	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	2,4-Dimethylphenol	ND	ND	610	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	2,4-Dinitrophenol	ND	ND	1300	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	2,4-Dinitrotoluene	ND	ND	810	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	2,6-Dinitrotoluene	ND	ND	810	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	2-Chloronaphthalene	ND	ND	200	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	2-Chlorophenol	ND	ND	200	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	2-Methylnaphthalene	54.0	60.0	27.0	10.5	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	2-Methylphenol (o-Cresol)	ND	ND	810	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	2-Nitroaniline	ND	ND	810	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	2-Nitrophenol	ND	ND	200	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	3,3'-Dichlorobenzidine	ND	ND	410	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	3-Nitroaniline	ND	ND	810	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	4,6-Dinitro-2-Methylphenol	ND	ND	610	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	4-Bromophenyl phenyl ether	ND	ND	200	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	4-Chloro-3-Methylphenol	ND	ND	610	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	4-Chloroaniline	ND	ND	610	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	4-Chlorophenyl Phenyl Ether	ND	ND	200	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	4-Nitroaniline	ND	ND	810	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	4-Nitrophenol	ND	ND	1300	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Acenaphthene	ND	ND	27.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Acenaphthylene	ND	ND	27.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Anthracene	ND	11.0	27.0		NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Benzo(a)anthracene	57.0	48.0	27.0	17.1	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Benzo(a)pyrene	500	65.0	27.0	154	NA	435
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Benzo(b)fluoranthene	91.0	81.0	27.0	11.6	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Benzo(g,h,i)perylene	47.0	37.0	27.0	23.8	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Benzo(k)fluoranthene	18.0	17.0	27.0	5.71	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Benzoic acid	ND	ND	2700	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Benzyl alcohol	ND	ND	1300	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Benzyl butyl phthalate	ND	ND	200	NA	NA	OK

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RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil

The RPD criteria used for organic analysis is: 50
The RPD criteria used for non-organic analysis is: 35

077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	bis(2-Chloroethoxy) Methane	ND	ND	410	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	bis(2-Chloroethyl) Ether (2-Chloroethyl Ether)	ND	ND	410	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	bis(2-Chloroisopropyl) Ether	ND	ND	410	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	bis(2-Ethylhexyl) Phthalate	ND	ND	200	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Carbazole	ND	ND	200	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Chrysene	66.0	57.0	27.0	14.6	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Cresols, m & p	ND	ND	1600	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Di-n-Butyl Phthalate	ND	ND	200	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Di-n-Octylphthalate	ND	ND	200	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Dibenz(a,h)anthracene	ND	ND	27.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Dibenzofuran	14.0	14.0	200	0.00	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Diethyl Phthalate	ND	ND	200	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Dimethyl Phthalate	ND	ND	200	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Fluoranthene	120	99.0	27.0	19.2	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Fluorene	ND	9.60	27.0		NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Hexachlorobenzene	ND	ND	27.0	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Hexachlorobutadiene	ND	ND	200	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Hexachlorocyclopentadiene	ND	ND	1300	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Hexachloroethane	ND	ND	200	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Indeno(1,2,3-c,d)Pyrene	441	44.0	27.0	164	NA	397
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Isophorone	ND	ND	200	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	n-Nitrosodi-n-propylamine	ND	ND	200	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	n-Nitrosodiphenylamine	ND	ND	200	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Naphthalene	426	54.0	27.0	155	NA	372
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Nitrobenzene	ND	ND	410	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Pentachlorophenol	ND	ND	610	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Phenanthrene	77.0	64.0	27.0	18.4	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Phenol	ND	ND	200	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Pyrene	95.0	74.0	27.0	24.9	NA	OK

Location	Analysis
77-1037-DU1-SS	SW8330B

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Check	RL Check

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil

The RPD criteria used for organic analysis is: 50
The RPD criteria used for non-organic analysis is: 35

077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	1,3,5-Trinitrobenzene	ND	ND	0.250	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	1,3-Dinitrobenzene	ND	ND	0.250	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	2,4,6-Trinitrotoluene	ND	ND	0.250	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	2,4-Dinitrotoluene	ND	ND	0.250	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	2,6-Dinitrotoluene	ND	ND	0.250	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	2-Amino-4,6-dinitrotoluene	ND	ND	0.250	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	2-Nitrotoluene	ND	ND	0.250	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	3-Nitrotoluene	ND	ND	0.250	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	4-Amino-2,6-dinitrotoluene	ND	ND	0.250	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	4-Nitrotoluene	ND	ND	0.250	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Hexahydro-1,3,5-trinitro-1,3,5-triazine	ND	ND	0.250	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Nitrobenzene	ND	ND	0.250	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Nitroglycerin	ND	0.0830	0.500		NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	NITROGUANIDINE	ND	0.0550	0.250		NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	ND	ND	0.250	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Pentaerythritol Tetranitrate	ND	ND	0.500	NA	NA	OK
077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Tetryl	ND	0.0280	0.250		NA	OK

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil

The RPD criteria used for organic analysis is: 50
The RPD criteria used for non-organic analysis is: 35

WORKSHEET 2

Automated Data Review Summary for 240-18297-1

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AUTOMATED DATA REVIEW SUMMARY for 240-18297-1_(72-77-SB)

Facility: Ravenna Army Ammunition Plant

Event: Fall 2012 SI/RI Sampling

Guidance Document: Ravenna Army Ammunition Plant, Quality Assurance Project Plan, Oct. 3, 2012

Contract Laboratory: TestAmerica, Inc., North Canton, OH

Field Contractor: Environmental Chemical Corp., Otis Ang Base, MA

Data Review Contractor: ECC

SDG: 240-18297-1_(72-77-SB), Certified - 1/9/2013 by frederickroche

QC Level: ADR

Project Manager:

Data Reviewer: Veronica Champagne

Data Reviewer Title: Senior QA Chemist

Date of Review Report: January 07, 2013

Samples Included in SDG 240-18297-1_(72-77-SB)

Analytical Method/ Leach Method	Normal Soil Samples	Normal Water Samples	Field QC Soil Samples	Field QC Water Samples
E353.2/NONE	10		0	
M8015D/NONE	11		2	
M8015V/NONE	11		2	
SW6020/NONE	11		2	
SW7471A/NONE	11		2	
SW8081/NONE	2		0	
SW8082/NONE	2		0	
SW8260B/NONE	11	2	2	0
SW8270C/NONE	11		2	
SW8330B/NONE	10		0	

AUTOMATED DATA REVIEW SUMMARY for 240-18297-1_(72-77-SB)

This report assesses the analytical data quality associated with the analyses listed on the preceding cover page. This assessment has been made through a combination of automated data review (ADR) and supplemental manual review, the details of which are described below. The approach taken in the review of this data set is consistent with the requirements contained in the Ravenna Army Ammunition Plant, Quality Assurance Project Plan, Oct. 3, 2012 to the extent possible. Where definitive guidance is not provided, data has been evaluated in a conservative manner using professional judgment. In cases where two qualifiers are listed as an action, such as 'J/UJ', the first qualifier applies to positive results, and the second to non-detect results.

Samples were collected by Environmental Chemical Corp., Otis Ang Base, MA; analyses were performed by TestAmerica, Inc., North Canton, OH and were reported under sample delivery group (SDG) 240-18297-1_(72-77-SB). Results have been evaluated electronically using electronic data deliverables (EDDs) provided by the laboratory. The laboratory data summary forms (hard copy) have been reviewed during this effort and compared to the automated review output. Findings based on the automated data submission and manual data verification processes are detailed in the ADR narrative.

The following quality control elements were supported by the electronic deliverable and were evaluated during this review effort:

- Blank
- Blank - Negative
- Field Duplicate RPD
- LCS Recovery
- MS Recovery
- MS RPD
- Prep Hold Time
- Surrogate
- Test Hold Time

The following quality control elements were either not applicable to the deliverable, or were not supported by the electronic deliverable, and were therefore not included in the automated data review. Those elements required for the project were reviewed manually, as narrated in the Comment section below.

- Ambient Blank
- Calibration Blank
- Calibration Blank - Negative
- Continuing Calibration Verification
- Equipment Blank
- Field Blank
- Initial Calibration Verification
- Lab Replicate RPD
- LCS RPD

Material Blank

Trip Blank

AUTOMATED DATA REVIEW SUMMARY for 240-18297-1_(72-77-SB)

A representative sampling or ten percent of sample and QC results were manually evaluated for compliance with project specific requirements and consistency with hard copy results. The following summaries were generated during the evaluation of this data set and are included in this report as applicable.

Batch – The analytical batch report is reviewed for completeness and compliance with project specific requirements. Incomplete or non-compliant run sequences are identified and their impact on data quality are discussed in the narrative.

QC Outlier – Results exceeding the evaluation criteria are reviewed for compliance with project requirements and a minimum of ten percent of the non-compliant QC values reported electronically are verified for consistency with hard-copy values.

Qualified Results – Qualified results are evaluated for compliance with project requirements and ten percent of qualified results are verified for consistency with the QC Outliers.

Rejected Results – All rejected results are evaluated for compliance with project requirements. The reason for rejection of the data is verified against hard copy data.

Field Duplicates – Field duplicate comparison results are evaluated for compliance with project requirements and ten percent of values reported are verified for consistency with the hard-copy data.

Data Submission Warnings – Warnings encountered during the data submission process are evaluated and their affect on data quality is discussed in the narrative below.

Analytical deficiencies, project non-compliance issues and inconsistencies with hard copy results observed during ADR evaluation process and their impact on data quality are summarized in the narrative below.

A total of 192 results (17.76%) out of the 1081 results (sample and field QC samples) reported are qualified based on review and 0 results (0.00%) have been rejected. Trace values are not counted as qualified results in the above count. The qualified results are detailed in the following tables and discussed in the narrative below, where appropriate.

Narrative Comments

Analytical Method	Comment
E353.2	
M8015D	
M8015V	
SW6020	
SW7471A	

SW8081	
SW8082	
SW8260B	
SW8270C	
SW8330B	

07-Jan-2013

Reviewed by Veronica Champagne, Senior QA Chemist

Reason and Comment Code Definitions

Reasons	
Code Code	**Definition**
A	Serial dilution
A1	Ambient Blank
B	The analyte was found in an associated blank as well as in the sample.
B2	CCB
B3	CCB - Neg
c	LCS - low
C	LCS Recovery
d	Field Duplicate RPD
D	MS RPD
D1	Lab Replicate RPD
D2	No precision available
F	Field Blank
F1	Hydrocarbon pattern does not match standard
G1	Initial Calibration RRF
G2	Initial Calibration RSD
h	Holding time exceeded by less than 2X.
H	Holding time exceeded by more than 2X.
H1	Test Hold Time
H2	Prep Hold Time
I	Surrogate recovery outside project limits.
J	CRA/CRI Recovery
K	An analyte (non-common laboratory artifact) was detected in the sample at a concentration less than 5X the concentration detected in the associated method blank.
L	Lab Blank
L1	Lab Blank - Neg
m	MS - low
M	MS Recovery
N	Blank - No Action
O	ICS
P	Sample preservation/collection requirement not met.
P1	Column RPD

P2		Improper preparation/extraction
q		Encore sample holding time exceeded by less than 2X.
Q		Encore sample holding time exceeded by more than 2X.
Q1		Material Blank
R		Exceeds Linear Calibration Range
S		Internal standard
T		Trip Blank
TI		Tentatively Identified Compound
TR		Trace Level Detect
U		Receipt Temperature
V		Equipment Blank
V1		ICV
V2		CCV
V3		CCV RRF
V4		Sample Receipt Condition
W		Column breakdown (pesticides)
X		Raised reporting limit
Y		Cooler temperature greater than 10 degrees C.
y		Cooler temperature greater than 4 degrees C, but less than 10 degrees C.
Y1		False Positive
Y2		Data rejected due to radiological anomalies
Z		LCS RPD
Z2	Z	Analyte not confirmed on second column

Flag Code and Definitions

Flag	Definition
U	Undetected: The analyte was analyzed for, but not detected.
UJ	The analyte was not detected; however, the result is estimated due to discrepancies in meeting certain analyte-specific quality control criteria.
J	Estimated: The analyte was positively identified, the quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
R	The data are rejected due to deficiencies in meeting QC criteria and may not be used for decision making.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification".
NJ	The analysis indicates the presence of an analyte that has been “tentatively identified” and the associated numerical value represents its approximate concentration.

Batch Report

Test Method: E353.2; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
7694	7431	NA	LABQC	SQ	LABQC	MB 320-7372/1-B		1/1	17-Dec-2012 7:02 AM	17-Dec-2012 7:02 AM	18-Dec-2012 12:40 PM	LB
	7431	NA	LABQC	SQ	LABQC	LCS 320-7372/2-B		1/1	17-Dec-2012 7:02 AM	17-Dec-2012 7:02 AM	18-Dec-2012 12:42 PM	BS
	7431	NA	77-1037-DU1-SB	SO	077SB-0004M-0001-SO	240-18297-1		1/1	03-Dec-2012 12:00 PM	17-Dec-2012 7:02 AM	18-Dec-2012 12:44 PM	N
	7431	NA	77-1037-DU1-SB	SO	077SB-0004M-0001-SO	240-18297-1		1/1	03-Dec-2012 12:00 PM	17-Dec-2012 7:02 AM	18-Dec-2012 12:46 PM	MS
	7431	NA	77-1037-DU1-SB	SO	077SB-0004M-0001-SO	240-18297-1		1/1	03-Dec-2012 12:00 PM	17-Dec-2012 7:02 AM	18-Dec-2012 12:48 PM	SD
	7431	NA	77-1037-DU1-SB	SO	077SB-0005M-0001-SO	240-18297-2		1/1	03-Dec-2012 12:01 PM	17-Dec-2012 7:02 AM	18-Dec-2012 12:58 PM	N
	7431	NA	77-1037-DU1-SB1	SO	077SB-0006M-0001-SO	240-18297-3		1/1	03-Dec-2012 12:00 PM	17-Dec-2012 7:02 AM	18-Dec-2012 1:00 PM	N
	7431	NA	77-1037-DU1-SB2	SO	077SB-0007M-0001-SO	240-18297-4		1/1	03-Dec-2012 11:03 AM	17-Dec-2012 7:02 AM	18-Dec-2012 1:02 PM	N
	7431	NA	77-1037-DU1-SB2	SO	077SB-0008M-0001-SO	240-18297-5		1/1	03-Dec-2012 11:37 AM	17-Dec-2012 7:02 AM	18-Dec-2012 1:04 PM	N
	7431	NA	77-1037-DU1-SB3	SO	077SB-0009M-0001-SO	240-18297-6		1/1	03-Dec-2012 11:26 AM	17-Dec-2012 7:02 AM	18-Dec-2012 1:06 PM	N
	7431	NA	77-1037-DU1-SB4	SO	077SB-0010M-0001-SO	240-18297-7		1/1	03-Dec-2012 11:50 AM	17-Dec-2012 7:02 AM	18-Dec-2012 1:08 PM	N
	7431	NA	77-1037-DU1-SB5	SO	077SB-0011M-0001-SO	240-18297-8		1/1	03-Dec-2012 11:03 AM	17-Dec-2012 7:02 AM	18-Dec-2012 1:10 PM	N
	7431	NA	72-1048-RV5-SB1	SO	072SB-0003-0001-SO	240-18297-11		1/1	03-Dec-2012 2:50 PM	17-Dec-2012 7:02 AM	18-Dec-2012 1:12 PM	N
	7431	NA	72-1026-R86-SB2	SO	072SB-0014-0001-SO	240-18297-17		1/1	03-Dec-2012 4:45 PM	17-Dec-2012 7:02 AM	18-Dec-2012 1:14 PM	N

Test Method: M8015D; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
68302	68158	NA	LABQC	SQ	LABQC	MB 240-68158/23-A		1/1	11-Dec-2012 10:32 AM	11-Dec-2012 10:32 AM	12-Dec-2012 4:09 PM	LB
	68158	NA	LABQC	SQ	LABQC	LCS 240-68158/24-A		1/1	11-Dec-2012 10:32 AM	11-Dec-2012 10:32 AM	12-Dec-2012 4:39 PM	BS
	68158	NA	72-1048-RV5-SB1	SO	072SB-0001-0001-SO	240-18297-9		1/1	03-Dec-2012 2:30 PM	11-Dec-2012 10:32 AM	12-Dec-2012 10:44 PM	N
	68158	NA	72-1048-RV5-SB1	SO	072SB-0001-0002-SO	240-18297-9		1/1	03-Dec-2012 2:30 PM	11-Dec-2012 10:32 AM	12-Dec-2012 11:15 PM	MS

	68158	NA	72-1048-RV5-SB1	SO	072SB-0001-0002-SO	240-18297-9		1/1	03-Dec-2012 2:30 PM	11-Dec-2012 10:32 AM	12-Dec-2012 11:45 PM	SD
	68158	NA	72-1048-RV5-SB1	SO	072SB-0002-0001-SO	240-18297-10		1/1	03-Dec-2012 2:30 PM	11-Dec-2012 10:32 AM	13-Dec-2012 12:16 AM	FD
	68158	NA	72-1048-RV5-SB1	SO	072SB-0003-0001-SO	240-18297-11		1/1	03-Dec-2012 2:50 PM	11-Dec-2012 10:32 AM	13-Dec-2012 12:46 AM	N
	68158	NA	72-1048-RV5-SB2	SO	072SB-0004-0001-SO	240-18297-12		1/1	03-Dec-2012 3:20 PM	11-Dec-2012 10:32 AM	13-Dec-2012 1:16 AM	N
	68158	NA	72-1048-RV5-SB3	SO	072SB-0005-0001-SO	240-18297-13		1/1	03-Dec-2012 3:01 PM	11-Dec-2012 10:32 AM	13-Dec-2012 1:46 AM	N
	68158	NA	72-1026-R86-SB1	SO	072SB-0012-0001-SO	240-18297-15		1/1	03-Dec-2012 4:40 PM	11-Dec-2012 10:32 AM	13-Dec-2012 2:47 AM	N
	68158	NA	72-1026-R86-SB1	SO	072SB-0012-0002-SO	240-18297-15		1/1	03-Dec-2012 4:40 PM	11-Dec-2012 10:32 AM	13-Dec-2012 3:18 AM	MS
	68158	NA	72-1026-R86-SB1	SO	072SB-0012-0002-SO	240-18297-15		1/1	03-Dec-2012 4:40 PM	11-Dec-2012 10:32 AM	13-Dec-2012 3:48 AM	SD
	68158	NA	72-1026-R86-SB1	SO	072SB-0013-0001-SO	240-18297-16		1/1	03-Dec-2012 4:40 PM	11-Dec-2012 10:32 AM	13-Dec-2012 4:19 AM	FD
	68158	NA	72-1026-R86-SB2	SO	072SB-0014-0001-SO	240-18297-17		1/1	03-Dec-2012 4:45 PM	11-Dec-2012 10:32 AM	13-Dec-2012 4:49 AM	N
68515	68373	NA	LABQC	SQ	LABQC	MB 240-68373/12-A		1/1	12-Dec-2012 11:59 AM	12-Dec-2012 11:59 AM	13-Dec-2012 4:13 PM	LB
	68373	NA	LABQC	SQ	LABQC	LCS 240-68373/11-A		1/1	12-Dec-2012 11:59 AM	12-Dec-2012 11:59 AM	13-Dec-2012 4:44 PM	BS
	68373	NA	72-1026-R86-SB3	SO	072SB-0015-0001-SO	240-18297-18		1/1	03-Dec-2012 4:55 PM	12-Dec-2012 11:59 AM	13-Dec-2012 5:15 PM	N
	68373	NA	72-1026-R86-SB3	SO	072SB-0015-0001-SO	240-18297-18		1/1	03-Dec-2012 4:55 PM	12-Dec-2012 11:59 AM	13-Dec-2012 5:46 PM	MS
	68373	NA	72-1026-R86-SB3	SO	072SB-0015-0001-SO	240-18297-18		1/1	03-Dec-2012 4:55 PM	12-Dec-2012 11:59 AM	13-Dec-2012 6:16 PM	SD
	68373	NA	72-1026-R86-SB4	SO	072SB-0016-0001-SO	240-18297-19		1/1	03-Dec-2012 5:05 PM	12-Dec-2012 11:59 AM	13-Dec-2012 6:47 PM	N
	68373	NA	72-1026-R86-SB5	SO	072SB-0017-0001-SO	240-18297-20		1/1	03-Dec-2012 5:20 PM	12-Dec-2012 11:59 AM	13-Dec-2012 7:17 PM	N
	68373	NA	72-1026-R86-SB6	SO	072SB-0018-0001-SO	240-18297-21		1/1	03-Dec-2012 5:25 PM	12-Dec-2012 11:59 AM	13-Dec-2012 8:18 PM	N
	68373	NA	72-1026-R86-SB1	SO	072SB-0019-0001-SO	240-18297-22		1/1	03-Dec-2012 4:23 PM	12-Dec-2012 11:59 AM	13-Dec-2012 8:48 PM	N

Test Method: M8015V; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
68246	NA	NA	LABQC	SQ	LABQC	MB 240-68246/7		1/1	12-Dec-2012 12:50 PM		12-Dec-2012 12:50 PM	LB
	NA	NA	LABQC	SQ	LABQC	LCS 240-68246/9		1/1	12-Dec-2012 2:06 PM		12-Dec-2012 2:06 PM	BS

	68383	NA	72-1048-RV5-SB1	SO	072SB-0001-0001-SO	240-18297-9		1/1	03-Dec-2012 2:30 PM	04-Dec-2012 8:49 PM	12-Dec-2012 2:43 PM	N
	68383	NA	72-1048-RV5-SB1	SO	072SB-0001-0002-SO	240-18297-9		1/1	03-Dec-2012 2:30 PM	04-Dec-2012 8:49 PM	12-Dec-2012 3:21 PM	MS
	68383	NA	72-1048-RV5-SB1	SO	072SB-0001-0002-SO	240-18297-9		1/1	03-Dec-2012 2:30 PM	04-Dec-2012 8:49 PM	12-Dec-2012 3:58 PM	SD
	68383	NA	72-1048-RV5-SB1	SO	072SB-0002-0001-SO	240-18297-10		1/1	03-Dec-2012 2:30 PM	04-Dec-2012 8:49 PM	12-Dec-2012 4:36 PM	FD
	68383	NA	72-1048-RV5-SB1	SO	072SB-0003-0001-SO	240-18297-11		1/1	03-Dec-2012 2:50 PM	04-Dec-2012 8:49 PM	12-Dec-2012 5:14 PM	N
	68383	NA	72-1048-RV5-SB2	SO	072SB-0004-0001-SO	240-18297-12		1/1	03-Dec-2012 3:20 PM	04-Dec-2012 8:49 PM	12-Dec-2012 5:53 PM	N
	68383	NA	72-1048-RV5-SB3	SO	072SB-0005-0001-SO	240-18297-13		1/1	03-Dec-2012 3:01 PM	04-Dec-2012 8:49 PM	12-Dec-2012 7:09 PM	N
	68383	NA	72-1026-R86-SB1	SO	072SB-0012-0001-SO	240-18297-15		1/1	03-Dec-2012 4:40 PM	04-Dec-2012 8:49 PM	12-Dec-2012 7:47 PM	N
	68383	NA	72-1026-R86-SB1	SO	072SB-0012-0002-SO	240-18297-15		1/1	03-Dec-2012 4:40 PM	04-Dec-2012 8:49 PM	12-Dec-2012 8:26 PM	MS
	68383	NA	72-1026-R86-SB1	SO	072SB-0012-0002-SO	240-18297-15		1/1	03-Dec-2012 4:40 PM	04-Dec-2012 8:49 PM	12-Dec-2012 9:04 PM	SD
	68383	NA	72-1026-R86-SB1	SO	072SB-0013-0001-SO	240-18297-16		1/1	03-Dec-2012 4:40 PM	04-Dec-2012 8:49 PM	12-Dec-2012 9:42 PM	FD
	68383	NA	72-1026-R86-SB2	SO	072SB-0014-0001-SO	240-18297-17		1/1	03-Dec-2012 4:45 PM	04-Dec-2012 8:49 PM	12-Dec-2012 10:19 PM	N
	68383	NA	72-1026-R86-SB3	SO	072SB-0015-0001-SO	240-18297-18		1/1	03-Dec-2012 4:55 PM	04-Dec-2012 8:49 PM	12-Dec-2012 10:57 PM	N
	68383	NA	72-1026-R86-SB4	SO	072SB-0016-0001-SO	240-18297-19		1/1	03-Dec-2012 5:05 PM	04-Dec-2012 8:49 PM	12-Dec-2012 11:35 PM	N
	68383	NA	72-1026-R86-SB5	SO	072SB-0017-0001-SO	240-18297-20		1/1	03-Dec-2012 5:20 PM	04-Dec-2012 8:49 PM	13-Dec-2012 12:13 AM	N
	68383	NA	72-1026-R86-SB6	SO	072SB-0018-0001-SO	240-18297-21		1/1	03-Dec-2012 5:25 PM	04-Dec-2012 8:49 PM	13-Dec-2012 12:50 AM	N
	68383	NA	72-1026-R86-SB1	SO	072SB-0019-0001-SO	240-18297-22		1/1	03-Dec-2012 4:23 PM	04-Dec-2012 8:49 PM	13-Dec-2012 2:06 AM	N

Test Method: SW6020; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
59320	59173	NA	LABQC	SQ	LABQC	MB 180-59173/1-A		1/1	07-Dec-2012 1:14 PM	07-Dec-2012 1:14 PM	23-Dec-2012 7:20 PM	LB
	59173	NA	LABQC	SQ	LABQC	LCS 180-59173/2-A		1/1	07-Dec-2012 1:14 PM	07-Dec-2012 1:14 PM	23-Dec-2012 7:25 PM	BS
	59173	NA	72-1048-RV5-SB1	SO	072SB-0001-0001-SO	240-18297-9		1/1	03-Dec-2012 2:30 PM	07-Dec-2012 1:14 PM	23-Dec-2012 7:32 PM	N
	59173	NA	72-1048-RV5-SB1	SO	072SB-0001-0002-SO	240-18297-9		1/1	03-Dec-2012 2:30 PM	07-Dec-2012 1:14 PM	23-Dec-2012 7:40 PM	SD

	59173	NA	72-1048-RV5-SB1	SO	072SB-0001-0002-SO	240-18297-9		1/1	03-Dec-2012 2:30 PM	07-Dec-2012 1:14 PM	23-Dec-2012 7:45 PM	MS
	59173	NA	72-1026-R86-SB1	SO	072SB-0012-0001-SO	240-18297-15		1/1	03-Dec-2012 4:40 PM	07-Dec-2012 1:14 PM	23-Dec-2012 7:56 PM	N
	59173	NA	72-1026-R86-SB1	SO	072SB-0012-0002-SO	240-18297-15		1/1	03-Dec-2012 4:40 PM	07-Dec-2012 1:14 PM	23-Dec-2012 8:20 PM	SD
	59173	NA	72-1026-R86-SB1	SO	072SB-0012-0002-SO	240-18297-15		1/1	03-Dec-2012 4:40 PM	07-Dec-2012 1:14 PM	23-Dec-2012 8:24 PM	MS
	59173	NA	72-1048-RV5-SB1	SO	072SB-0002-0001-SO	240-18297-10		1/1	03-Dec-2012 2:30 PM	07-Dec-2012 1:14 PM	23-Dec-2012 8:36 PM	FD
	59173	NA	72-1048-RV5-SB1	SO	072SB-0003-0001-SO	240-18297-11		1/1	03-Dec-2012 2:50 PM	07-Dec-2012 1:14 PM	23-Dec-2012 8:40 PM	N
	59173	NA	72-1048-RV5-SB2	SO	072SB-0004-0001-SO	240-18297-12		1/1	03-Dec-2012 3:20 PM	07-Dec-2012 1:14 PM	23-Dec-2012 8:44 PM	N
	59173	NA	72-1048-RV5-SB3	SO	072SB-0005-0001-SO	240-18297-13		1/1	03-Dec-2012 3:01 PM	07-Dec-2012 1:14 PM	23-Dec-2012 8:49 PM	N
	59173	NA	72-1026-R86-SB1	SO	072SB-0013-0001-SO	240-18297-16		1/1	03-Dec-2012 4:40 PM	07-Dec-2012 1:14 PM	23-Dec-2012 8:53 PM	FD
	59173	NA	72-1026-R86-SB2	SO	072SB-0014-0001-SO	240-18297-17		1/1	03-Dec-2012 4:45 PM	07-Dec-2012 1:14 PM	23-Dec-2012 8:57 PM	N
	59173	NA	72-1026-R86-SB3	SO	072SB-0015-0001-SO	240-18297-18		1/1	03-Dec-2012 4:55 PM	07-Dec-2012 1:14 PM	23-Dec-2012 9:17 PM	N
	59173	NA	72-1026-R86-SB4	SO	072SB-0016-0001-SO	240-18297-19		1/1	03-Dec-2012 5:05 PM	07-Dec-2012 1:14 PM	23-Dec-2012 9:21 PM	N
	59173	NA	72-1026-R86-SB5	SO	072SB-0017-0001-SO	240-18297-20		1/1	03-Dec-2012 5:20 PM	07-Dec-2012 1:14 PM	23-Dec-2012 9:26 PM	N
	59173	NA	72-1026-R86-SB6	SO	072SB-0018-0001-SO	240-18297-21		1/1	03-Dec-2012 5:25 PM	07-Dec-2012 1:14 PM	23-Dec-2012 9:30 PM	N
	59173	NA	72-1026-R86-SB1	SO	072SB-0019-0001-SO	240-18297-22		1/1	03-Dec-2012 4:23 PM	07-Dec-2012 1:14 PM	23-Dec-2012 9:34 PM	N

Test Method: SW7471A; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
68700	68192	NA	LABQC	SQ	LABQC	MB 240-68192/1-A		1/1	11-Dec-2012 3:45 PM	11-Dec-2012 3:45 PM	13-Dec-2012 1:43 PM	LB
	68192	NA	LABQC	SQ	LABQC	LCS 240-68192/2-A		1/1	11-Dec-2012 3:45 PM	11-Dec-2012 3:45 PM	13-Dec-2012 1:45 PM	BS
	68192	NA	72-1048-RV5-SB1	SO	072SB-0001-0001-SO	240-18297-9		1/1	03-Dec-2012 2:30 PM	11-Dec-2012 3:45 PM	13-Dec-2012 1:47 PM	N
	68192	NA	72-1048-RV5-SB1	SO	072SB-0001-0002-SO	240-18297-9		1/1	03-Dec-2012 2:30 PM	11-Dec-2012 3:45 PM	13-Dec-2012 1:49 PM	SD
	68192	NA	72-1048-RV5-SB1	SO	072SB-0001-0002-SO	240-18297-9		1/1	03-Dec-2012 2:30 PM	11-Dec-2012 3:45 PM	13-Dec-2012 1:51 PM	MS
	68192	NA	72-1026-R86-SB1	SO	072SB-0012-0001-SO	240-18297-15		1/1	03-Dec-2012 4:40 PM	11-Dec-2012 3:45 PM	13-Dec-2012 1:52 PM	N

	68192	NA	72-1026-R86-SB1	SO	072SB-0012-0002-SO	240-18297-15		1/1	03-Dec-2012 4:40 PM	11-Dec-2012 3:45 PM	13-Dec-2012 1:55 PM	SD
	68192	NA	72-1026-R86-SB1	SO	072SB-0012-0002-SO	240-18297-15		1/1	03-Dec-2012 4:40 PM	11-Dec-2012 3:45 PM	13-Dec-2012 1:57 PM	MS
	68192	NA	72-1048-RV5-SB1	SO	072SB-0003-0001-SO	240-18297-11		1/1	03-Dec-2012 2:50 PM	11-Dec-2012 3:45 PM	13-Dec-2012 2:04 PM	N
	68192	NA	72-1026-R86-SB1	SO	072SB-0013-0001-SO	240-18297-16		1/1	03-Dec-2012 4:40 PM	11-Dec-2012 3:45 PM	13-Dec-2012 2:08 PM	FD
	68192	NA	72-1048-RV5-SB2	SO	072SB-0004-0001-SO	240-18297-12		1/1	03-Dec-2012 3:20 PM	11-Dec-2012 3:45 PM	13-Dec-2012 2:20 PM	N
	68192	NA	72-1026-R86-SB4	SO	072SB-0016-0001-SO	240-18297-19		1/1	03-Dec-2012 5:05 PM	11-Dec-2012 3:45 PM	13-Dec-2012 2:23 PM	N
	68192	NA	72-1048-RV5-SB1	SO	072SB-0002-0001-SO	240-18297-10		1/1	03-Dec-2012 2:30 PM	11-Dec-2012 3:45 PM	13-Dec-2012 2:28 PM	FD
	68192	NA	72-1026-R86-SB3	SO	072SB-0015-0001-SO	240-18297-18		1/1	03-Dec-2012 4:55 PM	11-Dec-2012 3:45 PM	13-Dec-2012 2:31 PM	N
	68192	NA	72-1026-R86-SB2	SO	072SB-0014-0001-SO	240-18297-17		1/1	03-Dec-2012 4:45 PM	11-Dec-2012 3:45 PM	13-Dec-2012 2:33 PM	N
	68192	NA	72-1026-R86-SB5	SO	072SB-0017-0001-SO	240-18297-20		1/1	03-Dec-2012 5:20 PM	11-Dec-2012 3:45 PM	13-Dec-2012 2:34 PM	N
	68192	NA	72-1026-R86-SB6	SO	072SB-0018-0001-SO	240-18297-21		1/1	03-Dec-2012 5:25 PM	11-Dec-2012 3:45 PM	13-Dec-2012 2:37 PM	N
	68192	NA	72-1048-RV5-SB3	SO	072SB-0005-0001-SO	240-18297-13		1/1	03-Dec-2012 3:01 PM	11-Dec-2012 3:45 PM	13-Dec-2012 2:39 PM	N
	68192	NA	72-1026-R86-SB1	SO	072SB-0019-0001-SO	240-18297-22		1/1	03-Dec-2012 4:23 PM	11-Dec-2012 3:45 PM	13-Dec-2012 2:41 PM	N

Test Method: SW8081; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
68628	68407	NA	LABQC	SQ	LABQC	LCS 240-68407/9-A		1/1	12-Dec-2012 2:20 PM	12-Dec-2012 2:20 PM	14-Dec-2012 4:26 AM	BS
	68407	NA	72-1048-RV5-SB1	SO	072SB-0003-0001-SO	240-18297-11		1/1	03-Dec-2012 2:50 PM	12-Dec-2012 2:20 PM	14-Dec-2012 4:54 AM	N
	68407	NA	72-1026-R86-SB2	SO	072SB-0014-0001-SO	240-18297-17		1/1	03-Dec-2012 4:45 PM	12-Dec-2012 2:20 PM	14-Dec-2012 5:22 AM	N
	68407	NA	72-1026-R86-SB2	SO	072SB-0014-0001-SO	240-18297-17		1/1	03-Dec-2012 4:45 PM	12-Dec-2012 2:20 PM	14-Dec-2012 5:49 AM	MS
	68407	NA	72-1026-R86-SB2	SO	072SB-0014-0001-SO	240-18297-17		1/1	03-Dec-2012 4:45 PM	12-Dec-2012 2:20 PM	14-Dec-2012 6:16 AM	SD
	68407	NA	LABQC	SQ	LABQC	MB 240-68407/10-A		1/1	12-Dec-2012 2:20 PM	12-Dec-2012 2:20 PM	14-Dec-2012 8:33 AM	LB

Test Method: SW8082; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type

68676	68401	NA	72-1048-RV5-SB1	SO	072SB-0003-0001-SO	240-18297-11		1/1	03-Dec-2012 2:50 PM	12-Dec-2012 1:49 PM	14-Dec-2012 6:02 AM	N
	68401	NA	72-1048-RV5-SB1	SO	072SB-0003-0001-SO	240-18297-11		1/1	03-Dec-2012 2:50 PM	12-Dec-2012 1:49 PM	14-Dec-2012 6:18 AM	MS
	68401	NA	72-1048-RV5-SB1	SO	072SB-0003-0001-SO	240-18297-11		1/1	03-Dec-2012 2:50 PM	12-Dec-2012 1:49 PM	14-Dec-2012 6:33 AM	SD
	68401	NA	72-1026-R86-SB2	SO	072SB-0014-0001-SO	240-18297-17		1/1	03-Dec-2012 4:45 PM	12-Dec-2012 1:49 PM	14-Dec-2012 6:49 AM	N
	68401	NA	LABQC	SQ	LABQC	MB 240-68401/24-A		1/1	12-Dec-2012 1:49 PM	12-Dec-2012 1:49 PM	14-Dec-2012 8:08 AM	LB
	68401	NA	LABQC	SQ	LABQC	LCS 240-68401/23-A		1/1	12-Dec-2012 1:49 PM	12-Dec-2012 1:49 PM	14-Dec-2012 11:16 AM	BS

Test Method: SW8260B; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
67515	NA	NA	LABQC	SQ	LABQC	LCS 240-67515/5		1/1	06-Dec-2012 3:03 AM		06-Dec-2012 3:03 AM	BS
	NA	NA	LABQC	SQ	LABQC	MB 240-67515/7		1/1	06-Dec-2012 3:46 AM		06-Dec-2012 3:46 AM	LB
68264	NA	NA	LABQC	SQ	LABQC	LCS 240-68264/5		1/1	12-Dec-2012 12:01 AM		12-Dec-2012 12:01 AM	BS
	NA	NA	LABQC	SQ	LABQC	MB 240-68264/7		1/1	12-Dec-2012 12:43 AM		12-Dec-2012 12:43 AM	LB
67515	67346	NA	72-1026-R86-SB1	SO	072SB-0012-0001-SO	240-18297-15		1/1	03-Dec-2012 4:40 PM	04-Dec-2012 8:49 PM	06-Dec-2012 4:25 AM	N
	67346	NA	72-1026-R86-SB1	SO	072SB-0012-0002-SO	240-18297-15		1/1	03-Dec-2012 4:40 PM	04-Dec-2012 8:49 PM	06-Dec-2012 4:47 AM	MS
	67346	NA	72-1026-R86-SB1	SO	072SB-0012-0002-SO	240-18297-15		1/1	03-Dec-2012 4:40 PM	04-Dec-2012 8:49 PM	06-Dec-2012 5:08 AM	SD
	67346	NA	72-1026-R86-SB1	SO	072SB-0013-0001-SO	240-18297-16		1/1	03-Dec-2012 4:40 PM	04-Dec-2012 8:49 PM	06-Dec-2012 5:29 AM	FD
	67346	NA	72-1026-R86-SB3	SO	072SB-0015-0001-SO	240-18297-18		1/1	03-Dec-2012 4:55 PM	04-Dec-2012 8:49 PM	06-Dec-2012 5:51 AM	N
	67346	NA	72-1026-R86-SB4	SO	072SB-0016-0001-SO	240-18297-19		1/1	03-Dec-2012 5:05 PM	04-Dec-2012 8:49 PM	06-Dec-2012 6:12 AM	N
	67346	NA	72-1026-R86-SB5	SO	072SB-0017-0001-SO	240-18297-20		1/1	03-Dec-2012 5:20 PM	04-Dec-2012 8:49 PM	06-Dec-2012 6:33 AM	N
	67346	NA	72-1026-R86-SB6	SO	072SB-0018-0001-SO	240-18297-21		1/1	03-Dec-2012 5:25 PM	04-Dec-2012 8:49 PM	06-Dec-2012 6:54 AM	N
	67346	NA	72-1026-R86-SB1	SO	072SB-0019-0001-SO	240-18297-22		1/1	03-Dec-2012 4:23 PM	04-Dec-2012 8:49 PM	06-Dec-2012 9:45 AM	N
68264	67346	NA	72-1026-R86-SB2	SO	072SB-0014-0001-SO	240-18297-17		1/1	03-Dec-2012 4:45 PM	04-Dec-2012 8:49 PM	12-Dec-2012 2:35 AM	N
67515	67349	NA	LABQC	SQ	LABQC	MB 240-67349/1-A		1/1	04-Dec-2012 10:43 PM	04-Dec-2012 10:43 PM	06-Dec-2012 10:06 AM	LB

	67349	NA	LABQC	SQ	LABQC	LCS 240-67349/2-A		1/1	04-Dec-2012 10:43 PM	04-Dec-2012 10:43 PM	06-Dec-2012 10:27 AM	BS
	67349	NA	72-1048-RV5-SB1	SO	072SB-0001-0001-SO	240-18297-9		1/1	03-Dec-2012 2:30 PM	04-Dec-2012 10:43 PM	06-Dec-2012 10:48 AM	N
	67349	NA	72-1048-RV5-SB1	SO	072SB-0001-0002-SO	240-18297-9		1/1	03-Dec-2012 2:30 PM	04-Dec-2012 10:43 PM	06-Dec-2012 11:09 AM	MS
	67349	NA	72-1048-RV5-SB1	SO	072SB-0001-0002-SO	240-18297-9		1/1	03-Dec-2012 2:30 PM	04-Dec-2012 10:43 PM	06-Dec-2012 11:31 AM	SD
	67349	NA	72-1048-RV5-SB1	SO	072SB-0002-0001-SO	240-18297-10		1/1	03-Dec-2012 2:30 PM	04-Dec-2012 10:43 PM	06-Dec-2012 11:52 AM	FD
	67349	NA	72-1048-RV5-SB3	SO	072SB-0005-0001-SO	240-18297-13		1/1	03-Dec-2012 3:01 PM	04-Dec-2012 10:43 PM	06-Dec-2012 12:34 PM	N
68264	67349	NA	LABQC	SQ	LABQC	MB 240-67349/1-A		2/1	04-Dec-2012 10:43 PM	04-Dec-2012 10:43 PM	12-Dec-2012 1:05 AM	LB
	67349	NA	LABQC	SQ	LABQC	LCS 240-67349/2-A		2/1	04-Dec-2012 10:43 PM	04-Dec-2012 10:43 PM	12-Dec-2012 1:31 AM	BS
	67349	NA	72-1048-RV5-SB1	SO	072SB-0003-0001-SO	240-18297-11		1/1.667	03-Dec-2012 2:50 PM	04-Dec-2012 10:43 PM	12-Dec-2012 1:52 AM	N
	67349	NA	72-1048-RV5-SB2	SO	072SB-0004-0001-SO	240-18297-12		1/1	03-Dec-2012 3:20 PM	04-Dec-2012 10:43 PM	12-Dec-2012 2:14 AM	N
68395	68395	NA	LABQC	WQ	LABQC	LCS 240-68395/5		1/1	12-Dec-2012 1:15 PM	12-Dec-2012 1:15 PM	12-Dec-2012 1:15 PM	BS
	68395	NA	LABQC	WQ	LABQC	MB 240-68395/6		1/1	12-Dec-2012 2:01 PM	12-Dec-2012 2:01 PM	12-Dec-2012 2:01 PM	LB
	68395	NA	72-1048-RV5-SB3	WG	072SB-0006-0001-TB	240-18297-14		1/1	03-Dec-2012 8:00 AM	12-Dec-2012 2:23 PM	12-Dec-2012 2:23 PM	N
	68395	NA	72-1026-R86-SB6	WG	072SB-0020-0001-TB	240-18297-23		1/1	03-Dec-2012 8:00 AM	12-Dec-2012 2:46 PM	12-Dec-2012 2:46 PM	N

Test Method: SW8270C; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
68706	68168	NA	LABQC	SQ	LABQC	MB 240-68168/23-A		1/1	11-Dec-2012 10:39 AM	11-Dec-2012 10:39 AM	14-Dec-2012 12:58 PM	LB
	68168	NA	LABQC	SQ	LABQC	LCS 240-68168/24-A		1/1	11-Dec-2012 10:39 AM	11-Dec-2012 10:39 AM	14-Dec-2012 1:23 PM	BS
	68168	NA	72-1048-RV5-SB1	SO	072SB-0002-0001-SO	240-18297-10		1/1	03-Dec-2012 2:30 PM	11-Dec-2012 10:39 AM	14-Dec-2012 1:48 PM	FD
	68168	NA	72-1048-RV5-SB1	SO	072SB-0001-0001-SO	240-18297-9		1/1	03-Dec-2012 2:30 PM	11-Dec-2012 10:39 AM	14-Dec-2012 2:13 PM	N
	68168	NA	72-1048-RV5-SB1	SO	072SB-0001-0002-SO	240-18297-9		1/1	03-Dec-2012 2:30 PM	11-Dec-2012 10:39 AM	14-Dec-2012 2:38 PM	MS
	68168	NA	72-1048-RV5-SB1	SO	072SB-0001-0002-SO	240-18297-9		1/1	03-Dec-2012 2:30 PM	11-Dec-2012 10:39 AM	14-Dec-2012 3:02 PM	SD
68859	68363	NA	LABQC	SQ	LABQC	MB 240-68363/21-A		1/1	12-Dec-2012 10:59 AM	12-Dec-2012 10:59 AM	15-Dec-2012 6:07 PM	LB

	68363	NA	LABQC	SQ	LABQC	LCS 240-68363/22-A		1/1	12-Dec-2012 10:59 AM	12-Dec-2012 10:59 AM	15-Dec-2012 6:30 PM	BS
	68363	NA	72-1048-RV5-SB1	SO	072SB-0003-0001-SO	240-18297-11		1/1	03-Dec-2012 2:50 PM	12-Dec-2012 10:59 AM	15-Dec-2012 6:53 PM	N
	68363	NA	72-1048-RV5-SB2	SO	072SB-0004-0001-SO	240-18297-12		1/1	03-Dec-2012 3:20 PM	12-Dec-2012 10:59 AM	15-Dec-2012 7:17 PM	N
	68363	NA	72-1048-RV5-SB3	SO	072SB-0005-0001-SO	240-18297-13		1/1	03-Dec-2012 3:01 PM	12-Dec-2012 10:59 AM	15-Dec-2012 7:40 PM	N
	68363	NA	72-1026-R86-SB1	SO	072SB-0012-0001-SO	240-18297-15		1/1	03-Dec-2012 4:40 PM	12-Dec-2012 10:59 AM	15-Dec-2012 8:04 PM	N
	68363	NA	72-1026-R86-SB1	SO	072SB-0012-0002-SO	240-18297-15		1/1	03-Dec-2012 4:40 PM	12-Dec-2012 10:59 AM	15-Dec-2012 8:27 PM	MS
	68363	NA	72-1026-R86-SB1	SO	072SB-0012-0002-SO	240-18297-15		1/1	03-Dec-2012 4:40 PM	12-Dec-2012 10:59 AM	15-Dec-2012 8:50 PM	SD
	68363	NA	72-1026-R86-SB1	SO	072SB-0013-0001-SO	240-18297-16		1/1	03-Dec-2012 4:40 PM	12-Dec-2012 10:59 AM	15-Dec-2012 9:14 PM	FD
	68363	NA	72-1026-R86-SB2	SO	072SB-0014-0001-SO	240-18297-17		1/1	03-Dec-2012 4:45 PM	12-Dec-2012 10:59 AM	15-Dec-2012 9:37 PM	N
	68363	NA	72-1026-R86-SB3	SO	072SB-0015-0001-SO	240-18297-18		1/1	03-Dec-2012 4:55 PM	12-Dec-2012 10:59 AM	15-Dec-2012 10:00 PM	N
	68363	NA	72-1026-R86-SB4	SO	072SB-0016-0001-SO	240-18297-19		1/1	03-Dec-2012 5:05 PM	12-Dec-2012 10:59 AM	15-Dec-2012 10:24 PM	N
	68363	NA	72-1026-R86-SB1	SO	072SB-0019-0001-SO	240-18297-22		1/1	03-Dec-2012 4:23 PM	12-Dec-2012 10:59 AM	15-Dec-2012 10:47 PM	N
	68363	NA	72-1026-R86-SB6	SO	072SB-0018-0001-SO	240-18297-21		1/1	03-Dec-2012 5:25 PM	12-Dec-2012 10:59 AM	15-Dec-2012 11:11 PM	N
	68363	NA	72-1026-R86-SB5	SO	072SB-0017-0001-SO	240-18297-20		1/1	03-Dec-2012 5:20 PM	12-Dec-2012 10:59 AM	15-Dec-2012 11:34 PM	N

Test Method: SW8330B; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
7620	7319	NA	LABQC	SQ	LABQC	MB 320-7319/1-A		1/1	13-Dec-2012 8:56 AM	13-Dec-2012 8:56 AM	21-Dec-2012 12:35 AM	LB
	7319	NA	LABQC	SQ	LABQC	LCS 320-7319/2-A		1/1	13-Dec-2012 8:56 AM	13-Dec-2012 8:56 AM	21-Dec-2012 1:16 AM	BS
	7319	NA	77-1037-DU1-SB	SO	077SB-0004M-0001-SO	240-18297-1		1/1	03-Dec-2012 12:00 PM	13-Dec-2012 8:56 AM	21-Dec-2012 1:56 AM	N
	7319	NA	77-1037-DU1-SB	SO	077SB-0004M-0001-SO	240-18297-1		1/1	03-Dec-2012 12:00 PM	13-Dec-2012 8:56 AM	21-Dec-2012 2:37 AM	MS
	7319	NA	77-1037-DU1-SB	SO	077SB-0004M-0001-SO	240-18297-1		1/1	03-Dec-2012 12:00 PM	13-Dec-2012 8:56 AM	21-Dec-2012 3:17 AM	SD
	7319	NA	77-1037-DU1-SB	SO	077SB-0005M-0001-SO	240-18297-2		1/1	03-Dec-2012 12:01 PM	13-Dec-2012 8:56 AM	21-Dec-2012 3:58 AM	N
	7319	NA	77-1037-DU1-SB1	SO	077SB-0006M-0001-SO	240-18297-3		1/1	03-Dec-2012 12:00 PM	13-Dec-2012 8:56 AM	21-Dec-2012 4:38 AM	N

	7319	NA	77-1037-DU1-SB2	SO	077SB-0007M-0001-SO	240-18297-4	1/1	03-Dec-2012 11:03 AM	13-Dec-2012 8:56 AM	21-Dec-2012 5:19 AM	N
	7319	NA	77-1037-DU1-SB2	SO	077SB-0008M-0001-SO	240-18297-5	1/1	03-Dec-2012 11:37 AM	13-Dec-2012 8:56 AM	21-Dec-2012 5:59 AM	N
	7319	NA	77-1037-DU1-SB3	SO	077SB-0009M-0001-SO	240-18297-6	1/1	03-Dec-2012 11:26 AM	13-Dec-2012 8:56 AM	21-Dec-2012 6:39 AM	N
	7319	NA	77-1037-DU1-SB4	SO	077SB-0010M-0001-SO	240-18297-7	1/1	03-Dec-2012 11:50 AM	13-Dec-2012 8:56 AM	21-Dec-2012 8:00 AM	N
	7319	NA	77-1037-DU1-SB5	SO	077SB-0011M-0001-SO	240-18297-8	1/1	03-Dec-2012 11:03 AM	13-Dec-2012 8:56 AM	21-Dec-2012 8:40 AM	N
	7319	NA	72-1048-RV5-SB1	SO	072SB-0003-0001-SO	240-18297-11	1/1	03-Dec-2012 2:50 PM	13-Dec-2012 8:56 AM	21-Dec-2012 9:20 AM	N
	7319	NA	72-1026-R86-SB2	SO	072SB-0014-0001-SO	240-18297-17	1/1	03-Dec-2012 4:45 PM	13-Dec-2012 8:56 AM	21-Dec-2012 10:00 AM	N
7989	7319	NA	LABQC	SQ	LABQC	MB 320-7319/1-A	2/1	13-Dec-2012 8:56 AM	13-Dec-2012 8:56 AM	28-Dec-2012 7:22 PM	LB
	7319	NA	77-1037-DU1-SB4	SO	077SB-0010M-0001-SO	240-18297-7	3/1	03-Dec-2012 11:50 AM	13-Dec-2012 8:56 AM	28-Dec-2012 8:27 PM	N
7855	7352	NA	LABQC	SQ	LABQC	MB 320-7352/1-A	1/1	13-Dec-2012 2:20 PM	13-Dec-2012 2:20 PM	26-Dec-2012 3:41 PM	LB
	7352	NA	LABQC	SQ	LABQC	LCS 320-7352/2-A	1/1	13-Dec-2012 2:20 PM	13-Dec-2012 2:20 PM	26-Dec-2012 3:56 PM	BS
	7352	NA	77-1037-DU1-SB	SO	077SB-0004M-0001-SO	240-18297-1	2/1	03-Dec-2012 12:00 PM	13-Dec-2012 2:20 PM	26-Dec-2012 4:10 PM	N
	7352	NA	77-1037-DU1-SB	SO	077SB-0004M-0001-SO	240-18297-1	2/1	03-Dec-2012 12:00 PM	13-Dec-2012 2:20 PM	26-Dec-2012 4:24 PM	MS
	7352	NA	77-1037-DU1-SB	SO	077SB-0004M-0001-SO	240-18297-1	2/1	03-Dec-2012 12:00 PM	13-Dec-2012 2:20 PM	26-Dec-2012 4:39 PM	SD
	7352	NA	77-1037-DU1-SB	SO	077SB-0005M-0001-SO	240-18297-2	2/1	03-Dec-2012 12:01 PM	13-Dec-2012 2:20 PM	26-Dec-2012 4:53 PM	N
	7352	NA	77-1037-DU1-SB1	SO	077SB-0006M-0001-SO	240-18297-3	2/1	03-Dec-2012 12:00 PM	13-Dec-2012 2:20 PM	26-Dec-2012 5:08 PM	N
	7352	NA	77-1037-DU1-SB2	SO	077SB-0007M-0001-SO	240-18297-4	2/1	03-Dec-2012 11:03 AM	13-Dec-2012 2:20 PM	26-Dec-2012 5:22 PM	N
	7352	NA	77-1037-DU1-SB2	SO	077SB-0008M-0001-SO	240-18297-5	2/1	03-Dec-2012 11:37 AM	13-Dec-2012 2:20 PM	26-Dec-2012 5:36 PM	N
	7352	NA	77-1037-DU1-SB3	SO	077SB-0009M-0001-SO	240-18297-6	2/1	03-Dec-2012 11:26 AM	13-Dec-2012 2:20 PM	26-Dec-2012 5:51 PM	N
	7352	NA	77-1037-DU1-SB4	SO	077SB-0010M-0001-SO	240-18297-7	2/1	03-Dec-2012 11:50 AM	13-Dec-2012 2:20 PM	26-Dec-2012 6:19 PM	N
	7352	NA	77-1037-DU1-SB5	SO	077SB-0011M-0001-SO	240-18297-8	2/1	03-Dec-2012 11:03 AM	13-Dec-2012 2:20 PM	26-Dec-2012 6:34 PM	N
	7352	NA	72-1048-RV5-SB1	SO	072SB-0003-0001-SO	240-18297-11	2/1	03-Dec-2012 2:50 PM	13-Dec-2012 2:20 PM	26-Dec-2012 6:48 PM	N
	7352	NA	72-1026-R86-SB2	SO	072SB-0014-0001-SO	240-18297-17	2/1	03-Dec-2012 4:45 PM	13-Dec-2012 2:20 PM	26-Dec-2012 7:03 PM	N

Field Batch Report

--No Records Found--

QC Outlier Report

Test/Prep/Leach	QC Element	Sample ID/ Lab Sample ID	Run# / Dil'n	Analyte	Result (Units)	Qualifier	Warning Limits	Control Limits	Reason	Comment	Rule	Action Level
E353.2 / METHOD/NONE	Test Hold Time	072SB-0003-0001-SO (N) / 240-18297-11	1 / 1.00	Nitrocellulose	14.9 (Days)	J/UJ	< 14	< 28	H1	Test Exceeds UWL		
E353.2 / METHOD/NONE	Test Hold Time	072SB-0014-0001-SO (N) / 240-18297-17	1 / 1.00	Nitrocellulose	14.9 (Days)	J/UJ	< 14	< 28	H1	Test Exceeds UWL		
E353.2 / METHOD/NONE	Test Hold Time	077SB-0004M-0001-SO (N) / 240-18297-1	1 / 1.00	Nitrocellulose	15.0 (Days)	J/UJ	< 14	< 28	H1	Test Exceeds UWL		
E353.2 / METHOD/NONE	Test Hold Time	077SB-0005M-0001-SO (N) / 240-18297-2	1 / 1.00	Nitrocellulose	15.0 (Days)	J/UJ	< 14	< 28	H1	Test Exceeds UWL		
E353.2 / METHOD/NONE	Test Hold Time	077SB-0006M-0001-SO (N) / 240-18297-3	1 / 1.00	Nitrocellulose	15.0 (Days)	J/UJ	< 14	< 28	H1	Test Exceeds UWL		
E353.2 / METHOD/NONE	Test Hold Time	077SB-0007M-0001-SO (N) / 240-18297-4	1 / 1.00	Nitrocellulose	15.1 (Days)	J/UJ	< 14	< 28	H1	Test Exceeds UWL		
E353.2 / METHOD/NONE	Test Hold Time	077SB-0008M-0001-SO (N) / 240-18297-5	1 / 1.00	Nitrocellulose	15.1 (Days)	J/UJ	< 14	< 28	H1	Test Exceeds UWL		
E353.2 / METHOD/NONE	Test Hold Time	077SB-0009M-0001-SO (N) / 240-18297-6	1 / 1.00	Nitrocellulose	15.1 (Days)	J/UJ	< 14	< 28	H1	Test Exceeds UWL		
E353.2 / METHOD/NONE	Test Hold Time	077SB-0010M-0001-SO (N) / 240-18297-7	1 / 1.00	Nitrocellulose	15.1 (Days)	J/UJ	< 14	< 28	H1	Test Exceeds UWL		
E353.2 / METHOD/NONE	Test Hold Time	077SB-0011M-0001-SO (N) / 240-18297-8	1 / 1.00	Nitrocellulose	15.1 (Days)	J/UJ	< 14	< 28	H1	Test Exceeds UWL		
M8015V / SW3550B/NONE	MS Recovery	072SB-0001-0002-SO (SD) / 240-18297-9	1 / 1.00	Petroleum Hydrocarbons C6-C12	23.4 (PERCENT)	J/UJ	60 - 142	30 - 142	M			
SW6020 / SW3050B/NONE	Blank	MB 180-59173/1-A (LB) / MB 180-59173/1-A	1 / 1.00	Aluminum	0.73 (MG/KG)	U/None	< 0.28	< 3	L		5	3.66
SW6020 / SW3050B/NONE	Blank	MB 180-59173/1-A (LB) / MB 180-59173/1-A	1 / 1.00	Calcium	1.5 (MG/KG)	U/None	< 1.3	< 10	L		5	7.60
SW6020 / SW3050B/NONE	Blank	MB 180-59173/1-A (LB) / MB 180-59173/1-A	1 / 1.00	Iron	2.1 (MG/KG)	U/None	< 1.1	< 5	L		5	10.5
SW6020 / SW3050B/NONE	Blank	MB 180-59173/1-A (LB) / MB 180-59173/1-A	1 / 1.00	Manganese	0.022 (MG/KG)	U/None	< 0.016	< 0.5	L		5	0.111
SW8081 / SW3540C/NONE	MS Recovery	072SB-0014-0001-SO (SD) / 240-18297-17	1 / 1.00	alpha BHC (alpha Hexachlorocyclohexane)	44.1 (PERCENT)	J/UJ	60 - 125	20 - 125	M			
SW8081 / SW3540C/NONE	MS Recovery	072SB-0014-0001-SO (SD) / 240-18297-17	1 / 1.00	alpha-Chlordane	41.5 (PERCENT)	J/UJ	65 - 120	20 - 120	M			
SW8081 / SW3540C/NONE	MS Recovery	072SB-0014-0001-SO (MS) / 240-18297-17	1 / 1.00	alpha-Chlordane	62.2 (PERCENT)	J/UJ	65 - 120	20 - 120	M			
SW8081 / SW3540C/NONE	MS Recovery	072SB-0014-0001-SO (SD) / 240-18297-17	1 / 1.00	beta BHC (beta Hexachlorocyclohexane)	38.6 (PERCENT)	J/UJ	60 - 125	20 - 125	M			
SW8081 / SW3540C/NONE	MS Recovery	072SB-0014-0001-SO (SD) / 240-18297-17	1 / 1.00	delta BHC (delta Hexachlorocyclohexane)	43.3 (PERCENT)	J/UJ	55 - 130	20 - 130	M			
SW8081 / SW3540C/NONE	MS Recovery	072SB-0014-0001-SO (SD) / 240-18297-17	1 / 1.00	Dieldrin	45.9 (PERCENT)	J/UJ	65 - 125	20 - 125	M			

SW8081 / SW3540C/NONE	MS Recovery	072SB-0014-0001-SO (SD) / 240-18297-17	1 / 1.00	Endosulfan Sulfate	38.8 (PERCENT)	J/UJ	60 - 135	20 - 135	M		
SW8081 / SW3540C/NONE	MS Recovery	072SB-0014-0001-SO (MS) / 240-18297-17	1 / 1.00	Endosulfan Sulfate	57.0 (PERCENT)	J/UJ	60 - 135	20 - 135	M		
SW8081 / SW3540C/NONE	MS Recovery	072SB-0014-0001-SO (SD) / 240-18297-17	1 / 1.00	Endrin	43.0 (PERCENT)	J/UJ	60 - 135	20 - 135	M		
SW8081 / SW3540C/NONE	MS Recovery	072SB-0014-0001-SO (SD) / 240-18297-17	1 / 1.00	Endrin Ketone	38.8 (PERCENT)	J/UJ	65 - 135	20 - 135	M		
SW8081 / SW3540C/NONE	MS Recovery	072SB-0014-0001-SO (MS) / 240-18297-17	1 / 1.00	Endrin Ketone	52.4 (PERCENT)	J/UJ	65 - 135	20 - 135	M		
SW8081 / SW3540C/NONE	MS Recovery	072SB-0014-0001-SO (SD) / 240-18297-17	1 / 1.00	gamma BHC (Lindane)	38.8 (PERCENT)	J/UJ	60 - 125	20 - 125	M		
SW8081 / SW3540C/NONE	MS Recovery	072SB-0014-0001-SO (MS) / 240-18297-17	1 / 1.00	gamma BHC (Lindane)	57.8 (PERCENT)	J/UJ	60 - 125	20 - 125	M		
SW8081 / SW3540C/NONE	MS Recovery	072SB-0014-0001-SO (SD) / 240-18297-17	1 / 1.00	gamma-Chlordane	40.7 (PERCENT)	J/UJ	65 - 125	20 - 125	M		
SW8081 / SW3540C/NONE	MS Recovery	072SB-0014-0001-SO (MS) / 240-18297-17	1 / 1.00	gamma-Chlordane	62.4 (PERCENT)	J/UJ	65 - 125	20 - 125	M		
SW8081 / SW3540C/NONE	MS Recovery	072SB-0014-0001-SO (SD) / 240-18297-17	1 / 1.00	Heptachlor	40.4 (PERCENT)	J/UJ	50 - 140	20 - 140	M		
SW8081 / SW3540C/NONE	MS Recovery	072SB-0014-0001-SO (SD) / 240-18297-17	1 / 1.00	Heptachlor Epoxide	46.5 (PERCENT)	J/UJ	65 - 130	20 - 130	M		
SW8081 / SW3540C/NONE	MS Recovery	072SB-0014-0001-SO (SD) / 240-18297-17	1 / 1.00	Methoxychlor	39.6 (PERCENT)	J/UJ	55 - 145	20 - 145	M		
SW8081 / SW3540C/NONE	MS Recovery	072SB-0014-0001-SO (MS) / 240-18297-17	1 / 1.00	Methoxychlor	53.0 (PERCENT)	J/UJ	55 - 145	20 - 145	M		
SW8081 / SW3540C/NONE	MS Recovery	072SB-0014-0001-SO (SD) / 240-18297-17	1 / 1.00	p,p'-DDE	45.1 (PERCENT)	J/UJ	70 - 125	20 - 125	M		
SW8081 / SW3540C/NONE	MS Recovery	072SB-0014-0001-SO (MS) / 240-18297-17	1 / 1.00	p,p'-DDE	65.7 (PERCENT)	J/UJ	70 - 125	20 - 125	M		
SW8081 / SW3540C/NONE	MS Recovery	072SB-0014-0001-SO (SD) / 240-18297-17	1 / 1.00	p,p'-DDT	39.6 (PERCENT)	J/UJ	45 - 140	20 - 140	M		
SW8260B / SW5030B/NONE	Blank	MB 240-68395/6 (LB) / MB 240-68395/6	1 / 1.00	Methylene Chloride	0.69 (UG/L)	U/None	< 0.33	< 1	L	2	1.38
SW8260B / SW5035/NONE	Blank	MB 240-67349/1-A (LB) / MB 240-67349/1-A	2 / 1.00	Tetrachloroethylene (PCE)	19.6 (UG/KG)	U/None	< 12	< 250	L	1	19.6
SW8260B / SW5035/NONE	Blank	MB 240-68264/7 (LB) / MB 240-68264/7	1 / 1.00	2-Hexanone	0.72 (UG/KG)	U/None	< 0.63	< 20	L	1	0.718
SW8260B / SW5035/NONE	Surrogate	072SB-0001-0001-SO (N) / 240-18297-9	1 / 1.00	1-Bromo-4-fluorobenzene (4-Bromofluorobenzene)	72.6 (PERCENT)	J/UJ	85 - 120	10 - 120	I		
SW8260B / SW5035/NONE	Surrogate	072SB-0001-0001-SO (N) / 240-18297-9	1 / 1.00	Dibromofluoromethane	64.5 (PERCENT)	J/UJ	85 - 115	10 - 115	I		
SW8260B / SW5035/NONE	Surrogate	072SB-0001-0001-SO (N) / 240-18297-9	1 / 1.00	Toluene-d8	72.6 (PERCENT)	J/UJ	85 - 115	10 - 115	I		
SW8260B / SW5035/NONE	Surrogate	072SB-0002-0001-SO (FD) / 240-18297-10	1 / 1.00	1-Bromo-4-fluorobenzene (4-Bromofluorobenzene)	84.0 (PERCENT)	J/UJ	85 - 120	10 - 120	I		

SW8260B / SW5035/NONE	Surrogate	072SB-0002-0001-SO (FD) / 240-18297-10	1 / 1.00	Dibromofluoromethane	75.6 (PERCENT)	J/UJ	85 - 115	10 - 115	I		
SW8260B / SW5035/NONE	Surrogate	072SB-0002-0001-SO (FD) / 240-18297-10	1 / 1.00	Toluene-d8	84.0 (PERCENT)	J/UJ	85 - 115	10 - 115	I		
SW8260B / SW5035/NONE	Surrogate	072SB-0003-0001-SO (N) / 240-18297-11	1 / 2.00	1-Bromo-4-fluorobenzene (4-Bromofluorobenzene)	75.9 (PERCENT)	J/UJ	85 - 120	10 - 120	I		
SW8260B / SW5035/NONE	Surrogate	072SB-0003-0001-SO (N) / 240-18297-11	1 / 2.00	Dibromofluoromethane	63.3 (PERCENT)	J/UJ	85 - 115	10 - 115	I		
SW8260B / SW5035/NONE	Surrogate	072SB-0003-0001-SO (N) / 240-18297-11	1 / 2.00	Toluene-d8	67.5 (PERCENT)	J/UJ	85 - 115	10 - 115	I		
SW8260B / SW5035/NONE	Surrogate	072SB-0004-0001-SO (N) / 240-18297-12	1 / 1.00	Dibromofluoromethane	83.7 (PERCENT)	J/UJ	85 - 115	10 - 115	I		
SW8260B / SW5035/NONE	Surrogate	072SB-0004-0001-SO (N) / 240-18297-12	1 / 1.00	Toluene-d8	83.7 (PERCENT)	J/UJ	85 - 115	10 - 115	I		
SW8260B / SW5035/NONE	Surrogate	072SB-0005-0001-SO (N) / 240-18297-13	1 / 1.00	1,2-Dichloroethane-d4	64.2 (PERCENT)	J/UJ	70 - 120	10 - 120	I		
SW8260B / SW5035/NONE	Surrogate	072SB-0005-0001-SO (N) / 240-18297-13	1 / 1.00	1-Bromo-4-fluorobenzene (4-Bromofluorobenzene)	64.2 (PERCENT)	J/UJ	85 - 120	10 - 120	I		
SW8260B / SW5035/NONE	Surrogate	072SB-0005-0001-SO (N) / 240-18297-13	1 / 1.00	Dibromofluoromethane	55.0 (PERCENT)	J/UJ	85 - 115	10 - 115	I		
SW8260B / SW5035/NONE	Surrogate	072SB-0005-0001-SO (N) / 240-18297-13	1 / 1.00	Toluene-d8	59.6 (PERCENT)	J/UJ	85 - 115	10 - 115	I		
SW8260B / SW5035/NONE	Surrogate	072SB-0012-0001-SO (N) / 240-18297-15	1 / 1.00	1-Bromo-4-fluorobenzene (4-Bromofluorobenzene)	76.6 (PERCENT)	J/UJ	85 - 120	10 - 120	I		
SW8260B / SW5035/NONE	Surrogate	072SB-0012-0001-SO (N) / 240-18297-15	1 / 1.00	Dibromofluoromethane	80.9 (PERCENT)	J/UJ	85 - 115	10 - 115	I		
SW8260B / SW5035/NONE	Surrogate	072SB-0016-0001-SO (N) / 240-18297-19	1 / 1.00	1-Bromo-4-fluorobenzene (4-Bromofluorobenzene)	71.6 (PERCENT)	J/UJ	85 - 120	10 - 120	I		
SW8260B / SW5035/NONE	Surrogate	072SB-0016-0001-SO (N) / 240-18297-19	1 / 1.00	Dibromofluoromethane	81.1 (PERCENT)	J/UJ	85 - 115	10 - 115	I		
SW8260B / SW5035/NONE	Surrogate	072SB-0017-0001-SO (N) / 240-18297-20	1 / 1.00	1-Bromo-4-fluorobenzene (4-Bromofluorobenzene)	79.6 (PERCENT)	J/UJ	85 - 120	10 - 120	I		
SW8260B / SW5035/NONE	Surrogate	072SB-0017-0001-SO (N) / 240-18297-20	1 / 1.00	Dibromofluoromethane	84.8 (PERCENT)	J/UJ	85 - 115	10 - 115	I		
SW8260B / SW5035/NONE	Surrogate	072SB-0018-0001-SO (N) / 240-18297-21	1 / 1.00	1-Bromo-4-fluorobenzene (4-Bromofluorobenzene)	83.7 (PERCENT)	J/UJ	85 - 120	10 - 120	I		
SW8260B / SW5035/NONE	Surrogate	072SB-0018-0001-SO (N) / 240-18297-21	1 / 1.00	Dibromofluoromethane	83.7 (PERCENT)	J/UJ	85 - 115	10 - 115	I		
SW8270C / SW3550/NONE	Blank	MB 240-68363/21-A (LB) / MB 240-68363/21-A	1 / 1.00	bis(2-Ethylhexyl) Phthalate	19.2 (UG/KG)	U/None	< 19	< 50	L	1	19.2
SW8270C / SW3550/NONE	Surrogate	072SB-0012-0001-SO (N) / 240-18297-15	1 / 1.00	2,4,6-Tribromophenol	34.2 (PERCENT)	J/UJ	35 - 125	10 - 125	I		
SW8270C / SW3550/NONE	Surrogate	072SB-0012-0001-SO (N) / 240-18297-15	1 / 1.00	2-Fluorobiphenyl	44.8 (PERCENT)	J/UJ	45 - 105	10 - 105	I		

AUTOMATED DATA REVIEW SUMMARY for 240-18297-1_(72-77-SB)

Qualified Results

Test Leach	Matrix	Field Sample ID	Lab Sample ID	Type	Analyte	RL	Lab Result	Qualified Result	Bias	Units	Reason
E353.2/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	Nitrocellulose	56.0	56.0	56.0 UJ	-	MG/KG	H1
E353.2/NONE	SO	072SB-0014-0001-SO	240-18297-17	N	Nitrocellulose	54.0	54.0	54.0 UJ	-	MG/KG	H1
E353.2/NONE	SO	077SB-0004M-0001-SO	240-18297-1	N	Nitrocellulose	50.0	50.0	50.0 UJ	-	MG/KG	H1
E353.2/NONE	SO	077SB-0005M-0001-SO	240-18297-2	N	Nitrocellulose	48.0	48.0	48.0 UJ	-	MG/KG	H1
E353.2/NONE	SO	077SB-0006M-0001-SO	240-18297-3	N	Nitrocellulose	50.0	50.0	50.0 UJ	-	MG/KG	H1
E353.2/NONE	SO	077SB-0007M-0001-SO	240-18297-4	N	Nitrocellulose	49.0	49.0	49.0 UJ	-	MG/KG	H1
E353.2/NONE	SO	077SB-0008M-0001-SO	240-18297-5	N	Nitrocellulose	48.0	48.0	48.0 UJ	-	MG/KG	H1
E353.2/NONE	SO	077SB-0009M-0001-SO	240-18297-6	N	Nitrocellulose	43.0	43.0	43.0 UJ	-	MG/KG	H1
E353.2/NONE	SO	077SB-0010M-0001-SO	240-18297-7	N	Nitrocellulose	50.0	50.0	50.0 UJ	-	MG/KG	H1
E353.2/NONE	SO	077SB-0011M-0001-SO	240-18297-8	N	Nitrocellulose	53.0	53.0	53.0 UJ	-	MG/KG	H1
Test Leach	**Matrix**	**Field Sample ID**	**Lab Sample ID**	**Type**	**Analyte**	**RL**	**Lab Result**	**Qualified Result**	**Bias**	**Units**	**Reason**
M8015V/NONE	SO	072SB-0001-0001-SO	240-18297-9	N	Petroleum Hydrocarbons C6-C12	110	320	320 J		UG/KG	d
M8015V/NONE	SO	072SB-0002-0001-SO	240-18297-10	FD	Petroleum Hydrocarbons C6-C12	100	180	180 J		UG/KG	d
Test Leach	**Matrix**	**Field Sample ID**	**Lab Sample ID**	**Type**	**Analyte**	**RL**	**Lab Result**	**Qualified Result**	**Bias**	**Units**	**Reason**
SW6020/NONE	SO	072SB-0001-0001-SO	240-18297-9	N	Antimony	0.21	0.075	0.075 J	-	MG/KG	TR/M
SW6020/NONE	SO	072SB-0001-0001-SO	240-18297-9	N	Arsenic	0.10	14.0	14.0 J		MG/KG	d
SW6020/NONE	SO	072SB-0001-0001-SO	240-18297-9	N	Barium	1.0	36.0	36.0 J		MG/KG	d
SW6020/NONE	SO	072SB-0001-0001-SO	240-18297-9	N	Calcium	10.0	2900	2900 J	+	MG/KG	M/D1/d
SW6020/NONE	SO	072SB-0001-0001-SO	240-18297-9	N	Potassium	10.0	1900	1900 J	+	MG/KG	M
SW6020/NONE	SO	072SB-0001-0001-SO	240-18297-9	N	Silver	0.10	0.033	0.033 J		MG/KG	TR
SW6020/NONE	SO	072SB-0002-0001-SO	240-18297-10	FD	Antimony	0.19	0.083	0.083 J	-	MG/KG	TR/M
SW6020/NONE	SO	072SB-0002-0001-SO	240-18297-10	FD	Arsenic	0.096	7.8	7.8 J		MG/KG	d
SW6020/NONE	SO	072SB-0002-0001-SO	240-18297-10	FD	Barium	0.96	87.0	87.0 J		MG/KG	d
SW6020/NONE	SO	072SB-0002-0001-SO	240-18297-10	FD	Calcium	9.6	28000	28000 J		MG/KG	d
SW6020/NONE	SO	072SB-0002-0001-SO	240-18297-10	FD	Silver	0.096	0.034	0.034 J		MG/KG	TR
SW6020/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	Antimony	0.21	0.065	0.065 J	-	MG/KG	TR/M
SW6020/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	Silver	0.10	0.034	0.034 J		MG/KG	TR
SW6020/NONE	SO	072SB-0004-0001-SO	240-18297-12	N	Antimony	0.21	0.076	0.076 J	-	MG/KG	TR/M
SW6020/NONE	SO	072SB-0004-0001-SO	240-18297-12	N	Silver	0.10	0.034	0.034 J		MG/KG	TR
SW6020/NONE	SO	072SB-0005-0001-SO	240-18297-13	N	Antimony	0.18	0.059	0.059 J	-	MG/KG	TR/M
SW6020/NONE	SO	072SB-0005-0001-SO	240-18297-13	N	Silver	0.092	0.026	0.026 J		MG/KG	TR

SW6020/NONE	SO	072SB-0005-0001-SO	240-18297-13	N	Thallium	0.092	0.078	0.078 J		MG/KG	TR
SW6020/NONE	SO	072SB-0012-0001-SO	240-18297-15	N	Antimony	0.21	0.20	0.20 J	-	MG/KG	TR/M
SW6020/NONE	SO	072SB-0012-0001-SO	240-18297-15	N	Arsenic	0.11	5.6	5.6 J		MG/KG	D1
SW6020/NONE	SO	072SB-0012-0001-SO	240-18297-15	N	Silver	0.11	0.032	0.032 J		MG/KG	TR
SW6020/NONE	SO	072SB-0013-0001-SO	240-18297-16	FD	Antimony	0.20	0.14	0.14 J	-	MG/KG	TR/M
SW6020/NONE	SO	072SB-0013-0001-SO	240-18297-16	FD	Silver	0.099	0.037	0.037 J		MG/KG	TR
SW6020/NONE	SO	072SB-0014-0001-SO	240-18297-17	N	Antimony	0.20	0.13	0.13 J	-	MG/KG	TR/M
SW6020/NONE	SO	072SB-0014-0001-SO	240-18297-17	N	Silver	0.10	0.036	0.036 J		MG/KG	TR
SW6020/NONE	SO	072SB-0015-0001-SO	240-18297-18	N	Antimony	0.18	0.13	0.13 J	-	MG/KG	TR/M
SW6020/NONE	SO	072SB-0015-0001-SO	240-18297-18	N	Silver	0.088	0.029	0.029 J		MG/KG	TR
SW6020/NONE	SO	072SB-0016-0001-SO	240-18297-19	N	Antimony	0.18	0.12	0.12 J	-	MG/KG	TR/M
SW6020/NONE	SO	072SB-0016-0001-SO	240-18297-19	N	Silver	0.090	0.034	0.034 J		MG/KG	TR
SW6020/NONE	SO	072SB-0017-0001-SO	240-18297-20	N	Antimony	0.20	0.087	0.087 J	-	MG/KG	TR/M
SW6020/NONE	SO	072SB-0017-0001-SO	240-18297-20	N	Silver	0.098	0.028	0.028 J		MG/KG	TR
SW6020/NONE	SO	072SB-0018-0001-SO	240-18297-21	N	Antimony	0.23	0.13	0.13 J	-	MG/KG	TR/M
SW6020/NONE	SO	072SB-0018-0001-SO	240-18297-21	N	Silver	0.12	0.039	0.039 J		MG/KG	TR
SW6020/NONE	SO	072SB-0018-0001-SO	240-18297-21	N	Thallium	0.12	0.10	0.10 J		MG/KG	TR
SW6020/NONE	SO	072SB-0019-0001-SO	240-18297-22	N	Antimony	0.18	0.073	0.073 J	-	MG/KG	TR/M
SW6020/NONE	SO	072SB-0019-0001-SO	240-18297-22	N	Silver	0.089	0.043	0.043 J		MG/KG	TR

Test Leach	Matrix	Field Sample ID	Lab Sample ID	Type	Analyte	RL	Lab Result	Qualified Result	Bias	Units	Reason
SW7471A/NONE	SO	072SB-0004-0001-SO	240-18297-12	N	Mercury	0.11	0.016	0.016 J		MG/KG	TR
SW7471A/NONE	SO	072SB-0012-0001-SO	240-18297-15	N	Mercury	0.10	0.040	0.040 J		MG/KG	TR
SW7471A/NONE	SO	072SB-0013-0001-SO	240-18297-16	FD	Mercury	0.097	0.021	0.021 J		MG/KG	TR
SW7471A/NONE	SO	072SB-0014-0001-SO	240-18297-17	N	Mercury	0.098	0.027	0.027 J		MG/KG	TR
SW7471A/NONE	SO	072SB-0015-0001-SO	240-18297-18	N	Mercury	0.10	0.026	0.026 J		MG/KG	TR
SW7471A/NONE	SO	072SB-0016-0001-SO	240-18297-19	N	Mercury	0.10	0.026	0.026 J		MG/KG	TR
SW7471A/NONE	SO	072SB-0017-0001-SO	240-18297-20	N	Mercury	0.11	0.022	0.022 J		MG/KG	TR
SW7471A/NONE	SO	072SB-0018-0001-SO	240-18297-21	N	Mercury	0.11	0.041	0.041 J		MG/KG	TR
SW7471A/NONE	SO	072SB-0019-0001-SO	240-18297-22	N	Mercury	0.094	0.020	0.020 J		MG/KG	TR

Test Leach	Matrix	Field Sample ID	Lab Sample ID	Type	Analyte	RL	Lab Result	Qualified Result	Bias	Units	Reason
SW8081/NONE	SO	072SB-0014-0001-SO	240-18297-17	N	alpha BHC (alpha Hexachlorocyclohexane)	2.9	2.9	2.9 UJ	-	UG/KG	M/D
SW8081/NONE	SO	072SB-0014-0001-SO	240-18297-17	N	alpha Endosulfan	1.9	1.9	1.9 UJ	-	UG/KG	M/D

SW8081/NONE	SO	072SB-0014-0001-SO	240-18297-17	N	alpha-Chlordane	3.4	3.4	3.4 UJ	-	UG/KG	M/D
SW8081/NONE	SO	072SB-0014-0001-SO	240-18297-17	N	beta BHC (beta Hexachlorocyclohexane)	4.0	4.0	4.0 UJ	-	UG/KG	M/D
SW8081/NONE	SO	072SB-0014-0001-SO	240-18297-17	N	beta Endosulfan	2.9	2.9	2.9 UJ	-	UG/KG	M/D
SW8081/NONE	SO	072SB-0014-0001-SO	240-18297-17	N	delta BHC (delta Hexachlorocyclohexane)	4.6	4.6	4.6 UJ	-	UG/KG	M/D
SW8081/NONE	SO	072SB-0014-0001-SO	240-18297-17	N	Dieldrin	1.9	1.9	1.9 UJ	-	UG/KG	M/D
SW8081/NONE	SO	072SB-0014-0001-SO	240-18297-17	N	Endosulfan Sulfate	3.4	3.4	3.4 UJ	-	UG/KG	M/D
SW8081/NONE	SO	072SB-0014-0001-SO	240-18297-17	N	Endrin	1.9	1.9	1.9 UJ	-	UG/KG	M/D
SW8081/NONE	SO	072SB-0014-0001-SO	240-18297-17	N	Endrin Aldehyde	3.4	3.4	3.4 UJ	-	UG/KG	M/D
SW8081/NONE	SO	072SB-0014-0001-SO	240-18297-17	N	Endrin Ketone	2.3	2.3	2.3 UJ	-	UG/KG	M
SW8081/NONE	SO	072SB-0014-0001-SO	240-18297-17	N	gamma BHC (Lindane)	2.9	2.9	2.9 UJ	-	UG/KG	M/D
SW8081/NONE	SO	072SB-0014-0001-SO	240-18297-17	N	gamma-Chlordane	1.9	1.9	1.9 UJ	-	UG/KG	M/D
SW8081/NONE	SO	072SB-0014-0001-SO	240-18297-17	N	Heptachlor	4.0	4.0	4.0 UJ	-	UG/KG	M
SW8081/NONE	SO	072SB-0014-0001-SO	240-18297-17	N	Heptachlor Epoxide	2.9	2.9	2.9 UJ	-	UG/KG	M/D
SW8081/NONE	SO	072SB-0014-0001-SO	240-18297-17	N	Methoxychlor	5.7	5.7	5.7 UJ	-	UG/KG	M/D
SW8081/NONE	SO	072SB-0014-0001-SO	240-18297-17	N	p,p'-DDD	2.3	2.3	2.3 UJ	-	UG/KG	M/D
SW8081/NONE	SO	072SB-0014-0001-SO	240-18297-17	N	p,p'-DDE	1.9	1.9	1.9 UJ	-	UG/KG	M/D
SW8081/NONE	SO	072SB-0014-0001-SO	240-18297-17	N	p,p'-DDT	2.3	2.3	2.3 UJ	-	UG/KG	M
Test Leach	**Matrix**	**Field Sample ID**	**Lab Sample ID**	**Type**	**Analyte**	**RL**	**Lab Result**	**Qualified Result**	**Bias**	**Units**	**Reason**
SW8260B/NONE	SO	072SB-0001-0001-SO	240-18297-9	N	Benzene	250	250	250 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0001-0001-SO	240-18297-9	N	Ethylbenzene	250	250	250 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0001-0001-SO	240-18297-9	N	tert-Butyl Methyl Ether	250	250	250 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0001-0001-SO	240-18297-9	N	Toluene	250	250	250 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0001-0001-SO	240-18297-9	N	Xylenes, Total	500	500	500 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0002-0001-SO	240-18297-10	FD	Benzene	240	240	240 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0002-0001-SO	240-18297-10	FD	Ethylbenzene	240	240	240 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0002-0001-SO	240-18297-10	FD	tert-Butyl Methyl Ether	240	240	240 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0002-0001-SO	240-18297-10	FD	Toluene	240	240	240 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0002-0001-SO	240-18297-10	FD	Xylenes, Total	480	480	480 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	1,1,1-Trichloroethane	400	400	400 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	1,1,2,2-Tetrachloroethane	400	400	400 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	1,1,2-Trichloroethane	400	400	400 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	1,1-Dichloroethane	400	400	400 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	1,1-Dichloroethene	400	400	400 UJ	-	UG/KG	I

SW8260B/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	1,2-Dibromoethane (Ethylene Dibromide)	400	400	400 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	1,2-Dichloroethane	400	400	400 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	1,2-Dichloropropane	400	400	400 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	2-Hexanone	1600	39.0	1600 UJ	-	UG/KG	I/L/J
SW8260B/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	Acetone	1600	1600	1600 UJ	-	UG/KG	I/J
SW8260B/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	Benzene	400	400	400 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	Bromochloromethane	400	400	400 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	Bromodichloromethane	400	400	400 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	Bromoform	400	400	400 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	Bromomethane	400	400	400 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	Carbon Disulfide	400	400	400 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	Carbon Tetrachloride	400	14000	14000 J	-	UG/KG	I
SW8260B/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	Chlorobenzene	400	400	400 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	Chloroethane	400	400	400 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	Chloroform	400	190	190 J	-	UG/KG	I/TR
SW8260B/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	Chloromethane	400	400	400 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	cis-1,3-Dichloropropene	400	400	400 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	Dibromochloromethane	400	400	400 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	Ethylbenzene	400	400	400 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	Methyl Ethyl Ketone (2-Butanone)	1600	1600	1600 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	Methyl Isobutyl Ketone (4-Methyl-2-pentanone)	1600	1600	1600 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	Methylene Chloride	400	400	400 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	Styrene	400	400	400 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	tert-Butyl Methyl Ether	400	400	400 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	Tetrachloroethylene (PCE)	400	400	400 UJ		UG/KG	I
SW8260B/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	Toluene	400	400	400 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	Total 1,2-Dichloroethene	790	790	790 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	trans-1,3-Dichloropropene	400	400	400 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	Trichloroethylene (TCE)	400	400	400 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	Vinyl Chloride	400	400	400 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	Xylenes, Total	790	790	790 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0004-0001-SO	240-18297-12	N	Benzene	230	230	230 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0004-0001-SO	240-18297-12	N	Ethylbenzene	230	230	230 UJ	-	UG/KG	I

SW8260B/NONE	SO	072SB-0004-0001-SO	240-18297-12	N	tert-Butyl Methyl Ether	230	230	230 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0004-0001-SO	240-18297-12	N	Toluene	230	230	230 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0004-0001-SO	240-18297-12	N	Xylenes, Total	450	450	450 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0005-0001-SO	240-18297-13	N	Benzene	220	220	220 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0005-0001-SO	240-18297-13	N	Ethylbenzene	220	220	220 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0005-0001-SO	240-18297-13	N	tert-Butyl Methyl Ether	220	220	220 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0005-0001-SO	240-18297-13	N	Toluene	220	220	220 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0005-0001-SO	240-18297-13	N	Xylenes, Total	440	440	440 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0012-0001-SO	240-18297-15	N	Benzene	4.7	4.7	4.7 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0012-0001-SO	240-18297-15	N	Ethylbenzene	4.7	4.7	4.7 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0012-0001-SO	240-18297-15	N	tert-Butyl Methyl Ether	4.7	4.7	4.7 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0012-0001-SO	240-18297-15	N	Toluene	4.7	4.7	4.7 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0012-0001-SO	240-18297-15	N	Xylenes, Total	9.4	9.4	9.4 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0014-0001-SO	240-18297-17	N	2-Hexanone	18.0	18.0	18.0 UJ		UG/KG	J
SW8260B/NONE	SO	072SB-0014-0001-SO	240-18297-17	N	Acetone	18.0	18.0	18.0 UJ		UG/KG	J
SW8260B/NONE	SO	072SB-0016-0001-SO	240-18297-19	N	Benzene	4.2	4.2	4.2 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0016-0001-SO	240-18297-19	N	Ethylbenzene	4.2	4.2	4.2 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0016-0001-SO	240-18297-19	N	tert-Butyl Methyl Ether	4.2	4.2	4.2 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0016-0001-SO	240-18297-19	N	Toluene	4.2	4.2	4.2 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0016-0001-SO	240-18297-19	N	Xylenes, Total	8.4	8.4	8.4 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0017-0001-SO	240-18297-20	N	Benzene	5.8	5.8	5.8 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0017-0001-SO	240-18297-20	N	Ethylbenzene	5.8	5.8	5.8 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0017-0001-SO	240-18297-20	N	tert-Butyl Methyl Ether	5.8	5.8	5.8 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0017-0001-SO	240-18297-20	N	Toluene	5.8	5.8	5.8 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0017-0001-SO	240-18297-20	N	Xylenes, Total	12.0	12.0	12.0 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0018-0001-SO	240-18297-21	N	Benzene	4.8	4.8	4.8 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0018-0001-SO	240-18297-21	N	Ethylbenzene	4.8	4.8	4.8 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0018-0001-SO	240-18297-21	N	tert-Butyl Methyl Ether	4.8	4.8	4.8 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0018-0001-SO	240-18297-21	N	Toluene	4.8	4.8	4.8 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0018-0001-SO	240-18297-21	N	Xylenes, Total	9.6	9.6	9.6 UJ	-	UG/KG	I
SW8260B/NONE	WG	072SB-0020-0001-TB	240-18297-23	N	Acetone	10.0	1.5	1.5 J		UG/L	TR

Test Leach	Matrix	Field Sample ID	Lab Sample ID	Type	Analyte	RL	Lab Result	Qualified Result	Bias	Units	Reason
SW8270C/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	2,4-Dinitrophenol	390	390	390 UJ		UG/KG	J

SW8270C/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	3,3'-Dichlorobenzidine	120	120	120 UJ		UG/KG	V1
SW8270C/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	4,6-Dinitro-2-Methylphenol	180	180	180 UJ		UG/KG	J
SW8270C/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	4-Nitroaniline	240	240	240 UJ		UG/KG	J
SW8270C/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	bis(2-Ethylhexyl) Phthalate	59.0	24.0	59.0 U	+	UG/KG	L
SW8270C/NONE	SO	072SB-0013-0001-SO	240-18297-16	FD	Benzo(b)fluoranthene	7.3	4.4	4.4 J		UG/KG	TR
SW8270C/NONE	SO	072SB-0014-0001-SO	240-18297-17	N	2,4-Dinitrophenol	370	370	370 UJ		UG/KG	J
SW8270C/NONE	SO	072SB-0014-0001-SO	240-18297-17	N	3,3'-Dichlorobenzidine	110	110	110 UJ		UG/KG	V1
SW8270C/NONE	SO	072SB-0014-0001-SO	240-18297-17	N	4,6-Dinitro-2-Methylphenol	170	170	170 UJ		UG/KG	J
SW8270C/NONE	SO	072SB-0014-0001-SO	240-18297-17	N	4-Nitroaniline	230	230	230 UJ		UG/KG	J
SW8270C/NONE	SO	072SB-0014-0001-SO	240-18297-17	N	Benzo(b)fluoranthene	7.5	6.7	6.7 J		UG/KG	TR
SW8270C/NONE	SO	072SB-0014-0001-SO	240-18297-17	N	bis(2-Ethylhexyl) Phthalate	56.0	22.0	56.0 U	+	UG/KG	L
SW8270C/NONE	SO	072SB-0014-0001-SO	240-18297-17	N	Naphthalene	7.5	5.4	5.4 J		UG/KG	TR
SW8270C/NONE	SO	072SB-0015-0001-SO	240-18297-18	N	Benzo(b)fluoranthene	7.5	6.9	6.9 J		UG/KG	TR
SW8270C/NONE	SO	072SB-0015-0001-SO	240-18297-18	N	Naphthalene	7.5	6.7	6.7 J		UG/KG	TR
SW8270C/NONE	SO	072SB-0016-0001-SO	240-18297-19	N	Benzo(b)fluoranthene	7.3	4.9	4.9 J		UG/KG	TR
SW8270C/NONE	SO	072SB-0016-0001-SO	240-18297-19	N	Naphthalene	7.3	4.1	4.1 J		UG/KG	TR
SW8270C/NONE	SO	072SB-0017-0001-SO	240-18297-20	N	Benzo(b)fluoranthene	7.9	6.7	6.7 J		UG/KG	TR
SW8270C/NONE	SO	072SB-0018-0001-SO	240-18297-21	N	Benzo(b)fluoranthene	7.9	6.2	6.2 J		UG/KG	TR
SW8270C/NONE	SO	072SB-0019-0001-SO	240-18297-22	N	Naphthalene	7.2	5.0	5.0 J		UG/KG	TR

AUTOMATED DATA REVIEW SUMMARY for 240-18297-1_(72-77-SB)

AUTOMATED DATA REVIEW SUMMARY for 240-18297-1_(72-77-SB)

Detected Results

Test Leach	Matrix	Field Sample ID	Lab Sample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
M8015V/NONE	SO	072SB-0001-0001-SO	240-18297-9	N	Petroleum Hydrocarbons C6-C12	110	320	320 J	UG/KG	d
M8015V/NONE	SO	072SB-0002-0001-SO	240-18297-10	FD	Petroleum Hydrocarbons C6-C12	100	180	180 J	UG/KG	d
M8015V/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	Petroleum Hydrocarbons C6-C12	91.0	760	760	UG/KG	
M8015V/NONE	SO	072SB-0004-0001-SO	240-18297-12	N	Petroleum Hydrocarbons C6-C12	92.0	310	310	UG/KG	
M8015V/NONE	SO	072SB-0005-0001-SO	240-18297-13	N	Petroleum Hydrocarbons C6-C12	91.0	440	440	UG/KG	

Test Leach	Matrix	Field Sample ID	Lab Sample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW6020/NONE	SO	072SB-0001-0001-SO	240-18297-9	N	Silver	0.10	0.033	0.033 J	MG/KG	TR
SW6020/NONE	SO	072SB-0001-0001-SO	240-18297-9	N	Aluminum	3.1	12000	12000	MG/KG	
SW6020/NONE	SO	072SB-0001-0001-SO	240-18297-9	N	Arsenic	0.10	14.0	14.0 J	MG/KG	d
SW6020/NONE	SO	072SB-0001-0001-SO	240-18297-9	N	Barium	1.0	36.0	36.0 J	MG/KG	d
SW6020/NONE	SO	072SB-0001-0001-SO	240-18297-9	N	Beryllium	0.10	0.65	0.65	MG/KG	
SW6020/NONE	SO	072SB-0001-0001-SO	240-18297-9	N	Calcium	10.0	2900	2900 J +	MG/KG	M/D1/d
SW6020/NONE	SO	072SB-0001-0001-SO	240-18297-9	N	Cadmium	0.10	0.15	0.15	MG/KG	
SW6020/NONE	SO	072SB-0001-0001-SO	240-18297-9	N	Cobalt	0.051	12.0	12.0	MG/KG	
SW6020/NONE	SO	072SB-0001-0001-SO	240-18297-9	N	Chromium	0.21	18.0	18.0	MG/KG	
SW6020/NONE	SO	072SB-0001-0001-SO	240-18297-9	N	Copper	0.21	16.0	16.0	MG/KG	
SW6020/NONE	SO	072SB-0001-0001-SO	240-18297-9	N	Iron	5.1	28000	28000	MG/KG	
SW6020/NONE	SO	072SB-0001-0001-SO	240-18297-9	N	Potassium	10.0	1900	1900 J +	MG/KG	M
SW6020/NONE	SO	072SB-0001-0001-SO	240-18297-9	N	Magnesium	10.0	6000	6000	MG/KG	
SW6020/NONE	SO	072SB-0001-0001-SO	240-18297-9	N	Manganese	0.51	190	190	MG/KG	
SW6020/NONE	SO	072SB-0001-0001-SO	240-18297-9	N	Sodium	10.0	85.0	85.0	MG/KG	
SW6020/NONE	SO	072SB-0001-0001-SO	240-18297-9	N	Nickel	0.10	29.0	29.0	MG/KG	
SW6020/NONE	SO	072SB-0001-0001-SO	240-18297-9	N	Lead	0.10	11.0	11.0	MG/KG	
SW6020/NONE	SO	072SB-0001-0001-SO	240-18297-9	N	Antimony	0.21	0.075	0.075 J -	MG/KG	TR/M
SW6020/NONE	SO	072SB-0001-0001-SO	240-18297-9	N	Selenium	0.51	0.90	0.90	MG/KG	
SW6020/NONE	SO	072SB-0001-0001-SO	240-18297-9	N	Thallium	0.10	0.18	0.18	MG/KG	
SW6020/NONE	SO	072SB-0001-0001-SO	240-18297-9	N	Vanadium	0.10	17.0	17.0	MG/KG	
SW6020/NONE	SO	072SB-0001-0001-SO	240-18297-9	N	Zinc	0.51	59.0	59.0	MG/KG	
SW6020/NONE	SO	072SB-0002-0001-SO	240-18297-10	FD	Silver	0.096	0.034	0.034 J	MG/KG	TR

SW6020/NONE	SO	072SB-0002-0001-SO	240-18297-10	FD	Aluminum	2.9	12000	12000	MG/KG	
SW6020/NONE	SO	072SB-0002-0001-SO	240-18297-10	FD	Arsenic	0.096	7.8	7.8 J	MG/KG	d
SW6020/NONE	SO	072SB-0002-0001-SO	240-18297-10	FD	Barium	0.96	87.0	87.0 J	MG/KG	d
SW6020/NONE	SO	072SB-0002-0001-SO	240-18297-10	FD	Beryllium	0.096	0.60	0.60	MG/KG	
SW6020/NONE	SO	072SB-0002-0001-SO	240-18297-10	FD	Calcium	9.6	28000	28000 J	MG/KG	d
SW6020/NONE	SO	072SB-0002-0001-SO	240-18297-10	FD	Cadmium	0.096	0.19	0.19	MG/KG	
SW6020/NONE	SO	072SB-0002-0001-SO	240-18297-10	FD	Cobalt	0.048	9.6	9.6	MG/KG	
SW6020/NONE	SO	072SB-0002-0001-SO	240-18297-10	FD	Chromium	0.19	19.0	19.0	MG/KG	
SW6020/NONE	SO	072SB-0002-0001-SO	240-18297-10	FD	Copper	0.19	17.0	17.0	MG/KG	
SW6020/NONE	SO	072SB-0002-0001-SO	240-18297-10	FD	Iron	4.8	26000	26000	MG/KG	
SW6020/NONE	SO	072SB-0002-0001-SO	240-18297-10	FD	Potassium	9.6	2100	2100	MG/KG	
SW6020/NONE	SO	072SB-0002-0001-SO	240-18297-10	FD	Magnesium	9.6	8100	8100	MG/KG	
SW6020/NONE	SO	072SB-0002-0001-SO	240-18297-10	FD	Manganese	0.48	270	270	MG/KG	
SW6020/NONE	SO	072SB-0002-0001-SO	240-18297-10	FD	Sodium	9.6	100	100	MG/KG	
SW6020/NONE	SO	072SB-0002-0001-SO	240-18297-10	FD	Nickel	0.096	25.0	25.0	MG/KG	
SW6020/NONE	SO	072SB-0002-0001-SO	240-18297-10	FD	Lead	0.096	10.0	10.0	MG/KG	
SW6020/NONE	SO	072SB-0002-0001-SO	240-18297-10	FD	Antimony	0.19	0.083	0.083 J -	MG/KG	TR/M
SW6020/NONE	SO	072SB-0002-0001-SO	240-18297-10	FD	Selenium	0.48	0.90	0.90	MG/KG	
SW6020/NONE	SO	072SB-0002-0001-SO	240-18297-10	FD	Thallium	0.096	0.15	0.15	MG/KG	
SW6020/NONE	SO	072SB-0002-0001-SO	240-18297-10	FD	Vanadium	0.096	20.0	20.0	MG/KG	
SW6020/NONE	SO	072SB-0002-0001-SO	240-18297-10	FD	Zinc	0.48	52.0	52.0	MG/KG	
SW6020/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	Silver	0.10	0.034	0.034 J	MG/KG	TR
SW6020/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	Aluminum	3.1	9100	9100	MG/KG	
SW6020/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	Arsenic	0.10	18.0	18.0	MG/KG	
SW6020/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	Barium	1.0	40.0	40.0	MG/KG	
SW6020/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	Beryllium	0.10	0.44	0.44	MG/KG	
SW6020/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	Calcium	10.0	16000	16000	MG/KG	
SW6020/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	Cadmium	0.10	0.17	0.17	MG/KG	
SW6020/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	Cobalt	0.052	10.0	10.0	MG/KG	
SW6020/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	Chromium	0.21	16.0	16.0	MG/KG	
SW6020/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	Copper	0.21	20.0	20.0	MG/KG	
SW6020/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	Iron	5.2	27000	27000	MG/KG	

SW6020/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	Potassium	10.0	1300	1300	MG/KG	
SW6020/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	Magnesium	10.0	6100	6100	MG/KG	
SW6020/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	Manganese	0.52	230	230	MG/KG	
SW6020/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	Sodium	10.0	74.0	74.0	MG/KG	
SW6020/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	Nickel	0.10	23.0	23.0	MG/KG	
SW6020/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	Lead	0.10	12.0	12.0	MG/KG	
SW6020/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	Antimony	0.21	0.065	0.065 J -	MG/KG	TR/M
SW6020/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	Selenium	0.52	0.91	0.91	MG/KG	
SW6020/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	Thallium	0.10	0.11	0.11	MG/KG	
SW6020/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	Vanadium	0.10	15.0	15.0	MG/KG	
SW6020/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	Zinc	0.52	55.0	55.0	MG/KG	
SW6020/NONE	SO	072SB-0004-0001-SO	240-18297-12	N	Silver	0.10	0.034	0.034 J	MG/KG	TR
SW6020/NONE	SO	072SB-0004-0001-SO	240-18297-12	N	Aluminum	3.1	9600	9600	MG/KG	
SW6020/NONE	SO	072SB-0004-0001-SO	240-18297-12	N	Arsenic	0.10	12.0	12.0	MG/KG	
SW6020/NONE	SO	072SB-0004-0001-SO	240-18297-12	N	Barium	1.0	36.0	36.0	MG/KG	
SW6020/NONE	SO	072SB-0004-0001-SO	240-18297-12	N	Beryllium	0.10	0.48	0.48	MG/KG	
SW6020/NONE	SO	072SB-0004-0001-SO	240-18297-12	N	Calcium	10.0	8100	8100	MG/KG	
SW6020/NONE	SO	072SB-0004-0001-SO	240-18297-12	N	Cadmium	0.10	0.16	0.16	MG/KG	
SW6020/NONE	SO	072SB-0004-0001-SO	240-18297-12	N	Cobalt	0.052	9.2	9.2	MG/KG	
SW6020/NONE	SO	072SB-0004-0001-SO	240-18297-12	N	Chromium	0.21	15.0	15.0	MG/KG	
SW6020/NONE	SO	072SB-0004-0001-SO	240-18297-12	N	Copper	0.21	17.0	17.0	MG/KG	
SW6020/NONE	SO	072SB-0004-0001-SO	240-18297-12	N	Iron	5.2	25000	25000	MG/KG	
SW6020/NONE	SO	072SB-0004-0001-SO	240-18297-12	N	Potassium	10.0	1500	1500	MG/KG	
SW6020/NONE	SO	072SB-0004-0001-SO	240-18297-12	N	Magnesium	10.0	5800	5800	MG/KG	
SW6020/NONE	SO	072SB-0004-0001-SO	240-18297-12	N	Manganese	0.52	190	190	MG/KG	
SW6020/NONE	SO	072SB-0004-0001-SO	240-18297-12	N	Sodium	10.0	74.0	74.0	MG/KG	
SW6020/NONE	SO	072SB-0004-0001-SO	240-18297-12	N	Nickel	0.10	24.0	24.0	MG/KG	
SW6020/NONE	SO	072SB-0004-0001-SO	240-18297-12	N	Lead	0.10	11.0	11.0	MG/KG	
SW6020/NONE	SO	072SB-0004-0001-SO	240-18297-12	N	Antimony	0.21	0.076	0.076 J -	MG/KG	TR/M
SW6020/NONE	SO	072SB-0004-0001-SO	240-18297-12	N	Selenium	0.52	0.82	0.82	MG/KG	
SW6020/NONE	SO	072SB-0004-0001-SO	240-18297-12	N	Thallium	0.10	0.13	0.13	MG/KG	
SW6020/NONE	SO	072SB-0004-0001-SO	240-18297-12	N	Vanadium	0.10	16.0	16.0	MG/KG	

SW6020/NONE	SO	072SB-0004-0001-SO	240-18297-12	N	Zinc	0.52	53.0	53.0	MG/KG	
SW6020/NONE	SO	072SB-0005-0001-SO	240-18297-13	N	Silver	0.092	0.026	0.026 J	MG/KG	TR
SW6020/NONE	SO	072SB-0005-0001-SO	240-18297-13	N	Aluminum	2.8	4300	4300	MG/KG	
SW6020/NONE	SO	072SB-0005-0001-SO	240-18297-13	N	Arsenic	0.092	13.0	13.0	MG/KG	
SW6020/NONE	SO	072SB-0005-0001-SO	240-18297-13	N	Barium	0.92	13.0	13.0	MG/KG	
SW6020/NONE	SO	072SB-0005-0001-SO	240-18297-13	N	Beryllium	0.092	0.21	0.21	MG/KG	
SW6020/NONE	SO	072SB-0005-0001-SO	240-18297-13	N	Calcium	9.2	4300	4300	MG/KG	
SW6020/NONE	SO	072SB-0005-0001-SO	240-18297-13	N	Cadmium	0.092	0.12	0.12	MG/KG	
SW6020/NONE	SO	072SB-0005-0001-SO	240-18297-13	N	Cobalt	0.046	5.6	5.6	MG/KG	
SW6020/NONE	SO	072SB-0005-0001-SO	240-18297-13	N	Chromium	0.18	7.1	7.1	MG/KG	
SW6020/NONE	SO	072SB-0005-0001-SO	240-18297-13	N	Copper	0.18	18.0	18.0	MG/KG	
SW6020/NONE	SO	072SB-0005-0001-SO	240-18297-13	N	Iron	4.6	17000	17000	MG/KG	
SW6020/NONE	SO	072SB-0005-0001-SO	240-18297-13	N	Potassium	9.2	630	630	MG/KG	
SW6020/NONE	SO	072SB-0005-0001-SO	240-18297-13	N	Magnesium	9.2	3300	3300	MG/KG	
SW6020/NONE	SO	072SB-0005-0001-SO	240-18297-13	N	Manganese	0.46	200	200	MG/KG	
SW6020/NONE	SO	072SB-0005-0001-SO	240-18297-13	N	Sodium	9.2	40.0	40.0	MG/KG	
SW6020/NONE	SO	072SB-0005-0001-SO	240-18297-13	N	Nickel	0.092	13.0	13.0	MG/KG	
SW6020/NONE	SO	072SB-0005-0001-SO	240-18297-13	N	Lead	0.092	8.1	8.1	MG/KG	
SW6020/NONE	SO	072SB-0005-0001-SO	240-18297-13	N	Antimony	0.18	0.059	0.059 J -	MG/KG	TR/M
SW6020/NONE	SO	072SB-0005-0001-SO	240-18297-13	N	Selenium	0.46	0.71	0.71	MG/KG	
SW6020/NONE	SO	072SB-0005-0001-SO	240-18297-13	N	Thallium	0.092	0.078	0.078 J	MG/KG	TR
SW6020/NONE	SO	072SB-0005-0001-SO	240-18297-13	N	Vanadium	0.092	7.8	7.8	MG/KG	
SW6020/NONE	SO	072SB-0005-0001-SO	240-18297-13	N	Zinc	0.46	45.0	45.0	MG/KG	
SW6020/NONE	SO	072SB-0012-0001-SO	240-18297-15	N	Silver	0.11	0.032	0.032 J	MG/KG	TR
SW6020/NONE	SO	072SB-0012-0001-SO	240-18297-15	N	Aluminum	3.2	8500	8500	MG/KG	
SW6020/NONE	SO	072SB-0012-0001-SO	240-18297-15	N	Arsenic	0.11	5.6	5.6 J	MG/KG	D1
SW6020/NONE	SO	072SB-0012-0001-SO	240-18297-15	N	Barium	1.1	55.0	55.0	MG/KG	
SW6020/NONE	SO	072SB-0012-0001-SO	240-18297-15	N	Beryllium	0.11	0.88	0.88	MG/KG	
SW6020/NONE	SO	072SB-0012-0001-SO	240-18297-15	N	Calcium	11.0	400	400	MG/KG	
SW6020/NONE	SO	072SB-0012-0001-SO	240-18297-15	N	Cadmium	0.11	0.20	0.20	MG/KG	
SW6020/NONE	SO	072SB-0012-0001-SO	240-18297-15	N	Cobalt	0.053	18.0	18.0	MG/KG	
SW6020/NONE	SO	072SB-0012-0001-SO	240-18297-15	N	Chromium	0.21	18.0	18.0	MG/KG	

SW6020/NONE	SO	072SB-0012-0001-SO	240-18297-15	N	Copper	0.21	31.0	31.0	MG/KG	
SW6020/NONE	SO	072SB-0012-0001-SO	240-18297-15	N	Iron	5.3	37000	37000	MG/KG	
SW6020/NONE	SO	072SB-0012-0001-SO	240-18297-15	N	Potassium	11.0	1000	1000	MG/KG	
SW6020/NONE	SO	072SB-0012-0001-SO	240-18297-15	N	Magnesium	11.0	4000	4000	MG/KG	
SW6020/NONE	SO	072SB-0012-0001-SO	240-18297-15	N	Manganese	0.53	910	910	MG/KG	
SW6020/NONE	SO	072SB-0012-0001-SO	240-18297-15	N	Sodium	11.0	60.0	60.0	MG/KG	
SW6020/NONE	SO	072SB-0012-0001-SO	240-18297-15	N	Nickel	0.11	31.0	31.0	MG/KG	
SW6020/NONE	SO	072SB-0012-0001-SO	240-18297-15	N	Lead	0.11	20.0	20.0	MG/KG	
SW6020/NONE	SO	072SB-0012-0001-SO	240-18297-15	N	Antimony	0.21	0.20	0.20 J -	MG/KG	TR/M
SW6020/NONE	SO	072SB-0012-0001-SO	240-18297-15	N	Selenium	0.53	1.0	1.0	MG/KG	
SW6020/NONE	SO	072SB-0012-0001-SO	240-18297-15	N	Thallium	0.11	0.14	0.14	MG/KG	
SW6020/NONE	SO	072SB-0012-0001-SO	240-18297-15	N	Vanadium	0.11	17.0	17.0	MG/KG	
SW6020/NONE	SO	072SB-0012-0001-SO	240-18297-15	N	Zinc	0.53	69.0	69.0	MG/KG	
SW6020/NONE	SO	072SB-0013-0001-SO	240-18297-16	FD	Silver	0.099	0.037	0.037 J	MG/KG	TR
SW6020/NONE	SO	072SB-0013-0001-SO	240-18297-16	FD	Aluminum	3.0	9600	9600	MG/KG	
SW6020/NONE	SO	072SB-0013-0001-SO	240-18297-16	FD	Arsenic	0.099	4.7	4.7	MG/KG	
SW6020/NONE	SO	072SB-0013-0001-SO	240-18297-16	FD	Barium	0.99	53.0	53.0	MG/KG	
SW6020/NONE	SO	072SB-0013-0001-SO	240-18297-16	FD	Beryllium	0.099	0.81	0.81	MG/KG	
SW6020/NONE	SO	072SB-0013-0001-SO	240-18297-16	FD	Calcium	9.9	450	450	MG/KG	
SW6020/NONE	SO	072SB-0013-0001-SO	240-18297-16	FD	Cadmium	0.099	0.23	0.23	MG/KG	
SW6020/NONE	SO	072SB-0013-0001-SO	240-18297-16	FD	Cobalt	0.049	17.0	17.0	MG/KG	
SW6020/NONE	SO	072SB-0013-0001-SO	240-18297-16	FD	Chromium	0.20	20.0	20.0	MG/KG	
SW6020/NONE	SO	072SB-0013-0001-SO	240-18297-16	FD	Copper	0.20	33.0	33.0	MG/KG	
SW6020/NONE	SO	072SB-0013-0001-SO	240-18297-16	FD	Iron	4.9	36000	36000	MG/KG	
SW6020/NONE	SO	072SB-0013-0001-SO	240-18297-16	FD	Potassium	9.9	1200	1200	MG/KG	
SW6020/NONE	SO	072SB-0013-0001-SO	240-18297-16	FD	Magnesium	9.9	4300	4300	MG/KG	
SW6020/NONE	SO	072SB-0013-0001-SO	240-18297-16	FD	Manganese	0.49	700	700	MG/KG	
SW6020/NONE	SO	072SB-0013-0001-SO	240-18297-16	FD	Sodium	9.9	66.0	66.0	MG/KG	
SW6020/NONE	SO	072SB-0013-0001-SO	240-18297-16	FD	Nickel	0.099	32.0	32.0	MG/KG	
SW6020/NONE	SO	072SB-0013-0001-SO	240-18297-16	FD	Lead	0.099	17.0	17.0	MG/KG	
SW6020/NONE	SO	072SB-0013-0001-SO	240-18297-16	FD	Antimony	0.20	0.14	0.14 J -	MG/KG	TR/M
SW6020/NONE	SO	072SB-0013-0001-SO	240-18297-16	FD	Selenium	0.49	1.1	1.1	MG/KG	

SW6020/NONE	SO	072SB-0013-0001-SO	240-18297-16	FD	Thallium	0.099	0.11	0.11	MG/KG	
SW6020/NONE	SO	072SB-0013-0001-SO	240-18297-16	FD	Vanadium	0.099	18.0	18.0	MG/KG	
SW6020/NONE	SO	072SB-0013-0001-SO	240-18297-16	FD	Zinc	0.49	80.0	80.0	MG/KG	
SW6020/NONE	SO	072SB-0014-0001-SO	240-18297-17	N	Silver	0.10	0.036	0.036 J	MG/KG	TR
SW6020/NONE	SO	072SB-0014-0001-SO	240-18297-17	N	Aluminum	3.0	9500	9500	MG/KG	
SW6020/NONE	SO	072SB-0014-0001-SO	240-18297-17	N	Arsenic	0.10	5.6	5.6	MG/KG	
SW6020/NONE	SO	072SB-0014-0001-SO	240-18297-17	N	Barium	1.0	61.0	61.0	MG/KG	
SW6020/NONE	SO	072SB-0014-0001-SO	240-18297-17	N	Beryllium	0.10	0.91	0.91	MG/KG	
SW6020/NONE	SO	072SB-0014-0001-SO	240-18297-17	N	Calcium	10.0	430	430	MG/KG	
SW6020/NONE	SO	072SB-0014-0001-SO	240-18297-17	N	Cadmium	0.10	0.26	0.26	MG/KG	
SW6020/NONE	SO	072SB-0014-0001-SO	240-18297-17	N	Cobalt	0.050	17.0	17.0	MG/KG	
SW6020/NONE	SO	072SB-0014-0001-SO	240-18297-17	N	Chromium	0.20	19.0	19.0	MG/KG	
SW6020/NONE	SO	072SB-0014-0001-SO	240-18297-17	N	Copper	0.20	34.0	34.0	MG/KG	
SW6020/NONE	SO	072SB-0014-0001-SO	240-18297-17	N	Iron	5.0	40000	40000	MG/KG	
SW6020/NONE	SO	072SB-0014-0001-SO	240-18297-17	N	Potassium	10.0	1200	1200	MG/KG	
SW6020/NONE	SO	072SB-0014-0001-SO	240-18297-17	N	Magnesium	10.0	4200	4200	MG/KG	
SW6020/NONE	SO	072SB-0014-0001-SO	240-18297-17	N	Manganese	0.50	840	840	MG/KG	
SW6020/NONE	SO	072SB-0014-0001-SO	240-18297-17	N	Sodium	10.0	61.0	61.0	MG/KG	
SW6020/NONE	SO	072SB-0014-0001-SO	240-18297-17	N	Nickel	0.10	34.0	34.0	MG/KG	
SW6020/NONE	SO	072SB-0014-0001-SO	240-18297-17	N	Lead	0.10	23.0	23.0	MG/KG	
SW6020/NONE	SO	072SB-0014-0001-SO	240-18297-17	N	Antimony	0.20	0.13	0.13 J -	MG/KG	TR/M
SW6020/NONE	SO	072SB-0014-0001-SO	240-18297-17	N	Selenium	0.50	1.1	1.1	MG/KG	
SW6020/NONE	SO	072SB-0014-0001-SO	240-18297-17	N	Thallium	0.10	0.12	0.12	MG/KG	
SW6020/NONE	SO	072SB-0014-0001-SO	240-18297-17	N	Vanadium	0.10	19.0	19.0	MG/KG	
SW6020/NONE	SO	072SB-0014-0001-SO	240-18297-17	N	Zinc	0.50	87.0	87.0	MG/KG	
SW6020/NONE	SO	072SB-0015-0001-SO	240-18297-18	N	Silver	0.088	0.029	0.029 J	MG/KG	TR
SW6020/NONE	SO	072SB-0015-0001-SO	240-18297-18	N	Aluminum	2.6	9500	9500	MG/KG	
SW6020/NONE	SO	072SB-0015-0001-SO	240-18297-18	N	Arsenic	0.088	3.6	3.6	MG/KG	
SW6020/NONE	SO	072SB-0015-0001-SO	240-18297-18	N	Barium	0.88	57.0	57.0	MG/KG	
SW6020/NONE	SO	072SB-0015-0001-SO	240-18297-18	N	Beryllium	0.088	0.82	0.82	MG/KG	
SW6020/NONE	SO	072SB-0015-0001-SO	240-18297-18	N	Calcium	8.8	420	420	MG/KG	
SW6020/NONE	SO	072SB-0015-0001-SO	240-18297-18	N	Cadmium	0.088	0.20	0.20	MG/KG	

SW6020/NONE	SO	072SB-0015-0001-SO	240-18297-18	N	Cobalt	0.044	15.0	15.0	MG/KG	
SW6020/NONE	SO	072SB-0015-0001-SO	240-18297-18	N	Chromium	0.18	18.0	18.0	MG/KG	
SW6020/NONE	SO	072SB-0015-0001-SO	240-18297-18	N	Copper	0.18	31.0	31.0	MG/KG	
SW6020/NONE	SO	072SB-0015-0001-SO	240-18297-18	N	Iron	4.4	34000	34000	MG/KG	
SW6020/NONE	SO	072SB-0015-0001-SO	240-18297-18	N	Potassium	8.8	1200	1200	MG/KG	
SW6020/NONE	SO	072SB-0015-0001-SO	240-18297-18	N	Magnesium	8.8	4200	4200	MG/KG	
SW6020/NONE	SO	072SB-0015-0001-SO	240-18297-18	N	Manganese	0.44	650	650	MG/KG	
SW6020/NONE	SO	072SB-0015-0001-SO	240-18297-18	N	Sodium	8.8	61.0	61.0	MG/KG	
SW6020/NONE	SO	072SB-0015-0001-SO	240-18297-18	N	Nickel	0.088	30.0	30.0	MG/KG	
SW6020/NONE	SO	072SB-0015-0001-SO	240-18297-18	N	Lead	0.088	16.0	16.0	MG/KG	
SW6020/NONE	SO	072SB-0015-0001-SO	240-18297-18	N	Antimony	0.18	0.13	0.13 J -	MG/KG	TR/M
SW6020/NONE	SO	072SB-0015-0001-SO	240-18297-18	N	Selenium	0.44	0.85	0.85	MG/KG	
SW6020/NONE	SO	072SB-0015-0001-SO	240-18297-18	N	Thallium	0.088	0.10	0.10	MG/KG	
SW6020/NONE	SO	072SB-0015-0001-SO	240-18297-18	N	Vanadium	0.088	17.0	17.0	MG/KG	
SW6020/NONE	SO	072SB-0015-0001-SO	240-18297-18	N	Zinc	0.44	70.0	70.0	MG/KG	
SW6020/NONE	SO	072SB-0016-0001-SO	240-18297-19	N	Silver	0.090	0.034	0.034 J	MG/KG	TR
SW6020/NONE	SO	072SB-0016-0001-SO	240-18297-19	N	Aluminum	2.7	9700	9700	MG/KG	
SW6020/NONE	SO	072SB-0016-0001-SO	240-18297-19	N	Arsenic	0.090	3.9	3.9	MG/KG	
SW6020/NONE	SO	072SB-0016-0001-SO	240-18297-19	N	Barium	0.90	54.0	54.0	MG/KG	
SW6020/NONE	SO	072SB-0016-0001-SO	240-18297-19	N	Beryllium	0.090	0.85	0.85	MG/KG	
SW6020/NONE	SO	072SB-0016-0001-SO	240-18297-19	N	Calcium	9.0	470	470	MG/KG	
SW6020/NONE	SO	072SB-0016-0001-SO	240-18297-19	N	Cadmium	0.090	0.19	0.19	MG/KG	
SW6020/NONE	SO	072SB-0016-0001-SO	240-18297-19	N	Cobalt	0.045	13.0	13.0	MG/KG	
SW6020/NONE	SO	072SB-0016-0001-SO	240-18297-19	N	Chromium	0.18	19.0	19.0	MG/KG	
SW6020/NONE	SO	072SB-0016-0001-SO	240-18297-19	N	Copper	0.18	32.0	32.0	MG/KG	
SW6020/NONE	SO	072SB-0016-0001-SO	240-18297-19	N	Iron	4.5	33000	33000	MG/KG	
SW6020/NONE	SO	072SB-0016-0001-SO	240-18297-19	N	Potassium	9.0	1200	1200	MG/KG	
SW6020/NONE	SO	072SB-0016-0001-SO	240-18297-19	N	Magnesium	9.0	4300	4300	MG/KG	
SW6020/NONE	SO	072SB-0016-0001-SO	240-18297-19	N	Manganese	0.45	490	490	MG/KG	
SW6020/NONE	SO	072SB-0016-0001-SO	240-18297-19	N	Sodium	9.0	65.0	65.0	MG/KG	
SW6020/NONE	SO	072SB-0016-0001-SO	240-18297-19	N	Nickel	0.090	27.0	27.0	MG/KG	
SW6020/NONE	SO	072SB-0016-0001-SO	240-18297-19	N	Lead	0.090	15.0	15.0	MG/KG	

SW6020/NONE	SO	072SB-0016-0001-SO	240-18297-19	N	Antimony	0.18	0.12	0.12 J -	MG/KG	TR/M
SW6020/NONE	SO	072SB-0016-0001-SO	240-18297-19	N	Selenium	0.45	0.85	0.85	MG/KG	
SW6020/NONE	SO	072SB-0016-0001-SO	240-18297-19	N	Thallium	0.090	0.093	0.093	MG/KG	
SW6020/NONE	SO	072SB-0016-0001-SO	240-18297-19	N	Vanadium	0.090	18.0	18.0	MG/KG	
SW6020/NONE	SO	072SB-0016-0001-SO	240-18297-19	N	Zinc	0.45	58.0	58.0	MG/KG	
SW6020/NONE	SO	072SB-0017-0001-SO	240-18297-20	N	Silver	0.098	0.028	0.028 J	MG/KG	TR
SW6020/NONE	SO	072SB-0017-0001-SO	240-18297-20	N	Aluminum	2.9	9400	9400	MG/KG	
SW6020/NONE	SO	072SB-0017-0001-SO	240-18297-20	N	Arsenic	0.098	2.8	2.8	MG/KG	
SW6020/NONE	SO	072SB-0017-0001-SO	240-18297-20	N	Barium	0.98	61.0	61.0	MG/KG	
SW6020/NONE	SO	072SB-0017-0001-SO	240-18297-20	N	Beryllium	0.098	0.91	0.91	MG/KG	
SW6020/NONE	SO	072SB-0017-0001-SO	240-18297-20	N	Calcium	9.8	310	310	MG/KG	
SW6020/NONE	SO	072SB-0017-0001-SO	240-18297-20	N	Cadmium	0.098	0.24	0.24	MG/KG	
SW6020/NONE	SO	072SB-0017-0001-SO	240-18297-20	N	Cobalt	0.049	17.0	17.0	MG/KG	
SW6020/NONE	SO	072SB-0017-0001-SO	240-18297-20	N	Chromium	0.20	19.0	19.0	MG/KG	
SW6020/NONE	SO	072SB-0017-0001-SO	240-18297-20	N	Copper	0.20	31.0	31.0	MG/KG	
SW6020/NONE	SO	072SB-0017-0001-SO	240-18297-20	N	Iron	4.9	35000	35000	MG/KG	
SW6020/NONE	SO	072SB-0017-0001-SO	240-18297-20	N	Potassium	9.8	1200	1200	MG/KG	
SW6020/NONE	SO	072SB-0017-0001-SO	240-18297-20	N	Magnesium	9.8	4200	4200	MG/KG	
SW6020/NONE	SO	072SB-0017-0001-SO	240-18297-20	N	Manganese	0.49	870	870	MG/KG	
SW6020/NONE	SO	072SB-0017-0001-SO	240-18297-20	N	Sodium	9.8	58.0	58.0	MG/KG	
SW6020/NONE	SO	072SB-0017-0001-SO	240-18297-20	N	Nickel	0.098	33.0	33.0	MG/KG	
SW6020/NONE	SO	072SB-0017-0001-SO	240-18297-20	N	Lead	0.098	16.0	16.0	MG/KG	
SW6020/NONE	SO	072SB-0017-0001-SO	240-18297-20	N	Antimony	0.20	0.087	0.087 J -	MG/KG	TR/M
SW6020/NONE	SO	072SB-0017-0001-SO	240-18297-20	N	Selenium	0.49	0.89	0.89	MG/KG	
SW6020/NONE	SO	072SB-0017-0001-SO	240-18297-20	N	Thallium	0.098	0.13	0.13	MG/KG	
SW6020/NONE	SO	072SB-0017-0001-SO	240-18297-20	N	Vanadium	0.098	17.0	17.0	MG/KG	
SW6020/NONE	SO	072SB-0017-0001-SO	240-18297-20	N	Zinc	0.49	81.0	81.0	MG/KG	
SW6020/NONE	SO	072SB-0018-0001-SO	240-18297-21	N	Silver	0.12	0.039	0.039 J	MG/KG	TR
SW6020/NONE	SO	072SB-0018-0001-SO	240-18297-21	N	Aluminum	3.5	10000	10000	MG/KG	
SW6020/NONE	SO	072SB-0018-0001-SO	240-18297-21	N	Arsenic	0.12	4.4	4.4	MG/KG	
SW6020/NONE	SO	072SB-0018-0001-SO	240-18297-21	N	Barium	1.2	55.0	55.0	MG/KG	
SW6020/NONE	SO	072SB-0018-0001-SO	240-18297-21	N	Beryllium	0.12	0.91	0.91	MG/KG	

SW6020/NONE	SO	072SB-0018-0001-SO	240-18297-21	N	Calcium	12.0	480	480	MG/KG	
SW6020/NONE	SO	072SB-0018-0001-SO	240-18297-21	N	Cadmium	0.12	0.25	0.25	MG/KG	
SW6020/NONE	SO	072SB-0018-0001-SO	240-18297-21	N	Cobalt	0.058	16.0	16.0	MG/KG	
SW6020/NONE	SO	072SB-0018-0001-SO	240-18297-21	N	Chromium	0.23	20.0	20.0	MG/KG	
SW6020/NONE	SO	072SB-0018-0001-SO	240-18297-21	N	Copper	0.23	34.0	34.0	MG/KG	
SW6020/NONE	SO	072SB-0018-0001-SO	240-18297-21	N	Iron	5.8	37000	37000	MG/KG	
SW6020/NONE	SO	072SB-0018-0001-SO	240-18297-21	N	Potassium	12.0	1300	1300	MG/KG	
SW6020/NONE	SO	072SB-0018-0001-SO	240-18297-21	N	Magnesium	12.0	4500	4500	MG/KG	
SW6020/NONE	SO	072SB-0018-0001-SO	240-18297-21	N	Manganese	0.58	500	500	MG/KG	
SW6020/NONE	SO	072SB-0018-0001-SO	240-18297-21	N	Sodium	12.0	62.0	62.0	MG/KG	
SW6020/NONE	SO	072SB-0018-0001-SO	240-18297-21	N	Nickel	0.12	30.0	30.0	MG/KG	
SW6020/NONE	SO	072SB-0018-0001-SO	240-18297-21	N	Lead	0.12	19.0	19.0	MG/KG	
SW6020/NONE	SO	072SB-0018-0001-SO	240-18297-21	N	Antimony	0.23	0.13	0.13 J -	MG/KG	TR/M
SW6020/NONE	SO	072SB-0018-0001-SO	240-18297-21	N	Selenium	0.58	1.1	1.1	MG/KG	
SW6020/NONE	SO	072SB-0018-0001-SO	240-18297-21	N	Thallium	0.12	0.10	0.10 J	MG/KG	TR
SW6020/NONE	SO	072SB-0018-0001-SO	240-18297-21	N	Vanadium	0.12	19.0	19.0	MG/KG	
SW6020/NONE	SO	072SB-0018-0001-SO	240-18297-21	N	Zinc	0.58	75.0	75.0	MG/KG	
SW6020/NONE	SO	072SB-0019-0001-SO	240-18297-22	N	Silver	0.089	0.043	0.043 J	MG/KG	TR
SW6020/NONE	SO	072SB-0019-0001-SO	240-18297-22	N	Aluminum	2.7	9000	9000	MG/KG	
SW6020/NONE	SO	072SB-0019-0001-SO	240-18297-22	N	Arsenic	0.089	2.2	2.2	MG/KG	
SW6020/NONE	SO	072SB-0019-0001-SO	240-18297-22	N	Barium	0.89	56.0	56.0	MG/KG	
SW6020/NONE	SO	072SB-0019-0001-SO	240-18297-22	N	Beryllium	0.089	0.83	0.83	MG/KG	
SW6020/NONE	SO	072SB-0019-0001-SO	240-18297-22	N	Calcium	8.9	550	550	MG/KG	
SW6020/NONE	SO	072SB-0019-0001-SO	240-18297-22	N	Cadmium	0.089	0.24	0.24	MG/KG	
SW6020/NONE	SO	072SB-0019-0001-SO	240-18297-22	N	Cobalt	0.044	14.0	14.0	MG/KG	
SW6020/NONE	SO	072SB-0019-0001-SO	240-18297-22	N	Chromium	0.18	18.0	18.0	MG/KG	
SW6020/NONE	SO	072SB-0019-0001-SO	240-18297-22	N	Copper	0.18	27.0	27.0	MG/KG	
SW6020/NONE	SO	072SB-0019-0001-SO	240-18297-22	N	Iron	4.4	35000	35000	MG/KG	
SW6020/NONE	SO	072SB-0019-0001-SO	240-18297-22	N	Potassium	8.9	1300	1300	MG/KG	
SW6020/NONE	SO	072SB-0019-0001-SO	240-18297-22	N	Magnesium	8.9	4000	4000	MG/KG	
SW6020/NONE	SO	072SB-0019-0001-SO	240-18297-22	N	Manganese	0.44	520	520	MG/KG	
SW6020/NONE	SO	072SB-0019-0001-SO	240-18297-22	N	Sodium	8.9	52.0	52.0	MG/KG	

SW6020/NONE	SO	072SB-0019-0001-SO	240-18297-22	N	Nickel	0.089	26.0	26.0	MG/KG	
SW6020/NONE	SO	072SB-0019-0001-SO	240-18297-22	N	Lead	0.089	15.0	15.0	MG/KG	
SW6020/NONE	SO	072SB-0019-0001-SO	240-18297-22	N	Antimony	0.18	0.073	0.073 J -	MG/KG	TR/M
SW6020/NONE	SO	072SB-0019-0001-SO	240-18297-22	N	Selenium	0.44	0.82	0.82	MG/KG	
SW6020/NONE	SO	072SB-0019-0001-SO	240-18297-22	N	Thallium	0.089	0.098	0.098	MG/KG	
SW6020/NONE	SO	072SB-0019-0001-SO	240-18297-22	N	Vanadium	0.089	17.0	17.0	MG/KG	
SW6020/NONE	SO	072SB-0019-0001-SO	240-18297-22	N	Zinc	0.44	61.0	61.0	MG/KG	

Test Leach	Matrix	Field Sample ID	Lab Sample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW7471A/NONE	SO	072SB-0004-0001-SO	240-18297-12	N	Mercury	0.11	0.016	0.016 J	MG/KG	TR
SW7471A/NONE	SO	072SB-0012-0001-SO	240-18297-15	N	Mercury	0.10	0.040	0.040 J	MG/KG	TR
SW7471A/NONE	SO	072SB-0013-0001-SO	240-18297-16	FD	Mercury	0.097	0.021	0.021 J	MG/KG	TR
SW7471A/NONE	SO	072SB-0014-0001-SO	240-18297-17	N	Mercury	0.098	0.027	0.027 J	MG/KG	TR
SW7471A/NONE	SO	072SB-0015-0001-SO	240-18297-18	N	Mercury	0.10	0.026	0.026 J	MG/KG	TR
SW7471A/NONE	SO	072SB-0016-0001-SO	240-18297-19	N	Mercury	0.10	0.026	0.026 J	MG/KG	TR
SW7471A/NONE	SO	072SB-0017-0001-SO	240-18297-20	N	Mercury	0.11	0.022	0.022 J	MG/KG	TR
SW7471A/NONE	SO	072SB-0018-0001-SO	240-18297-21	N	Mercury	0.11	0.041	0.041 J	MG/KG	TR
SW7471A/NONE	SO	072SB-0019-0001-SO	240-18297-22	N	Mercury	0.094	0.020	0.020 J	MG/KG	TR

Test Leach	Matrix	Field Sample ID	Lab Sample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW8260B/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	Carbon Tetrachloride	400	14000	14000 J -	UG/KG	I
SW8260B/NONE	SO	072SB-0003-0001-SO	240-18297-11	N	Chloroform	400	190	190 J -	UG/KG	I/TR
SW8260B/NONE	WG	072SB-0020-0001-TB	240-18297-23	N	Acetone	10.0	1.5	1.5 J	UG/L	TR

Test Leach	Matrix	Field Sample ID	Lab Sample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW8270C/NONE	SO	072SB-0001-0001-SO	240-18297-9	N	Naphthalene	8.0	8.9	8.9	UG/KG	
SW8270C/NONE	SO	072SB-0013-0001-SO	240-18297-16	FD	Benzo(b)fluoranthene	7.3	4.4	4.4 J	UG/KG	TR
SW8270C/NONE	SO	072SB-0014-0001-SO	240-18297-17	N	Benzo(b)fluoranthene	7.5	6.7	6.7 J	UG/KG	TR
SW8270C/NONE	SO	072SB-0014-0001-SO	240-18297-17	N	Naphthalene	7.5	5.4	5.4 J	UG/KG	TR
SW8270C/NONE	SO	072SB-0015-0001-SO	240-18297-18	N	Benzo(b)fluoranthene	7.5	6.9	6.9 J	UG/KG	TR
SW8270C/NONE	SO	072SB-0015-0001-SO	240-18297-18	N	Naphthalene	7.5	6.7	6.7 J	UG/KG	TR
SW8270C/NONE	SO	072SB-0016-0001-SO	240-18297-19	N	Benzo(b)fluoranthene	7.3	4.9	4.9 J	UG/KG	TR
SW8270C/NONE	SO	072SB-0016-0001-SO	240-18297-19	N	Naphthalene	7.3	4.1	4.1 J	UG/KG	TR

SW8270C/NONE	SO	072SB-0017-0001-SO	240-18297-20	N	Benzo(b)fluoranthene	7.9	6.7	6.7 J	UG/KG	TR
SW8270C/NONE	SO	072SB-0018-0001-SO	240-18297-21	N	Benzo(b)fluoranthene	7.9	6.2	6.2 J	UG/KG	TR
SW8270C/NONE	SO	072SB-0019-0001-SO	240-18297-22	N	Benzo(a)anthracene	7.2	11.0	11.0	UG/KG	
SW8270C/NONE	SO	072SB-0019-0001-SO	240-18297-22	N	Benzo(b)fluoranthene	7.2	29.0	29.0	UG/KG	
SW8270C/NONE	SO	072SB-0019-0001-SO	240-18297-22	N	Benzo(g,h,i)perylene	7.2	10.0	10.0	UG/KG	
SW8270C/NONE	SO	072SB-0019-0001-SO	240-18297-22	N	Benzo(k)fluoranthene	7.2	10.0	10.0	UG/KG	
SW8270C/NONE	SO	072SB-0019-0001-SO	240-18297-22	N	Chrysene	7.2	12.0	12.0	UG/KG	
SW8270C/NONE	SO	072SB-0019-0001-SO	240-18297-22	N	Fluoranthene	7.2	12.0	12.0	UG/KG	
SW8270C/NONE	SO	072SB-0019-0001-SO	240-18297-22	N	Naphthalene	7.2	5.0	5.0 J	UG/KG	TR
SW8270C/NONE	SO	072SB-0019-0001-SO	240-18297-22	N	Phenanthrene	7.2	34.0	34.0	UG/KG	
SW8270C/NONE	SO	072SB-0019-0001-SO	240-18297-22	N	Pyrene	7.2	8.1	8.1	UG/KG	

Rejected Results

--No Records Found--

AUTOMATED DATA REVIEW SUMMARY for 240-18297-1_(72-77-SB)

Anomalies Count

SDG Name: 240-18297-1_(72-77-SB)

Test/Extraction Method/Leach	# of Field Samples Outside of Compliance	# of Analytes Outside of Compliance
E353.2/METHOD/NONE	10	10
M8015D/SW3540C/NONE	13	26
M8015V/SW3550B/NONE	2	2
SW6020/SW3050B/NONE	5	15
SW7471A/TOTAL/NONE	6	6
SW8081/SW3540C/NONE	2	40
SW8082/SW3540C/NONE	2	14
SW8260B/SW5030B/NONE	2	2
SW8270C/SW3550/NONE	2	8

Anomalies are cases where the reported RL exceeds that specified in the governing project document.

AUTOMATED DATA REVIEW SUMMARY for 240-18297-1_(72-77-SB)

Worksheet

SDG Name: 240-18297-1_(72-77-SB)

Method: E353.2

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	Y			
Were samples preserved properly and received in good condition?	Y			
Were holding times met?	Y			
Were sample receipt temperatures met?	Y			
Were QAPP specified RLs achieved?	Y			
Were all QAPP specified target analytes reported?	Y			
Was the initial calibration curve within QAPP acceptance limits?			•	Not Required
Were the ICV/CCVs analyzed (frequency) as required in the QAPP?	Y			
Were ICV/CCV results within QAPP acceptance limits?		N		ICV %R above QC criteria; all samples ND, no impact.
Were the ICB/CCBs analyzed (frequency) as required in the QAPP?	Y			
Was a method blank prepared and analyzed with each batch?	Y			
Were target analytes detected in the ICB/CCB/method blank?		N		
Was a field blank collected and analyzed?		N		Not Required
Were target analytes reported in the field blank analyses above the MDL?			•	
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	Y			
Was a LCS prepared and analyzed with each batch?	Y			
Were the LCS recoveries within QAPP acceptance limits?	Y			
Was a duplicate sample prepared and analyzed with each batch?			•	Not Required
Was the duplicate RPD within QAPP acceptance limits?			•	Not Required
Was a MS/MSD pair prepared with each batch?	Y			
Is the MS/MSD parent sample the one designated by the sampling team?	Y			
Were the MS/MSD recoveries and RPDs within QAPP acceptance limits?	Y			
Were sample concentrations within calibration range?	Y			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	Y			
Are all samples associated with QC non-compliances flagged appropriately?	Y			
Are the Qualified, Detected, and Rejected tables of the ADR report in agreement?	Y			

Method: M8015D

AUTOMATED DATA REVIEW SUMMARY for 240-18297-1_(72-77-SB)

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report?	Y			
Were samples preserved properly and received in good condition?	Y			
Were sample receipt temperatures met?	Y			
Were holding times for prep and analysis met?	Y			
Does the initial calibration curve consist of 5 concentration levels, with the low standard near but > MDL?	Y			
Is the ICAL %RSD within acceptance limits (%D =20%) on both columns?	Y			
Was a second source verification analyzed after the ICAL and all analytes within criteria (%D =20%)?	Y			
Was a CCV run at the beginning of the analytical sequence and every 12 hours?	Y			
Was the CCV a mid-level standard from the initial calibration curve?	Y			
Was the CCV %D within criteria (%D =20%)?	Y			
Was a method blank prepared and analyzed with each batch?	Y			
Were target analytes detected in the method blank above the MDL?		N		
Was a field blank (equipment or trip) collected and analyzed?		N		Not Required
Were target analytes reported in the field blank analyses above the MDL?			•	
Were surrogate recoveries within QAPP acceptance limits?	Y			
Was an LCS/LCSD pair prepared and analyzed with each batch? (if applicable)	Y			Single LCS only
Were the LCS recoveries within QAPP acceptance limits?	Y			
Were the LCS/LCSD RPDs within QAPP acceptance limits? (if applicable)			•	
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits (RPD = 30%) ?	Y			
Is the MS/MSD parent sample the one designated by the sampling team?	Y			
Were MS/MSD recoveries and RPD within QAPP acceptance limits?	Y			
Were all QAPP-specified target analytes reported?	Y			
Were reported sample concentrations within calibration range?	Y			
Are all samples associated with QC non-compliances flagged appropriately?	Y			
Are the Qualified, Detected, and Rejected tables of the ADR report in agreement?	Y			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	Y			
Were sample preparation sheets present and filled out appropriately?	Y			
Were instrument run logs present and filled out appropriately?	Y			

Method: M8015V

AUTOMATED DATA REVIEW SUMMARY for 240-18297-1_(72-77-SB)

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report?	Y			
Were samples preserved properly and received in good condition?	Y			
Were sample receipt temperatures met?	Y			
Were holding times for prep and analysis met?	Y			
Does the initial calibration curve consist of 5 concentration levels, with the low standard near but > MDL?	Y			
Is the ICAL %RSD within acceptance limits (%D =20%) on both columns?	Y			
Was a second source verification analyzed after the ICAL and all analytes within criteria (%D =20%)?	Y			
Was a CCV run at the beginning of the analytical sequence and every 12 hours?	Y			
Was the CCV a mid-level standard from the initial calibration curve?	Y			
Was the CCV %D within criteria (%D =20%)?	Y			
Was a method blank prepared and analyzed with each batch?	Y			
Were target analytes detected in the method blank above the MDL?		N		
Was a field blank (equipment or trip) collected and analyzed?		N		Not Required
Were target analytes reported in the field blank analyses above the MDL?			•	
Were surrogate recoveries within QAPP acceptance limits?	Y			
Was an LCS/LCSD pair prepared and analyzed with each batch? (if applicable)	Y			Single LCS Only
Were the LCS recoveries within QAPP acceptance limits?	Y			
Were the LCS/LCSD RPDs within QAPP acceptance limits? (if applicable)			•	
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits (RPD = 30%) ?		N		RPD for C6-C12 outside QC criteria; results for samples9/10 qualified.
Is the MS/MSD parent sample the one designated by the sampling team?	Y			
Were MS/MSD recoveries and RPD within QAPP acceptance limits?	Y			
Were all QAPP-specified target analytes reported?	Y			
Were reported sample concentrations within calibration range?	Y			
Are all samples associated with QC non-compliances flagged appropriately?	Y			
Are the Qualified, Detected, and Rejected tables of the ADR report in agreement?	Y			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	Y			
Were sample preparation sheets present and filled out appropriately?	Y			
Were instrument run logs present and filled out appropriately?	Y			

Method: SW6020

AUTOMATED DATA REVIEW SUMMARY for 240-18297-1_(72-77-SB)

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	Y			
Were samples preserved properly and received in good condition?	Y			
Were holding times met?	Y			
Were sample receipt temperatures met?	Y			
Were QAPP specified RLs achieved?	Y			
Were all QAPP specified target analytes reported?	Y			
Was the initial calibration curve within QAPP acceptance limits?			•	Not Required
Were the ICV/CCVs analyzed (frequency) as required in the QAPP?	Y			
Were ICV/CCV results within QAPP acceptance limits?	Y			
Were the ICB/CCBs analyzed (frequency) as required in the QAPP?	Y			
Was a method blank prepared and analyzed with each batch?	Y			
Were target analytes detected in the ICB/CCB/method blank?	Y			Ca detected in ICB. Al, Ca, Mn, and Se detected in CCBs, Al, Ca, Fe, and Mn detected in MB; No impact on samples.
Was a field blank collected and analyzed?		N		Not Required
Were target analytes reported in the field blank analyses above the MDL?			•	
Was an Interference Check Standard (ICS) run at the beginning and end of every run?	Y			
Was the ICS recovery within QAPP acceptance limits?	Y			Ba, Cd, Co, Cu, Mn, Ni, and Zn noted in ISCA as having values > MDLs. However, all values were below their CRQLs; no impact on data.
If a field duplicate was analyzed, were the RPDs within criteria?		N		As, Ba and Ca RPDs for samples 9/10 outside QC criteria. As all RPDs were good for samples 15/16, only As, Ba, and Ca results for samples 9/10 were qualified.
Was a LCS prepared and analyzed with each batch?	Y			
Were the LCS recoveries within QAPP acceptance limits?	Y			
Was a MS/MSD pair prepared with each batch?	Y			MS/Lab Duplicate Performed
Is the MS/MSD parent sample the one designated by the sampling team?	Y			
Were the MS/MSD within QAPP acceptance limits?		N		MS recoveries in samples 9 and 15 below QC criteria (<30%) for Sb. All Sb results (all detects) in package qualified as estimated. MS recoveries in sample 9 below QC criteria, with Ca below 30%, for Ca and K; results for sample 9 (all detects) qualified as estimated. Ca RPD for lab duplicate outside criteria for sample 9, impacted sample 9. As RPD for lab duplicate outside criteria for sample 15, impacted sample 15.
Was a serial dilution prepared and analyzed with each batch?	Y			

Was the serial dilution within QAPP acceptance limits?	Y			
Were sample concentrations within calibration range?	Y			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	Y			
Are all samples associated with QC non-compliances flagged appropriately?	Y			
Are the Qualified, Detected, and Rejected tables of the ADR report in agreement?	Y			

Method: SW7471A

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	Y			
Were samples preserved properly and received in good condition?	Y			
Were holding times met?	Y			
Were sample receipt temperatures met?	Y			
Were QAPP specified RLs achieved?	Y			
Were all QAPP specified target analytes reported?	Y			
Was the initial calibration curve within QAPP acceptance limits?			•	Not Required
Were the ICV/CCVs analyzed (frequency) as required in the QAPP?	Y			
Were ICV/CCV results within QAPP acceptance limits?	Y			
Were the ICB/CCBs analyzed (frequency) as required in the QAPP?	Y			
Was a method blank prepared and analyzed with each batch?	Y			
Were target analytes detected in the ICB/CCB/method blank?		N		
Was a field blank collected and analyzed?		N		Not Required
Were target analytes reported in the field blank analyses above the MDL?			•	
Was the ICS recovery within QAPP acceptance limits?			•	Not Required
If a field duplicate was analyzed, were the RPDs within criteria?	Y			
Was a LCS prepared and analyzed with each batch?	Y			
Were the LCS recoveries within QAPP acceptance limits?	Y			
Was a MS/MSD pair prepared with each batch?	Y			MS/Lab Duplicate Performed
Is the MS/MSD parent sample the one designated by the sampling team?	Y			
Were the MS/MSD within QAPP acceptance limits?	Y			
Were sample concentrations within calibration range?	Y			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	Y			
Are all samples associated with QC non-compliances flagged appropriately?	Y			

Are the Qualified, Detected, and Rejected tables of the ADR report in agreement?	Y			

Method: SW8081

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report?	Y			
Were samples preserved properly and received in good condition?	Y			
Were sample receipt temperatures met?	Y			
Were holding times for prep and analysis met?	Y			
Does the initial calibration curve consist of 5 concentration levels, with the low standard near but > MDL?	Y			
Is the ICAL %RSD within acceptance limits (%D =20%) on both columns?	Y			
Was a second source verification analyzed after the ICAL and all analytes within criteria (%D =20%)?	Y			
Was a CCV run at the beginning of the analytical sequence and every 12 hours?	Y			
Was the CCV a mid-level standard from the initial calibration curve?	Y			
Was the CCV %D within criteria (%D =20%)?	Y			
Was a method blank prepared and analyzed with each batch?	Y			
Were target analytes detected in the method blank above the MDL?		N		
Was a field blank (equipment or trip) collected and analyzed?		N		Not Required
Were target analytes reported in the field blank analyses above the MDL?			•	
Were surrogate recoveries within QAPP acceptance limits?	Y			Sample 11 TCX > QC criteria in confirmation column only; sample results ND, no impact. Surrogate recoveries poor for sample 11 MS/MSD (see below).
Was an LCS/LCSD pair prepared and analyzed with each batch? (if applicable)	Y			Single LCS only
Were the LCS recoveries within QAPP acceptance limits?	Y			
Were the LCS/LCSD RPDs within QAPP acceptance limits? (if applicable)			•	
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits (RPD = 30%) ?	Y			
Were the Breakdown products within QAPP acceptance limits?	Y			
Is the MS/MSD parent sample the one designated by the sampling team?		N		No MS/MSD specifically requested for this analysis. Lab chose sample 17 to perform MS/MSD.
Were MS/MSD recoveries and RPD within QAPP acceptance limits?		N		Numerous recoveries outside criteria in MS and/or MSD for sample 17. All sample 17 results except aldrin are impacted. All sample RPDs outside criteria except 4,4'-DDT, aldrin, and endrin ketone. All results except these compounds are impacted in sample 17.
Were all QAPP-specified target analytes reported?	Y			

Were reported sample concentrations within calibration range?	Y			
Were RPDs between primary and confirmation columns < 40%?			•	No detections
Are all samples associated with QC non-compliances flagged appropriately?	Y			
Are the Qualified, Detected, and Rejected tables of the ADR report in agreement?	Y			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	Y			
Were sample preparation sheets present and filled out appropriately?	Y			
Were instrument run logs present and filled out appropriately?	Y			

Method: SW8082

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report?	Y			
Were samples preserved properly and received in good condition?	Y			
Were sample receipt temperatures met?	Y			
Were holding times for prep and analysis met?	Y			
Does the initial calibration curve consist of 5 concentration levels, with the low standard near but > MDL?	Y			
Is the ICAL %RSD within acceptance limits (%D =20%) on both columns?	Y			
Was a second source verification analyzed after the ICAL and all analytes within criteria (%D =20%)?	Y			
Was a CCV run at the beginning of the analytical sequence and every 12 hours?	Y			
Was the CCV a mid-level standard from the initial calibration curve?	Y			
Was the CCV %D within criteria (%D =20%)?	Y			
Was a method blank prepared and analyzed with each batch?	Y			
Were target analytes detected in the method blank above the MDL?		N		
Was a field blank (equipment or trip) collected and analyzed?		N		
Were target analytes reported in the field blank analyses above the MDL?			•	Not Required
Were surrogate recoveries within QAPP acceptance limits?	Y			
Was an LCS/LCSD pair prepared and analyzed with each batch? (if applicable)	Y			Single LCS only
Were the LCS recoveries within QAPP acceptance limits?	Y			
Were the LCS/LCSD RPDs within QAPP acceptance limits? (if applicable)			•	
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits (RPD = 30%) ?	Y			
Were the Breakdown products within QAPP acceptance limits?			•	Not Required
Is the MS/MSD parent sample the one designated by the sampling team?		N		No MS/MSD specifically requested for this analysis. Lab chose sample 11 to perform MS/MSD.

Were MS/MSD recoveries and RPD within QAPP acceptance limits?	Y			
Were all QAPP-specified target analytes reported?	Y			
Were reported sample concentrations within calibration range?	Y			
Were RPDs between primary and confirmation columns < 40%?			•	No detections
Are all samples associated with QC non-compliances flagged appropriately?	Y			
Are the Qualified, Detected, and Rejected tables of the ADR report in agreement?	Y			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	Y			
Were sample preparation sheets present and filled out appropriately?	Y			
Were instrument run logs present and filled out appropriately?	Y			

Method: SW8260B

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	Y			
Were samples preserved properly and received in good condition?	Y			
Were holding times met?	Y			
Were sample receipt temperatures met?	Y			
Were QAPP specified PQLs achieved?	Y			Sample 11 diluted X 1.667
Were all QAPP-specified target analytes reported?	Y			
Was the GC/MS system tuned with bromofluorobenzene (BFB)?	Y			
Was the criteria met during each 12 hour shift (prior to ICAL and Cal Ver.)?	Y			
Does the initial calibration curve consist of 5 concentration levels, with the low standard near but > MDL?	Y			
Did the Calibration Check Compounds (CCCs) have a relative standard deviation within QAPP acceptance limits?	Y			
Were the average response factors (RFs) for the System Performance Check Compounds (SPCCs) within QAPP acceptance limits?	Y			
Were all other target analytes within criteria? OR Was the average across all target analytes within criteria? Was a different calibration option used?	Y			
If a linear regression curve was used, was the correlation coefficient within criteria?	Y			
Was a second source verification analyzed after the ICAL and all analytes within criteria?	Y			
Was a CCV run at the beginning of the analytical sequence and every 12 hours?	Y			
Was the CCV a mid-level standard from the initial calibration curve?	Y			
Did the CCCs have a %Difference within QAPP acceptance limits?	Y			
Were the average RFs for the SPCCs within QAPP acceptance limits?	Y			

Was the average %D (difference or drift) for all target analytes within QAPP acceptance limits?	Y			
Were the internal standards added to every standard, blank, matrix spike, matrix spike duplicate, and sample?	Y			
Were the retention times for all IS compounds within QAPP acceptance limits?	Y			
Are the area counts of all IS compounds within QAPP acceptance limits?	Y			
Was a method blank prepared and analyzed with each batch?	Y			
Were target analytes detected in the method blank above the MDL?	Y			PCE detected in MB < CRQL. No impact on data. 2-Hexanone detected in 2nd MB. Impacted sample 11 (changed result to ND).
Was a field blank (equipment or trip) collected and analyzed at the required frequency?	Y			2 Trip blank submitted.
Were target analytes reported in the field blank analyses above the MDL?	Y			Acetone detected < CRQL in second TB; no impact on data.
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	Y			
Was an LCS/LCSD pair prepared and analyzed with each batch?	Y			Single LCS only
Were the LCS/LCSD recoveries within QAPP acceptance limits?	Y			
Were the LCS/LCSD RPDs within QAPP acceptance limits?			•	
Was the duplicate RPD within QAPP acceptance limits?			•	
Are all samples associated with QC non-compliances flagged appropriately?	Y			Acetone and 2-Hexanone recoveries below QC criteria in one MRL set; impacted results in samples 11 and 17
Are the Qualified, Detected, and Rejected tables of the ADR report in agreement?	Y			
Was a MS/MSD pair prepared with each batch?	Y			
Is the MS/MSD parent sample the one designated by the sampling team?	Y			
Were MS/MSD recoveries and RPD within QAPP acceptance limits?	Y			
Were surrogate recoveries within QAPP acceptance limits?		N		Surrogate recoveries below QC criteria for samples 9, 10, 11, 12, 13, 15, 19, 20, and 21. Lab re-analyzed samples 9, 15, 19, 20, and 21 and confirmed surrogate issue, reporting original results. Insufficient sample to re-extract samples 10-13. All results for samples 9, 10, 11, 12, 13, 15, 19, 20, and 21 qualified/considered estimates.
Were reported sample concentrations within calibration range?	Y			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	Y			
Were instrument run logs present and filled out appropriately?	Y			
Were sample preparation sheets present and filled out appropriately?	Y			

Method: SW8270C

Review Questions	Yes	No	NA	Comment

Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?		N		COC did not request PAHs for samples 9, 10, 12, 13, 15, 16, 18-22, but these samples were analyzed for PAHs.
Were samples preserved properly and received in good condition?	Y			
Were holding times met?	Y			
Were sample receipt temperatures met?	Y			
Were QAPP specified PQLs achieved?	Y			
Were all QAPP-specified target analytes reported?	Y			
Was the GC/MS system tuned with bromofluorobenzene (BFB)?	Y			
Was the criteria met during each 12 hour shift (prior to ICAL and Cal Ver.)?	Y			
Does the initial calibration curve consist of 5 concentration levels, with the low standard near but > MDL?	Y			
Did the Calibration Check Compounds (CCCs) have a relative standard deviation within QAPP acceptance limits?	Y			
Were the average response factors (RFs) for the System Performance Check Compounds (SPCCs) within QAPP acceptance limits?	Y			
Were all other target analytes within criteria? OR Was the average across all target analytes within criteria? Was a different calibration option used?	Y			
If a linear regression curve was used, was the correlation coefficient within criteria?	Y			
Was a second source verification analyzed after the ICAL and all analytes within criteria?		N		3,3'-DCB %D>20% in two ICVs; Samples 9, 10, 11 and 17 impacted.
Was a CCV run at the beginning of the analytical sequence and every 12 hours?	Y			
Was the CCV a mid-level standard from the initial calibration curve?	Y			
Did the CCCs have a %Difference within QAPP acceptance limits?	Y			
Were the average RFs for the SPCCs within QAPP acceptance limits?	Y			
Was the average %D (difference or drift) for all target analytes within QAPP acceptance limits?	Y			
Were the internal standards added to every standard, blank, matrix spike, matrix spike duplicate, and sample?	Y			
Were the retention times for all IS compounds within QAPP acceptance limits?	Y			
Are the area counts of all IS compounds within QAPP acceptance limits?	Y			
Was a method blank prepared and analyzed with each batch?	Y			
Were target analytes detected in the method blank above the MDL?	Y			BEHP detected in one MB; impacted result s in samples 11 and 17 (changed to ND).
Was a field blank (equipment or trip) collected and analyzed at the required frequency?		N		Not Required
Were target analytes reported in the field blank analyses above the MDL?			•	
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	Y			
Was an LCS/LCSD pair prepared and analyzed with each batch?	Y			Single LCS only

Were the LCS/LCSD recoveries within QAPP acceptance limits?	Y			
Were the LCS/LCSD RPDs within QAPP acceptance limits?			•	
Was the duplicate RPD within QAPP acceptance limits?			•	No Lab duplicate
Are all samples associated with QC non-compliances flagged appropriately?	Y			4,6-Dinitro-2-methylphenol, 2,4-dinitrophenol and 4-nitroaniline recoveries below QC criteria in one MRL set; impacted results for samples 11 and 17.
Are the Qualified, Detected, and Rejected tables of the ADR report in agreement?	Y			
Was a MS/MSD pair prepared with each batch?	Y			
Is the MS/MSD parent sample the one designated by the sampling team?	Y			
Were MS/MSD recoveries and RPD within QAPP acceptance limits?	Y			
Were surrogate recoveries within QAPP acceptance limits?		N		One acid surrogate recovered below QC limits for sample 15; no impact on data as only PAHs (base/neutral cmpds) reported.
Were reported sample concentrations within calibration range?	Y			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	Y			
Were instrument run logs present and filled out appropriately?	Y			
Were sample preparation sheets present and filled out appropriately?	Y			

Method: SW8330B

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report?	Y			
Were samples preserved properly and received in good condition?	Y			
Were sample receipt temperatures met?	Y			
Were holding times for prep and analysis met?	Y			
Does the initial calibration curve consist of 5 concentration levels, with the low standard near but > MDL?	Y			
Is the ICAL %RSD within acceptance limits (%D =20%) on both columns?	Y			
Was a second source verification analyzed after the ICAL and all analytes within criteria (%D =20%)?	Y			
Was a CCV run at the beginning of the analytical sequence and every 12 hours?	Y			
Was the CCV a mid-level standard from the initial calibration curve?	Y			
Was the CCV %D within criteria (%D =20%)?	Y			CCVLs had results >20%; lab performed required corrective action.
Was a method blank prepared and analyzed with each batch?	Y			
Were target analytes detected in the method blank above the MDL?		N		
Was a field blank (equipment or trip) collected and analyzed?		N		Not Required

AUTOMATED DATA REVIEW SUMMARY for 240-18297-1_(72-77-SB)

Were target analytes reported in the field blank analyses above the MDL?			•	
Were surrogate recoveries within QAPP acceptance limits?	Y			
Was an LCS/LCSD pair prepared and analyzed with each batch? (if applicable)	Y			Single LCS only
Were the LCS recoveries within QAPP acceptance limits?	Y			
Were the LCS/LCSD RPDs within QAPP acceptance limits? (if applicable)			•	
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits (RPD = 30%) ?			•	No field duplicate submitted
Is the MS/MSD parent sample the one designated by the sampling team?		N		No MS/MSD specifically requested for this analysis. Lab chose sample 1 to perform MS/MSD.
Were MS/MSD recoveries and RPD within QAPP acceptance limits?	Y			
Were all QAPP-specified target analytes reported?	Y			
Were reported sample concentrations within calibration range?	Y			
Were RPDs between primary and confirmation columns < 40%?			•	All results ND
Did PDA spectra for reported compounds match associated standard spectra?			•	Not required
Are all samples associated with QC non-compliances flagged appropriately?	Y			
Are the Qualified, Detected, and Rejected tables of the ADR report in agreement?	Y			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	Y			
Were sample preparation sheets present and filled out appropriately?	Y			
Were instrument run logs present and filled out appropriately?	Y			

Field Duplicates for SDG: 240-18297-1_(72-77-SB)

Location	Analysis
72-1026-R86-SB1	M8015D

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Check	RL Check
072SB-0012-0001-SO / 072SB-0013-0001-SO	240-18297-15 / 240-18297-16	C10-C20 Diesel Range Organics	ND	ND	19.0	NA	NA	OK
072SB-0012-0001-SO / 072SB-0013-0001-SO	240-18297-15 / 240-18297-16	C20-C34 Motor Oil Range Organics	ND	ND	19.0	NA	NA	OK

Location	Analysis
72-1026-R86-SB1	M8015V

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Check	RL Check
072SB-0012-0001-SO / 072SB-0013-0001-SO	240-18297-15 / 240-18297-16	Petroleum Hydrocarbons C6-C12	ND	ND	93.0	NA	NA	OK

Location	Analysis
72-1026-R86-SB1	SW6020

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Check	RL Check
072SB-0012-0001-SO / 072SB-0013-0001-SO	240-18297-15 / 240-18297-16	Aluminum	8500	9600	3.20	12.2	OK	NA
072SB-0012-0001-SO / 072SB-0013-0001-SO	240-18297-15 / 240-18297-16	Antimony	0.200	0.140	0.210	35.3	NA	OK
072SB-0012-0001-SO / 072SB-0013-0001-SO	240-18297-15 / 240-18297-16	Arsenic	5.60	4.70	0.110	17.5	OK	NA
072SB-0012-0001-SO / 072SB-0013-0001-SO	240-18297-15 / 240-18297-16	Barium	55.0	53.0	1.10	3.70	OK	NA
072SB-0012-0001-SO / 072SB-0013-0001-SO	240-18297-15 / 240-18297-16	Beryllium	0.880	0.810	0.110	8.28	OK	NA
072SB-0012-0001-SO / 072SB-0013-0001-SO	240-18297-15 / 240-18297-16	Cadmium	0.200	0.230	0.110	14.0	NA	OK
072SB-0012-0001-SO / 072SB-0013-0001-SO	240-18297-15 / 240-18297-16	Calcium	400	450	11.0	11.8	OK	NA
072SB-0012-0001-SO / 072SB-0013-0001-SO	240-18297-15 / 240-18297-16	Chromium	18.0	20.0	0.210	10.5	OK	NA
072SB-0012-0001-SO / 072SB-0013-0001-SO	240-18297-15 / 240-18297-16	Cobalt	18.0	17.0	0.0530	5.71	OK	NA
072SB-0012-0001-SO / 072SB-0013-0001-SO	240-18297-15 / 240-18297-16	Copper	31.0	33.0	0.210	6.25	OK	NA
072SB-0012-0001-SO / 072SB-0013-0001-SO	240-18297-15 / 240-18297-16	Iron	37000	36000	5.30	2.74	OK	NA
072SB-0012-0001-SO / 072SB-0013-0001-SO	240-18297-15 / 240-18297-16	Lead	20.0	17.0	0.110	16.2	OK	NA
072SB-0012-0001-SO / 072SB-0013-0001-SO	240-18297-15 / 240-18297-16	Magnesium	4000	4300	11.0	7.23	OK	NA
072SB-0012-0001-SO / 072SB-0013-0001-SO	240-18297-15 / 240-18297-16	Manganese	910	700	0.530	26.1	OK	NA
072SB-0012-0001-SO / 072SB-0013-0001-SO	240-18297-15 / 240-18297-16	Nickel	31.0	32.0	0.110	3.17	OK	NA

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil

The RPD criteria used for organic analysis is: 50
The RPD criteria used for non-organic analysis is: 35

072SB-0012-0001-SO / 072SB-0013-0001-SO	240-18297-15 / 240-18297-16	Potassium	1000	1200	11.0	18.2	OK	NA
072SB-0012-0001-SO / 072SB-0013-0001-SO	240-18297-15 / 240-18297-16	Selenium	1.00	1.10	0.530	9.52	NA	OK
072SB-0012-0001-SO / 072SB-0013-0001-SO	240-18297-15 / 240-18297-16	Silver	0.0320	0.0370	0.110	14.5	NA	OK
072SB-0012-0001-SO / 072SB-0013-0001-SO	240-18297-15 / 240-18297-16	Sodium	60.0	66.0	11.0	9.52	OK	NA
072SB-0012-0001-SO / 072SB-0013-0001-SO	240-18297-15 / 240-18297-16	Thallium	0.140	0.110	0.110	24.0	NA	OK
072SB-0012-0001-SO / 072SB-0013-0001-SO	240-18297-15 / 240-18297-16	Vanadium	17.0	18.0	0.110	5.71	OK	NA
072SB-0012-0001-SO / 072SB-0013-0001-SO	240-18297-15 / 240-18297-16	Zinc	69.0	80.0	0.530	14.8	OK	NA

Location 72-1026-R86-SB1 **Analysis** SW7471A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Check	RL Check
072SB-0012-0001-SO / 072SB-0013-0001-SO	240-18297-15 / 240-18297-16	Mercury	0.0400	0.0210	0.100	62.3	NA	OK

Location 72-1026-R86-SB1 **Analysis** SW8260B

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Check	RL Check
072SB-0012-0001-SO / 072SB-0013-0001-SO	240-18297-15 / 240-18297-16	Benzene	ND	ND	4.70	NA	NA	OK
072SB-0012-0001-SO / 072SB-0013-0001-SO	240-18297-15 / 240-18297-16	Ethylbenzene	ND	ND	4.70	NA	NA	OK
072SB-0012-0001-SO / 072SB-0013-0001-SO	240-18297-15 / 240-18297-16	tert-Butyl Methyl Ether	ND	ND	4.70	NA	NA	OK
072SB-0012-0001-SO / 072SB-0013-0001-SO	240-18297-15 / 240-18297-16	Toluene	ND	ND	4.70	NA	NA	OK
072SB-0012-0001-SO / 072SB-0013-0001-SO	240-18297-15 / 240-18297-16	Xylenes, Total	ND	ND	9.40	NA	NA	OK

Location 72-1026-R86-SB1 **Analysis** SW8270C

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Check	RL Check
072SB-0012-0001-SO / 072SB-0013-0001-SO	240-18297-15 / 240-18297-16	Acenaphthene	ND	ND	7.60	NA	NA	OK
072SB-0012-0001-SO / 072SB-0013-0001-SO	240-18297-15 / 240-18297-16	Acenaphthylene	ND	ND	7.60	NA	NA	OK
072SB-0012-0001-SO / 072SB-0013-0001-SO	240-18297-15 / 240-18297-16	Anthracene	ND	ND	7.60	NA	NA	OK
072SB-0012-0001-SO / 072SB-0013-0001-SO	240-18297-15 / 240-18297-16	Benzo(a)anthracene	ND	ND	7.60	NA	NA	OK
072SB-0012-0001-SO / 072SB-0013-0001-SO	240-18297-15 / 240-18297-16	Benzo(a)pyrene	ND	ND	7.60	NA	NA	OK

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil

The RPD criteria used for organic analysis is: 50
The RPD criteria used for non-organic analysis is: 35

072SB-0012-0001-SO / 072SB-0013-0001-SO	240-18297-15 / 240-18297-16	Benzo(b)fluoranthene	ND	4.40	7.60		NA	OK
072SB-0012-0001-SO / 072SB-0013-0001-SO	240-18297-15 / 240-18297-16	Benzo(g,h,i)perylene	ND	ND	7.60	NA	NA	OK
072SB-0012-0001-SO / 072SB-0013-0001-SO	240-18297-15 / 240-18297-16	Benzo(k)fluoranthene	ND	ND	7.60	NA	NA	OK
072SB-0012-0001-SO / 072SB-0013-0001-SO	240-18297-15 / 240-18297-16	Chrysene	ND	ND	7.60	NA	NA	OK
072SB-0012-0001-SO / 072SB-0013-0001-SO	240-18297-15 / 240-18297-16	Dibenz(a,h)anthracene	ND	ND	7.60	NA	NA	OK
072SB-0012-0001-SO / 072SB-0013-0001-SO	240-18297-15 / 240-18297-16	Fluoranthene	ND	ND	7.60	NA	NA	OK
072SB-0012-0001-SO / 072SB-0013-0001-SO	240-18297-15 / 240-18297-16	Fluorene	ND	ND	7.60	NA	NA	OK
072SB-0012-0001-SO / 072SB-0013-0001-SO	240-18297-15 / 240-18297-16	Indeno(1,2,3-c,d)Pyrene	ND	ND	7.60	NA	NA	OK
072SB-0012-0001-SO / 072SB-0013-0001-SO	240-18297-15 / 240-18297-16	Naphthalene	ND	ND	7.60	NA	NA	OK
072SB-0012-0001-SO / 072SB-0013-0001-SO	240-18297-15 / 240-18297-16	Phenanthrene	ND	ND	7.60	NA	NA	OK
072SB-0012-0001-SO / 072SB-0013-0001-SO	240-18297-15 / 240-18297-16	Pyrene	ND	ND	7.60	NA	NA	OK

Location **Analysis**

72-1048-RV5-SB1 M8015D

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Check	RL Check
072SB-0001-0001-SO / 072SB-0002-0001-SO	240-18297-9 / 240-18297-10	C10-C20 Diesel Range Organics	ND	ND	20.0	NA	NA	OK
072SB-0001-0001-SO / 072SB-0002-0001-SO	240-18297-9 / 240-18297-10	C20-C34 Motor Oil Range Organics	ND	ND	20.0	NA	NA	OK

Location **Analysis**

72-1048-RV5-SB1 M8015V

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Check	RL Check
072SB-0001-0001-SO / 072SB-0002-0001-SO	240-18297-9 / 240-18297-10	Petroleum Hydrocarbons C6-C12	320	180	110	56.0	NA	OK

Location **Analysis**

72-1048-RV5-SB1 SW6020

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Check	RL Check
072SB-0001-0001-SO / 072SB-0002-0001-SO	240-18297-9 / 240-18297-10	Aluminum	12000	12000	3.10	0.00	OK	NA
072SB-0001-0001-SO / 072SB-0002-0001-SO	240-18297-9 / 240-18297-10	Antimony	0.0750	0.0830	0.210	10.1	NA	OK
072SB-0001-0001-SO / 072SB-0002-0001-SO	240-18297-9 / 240-18297-10	Arsenic	14.0	7.80	0.100	56.9	Out	NA
072SB-0001-0001-SO / 072SB-0002-0001-SO	240-18297-9 / 240-18297-10	Barium	36.0	87.0	1.00	82.9	Out	NA

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil

The RPD criteria used for organic analysis is: 50
The RPD criteria used for non-organic analysis is: 35

072SB-0001-0001-SO / 072SB-0002-0001-SO	240-18297-9 / 240-18297-10	Beryllium	0.650	0.600	0.100	8.00	OK	NA
072SB-0001-0001-SO / 072SB-0002-0001-SO	240-18297-9 / 240-18297-10	Cadmium	0.150	0.190	0.100	23.5	NA	OK
072SB-0001-0001-SO / 072SB-0002-0001-SO	240-18297-9 / 240-18297-10	Calcium	2900	28000	10.0	162	Out	NA
072SB-0001-0001-SO / 072SB-0002-0001-SO	240-18297-9 / 240-18297-10	Chromium	18.0	19.0	0.210	5.41	OK	NA
072SB-0001-0001-SO / 072SB-0002-0001-SO	240-18297-9 / 240-18297-10	Cobalt	12.0	9.60	0.0510	22.2	OK	NA
072SB-0001-0001-SO / 072SB-0002-0001-SO	240-18297-9 / 240-18297-10	Copper	16.0	17.0	0.210	6.06	OK	NA
072SB-0001-0001-SO / 072SB-0002-0001-SO	240-18297-9 / 240-18297-10	Iron	28000	26000	5.10	7.41	OK	NA
072SB-0001-0001-SO / 072SB-0002-0001-SO	240-18297-9 / 240-18297-10	Lead	11.0	10.0	0.100	9.52	OK	NA
072SB-0001-0001-SO / 072SB-0002-0001-SO	240-18297-9 / 240-18297-10	Magnesium	6000	8100	10.0	29.8	OK	NA
072SB-0001-0001-SO / 072SB-0002-0001-SO	240-18297-9 / 240-18297-10	Manganese	190	270	0.510	34.8	OK	NA
072SB-0001-0001-SO / 072SB-0002-0001-SO	240-18297-9 / 240-18297-10	Nickel	29.0	25.0	0.100	14.8	OK	NA
072SB-0001-0001-SO / 072SB-0002-0001-SO	240-18297-9 / 240-18297-10	Potassium	1900	2100	10.0	10.0	OK	NA
072SB-0001-0001-SO / 072SB-0002-0001-SO	240-18297-9 / 240-18297-10	Selenium	0.900	0.900	0.510	0.00	NA	OK
072SB-0001-0001-SO / 072SB-0002-0001-SO	240-18297-9 / 240-18297-10	Silver	0.0330	0.0340	0.100	2.99	NA	OK
072SB-0001-0001-SO / 072SB-0002-0001-SO	240-18297-9 / 240-18297-10	Sodium	85.0	100	10.0	16.2	OK	NA
072SB-0001-0001-SO / 072SB-0002-0001-SO	240-18297-9 / 240-18297-10	Thallium	0.180	0.150	0.100	18.2	NA	OK
072SB-0001-0001-SO / 072SB-0002-0001-SO	240-18297-9 / 240-18297-10	Vanadium	17.0	20.0	0.100	16.2	OK	NA
072SB-0001-0001-SO / 072SB-0002-0001-SO	240-18297-9 / 240-18297-10	Zinc	59.0	52.0	0.510	12.6	OK	NA

Location	Analysis
72-1048-RV5-SB1	SW7471A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Check	RL Check
072SB-0001-0001-SO / 072SB-0002-0001-SO	240-18297-9 / 240-18297-10	Mercury	ND	ND	0.120	NA	NA	OK

Location	Analysis
72-1048-RV5-SB1	SW8260B

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Check	RL Check
072SB-0001-0001-SO / 072SB-0002-0001-SO	240-18297-9 / 240-18297-10	Benzene	ND	ND	250	NA	NA	OK
072SB-0001-0001-SO / 072SB-0002-0001-SO	240-18297-9 / 240-18297-10	Ethylbenzene	ND	ND	250	NA	NA	OK
072SB-0001-0001-SO / 072SB-0002-0001-SO	240-18297-9 / 240-18297-10	tert-Butyl Methyl Ether	ND	ND	250	NA	NA	OK
072SB-0001-0001-SO / 072SB-0002-0001-SO	240-18297-9 / 240-18297-10	Toluene	ND	ND	250	NA	NA	OK

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil

The RPD criteria used for organic analysis is: 50
The RPD criteria used for non-organic analysis is: 35

072SB-0001-0001-SO / 072SB-0002-0001-SO	240-18297-9 / 240-18297-10	Xylenes, Total	ND	ND	500	NA	NA	OK

Location **Analysis**

72-1048-RV5-SB1 SW8270C

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Check	RL Check
072SB-0001-0001-SO / 072SB-0002-0001-SO	240-18297-9 / 240-18297-10	Acenaphthene	ND	ND	8.00	NA	NA	OK
072SB-0001-0001-SO / 072SB-0002-0001-SO	240-18297-9 / 240-18297-10	Acenaphthylene	ND	ND	8.00	NA	NA	OK
072SB-0001-0001-SO / 072SB-0002-0001-SO	240-18297-9 / 240-18297-10	Anthracene	ND	ND	8.00	NA	NA	OK
072SB-0001-0001-SO / 072SB-0002-0001-SO	240-18297-9 / 240-18297-10	Benzo(a)anthracene	ND	ND	8.00	NA	NA	OK
072SB-0001-0001-SO / 072SB-0002-0001-SO	240-18297-9 / 240-18297-10	Benzo(a)pyrene	ND	ND	8.00	NA	NA	OK
072SB-0001-0001-SO / 072SB-0002-0001-SO	240-18297-9 / 240-18297-10	Benzo(b)fluoranthene	ND	ND	8.00	NA	NA	OK
072SB-0001-0001-SO / 072SB-0002-0001-SO	240-18297-9 / 240-18297-10	Benzo(g,h,i)perylene	ND	ND	8.00	NA	NA	OK
072SB-0001-0001-SO / 072SB-0002-0001-SO	240-18297-9 / 240-18297-10	Benzo(k)fluoranthene	ND	ND	8.00	NA	NA	OK
072SB-0001-0001-SO / 072SB-0002-0001-SO	240-18297-9 / 240-18297-10	Chrysene	ND	ND	8.00	NA	NA	OK
072SB-0001-0001-SO / 072SB-0002-0001-SO	240-18297-9 / 240-18297-10	Dibenz(a,h)anthracene	ND	ND	8.00	NA	NA	OK
072SB-0001-0001-SO / 072SB-0002-0001-SO	240-18297-9 / 240-18297-10	Fluoranthene	ND	ND	8.00	NA	NA	OK
072SB-0001-0001-SO / 072SB-0002-0001-SO	240-18297-9 / 240-18297-10	Fluorene	ND	ND	8.00	NA	NA	OK
072SB-0001-0001-SO / 072SB-0002-0001-SO	240-18297-9 / 240-18297-10	Indeno(1,2,3-c,d)Pyrene	ND	ND	8.00	NA	NA	OK
072SB-0001-0001-SO / 072SB-0002-0001-SO	240-18297-9 / 240-18297-10	Naphthalene	8.90	ND	8.00		NA	OK
072SB-0001-0001-SO / 072SB-0002-0001-SO	240-18297-9 / 240-18297-10	Phenanthrene	ND	ND	8.00	NA	NA	OK
072SB-0001-0001-SO / 072SB-0002-0001-SO	240-18297-9 / 240-18297-10	Pyrene	ND	ND	8.00	NA	NA	OK

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil

The RPD criteria used for organic analysis is: 50
The RPD criteria used for non-organic analysis is: 35

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WORKSHEET 3

Automated Data Review Summary for 240-18735-1

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AUTOMATED DATA REVIEW SUMMARY for 240-18735-1_(70-76-SB)

Facility: Ravenna Army Ammunition Plant

Event: Fall 2012 SI/RI Sampling

Guidance Document: Ravenna Army Ammunition Plant, Quality Assurance Project Plan, Oct. 3, 2012

Contract Laboratory: TestAmerica, Inc., North Canton, OH

Field Contractor: Environmental Chemical Corporation, Otis Ang Base, MA

Data Review Contractor:

SDG: 240-18735-1_(70-76-SB), Certified - 1/9/2013 by frederickroche

QC Level: ADR

Project Manager:

Data Reviewer:

Data Reviewer Title:

Date of Review Report:

Samples Included in SDG 240-18735-1_(70-76-SB)

Analytical Method/ Leach Method	Normal Soil Samples	Normal Water Samples	Field QC Soil Samples	Field QC Water Samples
M8015V/NONE	1	1	0	0
SW7196A/NONE	16		2	
SW8260B/NONE		1		0

AUTOMATED DATA REVIEW SUMMARY for 240-18735-1_(70-76-SB)

This report assesses the analytical data quality associated with the analyses listed on the preceding cover page. This assessment has been made through a combination of automated data review (ADR) and supplemental manual review, the details of which are described below. The approach taken in the review of this data set is consistent with the requirements contained in the Ravenna Army Ammunition Plant, Quality Assurance Project Plan, Oct. 3, 2012 to the extent possible. Where definitive guidance is not provided, data has been evaluated in a conservative manner using professional judgment. In cases where two qualifiers are listed as an action, such as 'J/UJ', the first qualifier applies to positive results, and the second to non-detect results.

Samples were collected by Environmental Chemical Corporation, Otis Ang Base, MA; analyses were performed by TestAmerica, Inc., North Canton, OH and were reported under sample delivery group (SDG) 240-18735-1_(70-76-SB). Results have been evaluated electronically using electronic data deliverables (EDDs) provided by the laboratory. The laboratory data summary forms (hard copy) have been reviewed during this effort and compared to the automated review output. Findings based on the automated data submission and manual data verification processes are detailed in the ADR narrative.

The following quality control elements were supported by the electronic deliverable and were evaluated during this review effort:

- Blank
- Blank - Negative
- Field Duplicate RPD
- LCS Recovery
- MS Recovery
- MS RPD
- Prep Hold Time
- Surrogate
- Test Hold Time

The following quality control elements were either not applicable to the deliverable, or were not supported by the electronic deliverable, and were therefore not included in the automated data review. Those elements required for the project were reviewed manually, as narrated in the Comment section below.

- Ambient Blank
- Calibration Blank
- Calibration Blank - Negative
- Continuing Calibration Verification
- Equipment Blank

AUTOMATED DATA REVIEW SUMMARY for 240-18735-1_(70-76-SB)

Field Blank

Initial Calibration Verification

Lab Replicate RPD

LCS RPD

Material Blank

Trip Blank

AUTOMATED DATA REVIEW SUMMARY for 240-18735-1_(70-76-SB)

A representative sampling or ten percent of sample and QC results were manually evaluated for compliance with project specific requirements and consistency with hard copy results. The following summaries were generated during the evaluation of this data set and are included in this report as applicable.

Batch – The analytical batch report is reviewed for completeness and compliance with project specific requirements. Incomplete or non-compliant run sequences are identified and their impact on data quality are discussed in the narrative.

QC Outlier – Results exceeding the evaluation criteria are reviewed for compliance with project requirements and a minimum of ten percent of the non-compliant QC values reported electronically are verified for consistency with hard-copy values.

Qualified Results – Qualified results are evaluated for compliance with project requirements and ten percent of qualified results are verified for consistency with the QC Outliers.

Rejected Results – All rejected results are evaluated for compliance with project requirements. The reason for rejection of the data is verified against hard copy data.

Field Duplicates – Field duplicate comparison results are evaluated for compliance with project requirements and ten percent of values reported are verified for consistency with the hard-copy data.

Data Submission Warnings – Warnings encountered during the data submission process are evaluated and their affect on data quality is discussed in the narrative below.

Analytical deficiencies, project non-compliance issues and inconsistencies with hard copy results observed during ADR evaluation process and their impact on data quality are summarized in the narrative below.

A total of 0 results (0.00%) out of the 56 results (sample and field QC samples) reported are qualified based on review and 0 results (0.00%) have been rejected. Trace values are not counted as qualified results in the above count. The qualified results are detailed in the following tables and discussed in the narrative below, where appropriate.

Narrative Comments

Analytical Method	Comment
M8015V	
SW7196A	

AUTOMATED DATA REVIEW SUMMARY for 240-18735-1_(70-76-SB)

SW8260B	

Reviewed by ,

AUTOMATED DATA REVIEW SUMMARY for 240-18735-1_(70-76-SB)

Reason and Comment Code Definitions

Reasons	
Code	**Definition**
A	Serial dilution
A1	Ambient Blank
B	The analyte was found in an associated blank as well as in the sample.
B2	CCB
B3	CCB - Neg
c	LCS - low
C	LCS Recovery
d	Field Duplicate RPD
D	MS RPD
D1	Lab Replicate RPD
D2	No precision available
F	Field Blank
F1	Hydrocarbon pattern does not match standard
G1	Initial Calibration RRF
G2	Initial Calibration RSD
h	Holding time exceeded by less than 2X.
H	Holding time exceeded by more than 2X.
H1	Test Hold Time
H2	Prep Hold Time
I	Surrogate recovery outside project limits.
J	CRA/CRI Recovery
K	An analyte (non-common laboratory artifact) was detected in the sample at a concentration less than 5X the concentration detected in the associated method blank.
L	Lab Blank
L1	Lab Blank - Neg
m	MS - low
M	MS Recovery
N	Blank - No Action

AUTOMATED DATA REVIEW SUMMARY for 240-18735-1_(70-76-SB)

Reason and Comment Code Definitions

O	ICS
P	Sample preservation/collection requirement not met.
P1	Column RPD
P2	Improper preparation/extraction
q	Encore sample holding time exceeded by less than 2X.
Q	Encore sample holding time exceeded by more than 2X.
Q1	Material Blank
R	Exceeds LinearCalibration Range
S	Internal standard
T	Trip Blank
TI	Tentatively Identified Compound
TR	Trace Level Detect
U	Receipt Temperature
V	Equipment Blank
V1	ICV
V2	CCV
V3	CCV RRF
V4	Sample Receipt Condition
W	Column breakdown (pesticides)
X	Raised reporting limit
Y	Cooler temperature greater than 10 degreec C.
y	Cooler temperature greater than 4 degrees C, but less than 10 degreec C.
Y1	False Positive
Y2	Data rejected due to radiological anomolies
Z	LCS RPD
Z2	Analyte not confirmed on second column
Z3	High percent moisture in sample.

AUTOMATED DATA REVIEW SUMMARY for 240-18735-1_(70-76-SB)

Flag Code and Definitions	
Flag	Definition
U	Undetected: The analyte was analyzed for, but not detected.
UJ	The analyte was not detected; however, the result is estimated due to discrepancies in meeting certain analyte-specific quality control criteria.
J	Estimated: The analyte was positively identified, the quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
R	The data are rejected due to deficiencies in meeting QC criteria and may not be used for decision making.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification".
NJ	The analysis indicates the presence of an analyte that has been “tentatively identified” and the associated numerical value represents its approximate concentration.

AUTOMATED DATA REVIEW SUMMARY for 240-18735-1_(70-76-SB)

Batch Report

Test Method: M8015V; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
69738	NA	NA	LABQC	SQ	LABQC	MB 240-69738/52		1/1	22-Dec-2012 6:53 PM		22-Dec-2012 6:53 PM	LB
	NA	NA	LABQC	SQ	LABQC	LCS 240-69738/53		1/1	22-Dec-2012 7:32 PM		22-Dec-2012 7:32 PM	BS
	69885	NA	70-4744-DU1-SB6	SO	070SB-0042M-0001-SO	240-18735-1		1/1	07-Dec-2012 11:45 AM	12-Dec-2012 10:10 PM	23-Dec-2012 7:33 AM	N
	69885	NA	70-4744-DU1-SB6	SO	070SB-0042M-0001-SO	240-18735-1		1/1	12-Dec-2012 12:00 AM	12-Dec-2012 10:10 PM	23-Dec-2012 8:10 AM	MS
	69885	NA	70-4744-DU1-SB6	SO	070SB-0042M-0001-SO	240-18735-1		1/1	12-Dec-2012 12:00 AM	12-Dec-2012 10:10 PM	23-Dec-2012 8:49 AM	SD
	69738	NA	LABQC	WQ	LABQC	MB 240-69738/36		1/1	22-Dec-2012 8:46 AM	22-Dec-2012 8:46 AM	22-Dec-2012 8:46 AM	LB
	69738	NA	LABQC	WQ	LABQC	LCS 240-69738/37		1/1	22-Dec-2012 9:24 AM	22-Dec-2012 9:24 AM	22-Dec-2012 9:24 AM	BS
	69738	NA	70-4744-DU1-SB6	WG	070SB-0055-0001-TB	240-18735-2		1/1	12-Dec-2012 12:00 AM	22-Dec-2012 3:41 PM	22-Dec-2012 3:41 PM	N

Test Method: SW7196A; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
70884	70771	NA	LABQC	SQ	LABQC	LCSI 240-70771/11-A		1/1	31-Dec-2012 1:31 PM	31-Dec-2012 1:31 PM	02-Jan-2013 12:00 AM	BS
	70771	NA	LABQC	SQ	LABQC	LCSS 240-70771/10-A		1/1	31-Dec-2012 1:31 PM	31-Dec-2012 1:31 PM	02-Jan-2013 12:00 AM	BS
	70771	NA	LABQC	SQ	LABQC	MB 240-70771/9-A		1/1	31-Dec-2012 1:31 PM	31-Dec-2012 1:31 PM	02-Jan-2013 12:00 AM	LB
	70771	NA	76-U3-UST-SB1	SO	076SB-0119-0001-SO	240-18735-8		1/1	11-Dec-2012 9:10 AM	31-Dec-2012 1:31 PM	02-Jan-2013 12:53 PM	N
	70771	NA	76-U3-UST-SB2	SO	076SB-0120-0001-SO	240-18735-9		1/1	11-Dec-2012 11:20 AM	31-Dec-2012 1:31 PM	02-Jan-2013 12:54 PM	N
	70771	NA	76-U3-UST-SB3	SO	076SB-0121-0001-SO	240-18735-10		1/1	11-Dec-2012 10:50 AM	31-Dec-2012 1:31 PM	02-Jan-2013 12:57 PM	N
	70771	NA	76-U3-UST-SB4	SO	076SB-0122-0001-SO	240-18735-11		1/1	11-Dec-2012 9:30 AM	31-Dec-2012 1:31 PM	02-Jan-2013 12:57 PM	N
	70771	NA	76-U3-UST-SB5	SO	076SB-0123-0001-SO	240-18735-12		1/1	11-Dec-2012 9:50 AM	31-Dec-2012 1:31 PM	02-Jan-2013 1:11 PM	N

AUTOMATED DATA REVIEW SUMMARY for 240-18735-1_(70-76-SB)

Batch Report

Test Method: SW7196A; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
70884	70771	NA	76-U3-UST-SB6	SO	076SB-0124-0001-SO	240-18735-13		1/1	11-Dec-2012 10:15 AM	31-Dec-2012 1:31 PM	02-Jan-2013 1:11 PM	N
	70771	NA	76-U6-UST-SB1	SO	076SB-0125-0001-SO	240-18735-14		1/1	12-Dec-2012 10:15 AM	31-Dec-2012 1:31 PM	02-Jan-2013 1:14 PM	MS
	70771	NA	76-U6-UST-SB1	SO	076SB-0125-0001-SO	240-18735-14		1/1	12-Dec-2012 10:15 AM	31-Dec-2012 1:31 PM	02-Jan-2013 1:15 PM	N
	70771	NA	76-U6-UST-SB2	SO	076SB-0126-0001-SO	240-18735-15		1/1	11-Dec-2012 3:55 PM	31-Dec-2012 1:31 PM	02-Jan-2013 1:17 PM	N
	70771	NA	76-U6-UST-SB2	SO	076SB-0127-0001-SO	240-18735-16		1/1	11-Dec-2012 3:55 PM	31-Dec-2012 1:31 PM	02-Jan-2013 1:18 PM	FD
	70771	NA	76-U6-UST-SB3	SO	076SB-0128-0001-SO	240-18735-17		1/1	11-Dec-2012 3:20 PM	31-Dec-2012 1:31 PM	02-Jan-2013 1:26 PM	N
	70771	NA	76-U6-UST-SB4	SO	076SB-0129-0001-SO	240-18735-18		1/1	11-Dec-2012 2:50 PM	31-Dec-2012 1:31 PM	02-Jan-2013 1:30 PM	N
	70771	NA	76-U6-UST-SB5	SO	076SB-0130-0001-SO	240-18735-19		1/1	12-Dec-2012 10:49 AM	31-Dec-2012 1:31 PM	02-Jan-2013 1:33 PM	N
	70771	NA	76-U6-UST-SB6	SO	076SB-0131-0001-SO	240-18735-20		1/1	12-Dec-2012 11:24 AM	31-Dec-2012 1:31 PM	02-Jan-2013 1:34 PM	N
	70771	NA	76-A1-UST-SB1	SO	076SB-0132-0001-SO	240-18735-21		1/1	11-Dec-2012 12:25 PM	31-Dec-2012 1:31 PM	02-Jan-2013 1:37 PM	N
	70771	NA	76-A1-UST-SB1	SO	076SB-0133-0001-SO	240-18735-22		1/1	11-Dec-2012 12:25 PM	31-Dec-2012 1:31 PM	02-Jan-2013 1:38 PM	FD
	70771	NA	76-A1-UST-SB2	SO	076SB-0134-0001-SO	240-18735-23		1/1	11-Dec-2012 1:15 PM	31-Dec-2012 1:31 PM	02-Jan-2013 1:43 PM	N
	70771	NA	76-A1-UST-SB3	SO	076SB-0135-0001-SO	240-18735-24		1/1	11-Dec-2012 1:40 PM	31-Dec-2012 1:31 PM	02-Jan-2013 1:43 PM	N
	70771	NA	76-A6-UST-SB13	SO	076SB-0136-0001-SO	240-18735-25		1/1	11-Dec-2012 2:10 PM	31-Dec-2012 1:31 PM	02-Jan-2013 1:47 PM	N

Test Method: SW8260B; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
69591	69591	NA	LABQC	WQ	LABQC	LCS 240-69591/4		1/1	20-Dec-2012 12:21 PM	20-Dec-2012 12:21 PM	20-Dec-2012 12:21 PM	BS
	69591	NA	LABQC	WQ	LABQC	MB 240-69591/6		1/1	20-Dec-2012 1:05 PM	20-Dec-2012 1:05 PM	20-Dec-2012 1:05 PM	LB

AUTOMATED DATA REVIEW SUMMARY for 240-18735-1_(70-76-SB)

Batch Report

Test Method: SW8260B; Leach Method: NONE												
Analytical Batch	**Prep Batch**	**Leach Batch**	**Location**	**Matrix**	**Field Sample ID**	**Lab Sample ID**	**Calibration Ref**	**Run#/ Dil'n**	**Collection Date/Time**	**Extract Date/Time**	**Analysis Date/Time**	**Sample Type**
69591	69591	NA	70-4744-DU1-SB6	WG	070-0060-0001-TB	240-18735-7		1/1	12-Dec-2012 12:00 AM	20-Dec-2012 4:37 PM	20-Dec-2012 4:37 PM	N

AUTOMATED DATA REVIEW SUMMARY for 240-18735-1_(70-76-SB)

Field Batch Report

--No Records Found--

QC Outliers Report

--No Records Found--

Qualified Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Bias	Units	Reason
M8015V/NONE	WG	070SB-0055-0001-TB	240-18735-2	N	Petroleum Hydrocarbons C6-C12	100	37.0	37.0 J		UG/L	TR
Test Leach	**Matrix**	**FieldSample ID**	**LabSample ID**	**Type**	**Analyte**	**RL**	**Lab Result**	**Qualified Result**	**Bias**	**Units**	**Reason**
SW7196A/NONE	SO	076SB-0120-0001-SO	240-18735-9	N	Chromium, Hexavalent	0.91	0.34	0.34 J		MG/KG	TR
SW7196A/NONE	SO	076SB-0126-0001-SO	240-18735-15	N	Chromium, Hexavalent	0.89	0.31	0.31 J		MG/KG	TR
SW7196A/NONE	SO	076SB-0133-0001-SO	240-18735-22	FD	Chromium, Hexavalent	0.98	0.39	0.39 J		MG/KG	TR
SW7196A/NONE	SO	076SB-0134-0001-SO	240-18735-23	N	Chromium, Hexavalent	0.91	0.37	0.37 J		MG/KG	TR
Test Leach	**Matrix**	**FieldSample ID**	**LabSample ID**	**Type**	**Analyte**	**RL**	**Lab Result**	**Qualified Result**	**Bias**	**Units**	**Reason**
SW8260B/NONE	WG	070-0060-0001-TB	240-18735-7	N	Chloroform	1.0	0.32	0.32 J		UG/L	TR

AUTOMATED DATA REVIEW SUMMARY for 240-18735-1_(70-76-SB)

Detected Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
M8015V/NONE	WG	070SB-0055-0001-TB	240-18735-2	N	Petroleum Hydrocarbons C6-C12	100	37.0	37.0 J	UG/L	TR

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW7196A/NONE	SO	076SB-0120-0001-SO	240-18735-9	N	Chromium, Hexavalent	0.91	0.34	0.34 J	MG/KG	TR
SW7196A/NONE	SO	076SB-0126-0001-SO	240-18735-15	N	Chromium, Hexavalent	0.89	0.31	0.31 J	MG/KG	TR
SW7196A/NONE	SO	076SB-0133-0001-SO	240-18735-22	FD	Chromium, Hexavalent	0.98	0.39	0.39 J	MG/KG	TR
SW7196A/NONE	SO	076SB-0134-0001-SO	240-18735-23	N	Chromium, Hexavalent	0.91	0.37	0.37 J	MG/KG	TR

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW8260B/NONE	WG	070-0060-0001-TB	240-18735-7	N	Chloroform	1.0	0.32	0.32 J	UG/L	TR

AUTOMATED DATA REVIEW SUMMARY for 240-18735-1_(70-76-SB)

Rejected Results

--No Records Found--

AUTOMATED DATA REVIEW SUMMARY for 240-18735-1_(70-76-SB)

Anomalies Count

SDG Name: 240-18735-1_(70-76-SB)

Test/Extraction Method/Leach	# of Field Samples Outside of Compliance	# of Analytes Outside of Compliance
SW8260B/SW5030B/NONE	1	1

Anomalies are cases where the reported RL exceeds that specified in the governing project document.

AUTOMATED DATA REVIEW SUMMARY for 240-18735-1_(70-76-SB)

Worksheet

SDG Name: 240-18735-1_(70-76-SB)

Method: M8015V

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report?				
Were samples preserved properly and received in good condition?				
Were sample reciept temperatures met?				
Were holding times for prep and analysis met?				
Does the initial calibration curve consist of 5 concentration levels, with the low standard near but > MDL?				
Is the ICAL %RSD within acceptance limits (%D =20%) on both columns?				
Was a second source verification analyzed after the ICAL and all analytes within criteria (%D =20%)?				
Was a CCV run at the beginning of the analytical sequence and every 12 hours?				
Was the CCV a mid-level standard from the initial calibration curve?				
Was the CCV %D within criteria (%D =20%)?				
Was a method blank prepared and analyzed with each batch?				
Were target analytes detected in the method blank above the MDL?				
Was a field blank (equipment or trip) collected and analyzed?				
Were target analytes reported in the field blank analyses above the MDL?				
Were surrogate recoveries within QAPP acceptance limits?				
Was an LCS/LCSD pair prepared and analyzed with each batch? (if applicable)				
Were the LCS recoveries within QAPP acceptance limits?				
Were the LCS/LCSD RPDs within QAPP acceptance limits? (if applicable)				
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits (RPD = 30%) ?				
Is the MS/MSD parent sample the one designated by the sampling team?				
Were MS/MSD recoveries and RPD within QAPP acceptance limits?				
Were all QAPP-specified target analytes reported?				
Were reported sample concentrations within calibration range?				
Are all samples associated with QC non-compliances flagged appropriately?				
Are the Qualified, Detected, and Rejected tables of the ADR report in agreement?				

AUTOMATED DATA REVIEW SUMMARY for 240-18735-1_(70-76-SB)

Method: M8015V

Review Questions	Yes	No	NA	Comment
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?				
Were sample prepration sheets present and filled out appropriately?				
Were instrument run logs present and filled out appropriately?				

Method: SW7196A

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?				
Were samples preserved properly and received in good condition?				
Were holding times met?				
Were sample reciept temperatures met?				
Were QAPP specified RLs achieved?				
Were all QAPP specified target analytes reported?				
Was the initial calibration curve within QAPP acceptance limits?			•	Not Required
Were the ICV/CCVs analyzed (frequency) as required in the QAPP?			•	Not Required
Were ICV/CCV results within QAPP acceptance limits?			•	Not Required
Were the ICB/CCBs analyzed (frequency) as required in the QAPP?			•	Not Required
Was a method blank prepared and analyzed with each batch?				
Were target analytes detected in the ICB/CCB/method blank?			•	Not Required
Was a field blank collected and analyzed?				
Were target analytes reported in the field blank analyses above the MDL?				
Was the ICS recovery within QAPP acceptance limits?			•	Not Required
If a field duplicate was analyzed, were the RPDs within criteria?				
Was a LCS prepared and analyzed with each batch?				
Were the LCS recoveries within QAPP acceptance limits?				
Was a MS/MSD pair prepared with each batch?				
Is the MS/MSD parent sample the one designated by the sampling team?				
Were the MS/MSD within QAPP acceptance limits?				
Were sample concentrations within calibration range?				
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?				

AUTOMATED DATA REVIEW SUMMARY for 240-18735-1_(70-76-SB)

Method: SW7196A

Review Questions	Yes	No	NA	Comment
Are all samples associated with QC non-compliances flagged appropriately?				
Are the Qualified, Detected, and Rejected tables of the ADR report in agreement?				

Method: SW8260B

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?				
Were samples preserved properly and received in good condition?				
Were holding times met?				
Were sample reciept temperatures met?				
Were QAPP specified PQLs achieved?				
Were all QAPP-specified target analytes reported?				
Was the GC/MS system properly tuned based on method criteria?			•	Not Required
Was the criteria met during each 12 hour shift (prior to ICAL and Cal Ver.)?			•	Not Required
Does the initial calibration curve consist of 5 concentration levels, with the low standard near but > MDL?			•	Not Required
Did the Calibration Check Compounds (CCCs) have a relative standard deviation within QAPP acceptance limits?			•	Not Required
Were the average response factors (RFs) for the System Performance Check Compounds (SPCCs) within QAPP acceptance limits?			•	Not Required
Were all other target analytes within criteria? OR Was the average across all target analytes within criteria? Was a different calibration option used?			•	Not Required
If a linear regression curve was used, was the correlation coefficient within criteria?			•	Not Required
Was a second source verification analyzed after the ICAL and all analytes within criteria?			•	Not Required
Was a CCV run at the beginning of the analytical sequence and every 12 hours?			•	Not Required
Was the CCV a mid-level standard from the initial calibration curve?			•	Not Required
Did the CCCs have a %Difference within QAPP acceptance limits?			•	Not Required
Were the average RFs for the SPCCs within QAPP acceptance limits?			•	Not Required
Was the average %D (difference or drift) for all target analytes within QAPP acceptance limits?			•	Not Required
Were the internal standards added to every standard, blank, matrix spike, matrix spike duplicate, and sample?			•	Not Required

AUTOMATED DATA REVIEW SUMMARY for 240-18735-1_(70-76-SB)

Method: SW8260B

Review Questions	Yes	No	NA	Comment
Were the retention times for all IS compounds within QAPP acceptance limits?			•	Not Required
Are the area counts of all IS compounds within QAPP acceptance limits?			•	Not Required
Was a method blank prepared and analyzed with each batch?				
Were target analytes detected in the method blank above the MDL?				
Was a field blank (equipment or trip) collected and analyzed at the required frequency?				
Were target analytes reported in the field blank analyses above the MDL?				
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?				
Was an LCS/LCSD pair prepared and analyzed with each batch?				
Were the LCS/LCSD recoveries within QAPP acceptance limits?				
Were the LCS/LCSD RPDs within QAPP acceptance limits?				
Was the duplicate RPD within QAPP acceptance limits?				
Are all samples associated with QC non-compliances flagged appropriately?				
Are the Qualified, Detected, and Rejected tables of the ADR report in agreement?				
Was a MS/MSD pair prepared with each batch?				
Is the MS/MSD parent sample the one designated by the sampling team?				
Were MS/MSD recoveries and RPD within QAPP acceptance limits?				
Were surrogate recoveries within QAPP acceptance limits?				
Were reported sample concentrations within calibration range?				
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?				
Were instrument run logs present and filled out appropriately?				
Were sample prepration sheets present and filled out appropriately?				

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WORKSHEET 4

Automated Data Review Summary for J18735 Source Water

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AUTOMATED DATA REVIEW SUMMARY for J18735_SourceWater

Facility: Ravenna Army Ammunition Plant

Event: Fall 2012 SI/RI Sampling

Guidance Document: Ravenna Army Ammunition Plant, Quality Assurance Project Plan, Oct. 3, 2012

Contract Laboratory: TestAmerica, Inc., North Canton, OH

Field Contractor: Environmental Chemical Corporation, Abingdon, MD

Data Review Contractor:

SDG: J18735_SourceWater, Certified - 10/4/2013 by frederickroche

QC Level:

Project Manager:

Data Reviewer:

Data Reviewer Title:

Date of Review Report:

Samples Included in SDG J18735_SourceWater

Analytical Method/ Leach Method	Normal Water Samples	Field QC Water Samples
E353.2/NONE	2	0
M8015D/NONE	2	0
M8015V/NONE	2	0
SW6020/NONE	2	0
SW7470A/NONE	2	0
SW8081/NONE	2	0
SW8082/NONE	2	0

AUTOMATED DATA REVIEW SUMMARY for J18735_SourceWater

Analytical Method/ Leach Method	Normal Water Samples	Field QC Water Samples
SW8151A/NONE	2	0
SW8260B/NONE	2	0
SW8270C/NONE	2	0
SW8330B/NONE	2	0

AUTOMATED DATA REVIEW SUMMARY for J18735_SourceWater

This report assesses the analytical data quality associated with the analyses listed on the preceding cover page. This assessment has been made through a combination of automated data review (ADR) and supplemental manual review, the details of which are described below. The approach taken in the review of this data set is consistent with the requirements contained in the Ravenna Army Ammunition Plant, Quality Assurance Project Plan, Oct. 3, 2012 to the extent possible. Where definitive guidance is not provided, data has been evaluated in a conservative manner using professional judgment. In cases where two qualifiers are listed as an action, such as 'J/UJ', the first qualifier applies to positive results, and the second to non-detect results.

Samples were collected by Environmental Chemical Corporation, Abingdon, MD; analyses were performed by TestAmerica, Inc., North Canton, OH and were reported under sample delivery group (SDG) J18735_SourceWater. Results have been evaluated electronically using electronic data deliverables (EDDs) provided by the laboratory. The laboratory data summary forms (hard copy) have been reviewed during this effort and compared to the automated review output. Findings based on the automated data submission and manual data verification processes are detailed in the ADR narrative.

The following quality control elements were supported by the electronic deliverable and were evaluated during this review effort:

Prep Hold Time

Surrogate

Test Hold Time

The following quality control elements were either not applicable to the deliverable, or were not supported by the electronic deliverable, and were therefore not included in the automated data review. Those elements required for the project were reviewed manually, as narrated in the Comment section below.

Ambient Blank

Blank

Blank - Negative

Calibration Blank

Calibration Blank - Negative

Continuing Calibration Verification

Equipment Blank

Field Blank

Field Duplicate RPD

Initial Calibration Verification

Lab Replicate RPD

AUTOMATED DATA REVIEW SUMMARY for J18735_SourceWater

LCS Recovery

LCS RPD

Material Blank

MS Recovery

MS RPD

Trip Blank

AUTOMATED DATA REVIEW SUMMARY for J18735_SourceWater

A representative sampling or ten percent of sample and QC results were manually evaluated for compliance with project specific requirements and consistency with hard copy results. The following summaries were generated during the evaluation of this data set and are included in this report as applicable.

Batch – The analytical batch report is reviewed for completeness and compliance with project specific requirements. Incomplete or non-compliant run sequences are identified and their impact on data quality are discussed in the narrative.

QC Outlier – Results exceeding the evaluation criteria are reviewed for compliance with project requirements and a minimum of ten percent of the non-compliant QC values reported electronically are verified for consistency with hard-copy values.

Qualified Results – Qualified results are evaluated for compliance with project requirements and ten percent of qualified results are verified for consistency with the QC Outliers.

Rejected Results – All rejected results are evaluated for compliance with project requirements. The reason for rejection of the data is verified against hard copy data.

Field Duplicates – Field duplicate comparison results are evaluated for compliance with project requirements and ten percent of values reported are verified for consistency with the hard-copy data.

Data Submission Warnings – Warnings encountered during the data submission process are evaluated and their affect on data quality is discussed in the narrative below.

Analytical deficiencies, project non-compliance issues and inconsistencies with hard copy results observed during ADR evaluation process and their impact on data quality are summarized in the narrative below.

A total of 0 results (0.00%) out of the 370 results (sample and field QC samples) reported are qualified based on review and 0 results (0.00%) have been rejected. Trace values are not counted as qualified results in the above count. The qualified results are detailed in the following tables and discussed in the narrative below, where appropriate.

Narrative Comments

Analytical Method	Comment

AUTOMATED DATA REVIEW SUMMARY for J18735_SourceWater

Reviewed by ,

AUTOMATED DATA REVIEW SUMMARY for J18735_SourceWater

Reason and Comment Code Definitions

Reasons	
Code	**Definition**
A	Serial dilution
A1	Ambient Blank
B	The analyte was found in an associated blank as well as in the sample.
B2	CCB
B3	CCB - Neg
c	LCS - low
C	LCS Recovery
d	Field Duplicate RPD
D	MS RPD
D1	Lab Replicate RPD
D2	No precision available
F	Field Blank
F1	Hydrocarbon pattern does not match standard
G1	Initial Calibration RRF
G2	Initial Calibration RSD
h	Holding time exceeded by less than 2X.
H	Holding time exceeded by more than 2X.
H1	Test Hold Time
H2	Prep Hold Time
I	Surrogate recovery outside project limits.
J	CRA/CRI Recovery
K	An analyte (non-common laboratory artifact) was detected in the sample at a concentration less than 5X the concentration detected in the associated method blank.
L	Lab Blank
L1	Lab Blank - Neg
m	MS - low
M	MS Recovery
N	Blank - No Action

AUTOMATED DATA REVIEW SUMMARY for J18735_SourceWater

Reason and Comment Code Definitions

O	ICS
P	Sample preservation/collection requirement not met.
P1	Column RPD
P2	Improper preparation/extraction
q	Encore sample holding time exceeded by less than 2X.
Q	Encore sample holding time exceeded by more than 2X.
Q1	Material Blank
R	Exceeds LinearCalibration Range
S	Internal standard
T	Trip Blank
TI	Tentatively Identified Compound
TR	Trace Level Detect
U	Receipt Temperature
V	Equipment Blank
V1	ICV
V2	CCV
V3	CCV RRF
V4	Sample Receipt Condition
W	Column breakdown (pesticides)
X	Raised reporting limit
Y	Cooler temperature greater than 10 degreec C.
y	Cooler temperature greater than 4 degrees C, but less than 10 degreec C.
Y1	False Positive
Y2	Data rejected due to radiological anomolies
Z	LCS RPD
Z2	Analyte not confirmed on second column
Z3	High percent moisture in sample.

AUTOMATED DATA REVIEW SUMMARY for J18735_SourceWater

Flag Code and Definitions	
Flag	Definition
U	Undetected: The analyte was analyzed for, but not detected.
UJ	The analyte was not detected; however, the result is estimated due to discrepancies in meeting certain analyte-specific quality control criteria.
J	Estimated: The analyte was positively identified, the quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
R	The data are rejected due to deficiencies in meeting QC criteria and may not be used for decision making.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification".
NJ	The analysis indicates the presence of an analyte that has been “tentatively identified” and the associated numerical value represents its approximate concentration.

AUTOMATED DATA REVIEW SUMMARY for J18735_SourceWater

Batch Report

Test Method: E353.2; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
8009	7878	NA	BLDG-1036	WG	070-0056-0001-SOURCE WATER	240-18735-3		1/1	12-Dec-2012 1:00 PM	27-Dec-2012 6:07 AM	27-Dec-2012 1:51 PM	N
	7878	NA	BLDG-1036	WG	070-0057-0001-SOURCE WATER	240-18735-4		1/1	12-Dec-2012 1:15 PM	27-Dec-2012 6:07 AM	27-Dec-2012 1:53 PM	N

Test Method: M8015D; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
68949	68549	NA	BLDG-1036	WG	070-0056-0001-SOURCE WATER	240-18735-3		1/1	12-Dec-2012 1:00 PM	13-Dec-2012 11:26 AM	17-Dec-2012 9:35 PM	N
	68549	NA	BLDG-1036	WG	070-0057-0001-SOURCE WATER	240-18735-4		1/1	12-Dec-2012 1:15 PM	13-Dec-2012 11:26 AM	17-Dec-2012 10:05 PM	N

Test Method: M8015V; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
69738	69738	NA	BLDG-1036	WG	070-0056-0001-SOURCE WATER	240-18735-3		1/1	12-Dec-2012 1:00 PM	22-Dec-2012 4:18 PM	22-Dec-2012 4:18 PM	N
	69738	NA	BLDG-1036	WG	070-0057-0001-SOURCE WATER	240-18735-4		1/1	12-Dec-2012 1:15 PM	22-Dec-2012 4:56 PM	22-Dec-2012 4:56 PM	N

Test Method: SW6020; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
59694	59308	NA	BLDG-1036	WG	070-0056-0001-SOURCE WATER	240-18735-3		1/1	12-Dec-2012 1:00 PM	24-Dec-2012 10:24 AM	29-Dec-2012 4:07 AM	N
	59308	NA	BLDG-1036	WG	070-0057-0001-SOURCE WATER	240-18735-4		1/1	12-Dec-2012 1:15 PM	24-Dec-2012 10:24 AM	29-Dec-2012 4:11 AM	N

Test Method: SW7470A; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
70694	70255	NA	BLDG-1036	WG	070-0057-0001-SOURCE WATER	240-18735-4		1/1	12-Dec-2012 1:15 PM	27-Dec-2012 4:00 PM	29-Dec-2012 12:08 PM	N
	70255	NA	BLDG-1036	WG	070-0056-0001-SOURCE WATER	240-18735-3		1/1	12-Dec-2012 1:00 PM	27-Dec-2012 4:00 PM	29-Dec-2012 12:10 PM	N

AUTOMATED DATA REVIEW SUMMARY for J18735_SourceWater

Batch Report

Test Method: SW8081; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
69152	68554	NA	BLDG-1036	WG	070-0056-0001-SOURCE WATER	240-18735-3		1/1	12-Dec-2012 1:00 PM	13-Dec-2012 11:40 AM	18-Dec-2012 1:14 PM	N
	68554	NA	BLDG-1036	WG	070-0057-0001-SOURCE WATER	240-18735-4		1/1	12-Dec-2012 1:15 PM	13-Dec-2012 11:40 AM	18-Dec-2012 1:42 PM	N

Test Method: SW8082; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
69119	68553	NA	BLDG-1036	WG	070-0056-0001-SOURCE WATER	240-18735-3		1/1	12-Dec-2012 1:00 PM	13-Dec-2012 11:37 AM	18-Dec-2012 9:11 AM	N
	68553	NA	BLDG-1036	WG	070-0057-0001-SOURCE WATER	240-18735-4		1/1	12-Dec-2012 1:15 PM	13-Dec-2012 11:37 AM	18-Dec-2012 9:26 AM	N

Test Method: SW8151A; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
70037	69372	NA	BLDG-1036	WG	070-0056-0001-SOURCE WATER	240-18735-3		1/1	12-Dec-2012 1:00 PM	19-Dec-2012 9:51 AM	24-Dec-2012 5:40 PM	N
	69372	NA	BLDG-1036	WG	070-0057-0001-SOURCE WATER	240-18735-4		1/1	12-Dec-2012 1:15 PM	19-Dec-2012 9:51 AM	24-Dec-2012 6:03 PM	N

Test Method: SW8260B; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
69591	69591	NA	BLDG-1036	WG	070-0056-0001-SOURCE WATER	240-18735-3		1/1	12-Dec-2012 1:00 PM	20-Dec-2012 2:04 PM	20-Dec-2012 2:04 PM	N
	69591	NA	BLDG-1036	WG	070-0057-0001-SOURCE WATER	240-18735-4		1/1	12-Dec-2012 1:15 PM	20-Dec-2012 2:26 PM	20-Dec-2012 2:26 PM	N

Test Method: SW8270C; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
68962	68547	NA	BLDG-1036	WG	070-0056-0001-SOURCE WATER	240-18735-3		1/1	12-Dec-2012 1:00 PM	13-Dec-2012 11:21 AM	17-Dec-2012 12:28 PM	N
	68547	NA	BLDG-1036	WG	070-0057-0001-SOURCE WATER	240-18735-4		1/1	12-Dec-2012 1:15 PM	13-Dec-2012 11:21 AM	17-Dec-2012 12:51 PM	N

AUTOMATED DATA REVIEW SUMMARY for J18735_SourceWater

Batch Report

Test Method: SW8330B; Leach Method: NONE											
Analytical Batch	**Prep Batch**	**Leach Batch**	**Location**	**Matrix**	**Field Sample ID**	**Lab Sample ID**	**Calibration Ref**	**Run#/ Dil'n**	**Collection Date/Time**	**Extract Date/Time**	**Analysis Date/Time**	**Sample Type**
7620	7404	NA	BLDG-1036	WG	070-0056-0001-SOURCE WATER	240-18735-3		1/1	12-Dec-2012 1:00 PM	14-Dec-2012 11:07 AM	21-Dec-2012 3:22 PM	N
	7404	NA	BLDG-1036	WG	070-0057-0001-SOURCE WATER	240-18735-4		1/1	12-Dec-2012 1:15 PM	14-Dec-2012 11:07 AM	21-Dec-2012 4:02 PM	N
7855	7807	NA	BLDG-1036	WG	070-0056-0001-SOURCE WATER	240-18735-3		2/1	12-Dec-2012 1:00 PM	24-Dec-2012 12:40 PM	27-Dec-2012 4:51 AM	N
	7807	NA	BLDG-1036	WG	070-0057-0001-SOURCE WATER	240-18735-4		2/1	12-Dec-2012 1:15 PM	24-Dec-2012 12:40 PM	27-Dec-2012 5:06 AM	N

AUTOMATED DATA REVIEW SUMMARY for J18735_SourceWater

Field Batch Report

--No Records Found--

QC Outliers Report

--No Records Found--

Qualified Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Bias	Units	Reason
M8015V/NONE	WG	070-0056-0001-SOURCE WATER	240-18735-3	N	Petroleum Hydrocarbons C6-C12	100	39.0	39.0 J		UG/L	TR
M8015V/NONE	WG	070-0057-0001-SOURCE WATER	240-18735-4	N	Petroleum Hydrocarbons C6-C12	100	36.0	36.0 J		UG/L	TR
Test Leach	**Matrix**	**FieldSample ID**	**LabSample ID**	**Type**	**Analyte**	**RL**	**Lab Result**	**Qualified Result**	**Bias**	**Units**	**Reason**
SW6020/NONE	WG	070-0056-0001-SOURCE WATER	240-18735-3	N	Aluminum	30.0	13.0	13.0 J		UG/L	TR
SW6020/NONE	WG	070-0056-0001-SOURCE WATER	240-18735-3	N	Arsenic	1.0	0.49	0.49 J		UG/L	TR
SW6020/NONE	WG	070-0056-0001-SOURCE WATER	240-18735-3	N	Cobalt	0.50	0.11	0.11 J		UG/L	TR
SW6020/NONE	WG	070-0056-0001-SOURCE WATER	240-18735-3	N	Copper	2.0	0.83	0.83 J		UG/L	TR
SW6020/NONE	WG	070-0057-0001-SOURCE WATER	240-18735-4	N	Barium	10.0	0.13	0.13 J		UG/L	TR
SW6020/NONE	WG	070-0057-0001-SOURCE WATER	240-18735-4	N	Calcium	100	59.0	59.0 J		UG/L	TR
SW6020/NONE	WG	070-0057-0001-SOURCE WATER	240-18735-4	N	Copper	2.0	0.60	0.60 J		UG/L	TR
SW6020/NONE	WG	070-0057-0001-SOURCE WATER	240-18735-4	N	Magnesium	100	29.0	29.0 J		UG/L	TR
Test Leach	**Matrix**	**FieldSample ID**	**LabSample ID**	**Type**	**Analyte**	**RL**	**Lab Result**	**Qualified Result**	**Bias**	**Units**	**Reason**
SW8260B/NONE	WG	070-0057-0001-SOURCE WATER	240-18735-4	N	2-Butanone (MEK)	10.0	1.2	1.2 J		UG/L	TR

AUTOMATED DATA REVIEW SUMMARY for J18735_SourceWater

Qualified Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Bias	Units	Reason
SW8260B/NONE	WG	070-0057-0001-SOURCE WATER	240-18735-4	N	Acetone	10.0	2.1	2.1 J		UG/L	TR
SW8260B/NONE	WG	070-0057-0001-SOURCE WATER	240-18735-4	N	Toluene	1.0	0.15	0.15 J		UG/L	TR

AUTOMATED DATA REVIEW SUMMARY for J18735_SourceWater

AUTOMATED DATA REVIEW SUMMARY for J18735_SourceWater

Detected Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
M8015V/NONE	WG	070-0056-0001-SOURCE WATER	240-18735-3	N	Petroleum Hydrocarbons C6-C12	100	39.0	39.0 J	UG/L	TR
M8015V/NONE	WG	070-0057-0001-SOURCE WATER	240-18735-4	N	Petroleum Hydrocarbons C6-C12	100	36.0	36.0 J	UG/L	TR

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW6020/NONE	WG	070-0056-0001-SOURCE WATER	240-18735-3	N	Aluminum	30.0	13.0	13.0 J	UG/L	TR
SW6020/NONE	WG	070-0056-0001-SOURCE WATER	240-18735-3	N	Arsenic	1.0	0.49	0.49 J	UG/L	TR
SW6020/NONE	WG	070-0056-0001-SOURCE WATER	240-18735-3	N	Barium	10.0	39.0	39.0	UG/L	
SW6020/NONE	WG	070-0056-0001-SOURCE WATER	240-18735-3	N	Calcium	100	66000	66000	UG/L	
SW6020/NONE	WG	070-0056-0001-SOURCE WATER	240-18735-3	N	Cobalt	0.50	0.11	0.11 J	UG/L	TR
SW6020/NONE	WG	070-0056-0001-SOURCE WATER	240-18735-3	N	Copper	2.0	0.83	0.83 J	UG/L	TR
SW6020/NONE	WG	070-0056-0001-SOURCE WATER	240-18735-3	N	Iron	50.0	440	440	UG/L	
SW6020/NONE	WG	070-0056-0001-SOURCE WATER	240-18735-3	N	Potassium	100	2500	2500	UG/L	
SW6020/NONE	WG	070-0056-0001-SOURCE WATER	240-18735-3	N	Magnesium	100	27000	27000	UG/L	
SW6020/NONE	WG	070-0056-0001-SOURCE WATER	240-18735-3	N	Manganese	5.0	77.0	77.0	UG/L	
SW6020/NONE	WG	070-0056-0001-SOURCE WATER	240-18735-3	N	Sodium	100	35000	35000	UG/L	
SW6020/NONE	WG	070-0056-0001-SOURCE WATER	240-18735-3	N	Zinc	5.0	18.0	18.0	UG/L	
SW6020/NONE	WG	070-0057-0001-SOURCE WATER	240-18735-4	N	Barium	10.0	0.13	0.13 J	UG/L	TR
SW6020/NONE	WG	070-0057-0001-SOURCE WATER	240-18735-4	N	Calcium	100	59.0	59.0 J	UG/L	TR
SW6020/NONE	WG	070-0057-0001-SOURCE WATER	240-18735-4	N	Copper	2.0	0.60	0.60 J	UG/L	TR
SW6020/NONE	WG	070-0057-0001-SOURCE WATER	240-18735-4	N	Magnesium	100	29.0	29.0 J	UG/L	TR
SW6020/NONE	WG	070-0057-0001-SOURCE WATER	240-18735-4	N	Sodium	100	1600	1600	UG/L	

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW8260B/NONE	WG	070-0057-0001-SOURCE WATER	240-18735-4	N	Acetone	10.0	2.1	2.1 J	UG/L	TR
SW8260B/NONE	WG	070-0057-0001-SOURCE WATER	240-18735-4	N	Bromodichloromethane	1.0	3.6	3.6	UG/L	
SW8260B/NONE	WG	070-0057-0001-SOURCE WATER	240-18735-4	N	Toluene	1.0	0.15	0.15 J	UG/L	TR
SW8260B/NONE	WG	070-0057-0001-SOURCE WATER	240-18735-4	N	Dibromochloromethane	1.0	1.3	1.3	UG/L	
SW8260B/NONE	WG	070-0057-0001-SOURCE WATER	240-18735-4	N	2-Butanone (MEK)	10.0	1.2	1.2 J	UG/L	TR
SW8260B/NONE	WG	070-0057-0001-SOURCE WATER	240-18735-4	N	Chloroform	1.0	5.3	5.3	UG/L	

AUTOMATED DATA REVIEW SUMMARY for J18735_SourceWater

Rejected Results

--No Records Found--

AUTOMATED DATA REVIEW SUMMARY for J18735_SourceWater

Anomalies Count

SDG Name: J18735_SourceWater

Test/Extraction Method/Leach	# of Field Samples Outside of Compliance	# of Analytes Outside of Compliance
M8015D/SW3520C/NONE	2	4
SW6020/TOTAL/NONE	2	2
SW8081/SW3520C/NONE	2	10
SW8082/SW3520C/NONE	2	14
SW8151A/METHOD/NONE	2	22
SW8260B/SW5030B/NONE	2	2
SW8330B/METHOD/NONE	2	6

Anomalies are cases where the reported RL exceeds that specified in the governing project document.

AUTOMATED DATA REVIEW SUMMARY for J18735_SourceWater

Reporting Anomalies

SDG Name: J18735_SourceWater

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
M8015D/NONE	070-0056-0001-SOURCE WATER	N	1	C10-C20 Diesel Range Organics	480 U	230	480	0.5	UG/L
M8015D/NONE	070-0056-0001-SOURCE WATER	N	1	C20-C34 Motor Oil Range Organics	480 U	230	480	0.5	UG/L
M8015D/NONE	070-0057-0001-SOURCE WATER	N	1	C10-C20 Diesel Range Organics	480 U	230	480	0.5	UG/L
M8015D/NONE	070-0057-0001-SOURCE WATER	N	1	C20-C34 Motor Oil Range Organics	480 U	230	480	0.5	UG/L

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW6020/NONE	070-0056-0001-SOURCE WATER	N	1	Cadmium	1 U	0.13	1	0.5	UG/L
SW6020/NONE	070-0057-0001-SOURCE WATER	N	1	Cadmium	1 U	0.13	1	0.5	UG/L

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW8081/NONE	070-0056-0001-SOURCE WATER	N	1	Aldrin	0.048 U	0.0078	0.048	0.03	UG/L
SW8081/NONE	070-0056-0001-SOURCE WATER	N	1	alpha-BHC (alpha-Hexachlorocyclohexane)	0.048 U	0.0067	0.048	0.03	UG/L
SW8081/NONE	070-0056-0001-SOURCE WATER	N	1	Dieldrin	0.048 U	0.0071	0.048	0.03	UG/L
SW8081/NONE	070-0056-0001-SOURCE WATER	N	1	Heptachlor	0.048 U	0.0076	0.048	0.03	UG/L
SW8081/NONE	070-0056-0001-SOURCE WATER	N	1	Heptachlor Epoxide	0.048 U	0.0068	0.048	0.03	UG/L
SW8081/NONE	070-0057-0001-SOURCE WATER	N	1	Aldrin	0.048 U	0.0078	0.048	0.03	UG/L
SW8081/NONE	070-0057-0001-SOURCE WATER	N	1	alpha-BHC (alpha-Hexachlorocyclohexane)	0.048 U	0.0067	0.048	0.03	UG/L
SW8081/NONE	070-0057-0001-SOURCE WATER	N	1	Dieldrin	0.048 U	0.0071	0.048	0.03	UG/L
SW8081/NONE	070-0057-0001-SOURCE WATER	N	1	Heptachlor	0.048 U	0.0076	0.048	0.03	UG/L

Reporting Anomalies are cases where the reported RL exceeds that specified in the governing project document.

AUTOMATED DATA REVIEW SUMMARY for J18735_SourceWater

Reporting Anomalies

SDG Name: J18735_SourceWater

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW8081/NONE	070-0057-0001-SOURCE WATER	N	1	Heptachlor Epoxide	0.048 U	0.0068	0.048	0.03	UG/L

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW8082/NONE	070-0056-0001-SOURCE WATER	N	1	PCB-1016 (Arochlor 1016)	0.48 U	0.16	0.48	0.2	UG/L
SW8082/NONE	070-0056-0001-SOURCE WATER	N	1	PCB-1221 (Arochlor 1221)	0.48 U	0.12	0.48	0.2	UG/L
SW8082/NONE	070-0056-0001-SOURCE WATER	N	1	PCB-1232 (Arochlor 1232)	0.48 U	0.15	0.48	0.2	UG/L
SW8082/NONE	070-0056-0001-SOURCE WATER	N	1	PCB-1242 (Arochlor 1242)	0.48 U	0.21	0.48	0.2	UG/L
SW8082/NONE	070-0056-0001-SOURCE WATER	N	1	PCB-1248 (Arochlor 1248)	0.48 U	0.095	0.48	0.2	UG/L
SW8082/NONE	070-0056-0001-SOURCE WATER	N	1	PCB-1254 (Arochlor 1254)	0.48 U	0.15	0.48	0.2	UG/L
SW8082/NONE	070-0056-0001-SOURCE WATER	N	1	PCB-1260 (Arochlor 1260)	0.48 U	0.16	0.48	0.2	UG/L
SW8082/NONE	070-0057-0001-SOURCE WATER	N	1	PCB-1016 (Arochlor 1016)	0.48 U	0.16	0.48	0.2	UG/L
SW8082/NONE	070-0057-0001-SOURCE WATER	N	1	PCB-1221 (Arochlor 1221)	0.48 U	0.12	0.48	0.2	UG/L
SW8082/NONE	070-0057-0001-SOURCE WATER	N	1	PCB-1232 (Arochlor 1232)	0.48 U	0.15	0.48	0.2	UG/L
SW8082/NONE	070-0057-0001-SOURCE WATER	N	1	PCB-1242 (Arochlor 1242)	0.48 U	0.21	0.48	0.2	UG/L
SW8082/NONE	070-0057-0001-SOURCE WATER	N	1	PCB-1248 (Arochlor 1248)	0.48 U	0.095	0.48	0.2	UG/L
SW8082/NONE	070-0057-0001-SOURCE WATER	N	1	PCB-1254 (Arochlor 1254)	0.48 U	0.15	0.48	0.2	UG/L
SW8082/NONE	070-0057-0001-SOURCE WATER	N	1	PCB-1260 (Arochlor 1260)	0.48 U	0.16	0.48	0.2	UG/L

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW8151A/NONE	070-0056-0001-SOURCE WATER	N	1	2,4 DB	4 U	0.69	4	0	UG/L

Reporting Anomalies are cases where the reported RL exceeds that specified in the governing project document.

AUTOMATED DATA REVIEW SUMMARY for J18735_SourceWater

Reporting Anomalies

SDG Name: J18735_SourceWater

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW8151A/NONE	070-0056-0001-SOURCE WATER	N	1	2,4,5-T (Trichlorophenoxyacetic Acid)	1 U	0.3	1	0	UG/L
SW8151A/NONE	070-0056-0001-SOURCE WATER	N	1	2,4-D (Dichlorophenoxyacetic Acid)	4 U	0.41	4	0	UG/L
SW8151A/NONE	070-0056-0001-SOURCE WATER	N	1	Dalapon	2 U	0.17	2	0	UG/L
SW8151A/NONE	070-0056-0001-SOURCE WATER	N	1	Dicamba	2 U	0.52	2	0	UG/L
SW8151A/NONE	070-0056-0001-SOURCE WATER	N	1	Dichloroprop	4 U	0.86	4	0	UG/L
SW8151A/NONE	070-0056-0001-SOURCE WATER	N	1	Dinoseb	0.6 U	0.087	0.6	0	UG/L
SW8151A/NONE	070-0056-0001-SOURCE WATER	N	1	MCPA	400 U	390	400	0	UG/L
SW8151A/NONE	070-0056-0001-SOURCE WATER	N	1	MCPP	400 U	400	400	0	UG/L
SW8151A/NONE	070-0056-0001-SOURCE WATER	N	1	Pentachlorophenol	0.1 U	0.024	0.1	0	UG/L
SW8151A/NONE	070-0056-0001-SOURCE WATER	N	1	Silvex (2,4,5-TP)	1 U	0.2	1	0	UG/L
SW8151A/NONE	070-0057-0001-SOURCE WATER	N	1	2,4 DB	4 U	0.69	4	0	UG/L
SW8151A/NONE	070-0057-0001-SOURCE WATER	N	1	2,4,5-T (Trichlorophenoxyacetic Acid)	1 U	0.3	1	0	UG/L
SW8151A/NONE	070-0057-0001-SOURCE WATER	N	1	2,4-D (Dichlorophenoxyacetic Acid)	4 U	0.41	4	0	UG/L
SW8151A/NONE	070-0057-0001-SOURCE WATER	N	1	Dalapon	2 U	0.17	2	0	UG/L
SW8151A/NONE	070-0057-0001-SOURCE WATER	N	1	Dicamba	2 U	0.52	2	0	UG/L
SW8151A/NONE	070-0057-0001-SOURCE WATER	N	1	Dichloroprop	4 U	0.86	4	0	UG/L
SW8151A/NONE	070-0057-0001-SOURCE WATER	N	1	Dinoseb	0.6 U	0.087	0.6	0	UG/L
SW8151A/NONE	070-0057-0001-SOURCE WATER	N	1	MCPA	400 U	390	400	0	UG/L

Reporting Anomalies are cases where the reported RL exceeds that specified in the governing project document.

AUTOMATED DATA REVIEW SUMMARY for J18735_SourceWater

Reporting Anomalies

SDG Name: J18735_SourceWater

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW8151A/NONE	070-0057-0001-SOURCE WATER	N	1	MCPP	400 U	400	400	0	UG/L
SW8151A/NONE	070-0057-0001-SOURCE WATER	N	1	Pentachlorophenol	0.1 U	0.024	0.1	0	UG/L
SW8151A/NONE	070-0057-0001-SOURCE WATER	N	1	Silvex (2,4,5-TP)	1 U	0.2	1	0	UG/L

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW8260B/NONE	070-0056-0001-SOURCE WATER	N	1	1,2-Dichloroethene	2 U	0.34	2	1	UG/L
SW8260B/NONE	070-0057-0001-SOURCE WATER	N	1	1,2-Dichloroethene	2 U	0.34	2	1	UG/L

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW8330B/NONE	070-0056-0001-SOURCE WATER	N	1	2-Nitrotoluene	0.5 U	0.088	0.5	0.2	UG/L
SW8330B/NONE	070-0056-0001-SOURCE WATER	N	1	3-Nitrotoluene	0.5 U	0.057	0.5	0.2	UG/L
SW8330B/NONE	070-0056-0001-SOURCE WATER	N	1	4-Nitrotoluene	0.5 U	0.088	0.5	0.2	UG/L
SW8330B/NONE	070-0057-0001-SOURCE WATER	N	1	2-Nitrotoluene	0.49 U	0.087	0.49	0.2	UG/L
SW8330B/NONE	070-0057-0001-SOURCE WATER	N	1	3-Nitrotoluene	0.49 U	0.056	0.49	0.2	UG/L
SW8330B/NONE	070-0057-0001-SOURCE WATER	N	1	4-Nitrotoluene	0.49 U	0.087	0.49	0.2	UG/L

Reporting Anomalies are cases where the reported RL exceeds that specified in the governing project document.

AUTOMATED DATA REVIEW SUMMARY for J18735_SourceWater

Worksheet

SDG Name: J18735_SourceWater

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WORKSHEET 5

Automated Data Review Summary for 240-17796-1

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AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Facility: Ravenna Army Ammunition Plant

Event: Fall 2012 SI/RI Sampling

Guidance Document: Ravenna Army Ammunition Plant, Quality Assurance Project Plan, Oct. 3, 2012

Contract Laboratory: TestAmerica, Inc., North Canton, OH

Field Contractor: Environmental Chemical Corporation, Otis Ang Base, MA

Data Review Contractor:

SDG: 240-17796-1_(76-SB,SS,SW), Certified - 1/3/2013 by frederickroche

QC Level: ADR

Project Manager:

Data Reviewer:

Data Reviewer Title:

Date of Review Report:

Samples Included in SDG 240-17796-1_(76-SB,SS,SW)

Analytical Method/ Leach Method	Normal Soil Samples	Normal Water Samples	Field QC Soil Samples	Field QC Water Samples
E353.2/NONE	16	3	1	1
M8015V/NONE		1		0
SW6020/NONE		1		0
SW7196A/NONE	1		0	
SW7470A/NONE		1		0
SW7471A/NONE	23		0	
SW8081/NONE		1		0

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Analytical Method/ Leach Method	Normal Soil Samples	Normal Water Samples	Field QC Soil Samples	Field QC Water Samples
SW8082/NONE	8	3	0	1
SW8151/NONE		1		0
SW8260B/NONE	14	3	0	0
SW8270C/NONE	30	1	1	0
SW8330B/NONE	16	3	1	1

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

This report assesses the analytical data quality associated with the analyses listed on the preceding cover page. This assessment has been made through a combination of automated data review (ADR) and supplemental manual review, the details of which are described below. The approach taken in the review of this data set is consistent with the requirements contained in the Ravenna Army Ammunition Plant, Quality Assurance Project Plan, Oct. 3, 2012 to the extent possible. Where definitive guidance is not provided, data has been evaluated in a conservative manner using professional judgment. In cases where two qualifiers are listed as an action, such as 'J/UJ', the first qualifier applies to positive results, and the second to non-detect results.

Samples were collected by Environmental Chemical Corporation, Otis Ang Base, MA; analyses were performed by TestAmerica, Inc., North Canton, OH and were reported under sample delivery group (SDG) 240-17796-1_(76-SB,SS,SW). Results have been evaluated electronically using electronic data deliverables (EDDs) provided by the laboratory. The laboratory data summary forms (hard copy) have been reviewed during this effort and compared to the automated review output. Findings based on the automated data submission and manual data verification processes are detailed in the ADR narrative.

The following quality control elements were supported by the electronic deliverable and were evaluated during this review effort:

- Blank
- Blank - Negative
- Field Duplicate RPD
- LCS Recovery
- MS Recovery
- MS RPD
- Prep Hold Time
- Surrogate
- Test Hold Time

The following quality control elements were either not applicable to the deliverable, or were not supported by the electronic deliverable, and were therefore not included in the automated data review. Those elements required for the project were reviewed manually, as narrated in the Comment section below.

- Ambient Blank
- Calibration Blank
- Calibration Blank - Negative
- Continuing Calibration Verification
- Equipment Blank

Field Blank

Initial Calibration Verification

Lab Replicate RPD

LCS RPD

Material Blank

Trip Blank

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

A representative sampling or ten percent of sample and QC results were manually evaluated for compliance with project specific requirements and consistency with hard copy results. The following summaries were generated during the evaluation of this data set and are included in this report as applicable.

Batch – The analytical batch report is reviewed for completeness and compliance with project specific requirements. Incomplete or non-compliant run sequences are identified and their impact on data quality are discussed in the narrative.

QC Outlier – Results exceeding the evaluation criteria are reviewed for compliance with project requirements and a minimum of ten percent of the non-compliant QC values reported electronically are verified for consistency with hard-copy values.

Qualified Results – Qualified results are evaluated for compliance with project requirements and ten percent of qualified results are verified for consistency with the QC Outliers.

Rejected Results – All rejected results are evaluated for compliance with project requirements. The reason for rejection of the data is verified against hard copy data.

Field Duplicates – Field duplicate comparison results are evaluated for compliance with project requirements and ten percent of values reported are verified for consistency with the hard-copy data.

Data Submission Warnings – Warnings encountered during the data submission process are evaluated and their affect on data quality is discussed in the narrative below.

Analytical deficiencies, project non-compliance issues and inconsistencies with hard copy results observed during ADR evaluation process and their impact on data quality are summarized in the narrative below.

A total of 58 results (1.74%) out of the 3332 results (sample and field QC samples) reported are qualified based on review and 0 results (0.00%) have been rejected. Trace values are not counted as qualified results in the above count. The qualified results are detailed in the following tables and discussed in the narrative below, where appropriate.

Narrative Comments

Analytical Method	Comment
E353.2	
M8015V	

SW6020	
SW7196A	
SW7470A	
SW7471A	
SW8081	
SW8082	
SW8151	
SW8260B	
SW8270C	
SW8330B	

Reviewed by ,

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Reason and Comment Code Definitions

Reasons	
Code	**Definition**
A	Serial dilution
A1	Ambient Blank
B	The analyte was found in an associated blank as well as in the sample.
B2	CCB
B3	CCB - Neg
c	LCS - low
C	LCS Recovery
d	Field Duplicate RPD
D	MS RPD
D1	Lab Replicate RPD
D2	No precision available
F	Field Blank
F1	Hydrocarbon pattern does not match standard
G1	Initial Calibration RRF
G2	Initial Calibration RSD
h	Holding time exceeded by less than 2X.
H	Holding time exceeded by more than 2X.
H1	Test Hold Time
H2	Prep Hold Time
I	Surrogate recovery outside project limits.
J	CRA/CRI Recovery
K	An analyte (non-common laboratory artifact) was detected in the sample at a concentration less than 5X the concentration detected in the associated method blank.
L	Lab Blank
L1	Lab Blank - Neg
m	MS - low
M	MS Recovery
N	Blank - No Action

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Reason and Comment Code Definitions

O	ICS
P	Sample preservation/collection requirement not met.
P1	Column RPD
P2	Improper preparation/extraction
q	Encore sample holding time exceeded by less than 2X.
Q	Encore sample holding time exceeded by more than 2X.
Q1	Material Blank
R	Exceeds LinearCalibration Range
S	Internal standard
T	Trip Blank
TI	Tentatively Identified Compound
TR	Trace Level Detect
U	Receipt Temperature
V	Equipment Blank
V1	ICV
V2	CCV
V3	CCV RRF
V4	Sample Receipt Condition
W	Column breakdown (pesticides)
X	Raised reporting limit
Y	Cooler temperature greater than 10 degreec C.
y	Cooler temperature greater than 4 degrees C, but less than 10 degreec C.
Y1	False Positive
Y2	Data rejected due to radiological anomolies
Z	LCS RPD
Z2	Analyte not confirmed on second column
Z3	High percent moisture in sample.

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Flag Code and Definitions	
Flag	Definition
U	Undetected: The analyte was analyzed for, but not detected.
UJ	The analyte was not detected; however, the result is estimated due to discrepancies in meeting certain analyte-specific quality control criteria.
J	Estimated: The analyte was positively identified, the quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
R	The data are rejected due to deficiencies in meeting QC criteria and may not be used for decision making.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification".
NJ	The analysis indicates the presence of an analyte that has been “tentatively identified” and the associated numerical value represents its approximate concentration.

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Batch Report

Test Method: E353.2; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
7008	6966	NA	LABQC	WQ	LABQC	MB 320-6877/1-B		1/1	06-Dec-2012 6:41 AM	06-Dec-2012 6:41 AM	06-Dec-2012 1:56 PM	LB
	6966	NA	LABQC	WQ	LABQC	LCS 320-6877/2-B		1/1	06-Dec-2012 6:41 AM	06-Dec-2012 6:41 AM	06-Dec-2012 1:58 PM	BS
	6966	NA	76-U20-SW	WS	076SW-0013-0001-SW	240-17796-17		1/1	08-Nov-2012 2:30 PM	06-Dec-2012 6:41 AM	06-Dec-2012 2:04 PM	N
	6966	NA	76-U20-SW	WS	076SW-0013-0002-SW	240-17796-17		1/1	08-Nov-2012 2:30 PM	06-Dec-2012 6:41 AM	06-Dec-2012 2:06 PM	MS
	6966	NA	76-U20-SW	WS	076SW-0013-0002-SW	240-17796-17		1/1	08-Nov-2012 2:30 PM	06-Dec-2012 6:41 AM	06-Dec-2012 2:08 PM	SD
	6966	NA	76-U20-SW	WS	076SW-0014-0001-SW	240-17796-18		1/1	08-Nov-2012 2:30 PM	06-Dec-2012 6:41 AM	06-Dec-2012 2:10 PM	FD
	6966	NA	76-U20-SW2	WS	076SW-0015-0001-SW	240-17796-19		1/1	08-Nov-2012 3:00 PM	06-Dec-2012 6:41 AM	06-Dec-2012 2:12 PM	N
	6966	NA	76-A3-DU1-SB5	WG	076-0067-0001-ER	240-17796-20		1/1	15-Nov-2012 1:00 PM	06-Dec-2012 6:41 AM	06-Dec-2012 2:14 PM	N
	6967	NA	LABQC	SQ	LABQC	MB 320-6938/1-B		1/1	06-Dec-2012 7:13 AM	06-Dec-2012 7:13 AM	06-Dec-2012 12:50 PM	LB
	6967	NA	LABQC	SQ	LABQC	LCS 320-6938/2-B		1/1	06-Dec-2012 7:13 AM	06-Dec-2012 7:13 AM	06-Dec-2012 12:52 PM	BS
	6967	NA	76-U10-DU1-SS	SO	076SS-0022M-0001-SO	240-17796-2		1/1	15-Nov-2012 12:25 PM	06-Dec-2012 7:13 AM	06-Dec-2012 12:54 PM	N
	6967	NA	76-U10-DU1-SS	SO	076SS-0022M-0001-SO	240-17796-2		1/1	15-Nov-2012 12:25 PM	06-Dec-2012 7:13 AM	06-Dec-2012 12:56 PM	MS
	6967	NA	76-U10-DU1-SS	SO	076SS-0022M-0001-SO	240-17796-2		1/1	15-Nov-2012 12:25 PM	06-Dec-2012 7:13 AM	06-Dec-2012 12:58 PM	SD
	6967	NA	76-U20-DU1-SB	SO	076SB-0053M-0001-SO	240-17796-9		1/1	15-Nov-2012 3:55 PM	06-Dec-2012 7:13 AM	06-Dec-2012 1:08 PM	N
	6967	NA	76-U20-DU1-SS	SO	076SS-0007M-0001-SO	240-17796-10		1/1	15-Nov-2012 3:45 PM	06-Dec-2012 7:13 AM	06-Dec-2012 1:10 PM	N
	6967	NA	76-U20-DU1-SB	SO	076SB-0054M-0001-SO	240-17796-11		1/1	15-Nov-2012 3:56 PM	06-Dec-2012 7:13 AM	06-Dec-2012 1:12 PM	N
	6967	NA	76-U20-DU1-SB1	SO	076SB-0055M-0001-SO	240-17796-12		1/1	15-Nov-2012 1:45 PM	06-Dec-2012 7:13 AM	06-Dec-2012 1:14 PM	N
	6967	NA	76-U20-DU1-SB2	SO	076SB-0056M-0001-SO	240-17796-13		1/1	15-Nov-2012 2:10 PM	06-Dec-2012 7:13 AM	06-Dec-2012 1:16 PM	N

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Batch Report

Test Method: E353.2; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
7008	6967	NA	76-U20-DU1-SB3	SO	076SB-0057M-0001-SO	240-17796-14		1/1	15-Nov-2012 2:40 PM	06-Dec-2012 7:13 AM	06-Dec-2012 1:18 PM	N
	6967	NA	76-U20-DU1-SB4	SO	076SB-0058M-0001-SO	240-17796-15		1/1	15-Nov-2012 3:30 PM	06-Dec-2012 7:13 AM	06-Dec-2012 1:20 PM	N
	6967	NA	76-U20-DU1-SB5	SO	076SB-0059M-0001-SO	240-17796-16		1/1	15-Nov-2012 4:00 PM	06-Dec-2012 7:13 AM	06-Dec-2012 1:22 PM	N
	6967	NA	76-U10-DU1-SB	SO	076SB-0044M-0001-SO	240-17796-29		1/1	15-Nov-2012 12:25 PM	06-Dec-2012 7:13 AM	06-Dec-2012 1:24 PM	N
	6967	NA	76-U10-DU1-SB	SO	076SB-0045M-0001-SO	240-17796-30		1/1	15-Nov-2012 12:26 PM	06-Dec-2012 7:13 AM	06-Dec-2012 1:26 PM	N
	6967	NA	76-U10-DU1-SB1	SO	076SB-0046M-0001-SO	240-17796-31		1/1	15-Nov-2012 10:50 AM	06-Dec-2012 7:13 AM	06-Dec-2012 1:36 PM	N
	6967	NA	76-U10-DU1-SB1	SO	076SB-0047M-0001-SO	240-17796-32		1/1	15-Nov-2012 11:11 AM	06-Dec-2012 7:13 AM	06-Dec-2012 1:38 PM	N
	6967	NA	76-U10-DU1-SB2	SO	076SB-0048M-0001-SO	240-17796-33		1/1	15-Nov-2012 11:40 AM	06-Dec-2012 7:13 AM	06-Dec-2012 1:40 PM	FD
	6967	NA	76-U10-DU1-SB3	SO	076SB-0049M-0001-SO	240-17796-34		1/1	15-Nov-2012 12:05 PM	06-Dec-2012 7:13 AM	06-Dec-2012 1:42 PM	N
	6967	NA	76-U10-DU1-SB4	SO	076SB-0050M-0001-SO	240-17796-35		1/1	15-Nov-2012 12:30 PM	06-Dec-2012 7:13 AM	06-Dec-2012 1:44 PM	N
	6967	NA	76-U10-DU1-SB5	SO	076SB-0051M-0001-SO	240-17796-36		1/1	15-Nov-2012 12:10 PM	06-Dec-2012 7:13 AM	06-Dec-2012 1:46 PM	N

Test Method: M8015V; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
66387	66387	NA	LABQC	WQ	LABQC	MB 240-66387/45		1/1	28-Nov-2012 2:00 PM	28-Nov-2012 2:00 PM	28-Nov-2012 2:00 PM	LB
	66387	NA	LABQC	WQ	LABQC	LCS 240-66387/46		1/1	28-Nov-2012 2:38 PM	28-Nov-2012 2:38 PM	28-Nov-2012 2:38 PM	BS
	66387	NA	76-A3-DU1-SB5	WG	076-0067-0001-ER	240-17796-20		1/1	15-Nov-2012 1:00 PM	28-Nov-2012 3:56 PM	28-Nov-2012 3:56 PM	N
	66387	NA	76-A3-DU1-SB5	WG	076-0067-0001-ER	240-17796-20		1/1	15-Nov-2012 1:00 PM	28-Nov-2012 4:35 PM	28-Nov-2012 4:35 PM	MS
	66387	NA	76-A3-DU1-SB5	WG	076-0067-0001-ER	240-17796-20		1/1	15-Nov-2012 1:00 PM	28-Nov-2012 5:13 PM	28-Nov-2012 5:13 PM	SD

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Batch Report

Test Method: SW6020; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
68088	66568	NA	LABQC	WQ	LABQC	MB 240-66568/1-A		1/1	28-Nov-2012 9:45 AM	28-Nov-2012 9:45 AM	10-Dec-2012 10:22 AM	LB
	66568	NA	LABQC	WQ	LABQC	LCS 240-66568/2-A		1/1	28-Nov-2012 9:45 AM	28-Nov-2012 9:45 AM	10-Dec-2012 10:27 AM	BS
	66568	NA	76-A3-DU1-SB5	WG	076-0067-0001-ER	240-17796-20		1/1	15-Nov-2012 1:00 PM	28-Nov-2012 9:45 AM	10-Dec-2012 10:35 AM	N

Test Method: SW7196A; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
67491	67293	NA	LABQC	SQ	LABQC	LCSI 240-67293/11-A		1/1	04-Dec-2012 3:00 PM	04-Dec-2012 3:00 PM	05-Dec-2012 12:00 AM	BS
	67293	NA	LABQC	SQ	LABQC	LCSS 240-67293/10-A		1/1	04-Dec-2012 3:00 PM	04-Dec-2012 3:00 PM	05-Dec-2012 12:00 AM	BS
	67293	NA	LABQC	SQ	LABQC	MB 240-67293/9-A		1/1	04-Dec-2012 3:00 PM	04-Dec-2012 3:00 PM	05-Dec-2012 12:00 AM	LB
	67293	NA	76-U10-DU1-SS	SO	076SS-0022M-0001-SO	240-17796-2		1/1	15-Nov-2012 12:25 PM	04-Dec-2012 3:00 PM	05-Dec-2012 3:58 PM	N

Test Method: SW7470A; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
66485	66219	NA	LABQC	WQ	LABQC	MB 240-66219/1-A		1/1	26-Nov-2012 3:25 PM	26-Nov-2012 3:25 PM	27-Nov-2012 3:50 PM	LB
	66219	NA	LABQC	WQ	LABQC	LCS 240-66219/2-A		1/1	26-Nov-2012 3:25 PM	26-Nov-2012 3:25 PM	27-Nov-2012 3:57 PM	BS
	66219	NA	76-A3-DU1-SB5	WG	076-0067-0001-ER	240-17796-20		1/1	15-Nov-2012 1:00 PM	26-Nov-2012 3:25 PM	27-Nov-2012 4:28 PM	N

Test Method: SW7471A; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
67078	66416	NA	LABQC	SQ	LABQC	MB 240-66416/1-A		1/1	27-Nov-2012 2:25 PM	27-Nov-2012 2:25 PM	30-Nov-2012 4:17 PM	LB
	66416	NA	LABQC	SQ	LABQC	LCS 240-66416/2-A		1/1	27-Nov-2012 2:25 PM	27-Nov-2012 2:25 PM	30-Nov-2012 4:19 PM	BS

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Batch Report

Test Method: SW7471A; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
67078	66416	NA	76-U4-DU1-SB	SO	076SB-0023M-0001-SO	240-17796-1		1/1	15-Nov-2012 9:15 AM	27-Nov-2012 2:25 PM	30-Nov-2012 4:20 PM	SD
	66416	NA	76-U4-DU1-SB	SO	076SB-0023M-0001-SO	240-17796-1		1/1	15-Nov-2012 9:15 AM	27-Nov-2012 2:25 PM	30-Nov-2012 4:22 PM	N
	66416	NA	76-U4-DU1-SB	SO	076SB-0023M-0001-SO	240-17796-1		1/1	15-Nov-2012 9:15 AM	27-Nov-2012 2:25 PM	30-Nov-2012 4:23 PM	MS
	66416	NA	76-A3-DU1-SB1	SO	076SB-0062M-0001-SO	240-17796-24		1/1	15-Nov-2012 5:05 PM	27-Nov-2012 2:25 PM	30-Nov-2012 4:28 PM	N
	66416	NA	76-U20-DU1-SS	SO	076SS-0007M-0001-SO	240-17796-10		1/1	15-Nov-2012 3:45 PM	27-Nov-2012 2:25 PM	30-Nov-2012 4:29 PM	N
	66416	NA	76-U4-DU1-SB5	SO	076SB-0029M-0001-SO	240-17796-8		1/1	15-Nov-2012 10:25 AM	27-Nov-2012 2:25 PM	30-Nov-2012 4:30 PM	N
	66416	NA	76-U20-DU1-SB4	SO	076SB-0058M-0001-SO	240-17796-15		1/1	15-Nov-2012 3:30 PM	27-Nov-2012 2:25 PM	30-Nov-2012 4:32 PM	N
	66416	NA	76-U20-DU1-SB	SO	076SB-0054M-0001-SO	240-17796-11		1/1	15-Nov-2012 3:56 PM	27-Nov-2012 2:25 PM	30-Nov-2012 4:33 PM	N
	66416	NA	76-U20-DU1-SB1	SO	076SB-0055M-0001-SO	240-17796-12		1/1	15-Nov-2012 1:45 PM	27-Nov-2012 2:25 PM	30-Nov-2012 4:34 PM	N
	66416	NA	76-U20-DU1-SB3	SO	076SB-0057M-0001-SO	240-17796-14		1/1	15-Nov-2012 2:40 PM	27-Nov-2012 2:25 PM	30-Nov-2012 4:36 PM	N
	66416	NA	76-U4-DU1-SB1	SO	076SB-0025M-0001-SO	240-17796-4		1/1	15-Nov-2012 9:00 AM	27-Nov-2012 2:25 PM	30-Nov-2012 4:37 PM	N
	66416	NA	76-A3-DU1-SB	SO	076SB-0061M-0001-SO	240-17796-23		1/1	15-Nov-2012 5:36 PM	27-Nov-2012 2:25 PM	30-Nov-2012 4:39 PM	N
	66416	NA	76-U20-DU1-SB2	SO	076SB-0056M-0001-SO	240-17796-13		1/1	15-Nov-2012 2:10 PM	27-Nov-2012 2:25 PM	30-Nov-2012 4:40 PM	N
	66416	NA	76-U4-DU1-SB3	SO	076SB-0027M-0001-SO	240-17796-6		1/1	15-Nov-2012 9:40 AM	27-Nov-2012 2:25 PM	30-Nov-2012 4:44 PM	N
	66416	NA	76-U20-DU1-SB5	SO	076SB-0059M-0001-SO	240-17796-16		1/1	15-Nov-2012 4:00 PM	27-Nov-2012 2:25 PM	30-Nov-2012 4:45 PM	N
	66416	NA	76-U4-DU1-SB4	SO	076SB-0028M-0001-SO	240-17796-7		1/1	15-Nov-2012 10:00 AM	27-Nov-2012 2:25 PM	30-Nov-2012 4:47 PM	N
	66416	NA	76-U4-DU1-SB2	SO	076SB-0026M-0001-SO	240-17796-5		1/1	15-Nov-2012 9:20 AM	27-Nov-2012 2:25 PM	30-Nov-2012 4:48 PM	N
	66416	NA	76-A3-DU1-SB2	SO	076SB-0063M-0001-SO	240-17796-25		1/1	15-Nov-2012 5:15 PM	27-Nov-2012 2:25 PM	30-Nov-2012 4:50 PM	N

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Batch Report

Test Method: SW7471A; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
67078	66416	NA	76-U10-DU1-SS	SO	076SS-0022M-0001-SO	240-17796-2		1/1	15-Nov-2012 12:25 PM	27-Nov-2012 2:25 PM	30-Nov-2012 4:51 PM	N
	66416	NA	76-A3-DU1-SB	SO	076SB-0060M-0001-SO	240-17796-22		1/1	15-Nov-2012 5:35 PM	27-Nov-2012 2:25 PM	30-Nov-2012 4:53 PM	N
	66416	NA	76-U20-DU1-SB	SO	076SB-0053M-0001-SO	240-17796-9		1/1	15-Nov-2012 3:55 PM	27-Nov-2012 2:25 PM	30-Nov-2012 4:54 PM	N
	66416	NA	76-U4-DU1-SB	SO	076SB-0024M-0001-SO	240-17796-3		1/1	15-Nov-2012 10:20 AM	27-Nov-2012 2:25 PM	30-Nov-2012 4:55 PM	N
	66624	NA	LABQC	SQ	LABQC	MB 240-66624/1-A		1/1	28-Nov-2012 2:55 PM	28-Nov-2012 2:55 PM	30-Nov-2012 4:57 PM	LB
	66624	NA	LABQC	SQ	LABQC	LCS 240-66624/2-A		1/1	28-Nov-2012 2:55 PM	28-Nov-2012 2:55 PM	30-Nov-2012 5:01 PM	BS
	66624	NA	76-A3-DU1-SB3	SO	076SB-0064M-0001-SO	240-17796-26		1/1	15-Nov-2012 5:25 PM	28-Nov-2012 2:55 PM	30-Nov-2012 5:02 PM	SD
	66624	NA	76-A3-DU1-SB3	SO	076SB-0064M-0001-SO	240-17796-26		1/1	15-Nov-2012 5:25 PM	28-Nov-2012 2:55 PM	30-Nov-2012 5:04 PM	N
	66624	NA	76-A3-DU1-SB3	SO	076SB-0064M-0001-SO	240-17796-26		1/1	15-Nov-2012 5:25 PM	28-Nov-2012 2:55 PM	30-Nov-2012 5:06 PM	MS
	66624	NA	76-A3-DU1-SB4	SO	076SB-0065M-0001-SO	240-17796-27		1/1	15-Nov-2012 5:40 PM	28-Nov-2012 2:55 PM	30-Nov-2012 5:07 PM	N
	66624	NA	76-A3-DU1-SB5	SO	076SB-0066M-0001-SO	240-17796-28		1/1	15-Nov-2012 4:50 PM	28-Nov-2012 2:55 PM	30-Nov-2012 5:09 PM	N

Test Method: SW8081; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
66500	65900	NA	76-A3-DU1-SB5	WG	076-0067-0001-ER	240-17796-20		1/1	15-Nov-2012 1:00 PM	21-Nov-2012 9:52 AM	28-Nov-2012 7:19 PM	N
	65900	NA	LABQC	WQ	LABQC	MB 240-65900/9-A		1/1	21-Nov-2012 9:52 AM	21-Nov-2012 9:52 AM	28-Nov-2012 7:47 PM	LB
	65900	NA	LABQC	WQ	LABQC	LCS 240-65900/10-A		1/1	21-Nov-2012 9:52 AM	21-Nov-2012 9:52 AM	29-Nov-2012 2:08 AM	BS

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Batch Report

Test Method: SW8082; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
66171	65899	NA	76-U20-SW	WS	076SW-0014-0001-SW	240-17796-18		1/1	08-Nov-2012 2:30 PM	21-Nov-2012 9:48 AM	24-Nov-2012 10:32 PM	FD
	65899	NA	76-U20-SW2	WS	076SW-0015-0001-SW	240-17796-19		1/1	08-Nov-2012 3:00 PM	21-Nov-2012 9:48 AM	24-Nov-2012 10:47 PM	N
	65899	NA	76-A3-DU1-SB5	WG	076-0067-0001-ER	240-17796-20		1/1	15-Nov-2012 1:00 PM	21-Nov-2012 9:48 AM	24-Nov-2012 11:02 PM	N
	65899	NA	LABQC	WQ	LABQC	MB 240-65899/8-A		1/1	21-Nov-2012 9:48 AM	21-Nov-2012 9:48 AM	24-Nov-2012 11:31 PM	LB
	65899	NA	LABQC	WQ	LABQC	LCS 240-65899/9-A		1/1	21-Nov-2012 9:48 AM	21-Nov-2012 9:48 AM	24-Nov-2012 11:46 PM	BS
66802	66426	NA	76-U20-SW	WS	076SW-0013-0001-SW	240-17796-17		1/1	08-Nov-2012 2:30 PM	27-Nov-2012 10:47 AM	30-Nov-2012 5:20 PM	N
	66426	NA	76-U20-SW	WS	076SW-0013-0002-SW	240-17796-17		1/1	08-Nov-2012 2:30 PM	27-Nov-2012 10:47 AM	30-Nov-2012 5:20 PM	MS
	66426	NA	76-U20-SW	WS	076SW-0013-0001-SW	240-17796-17		1/1	08-Nov-2012 2:30 PM	27-Nov-2012 10:47 AM	30-Nov-2012 5:35 PM	N
	66426	NA	76-U20-SW	WS	076SW-0013-0002-SW	240-17796-17		1/1	08-Nov-2012 2:30 PM	27-Nov-2012 10:47 AM	30-Nov-2012 5:35 PM	MS
	66426	NA	76-U20-SW	WS	076SW-0013-0002-SW	240-17796-17		1/1	08-Nov-2012 2:30 PM	27-Nov-2012 10:47 AM	30-Nov-2012 5:35 PM	SD
	66426	NA	76-U20-SW	WS	076SW-0013-0001-SW	240-17796-17		1/1	08-Nov-2012 2:30 PM	27-Nov-2012 10:47 AM	30-Nov-2012 5:50 PM	N
	66426	NA	76-U20-SW	WS	076SW-0013-0002-SW	240-17796-17		1/1	08-Nov-2012 2:30 PM	27-Nov-2012 10:47 AM	30-Nov-2012 5:50 PM	SD
	66426	NA	LABQC	WQ	LABQC	MB 240-66426/4-A		1/1	27-Nov-2012 10:47 AM	27-Nov-2012 10:47 AM	30-Nov-2012 6:05 PM	LB
	66426	NA	LABQC	WQ	LABQC	LCS 240-66426/5-A		1/1	27-Nov-2012 10:47 AM	27-Nov-2012 10:47 AM	30-Nov-2012 6:20 PM	BS
67173	66777	NA	76-U20-DU1-SB	SO	076SB-0053M-0001-SO	240-17796-9		1/1	15-Nov-2012 3:55 PM	29-Nov-2012 11:28 AM	04-Dec-2012 5:27 AM	N
	66777	NA	76-U20-DU1-SS	SO	076SS-0007M-0001-SO	240-17796-10		1/1	15-Nov-2012 3:45 PM	29-Nov-2012 11:28 AM	04-Dec-2012 5:42 AM	N
	66777	NA	LABQC	SQ	LABQC	MB 240-66777/20-A		1/1	29-Nov-2012 11:28 AM	29-Nov-2012 11:28 AM	04-Dec-2012 5:57 AM	LB
	66777	NA	76-U20-DU1-SB	SO	076SB-0054M-0001-SO	240-17796-11		1/1	15-Nov-2012 3:56 PM	29-Nov-2012 11:28 AM	04-Dec-2012 6:27 AM	N

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Batch Report

Test Method: SW8082; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
67173	66777	NA	76-U20-DU1-SB1	SO	076SB-0055M-0001-SO	240-17796-12		1/1	15-Nov-2012 1:45 PM	29-Nov-2012 11:28 AM	04-Dec-2012 6:42 AM	N
	66777	NA	76-U20-DU1-SB2	SO	076SB-0056M-0001-SO	240-17796-13		1/1	15-Nov-2012 2:10 PM	29-Nov-2012 11:28 AM	04-Dec-2012 6:57 AM	N
	66777	NA	76-U20-DU1-SB3	SO	076SB-0057M-0001-SO	240-17796-14		1/1	15-Nov-2012 2:40 PM	29-Nov-2012 11:28 AM	04-Dec-2012 7:12 AM	N
	66777	NA	76-U20-DU1-SB4	SO	076SB-0058M-0001-SO	240-17796-15		1/1	15-Nov-2012 3:30 PM	29-Nov-2012 11:28 AM	04-Dec-2012 7:27 AM	N
	66777	NA	76-U20-DU1-SB5	SO	076SB-0059M-0001-SO	240-17796-16		1/1	15-Nov-2012 4:00 PM	29-Nov-2012 11:28 AM	04-Dec-2012 7:42 AM	N
	66777	NA	76-U20-DU1-SB5	SO	076SB-0059M-0001-SO	240-17796-16		1/1	15-Nov-2012 4:00 PM	29-Nov-2012 11:28 AM	04-Dec-2012 7:56 AM	MS
	66777	NA	76-U20-DU1-SB5	SO	076SB-0059M-0001-SO	240-17796-16		1/1	15-Nov-2012 4:00 PM	29-Nov-2012 11:28 AM	04-Dec-2012 8:11 AM	SD
	66777	NA	LABQC	SQ	LABQC	LCS 240-66777/21-A		1/1	29-Nov-2012 11:28 AM	29-Nov-2012 11:28 AM	04-Dec-2012 8:26 AM	BS

Test Method: SW8151; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
67147	65729	NA	76-A3-DU1-SB5	WG	076-0067-0001-ER	240-17796-20		1/1	15-Nov-2012 1:00 PM	20-Nov-2012 9:45 AM	04-Dec-2012 2:35 AM	N
	65729	NA	LABQC	WQ	LABQC	MB 240-65729/4-A		1/1	20-Nov-2012 9:45 AM	20-Nov-2012 9:45 AM	04-Dec-2012 2:58 AM	LB
	65729	NA	LABQC	WQ	LABQC	LCS 240-65729/5-A		1/1	20-Nov-2012 9:45 AM	20-Nov-2012 9:45 AM	04-Dec-2012 3:22 AM	BS

Test Method: SW8260B; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
66239	NA	NA	LABQC	SQ	LABQC	LCS 240-66239/7		1/1	26-Nov-2012 1:54 PM		26-Nov-2012 1:54 PM	BS
	NA	NA	LABQC	SQ	LABQC	MB 240-66239/8		1/1	26-Nov-2012 2:15 PM		26-Nov-2012 2:15 PM	LB
	66118	NA	76-U4-DU1-SB	SO	076SB-0023M-0001-SO	240-17796-1		1/1	15-Nov-2012 9:15 AM	17-Nov-2012 8:00 AM	26-Nov-2012 5:29 PM	N

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Batch Report

Test Method: SW8260B; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
66239	66118	NA	76-U4-DU1-SB	SO	076SB-0024M-0001-SO	240-17796-3		1/1	15-Nov-2012 10:20 AM	17-Nov-2012 8:00 AM	26-Nov-2012 5:51 PM	N
	66118	NA	76-U4-DU1-SB1	SO	076SB-0025M-0001-SO	240-17796-4		1/1	15-Nov-2012 9:00 AM	17-Nov-2012 8:00 AM	26-Nov-2012 6:12 PM	N
	66118	NA	76-U4-DU1-SB2	SO	076SB-0026M-0001-SO	240-17796-5		1/1	15-Nov-2012 9:20 AM	17-Nov-2012 8:00 AM	26-Nov-2012 6:34 PM	N
	66118	NA	76-U4-DU1-SB3	SO	076SB-0027M-0001-SO	240-17796-6		1/1	15-Nov-2012 9:40 AM	17-Nov-2012 8:00 AM	26-Nov-2012 6:55 PM	N
	66118	NA	76-U4-DU1-SB4	SO	076SB-0028M-0001-SO	240-17796-7		1/1	15-Nov-2012 10:00 AM	17-Nov-2012 8:00 AM	26-Nov-2012 7:17 PM	N
	66118	NA	76-U4-DU1-SB5	SO	076SB-0029M-0001-SO	240-17796-8		1/1	15-Nov-2012 10:25 AM	17-Nov-2012 8:00 AM	26-Nov-2012 7:38 PM	N
	66118	NA	76-A3-DU1-SB	SO	076SB-0060M-0001-SO	240-17796-22		1/1	15-Nov-2012 5:35 PM	17-Nov-2012 8:00 AM	26-Nov-2012 8:00 PM	N
	66118	NA	76-A3-DU1-SB	SO	076SB-0061M-0001-SO	240-17796-23		1/1	15-Nov-2012 5:36 PM	17-Nov-2012 8:00 AM	26-Nov-2012 8:21 PM	N
	66118	NA	76-A3-DU1-SB1	SO	076SB-0062M-0001-SO	240-17796-24		1/1	15-Nov-2012 5:05 PM	17-Nov-2012 8:00 AM	26-Nov-2012 8:43 PM	N
	66118	NA	76-A3-DU1-SB2	SO	076SB-0063M-0001-SO	240-17796-25		1/1	15-Nov-2012 5:15 PM	17-Nov-2012 8:00 AM	26-Nov-2012 9:05 PM	N
	66118	NA	76-A3-DU1-SB3	SO	076SB-0064M-0001-SO	240-17796-26		1/1	15-Nov-2012 5:25 PM	17-Nov-2012 8:00 AM	26-Nov-2012 9:26 PM	N
	66118	NA	76-A3-DU1-SB4	SO	076SB-0065M-0001-SO	240-17796-27		1/1	15-Nov-2012 5:40 PM	17-Nov-2012 8:00 AM	26-Nov-2012 9:48 PM	N
	66118	NA	76-A3-DU1-SB5	SO	076SB-0066M-0001-SO	240-17796-28		1/1	15-Nov-2012 4:50 PM	17-Nov-2012 8:00 AM	26-Nov-2012 10:09 PM	N
65929	65929	NA	LABQC	WQ	LABQC	LCS 240-65929/4		1/1	21-Nov-2012 11:14 AM	21-Nov-2012 11:14 AM	21-Nov-2012 11:14 AM	BS
	65929	NA	LABQC	WQ	LABQC	MB 240-65929/6		1/1	21-Nov-2012 11:58 AM	21-Nov-2012 11:58 AM	21-Nov-2012 11:58 AM	LB
	65929	NA	76-A3-DU1-SB5	WG	076-0067-0001-ER	240-17796-20		1/1	15-Nov-2012 1:00 PM	21-Nov-2012 1:47 PM	21-Nov-2012 1:47 PM	N
	65929	NA	76-A3-DU1-SB4	WG	076-0068-0001-TB	240-17796-21		1/1	15-Nov-2012 8:00 AM	21-Nov-2012 2:31 PM	21-Nov-2012 2:31 PM	N
	65929	NA	76-U10-DU1-SB5	WG	076SB-0052M-0001-TB	240-17796-37		1/1	15-Nov-2012 8:00 AM	21-Nov-2012 2:54 PM	21-Nov-2012 2:54 PM	N

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Batch Report

Test Method: SW8260B; Leach Method: NONE												
Analytical Batch	**Prep Batch**	**Leach Batch**	**Location**	**Matrix**	**Field Sample ID**	**Lab Sample ID**	**Calibration Ref**	**Run#/ Dil'n**	**Collection Date/Time**	**Extract Date/Time**	**Analysis Date/Time**	**Sample Type**
65929	65929	NA	76-A3-DU1-SB5	WG	076-0067-0001-ER	240-17796-20		1/1	15-Nov-2012 1:00 PM	21-Nov-2012 4:46 PM	21-Nov-2012 4:46 PM	MS
	65929	NA	76-A3-DU1-SB5	WG	076-0067-0001-ER	240-17796-20		1/1	15-Nov-2012 1:00 PM	21-Nov-2012 5:08 PM	21-Nov-2012 5:08 PM	SD

Test Method: SW8270C; Leach Method: NONE												
Analytical Batch	**Prep Batch**	**Leach Batch**	**Location**	**Matrix**	**Field Sample ID**	**Lab Sample ID**	**Calibration Ref**	**Run#/ Dil'n**	**Collection Date/Time**	**Extract Date/Time**	**Analysis Date/Time**	**Sample Type**
66717	65893	NA	LABQC	WQ	LABQC	MB 240-65893/5-A		1/1	21-Nov-2012 9:42 AM	21-Nov-2012 9:42 AM	29-Nov-2012 10:13 AM	LB
	65893	NA	LABQC	WQ	LABQC	LCS 240-65893/6-A		1/1	21-Nov-2012 9:42 AM	21-Nov-2012 9:42 AM	29-Nov-2012 10:37 AM	BS
	65893	NA	76-A3-DU1-SB5	WG	076-0067-0001-ER	240-17796-20		1/1	15-Nov-2012 1:00 PM	21-Nov-2012 9:42 AM	29-Nov-2012 11:46 AM	N
67225	66393	NA	LABQC	SQ	LABQC	MB 240-66393/23-A		1/1	27-Nov-2012 9:03 AM	27-Nov-2012 9:03 AM	04-Dec-2012 10:08 AM	LB
	66393	NA	LABQC	SQ	LABQC	LCS 240-66393/24-A		1/1	27-Nov-2012 9:03 AM	27-Nov-2012 9:03 AM	04-Dec-2012 10:32 AM	BS
	66393	NA	76-A3-DU1-SB2	SO	076SB-0063M-0001-SO	240-17796-25		1/1	15-Nov-2012 5:15 PM	27-Nov-2012 9:03 AM	04-Dec-2012 11:43 AM	N
	66393	NA	76-A3-DU1-SB2	SO	076SB-0063M-0001-SO	240-17796-25		1/1	15-Nov-2012 5:15 PM	27-Nov-2012 9:03 AM	04-Dec-2012 12:07 PM	MS
	66393	NA	76-A3-DU1-SB2	SO	076SB-0063M-0001-SO	240-17796-25		1/1	15-Nov-2012 5:15 PM	27-Nov-2012 9:03 AM	04-Dec-2012 12:30 PM	SD
	66393	NA	76-U20-DU1-SS	SO	076SS-0007M-0001-SO	240-17796-10		1/5	15-Nov-2012 3:45 PM	27-Nov-2012 9:03 AM	04-Dec-2012 12:54 PM	N
	66393	NA	76-U20-DU1-SB	SO	076SB-0054M-0001-SO	240-17796-11		1/5	15-Nov-2012 3:56 PM	27-Nov-2012 9:03 AM	04-Dec-2012 1:18 PM	N
	66393	NA	76-U20-DU1-SB1	SO	076SB-0055M-0001-SO	240-17796-12		1/5	15-Nov-2012 1:45 PM	27-Nov-2012 9:03 AM	04-Dec-2012 1:42 PM	N
	66393	NA	76-A3-DU1-SB	SO	076SB-0060M-0001-SO	240-17796-22		1/5	15-Nov-2012 5:35 PM	27-Nov-2012 9:03 AM	04-Dec-2012 2:05 PM	N
	66393	NA	76-U10-DU1-SS	SO	076SS-0022M-0001-SO	240-17796-2		1/1	15-Nov-2012 12:25 PM	27-Nov-2012 9:03 AM	04-Dec-2012 2:29 PM	N
	66393	NA	76-U4-DU1-SB5	SO	076SB-0029M-0001-SO	240-17796-8		1/1	15-Nov-2012 10:25 AM	27-Nov-2012 9:03 AM	04-Dec-2012 2:53 PM	N

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Batch Report

Test Method: SW8270C; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
67225	66393	NA	76-U20-DU1-SB2	SO	076SB-0056M-0001-SO	240-17796-13		1/1	15-Nov-2012 2:10 PM	27-Nov-2012 9:03 AM	04-Dec-2012 3:16 PM	N
	66393	NA	76-U20-DU1-SB5	SO	076SB-0059M-0001-SO	240-17796-16		1/1	15-Nov-2012 4:00 PM	27-Nov-2012 9:03 AM	04-Dec-2012 3:40 PM	N
	66393	NA	76-U20-DU1-SB3	SO	076SB-0057M-0001-SO	240-17796-14		1/1	15-Nov-2012 2:40 PM	27-Nov-2012 9:03 AM	04-Dec-2012 4:04 PM	N
	66393	NA	76-U20-DU1-SB4	SO	076SB-0058M-0001-SO	240-17796-15		1/1	15-Nov-2012 3:30 PM	27-Nov-2012 9:03 AM	04-Dec-2012 4:28 PM	N
	66393	NA	76-U4-DU1-SB	SO	076SB-0023M-0001-SO	240-17796-1		1/1	15-Nov-2012 9:15 AM	27-Nov-2012 9:03 AM	04-Dec-2012 4:51 PM	N
	66393	NA	76-A3-DU1-SB1	SO	076SB-0062M-0001-SO	240-17796-24		1/1	15-Nov-2012 5:05 PM	27-Nov-2012 9:03 AM	04-Dec-2012 5:15 PM	N
	66393	NA	76-U4-DU1-SB2	SO	076SB-0026M-0001-SO	240-17796-5		1/1	15-Nov-2012 9:20 AM	27-Nov-2012 9:03 AM	04-Dec-2012 5:39 PM	N
	66393	NA	76-U4-DU1-SB3	SO	076SB-0027M-0001-SO	240-17796-6		1/1	15-Nov-2012 9:40 AM	27-Nov-2012 9:03 AM	04-Dec-2012 6:02 PM	N
67390	66393	NA	76-U20-DU1-SB	SO	076SB-0053M-0001-SO	240-17796-9		1/2.5	15-Nov-2012 3:55 PM	27-Nov-2012 9:03 AM	05-Dec-2012 4:54 PM	N
	66393	NA	76-U4-DU1-SB4	SO	076SB-0028M-0001-SO	240-17796-7		1/2.5	15-Nov-2012 10:00 AM	27-Nov-2012 9:03 AM	05-Dec-2012 5:17 PM	N
	66393	NA	76-A3-DU1-SB	SO	076SB-0061M-0001-SO	240-17796-23		1/2.5	15-Nov-2012 5:36 PM	27-Nov-2012 9:03 AM	05-Dec-2012 5:41 PM	N
	66393	NA	76-U4-DU1-SB	SO	076SB-0024M-0001-SO	240-17796-3		1/2.5	15-Nov-2012 10:20 AM	27-Nov-2012 9:03 AM	05-Dec-2012 6:04 PM	N
	66393	NA	76-U4-DU1-SB1	SO	076SB-0025M-0001-SO	240-17796-4		1/2.5	15-Nov-2012 9:00 AM	27-Nov-2012 9:03 AM	05-Dec-2012 6:27 PM	N
67544	66569	NA	LABQC	SQ	LABQC	MB 240-66569/21-A		1/1	28-Nov-2012 9:47 AM	28-Nov-2012 9:47 AM	06-Dec-2012 10:08 AM	LB
	66569	NA	LABQC	SQ	LABQC	LCS 240-66569/22-A		1/1	28-Nov-2012 9:47 AM	28-Nov-2012 9:47 AM	06-Dec-2012 10:31 AM	BS
	66569	NA	76-A3-DU1-SB3	SO	076SB-0064M-0001-SO	240-17796-26		1/10	15-Nov-2012 5:25 PM	28-Nov-2012 9:47 AM	06-Dec-2012 12:04 PM	N
	66569	NA	76-A3-DU1-SB5	SO	076SB-0066M-0001-SO	240-17796-28		1/10	15-Nov-2012 4:50 PM	28-Nov-2012 9:47 AM	06-Dec-2012 12:27 PM	N
	66569	NA	76-U10-DU1-SB1	SO	076SB-0047M-0001-SO	240-17796-32		1/10	15-Nov-2012 11:11 AM	28-Nov-2012 9:47 AM	06-Dec-2012 12:51 PM	N

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Batch Report

Test Method: SW8270C; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
67544	66569	NA	76-U10-DU1-SB3	SO	076SB-0049M-0001-SO	240-17796-34		1/10	15-Nov-2012 12:05 PM	28-Nov-2012 9:47 AM	06-Dec-2012 1:14 PM	N
	66569	NA	76-U10-DU1-SB	SO	076SB-0045M-0001-SO	240-17796-30		1/10	15-Nov-2012 12:26 PM	28-Nov-2012 9:47 AM	06-Dec-2012 1:37 PM	N
	66569	NA	76-A3-DU1-SB4	SO	076SB-0065M-0001-SO	240-17796-27		1/2.5	15-Nov-2012 5:40 PM	28-Nov-2012 9:47 AM	06-Dec-2012 2:47 PM	N
	66569	NA	76-U10-DU1-SB	SO	076SB-0044M-0001-SO	240-17796-29		1/2.5	15-Nov-2012 12:25 PM	28-Nov-2012 9:47 AM	06-Dec-2012 3:10 PM	N
	66569	NA	76-U10-DU1-SB1	SO	076SB-0046M-0001-SO	240-17796-31		1/2.5	15-Nov-2012 10:50 AM	28-Nov-2012 9:47 AM	06-Dec-2012 3:33 PM	N
	66569	NA	76-U10-DU1-SB4	SO	076SB-0050M-0001-SO	240-17796-35		1/2.5	15-Nov-2012 12:30 PM	28-Nov-2012 9:47 AM	06-Dec-2012 3:56 PM	N
67761	66569	NA	76-U10-DU1-SB5	SO	076SB-0051M-0001-SO	240-17796-36		1/1	15-Nov-2012 12:10 PM	28-Nov-2012 9:47 AM	07-Dec-2012 12:51 PM	N
67368	66734	NA	LABQC	SQ	LABQC	MB 240-66734/4-A		1/1	29-Nov-2012 9:51 AM	29-Nov-2012 9:51 AM	05-Dec-2012 10:12 AM	LB
	66734	NA	LABQC	SQ	LABQC	LCS 240-66734/5-A		1/1	29-Nov-2012 9:51 AM	29-Nov-2012 9:51 AM	05-Dec-2012 10:37 AM	BS
	66734	NA	76-U10-DU1-SB2	SO	076SB-0048M-0001-SO	240-17796-33		1/1	15-Nov-2012 11:40 AM	29-Nov-2012 10:26 AM	05-Dec-2012 1:05 PM	FD
68148	67600	NA	LABQC	SQ	LABQC	MB 240-67600/22-A		1/1	06-Dec-2012 10:45 AM	06-Dec-2012 10:45 AM	11-Dec-2012 12:44 PM	LB
	67600	NA	LABQC	SQ	LABQC	LCS 240-67600/23-A		1/1	06-Dec-2012 10:45 AM	06-Dec-2012 10:45 AM	11-Dec-2012 1:07 PM	BS
	67600	NA	76-U10-DU1-SB2	SO	076SB-0048M-0001-SO	240-17796-33		2/1	15-Nov-2012 11:40 AM	06-Dec-2012 10:45 AM	11-Dec-2012 3:27 PM	FD

Test Method: SW8330B; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
6772	6172	NA	LABQC	WQ	LABQC	MB 320-6172/1-A		1/1	20-Nov-2012 12:14 PM	20-Nov-2012 12:14 PM	04-Dec-2012 1:40 PM	LB
	6172	NA	LABQC	WQ	LABQC	LCS 320-6172/2-A		1/1	20-Nov-2012 12:14 PM	20-Nov-2012 12:14 PM	04-Dec-2012 2:20 PM	BS
	6172	NA	76-U20-SW	WS	076SW-0013-0001-SW	240-17796-17		1/1	08-Nov-2012 2:30 PM	20-Nov-2012 12:14 PM	04-Dec-2012 3:00 PM	N

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Batch Report

Test Method: SW8330B; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
6772	6172	NA	76-U20-SW	WS	076SW-0013-0002-SW	240-17796-17		1/1	08-Nov-2012 2:30 PM	20-Nov-2012 12:14 PM	04-Dec-2012 3:00 PM	MS
	6172	NA	76-U20-SW	WS	076SW-0013-0002-SW	240-17796-17		1/1	08-Nov-2012 2:30 PM	20-Nov-2012 12:14 PM	04-Dec-2012 3:41 PM	MS
	6172	NA	76-U20-SW	WS	076SW-0013-0002-SW	240-17796-17		1/1	08-Nov-2012 2:30 PM	20-Nov-2012 12:14 PM	04-Dec-2012 3:41 PM	SD
	6172	NA	76-U20-SW	WS	076SW-0013-0001-SW	240-17796-17		1/1	08-Nov-2012 2:30 PM	20-Nov-2012 12:14 PM	04-Dec-2012 4:21 PM	N
	6172	NA	76-U20-SW	WS	076SW-0013-0002-SW	240-17796-17		1/1	08-Nov-2012 2:30 PM	20-Nov-2012 12:14 PM	04-Dec-2012 4:21 PM	MS
	6172	NA	76-U20-SW	WS	076SW-0013-0002-SW	240-17796-17		1/1	08-Nov-2012 2:30 PM	20-Nov-2012 12:14 PM	04-Dec-2012 4:21 PM	SD
	6172	NA	76-U20-SW	WS	076SW-0014-0001-SW	240-17796-18		1/1	08-Nov-2012 2:30 PM	20-Nov-2012 12:14 PM	04-Dec-2012 5:01 PM	FD
	6172	NA	76-U20-SW2	WS	076SW-0015-0001-SW	240-17796-19		1/1	08-Nov-2012 3:00 PM	20-Nov-2012 12:14 PM	04-Dec-2012 5:41 PM	N
	6172	NA	76-A3-DU1-SB5	WG	076-0067-0001-ER	240-17796-20		1/1	15-Nov-2012 1:00 PM	20-Nov-2012 12:14 PM	04-Dec-2012 6:22 PM	N
7240	6559	NA	LABQC	SQ	LABQC	MB 320-6559/1-A		1/1	29-Nov-2012 8:10 AM	29-Nov-2012 8:10 AM	11-Dec-2012 4:47 PM	LB
	6559	NA	LABQC	SQ	LABQC	LCS 320-6559/2-A		1/1	29-Nov-2012 8:10 AM	29-Nov-2012 8:10 AM	11-Dec-2012 5:27 PM	BS
	6559	NA	76-U10-DU1-SS	SO	076SS-0022M-0001-SO	240-17796-2		2/1	15-Nov-2012 12:25 PM	29-Nov-2012 8:10 AM	11-Dec-2012 6:07 PM	N
	6559	NA	76-U10-DU1-SS	SO	076SS-0022M-0001-SO	240-17796-2		2/1	15-Nov-2012 12:25 PM	29-Nov-2012 8:10 AM	11-Dec-2012 6:48 PM	MS
	6559	NA	76-U10-DU1-SS	SO	076SS-0022M-0001-SO	240-17796-2		2/1	15-Nov-2012 12:25 PM	29-Nov-2012 8:10 AM	11-Dec-2012 7:28 PM	SD
	6559	NA	76-U20-DU1-SB	SO	076SB-0053M-0001-SO	240-17796-9		2/1	15-Nov-2012 3:55 PM	29-Nov-2012 8:10 AM	11-Dec-2012 8:08 PM	N
	6559	NA	76-U20-DU1-SS	SO	076SS-0007M-0001-SO	240-17796-10		2/1	15-Nov-2012 3:45 PM	29-Nov-2012 8:10 AM	11-Dec-2012 8:48 PM	N
	6559	NA	76-U20-DU1-SB	SO	076SB-0054M-0001-SO	240-17796-11		2/1	15-Nov-2012 3:56 PM	29-Nov-2012 8:10 AM	11-Dec-2012 9:28 PM	N
	6559	NA	76-U20-DU1-SB1	SO	076SB-0055M-0001-SO	240-17796-12		2/1	15-Nov-2012 1:45 PM	29-Nov-2012 8:10 AM	11-Dec-2012 10:09 PM	N

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Batch Report

Test Method: SW8330B; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
7240	6559	NA	76-U20-DU1-SB2	SO	076SB-0056M-0001-SO	240-17796-13		2/1	15-Nov-2012 2:10 PM	29-Nov-2012 8:10 AM	11-Dec-2012 10:49 PM	N
	6559	NA	76-U20-DU1-SB3	SO	076SB-0057M-0001-SO	240-17796-14		2/1	15-Nov-2012 2:40 PM	29-Nov-2012 8:10 AM	12-Dec-2012 12:09 AM	N
	6559	NA	76-U20-DU1-SB4	SO	076SB-0058M-0001-SO	240-17796-15		2/1	15-Nov-2012 3:30 PM	29-Nov-2012 8:10 AM	12-Dec-2012 12:49 AM	N
	6559	NA	76-U20-DU1-SB5	SO	076SB-0059M-0001-SO	240-17796-16		2/1	15-Nov-2012 4:00 PM	29-Nov-2012 8:10 AM	12-Dec-2012 1:29 AM	N
	6559	NA	76-U10-DU1-SB	SO	076SB-0044M-0001-SO	240-17796-29		2/1	15-Nov-2012 12:25 PM	29-Nov-2012 8:10 AM	12-Dec-2012 2:10 AM	N
	6559	NA	76-U10-DU1-SB	SO	076SB-0045M-0001-SO	240-17796-30		2/1	15-Nov-2012 12:26 PM	29-Nov-2012 8:10 AM	12-Dec-2012 2:50 AM	N
	6559	NA	76-U10-DU1-SB1	SO	076SB-0046M-0001-SO	240-17796-31		2/1	15-Nov-2012 10:50 AM	29-Nov-2012 8:10 AM	12-Dec-2012 3:30 AM	N
	6559	NA	76-U10-DU1-SB1	SO	076SB-0047M-0001-SO	240-17796-32		3/1	15-Nov-2012 11:11 AM	29-Nov-2012 8:10 AM	12-Dec-2012 4:11 AM	N
	6559	NA	76-U10-DU1-SB2	SO	076SB-0048M-0001-SO	240-17796-33		2/1	15-Nov-2012 11:40 AM	29-Nov-2012 8:10 AM	12-Dec-2012 4:51 AM	FD
	6559	NA	76-U10-DU1-SB3	SO	076SB-0049M-0001-SO	240-17796-34		2/1	15-Nov-2012 12:05 PM	29-Nov-2012 8:10 AM	12-Dec-2012 5:31 AM	N
	6559	NA	76-U10-DU1-SB4	SO	076SB-0050M-0001-SO	240-17796-35		2/1	15-Nov-2012 12:30 PM	29-Nov-2012 8:10 AM	12-Dec-2012 6:12 AM	N
	6559	NA	76-U10-DU1-SB5	SO	076SB-0051M-0001-SO	240-17796-36		2/1	15-Nov-2012 12:10 PM	29-Nov-2012 8:10 AM	12-Dec-2012 7:32 AM	N
6888	6579	NA	LABQC	SQ	LABQC	MB 320-6579/1-A		1/1	29-Nov-2012 10:14 AM	29-Nov-2012 10:14 AM	05-Dec-2012 8:16 PM	LB
	6579	NA	LABQC	SQ	LABQC	LCS 320-6579/2-A		1/1	29-Nov-2012 10:14 AM	29-Nov-2012 10:14 AM	05-Dec-2012 8:30 PM	BS
	6579	NA	76-U10-DU1-SS	SO	076SS-0022M-0001-SO	240-17796-2		1/1	15-Nov-2012 12:25 PM	29-Nov-2012 10:14 AM	05-Dec-2012 8:44 PM	N
	6579	NA	76-U10-DU1-SS	SO	076SS-0022M-0001-SO	240-17796-2		1/1	15-Nov-2012 12:25 PM	29-Nov-2012 10:14 AM	05-Dec-2012 8:58 PM	MS
	6579	NA	76-U10-DU1-SS	SO	076SS-0022M-0001-SO	240-17796-2		1/1	15-Nov-2012 12:25 PM	29-Nov-2012 10:14 AM	05-Dec-2012 9:13 PM	SD
	6579	NA	76-U20-DU1-SB	SO	076SB-0053M-0001-SO	240-17796-9		1/1	15-Nov-2012 3:55 PM	29-Nov-2012 10:14 AM	05-Dec-2012 9:27 PM	N

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Batch Report

Test Method: SW8330B; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
6888	6579	NA	76-U20-DU1-SS	SO	076SS-0007M-0001-SO	240-17796-10		1/1	15-Nov-2012 3:45 PM	29-Nov-2012 10:14 AM	05-Dec-2012 9:41 PM	N
	6579	NA	76-U20-DU1-SB	SO	076SB-0054M-0001-SO	240-17796-11		1/1	15-Nov-2012 3:56 PM	29-Nov-2012 10:14 AM	05-Dec-2012 9:56 PM	N
	6579	NA	76-U20-DU1-SB1	SO	076SB-0055M-0001-SO	240-17796-12		1/1	15-Nov-2012 1:45 PM	29-Nov-2012 10:14 AM	05-Dec-2012 10:10 PM	N
	6579	NA	76-U20-DU1-SB2	SO	076SB-0056M-0001-SO	240-17796-13		1/1	15-Nov-2012 2:10 PM	29-Nov-2012 10:14 AM	05-Dec-2012 10:24 PM	N
	6579	NA	76-U20-DU1-SB3	SO	076SB-0057M-0001-SO	240-17796-14		1/1	15-Nov-2012 2:40 PM	29-Nov-2012 10:14 AM	05-Dec-2012 10:53 PM	N
	6579	NA	76-U20-DU1-SB4	SO	076SB-0058M-0001-SO	240-17796-15		1/1	15-Nov-2012 3:30 PM	29-Nov-2012 10:14 AM	05-Dec-2012 11:07 PM	N
	6579	NA	76-U20-DU1-SB5	SO	076SB-0059M-0001-SO	240-17796-16		1/1	15-Nov-2012 4:00 PM	29-Nov-2012 10:14 AM	05-Dec-2012 11:22 PM	N
	6579	NA	76-U10-DU1-SB	SO	076SB-0044M-0001-SO	240-17796-29		1/1	15-Nov-2012 12:25 PM	29-Nov-2012 10:14 AM	05-Dec-2012 11:36 PM	N
	6579	NA	76-U10-DU1-SB	SO	076SB-0045M-0001-SO	240-17796-30		1/1	15-Nov-2012 12:26 PM	29-Nov-2012 10:14 AM	05-Dec-2012 11:50 PM	N
	6579	NA	76-U10-DU1-SB1	SO	076SB-0046M-0001-SO	240-17796-31		1/1	15-Nov-2012 10:50 AM	29-Nov-2012 10:14 AM	06-Dec-2012 12:04 AM	N
	6579	NA	76-U10-DU1-SB1	SO	076SB-0047M-0001-SO	240-17796-32		1/1	15-Nov-2012 11:11 AM	29-Nov-2012 10:14 AM	06-Dec-2012 12:19 AM	N
	6579	NA	76-U10-DU1-SB2	SO	076SB-0048M-0001-SO	240-17796-33		1/1	15-Nov-2012 11:40 AM	29-Nov-2012 10:14 AM	06-Dec-2012 12:33 AM	FD
	6579	NA	76-U10-DU1-SB3	SO	076SB-0049M-0001-SO	240-17796-34		1/1	15-Nov-2012 12:05 PM	29-Nov-2012 10:14 AM	06-Dec-2012 12:47 AM	N
	6579	NA	76-U10-DU1-SB4	SO	076SB-0050M-0001-SO	240-17796-35		1/1	15-Nov-2012 12:30 PM	29-Nov-2012 10:14 AM	06-Dec-2012 1:02 AM	N
	6579	NA	76-U10-DU1-SB5	SO	076SB-0051M-0001-SO	240-17796-36		1/1	15-Nov-2012 12:10 PM	29-Nov-2012 10:14 AM	06-Dec-2012 1:30 AM	N
7142	6579	NA	LABQC	SQ	LABQC	MB 320-6579/1-A		2/1	29-Nov-2012 10:14 AM	29-Nov-2012 10:14 AM	10-Dec-2012 1:25 PM	LB
6888	6878	NA	LABQC	WQ	LABQC	MB 320-6878/1-A		1/1	05-Dec-2012 7:38 AM	05-Dec-2012 7:38 AM	06-Dec-2012 1:45 AM	LB
	6878	NA	LABQC	WQ	LABQC	LCS 320-6878/2-A		1/1	05-Dec-2012 7:38 AM	05-Dec-2012 7:38 AM	06-Dec-2012 1:59 AM	BS

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Batch Report

Test Method: SW8330B; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
6888	6878	NA	76-U20-SW	WS	076SW-0013-0001-SW	240-17796-17		2/1	08-Nov-2012 2:30 PM	05-Dec-2012 7:38 AM	06-Dec-2012 2:13 AM	N
	6878	NA	76-U20-SW	WS	076SW-0013-0002-SW	240-17796-17		2/1	08-Nov-2012 2:30 PM	05-Dec-2012 7:38 AM	06-Dec-2012 2:28 AM	SD
	6878	NA	76-U20-SW	WS	076SW-0013-0002-SW	240-17796-17		2/1	08-Nov-2012 2:30 PM	05-Dec-2012 7:38 AM	06-Dec-2012 2:42 AM	MS
	6878	NA	76-U20-SW	WS	076SW-0014-0001-SW	240-17796-18		2/1	08-Nov-2012 2:30 PM	05-Dec-2012 7:38 AM	06-Dec-2012 2:56 AM	FD
	6878	NA	76-U20-SW2	WS	076SW-0015-0001-SW	240-17796-19		2/1	08-Nov-2012 3:00 PM	05-Dec-2012 7:38 AM	06-Dec-2012 3:10 AM	N
	6878	NA	76-A3-DU1-SB5	WG	076-0067-0001-ER	240-17796-20		2/1	15-Nov-2012 1:00 PM	05-Dec-2012 7:38 AM	06-Dec-2012 3:25 AM	N

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Field Batch Report

--No Records Found--

QC Outliers Report

--No Records Found--

Qualified Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Bias	Units	Reason
M8015V/NONE	WG	076-0067-0001-ER	240-17796-20	N	Petroleum Hydrocarbons C6-C12	100	33.0	33.0 J		UG/L	TR
Test Leach	**Matrix**	**FieldSample ID**	**LabSample ID**	**Type**	**Analyte**	**RL**	**Lab Result**	**Qualified Result**	**Bias**	**Units**	**Reason**
SW6020/NONE	WG	076-0067-0001-ER	240-17796-20	N	Antimony	2.0	0.34	0.34 J		UG/L	TR
SW6020/NONE	WG	076-0067-0001-ER	240-17796-20	N	Chromium	2.0	0.60	0.60 J		UG/L	TR
SW6020/NONE	WG	076-0067-0001-ER	240-17796-20	N	Manganese	5.0	3.5	3.5 J		UG/L	TR
SW6020/NONE	WG	076-0067-0001-ER	240-17796-20	N	Thallium	2.0	0.75	0.75 J		UG/L	TR
SW6020/NONE	WG	076-0067-0001-ER	240-17796-20	N	Zinc	40.0	10.0	10.0 J		UG/L	TR
Test Leach	**Matrix**	**FieldSample ID**	**LabSample ID**	**Type**	**Analyte**	**RL**	**Lab Result**	**Qualified Result**	**Bias**	**Units**	**Reason**
SW7471A/NONE	SO	076SB-0023M-0001-SO	240-17796-1	N	Mercury	0.098	0.038	0.038 J		MG/KG	TR
SW7471A/NONE	SO	076SB-0024M-0001-SO	240-17796-3	N	Mercury	0.098	0.028	0.028 J		MG/KG	TR
SW7471A/NONE	SO	076SB-0025M-0001-SO	240-17796-4	N	Mercury	0.091	0.029	0.029 J		MG/KG	TR
SW7471A/NONE	SO	076SB-0026M-0001-SO	240-17796-5	N	Mercury	0.094	0.027	0.027 J		MG/KG	TR
SW7471A/NONE	SO	076SB-0027M-0001-SO	240-17796-6	N	Mercury	0.097	0.042	0.042 J		MG/KG	TR
SW7471A/NONE	SO	076SB-0028M-0001-SO	240-17796-7	N	Mercury	0.10	0.026	0.026 J		MG/KG	TR
SW7471A/NONE	SO	076SB-0029M-0001-SO	240-17796-8	N	Mercury	0.094	0.036	0.036 J		MG/KG	TR
SW7471A/NONE	SO	076SB-0053M-0001-SO	240-17796-9	N	Mercury	0.098	0.027	0.027 J		MG/KG	TR
SW7471A/NONE	SO	076SB-0054M-0001-SO	240-17796-11	N	Mercury	0.094	0.016	0.016 J		MG/KG	TR
SW7471A/NONE	SO	076SB-0055M-0001-SO	240-17796-12	N	Mercury	0.095	0.017	0.017 J		MG/KG	TR
SW7471A/NONE	SO	076SB-0056M-0001-SO	240-17796-13	N	Mercury	0.094	0.021	0.021 J		MG/KG	TR

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Qualified Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Bias	Units	Reason
SW7471A/NONE	SO	076SB-0057M-0001-SO	240-17796-14	N	Mercury	0.092	0.021	0.021 J		MG/KG	TR
SW7471A/NONE	SO	076SB-0058M-0001-SO	240-17796-15	N	Mercury	0.097	0.014	0.014 J		MG/KG	TR
SW7471A/NONE	SO	076SB-0059M-0001-SO	240-17796-16	N	Mercury	0.097	0.018	0.018 J		MG/KG	TR
SW7471A/NONE	SO	076SB-0060M-0001-SO	240-17796-22	N	Mercury	0.097	0.026	0.026 J		MG/KG	TR
SW7471A/NONE	SO	076SB-0061M-0001-SO	240-17796-23	N	Mercury	0.10	0.017	0.017 J		MG/KG	TR
SW7471A/NONE	SO	076SB-0062M-0001-SO	240-17796-24	N	Mercury	0.097	0.028	0.028 J		MG/KG	TR
SW7471A/NONE	SO	076SB-0063M-0001-SO	240-17796-25	N	Mercury	0.10	0.024	0.024 J		MG/KG	TR
SW7471A/NONE	SO	076SB-0064M-0001-SO	240-17796-26	N	Mercury	0.12	0.028	0.028 J		MG/KG	TR
SW7471A/NONE	SO	076SB-0065M-0001-SO	240-17796-27	N	Mercury	0.098	0.027	0.027 J		MG/KG	TR
SW7471A/NONE	SO	076SB-0066M-0001-SO	240-17796-28	N	Mercury	0.097	0.043	0.043 J		MG/KG	TR
SW7471A/NONE	SO	076SS-0007M-0001-SO	240-17796-10	N	Mercury	0.095	0.045	0.045 J		MG/KG	TR
SW7471A/NONE	SO	076SS-0022M-0001-SO	240-17796-2	N	Mercury	0.092	0.033	0.033 J		MG/KG	TR
Test Leach	**Matrix**	**FieldSample ID**	**LabSample ID**	**Type**	**Analyte**	**RL**	**Lab Result**	**Qualified Result**	**Bias**	**Units**	**Reason**
SW8082/NONE	SO	076SS-0007M-0001-SO	240-17796-10	N	PCB-1260 (Arochlor 1260)	56.0	24.0	24.0 J		UG/KG	TR
Test Leach	**Matrix**	**FieldSample ID**	**LabSample ID**	**Type**	**Analyte**	**RL**	**Lab Result**	**Qualified Result**	**Bias**	**Units**	**Reason**
SW8151/NONE	WG	076-0067-0001-ER	240-17796-20	N	MCPA	400	400	400 UJ		UG/L	J
Test Leach	**Matrix**	**FieldSample ID**	**LabSample ID**	**Type**	**Analyte**	**RL**	**Lab Result**	**Qualified Result**	**Bias**	**Units**	**Reason**
SW8260B/NONE	WG	076-0067-0001-ER	240-17796-20	N	Acetone	10.0	10.0	10.0 UJ		UG/L	J
SW8260B/NONE	WG	076-0067-0001-ER	240-17796-20	N	Chloroform	1.0	0.61	0.61 J		UG/L	TR
SW8260B/NONE	WG	076-0067-0001-ER	240-17796-20	N	Methylene Chloride	1.0	0.36	1.0 U		UG/L	L
SW8260B/NONE	WG	076-0067-0001-ER	240-17796-20	N	Styrene	1.0	1.0	1.0 UJ		UG/L	J
SW8260B/NONE	WG	076-0068-0001-TB	240-17796-21	N	Acetone	10.0	10.0	10.0 UJ		UG/L	J
SW8260B/NONE	WG	076-0068-0001-TB	240-17796-21	N	Methylene Chloride	1.0	0.84	1.0 U		UG/L	L
SW8260B/NONE	WG	076-0068-0001-TB	240-17796-21	N	Styrene	1.0	1.0	1.0 UJ		UG/L	J
SW8260B/NONE	SO	076SB-0023M-0001-SO	240-17796-1	N	2-Butanone (MEK)	18.0	1.5	1.5 J		UG/KG	TR
SW8260B/NONE	SO	076SB-0024M-0001-SO	240-17796-3	N	2-Butanone (MEK)	24.0	2.3	2.3 J		UG/KG	TR
SW8260B/NONE	SO	076SB-0024M-0001-SO	240-17796-3	N	Acetone	24.0	13.0	24.0 U		UG/KG	L
SW8260B/NONE	SO	076SB-0025M-0001-SO	240-17796-4	N	2-Butanone (MEK)	17.0	1.4	1.4 J		UG/KG	TR

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Qualified Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Bias	Units	Reason
SW8260B/NONE	SO	076SB-0025M-0001-SO	240-17796-4	N	Acetone	17.0	7.5	17.0 U		UG/KG	L
SW8260B/NONE	SO	076SB-0025M-0001-SO	240-17796-4	N	Carbon Disulfide	4.2	2.4	2.4 J		UG/KG	TR
SW8260B/NONE	SO	076SB-0026M-0001-SO	240-17796-5	N	Acetone	17.0	5.9	17.0 U		UG/KG	L
SW8260B/NONE	SO	076SB-0027M-0001-SO	240-17796-6	N	Methylene Chloride	5.1	0.69	0.69 J		UG/KG	TR/J
SW8260B/NONE	SO	076SB-0028M-0001-SO	240-17796-7	N	Carbon Disulfide	4.9	2.9	2.9 J		UG/KG	TR
SW8260B/NONE	SO	076SB-0029M-0001-SO	240-17796-8	N	2-Butanone (MEK)	24.0	9.6	9.6 J		UG/KG	TR
SW8260B/NONE	SO	076SB-0029M-0001-SO	240-17796-8	N	Acetone	24.0	51.0	24.0 U		UG/KG	L
SW8260B/NONE	SO	076SB-0029M-0001-SO	240-17796-8	N	Carbon Disulfide	6.0	3.5	3.5 J		UG/KG	TR
SW8260B/NONE	SO	076SB-0029M-0001-SO	240-17796-8	N	Methylene Chloride	6.0	1.3	1.3 J		UG/KG	TR/J
SW8260B/NONE	SO	076SB-0029M-0001-SO	240-17796-8	N	Toluene	6.0	0.33	0.33 J		UG/KG	TR
SW8260B/NONE	WG	076SB-0052M-0001-TB	240-17796-37	N	Acetone	10.0	10.0	10.0 UJ		UG/L	J
SW8260B/NONE	WG	076SB-0052M-0001-TB	240-17796-37	N	Methylene Chloride	1.0	0.77	1.0 U		UG/L	L
SW8260B/NONE	WG	076SB-0052M-0001-TB	240-17796-37	N	Styrene	1.0	1.0	1.0 UJ		UG/L	J
SW8260B/NONE	SO	076SB-0060M-0001-SO	240-17796-22	N	Acetone	21.0	8.7	21.0 U		UG/KG	L
SW8260B/NONE	SO	076SB-0060M-0001-SO	240-17796-22	N	Carbon Disulfide	5.2	3.1	3.1 J		UG/KG	TR
SW8260B/NONE	SO	076SB-0061M-0001-SO	240-17796-23	N	2-Butanone (MEK)	9.7	4.3	4.3 J		UG/KG	TR
SW8260B/NONE	SO	076SB-0061M-0001-SO	240-17796-23	N	Acetone	9.7	57.0	9.7 U		UG/KG	L
SW8260B/NONE	SO	076SB-0061M-0001-SO	240-17796-23	N	Carbon Disulfide	2.4	1.4	1.4 J		UG/KG	TR
SW8260B/NONE	SO	076SB-0062M-0001-SO	240-17796-24	N	2-Butanone (MEK)	18.0	1.3	1.3 J		UG/KG	TR
SW8260B/NONE	SO	076SB-0062M-0001-SO	240-17796-24	N	Acetone	18.0	9.9	18.0 U		UG/KG	L
SW8260B/NONE	SO	076SB-0063M-0001-SO	240-17796-25	N	2-Butanone (MEK)	23.0	13.0	13.0 J		UG/KG	TR
SW8260B/NONE	SO	076SB-0063M-0001-SO	240-17796-25	N	Acetone	23.0	59.0	23.0 U		UG/KG	L
SW8260B/NONE	SO	076SB-0063M-0001-SO	240-17796-25	N	Carbon Disulfide	5.9	3.5	3.5 J		UG/KG	TR
SW8260B/NONE	SO	076SB-0063M-0001-SO	240-17796-25	N	Ethylbenzene	5.9	2.4	2.4 J		UG/KG	TR
SW8260B/NONE	SO	076SB-0063M-0001-SO	240-17796-25	N	Toluene	5.9	1.0	1.0 J		UG/KG	TR
SW8260B/NONE	SO	076SB-0064M-0001-SO	240-17796-26	N	2-Butanone (MEK)	17.0	2.4	2.4 J		UG/KG	TR
SW8260B/NONE	SO	076SB-0064M-0001-SO	240-17796-26	N	Acetone	17.0	28.0	17.0 U		UG/KG	L
SW8260B/NONE	SO	076SB-0064M-0001-SO	240-17796-26	N	Carbon Disulfide	4.2	2.6	2.6 J		UG/KG	TR
SW8260B/NONE	SO	076SB-0065M-0001-SO	240-17796-27	N	2-Butanone (MEK)	21.0	1.7	1.7 J		UG/KG	TR

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Qualified Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Bias	Units	Reason
SW8260B/NONE	SO	076SB-0065M-0001-SO	240-17796-27	N	Acetone	21.0	15.0	21.0 U		UG/KG	L
SW8260B/NONE	SO	076SB-0065M-0001-SO	240-17796-27	N	Carbon Disulfide	5.3	3.2	3.2 J		UG/KG	TR
SW8260B/NONE	SO	076SB-0066M-0001-SO	240-17796-28	N	2-Butanone (MEK)	18.0	7.3	7.3 J		UG/KG	TR
SW8260B/NONE	SO	076SB-0066M-0001-SO	240-17796-28	N	Acetone	18.0	66.0	18.0 U		UG/KG	L
SW8260B/NONE	SO	076SB-0066M-0001-SO	240-17796-28	N	Methylene Chloride	4.6	0.91	0.91 J		UG/KG	TR/J
Test Leach	**Matrix**	**FieldSample ID**	**LabSample ID**	**Type**	**Analyte**	**RL**	**Lab Result**	**Qualified Result**	**Bias**	**Units**	**Reason**
SW8270C/NONE	WG	076-0067-0001-ER	240-17796-20	N	3,3'-Dichlorobenzidine	4.9	4.9	4.9 UJ		UG/L	V1
SW8270C/NONE	WG	076-0067-0001-ER	240-17796-20	N	n-Nitrosodiphenylamine	0.97	0.97	0.97 UJ		UG/L	J
SW8270C/NONE	SO	076SB-0023M-0001-SO	240-17796-1	N	2,4-Dinitrophenol	330	330	330 UJ		UG/KG	J
SW8270C/NONE	SO	076SB-0023M-0001-SO	240-17796-1	N	Anthracene	6.7	5.0	5.0 J		UG/KG	TR
SW8270C/NONE	SO	076SB-0023M-0001-SO	240-17796-1	N	Benzo(k)fluoranthene	6.7	6.0	6.0 J		UG/KG	TR
SW8270C/NONE	SO	076SB-0023M-0001-SO	240-17796-1	N	bis(2-Ethylhexyl) Phthalate	50.0	31.0	31.0 J		UG/KG	TR
SW8270C/NONE	SO	076SB-0023M-0001-SO	240-17796-1	N	Dibenzofuran	50.0	7.1	7.1 J		UG/KG	TR
SW8270C/NONE	SO	076SB-0023M-0001-SO	240-17796-1	N	Fluorene	6.7	4.6	4.6 J		UG/KG	TR
SW8270C/NONE	SO	076SB-0023M-0001-SO	240-17796-1	N	Isophorone	50.0	14.0	14.0 J		UG/KG	TR
SW8270C/NONE	SO	076SB-0023M-0001-SO	240-17796-1	N	n-Nitrosodiphenylamine	50.0	50.0	50.0 UJ		UG/KG	J
SW8270C/NONE	SO	076SB-0024M-0001-SO	240-17796-3	N	bis(2-Ethylhexyl) Phthalate	120	58.0	58.0 J		UG/KG	TR
SW8270C/NONE	SO	076SB-0025M-0001-SO	240-17796-4	N	bis(2-Ethylhexyl) Phthalate	130	48.0	48.0 J		UG/KG	TR
SW8270C/NONE	SO	076SB-0026M-0001-SO	240-17796-5	N	2,4-Dinitrophenol	330	330	330 UJ		UG/KG	J
SW8270C/NONE	SO	076SB-0026M-0001-SO	240-17796-5	N	Acenaphthene	6.8	5.8	5.8 J		UG/KG	TR
SW8270C/NONE	SO	076SB-0026M-0001-SO	240-17796-5	N	bis(2-Ethylhexyl) Phthalate	51.0	30.0	30.0 J		UG/KG	TR
SW8270C/NONE	SO	076SB-0026M-0001-SO	240-17796-5	N	Dibenzofuran	51.0	7.2	7.2 J		UG/KG	TR
SW8270C/NONE	SO	076SB-0026M-0001-SO	240-17796-5	N	n-Nitrosodiphenylamine	51.0	51.0	51.0 UJ		UG/KG	J
SW8270C/NONE	SO	076SB-0027M-0001-SO	240-17796-6	N	2,4-Dinitrophenol	330	330	330 UJ		UG/KG	J
SW8270C/NONE	SO	076SB-0027M-0001-SO	240-17796-6	N	2-Methylnaphthalene	6.7	6.4	6.4 J		UG/KG	TR
SW8270C/NONE	SO	076SB-0027M-0001-SO	240-17796-6	N	bis(2-Ethylhexyl) Phthalate	50.0	26.0	26.0 J		UG/KG	TR
SW8270C/NONE	SO	076SB-0027M-0001-SO	240-17796-6	N	Fluoranthene	6.7	6.0	6.0 J		UG/KG	TR
SW8270C/NONE	SO	076SB-0027M-0001-SO	240-17796-6	N	Naphthalene	6.7	6.3	6.3 J		UG/KG	TR
SW8270C/NONE	SO	076SB-0027M-0001-SO	240-17796-6	N	n-Nitrosodiphenylamine	50.0	50.0	50.0 UJ		UG/KG	J

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Qualified Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Bias	Units	Reason
SW8270C/NONE	SO	076SB-0027M-0001-SO	240-17796-6	N	Pyrene	6.7	4.1	4.1 J		UG/KG	TR
SW8270C/NONE	SO	076SB-0029M-0001-SO	240-17796-8	N	2,4-Dinitrophenol	330	330	330 UJ		UG/KG	J
SW8270C/NONE	SO	076SB-0029M-0001-SO	240-17796-8	N	bis(2-Ethylhexyl) Phthalate	50.0	38.0	38.0 J		UG/KG	TR
SW8270C/NONE	SO	076SB-0029M-0001-SO	240-17796-8	N	Carbazole	50.0	28.0	28.0 J		UG/KG	TR
SW8270C/NONE	SO	076SB-0029M-0001-SO	240-17796-8	N	Dibenzofuran	50.0	36.0	36.0 J		UG/KG	TR
SW8270C/NONE	SO	076SB-0029M-0001-SO	240-17796-8	N	n-Nitrosodiphenylamine	50.0	50.0	50.0 UJ		UG/KG	J
SW8270C/NONE	SO	076SB-0048M-0001-SO	240-17796-33	FD	bis(2-Ethylhexyl) Phthalate	50.0	24.0	24.0 J		UG/KG	TR
SW8270C/NONE	SO	076SB-0048M-0001-SO	240-17796-33	FD	Phenanthrene	6.6	3.5	3.5 J		UG/KG	TR
SW8270C/NONE	SO	076SB-0050M-0001-SO	240-17796-35	N	bis(2-Ethylhexyl) Phthalate	120	47.0	47.0 J		UG/KG	TR
SW8270C/NONE	SO	076SB-0051M-0001-SO	240-17796-36	N	Benzo(b)fluoranthene	8.4	4.2	4.2 J		UG/KG	TR
SW8270C/NONE	SO	076SB-0051M-0001-SO	240-17796-36	N	bis(2-Ethylhexyl) Phthalate	63.0	29.0	29.0 J		UG/KG	TR
SW8270C/NONE	SO	076SB-0051M-0001-SO	240-17796-36	N	n-Nitrosodiphenylamine	63.0	63.0	63.0 UJ		UG/KG	J
SW8270C/NONE	SO	076SB-0051M-0001-SO	240-17796-36	N	Pyrene	8.4	6.7	6.7 J		UG/KG	TR
SW8270C/NONE	SO	076SB-0053M-0001-SO	240-17796-9	N	bis(2-Ethylhexyl) Phthalate	130	55.0	55.0 J		UG/KG	TR
SW8270C/NONE	SO	076SB-0054M-0001-SO	240-17796-11	N	2,4-Dinitrophenol	1700	1700	1700 UJ		UG/KG	J
SW8270C/NONE	SO	076SB-0054M-0001-SO	240-17796-11	N	n-Nitrosodiphenylamine	250	250	250 UJ		UG/KG	J
SW8270C/NONE	SO	076SB-0055M-0001-SO	240-17796-12	N	2,4-Dinitrophenol	1700	1700	1700 UJ		UG/KG	J
SW8270C/NONE	SO	076SB-0055M-0001-SO	240-17796-12	N	n-Nitrosodiphenylamine	250	250	250 UJ		UG/KG	J
SW8270C/NONE	SO	076SB-0056M-0001-SO	240-17796-13	N	2,4-Dinitrophenol	330	330	330 UJ		UG/KG	J
SW8270C/NONE	SO	076SB-0056M-0001-SO	240-17796-13	N	2-Methylnaphthalene	6.8	4.7	4.7 J		UG/KG	TR
SW8270C/NONE	SO	076SB-0056M-0001-SO	240-17796-13	N	bis(2-Ethylhexyl) Phthalate	51.0	26.0	26.0 J		UG/KG	TR
SW8270C/NONE	SO	076SB-0056M-0001-SO	240-17796-13	N	Naphthalene	6.8	3.8	3.8 J		UG/KG	TR
SW8270C/NONE	SO	076SB-0056M-0001-SO	240-17796-13	N	n-Nitrosodiphenylamine	51.0	51.0	51.0 UJ		UG/KG	J
SW8270C/NONE	SO	076SB-0057M-0001-SO	240-17796-14	N	2,4-Dinitrophenol	330	330	330 UJ		UG/KG	J
SW8270C/NONE	SO	076SB-0057M-0001-SO	240-17796-14	N	2-Methylnaphthalene	6.7	6.2	6.2 J		UG/KG	TR
SW8270C/NONE	SO	076SB-0057M-0001-SO	240-17796-14	N	bis(2-Ethylhexyl) Phthalate	51.0	24.0	24.0 J		UG/KG	TR
SW8270C/NONE	SO	076SB-0057M-0001-SO	240-17796-14	N	Naphthalene	6.7	5.1	5.1 J		UG/KG	TR
SW8270C/NONE	SO	076SB-0057M-0001-SO	240-17796-14	N	n-Nitrosodiphenylamine	51.0	51.0	51.0 UJ		UG/KG	J
SW8270C/NONE	SO	076SB-0057M-0001-SO	240-17796-14	N	Pyrene	6.7	5.6	5.6 J		UG/KG	TR

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Qualified Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Bias	Units	Reason
SW8270C/NONE	SO	076SB-0058M-0001-SO	240-17796-15	N	2,4-Dinitrophenol	330	330	330 UJ		UG/KG	J
SW8270C/NONE	SO	076SB-0058M-0001-SO	240-17796-15	N	Benzo(b)fluoranthene	6.7	4.2	4.2 J		UG/KG	TR
SW8270C/NONE	SO	076SB-0058M-0001-SO	240-17796-15	N	Benzo(g,h,i)perylene	6.7	5.1	5.1 J		UG/KG	TR
SW8270C/NONE	SO	076SB-0058M-0001-SO	240-17796-15	N	bis(2-Ethylhexyl) Phthalate	50.0	35.0	35.0 J		UG/KG	TR
SW8270C/NONE	SO	076SB-0058M-0001-SO	240-17796-15	N	n-Nitrosodiphenylamine	50.0	50.0	50.0 UJ		UG/KG	J
SW8270C/NONE	SO	076SB-0058M-0001-SO	240-17796-15	N	Pyrene	6.7	5.8	5.8 J		UG/KG	TR
SW8270C/NONE	SO	076SB-0059M-0001-SO	240-17796-16	N	2,4-Dinitrophenol	340	340	340 UJ		UG/KG	J
SW8270C/NONE	SO	076SB-0059M-0001-SO	240-17796-16	N	Benzo(b)fluoranthene	6.8	4.2	4.2 J		UG/KG	TR
SW8270C/NONE	SO	076SB-0059M-0001-SO	240-17796-16	N	bis(2-Ethylhexyl) Phthalate	51.0	27.0	27.0 J		UG/KG	TR
SW8270C/NONE	SO	076SB-0059M-0001-SO	240-17796-16	N	Fluoranthene	6.8	4.0	4.0 J		UG/KG	TR
SW8270C/NONE	SO	076SB-0059M-0001-SO	240-17796-16	N	Naphthalene	6.8	6.2	6.2 J		UG/KG	TR
SW8270C/NONE	SO	076SB-0059M-0001-SO	240-17796-16	N	n-Nitrosodiphenylamine	51.0	51.0	51.0 UJ		UG/KG	J
SW8270C/NONE	SO	076SB-0059M-0001-SO	240-17796-16	N	Phenanthrene	6.8	5.8	5.8 J		UG/KG	TR
SW8270C/NONE	SO	076SB-0059M-0001-SO	240-17796-16	N	Pyrene	6.8	4.8	4.8 J		UG/KG	TR
SW8270C/NONE	SO	076SB-0060M-0001-SO	240-17796-22	N	2,4-Dinitrophenol	1700	1700	1700 UJ		UG/KG	J
SW8270C/NONE	SO	076SB-0060M-0001-SO	240-17796-22	N	Acenaphthylene	34.0	18.0	18.0 J		UG/KG	TR
SW8270C/NONE	SO	076SB-0060M-0001-SO	240-17796-22	N	Anthracene	34.0	17.0	17.0 J		UG/KG	TR
SW8270C/NONE	SO	076SB-0060M-0001-SO	240-17796-22	N	Naphthalene	34.0	24.0	24.0 J		UG/KG	TR
SW8270C/NONE	SO	076SB-0060M-0001-SO	240-17796-22	N	n-Nitrosodiphenylamine	250	250	250 UJ		UG/KG	J
SW8270C/NONE	SO	076SB-0061M-0001-SO	240-17796-23	N	bis(2-Ethylhexyl) Phthalate	130	54.0	54.0 J		UG/KG	TR
SW8270C/NONE	SO	076SB-0062M-0001-SO	240-17796-24	N	2,4-Dinitrophenol	330	330	330 UJ		UG/KG	J
SW8270C/NONE	SO	076SB-0062M-0001-SO	240-17796-24	N	2-Methylnaphthalene	6.6	4.5	4.5 J		UG/KG	TR
SW8270C/NONE	SO	076SB-0062M-0001-SO	240-17796-24	N	Benzo(b)fluoranthene	6.6	5.4	5.4 J		UG/KG	TR
SW8270C/NONE	SO	076SB-0062M-0001-SO	240-17796-24	N	bis(2-Ethylhexyl) Phthalate	49.0	26.0	26.0 J		UG/KG	TR
SW8270C/NONE	SO	076SB-0062M-0001-SO	240-17796-24	N	Fluoranthene	6.6	6.2	6.2 J		UG/KG	TR
SW8270C/NONE	SO	076SB-0062M-0001-SO	240-17796-24	N	Naphthalene	6.6	4.6	4.6 J		UG/KG	TR
SW8270C/NONE	SO	076SB-0062M-0001-SO	240-17796-24	N	n-Nitrosodiphenylamine	49.0	49.0	49.0 UJ		UG/KG	J
SW8270C/NONE	SO	076SB-0062M-0001-SO	240-17796-24	N	Phenanthrene	6.6	5.1	5.1 J		UG/KG	TR
SW8270C/NONE	SO	076SB-0062M-0001-SO	240-17796-24	N	Pyrene	6.6	4.7	4.7 J		UG/KG	TR

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Qualified Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Bias	Units	Reason
SW8270C/NONE	SO	076SB-0063M-0001-SO	240-17796-25	N	2,4-Dinitrophenol	330	330	330 UJ		UG/KG	J
SW8270C/NONE	SO	076SB-0063M-0001-SO	240-17796-25	N	4,6-Dinitro-2-Methylphenol	150	150	150 UJ		UG/KG	M
SW8270C/NONE	SO	076SB-0063M-0001-SO	240-17796-25	N	Benzo(b)fluoranthene	6.6	5.7	5.7 J		UG/KG	TR
SW8270C/NONE	SO	076SB-0063M-0001-SO	240-17796-25	N	bis(2-Ethylhexyl) Phthalate	50.0	25.0	25.0 J		UG/KG	TR
SW8270C/NONE	SO	076SB-0063M-0001-SO	240-17796-25	N	n-Nitrosodiphenylamine	50.0	50.0	50.0 UJ		UG/KG	J
SW8270C/NONE	SO	076SB-0063M-0001-SO	240-17796-25	N	Pyrene	6.6	5.8	5.8 J		UG/KG	TR
SW8270C/NONE	SO	076SB-0065M-0001-SO	240-17796-27	N	Benzo(k)fluoranthene	17.0	9.4	9.4 J		UG/KG	TR
SW8270C/NONE	SO	076SB-0065M-0001-SO	240-17796-27	N	bis(2-Ethylhexyl) Phthalate	130	50.0	50.0 J		UG/KG	TR
SW8270C/NONE	SO	076SB-0066M-0001-SO	240-17796-28	N	Benzo(k)fluoranthene	67.0	45.0	45.0 J		UG/KG	TR
SW8270C/NONE	SO	076SS-0007M-0001-SO	240-17796-10	N	2,4-Dinitrophenol	1700	1700	1700 UJ		UG/KG	J
SW8270C/NONE	SO	076SS-0007M-0001-SO	240-17796-10	N	2-Methylnaphthalene	34.0	27.0	27.0 J		UG/KG	TR
SW8270C/NONE	SO	076SS-0007M-0001-SO	240-17796-10	N	Benzo(g,h,i)perylene	34.0	30.0	30.0 J		UG/KG	TR
SW8270C/NONE	SO	076SS-0007M-0001-SO	240-17796-10	N	Benzo(k)fluoranthene	34.0	22.0	22.0 J		UG/KG	TR
SW8270C/NONE	SO	076SS-0007M-0001-SO	240-17796-10	N	Naphthalene	34.0	26.0	26.0 J		UG/KG	TR
SW8270C/NONE	SO	076SS-0007M-0001-SO	240-17796-10	N	n-Nitrosodiphenylamine	250	250	250 UJ		UG/KG	J
SW8270C/NONE	SO	076SS-0022M-0001-SO	240-17796-2	N	2,4-Dinitrophenol	330	330	330 UJ		UG/KG	J
SW8270C/NONE	SO	076SS-0022M-0001-SO	240-17796-2	N	Anthracene	6.6	5.0	5.0 J		UG/KG	TR
SW8270C/NONE	SO	076SS-0022M-0001-SO	240-17796-2	N	bis(2-Ethylhexyl) Phthalate	50.0	29.0	29.0 J		UG/KG	TR
SW8270C/NONE	SO	076SS-0022M-0001-SO	240-17796-2	N	Dibenzofuran	50.0	8.7	8.7 J		UG/KG	TR
SW8270C/NONE	SO	076SS-0022M-0001-SO	240-17796-2	N	n-Nitrosodiphenylamine	50.0	50.0	50.0 UJ		UG/KG	J
Test Leach	**Matrix**	**FieldSample ID**	**LabSample ID**	**Type**	**Analyte**	**RL**	**Lab Result**	**Qualified Result**	**Bias**	**Units**	**Reason**
SW8330B/NONE	SO	076SB-0047M-0001-SO	240-17796-32	N	NITROGUANIDINE	0.24	0.036	0.036 J		MG/KG	TR

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Detected Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
M8015V/NONE	WG	076-0067-0001-ER	240-17796-20	N	Petroleum Hydrocarbons C6-C12	100	33.0	33.0 J	UG/L	TR

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW6020/NONE	WG	076-0067-0001-ER	240-17796-20	N	Chromium	2.0	0.60	0.60 J	UG/L	TR
SW6020/NONE	WG	076-0067-0001-ER	240-17796-20	N	Manganese	5.0	3.5	3.5 J	UG/L	TR
SW6020/NONE	WG	076-0067-0001-ER	240-17796-20	N	Nickel	5.0	20.0	20.0	UG/L	
SW6020/NONE	WG	076-0067-0001-ER	240-17796-20	N	Antimony	2.0	0.34	0.34 J	UG/L	TR
SW6020/NONE	WG	076-0067-0001-ER	240-17796-20	N	Thallium	2.0	0.75	0.75 J	UG/L	TR
SW6020/NONE	WG	076-0067-0001-ER	240-17796-20	N	Zinc	40.0	10.0	10.0 J	UG/L	TR

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW7471A/NONE	SO	076SB-0023M-0001-SO	240-17796-1	N	Mercury	0.098	0.038	0.038 J	MG/KG	TR
SW7471A/NONE	SO	076SB-0024M-0001-SO	240-17796-3	N	Mercury	0.098	0.028	0.028 J	MG/KG	TR
SW7471A/NONE	SO	076SB-0025M-0001-SO	240-17796-4	N	Mercury	0.091	0.029	0.029 J	MG/KG	TR
SW7471A/NONE	SO	076SB-0026M-0001-SO	240-17796-5	N	Mercury	0.094	0.027	0.027 J	MG/KG	TR
SW7471A/NONE	SO	076SB-0027M-0001-SO	240-17796-6	N	Mercury	0.097	0.042	0.042 J	MG/KG	TR
SW7471A/NONE	SO	076SB-0028M-0001-SO	240-17796-7	N	Mercury	0.10	0.026	0.026 J	MG/KG	TR
SW7471A/NONE	SO	076SB-0029M-0001-SO	240-17796-8	N	Mercury	0.094	0.036	0.036 J	MG/KG	TR
SW7471A/NONE	SO	076SB-0053M-0001-SO	240-17796-9	N	Mercury	0.098	0.027	0.027 J	MG/KG	TR
SW7471A/NONE	SO	076SB-0054M-0001-SO	240-17796-11	N	Mercury	0.094	0.016	0.016 J	MG/KG	TR
SW7471A/NONE	SO	076SB-0055M-0001-SO	240-17796-12	N	Mercury	0.095	0.017	0.017 J	MG/KG	TR
SW7471A/NONE	SO	076SB-0056M-0001-SO	240-17796-13	N	Mercury	0.094	0.021	0.021 J	MG/KG	TR
SW7471A/NONE	SO	076SB-0057M-0001-SO	240-17796-14	N	Mercury	0.092	0.021	0.021 J	MG/KG	TR
SW7471A/NONE	SO	076SB-0058M-0001-SO	240-17796-15	N	Mercury	0.097	0.014	0.014 J	MG/KG	TR
SW7471A/NONE	SO	076SB-0059M-0001-SO	240-17796-16	N	Mercury	0.097	0.018	0.018 J	MG/KG	TR
SW7471A/NONE	SO	076SB-0060M-0001-SO	240-17796-22	N	Mercury	0.097	0.026	0.026 J	MG/KG	TR
SW7471A/NONE	SO	076SB-0061M-0001-SO	240-17796-23	N	Mercury	0.10	0.017	0.017 J	MG/KG	TR
SW7471A/NONE	SO	076SB-0062M-0001-SO	240-17796-24	N	Mercury	0.097	0.028	0.028 J	MG/KG	TR
SW7471A/NONE	SO	076SB-0063M-0001-SO	240-17796-25	N	Mercury	0.10	0.024	0.024 J	MG/KG	TR
SW7471A/NONE	SO	076SB-0064M-0001-SO	240-17796-26	N	Mercury	0.12	0.028	0.028 J	MG/KG	TR

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Detected Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW7471A/NONE	SO	076SB-0065M-0001-SO	240-17796-27	N	Mercury	0.098	0.027	0.027 J	MG/KG	TR
SW7471A/NONE	SO	076SB-0066M-0001-SO	240-17796-28	N	Mercury	0.097	0.043	0.043 J	MG/KG	TR
SW7471A/NONE	SO	076SS-0007M-0001-SO	240-17796-10	N	Mercury	0.095	0.045	0.045 J	MG/KG	TR
SW7471A/NONE	SO	076SS-0022M-0001-SO	240-17796-2	N	Mercury	0.092	0.033	0.033 J	MG/KG	TR

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW8082/NONE	SO	076SS-0007M-0001-SO	240-17796-10	N	PCB-1260 (Arochlor 1260)	56.0	24.0	24.0 J	UG/KG	TR

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW8260B/NONE	WG	076-0067-0001-ER	240-17796-20	N	Chloroform	1.0	0.61	0.61 J	UG/L	TR
SW8260B/NONE	SO	076SB-0023M-0001-SO	240-17796-1	N	2-Butanone (MEK)	18.0	1.5	1.5 J	UG/KG	TR
SW8260B/NONE	SO	076SB-0024M-0001-SO	240-17796-3	N	2-Butanone (MEK)	24.0	2.3	2.3 J	UG/KG	TR
SW8260B/NONE	SO	076SB-0025M-0001-SO	240-17796-4	N	Carbon Disulfide	4.2	2.4	2.4 J	UG/KG	TR
SW8260B/NONE	SO	076SB-0025M-0001-SO	240-17796-4	N	2-Butanone (MEK)	17.0	1.4	1.4 J	UG/KG	TR
SW8260B/NONE	SO	076SB-0027M-0001-SO	240-17796-6	N	Methylene Chloride	5.1	0.69	0.69 J	UG/KG	TR/J
SW8260B/NONE	SO	076SB-0028M-0001-SO	240-17796-7	N	Carbon Disulfide	4.9	2.9	2.9 J	UG/KG	TR
SW8260B/NONE	SO	076SB-0029M-0001-SO	240-17796-8	N	Toluene	6.0	0.33	0.33 J	UG/KG	TR
SW8260B/NONE	SO	076SB-0029M-0001-SO	240-17796-8	N	Carbon Disulfide	6.0	3.5	3.5 J	UG/KG	TR
SW8260B/NONE	SO	076SB-0029M-0001-SO	240-17796-8	N	2-Butanone (MEK)	24.0	9.6	9.6 J	UG/KG	TR
SW8260B/NONE	SO	076SB-0029M-0001-SO	240-17796-8	N	Methylene Chloride	6.0	1.3	1.3 J	UG/KG	TR/J
SW8260B/NONE	SO	076SB-0060M-0001-SO	240-17796-22	N	Carbon Disulfide	5.2	3.1	3.1 J	UG/KG	TR
SW8260B/NONE	SO	076SB-0061M-0001-SO	240-17796-23	N	Carbon Disulfide	2.4	1.4	1.4 J	UG/KG	TR
SW8260B/NONE	SO	076SB-0061M-0001-SO	240-17796-23	N	2-Butanone (MEK)	9.7	4.3	4.3 J	UG/KG	TR
SW8260B/NONE	SO	076SB-0062M-0001-SO	240-17796-24	N	2-Butanone (MEK)	18.0	1.3	1.3 J	UG/KG	TR
SW8260B/NONE	SO	076SB-0063M-0001-SO	240-17796-25	N	Toluene	5.9	1.0	1.0 J	UG/KG	TR
SW8260B/NONE	SO	076SB-0063M-0001-SO	240-17796-25	N	Carbon Disulfide	5.9	3.5	3.5 J	UG/KG	TR
SW8260B/NONE	SO	076SB-0063M-0001-SO	240-17796-25	N	Ethylbenzene	5.9	2.4	2.4 J	UG/KG	TR
SW8260B/NONE	SO	076SB-0063M-0001-SO	240-17796-25	N	2-Butanone (MEK)	23.0	13.0	13.0 J	UG/KG	TR
SW8260B/NONE	SO	076SB-0063M-0001-SO	240-17796-25	N	Xylenes, Total	12.0	14.0	14.0	UG/KG	
SW8260B/NONE	SO	076SB-0064M-0001-SO	240-17796-26	N	Carbon Disulfide	4.2	2.6	2.6 J	UG/KG	TR

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Detected Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW8260B/NONE	SO	076SB-0064M-0001-SO	240-17796-26	N	2-Butanone (MEK)	17.0	2.4	2.4 J	UG/KG	TR
SW8260B/NONE	SO	076SB-0065M-0001-SO	240-17796-27	N	Carbon Disulfide	5.3	3.2	3.2 J	UG/KG	TR
SW8260B/NONE	SO	076SB-0065M-0001-SO	240-17796-27	N	2-Butanone (MEK)	21.0	1.7	1.7 J	UG/KG	TR
SW8260B/NONE	SO	076SB-0066M-0001-SO	240-17796-28	N	2-Butanone (MEK)	18.0	7.3	7.3 J	UG/KG	TR
SW8260B/NONE	SO	076SB-0066M-0001-SO	240-17796-28	N	Methylene Chloride	4.6	0.91	0.91 J	UG/KG	TR/J

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW8270C/NONE	SO	076SB-0023M-0001-SO	240-17796-1	N	Anthracene	6.7	5.0	5.0 J	UG/KG	TR
SW8270C/NONE	SO	076SB-0023M-0001-SO	240-17796-1	N	bis(2-Ethylhexyl) Phthalate	50.0	31.0	31.0 J	UG/KG	TR
SW8270C/NONE	SO	076SB-0023M-0001-SO	240-17796-1	N	Benzo(a)anthracene	6.7	16.0	16.0	UG/KG	
SW8270C/NONE	SO	076SB-0023M-0001-SO	240-17796-1	N	Benzo(a)pyrene	6.7	20.0	20.0	UG/KG	
SW8270C/NONE	SO	076SB-0023M-0001-SO	240-17796-1	N	Benzo(b)fluoranthene	6.7	18.0	18.0	UG/KG	
SW8270C/NONE	SO	076SB-0023M-0001-SO	240-17796-1	N	Benzo(g,h,i)perylene	6.7	8.9	8.9	UG/KG	
SW8270C/NONE	SO	076SB-0023M-0001-SO	240-17796-1	N	Benzo(k)fluoranthene	6.7	6.0	6.0 J	UG/KG	TR
SW8270C/NONE	SO	076SB-0023M-0001-SO	240-17796-1	N	Chrysene	6.7	15.0	15.0	UG/KG	
SW8270C/NONE	SO	076SB-0023M-0001-SO	240-17796-1	N	Dibenzofuran	50.0	7.1	7.1 J	UG/KG	TR
SW8270C/NONE	SO	076SB-0023M-0001-SO	240-17796-1	N	Fluorene	6.7	4.6	4.6 J	UG/KG	TR
SW8270C/NONE	SO	076SB-0023M-0001-SO	240-17796-1	N	Fluoranthene	6.7	38.0	38.0	UG/KG	
SW8270C/NONE	SO	076SB-0023M-0001-SO	240-17796-1	N	Indeno(1,2,3-c,d)pyrene	6.7	12.0	12.0	UG/KG	
SW8270C/NONE	SO	076SB-0023M-0001-SO	240-17796-1	N	Isophorone	50.0	14.0	14.0 J	UG/KG	TR
SW8270C/NONE	SO	076SB-0023M-0001-SO	240-17796-1	N	2-Methylnaphthalene	6.7	19.0	19.0	UG/KG	
SW8270C/NONE	SO	076SB-0023M-0001-SO	240-17796-1	N	Naphthalene	6.7	16.0	16.0	UG/KG	
SW8270C/NONE	SO	076SB-0023M-0001-SO	240-17796-1	N	Phenanthrene	6.7	33.0	33.0	UG/KG	
SW8270C/NONE	SO	076SB-0023M-0001-SO	240-17796-1	N	Pyrene	6.7	27.0	27.0	UG/KG	
SW8270C/NONE	SO	076SB-0024M-0001-SO	240-17796-3	N	bis(2-Ethylhexyl) Phthalate	120	58.0	58.0 J	UG/KG	TR
SW8270C/NONE	SO	076SB-0025M-0001-SO	240-17796-4	N	bis(2-Ethylhexyl) Phthalate	130	48.0	48.0 J	UG/KG	TR
SW8270C/NONE	SO	076SB-0026M-0001-SO	240-17796-5	N	Acenaphthene	6.8	5.8	5.8 J	UG/KG	TR
SW8270C/NONE	SO	076SB-0026M-0001-SO	240-17796-5	N	Anthracene	6.8	17.0	17.0	UG/KG	
SW8270C/NONE	SO	076SB-0026M-0001-SO	240-17796-5	N	bis(2-Ethylhexyl) Phthalate	51.0	30.0	30.0 J	UG/KG	TR

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Detected Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW8270C/NONE	SO	076SB-0026M-0001-SO	240-17796-5	N	Benzo(a)anthracene	6.8	34.0	34.0	UG/KG	
SW8270C/NONE	SO	076SB-0026M-0001-SO	240-17796-5	N	Benzo(a)pyrene	6.8	34.0	34.0	UG/KG	
SW8270C/NONE	SO	076SB-0026M-0001-SO	240-17796-5	N	Benzo(b)fluoranthene	6.8	33.0	33.0	UG/KG	
SW8270C/NONE	SO	076SB-0026M-0001-SO	240-17796-5	N	Benzo(g,h,i)perylene	6.8	16.0	16.0	UG/KG	
SW8270C/NONE	SO	076SB-0026M-0001-SO	240-17796-5	N	Benzo(k)fluoranthene	6.8	15.0	15.0	UG/KG	
SW8270C/NONE	SO	076SB-0026M-0001-SO	240-17796-5	N	Chrysene	6.8	33.0	33.0	UG/KG	
SW8270C/NONE	SO	076SB-0026M-0001-SO	240-17796-5	N	Dibenzofuran	51.0	7.2	7.2 J	UG/KG	TR
SW8270C/NONE	SO	076SB-0026M-0001-SO	240-17796-5	N	Fluorene	6.8	9.8	9.8	UG/KG	
SW8270C/NONE	SO	076SB-0026M-0001-SO	240-17796-5	N	Fluoranthene	6.8	91.0	91.0	UG/KG	
SW8270C/NONE	SO	076SB-0026M-0001-SO	240-17796-5	N	Indeno(1,2,3-c,d)pyrene	6.8	19.0	19.0	UG/KG	
SW8270C/NONE	SO	076SB-0026M-0001-SO	240-17796-5	N	2-Methylnaphthalene	6.8	8.0	8.0	UG/KG	
SW8270C/NONE	SO	076SB-0026M-0001-SO	240-17796-5	N	Naphthalene	6.8	10.0	10.0	UG/KG	
SW8270C/NONE	SO	076SB-0026M-0001-SO	240-17796-5	N	Phenanthrene	6.8	78.0	78.0	UG/KG	
SW8270C/NONE	SO	076SB-0026M-0001-SO	240-17796-5	N	Pyrene	6.8	65.0	65.0	UG/KG	
SW8270C/NONE	SO	076SB-0027M-0001-SO	240-17796-6	N	bis(2-Ethylhexyl) Phthalate	50.0	26.0	26.0 J	UG/KG	TR
SW8270C/NONE	SO	076SB-0027M-0001-SO	240-17796-6	N	Benzo(a)pyrene	6.7	9.7	9.7	UG/KG	
SW8270C/NONE	SO	076SB-0027M-0001-SO	240-17796-6	N	Fluoranthene	6.7	6.0	6.0 J	UG/KG	TR
SW8270C/NONE	SO	076SB-0027M-0001-SO	240-17796-6	N	2-Methylnaphthalene	6.7	6.4	6.4 J	UG/KG	TR
SW8270C/NONE	SO	076SB-0027M-0001-SO	240-17796-6	N	Naphthalene	6.7	6.3	6.3 J	UG/KG	TR
SW8270C/NONE	SO	076SB-0027M-0001-SO	240-17796-6	N	Phenanthrene	6.7	8.1	8.1	UG/KG	
SW8270C/NONE	SO	076SB-0027M-0001-SO	240-17796-6	N	Pyrene	6.7	4.1	4.1 J	UG/KG	TR
SW8270C/NONE	SO	076SB-0029M-0001-SO	240-17796-8	N	Acenaphthene	6.7	22.0	22.0	UG/KG	
SW8270C/NONE	SO	076SB-0029M-0001-SO	240-17796-8	N	Anthracene	6.7	72.0	72.0	UG/KG	
SW8270C/NONE	SO	076SB-0029M-0001-SO	240-17796-8	N	bis(2-Ethylhexyl) Phthalate	50.0	38.0	38.0 J	UG/KG	TR
SW8270C/NONE	SO	076SB-0029M-0001-SO	240-17796-8	N	Benzo(a)anthracene	6.7	110	110	UG/KG	
SW8270C/NONE	SO	076SB-0029M-0001-SO	240-17796-8	N	Benzo(a)pyrene	6.7	88.0	88.0	UG/KG	
SW8270C/NONE	SO	076SB-0029M-0001-SO	240-17796-8	N	Benzo(b)fluoranthene	6.7	100	100	UG/KG	
SW8270C/NONE	SO	076SB-0029M-0001-SO	240-17796-8	N	Benzo(g,h,i)perylene	6.7	48.0	48.0	UG/KG	

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Detected Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW8270C/NONE	SO	076SB-0029M-0001-SO	240-17796-8	N	Benzo(k)fluoranthene	6.7	37.0	37.0	UG/KG	
SW8270C/NONE	SO	076SB-0029M-0001-SO	240-17796-8	N	Carbazole	50.0	28.0	28.0 J	UG/KG	TR
SW8270C/NONE	SO	076SB-0029M-0001-SO	240-17796-8	N	Chrysene	6.7	100	100	UG/KG	
SW8270C/NONE	SO	076SB-0029M-0001-SO	240-17796-8	N	Dibenz(a,h)anthracene	6.7	24.0	24.0	UG/KG	
SW8270C/NONE	SO	076SB-0029M-0001-SO	240-17796-8	N	Dibenzofuran	50.0	36.0	36.0 J	UG/KG	TR
SW8270C/NONE	SO	076SB-0029M-0001-SO	240-17796-8	N	Fluorene	6.7	46.0	46.0	UG/KG	
SW8270C/NONE	SO	076SB-0029M-0001-SO	240-17796-8	N	Fluoranthene	6.7	290	290	UG/KG	
SW8270C/NONE	SO	076SB-0029M-0001-SO	240-17796-8	N	Indeno(1,2,3-c,d)pyrene	6.7	44.0	44.0	UG/KG	
SW8270C/NONE	SO	076SB-0029M-0001-SO	240-17796-8	N	2-Methylnaphthalene	6.7	24.0	24.0	UG/KG	
SW8270C/NONE	SO	076SB-0029M-0001-SO	240-17796-8	N	Naphthalene	6.7	38.0	38.0	UG/KG	
SW8270C/NONE	SO	076SB-0029M-0001-SO	240-17796-8	N	Phenanthrene	6.7	330	330	UG/KG	
SW8270C/NONE	SO	076SB-0029M-0001-SO	240-17796-8	N	Pyrene	6.7	200	200	UG/KG	
SW8270C/NONE	SO	076SB-0048M-0001-SO	240-17796-33	FD	bis(2-Ethylhexyl) Phthalate	50.0	24.0	24.0 J	UG/KG	TR
SW8270C/NONE	SO	076SB-0048M-0001-SO	240-17796-33	FD	Phenanthrene	6.6	3.5	3.5 J	UG/KG	TR
SW8270C/NONE	SO	076SB-0050M-0001-SO	240-17796-35	N	bis(2-Ethylhexyl) Phthalate	120	47.0	47.0 J	UG/KG	TR
SW8270C/NONE	SO	076SB-0051M-0001-SO	240-17796-36	N	bis(2-Ethylhexyl) Phthalate	63.0	29.0	29.0 J	UG/KG	TR
SW8270C/NONE	SO	076SB-0051M-0001-SO	240-17796-36	N	Benzo(b)fluoranthene	8.4	4.2	4.2 J	UG/KG	TR
SW8270C/NONE	SO	076SB-0051M-0001-SO	240-17796-36	N	Benzo(g,h,i)perylene	8.4	12.0	12.0	UG/KG	
SW8270C/NONE	SO	076SB-0051M-0001-SO	240-17796-36	N	2-Methylnaphthalene	8.4	8.6	8.6	UG/KG	
SW8270C/NONE	SO	076SB-0051M-0001-SO	240-17796-36	N	Pyrene	8.4	6.7	6.7 J	UG/KG	TR
SW8270C/NONE	SO	076SB-0053M-0001-SO	240-17796-9	N	bis(2-Ethylhexyl) Phthalate	130	55.0	55.0 J	UG/KG	TR
SW8270C/NONE	SO	076SB-0056M-0001-SO	240-17796-13	N	bis(2-Ethylhexyl) Phthalate	51.0	26.0	26.0 J	UG/KG	TR
SW8270C/NONE	SO	076SB-0056M-0001-SO	240-17796-13	N	2-Methylnaphthalene	6.8	4.7	4.7 J	UG/KG	TR
SW8270C/NONE	SO	076SB-0056M-0001-SO	240-17796-13	N	Naphthalene	6.8	3.8	3.8 J	UG/KG	TR
SW8270C/NONE	SO	076SB-0057M-0001-SO	240-17796-14	N	bis(2-Ethylhexyl) Phthalate	51.0	24.0	24.0 J	UG/KG	TR
SW8270C/NONE	SO	076SB-0057M-0001-SO	240-17796-14	N	2-Methylnaphthalene	6.7	6.2	6.2 J	UG/KG	TR
SW8270C/NONE	SO	076SB-0057M-0001-SO	240-17796-14	N	Naphthalene	6.7	5.1	5.1 J	UG/KG	TR
SW8270C/NONE	SO	076SB-0057M-0001-SO	240-17796-14	N	Pyrene	6.7	5.6	5.6 J	UG/KG	TR

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Detected Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW8270C/NONE	SO	076SB-0058M-0001-SO	240-17796-15	N	bis(2-Ethylhexyl) Phthalate	50.0	35.0	35.0 J	UG/KG	TR
SW8270C/NONE	SO	076SB-0058M-0001-SO	240-17796-15	N	Benzo(b)fluoranthene	6.7	4.2	4.2 J	UG/KG	TR
SW8270C/NONE	SO	076SB-0058M-0001-SO	240-17796-15	N	Benzo(g,h,i)perylene	6.7	5.1	5.1 J	UG/KG	TR
SW8270C/NONE	SO	076SB-0058M-0001-SO	240-17796-15	N	2-Methylnaphthalene	6.7	9.0	9.0	UG/KG	
SW8270C/NONE	SO	076SB-0058M-0001-SO	240-17796-15	N	Naphthalene	6.7	10.0	10.0	UG/KG	
SW8270C/NONE	SO	076SB-0058M-0001-SO	240-17796-15	N	Pyrene	6.7	5.8	5.8 J	UG/KG	TR
SW8270C/NONE	SO	076SB-0059M-0001-SO	240-17796-16	N	bis(2-Ethylhexyl) Phthalate	51.0	27.0	27.0 J	UG/KG	TR
SW8270C/NONE	SO	076SB-0059M-0001-SO	240-17796-16	N	Benzo(b)fluoranthene	6.8	4.2	4.2 J	UG/KG	TR
SW8270C/NONE	SO	076SB-0059M-0001-SO	240-17796-16	N	Fluoranthene	6.8	4.0	4.0 J	UG/KG	TR
SW8270C/NONE	SO	076SB-0059M-0001-SO	240-17796-16	N	2-Methylnaphthalene	6.8	9.3	9.3	UG/KG	
SW8270C/NONE	SO	076SB-0059M-0001-SO	240-17796-16	N	Naphthalene	6.8	6.2	6.2 J	UG/KG	TR
SW8270C/NONE	SO	076SB-0059M-0001-SO	240-17796-16	N	Phenanthrene	6.8	5.8	5.8 J	UG/KG	TR
SW8270C/NONE	SO	076SB-0059M-0001-SO	240-17796-16	N	Pyrene	6.8	4.8	4.8 J	UG/KG	TR
SW8270C/NONE	SO	076SB-0060M-0001-SO	240-17796-22	N	Acenaphthylene	34.0	18.0	18.0 J	UG/KG	TR
SW8270C/NONE	SO	076SB-0060M-0001-SO	240-17796-22	N	Anthracene	34.0	17.0	17.0 J	UG/KG	TR
SW8270C/NONE	SO	076SB-0060M-0001-SO	240-17796-22	N	Benzo(a)anthracene	34.0	92.0	92.0	UG/KG	
SW8270C/NONE	SO	076SB-0060M-0001-SO	240-17796-22	N	Benzo(a)pyrene	34.0	120	120	UG/KG	
SW8270C/NONE	SO	076SB-0060M-0001-SO	240-17796-22	N	Benzo(b)fluoranthene	34.0	87.0	87.0	UG/KG	
SW8270C/NONE	SO	076SB-0060M-0001-SO	240-17796-22	N	Benzo(g,h,i)perylene	34.0	58.0	58.0	UG/KG	
SW8270C/NONE	SO	076SB-0060M-0001-SO	240-17796-22	N	Benzo(k)fluoranthene	34.0	55.0	55.0	UG/KG	
SW8270C/NONE	SO	076SB-0060M-0001-SO	240-17796-22	N	Chrysene	34.0	110	110	UG/KG	
SW8270C/NONE	SO	076SB-0060M-0001-SO	240-17796-22	N	Fluoranthene	34.0	190	190	UG/KG	
SW8270C/NONE	SO	076SB-0060M-0001-SO	240-17796-22	N	Indeno(1,2,3-c,d)pyrene	34.0	66.0	66.0	UG/KG	
SW8270C/NONE	SO	076SB-0060M-0001-SO	240-17796-22	N	Naphthalene	34.0	24.0	24.0 J	UG/KG	TR
SW8270C/NONE	SO	076SB-0060M-0001-SO	240-17796-22	N	Phenanthrene	34.0	100	100	UG/KG	
SW8270C/NONE	SO	076SB-0060M-0001-SO	240-17796-22	N	Pyrene	34.0	140	140	UG/KG	
SW8270C/NONE	SO	076SB-0061M-0001-SO	240-17796-23	N	bis(2-Ethylhexyl) Phthalate	130	54.0	54.0 J	UG/KG	TR
SW8270C/NONE	SO	076SB-0062M-0001-SO	240-17796-24	N	bis(2-Ethylhexyl) Phthalate	49.0	26.0	26.0 J	UG/KG	TR

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Detected Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW8270C/NONE	SO	076SB-0062M-0001-SO	240-17796-24	N	Benzo(a)pyrene	6.6	9.8	9.8	UG/KG	
SW8270C/NONE	SO	076SB-0062M-0001-SO	240-17796-24	N	Benzo(b)fluoranthene	6.6	5.4	5.4 J	UG/KG	TR
SW8270C/NONE	SO	076SB-0062M-0001-SO	240-17796-24	N	Fluoranthene	6.6	6.2	6.2 J	UG/KG	TR
SW8270C/NONE	SO	076SB-0062M-0001-SO	240-17796-24	N	2-Methylnaphthalene	6.6	4.5	4.5 J	UG/KG	TR
SW8270C/NONE	SO	076SB-0062M-0001-SO	240-17796-24	N	Naphthalene	6.6	4.6	4.6 J	UG/KG	TR
SW8270C/NONE	SO	076SB-0062M-0001-SO	240-17796-24	N	Phenanthrene	6.6	5.1	5.1 J	UG/KG	TR
SW8270C/NONE	SO	076SB-0062M-0001-SO	240-17796-24	N	Pyrene	6.6	4.7	4.7 J	UG/KG	TR
SW8270C/NONE	SO	076SB-0063M-0001-SO	240-17796-25	N	bis(2-Ethylhexyl) Phthalate	50.0	25.0	25.0 J	UG/KG	TR
SW8270C/NONE	SO	076SB-0063M-0001-SO	240-17796-25	N	Benzo(b)fluoranthene	6.6	5.7	5.7 J	UG/KG	TR
SW8270C/NONE	SO	076SB-0063M-0001-SO	240-17796-25	N	Fluoranthene	6.6	7.6	7.6	UG/KG	
SW8270C/NONE	SO	076SB-0063M-0001-SO	240-17796-25	N	2-Methylnaphthalene	6.6	25.0	25.0	UG/KG	
SW8270C/NONE	SO	076SB-0063M-0001-SO	240-17796-25	N	Naphthalene	6.6	16.0	16.0	UG/KG	
SW8270C/NONE	SO	076SB-0063M-0001-SO	240-17796-25	N	Phenanthrene	6.6	7.4	7.4	UG/KG	
SW8270C/NONE	SO	076SB-0063M-0001-SO	240-17796-25	N	Pyrene	6.6	5.8	5.8 J	UG/KG	TR
SW8270C/NONE	SO	076SB-0065M-0001-SO	240-17796-27	N	bis(2-Ethylhexyl) Phthalate	130	50.0	50.0 J	UG/KG	TR
SW8270C/NONE	SO	076SB-0065M-0001-SO	240-17796-27	N	Benzo(a)anthracene	17.0	32.0	32.0	UG/KG	
SW8270C/NONE	SO	076SB-0065M-0001-SO	240-17796-27	N	Benzo(a)pyrene	17.0	39.0	39.0	UG/KG	
SW8270C/NONE	SO	076SB-0065M-0001-SO	240-17796-27	N	Benzo(b)fluoranthene	17.0	43.0	43.0	UG/KG	
SW8270C/NONE	SO	076SB-0065M-0001-SO	240-17796-27	N	Benzo(g,h,i)perylene	17.0	21.0	21.0	UG/KG	
SW8270C/NONE	SO	076SB-0065M-0001-SO	240-17796-27	N	Benzo(k)fluoranthene	17.0	9.4	9.4 J	UG/KG	TR
SW8270C/NONE	SO	076SB-0065M-0001-SO	240-17796-27	N	Chrysene	17.0	29.0	29.0	UG/KG	
SW8270C/NONE	SO	076SB-0065M-0001-SO	240-17796-27	N	Fluoranthene	17.0	59.0	59.0	UG/KG	
SW8270C/NONE	SO	076SB-0065M-0001-SO	240-17796-27	N	Indeno(1,2,3-c,d)pyrene	17.0	26.0	26.0	UG/KG	
SW8270C/NONE	SO	076SB-0065M-0001-SO	240-17796-27	N	Phenanthrene	17.0	34.0	34.0	UG/KG	
SW8270C/NONE	SO	076SB-0065M-0001-SO	240-17796-27	N	Pyrene	17.0	43.0	43.0	UG/KG	
SW8270C/NONE	SO	076SB-0066M-0001-SO	240-17796-28	N	Benzo(a)anthracene	67.0	130	130	UG/KG	
SW8270C/NONE	SO	076SB-0066M-0001-SO	240-17796-28	N	Benzo(a)pyrene	67.0	170	170	UG/KG	
SW8270C/NONE	SO	076SB-0066M-0001-SO	240-17796-28	N	Benzo(b)fluoranthene	67.0	190	190	UG/KG	

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Detected Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW8270C/NONE	SO	076SB-0066M-0001-SO	240-17796-28	N	Benzo(g,h,i)perylene	67.0	68.0	68.0	UG/KG	
SW8270C/NONE	SO	076SB-0066M-0001-SO	240-17796-28	N	Benzo(k)fluoranthene	67.0	45.0	45.0 J	UG/KG	TR
SW8270C/NONE	SO	076SB-0066M-0001-SO	240-17796-28	N	Chrysene	67.0	140	140	UG/KG	
SW8270C/NONE	SO	076SB-0066M-0001-SO	240-17796-28	N	Fluoranthene	67.0	260	260	UG/KG	
SW8270C/NONE	SO	076SB-0066M-0001-SO	240-17796-28	N	Indeno(1,2,3-c,d)pyrene	67.0	100	100	UG/KG	
SW8270C/NONE	SO	076SB-0066M-0001-SO	240-17796-28	N	Phenanthrene	67.0	140	140	UG/KG	
SW8270C/NONE	SO	076SB-0066M-0001-SO	240-17796-28	N	Pyrene	67.0	190	190	UG/KG	
SW8270C/NONE	SO	076SS-0007M-0001-SO	240-17796-10	N	Benzo(a)anthracene	34.0	37.0	37.0	UG/KG	
SW8270C/NONE	SO	076SS-0007M-0001-SO	240-17796-10	N	Benzo(a)pyrene	34.0	74.0	74.0	UG/KG	
SW8270C/NONE	SO	076SS-0007M-0001-SO	240-17796-10	N	Benzo(b)fluoranthene	34.0	59.0	59.0	UG/KG	
SW8270C/NONE	SO	076SS-0007M-0001-SO	240-17796-10	N	Benzo(g,h,i)perylene	34.0	30.0	30.0 J	UG/KG	TR
SW8270C/NONE	SO	076SS-0007M-0001-SO	240-17796-10	N	Benzo(k)fluoranthene	34.0	22.0	22.0 J	UG/KG	TR
SW8270C/NONE	SO	076SS-0007M-0001-SO	240-17796-10	N	Chrysene	34.0	49.0	49.0	UG/KG	
SW8270C/NONE	SO	076SS-0007M-0001-SO	240-17796-10	N	Fluoranthene	34.0	63.0	63.0	UG/KG	
SW8270C/NONE	SO	076SS-0007M-0001-SO	240-17796-10	N	Indeno(1,2,3-c,d)pyrene	34.0	50.0	50.0	UG/KG	
SW8270C/NONE	SO	076SS-0007M-0001-SO	240-17796-10	N	2-Methylnaphthalene	34.0	27.0	27.0 J	UG/KG	TR
SW8270C/NONE	SO	076SS-0007M-0001-SO	240-17796-10	N	Naphthalene	34.0	26.0	26.0 J	UG/KG	TR
SW8270C/NONE	SO	076SS-0007M-0001-SO	240-17796-10	N	Phenanthrene	34.0	39.0	39.0	UG/KG	
SW8270C/NONE	SO	076SS-0007M-0001-SO	240-17796-10	N	Pyrene	34.0	48.0	48.0	UG/KG	
SW8270C/NONE	SO	076SS-0022M-0001-SO	240-17796-2	N	Anthracene	6.6	5.0	5.0 J	UG/KG	TR
SW8270C/NONE	SO	076SS-0022M-0001-SO	240-17796-2	N	bis(2-Ethylhexyl) Phthalate	50.0	29.0	29.0 J	UG/KG	TR
SW8270C/NONE	SO	076SS-0022M-0001-SO	240-17796-2	N	Benzo(a)anthracene	6.6	7.0	7.0	UG/KG	
SW8270C/NONE	SO	076SS-0022M-0001-SO	240-17796-2	N	Benzo(a)pyrene	6.6	12.0	12.0	UG/KG	
SW8270C/NONE	SO	076SS-0022M-0001-SO	240-17796-2	N	Benzo(b)fluoranthene	6.6	7.1	7.1	UG/KG	
SW8270C/NONE	SO	076SS-0022M-0001-SO	240-17796-2	N	Chrysene	6.6	7.1	7.1	UG/KG	
SW8270C/NONE	SO	076SS-0022M-0001-SO	240-17796-2	N	Dibenzofuran	50.0	8.7	8.7 J	UG/KG	TR
SW8270C/NONE	SO	076SS-0022M-0001-SO	240-17796-2	N	Fluorene	6.6	8.9	8.9	UG/KG	
SW8270C/NONE	SO	076SS-0022M-0001-SO	240-17796-2	N	Fluoranthene	6.6	24.0	24.0	UG/KG	

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Detected Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW8270C/NONE	SO	076SS-0022M-0001-SO	240-17796-2	N	2-Methylnaphthalene	6.6	9.2	9.2	UG/KG	
SW8270C/NONE	SO	076SS-0022M-0001-SO	240-17796-2	N	Naphthalene	6.6	13.0	13.0	UG/KG	
SW8270C/NONE	SO	076SS-0022M-0001-SO	240-17796-2	N	Phenanthrene	6.6	39.0	39.0	UG/KG	
SW8270C/NONE	SO	076SS-0022M-0001-SO	240-17796-2	N	Pyrene	6.6	14.0	14.0	UG/KG	

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW8330B/NONE	SO	076SB-0047M-0001-SO	240-17796-32	N	NITROGUANIDINE	0.24	0.036	0.036 J	MG/KG	TR

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Rejected Results

--No Records Found--

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Anomalies Count

SDG Name: 240-17796-1_(76-SB,SS,SW)

Test/Extraction Method/Leach	# of Field Samples Outside of Compliance	# of Analytes Outside of Compliance
E353.2/METHOD/NONE	17	17
SW6020/TOTAL/NONE	1	9
SW7471A/TOTAL/NONE	1	1
SW8081/SW3520C/NONE	1	5
SW8082/SW3540C/NONE	12	84
SW8260B/SW5035/NONE	13	221
SW8270C/SW3550/NONE	31	561
SW8330B/METHOD/NONE	4	15

Anomalies are cases where the reported RL exceeds that specified in the governing project document.

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Reporting Anomalies

SDG Name: 240-17796-1_(76-SB,SS,SW)

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
E353.2/NONE	076SB-0044M-0001-SO	N	1	Nitrocellulose	51 U	7.9	51	5	MG/KG
E353.2/NONE	076SB-0045M-0001-SO	N	1	Nitrocellulose	50 U	7.7	50	5	MG/KG
E353.2/NONE	076SB-0046M-0001-SO	N	1	Nitrocellulose	47 U	7.4	47	5	MG/KG
E353.2/NONE	076SB-0047M-0001-SO	N	1	Nitrocellulose	50 U	7.8	50	5	MG/KG
E353.2/NONE	076SB-0048M-0001-SO	FD	1	Nitrocellulose	51 U	8	51	5	MG/KG
E353.2/NONE	076SB-0049M-0001-SO	N	1	Nitrocellulose	51 U	7.9	51	5	MG/KG
E353.2/NONE	076SB-0050M-0001-SO	N	1	Nitrocellulose	46 U	7.2	46	5	MG/KG
E353.2/NONE	076SB-0051M-0001-SO	N	1	Nitrocellulose	61 U	9.6	61	5	MG/KG
E353.2/NONE	076SB-0053M-0001-SO	N	1	Nitrocellulose	48 U	7.5	48	5	MG/KG
E353.2/NONE	076SB-0054M-0001-SO	N	1	Nitrocellulose	46 U	7.2	46	5	MG/KG
E353.2/NONE	076SB-0055M-0001-SO	N	1	Nitrocellulose	46 U	7.2	46	5	MG/KG
E353.2/NONE	076SB-0056M-0001-SO	N	1	Nitrocellulose	50 U	7.7	50	5	MG/KG
E353.2/NONE	076SB-0057M-0001-SO	N	1	Nitrocellulose	51 U	7.9	51	5	MG/KG
E353.2/NONE	076SB-0058M-0001-SO	N	1	Nitrocellulose	47 U	7.3	47	5	MG/KG
E353.2/NONE	076SB-0059M-0001-SO	N	1	Nitrocellulose	49 U	7.6	49	5	MG/KG
E353.2/NONE	076SS-0007M-0001-SO	N	1	Nitrocellulose	44 U	6.9	44	5	MG/KG
E353.2/NONE	076SS-0022M-0001-SO	N	1	Nitrocellulose	46 U	7.2	46	5	MG/KG

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW6020/NONE	076-0067-0001-ER	N	1	Aluminum	60 U	20	60	50	UG/L
SW6020/NONE	076-0067-0001-ER	N	1	Cadmium	2 U	0.4	2	0.5	UG/L
SW6020/NONE	076-0067-0001-ER	N	1	Calcium	2000 U	540	2000	100	UG/L
SW6020/NONE	076-0067-0001-ER	N	1	Iron	150 U	44	150	100	UG/L
SW6020/NONE	076-0067-0001-ER	N	1	Magnesium	1000 U	120	1000	100	UG/L
SW6020/NONE	076-0067-0001-ER	N	1	Potassium	1000 U	16	1000	200	UG/L
SW6020/NONE	076-0067-0001-ER	N	1	Sodium	1000 U	160	1000	200	UG/L
SW6020/NONE	076-0067-0001-ER	N	1	Thallium	0.75 J	0.32	2	1	UG/L
SW6020/NONE	076-0067-0001-ER	N	1	Zinc	10 J	8.8	40	10	UG/L

Reporting Anomalies are cases where the reported RL exceeds that specified in the governing project document.

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Reporting Anomalies

SDG Name: 240-17796-1_(76-SB,SS,SW)

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW7471A/NONE	076SB-0064M-0001-SO	N	1	Mercury	0.0283 J	0.016	0.12	0.1	MG/KG

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW8081/NONE	076-0067-0001-ER	N	1	Aldrin	0.048 U	0.0079	0.048	0.03	UG/L
SW8081/NONE	076-0067-0001-ER	N	1	alpha-BHC (alpha-Hexachlorocyclohexane)	0.048 U	0.0067	0.048	0.03	UG/L
SW8081/NONE	076-0067-0001-ER	N	1	Dieldrin	0.048 U	0.0072	0.048	0.03	UG/L
SW8081/NONE	076-0067-0001-ER	N	1	Heptachlor	0.048 U	0.0077	0.048	0.03	UG/L
SW8081/NONE	076-0067-0001-ER	N	1	Heptachlor Epoxide	0.048 U	0.0068	0.048	0.03	UG/L

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW8082/NONE	076-0067-0001-ER	N	1	PCB-1016 (Arochlor 1016)	0.48 U	0.16	0.48	0.2	UG/L
SW8082/NONE	076-0067-0001-ER	N	1	PCB-1221 (Arochlor 1221)	0.48 U	0.13	0.48	0.2	UG/L
SW8082/NONE	076-0067-0001-ER	N	1	PCB-1232 (Arochlor 1232)	0.48 U	0.15	0.48	0.2	UG/L
SW8082/NONE	076-0067-0001-ER	N	1	PCB-1242 (Arochlor 1242)	0.48 U	0.21	0.48	0.2	UG/L
SW8082/NONE	076-0067-0001-ER	N	1	PCB-1248 (Arochlor 1248)	0.48 U	0.096	0.48	0.2	UG/L
SW8082/NONE	076-0067-0001-ER	N	1	PCB-1254 (Arochlor 1254)	0.48 U	0.15	0.48	0.2	UG/L
SW8082/NONE	076-0067-0001-ER	N	1	PCB-1260 (Arochlor 1260)	0.48 U	0.16	0.48	0.2	UG/L
SW8082/NONE	076SB-0053M-0001-SO	N	1	PCB-1016 (Arochlor 1016)	66 U	21	66	33	UG/KG
SW8082/NONE	076SB-0053M-0001-SO	N	1	PCB-1221 (Arochlor 1221)	51 U	16	51	33	UG/KG
SW8082/NONE	076SB-0053M-0001-SO	N	1	PCB-1232 (Arochlor 1232)	46 U	14	46	33	UG/KG
SW8082/NONE	076SB-0053M-0001-SO	N	1	PCB-1242 (Arochlor 1242)	41 U	13	41	33	UG/KG
SW8082/NONE	076SB-0053M-0001-SO	N	1	PCB-1248 (Arochlor 1248)	56 U	17	56	33	UG/KG
SW8082/NONE	076SB-0053M-0001-SO	N	1	PCB-1254 (Arochlor 1254)	56 U	17	56	33	UG/KG
SW8082/NONE	076SB-0053M-0001-SO	N	1	PCB-1260 (Arochlor 1260)	56 U	17	56	33	UG/KG
SW8082/NONE	076SB-0054M-0001-SO	N	1	PCB-1016 (Arochlor 1016)	65 U	21	65	33	UG/KG
SW8082/NONE	076SB-0054M-0001-SO	N	1	PCB-1221 (Arochlor 1221)	50 U	16	50	33	UG/KG
SW8082/NONE	076SB-0054M-0001-SO	N	1	PCB-1232 (Arochlor 1232)	45 U	14	45	33	UG/KG
SW8082/NONE	076SB-0054M-0001-SO	N	1	PCB-1242 (Arochlor 1242)	40 U	13	40	33	UG/KG
SW8082/NONE	076SB-0054M-0001-SO	N	1	PCB-1248 (Arochlor 1248)	55 U	17	55	33	UG/KG
SW8082/NONE	076SB-0054M-0001-SO	N	1	PCB-1254 (Arochlor 1254)	55 U	17	55	33	UG/KG

Reporting Anomalies are cases where the reported RL exceeds that specified in the governing project document.

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Reporting Anomalies

SDG Name: 240-17796-1_(76-SB,SS,SW)

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW8082/NONE	076SB-0054M-0001-SO	N	1	PCB-1260 (Arochlor 1260)	55 U	17	55	33	UG/KG
SW8082/NONE	076SB-0055M-0001-SO	N	1	PCB-1016 (Arochlor 1016)	65 U	21	65	33	UG/KG
SW8082/NONE	076SB-0055M-0001-SO	N	1	PCB-1221 (Arochlor 1221)	50 U	16	50	33	UG/KG
SW8082/NONE	076SB-0055M-0001-SO	N	1	PCB-1232 (Arochlor 1232)	45 U	14	45	33	UG/KG
SW8082/NONE	076SB-0055M-0001-SO	N	1	PCB-1242 (Arochlor 1242)	40 U	13	40	33	UG/KG
SW8082/NONE	076SB-0055M-0001-SO	N	1	PCB-1248 (Arochlor 1248)	55 U	17	55	33	UG/KG
SW8082/NONE	076SB-0055M-0001-SO	N	1	PCB-1254 (Arochlor 1254)	55 U	17	55	33	UG/KG
SW8082/NONE	076SB-0055M-0001-SO	N	1	PCB-1260 (Arochlor 1260)	55 U	17	55	33	UG/KG
SW8082/NONE	076SB-0056M-0001-SO	N	1	PCB-1016 (Arochlor 1016)	65 U	21	65	33	UG/KG
SW8082/NONE	076SB-0056M-0001-SO	N	1	PCB-1221 (Arochlor 1221)	50 U	16	50	33	UG/KG
SW8082/NONE	076SB-0056M-0001-SO	N	1	PCB-1232 (Arochlor 1232)	45 U	14	45	33	UG/KG
SW8082/NONE	076SB-0056M-0001-SO	N	1	PCB-1242 (Arochlor 1242)	40 U	13	40	33	UG/KG
SW8082/NONE	076SB-0056M-0001-SO	N	1	PCB-1248 (Arochlor 1248)	55 U	17	55	33	UG/KG
SW8082/NONE	076SB-0056M-0001-SO	N	1	PCB-1254 (Arochlor 1254)	55 U	17	55	33	UG/KG
SW8082/NONE	076SB-0056M-0001-SO	N	1	PCB-1260 (Arochlor 1260)	55 U	17	55	33	UG/KG
SW8082/NONE	076SB-0057M-0001-SO	N	1	PCB-1016 (Arochlor 1016)	65 U	21	65	33	UG/KG
SW8082/NONE	076SB-0057M-0001-SO	N	1	PCB-1221 (Arochlor 1221)	50 U	16	50	33	UG/KG
SW8082/NONE	076SB-0057M-0001-SO	N	1	PCB-1232 (Arochlor 1232)	45 U	14	45	33	UG/KG
SW8082/NONE	076SB-0057M-0001-SO	N	1	PCB-1242 (Arochlor 1242)	40 U	13	40	33	UG/KG
SW8082/NONE	076SB-0057M-0001-SO	N	1	PCB-1248 (Arochlor 1248)	55 U	17	55	33	UG/KG
SW8082/NONE	076SB-0057M-0001-SO	N	1	PCB-1254 (Arochlor 1254)	55 U	17	55	33	UG/KG
SW8082/NONE	076SB-0057M-0001-SO	N	1	PCB-1260 (Arochlor 1260)	55 U	17	55	33	UG/KG
SW8082/NONE	076SB-0058M-0001-SO	N	1	PCB-1016 (Arochlor 1016)	64 U	21	64	33	UG/KG
SW8082/NONE	076SB-0058M-0001-SO	N	1	PCB-1221 (Arochlor 1221)	49 U	16	49	33	UG/KG
SW8082/NONE	076SB-0058M-0001-SO	N	1	PCB-1232 (Arochlor 1232)	44 U	14	44	33	UG/KG
SW8082/NONE	076SB-0058M-0001-SO	N	1	PCB-1242 (Arochlor 1242)	40 U	13	40	33	UG/KG
SW8082/NONE	076SB-0058M-0001-SO	N	1	PCB-1248 (Arochlor 1248)	54 U	17	54	33	UG/KG
SW8082/NONE	076SB-0058M-0001-SO	N	1	PCB-1254 (Arochlor 1254)	54 U	17	54	33	UG/KG
SW8082/NONE	076SB-0058M-0001-SO	N	1	PCB-1260 (Arochlor 1260)	54 U	17	54	33	UG/KG

Reporting Anomalies are cases where the reported RL exceeds that specified in the governing project document.

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Reporting Anomalies

SDG Name: 240-17796-1_(76-SB,SS,SW)

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW8082/NONE	076SB-0059M-0001-SO	N	1	PCB-1016 (Arochlor 1016)	65 U	21	65	33	UG/KG
SW8082/NONE	076SB-0059M-0001-SO	N	1	PCB-1221 (Arochlor 1221)	50 U	16	50	33	UG/KG
SW8082/NONE	076SB-0059M-0001-SO	N	1	PCB-1232 (Arochlor 1232)	45 U	14	45	33	UG/KG
SW8082/NONE	076SB-0059M-0001-SO	N	1	PCB-1242 (Arochlor 1242)	40 U	13	40	33	UG/KG
SW8082/NONE	076SB-0059M-0001-SO	N	1	PCB-1248 (Arochlor 1248)	55 U	17	55	33	UG/KG
SW8082/NONE	076SB-0059M-0001-SO	N	1	PCB-1254 (Arochlor 1254)	55 U	17	55	33	UG/KG
SW8082/NONE	076SB-0059M-0001-SO	N	1	PCB-1260 (Arochlor 1260)	55 U	17	55	33	UG/KG
SW8082/NONE	076SS-0007M-0001-SO	N	1	PCB-1016 (Arochlor 1016)	66 U	21	66	33	UG/KG
SW8082/NONE	076SS-0007M-0001-SO	N	1	PCB-1221 (Arochlor 1221)	51 U	16	51	33	UG/KG
SW8082/NONE	076SS-0007M-0001-SO	N	1	PCB-1232 (Arochlor 1232)	46 U	14	46	33	UG/KG
SW8082/NONE	076SS-0007M-0001-SO	N	1	PCB-1242 (Arochlor 1242)	41 U	13	41	33	UG/KG
SW8082/NONE	076SS-0007M-0001-SO	N	1	PCB-1248 (Arochlor 1248)	56 U	17	56	33	UG/KG
SW8082/NONE	076SS-0007M-0001-SO	N	1	PCB-1254 (Arochlor 1254)	56 U	17	56	33	UG/KG
SW8082/NONE	076SS-0007M-0001-SO	N	1	PCB-1260 (Arochlor 1260)	24 J	17	56	33	UG/KG
SW8082/NONE	076SW-0013-0001-SW	N	1	PCB-1016 (Arochlor 1016)	0.48 U	0.16	0.48	0.2	UG/L
SW8082/NONE	076SW-0013-0001-SW	N	1	PCB-1221 (Arochlor 1221)	0.48 U	0.12	0.48	0.2	UG/L
SW8082/NONE	076SW-0013-0001-SW	N	1	PCB-1232 (Arochlor 1232)	0.48 U	0.15	0.48	0.2	UG/L
SW8082/NONE	076SW-0013-0001-SW	N	1	PCB-1242 (Arochlor 1242)	0.48 U	0.21	0.48	0.2	UG/L
SW8082/NONE	076SW-0013-0001-SW	N	1	PCB-1248 (Arochlor 1248)	0.48 U	0.095	0.48	0.2	UG/L
SW8082/NONE	076SW-0013-0001-SW	N	1	PCB-1254 (Arochlor 1254)	0.48 U	0.15	0.48	0.2	UG/L
SW8082/NONE	076SW-0013-0001-SW	N	1	PCB-1260 (Arochlor 1260)	0.48 U	0.16	0.48	0.2	UG/L
SW8082/NONE	076SW-0014-0001-SW	FD	1	PCB-1016 (Arochlor 1016)	0.5 U	0.17	0.5	0.2	UG/L
SW8082/NONE	076SW-0014-0001-SW	FD	1	PCB-1221 (Arochlor 1221)	0.5 U	0.13	0.5	0.2	UG/L
SW8082/NONE	076SW-0014-0001-SW	FD	1	PCB-1232 (Arochlor 1232)	0.5 U	0.16	0.5	0.2	UG/L
SW8082/NONE	076SW-0014-0001-SW	FD	1	PCB-1242 (Arochlor 1242)	0.5 U	0.22	0.5	0.2	UG/L
SW8082/NONE	076SW-0014-0001-SW	FD	1	PCB-1248 (Arochlor 1248)	0.5 U	0.1	0.5	0.2	UG/L
SW8082/NONE	076SW-0014-0001-SW	FD	1	PCB-1254 (Arochlor 1254)	0.5 U	0.16	0.5	0.2	UG/L
SW8082/NONE	076SW-0014-0001-SW	FD	1	PCB-1260 (Arochlor 1260)	0.5 U	0.17	0.5	0.2	UG/L
SW8082/NONE	076SW-0015-0001-SW	N	1	PCB-1016 (Arochlor 1016)	0.48 U	0.16	0.48	0.2	UG/L

Reporting Anomalies are cases where the reported RL exceeds that specified in the governing project document.

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Reporting Anomalies

SDG Name: 240-17796-1_(76-SB,SS,SW)

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW8082/NONE	076SW-0015-0001-SW	N	1	PCB-1221 (Arochlor 1221)	0.48 U	0.12	0.48	0.2	UG/L
SW8082/NONE	076SW-0015-0001-SW	N	1	PCB-1232 (Arochlor 1232)	0.48 U	0.15	0.48	0.2	UG/L
SW8082/NONE	076SW-0015-0001-SW	N	1	PCB-1242 (Arochlor 1242)	0.48 U	0.21	0.48	0.2	UG/L
SW8082/NONE	076SW-0015-0001-SW	N	1	PCB-1248 (Arochlor 1248)	0.48 U	0.095	0.48	0.2	UG/L
SW8082/NONE	076SW-0015-0001-SW	N	1	PCB-1254 (Arochlor 1254)	0.48 U	0.15	0.48	0.2	UG/L
SW8082/NONE	076SW-0015-0001-SW	N	1	PCB-1260 (Arochlor 1260)	0.48 U	0.16	0.48	0.2	UG/L

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW8260B/NONE	076-0067-0001-ER	N	1	1,2-Dichloroethene	2 U	0.34	2	1	UG/L
SW8260B/NONE	076-0068-0001-TB	N	1	1,2-Dichloroethene	2 U	0.34	2	1	UG/L
SW8260B/NONE	076SB-0023M-0001-SO	N	1	1,2-Dichloroethene	8.8 U	0.67	8.8	5	UG/KG
SW8260B/NONE	076SB-0024M-0001-SO	N	1	1,1,1-Trichloroethane	5.9 U	0.66	5.9	5	UG/KG
SW8260B/NONE	076SB-0024M-0001-SO	N	1	1,1,2,2-Tetrachloroethane	5.9 U	0.4	5.9	5	UG/KG
SW8260B/NONE	076SB-0024M-0001-SO	N	1	1,1,2-Trichloroethane	5.9 U	0.46	5.9	5	UG/KG
SW8260B/NONE	076SB-0024M-0001-SO	N	1	1,1-Dichloroethane	5.9 U	0.43	5.9	5	UG/KG
SW8260B/NONE	076SB-0024M-0001-SO	N	1	1,1-Dichloroethene	5.9 U	0.61	5.9	5	UG/KG
SW8260B/NONE	076SB-0024M-0001-SO	N	1	1,2-Dibromoethane (EDB)	5.9 U	0.59	5.9	5	UG/KG
SW8260B/NONE	076SB-0024M-0001-SO	N	1	1,2-Dichloroethane	5.9 U	0.4	5.9	5	UG/KG
SW8260B/NONE	076SB-0024M-0001-SO	N	1	1,2-Dichloroethene	12 U	0.91	12	5	UG/KG
SW8260B/NONE	076SB-0024M-0001-SO	N	1	1,2-Dichloropropane	5.9 U	0.82	5.9	5	UG/KG
SW8260B/NONE	076SB-0024M-0001-SO	N	1	2-Butanone (MEK)	2.3 J	1.7	24	20	UG/KG
SW8260B/NONE	076SB-0024M-0001-SO	N	1	2-Hexanone	24 U	0.74	24	20	UG/KG
SW8260B/NONE	076SB-0024M-0001-SO	N	1	4-Methyl-2-pentanone (MIBK)	24 U	0.64	24	20	UG/KG
SW8260B/NONE	076SB-0024M-0001-SO	N	1	Acetone	24 U	7.4	24	20	UG/KG
SW8260B/NONE	076SB-0024M-0001-SO	N	1	Benzene	5.9 U	0.27	5.9	5	UG/KG
SW8260B/NONE	076SB-0024M-0001-SO	N	1	Bromochloromethane	5.9 U	0.84	5.9	5	UG/KG
SW8260B/NONE	076SB-0024M-0001-SO	N	1	Bromodichloromethane	5.9 U	0.33	5.9	5	UG/KG
SW8260B/NONE	076SB-0024M-0001-SO	N	1	Bromoform	5.9 U	0.39	5.9	5	UG/KG
SW8260B/NONE	076SB-0024M-0001-SO	N	1	Bromomethane	5.9 U	0.64	5.9	5	UG/KG
SW8260B/NONE	076SB-0024M-0001-SO	N	1	Carbon Disulfide	5.9 U	0.52	5.9	5	UG/KG

Reporting Anomalies are cases where the reported RL exceeds that specified in the governing project document.

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Reporting Anomalies

SDG Name: 240-17796-1_(76-SB,SS,SW)

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW8260B/NONE	076SB-0024M-0001-SO	N	1	Carbon Tetrachloride	5.9 U	0.44	5.9	5	UG/KG
SW8260B/NONE	076SB-0024M-0001-SO	N	1	Chlorobenzene	5.9 U	0.39	5.9	5	UG/KG
SW8260B/NONE	076SB-0024M-0001-SO	N	1	Chloroethane	5.9 U	1	5.9	5	UG/KG
SW8260B/NONE	076SB-0024M-0001-SO	N	1	Chloroform	5.9 U	0.34	5.9	5	UG/KG
SW8260B/NONE	076SB-0024M-0001-SO	N	1	Chloromethane	5.9 U	0.48	5.9	5	UG/KG
SW8260B/NONE	076SB-0024M-0001-SO	N	1	cis-1,3-Dichloropropene	5.9 U	0.4	5.9	5	UG/KG
SW8260B/NONE	076SB-0024M-0001-SO	N	1	Dibromochloromethane	5.9 U	0.65	5.9	5	UG/KG
SW8260B/NONE	076SB-0024M-0001-SO	N	1	Ethylbenzene	5.9 U	0.31	5.9	5	UG/KG
SW8260B/NONE	076SB-0024M-0001-SO	N	1	Methylene Chloride	5.9 U	0.79	5.9	5	UG/KG
SW8260B/NONE	076SB-0024M-0001-SO	N	1	Styrene	5.9 U	0.18	5.9	5	UG/KG
SW8260B/NONE	076SB-0024M-0001-SO	N	1	tert-Butyl Methyl Ether (MTBE)	5.9 U	0.51	5.9	5	UG/KG
SW8260B/NONE	076SB-0024M-0001-SO	N	1	Tetrachloroethene (PCE)	5.9 U	0.61	5.9	5	UG/KG
SW8260B/NONE	076SB-0024M-0001-SO	N	1	Toluene	5.9 U	0.32	5.9	5	UG/KG
SW8260B/NONE	076SB-0024M-0001-SO	N	1	trans-1,3-Dichloropropene	5.9 U	0.64	5.9	5	UG/KG
SW8260B/NONE	076SB-0024M-0001-SO	N	1	Trichloroethene (TCE)	5.9 U	0.5	5.9	5	UG/KG
SW8260B/NONE	076SB-0024M-0001-SO	N	1	Vinyl Chloride	5.9 U	0.46	5.9	5	UG/KG
SW8260B/NONE	076SB-0024M-0001-SO	N	1	Xylenes, Total	12 U	0.79	12	10	UG/KG
SW8260B/NONE	076SB-0025M-0001-SO	N	1	1,2-Dichloroethene	8.3 U	0.64	8.3	5	UG/KG
SW8260B/NONE	076SB-0026M-0001-SO	N	1	1,2-Dichloroethene	8.7 U	0.67	8.7	5	UG/KG
SW8260B/NONE	076SB-0027M-0001-SO	N	1	1,1,1-Trichloroethane	5.1 U	0.58	5.1	5	UG/KG
SW8260B/NONE	076SB-0027M-0001-SO	N	1	1,1,2,2-Tetrachloroethane	5.1 U	0.35	5.1	5	UG/KG
SW8260B/NONE	076SB-0027M-0001-SO	N	1	1,1,2-Trichloroethane	5.1 U	0.4	5.1	5	UG/KG
SW8260B/NONE	076SB-0027M-0001-SO	N	1	1,1-Dichloroethane	5.1 U	0.37	5.1	5	UG/KG
SW8260B/NONE	076SB-0027M-0001-SO	N	1	1,1-Dichloroethene	5.1 U	0.54	5.1	5	UG/KG
SW8260B/NONE	076SB-0027M-0001-SO	N	1	1,2-Dibromoethane (EDB)	5.1 U	0.51	5.1	5	UG/KG
SW8260B/NONE	076SB-0027M-0001-SO	N	1	1,2-Dichloroethane	5.1 U	0.35	5.1	5	UG/KG
SW8260B/NONE	076SB-0027M-0001-SO	N	1	1,2-Dichloroethene	10 U	0.79	10	5	UG/KG
SW8260B/NONE	076SB-0027M-0001-SO	N	1	1,2-Dichloropropane	5.1 U	0.71	5.1	5	UG/KG
SW8260B/NONE	076SB-0027M-0001-SO	N	1	2-Butanone (MEK)	21 U	1.4	21	20	UG/KG

Reporting Anomalies are cases where the reported RL exceeds that specified in the governing project document.

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Reporting Anomalies

SDG Name: 240-17796-1_(76-SB,SS,SW)

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW8260B/NONE	076SB-0027M-0001-SO	N	1	2-Hexanone	21 U	0.65	21	20	UG/KG
SW8260B/NONE	076SB-0027M-0001-SO	N	1	4-Methyl-2-pentanone (MIBK)	21 U	0.56	21	20	UG/KG
SW8260B/NONE	076SB-0027M-0001-SO	N	1	Acetone	21 U	6.5	21	20	UG/KG
SW8260B/NONE	076SB-0027M-0001-SO	N	1	Benzene	5.1 U	0.24	5.1	5	UG/KG
SW8260B/NONE	076SB-0027M-0001-SO	N	1	Bromochloromethane	5.1 U	0.73	5.1	5	UG/KG
SW8260B/NONE	076SB-0027M-0001-SO	N	1	Bromodichloromethane	5.1 U	0.29	5.1	5	UG/KG
SW8260B/NONE	076SB-0027M-0001-SO	N	1	Bromoform	5.1 U	0.34	5.1	5	UG/KG
SW8260B/NONE	076SB-0027M-0001-SO	N	1	Bromomethane	5.1 U	0.56	5.1	5	UG/KG
SW8260B/NONE	076SB-0027M-0001-SO	N	1	Carbon Disulfide	5.1 U	0.45	5.1	5	UG/KG
SW8260B/NONE	076SB-0027M-0001-SO	N	1	Carbon Tetrachloride	5.1 U	0.38	5.1	5	UG/KG
SW8260B/NONE	076SB-0027M-0001-SO	N	1	Chlorobenzene	5.1 U	0.34	5.1	5	UG/KG
SW8260B/NONE	076SB-0027M-0001-SO	N	1	Chloroethane	5.1 U	0.89	5.1	5	UG/KG
SW8260B/NONE	076SB-0027M-0001-SO	N	1	Chloroform	5.1 U	0.3	5.1	5	UG/KG
SW8260B/NONE	076SB-0027M-0001-SO	N	1	Chloromethane	5.1 U	0.42	5.1	5	UG/KG
SW8260B/NONE	076SB-0027M-0001-SO	N	1	cis-1,3-Dichloropropene	5.1 U	0.35	5.1	5	UG/KG
SW8260B/NONE	076SB-0027M-0001-SO	N	1	Dibromochloromethane	5.1 U	0.57	5.1	5	UG/KG
SW8260B/NONE	076SB-0027M-0001-SO	N	1	Ethylbenzene	5.1 U	0.27	5.1	5	UG/KG
SW8260B/NONE	076SB-0027M-0001-SO	N	1	Methylene Chloride	0.69 J	0.69	5.1	5	UG/KG
SW8260B/NONE	076SB-0027M-0001-SO	N	1	Styrene	5.1 U	0.15	5.1	5	UG/KG
SW8260B/NONE	076SB-0027M-0001-SO	N	1	tert-Butyl Methyl Ether (MTBE)	5.1 U	0.44	5.1	5	UG/KG
SW8260B/NONE	076SB-0027M-0001-SO	N	1	Tetrachloroethene (PCE)	5.1 U	0.54	5.1	5	UG/KG
SW8260B/NONE	076SB-0027M-0001-SO	N	1	Toluene	5.1 U	0.28	5.1	5	UG/KG
SW8260B/NONE	076SB-0027M-0001-SO	N	1	trans-1,3-Dichloropropene	5.1 U	0.56	5.1	5	UG/KG
SW8260B/NONE	076SB-0027M-0001-SO	N	1	Trichloroethene (TCE)	5.1 U	0.43	5.1	5	UG/KG
SW8260B/NONE	076SB-0027M-0001-SO	N	1	Vinyl Chloride	5.1 U	0.4	5.1	5	UG/KG
SW8260B/NONE	076SB-0028M-0001-SO	N	1	1,2-Dichloroethene	9.7 U	0.75	9.7	5	UG/KG
SW8260B/NONE	076SB-0029M-0001-SO	N	1	1,1,1-Trichloroethane	6 U	0.67	6	5	UG/KG
SW8260B/NONE	076SB-0029M-0001-SO	N	1	1,1,2,2-Tetrachloroethane	6 U	0.41	6	5	UG/KG
SW8260B/NONE	076SB-0029M-0001-SO	N	1	1,1,2-Trichloroethane	6 U	0.47	6	5	UG/KG

Reporting Anomalies are cases where the reported RL exceeds that specified in the governing project document.

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Reporting Anomalies

SDG Name: 240-17796-1_(76-SB,SS,SW)

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW8260B/NONE	076SB-0029M-0001-SO	N	1	1,1-Dichloroethane	6 U	0.43	6	5	UG/KG
SW8260B/NONE	076SB-0029M-0001-SO	N	1	1,1-Dichloroethene	6 U	0.62	6	5	UG/KG
SW8260B/NONE	076SB-0029M-0001-SO	N	1	1,2-Dibromoethane (EDB)	6 U	0.6	6	5	UG/KG
SW8260B/NONE	076SB-0029M-0001-SO	N	1	1,2-Dichloroethane	6 U	0.41	6	5	UG/KG
SW8260B/NONE	076SB-0029M-0001-SO	N	1	1,2-Dichloroethene	12 U	0.92	12	5	UG/KG
SW8260B/NONE	076SB-0029M-0001-SO	N	1	1,2-Dichloropropane	6 U	0.82	6	5	UG/KG
SW8260B/NONE	076SB-0029M-0001-SO	N	1	2-Butanone (MEK)	9.6 J	1.7	24	20	UG/KG
SW8260B/NONE	076SB-0029M-0001-SO	N	1	2-Hexanone	24 U	0.75	24	20	UG/KG
SW8260B/NONE	076SB-0029M-0001-SO	N	1	4-Methyl-2-pentanone (MIBK)	24 U	0.64	24	20	UG/KG
SW8260B/NONE	076SB-0029M-0001-SO	N	1	Acetone	24 U	7.5	24	20	UG/KG
SW8260B/NONE	076SB-0029M-0001-SO	N	1	Benzene	6 U	0.27	6	5	UG/KG
SW8260B/NONE	076SB-0029M-0001-SO	N	1	Bromochloromethane	6 U	0.85	6	5	UG/KG
SW8260B/NONE	076SB-0029M-0001-SO	N	1	Bromodichloromethane	6 U	0.33	6	5	UG/KG
SW8260B/NONE	076SB-0029M-0001-SO	N	1	Bromoform	6 U	0.39	6	5	UG/KG
SW8260B/NONE	076SB-0029M-0001-SO	N	1	Bromomethane	6 U	0.64	6	5	UG/KG
SW8260B/NONE	076SB-0029M-0001-SO	N	1	Carbon Disulfide	3.5 J	0.53	6	5	UG/KG
SW8260B/NONE	076SB-0029M-0001-SO	N	1	Carbon Tetrachloride	6 U	0.44	6	5	UG/KG
SW8260B/NONE	076SB-0029M-0001-SO	N	1	Chlorobenzene	6 U	0.39	6	5	UG/KG
SW8260B/NONE	076SB-0029M-0001-SO	N	1	Chloroethane	6 U	1	6	5	UG/KG
SW8260B/NONE	076SB-0029M-0001-SO	N	1	Chloroform	6 U	0.35	6	5	UG/KG
SW8260B/NONE	076SB-0029M-0001-SO	N	1	Chloromethane	6 U	0.49	6	5	UG/KG
SW8260B/NONE	076SB-0029M-0001-SO	N	1	cis-1,3-Dichloropropene	6 U	0.41	6	5	UG/KG
SW8260B/NONE	076SB-0029M-0001-SO	N	1	Dibromochloromethane	6 U	0.66	6	5	UG/KG
SW8260B/NONE	076SB-0029M-0001-SO	N	1	Ethylbenzene	6 U	0.31	6	5	UG/KG
SW8260B/NONE	076SB-0029M-0001-SO	N	1	Methylene Chloride	1.3 J	0.8	6	5	UG/KG
SW8260B/NONE	076SB-0029M-0001-SO	N	1	Styrene	6 U	0.18	6	5	UG/KG
SW8260B/NONE	076SB-0029M-0001-SO	N	1	tert-Butyl Methyl Ether (MTBE)	6 U	0.51	6	5	UG/KG
SW8260B/NONE	076SB-0029M-0001-SO	N	1	Tetrachloroethene (PCE)	6 U	0.62	6	5	UG/KG
SW8260B/NONE	076SB-0029M-0001-SO	N	1	Toluene	0.33 J	0.32	6	5	UG/KG

Reporting Anomalies are cases where the reported RL exceeds that specified in the governing project document.

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Reporting Anomalies

SDG Name: 240-17796-1_(76-SB,SS,SW)

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW8260B/NONE	076SB-0029M-0001-SO	N	1	trans-1,3-Dichloropropene	6 U	0.64	6	5	UG/KG
SW8260B/NONE	076SB-0029M-0001-SO	N	1	Trichloroethene (TCE)	6 U	0.5	6	5	UG/KG
SW8260B/NONE	076SB-0029M-0001-SO	N	1	Vinyl Chloride	6 U	0.47	6	5	UG/KG
SW8260B/NONE	076SB-0029M-0001-SO	N	1	Xylenes, Total	12 U	0.8	12	10	UG/KG
SW8260B/NONE	076SB-0052M-0001-TB	N	1	1,2-Dichloroethene	2 U	0.34	2	1	UG/L
SW8260B/NONE	076SB-0060M-0001-SO	N	1	1,1,1-Trichloroethane	5.2 U	0.58	5.2	5	UG/KG
SW8260B/NONE	076SB-0060M-0001-SO	N	1	1,1,2,2-Tetrachloroethane	5.2 U	0.35	5.2	5	UG/KG
SW8260B/NONE	076SB-0060M-0001-SO	N	1	1,1,2-Trichloroethane	5.2 U	0.41	5.2	5	UG/KG
SW8260B/NONE	076SB-0060M-0001-SO	N	1	1,1-Dichloroethane	5.2 U	0.37	5.2	5	UG/KG
SW8260B/NONE	076SB-0060M-0001-SO	N	1	1,1-Dichloroethene	5.2 U	0.54	5.2	5	UG/KG
SW8260B/NONE	076SB-0060M-0001-SO	N	1	1,2-Dibromoethane (EDB)	5.2 U	0.52	5.2	5	UG/KG
SW8260B/NONE	076SB-0060M-0001-SO	N	1	1,2-Dichloroethane	5.2 U	0.35	5.2	5	UG/KG
SW8260B/NONE	076SB-0060M-0001-SO	N	1	1,2-Dichloroethene	10 U	0.8	10	5	UG/KG
SW8260B/NONE	076SB-0060M-0001-SO	N	1	1,2-Dichloropropane	5.2 U	0.72	5.2	5	UG/KG
SW8260B/NONE	076SB-0060M-0001-SO	N	1	2-Butanone (MEK)	21 U	1.5	21	20	UG/KG
SW8260B/NONE	076SB-0060M-0001-SO	N	1	2-Hexanone	21 U	0.65	21	20	UG/KG
SW8260B/NONE	076SB-0060M-0001-SO	N	1	4-Methyl-2-pentanone (MIBK)	21 U	0.56	21	20	UG/KG
SW8260B/NONE	076SB-0060M-0001-SO	N	1	Acetone	21 U	6.5	21	20	UG/KG
SW8260B/NONE	076SB-0060M-0001-SO	N	1	Benzene	5.2 U	0.24	5.2	5	UG/KG
SW8260B/NONE	076SB-0060M-0001-SO	N	1	Bromochloromethane	5.2 U	0.74	5.2	5	UG/KG
SW8260B/NONE	076SB-0060M-0001-SO	N	1	Bromodichloromethane	5.2 U	0.29	5.2	5	UG/KG
SW8260B/NONE	076SB-0060M-0001-SO	N	1	Bromoform	5.2 U	0.34	5.2	5	UG/KG
SW8260B/NONE	076SB-0060M-0001-SO	N	1	Bromomethane	5.2 U	0.56	5.2	5	UG/KG
SW8260B/NONE	076SB-0060M-0001-SO	N	1	Carbon Disulfide	3.1 J	0.46	5.2	5	UG/KG
SW8260B/NONE	076SB-0060M-0001-SO	N	1	Carbon Tetrachloride	5.2 U	0.38	5.2	5	UG/KG
SW8260B/NONE	076SB-0060M-0001-SO	N	1	Chlorobenzene	5.2 U	0.34	5.2	5	UG/KG
SW8260B/NONE	076SB-0060M-0001-SO	N	1	Chloroethane	5.2 U	0.89	5.2	5	UG/KG
SW8260B/NONE	076SB-0060M-0001-SO	N	1	Chloroform	5.2 U	0.3	5.2	5	UG/KG
SW8260B/NONE	076SB-0060M-0001-SO	N	1	Chloromethane	5.2 U	0.43	5.2	5	UG/KG

Reporting Anomalies are cases where the reported RL exceeds that specified in the governing project document.

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Reporting Anomalies

SDG Name: 240-17796-1_(76-SB,SS,SW)

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW8260B/NONE	076SB-0060M-0001-SO	N	1	cis-1,3-Dichloropropene	5.2 U	0.35	5.2	5	UG/KG
SW8260B/NONE	076SB-0060M-0001-SO	N	1	Dibromochloromethane	5.2 U	0.57	5.2	5	UG/KG
SW8260B/NONE	076SB-0060M-0001-SO	N	1	Ethylbenzene	5.2 U	0.27	5.2	5	UG/KG
SW8260B/NONE	076SB-0060M-0001-SO	N	1	Methylene Chloride	5.2 U	0.7	5.2	5	UG/KG
SW8260B/NONE	076SB-0060M-0001-SO	N	1	Styrene	5.2 U	0.16	5.2	5	UG/KG
SW8260B/NONE	076SB-0060M-0001-SO	N	1	tert-Butyl Methyl Ether (MTBE)	5.2 U	0.45	5.2	5	UG/KG
SW8260B/NONE	076SB-0060M-0001-SO	N	1	Tetrachloroethene (PCE)	5.2 U	0.54	5.2	5	UG/KG
SW8260B/NONE	076SB-0060M-0001-SO	N	1	Toluene	5.2 U	0.28	5.2	5	UG/KG
SW8260B/NONE	076SB-0060M-0001-SO	N	1	trans-1,3-Dichloropropene	5.2 U	0.56	5.2	5	UG/KG
SW8260B/NONE	076SB-0060M-0001-SO	N	1	Trichloroethene (TCE)	5.2 U	0.44	5.2	5	UG/KG
SW8260B/NONE	076SB-0060M-0001-SO	N	1	Vinyl Chloride	5.2 U	0.41	5.2	5	UG/KG
SW8260B/NONE	076SB-0062M-0001-SO	N	1	1,2-Dichloroethene	8.8 U	0.68	8.8	5	UG/KG
SW8260B/NONE	076SB-0063M-0001-SO	N	1	1,1,1-Trichloroethane	5.9 U	0.66	5.9	5	UG/KG
SW8260B/NONE	076SB-0063M-0001-SO	N	1	1,1,2,2-Tetrachloroethane	5.9 U	0.4	5.9	5	UG/KG
SW8260B/NONE	076SB-0063M-0001-SO	N	1	1,1,2-Trichloroethane	5.9 U	0.46	5.9	5	UG/KG
SW8260B/NONE	076SB-0063M-0001-SO	N	1	1,1-Dichloroethane	5.9 U	0.42	5.9	5	UG/KG
SW8260B/NONE	076SB-0063M-0001-SO	N	1	1,1-Dichloroethene	5.9 U	0.61	5.9	5	UG/KG
SW8260B/NONE	076SB-0063M-0001-SO	N	1	1,2-Dibromoethane (EDB)	5.9 U	0.59	5.9	5	UG/KG
SW8260B/NONE	076SB-0063M-0001-SO	N	1	1,2-Dichloroethane	5.9 U	0.4	5.9	5	UG/KG
SW8260B/NONE	076SB-0063M-0001-SO	N	1	1,2-Dichloroethene	12 U	0.9	12	5	UG/KG
SW8260B/NONE	076SB-0063M-0001-SO	N	1	1,2-Dichloropropane	5.9 U	0.81	5.9	5	UG/KG
SW8260B/NONE	076SB-0063M-0001-SO	N	1	2-Butanone (MEK)	13 J	1.6	23	20	UG/KG
SW8260B/NONE	076SB-0063M-0001-SO	N	1	2-Hexanone	23 U	0.74	23	20	UG/KG
SW8260B/NONE	076SB-0063M-0001-SO	N	1	4-Methyl-2-pentanone (MIBK)	23 U	0.63	23	20	UG/KG
SW8260B/NONE	076SB-0063M-0001-SO	N	1	Acetone	23 U	7.4	23	20	UG/KG
SW8260B/NONE	076SB-0063M-0001-SO	N	1	Benzene	5.9 U	0.27	5.9	5	UG/KG
SW8260B/NONE	076SB-0063M-0001-SO	N	1	Bromochloromethane	5.9 U	0.83	5.9	5	UG/KG
SW8260B/NONE	076SB-0063M-0001-SO	N	1	Bromodichloromethane	5.9 U	0.33	5.9	5	UG/KG
SW8260B/NONE	076SB-0063M-0001-SO	N	1	Bromoform	5.9 U	0.39	5.9	5	UG/KG

Reporting Anomalies are cases where the reported RL exceeds that specified in the governing project document.

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Reporting Anomalies

SDG Name: 240-17796-1_(76-SB,SS,SW)

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW8260B/NONE	076SB-0063M-0001-SO	N	1	Bromomethane	5.9 U	0.63	5.9	5	UG/KG
SW8260B/NONE	076SB-0063M-0001-SO	N	1	Carbon Disulfide	3.5 J	0.52	5.9	5	UG/KG
SW8260B/NONE	076SB-0063M-0001-SO	N	1	Carbon Tetrachloride	5.9 U	0.43	5.9	5	UG/KG
SW8260B/NONE	076SB-0063M-0001-SO	N	1	Chlorobenzene	5.9 U	0.39	5.9	5	UG/KG
SW8260B/NONE	076SB-0063M-0001-SO	N	1	Chloroethane	5.9 U	1	5.9	5	UG/KG
SW8260B/NONE	076SB-0063M-0001-SO	N	1	Chloroform	5.9 U	0.34	5.9	5	UG/KG
SW8260B/NONE	076SB-0063M-0001-SO	N	1	Chloromethane	5.9 U	0.48	5.9	5	UG/KG
SW8260B/NONE	076SB-0063M-0001-SO	N	1	cis-1,3-Dichloropropene	5.9 U	0.4	5.9	5	UG/KG
SW8260B/NONE	076SB-0063M-0001-SO	N	1	Dibromochloromethane	5.9 U	0.65	5.9	5	UG/KG
SW8260B/NONE	076SB-0063M-0001-SO	N	1	Ethylbenzene	2.4 J	0.3	5.9	5	UG/KG
SW8260B/NONE	076SB-0063M-0001-SO	N	1	Methylene Chloride	5.9 U	0.79	5.9	5	UG/KG
SW8260B/NONE	076SB-0063M-0001-SO	N	1	Styrene	5.9 U	0.18	5.9	5	UG/KG
SW8260B/NONE	076SB-0063M-0001-SO	N	1	tert-Butyl Methyl Ether (MTBE)	5.9 U	0.5	5.9	5	UG/KG
SW8260B/NONE	076SB-0063M-0001-SO	N	1	Tetrachloroethene (PCE)	5.9 U	0.61	5.9	5	UG/KG
SW8260B/NONE	076SB-0063M-0001-SO	N	1	Toluene	1 J	0.32	5.9	5	UG/KG
SW8260B/NONE	076SB-0063M-0001-SO	N	1	trans-1,3-Dichloropropene	5.9 U	0.63	5.9	5	UG/KG
SW8260B/NONE	076SB-0063M-0001-SO	N	1	Trichloroethene (TCE)	5.9 U	0.49	5.9	5	UG/KG
SW8260B/NONE	076SB-0063M-0001-SO	N	1	Vinyl Chloride	5.9 U	0.46	5.9	5	UG/KG
SW8260B/NONE	076SB-0063M-0001-SO	N	1	Xylenes, Total	14	0.79	12	10	UG/KG
SW8260B/NONE	076SB-0064M-0001-SO	N	1	1,2-Dichloroethene	8.3 U	0.64	8.3	5	UG/KG
SW8260B/NONE	076SB-0065M-0001-SO	N	1	1,1,1-Trichloroethane	5.3 U	0.59	5.3	5	UG/KG
SW8260B/NONE	076SB-0065M-0001-SO	N	1	1,1,2,2-Tetrachloroethane	5.3 U	0.36	5.3	5	UG/KG
SW8260B/NONE	076SB-0065M-0001-SO	N	1	1,1,2-Trichloroethane	5.3 U	0.41	5.3	5	UG/KG
SW8260B/NONE	076SB-0065M-0001-SO	N	1	1,1-Dichloroethane	5.3 U	0.38	5.3	5	UG/KG
SW8260B/NONE	076SB-0065M-0001-SO	N	1	1,1-Dichloroethene	5.3 U	0.55	5.3	5	UG/KG
SW8260B/NONE	076SB-0065M-0001-SO	N	1	1,2-Dibromoethane (EDB)	5.3 U	0.53	5.3	5	UG/KG
SW8260B/NONE	076SB-0065M-0001-SO	N	1	1,2-Dichloroethane	5.3 U	0.36	5.3	5	UG/KG
SW8260B/NONE	076SB-0065M-0001-SO	N	1	1,2-Dichloroethene	11 U	0.81	11	5	UG/KG
SW8260B/NONE	076SB-0065M-0001-SO	N	1	1,2-Dichloropropane	5.3 U	0.73	5.3	5	UG/KG

Reporting Anomalies are cases where the reported RL exceeds that specified in the governing project document.

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Reporting Anomalies

SDG Name: 240-17796-1_(76-SB,SS,SW)

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW8260B/NONE	076SB-0065M-0001-SO	N	1	2-Butanone (MEK)	1.7 J	1.5	21	20	UG/KG
SW8260B/NONE	076SB-0065M-0001-SO	N	1	2-Hexanone	21 U	0.67	21	20	UG/KG
SW8260B/NONE	076SB-0065M-0001-SO	N	1	4-Methyl-2-pentanone (MIBK)	21 U	0.57	21	20	UG/KG
SW8260B/NONE	076SB-0065M-0001-SO	N	1	Acetone	21 U	6.7	21	20	UG/KG
SW8260B/NONE	076SB-0065M-0001-SO	N	1	Benzene	5.3 U	0.24	5.3	5	UG/KG
SW8260B/NONE	076SB-0065M-0001-SO	N	1	Bromochloromethane	5.3 U	0.75	5.3	5	UG/KG
SW8260B/NONE	076SB-0065M-0001-SO	N	1	Bromodichloromethane	5.3 U	0.3	5.3	5	UG/KG
SW8260B/NONE	076SB-0065M-0001-SO	N	1	Bromoform	5.3 U	0.35	5.3	5	UG/KG
SW8260B/NONE	076SB-0065M-0001-SO	N	1	Bromomethane	5.3 U	0.57	5.3	5	UG/KG
SW8260B/NONE	076SB-0065M-0001-SO	N	1	Carbon Disulfide	3.2 J	0.47	5.3	5	UG/KG
SW8260B/NONE	076SB-0065M-0001-SO	N	1	Carbon Tetrachloride	5.3 U	0.39	5.3	5	UG/KG
SW8260B/NONE	076SB-0065M-0001-SO	N	1	Chlorobenzene	5.3 U	0.35	5.3	5	UG/KG
SW8260B/NONE	076SB-0065M-0001-SO	N	1	Chloroethane	5.3 U	0.91	5.3	5	UG/KG
SW8260B/NONE	076SB-0065M-0001-SO	N	1	Chloroform	5.3 U	0.31	5.3	5	UG/KG
SW8260B/NONE	076SB-0065M-0001-SO	N	1	Chloromethane	5.3 U	0.43	5.3	5	UG/KG
SW8260B/NONE	076SB-0065M-0001-SO	N	1	cis-1,3-Dichloropropene	5.3 U	0.36	5.3	5	UG/KG
SW8260B/NONE	076SB-0065M-0001-SO	N	1	Dibromochloromethane	5.3 U	0.58	5.3	5	UG/KG
SW8260B/NONE	076SB-0065M-0001-SO	N	1	Ethylbenzene	5.3 U	0.28	5.3	5	UG/KG
SW8260B/NONE	076SB-0065M-0001-SO	N	1	Methylene Chloride	5.3 U	0.71	5.3	5	UG/KG
SW8260B/NONE	076SB-0065M-0001-SO	N	1	Styrene	5.3 U	0.16	5.3	5	UG/KG
SW8260B/NONE	076SB-0065M-0001-SO	N	1	tert-Butyl Methyl Ether (MTBE)	5.3 U	0.45	5.3	5	UG/KG
SW8260B/NONE	076SB-0065M-0001-SO	N	1	Tetrachloroethene (PCE)	5.3 U	0.55	5.3	5	UG/KG
SW8260B/NONE	076SB-0065M-0001-SO	N	1	Toluene	5.3 U	0.29	5.3	5	UG/KG
SW8260B/NONE	076SB-0065M-0001-SO	N	1	trans-1,3-Dichloropropene	5.3 U	0.57	5.3	5	UG/KG
SW8260B/NONE	076SB-0065M-0001-SO	N	1	Trichloroethene (TCE)	5.3 U	0.44	5.3	5	UG/KG
SW8260B/NONE	076SB-0065M-0001-SO	N	1	Vinyl Chloride	5.3 U	0.41	5.3	5	UG/KG
SW8260B/NONE	076SB-0065M-0001-SO	N	1	Xylenes, Total	11 U	0.71	11	10	UG/KG
SW8260B/NONE	076SB-0066M-0001-SO	N	1	1,2-Dichloroethene	9.1 U	0.7	9.1	5	UG/KG

Reporting Anomalies are cases where the reported RL exceeds that specified in the governing project document.

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Reporting Anomalies

SDG Name: 240-17796-1_(76-SB,SS,SW)

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW8270C/NONE	076SB-0023M-0001-SO	N	1	Cresols, m & p	400 U	20	400	300	UG/KG
SW8270C/NONE	076SB-0024M-0001-SO	N	2.5	2,4,6-Trichlorophenol	370 U	200	370	330	UG/KG
SW8270C/NONE	076SB-0024M-0001-SO	N	2.5	2,4-Dichlorophenol	370 U	50	370	330	UG/KG
SW8270C/NONE	076SB-0024M-0001-SO	N	2.5	2,4-Dimethylphenol	370 U	50	370	330	UG/KG
SW8270C/NONE	076SB-0024M-0001-SO	N	2.5	2,4-Dinitrophenol	820 U	200	820	800	UG/KG
SW8270C/NONE	076SB-0024M-0001-SO	N	2.5	2,4-Dinitrotoluene	500 U	67	500	330	UG/KG
SW8270C/NONE	076SB-0024M-0001-SO	N	2.5	2,6-Dinitrotoluene	500 U	52	500	330	UG/KG
SW8270C/NONE	076SB-0024M-0001-SO	N	2.5	2-Methylphenol (o-Cresol)	500 U	200	500	330	UG/KG
SW8270C/NONE	076SB-0024M-0001-SO	N	2.5	4-Chloro-3-Methylphenol	370 U	52	370	330	UG/KG
SW8270C/NONE	076SB-0024M-0001-SO	N	2.5	4-Chloroaniline	370 U	42	370	330	UG/KG
SW8270C/NONE	076SB-0024M-0001-SO	N	2.5	4-Nitrophenol	820 U	200	820	800	UG/KG
SW8270C/NONE	076SB-0024M-0001-SO	N	2.5	Benzoic acid	1600 U	830	1600	800	UG/KG
SW8270C/NONE	076SB-0024M-0001-SO	N	2.5	Benzyl alcohol	820 U	52	820	330	UG/KG
SW8270C/NONE	076SB-0024M-0001-SO	N	2.5	Carbazole	120 U	67	120	50	UG/KG
SW8270C/NONE	076SB-0024M-0001-SO	N	2.5	Cresols, m & p	990 U	50	990	300	UG/KG
SW8270C/NONE	076SB-0024M-0001-SO	N	2.5	Hexachlorocyclopentadiene	820 U	67	820	330	UG/KG
SW8270C/NONE	076SB-0025M-0001-SO	N	2.5	2,4,6-Trichlorophenol	380 U	200	380	330	UG/KG
SW8270C/NONE	076SB-0025M-0001-SO	N	2.5	2,4-Dichlorophenol	380 U	50	380	330	UG/KG
SW8270C/NONE	076SB-0025M-0001-SO	N	2.5	2,4-Dimethylphenol	380 U	50	380	330	UG/KG
SW8270C/NONE	076SB-0025M-0001-SO	N	2.5	2,4-Dinitrophenol	830 U	200	830	800	UG/KG
SW8270C/NONE	076SB-0025M-0001-SO	N	2.5	2,4-Dinitrotoluene	500 U	68	500	330	UG/KG
SW8270C/NONE	076SB-0025M-0001-SO	N	2.5	2,6-Dinitrotoluene	500 U	53	500	330	UG/KG
SW8270C/NONE	076SB-0025M-0001-SO	N	2.5	2-Methylphenol (o-Cresol)	500 U	200	500	330	UG/KG
SW8270C/NONE	076SB-0025M-0001-SO	N	2.5	4-Chloro-3-Methylphenol	380 U	53	380	330	UG/KG
SW8270C/NONE	076SB-0025M-0001-SO	N	2.5	4-Chloroaniline	380 U	43	380	330	UG/KG
SW8270C/NONE	076SB-0025M-0001-SO	N	2.5	4-Nitrophenol	830 U	200	830	800	UG/KG
SW8270C/NONE	076SB-0025M-0001-SO	N	2.5	Benzoic acid	1700 U	830	1700	800	UG/KG
SW8270C/NONE	076SB-0025M-0001-SO	N	2.5	Benzyl alcohol	830 U	53	830	330	UG/KG
SW8270C/NONE	076SB-0025M-0001-SO	N	2.5	Carbazole	130 U	68	130	50	UG/KG

Reporting Anomalies are cases where the reported RL exceeds that specified in the governing project document.

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Reporting Anomalies

SDG Name: 240-17796-1_(76-SB,SS,SW)

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW8270C/NONE	076SB-0025M-0001-SO	N	2.5	Cresols, m & p	1000 U	50	1000	300	UG/KG
SW8270C/NONE	076SB-0025M-0001-SO	N	2.5	Hexachlorocyclopentadiene	830 U	68	830	330	UG/KG
SW8270C/NONE	076SB-0026M-0001-SO	N	1	Carbazole	51 U	27	51	50	UG/KG
SW8270C/NONE	076SB-0026M-0001-SO	N	1	Cresols, m & p	410 U	20	410	300	UG/KG
SW8270C/NONE	076SB-0027M-0001-SO	N	1	Cresols, m & p	400 U	20	400	300	UG/KG
SW8270C/NONE	076SB-0028M-0001-SO	N	2.5	2,4,6-Trichlorophenol	380 U	200	380	330	UG/KG
SW8270C/NONE	076SB-0028M-0001-SO	N	2.5	2,4-Dichlorophenol	380 U	51	380	330	UG/KG
SW8270C/NONE	076SB-0028M-0001-SO	N	2.5	2,4-Dimethylphenol	380 U	51	380	330	UG/KG
SW8270C/NONE	076SB-0028M-0001-SO	N	2.5	2,4-Dinitrophenol	840 U	200	840	800	UG/KG
SW8270C/NONE	076SB-0028M-0001-SO	N	2.5	2,4-Dinitrotoluene	510 U	69	510	330	UG/KG
SW8270C/NONE	076SB-0028M-0001-SO	N	2.5	2,6-Dinitrotoluene	510 U	53	510	330	UG/KG
SW8270C/NONE	076SB-0028M-0001-SO	N	2.5	2-Methylphenol (o-Cresol)	510 U	200	510	330	UG/KG
SW8270C/NONE	076SB-0028M-0001-SO	N	2.5	4-Chloro-3-Methylphenol	380 U	53	380	330	UG/KG
SW8270C/NONE	076SB-0028M-0001-SO	N	2.5	4-Chloroaniline	380 U	43	380	330	UG/KG
SW8270C/NONE	076SB-0028M-0001-SO	N	2.5	4-Nitrophenol	840 U	200	840	800	UG/KG
SW8270C/NONE	076SB-0028M-0001-SO	N	2.5	Benzoic acid	1700 U	850	1700	800	UG/KG
SW8270C/NONE	076SB-0028M-0001-SO	N	2.5	Benzyl alcohol	840 U	53	840	330	UG/KG
SW8270C/NONE	076SB-0028M-0001-SO	N	2.5	Carbazole	130 U	69	130	50	UG/KG
SW8270C/NONE	076SB-0028M-0001-SO	N	2.5	Cresols, m & p	1000 U	51	1000	300	UG/KG
SW8270C/NONE	076SB-0028M-0001-SO	N	2.5	Hexachlorocyclopentadiene	840 U	69	840	330	UG/KG
SW8270C/NONE	076SB-0029M-0001-SO	N	1	Cresols, m & p	400 U	20	400	300	UG/KG
SW8270C/NONE	076SB-0044M-0001-SO	N	2.5	2,4,6-Trichlorophenol	370 U	200	370	330	UG/KG
SW8270C/NONE	076SB-0044M-0001-SO	N	2.5	2,4-Dichlorophenol	370 U	50	370	330	UG/KG
SW8270C/NONE	076SB-0044M-0001-SO	N	2.5	2,4-Dimethylphenol	370 U	50	370	330	UG/KG
SW8270C/NONE	076SB-0044M-0001-SO	N	2.5	2,4-Dinitrophenol	820 U	200	820	800	UG/KG
SW8270C/NONE	076SB-0044M-0001-SO	N	2.5	2,4-Dinitrotoluene	500 U	67	500	330	UG/KG
SW8270C/NONE	076SB-0044M-0001-SO	N	2.5	2,6-Dinitrotoluene	500 U	52	500	330	UG/KG
SW8270C/NONE	076SB-0044M-0001-SO	N	2.5	2-Methylphenol (o-Cresol)	500 U	200	500	330	UG/KG
SW8270C/NONE	076SB-0044M-0001-SO	N	2.5	4-Chloro-3-Methylphenol	370 U	52	370	330	UG/KG

Reporting Anomalies are cases where the reported RL exceeds that specified in the governing project document.

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Reporting Anomalies

SDG Name: 240-17796-1_(76-SB,SS,SW)

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW8270C/NONE	076SB-0044M-0001-SO	N	2.5	4-Chloroaniline	370 U	42	370	330	UG/KG
SW8270C/NONE	076SB-0044M-0001-SO	N	2.5	4-Nitrophenol	820 U	200	820	800	UG/KG
SW8270C/NONE	076SB-0044M-0001-SO	N	2.5	Benzoic acid	1600 U	830	1600	800	UG/KG
SW8270C/NONE	076SB-0044M-0001-SO	N	2.5	Benzyl alcohol	820 U	52	820	330	UG/KG
SW8270C/NONE	076SB-0044M-0001-SO	N	2.5	Carbazole	120 U	67	120	50	UG/KG
SW8270C/NONE	076SB-0044M-0001-SO	N	2.5	Cresols, m & p	1000 U	50	1000	300	UG/KG
SW8270C/NONE	076SB-0044M-0001-SO	N	2.5	Hexachlorocyclopentadiene	820 U	67	820	330	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	1,2,4-Trichlorobenzene	510 U	270	510	330	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	1,2-Dichlorobenzene	510 U	98	510	330	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	1,3-Dichlorobenzene	510 U	110	510	330	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	1,4-Dichlorobenzene	510 U	200	510	330	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	2,4,5-Trichlorophenol	1500 U	250	1500	800	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	2,4,6-Trichlorophenol	1500 U	810	1500	330	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	2,4-Dichlorophenol	1500 U	200	1500	330	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	2,4-Dimethylphenol	1500 U	200	1500	330	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	2,4-Dinitrophenol	3300 U	810	3300	800	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	2,4-Dinitrotoluene	2000 U	270	2000	330	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	2,6-Dinitrotoluene	2000 U	210	2000	330	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	2-Chloronaphthalene	510 U	33	510	330	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	2-Chlorophenol	510 U	270	510	330	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	2-Methylphenol (o-Cresol)	2000 U	810	2000	330	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	2-Nitroaniline	2000 U	92	2000	800	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	2-Nitrophenol	510 U	270	510	330	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	3,3'-Dichlorobenzidine	1000 U	180	1000	330	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	3-Nitroaniline	2000 U	160	2000	800	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	4,6-Dinitro-2-Methylphenol	1500 U	810	1500	800	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	4-Bromophenyl phenyl ether	510 U	130	510	330	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	4-Chloro-3-Methylphenol	1500 U	210	1500	330	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	4-Chloroaniline	1500 U	170	1500	330	UG/KG

Reporting Anomalies are cases where the reported RL exceeds that specified in the governing project document.

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Reporting Anomalies

SDG Name: 240-17796-1_(76-SB,SS,SW)

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW8270C/NONE	076SB-0045M-0001-SO	N	10	4-Chlorophenyl Phenyl Ether	510 U	130	510	330	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	4-Nitroaniline	2000 U	260	2000	800	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	4-Nitrophenol	3300 U	810	3300	800	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	Acenaphthene	68 U	33	68	50	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	Acenaphthylene	68 U	33	68	50	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	Anthracene	68 U	33	68	50	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	Benzo(a)anthracene	68 U	33	68	50	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	Benzo(a)pyrene	68 U	33	68	50	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	Benzo(b)fluoranthene	68 U	33	68	50	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	Benzo(g,h,i)perylene	68 U	33	68	50	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	Benzo(k)fluoranthene	68 U	33	68	50	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	Benzoic acid	6700 U	3400	6700	800	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	Benzyl alcohol	3300 U	210	3300	330	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	Benzyl butyl phthalate	510 U	100	510	330	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	bis(2-Chloroethoxy) Methane	1000 U	220	1000	330	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	bis(2-Chloroethyl) Ether (2-Chloroethyl Ether)	1000 U	20	1000	330	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	bis(2-Chloroisopropyl) Ether	1000 U	96	1000	330	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	Carbazole	510 U	270	510	50	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	Chrysene	68 U	11	68	50	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	Cresols, m & p	4100 U	200	4100	300	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	Dibenz(a,h)anthracene	68 U	33	68	50	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	Dibenzofuran	510 U	33	510	330	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	Diethyl Phthalate	510 U	160	510	330	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	Dimethyl Phthalate	510 U	170	510	330	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	Di-n-Butyl Phthalate	510 U	150	510	330	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	Di-n-Octylphthalate	510 U	270	510	330	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	Fluoranthene	68 U	33	68	50	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	Fluorene	68 U	33	68	50	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	Hexachlorobutadiene	510 U	270	510	330	UG/KG

Reporting Anomalies are cases where the reported RL exceeds that specified in the governing project document.

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Reporting Anomalies

SDG Name: 240-17796-1_(76-SB,SS,SW)

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW8270C/NONE	076SB-0045M-0001-SO	N	10	Hexachlorocyclopentadiene	3300 U	270	3300	330	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	Hexachloroethane	510 U	91	510	330	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	Indeno(1,2,3-c,d)pyrene	68 U	33	68	50	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	Isophorone	510 U	130	510	330	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	Naphthalene	68 U	33	68	50	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	Nitrobenzene	1000 U	22	1000	330	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	n-Nitrosodi-n-propylamine	510 U	270	510	330	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	Pentachlorophenol	1500 U	810	1500	800	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	Phenanthrene	68 U	33	68	50	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	Phenol	510 U	270	510	330	UG/KG
SW8270C/NONE	076SB-0045M-0001-SO	N	10	Pyrene	68 U	33	68	50	UG/KG
SW8270C/NONE	076SB-0046M-0001-SO	N	2.5	2,4,6-Trichlorophenol	380 U	200	380	330	UG/KG
SW8270C/NONE	076SB-0046M-0001-SO	N	2.5	2,4-Dichlorophenol	380 U	50	380	330	UG/KG
SW8270C/NONE	076SB-0046M-0001-SO	N	2.5	2,4-Dimethylphenol	380 U	50	380	330	UG/KG
SW8270C/NONE	076SB-0046M-0001-SO	N	2.5	2,4-Dinitrophenol	830 U	200	830	800	UG/KG
SW8270C/NONE	076SB-0046M-0001-SO	N	2.5	2,4-Dinitrotoluene	500 U	68	500	330	UG/KG
SW8270C/NONE	076SB-0046M-0001-SO	N	2.5	2,6-Dinitrotoluene	500 U	53	500	330	UG/KG
SW8270C/NONE	076SB-0046M-0001-SO	N	2.5	2-Methylphenol (o-Cresol)	500 U	200	500	330	UG/KG
SW8270C/NONE	076SB-0046M-0001-SO	N	2.5	4-Chloro-3-Methylphenol	380 U	53	380	330	UG/KG
SW8270C/NONE	076SB-0046M-0001-SO	N	2.5	4-Chloroaniline	380 U	43	380	330	UG/KG
SW8270C/NONE	076SB-0046M-0001-SO	N	2.5	4-Nitrophenol	830 U	200	830	800	UG/KG
SW8270C/NONE	076SB-0046M-0001-SO	N	2.5	Benzoic acid	1700 U	840	1700	800	UG/KG
SW8270C/NONE	076SB-0046M-0001-SO	N	2.5	Benzyl alcohol	830 U	53	830	330	UG/KG
SW8270C/NONE	076SB-0046M-0001-SO	N	2.5	Carbazole	130 U	68	130	50	UG/KG
SW8270C/NONE	076SB-0046M-0001-SO	N	2.5	Cresols, m & p	1000 U	50	1000	300	UG/KG
SW8270C/NONE	076SB-0046M-0001-SO	N	2.5	Hexachlorocyclopentadiene	830 U	68	830	330	UG/KG
SW8270C/NONE	076SB-0047M-0001-SO	N	10	1,2,4-Trichlorobenzene	500 U	270	500	330	UG/KG
SW8270C/NONE	076SB-0047M-0001-SO	N	10	1,2-Dichlorobenzene	500 U	98	500	330	UG/KG
SW8270C/NONE	076SB-0047M-0001-SO	N	10	1,3-Dichlorobenzene	500 U	110	500	330	UG/KG

Reporting Anomalies are cases where the reported RL exceeds that specified in the governing project document.

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Reporting Anomalies

SDG Name: 240-17796-1_(76-SB,SS,SW)

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW8270C/NONE	076SB-0047M-0001-SO	N	10	1,4-Dichlorobenzene	500 U	200	500	330	UG/KG
SW8270C/NONE	076SB-0047M-0001-SO	N	10	2,4,5-Trichlorophenol	1500 U	250	1500	800	UG/KG
SW8270C/NONE	076SB-0047M-0001-SO	N	10	2,4,6-Trichlorophenol	1500 U	810	1500	330	UG/KG
SW8270C/NONE	076SB-0047M-0001-SO	N	10	2,4-Dichlorophenol	1500 U	200	1500	330	UG/KG
SW8270C/NONE	076SB-0047M-0001-SO	N	10	2,4-Dimethylphenol	1500 U	200	1500	330	UG/KG
SW8270C/NONE	076SB-0047M-0001-SO	N	10	2,4-Dinitrophenol	3300 U	810	3300	800	UG/KG
SW8270C/NONE	076SB-0047M-0001-SO	N	10	2,4-Dinitrotoluene	2000 U	270	2000	330	UG/KG
SW8270C/NONE	076SB-0047M-0001-SO	N	10	2,6-Dinitrotoluene	2000 U	210	2000	330	UG/KG
SW8270C/NONE	076SB-0047M-0001-SO	N	10	2-Chloronaphthalene	500 U	33	500	330	UG/KG
SW8270C/NONE	076SB-0047M-0001-SO	N	10	2-Chlorophenol	500 U	270	500	330	UG/KG
SW8270C/NONE	076SB-0047M-0001-SO	N	10	2-Methylphenol (o-Cresol)	2000 U	810	2000	330	UG/KG
SW8270C/NONE	076SB-0047M-0001-SO	N	10	2-Nitroaniline	2000 U	92	2000	800	UG/KG
SW8270C/NONE	076SB-0047M-0001-SO	N	10	2-Nitrophenol	500 U	270	500	330	UG/KG
SW8270C/NONE	076SB-0047M-0001-SO	N	10	3,3'-Dichlorobenzidine	1000 U	180	1000	330	UG/KG
SW8270C/NONE	076SB-0047M-0001-SO	N	10	3-Nitroaniline	2000 U	160	2000	800	UG/KG
SW8270C/NONE	076SB-0047M-0001-SO	N	10	4,6-Dinitro-2-Methylphenol	1500 U	810	1500	800	UG/KG
SW8270C/NONE	076SB-0047M-0001-SO	N	10	4-Bromophenyl phenyl ether	500 U	130	500	330	UG/KG
SW8270C/NONE	076SB-0047M-0001-SO	N	10	4-Chloro-3-Methylphenol	1500 U	210	1500	330	UG/KG
SW8270C/NONE	076SB-0047M-0001-SO	N	10	4-Chloroaniline	1500 U	170	1500	330	UG/KG
SW8270C/NONE	076SB-0047M-0001-SO	N	10	4-Chlorophenyl Phenyl Ether	500 U	130	500	330	UG/KG
SW8270C/NONE	076SB-0047M-0001-SO	N	10	4-Nitroaniline	2000 U	260	2000	800	UG/KG
SW8270C/NONE	076SB-0047M-0001-SO	N	10	4-Nitrophenol	3300 U	810	3300	800	UG/KG
SW8270C/NONE	076SB-0047M-0001-SO	N	10	Acenaphthene	67 U	33	67	50	UG/KG
SW8270C/NONE	076SB-0047M-0001-SO	N	10	Acenaphthylene	67 U	33	67	50	UG/KG
SW8270C/NONE	076SB-0047M-0001-SO	N	10	Anthracene	67 U	33	67	50	UG/KG
SW8270C/NONE	076SB-0047M-0001-SO	N	10	Benzo(a)anthracene	67 U	33	67	50	UG/KG
SW8270C/NONE	076SB-0047M-0001-SO	N	10	Benzo(a)pyrene	67 U	33	67	50	UG/KG
SW8270C/NONE	076SB-0047M-0001-SO	N	10	Benzo(b)fluoranthene	67 U	33	67	50	UG/KG
SW8270C/NONE	076SB-0047M-0001-SO	N	10	Benzo(g,h,i)perylene	67 U	33	67	50	UG/KG

Reporting Anomalies are cases where the reported RL exceeds that specified in the governing project document.

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Reporting Anomalies

SDG Name: 240-17796-1_(76-SB,SS,SW)

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW8270C/NONE	076SB-0047M-0001-SO	N	10	Benzo(k)fluoranthene	67 U	33	67	50	UG/KG
SW8270C/NONE	076SB-0047M-0001-SO	N	10	Benzoic acid	6600 U	3400	6600	800	UG/KG
SW8270C/NONE	076SB-0047M-0001-SO	N	10	Benzyl alcohol	3300 U	210	3300	330	UG/KG
SW8270C/NONE	076SB-0047M-0001-SO	N	10	Benzyl butyl phthalate	500 U	100	500	330	UG/KG
SW8270C/NONE	076SB-0047M-0001-SO	N	10	bis(2-Chloroethoxy) Methane	1000 U	220	1000	330	UG/KG
SW8270C/NONE	076SB-0047M-0001-SO	N	10	bis(2-Chloroethyl) Ether (2-Chloroethyl Ether)	1000 U	20	1000	330	UG/KG
SW8270C/NONE	076SB-0047M-0001-SO	N	10	bis(2-Chloroisopropyl) Ether	1000 U	96	1000	330	UG/KG
SW8270C/NONE	076SB-0047M-0001-SO	N	10	Carbazole	500 U	270	500	50	UG/KG
SW8270C/NONE	076SB-0047M-0001-SO	N	10	Chrysene	67 U	11	67	50	UG/KG
SW8270C/NONE	076SB-0047M-0001-SO	N	10	Cresols, m & p	4000 U	200	4000	300	UG/KG
SW8270C/NONE	076SB-0047M-0001-SO	N	10	Dibenz(a,h)anthracene	67 U	33	67	50	UG/KG
SW8270C/NONE	076SB-0047M-0001-SO	N	10	Dibenzofuran	500 U	33	500	330	UG/KG
SW8270C/NONE	076SB-0047M-0001-SO	N	10	Diethyl Phthalate	500 U	160	500	330	UG/KG
SW8270C/NONE	076SB-0047M-0001-SO	N	10	Dimethyl Phthalate	500 U	170	500	330	UG/KG
SW8270C/NONE	076SB-0047M-0001-SO	N	10	Di-n-Butyl Phthalate	500 U	150	500	330	UG/KG
SW8270C/NONE	076SB-0047M-0001-SO	N	10	Di-n-Octylphthalate	500 U	270	500	330	UG/KG
SW8270C/NONE	076SB-0047M-0001-SO	N	10	Fluoranthene	67 U	33	67	50	UG/KG
SW8270C/NONE	076SB-0047M-0001-SO	N	10	Fluorene	67 U	33	67	50	UG/KG
SW8270C/NONE	076SB-0047M-0001-SO	N	10	Hexachlorobutadiene	500 U	270	500	330	UG/KG
SW8270C/NONE	076SB-0047M-0001-SO	N	10	Hexachlorocyclopentadiene	3300 U	270	3300	330	UG/KG
SW8270C/NONE	076SB-0047M-0001-SO	N	10	Hexachloroethane	500 U	91	500	330	UG/KG
SW8270C/NONE	076SB-0047M-0001-SO	N	10	Indeno(1,2,3-c,d)pyrene	67 U	33	67	50	UG/KG
SW8270C/NONE	076SB-0047M-0001-SO	N	10	Isophorone	500 U	130	500	330	UG/KG
SW8270C/NONE	076SB-0047M-0001-SO	N	10	Naphthalene	67 U	33	67	50	UG/KG
SW8270C/NONE	076SB-0047M-0001-SO	N	10	Nitrobenzene	1000 U	22	1000	330	UG/KG
SW8270C/NONE	076SB-0047M-0001-SO	N	10	n-Nitrosodi-n-propylamine	500 U	270	500	330	UG/KG
SW8270C/NONE	076SB-0047M-0001-SO	N	10	Pentachlorophenol	1500 U	810	1500	800	UG/KG
SW8270C/NONE	076SB-0047M-0001-SO	N	10	Phenanthrene	67 U	33	67	50	UG/KG
SW8270C/NONE	076SB-0047M-0001-SO	N	10	Phenol	500 U	270	500	330	UG/KG

Reporting Anomalies are cases where the reported RL exceeds that specified in the governing project document.

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Reporting Anomalies

SDG Name: 240-17796-1_(76-SB,SS,SW)

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW8270C/NONE	076SB-0047M-0001-SO	N	10	Pyrene	67 U	33	67	50	UG/KG
SW8270C/NONE	076SB-0048M-0001-SO	FD	1	Cresols, m & p	400 U	20	400	300	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	1,2,4-Trichlorobenzene	500 U	270	500	330	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	1,2-Dichlorobenzene	500 U	97	500	330	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	1,3-Dichlorobenzene	500 U	110	500	330	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	1,4-Dichlorobenzene	500 U	200	500	330	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	2,4,5-Trichlorophenol	1500 U	250	1500	800	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	2,4,6-Trichlorophenol	1500 U	800	1500	330	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	2,4-Dichlorophenol	1500 U	200	1500	330	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	2,4-Dimethylphenol	1500 U	200	1500	330	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	2,4-Dinitrophenol	3300 U	800	3300	800	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	2,4-Dinitrotoluene	2000 U	270	2000	330	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	2,6-Dinitrotoluene	2000 U	210	2000	330	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	2-Chloronaphthalene	500 U	33	500	330	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	2-Chlorophenol	500 U	270	500	330	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	2-Methylphenol (o-Cresol)	2000 U	800	2000	330	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	2-Nitroaniline	2000 U	91	2000	800	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	2-Nitrophenol	500 U	270	500	330	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	3,3'-Dichlorobenzidine	1000 U	180	1000	330	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	3-Nitroaniline	2000 U	160	2000	800	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	4,6-Dinitro-2-Methylphenol	1500 U	800	1500	800	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	4-Bromophenyl phenyl ether	500 U	130	500	330	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	4-Chloro-3-Methylphenol	1500 U	210	1500	330	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	4-Chloroaniline	1500 U	170	1500	330	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	4-Chlorophenyl Phenyl Ether	500 U	130	500	330	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	4-Nitroaniline	2000 U	260	2000	800	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	4-Nitrophenol	3300 U	800	3300	800	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	Acenaphthene	67 U	33	67	50	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	Acenaphthylene	67 U	33	67	50	UG/KG

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AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Reporting Anomalies

SDG Name: 240-17796-1_(76-SB,SS,SW)

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW8270C/NONE	076SB-0049M-0001-SO	N	10	Anthracene	67 U	33	67	50	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	Benzo(a)anthracene	67 U	33	67	50	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	Benzo(a)pyrene	67 U	33	67	50	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	Benzo(b)fluoranthene	67 U	33	67	50	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	Benzo(g,h,i)perylene	67 U	33	67	50	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	Benzo(k)fluoranthene	67 U	33	67	50	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	Benzoic acid	6600 U	3300	6600	800	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	Benzyl alcohol	3300 U	210	3300	330	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	Benzyl butyl phthalate	500 U	100	500	330	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	bis(2-Chloroethoxy) Methane	1000 U	220	1000	330	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	bis(2-Chloroethyl) Ether (2-Chloroethyl Ether)	1000 U	20	1000	330	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	bis(2-Chloroisopropyl) Ether	1000 U	95	1000	330	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	Carbazole	500 U	270	500	50	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	Chrysene	67 U	11	67	50	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	Cresols, m & p	4000 U	200	4000	300	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	Dibenz(a,h)anthracene	67 U	33	67	50	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	Dibenzofuran	500 U	33	500	330	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	Diethyl Phthalate	500 U	160	500	330	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	Dimethyl Phthalate	500 U	170	500	330	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	Di-n-Butyl Phthalate	500 U	150	500	330	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	Di-n-Octylphthalate	500 U	270	500	330	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	Fluoranthene	67 U	33	67	50	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	Fluorene	67 U	33	67	50	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	Hexachlorobutadiene	500 U	270	500	330	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	Hexachlorocyclopentadiene	3300 U	270	3300	330	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	Hexachloroethane	500 U	90	500	330	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	Indeno(1,2,3-c,d)pyrene	67 U	33	67	50	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	Isophorone	500 U	130	500	330	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	Naphthalene	67 U	33	67	50	UG/KG

Reporting Anomalies are cases where the reported RL exceeds that specified in the governing project document.

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Reporting Anomalies

SDG Name: 240-17796-1_(76-SB,SS,SW)

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW8270C/NONE	076SB-0049M-0001-SO	N	10	Nitrobenzene	1000 U	22	1000	330	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	n-Nitrosodi-n-propylamine	500 U	270	500	330	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	Pentachlorophenol	1500 U	800	1500	800	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	Phenanthrene	67 U	33	67	50	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	Phenol	500 U	270	500	330	UG/KG
SW8270C/NONE	076SB-0049M-0001-SO	N	10	Pyrene	67 U	33	67	50	UG/KG
SW8270C/NONE	076SB-0050M-0001-SO	N	2.5	2,4,6-Trichlorophenol	370 U	200	370	330	UG/KG
SW8270C/NONE	076SB-0050M-0001-SO	N	2.5	2,4-Dichlorophenol	370 U	49	370	330	UG/KG
SW8270C/NONE	076SB-0050M-0001-SO	N	2.5	2,4-Dimethylphenol	370 U	49	370	330	UG/KG
SW8270C/NONE	076SB-0050M-0001-SO	N	2.5	2,4-Dinitrophenol	810 U	200	810	800	UG/KG
SW8270C/NONE	076SB-0050M-0001-SO	N	2.5	2,4-Dinitrotoluene	490 U	67	490	330	UG/KG
SW8270C/NONE	076SB-0050M-0001-SO	N	2.5	2,6-Dinitrotoluene	490 U	52	490	330	UG/KG
SW8270C/NONE	076SB-0050M-0001-SO	N	2.5	2-Methylphenol (o-Cresol)	490 U	200	490	330	UG/KG
SW8270C/NONE	076SB-0050M-0001-SO	N	2.5	4-Chloro-3-Methylphenol	370 U	52	370	330	UG/KG
SW8270C/NONE	076SB-0050M-0001-SO	N	2.5	4-Chloroaniline	370 U	42	370	330	UG/KG
SW8270C/NONE	076SB-0050M-0001-SO	N	2.5	4-Nitrophenol	810 U	200	810	800	UG/KG
SW8270C/NONE	076SB-0050M-0001-SO	N	2.5	Benzoic acid	1600 U	820	1600	800	UG/KG
SW8270C/NONE	076SB-0050M-0001-SO	N	2.5	Benzyl alcohol	810 U	52	810	330	UG/KG
SW8270C/NONE	076SB-0050M-0001-SO	N	2.5	Carbazole	120 U	67	120	50	UG/KG
SW8270C/NONE	076SB-0050M-0001-SO	N	2.5	Cresols, m & p	990 U	49	990	300	UG/KG
SW8270C/NONE	076SB-0050M-0001-SO	N	2.5	Hexachlorocyclopentadiene	810 U	67	810	330	UG/KG
SW8270C/NONE	076SB-0051M-0001-SO	N	1	Benzoic acid	830 U	420	830	800	UG/KG
SW8270C/NONE	076SB-0051M-0001-SO	N	1	Benzyl alcohol	410 U	26	410	330	UG/KG
SW8270C/NONE	076SB-0051M-0001-SO	N	1	Carbazole	63 U	34	63	50	UG/KG
SW8270C/NONE	076SB-0051M-0001-SO	N	1	Cresols, m & p	500 U	25	500	300	UG/KG
SW8270C/NONE	076SB-0051M-0001-SO	N	1	Hexachlorocyclopentadiene	410 U	34	410	330	UG/KG
SW8270C/NONE	076SB-0053M-0001-SO	N	2.5	2,4,6-Trichlorophenol	380 U	200	380	330	UG/KG
SW8270C/NONE	076SB-0053M-0001-SO	N	2.5	2,4-Dichlorophenol	380 U	50	380	330	UG/KG
SW8270C/NONE	076SB-0053M-0001-SO	N	2.5	2,4-Dimethylphenol	380 U	50	380	330	UG/KG

Reporting Anomalies are cases where the reported RL exceeds that specified in the governing project document.

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Reporting Anomalies

SDG Name: 240-17796-1_(76-SB,SS,SW)

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW8270C/NONE	076SB-0053M-0001-SO	N	2.5	2,4-Dinitrophenol	830 U	200	830	800	UG/KG
SW8270C/NONE	076SB-0053M-0001-SO	N	2.5	2,4-Dinitrotoluene	500 U	68	500	330	UG/KG
SW8270C/NONE	076SB-0053M-0001-SO	N	2.5	2,6-Dinitrotoluene	500 U	53	500	330	UG/KG
SW8270C/NONE	076SB-0053M-0001-SO	N	2.5	2-Methylphenol (o-Cresol)	500 U	200	500	330	UG/KG
SW8270C/NONE	076SB-0053M-0001-SO	N	2.5	4-Chloro-3-Methylphenol	380 U	53	380	330	UG/KG
SW8270C/NONE	076SB-0053M-0001-SO	N	2.5	4-Chloroaniline	380 U	43	380	330	UG/KG
SW8270C/NONE	076SB-0053M-0001-SO	N	2.5	4-Nitrophenol	830 U	200	830	800	UG/KG
SW8270C/NONE	076SB-0053M-0001-SO	N	2.5	Benzoic acid	1700 U	830	1700	800	UG/KG
SW8270C/NONE	076SB-0053M-0001-SO	N	2.5	Benzyl alcohol	830 U	53	830	330	UG/KG
SW8270C/NONE	076SB-0053M-0001-SO	N	2.5	Carbazole	130 U	68	130	50	UG/KG
SW8270C/NONE	076SB-0053M-0001-SO	N	2.5	Cresols, m & p	1000 U	50	1000	300	UG/KG
SW8270C/NONE	076SB-0053M-0001-SO	N	2.5	Hexachlorocyclopentadiene	830 U	68	830	330	UG/KG
SW8270C/NONE	076SB-0054M-0001-SO	N	5	2,4,6-Trichlorophenol	760 U	410	760	330	UG/KG
SW8270C/NONE	076SB-0054M-0001-SO	N	5	2,4-Dichlorophenol	760 U	100	760	330	UG/KG
SW8270C/NONE	076SB-0054M-0001-SO	N	5	2,4-Dimethylphenol	760 U	100	760	330	UG/KG
SW8270C/NONE	076SB-0054M-0001-SO	N	5	2,4-Dinitrophenol	1700 UJ	410	1700	800	UG/KG
SW8270C/NONE	076SB-0054M-0001-SO	N	5	2,4-Dinitrotoluene	1000 U	140	1000	330	UG/KG
SW8270C/NONE	076SB-0054M-0001-SO	N	5	2,6-Dinitrotoluene	1000 U	110	1000	330	UG/KG
SW8270C/NONE	076SB-0054M-0001-SO	N	5	2-Methylphenol (o-Cresol)	1000 U	410	1000	330	UG/KG
SW8270C/NONE	076SB-0054M-0001-SO	N	5	2-Nitroaniline	1000 U	46	1000	800	UG/KG
SW8270C/NONE	076SB-0054M-0001-SO	N	5	3,3'-Dichlorobenzidine	510 U	91	510	330	UG/KG
SW8270C/NONE	076SB-0054M-0001-SO	N	5	3-Nitroaniline	1000 U	81	1000	800	UG/KG
SW8270C/NONE	076SB-0054M-0001-SO	N	5	4-Chloro-3-Methylphenol	760 U	110	760	330	UG/KG
SW8270C/NONE	076SB-0054M-0001-SO	N	5	4-Chloroaniline	760 U	86	760	330	UG/KG
SW8270C/NONE	076SB-0054M-0001-SO	N	5	4-Nitroaniline	1000 U	130	1000	800	UG/KG
SW8270C/NONE	076SB-0054M-0001-SO	N	5	4-Nitrophenol	1700 U	410	1700	800	UG/KG
SW8270C/NONE	076SB-0054M-0001-SO	N	5	Benzoic acid	3300 U	1700	3300	800	UG/KG
SW8270C/NONE	076SB-0054M-0001-SO	N	5	Benzyl alcohol	1700 U	110	1700	330	UG/KG
SW8270C/NONE	076SB-0054M-0001-SO	N	5	bis(2-Chloroethoxy) Methane	510 U	110	510	330	UG/KG

Reporting Anomalies are cases where the reported RL exceeds that specified in the governing project document.

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Reporting Anomalies

SDG Name: 240-17796-1_(76-SB,SS,SW)

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW8270C/NONE	076SB-0054M-0001-SO	N	5	bis(2-Chloroethyl) Ether (2-Chloroethyl Ether)	510 U	10	510	330	UG/KG
SW8270C/NONE	076SB-0054M-0001-SO	N	5	bis(2-Chloroisopropyl) Ether	510 U	48	510	330	UG/KG
SW8270C/NONE	076SB-0054M-0001-SO	N	5	Carbazole	250 U	140	250	50	UG/KG
SW8270C/NONE	076SB-0054M-0001-SO	N	5	Cresols, m & p	2000 U	100	2000	300	UG/KG
SW8270C/NONE	076SB-0054M-0001-SO	N	5	Hexachlorocyclopentadiene	1700 U	140	1700	330	UG/KG
SW8270C/NONE	076SB-0054M-0001-SO	N	5	Nitrobenzene	510 U	11	510	330	UG/KG
SW8270C/NONE	076SB-0055M-0001-SO	N	5	2,4,6-Trichlorophenol	750 U	400	750	330	UG/KG
SW8270C/NONE	076SB-0055M-0001-SO	N	5	2,4-Dichlorophenol	750 U	100	750	330	UG/KG
SW8270C/NONE	076SB-0055M-0001-SO	N	5	2,4-Dimethylphenol	750 U	100	750	330	UG/KG
SW8270C/NONE	076SB-0055M-0001-SO	N	5	2,4-Dinitrophenol	1700 UJ	400	1700	800	UG/KG
SW8270C/NONE	076SB-0055M-0001-SO	N	5	2,4-Dinitrotoluene	1000 U	140	1000	330	UG/KG
SW8270C/NONE	076SB-0055M-0001-SO	N	5	2,6-Dinitrotoluene	1000 U	110	1000	330	UG/KG
SW8270C/NONE	076SB-0055M-0001-SO	N	5	2-Methylphenol (o-Cresol)	1000 U	400	1000	330	UG/KG
SW8270C/NONE	076SB-0055M-0001-SO	N	5	2-Nitroaniline	1000 U	46	1000	800	UG/KG
SW8270C/NONE	076SB-0055M-0001-SO	N	5	3,3'-Dichlorobenzidine	500 U	90	500	330	UG/KG
SW8270C/NONE	076SB-0055M-0001-SO	N	5	3-Nitroaniline	1000 U	80	1000	800	UG/KG
SW8270C/NONE	076SB-0055M-0001-SO	N	5	4-Chloro-3-Methylphenol	750 U	110	750	330	UG/KG
SW8270C/NONE	076SB-0055M-0001-SO	N	5	4-Chloroaniline	750 U	85	750	330	UG/KG
SW8270C/NONE	076SB-0055M-0001-SO	N	5	4-Nitroaniline	1000 U	130	1000	800	UG/KG
SW8270C/NONE	076SB-0055M-0001-SO	N	5	4-Nitrophenol	1700 U	400	1700	800	UG/KG
SW8270C/NONE	076SB-0055M-0001-SO	N	5	Benzoic acid	3300 U	1700	3300	800	UG/KG
SW8270C/NONE	076SB-0055M-0001-SO	N	5	Benzyl alcohol	1700 U	110	1700	330	UG/KG
SW8270C/NONE	076SB-0055M-0001-SO	N	5	bis(2-Chloroethoxy) Methane	500 U	110	500	330	UG/KG
SW8270C/NONE	076SB-0055M-0001-SO	N	5	bis(2-Chloroethyl) Ether (2-Chloroethyl Ether)	500 U	10	500	330	UG/KG
SW8270C/NONE	076SB-0055M-0001-SO	N	5	bis(2-Chloroisopropyl) Ether	500 U	48	500	330	UG/KG
SW8270C/NONE	076SB-0055M-0001-SO	N	5	Carbazole	250 U	140	250	50	UG/KG
SW8270C/NONE	076SB-0055M-0001-SO	N	5	Cresols, m & p	2000 U	100	2000	300	UG/KG
SW8270C/NONE	076SB-0055M-0001-SO	N	5	Hexachlorocyclopentadiene	1700 U	140	1700	330	UG/KG
SW8270C/NONE	076SB-0055M-0001-SO	N	5	Nitrobenzene	500 U	11	500	330	UG/KG

Reporting Anomalies are cases where the reported RL exceeds that specified in the governing project document.

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Reporting Anomalies

SDG Name: 240-17796-1_(76-SB,SS,SW)

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW8270C/NONE	076SB-0056M-0001-SO	N	1	Carbazole	51 U	27	51	50	UG/KG
SW8270C/NONE	076SB-0056M-0001-SO	N	1	Cresols, m & p	400 U	20	400	300	UG/KG
SW8270C/NONE	076SB-0057M-0001-SO	N	1	Carbazole	51 U	27	51	50	UG/KG
SW8270C/NONE	076SB-0057M-0001-SO	N	1	Cresols, m & p	400 U	20	400	300	UG/KG
SW8270C/NONE	076SB-0058M-0001-SO	N	1	Cresols, m & p	400 U	20	400	300	UG/KG
SW8270C/NONE	076SB-0059M-0001-SO	N	1	Benzyl alcohol	340 U	21	340	330	UG/KG
SW8270C/NONE	076SB-0059M-0001-SO	N	1	Carbazole	51 U	27	51	50	UG/KG
SW8270C/NONE	076SB-0059M-0001-SO	N	1	Cresols, m & p	410 U	20	410	300	UG/KG
SW8270C/NONE	076SB-0059M-0001-SO	N	1	Hexachlorocyclopentadiene	340 U	27	340	330	UG/KG
SW8270C/NONE	076SB-0060M-0001-SO	N	5	2,4,6-Trichlorophenol	760 U	410	760	330	UG/KG
SW8270C/NONE	076SB-0060M-0001-SO	N	5	2,4-Dichlorophenol	760 U	100	760	330	UG/KG
SW8270C/NONE	076SB-0060M-0001-SO	N	5	2,4-Dimethylphenol	760 U	100	760	330	UG/KG
SW8270C/NONE	076SB-0060M-0001-SO	N	5	2,4-Dinitrophenol	1700 UJ	410	1700	800	UG/KG
SW8270C/NONE	076SB-0060M-0001-SO	N	5	2,4-Dinitrotoluene	1000 U	140	1000	330	UG/KG
SW8270C/NONE	076SB-0060M-0001-SO	N	5	2,6-Dinitrotoluene	1000 U	110	1000	330	UG/KG
SW8270C/NONE	076SB-0060M-0001-SO	N	5	2-Methylphenol (o-Cresol)	1000 U	410	1000	330	UG/KG
SW8270C/NONE	076SB-0060M-0001-SO	N	5	2-Nitroaniline	1000 U	46	1000	800	UG/KG
SW8270C/NONE	076SB-0060M-0001-SO	N	5	3,3'-Dichlorobenzidine	510 U	91	510	330	UG/KG
SW8270C/NONE	076SB-0060M-0001-SO	N	5	3-Nitroaniline	1000 U	81	1000	800	UG/KG
SW8270C/NONE	076SB-0060M-0001-SO	N	5	4-Chloro-3-Methylphenol	760 U	110	760	330	UG/KG
SW8270C/NONE	076SB-0060M-0001-SO	N	5	4-Chloroaniline	760 U	86	760	330	UG/KG
SW8270C/NONE	076SB-0060M-0001-SO	N	5	4-Nitroaniline	1000 U	130	1000	800	UG/KG
SW8270C/NONE	076SB-0060M-0001-SO	N	5	4-Nitrophenol	1700 U	410	1700	800	UG/KG
SW8270C/NONE	076SB-0060M-0001-SO	N	5	Benzoic acid	3400 U	1700	3400	800	UG/KG
SW8270C/NONE	076SB-0060M-0001-SO	N	5	Benzyl alcohol	1700 U	110	1700	330	UG/KG
SW8270C/NONE	076SB-0060M-0001-SO	N	5	bis(2-Chloroethoxy) Methane	510 U	110	510	330	UG/KG
SW8270C/NONE	076SB-0060M-0001-SO	N	5	bis(2-Chloroethyl) Ether (2-Chloroethyl Ether)	510 U	10	510	330	UG/KG
SW8270C/NONE	076SB-0060M-0001-SO	N	5	bis(2-Chloroisopropyl) Ether	510 U	48	510	330	UG/KG
SW8270C/NONE	076SB-0060M-0001-SO	N	5	Carbazole	250 U	140	250	50	UG/KG

Reporting Anomalies are cases where the reported RL exceeds that specified in the governing project document.

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Reporting Anomalies

SDG Name: 240-17796-1_(76-SB,SS,SW)

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW8270C/NONE	076SB-0060M-0001-SO	N	5	Cresols, m & p	2000 U	100	2000	300	UG/KG
SW8270C/NONE	076SB-0060M-0001-SO	N	5	Hexachlorocyclopentadiene	1700 U	140	1700	330	UG/KG
SW8270C/NONE	076SB-0060M-0001-SO	N	5	Nitrobenzene	510 U	11	510	330	UG/KG
SW8270C/NONE	076SB-0061M-0001-SO	N	2.5	2,4,6-Trichlorophenol	380 U	200	380	330	UG/KG
SW8270C/NONE	076SB-0061M-0001-SO	N	2.5	2,4-Dichlorophenol	380 U	50	380	330	UG/KG
SW8270C/NONE	076SB-0061M-0001-SO	N	2.5	2,4-Dimethylphenol	380 U	50	380	330	UG/KG
SW8270C/NONE	076SB-0061M-0001-SO	N	2.5	2,4-Dinitrophenol	830 U	200	830	800	UG/KG
SW8270C/NONE	076SB-0061M-0001-SO	N	2.5	2,4-Dinitrotoluene	500 U	68	500	330	UG/KG
SW8270C/NONE	076SB-0061M-0001-SO	N	2.5	2,6-Dinitrotoluene	500 U	53	500	330	UG/KG
SW8270C/NONE	076SB-0061M-0001-SO	N	2.5	2-Methylphenol (o-Cresol)	500 U	200	500	330	UG/KG
SW8270C/NONE	076SB-0061M-0001-SO	N	2.5	4-Chloro-3-Methylphenol	380 U	53	380	330	UG/KG
SW8270C/NONE	076SB-0061M-0001-SO	N	2.5	4-Chloroaniline	380 U	43	380	330	UG/KG
SW8270C/NONE	076SB-0061M-0001-SO	N	2.5	4-Nitrophenol	830 U	200	830	800	UG/KG
SW8270C/NONE	076SB-0061M-0001-SO	N	2.5	Benzoic acid	1700 U	830	1700	800	UG/KG
SW8270C/NONE	076SB-0061M-0001-SO	N	2.5	Benzyl alcohol	830 U	53	830	330	UG/KG
SW8270C/NONE	076SB-0061M-0001-SO	N	2.5	Carbazole	130 U	68	130	50	UG/KG
SW8270C/NONE	076SB-0061M-0001-SO	N	2.5	Cresols, m & p	1000 U	50	1000	300	UG/KG
SW8270C/NONE	076SB-0061M-0001-SO	N	2.5	Hexachlorocyclopentadiene	830 U	68	830	330	UG/KG
SW8270C/NONE	076SB-0062M-0001-SO	N	1	Cresols, m & p	400 U	20	400	300	UG/KG
SW8270C/NONE	076SB-0063M-0001-SO	N	1	Cresols, m & p	400 U	20	400	300	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	1,2,4-Trichlorobenzene	490 U	270	490	330	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	1,2-Dichlorobenzene	490 U	96	490	330	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	1,3-Dichlorobenzene	490 U	110	490	330	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	1,4-Dichlorobenzene	490 U	200	490	330	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	2,4,5-Trichlorophenol	1500 U	250	1500	800	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	2,4,6-Trichlorophenol	1500 U	790	1500	330	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	2,4-Dichlorophenol	1500 U	200	1500	330	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	2,4-Dimethylphenol	1500 U	200	1500	330	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	2,4-Dinitrophenol	3300 U	790	3300	800	UG/KG

Reporting Anomalies are cases where the reported RL exceeds that specified in the governing project document.

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Reporting Anomalies

SDG Name: 240-17796-1_(76-SB,SS,SW)

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW8270C/NONE	076SB-0064M-0001-SO	N	10	2,4-Dinitrotoluene	2000 U	270	2000	330	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	2,6-Dinitrotoluene	2000 U	210	2000	330	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	2-Chloronaphthalene	490 U	33	490	330	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	2-Chlorophenol	490 U	270	490	330	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	2-Methylphenol (o-Cresol)	2000 U	790	2000	330	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	2-Nitroaniline	2000 U	90	2000	800	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	2-Nitrophenol	490 U	270	490	330	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	3,3'-Dichlorobenzidine	990 U	180	990	330	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	3-Nitroaniline	2000 U	160	2000	800	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	4,6-Dinitro-2-Methylphenol	1500 U	790	1500	800	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	4-Bromophenyl phenyl ether	490 U	130	490	330	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	4-Chloro-3-Methylphenol	1500 U	210	1500	330	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	4-Chloroaniline	1500 U	170	1500	330	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	4-Chlorophenyl Phenyl Ether	490 U	130	490	330	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	4-Nitroaniline	2000 U	260	2000	800	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	4-Nitrophenol	3300 U	790	3300	800	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	Acenaphthene	66 U	33	66	50	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	Acenaphthylene	66 U	33	66	50	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	Anthracene	66 U	33	66	50	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	Benzo(a)anthracene	66 U	33	66	50	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	Benzo(a)pyrene	66 U	33	66	50	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	Benzo(b)fluoranthene	66 U	33	66	50	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	Benzo(g,h,i)perylene	66 U	33	66	50	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	Benzo(k)fluoranthene	66 U	33	66	50	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	Benzoic acid	6500 U	3300	6500	800	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	Benzyl alcohol	3300 U	210	3300	330	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	Benzyl butyl phthalate	490 U	99	490	330	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	bis(2-Chloroethoxy) Methane	990 U	220	990	330	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	bis(2-Chloroethyl) Ether (2-Chloroethyl Ether)	990 U	20	990	330	UG/KG

Reporting Anomalies are cases where the reported RL exceeds that specified in the governing project document.

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Reporting Anomalies

SDG Name: 240-17796-1_(76-SB,SS,SW)

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW8270C/NONE	076SB-0064M-0001-SO	N	10	bis(2-Chloroisopropyl) Ether	990 U	94	990	330	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	Carbazole	490 U	270	490	50	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	Chrysene	66 U	11	66	50	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	Cresols, m & p	3900 U	200	3900	300	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	Dibenz(a,h)anthracene	66 U	33	66	50	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	Dibenzofuran	490 U	33	490	330	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	Diethyl Phthalate	490 U	160	490	330	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	Dimethyl Phthalate	490 U	170	490	330	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	Di-n-Butyl Phthalate	490 U	150	490	330	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	Di-n-Octylphthalate	490 U	270	490	330	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	Fluoranthene	66 U	33	66	50	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	Fluorene	66 U	33	66	50	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	Hexachlorobutadiene	490 U	270	490	330	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	Hexachlorocyclopentadiene	3300 U	270	3300	330	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	Hexachloroethane	490 U	89	490	330	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	Indeno(1,2,3-c,d)pyrene	66 U	33	66	50	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	Isophorone	490 U	130	490	330	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	Naphthalene	66 U	33	66	50	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	Nitrobenzene	990 U	22	990	330	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	n-Nitrosodi-n-propylamine	490 U	270	490	330	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	Pentachlorophenol	1500 U	790	1500	800	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	Phenanthrene	66 U	33	66	50	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	Phenol	490 U	270	490	330	UG/KG
SW8270C/NONE	076SB-0064M-0001-SO	N	10	Pyrene	66 U	33	66	50	UG/KG
SW8270C/NONE	076SB-0065M-0001-SO	N	2.5	2,4,6-Trichlorophenol	380 U	200	380	330	UG/KG
SW8270C/NONE	076SB-0065M-0001-SO	N	2.5	2,4-Dichlorophenol	380 U	50	380	330	UG/KG
SW8270C/NONE	076SB-0065M-0001-SO	N	2.5	2,4-Dimethylphenol	380 U	50	380	330	UG/KG
SW8270C/NONE	076SB-0065M-0001-SO	N	2.5	2,4-Dinitrophenol	830 U	200	830	800	UG/KG
SW8270C/NONE	076SB-0065M-0001-SO	N	2.5	2,4-Dinitrotoluene	500 U	68	500	330	UG/KG

Reporting Anomalies are cases where the reported RL exceeds that specified in the governing project document.

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Reporting Anomalies

SDG Name: 240-17796-1_(76-SB,SS,SW)

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW8270C/NONE	076SB-0065M-0001-SO	N	2.5	2,6-Dinitrotoluene	500 U	53	500	330	UG/KG
SW8270C/NONE	076SB-0065M-0001-SO	N	2.5	2-Methylphenol (o-Cresol)	500 U	200	500	330	UG/KG
SW8270C/NONE	076SB-0065M-0001-SO	N	2.5	4-Chloro-3-Methylphenol	380 U	53	380	330	UG/KG
SW8270C/NONE	076SB-0065M-0001-SO	N	2.5	4-Chloroaniline	380 U	43	380	330	UG/KG
SW8270C/NONE	076SB-0065M-0001-SO	N	2.5	4-Nitrophenol	830 U	200	830	800	UG/KG
SW8270C/NONE	076SB-0065M-0001-SO	N	2.5	Benzoic acid	1700 U	830	1700	800	UG/KG
SW8270C/NONE	076SB-0065M-0001-SO	N	2.5	Benzyl alcohol	830 U	53	830	330	UG/KG
SW8270C/NONE	076SB-0065M-0001-SO	N	2.5	Carbazole	130 U	68	130	50	UG/KG
SW8270C/NONE	076SB-0065M-0001-SO	N	2.5	Cresols, m & p	1000 U	50	1000	300	UG/KG
SW8270C/NONE	076SB-0065M-0001-SO	N	2.5	Hexachlorocyclopentadiene	830 U	68	830	330	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	1,2,4-Trichlorobenzene	500 U	270	500	330	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	1,2-Dichlorobenzene	500 U	97	500	330	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	1,3-Dichlorobenzene	500 U	110	500	330	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	1,4-Dichlorobenzene	500 U	200	500	330	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	2,4,5-Trichlorophenol	1500 U	250	1500	800	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	2,4,6-Trichlorophenol	1500 U	800	1500	330	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	2,4-Dichlorophenol	1500 U	200	1500	330	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	2,4-Dimethylphenol	1500 U	200	1500	330	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	2,4-Dinitrophenol	3300 U	800	3300	800	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	2,4-Dinitrotoluene	2000 U	270	2000	330	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	2,6-Dinitrotoluene	2000 U	210	2000	330	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	2-Chloronaphthalene	500 U	33	500	330	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	2-Chlorophenol	500 U	270	500	330	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	2-Methylphenol (o-Cresol)	2000 U	800	2000	330	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	2-Nitroaniline	2000 U	91	2000	800	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	2-Nitrophenol	500 U	270	500	330	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	3,3'-Dichlorobenzidine	1000 U	180	1000	330	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	3-Nitroaniline	2000 U	160	2000	800	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	4,6-Dinitro-2-Methylphenol	1500 U	800	1500	800	UG/KG

Reporting Anomalies are cases where the reported RL exceeds that specified in the governing project document.

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Reporting Anomalies

SDG Name: 240-17796-1_(76-SB,SS,SW)

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW8270C/NONE	076SB-0066M-0001-SO	N	10	4-Bromophenyl phenyl ether	500 U	130	500	330	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	4-Chloro-3-Methylphenol	1500 U	210	1500	330	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	4-Chloroaniline	1500 U	170	1500	330	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	4-Chlorophenyl Phenyl Ether	500 U	130	500	330	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	4-Nitroaniline	2000 U	260	2000	800	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	4-Nitrophenol	3300 U	800	3300	800	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	Acenaphthene	67 U	33	67	50	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	Acenaphthylene	67 U	33	67	50	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	Anthracene	67 U	33	67	50	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	Benzo(a)anthracene	130	33	67	50	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	Benzo(a)pyrene	170	33	67	50	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	Benzo(b)fluoranthene	190	33	67	50	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	Benzo(g,h,i)perylene	68	33	67	50	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	Benzo(k)fluoranthene	45 J	33	67	50	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	Benzoic acid	6600 U	3300	6600	800	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	Benzyl alcohol	3300 U	210	3300	330	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	Benzyl butyl phthalate	500 U	100	500	330	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	bis(2-Chloroethoxy) Methane	1000 U	220	1000	330	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	bis(2-Chloroethyl) Ether (2-Chloroethyl Ether)	1000 U	20	1000	330	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	bis(2-Chloroisopropyl) Ether	1000 U	95	1000	330	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	Carbazole	500 U	270	500	50	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	Chrysene	140	11	67	50	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	Cresols, m & p	4000 U	200	4000	300	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	Dibenz(a,h)anthracene	67 U	33	67	50	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	Dibenzofuran	500 U	33	500	330	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	Diethyl Phthalate	500 U	160	500	330	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	Dimethyl Phthalate	500 U	170	500	330	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	Di-n-Butyl Phthalate	500 U	150	500	330	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	Di-n-Octylphthalate	500 U	270	500	330	UG/KG

Reporting Anomalies are cases where the reported RL exceeds that specified in the governing project document.

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Reporting Anomalies

SDG Name: 240-17796-1_(76-SB,SS,SW)

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW8270C/NONE	076SB-0066M-0001-SO	N	10	Fluoranthene	260	33	67	50	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	Fluorene	67 U	33	67	50	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	Hexachlorobutadiene	500 U	270	500	330	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	Hexachlorocyclopentadiene	3300 U	270	3300	330	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	Hexachloroethane	500 U	90	500	330	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	Indeno(1,2,3-c,d)pyrene	100	33	67	50	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	Isophorone	500 U	130	500	330	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	Naphthalene	67 U	33	67	50	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	Nitrobenzene	1000 U	22	1000	330	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	n-Nitrosodi-n-propylamine	500 U	270	500	330	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	Pentachlorophenol	1500 U	800	1500	800	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	Phenanthrene	140	33	67	50	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	Phenol	500 U	270	500	330	UG/KG
SW8270C/NONE	076SB-0066M-0001-SO	N	10	Pyrene	190	33	67	50	UG/KG
SW8270C/NONE	076SS-0007M-0001-SO	N	5	2,4,6-Trichlorophenol	760 U	400	760	330	UG/KG
SW8270C/NONE	076SS-0007M-0001-SO	N	5	2,4-Dichlorophenol	760 U	100	760	330	UG/KG
SW8270C/NONE	076SS-0007M-0001-SO	N	5	2,4-Dimethylphenol	760 U	100	760	330	UG/KG
SW8270C/NONE	076SS-0007M-0001-SO	N	5	2,4-Dinitrophenol	1700 UJ	400	1700	800	UG/KG
SW8270C/NONE	076SS-0007M-0001-SO	N	5	2,4-Dinitrotoluene	1000 U	140	1000	330	UG/KG
SW8270C/NONE	076SS-0007M-0001-SO	N	5	2,6-Dinitrotoluene	1000 U	110	1000	330	UG/KG
SW8270C/NONE	076SS-0007M-0001-SO	N	5	2-Methylphenol (o-Cresol)	1000 U	400	1000	330	UG/KG
SW8270C/NONE	076SS-0007M-0001-SO	N	5	2-Nitroaniline	1000 U	46	1000	800	UG/KG
SW8270C/NONE	076SS-0007M-0001-SO	N	5	3,3'-Dichlorobenzidine	500 U	91	500	330	UG/KG
SW8270C/NONE	076SS-0007M-0001-SO	N	5	3-Nitroaniline	1000 U	81	1000	800	UG/KG
SW8270C/NONE	076SS-0007M-0001-SO	N	5	4-Chloro-3-Methylphenol	760 U	110	760	330	UG/KG
SW8270C/NONE	076SS-0007M-0001-SO	N	5	4-Chloroaniline	760 U	86	760	330	UG/KG
SW8270C/NONE	076SS-0007M-0001-SO	N	5	4-Nitroaniline	1000 U	130	1000	800	UG/KG
SW8270C/NONE	076SS-0007M-0001-SO	N	5	4-Nitrophenol	1700 U	400	1700	800	UG/KG
SW8270C/NONE	076SS-0007M-0001-SO	N	5	Benzoic acid	3300 U	1700	3300	800	UG/KG

Reporting Anomalies are cases where the reported RL exceeds that specified in the governing project document.

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Reporting Anomalies

SDG Name: 240-17796-1_(76-SB,SS,SW)

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW8270C/NONE	076SS-0007M-0001-SO	N	5	Benzyl alcohol	1700 U	110	1700	330	UG/KG
SW8270C/NONE	076SS-0007M-0001-SO	N	5	bis(2-Chloroethoxy) Methane	500 U	110	500	330	UG/KG
SW8270C/NONE	076SS-0007M-0001-SO	N	5	bis(2-Chloroethyl) Ether (2-Chloroethyl Ether)	500 U	10	500	330	UG/KG
SW8270C/NONE	076SS-0007M-0001-SO	N	5	bis(2-Chloroisopropyl) Ether	500 U	48	500	330	UG/KG
SW8270C/NONE	076SS-0007M-0001-SO	N	5	Carbazole	250 U	140	250	50	UG/KG
SW8270C/NONE	076SS-0007M-0001-SO	N	5	Cresols, m & p	2000 U	100	2000	300	UG/KG
SW8270C/NONE	076SS-0007M-0001-SO	N	5	Hexachlorocyclopentadiene	1700 U	140	1700	330	UG/KG
SW8270C/NONE	076SS-0007M-0001-SO	N	5	Nitrobenzene	500 U	11	500	330	UG/KG
SW8270C/NONE	076SS-0022M-0001-SO	N	1	Cresols, m & p	400 U	20	400	300	UG/KG

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW8330B/NONE	076-0067-0001-ER	N	1	2-Amino-4,6-dinitrotoluene	0.21 U	0.015	0.21	0.2	UG/L
SW8330B/NONE	076-0067-0001-ER	N	1	2-Nitrotoluene	0.51 U	0.09	0.51	0.2	UG/L
SW8330B/NONE	076-0067-0001-ER	N	1	3-Nitrotoluene	0.51 U	0.059	0.51	0.2	UG/L
SW8330B/NONE	076-0067-0001-ER	N	1	4-Nitrotoluene	0.51 U	0.09	0.51	0.2	UG/L
SW8330B/NONE	076SW-0013-0001-SW	N	1	2-Nitrotoluene	0.51 U	0.09	0.51	0.2	UG/L
SW8330B/NONE	076SW-0013-0001-SW	N	1	3-Nitrotoluene	0.51 U	0.058	0.51	0.2	UG/L
SW8330B/NONE	076SW-0013-0001-SW	N	1	4-Nitrotoluene	0.51 U	0.09	0.51	0.2	UG/L
SW8330B/NONE	076SW-0014-0001-SW	FD	1	2-Amino-4,6-dinitrotoluene	0.21 U	0.015	0.21	0.2	UG/L
SW8330B/NONE	076SW-0014-0001-SW	FD	1	2-Nitrotoluene	0.52 U	0.091	0.52	0.2	UG/L
SW8330B/NONE	076SW-0014-0001-SW	FD	1	3-Nitrotoluene	0.52 U	0.059	0.52	0.2	UG/L
SW8330B/NONE	076SW-0014-0001-SW	FD	1	4-Nitrotoluene	0.52 U	0.091	0.52	0.2	UG/L
SW8330B/NONE	076SW-0015-0001-SW	N	1	2-Amino-4,6-dinitrotoluene	0.21 U	0.015	0.21	0.2	UG/L
SW8330B/NONE	076SW-0015-0001-SW	N	1	2-Nitrotoluene	0.52 U	0.091	0.52	0.2	UG/L
SW8330B/NONE	076SW-0015-0001-SW	N	1	3-Nitrotoluene	0.52 U	0.059	0.52	0.2	UG/L
SW8330B/NONE	076SW-0015-0001-SW	N	1	4-Nitrotoluene	0.52 U	0.091	0.52	0.2	UG/L

Reporting Anomalies are cases where the reported RL exceeds that specified in the governing project document.

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Worksheet

SDG Name: 240-17796-1_(76-SB,SS,SW)

Method: E353.2

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?				
Were samples preserved properly and received in good condition?				
Were holding times met?				
Were sample reciept temperatures met?				
Were QAPP specified RLs achieved?				
Were all QAPP specified target analytes reported?				
Was the initial calibration curve within QAPP acceptance limits?			•	Not Required
Were the ICV/CCVs analyzed (frequency) as required in the QAPP?			•	Not Required
Were ICV/CCV results within QAPP acceptance limits?			•	Not Required
Were the ICB/CCBs analyzed (frequency) as required in the QAPP?			•	Not Required
Was a method blank prepared and analyzed with each batch?				
Were target analytes detected in the ICB/CCB/method blank?			•	Not Required
Was a field blank collected and analyzed?				
Were target analytes reported in the field blank analyses above the MDL?				
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?				
Was a LCS prepared and analyzed with each batch?				
Were the LCS recoveries within QAPP acceptance limits?				
Was a duplicate sample prepared and analyzed with each batch?				
Was the duplicate RPD within QAPP acceptance limits?				
Was a MS/MSD pair prepared with each batch?				
Is the MS/MSD parent sample the one designated by the sampling team?				
Were the MS/MSD recoveries and RPDs within QAPP acceptance limits?				
Were sample concentrations within calibration range?				
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?				
Are all samples associated with QC non-compliances flagged appropriately?				
Are the Qualified, Detected, and Rejected tables of the ADR report in agreement?				

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Method: M8015V

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report?				
Were samples preserved properly and received in good condition?				
Were sample reciept temperatures met?				
Were holding times for prep and analysis met?				
Does the initial calibration curve consist of 5 concentration levels, with the low standard near but > MDL?				
Is the ICAL %RSD within acceptance limits (%D =20%) on both columns?				
Was a second source verification analyzed after the ICAL and all analytes within criteria (%D =20%)?				
Was a CCV run at the beginning of the analytical sequence and every 12 hours?				
Was the CCV a mid-level standard from the initial calibration curve?				
Was the CCV %D within criteria (%D =20%)?				
Was a method blank prepared and analyzed with each batch?				
Were target analytes detected in the method blank above the MDL?				
Was a field blank (equipment or trip) collected and analyzed?				
Were target analytes reported in the field blank analyses above the MDL?				
Were surrogate recoveries within QAPP acceptance limits?				
Was an LCS/LCSD pair prepared and analyzed with each batch? (if applicable)				
Were the LCS recoveries within QAPP acceptance limits?				
Were the LCS/LCSD RPDs within QAPP acceptance limits? (if applicable)				
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits (RPD = 30%) ?				
Is the MS/MSD parent sample the one designated by the sampling team?				
Were MS/MSD recoveries and RPD within QAPP acceptance limits?				
Were all QAPP-specified target analytes reported?				
Were reported sample concentrations within calibration range?				
Are all samples associated with QC non-compliances flagged appropriately?				
Are the Qualified, Detected, and Rejected tables of the ADR report in agreement?				
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?				
Were sample prepration sheets present and filled out appropriately?				
Were instrument run logs present and filled out appropriately?				

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Method: SW6020

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?				
Were samples preserved properly and received in good condition?				
Were holding times met?				
Were sample reciept temperatures met?				
Were QAPP specified RLs achieved?				
Were all QAPP specified target analytes reported?				
Was the initial calibration curve within QAPP acceptance limits?			•	Not Required
Were the ICV/CCVs analyzed (frequency) as required in the QAPP?			•	Not Required
Were ICV/CCV results within QAPP acceptance limits?			•	Not Required
Were the ICB/CCBs analyzed (frequency) as required in the QAPP?			•	Not Required
Was a method blank prepared and analyzed with each batch?				
Were target analytes detected in the ICB/CCB/method blank?			•	Not Required
Was a field blank collected and analyzed?				
Were target analytes reported in the field blank analyses above the MDL?				
Was an Interference Check Standard (ICS) run at the beginning and end of every run?			•	Not Required
Was the ICS recovery within QAPP acceptance limits?			•	Not Required
If a field duplicate was analyzed, were the RPDs within criteria?				
Was a LCS prepared and analyzed with each batch?				
Were the LCS recoveries within QAPP acceptance limits?				
Was a MS/MSD pair prepared with each batch?				
Is the MS/MSD parent sample the one designated by the sampling team?				
Were the MS/MSD within QAPP acceptance limits?				
Was a serial dilution prepared and analyzed with each batch?			•	Not Required
Was the serial dilution within QAPP acceptance limits?			•	Not Required
Were sample concentrations within calibration range?				
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?				
Are all samples associated with QC non-compliances flagged appropriately?				
Are the Qualified, Detected, and Rejected tables of the ADR report in agreement?				

Method: SW7196A

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?				
Were samples preserved properly and received in good condition?				
Were holding times met?				
Were sample reciept temperatures met?				
Were QAPP specified RLs achieved?				
Were all QAPP specified target analytes reported?				
Was the initial calibration curve within QAPP acceptance limits?			•	Not Required
Were the ICV/CCVs analyzed (frequency) as required in the QAPP?			•	Not Required
Were ICV/CCV results within QAPP acceptance limits?			•	Not Required
Were the ICB/CCBs analyzed (frequency) as required in the QAPP?			•	Not Required
Was a method blank prepared and analyzed with each batch?				
Were target analytes detected in the ICB/CCB/method blank?			•	Not Required
Was a field blank collected and analyzed?				
Were target analytes reported in the field blank analyses above the MDL?				
Was the ICS recovery within QAPP acceptance limits?			•	Not Required
If a field duplicate was analyzed, were the RPDs within criteria?				
Was a LCS prepared and analyzed with each batch?				
Were the LCS recoveries within QAPP acceptance limits?				
Was a MS/MSD pair prepared with each batch?				
Is the MS/MSD parent sample the one designated by the sampling team?				
Were the MS/MSD within QAPP acceptance limits?				
Were sample concentrations within calibration range?				
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?				
Are all samples associated with QC non-compliances flagged appropriately?				
Are the Qualified, Detected, and Rejected tables of the ADR report in agreement?				

Method: SW7470A

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?				

Method: SW7470A

Review Questions	Yes	No	NA	Comment
Were samples preserved properly and received in good condition?				
Were holding times met?				
Were sample reciept temperatures met?				
Were QAPP specified RLs achieved?				
Were all QAPP specified target analytes reported?				
Was the initial calibration curve within QAPP acceptance limits?			•	Not Required
Were the ICV/CCVs analyzed (frequency) as required in the QAPP?			•	Not Required
Were ICV/CCV results within QAPP acceptance limits?			•	Not Required
Were the ICB/CCBs analyzed (frequency) as required in the QAPP?			•	Not Required
Was a method blank prepared and analyzed with each batch?				
Were target analytes detected in the ICB/CCB/method blank?			•	Not Required
Was a field blank collected and analyzed?				
Were target analytes reported in the field blank analyses above the MDL?				
Was the ICS recovery within QAPP acceptance limits?			•	Not Required
If a field duplicate was analyzed, were the RPDs within criteria?				
Was a LCS prepared and analyzed with each batch?				
Were the LCS recoveries within QAPP acceptance limits?				
Was a MS/MSD pair prepared with each batch?				
Is the MS/MSD parent sample the one designated by the sampling team?				
Were the MS/MSD within QAPP acceptance limits?				
Were sample concentrations within calibration range?				
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?				
Are all samples associated with QC non-compliances flagged appropriately?				
Are the Qualified, Detected, and Rejected tables of the ADR report in agreement?				

Method: SW7471A

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?				
Were samples preserved properly and received in good condition?				
Were holding times met?				

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Method: SW7471A

Review Questions	Yes	No	NA	Comment
Were sample reciept temperatures met?				
Were QAPP specified RLs achieved?				
Were all QAPP specified target analytes reported?				
Was the initial calibration curve within QAPP acceptance limits?			•	Not Required
Were the ICV/CCVs analyzed (frequency) as required in the QAPP?			•	Not Required
Were ICV/CCV results within QAPP acceptance limits?			•	Not Required
Were the ICB/CCBs analyzed (frequency) as required in the QAPP?			•	Not Required
Was a method blank prepared and analyzed with each batch?				
Were target analytes detected in the ICB/CCB/method blank?			•	Not Required
Was a field blank collected and analyzed?				
Were target analytes reported in the field blank analyses above the MDL?				
Was the ICS recovery within QAPP acceptance limits?			•	Not Required
If a field duplicate was analyzed, were the RPDs within criteria?				
Was a LCS prepared and analyzed with each batch?				
Were the LCS recoveries within QAPP acceptance limits?				
Was a MS/MSD pair prepared with each batch?				
Is the MS/MSD parent sample the one designated by the sampling team?				
Were the MS/MSD within QAPP acceptance limits?				
Were sample concentrations within calibration range?				
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?				
Are all samples associated with QC non-compliances flagged appropriately?				
Are the Qualified, Detected, and Rejected tables of the ADR report in agreement?				

Method: SW8081

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report?				
Were samples preserved properly and received in good condition?				
Were sample reciept temperatures met?				
Were holding times for prep and analysis met?				
Does the initial calibration curve consist of 5 concentration levels, with the low standard near but > MDL?				

Method: SW8081

Review Questions	Yes	No	NA	Comment
Is the ICAL %RSD within acceptance limits (%D =20%) on both columns?				
Was a second source verification analyzed after the ICAL and all analytes within criteria (%D =20%)?				
Was a CCV run at the beginning of the analytical sequence and every 12 hours?				
Was the CCV a mid-level standard from the initial calibration curve?				
Was the CCV %D within criteria (%D =20%)?				
Was a method blank prepared and analyzed with each batch?				
Were target analytes detected in the method blank above the MDL?				
Was a field blank (equipment or trip) collected and analyzed?				
Were target analytes reported in the field blank analyses above the MDL?				
Were surrogate recoveries within QAPP acceptance limits?				
Was an LCS/LCSD pair prepared and analyzed with each batch? (if applicable)				
Were the LCS recoveries within QAPP acceptance limits?				
Were the LCS/LCSD RPDs within QAPP acceptance limits? (if applicable)				
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits (RPD = 30%) ?				
Were the Breakdown products within QAPP acceptance limits?				
Is the MS/MSD parent sample the one designated by the sampling team?				
Were MS/MSD recoveries and RPD within QAPP acceptance limits?				
Were all QAPP-specified target analytes reported?				
Were reported sample concentrations within calibration range?				
Were RPDs between primary and confirmation columns < 40%?				
Are all samples associated with QC non-compliances flagged appropriately?				
Are the Qualified, Detected, and Rejected tables of the ADR report in agreement?				
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?				
Were sample prepration sheets present and filled out appropriately?				
Were instrument run logs present and filled out appropriately?				

Method: SW8082

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report?				

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Method: SW8082

Review Questions	Yes	No	NA	Comment
Were samples preserved properly and received in good condition?				
Were sample reciept temperatures met?				
Were holding times for prep and analysis met?				
Does the initial calibration curve consist of 5 concentration levels, with the low standard near but > MDL?				
Is the ICAL %RSD within acceptance limits (%D =20%) on both columns?				
Was a second source verification analyzed after the ICAL and all analytes within criteria (%D =20%)?				
Was a CCV run at the beginning of the analytical sequence and every 12 hours?				
Was the CCV a mid-level standard from the initial calibration curve?				
Was the CCV %D within criteria (%D =20%)?				
Was a method blank prepared and analyzed with each batch?				
Were target analytes detected in the method blank above the MDL?				
Was a field blank (equipment or trip) collected and analyzed?				
Were target analytes reported in the field blank analyses above the MDL?				
Were surrogate recoveries within QAPP acceptance limits?				
Was an LCS/LCSD pair prepared and analyzed with each batch? (if applicable)				
Were the LCS recoveries within QAPP acceptance limits?				
Were the LCS/LCSD RPDs within QAPP acceptance limits? (if applicable)				
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits (RPD = 30%) ?				
Were the Breakdown products within QAPP acceptance limits?				
Is the MS/MSD parent sample the one designated by the sampling team?				
Were MS/MSD recoveries and RPD within QAPP acceptance limits?				
Were all QAPP-specified target analytes reported?				
Were reported sample concentrations within calibration range?				
Were RPDs between primary and confirmation columns < 40%?				
Are all samples associated with QC non-compliances flagged appropriately?				
Are the Qualified, Detected, and Rejected tables of the ADR report in agreement?				
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?				
Were sample prepration sheets present and filled out appropriately?				

Method: SW8082

Review Questions	Yes	No	NA	Comment
Were instrument run logs present and filled out appropriately?				

Method: SW8151

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report?				
Were samples preserved properly and received in good condition?				
Were sample reciept temperatures met?				
Were holding times for prep and analysis met?				
Does the initial calibration curve consist of 5 concentration levels, with the low standard near but > MDL?				
Is the ICAL %RSD within acceptance limits (%D =20%) on both columns?				
Was a second source verification analyzed after the ICAL and all analytes within criteria (%D =20%)?				
Was a CCV run at the beginning of the analytical sequence and every 12 hours?				
Was the CCV a mid-level standard from the initial calibration curve?				
Was the CCV %D within criteria (%D =20%)?				
Was a method blank prepared and analyzed with each batch?				
Were target analytes detected in the method blank above the MDL?				
Was a field blank (equipment or trip) collected and analyzed?				
Were target analytes reported in the field blank analyses above the MDL?				
Were surrogate recoveries within QAPP acceptance limits?				
Was an LCS/LCSD pair prepared and analyzed with each batch? (if applicable)				
Were the LCS recoveries within QAPP acceptance limits?				
Were the LCS/LCSD RPDs within QAPP acceptance limits? (if applicable)				
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits (RPD = 30%) ?				
Were the Breakdown products within QAPP acceptance limits?				
Is the MS/MSD parent sample the one designated by the sampling team?				
Were MS/MSD recoveries and RPD within QAPP acceptance limits?				
Were all QAPP-specified target analytes reported?				

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Method: SW8151				
Review Questions	**Yes**	**No**	**NA**	**Comment**
Were reported sample concentrations within calibration range?				
Were RPDs between primary and confirmation columns < 40%?				
Are all samples associated with QC non-compliances flagged appropriately?				
Are the Qualified, Detected, and Rejected tables of the ADR report in agreement?				
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?				
Were sample prepration sheets present and filled out appropriately?				
Were instrument run logs present and filled out appropriately?				

Method: SW8260B				
Review Questions	**Yes**	**No**	**NA**	**Comment**
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?				
Were samples preserved properly and received in good condition?				
Were holding times met?				
Were sample reciept temperatures met?				
Were QAPP specified PQLs achieved?				
Were all QAPP-specified target analytes reported?				
Was the GC/MS system properly tuned based on method criteria?			•	Not Required
Was the criteria met during each 12 hour shift (prior to ICAL and Cal Ver.)?			•	Not Required
Does the initial calibration curve consist of 5 concentration levels, with the low standard near but > MDL?			•	Not Required
Did the Calibration Check Compounds (CCCs) have a relative standard deviation within QAPP acceptance limits?			•	Not Required
Were the average response factors (RFs) for the System Performance Check Compounds (SPCCs) within QAPP acceptance limits?			•	Not Required
Were all other target analytes within criteria? OR Was the average across all target analytes within criteria? Was a different calibration option used?			•	Not Required
If a linear regression curve was used, was the correlation coefficient within criteria?			•	Not Required
Was a second source verification analyzed after the ICAL and all analytes within criteria?			•	Not Required
Was a CCV run at the beginning of the analytical sequence and every 12 hours?			•	Not Required
Was the CCV a mid-level standard from the initial calibration curve?			•	Not Required
Did the CCCs have a %Difference within QAPP acceptance limits?			•	Not Required

Method: SW8260B

Review Questions	Yes	No	NA	Comment
Were the average RFs for the SPCCs within QAPP acceptance limits?			•	Not Required
Was the average %D (difference or drift) for all target analytes within QAPP acceptance limits?			•	Not Required
Were the internal standards added to every standard, blank, matrix spike, matrix spike duplicate, and sample?			•	Not Required
Were the retention times for all IS compounds within QAPP acceptance limits?			•	Not Required
Are the area counts of all IS compounds within QAPP acceptance limits?			•	Not Required
Was a method blank prepared and analyzed with each batch?				
Were target analytes detected in the method blank above the MDL?				
Was a field blank (equipment or trip) collected and analyzed at the required frequency?				
Were target analytes reported in the field blank analyses above the MDL?				
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?				
Was an LCS/LCSD pair prepared and analyzed with each batch?				
Were the LCS/LCSD recoveries within QAPP acceptance limits?				
Were the LCS/LCSD RPDs within QAPP acceptance limits?				
Was the duplicate RPD within QAPP acceptance limits?				
Are all samples associated with QC non-compliances flagged appropriately?				
Are the Qualified, Detected, and Rejected tables of the ADR report in agreement?				
Was a MS/MSD pair prepared with each batch?				
Is the MS/MSD parent sample the one designated by the sampling team?				
Were MS/MSD recoveries and RPD within QAPP acceptance limits?				
Were surrogate recoveries within QAPP acceptance limits?				
Were reported sample concentrations within calibration range?				
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?				
Were instrument run logs present and filled out appropriately?				
Were sample prepration sheets present and filled out appropriately?				

Method: SW8270C

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?				
Were samples preserved properly and received in good condition?				

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Method: SW8270C

Review Questions	Yes	No	NA	Comment
Were holding times met?				
Were sample reciept temperatures met?				
Were QAPP specified PQLs achieved?				
Were all QAPP-specified target analytes reported?				
Was the GC/MS system properly tuned based on method criteria?			•	Not Required
Was the criteria met during each 12 hour shift (prior to ICAL and Cal Ver.)?			•	Not Required
Does the initial calibration curve consist of 5 concentration levels, with the low standard near but > MDL?			•	Not Required
Did the Calibration Check Compounds (CCCs) have a relative standard deviation within QAPP acceptance limits?			•	Not Required
Were the average response factors (RFs) for the System Performance Check Compounds (SPCCs) within QAPP acceptance limits?			•	Not Required
Were all other target analytes within criteria? OR Was the average across all target analytes within criteria? Was a different calibration option used?			•	Not Required
If a linear regression curve was used, was the correlation coefficient within criteria?			•	Not Required
Was a second source verification analyzed after the ICAL and all analytes within criteria?			•	Not Required
Was a CCV run at the beginning of the analytical sequence and every 12 hours?			•	Not Required
Was the CCV a mid-level standard from the initial calibration curve?			•	Not Required
Did the CCCs have a %Difference within QAPP acceptance limits?			•	Not Required
Were the average RFs for the SPCCs within QAPP acceptance limits?			•	Not Required
Was the average %D (difference or drift) for all target analytes within QAPP acceptance limits?			•	Not Required
Were the internal standards added to every standard, blank, matrix spike, matrix spike duplicate, and sample?			•	Not Required
Were the retention times for all IS compounds within QAPP acceptance limits?			•	Not Required
Are the area counts of all IS compounds within QAPP acceptance limits?			•	Not Required
Was a method blank prepared and analyzed with each batch?				
Were target analytes detected in the method blank above the MDL?				
Was a field blank (equipment or trip) collected and analyzed at the required frequency?				
Were target analytes reported in the field blank analyses above the MDL?				
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?				
Was an LCS/LCSD pair prepared and analyzed with each batch?				

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Method: SW8270C

Review Questions	Yes	No	NA	Comment
Were the LCS/LCSD recoveries within QAPP acceptance limits?				
Were the LCS/LCSD RPDs within QAPP acceptance limits?				
Was the duplicate RPD within QAPP acceptance limits?				
Are all samples associated with QC non-compliances flagged appropriately?				
Are the Qualified, Detected, and Rejected tables of the ADR report in agreement?				
Was a MS/MSD pair prepared with each batch?				
Is the MS/MSD parent sample the one designated by the sampling team?				
Were MS/MSD recoveries and RPD within QAPP acceptance limits?				
Were surrogate recoveries within QAPP acceptance limits?				
Were reported sample concentrations within calibration range?				
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?				
Were instrument run logs present and filled out appropriately?				
Were sample prepration sheets present and filled out appropriately?				

Method: SW8330B

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report?				
Were samples preserved properly and received in good condition?				
Were sample reciept temperatures met?				
Were holding times for prep and analysis met?				
Does the initial calibration curve consist of 5 concentration levels, with the low standard near but > MDL?				
Is the ICAL %RSD within acceptance limits (%D =20%) on both columns?				
Was a second source verification analyzed after the ICAL and all analytes within criteria (%D =20%)?				
Was a CCV run at the beginning of the analytical sequence and every 12 hours?				
Was the CCV a mid-level standard from the initial calibration curve?				
Was the CCV %D within criteria (%D =20%)?				
Was a method blank prepared and analyzed with each batch?				
Were target analytes detected in the method blank above the MDL?				
Was a field blank (equipment or trip) collected and analyzed?				

AUTOMATED DATA REVIEW SUMMARY for 240-17796-1_(76-SB,SS,SW)

Method: SW8330B

Review Questions	Yes	No	NA	Comment
Were target analytes reported in the field blank analyses above the MDL?				
Were surrogate recoveries within QAPP acceptance limits?				
Was an LCS/LCSD pair prepared and analyzed with each batch? (if applicable)				
Were the LCS recoveries within QAPP acceptance limits?				
Were the LCS/LCSD RPDs within QAPP acceptance limits? (if applicable)				
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits (RPD = 30%) ?				
Is the MS/MSD parent sample the one designated by the sampling team?				
Were MS/MSD recoveries and RPD within QAPP acceptance limits?				
Were all QAPP-specified target analytes reported?				
Were reported sample concentrations within calibration range?				
Were RPDs between primary and confirmation columns < 40%?				
Did PDA spectra for reported compounds match associated standard spectra?				
Are all samples associated with QC non-compliances flagged appropriately?				
Are the Qualified, Detected, and Rejected tables of the ADR report in agreement?				
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?				
Were sample prepration sheets present and filled out appropriately?				
Were instrument run logs present and filled out appropriately?				

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WORKSHEET 6

Automated Data Review Summary for 240-17796-2

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AUTOMATED DATA REVIEW SUMMARY for 240-17796-2

Facility: Ravenna Army Ammunition Plant

Event: Fall 2012 SI/RI Sampling

Guidance Document: Ravenna Army Ammunition Plant, Quality Assurance Project Plan, Oct. 3, 2012

Contract Laboratory: TestAmerica, Inc., North Canton, OH

Field Contractor: Environmental Chemical Corporation, Otis Ang Base, MA

Data Review Contractor:

SDG: 240-17796-2, Certified - 1/3/2013 by frederickroche

QC Level: ADR

Project Manager:

Data Reviewer:

Data Reviewer Title:

Date of Review Report:

Samples Included in SDG 240-17796-2

Analytical Method/ Leach Method	Normal Soil Samples	Field QC Soil Samples
SW6020/NONE	23	0

AUTOMATED DATA REVIEW SUMMARY for 240-17796-2

This report assesses the analytical data quality associated with the analyses listed on the preceding cover page. This assessment has been made through a combination of automated data review (ADR) and supplemental manual review, the details of which are described below. The approach taken in the review of this data set is consistent with the requirements contained in the Ravenna Army Ammunition Plant, Quality Assurance Project Plan, Oct. 3, 2012 to the extent possible. Where definitive guidance is not provided, data has been evaluated in a conservative manner using professional judgment. In cases where two qualifiers are listed as an action, such as 'J/UJ', the first qualifier applies to positive results, and the second to non-detect results.

Samples were collected by Environmental Chemical Corporation, Otis Ang Base, MA; analyses were performed by TestAmerica, Inc., North Canton, OH and were reported under sample delivery group (SDG) 240-17796-2. Results have been evaluated electronically using electronic data deliverables (EDDs) provided by the laboratory. The laboratory data summary forms (hard copy) have been reviewed during this effort and compared to the automated review output. Findings based on the automated data submission and manual data verification processes are detailed in the ADR narrative.

The following quality control elements were supported by the electronic deliverable and were evaluated during this review effort:

- Blank
- Blank - Negative
- Lab Replicate RPD
- LCS Recovery
- MS Recovery
- Prep Hold Time
- Test Hold Time

The following quality control elements were either not applicable to the deliverable, or were not supported by the electronic deliverable, and were therefore not included in the automated data review. Those elements required for the project were reviewed manually, as narrated in the Comment section below.

- Ambient Blank
- Calibration Blank
- Calibration Blank - Negative
- Continuing Calibration Verification
- Equipment Blank
- Field Blank
- Field Duplicate RPD

AUTOMATED DATA REVIEW SUMMARY for 240-17796-2

Initial Calibration Verification

LCS RPD

Material Blank

MS RPD

Surrogate

Trip Blank

AUTOMATED DATA REVIEW SUMMARY for 240-17796-2

A representative sampling or ten percent of sample and QC results were manually evaluated for compliance with project specific requirements and consistency with hard copy results. The following summaries were generated during the evaluation of this data set and are included in this report as applicable.

Batch – The analytical batch report is reviewed for completeness and compliance with project specific requirements. Incomplete or non-compliant run sequences are identified and their impact on data quality are discussed in the narrative.

QC Outlier – Results exceeding the evaluation criteria are reviewed for compliance with project requirements and a minimum of ten percent of the non-compliant QC values reported electronically are verified for consistency with hard-copy values.

Qualified Results – Qualified results are evaluated for compliance with project requirements and ten percent of qualified results are verified for consistency with the QC Outliers.

Rejected Results – All rejected results are evaluated for compliance with project requirements. The reason for rejection of the data is verified against hard copy data.

Field Duplicates – Field duplicate comparison results are evaluated for compliance with project requirements and ten percent of values reported are verified for consistency with the hard-copy data.

Data Submission Warnings – Warnings encountered during the data submission process are evaluated and their affect on data quality is discussed in the narrative below.

Analytical deficiencies, project non-compliance issues and inconsistencies with hard copy results observed during ADR evaluation process and their impact on data quality are summarized in the narrative below.

A total of 4 results (0.79%) out of the 506 results (sample and field QC samples) reported are qualified based on review and 0 results (0.00%) have been rejected. Trace values are not counted as qualified results in the above count. The qualified results are detailed in the following tables and discussed in the narrative below, where appropriate.

Narrative Comments

Analytical Method	Comment
SW6020	

AUTOMATED DATA REVIEW SUMMARY for 240-17796-2

Reviewed by ,

AUTOMATED DATA REVIEW SUMMARY for 240-17796-2

Reason and Comment Code Definitions

Reasons	
Code	**Definition**
A	Serial dilution
A1	Ambient Blank
B	The analyte was found in an associated blank as well as in the sample.
B2	CCB
B3	CCB - Neg
c	LCS - low
C	LCS Recovery
d	Field Duplicate RPD
D	MS RPD
D1	Lab Replicate RPD
D2	No precision available
F	Field Blank
F1	Hydrocarbon pattern does not match standard
G1	Initial Calibration RRF
G2	Initial Calibration RSD
h	Holding time exceeded by less than 2X.
H	Holding time exceeded by more than 2X.
H1	Test Hold Time
H2	Prep Hold Time
I	Surrogate recovery outside project limits.
J	CRA/CRI Recovery
K	An analyte (non-common laboratory artifact) was detected in the sample at a concentration less than 5X the concentration detected in the associated method blank.
L	Lab Blank
L1	Lab Blank - Neg
m	MS - low
M	MS Recovery
N	Blank - No Action

AUTOMATED DATA REVIEW SUMMARY for 240-17796-2

Reason and Comment Code Definitions

O	ICS
P	Sample preservation/collection requirement not met.
P1	Column RPD
P2	Improper preparation/extraction
q	Encore sample holding time exceeded by less than 2X.
Q	Encore sample holding time exceeded by more than 2X.
Q1	Material Blank
R	Exceeds LinearCalibration Range
S	Internal standard
T	Trip Blank
TI	Tentatively Identified Compound
TR	Trace Level Detect
U	Receipt Temperature
V	Equipment Blank
V1	ICV
V2	CCV
V3	CCV RRF
V4	Sample Receipt Condition
W	Column breakdown (pesticides)
X	Raised reporting limit
Y	Cooler temperature greater than 10 degreec C.
y	Cooler temperature greater than 4 degrees C, but less than 10 degreec C.
Y1	False Positive
Y2	Data rejected due to radiological anomolies
Z	LCS RPD
Z2	Analyte not confirmed on second column
Z3	High percent moisture in sample.

AUTOMATED DATA REVIEW SUMMARY for 240-17796-2

Flag Code and Definitions	
Flag	Definition
U	Undetected: The analyte was analyzed for, but not detected.
UJ	The analyte was not detected; however, the result is estimated due to discrepancies in meeting certain analyte-specific quality control criteria.
J	Estimated: The analyte was positively identified, the quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
R	The data are rejected due to deficiencies in meeting QC criteria and may not be used for decision making.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification".
NJ	The analysis indicates the presence of an analyte that has been “tentatively identified” and the associated numerical value represents its approximate concentration.

AUTOMATED DATA REVIEW SUMMARY for 240-17796-2

Batch Report

Test Method: SW6020; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
59262	59062	NA	LABQC	SQ	LABQC	MB 180-59062/1-A		1/1	27-Nov-2012 10:06 AM	27-Nov-2012 10:06 AM	22-Dec-2012 9:29 PM	LB
	59062	NA	LABQC	SQ	LABQC	LCS 180-59062/2-A		1/1	27-Nov-2012 10:06 AM	27-Nov-2012 10:06 AM	22-Dec-2012 9:33 PM	BS
	59062	NA	76-U4-DU1-SB	SO	076SB-0023M-0001-SO	240-17796-1		1/1	15-Nov-2012 9:15 AM	27-Nov-2012 10:06 AM	22-Dec-2012 9:40 PM	N
	59062	NA	76-U4-DU1-SB	SO	076SB-0023M-0001-SO	240-17796-1		1/1	15-Nov-2012 9:15 AM	27-Nov-2012 10:06 AM	22-Dec-2012 10:04 PM	LR
	59062	NA	76-U4-DU1-SB	SO	076SB-0023M-0001-SO	240-17796-1		1/1	15-Nov-2012 9:15 AM	27-Nov-2012 10:06 AM	22-Dec-2012 10:08 PM	MS
	59062	NA	76-U10-DU1-SS	SO	076SS-0022M-0001-SO	240-17796-2		1/1	15-Nov-2012 12:25 PM	27-Nov-2012 10:06 AM	22-Dec-2012 10:20 PM	N
	59062	NA	76-U4-DU1-SB	SO	076SB-0024M-0001-SO	240-17796-3		1/1	15-Nov-2012 10:20 AM	27-Nov-2012 10:06 AM	22-Dec-2012 10:24 PM	N
	59062	NA	76-U4-DU1-SB1	SO	076SB-0025M-0001-SO	240-17796-4		1/1	15-Nov-2012 9:00 AM	27-Nov-2012 10:06 AM	22-Dec-2012 10:28 PM	N
	59062	NA	76-U4-DU1-SB2	SO	076SB-0026M-0001-SO	240-17796-5		1/1	15-Nov-2012 9:20 AM	27-Nov-2012 10:06 AM	22-Dec-2012 10:33 PM	N
	59062	NA	76-U4-DU1-SB3	SO	076SB-0027M-0001-SO	240-17796-6		1/1	15-Nov-2012 9:40 AM	27-Nov-2012 10:06 AM	22-Dec-2012 10:37 PM	N
	59062	NA	76-U4-DU1-SB4	SO	076SB-0028M-0001-SO	240-17796-7		1/1	15-Nov-2012 10:00 AM	27-Nov-2012 10:06 AM	22-Dec-2012 10:41 PM	N
	59062	NA	76-U4-DU1-SB5	SO	076SB-0029M-0001-SO	240-17796-8		1/1	15-Nov-2012 10:25 AM	27-Nov-2012 10:06 AM	22-Dec-2012 11:01 PM	N
	59062	NA	76-U20-DU1-SB	SO	076SB-0053M-0001-SO	240-17796-9		1/1	15-Nov-2012 3:55 PM	27-Nov-2012 10:06 AM	22-Dec-2012 11:05 PM	N
	59062	NA	76-U20-DU1-SS	SO	076SS-0007M-0001-SO	240-17796-10		1/1	15-Nov-2012 3:45 PM	27-Nov-2012 10:06 AM	22-Dec-2012 11:09 PM	N
	59062	NA	76-U20-DU1-SB	SO	076SB-0054M-0001-SO	240-17796-11		1/1	15-Nov-2012 3:56 PM	27-Nov-2012 10:06 AM	22-Dec-2012 11:14 PM	N
	59062	NA	76-U20-DU1-SB1	SO	076SB-0055M-0001-SO	240-17796-12		1/1	15-Nov-2012 1:45 PM	27-Nov-2012 10:06 AM	22-Dec-2012 11:18 PM	N
	59062	NA	76-U20-DU1-SB2	SO	076SB-0056M-0001-SO	240-17796-13		1/1	15-Nov-2012 2:10 PM	27-Nov-2012 10:06 AM	22-Dec-2012 11:22 PM	N
	59062	NA	76-U20-DU1-SB3	SO	076SB-0057M-0001-SO	240-17796-14		1/1	15-Nov-2012 2:40 PM	27-Nov-2012 10:06 AM	22-Dec-2012 11:27 PM	N

AUTOMATED DATA REVIEW SUMMARY for 240-17796-2

Batch Report

Test Method: SW6020; Leach Method: NONE												
Analytical Batch	**Prep Batch**	**Leach Batch**	**Location**	**Matrix**	**Field Sample ID**	**Lab Sample ID**	**Calibration Ref**	**Run#/ Dil'n**	**Collection Date/Time**	**Extract Date/Time**	**Analysis Date/Time**	**Sample Type**
59262	59062	NA	76-U20-DU1-SB4	SO	076SB-0058M-0001-SO	240-17796-15		1/1	15-Nov-2012 3:30 PM	27-Nov-2012 10:06 AM	22-Dec-2012 11:31 PM	N
	59062	NA	76-U20-DU1-SB5	SO	076SB-0059M-0001-SO	240-17796-16		1/1	15-Nov-2012 4:00 PM	27-Nov-2012 10:06 AM	22-Dec-2012 11:35 PM	N
	59062	NA	76-A3-DU1-SB	SO	076SB-0060M-0001-SO	240-17796-22		1/1	15-Nov-2012 5:35 PM	27-Nov-2012 10:06 AM	22-Dec-2012 11:40 PM	N
	59062	NA	76-A3-DU1-SB	SO	076SB-0061M-0001-SO	240-17796-23		1/1	15-Nov-2012 5:36 PM	27-Nov-2012 10:06 AM	22-Dec-2012 11:59 PM	N
	59062	NA	76-A3-DU1-SB1	SO	076SB-0062M-0001-SO	240-17796-24		1/1	15-Nov-2012 5:05 PM	27-Nov-2012 10:06 AM	23-Dec-2012 12:04 AM	N
59320	59062	NA	LABQC	SQ	LABQC	MB 180-59062/1-A		2/1	27-Nov-2012 10:06 AM	27-Nov-2012 10:06 AM	23-Dec-2012 7:08 PM	LB
	59062	NA	76-A3-DU1-SB2	SO	076SB-0063M-0001-SO	240-17796-25		1/1	15-Nov-2012 5:15 PM	27-Nov-2012 10:06 AM	23-Dec-2012 7:13 PM	N
59262	59171	NA	LABQC	SQ	LABQC	MB 180-59171/1-A		1/1	28-Nov-2012 12:40 PM	28-Nov-2012 12:40 PM	23-Dec-2012 12:14 AM	LB
	59171	NA	LABQC	SQ	LABQC	LCS 180-59171/2-A		1/1	28-Nov-2012 12:40 PM	28-Nov-2012 12:40 PM	23-Dec-2012 12:18 AM	BS
	59171	NA	76-A3-DU1-SB3	SO	076SB-0064M-0001-SO	240-17796-26		1/1	15-Nov-2012 5:25 PM	28-Nov-2012 12:40 PM	23-Dec-2012 12:22 AM	N
	59171	NA	76-A3-DU1-SB3	SO	076SB-0064M-0001-SO	240-17796-26		1/1	15-Nov-2012 5:25 PM	28-Nov-2012 12:40 PM	23-Dec-2012 12:31 AM	LR
	59171	NA	76-A3-DU1-SB3	SO	076SB-0064M-0001-SO	240-17796-26		1/1	15-Nov-2012 5:25 PM	28-Nov-2012 12:40 PM	23-Dec-2012 12:35 AM	MS
	59171	NA	76-A3-DU1-SB4	SO	076SB-0065M-0001-SO	240-17796-27		1/1	15-Nov-2012 5:40 PM	28-Nov-2012 12:40 PM	23-Dec-2012 12:59 AM	N
	59171	NA	76-A3-DU1-SB5	SO	076SB-0066M-0001-SO	240-17796-28		1/1	15-Nov-2012 4:50 PM	28-Nov-2012 12:40 PM	23-Dec-2012 1:04 AM	N

AUTOMATED DATA REVIEW SUMMARY for 240-17796-2

Field Batch Report

--No Records Found--

AUTOMATED DATA REVIEW SUMMARY for 240-17796-2

QC Outlier Report

Test/Prep/Leach	QC Element	Sample ID/ Lab Sample ID	Run# / Dil'n	Analyte	Result (Units)	Qualifier	Warning Limits	Control Limits	Reason	Comment	Rule	Action Level
SW6020 / SW3050B/NONE	Blank	MB 180-59062/1-A (LB) / MB 180-59062/1-A	1 / 1.00	Aluminum	0.50 (MG/KG)	U/None	< 0.28	< 3	L		1	0.495
SW6020 / SW3050B/NONE	Blank	MB 180-59062/1-A (LB) / MB 180-59062/1-A	2 / 1.00	Aluminum	0.65 (MG/KG)	U/None	< 0.28	< 3	L		1	0.652
SW6020 / SW3050B/NONE	Blank	MB 180-59062/1-A (LB) / MB 180-59062/1-A	1 / 1.00	Calcium	1.4 (MG/KG)	U/None	< 1.3	< 10	L		1	1.43
SW6020 / SW3050B/NONE	Blank	MB 180-59062/1-A (LB) / MB 180-59062/1-A	2 / 1.00	Calcium	1.8 (MG/KG)	U/None	< 1.3	< 10	L		1	1.81
SW6020 / SW3050B/NONE	Blank	MB 180-59062/1-A (LB) / MB 180-59062/1-A	1 / 1.00	Iron	2.4 (MG/KG)	U/None	< 1.1	< 5	L		1	2.37
SW6020 / SW3050B/NONE	Blank	MB 180-59062/1-A (LB) / MB 180-59062/1-A	2 / 1.00	Manganese	0.039 (MG/KG)	U/None	< 0.016	< 0.5	L		1	0.0391
SW6020 / SW3050B/NONE	Blank	MB 180-59062/1-A (LB) / MB 180-59062/1-A	2 / 1.00	Zinc	0.078 (MG/KG)	U/None	< 0.065	< 0.5	L		1	0.0780
SW6020 / SW3050B/NONE	Blank	MB 180-59171/1-A (LB) / MB 180-59171/1-A	1 / 1.00	Aluminum	0.70 (MG/KG)	U/None	< 0.28	< 3	L		1	0.695
SW6020 / SW3050B/NONE	Blank	MB 180-59171/1-A (LB) / MB 180-59171/1-A	1 / 1.00	Calcium	1.4 (MG/KG)	U/None	< 1.3	< 10	L		1	1.44
SW6020 / SW3050B/NONE	Blank	MB 180-59171/1-A (LB) / MB 180-59171/1-A	1 / 1.00	Iron	2.3 (MG/KG)	U/None	< 1.1	< 5	L		1	2.32
SW6020 / SW3050B/NONE	Blank	MB 180-59171/1-A (LB) / MB 180-59171/1-A	1 / 1.00	Manganese	0.020 (MG/KG)	U/None	< 0.016	< 0.5	L		1	0.0199

AUTOMATED DATA REVIEW SUMMARY for 240-17796-2

Qualified Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Bias	Units	Reason
SW6020/NONE	SO	076SB-0023M-0001-SO	240-17796-1	N	Aluminum	2.8	7300	7300 J		MG/KG	M
SW6020/NONE	SO	076SB-0023M-0001-SO	240-17796-1	N	Antimony	0.19	0.11	0.11 J		MG/KG	TR
SW6020/NONE	SO	076SB-0023M-0001-SO	240-17796-1	N	Iron	4.7	22000	22000 J		MG/KG	M
SW6020/NONE	SO	076SB-0023M-0001-SO	240-17796-1	N	Manganese	0.47	590	590 J		MG/KG	M
SW6020/NONE	SO	076SB-0023M-0001-SO	240-17796-1	N	Silver	0.094	0.021	0.021 J		MG/KG	TR
SW6020/NONE	SO	076SB-0023M-0001-SO	240-17796-1	N	Zinc	0.47	46.0	46.0 J		MG/KG	M
SW6020/NONE	SO	076SB-0024M-0001-SO	240-17796-3	N	Antimony	0.19	0.11	0.11 J		MG/KG	TR
SW6020/NONE	SO	076SB-0024M-0001-SO	240-17796-3	N	Selenium	0.46	0.43	0.43 J		MG/KG	TR
SW6020/NONE	SO	076SB-0024M-0001-SO	240-17796-3	N	Silver	0.093	0.020	0.020 J		MG/KG	TR
SW6020/NONE	SO	076SB-0025M-0001-SO	240-17796-4	N	Antimony	0.18	0.092	0.092 J		MG/KG	TR
SW6020/NONE	SO	076SB-0025M-0001-SO	240-17796-4	N	Selenium	0.45	0.39	0.39 J		MG/KG	TR
SW6020/NONE	SO	076SB-0025M-0001-SO	240-17796-4	N	Silver	0.091	0.019	0.019 J		MG/KG	TR
SW6020/NONE	SO	076SB-0026M-0001-SO	240-17796-5	N	Antimony	0.15	0.095	0.095 J		MG/KG	TR
SW6020/NONE	SO	076SB-0026M-0001-SO	240-17796-5	N	Silver	0.073	0.022	0.022 J		MG/KG	TR
SW6020/NONE	SO	076SB-0027M-0001-SO	240-17796-6	N	Silver	0.087	0.037	0.037 J		MG/KG	TR
SW6020/NONE	SO	076SB-0028M-0001-SO	240-17796-7	N	Antimony	0.15	0.090	0.090 J		MG/KG	TR
SW6020/NONE	SO	076SB-0028M-0001-SO	240-17796-7	N	Silver	0.076	0.013	0.013 J		MG/KG	TR
SW6020/NONE	SO	076SB-0029M-0001-SO	240-17796-8	N	Antimony	0.17	0.11	0.11 J		MG/KG	TR
SW6020/NONE	SO	076SB-0029M-0001-SO	240-17796-8	N	Silver	0.085	0.024	0.024 J		MG/KG	TR
SW6020/NONE	SO	076SB-0053M-0001-SO	240-17796-9	N	Antimony	0.16	0.064	0.064 J		MG/KG	TR
SW6020/NONE	SO	076SB-0053M-0001-SO	240-17796-9	N	Selenium	0.40	0.32	0.32 J		MG/KG	TR
SW6020/NONE	SO	076SB-0053M-0001-SO	240-17796-9	N	Silver	0.081	0.024	0.024 J		MG/KG	TR
SW6020/NONE	SO	076SB-0054M-0001-SO	240-17796-11	N	Antimony	0.14	0.058	0.058 J		MG/KG	TR
SW6020/NONE	SO	076SB-0054M-0001-SO	240-17796-11	N	Silver	0.072	0.027	0.027 J		MG/KG	TR
SW6020/NONE	SO	076SB-0055M-0001-SO	240-17796-12	N	Antimony	0.18	0.053	0.053 J		MG/KG	TR
SW6020/NONE	SO	076SB-0055M-0001-SO	240-17796-12	N	Selenium	0.44	0.38	0.38 J		MG/KG	TR
SW6020/NONE	SO	076SB-0055M-0001-SO	240-17796-12	N	Silver	0.088	0.027	0.027 J		MG/KG	TR
SW6020/NONE	SO	076SB-0056M-0001-SO	240-17796-13	N	Antimony	0.14	0.065	0.065 J		MG/KG	TR

AUTOMATED DATA REVIEW SUMMARY for 240-17796-2

Qualified Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Bias	Units	Reason
SW6020/NONE	SO	076SB-0056M-0001-SO	240-17796-13	N	Silver	0.070	0.023	0.023 J		MG/KG	TR
SW6020/NONE	SO	076SB-0057M-0001-SO	240-17796-14	N	Antimony	0.20	0.063	0.063 J		MG/KG	TR
SW6020/NONE	SO	076SB-0057M-0001-SO	240-17796-14	N	Selenium	0.49	0.38	0.38 J		MG/KG	TR
SW6020/NONE	SO	076SB-0057M-0001-SO	240-17796-14	N	Silver	0.098	0.026	0.026 J		MG/KG	TR
SW6020/NONE	SO	076SB-0058M-0001-SO	240-17796-15	N	Antimony	0.18	0.050	0.050 J		MG/KG	TR
SW6020/NONE	SO	076SB-0058M-0001-SO	240-17796-15	N	Selenium	0.44	0.36	0.36 J		MG/KG	TR
SW6020/NONE	SO	076SB-0058M-0001-SO	240-17796-15	N	Silver	0.088	0.022	0.022 J		MG/KG	TR
SW6020/NONE	SO	076SB-0059M-0001-SO	240-17796-16	N	Antimony	0.19	0.053	0.053 J		MG/KG	TR
SW6020/NONE	SO	076SB-0059M-0001-SO	240-17796-16	N	Selenium	0.47	0.41	0.41 J		MG/KG	TR
SW6020/NONE	SO	076SB-0059M-0001-SO	240-17796-16	N	Silver	0.094	0.030	0.030 J		MG/KG	TR
SW6020/NONE	SO	076SB-0060M-0001-SO	240-17796-22	N	Antimony	0.19	0.18	0.18 J		MG/KG	TR
SW6020/NONE	SO	076SB-0060M-0001-SO	240-17796-22	N	Silver	0.096	0.028	0.028 J		MG/KG	TR
SW6020/NONE	SO	076SB-0060M-0001-SO	240-17796-22	N	Thallium	0.096	0.072	0.072 J		MG/KG	TR
SW6020/NONE	SO	076SB-0061M-0001-SO	240-17796-23	N	Antimony	0.18	0.072	0.072 J		MG/KG	TR
SW6020/NONE	SO	076SB-0061M-0001-SO	240-17796-23	N	Selenium	0.46	0.40	0.40 J		MG/KG	TR
SW6020/NONE	SO	076SB-0061M-0001-SO	240-17796-23	N	Silver	0.092	0.029	0.029 J		MG/KG	TR
SW6020/NONE	SO	076SB-0062M-0001-SO	240-17796-24	N	Antimony	0.19	0.058	0.058 J		MG/KG	TR
SW6020/NONE	SO	076SB-0062M-0001-SO	240-17796-24	N	Selenium	0.49	0.43	0.43 J		MG/KG	TR
SW6020/NONE	SO	076SB-0062M-0001-SO	240-17796-24	N	Silver	0.097	0.052	0.052 J		MG/KG	TR
SW6020/NONE	SO	076SB-0062M-0001-SO	240-17796-24	N	Thallium	0.097	0.087	0.087 J		MG/KG	TR
SW6020/NONE	SO	076SB-0063M-0001-SO	240-17796-25	N	Antimony	0.16	0.13	0.13 J		MG/KG	TR
SW6020/NONE	SO	076SB-0063M-0001-SO	240-17796-25	N	Silver	0.078	0.027	0.027 J		MG/KG	TR
SW6020/NONE	SO	076SB-0064M-0001-SO	240-17796-26	N	Antimony	0.18	0.12	0.12 J		MG/KG	TR
SW6020/NONE	SO	076SB-0064M-0001-SO	240-17796-26	N	Silver	0.092	0.021	0.021 J		MG/KG	TR
SW6020/NONE	SO	076SB-0065M-0001-SO	240-17796-27	N	Silver	0.074	0.026	0.026 J		MG/KG	TR
SW6020/NONE	SO	076SB-0066M-0001-SO	240-17796-28	N	Antimony	0.17	0.11	0.11 J		MG/KG	TR
SW6020/NONE	SO	076SB-0066M-0001-SO	240-17796-28	N	Silver	0.087	0.035	0.035 J		MG/KG	TR
SW6020/NONE	SO	076SS-0007M-0001-SO	240-17796-10	N	Antimony	0.19	0.12	0.12 J		MG/KG	TR
SW6020/NONE	SO	076SS-0022M-0001-SO	240-17796-2	N	Antimony	0.20	0.10	0.10 J		MG/KG	TR

AUTOMATED DATA REVIEW SUMMARY for 240-17796-2

Qualified Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Bias	Units	Reason
SW6020/NONE	SO	076SS-0022M-0001-SO	240-17796-2	N	Silver	0.098	0.026	0.026 J		MG/KG	TR

AUTOMATED DATA REVIEW SUMMARY for 240-17796-2

AUTOMATED DATA REVIEW SUMMARY for 240-17796-2

Detected Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW6020/NONE	SO	076SB-0023M-0001-SO	240-17796-1	N	Silver	0.094	0.021	0.021 J	MG/KG	TR
SW6020/NONE	SO	076SB-0023M-0001-SO	240-17796-1	N	Aluminum	2.8	7300	7300 J	MG/KG	M
SW6020/NONE	SO	076SB-0023M-0001-SO	240-17796-1	N	Arsenic	0.094	11.0	11.0	MG/KG	
SW6020/NONE	SO	076SB-0023M-0001-SO	240-17796-1	N	Barium	0.94	50.0	50.0	MG/KG	
SW6020/NONE	SO	076SB-0023M-0001-SO	240-17796-1	N	Beryllium	0.094	0.44	0.44	MG/KG	
SW6020/NONE	SO	076SB-0023M-0001-SO	240-17796-1	N	Calcium	9.4	950	950	MG/KG	
SW6020/NONE	SO	076SB-0023M-0001-SO	240-17796-1	N	Cadmium	0.094	0.14	0.14	MG/KG	
SW6020/NONE	SO	076SB-0023M-0001-SO	240-17796-1	N	Cobalt	0.047	7.3	7.3	MG/KG	
SW6020/NONE	SO	076SB-0023M-0001-SO	240-17796-1	N	Chromium	0.19	18.0	18.0	MG/KG	
SW6020/NONE	SO	076SB-0023M-0001-SO	240-17796-1	N	Copper	0.19	12.0	12.0	MG/KG	
SW6020/NONE	SO	076SB-0023M-0001-SO	240-17796-1	N	Iron	4.7	22000	22000 J	MG/KG	M
SW6020/NONE	SO	076SB-0023M-0001-SO	240-17796-1	N	Potassium	9.4	570	570	MG/KG	
SW6020/NONE	SO	076SB-0023M-0001-SO	240-17796-1	N	Magnesium	9.4	1500	1500	MG/KG	
SW6020/NONE	SO	076SB-0023M-0001-SO	240-17796-1	N	Manganese	0.47	590	590 J	MG/KG	M
SW6020/NONE	SO	076SB-0023M-0001-SO	240-17796-1	N	Sodium	9.4	21.0	21.0	MG/KG	
SW6020/NONE	SO	076SB-0023M-0001-SO	240-17796-1	N	Nickel	0.094	16.0	16.0	MG/KG	
SW6020/NONE	SO	076SB-0023M-0001-SO	240-17796-1	N	Lead	0.094	12.0	12.0	MG/KG	
SW6020/NONE	SO	076SB-0023M-0001-SO	240-17796-1	N	Antimony	0.19	0.11	0.11 J	MG/KG	TR
SW6020/NONE	SO	076SB-0023M-0001-SO	240-17796-1	N	Selenium	0.47	0.52	0.52	MG/KG	
SW6020/NONE	SO	076SB-0023M-0001-SO	240-17796-1	N	Thallium	0.094	0.15	0.15	MG/KG	
SW6020/NONE	SO	076SB-0023M-0001-SO	240-17796-1	N	Vanadium	0.094	16.0	16.0	MG/KG	
SW6020/NONE	SO	076SB-0023M-0001-SO	240-17796-1	N	Zinc	0.47	46.0	46.0 J	MG/KG	M
SW6020/NONE	SO	076SB-0024M-0001-SO	240-17796-3	N	Silver	0.093	0.020	0.020 J	MG/KG	TR
SW6020/NONE	SO	076SB-0024M-0001-SO	240-17796-3	N	Aluminum	2.8	5900	5900	MG/KG	
SW6020/NONE	SO	076SB-0024M-0001-SO	240-17796-3	N	Arsenic	0.093	14.0	14.0	MG/KG	
SW6020/NONE	SO	076SB-0024M-0001-SO	240-17796-3	N	Barium	0.93	41.0	41.0	MG/KG	
SW6020/NONE	SO	076SB-0024M-0001-SO	240-17796-3	N	Beryllium	0.093	0.37	0.37	MG/KG	
SW6020/NONE	SO	076SB-0024M-0001-SO	240-17796-3	N	Calcium	9.3	890	890	MG/KG	

AUTOMATED DATA REVIEW SUMMARY for 240-17796-2

Detected Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW6020/NONE	SO	076SB-0024M-0001-SO	240-17796-3	N	Cadmium	0.093	0.14	0.14	MG/KG	
SW6020/NONE	SO	076SB-0024M-0001-SO	240-17796-3	N	Cobalt	0.046	7.2	7.2	MG/KG	
SW6020/NONE	SO	076SB-0024M-0001-SO	240-17796-3	N	Chromium	0.19	13.0	13.0	MG/KG	
SW6020/NONE	SO	076SB-0024M-0001-SO	240-17796-3	N	Copper	0.19	16.0	16.0	MG/KG	
SW6020/NONE	SO	076SB-0024M-0001-SO	240-17796-3	N	Iron	4.6	22000	22000	MG/KG	
SW6020/NONE	SO	076SB-0024M-0001-SO	240-17796-3	N	Potassium	9.3	620	620	MG/KG	
SW6020/NONE	SO	076SB-0024M-0001-SO	240-17796-3	N	Magnesium	9.3	1600	1600	MG/KG	
SW6020/NONE	SO	076SB-0024M-0001-SO	240-17796-3	N	Manganese	0.46	470	470	MG/KG	
SW6020/NONE	SO	076SB-0024M-0001-SO	240-17796-3	N	Sodium	9.3	22.0	22.0	MG/KG	
SW6020/NONE	SO	076SB-0024M-0001-SO	240-17796-3	N	Nickel	0.093	18.0	18.0	MG/KG	
SW6020/NONE	SO	076SB-0024M-0001-SO	240-17796-3	N	Lead	0.093	11.0	11.0	MG/KG	
SW6020/NONE	SO	076SB-0024M-0001-SO	240-17796-3	N	Antimony	0.19	0.11	0.11 J	MG/KG	TR
SW6020/NONE	SO	076SB-0024M-0001-SO	240-17796-3	N	Selenium	0.46	0.43	0.43 J	MG/KG	TR
SW6020/NONE	SO	076SB-0024M-0001-SO	240-17796-3	N	Thallium	0.093	0.12	0.12	MG/KG	
SW6020/NONE	SO	076SB-0024M-0001-SO	240-17796-3	N	Vanadium	0.093	12.0	12.0	MG/KG	
SW6020/NONE	SO	076SB-0024M-0001-SO	240-17796-3	N	Zinc	0.46	51.0	51.0	MG/KG	
SW6020/NONE	SO	076SB-0025M-0001-SO	240-17796-4	N	Silver	0.091	0.019	0.019 J	MG/KG	TR
SW6020/NONE	SO	076SB-0025M-0001-SO	240-17796-4	N	Aluminum	2.7	6600	6600	MG/KG	
SW6020/NONE	SO	076SB-0025M-0001-SO	240-17796-4	N	Arsenic	0.091	12.0	12.0	MG/KG	
SW6020/NONE	SO	076SB-0025M-0001-SO	240-17796-4	N	Barium	0.91	41.0	41.0	MG/KG	
SW6020/NONE	SO	076SB-0025M-0001-SO	240-17796-4	N	Beryllium	0.091	0.35	0.35	MG/KG	
SW6020/NONE	SO	076SB-0025M-0001-SO	240-17796-4	N	Calcium	9.1	1100	1100	MG/KG	
SW6020/NONE	SO	076SB-0025M-0001-SO	240-17796-4	N	Cadmium	0.091	0.17	0.17	MG/KG	
SW6020/NONE	SO	076SB-0025M-0001-SO	240-17796-4	N	Cobalt	0.045	7.0	7.0	MG/KG	
SW6020/NONE	SO	076SB-0025M-0001-SO	240-17796-4	N	Chromium	0.18	17.0	17.0	MG/KG	
SW6020/NONE	SO	076SB-0025M-0001-SO	240-17796-4	N	Copper	0.18	17.0	17.0	MG/KG	
SW6020/NONE	SO	076SB-0025M-0001-SO	240-17796-4	N	Iron	4.5	21000	21000	MG/KG	
SW6020/NONE	SO	076SB-0025M-0001-SO	240-17796-4	N	Potassium	9.1	620	620	MG/KG	

AUTOMATED DATA REVIEW SUMMARY for 240-17796-2

Detected Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW6020/NONE	SO	076SB-0025M-0001-SO	240-17796-4	N	Magnesium	9.1	1800	1800	MG/KG	
SW6020/NONE	SO	076SB-0025M-0001-SO	240-17796-4	N	Manganese	0.45	300	300	MG/KG	
SW6020/NONE	SO	076SB-0025M-0001-SO	240-17796-4	N	Sodium	9.1	26.0	26.0	MG/KG	
SW6020/NONE	SO	076SB-0025M-0001-SO	240-17796-4	N	Nickel	0.091	19.0	19.0	MG/KG	
SW6020/NONE	SO	076SB-0025M-0001-SO	240-17796-4	N	Lead	0.091	11.0	11.0	MG/KG	
SW6020/NONE	SO	076SB-0025M-0001-SO	240-17796-4	N	Antimony	0.18	0.092	0.092 J	MG/KG	TR
SW6020/NONE	SO	076SB-0025M-0001-SO	240-17796-4	N	Selenium	0.45	0.39	0.39 J	MG/KG	TR
SW6020/NONE	SO	076SB-0025M-0001-SO	240-17796-4	N	Thallium	0.091	0.13	0.13	MG/KG	
SW6020/NONE	SO	076SB-0025M-0001-SO	240-17796-4	N	Vanadium	0.091	13.0	13.0	MG/KG	
SW6020/NONE	SO	076SB-0025M-0001-SO	240-17796-4	N	Zinc	0.45	50.0	50.0	MG/KG	
SW6020/NONE	SO	076SB-0026M-0001-SO	240-17796-5	N	Silver	0.073	0.022	0.022 J	MG/KG	TR
SW6020/NONE	SO	076SB-0026M-0001-SO	240-17796-5	N	Aluminum	2.2	6300	6300	MG/KG	
SW6020/NONE	SO	076SB-0026M-0001-SO	240-17796-5	N	Arsenic	0.073	13.0	13.0	MG/KG	
SW6020/NONE	SO	076SB-0026M-0001-SO	240-17796-5	N	Barium	0.73	37.0	37.0	MG/KG	
SW6020/NONE	SO	076SB-0026M-0001-SO	240-17796-5	N	Beryllium	0.073	0.39	0.39	MG/KG	
SW6020/NONE	SO	076SB-0026M-0001-SO	240-17796-5	N	Calcium	7.3	700	700	MG/KG	
SW6020/NONE	SO	076SB-0026M-0001-SO	240-17796-5	N	Cadmium	0.073	0.15	0.15	MG/KG	
SW6020/NONE	SO	076SB-0026M-0001-SO	240-17796-5	N	Cobalt	0.036	8.5	8.5	MG/KG	
SW6020/NONE	SO	076SB-0026M-0001-SO	240-17796-5	N	Chromium	0.15	16.0	16.0	MG/KG	
SW6020/NONE	SO	076SB-0026M-0001-SO	240-17796-5	N	Copper	0.15	15.0	15.0	MG/KG	
SW6020/NONE	SO	076SB-0026M-0001-SO	240-17796-5	N	Iron	3.6	21000	21000	MG/KG	
SW6020/NONE	SO	076SB-0026M-0001-SO	240-17796-5	N	Potassium	7.3	620	620	MG/KG	
SW6020/NONE	SO	076SB-0026M-0001-SO	240-17796-5	N	Magnesium	7.3	1700	1700	MG/KG	
SW6020/NONE	SO	076SB-0026M-0001-SO	240-17796-5	N	Manganese	0.36	450	450	MG/KG	
SW6020/NONE	SO	076SB-0026M-0001-SO	240-17796-5	N	Sodium	7.3	20.0	20.0	MG/KG	
SW6020/NONE	SO	076SB-0026M-0001-SO	240-17796-5	N	Nickel	0.073	18.0	18.0	MG/KG	
SW6020/NONE	SO	076SB-0026M-0001-SO	240-17796-5	N	Lead	0.073	13.0	13.0	MG/KG	
SW6020/NONE	SO	076SB-0026M-0001-SO	240-17796-5	N	Antimony	0.15	0.095	0.095 J	MG/KG	TR

AUTOMATED DATA REVIEW SUMMARY for 240-17796-2

Detected Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW6020/NONE	SO	076SB-0026M-0001-SO	240-17796-5	N	Selenium	0.36	0.41	0.41	MG/KG	
SW6020/NONE	SO	076SB-0026M-0001-SO	240-17796-5	N	Thallium	0.073	0.13	0.13	MG/KG	
SW6020/NONE	SO	076SB-0026M-0001-SO	240-17796-5	N	Vanadium	0.073	13.0	13.0	MG/KG	
SW6020/NONE	SO	076SB-0026M-0001-SO	240-17796-5	N	Zinc	0.36	49.0	49.0	MG/KG	
SW6020/NONE	SO	076SB-0027M-0001-SO	240-17796-6	N	Silver	0.087	0.037	0.037 J	MG/KG	TR
SW6020/NONE	SO	076SB-0027M-0001-SO	240-17796-6	N	Aluminum	2.6	7200	7200	MG/KG	
SW6020/NONE	SO	076SB-0027M-0001-SO	240-17796-6	N	Arsenic	0.087	16.0	16.0	MG/KG	
SW6020/NONE	SO	076SB-0027M-0001-SO	240-17796-6	N	Barium	0.87	62.0	62.0	MG/KG	
SW6020/NONE	SO	076SB-0027M-0001-SO	240-17796-6	N	Beryllium	0.087	0.47	0.47	MG/KG	
SW6020/NONE	SO	076SB-0027M-0001-SO	240-17796-6	N	Calcium	8.7	980	980	MG/KG	
SW6020/NONE	SO	076SB-0027M-0001-SO	240-17796-6	N	Cadmium	0.087	0.16	0.16	MG/KG	
SW6020/NONE	SO	076SB-0027M-0001-SO	240-17796-6	N	Cobalt	0.043	8.6	8.6	MG/KG	
SW6020/NONE	SO	076SB-0027M-0001-SO	240-17796-6	N	Chromium	0.17	16.0	16.0	MG/KG	
SW6020/NONE	SO	076SB-0027M-0001-SO	240-17796-6	N	Copper	0.17	11.0	11.0	MG/KG	
SW6020/NONE	SO	076SB-0027M-0001-SO	240-17796-6	N	Iron	4.3	20000	20000	MG/KG	
SW6020/NONE	SO	076SB-0027M-0001-SO	240-17796-6	N	Potassium	8.7	560	560	MG/KG	
SW6020/NONE	SO	076SB-0027M-0001-SO	240-17796-6	N	Magnesium	8.7	1300	1300	MG/KG	
SW6020/NONE	SO	076SB-0027M-0001-SO	240-17796-6	N	Manganese	0.43	930	930	MG/KG	
SW6020/NONE	SO	076SB-0027M-0001-SO	240-17796-6	N	Sodium	8.7	17.0	17.0	MG/KG	
SW6020/NONE	SO	076SB-0027M-0001-SO	240-17796-6	N	Nickel	0.087	18.0	18.0	MG/KG	
SW6020/NONE	SO	076SB-0027M-0001-SO	240-17796-6	N	Lead	0.087	16.0	16.0	MG/KG	
SW6020/NONE	SO	076SB-0027M-0001-SO	240-17796-6	N	Antimony	0.17	0.29	0.29	MG/KG	
SW6020/NONE	SO	076SB-0027M-0001-SO	240-17796-6	N	Selenium	0.43	0.46	0.46	MG/KG	
SW6020/NONE	SO	076SB-0027M-0001-SO	240-17796-6	N	Thallium	0.087	0.12	0.12	MG/KG	
SW6020/NONE	SO	076SB-0027M-0001-SO	240-17796-6	N	Vanadium	0.087	14.0	14.0	MG/KG	
SW6020/NONE	SO	076SB-0027M-0001-SO	240-17796-6	N	Zinc	0.43	45.0	45.0	MG/KG	
SW6020/NONE	SO	076SB-0028M-0001-SO	240-17796-7	N	Silver	0.076	0.013	0.013 J	MG/KG	TR
SW6020/NONE	SO	076SB-0028M-0001-SO	240-17796-7	N	Aluminum	2.3	6100	6100	MG/KG	

AUTOMATED DATA REVIEW SUMMARY for 240-17796-2

Detected Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW6020/NONE	SO	076SB-0028M-0001-SO	240-17796-7	N	Arsenic	0.076	13.0	13.0	MG/KG	
SW6020/NONE	SO	076SB-0028M-0001-SO	240-17796-7	N	Barium	0.76	37.0	37.0	MG/KG	
SW6020/NONE	SO	076SB-0028M-0001-SO	240-17796-7	N	Beryllium	0.076	0.34	0.34	MG/KG	
SW6020/NONE	SO	076SB-0028M-0001-SO	240-17796-7	N	Calcium	7.6	630	630	MG/KG	
SW6020/NONE	SO	076SB-0028M-0001-SO	240-17796-7	N	Cadmium	0.076	0.13	0.13	MG/KG	
SW6020/NONE	SO	076SB-0028M-0001-SO	240-17796-7	N	Cobalt	0.038	7.8	7.8	MG/KG	
SW6020/NONE	SO	076SB-0028M-0001-SO	240-17796-7	N	Chromium	0.15	12.0	12.0	MG/KG	
SW6020/NONE	SO	076SB-0028M-0001-SO	240-17796-7	N	Copper	0.15	15.0	15.0	MG/KG	
SW6020/NONE	SO	076SB-0028M-0001-SO	240-17796-7	N	Iron	3.8	20000	20000	MG/KG	
SW6020/NONE	SO	076SB-0028M-0001-SO	240-17796-7	N	Potassium	7.6	580	580	MG/KG	
SW6020/NONE	SO	076SB-0028M-0001-SO	240-17796-7	N	Magnesium	7.6	1600	1600	MG/KG	
SW6020/NONE	SO	076SB-0028M-0001-SO	240-17796-7	N	Manganese	0.38	380	380	MG/KG	
SW6020/NONE	SO	076SB-0028M-0001-SO	240-17796-7	N	Sodium	7.6	17.0	17.0	MG/KG	
SW6020/NONE	SO	076SB-0028M-0001-SO	240-17796-7	N	Nickel	0.076	15.0	15.0	MG/KG	
SW6020/NONE	SO	076SB-0028M-0001-SO	240-17796-7	N	Lead	0.076	11.0	11.0	MG/KG	
SW6020/NONE	SO	076SB-0028M-0001-SO	240-17796-7	N	Antimony	0.15	0.090	0.090 J	MG/KG	TR
SW6020/NONE	SO	076SB-0028M-0001-SO	240-17796-7	N	Selenium	0.38	0.51	0.51	MG/KG	
SW6020/NONE	SO	076SB-0028M-0001-SO	240-17796-7	N	Thallium	0.076	0.099	0.099	MG/KG	
SW6020/NONE	SO	076SB-0028M-0001-SO	240-17796-7	N	Vanadium	0.076	13.0	13.0	MG/KG	
SW6020/NONE	SO	076SB-0028M-0001-SO	240-17796-7	N	Zinc	0.38	46.0	46.0	MG/KG	
SW6020/NONE	SO	076SB-0029M-0001-SO	240-17796-8	N	Silver	0.085	0.024	0.024 J	MG/KG	TR
SW6020/NONE	SO	076SB-0029M-0001-SO	240-17796-8	N	Aluminum	2.6	6000	6000	MG/KG	
SW6020/NONE	SO	076SB-0029M-0001-SO	240-17796-8	N	Arsenic	0.085	11.0	11.0	MG/KG	
SW6020/NONE	SO	076SB-0029M-0001-SO	240-17796-8	N	Barium	0.85	48.0	48.0	MG/KG	
SW6020/NONE	SO	076SB-0029M-0001-SO	240-17796-8	N	Beryllium	0.085	0.47	0.47	MG/KG	
SW6020/NONE	SO	076SB-0029M-0001-SO	240-17796-8	N	Calcium	8.5	1600	1600	MG/KG	
SW6020/NONE	SO	076SB-0029M-0001-SO	240-17796-8	N	Cadmium	0.085	0.17	0.17	MG/KG	
SW6020/NONE	SO	076SB-0029M-0001-SO	240-17796-8	N	Cobalt	0.043	7.2	7.2	MG/KG	

AUTOMATED DATA REVIEW SUMMARY for 240-17796-2

Detected Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW6020/NONE	SO	076SB-0029M-0001-SO	240-17796-8	N	Chromium	0.17	18.0	18.0	MG/KG	
SW6020/NONE	SO	076SB-0029M-0001-SO	240-17796-8	N	Copper	0.17	13.0	13.0	MG/KG	
SW6020/NONE	SO	076SB-0029M-0001-SO	240-17796-8	N	Iron	4.3	24000	24000	MG/KG	
SW6020/NONE	SO	076SB-0029M-0001-SO	240-17796-8	N	Potassium	8.5	500	500	MG/KG	
SW6020/NONE	SO	076SB-0029M-0001-SO	240-17796-8	N	Magnesium	8.5	1400	1400	MG/KG	
SW6020/NONE	SO	076SB-0029M-0001-SO	240-17796-8	N	Manganese	0.43	710	710	MG/KG	
SW6020/NONE	SO	076SB-0029M-0001-SO	240-17796-8	N	Sodium	8.5	27.0	27.0	MG/KG	
SW6020/NONE	SO	076SB-0029M-0001-SO	240-17796-8	N	Nickel	0.085	17.0	17.0	MG/KG	
SW6020/NONE	SO	076SB-0029M-0001-SO	240-17796-8	N	Lead	0.085	16.0	16.0	MG/KG	
SW6020/NONE	SO	076SB-0029M-0001-SO	240-17796-8	N	Antimony	0.17	0.11	0.11 J	MG/KG	TR
SW6020/NONE	SO	076SB-0029M-0001-SO	240-17796-8	N	Selenium	0.43	0.43	0.43	MG/KG	
SW6020/NONE	SO	076SB-0029M-0001-SO	240-17796-8	N	Thallium	0.085	0.11	0.11	MG/KG	
SW6020/NONE	SO	076SB-0029M-0001-SO	240-17796-8	N	Vanadium	0.085	14.0	14.0	MG/KG	
SW6020/NONE	SO	076SB-0029M-0001-SO	240-17796-8	N	Zinc	0.43	50.0	50.0	MG/KG	
SW6020/NONE	SO	076SB-0053M-0001-SO	240-17796-9	N	Silver	0.081	0.024	0.024 J	MG/KG	TR
SW6020/NONE	SO	076SB-0053M-0001-SO	240-17796-9	N	Aluminum	2.4	7700	7700	MG/KG	
SW6020/NONE	SO	076SB-0053M-0001-SO	240-17796-9	N	Arsenic	0.081	12.0	12.0	MG/KG	
SW6020/NONE	SO	076SB-0053M-0001-SO	240-17796-9	N	Barium	0.81	36.0	36.0	MG/KG	
SW6020/NONE	SO	076SB-0053M-0001-SO	240-17796-9	N	Beryllium	0.081	0.39	0.39	MG/KG	
SW6020/NONE	SO	076SB-0053M-0001-SO	240-17796-9	N	Calcium	8.1	1700	1700	MG/KG	
SW6020/NONE	SO	076SB-0053M-0001-SO	240-17796-9	N	Cadmium	0.081	0.15	0.15	MG/KG	
SW6020/NONE	SO	076SB-0053M-0001-SO	240-17796-9	N	Cobalt	0.040	7.3	7.3	MG/KG	
SW6020/NONE	SO	076SB-0053M-0001-SO	240-17796-9	N	Chromium	0.16	17.0	17.0	MG/KG	
SW6020/NONE	SO	076SB-0053M-0001-SO	240-17796-9	N	Copper	0.16	15.0	15.0	MG/KG	
SW6020/NONE	SO	076SB-0053M-0001-SO	240-17796-9	N	Iron	4.0	20000	20000	MG/KG	
SW6020/NONE	SO	076SB-0053M-0001-SO	240-17796-9	N	Potassium	8.1	750	750	MG/KG	
SW6020/NONE	SO	076SB-0053M-0001-SO	240-17796-9	N	Magnesium	8.1	2300	2300	MG/KG	
SW6020/NONE	SO	076SB-0053M-0001-SO	240-17796-9	N	Manganese	0.40	270	270	MG/KG	

AUTOMATED DATA REVIEW SUMMARY for 240-17796-2

Detected Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW6020/NONE	SO	076SB-0053M-0001-SO	240-17796-9	N	Sodium	8.1	32.0	32.0	MG/KG	
SW6020/NONE	SO	076SB-0053M-0001-SO	240-17796-9	N	Nickel	0.081	20.0	20.0	MG/KG	
SW6020/NONE	SO	076SB-0053M-0001-SO	240-17796-9	N	Lead	0.081	11.0	11.0	MG/KG	
SW6020/NONE	SO	076SB-0053M-0001-SO	240-17796-9	N	Antimony	0.16	0.064	0.064 J	MG/KG	TR
SW6020/NONE	SO	076SB-0053M-0001-SO	240-17796-9	N	Selenium	0.40	0.32	0.32 J	MG/KG	TR
SW6020/NONE	SO	076SB-0053M-0001-SO	240-17796-9	N	Thallium	0.081	0.11	0.11	MG/KG	
SW6020/NONE	SO	076SB-0053M-0001-SO	240-17796-9	N	Vanadium	0.081	14.0	14.0	MG/KG	
SW6020/NONE	SO	076SB-0053M-0001-SO	240-17796-9	N	Zinc	0.40	45.0	45.0	MG/KG	
SW6020/NONE	SO	076SB-0054M-0001-SO	240-17796-11	N	Silver	0.072	0.027	0.027 J	MG/KG	TR
SW6020/NONE	SO	076SB-0054M-0001-SO	240-17796-11	N	Aluminum	2.2	6700	6700	MG/KG	
SW6020/NONE	SO	076SB-0054M-0001-SO	240-17796-11	N	Arsenic	0.072	14.0	14.0	MG/KG	
SW6020/NONE	SO	076SB-0054M-0001-SO	240-17796-11	N	Barium	0.72	30.0	30.0	MG/KG	
SW6020/NONE	SO	076SB-0054M-0001-SO	240-17796-11	N	Beryllium	0.072	0.38	0.38	MG/KG	
SW6020/NONE	SO	076SB-0054M-0001-SO	240-17796-11	N	Calcium	7.2	5000	5000	MG/KG	
SW6020/NONE	SO	076SB-0054M-0001-SO	240-17796-11	N	Cadmium	0.072	0.15	0.15	MG/KG	
SW6020/NONE	SO	076SB-0054M-0001-SO	240-17796-11	N	Cobalt	0.036	8.6	8.6	MG/KG	
SW6020/NONE	SO	076SB-0054M-0001-SO	240-17796-11	N	Chromium	0.14	15.0	15.0	MG/KG	
SW6020/NONE	SO	076SB-0054M-0001-SO	240-17796-11	N	Copper	0.14	17.0	17.0	MG/KG	
SW6020/NONE	SO	076SB-0054M-0001-SO	240-17796-11	N	Iron	3.6	22000	22000	MG/KG	
SW6020/NONE	SO	076SB-0054M-0001-SO	240-17796-11	N	Potassium	7.2	890	890	MG/KG	
SW6020/NONE	SO	076SB-0054M-0001-SO	240-17796-11	N	Magnesium	7.2	3400	3400	MG/KG	
SW6020/NONE	SO	076SB-0054M-0001-SO	240-17796-11	N	Manganese	0.36	360	360	MG/KG	
SW6020/NONE	SO	076SB-0054M-0001-SO	240-17796-11	N	Sodium	7.2	40.0	40.0	MG/KG	
SW6020/NONE	SO	076SB-0054M-0001-SO	240-17796-11	N	Nickel	0.072	22.0	22.0	MG/KG	
SW6020/NONE	SO	076SB-0054M-0001-SO	240-17796-11	N	Lead	0.072	9.8	9.8	MG/KG	
SW6020/NONE	SO	076SB-0054M-0001-SO	240-17796-11	N	Antimony	0.14	0.058	0.058 J	MG/KG	TR
SW6020/NONE	SO	076SB-0054M-0001-SO	240-17796-11	N	Selenium	0.36	0.46	0.46	MG/KG	
SW6020/NONE	SO	076SB-0054M-0001-SO	240-17796-11	N	Thallium	0.072	0.11	0.11	MG/KG	

AUTOMATED DATA REVIEW SUMMARY for 240-17796-2

Detected Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW6020/NONE	SO	076SB-0054M-0001-SO	240-17796-11	N	Vanadium	0.072	12.0	12.0	MG/KG	
SW6020/NONE	SO	076SB-0054M-0001-SO	240-17796-11	N	Zinc	0.36	50.0	50.0	MG/KG	
SW6020/NONE	SO	076SB-0055M-0001-SO	240-17796-12	N	Silver	0.088	0.027	0.027 J	MG/KG	TR
SW6020/NONE	SO	076SB-0055M-0001-SO	240-17796-12	N	Aluminum	2.6	7200	7200	MG/KG	
SW6020/NONE	SO	076SB-0055M-0001-SO	240-17796-12	N	Arsenic	0.088	15.0	15.0	MG/KG	
SW6020/NONE	SO	076SB-0055M-0001-SO	240-17796-12	N	Barium	0.88	29.0	29.0	MG/KG	
SW6020/NONE	SO	076SB-0055M-0001-SO	240-17796-12	N	Beryllium	0.088	0.41	0.41	MG/KG	
SW6020/NONE	SO	076SB-0055M-0001-SO	240-17796-12	N	Calcium	8.8	5800	5800	MG/KG	
SW6020/NONE	SO	076SB-0055M-0001-SO	240-17796-12	N	Cadmium	0.088	0.15	0.15	MG/KG	
SW6020/NONE	SO	076SB-0055M-0001-SO	240-17796-12	N	Cobalt	0.044	9.4	9.4	MG/KG	
SW6020/NONE	SO	076SB-0055M-0001-SO	240-17796-12	N	Chromium	0.18	13.0	13.0	MG/KG	
SW6020/NONE	SO	076SB-0055M-0001-SO	240-17796-12	N	Copper	0.18	16.0	16.0	MG/KG	
SW6020/NONE	SO	076SB-0055M-0001-SO	240-17796-12	N	Iron	4.4	23000	23000	MG/KG	
SW6020/NONE	SO	076SB-0055M-0001-SO	240-17796-12	N	Potassium	8.8	940	940	MG/KG	
SW6020/NONE	SO	076SB-0055M-0001-SO	240-17796-12	N	Magnesium	8.8	3800	3800	MG/KG	
SW6020/NONE	SO	076SB-0055M-0001-SO	240-17796-12	N	Manganese	0.44	350	350	MG/KG	
SW6020/NONE	SO	076SB-0055M-0001-SO	240-17796-12	N	Sodium	8.8	42.0	42.0	MG/KG	
SW6020/NONE	SO	076SB-0055M-0001-SO	240-17796-12	N	Nickel	0.088	22.0	22.0	MG/KG	
SW6020/NONE	SO	076SB-0055M-0001-SO	240-17796-12	N	Lead	0.088	9.7	9.7	MG/KG	
SW6020/NONE	SO	076SB-0055M-0001-SO	240-17796-12	N	Antimony	0.18	0.053	0.053 J	MG/KG	TR
SW6020/NONE	SO	076SB-0055M-0001-SO	240-17796-12	N	Selenium	0.44	0.38	0.38 J	MG/KG	TR
SW6020/NONE	SO	076SB-0055M-0001-SO	240-17796-12	N	Thallium	0.088	0.11	0.11	MG/KG	
SW6020/NONE	SO	076SB-0055M-0001-SO	240-17796-12	N	Vanadium	0.088	12.0	12.0	MG/KG	
SW6020/NONE	SO	076SB-0055M-0001-SO	240-17796-12	N	Zinc	0.44	47.0	47.0	MG/KG	
SW6020/NONE	SO	076SB-0056M-0001-SO	240-17796-13	N	Silver	0.070	0.023	0.023 J	MG/KG	TR
SW6020/NONE	SO	076SB-0056M-0001-SO	240-17796-13	N	Aluminum	2.1	7300	7300	MG/KG	
SW6020/NONE	SO	076SB-0056M-0001-SO	240-17796-13	N	Arsenic	0.070	12.0	12.0	MG/KG	
SW6020/NONE	SO	076SB-0056M-0001-SO	240-17796-13	N	Barium	0.70	34.0	34.0	MG/KG	

AUTOMATED DATA REVIEW SUMMARY for 240-17796-2

Detected Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW6020/NONE	SO	076SB-0056M-0001-SO	240-17796-13	N	Beryllium	0.070	0.37	0.37	MG/KG	
SW6020/NONE	SO	076SB-0056M-0001-SO	240-17796-13	N	Calcium	7.0	2500	2500	MG/KG	
SW6020/NONE	SO	076SB-0056M-0001-SO	240-17796-13	N	Cadmium	0.070	0.17	0.17	MG/KG	
SW6020/NONE	SO	076SB-0056M-0001-SO	240-17796-13	N	Cobalt	0.035	7.5	7.5	MG/KG	
SW6020/NONE	SO	076SB-0056M-0001-SO	240-17796-13	N	Chromium	0.14	23.0	23.0	MG/KG	
SW6020/NONE	SO	076SB-0056M-0001-SO	240-17796-13	N	Copper	0.14	19.0	19.0	MG/KG	
SW6020/NONE	SO	076SB-0056M-0001-SO	240-17796-13	N	Iron	3.5	21000	21000	MG/KG	
SW6020/NONE	SO	076SB-0056M-0001-SO	240-17796-13	N	Potassium	7.0	780	780	MG/KG	
SW6020/NONE	SO	076SB-0056M-0001-SO	240-17796-13	N	Magnesium	7.0	2500	2500	MG/KG	
SW6020/NONE	SO	076SB-0056M-0001-SO	240-17796-13	N	Manganese	0.35	330	330	MG/KG	
SW6020/NONE	SO	076SB-0056M-0001-SO	240-17796-13	N	Sodium	7.0	33.0	33.0	MG/KG	
SW6020/NONE	SO	076SB-0056M-0001-SO	240-17796-13	N	Nickel	0.070	23.0	23.0	MG/KG	
SW6020/NONE	SO	076SB-0056M-0001-SO	240-17796-13	N	Lead	0.070	10.0	10.0	MG/KG	
SW6020/NONE	SO	076SB-0056M-0001-SO	240-17796-13	N	Antimony	0.14	0.065	0.065 J	MG/KG	TR
SW6020/NONE	SO	076SB-0056M-0001-SO	240-17796-13	N	Selenium	0.35	0.46	0.46	MG/KG	
SW6020/NONE	SO	076SB-0056M-0001-SO	240-17796-13	N	Thallium	0.070	0.11	0.11	MG/KG	
SW6020/NONE	SO	076SB-0056M-0001-SO	240-17796-13	N	Vanadium	0.070	13.0	13.0	MG/KG	
SW6020/NONE	SO	076SB-0056M-0001-SO	240-17796-13	N	Zinc	0.35	49.0	49.0	MG/KG	
SW6020/NONE	SO	076SB-0057M-0001-SO	240-17796-14	N	Silver	0.098	0.026	0.026 J	MG/KG	TR
SW6020/NONE	SO	076SB-0057M-0001-SO	240-17796-14	N	Aluminum	2.9	8500	8500	MG/KG	
SW6020/NONE	SO	076SB-0057M-0001-SO	240-17796-14	N	Arsenic	0.098	15.0	15.0	MG/KG	
SW6020/NONE	SO	076SB-0057M-0001-SO	240-17796-14	N	Barium	0.98	37.0	37.0	MG/KG	
SW6020/NONE	SO	076SB-0057M-0001-SO	240-17796-14	N	Beryllium	0.098	0.46	0.46	MG/KG	
SW6020/NONE	SO	076SB-0057M-0001-SO	240-17796-14	N	Calcium	9.8	4000	4000	MG/KG	
SW6020/NONE	SO	076SB-0057M-0001-SO	240-17796-14	N	Cadmium	0.098	0.13	0.13	MG/KG	
SW6020/NONE	SO	076SB-0057M-0001-SO	240-17796-14	N	Cobalt	0.049	8.5	8.5	MG/KG	
SW6020/NONE	SO	076SB-0057M-0001-SO	240-17796-14	N	Chromium	0.20	19.0	19.0	MG/KG	
SW6020/NONE	SO	076SB-0057M-0001-SO	240-17796-14	N	Copper	0.20	18.0	18.0	MG/KG	

AUTOMATED DATA REVIEW SUMMARY for 240-17796-2

Detected Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW6020/NONE	SO	076SB-0057M-0001-SO	240-17796-14	N	Iron	4.9	23000	23000	MG/KG	
SW6020/NONE	SO	076SB-0057M-0001-SO	240-17796-14	N	Potassium	9.8	1200	1200	MG/KG	
SW6020/NONE	SO	076SB-0057M-0001-SO	240-17796-14	N	Magnesium	9.8	3200	3200	MG/KG	
SW6020/NONE	SO	076SB-0057M-0001-SO	240-17796-14	N	Manganese	0.49	330	330	MG/KG	
SW6020/NONE	SO	076SB-0057M-0001-SO	240-17796-14	N	Sodium	9.8	47.0	47.0	MG/KG	
SW6020/NONE	SO	076SB-0057M-0001-SO	240-17796-14	N	Nickel	0.098	23.0	23.0	MG/KG	
SW6020/NONE	SO	076SB-0057M-0001-SO	240-17796-14	N	Lead	0.098	11.0	11.0	MG/KG	
SW6020/NONE	SO	076SB-0057M-0001-SO	240-17796-14	N	Antimony	0.20	0.063	0.063 J	MG/KG	TR
SW6020/NONE	SO	076SB-0057M-0001-SO	240-17796-14	N	Selenium	0.49	0.38	0.38 J	MG/KG	TR
SW6020/NONE	SO	076SB-0057M-0001-SO	240-17796-14	N	Thallium	0.098	0.12	0.12	MG/KG	
SW6020/NONE	SO	076SB-0057M-0001-SO	240-17796-14	N	Vanadium	0.098	14.0	14.0	MG/KG	
SW6020/NONE	SO	076SB-0057M-0001-SO	240-17796-14	N	Zinc	0.49	62.0	62.0	MG/KG	
SW6020/NONE	SO	076SB-0058M-0001-SO	240-17796-15	N	Silver	0.088	0.022	0.022 J	MG/KG	TR
SW6020/NONE	SO	076SB-0058M-0001-SO	240-17796-15	N	Aluminum	2.6	8000	8000	MG/KG	
SW6020/NONE	SO	076SB-0058M-0001-SO	240-17796-15	N	Arsenic	0.088	16.0	16.0	MG/KG	
SW6020/NONE	SO	076SB-0058M-0001-SO	240-17796-15	N	Barium	0.88	32.0	32.0	MG/KG	
SW6020/NONE	SO	076SB-0058M-0001-SO	240-17796-15	N	Beryllium	0.088	0.47	0.47	MG/KG	
SW6020/NONE	SO	076SB-0058M-0001-SO	240-17796-15	N	Calcium	8.8	4100	4100	MG/KG	
SW6020/NONE	SO	076SB-0058M-0001-SO	240-17796-15	N	Cadmium	0.088	0.15	0.15	MG/KG	
SW6020/NONE	SO	076SB-0058M-0001-SO	240-17796-15	N	Cobalt	0.044	9.1	9.1	MG/KG	
SW6020/NONE	SO	076SB-0058M-0001-SO	240-17796-15	N	Chromium	0.18	15.0	15.0	MG/KG	
SW6020/NONE	SO	076SB-0058M-0001-SO	240-17796-15	N	Copper	0.18	16.0	16.0	MG/KG	
SW6020/NONE	SO	076SB-0058M-0001-SO	240-17796-15	N	Iron	4.4	23000	23000	MG/KG	
SW6020/NONE	SO	076SB-0058M-0001-SO	240-17796-15	N	Potassium	8.8	1100	1100	MG/KG	
SW6020/NONE	SO	076SB-0058M-0001-SO	240-17796-15	N	Magnesium	8.8	3700	3700	MG/KG	
SW6020/NONE	SO	076SB-0058M-0001-SO	240-17796-15	N	Manganese	0.44	350	350	MG/KG	
SW6020/NONE	SO	076SB-0058M-0001-SO	240-17796-15	N	Sodium	8.8	43.0	43.0	MG/KG	
SW6020/NONE	SO	076SB-0058M-0001-SO	240-17796-15	N	Nickel	0.088	23.0	23.0	MG/KG	

AUTOMATED DATA REVIEW SUMMARY for 240-17796-2

Detected Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW6020/NONE	SO	076SB-0058M-0001-SO	240-17796-15	N	Lead	0.088	9.4	9.4	MG/KG	
SW6020/NONE	SO	076SB-0058M-0001-SO	240-17796-15	N	Antimony	0.18	0.050	0.050 J	MG/KG	TR
SW6020/NONE	SO	076SB-0058M-0001-SO	240-17796-15	N	Selenium	0.44	0.36	0.36 J	MG/KG	TR
SW6020/NONE	SO	076SB-0058M-0001-SO	240-17796-15	N	Thallium	0.088	0.11	0.11	MG/KG	
SW6020/NONE	SO	076SB-0058M-0001-SO	240-17796-15	N	Vanadium	0.088	13.0	13.0	MG/KG	
SW6020/NONE	SO	076SB-0058M-0001-SO	240-17796-15	N	Zinc	0.44	58.0	58.0	MG/KG	
SW6020/NONE	SO	076SB-0059M-0001-SO	240-17796-16	N	Silver	0.094	0.030	0.030 J	MG/KG	TR
SW6020/NONE	SO	076SB-0059M-0001-SO	240-17796-16	N	Aluminum	2.8	6600	6600	MG/KG	
SW6020/NONE	SO	076SB-0059M-0001-SO	240-17796-16	N	Arsenic	0.094	12.0	12.0	MG/KG	
SW6020/NONE	SO	076SB-0059M-0001-SO	240-17796-16	N	Barium	0.94	31.0	31.0	MG/KG	
SW6020/NONE	SO	076SB-0059M-0001-SO	240-17796-16	N	Beryllium	0.094	0.37	0.37	MG/KG	
SW6020/NONE	SO	076SB-0059M-0001-SO	240-17796-16	N	Calcium	9.4	2200	2200	MG/KG	
SW6020/NONE	SO	076SB-0059M-0001-SO	240-17796-16	N	Cadmium	0.094	0.15	0.15	MG/KG	
SW6020/NONE	SO	076SB-0059M-0001-SO	240-17796-16	N	Cobalt	0.047	7.6	7.6	MG/KG	
SW6020/NONE	SO	076SB-0059M-0001-SO	240-17796-16	N	Chromium	0.19	13.0	13.0	MG/KG	
SW6020/NONE	SO	076SB-0059M-0001-SO	240-17796-16	N	Copper	0.19	15.0	15.0	MG/KG	
SW6020/NONE	SO	076SB-0059M-0001-SO	240-17796-16	N	Iron	4.7	20000	20000	MG/KG	
SW6020/NONE	SO	076SB-0059M-0001-SO	240-17796-16	N	Potassium	9.4	920	920	MG/KG	
SW6020/NONE	SO	076SB-0059M-0001-SO	240-17796-16	N	Magnesium	9.4	2600	2600	MG/KG	
SW6020/NONE	SO	076SB-0059M-0001-SO	240-17796-16	N	Manganese	0.47	300	300	MG/KG	
SW6020/NONE	SO	076SB-0059M-0001-SO	240-17796-16	N	Sodium	9.4	37.0	37.0	MG/KG	
SW6020/NONE	SO	076SB-0059M-0001-SO	240-17796-16	N	Nickel	0.094	19.0	19.0	MG/KG	
SW6020/NONE	SO	076SB-0059M-0001-SO	240-17796-16	N	Lead	0.094	10.0	10.0	MG/KG	
SW6020/NONE	SO	076SB-0059M-0001-SO	240-17796-16	N	Antimony	0.19	0.053	0.053 J	MG/KG	TR
SW6020/NONE	SO	076SB-0059M-0001-SO	240-17796-16	N	Selenium	0.47	0.41	0.41 J	MG/KG	TR
SW6020/NONE	SO	076SB-0059M-0001-SO	240-17796-16	N	Thallium	0.094	0.10	0.10	MG/KG	
SW6020/NONE	SO	076SB-0059M-0001-SO	240-17796-16	N	Vanadium	0.094	12.0	12.0	MG/KG	
SW6020/NONE	SO	076SB-0059M-0001-SO	240-17796-16	N	Zinc	0.47	46.0	46.0	MG/KG	

AUTOMATED DATA REVIEW SUMMARY for 240-17796-2

Detected Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW6020/NONE	SO	076SB-0060M-0001-SO	240-17796-22	N	Silver	0.096	0.028	0.028 J	MG/KG	TR
SW6020/NONE	SO	076SB-0060M-0001-SO	240-17796-22	N	Aluminum	2.9	6800	6800	MG/KG	
SW6020/NONE	SO	076SB-0060M-0001-SO	240-17796-22	N	Arsenic	0.096	6.7	6.7	MG/KG	
SW6020/NONE	SO	076SB-0060M-0001-SO	240-17796-22	N	Barium	0.96	52.0	52.0	MG/KG	
SW6020/NONE	SO	076SB-0060M-0001-SO	240-17796-22	N	Beryllium	0.096	0.60	0.60	MG/KG	
SW6020/NONE	SO	076SB-0060M-0001-SO	240-17796-22	N	Calcium	9.6	14000	14000	MG/KG	
SW6020/NONE	SO	076SB-0060M-0001-SO	240-17796-22	N	Cadmium	0.096	0.16	0.16	MG/KG	
SW6020/NONE	SO	076SB-0060M-0001-SO	240-17796-22	N	Cobalt	0.048	4.2	4.2	MG/KG	
SW6020/NONE	SO	076SB-0060M-0001-SO	240-17796-22	N	Chromium	0.19	13.0	13.0	MG/KG	
SW6020/NONE	SO	076SB-0060M-0001-SO	240-17796-22	N	Copper	0.19	8.7	8.7	MG/KG	
SW6020/NONE	SO	076SB-0060M-0001-SO	240-17796-22	N	Iron	4.8	14000	14000	MG/KG	
SW6020/NONE	SO	076SB-0060M-0001-SO	240-17796-22	N	Potassium	9.6	810	810	MG/KG	
SW6020/NONE	SO	076SB-0060M-0001-SO	240-17796-22	N	Magnesium	9.6	2400	2400	MG/KG	
SW6020/NONE	SO	076SB-0060M-0001-SO	240-17796-22	N	Manganese	0.48	650	650	MG/KG	
SW6020/NONE	SO	076SB-0060M-0001-SO	240-17796-22	N	Sodium	9.6	78.0	78.0	MG/KG	
SW6020/NONE	SO	076SB-0060M-0001-SO	240-17796-22	N	Nickel	0.096	10.0	10.0	MG/KG	
SW6020/NONE	SO	076SB-0060M-0001-SO	240-17796-22	N	Lead	0.096	14.0	14.0	MG/KG	
SW6020/NONE	SO	076SB-0060M-0001-SO	240-17796-22	N	Antimony	0.19	0.18	0.18 J	MG/KG	TR
SW6020/NONE	SO	076SB-0060M-0001-SO	240-17796-22	N	Selenium	0.48	0.55	0.55	MG/KG	
SW6020/NONE	SO	076SB-0060M-0001-SO	240-17796-22	N	Thallium	0.096	0.072	0.072 J	MG/KG	TR
SW6020/NONE	SO	076SB-0060M-0001-SO	240-17796-22	N	Vanadium	0.096	11.0	11.0	MG/KG	
SW6020/NONE	SO	076SB-0060M-0001-SO	240-17796-22	N	Zinc	0.48	33.0	33.0	MG/KG	
SW6020/NONE	SO	076SB-0061M-0001-SO	240-17796-23	N	Silver	0.092	0.029	0.029 J	MG/KG	TR
SW6020/NONE	SO	076SB-0061M-0001-SO	240-17796-23	N	Aluminum	2.8	7900	7900	MG/KG	
SW6020/NONE	SO	076SB-0061M-0001-SO	240-17796-23	N	Arsenic	0.092	14.0	14.0	MG/KG	
SW6020/NONE	SO	076SB-0061M-0001-SO	240-17796-23	N	Barium	0.92	53.0	53.0	MG/KG	
SW6020/NONE	SO	076SB-0061M-0001-SO	240-17796-23	N	Beryllium	0.092	0.46	0.46	MG/KG	
SW6020/NONE	SO	076SB-0061M-0001-SO	240-17796-23	N	Calcium	9.2	1600	1600	MG/KG	

AUTOMATED DATA REVIEW SUMMARY for 240-17796-2

Detected Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW6020/NONE	SO	076SB-0061M-0001-SO	240-17796-23	N	Cadmium	0.092	0.17	0.17	MG/KG	
SW6020/NONE	SO	076SB-0061M-0001-SO	240-17796-23	N	Cobalt	0.046	8.6	8.6	MG/KG	
SW6020/NONE	SO	076SB-0061M-0001-SO	240-17796-23	N	Chromium	0.18	16.0	16.0	MG/KG	
SW6020/NONE	SO	076SB-0061M-0001-SO	240-17796-23	N	Copper	0.18	16.0	16.0	MG/KG	
SW6020/NONE	SO	076SB-0061M-0001-SO	240-17796-23	N	Iron	4.6	22000	22000	MG/KG	
SW6020/NONE	SO	076SB-0061M-0001-SO	240-17796-23	N	Potassium	9.2	1100	1100	MG/KG	
SW6020/NONE	SO	076SB-0061M-0001-SO	240-17796-23	N	Magnesium	9.2	2400	2400	MG/KG	
SW6020/NONE	SO	076SB-0061M-0001-SO	240-17796-23	N	Manganese	0.46	350	350	MG/KG	
SW6020/NONE	SO	076SB-0061M-0001-SO	240-17796-23	N	Sodium	9.2	37.0	37.0	MG/KG	
SW6020/NONE	SO	076SB-0061M-0001-SO	240-17796-23	N	Nickel	0.092	22.0	22.0	MG/KG	
SW6020/NONE	SO	076SB-0061M-0001-SO	240-17796-23	N	Lead	0.092	11.0	11.0	MG/KG	
SW6020/NONE	SO	076SB-0061M-0001-SO	240-17796-23	N	Antimony	0.18	0.072	0.072 J	MG/KG	TR
SW6020/NONE	SO	076SB-0061M-0001-SO	240-17796-23	N	Selenium	0.46	0.40	0.40 J	MG/KG	TR
SW6020/NONE	SO	076SB-0061M-0001-SO	240-17796-23	N	Thallium	0.092	0.11	0.11	MG/KG	
SW6020/NONE	SO	076SB-0061M-0001-SO	240-17796-23	N	Vanadium	0.092	14.0	14.0	MG/KG	
SW6020/NONE	SO	076SB-0061M-0001-SO	240-17796-23	N	Zinc	0.46	53.0	53.0	MG/KG	
SW6020/NONE	SO	076SB-0062M-0001-SO	240-17796-24	N	Silver	0.097	0.052	0.052 J	MG/KG	TR
SW6020/NONE	SO	076SB-0062M-0001-SO	240-17796-24	N	Aluminum	2.9	7300	7300	MG/KG	
SW6020/NONE	SO	076SB-0062M-0001-SO	240-17796-24	N	Arsenic	0.097	10.0	10.0	MG/KG	
SW6020/NONE	SO	076SB-0062M-0001-SO	240-17796-24	N	Barium	0.97	63.0	63.0	MG/KG	
SW6020/NONE	SO	076SB-0062M-0001-SO	240-17796-24	N	Beryllium	0.097	0.46	0.46	MG/KG	
SW6020/NONE	SO	076SB-0062M-0001-SO	240-17796-24	N	Calcium	9.7	4000	4000	MG/KG	
SW6020/NONE	SO	076SB-0062M-0001-SO	240-17796-24	N	Cadmium	0.097	0.24	0.24	MG/KG	
SW6020/NONE	SO	076SB-0062M-0001-SO	240-17796-24	N	Cobalt	0.049	6.0	6.0	MG/KG	
SW6020/NONE	SO	076SB-0062M-0001-SO	240-17796-24	N	Chromium	0.19	16.0	16.0	MG/KG	
SW6020/NONE	SO	076SB-0062M-0001-SO	240-17796-24	N	Copper	0.19	14.0	14.0	MG/KG	
SW6020/NONE	SO	076SB-0062M-0001-SO	240-17796-24	N	Iron	4.9	19000	19000	MG/KG	
SW6020/NONE	SO	076SB-0062M-0001-SO	240-17796-24	N	Potassium	9.7	1100	1100	MG/KG	

AUTOMATED DATA REVIEW SUMMARY for 240-17796-2

Detected Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW6020/NONE	SO	076SB-0062M-0001-SO	240-17796-24	N	Magnesium	9.7	2300	2300	MG/KG	
SW6020/NONE	SO	076SB-0062M-0001-SO	240-17796-24	N	Manganese	0.49	410	410	MG/KG	
SW6020/NONE	SO	076SB-0062M-0001-SO	240-17796-24	N	Sodium	9.7	36.0	36.0	MG/KG	
SW6020/NONE	SO	076SB-0062M-0001-SO	240-17796-24	N	Nickel	0.097	18.0	18.0	MG/KG	
SW6020/NONE	SO	076SB-0062M-0001-SO	240-17796-24	N	Lead	0.097	9.5	9.5	MG/KG	
SW6020/NONE	SO	076SB-0062M-0001-SO	240-17796-24	N	Antimony	0.19	0.058	0.058 J	MG/KG	TR
SW6020/NONE	SO	076SB-0062M-0001-SO	240-17796-24	N	Selenium	0.49	0.43	0.43 J	MG/KG	TR
SW6020/NONE	SO	076SB-0062M-0001-SO	240-17796-24	N	Thallium	0.097	0.087	0.087 J	MG/KG	TR
SW6020/NONE	SO	076SB-0062M-0001-SO	240-17796-24	N	Vanadium	0.097	13.0	13.0	MG/KG	
SW6020/NONE	SO	076SB-0062M-0001-SO	240-17796-24	N	Zinc	0.49	42.0	42.0	MG/KG	
SW6020/NONE	SO	076SB-0063M-0001-SO	240-17796-25	N	Silver	0.078	0.027	0.027 J	MG/KG	TR
SW6020/NONE	SO	076SB-0063M-0001-SO	240-17796-25	N	Aluminum	2.3	7700	7700	MG/KG	
SW6020/NONE	SO	076SB-0063M-0001-SO	240-17796-25	N	Arsenic	0.078	11.0	11.0	MG/KG	
SW6020/NONE	SO	076SB-0063M-0001-SO	240-17796-25	N	Barium	0.78	42.0	42.0	MG/KG	
SW6020/NONE	SO	076SB-0063M-0001-SO	240-17796-25	N	Beryllium	0.078	0.38	0.38	MG/KG	
SW6020/NONE	SO	076SB-0063M-0001-SO	240-17796-25	N	Calcium	7.8	1300	1300	MG/KG	
SW6020/NONE	SO	076SB-0063M-0001-SO	240-17796-25	N	Cadmium	0.078	0.16	0.16	MG/KG	
SW6020/NONE	SO	076SB-0063M-0001-SO	240-17796-25	N	Cobalt	0.039	7.5	7.5	MG/KG	
SW6020/NONE	SO	076SB-0063M-0001-SO	240-17796-25	N	Chromium	0.16	14.0	14.0	MG/KG	
SW6020/NONE	SO	076SB-0063M-0001-SO	240-17796-25	N	Copper	0.16	13.0	13.0	MG/KG	
SW6020/NONE	SO	076SB-0063M-0001-SO	240-17796-25	N	Iron	3.9	19000	19000	MG/KG	
SW6020/NONE	SO	076SB-0063M-0001-SO	240-17796-25	N	Potassium	7.8	1200	1200	MG/KG	
SW6020/NONE	SO	076SB-0063M-0001-SO	240-17796-25	N	Magnesium	7.8	2000	2000	MG/KG	
SW6020/NONE	SO	076SB-0063M-0001-SO	240-17796-25	N	Manganese	0.39	250	250	MG/KG	
SW6020/NONE	SO	076SB-0063M-0001-SO	240-17796-25	N	Sodium	7.8	44.0	44.0	MG/KG	
SW6020/NONE	SO	076SB-0063M-0001-SO	240-17796-25	N	Nickel	0.078	17.0	17.0	MG/KG	
SW6020/NONE	SO	076SB-0063M-0001-SO	240-17796-25	N	Lead	0.078	13.0	13.0	MG/KG	
SW6020/NONE	SO	076SB-0063M-0001-SO	240-17796-25	N	Antimony	0.16	0.13	0.13 J	MG/KG	TR

AUTOMATED DATA REVIEW SUMMARY for 240-17796-2

Detected Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW6020/NONE	SO	076SB-0063M-0001-SO	240-17796-25	N	Selenium	0.39	0.47	0.47	MG/KG	
SW6020/NONE	SO	076SB-0063M-0001-SO	240-17796-25	N	Thallium	0.078	0.094	0.094	MG/KG	
SW6020/NONE	SO	076SB-0063M-0001-SO	240-17796-25	N	Vanadium	0.078	14.0	14.0	MG/KG	
SW6020/NONE	SO	076SB-0063M-0001-SO	240-17796-25	N	Zinc	0.39	44.0	44.0	MG/KG	
SW6020/NONE	SO	076SB-0064M-0001-SO	240-17796-26	N	Silver	0.092	0.021	0.021 J	MG/KG	TR
SW6020/NONE	SO	076SB-0064M-0001-SO	240-17796-26	N	Aluminum	2.8	6600	6600	MG/KG	
SW6020/NONE	SO	076SB-0064M-0001-SO	240-17796-26	N	Arsenic	0.092	15.0	15.0	MG/KG	
SW6020/NONE	SO	076SB-0064M-0001-SO	240-17796-26	N	Barium	0.92	43.0	43.0	MG/KG	
SW6020/NONE	SO	076SB-0064M-0001-SO	240-17796-26	N	Beryllium	0.092	0.43	0.43	MG/KG	
SW6020/NONE	SO	076SB-0064M-0001-SO	240-17796-26	N	Calcium	9.2	3700	3700	MG/KG	
SW6020/NONE	SO	076SB-0064M-0001-SO	240-17796-26	N	Cadmium	0.092	0.19	0.19	MG/KG	
SW6020/NONE	SO	076SB-0064M-0001-SO	240-17796-26	N	Cobalt	0.046	8.1	8.1	MG/KG	
SW6020/NONE	SO	076SB-0064M-0001-SO	240-17796-26	N	Chromium	0.18	18.0	18.0	MG/KG	
SW6020/NONE	SO	076SB-0064M-0001-SO	240-17796-26	N	Copper	0.18	17.0	17.0	MG/KG	
SW6020/NONE	SO	076SB-0064M-0001-SO	240-17796-26	N	Iron	4.6	22000	22000	MG/KG	
SW6020/NONE	SO	076SB-0064M-0001-SO	240-17796-26	N	Potassium	9.2	810	810	MG/KG	
SW6020/NONE	SO	076SB-0064M-0001-SO	240-17796-26	N	Magnesium	9.2	2100	2100	MG/KG	
SW6020/NONE	SO	076SB-0064M-0001-SO	240-17796-26	N	Manganese	0.46	330	330	MG/KG	
SW6020/NONE	SO	076SB-0064M-0001-SO	240-17796-26	N	Sodium	9.2	29.0	29.0	MG/KG	
SW6020/NONE	SO	076SB-0064M-0001-SO	240-17796-26	N	Nickel	0.092	21.0	21.0	MG/KG	
SW6020/NONE	SO	076SB-0064M-0001-SO	240-17796-26	N	Lead	0.092	14.0	14.0	MG/KG	
SW6020/NONE	SO	076SB-0064M-0001-SO	240-17796-26	N	Antimony	0.18	0.12	0.12 J	MG/KG	TR
SW6020/NONE	SO	076SB-0064M-0001-SO	240-17796-26	N	Selenium	0.46	0.61	0.61	MG/KG	
SW6020/NONE	SO	076SB-0064M-0001-SO	240-17796-26	N	Thallium	0.092	0.15	0.15	MG/KG	
SW6020/NONE	SO	076SB-0064M-0001-SO	240-17796-26	N	Vanadium	0.092	12.0	12.0	MG/KG	
SW6020/NONE	SO	076SB-0064M-0001-SO	240-17796-26	N	Zinc	0.46	54.0	54.0	MG/KG	
SW6020/NONE	SO	076SB-0065M-0001-SO	240-17796-27	N	Silver	0.074	0.026	0.026 J	MG/KG	TR
SW6020/NONE	SO	076SB-0065M-0001-SO	240-17796-27	N	Aluminum	2.2	8000	8000	MG/KG	

AUTOMATED DATA REVIEW SUMMARY for 240-17796-2

Detected Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW6020/NONE	SO	076SB-0065M-0001-SO	240-17796-27	N	Arsenic	0.074	16.0	16.0	MG/KG	
SW6020/NONE	SO	076SB-0065M-0001-SO	240-17796-27	N	Barium	0.74	69.0	69.0	MG/KG	
SW6020/NONE	SO	076SB-0065M-0001-SO	240-17796-27	N	Beryllium	0.074	0.59	0.59	MG/KG	
SW6020/NONE	SO	076SB-0065M-0001-SO	240-17796-27	N	Calcium	7.4	7100	7100	MG/KG	
SW6020/NONE	SO	076SB-0065M-0001-SO	240-17796-27	N	Cadmium	0.074	0.21	0.21	MG/KG	
SW6020/NONE	SO	076SB-0065M-0001-SO	240-17796-27	N	Cobalt	0.037	7.5	7.5	MG/KG	
SW6020/NONE	SO	076SB-0065M-0001-SO	240-17796-27	N	Chromium	0.15	18.0	18.0	MG/KG	
SW6020/NONE	SO	076SB-0065M-0001-SO	240-17796-27	N	Copper	0.15	21.0	21.0	MG/KG	
SW6020/NONE	SO	076SB-0065M-0001-SO	240-17796-27	N	Iron	3.7	19000	19000	MG/KG	
SW6020/NONE	SO	076SB-0065M-0001-SO	240-17796-27	N	Potassium	7.4	870	870	MG/KG	
SW6020/NONE	SO	076SB-0065M-0001-SO	240-17796-27	N	Magnesium	7.4	2500	2500	MG/KG	
SW6020/NONE	SO	076SB-0065M-0001-SO	240-17796-27	N	Manganese	0.37	500	500	MG/KG	
SW6020/NONE	SO	076SB-0065M-0001-SO	240-17796-27	N	Sodium	7.4	48.0	48.0	MG/KG	
SW6020/NONE	SO	076SB-0065M-0001-SO	240-17796-27	N	Nickel	0.074	20.0	20.0	MG/KG	
SW6020/NONE	SO	076SB-0065M-0001-SO	240-17796-27	N	Lead	0.074	13.0	13.0	MG/KG	
SW6020/NONE	SO	076SB-0065M-0001-SO	240-17796-27	N	Antimony	0.15	0.18	0.18	MG/KG	
SW6020/NONE	SO	076SB-0065M-0001-SO	240-17796-27	N	Selenium	0.37	0.64	0.64	MG/KG	
SW6020/NONE	SO	076SB-0065M-0001-SO	240-17796-27	N	Thallium	0.074	0.12	0.12	MG/KG	
SW6020/NONE	SO	076SB-0065M-0001-SO	240-17796-27	N	Vanadium	0.074	15.0	15.0	MG/KG	
SW6020/NONE	SO	076SB-0065M-0001-SO	240-17796-27	N	Zinc	0.37	50.0	50.0	MG/KG	
SW6020/NONE	SO	076SB-0066M-0001-SO	240-17796-28	N	Silver	0.087	0.035	0.035 J	MG/KG	TR
SW6020/NONE	SO	076SB-0066M-0001-SO	240-17796-28	N	Aluminum	2.6	8600	8600	MG/KG	
SW6020/NONE	SO	076SB-0066M-0001-SO	240-17796-28	N	Arsenic	0.087	12.0	12.0	MG/KG	
SW6020/NONE	SO	076SB-0066M-0001-SO	240-17796-28	N	Barium	0.87	69.0	69.0	MG/KG	
SW6020/NONE	SO	076SB-0066M-0001-SO	240-17796-28	N	Beryllium	0.087	0.61	0.61	MG/KG	
SW6020/NONE	SO	076SB-0066M-0001-SO	240-17796-28	N	Calcium	8.7	7300	7300	MG/KG	
SW6020/NONE	SO	076SB-0066M-0001-SO	240-17796-28	N	Cadmium	0.087	0.20	0.20	MG/KG	
SW6020/NONE	SO	076SB-0066M-0001-SO	240-17796-28	N	Cobalt	0.043	7.8	7.8	MG/KG	

AUTOMATED DATA REVIEW SUMMARY for 240-17796-2

Detected Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW6020/NONE	SO	076SB-0066M-0001-SO	240-17796-28	N	Chromium	0.17	17.0	17.0	MG/KG	
SW6020/NONE	SO	076SB-0066M-0001-SO	240-17796-28	N	Copper	0.17	14.0	14.0	MG/KG	
SW6020/NONE	SO	076SB-0066M-0001-SO	240-17796-28	N	Iron	4.3	20000	20000	MG/KG	
SW6020/NONE	SO	076SB-0066M-0001-SO	240-17796-28	N	Potassium	8.7	790	790	MG/KG	
SW6020/NONE	SO	076SB-0066M-0001-SO	240-17796-28	N	Magnesium	8.7	2700	2700	MG/KG	
SW6020/NONE	SO	076SB-0066M-0001-SO	240-17796-28	N	Manganese	0.43	560	560	MG/KG	
SW6020/NONE	SO	076SB-0066M-0001-SO	240-17796-28	N	Sodium	8.7	55.0	55.0	MG/KG	
SW6020/NONE	SO	076SB-0066M-0001-SO	240-17796-28	N	Nickel	0.087	18.0	18.0	MG/KG	
SW6020/NONE	SO	076SB-0066M-0001-SO	240-17796-28	N	Lead	0.087	26.0	26.0	MG/KG	
SW6020/NONE	SO	076SB-0066M-0001-SO	240-17796-28	N	Antimony	0.17	0.11	0.11 J	MG/KG	TR
SW6020/NONE	SO	076SB-0066M-0001-SO	240-17796-28	N	Selenium	0.43	0.61	0.61	MG/KG	
SW6020/NONE	SO	076SB-0066M-0001-SO	240-17796-28	N	Thallium	0.087	0.13	0.13	MG/KG	
SW6020/NONE	SO	076SB-0066M-0001-SO	240-17796-28	N	Vanadium	0.087	16.0	16.0	MG/KG	
SW6020/NONE	SO	076SB-0066M-0001-SO	240-17796-28	N	Zinc	0.43	55.0	55.0	MG/KG	
SW6020/NONE	SO	076SS-0007M-0001-SO	240-17796-10	N	Silver	0.097	0.22	0.22	MG/KG	
SW6020/NONE	SO	076SS-0007M-0001-SO	240-17796-10	N	Aluminum	2.9	7800	7800	MG/KG	
SW6020/NONE	SO	076SS-0007M-0001-SO	240-17796-10	N	Arsenic	0.097	9.2	9.2	MG/KG	
SW6020/NONE	SO	076SS-0007M-0001-SO	240-17796-10	N	Barium	0.97	52.0	52.0	MG/KG	
SW6020/NONE	SO	076SS-0007M-0001-SO	240-17796-10	N	Beryllium	0.097	0.41	0.41	MG/KG	
SW6020/NONE	SO	076SS-0007M-0001-SO	240-17796-10	N	Calcium	9.7	2400	2400	MG/KG	
SW6020/NONE	SO	076SS-0007M-0001-SO	240-17796-10	N	Cadmium	0.097	0.29	0.29	MG/KG	
SW6020/NONE	SO	076SS-0007M-0001-SO	240-17796-10	N	Cobalt	0.049	6.1	6.1	MG/KG	
SW6020/NONE	SO	076SS-0007M-0001-SO	240-17796-10	N	Chromium	0.19	18.0	18.0	MG/KG	
SW6020/NONE	SO	076SS-0007M-0001-SO	240-17796-10	N	Copper	0.19	14.0	14.0	MG/KG	
SW6020/NONE	SO	076SS-0007M-0001-SO	240-17796-10	N	Iron	4.9	19000	19000	MG/KG	
SW6020/NONE	SO	076SS-0007M-0001-SO	240-17796-10	N	Potassium	9.7	600	600	MG/KG	
SW6020/NONE	SO	076SS-0007M-0001-SO	240-17796-10	N	Magnesium	9.7	1600	1600	MG/KG	
SW6020/NONE	SO	076SS-0007M-0001-SO	240-17796-10	N	Manganese	0.49	290	290	MG/KG	

AUTOMATED DATA REVIEW SUMMARY for 240-17796-2

Detected Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW6020/NONE	SO	076SS-0007M-0001-SO	240-17796-10	N	Sodium	9.7	25.0	25.0	MG/KG	
SW6020/NONE	SO	076SS-0007M-0001-SO	240-17796-10	N	Nickel	0.097	16.0	16.0	MG/KG	
SW6020/NONE	SO	076SS-0007M-0001-SO	240-17796-10	N	Lead	0.097	20.0	20.0	MG/KG	
SW6020/NONE	SO	076SS-0007M-0001-SO	240-17796-10	N	Antimony	0.19	0.12	0.12 J	MG/KG	TR
SW6020/NONE	SO	076SS-0007M-0001-SO	240-17796-10	N	Selenium	0.49	0.50	0.50	MG/KG	
SW6020/NONE	SO	076SS-0007M-0001-SO	240-17796-10	N	Thallium	0.097	0.12	0.12	MG/KG	
SW6020/NONE	SO	076SS-0007M-0001-SO	240-17796-10	N	Vanadium	0.097	16.0	16.0	MG/KG	
SW6020/NONE	SO	076SS-0007M-0001-SO	240-17796-10	N	Zinc	0.49	52.0	52.0	MG/KG	
SW6020/NONE	SO	076SS-0022M-0001-SO	240-17796-2	N	Silver	0.098	0.026	0.026 J	MG/KG	TR
SW6020/NONE	SO	076SS-0022M-0001-SO	240-17796-2	N	Aluminum	2.9	8400	8400	MG/KG	
SW6020/NONE	SO	076SS-0022M-0001-SO	240-17796-2	N	Arsenic	0.098	11.0	11.0	MG/KG	
SW6020/NONE	SO	076SS-0022M-0001-SO	240-17796-2	N	Barium	0.98	51.0	51.0	MG/KG	
SW6020/NONE	SO	076SS-0022M-0001-SO	240-17796-2	N	Beryllium	0.098	0.51	0.51	MG/KG	
SW6020/NONE	SO	076SS-0022M-0001-SO	240-17796-2	N	Calcium	9.8	4300	4300	MG/KG	
SW6020/NONE	SO	076SS-0022M-0001-SO	240-17796-2	N	Cadmium	0.098	0.13	0.13	MG/KG	
SW6020/NONE	SO	076SS-0022M-0001-SO	240-17796-2	N	Cobalt	0.049	8.2	8.2	MG/KG	
SW6020/NONE	SO	076SS-0022M-0001-SO	240-17796-2	N	Chromium	0.20	17.0	17.0	MG/KG	
SW6020/NONE	SO	076SS-0022M-0001-SO	240-17796-2	N	Copper	0.20	13.0	13.0	MG/KG	
SW6020/NONE	SO	076SS-0022M-0001-SO	240-17796-2	N	Iron	4.9	22000	22000	MG/KG	
SW6020/NONE	SO	076SS-0022M-0001-SO	240-17796-2	N	Potassium	9.8	800	800	MG/KG	
SW6020/NONE	SO	076SS-0022M-0001-SO	240-17796-2	N	Magnesium	9.8	2200	2200	MG/KG	
SW6020/NONE	SO	076SS-0022M-0001-SO	240-17796-2	N	Manganese	0.49	400	400	MG/KG	
SW6020/NONE	SO	076SS-0022M-0001-SO	240-17796-2	N	Sodium	9.8	44.0	44.0	MG/KG	
SW6020/NONE	SO	076SS-0022M-0001-SO	240-17796-2	N	Nickel	0.098	17.0	17.0	MG/KG	
SW6020/NONE	SO	076SS-0022M-0001-SO	240-17796-2	N	Lead	0.098	13.0	13.0	MG/KG	
SW6020/NONE	SO	076SS-0022M-0001-SO	240-17796-2	N	Antimony	0.20	0.10	0.10 J	MG/KG	TR
SW6020/NONE	SO	076SS-0022M-0001-SO	240-17796-2	N	Selenium	0.49	0.56	0.56	MG/KG	
SW6020/NONE	SO	076SS-0022M-0001-SO	240-17796-2	N	Thallium	0.098	0.14	0.14	MG/KG	

AUTOMATED DATA REVIEW SUMMARY for 240-17796-2

Detected Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW6020/NONE	SO	076SS-0022M-0001-SO	240-17796-2	N	Vanadium	0.098	16.0	16.0	MG/KG	
SW6020/NONE	SO	076SS-0022M-0001-SO	240-17796-2	N	Zinc	0.49	40.0	40.0	MG/KG	

AUTOMATED DATA REVIEW SUMMARY for 240-17796-2

Rejected Results

--No Records Found--

Anomalies Count

--No Records Found--

Reporting Anomalies

--No Records Found--

Worksheet

SDG Name: 240-17796-2

Method: SW6020

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?				
Were samples preserved properly and received in good condition?				
Were holding times met?				
Were sample reciept temperatures met?				
Were QAPP specified RLs achieved?				
Were all QAPP specified target analytes reported?				
Was the initial calibration curve within QAPP acceptance limits?			•	Not Required
Were the ICV/CCVs analyzed (frequency) as required in the QAPP?			•	Not Required
Were ICV/CCV results within QAPP acceptance limits?			•	Not Required

AUTOMATED DATA REVIEW SUMMARY for 240-17796-2

Method: SW6020

Review Questions	Yes	No	NA	Comment
Were the ICB/CCBs analyzed (frequency) as required in the QAPP?			•	Not Required
Was a method blank prepared and analyzed with each batch?				
Were target analytes detected in the ICB/CCB/method blank?			•	Not Required
Was a field blank collected and analyzed?				
Were target analytes reported in the field blank analyses above the MDL?				
Was an Interference Check Standard (ICS) run at the beginning and end of every run?			•	Not Required
Was the ICS recovery within QAPP acceptance limits?			•	Not Required
If a field duplicate was analyzed, were the RPDs within criteria?				
Was a LCS prepared and analyzed with each batch?				
Were the LCS recoveries within QAPP acceptance limits?				
Was a MS/MSD pair prepared with each batch?				
Is the MS/MSD parent sample the one designated by the sampling team?				
Were the MS/MSD within QAPP acceptance limits?				
Was a serial dilution prepared and analyzed with each batch?			•	Not Required
Was the serial dilution within QAPP acceptance limits?			•	Not Required
Were sample concentrations within calibration range?				
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?				
Are all samples associated with QC non-compliances flagged appropriately?				
Are the Qualified, Detected, and Rejected tables of the ADR report in agreement?				

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WORKSHEET 7

Automated Data Review Summary for 240-18703-1

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AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Facility: Ravenna Army Ammunition Plant

Event: Fall 2012 SI/RI Sampling

Guidance Document: Ravenna Army Ammunition Plant, Quality Assurance Project Plan, Oct. 3, 2012

Contract Laboratory: TestAmerica, Inc., North Canton, OH

Field Contractor: Environmental Chemical Corporation, Otis Ang Base, MA

Data Review Contractor: ECC

SDG: 240-18703-1_(72-SB_76-TB), Certified - 1/10/2013 by frederickroche

QC Level: ADR

Project Manager:

Data Reviewer:

Data Reviewer Title:

Date of Review Report:

Samples Included in SDG 240-18703-1_(72-SB_76-TB)

Analytical Method/ Leach Method	Normal Soil Samples	Normal Water Samples	Field QC Soil Samples	Field QC Water Samples
E353.2/NONE	1	1	1	0
M8015D/NONE	13	1	4	0
M8015V/NONE	13	6	4	0
SW6020/NONE	13	1	4	0
SW7470A/NONE		1		0
SW7471A/NONE	13		4	
SW8081/NONE	1	1	1	0

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Analytical Method/ Leach Method	Normal Soil Samples	Normal Water Samples	Field QC Soil Samples	Field QC Water Samples
SW8082/NONE	1	1	1	0
SW8151/NONE	5	1	1	0
SW8260B/NONE	13	6	4	0
SW8270C/NONE	13	1	4	0
SW8330B/NONE	1	1	1	0

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

This report assesses the analytical data quality associated with the analyses listed on the preceding cover page. This assessment has been made through a combination of automated data review (ADR) and supplemental manual review, the details of which are described below. The approach taken in the review of this data set is consistent with the requirements contained in the Ravenna Army Ammunition Plant, Quality Assurance Project Plan, Oct. 3, 2012 to the extent possible. Where definitive guidance is not provided, data has been evaluated in a conservative manner using professional judgment. In cases where two qualifiers are listed as an action, such as 'J/UJ', the first qualifier applies to positive results, and the second to non-detect results.

Samples were collected by Environmental Chemical Corporation, Otis Ang Base, MA; analyses were performed by TestAmerica, Inc., North Canton, OH and were reported under sample delivery group (SDG) 240-18703-1_(72-SB_76-TB). Results have been evaluated electronically using electronic data deliverables (EDDs) provided by the laboratory. The laboratory data summary forms (hard copy) have been reviewed during this effort and compared to the automated review output. Findings based on the automated data submission and manual data verification processes are detailed in the ADR narrative.

The following quality control elements were supported by the electronic deliverable and were evaluated during this review effort:

- Blank
- Blank - Negative
- Field Duplicate RPD
- Lab Replicate RPD
- LCS Recovery
- LCS RPD
- MS Recovery
- MS RPD
- Prep Hold Time
- Surrogate
- Test Hold Time

The following quality control elements were either not applicable to the deliverable, or were not supported by the electronic deliverable, and were therefore not included in the automated data review. Those elements required for the project were reviewed manually, as narrated in the Comment section below.

- Ambient Blank
- Calibration Blank
- Calibration Blank - Negative

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Continuing Calibration Verification

Equipment Blank

Field Blank

Initial Calibration Verification

Material Blank

Trip Blank

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

A representative sampling or ten percent of sample and QC results were manually evaluated for compliance with project specific requirements and consistency with hard copy results. The following summaries were generated during the evaluation of this data set and are included in this report as applicable.

Batch – The analytical batch report is reviewed for completeness and compliance with project specific requirements. Incomplete or non-compliant run sequences are identified and their impact on data quality are discussed in the narrative.

QC Outlier – Results exceeding the evaluation criteria are reviewed for compliance with project requirements and a minimum of ten percent of the non-compliant QC values reported electronically are verified for consistency with hard-copy values.

Qualified Results – Qualified results are evaluated for compliance with project requirements and ten percent of qualified results are verified for consistency with the QC Outliers.

Rejected Results – All rejected results are evaluated for compliance with project requirements. The reason for rejection of the data is verified against hard copy data.

Field Duplicates – Field duplicate comparison results are evaluated for compliance with project requirements and ten percent of values reported are verified for consistency with the hard-copy data.

Data Submission Warnings – Warnings encountered during the data submission process are evaluated and their affect on data quality is discussed in the narrative below.

Analytical deficiencies, project non-compliance issues and inconsistencies with hard copy results observed during ADR evaluation process and their impact on data quality are summarized in the narrative below.

A total of 182 results (8.30%) out of the 2192 results (sample and field QC samples) reported are qualified based on review and 16 results (0.73%) have been rejected. Trace values are not counted as qualified results in the above count. The qualified results are detailed in the following tables and discussed in the narrative below, where appropriate.

Narrative Comments

Analytical Method	Comment
E353.2	
M8015D	

M8015V	
SW6020	
SW7470A	
SW7471A	
SW8081	
SW8082	
SW8151	
SW8260B	
SW8270C	
SW8330B	

Reviewed by ,

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Reason and Comment Code Definitions

Reasons	
Code	**Definition**
A	Serial dilution
A1	Ambient Blank
B	The analyte was found in an associated blank as well as in the sample.
B2	CCB
B3	CCB - Neg
c	LCS - low
C	LCS Recovery
d	Field Duplicate RPD
D	MS RPD
D1	Lab Replicate RPD
D2	No precision available
F	Field Blank
F1	Hydrocarbon pattern does not match standard
G1	Initial Calibration RRF
G2	Initial Calibration RSD
h	Holding time exceeded by less than 2X.
H	Holding time exceeded by more than 2X.
H1	Test Hold Time
H2	Prep Hold Time
I	Surrogate recovery outside project limits.
J	CRA/CRI Recovery
K	An analyte (non-common laboratory artifact) was detected in the sample at a concentration less than 5X the concentration detected in the associated method blank.
L	Lab Blank
L1	Lab Blank - Neg
m	MS - low
M	MS Recovery
N	Blank - No Action

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Reason and Comment Code Definitions

O	ICS
P	Sample preservation/collection requirement not met.
P1	Column RPD
P2	Improper preparation/extraction
q	Encore sample holding time exceeded by less than 2X.
Q	Encore sample holding time exceeded by more than 2X.
Q1	Material Blank
R	Exceeds LinearCalibration Range
S	Internal standard
T	Trip Blank
TI	Tentatively Identified Compound
TR	Trace Level Detect
U	Receipt Temperature
V	Equipment Blank
V1	ICV
V2	CCV
V3	CCV RRF
V4	Sample Receipt Condition
W	Column breakdown (pesticides)
X	Raised reporting limit
Y	Cooler temperature greater than 10 degreec C.
y	Cooler temperature greater than 4 degrees C, but less than 10 degreec C.
Y1	False Positive
Y2	Data rejected due to radiological anomolies
Z	LCS RPD
Z2	Analyte not confirmed on second column
Z3	High percent moisture in sample.

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Flag Code and Definitions	
Flag	Definition
U	Undetected: The analyte was analyzed for, but not detected.
UJ	The analyte was not detected; however, the result is estimated due to discrepancies in meeting certain analyte-specific quality control criteria.
J	Estimated: The analyte was positively identified, the quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
R	The data are rejected due to deficiencies in meeting QC criteria and may not be used for decision making.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification".
NJ	The analysis indicates the presence of an analyte that has been “tentatively identified” and the associated numerical value represents its approximate concentration.

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Batch Report

Test Method: E353.2; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
8137	7638	NA	LABQC	SQ	LABQC	MB 320-7571/1-B		1/1	20-Dec-2012 8:01 AM	20-Dec-2012 8:01 AM	20-Dec-2012 12:16 PM	LB
	7638	NA	LABQC	SQ	LABQC	LCS 320-7571/2-B		1/1	20-Dec-2012 8:01 AM	20-Dec-2012 8:01 AM	20-Dec-2012 12:18 PM	BS
	7638	NA	72-2F11-R41-SB1	SO	072SB-0082-0001-SO	240-18703-8		1/1	10-Dec-2012 10:45 AM	20-Dec-2012 8:01 AM	20-Dec-2012 1:16 PM	FD
	7638	NA	72-FS-01-SB1	SO	072SB-0075-0001-SO	240-18703-18		1/1	10-Dec-2012 1:45 PM	20-Dec-2012 8:01 AM	20-Dec-2012 1:18 PM	N
8009	7878	NA	LABQC	WQ	LABQC	MB 320-7816/1-B		1/1	27-Dec-2012 6:07 AM	27-Dec-2012 6:07 AM	27-Dec-2012 1:33 PM	LB
	7878	NA	LABQC	WQ	LABQC	LCS 320-7816/2-B		1/1	27-Dec-2012 6:07 AM	27-Dec-2012 6:07 AM	27-Dec-2012 1:35 PM	BS
	7878	NA	76-A1-UST-SB2	WG	076-0140-0001-ER	240-18703-24		1/1	11-Dec-2012 10:30 AM	27-Dec-2012 6:07 AM	27-Dec-2012 1:37 PM	N
	7878	NA	76-A1-UST-SB2	WG	076-0140-0001-ER	240-18703-24		1/1	11-Dec-2012 10:30 AM	27-Dec-2012 6:07 AM	27-Dec-2012 1:39 PM	MS
	7878	NA	76-A1-UST-SB2	WG	076-0140-0001-ER	240-18703-24		1/1	11-Dec-2012 10:30 AM	27-Dec-2012 6:07 AM	27-Dec-2012 1:41 PM	SD

Test Method: M8015D; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
68949	68549	NA	LABQC	WQ	LABQC	MB 240-68549/15-A		1/1	13-Dec-2012 11:26 AM	13-Dec-2012 11:26 AM	17-Dec-2012 2:33 PM	LB
	68549	NA	LABQC	WQ	LABQC	LCS 240-68549/16-A		1/1	13-Dec-2012 11:26 AM	13-Dec-2012 11:26 AM	17-Dec-2012 3:03 PM	BS
	68549	NA	76-A1-UST-SB2	WG	076-0140-0001-ER	240-18703-24		1/1	11-Dec-2012 10:30 AM	13-Dec-2012 11:26 AM	17-Dec-2012 3:34 PM	N
70006	69559	NA	LABQC	SQ	LABQC	MB 240-69559/17-A		1/1	20-Dec-2012 9:27 AM	20-Dec-2012 9:27 AM	24-Dec-2012 4:32 PM	LB
	69559	NA	LABQC	SQ	LABQC	LCS 240-69559/18-A		1/1	20-Dec-2012 9:27 AM	20-Dec-2012 9:27 AM	24-Dec-2012 5:11 PM	BS
	69559	NA	72-2F11-R41-SB5	SO	072SB-0092-0001-SO	240-18703-1		1/1	10-Dec-2012 12:37 PM	20-Dec-2012 9:27 AM	24-Dec-2012 6:29 PM	N
	69559	NA	72-2F11-R41-SB1	SO	072SB-0082-0001-SO	240-18703-8		1/1	10-Dec-2012 10:45 AM	20-Dec-2012 9:27 AM	24-Dec-2012 7:08 PM	FD

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Batch Report

Test Method: M8015D; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
70006	69559	NA	72-2F11-R41-SB1	SO	072SB-0082-0001-SO	240-18703-8		1/1	10-Dec-2012 10:45 AM	20-Dec-2012 9:27 AM	24-Dec-2012 7:47 PM	MS
	69559	NA	72-2F11-R41-SB1	SO	072SB-0082-0001-SO	240-18703-8		1/1	10-Dec-2012 10:45 AM	20-Dec-2012 9:27 AM	24-Dec-2012 8:26 PM	SD
	69559	NA	72-2F11-R41-SB2	SO	072SB-0083-0001-SO	240-18703-9		1/1	10-Dec-2012 11:15 AM	20-Dec-2012 9:27 AM	24-Dec-2012 9:05 PM	N
	69559	NA	72-2F11-R41-SB3	SO	072SB-0084-0001-SO	240-18703-10		1/1	10-Dec-2012 11:30 AM	20-Dec-2012 9:27 AM	24-Dec-2012 9:44 PM	N
	69559	NA	72-2F11-R41-SB4	SO	072SB-0085-0001-SO	240-18703-11		1/1	10-Dec-2012 12:05 PM	20-Dec-2012 9:27 AM	24-Dec-2012 10:23 PM	N
	69559	NA	72-2F11-R41-SB4	SO	072SB-0086-0001-SO	240-18703-12		1/1	10-Dec-2012 12:05 PM	20-Dec-2012 9:27 AM	24-Dec-2012 11:41 PM	FD
	69559	NA	72-WTP-06-SB1	SO	072SB-0087-0001-SO	240-18703-13		1/1	10-Dec-2012 9:10 AM	20-Dec-2012 9:27 AM	25-Dec-2012 12:20 AM	N
	69794	NA	LABQC	SQ	LABQC	MB 240-69794/6-A		1/1	21-Dec-2012 11:38 AM	21-Dec-2012 11:38 AM	25-Dec-2012 1:37 AM	LB
	69794	NA	LABQC	SQ	LABQC	LCS 240-69794/7-A		1/1	21-Dec-2012 11:38 AM	21-Dec-2012 11:38 AM	25-Dec-2012 2:16 AM	BS
	69794	NA	72-WTP-06-SB2	SO	072SB-0088-0001-SO	240-18703-14		1/1	10-Dec-2012 9:30 AM	21-Dec-2012 11:38 AM	25-Dec-2012 4:51 AM	N
	69794	NA	72-WTP-06-SB3	SO	072SB-0089-0001-SO	240-18703-15		1/1	10-Dec-2012 9:40 AM	21-Dec-2012 11:38 AM	25-Dec-2012 5:30 AM	N
70185	69985	NA	LABQC	SQ	LABQC	MB 240-69985/23-A		1/1	24-Dec-2012 9:40 AM	24-Dec-2012 9:40 AM	27-Dec-2012 1:44 PM	LB
	69985	NA	LABQC	SQ	LABQC	LCS 240-69985/24-A		1/1	24-Dec-2012 9:40 AM	24-Dec-2012 9:40 AM	27-Dec-2012 2:14 PM	BS
	69985	NA	72-WTP-06-SB4	SO	072SB-0090-0001-SO	240-18703-16		1/1	10-Dec-2012 9:55 AM	24-Dec-2012 9:40 AM	27-Dec-2012 2:45 PM	N
	69985	NA	72-2F11-R41-SB5	SO	072SB-0091-0001-SO	240-18703-17		1/1	10-Dec-2012 12:25 PM	24-Dec-2012 9:40 AM	27-Dec-2012 3:15 PM	N
	69985	NA	72-FS-01-SB1	SO	072SB-0075-0001-SO	240-18703-18		1/1	10-Dec-2012 1:45 PM	24-Dec-2012 9:40 AM	27-Dec-2012 3:45 PM	N
	69985	NA	72-FS-01-SB2	SO	072SB-0076-0001-SO	240-18703-19		1/1	10-Dec-2012 2:00 PM	24-Dec-2012 9:40 AM	27-Dec-2012 4:15 PM	N
	69985	NA	72-FS-01-SB2	SO	072SB-0077-0001-SO	240-18703-20		1/1	10-Dec-2012 2:00 PM	24-Dec-2012 9:40 AM	27-Dec-2012 4:45 PM	FD

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Batch Report

Test Method: M8015D; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
70185	69985	NA	72-FS-01-SB3	SO	072SB-0079-0001-SO	240-18703-21		1/1	10-Dec-2012 2:20 PM	24-Dec-2012 9:40 AM	27-Dec-2012 5:16 PM	N
	69985	NA	72-FS-01-SB4	SO	072SB-0080-0001-SO	240-18703-22		1/1	10-Dec-2012 3:16 PM	24-Dec-2012 9:40 AM	27-Dec-2012 5:46 PM	FD
	69985	NA	72-FS-01-SB5	SO	072SB-0081-0001-SO	240-18703-23		1/1	10-Dec-2012 2:50 PM	24-Dec-2012 9:40 AM	27-Dec-2012 6:17 PM	N

Test Method: M8015V; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
69738	NA	NA	LABQC	SQ	LABQC	MB 240-69738/52		1/1	22-Dec-2012 6:53 PM		22-Dec-2012 6:53 PM	LB
	NA	NA	LABQC	SQ	LABQC	LCS 240-69738/53		1/1	22-Dec-2012 7:32 PM		22-Dec-2012 7:32 PM	BS
	69885	NA	72-2F11-R41-SB5	SO	072SB-0092-0001-SO	240-18703-1		1/1	10-Dec-2012 12:37 PM	11-Dec-2012 6:35 PM	22-Dec-2012 8:11 PM	N
	69885	NA	72-2F11-R41-SB2	SO	072SB-0083-0001-SO	240-18703-9		1/1	10-Dec-2012 11:15 AM	11-Dec-2012 6:35 PM	22-Dec-2012 8:49 PM	N
	69885	NA	72-2F11-R41-SB3	SO	072SB-0084-0001-SO	240-18703-10		1/1	10-Dec-2012 11:30 AM	11-Dec-2012 6:35 PM	22-Dec-2012 9:27 PM	N
	69885	NA	72-2F11-R41-SB4	SO	072SB-0085-0001-SO	240-18703-11		1/1	10-Dec-2012 12:05 PM	11-Dec-2012 6:35 PM	22-Dec-2012 10:06 PM	N
	69885	NA	72-2F11-R41-SB4	SO	072SB-0086-0001-SO	240-18703-12		1/1	10-Dec-2012 12:05 PM	11-Dec-2012 6:35 PM	22-Dec-2012 10:44 PM	FD
	69885	NA	72-WTP-06-SB1	SO	072SB-0087-0001-SO	240-18703-13		1/1	10-Dec-2012 9:10 AM	11-Dec-2012 6:35 PM	22-Dec-2012 11:22 PM	N
	69885	NA	72-WTP-06-SB2	SO	072SB-0088-0001-SO	240-18703-14		1/1	10-Dec-2012 9:30 AM	11-Dec-2012 6:35 PM	23-Dec-2012 12:00 AM	N
	69885	NA	72-WTP-06-SB3	SO	072SB-0089-0001-SO	240-18703-15		1/1	10-Dec-2012 9:40 AM	11-Dec-2012 6:35 PM	23-Dec-2012 1:16 AM	N
	69885	NA	72-WTP-06-SB4	SO	072SB-0090-0001-SO	240-18703-16		1/1	10-Dec-2012 9:55 AM	11-Dec-2012 6:35 PM	23-Dec-2012 1:54 AM	N
	69885	NA	72-2F11-R41-SB5	SO	072SB-0091-0001-SO	240-18703-17		1/1	10-Dec-2012 12:25 PM	11-Dec-2012 6:35 PM	23-Dec-2012 2:31 AM	N
	69885	NA	72-FS-01-SB1	SO	072SB-0075-0001-SO	240-18703-18		1/1	10-Dec-2012 1:45 PM	11-Dec-2012 6:35 PM	23-Dec-2012 3:09 AM	N

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Batch Report

Test Method: M8015V; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
69738	69885	NA	72-FS-01-SB2	SO	072SB-0076-0001-SO	240-18703-19		1/1	10-Dec-2012 2:00 PM	11-Dec-2012 6:35 PM	23-Dec-2012 3:47 AM	N
	69885	NA	72-FS-01-SB2	SO	072SB-0077-0001-SO	240-18703-20		1/1	10-Dec-2012 2:00 PM	11-Dec-2012 6:35 PM	23-Dec-2012 4:24 AM	FD
	69885	NA	72-FS-01-SB3	SO	072SB-0079-0001-SO	240-18703-21		1/1	10-Dec-2012 2:20 PM	11-Dec-2012 6:35 PM	23-Dec-2012 5:02 AM	N
	69885	NA	72-FS-01-SB4	SO	072SB-0080-0001-SO	240-18703-22		1/1	10-Dec-2012 3:16 PM	11-Dec-2012 6:35 PM	23-Dec-2012 5:39 AM	FD
	69885	NA	72-FS-01-SB5	SO	072SB-0081-0001-SO	240-18703-23		1/1	10-Dec-2012 2:50 PM	11-Dec-2012 6:35 PM	23-Dec-2012 6:17 AM	N
69965	69748	NA	LABQC	SQ	LABQC	MB 240-69748/1-A		1/1	21-Dec-2012 9:33 AM	21-Dec-2012 9:33 AM	24-Dec-2012 11:04 AM	LB
	69748	NA	LABQC	SQ	LABQC	LCS 240-69748/2-A		1/1	21-Dec-2012 9:33 AM	21-Dec-2012 9:33 AM	24-Dec-2012 11:43 AM	BS
	69748	NA	72-2F11-R41-SB1	SO	072SB-0082-0001-SO	240-18703-8		1/2	10-Dec-2012 10:45 AM	21-Dec-2012 9:33 AM	24-Dec-2012 12:21 PM	FD
	69748	NA	72-FS-01-SB2	SO	072SB-0077-0001-SO	240-18703-20		2/1	10-Dec-2012 2:00 PM	21-Dec-2012 9:33 AM	24-Dec-2012 1:36 PM	FD
	69748	NA	72-FS-01-SB4	SO	072SB-0080-0001-SO	240-18703-22		2/1	10-Dec-2012 3:16 PM	21-Dec-2012 9:33 AM	24-Dec-2012 2:51 PM	FD
70834	69748	NA	72-2F11-R41-SB1	SO	072SB-0082-0001-SO	240-18703-8		2/2	10-Dec-2012 10:45 AM	21-Dec-2012 9:33 AM	03-Jan-2013 4:56 AM	FD
69738	69738	NA	LABQC	WQ	LABQC	MB 240-69738/36		1/1	22-Dec-2012 8:46 AM	22-Dec-2012 8:46 AM	22-Dec-2012 8:46 AM	LB
	69738	NA	LABQC	WQ	LABQC	LCS 240-69738/37		1/1	22-Dec-2012 9:24 AM	22-Dec-2012 9:24 AM	22-Dec-2012 9:24 AM	BS
	69738	NA	76-U3-UST-SB4	WG	076SB-0143-0001-TB	240-18703-5		1/1	11-Dec-2012 8:00 AM	22-Dec-2012 10:01 AM	22-Dec-2012 10:01 AM	N
	69738	NA	76-U3-UST-SB5	WG	076SB-0144-0001-TB	240-18703-6		1/1	11-Dec-2012 8:00 AM	22-Dec-2012 10:39 AM	22-Dec-2012 10:39 AM	N
	69738	NA	76-U3-UST-SB6	WG	076SB-0145-0001-TB	240-18703-7		1/1	11-Dec-2012 8:00 AM	22-Dec-2012 11:16 AM	22-Dec-2012 11:16 AM	N
	69738	NA	76-A1-UST-SB2	WG	076-0140-0001-ER	240-18703-24		1/1	11-Dec-2012 10:30 AM	22-Dec-2012 11:54 AM	22-Dec-2012 11:54 AM	N
	69738	NA	76-A1-UST-SB2	WG	076-0140-0001-ER	240-18703-24		1/1	11-Dec-2012 10:30 AM	22-Dec-2012 12:32 PM	22-Dec-2012 12:32 PM	MS

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Batch Report

Test Method: M8015V; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
69738	69738	NA	76-A1-UST-SB2	WG	076-0140-0001-ER	240-18703-24		1/1	11-Dec-2012 10:30 AM	22-Dec-2012 1:10 PM	22-Dec-2012 1:10 PM	SD
	69738	NA	76-A1-UST-SB3	WG	076-0141-0001-TB	240-18703-25		1/1	11-Dec-2012 8:00 AM	22-Dec-2012 1:47 PM	22-Dec-2012 1:47 PM	N
	69738	NA	76-A6-UST-SB13	WG	076-0142-0001-TB	240-18703-26		1/1	11-Dec-2012 8:00 AM	22-Dec-2012 3:02 PM	22-Dec-2012 3:02 PM	N

Test Method: SW6020; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
59694	59183	NA	LABQC	SQ	LABQC	MB 180-59183/1-A		1/1	17-Dec-2012 12:42 PM	17-Dec-2012 12:42 PM	28-Dec-2012 11:33 PM	LB
	59183	NA	LABQC	SQ	LABQC	LCS 180-59183/2-A		1/1	17-Dec-2012 12:42 PM	17-Dec-2012 12:42 PM	28-Dec-2012 11:37 PM	BS
	59183	NA	72-2F11-R41-SB5	SO	072SB-0092-0001-SO	240-18703-1		1/1	10-Dec-2012 12:37 PM	17-Dec-2012 12:42 PM	29-Dec-2012 1:51 AM	N
	59308	NA	LABQC	WQ	LABQC	MB 180-59308/1-A		1/1	24-Dec-2012 10:24 AM	24-Dec-2012 10:24 AM	29-Dec-2012 3:45 AM	LB
	59308	NA	LABQC	WQ	LABQC	LCS 180-59308/2-A		1/1	24-Dec-2012 10:24 AM	24-Dec-2012 10:24 AM	29-Dec-2012 3:50 AM	BS
	59308	NA	LABQC	WQ	LABQC	LCSD 180-59308/3-A		1/1	24-Dec-2012 10:24 AM	24-Dec-2012 10:24 AM	29-Dec-2012 3:54 AM	BD
	59308	NA	76-A1-UST-SB2	WG	076-0140-0001-ER	240-18703-24		1/1	11-Dec-2012 10:30 AM	24-Dec-2012 10:24 AM	29-Dec-2012 3:58 AM	N
59733	59442	NA	LABQC	SQ	LABQC	MB 180-59442/1-A		1/1	27-Dec-2012 7:50 AM	27-Dec-2012 7:50 AM	29-Dec-2012 5:29 PM	LB
	59442	NA	LABQC	SQ	LABQC	LCS 180-59442/2-A		1/1	27-Dec-2012 7:50 AM	27-Dec-2012 7:50 AM	29-Dec-2012 5:33 PM	BS
	59442	NA	72-2F11-R41-SB1	SO	072SB-0082-0001-SO	240-18703-8		1/1	10-Dec-2012 10:45 AM	27-Dec-2012 7:50 AM	29-Dec-2012 5:38 PM	FD
	59442	NA	72-2F11-R41-SB2	SO	072SB-0083-0001-SO	240-18703-9		1/1	10-Dec-2012 11:15 AM	27-Dec-2012 7:50 AM	29-Dec-2012 5:42 PM	N
	59442	NA	72-2F11-R41-SB2	SO	072SB-0083-0002-SO	240-18703-9		1/1	10-Dec-2012 11:15 AM	27-Dec-2012 7:50 AM	29-Dec-2012 5:51 PM	MS
	59442	NA	72-2F11-R41-SB2	SO	072SB-0083-0002-SO	240-18703-9		1/1	10-Dec-2012 11:15 AM	27-Dec-2012 7:50 AM	29-Dec-2012 5:55 PM	SD

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Batch Report

Test Method: SW6020; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
59733	59442	NA	72-2F11-R41-SB3	SO	072SB-0084-0001-SO	240-18703-10		1/1	10-Dec-2012 11:30 AM	27-Dec-2012 7:50 AM	29-Dec-2012 6:03 PM	N
	59442	NA	72-2F11-R41-SB4	SO	072SB-0085-0001-SO	240-18703-11		1/1	10-Dec-2012 12:05 PM	27-Dec-2012 7:50 AM	29-Dec-2012 6:08 PM	N
	59442	NA	72-2F11-R41-SB4	SO	072SB-0086-0001-SO	240-18703-12		1/1	10-Dec-2012 12:05 PM	27-Dec-2012 7:50 AM	29-Dec-2012 6:27 PM	FD
	59442	NA	72-WTP-06-SB1	SO	072SB-0087-0001-SO	240-18703-13		1/1	10-Dec-2012 9:10 AM	27-Dec-2012 7:50 AM	29-Dec-2012 6:32 PM	N
	59442	NA	72-WTP-06-SB2	SO	072SB-0088-0001-SO	240-18703-14		1/1	10-Dec-2012 9:30 AM	27-Dec-2012 7:50 AM	29-Dec-2012 6:36 PM	N
	59442	NA	72-WTP-06-SB3	SO	072SB-0089-0001-SO	240-18703-15		1/1	10-Dec-2012 9:40 AM	27-Dec-2012 7:50 AM	29-Dec-2012 6:40 PM	N
	59442	NA	72-WTP-06-SB4	SO	072SB-0090-0001-SO	240-18703-16		1/1	10-Dec-2012 9:55 AM	27-Dec-2012 7:50 AM	29-Dec-2012 6:44 PM	N
	59442	NA	72-2F11-R41-SB5	SO	072SB-0091-0001-SO	240-18703-17		1/1	10-Dec-2012 12:25 PM	27-Dec-2012 7:50 AM	29-Dec-2012 6:49 PM	N
	59442	NA	72-FS-01-SB1	SO	072SB-0075-0001-SO	240-18703-18		1/1	10-Dec-2012 1:45 PM	27-Dec-2012 7:50 AM	29-Dec-2012 6:53 PM	N
	59442	NA	72-FS-01-SB2	SO	072SB-0076-0001-SO	240-18703-19		1/1	10-Dec-2012 2:00 PM	27-Dec-2012 7:50 AM	29-Dec-2012 6:57 PM	N
	59442	NA	72-FS-01-SB2	SO	072SB-0077-0001-SO	240-18703-20		1/1	10-Dec-2012 2:00 PM	27-Dec-2012 7:50 AM	29-Dec-2012 7:02 PM	FD
	59442	NA	72-FS-01-SB3	SO	072SB-0079-0001-SO	240-18703-21		1/1	10-Dec-2012 2:20 PM	27-Dec-2012 7:50 AM	29-Dec-2012 7:06 PM	N
	59442	NA	72-FS-01-SB4	SO	072SB-0080-0001-SO	240-18703-22		1/1	10-Dec-2012 3:16 PM	27-Dec-2012 7:50 AM	29-Dec-2012 7:26 PM	FD
	59442	NA	72-FS-01-SB5	SO	072SB-0081-0001-SO	240-18703-23		1/1	10-Dec-2012 2:50 PM	27-Dec-2012 7:50 AM	29-Dec-2012 7:30 PM	N

Test Method: SW7470A; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
70694	70255	NA	LABQC	WQ	LABQC	MB 240-70255/1-A		1/1	27-Dec-2012 4:00 PM	27-Dec-2012 4:00 PM	29-Dec-2012 11:59 AM	LB
	70255	NA	LABQC	WQ	LABQC	LCS 240-70255/2-A		1/1	27-Dec-2012 4:00 PM	27-Dec-2012 4:00 PM	29-Dec-2012 12:00 PM	BS

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Batch Report

Test Method: SW7470A; Leach Method: NONE												
Analytical Batch	**Prep Batch**	**Leach Batch**	**Location**	**Matrix**	**Field Sample ID**	**Lab Sample ID**	**Calibration Ref**	**Run#/ Dil'n**	**Collection Date/Time**	**Extract Date/Time**	**Analysis Date/Time**	**Sample Type**
70694	70255	NA	76-A1-UST-SB2	WG	076-0140-0001-ER	240-18703-24		1/1	11-Dec-2012 10:30 AM	27-Dec-2012 4:00 PM	29-Dec-2012 12:06 PM	N

Test Method: SW7471A; Leach Method: NONE												
Analytical Batch	**Prep Batch**	**Leach Batch**	**Location**	**Matrix**	**Field Sample ID**	**Lab Sample ID**	**Calibration Ref**	**Run#/ Dil'n**	**Collection Date/Time**	**Extract Date/Time**	**Analysis Date/Time**	**Sample Type**
69324	69021	NA	LABQC	SQ	LABQC	MB 240-69021/1-A		1/1	17-Dec-2012 3:15 PM	17-Dec-2012 3:15 PM	18-Dec-2012 11:17 AM	LB
	69021	NA	LABQC	SQ	LABQC	LCS 240-69021/2-A		1/1	17-Dec-2012 3:15 PM	17-Dec-2012 3:15 PM	18-Dec-2012 11:19 AM	BS
	69021	NA	72-2F11-R41-SB5	SO	072SB-0092-0001-SO	240-18703-1		1/1	10-Dec-2012 12:37 PM	17-Dec-2012 3:15 PM	18-Dec-2012 12:01 PM	N
70525	70273	NA	LABQC	SQ	LABQC	MB 240-70273/1-A		1/1	27-Dec-2012 3:25 PM	27-Dec-2012 3:25 PM	28-Dec-2012 4:34 PM	LB
	70273	NA	LABQC	SQ	LABQC	LCS 240-70273/2-A		1/1	27-Dec-2012 3:25 PM	27-Dec-2012 3:25 PM	28-Dec-2012 4:35 PM	BS
	70273	NA	72-2F11-R41-SB1	SO	072SB-0082-0001-SO	240-18703-8		1/1	10-Dec-2012 10:45 AM	27-Dec-2012 3:25 PM	28-Dec-2012 4:38 PM	FD
	70273	NA	72-2F11-R41-SB1	SO	072SB-0082-0001-SO	240-18703-8		1/1	10-Dec-2012 10:45 AM	27-Dec-2012 3:25 PM	28-Dec-2012 4:40 PM	LR
	70273	NA	72-2F11-R41-SB1	SO	072SB-0082-0001-SO	240-18703-8		1/1	10-Dec-2012 10:45 AM	27-Dec-2012 3:25 PM	28-Dec-2012 4:42 PM	MS
	70273	NA	72-FS-01-SB2	SO	072SB-0076-0001-SO	240-18703-19		1/1	10-Dec-2012 2:00 PM	27-Dec-2012 3:25 PM	28-Dec-2012 4:44 PM	N
	70273	NA	72-WTP-06-SB3	SO	072SB-0089-0001-SO	240-18703-15		1/1	10-Dec-2012 9:40 AM	27-Dec-2012 3:25 PM	28-Dec-2012 4:46 PM	N
	70273	NA	72-WTP-06-SB2	SO	072SB-0088-0001-SO	240-18703-14		1/1	10-Dec-2012 9:30 AM	27-Dec-2012 3:25 PM	28-Dec-2012 4:48 PM	N
	70273	NA	72-2F11-R41-SB5	SO	072SB-0091-0001-SO	240-18703-17		1/1	10-Dec-2012 12:25 PM	27-Dec-2012 3:25 PM	28-Dec-2012 4:50 PM	N
	70273	NA	72-FS-01-SB4	SO	072SB-0080-0001-SO	240-18703-22		1/1	10-Dec-2012 3:16 PM	27-Dec-2012 3:25 PM	28-Dec-2012 4:52 PM	FD
	70273	NA	72-2F11-R41-SB3	SO	072SB-0084-0001-SO	240-18703-10		1/1	10-Dec-2012 11:30 AM	27-Dec-2012 3:25 PM	28-Dec-2012 4:58 PM	N
	70273	NA	72-FS-01-SB3	SO	072SB-0079-0001-SO	240-18703-21		1/1	10-Dec-2012 2:20 PM	27-Dec-2012 3:25 PM	28-Dec-2012 5:00 PM	N

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Batch Report

Test Method: SW7471A; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
70525	70273	NA	72-FS-01-SB5	SO	072SB-0081-0001-SO	240-18703-23		1/1	10-Dec-2012 2:50 PM	27-Dec-2012 3:25 PM	28-Dec-2012 5:02 PM	N
	70273	NA	72-2F11-R41-SB4	SO	072SB-0085-0001-SO	240-18703-11		1/1	10-Dec-2012 12:05 PM	27-Dec-2012 3:25 PM	28-Dec-2012 5:04 PM	N
	70273	NA	72-WTP-06-SB4	SO	072SB-0090-0001-SO	240-18703-16		1/1	10-Dec-2012 9:55 AM	27-Dec-2012 3:25 PM	28-Dec-2012 5:06 PM	N
	70273	NA	72-FS-01-SB2	SO	072SB-0077-0001-SO	240-18703-20		1/1	10-Dec-2012 2:00 PM	27-Dec-2012 3:25 PM	28-Dec-2012 5:10 PM	FD
	70273	NA	72-2F11-R41-SB4	SO	072SB-0086-0001-SO	240-18703-12		1/1	10-Dec-2012 12:05 PM	27-Dec-2012 3:25 PM	28-Dec-2012 5:12 PM	FD
	70273	NA	72-2F11-R41-SB2	SO	072SB-0083-0001-SO	240-18703-9		1/1	10-Dec-2012 11:15 AM	27-Dec-2012 3:25 PM	28-Dec-2012 5:16 PM	N
	70273	NA	72-WTP-06-SB1	SO	072SB-0087-0001-SO	240-18703-13		1/1	10-Dec-2012 9:10 AM	27-Dec-2012 3:25 PM	28-Dec-2012 5:22 PM	N
	70273	NA	72-FS-01-SB1	SO	072SB-0075-0001-SO	240-18703-18		1/1	10-Dec-2012 1:45 PM	27-Dec-2012 3:25 PM	28-Dec-2012 5:24 PM	N

Test Method: SW8081; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
69152	68554	NA	LABQC	WQ	LABQC	LCS 240-68554/5-A		1/1	13-Dec-2012 11:40 AM	13-Dec-2012 11:40 AM	18-Dec-2012 12:18 PM	BS
	68554	NA	76-A1-UST-SB2	WG	076-0140-0001-ER	240-18703-24		1/1	11-Dec-2012 10:30 AM	13-Dec-2012 11:40 AM	18-Dec-2012 12:46 PM	N
	68554	NA	LABQC	WQ	LABQC	MB 240-68554/4-A		1/1	13-Dec-2012 11:40 AM	13-Dec-2012 11:40 AM	18-Dec-2012 2:09 PM	LB
69893	69596	NA	72-2F11-R41-SB1	SO	072SB-0082-0001-SO	240-18703-8		1/5	10-Dec-2012 10:45 AM	20-Dec-2012 11:14 AM	22-Dec-2012 10:07 PM	FD
	69596	NA	72-FS-01-SB1	SO	072SB-0075-0001-SO	240-18703-18		1/1	10-Dec-2012 1:45 PM	20-Dec-2012 11:14 AM	22-Dec-2012 10:31 PM	N
	69596	NA	LABQC	SQ	LABQC	MB 240-69596/9-A		1/1	20-Dec-2012 11:14 AM	20-Dec-2012 11:14 AM	23-Dec-2012 12:59 AM	LB
	69596	NA	LABQC	SQ	LABQC	LCS 240-69596/10-A		1/1	20-Dec-2012 11:14 AM	20-Dec-2012 11:14 AM	23-Dec-2012 1:23 AM	BS

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Batch Report

Test Method: SW8082; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
69119	68553	NA	76-A1-UST-SB2	WG	076-0140-0001-ER	240-18703-24		1/1	11-Dec-2012 10:30 AM	13-Dec-2012 11:37 AM	18-Dec-2012 8:56 AM	N
	68553	NA	LABQC	WQ	LABQC	MB 240-68553/4-A		1/1	13-Dec-2012 11:37 AM	13-Dec-2012 11:37 AM	18-Dec-2012 9:41 AM	LB
	68553	NA	LABQC	WQ	LABQC	LCS 240-68553/5-A		1/1	13-Dec-2012 11:37 AM	13-Dec-2012 11:37 AM	18-Dec-2012 9:56 AM	BS
69879	69585	NA	LABQC	SQ	LABQC	MB 240-69585/23-A		1/1	20-Dec-2012 10:35 AM	20-Dec-2012 10:35 AM	22-Dec-2012 6:30 AM	LB
69978	69585	NA	72-2F11-R41-SB1	SO	072SB-0082-0001-SO	240-18703-8		1/1	10-Dec-2012 10:45 AM	20-Dec-2012 10:35 AM	24-Dec-2012 1:20 PM	FD
	69585	NA	72-FS-01-SB1	SO	072SB-0075-0001-SO	240-18703-18		1/1	10-Dec-2012 1:45 PM	20-Dec-2012 10:35 AM	24-Dec-2012 1:35 PM	N
	69585	NA	LABQC	SQ	LABQC	LCS 240-69585/24-A		1/1	20-Dec-2012 10:35 AM	20-Dec-2012 10:35 AM	24-Dec-2012 2:07 PM	BS

Test Method: SW8151; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
68956	68522	NA	76-A1-UST-SB2	WG	076-0140-0001-ER	240-18703-24		1/1	11-Dec-2012 10:30 AM	13-Dec-2012 9:53 AM	17-Dec-2012 3:53 PM	N
	68522	NA	LABQC	WQ	LABQC	MB 240-68522/21-A		1/1	13-Dec-2012 9:53 AM	13-Dec-2012 9:53 AM	17-Dec-2012 4:16 PM	LB
	68522	NA	LABQC	WQ	LABQC	LCS 240-68522/22-A		1/1	13-Dec-2012 9:53 AM	13-Dec-2012 9:53 AM	17-Dec-2012 4:40 PM	BS
69890	69221	NA	72-FS-01-SB1	SO	072SB-0075-0001-SO	240-18703-18		1/1	10-Dec-2012 1:45 PM	18-Dec-2012 11:08 AM	22-Dec-2012 8:29 PM	N
	69221	NA	72-FS-01-SB2	SO	072SB-0076-0001-SO	240-18703-19		1/1	10-Dec-2012 2:00 PM	18-Dec-2012 11:08 AM	22-Dec-2012 8:53 PM	N
	69221	NA	72-FS-01-SB2	SO	072SB-0077-0001-SO	240-18703-20		1/1	10-Dec-2012 2:00 PM	18-Dec-2012 11:08 AM	22-Dec-2012 9:16 PM	FD
	69221	NA	72-FS-01-SB3	SO	072SB-0079-0001-SO	240-18703-21		1/1	10-Dec-2012 2:20 PM	18-Dec-2012 11:08 AM	22-Dec-2012 10:27 PM	N
	69221	NA	72-FS-01-SB4	SO	072SB-0080-0001-SO	240-18703-22		1/1	10-Dec-2012 3:16 PM	18-Dec-2012 11:08 AM	22-Dec-2012 10:50 PM	N
	69221	NA	72-FS-01-SB5	SO	072SB-0081-0001-SO	240-18703-23		1/1	10-Dec-2012 2:50 PM	18-Dec-2012 11:08 AM	22-Dec-2012 11:14 PM	N

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Batch Report

Test Method: SW8151; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
69890	69221	NA	LABQC	SQ	LABQC	MB 240-69221/23-A		1/1	18-Dec-2012 11:08 AM	18-Dec-2012 11:08 AM	23-Dec-2012 3:56 AM	LB
	69221	NA	LABQC	SQ	LABQC	LCS 240-69221/24-A		1/1	18-Dec-2012 11:08 AM	18-Dec-2012 11:08 AM	23-Dec-2012 4:19 AM	BS

Test Method: SW8260B; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
68905	NA	NA	LABQC	SQ	LABQC	LCS 240-68905/6		1/1	17-Dec-2012 12:47 AM		17-Dec-2012 12:47 AM	BS
	NA	NA	LABQC	SQ	LABQC	MB 240-68905/7		1/1	17-Dec-2012 1:09 AM		17-Dec-2012 1:09 AM	LB
69093	NA	NA	LABQC	SQ	LABQC	LCS 240-69093/7		1/1	18-Dec-2012 12:15 AM		18-Dec-2012 12:15 AM	BS
	NA	NA	LABQC	SQ	LABQC	MB 240-69093/8		1/1	18-Dec-2012 12:37 AM		18-Dec-2012 12:37 AM	LB
68905	68832	NA	72-FS-01-SB1	SO	072SB-0075-0001-SO	240-18703-18		1/1	10-Dec-2012 1:45 PM	11-Dec-2012 6:35 PM	17-Dec-2012 2:03 AM	N
	68832	NA	72-2F11-R41-SB1	SO	072SB-0082-0001-SO	240-18703-8		1/1	10-Dec-2012 10:45 AM	11-Dec-2012 6:35 PM	17-Dec-2012 10:12 AM	FD
69093	68832	NA	72-2F11-R41-SB5	SO	072SB-0092-0001-SO	240-18703-1		1/1	10-Dec-2012 12:37 PM	11-Dec-2012 6:35 PM	18-Dec-2012 1:10 AM	N
	68832	NA	72-2F11-R41-SB2	SO	072SB-0083-0001-SO	240-18703-9		1/1	10-Dec-2012 11:15 AM	11-Dec-2012 6:35 PM	18-Dec-2012 1:31 AM	N
	68832	NA	72-2F11-R41-SB3	SO	072SB-0084-0001-SO	240-18703-10		1/1	10-Dec-2012 11:30 AM	11-Dec-2012 6:35 PM	18-Dec-2012 1:52 AM	N
	68832	NA	72-2F11-R41-SB4	SO	072SB-0085-0001-SO	240-18703-11		1/1	10-Dec-2012 12:05 PM	11-Dec-2012 6:35 PM	18-Dec-2012 2:14 AM	N
	68832	NA	72-2F11-R41-SB4	SO	072SB-0086-0001-SO	240-18703-12		1/1	10-Dec-2012 12:05 PM	11-Dec-2012 6:35 PM	18-Dec-2012 2:35 AM	FD
	68832	NA	72-WTP-06-SB2	SO	072SB-0088-0001-SO	240-18703-14		1/1	10-Dec-2012 9:30 AM	11-Dec-2012 6:35 PM	18-Dec-2012 3:18 AM	N
	68832	NA	72-WTP-06-SB4	SO	072SB-0090-0001-SO	240-18703-16		1/1	10-Dec-2012 9:55 AM	11-Dec-2012 6:35 PM	18-Dec-2012 4:00 AM	N
	68832	NA	72-2F11-R41-SB5	SO	072SB-0091-0001-SO	240-18703-17		1/1	10-Dec-2012 12:25 PM	11-Dec-2012 6:35 PM	18-Dec-2012 4:21 AM	N

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Batch Report

Test Method: SW8260B; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
69093	68832	NA	72-FS-01-SB2	SO	072SB-0077-0001-SO	240-18703-20		1/1	10-Dec-2012 2:00 PM	11-Dec-2012 6:35 PM	18-Dec-2012 5:04 AM	FD
	68832	NA	72-FS-01-SB3	SO	072SB-0079-0001-SO	240-18703-21		1/1	10-Dec-2012 2:20 PM	11-Dec-2012 6:35 PM	18-Dec-2012 5:25 AM	N
	68832	NA	72-FS-01-SB4	SO	072SB-0080-0001-SO	240-18703-22		1/1	10-Dec-2012 3:16 PM	11-Dec-2012 6:35 PM	18-Dec-2012 5:46 AM	FD
	68832	NA	72-FS-01-SB5	SO	072SB-0081-0001-SO	240-18703-23		1/1	10-Dec-2012 2:50 PM	11-Dec-2012 6:35 PM	18-Dec-2012 6:08 AM	N
	68832	NA	72-WTP-06-SB1	SO	072SB-0087-0001-SO	240-18703-13		1/1	10-Dec-2012 9:10 AM	11-Dec-2012 6:35 PM	18-Dec-2012 6:50 AM	N
	68832	NA	72-WTP-06-SB3	SO	072SB-0089-0001-SO	240-18703-15		1/1	10-Dec-2012 9:40 AM	11-Dec-2012 6:35 PM	18-Dec-2012 7:11 AM	N
	68832	NA	72-FS-01-SB2	SO	072SB-0076-0001-SO	240-18703-19		1/1	10-Dec-2012 2:00 PM	11-Dec-2012 6:35 PM	18-Dec-2012 8:15 AM	N
69591	69591	NA	LABQC	WQ	LABQC	LCS 240-69591/4		1/1	20-Dec-2012 12:21 PM	20-Dec-2012 12:21 PM	20-Dec-2012 12:21 PM	BS
	69591	NA	LABQC	WQ	LABQC	MB 240-69591/6		1/1	20-Dec-2012 1:05 PM	20-Dec-2012 1:05 PM	20-Dec-2012 1:05 PM	LB
	69591	NA	76-A1-UST-SB2	WG	076-0140-0001-ER	240-18703-24		1/1	11-Dec-2012 10:30 AM	20-Dec-2012 1:42 PM	20-Dec-2012 1:42 PM	N
	69591	NA	76-U3-UST-SB1	WG	076SB-0137-0001-TB	240-18703-2		1/1	11-Dec-2012 8:00 AM	20-Dec-2012 2:47 PM	20-Dec-2012 2:47 PM	N
	69591	NA	76-U3-UST-SB2	WG	076SB-0138-0001-TB	240-18703-3		1/1	11-Dec-2012 8:00 AM	20-Dec-2012 3:09 PM	20-Dec-2012 3:09 PM	N
	69591	NA	76-U3-UST-SB3	WG	076SB-0139-0001-TB	240-18703-4		1/1	11-Dec-2012 8:00 AM	20-Dec-2012 3:31 PM	20-Dec-2012 3:31 PM	N
	69591	NA	76-A1-UST-SB3	WG	076-0141-0001-TB	240-18703-25		1/1	11-Dec-2012 8:00 AM	20-Dec-2012 3:53 PM	20-Dec-2012 3:53 PM	N
	69591	NA	76-A6-UST-SB13	WG	076-0142-0001-TB	240-18703-26		1/1	11-Dec-2012 8:00 AM	20-Dec-2012 4:15 PM	20-Dec-2012 4:15 PM	N
	69591	NA	76-A1-UST-SB2	WG	076-0140-0001-ER	240-18703-24		1/1	11-Dec-2012 10:30 AM	20-Dec-2012 4:58 PM	20-Dec-2012 4:58 PM	MS
	69591	NA	76-A1-UST-SB2	WG	076-0140-0001-ER	240-18703-24		1/1	11-Dec-2012 10:30 AM	20-Dec-2012 5:20 PM	20-Dec-2012 5:20 PM	SD

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Batch Report

Test Method: SW8270C; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
68962	68547	NA	LABQC	WQ	LABQC	MB 240-68547/18-A		1/1	13-Dec-2012 11:21 AM	13-Dec-2012 11:21 AM	17-Dec-2012 11:18 AM	LB
	68547	NA	LABQC	WQ	LABQC	LCS 240-68547/19-A		1/1	13-Dec-2012 11:21 AM	13-Dec-2012 11:21 AM	17-Dec-2012 11:41 AM	BS
	68547	NA	76-A1-UST-SB2	WG	076-0140-0001-ER	240-18703-24		1/1	11-Dec-2012 10:30 AM	13-Dec-2012 11:21 AM	17-Dec-2012 12:04 PM	N
69988	69569	NA	LABQC	SQ	LABQC	MB 240-69569/23-A		1/1	20-Dec-2012 9:55 AM	20-Dec-2012 9:55 AM	24-Dec-2012 11:20 AM	LB
	69569	NA	LABQC	SQ	LABQC	LCS 240-69569/24-A		1/1	20-Dec-2012 9:55 AM	20-Dec-2012 9:55 AM	24-Dec-2012 11:45 AM	BS
	69569	NA	72-2F11-R41-SB5	SO	072SB-0092-0001-SO	240-18703-1		1/1	10-Dec-2012 12:37 PM	20-Dec-2012 9:55 AM	24-Dec-2012 1:50 PM	N
	69569	NA	72-2F11-R41-SB1	SO	072SB-0082-0001-SO	240-18703-8		1/1	10-Dec-2012 10:45 AM	20-Dec-2012 9:55 AM	24-Dec-2012 2:15 PM	FD
	69569	NA	72-2F11-R41-SB2	SO	072SB-0083-0001-SO	240-18703-9		1/1	10-Dec-2012 11:15 AM	20-Dec-2012 9:55 AM	24-Dec-2012 2:39 PM	N
	69569	NA	72-2F11-R41-SB3	SO	072SB-0084-0001-SO	240-18703-10		1/1	10-Dec-2012 11:30 AM	20-Dec-2012 9:55 AM	24-Dec-2012 3:04 PM	N
	69569	NA	72-2F11-R41-SB4	SO	072SB-0085-0001-SO	240-18703-11		1/1	10-Dec-2012 12:05 PM	20-Dec-2012 9:55 AM	24-Dec-2012 3:29 PM	N
	69569	NA	72-2F11-R41-SB4	SO	072SB-0086-0001-SO	240-18703-12		1/1	10-Dec-2012 12:05 PM	20-Dec-2012 9:55 AM	24-Dec-2012 3:54 PM	FD
	69569	NA	72-WTP-06-SB1	SO	072SB-0087-0001-SO	240-18703-13		1/1	10-Dec-2012 9:10 AM	20-Dec-2012 9:55 AM	24-Dec-2012 4:19 PM	N
	69569	NA	72-WTP-06-SB2	SO	072SB-0088-0001-SO	240-18703-14		1/1	10-Dec-2012 9:30 AM	20-Dec-2012 9:55 AM	24-Dec-2012 4:44 PM	N
	69569	NA	72-WTP-06-SB3	SO	072SB-0089-0001-SO	240-18703-15		1/1	10-Dec-2012 9:40 AM	20-Dec-2012 9:55 AM	24-Dec-2012 5:09 PM	N
	69569	NA	72-WTP-06-SB4	SO	072SB-0090-0001-SO	240-18703-16		1/1	10-Dec-2012 9:55 AM	20-Dec-2012 9:55 AM	24-Dec-2012 5:34 PM	N
	69569	NA	72-2F11-R41-SB5	SO	072SB-0091-0001-SO	240-18703-17		1/1	10-Dec-2012 12:25 PM	20-Dec-2012 9:55 AM	24-Dec-2012 5:59 PM	N
	69569	NA	72-FS-01-SB2	SO	072SB-0076-0001-SO	240-18703-19		1/1	10-Dec-2012 2:00 PM	20-Dec-2012 9:55 AM	24-Dec-2012 6:24 PM	N
	69569	NA	72-FS-01-SB2	SO	072SB-0077-0001-SO	240-18703-20		1/1	10-Dec-2012 2:00 PM	20-Dec-2012 9:55 AM	24-Dec-2012 6:49 PM	FD

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Batch Report

Test Method: SW8270C; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
69988	69569	NA	72-FS-01-SB3	SO	072SB-0079-0001-SO	240-18703-21		1/1	10-Dec-2012 2:20 PM	20-Dec-2012 9:55 AM	24-Dec-2012 7:14 PM	N
	69569	NA	72-FS-01-SB4	SO	072SB-0080-0001-SO	240-18703-22		1/1	10-Dec-2012 3:16 PM	20-Dec-2012 9:55 AM	24-Dec-2012 7:39 PM	FD
70697	69614	NA	LABQC	SQ	LABQC	MB 240-69614/23-A		1/1	20-Dec-2012 12:23 PM	20-Dec-2012 12:23 PM	31-Dec-2012 12:16 PM	LB
	69614	NA	LABQC	SQ	LABQC	LCS 240-69614/24-A		1/1	20-Dec-2012 12:23 PM	20-Dec-2012 12:23 PM	31-Dec-2012 12:39 PM	BS
	69614	NA	72-FS-01-SB5	SO	072SB-0081-0001-SO	240-18703-23		1/1	10-Dec-2012 2:50 PM	20-Dec-2012 12:23 PM	31-Dec-2012 1:03 PM	N
	69993	NA	LABQC	SQ	LABQC	MB 240-69993/23-A		1/1	24-Dec-2012 9:50 AM	24-Dec-2012 9:50 AM	31-Dec-2012 11:30 AM	LB
	69993	NA	LABQC	SQ	LABQC	LCS 240-69993/24-A		1/1	24-Dec-2012 9:50 AM	24-Dec-2012 9:50 AM	31-Dec-2012 11:53 AM	BS
	69993	NA	72-FS-01-SB1	SO	072SB-0075-0001-SO	240-18703-18		1/1	10-Dec-2012 1:45 PM	24-Dec-2012 9:50 AM	31-Dec-2012 1:26 PM	N

Test Method: SW8330B; Leach Method: NONE

Analytical Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Calibration Ref	Run#/ Dil'n	Collection Date/Time	Extract Date/Time	Analysis Date/Time	Sample Type
7620	7404	NA	LABQC	WQ	LABQC	MB 320-7404/1-A		1/1	14-Dec-2012 11:07 AM	14-Dec-2012 11:07 AM	21-Dec-2012 1:22 PM	LB
	7404	NA	LABQC	WQ	LABQC	LCS 320-7404/2-A		1/1	14-Dec-2012 11:07 AM	14-Dec-2012 11:07 AM	21-Dec-2012 2:02 PM	BS
	7404	NA	76-A1-UST-SB2	WG	076-0140-0001-ER	240-18703-24		1/1	11-Dec-2012 10:30 AM	14-Dec-2012 11:07 AM	21-Dec-2012 2:42 PM	N
	7444	NA	LABQC	SQ	LABQC	MB 320-7444/1-A		1/1	17-Dec-2012 10:34 AM	17-Dec-2012 10:34 AM	20-Dec-2012 7:07 AM	LB
	7444	NA	LABQC	SQ	LABQC	LCS 320-7444/2-A		1/1	17-Dec-2012 10:34 AM	17-Dec-2012 10:34 AM	20-Dec-2012 7:47 AM	BS
	7444	NA	72-2F11-R41-SB1	SO	072SB-0082-0001-SO	240-18703-8		1/1	10-Dec-2012 10:45 AM	17-Dec-2012 10:34 AM	20-Dec-2012 9:54 PM	FD
	7444	NA	72-FS-01-SB1	SO	072SB-0075-0001-SO	240-18703-18		1/1	10-Dec-2012 1:45 PM	17-Dec-2012 10:34 AM	20-Dec-2012 10:34 PM	N
7855	7464	NA	LABQC	SQ	LABQC	MB 320-7464/1-A		1/1	17-Dec-2012 11:57 AM	17-Dec-2012 11:57 AM	26-Dec-2012 8:00 PM	LB

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Batch Report

Test Method: SW8330B; Leach Method: NONE												
Analytical Batch	**Prep Batch**	**Leach Batch**	**Location**	**Matrix**	**Field Sample ID**	**Lab Sample ID**	**Calibration Ref**	**Run#/ Dil'n**	**Collection Date/Time**	**Extract Date/Time**	**Analysis Date/Time**	**Sample Type**
7855	7464	NA	LABQC	SQ	LABQC	LCS 320-7464/2-A		1/1	17-Dec-2012 11:57 AM	17-Dec-2012 11:57 AM	26-Dec-2012 8:14 PM	BS
	7464	NA	72-2F11-R41-SB1	SO	072SB-0082-0001-SO	240-18703-8		2/1	10-Dec-2012 10:45 AM	17-Dec-2012 11:57 AM	27-Dec-2012 1:02 AM	FD
	7464	NA	72-FS-01-SB1	SO	072SB-0075-0001-SO	240-18703-18		2/1	10-Dec-2012 1:45 PM	17-Dec-2012 11:57 AM	27-Dec-2012 1:16 AM	N
	7807	NA	LABQC	WQ	LABQC	MB 320-7807/1-A		1/1	24-Dec-2012 12:40 PM	24-Dec-2012 12:40 PM	27-Dec-2012 3:25 AM	LB
	7807	NA	LABQC	WQ	LABQC	LCS 320-7807/2-A		1/1	24-Dec-2012 12:40 PM	24-Dec-2012 12:40 PM	27-Dec-2012 3:54 AM	BS
	7807	NA	76-A1-UST-SB2	WG	076-0140-0001-ER	240-18703-24		2/1	11-Dec-2012 10:30 AM	24-Dec-2012 12:40 PM	27-Dec-2012 4:08 AM	N
	7807	NA	76-A1-UST-SB2	WG	076-0140-0001-ER	240-18703-24		1/1	11-Dec-2012 10:30 AM	24-Dec-2012 12:40 PM	27-Dec-2012 4:23 AM	MS
	7807	NA	76-A1-UST-SB2	WG	076-0140-0001-ER	240-18703-24		1/1	11-Dec-2012 10:30 AM	24-Dec-2012 12:40 PM	27-Dec-2012 4:37 AM	SD

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Field Batch Report

--No Records Found--

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

QC Outlier Report

Test/Prep/Leach	QC Element	Sample ID/ Lab Sample ID	Run# / Dil'n	Analyte	Result (Units)	Qualifier	Warning Limits	Control Limits	Reason	Comment	Rule	Action Level
E353.2 / METHOD/NONE	Blank	MB 320-7571/1-B (LB) / MB 320-7571/1-B	1 / 1.00	Nitrocellulose	1.3 (MG/KG)	U/None	< 0.78	< 5	L		1	1.31
E353.2 / METHOD/NONE	Test Hold Time	076-0140-0001-ER (N) / 240-18703-24	1 / 1.00	Nitrocellulose	16.1 (Days)	J/UJ	< 14	< 28	H1	Test Exceeds UWL		
M8015V / SW5035/NONE	Surrogate	072SB-0077-0001-SO (FD) / 240-18703-20	1 / 1.00	1,1,1-Trifluorotoluene	329 (PERCENT)	J/None	10 - 150	10 - 150	I			
M8015V / SW5035/NONE	Surrogate	072SB-0080-0001-SO (FD) / 240-18703-22	1 / 1.00	1,1,1-Trifluorotoluene	231 (PERCENT)	J/None	10 - 150	10 - 150	I			
SW6020 / SW3050B/NONE	Blank	MB 180-59183/1-A (LB) / MB 180-59183/1-A	1 / 1.00	Aluminum	0.52 (MG/KG)	U/None	< 0.28	< 3	L		1	0.515
SW6020 / SW3050B/NONE	Blank	MB 180-59183/1-A (LB) / MB 180-59183/1-A	1 / 1.00	Barium	0.013 (MG/KG)	U/None	< 0.011	< 1	L		1	0.0133
SW6020 / SW3050B/NONE	Blank	MB 180-59183/1-A (LB) / MB 180-59183/1-A	1 / 1.00	Calcium	2.8 (MG/KG)	U/None	< 1.3	< 10	L		1	2.78
SW6020 / SW3050B/NONE	Blank	MB 180-59183/1-A (LB) / MB 180-59183/1-A	1 / 1.00	Iron	1.1 (MG/KG)	U/None	< 1.1	< 5	L		1	1.12
SW6020 / SW3050B/NONE	Blank	MB 180-59183/1-A (LB) / MB 180-59183/1-A	1 / 1.00	Nickel	0.013 (MG/KG)	U/None	< 0.011	< 0.1	L		1	0.0132
SW6020 / SW3050B/NONE	Blank	MB 180-59183/1-A (LB) / MB 180-59183/1-A	1 / 1.00	Zinc	0.14 (MG/KG)	U/None	< 0.065	< 0.5	L		1	0.141
SW6020 / SW3050B/NONE	Blank	MB 180-59442/1-A (LB) / MB 180-59442/1-A	1 / 1.00	Barium	0.012 (MG/KG)	U/None	< 0.01	< 0.95	L		1	0.0122
SW6020 / SW3050B/NONE	Blank	MB 180-59442/1-A (LB) / MB 180-59442/1-A	1 / 1.00	Calcium	2.2 (MG/KG)	U/None	< 1.3	< 9.5	L		1	2.18
SW6020 / SW3050B/NONE	Blank	MB 180-59442/1-A (LB) / MB 180-59442/1-A	1 / 1.00	Iron	1.2 (MG/KG)	U/None	< 1	< 4.8	L		1	1.19
SW6020 / TOTAL/NONE	Blank	MB 180-59308/1-A (LB) / MB 180-59308/1-A	1 / 1.00	Aluminum	6.5 (UG/L)	U/None	< 2.6	< 30	L		1	6.47
SW6020 / TOTAL/NONE	Blank	MB 180-59308/1-A (LB) / MB 180-59308/1-A	1 / 1.00	Iron	19.2 (UG/L)	U/None	< 11	< 50	L		1	19.2
SW8082 / SW3540C/NONE	Surrogate	072SB-0082-0001-SO (FD) / 240-18703-8	1 / 1.00	Decachlorobiphenyl	151 (PERCENT)	J/None	60 - 125	10 - 125	I			
SW8260B / SW5035/NONE	Blank	MB 240-68905/7 (LB) / MB 240-68905/7	1 / 1.00	2-Hexanone	2.4 (UG/KG)	U/None	< 0.63	< 20	L		1	2.37
SW8260B / SW5035/NONE	Blank	MB 240-68905/7 (LB) / MB 240-68905/7	1 / 1.00	4-Methyl-2-pentanone (MIBK)	1.4 (UG/KG)	U/None	< 0.54	< 20	L		1	1.41
SW8260B / SW5035/NONE	Blank	MB 240-68905/7 (LB) / MB 240-68905/7	1 / 1.00	Methylene Chloride	1.7 (UG/KG)	U/None	< 0.67	< 5	L		2	3.46

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

QC Outlier Report

Test/Prep/Leach	QC Element	Sample ID/ Lab Sample ID	Run# / Dil'n	Analyte	Result (Units)	Qualifier	Warning Limits	Control Limits	Reason	Comment	Rule	Action Level
SW8260B / SW5035/NONE	Surrogate	072SB-0084-0001-SO (N) / 240-18703-10	1 / 1.00	1-Bromo-4-fluorobenzene (4-Bromofluorobenzene)	82.8 (PERCENT)	J/UJ	85 - 120	10 - 120	I			
SW8260B / SW5035/NONE	Surrogate	072SB-0088-0001-SO (N) / 240-18703-14	1 / 1.00	1-Bromo-4-fluorobenzene (4-Bromofluorobenzene)	84.5 (PERCENT)	J/UJ	85 - 120	10 - 120	I			
SW8270C / SW3550/NONE	Blank	MB 240-69993/23-A (LB) / MB 240-69993/23-A	1 / 1.00	bis(2-Ethylhexyl) Phthalate	45.6 (UG/KG)	U/None	< 19	< 50	L		5	228

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Qualified Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Bias	Units	Reason
E353.2/NONE	SO	072SB-0075-0001-SO	240-18703-18	N	Nitrocellulose	55.0	11.0	55.0 U	+	MG/KG	L
E353.2/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	Nitrocellulose	49.0	9.5	49.0 U	+	MG/KG	L
E353.2/NONE	WG	076-0140-0001-ER	240-18703-24	N	Nitrocellulose	2.0	2.0	2.0 UJ	-	MG/L	H1
Test Leach	**Matrix**	**FieldSample ID**	**LabSample ID**	**Type**	**Analyte**	**RL**	**Lab Result**	**Qualified Result**	**Bias**	**Units**	**Reason**
M8015D/NONE	SO	072SB-0088-0001-SO	240-18703-14	N	C20-C34 Motor Oil Range Organics	18.0	11.0	11.0 J		MG/KG	TR
M8015D/NONE	SO	072SB-0090-0001-SO	240-18703-16	N	C20-C34 Motor Oil Range Organics	18.0	14.0	14.0 J		MG/KG	TR
Test Leach	**Matrix**	**FieldSample ID**	**LabSample ID**	**Type**	**Analyte**	**RL**	**Lab Result**	**Qualified Result**	**Bias**	**Units**	**Reason**
M8015V/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	Petroleum Hydrocarbons C6-C12	94.0	70.0	70.0 J		UG/KG	TR/D1
M8015V/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	Petroleum Hydrocarbons C6-C12	97.0	2200	2200 J	+	UG/KG	I/D1
M8015V/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	Petroleum Hydrocarbons C6-C12	5000	2900	2900 J		UG/KG	TR/D1
M8015V/NONE	SO	072SB-0080-0001-SO	240-18703-22	FD	Petroleum Hydrocarbons C6-C12	5100	4200	4200 J		UG/KG	TR
M8015V/NONE	SO	072SB-0080-0001-SO	240-18703-22	FD	Petroleum Hydrocarbons C6-C12	78.0	3200	3200 J	+	UG/KG	I
M8015V/NONE	SO	072SB-0089-0001-SO	240-18703-15	N	Petroleum Hydrocarbons C6-C12	99.0	54.0	54.0 J		UG/KG	TR
M8015V/NONE	WG	076-0141-0001-TB	240-18703-25	N	Petroleum Hydrocarbons C6-C12	100	27.0	27.0 J		UG/L	TR
M8015V/NONE	WG	076SB-0143-0001-TB	240-18703-5	N	Petroleum Hydrocarbons C6-C12	100	29.0	29.0 J		UG/L	TR
M8015V/NONE	WG	076SB-0144-0001-TB	240-18703-6	N	Petroleum Hydrocarbons C6-C12	100	27.0	27.0 J		UG/L	TR
Test Leach	**Matrix**	**FieldSample ID**	**LabSample ID**	**Type**	**Analyte**	**RL**	**Lab Result**	**Qualified Result**	**Bias**	**Units**	**Reason**
SW6020/NONE	SO	072SB-0075-0001-SO	240-18703-18	N	Selenium	0.54	0.50	0.50 J		MG/KG	TR
SW6020/NONE	SO	072SB-0075-0001-SO	240-18703-18	N	Silver	0.11	0.044	0.044 J		MG/KG	TR
SW6020/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	Barium	1.1	56.0	56.0 J		MG/KG	d
SW6020/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	Manganese	0.55	330	330 J		MG/KG	d
SW6020/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	Silver	0.11	0.037	0.037 J		MG/KG	TR
SW6020/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	Barium	1.1	95.0	95.0 J		MG/KG	d
SW6020/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	Manganese	0.55	1700	1700 J		MG/KG	d
SW6020/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	Silver	0.11	0.045	0.045 J		MG/KG	TR
SW6020/NONE	SO	072SB-0079-0001-SO	240-18703-21	N	Silver	0.12	0.042	0.042 J		MG/KG	TR
SW6020/NONE	SO	072SB-0080-0001-SO	240-18703-22	FD	Selenium	0.53	0.46	0.46 J		MG/KG	TR
SW6020/NONE	SO	072SB-0080-0001-SO	240-18703-22	FD	Silver	0.11	0.032	0.032 J		MG/KG	TR

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Qualified Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Bias	Units	Reason
SW6020/NONE	SO	072SB-0081-0001-SO	240-18703-23	N	Silver	0.099	0.033	0.033 J		MG/KG	TR
SW6020/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	Selenium	0.57	0.54	0.54 J		MG/KG	TR
SW6020/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	Silver	0.11	0.031	0.031 J		MG/KG	TR
SW6020/NONE	SO	072SB-0083-0001-SO	240-18703-9	N	Antimony	0.21	0.21	0.21 UJ		MG/KG	m
SW6020/NONE	SO	072SB-0083-0001-SO	240-18703-9	N	Calcium	10.0	11000	11000 J		MG/KG	A
SW6020/NONE	SO	072SB-0083-0001-SO	240-18703-9	N	Chromium	0.21	14.0	14.0 J		MG/KG	A
SW6020/NONE	SO	072SB-0083-0001-SO	240-18703-9	N	Magnesium	10.0	8700	8700 J		MG/KG	A
SW6020/NONE	SO	072SB-0083-0001-SO	240-18703-9	N	Potassium	10.0	1600	1600 J		MG/KG	A
SW6020/NONE	SO	072SB-0083-0001-SO	240-18703-9	N	Selenium	0.51	0.47	0.47 J		MG/KG	TR
SW6020/NONE	SO	072SB-0083-0001-SO	240-18703-9	N	Silver	0.10	0.031	0.031 J		MG/KG	TR
SW6020/NONE	SO	072SB-0084-0001-SO	240-18703-10	N	Selenium	0.55	0.49	0.49 J		MG/KG	TR
SW6020/NONE	SO	072SB-0084-0001-SO	240-18703-10	N	Silver	0.11	0.031	0.031 J		MG/KG	TR
SW6020/NONE	SO	072SB-0085-0001-SO	240-18703-11	N	Antimony	0.23	0.077	0.077 J		MG/KG	TR
SW6020/NONE	SO	072SB-0085-0001-SO	240-18703-11	N	Selenium	0.56	0.46	0.46 J		MG/KG	TR
SW6020/NONE	SO	072SB-0085-0001-SO	240-18703-11	N	Silver	0.11	0.030	0.030 J		MG/KG	TR
SW6020/NONE	SO	072SB-0086-0001-SO	240-18703-12	FD	Cadmium	0.10	0.092	0.092 J		MG/KG	TR
SW6020/NONE	SO	072SB-0086-0001-SO	240-18703-12	FD	Selenium	0.51	0.40	0.40 J		MG/KG	TR
SW6020/NONE	SO	072SB-0086-0001-SO	240-18703-12	FD	Silver	0.10	0.022	0.022 J		MG/KG	TR
SW6020/NONE	SO	072SB-0087-0001-SO	240-18703-13	N	Selenium	0.45	0.41	0.41 J		MG/KG	TR
SW6020/NONE	SO	072SB-0087-0001-SO	240-18703-13	N	Silver	0.091	0.022	0.022 J		MG/KG	TR
SW6020/NONE	SO	072SB-0088-0001-SO	240-18703-14	N	Selenium	0.50	0.32	0.32 J		MG/KG	TR
SW6020/NONE	SO	072SB-0088-0001-SO	240-18703-14	N	Silver	0.10	0.018	0.018 J		MG/KG	TR
SW6020/NONE	SO	072SB-0089-0001-SO	240-18703-15	N	Selenium	0.51	0.46	0.46 J		MG/KG	TR
SW6020/NONE	SO	072SB-0089-0001-SO	240-18703-15	N	Silver	0.10	0.023	0.023 J		MG/KG	TR
SW6020/NONE	SO	072SB-0090-0001-SO	240-18703-16	N	Selenium	0.52	0.28	0.28 J		MG/KG	TR
SW6020/NONE	SO	072SB-0090-0001-SO	240-18703-16	N	Silver	0.10	0.013	0.013 J		MG/KG	TR
SW6020/NONE	SO	072SB-0090-0001-SO	240-18703-16	N	Thallium	0.10	0.075	0.075 J		MG/KG	TR
SW6020/NONE	SO	072SB-0091-0001-SO	240-18703-17	N	Selenium	0.55	0.49	0.49 J		MG/KG	TR
SW6020/NONE	SO	072SB-0091-0001-SO	240-18703-17	N	Silver	0.11	0.025	0.025 J		MG/KG	TR

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Qualified Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Bias	Units	Reason
SW6020/NONE	SO	072SB-0092-0001-SO	240-18703-1	N	Antimony	0.18	0.053	0.053 J		MG/KG	TR
SW6020/NONE	SO	072SB-0092-0001-SO	240-18703-1	N	Selenium	0.44	0.32	0.32 J		MG/KG	TR
SW6020/NONE	SO	072SB-0092-0001-SO	240-18703-1	N	Silver	0.088	0.025	0.025 J		MG/KG	TR
SW6020/NONE	WG	076-0140-0001-ER	240-18703-24	N	Aluminum	30.0	14.0	30.0 U	+	UG/L	L
SW6020/NONE	WG	076-0140-0001-ER	240-18703-24	N	Barium	10.0	0.43	0.43 J		UG/L	TR
SW6020/NONE	WG	076-0140-0001-ER	240-18703-24	N	Calcium	100	82.0	82.0 J		UG/L	TR
SW6020/NONE	WG	076-0140-0001-ER	240-18703-24	N	Chromium	2.0	0.76	0.76 J		UG/L	TR
SW6020/NONE	WG	076-0140-0001-ER	240-18703-24	N	Cobalt	0.50	0.036	0.036 J		UG/L	TR
SW6020/NONE	WG	076-0140-0001-ER	240-18703-24	N	Iron	50.0	20.0	50.0 U	+	UG/L	L
SW6020/NONE	WG	076-0140-0001-ER	240-18703-24	N	Manganese	5.0	1.9	1.9 J		UG/L	TR
SW6020/NONE	WG	076-0140-0001-ER	240-18703-24	N	Nickel	1.0	0.47	0.47 J		UG/L	TR
SW6020/NONE	WG	076-0140-0001-ER	240-18703-24	N	Thallium	1.0	0.25	0.25 J		UG/L	TR
SW6020/NONE	WG	076-0140-0001-ER	240-18703-24	N	Zinc	5.0	1.1	1.1 J		UG/L	TR
Test Leach	**Matrix**	**FieldSample ID**	**LabSample ID**	**Type**	**Analyte**	**RL**	**Lab Result**	**Qualified Result**	**Bias**	**Units**	**Reason**
SW7471A/NONE	SO	072SB-0079-0001-SO	240-18703-21	N	Mercury	0.15	0.034	0.034 J		MG/KG	TR
SW7471A/NONE	SO	072SB-0088-0001-SO	240-18703-14	N	Mercury	0.12	0.016	0.016 J		MG/KG	TR
SW7471A/NONE	SO	072SB-0089-0001-SO	240-18703-15	N	Mercury	0.10	0.014	0.014 J		MG/KG	TR
Test Leach	**Matrix**	**FieldSample ID**	**LabSample ID**	**Type**	**Analyte**	**RL**	**Lab Result**	**Qualified Result**	**Bias**	**Units**	**Reason**
SW8081/NONE	SO	072SB-0075-0001-SO	240-18703-18	N	Aldrin	4.6	4.6	4.6 UJ		UG/KG	V2
SW8081/NONE	SO	072SB-0075-0001-SO	240-18703-18	N	alpha-BHC (alpha-Hexachlorocyclohexane)	2.8	2.8	2.8 UJ		UG/KG	V2
SW8081/NONE	SO	072SB-0075-0001-SO	240-18703-18	N	alpha-Chlordane	3.4	3.4	3.4 UJ		UG/KG	V2
SW8081/NONE	SO	072SB-0075-0001-SO	240-18703-18	N	alpha-Endosulfan	1.9	1.9	1.9 UJ		UG/KG	V2
SW8081/NONE	SO	072SB-0075-0001-SO	240-18703-18	N	beta-BHC (beta-Hexachlorocyclohexane)	4.0	4.0	4.0 UJ		UG/KG	V2
SW8081/NONE	SO	072SB-0075-0001-SO	240-18703-18	N	beta-Endosulfan	2.8	2.8	2.8 UJ		UG/KG	V2
SW8081/NONE	SO	072SB-0075-0001-SO	240-18703-18	N	delta-BHC (delta-Hexachlorocyclohexane)	4.6	4.6	4.6 UJ		UG/KG	V2
SW8081/NONE	SO	072SB-0075-0001-SO	240-18703-18	N	Dieldrin	1.9	1.9	1.9 UJ		UG/KG	V2
SW8081/NONE	SO	072SB-0075-0001-SO	240-18703-18	N	Endosulfan Sulfate	3.4	3.4	3.4 UJ		UG/KG	V2
SW8081/NONE	SO	072SB-0075-0001-SO	240-18703-18	N	Endrin	1.9	1.9	1.9 UJ		UG/KG	V2
SW8081/NONE	SO	072SB-0075-0001-SO	240-18703-18	N	Endrin Aldehyde	3.4	3.4	3.4 UJ		UG/KG	V2

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Qualified Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Bias	Units	Reason
SW8081/NONE	SO	072SB-0075-0001-SO	240-18703-18	N	Endrin Ketone	2.3	2.3	2.3 UJ		UG/KG	V2
SW8081/NONE	SO	072SB-0075-0001-SO	240-18703-18	N	gamma-BHC (Lindane)	2.8	2.8	2.8 UJ		UG/KG	V2
SW8081/NONE	SO	072SB-0075-0001-SO	240-18703-18	N	gamma-Chlordane	1.9	1.9	1.9 UJ		UG/KG	V2
SW8081/NONE	SO	072SB-0075-0001-SO	240-18703-18	N	Heptachlor	4.0	4.0	4.0 UJ		UG/KG	V2
SW8081/NONE	SO	072SB-0075-0001-SO	240-18703-18	N	Heptachlor Epoxide	2.8	2.8	2.8 UJ		UG/KG	V2
SW8081/NONE	SO	072SB-0075-0001-SO	240-18703-18	N	Methoxychlor	5.7	5.7	5.7 UJ		UG/KG	V2
SW8081/NONE	SO	072SB-0075-0001-SO	240-18703-18	N	p,p'-DDD	2.3	2.3	2.3 UJ		UG/KG	V2
SW8081/NONE	SO	072SB-0075-0001-SO	240-18703-18	N	p,p'-DDE	1.9	1.9	1.9 UJ		UG/KG	V2
SW8081/NONE	SO	072SB-0075-0001-SO	240-18703-18	N	p,p'-DDT	2.3	2.3	2.3 UJ		UG/KG	V2
SW8081/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	Aldrin	24.0	24.0	24.0 UJ		UG/KG	V2
SW8081/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	alpha-BHC (alpha-Hexachlorocyclohexane)	15.0	15.0	15.0 UJ		UG/KG	V2
SW8081/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	alpha-Chlordane	18.0	18.0	18.0 UJ		UG/KG	V2
SW8081/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	alpha-Endosulfan	10.0	10.0	10.0 UJ		UG/KG	V2
SW8081/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	beta-BHC (beta-Hexachlorocyclohexane)	21.0	21.0	21.0 UJ		UG/KG	V2
SW8081/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	beta-Endosulfan	15.0	15.0	15.0 UJ		UG/KG	V2
SW8081/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	delta-BHC (delta-Hexachlorocyclohexane)	24.0	24.0	24.0 UJ		UG/KG	V2
SW8081/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	Dieldrin	10.0	10.0	10.0 UJ		UG/KG	V2
SW8081/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	Endosulfan Sulfate	18.0	18.0	18.0 UJ		UG/KG	V2
SW8081/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	Endrin	10.0	10.0	10.0 UJ		UG/KG	V2
SW8081/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	Endrin Aldehyde	18.0	18.0	18.0 UJ		UG/KG	V2
SW8081/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	Endrin Ketone	12.0	12.0	12.0 UJ		UG/KG	V2
SW8081/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	gamma-BHC (Lindane)	15.0	15.0	15.0 UJ		UG/KG	V2
SW8081/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	gamma-Chlordane	10.0	10.0	10.0 UJ		UG/KG	V2
SW8081/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	Heptachlor	21.0	21.0	21.0 UJ		UG/KG	V2
SW8081/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	Heptachlor Epoxide	15.0	15.0	15.0 UJ		UG/KG	V2
SW8081/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	Methoxychlor	30.0	30.0	30.0 UJ		UG/KG	V2
SW8081/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	p,p'-DDD	12.0	12.0	12.0 UJ		UG/KG	V2
SW8081/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	p,p'-DDE	10.0	10.0	10.0 UJ		UG/KG	V2
SW8081/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	p,p'-DDT	12.0	12.0	12.0 UJ		UG/KG	V2

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Qualified Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Bias	Units	Reason
SW8081/NONE	WG	076-0140-0001-ER	240-18703-24	N	Toxaphene	1.9	1.9	1.9 UJ		UG/L	V1
Test Leach	**Matrix**	**FieldSample ID**	**LabSample ID**	**Type**	**Analyte**	**RL**	**Lab Result**	**Qualified Result**	**Bias**	**Units**	**Reason**
SW8151/NONE	SO	072SB-0075-0001-SO	240-18703-18	N	MCPA	9100	9100	9100 UJ		UG/KG	V2
SW8151/NONE	SO	072SB-0075-0001-SO	240-18703-18	N	MCPP	9100	9100	9100 UJ		UG/KG	V2
SW8151/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	MCPA	9500	9500	9500 UJ		UG/KG	V2
SW8151/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	MCPP	9500	9500	9500 UJ		UG/KG	V2
SW8151/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	MCPA	9600	9600	9600 UJ		UG/KG	V2
SW8151/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	MCPP	9600	9600	9600 UJ		UG/KG	V2
SW8151/NONE	SO	072SB-0079-0001-SO	240-18703-21	N	MCPA	10000	10000	10000 UJ		UG/KG	V2
SW8151/NONE	SO	072SB-0079-0001-SO	240-18703-21	N	MCPP	10000	10000	10000 UJ		UG/KG	V2
SW8151/NONE	SO	072SB-0080-0001-SO	240-18703-22	N	Dalapon	47.0	33.0	33.0 J		UG/KG	TR/P
SW8151/NONE	SO	072SB-0080-0001-SO	240-18703-22	N	MCPA	9300	9300	9300 UJ		UG/KG	V2
SW8151/NONE	SO	072SB-0080-0001-SO	240-18703-22	N	MCPP	9300	9300	9300 UJ		UG/KG	V2
SW8151/NONE	SO	072SB-0081-0001-SO	240-18703-23	N	Dalapon	45.0	14.0	14.0 J		UG/KG	TR
SW8151/NONE	SO	072SB-0081-0001-SO	240-18703-23	N	MCPA	9100	9100	9100 UJ		UG/KG	V2
SW8151/NONE	SO	072SB-0081-0001-SO	240-18703-23	N	MCPP	9100	9100	9100 UJ		UG/KG	V2
SW8151/NONE	WG	076-0140-0001-ER	240-18703-24	N	MCPA	400	400	400 UJ		UG/L	V2
SW8151/NONE	WG	076-0140-0001-ER	240-18703-24	N	MCPP	400	400	400 UJ		UG/L	V2
Test Leach	**Matrix**	**FieldSample ID**	**LabSample ID**	**Type**	**Analyte**	**RL**	**Lab Result**	**Qualified Result**	**Bias**	**Units**	**Reason**
SW8260B/NONE	SO	072SB-0075-0001-SO	240-18703-18	N	1,2-Dichloroethane	4.4	0.82	0.82 J		UG/KG	TR/J
SW8260B/NONE	SO	072SB-0075-0001-SO	240-18703-18	N	Methylene Chloride	4.4	1.0	4.4 U		UG/KG	L
SW8260B/NONE	SO	072SB-0075-0001-SO	240-18703-18	N	Toluene	4.4	3.8	3.8 J		UG/KG	TR
SW8260B/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	Benzene	4.0	9.9	9.9 J		UG/KG	d
SW8260B/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	Ethylbenzene	4.0	22.0	22.0 J		UG/KG	d
SW8260B/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	Toluene	4.0	52.0	52.0 J		UG/KG	d
SW8260B/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	Xylenes, Total	8.0	150	150 J		UG/KG	d
SW8260B/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	Benzene	4.6	1.8	1.8 J		UG/KG	TR/d
SW8260B/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	Ethylbenzene	4.6	0.71	0.71 J		UG/KG	TR/d
SW8260B/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	Toluene	4.6	6.7	6.7 J		UG/KG	d

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Qualified Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Bias	Units	Reason
SW8260B/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	Xylenes, Total	9.2	5.4	5.4 J		UG/KG	TR/d
SW8260B/NONE	SO	072SB-0081-0001-SO	240-18703-23	N	Toluene	7.9	5.3	5.3 J		UG/KG	TR
SW8260B/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	2-Butanone (MEK)	19.0	2.9	19.0 U		UG/KG	L
SW8260B/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	Acetone	19.0	14.0	19.0 U		UG/KG	T
SW8260B/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	Toluene	4.8	1.7	1.7 J		UG/KG	TR
SW8260B/NONE	SO	072SB-0083-0001-SO	240-18703-9	N	Toluene	4.7	2.7	2.7 J		UG/KG	TR
SW8260B/NONE	SO	072SB-0084-0001-SO	240-18703-10	N	Benzene	4.8	4.8	4.8 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0084-0001-SO	240-18703-10	N	Ethylbenzene	4.8	4.8	4.8 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0084-0001-SO	240-18703-10	N	tert-Butyl Methyl Ether (MTBE)	4.8	4.8	4.8 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0084-0001-SO	240-18703-10	N	Toluene	4.8	3.5	3.5 J	-	UG/KG	I/TR
SW8260B/NONE	SO	072SB-0084-0001-SO	240-18703-10	N	Xylenes, Total	9.7	9.7	9.7 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0085-0001-SO	240-18703-11	N	Toluene	6.0	4.3	4.3 J		UG/KG	TR
SW8260B/NONE	SO	072SB-0086-0001-SO	240-18703-12	FD	Toluene	4.8	2.6	2.6 J		UG/KG	TR
SW8260B/NONE	SO	072SB-0088-0001-SO	240-18703-14	N	Benzene	4.9	4.9	4.9 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0088-0001-SO	240-18703-14	N	Ethylbenzene	4.9	4.9	4.9 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0088-0001-SO	240-18703-14	N	tert-Butyl Methyl Ether (MTBE)	4.9	4.9	4.9 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0088-0001-SO	240-18703-14	N	Toluene	4.9	5.2	5.2 J	-	UG/KG	I
SW8260B/NONE	SO	072SB-0088-0001-SO	240-18703-14	N	Xylenes, Total	9.7	9.7	9.7 UJ	-	UG/KG	I
SW8260B/NONE	SO	072SB-0089-0001-SO	240-18703-15	N	Toluene	5.6	3.8	3.8 J		UG/KG	TR
SW8260B/NONE	SO	072SB-0090-0001-SO	240-18703-16	N	Toluene	5.3	2.8	2.8 J		UG/KG	TR
SW8260B/NONE	SO	072SB-0091-0001-SO	240-18703-17	N	Toluene	6.5	5.0	5.0 J		UG/KG	TR
SW8260B/NONE	SO	072SB-0092-0001-SO	240-18703-1	N	Toluene	4.2	3.1	3.1 J		UG/KG	TR
SW8260B/NONE	WG	076-0140-0001-ER	240-18703-24	N	Chloroform	1.0	0.58	0.58 J		UG/L	TR
SW8260B/NONE	WG	076-0141-0001-TB	240-18703-25	N	4-Methyl-2-pentanone (MIBK)	10.0	0.36	0.36 J		UG/L	TR
SW8260B/NONE	WG	076-0142-0001-TB	240-18703-26	N	2-Butanone (MEK)	10.0	0.60	0.60 J		UG/L	TR
SW8260B/NONE	WG	076-0142-0001-TB	240-18703-26	N	4-Methyl-2-pentanone (MIBK)	10.0	0.35	0.35 J		UG/L	TR
SW8260B/NONE	WG	076SB-0137-0001-TB	240-18703-2	N	2-Butanone (MEK)	10.0	0.57	0.57 J		UG/L	TR
SW8260B/NONE	WG	076SB-0137-0001-TB	240-18703-2	N	4-Methyl-2-pentanone (MIBK)	10.0	0.32	0.32 J		UG/L	TR
SW8260B/NONE	WG	076SB-0138-0001-TB	240-18703-3	N	2-Butanone (MEK)	10.0	0.69	0.69 J		UG/L	TR

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Qualified Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Bias	Units	Reason
SW8260B/NONE	WG	076SB-0139-0001-TB	240-18703-4	N	2-Butanone (MEK)	10.0	0.64	0.64 J		UG/L	TR
SW8260B/NONE	WG	076SB-0139-0001-TB	240-18703-4	N	4-Methyl-2-pentanone (MIBK)	10.0	0.39	0.39 J		UG/L	TR
Test Leach	**Matrix**	**FieldSample ID**	**LabSample ID**	**Type**	**Analyte**	**RL**	**Lab Result**	**Qualified Result**	**Bias**	**Units**	**Reason**
SW8270C/NONE	SO	072SB-0075-0001-SO	240-18703-18	N	4-Nitroaniline	230	230	230 UJ		UG/KG	V1
SW8270C/NONE	SO	072SB-0075-0001-SO	240-18703-18	N	Benzo(b)fluoranthene	7.7	3.8	3.8 J		UG/KG	TR
SW8270C/NONE	SO	072SB-0075-0001-SO	240-18703-18	N	Benzoic acid	770	770	770 R		UG/KG	c
SW8270C/NONE	SO	072SB-0075-0001-SO	240-18703-18	N	bis(2-Ethylhexyl) Phthalate	58.0	24.0	58.0 U	+	UG/KG	L
SW8270C/NONE	SO	072SB-0075-0001-SO	240-18703-18	N	Di-n-Butyl Phthalate	58.0	58.0	58.0 UJ		UG/KG	V1
SW8270C/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	2,4-Dinitrophenol	390	390	390 UJ		UG/KG	J
SW8270C/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	3,3'-Dichlorobenzidine	120	120	120 UJ		UG/KG	V1
SW8270C/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	4,6-Dinitro-2-Methylphenol	180	180	180 UJ		UG/KG	J
SW8270C/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	Acenaphthylene	7.9	7.6	7.6 J		UG/KG	TR
SW8270C/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	Anthracene	7.9	5.8	5.8 J		UG/KG	TR
SW8270C/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	Benzo(a)anthracene	7.9	55.0	55.0 J		UG/KG	d
SW8270C/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	Benzo(a)pyrene	7.9	40.0	40.0 J		UG/KG	d
SW8270C/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	Benzo(b)fluoranthene	7.9	65.0	65.0 J		UG/KG	d
SW8270C/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	Benzo(g,h,i)perylene	7.9	34.0	34.0 J		UG/KG	d
SW8270C/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	Benzo(k)fluoranthene	7.9	22.0	22.0 J		UG/KG	d
SW8270C/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	Benzoic acid	780	780	780 R		UG/KG	c/J
SW8270C/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	bis(2-Ethylhexyl) Phthalate	59.0	24.0	59.0 U		UG/KG	L
SW8270C/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	Chrysene	7.9	41.0	41.0 J		UG/KG	d
SW8270C/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	Fluoranthene	7.9	96.0	96.0 J		UG/KG	d
SW8270C/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	Indeno(1,2,3-c,d)pyrene	7.9	22.0	22.0 J		UG/KG	d
SW8270C/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	Phenanthrene	7.9	47.0	47.0 J		UG/KG	d
SW8270C/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	2,4-Dinitrophenol	410	410	410 UJ		UG/KG	J
SW8270C/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	3,3'-Dichlorobenzidine	120	120	120 UJ		UG/KG	V1
SW8270C/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	4,6-Dinitro-2-Methylphenol	180	180	180 UJ		UG/KG	J
SW8270C/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	Anthracene	8.2	4.8	4.8 J		UG/KG	TR
SW8270C/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	Benzo(a)anthracene	8.2	24.0	24.0 J		UG/KG	d

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Qualified Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Bias	Units	Reason
SW8270C/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	Benzo(a)pyrene	8.2	16.0	16.0 J		UG/KG	d
SW8270C/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	Benzo(b)fluoranthene	8.2	22.0	22.0 J		UG/KG	d
SW8270C/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	Benzo(g,h,i)perylene	8.2	20.0	20.0 J		UG/KG	d
SW8270C/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	Benzo(k)fluoranthene	8.2	8.9	8.9 J		UG/KG	d
SW8270C/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	Benzoic acid	810	810	810 R		UG/KG	c/J
SW8270C/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	Chrysene	8.2	17.0	17.0 J		UG/KG	d
SW8270C/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	Fluoranthene	8.2	34.0	34.0 J		UG/KG	d
SW8270C/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	Indeno(1,2,3-c,d)pyrene	8.2	10.0	10.0 J		UG/KG	d
SW8270C/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	Phenanthrene	8.2	21.0	21.0 J		UG/KG	d
SW8270C/NONE	SO	072SB-0079-0001-SO	240-18703-21	N	2,4-Dinitrophenol	430	430	430 UJ		UG/KG	J
SW8270C/NONE	SO	072SB-0079-0001-SO	240-18703-21	N	3,3'-Dichlorobenzidine	130	130	130 UJ		UG/KG	V1
SW8270C/NONE	SO	072SB-0079-0001-SO	240-18703-21	N	4,6-Dinitro-2-Methylphenol	200	200	200 UJ		UG/KG	J
SW8270C/NONE	SO	072SB-0079-0001-SO	240-18703-21	N	Acenaphthylene	8.7	5.3	5.3 J		UG/KG	TR
SW8270C/NONE	SO	072SB-0079-0001-SO	240-18703-21	N	Anthracene	8.7	5.5	5.5 J		UG/KG	TR
SW8270C/NONE	SO	072SB-0079-0001-SO	240-18703-21	N	Benzoic acid	870	870	870 R		UG/KG	c/J
SW8270C/NONE	SO	072SB-0079-0001-SO	240-18703-21	N	Naphthalene	8.7	7.6	7.6 J		UG/KG	TR
SW8270C/NONE	SO	072SB-0080-0001-SO	240-18703-22	FD	2,4-Dinitrophenol	390	390	390 UJ		UG/KG	J
SW8270C/NONE	SO	072SB-0080-0001-SO	240-18703-22	FD	3,3'-Dichlorobenzidine	120	120	120 UJ		UG/KG	V1
SW8270C/NONE	SO	072SB-0080-0001-SO	240-18703-22	FD	4,6-Dinitro-2-Methylphenol	180	180	180 UJ		UG/KG	J
SW8270C/NONE	SO	072SB-0080-0001-SO	240-18703-22	FD	Benzo(b)fluoranthene	7.8	6.1	6.1 J		UG/KG	TR
SW8270C/NONE	SO	072SB-0080-0001-SO	240-18703-22	FD	Benzoic acid	770	770	770 R		UG/KG	c/J
SW8270C/NONE	SO	072SB-0080-0001-SO	240-18703-22	FD	bis(2-Ethylhexyl) Phthalate	59.0	31.0	59.0 U		UG/KG	L
SW8270C/NONE	SO	072SB-0080-0001-SO	240-18703-22	FD	Chrysene	7.8	4.5	4.5 J		UG/KG	TR
SW8270C/NONE	SO	072SB-0081-0001-SO	240-18703-23	N	4-Nitroaniline	230	230	230 UJ		UG/KG	V1
SW8270C/NONE	SO	072SB-0081-0001-SO	240-18703-23	N	Benzoic acid	740	740	740 R		UG/KG	c
SW8270C/NONE	SO	072SB-0081-0001-SO	240-18703-23	N	bis(2-Ethylhexyl) Phthalate	56.0	31.0	31.0 J		UG/KG	TR
SW8270C/NONE	SO	072SB-0081-0001-SO	240-18703-23	N	Di-n-Butyl Phthalate	56.0	56.0	56.0 UJ		UG/KG	V1
SW8270C/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	2,4-Dinitrophenol	390	390	390 UJ		UG/KG	J
SW8270C/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	3,3'-Dichlorobenzidine	120	120	120 UJ		UG/KG	V1

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Qualified Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Bias	Units	Reason
SW8270C/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	4,6-Dinitro-2-Methylphenol	180	180	180 UJ		UG/KG	J
SW8270C/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	Benzo(k)fluoranthene	7.8	5.6	5.6 J		UG/KG	TR
SW8270C/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	Benzoic acid	770	770	770 R		UG/KG	c/J
SW8270C/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	Dibenzofuran	59.0	12.0	12.0 J		UG/KG	TR
SW8270C/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	Indeno(1,2,3-c,d)pyrene	7.8	7.6	7.6 J		UG/KG	TR
SW8270C/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	Naphthalene	7.8	7.0	7.0 J		UG/KG	TR
SW8270C/NONE	SO	072SB-0083-0001-SO	240-18703-9	N	2,4-Dinitrophenol	380	380	380 UJ		UG/KG	J
SW8270C/NONE	SO	072SB-0083-0001-SO	240-18703-9	N	3,3'-Dichlorobenzidine	120	120	120 UJ		UG/KG	V1
SW8270C/NONE	SO	072SB-0083-0001-SO	240-18703-9	N	4,6-Dinitro-2-Methylphenol	170	170	170 UJ		UG/KG	J
SW8270C/NONE	SO	072SB-0083-0001-SO	240-18703-9	N	Benzoic acid	760	760	760 R		UG/KG	c/J
SW8270C/NONE	SO	072SB-0084-0001-SO	240-18703-10	N	2,4-Dinitrophenol	380	380	380 UJ		UG/KG	J
SW8270C/NONE	SO	072SB-0084-0001-SO	240-18703-10	N	3,3'-Dichlorobenzidine	120	120	120 UJ		UG/KG	V1
SW8270C/NONE	SO	072SB-0084-0001-SO	240-18703-10	N	4,6-Dinitro-2-Methylphenol	170	170	170 UJ		UG/KG	J
SW8270C/NONE	SO	072SB-0084-0001-SO	240-18703-10	N	Benzoic acid	760	760	760 R		UG/KG	c/J
SW8270C/NONE	SO	072SB-0084-0001-SO	240-18703-10	N	Chrysene	7.7	5.3	5.3 J		UG/KG	TR
SW8270C/NONE	SO	072SB-0085-0001-SO	240-18703-11	N	2,4-Dinitrophenol	390	390	390 UJ		UG/KG	J
SW8270C/NONE	SO	072SB-0085-0001-SO	240-18703-11	N	3,3'-Dichlorobenzidine	120	120	120 UJ		UG/KG	V1
SW8270C/NONE	SO	072SB-0085-0001-SO	240-18703-11	N	4,6-Dinitro-2-Methylphenol	180	180	180 UJ		UG/KG	J
SW8270C/NONE	SO	072SB-0085-0001-SO	240-18703-11	N	Benzoic acid	770	770	770 R		UG/KG	c/J
SW8270C/NONE	SO	072SB-0086-0001-SO	240-18703-12	FD	2,4-Dinitrophenol	380	380	380 UJ		UG/KG	J
SW8270C/NONE	SO	072SB-0086-0001-SO	240-18703-12	FD	3,3'-Dichlorobenzidine	120	120	120 UJ		UG/KG	V1
SW8270C/NONE	SO	072SB-0086-0001-SO	240-18703-12	FD	4,6-Dinitro-2-Methylphenol	170	170	170 UJ		UG/KG	J
SW8270C/NONE	SO	072SB-0086-0001-SO	240-18703-12	FD	Benzoic acid	760	760	760 R		UG/KG	c/J
SW8270C/NONE	SO	072SB-0087-0001-SO	240-18703-13	N	2,4-Dinitrophenol	360	360	360 UJ		UG/KG	J
SW8270C/NONE	SO	072SB-0087-0001-SO	240-18703-13	N	2-Methylnaphthalene	7.2	3.9	3.9 J		UG/KG	TR
SW8270C/NONE	SO	072SB-0087-0001-SO	240-18703-13	N	3,3'-Dichlorobenzidine	110	110	110 UJ		UG/KG	V1
SW8270C/NONE	SO	072SB-0087-0001-SO	240-18703-13	N	4,6-Dinitro-2-Methylphenol	160	160	160 UJ		UG/KG	J
SW8270C/NONE	SO	072SB-0087-0001-SO	240-18703-13	N	Benzo(k)fluoranthene	7.2	3.6	3.6 J		UG/KG	TR
SW8270C/NONE	SO	072SB-0087-0001-SO	240-18703-13	N	Benzoic acid	710	710	710 R		UG/KG	c/J

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Qualified Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Bias	Units	Reason
SW8270C/NONE	SO	072SB-0087-0001-SO	240-18703-13	N	Chrysene	7.2	5.5	5.5 J		UG/KG	TR
SW8270C/NONE	SO	072SB-0087-0001-SO	240-18703-13	N	Phenanthrene	7.2	3.6	3.6 J		UG/KG	TR
SW8270C/NONE	SO	072SB-0088-0001-SO	240-18703-14	N	2,4-Dinitrophenol	360	360	360 UJ		UG/KG	J
SW8270C/NONE	SO	072SB-0088-0001-SO	240-18703-14	N	3,3'-Dichlorobenzidine	110	110	110 UJ		UG/KG	V1
SW8270C/NONE	SO	072SB-0088-0001-SO	240-18703-14	N	4,6-Dinitro-2-Methylphenol	160	160	160 UJ		UG/KG	J
SW8270C/NONE	SO	072SB-0088-0001-SO	240-18703-14	N	Benzoic acid	720	720	720 R		UG/KG	c/J
SW8270C/NONE	SO	072SB-0088-0001-SO	240-18703-14	N	Fluorene	7.3	5.6	5.6 J		UG/KG	TR
SW8270C/NONE	SO	072SB-0089-0001-SO	240-18703-15	N	2,4-Dinitrophenol	370	370	370 UJ		UG/KG	J
SW8270C/NONE	SO	072SB-0089-0001-SO	240-18703-15	N	3,3'-Dichlorobenzidine	110	110	110 UJ		UG/KG	V1
SW8270C/NONE	SO	072SB-0089-0001-SO	240-18703-15	N	4,6-Dinitro-2-Methylphenol	170	170	170 UJ		UG/KG	J
SW8270C/NONE	SO	072SB-0089-0001-SO	240-18703-15	N	Benzoic acid	740	740	740 R		UG/KG	c/J
SW8270C/NONE	SO	072SB-0089-0001-SO	240-18703-15	N	bis(2-Ethylhexyl) Phthalate	56.0	21.0	56.0 U		UG/KG	L
SW8270C/NONE	SO	072SB-0089-0001-SO	240-18703-15	N	Fluoranthene	7.5	5.5	5.5 J		UG/KG	TR
SW8270C/NONE	SO	072SB-0089-0001-SO	240-18703-15	N	Phenanthrene	7.5	4.1	4.1 J		UG/KG	TR
SW8270C/NONE	SO	072SB-0089-0001-SO	240-18703-15	N	Pyrene	7.5	3.9	3.9 J		UG/KG	TR
SW8270C/NONE	SO	072SB-0090-0001-SO	240-18703-16	N	2,4-Dinitrophenol	370	370	370 UJ		UG/KG	J
SW8270C/NONE	SO	072SB-0090-0001-SO	240-18703-16	N	3,3'-Dichlorobenzidine	110	110	110 UJ		UG/KG	V1
SW8270C/NONE	SO	072SB-0090-0001-SO	240-18703-16	N	4,6-Dinitro-2-Methylphenol	170	170	170 UJ		UG/KG	J
SW8270C/NONE	SO	072SB-0090-0001-SO	240-18703-16	N	Benzoic acid	740	740	740 R		UG/KG	c/J
SW8270C/NONE	SO	072SB-0090-0001-SO	240-18703-16	N	bis(2-Ethylhexyl) Phthalate	56.0	28.0	56.0 U		UG/KG	L
SW8270C/NONE	SO	072SB-0090-0001-SO	240-18703-16	N	Chrysene	7.5	4.0	4.0 J		UG/KG	TR
SW8270C/NONE	SO	072SB-0090-0001-SO	240-18703-16	N	Fluoranthene	7.5	6.3	6.3 J		UG/KG	TR
SW8270C/NONE	SO	072SB-0090-0001-SO	240-18703-16	N	Phenanthrene	7.5	4.5	4.5 J		UG/KG	TR
SW8270C/NONE	SO	072SB-0090-0001-SO	240-18703-16	N	Pyrene	7.5	5.0	5.0 J		UG/KG	TR
SW8270C/NONE	SO	072SB-0091-0001-SO	240-18703-17	N	2,4-Dinitrophenol	370	370	370 UJ		UG/KG	J
SW8270C/NONE	SO	072SB-0091-0001-SO	240-18703-17	N	3,3'-Dichlorobenzidine	110	110	110 UJ		UG/KG	V1
SW8270C/NONE	SO	072SB-0091-0001-SO	240-18703-17	N	4,6-Dinitro-2-Methylphenol	170	170	170 UJ		UG/KG	J
SW8270C/NONE	SO	072SB-0091-0001-SO	240-18703-17	N	Benzoic acid	750	750	750 R		UG/KG	c/J
SW8270C/NONE	WG	076-0140-0001-ER	240-18703-24	N	4-Nitrophenol	4.8	4.8	4.8 UJ		UG/L	V2

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Detected Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
M8015D/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	C10-C20 Diesel Range Organics	20.0	220	220	MG/KG	
M8015D/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	C20-C34 Motor Oil Range Organics	20.0	25.0	25.0	MG/KG	
M8015D/NONE	SO	072SB-0088-0001-SO	240-18703-14	N	C20-C34 Motor Oil Range Organics	18.0	11.0	11.0 J	MG/KG	TR
M8015D/NONE	SO	072SB-0090-0001-SO	240-18703-16	N	C20-C34 Motor Oil Range Organics	18.0	14.0	14.0 J	MG/KG	TR

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
M8015V/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	Petroleum Hydrocarbons C6-C12	94.0	70.0	70.0 J	UG/KG	TR/D1
M8015V/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	Petroleum Hydrocarbons C6-C12	97.0	2200	2200 J +	UG/KG	I/D1
M8015V/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	Petroleum Hydrocarbons C6-C12	5000	2900	2900 J	UG/KG	TR/D1
M8015V/NONE	SO	072SB-0079-0001-SO	240-18703-21	N	Petroleum Hydrocarbons C6-C12	110	860	860	UG/KG	
M8015V/NONE	SO	072SB-0080-0001-SO	240-18703-22	FD	Petroleum Hydrocarbons C6-C12	5100	4200	4200 J	UG/KG	TR
M8015V/NONE	SO	072SB-0080-0001-SO	240-18703-22	FD	Petroleum Hydrocarbons C6-C12	78.0	3200	3200 J +	UG/KG	I
M8015V/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	Petroleum Hydrocarbons C6-C12	8800	43000	43000	UG/KG	
M8015V/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	Petroleum Hydrocarbons C6-C12	8800	37000	37000	UG/KG	
M8015V/NONE	SO	072SB-0089-0001-SO	240-18703-15	N	Petroleum Hydrocarbons C6-C12	99.0	54.0	54.0 J	UG/KG	TR
M8015V/NONE	WG	076-0141-0001-TB	240-18703-25	N	Petroleum Hydrocarbons C6-C12	100	27.0	27.0 J	UG/L	TR
M8015V/NONE	WG	076SB-0143-0001-TB	240-18703-5	N	Petroleum Hydrocarbons C6-C12	100	29.0	29.0 J	UG/L	TR
M8015V/NONE	WG	076SB-0144-0001-TB	240-18703-6	N	Petroleum Hydrocarbons C6-C12	100	27.0	27.0 J	UG/L	TR

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW6020/NONE	SO	072SB-0075-0001-SO	240-18703-18	N	Silver	0.11	0.044	0.044 J	MG/KG	TR
SW6020/NONE	SO	072SB-0075-0001-SO	240-18703-18	N	Aluminum	3.2	14000	14000	MG/KG	
SW6020/NONE	SO	072SB-0075-0001-SO	240-18703-18	N	Arsenic	0.11	12.0	12.0	MG/KG	
SW6020/NONE	SO	072SB-0075-0001-SO	240-18703-18	N	Barium	1.1	53.0	53.0	MG/KG	
SW6020/NONE	SO	072SB-0075-0001-SO	240-18703-18	N	Beryllium	0.11	0.63	0.63	MG/KG	
SW6020/NONE	SO	072SB-0075-0001-SO	240-18703-18	N	Calcium	11.0	2000	2000	MG/KG	
SW6020/NONE	SO	072SB-0075-0001-SO	240-18703-18	N	Cadmium	0.11	0.16	0.16	MG/KG	
SW6020/NONE	SO	072SB-0075-0001-SO	240-18703-18	N	Cobalt	0.054	11.0	11.0	MG/KG	
SW6020/NONE	SO	072SB-0075-0001-SO	240-18703-18	N	Chromium	0.21	19.0	19.0	MG/KG	
SW6020/NONE	SO	072SB-0075-0001-SO	240-18703-18	N	Copper	0.21	19.0	19.0	MG/KG	

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Detected Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW6020/NONE	SO	072SB-0075-0001-SO	240-18703-18	N	Iron	5.4	28000	28000	MG/KG	
SW6020/NONE	SO	072SB-0075-0001-SO	240-18703-18	N	Potassium	11.0	2100	2100	MG/KG	
SW6020/NONE	SO	072SB-0075-0001-SO	240-18703-18	N	Magnesium	11.0	4800	4800	MG/KG	
SW6020/NONE	SO	072SB-0075-0001-SO	240-18703-18	N	Manganese	0.54	180	180	MG/KG	
SW6020/NONE	SO	072SB-0075-0001-SO	240-18703-18	N	Sodium	11.0	77.0	77.0	MG/KG	
SW6020/NONE	SO	072SB-0075-0001-SO	240-18703-18	N	Nickel	0.11	28.0	28.0	MG/KG	
SW6020/NONE	SO	072SB-0075-0001-SO	240-18703-18	N	Lead	0.11	12.0	12.0	MG/KG	
SW6020/NONE	SO	072SB-0075-0001-SO	240-18703-18	N	Selenium	0.54	0.50	0.50 J	MG/KG	TR
SW6020/NONE	SO	072SB-0075-0001-SO	240-18703-18	N	Thallium	0.11	0.17	0.17	MG/KG	
SW6020/NONE	SO	072SB-0075-0001-SO	240-18703-18	N	Vanadium	0.11	19.0	19.0	MG/KG	
SW6020/NONE	SO	072SB-0075-0001-SO	240-18703-18	N	Zinc	0.54	66.0	66.0	MG/KG	
SW6020/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	Silver	0.11	0.037	0.037 J	MG/KG	TR
SW6020/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	Aluminum	3.3	12000	12000	MG/KG	
SW6020/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	Arsenic	0.11	14.0	14.0	MG/KG	
SW6020/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	Barium	1.1	56.0	56.0 J	MG/KG	d
SW6020/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	Beryllium	0.11	0.55	0.55	MG/KG	
SW6020/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	Calcium	11.0	1300	1300	MG/KG	
SW6020/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	Cadmium	0.11	0.18	0.18	MG/KG	
SW6020/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	Cobalt	0.055	9.2	9.2	MG/KG	
SW6020/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	Chromium	0.22	14.0	14.0	MG/KG	
SW6020/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	Copper	0.22	14.0	14.0	MG/KG	
SW6020/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	Iron	5.5	24000	24000	MG/KG	
SW6020/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	Potassium	11.0	1200	1200	MG/KG	
SW6020/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	Magnesium	11.0	2600	2600	MG/KG	
SW6020/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	Manganese	0.55	330	330 J	MG/KG	d
SW6020/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	Sodium	11.0	45.0	45.0	MG/KG	
SW6020/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	Nickel	0.11	19.0	19.0	MG/KG	
SW6020/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	Lead	0.11	20.0	20.0	MG/KG	

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Detected Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW6020/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	Selenium	0.55	0.56	0.56	MG/KG	
SW6020/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	Thallium	0.11	0.15	0.15	MG/KG	
SW6020/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	Vanadium	0.11	19.0	19.0	MG/KG	
SW6020/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	Zinc	0.55	52.0	52.0	MG/KG	
SW6020/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	Silver	0.11	0.045	0.045 J	MG/KG	TR
SW6020/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	Aluminum	3.3	11000	11000	MG/KG	
SW6020/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	Arsenic	0.11	15.0	15.0	MG/KG	
SW6020/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	Barium	1.1	95.0	95.0 J	MG/KG	d
SW6020/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	Beryllium	0.11	0.56	0.56	MG/KG	
SW6020/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	Calcium	11.0	1400	1400	MG/KG	
SW6020/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	Cadmium	0.11	0.22	0.22	MG/KG	
SW6020/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	Cobalt	0.055	15.0	15.0	MG/KG	
SW6020/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	Chromium	0.22	13.0	13.0	MG/KG	
SW6020/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	Copper	0.22	9.9	9.9	MG/KG	
SW6020/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	Iron	5.5	24000	24000	MG/KG	
SW6020/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	Potassium	11.0	820	820	MG/KG	
SW6020/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	Magnesium	11.0	2000	2000	MG/KG	
SW6020/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	Manganese	0.55	1700	1700 J	MG/KG	d
SW6020/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	Sodium	11.0	36.0	36.0	MG/KG	
SW6020/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	Nickel	0.11	15.0	15.0	MG/KG	
SW6020/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	Lead	0.11	19.0	19.0	MG/KG	
SW6020/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	Selenium	0.55	0.70	0.70	MG/KG	
SW6020/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	Thallium	0.11	0.16	0.16	MG/KG	
SW6020/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	Vanadium	0.11	21.0	21.0	MG/KG	
SW6020/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	Zinc	0.55	45.0	45.0	MG/KG	
SW6020/NONE	SO	072SB-0079-0001-SO	240-18703-21	N	Silver	0.12	0.042	0.042 J	MG/KG	TR
SW6020/NONE	SO	072SB-0079-0001-SO	240-18703-21	N	Aluminum	3.7	13000	13000	MG/KG	
SW6020/NONE	SO	072SB-0079-0001-SO	240-18703-21	N	Arsenic	0.12	14.0	14.0	MG/KG	

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Detected Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW6020/NONE	SO	072SB-0079-0001-SO	240-18703-21	N	Barium	1.2	69.0	69.0	MG/KG	
SW6020/NONE	SO	072SB-0079-0001-SO	240-18703-21	N	Beryllium	0.12	0.60	0.60	MG/KG	
SW6020/NONE	SO	072SB-0079-0001-SO	240-18703-21	N	Calcium	12.0	1600	1600	MG/KG	
SW6020/NONE	SO	072SB-0079-0001-SO	240-18703-21	N	Cadmium	0.12	0.20	0.20	MG/KG	
SW6020/NONE	SO	072SB-0079-0001-SO	240-18703-21	N	Cobalt	0.062	10.0	10.0	MG/KG	
SW6020/NONE	SO	072SB-0079-0001-SO	240-18703-21	N	Chromium	0.25	16.0	16.0	MG/KG	
SW6020/NONE	SO	072SB-0079-0001-SO	240-18703-21	N	Copper	0.25	14.0	14.0	MG/KG	
SW6020/NONE	SO	072SB-0079-0001-SO	240-18703-21	N	Iron	6.2	30000	30000	MG/KG	
SW6020/NONE	SO	072SB-0079-0001-SO	240-18703-21	N	Potassium	12.0	1100	1100	MG/KG	
SW6020/NONE	SO	072SB-0079-0001-SO	240-18703-21	N	Magnesium	12.0	2700	2700	MG/KG	
SW6020/NONE	SO	072SB-0079-0001-SO	240-18703-21	N	Manganese	0.62	660	660	MG/KG	
SW6020/NONE	SO	072SB-0079-0001-SO	240-18703-21	N	Sodium	12.0	44.0	44.0	MG/KG	
SW6020/NONE	SO	072SB-0079-0001-SO	240-18703-21	N	Nickel	0.12	19.0	19.0	MG/KG	
SW6020/NONE	SO	072SB-0079-0001-SO	240-18703-21	N	Lead	0.12	46.0	46.0	MG/KG	
SW6020/NONE	SO	072SB-0079-0001-SO	240-18703-21	N	Selenium	0.62	0.76	0.76	MG/KG	
SW6020/NONE	SO	072SB-0079-0001-SO	240-18703-21	N	Thallium	0.12	0.18	0.18	MG/KG	
SW6020/NONE	SO	072SB-0079-0001-SO	240-18703-21	N	Vanadium	0.12	24.0	24.0	MG/KG	
SW6020/NONE	SO	072SB-0079-0001-SO	240-18703-21	N	Zinc	0.62	57.0	57.0	MG/KG	
SW6020/NONE	SO	072SB-0080-0001-SO	240-18703-22	FD	Silver	0.11	0.032	0.032 J	MG/KG	TR
SW6020/NONE	SO	072SB-0080-0001-SO	240-18703-22	FD	Aluminum	3.2	13000	13000	MG/KG	
SW6020/NONE	SO	072SB-0080-0001-SO	240-18703-22	FD	Arsenic	0.11	17.0	17.0	MG/KG	
SW6020/NONE	SO	072SB-0080-0001-SO	240-18703-22	FD	Barium	1.1	47.0	47.0	MG/KG	
SW6020/NONE	SO	072SB-0080-0001-SO	240-18703-22	FD	Beryllium	0.11	0.63	0.63	MG/KG	
SW6020/NONE	SO	072SB-0080-0001-SO	240-18703-22	FD	Calcium	11.0	4600	4600	MG/KG	
SW6020/NONE	SO	072SB-0080-0001-SO	240-18703-22	FD	Cadmium	0.11	0.25	0.25	MG/KG	
SW6020/NONE	SO	072SB-0080-0001-SO	240-18703-22	FD	Cobalt	0.053	14.0	14.0	MG/KG	
SW6020/NONE	SO	072SB-0080-0001-SO	240-18703-22	FD	Chromium	0.21	18.0	18.0	MG/KG	
SW6020/NONE	SO	072SB-0080-0001-SO	240-18703-22	FD	Copper	0.21	19.0	19.0	MG/KG	

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Detected Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW6020/NONE	SO	072SB-0080-0001-SO	240-18703-22	FD	Iron	5.3	31000	31000	MG/KG	
SW6020/NONE	SO	072SB-0080-0001-SO	240-18703-22	FD	Potassium	11.0	2200	2200	MG/KG	
SW6020/NONE	SO	072SB-0080-0001-SO	240-18703-22	FD	Magnesium	11.0	5800	5800	MG/KG	
SW6020/NONE	SO	072SB-0080-0001-SO	240-18703-22	FD	Manganese	0.53	350	350	MG/KG	
SW6020/NONE	SO	072SB-0080-0001-SO	240-18703-22	FD	Sodium	11.0	74.0	74.0	MG/KG	
SW6020/NONE	SO	072SB-0080-0001-SO	240-18703-22	FD	Nickel	0.11	30.0	30.0	MG/KG	
SW6020/NONE	SO	072SB-0080-0001-SO	240-18703-22	FD	Lead	0.11	13.0	13.0	MG/KG	
SW6020/NONE	SO	072SB-0080-0001-SO	240-18703-22	FD	Selenium	0.53	0.46	0.46 J	MG/KG	TR
SW6020/NONE	SO	072SB-0080-0001-SO	240-18703-22	FD	Thallium	0.11	0.14	0.14	MG/KG	
SW6020/NONE	SO	072SB-0080-0001-SO	240-18703-22	FD	Vanadium	0.11	18.0	18.0	MG/KG	
SW6020/NONE	SO	072SB-0080-0001-SO	240-18703-22	FD	Zinc	0.53	130	130	MG/KG	
SW6020/NONE	SO	072SB-0081-0001-SO	240-18703-23	N	Silver	0.099	0.033	0.033 J	MG/KG	TR
SW6020/NONE	SO	072SB-0081-0001-SO	240-18703-23	N	Aluminum	3.0	14000	14000	MG/KG	
SW6020/NONE	SO	072SB-0081-0001-SO	240-18703-23	N	Arsenic	0.099	17.0	17.0	MG/KG	
SW6020/NONE	SO	072SB-0081-0001-SO	240-18703-23	N	Barium	0.99	44.0	44.0	MG/KG	
SW6020/NONE	SO	072SB-0081-0001-SO	240-18703-23	N	Beryllium	0.099	0.66	0.66	MG/KG	
SW6020/NONE	SO	072SB-0081-0001-SO	240-18703-23	N	Calcium	9.9	4300	4300	MG/KG	
SW6020/NONE	SO	072SB-0081-0001-SO	240-18703-23	N	Cadmium	0.099	0.15	0.15	MG/KG	
SW6020/NONE	SO	072SB-0081-0001-SO	240-18703-23	N	Cobalt	0.049	12.0	12.0	MG/KG	
SW6020/NONE	SO	072SB-0081-0001-SO	240-18703-23	N	Chromium	0.20	18.0	18.0	MG/KG	
SW6020/NONE	SO	072SB-0081-0001-SO	240-18703-23	N	Copper	0.20	18.0	18.0	MG/KG	
SW6020/NONE	SO	072SB-0081-0001-SO	240-18703-23	N	Iron	4.9	30000	30000	MG/KG	
SW6020/NONE	SO	072SB-0081-0001-SO	240-18703-23	N	Potassium	9.9	2200	2200	MG/KG	
SW6020/NONE	SO	072SB-0081-0001-SO	240-18703-23	N	Magnesium	9.9	5800	5800	MG/KG	
SW6020/NONE	SO	072SB-0081-0001-SO	240-18703-23	N	Manganese	0.49	250	250	MG/KG	
SW6020/NONE	SO	072SB-0081-0001-SO	240-18703-23	N	Sodium	9.9	80.0	80.0	MG/KG	
SW6020/NONE	SO	072SB-0081-0001-SO	240-18703-23	N	Nickel	0.099	28.0	28.0	MG/KG	
SW6020/NONE	SO	072SB-0081-0001-SO	240-18703-23	N	Lead	0.099	12.0	12.0	MG/KG	

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Detected Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW6020/NONE	SO	072SB-0081-0001-SO	240-18703-23	N	Selenium	0.49	0.51	0.51	MG/KG	
SW6020/NONE	SO	072SB-0081-0001-SO	240-18703-23	N	Thallium	0.099	0.14	0.14	MG/KG	
SW6020/NONE	SO	072SB-0081-0001-SO	240-18703-23	N	Vanadium	0.099	19.0	19.0	MG/KG	
SW6020/NONE	SO	072SB-0081-0001-SO	240-18703-23	N	Zinc	0.49	60.0	60.0	MG/KG	
SW6020/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	Silver	0.11	0.031	0.031 J	MG/KG	TR
SW6020/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	Aluminum	3.4	10000	10000	MG/KG	
SW6020/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	Arsenic	0.11	15.0	15.0	MG/KG	
SW6020/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	Barium	1.1	38.0	38.0	MG/KG	
SW6020/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	Beryllium	0.11	0.47	0.47	MG/KG	
SW6020/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	Calcium	11.0	7500	7500	MG/KG	
SW6020/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	Cadmium	0.11	0.14	0.14	MG/KG	
SW6020/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	Cobalt	0.057	12.0	12.0	MG/KG	
SW6020/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	Chromium	0.23	14.0	14.0	MG/KG	
SW6020/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	Copper	0.23	55.0	55.0	MG/KG	
SW6020/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	Iron	5.7	26000	26000	MG/KG	
SW6020/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	Potassium	11.0	1600	1600	MG/KG	
SW6020/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	Magnesium	11.0	5500	5500	MG/KG	
SW6020/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	Manganese	0.57	440	440	MG/KG	
SW6020/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	Sodium	11.0	83.0	83.0	MG/KG	
SW6020/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	Nickel	0.11	27.0	27.0	MG/KG	
SW6020/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	Lead	0.11	13.0	13.0	MG/KG	
SW6020/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	Selenium	0.57	0.54	0.54 J	MG/KG	TR
SW6020/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	Thallium	0.11	0.15	0.15	MG/KG	
SW6020/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	Vanadium	0.11	16.0	16.0	MG/KG	
SW6020/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	Zinc	0.57	55.0	55.0	MG/KG	
SW6020/NONE	SO	072SB-0083-0001-SO	240-18703-9	N	Silver	0.10	0.031	0.031 J	MG/KG	TR
SW6020/NONE	SO	072SB-0083-0001-SO	240-18703-9	N	Aluminum	3.1	9800	9800	MG/KG	
SW6020/NONE	SO	072SB-0083-0001-SO	240-18703-9	N	Arsenic	0.10	16.0	16.0	MG/KG	

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Detected Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW6020/NONE	SO	072SB-0083-0001-SO	240-18703-9	N	Barium	1.0	33.0	33.0	MG/KG	
SW6020/NONE	SO	072SB-0083-0001-SO	240-18703-9	N	Beryllium	0.10	0.46	0.46	MG/KG	
SW6020/NONE	SO	072SB-0083-0001-SO	240-18703-9	N	Calcium	10.0	11000	11000 J	MG/KG	A
SW6020/NONE	SO	072SB-0083-0001-SO	240-18703-9	N	Cadmium	0.10	0.14	0.14	MG/KG	
SW6020/NONE	SO	072SB-0083-0001-SO	240-18703-9	N	Cobalt	0.051	11.0	11.0	MG/KG	
SW6020/NONE	SO	072SB-0083-0001-SO	240-18703-9	N	Chromium	0.21	14.0	14.0 J	MG/KG	A
SW6020/NONE	SO	072SB-0083-0001-SO	240-18703-9	N	Copper	0.21	20.0	20.0	MG/KG	
SW6020/NONE	SO	072SB-0083-0001-SO	240-18703-9	N	Iron	5.1	26000	26000	MG/KG	
SW6020/NONE	SO	072SB-0083-0001-SO	240-18703-9	N	Potassium	10.0	1600	1600 J	MG/KG	A
SW6020/NONE	SO	072SB-0083-0001-SO	240-18703-9	N	Magnesium	10.0	8700	8700 J	MG/KG	A
SW6020/NONE	SO	072SB-0083-0001-SO	240-18703-9	N	Manganese	0.51	400	400	MG/KG	
SW6020/NONE	SO	072SB-0083-0001-SO	240-18703-9	N	Sodium	10.0	100	100	MG/KG	
SW6020/NONE	SO	072SB-0083-0001-SO	240-18703-9	N	Nickel	0.10	25.0	25.0	MG/KG	
SW6020/NONE	SO	072SB-0083-0001-SO	240-18703-9	N	Lead	0.10	12.0	12.0	MG/KG	
SW6020/NONE	SO	072SB-0083-0001-SO	240-18703-9	N	Selenium	0.51	0.47	0.47 J	MG/KG	TR
SW6020/NONE	SO	072SB-0083-0001-SO	240-18703-9	N	Thallium	0.10	0.15	0.15	MG/KG	
SW6020/NONE	SO	072SB-0083-0001-SO	240-18703-9	N	Vanadium	0.10	15.0	15.0	MG/KG	
SW6020/NONE	SO	072SB-0083-0001-SO	240-18703-9	N	Zinc	0.51	55.0	55.0	MG/KG	
SW6020/NONE	SO	072SB-0084-0001-SO	240-18703-10	N	Silver	0.11	0.031	0.031 J	MG/KG	TR
SW6020/NONE	SO	072SB-0084-0001-SO	240-18703-10	N	Aluminum	3.3	10000	10000	MG/KG	
SW6020/NONE	SO	072SB-0084-0001-SO	240-18703-10	N	Arsenic	0.11	17.0	17.0	MG/KG	
SW6020/NONE	SO	072SB-0084-0001-SO	240-18703-10	N	Barium	1.1	35.0	35.0	MG/KG	
SW6020/NONE	SO	072SB-0084-0001-SO	240-18703-10	N	Beryllium	0.11	0.48	0.48	MG/KG	
SW6020/NONE	SO	072SB-0084-0001-SO	240-18703-10	N	Calcium	11.0	7300	7300	MG/KG	
SW6020/NONE	SO	072SB-0084-0001-SO	240-18703-10	N	Cadmium	0.11	0.14	0.14	MG/KG	
SW6020/NONE	SO	072SB-0084-0001-SO	240-18703-10	N	Cobalt	0.055	12.0	12.0	MG/KG	
SW6020/NONE	SO	072SB-0084-0001-SO	240-18703-10	N	Chromium	0.22	14.0	14.0	MG/KG	
SW6020/NONE	SO	072SB-0084-0001-SO	240-18703-10	N	Copper	0.22	20.0	20.0	MG/KG	

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Detected Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW6020/NONE	SO	072SB-0084-0001-SO	240-18703-10	N	Iron	5.5	27000	27000	MG/KG	
SW6020/NONE	SO	072SB-0084-0001-SO	240-18703-10	N	Potassium	11.0	1700	1700	MG/KG	
SW6020/NONE	SO	072SB-0084-0001-SO	240-18703-10	N	Magnesium	11.0	5300	5300	MG/KG	
SW6020/NONE	SO	072SB-0084-0001-SO	240-18703-10	N	Manganese	0.55	420	420	MG/KG	
SW6020/NONE	SO	072SB-0084-0001-SO	240-18703-10	N	Sodium	11.0	72.0	72.0	MG/KG	
SW6020/NONE	SO	072SB-0084-0001-SO	240-18703-10	N	Nickel	0.11	26.0	26.0	MG/KG	
SW6020/NONE	SO	072SB-0084-0001-SO	240-18703-10	N	Lead	0.11	12.0	12.0	MG/KG	
SW6020/NONE	SO	072SB-0084-0001-SO	240-18703-10	N	Antimony	0.22	0.30	0.30	MG/KG	
SW6020/NONE	SO	072SB-0084-0001-SO	240-18703-10	N	Selenium	0.55	0.49	0.49 J	MG/KG	TR
SW6020/NONE	SO	072SB-0084-0001-SO	240-18703-10	N	Thallium	0.11	0.17	0.17	MG/KG	
SW6020/NONE	SO	072SB-0084-0001-SO	240-18703-10	N	Vanadium	0.11	15.0	15.0	MG/KG	
SW6020/NONE	SO	072SB-0084-0001-SO	240-18703-10	N	Zinc	0.55	56.0	56.0	MG/KG	
SW6020/NONE	SO	072SB-0085-0001-SO	240-18703-11	N	Silver	0.11	0.030	0.030 J	MG/KG	TR
SW6020/NONE	SO	072SB-0085-0001-SO	240-18703-11	N	Aluminum	3.4	9600	9600	MG/KG	
SW6020/NONE	SO	072SB-0085-0001-SO	240-18703-11	N	Arsenic	0.11	18.0	18.0	MG/KG	
SW6020/NONE	SO	072SB-0085-0001-SO	240-18703-11	N	Barium	1.1	32.0	32.0	MG/KG	
SW6020/NONE	SO	072SB-0085-0001-SO	240-18703-11	N	Beryllium	0.11	0.44	0.44	MG/KG	
SW6020/NONE	SO	072SB-0085-0001-SO	240-18703-11	N	Calcium	11.0	8400	8400	MG/KG	
SW6020/NONE	SO	072SB-0085-0001-SO	240-18703-11	N	Cadmium	0.11	0.13	0.13	MG/KG	
SW6020/NONE	SO	072SB-0085-0001-SO	240-18703-11	N	Cobalt	0.056	11.0	11.0	MG/KG	
SW6020/NONE	SO	072SB-0085-0001-SO	240-18703-11	N	Chromium	0.23	13.0	13.0	MG/KG	
SW6020/NONE	SO	072SB-0085-0001-SO	240-18703-11	N	Copper	0.23	19.0	19.0	MG/KG	
SW6020/NONE	SO	072SB-0085-0001-SO	240-18703-11	N	Iron	5.6	25000	25000	MG/KG	
SW6020/NONE	SO	072SB-0085-0001-SO	240-18703-11	N	Potassium	11.0	1600	1600	MG/KG	
SW6020/NONE	SO	072SB-0085-0001-SO	240-18703-11	N	Magnesium	11.0	5300	5300	MG/KG	
SW6020/NONE	SO	072SB-0085-0001-SO	240-18703-11	N	Manganese	0.56	380	380	MG/KG	
SW6020/NONE	SO	072SB-0085-0001-SO	240-18703-11	N	Sodium	11.0	72.0	72.0	MG/KG	
SW6020/NONE	SO	072SB-0085-0001-SO	240-18703-11	N	Nickel	0.11	23.0	23.0	MG/KG	

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Detected Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW6020/NONE	SO	072SB-0085-0001-SO	240-18703-11	N	Lead	0.11	13.0	13.0	MG/KG	
SW6020/NONE	SO	072SB-0085-0001-SO	240-18703-11	N	Antimony	0.23	0.077	0.077 J	MG/KG	TR
SW6020/NONE	SO	072SB-0085-0001-SO	240-18703-11	N	Selenium	0.56	0.46	0.46 J	MG/KG	TR
SW6020/NONE	SO	072SB-0085-0001-SO	240-18703-11	N	Thallium	0.11	0.14	0.14	MG/KG	
SW6020/NONE	SO	072SB-0085-0001-SO	240-18703-11	N	Vanadium	0.11	15.0	15.0	MG/KG	
SW6020/NONE	SO	072SB-0085-0001-SO	240-18703-11	N	Zinc	0.56	52.0	52.0	MG/KG	
SW6020/NONE	SO	072SB-0086-0001-SO	240-18703-12	FD	Silver	0.10	0.022	0.022 J	MG/KG	TR
SW6020/NONE	SO	072SB-0086-0001-SO	240-18703-12	FD	Aluminum	3.0	8900	8900	MG/KG	
SW6020/NONE	SO	072SB-0086-0001-SO	240-18703-12	FD	Arsenic	0.10	13.0	13.0	MG/KG	
SW6020/NONE	SO	072SB-0086-0001-SO	240-18703-12	FD	Barium	1.0	27.0	27.0	MG/KG	
SW6020/NONE	SO	072SB-0086-0001-SO	240-18703-12	FD	Beryllium	0.10	0.35	0.35	MG/KG	
SW6020/NONE	SO	072SB-0086-0001-SO	240-18703-12	FD	Calcium	10.0	5200	5200	MG/KG	
SW6020/NONE	SO	072SB-0086-0001-SO	240-18703-12	FD	Cadmium	0.10	0.092	0.092 J	MG/KG	TR
SW6020/NONE	SO	072SB-0086-0001-SO	240-18703-12	FD	Cobalt	0.051	8.5	8.5	MG/KG	
SW6020/NONE	SO	072SB-0086-0001-SO	240-18703-12	FD	Chromium	0.20	11.0	11.0	MG/KG	
SW6020/NONE	SO	072SB-0086-0001-SO	240-18703-12	FD	Copper	0.20	15.0	15.0	MG/KG	
SW6020/NONE	SO	072SB-0086-0001-SO	240-18703-12	FD	Iron	5.1	22000	22000	MG/KG	
SW6020/NONE	SO	072SB-0086-0001-SO	240-18703-12	FD	Potassium	10.0	1400	1400	MG/KG	
SW6020/NONE	SO	072SB-0086-0001-SO	240-18703-12	FD	Magnesium	10.0	4200	4200	MG/KG	
SW6020/NONE	SO	072SB-0086-0001-SO	240-18703-12	FD	Manganese	0.51	260	260	MG/KG	
SW6020/NONE	SO	072SB-0086-0001-SO	240-18703-12	FD	Sodium	10.0	63.0	63.0	MG/KG	
SW6020/NONE	SO	072SB-0086-0001-SO	240-18703-12	FD	Nickel	0.10	19.0	19.0	MG/KG	
SW6020/NONE	SO	072SB-0086-0001-SO	240-18703-12	FD	Lead	0.10	9.3	9.3	MG/KG	
SW6020/NONE	SO	072SB-0086-0001-SO	240-18703-12	FD	Selenium	0.51	0.40	0.40 J	MG/KG	TR
SW6020/NONE	SO	072SB-0086-0001-SO	240-18703-12	FD	Thallium	0.10	0.10	0.10	MG/KG	
SW6020/NONE	SO	072SB-0086-0001-SO	240-18703-12	FD	Vanadium	0.10	13.0	13.0	MG/KG	
SW6020/NONE	SO	072SB-0086-0001-SO	240-18703-12	FD	Zinc	0.51	44.0	44.0	MG/KG	
SW6020/NONE	SO	072SB-0087-0001-SO	240-18703-13	N	Silver	0.091	0.022	0.022 J	MG/KG	TR

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Detected Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW6020/NONE	SO	072SB-0087-0001-SO	240-18703-13	N	Aluminum	2.7	7400	7400	MG/KG	
SW6020/NONE	SO	072SB-0087-0001-SO	240-18703-13	N	Arsenic	0.091	8.9	8.9	MG/KG	
SW6020/NONE	SO	072SB-0087-0001-SO	240-18703-13	N	Barium	0.91	39.0	39.0	MG/KG	
SW6020/NONE	SO	072SB-0087-0001-SO	240-18703-13	N	Beryllium	0.091	0.41	0.41	MG/KG	
SW6020/NONE	SO	072SB-0087-0001-SO	240-18703-13	N	Calcium	9.1	1600	1600	MG/KG	
SW6020/NONE	SO	072SB-0087-0001-SO	240-18703-13	N	Cadmium	0.091	0.16	0.16	MG/KG	
SW6020/NONE	SO	072SB-0087-0001-SO	240-18703-13	N	Cobalt	0.045	7.7	7.7	MG/KG	
SW6020/NONE	SO	072SB-0087-0001-SO	240-18703-13	N	Chromium	0.18	10.0	10.0	MG/KG	
SW6020/NONE	SO	072SB-0087-0001-SO	240-18703-13	N	Copper	0.18	13.0	13.0	MG/KG	
SW6020/NONE	SO	072SB-0087-0001-SO	240-18703-13	N	Iron	4.5	19000	19000	MG/KG	
SW6020/NONE	SO	072SB-0087-0001-SO	240-18703-13	N	Potassium	9.1	1000	1000	MG/KG	
SW6020/NONE	SO	072SB-0087-0001-SO	240-18703-13	N	Magnesium	9.1	2000	2000	MG/KG	
SW6020/NONE	SO	072SB-0087-0001-SO	240-18703-13	N	Manganese	0.45	360	360	MG/KG	
SW6020/NONE	SO	072SB-0087-0001-SO	240-18703-13	N	Sodium	9.1	47.0	47.0	MG/KG	
SW6020/NONE	SO	072SB-0087-0001-SO	240-18703-13	N	Nickel	0.091	16.0	16.0	MG/KG	
SW6020/NONE	SO	072SB-0087-0001-SO	240-18703-13	N	Lead	0.091	13.0	13.0	MG/KG	
SW6020/NONE	SO	072SB-0087-0001-SO	240-18703-13	N	Selenium	0.45	0.41	0.41 J	MG/KG	TR
SW6020/NONE	SO	072SB-0087-0001-SO	240-18703-13	N	Thallium	0.091	0.13	0.13	MG/KG	
SW6020/NONE	SO	072SB-0087-0001-SO	240-18703-13	N	Vanadium	0.091	13.0	13.0	MG/KG	
SW6020/NONE	SO	072SB-0087-0001-SO	240-18703-13	N	Zinc	0.45	53.0	53.0	MG/KG	
SW6020/NONE	SO	072SB-0088-0001-SO	240-18703-14	N	Silver	0.10	0.018	0.018 J	MG/KG	TR
SW6020/NONE	SO	072SB-0088-0001-SO	240-18703-14	N	Aluminum	3.0	5500	5500	MG/KG	
SW6020/NONE	SO	072SB-0088-0001-SO	240-18703-14	N	Arsenic	0.10	6.2	6.2	MG/KG	
SW6020/NONE	SO	072SB-0088-0001-SO	240-18703-14	N	Barium	1.0	30.0	30.0	MG/KG	
SW6020/NONE	SO	072SB-0088-0001-SO	240-18703-14	N	Beryllium	0.10	0.36	0.36	MG/KG	
SW6020/NONE	SO	072SB-0088-0001-SO	240-18703-14	N	Calcium	10.0	1300	1300	MG/KG	
SW6020/NONE	SO	072SB-0088-0001-SO	240-18703-14	N	Cadmium	0.10	0.14	0.14	MG/KG	
SW6020/NONE	SO	072SB-0088-0001-SO	240-18703-14	N	Cobalt	0.050	5.4	5.4	MG/KG	

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Detected Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW6020/NONE	SO	072SB-0088-0001-SO	240-18703-14	N	Chromium	0.20	7.2	7.2	MG/KG	
SW6020/NONE	SO	072SB-0088-0001-SO	240-18703-14	N	Copper	0.20	9.1	9.1	MG/KG	
SW6020/NONE	SO	072SB-0088-0001-SO	240-18703-14	N	Iron	5.0	16000	16000	MG/KG	
SW6020/NONE	SO	072SB-0088-0001-SO	240-18703-14	N	Potassium	10.0	830	830	MG/KG	
SW6020/NONE	SO	072SB-0088-0001-SO	240-18703-14	N	Magnesium	10.0	1400	1400	MG/KG	
SW6020/NONE	SO	072SB-0088-0001-SO	240-18703-14	N	Manganese	0.50	230	230	MG/KG	
SW6020/NONE	SO	072SB-0088-0001-SO	240-18703-14	N	Sodium	10.0	54.0	54.0	MG/KG	
SW6020/NONE	SO	072SB-0088-0001-SO	240-18703-14	N	Nickel	0.10	12.0	12.0	MG/KG	
SW6020/NONE	SO	072SB-0088-0001-SO	240-18703-14	N	Lead	0.10	12.0	12.0	MG/KG	
SW6020/NONE	SO	072SB-0088-0001-SO	240-18703-14	N	Selenium	0.50	0.32	0.32 J	MG/KG	TR
SW6020/NONE	SO	072SB-0088-0001-SO	240-18703-14	N	Thallium	0.10	0.11	0.11	MG/KG	
SW6020/NONE	SO	072SB-0088-0001-SO	240-18703-14	N	Vanadium	0.10	9.6	9.6	MG/KG	
SW6020/NONE	SO	072SB-0088-0001-SO	240-18703-14	N	Zinc	0.50	46.0	46.0	MG/KG	
SW6020/NONE	SO	072SB-0089-0001-SO	240-18703-15	N	Silver	0.10	0.023	0.023 J	MG/KG	TR
SW6020/NONE	SO	072SB-0089-0001-SO	240-18703-15	N	Aluminum	3.1	10000	10000	MG/KG	
SW6020/NONE	SO	072SB-0089-0001-SO	240-18703-15	N	Arsenic	0.10	13.0	13.0	MG/KG	
SW6020/NONE	SO	072SB-0089-0001-SO	240-18703-15	N	Barium	1.0	47.0	47.0	MG/KG	
SW6020/NONE	SO	072SB-0089-0001-SO	240-18703-15	N	Beryllium	0.10	0.48	0.48	MG/KG	
SW6020/NONE	SO	072SB-0089-0001-SO	240-18703-15	N	Calcium	10.0	1400	1400	MG/KG	
SW6020/NONE	SO	072SB-0089-0001-SO	240-18703-15	N	Cadmium	0.10	0.18	0.18	MG/KG	
SW6020/NONE	SO	072SB-0089-0001-SO	240-18703-15	N	Cobalt	0.051	9.3	9.3	MG/KG	
SW6020/NONE	SO	072SB-0089-0001-SO	240-18703-15	N	Chromium	0.21	14.0	14.0	MG/KG	
SW6020/NONE	SO	072SB-0089-0001-SO	240-18703-15	N	Copper	0.21	18.0	18.0	MG/KG	
SW6020/NONE	SO	072SB-0089-0001-SO	240-18703-15	N	Iron	5.1	23000	23000	MG/KG	
SW6020/NONE	SO	072SB-0089-0001-SO	240-18703-15	N	Potassium	10.0	1200	1200	MG/KG	
SW6020/NONE	SO	072SB-0089-0001-SO	240-18703-15	N	Magnesium	10.0	2900	2900	MG/KG	
SW6020/NONE	SO	072SB-0089-0001-SO	240-18703-15	N	Manganese	0.51	330	330	MG/KG	
SW6020/NONE	SO	072SB-0089-0001-SO	240-18703-15	N	Sodium	10.0	60.0	60.0	MG/KG	

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Detected Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW6020/NONE	SO	072SB-0089-0001-SO	240-18703-15	N	Nickel	0.10	22.0	22.0	MG/KG	
SW6020/NONE	SO	072SB-0089-0001-SO	240-18703-15	N	Lead	0.10	14.0	14.0	MG/KG	
SW6020/NONE	SO	072SB-0089-0001-SO	240-18703-15	N	Selenium	0.51	0.46	0.46 J	MG/KG	TR
SW6020/NONE	SO	072SB-0089-0001-SO	240-18703-15	N	Thallium	0.10	0.14	0.14	MG/KG	
SW6020/NONE	SO	072SB-0089-0001-SO	240-18703-15	N	Vanadium	0.10	16.0	16.0	MG/KG	
SW6020/NONE	SO	072SB-0089-0001-SO	240-18703-15	N	Zinc	0.51	55.0	55.0	MG/KG	
SW6020/NONE	SO	072SB-0090-0001-SO	240-18703-16	N	Silver	0.10	0.013	0.013 J	MG/KG	TR
SW6020/NONE	SO	072SB-0090-0001-SO	240-18703-16	N	Aluminum	3.1	4100	4100	MG/KG	
SW6020/NONE	SO	072SB-0090-0001-SO	240-18703-16	N	Arsenic	0.10	4.2	4.2	MG/KG	
SW6020/NONE	SO	072SB-0090-0001-SO	240-18703-16	N	Barium	1.0	23.0	23.0	MG/KG	
SW6020/NONE	SO	072SB-0090-0001-SO	240-18703-16	N	Beryllium	0.10	0.28	0.28	MG/KG	
SW6020/NONE	SO	072SB-0090-0001-SO	240-18703-16	N	Calcium	10.0	870	870	MG/KG	
SW6020/NONE	SO	072SB-0090-0001-SO	240-18703-16	N	Cadmium	0.10	0.11	0.11	MG/KG	
SW6020/NONE	SO	072SB-0090-0001-SO	240-18703-16	N	Cobalt	0.052	4.5	4.5	MG/KG	
SW6020/NONE	SO	072SB-0090-0001-SO	240-18703-16	N	Chromium	0.21	5.8	5.8	MG/KG	
SW6020/NONE	SO	072SB-0090-0001-SO	240-18703-16	N	Copper	0.21	7.0	7.0	MG/KG	
SW6020/NONE	SO	072SB-0090-0001-SO	240-18703-16	N	Iron	5.2	13000	13000	MG/KG	
SW6020/NONE	SO	072SB-0090-0001-SO	240-18703-16	N	Potassium	10.0	670	670	MG/KG	
SW6020/NONE	SO	072SB-0090-0001-SO	240-18703-16	N	Magnesium	10.0	1200	1200	MG/KG	
SW6020/NONE	SO	072SB-0090-0001-SO	240-18703-16	N	Manganese	0.52	220	220	MG/KG	
SW6020/NONE	SO	072SB-0090-0001-SO	240-18703-16	N	Sodium	10.0	33.0	33.0	MG/KG	
SW6020/NONE	SO	072SB-0090-0001-SO	240-18703-16	N	Nickel	0.10	9.2	9.2	MG/KG	
SW6020/NONE	SO	072SB-0090-0001-SO	240-18703-16	N	Lead	0.10	9.6	9.6	MG/KG	
SW6020/NONE	SO	072SB-0090-0001-SO	240-18703-16	N	Selenium	0.52	0.28	0.28 J	MG/KG	TR
SW6020/NONE	SO	072SB-0090-0001-SO	240-18703-16	N	Thallium	0.10	0.075	0.075 J	MG/KG	TR
SW6020/NONE	SO	072SB-0090-0001-SO	240-18703-16	N	Vanadium	0.10	7.8	7.8	MG/KG	
SW6020/NONE	SO	072SB-0090-0001-SO	240-18703-16	N	Zinc	0.52	38.0	38.0	MG/KG	
SW6020/NONE	SO	072SB-0091-0001-SO	240-18703-17	N	Silver	0.11	0.025	0.025 J	MG/KG	TR

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Detected Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW6020/NONE	SO	072SB-0091-0001-SO	240-18703-17	N	Aluminum	3.3	10000	10000	MG/KG	
SW6020/NONE	SO	072SB-0091-0001-SO	240-18703-17	N	Arsenic	0.11	16.0	16.0	MG/KG	
SW6020/NONE	SO	072SB-0091-0001-SO	240-18703-17	N	Barium	1.1	31.0	31.0	MG/KG	
SW6020/NONE	SO	072SB-0091-0001-SO	240-18703-17	N	Beryllium	0.11	0.46	0.46	MG/KG	
SW6020/NONE	SO	072SB-0091-0001-SO	240-18703-17	N	Calcium	11.0	5700	5700	MG/KG	
SW6020/NONE	SO	072SB-0091-0001-SO	240-18703-17	N	Cadmium	0.11	0.15	0.15	MG/KG	
SW6020/NONE	SO	072SB-0091-0001-SO	240-18703-17	N	Cobalt	0.055	11.0	11.0	MG/KG	
SW6020/NONE	SO	072SB-0091-0001-SO	240-18703-17	N	Chromium	0.22	14.0	14.0	MG/KG	
SW6020/NONE	SO	072SB-0091-0001-SO	240-18703-17	N	Copper	0.22	20.0	20.0	MG/KG	
SW6020/NONE	SO	072SB-0091-0001-SO	240-18703-17	N	Iron	5.5	26000	26000	MG/KG	
SW6020/NONE	SO	072SB-0091-0001-SO	240-18703-17	N	Potassium	11.0	1700	1700	MG/KG	
SW6020/NONE	SO	072SB-0091-0001-SO	240-18703-17	N	Magnesium	11.0	5400	5400	MG/KG	
SW6020/NONE	SO	072SB-0091-0001-SO	240-18703-17	N	Manganese	0.55	380	380	MG/KG	
SW6020/NONE	SO	072SB-0091-0001-SO	240-18703-17	N	Sodium	11.0	72.0	72.0	MG/KG	
SW6020/NONE	SO	072SB-0091-0001-SO	240-18703-17	N	Nickel	0.11	24.0	24.0	MG/KG	
SW6020/NONE	SO	072SB-0091-0001-SO	240-18703-17	N	Lead	0.11	12.0	12.0	MG/KG	
SW6020/NONE	SO	072SB-0091-0001-SO	240-18703-17	N	Selenium	0.55	0.49	0.49 J	MG/KG	TR
SW6020/NONE	SO	072SB-0091-0001-SO	240-18703-17	N	Thallium	0.11	0.14	0.14	MG/KG	
SW6020/NONE	SO	072SB-0091-0001-SO	240-18703-17	N	Vanadium	0.11	15.0	15.0	MG/KG	
SW6020/NONE	SO	072SB-0091-0001-SO	240-18703-17	N	Zinc	0.55	55.0	55.0	MG/KG	
SW6020/NONE	SO	072SB-0092-0001-SO	240-18703-1	N	Silver	0.088	0.025	0.025 J	MG/KG	TR
SW6020/NONE	SO	072SB-0092-0001-SO	240-18703-1	N	Aluminum	2.6	7700	7700	MG/KG	
SW6020/NONE	SO	072SB-0092-0001-SO	240-18703-1	N	Arsenic	0.088	15.0	15.0	MG/KG	
SW6020/NONE	SO	072SB-0092-0001-SO	240-18703-1	N	Barium	0.88	25.0	25.0	MG/KG	
SW6020/NONE	SO	072SB-0092-0001-SO	240-18703-1	N	Beryllium	0.088	0.38	0.38	MG/KG	
SW6020/NONE	SO	072SB-0092-0001-SO	240-18703-1	N	Calcium	8.8	5100	5100	MG/KG	
SW6020/NONE	SO	072SB-0092-0001-SO	240-18703-1	N	Cadmium	0.088	0.14	0.14	MG/KG	
SW6020/NONE	SO	072SB-0092-0001-SO	240-18703-1	N	Cobalt	0.044	9.3	9.3	MG/KG	

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Detected Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW6020/NONE	SO	072SB-0092-0001-SO	240-18703-1	N	Chromium	0.18	12.0	12.0	MG/KG	
SW6020/NONE	SO	072SB-0092-0001-SO	240-18703-1	N	Copper	0.18	16.0	16.0	MG/KG	
SW6020/NONE	SO	072SB-0092-0001-SO	240-18703-1	N	Iron	4.4	23000	23000	MG/KG	
SW6020/NONE	SO	072SB-0092-0001-SO	240-18703-1	N	Potassium	8.8	1100	1100	MG/KG	
SW6020/NONE	SO	072SB-0092-0001-SO	240-18703-1	N	Magnesium	8.8	4200	4200	MG/KG	
SW6020/NONE	SO	072SB-0092-0001-SO	240-18703-1	N	Manganese	0.44	260	260	MG/KG	
SW6020/NONE	SO	072SB-0092-0001-SO	240-18703-1	N	Sodium	8.8	43.0	43.0	MG/KG	
SW6020/NONE	SO	072SB-0092-0001-SO	240-18703-1	N	Nickel	0.088	21.0	21.0	MG/KG	
SW6020/NONE	SO	072SB-0092-0001-SO	240-18703-1	N	Lead	0.088	9.3	9.3	MG/KG	
SW6020/NONE	SO	072SB-0092-0001-SO	240-18703-1	N	Antimony	0.18	0.053	0.053 J	MG/KG	TR
SW6020/NONE	SO	072SB-0092-0001-SO	240-18703-1	N	Selenium	0.44	0.32	0.32 J	MG/KG	TR
SW6020/NONE	SO	072SB-0092-0001-SO	240-18703-1	N	Thallium	0.088	0.11	0.11	MG/KG	
SW6020/NONE	SO	072SB-0092-0001-SO	240-18703-1	N	Vanadium	0.088	12.0	12.0	MG/KG	
SW6020/NONE	SO	072SB-0092-0001-SO	240-18703-1	N	Zinc	0.44	48.0	48.0	MG/KG	
SW6020/NONE	WG	076-0140-0001-ER	240-18703-24	N	Barium	10.0	0.43	0.43 J	UG/L	TR
SW6020/NONE	WG	076-0140-0001-ER	240-18703-24	N	Calcium	100	82.0	82.0 J	UG/L	TR
SW6020/NONE	WG	076-0140-0001-ER	240-18703-24	N	Cobalt	0.50	0.036	0.036 J	UG/L	TR
SW6020/NONE	WG	076-0140-0001-ER	240-18703-24	N	Chromium	2.0	0.76	0.76 J	UG/L	TR
SW6020/NONE	WG	076-0140-0001-ER	240-18703-24	N	Manganese	5.0	1.9	1.9 J	UG/L	TR
SW6020/NONE	WG	076-0140-0001-ER	240-18703-24	N	Sodium	100	150	150	UG/L	
SW6020/NONE	WG	076-0140-0001-ER	240-18703-24	N	Nickel	1.0	0.47	0.47 J	UG/L	TR
SW6020/NONE	WG	076-0140-0001-ER	240-18703-24	N	Thallium	1.0	0.25	0.25 J	UG/L	TR
SW6020/NONE	WG	076-0140-0001-ER	240-18703-24	N	Zinc	5.0	1.1	1.1 J	UG/L	TR

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW7471A/NONE	SO	072SB-0079-0001-SO	240-18703-21	N	Mercury	0.15	0.034	0.034 J	MG/KG	TR
SW7471A/NONE	SO	072SB-0088-0001-SO	240-18703-14	N	Mercury	0.12	0.016	0.016 J	MG/KG	TR
SW7471A/NONE	SO	072SB-0089-0001-SO	240-18703-15	N	Mercury	0.10	0.014	0.014 J	MG/KG	TR

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Detected Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW8151/NONE	SO	072SB-0080-0001-SO	240-18703-22	N	Dalapon	47.0	33.0	33.0 J	UG/KG	TR/P
SW8151/NONE	SO	072SB-0081-0001-SO	240-18703-23	N	Dalapon	45.0	14.0	14.0 J	UG/KG	TR

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW8260B/NONE	SO	072SB-0075-0001-SO	240-18703-18	N	Toluene	4.4	3.8	3.8 J	UG/KG	TR
SW8260B/NONE	SO	072SB-0075-0001-SO	240-18703-18	N	1,2-Dichloroethane	4.4	0.82	0.82 J	UG/KG	TR/J
SW8260B/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	Benzene	4.0	9.9	9.9 J	UG/KG	d
SW8260B/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	Toluene	4.0	52.0	52.0 J	UG/KG	d
SW8260B/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	Ethylbenzene	4.0	22.0	22.0 J	UG/KG	d
SW8260B/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	Xylenes, Total	8.0	150	150 J	UG/KG	d
SW8260B/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	Benzene	4.6	1.8	1.8 J	UG/KG	TR/d
SW8260B/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	Toluene	4.6	6.7	6.7 J	UG/KG	d
SW8260B/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	Ethylbenzene	4.6	0.71	0.71 J	UG/KG	TR/d
SW8260B/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	Xylenes, Total	9.2	5.4	5.4 J	UG/KG	TR/d
SW8260B/NONE	SO	072SB-0079-0001-SO	240-18703-21	N	Benzene	5.4	46.0	46.0	UG/KG	
SW8260B/NONE	SO	072SB-0079-0001-SO	240-18703-21	N	Toluene	5.4	140	140	UG/KG	
SW8260B/NONE	SO	072SB-0079-0001-SO	240-18703-21	N	Ethylbenzene	5.4	30.0	30.0	UG/KG	
SW8260B/NONE	SO	072SB-0079-0001-SO	240-18703-21	N	Xylenes, Total	11.0	230	230	UG/KG	
SW8260B/NONE	SO	072SB-0080-0001-SO	240-18703-22	FD	Benzene	4.4	8.9	8.9	UG/KG	
SW8260B/NONE	SO	072SB-0080-0001-SO	240-18703-22	FD	Toluene	4.4	87.0	87.0	UG/KG	
SW8260B/NONE	SO	072SB-0080-0001-SO	240-18703-22	FD	Ethylbenzene	4.4	22.0	22.0	UG/KG	
SW8260B/NONE	SO	072SB-0080-0001-SO	240-18703-22	FD	Xylenes, Total	8.8	140	140	UG/KG	
SW8260B/NONE	SO	072SB-0081-0001-SO	240-18703-23	N	Toluene	7.9	5.3	5.3 J	UG/KG	TR
SW8260B/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	Toluene	4.8	1.7	1.7 J	UG/KG	TR
SW8260B/NONE	SO	072SB-0083-0001-SO	240-18703-9	N	Toluene	4.7	2.7	2.7 J	UG/KG	TR
SW8260B/NONE	SO	072SB-0084-0001-SO	240-18703-10	N	Toluene	4.8	3.5	3.5 J -	UG/KG	I/TR
SW8260B/NONE	SO	072SB-0085-0001-SO	240-18703-11	N	Toluene	6.0	4.3	4.3 J	UG/KG	TR
SW8260B/NONE	SO	072SB-0086-0001-SO	240-18703-12	FD	Toluene	4.8	2.6	2.6 J	UG/KG	TR
SW8260B/NONE	SO	072SB-0087-0001-SO	240-18703-13	N	Toluene	6.1	6.2	6.2	UG/KG	

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Detected Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW8260B/NONE	SO	072SB-0088-0001-SO	240-18703-14	N	Toluene	4.9	5.2	5.2 J -	UG/KG	I
SW8260B/NONE	SO	072SB-0089-0001-SO	240-18703-15	N	Toluene	5.6	3.8	3.8 J	UG/KG	TR
SW8260B/NONE	SO	072SB-0090-0001-SO	240-18703-16	N	Toluene	5.3	2.8	2.8 J	UG/KG	TR
SW8260B/NONE	SO	072SB-0091-0001-SO	240-18703-17	N	Toluene	6.5	5.0	5.0 J	UG/KG	TR
SW8260B/NONE	SO	072SB-0092-0001-SO	240-18703-1	N	Toluene	4.2	3.1	3.1 J	UG/KG	TR
SW8260B/NONE	WG	076-0140-0001-ER	240-18703-24	N	Chloroform	1.0	0.58	0.58 J	UG/L	TR
SW8260B/NONE	WG	076-0141-0001-TB	240-18703-25	N	Acetone	10.0	12.0	12.0	UG/L	
SW8260B/NONE	WG	076-0141-0001-TB	240-18703-25	N	4-Methyl-2-pentanone (MIBK)	10.0	0.36	0.36 J	UG/L	TR
SW8260B/NONE	WG	076-0142-0001-TB	240-18703-26	N	Acetone	10.0	12.0	12.0	UG/L	
SW8260B/NONE	WG	076-0142-0001-TB	240-18703-26	N	2-Butanone (MEK)	10.0	0.60	0.60 J	UG/L	TR
SW8260B/NONE	WG	076-0142-0001-TB	240-18703-26	N	4-Methyl-2-pentanone (MIBK)	10.0	0.35	0.35 J	UG/L	TR
SW8260B/NONE	WG	076SB-0137-0001-TB	240-18703-2	N	Acetone	10.0	12.0	12.0	UG/L	
SW8260B/NONE	WG	076SB-0137-0001-TB	240-18703-2	N	2-Butanone (MEK)	10.0	0.57	0.57 J	UG/L	TR
SW8260B/NONE	WG	076SB-0137-0001-TB	240-18703-2	N	4-Methyl-2-pentanone (MIBK)	10.0	0.32	0.32 J	UG/L	TR
SW8260B/NONE	WG	076SB-0138-0001-TB	240-18703-3	N	Acetone	10.0	14.0	14.0	UG/L	
SW8260B/NONE	WG	076SB-0138-0001-TB	240-18703-3	N	2-Butanone (MEK)	10.0	0.69	0.69 J	UG/L	TR
SW8260B/NONE	WG	076SB-0139-0001-TB	240-18703-4	N	Acetone	10.0	15.0	15.0	UG/L	
SW8260B/NONE	WG	076SB-0139-0001-TB	240-18703-4	N	2-Butanone (MEK)	10.0	0.64	0.64 J	UG/L	TR
SW8260B/NONE	WG	076SB-0139-0001-TB	240-18703-4	N	4-Methyl-2-pentanone (MIBK)	10.0	0.39	0.39 J	UG/L	TR

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW8270C/NONE	SO	072SB-0075-0001-SO	240-18703-18	N	Benzo(b)fluoranthene	7.7	3.8	3.8 J	UG/KG	TR
SW8270C/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	Acenaphthylene	7.9	7.6	7.6 J	UG/KG	TR
SW8270C/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	Anthracene	7.9	5.8	5.8 J	UG/KG	TR
SW8270C/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	Benzo(a)anthracene	7.9	55.0	55.0 J	UG/KG	d
SW8270C/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	Benzo(a)pyrene	7.9	40.0	40.0 J	UG/KG	d
SW8270C/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	Benzo(b)fluoranthene	7.9	65.0	65.0 J	UG/KG	d
SW8270C/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	Benzo(g,h,i)perylene	7.9	34.0	34.0 J	UG/KG	d
SW8270C/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	Benzo(k)fluoranthene	7.9	22.0	22.0 J	UG/KG	d

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Detected Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW8270C/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	Chrysene	7.9	41.0	41.0 J	UG/KG	d
SW8270C/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	Fluoranthene	7.9	96.0	96.0 J	UG/KG	d
SW8270C/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	Indeno(1,2,3-c,d)pyrene	7.9	22.0	22.0 J	UG/KG	d
SW8270C/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	Phenanthrene	7.9	47.0	47.0 J	UG/KG	d
SW8270C/NONE	SO	072SB-0076-0001-SO	240-18703-19	N	Pyrene	7.9	77.0	77.0	UG/KG	
SW8270C/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	Anthracene	8.2	4.8	4.8 J	UG/KG	TR
SW8270C/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	Benzo(a)anthracene	8.2	24.0	24.0 J	UG/KG	d
SW8270C/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	Benzo(a)pyrene	8.2	16.0	16.0 J	UG/KG	d
SW8270C/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	Benzo(b)fluoranthene	8.2	22.0	22.0 J	UG/KG	d
SW8270C/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	Benzo(g,h,i)perylene	8.2	20.0	20.0 J	UG/KG	d
SW8270C/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	Benzo(k)fluoranthene	8.2	8.9	8.9 J	UG/KG	d
SW8270C/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	Chrysene	8.2	17.0	17.0 J	UG/KG	d
SW8270C/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	Fluoranthene	8.2	34.0	34.0 J	UG/KG	d
SW8270C/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	Indeno(1,2,3-c,d)pyrene	8.2	10.0	10.0 J	UG/KG	d
SW8270C/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	Phenanthrene	8.2	21.0	21.0 J	UG/KG	d
SW8270C/NONE	SO	072SB-0077-0001-SO	240-18703-20	FD	Pyrene	8.2	26.0	26.0	UG/KG	
SW8270C/NONE	SO	072SB-0079-0001-SO	240-18703-21	N	Acenaphthylene	8.7	5.3	5.3 J	UG/KG	TR
SW8270C/NONE	SO	072SB-0079-0001-SO	240-18703-21	N	Anthracene	8.7	5.5	5.5 J	UG/KG	TR
SW8270C/NONE	SO	072SB-0079-0001-SO	240-18703-21	N	Benzo(a)anthracene	8.7	46.0	46.0	UG/KG	
SW8270C/NONE	SO	072SB-0079-0001-SO	240-18703-21	N	Benzo(a)pyrene	8.7	37.0	37.0	UG/KG	
SW8270C/NONE	SO	072SB-0079-0001-SO	240-18703-21	N	Benzo(b)fluoranthene	8.7	50.0	50.0	UG/KG	
SW8270C/NONE	SO	072SB-0079-0001-SO	240-18703-21	N	Benzo(g,h,i)perylene	8.7	32.0	32.0	UG/KG	
SW8270C/NONE	SO	072SB-0079-0001-SO	240-18703-21	N	Benzo(k)fluoranthene	8.7	21.0	21.0	UG/KG	
SW8270C/NONE	SO	072SB-0079-0001-SO	240-18703-21	N	Chrysene	8.7	35.0	35.0	UG/KG	
SW8270C/NONE	SO	072SB-0079-0001-SO	240-18703-21	N	Fluoranthene	8.7	74.0	74.0	UG/KG	
SW8270C/NONE	SO	072SB-0079-0001-SO	240-18703-21	N	Indeno(1,2,3-c,d)pyrene	8.7	20.0	20.0	UG/KG	
SW8270C/NONE	SO	072SB-0079-0001-SO	240-18703-21	N	2-Methylnaphthalene	8.7	11.0	11.0	UG/KG	
SW8270C/NONE	SO	072SB-0079-0001-SO	240-18703-21	N	Naphthalene	8.7	7.6	7.6 J	UG/KG	TR

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Detected Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW8270C/NONE	SO	072SB-0079-0001-SO	240-18703-21	N	Phenanthrene	8.7	32.0	32.0	UG/KG	
SW8270C/NONE	SO	072SB-0079-0001-SO	240-18703-21	N	Pyrene	8.7	57.0	57.0	UG/KG	
SW8270C/NONE	SO	072SB-0080-0001-SO	240-18703-22	FD	Benzo(b)fluoranthene	7.8	6.1	6.1 J	UG/KG	TR
SW8270C/NONE	SO	072SB-0080-0001-SO	240-18703-22	FD	Chrysene	7.8	4.5	4.5 J	UG/KG	TR
SW8270C/NONE	SO	072SB-0080-0001-SO	240-18703-22	FD	2-Methylnaphthalene	7.8	17.0	17.0	UG/KG	
SW8270C/NONE	SO	072SB-0080-0001-SO	240-18703-22	FD	Naphthalene	7.8	12.0	12.0	UG/KG	
SW8270C/NONE	SO	072SB-0081-0001-SO	240-18703-23	N	bis(2-Ethylhexyl) Phthalate	56.0	31.0	31.0 J	UG/KG	TR
SW8270C/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	Anthracene	7.8	8.8	8.8	UG/KG	
SW8270C/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	Benzo(a)anthracene	7.8	17.0	17.0	UG/KG	
SW8270C/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	Benzo(a)pyrene	7.8	9.6	9.6	UG/KG	
SW8270C/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	Benzo(b)fluoranthene	7.8	13.0	13.0	UG/KG	
SW8270C/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	Benzo(g,h,i)perylene	7.8	17.0	17.0	UG/KG	
SW8270C/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	Benzo(k)fluoranthene	7.8	5.6	5.6 J	UG/KG	TR
SW8270C/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	Chrysene	7.8	9.2	9.2	UG/KG	
SW8270C/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	Dibenzofuran	59.0	12.0	12.0 J	UG/KG	TR
SW8270C/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	Fluorene	7.8	11.0	11.0	UG/KG	
SW8270C/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	Fluoranthene	7.8	15.0	15.0	UG/KG	
SW8270C/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	Indeno(1,2,3-c,d)pyrene	7.8	7.6	7.6 J	UG/KG	TR
SW8270C/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	2-Methylnaphthalene	7.8	17.0	17.0	UG/KG	
SW8270C/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	Naphthalene	7.8	7.0	7.0 J	UG/KG	TR
SW8270C/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	Phenanthrene	7.8	20.0	20.0	UG/KG	
SW8270C/NONE	SO	072SB-0082-0001-SO	240-18703-8	FD	Pyrene	7.8	22.0	22.0	UG/KG	
SW8270C/NONE	SO	072SB-0084-0001-SO	240-18703-10	N	Chrysene	7.7	5.3	5.3 J	UG/KG	TR
SW8270C/NONE	SO	072SB-0084-0001-SO	240-18703-10	N	Phenanthrene	7.7	8.9	8.9	UG/KG	
SW8270C/NONE	SO	072SB-0087-0001-SO	240-18703-13	N	Benzo(a)anthracene	7.2	13.0	13.0	UG/KG	
SW8270C/NONE	SO	072SB-0087-0001-SO	240-18703-13	N	Benzo(b)fluoranthene	7.2	9.3	9.3	UG/KG	
SW8270C/NONE	SO	072SB-0087-0001-SO	240-18703-13	N	Benzo(k)fluoranthene	7.2	3.6	3.6 J	UG/KG	TR
SW8270C/NONE	SO	072SB-0087-0001-SO	240-18703-13	N	Chrysene	7.2	5.5	5.5 J	UG/KG	TR

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Detected Results

Test Leach	Matrix	FieldSample ID	LabSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW8270C/NONE	SO	072SB-0087-0001-SO	240-18703-13	N	Fluoranthene	7.2	12.0	12.0	UG/KG	
SW8270C/NONE	SO	072SB-0087-0001-SO	240-18703-13	N	2-Methylnaphthalene	7.2	3.9	3.9 J	UG/KG	TR
SW8270C/NONE	SO	072SB-0087-0001-SO	240-18703-13	N	Phenanthrene	7.2	3.6	3.6 J	UG/KG	TR
SW8270C/NONE	SO	072SB-0087-0001-SO	240-18703-13	N	Pyrene	7.2	7.6	7.6	UG/KG	
SW8270C/NONE	SO	072SB-0088-0001-SO	240-18703-14	N	Fluorene	7.3	5.6	5.6 J	UG/KG	TR
SW8270C/NONE	SO	072SB-0088-0001-SO	240-18703-14	N	Fluoranthene	7.3	12.0	12.0	UG/KG	
SW8270C/NONE	SO	072SB-0088-0001-SO	240-18703-14	N	Pyrene	7.3	10.0	10.0	UG/KG	
SW8270C/NONE	SO	072SB-0089-0001-SO	240-18703-15	N	Fluoranthene	7.5	5.5	5.5 J	UG/KG	TR
SW8270C/NONE	SO	072SB-0089-0001-SO	240-18703-15	N	Phenanthrene	7.5	4.1	4.1 J	UG/KG	TR
SW8270C/NONE	SO	072SB-0089-0001-SO	240-18703-15	N	Pyrene	7.5	3.9	3.9 J	UG/KG	TR
SW8270C/NONE	SO	072SB-0090-0001-SO	240-18703-16	N	Benzo(a)anthracene	7.5	11.0	11.0	UG/KG	
SW8270C/NONE	SO	072SB-0090-0001-SO	240-18703-16	N	Chrysene	7.5	4.0	4.0 J	UG/KG	TR
SW8270C/NONE	SO	072SB-0090-0001-SO	240-18703-16	N	Fluoranthene	7.5	6.3	6.3 J	UG/KG	TR
SW8270C/NONE	SO	072SB-0090-0001-SO	240-18703-16	N	Phenanthrene	7.5	4.5	4.5 J	UG/KG	TR
SW8270C/NONE	SO	072SB-0090-0001-SO	240-18703-16	N	Pyrene	7.5	5.0	5.0 J	UG/KG	TR

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Rejected Results

Test Leach	Matrix	FieldSample ID	Type	Analyte	RL	Lab Result	Qualified Result	Units	Reason
SW8270C/NONE	SO	072SB-0075-0001-SO	N	Benzoic acid	770	770	R	UG/KG	c
SW8270C/NONE	SO	072SB-0076-0001-SO	N	Benzoic acid	780	780	R	UG/KG	c/J
SW8270C/NONE	SO	072SB-0077-0001-SO	FD	Benzoic acid	810	810	R	UG/KG	c/J
SW8270C/NONE	SO	072SB-0079-0001-SO	N	Benzoic acid	870	870	R	UG/KG	c/J
SW8270C/NONE	SO	072SB-0080-0001-SO	FD	Benzoic acid	770	770	R	UG/KG	c/J
SW8270C/NONE	SO	072SB-0081-0001-SO	N	Benzoic acid	740	740	R	UG/KG	c
SW8270C/NONE	SO	072SB-0082-0001-SO	FD	Benzoic acid	770	770	R	UG/KG	c/J
SW8270C/NONE	SO	072SB-0083-0001-SO	N	Benzoic acid	760	760	R	UG/KG	c/J
SW8270C/NONE	SO	072SB-0084-0001-SO	N	Benzoic acid	760	760	R	UG/KG	c/J
SW8270C/NONE	SO	072SB-0085-0001-SO	N	Benzoic acid	770	770	R	UG/KG	c/J
SW8270C/NONE	SO	072SB-0086-0001-SO	FD	Benzoic acid	760	760	R	UG/KG	c/J
SW8270C/NONE	SO	072SB-0087-0001-SO	N	Benzoic acid	710	710	R	UG/KG	c/J
SW8270C/NONE	SO	072SB-0088-0001-SO	N	Benzoic acid	720	720	R	UG/KG	c/J
SW8270C/NONE	SO	072SB-0089-0001-SO	N	Benzoic acid	740	740	R	UG/KG	c/J
SW8270C/NONE	SO	072SB-0090-0001-SO	N	Benzoic acid	740	740	R	UG/KG	c/J
SW8270C/NONE	SO	072SB-0091-0001-SO	N	Benzoic acid	750	750	R	UG/KG	c/J

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Anomalies Count

SDG Name: 240-18703-1_(72-SB_76-TB)

Test/Extraction Method/Leach	# of Field Samples Outside of Compliance	# of Analytes Outside of Compliance
E353.2/METHOD/NONE	2	2
M8015D/SW3540C/NONE	18	36
M8015V/SW5035/NONE	7	8
SW6020/SW3050B/NONE	13	58
SW7471A/TOTAL/NONE	15	15
SW8081/SW3540C/NONE	2	41
SW8082/SW3540C/NONE	3	21
SW8260B/SW5035/NONE	9	37
SW8270C/SW3550/NONE	16	66
SW8330B/METHOD/NONE	1	3

Anomalies are cases where the reported RL exceeds that specified in the governing project document.

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Reporting Anomalies

SDG Name: 240-18703-1_(72-SB_76-TB)

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
E353.2/NONE	072SB-0075-0001-SO	N	1	Nitrocellulose	55 U	8.6	55	5	MG/KG
E353.2/NONE	072SB-0082-0001-SO	FD	1	Nitrocellulose	49 U	7.6	49	5	MG/KG

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
M8015D/NONE	072SB-0075-0001-SO	N	1	C10-C20 Diesel Range Organics	19 U	11	19	10	MG/KG
M8015D/NONE	072SB-0075-0001-SO	N	1	C20-C34 Motor Oil Range Organics	19 U	11	19	10	MG/KG
M8015D/NONE	072SB-0076-0001-SO	N	1	C10-C20 Diesel Range Organics	20 U	11	20	10	MG/KG
M8015D/NONE	072SB-0076-0001-SO	N	1	C20-C34 Motor Oil Range Organics	20 U	11	20	10	MG/KG
M8015D/NONE	072SB-0077-0001-SO	FD	1	C10-C20 Diesel Range Organics	20 U	11	20	10	MG/KG
M8015D/NONE	072SB-0077-0001-SO	FD	1	C20-C34 Motor Oil Range Organics	20 U	11	20	10	MG/KG
M8015D/NONE	072SB-0079-0001-SO	N	1	C10-C20 Diesel Range Organics	22 U	12	22	10	MG/KG
M8015D/NONE	072SB-0079-0001-SO	N	1	C20-C34 Motor Oil Range Organics	22 U	12	22	10	MG/KG
M8015D/NONE	072SB-0080-0001-SO	FD	1	C10-C20 Diesel Range Organics	20 U	11	20	10	MG/KG
M8015D/NONE	072SB-0080-0001-SO	FD	1	C20-C34 Motor Oil Range Organics	20 U	11	20	10	MG/KG
M8015D/NONE	072SB-0081-0001-SO	N	1	C10-C20 Diesel Range Organics	19 U	10	19	10	MG/KG
M8015D/NONE	072SB-0081-0001-SO	N	1	C20-C34 Motor Oil Range Organics	19 U	10	19	10	MG/KG
M8015D/NONE	072SB-0082-0001-SO	FD	1	C10-C20 Diesel Range Organics	220	11	20	10	MG/KG
M8015D/NONE	072SB-0082-0001-SO	FD	1	C20-C34 Motor Oil Range Organics	25	11	20	10	MG/KG
M8015D/NONE	072SB-0083-0001-SO	N	1	C10-C20 Diesel Range Organics	19 U	11	19	10	MG/KG
M8015D/NONE	072SB-0083-0001-SO	N	1	C20-C34 Motor Oil Range Organics	19 U	11	19	10	MG/KG
M8015D/NONE	072SB-0084-0001-SO	N	1	C10-C20 Diesel Range Organics	19 U	11	19	10	MG/KG
M8015D/NONE	072SB-0084-0001-SO	N	1	C20-C34 Motor Oil Range Organics	19 U	11	19	10	MG/KG
M8015D/NONE	072SB-0085-0001-SO	N	1	C10-C20 Diesel Range Organics	20 U	11	20	10	MG/KG
M8015D/NONE	072SB-0085-0001-SO	N	1	C20-C34 Motor Oil Range Organics	20 U	11	20	10	MG/KG
M8015D/NONE	072SB-0086-0001-SO	FD	1	C10-C20 Diesel Range Organics	19 U	11	19	10	MG/KG
M8015D/NONE	072SB-0086-0001-SO	FD	1	C20-C34 Motor Oil Range Organics	19 U	11	19	10	MG/KG
M8015D/NONE	072SB-0087-0001-SO	N	1	C10-C20 Diesel Range Organics	18 U	9.9	18	10	MG/KG
M8015D/NONE	072SB-0087-0001-SO	N	1	C20-C34 Motor Oil Range Organics	18 U	9.9	18	10	MG/KG
M8015D/NONE	072SB-0088-0001-SO	N	1	C10-C20 Diesel Range Organics	18 U	10	18	10	MG/KG

Reporting Anomalies are cases where the reported RL exceeds that specified in the governing project document.

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Reporting Anomalies

SDG Name: 240-18703-1_(72-SB_76-TB)

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
M8015D/NONE	072SB-0088-0001-SO	N	1	C20-C34 Motor Oil Range Organics	11 J	10	18	10	MG/KG
M8015D/NONE	072SB-0089-0001-SO	N	1	C10-C20 Diesel Range Organics	18 U	10	18	10	MG/KG
M8015D/NONE	072SB-0089-0001-SO	N	1	C20-C34 Motor Oil Range Organics	18 U	10	18	10	MG/KG
M8015D/NONE	072SB-0090-0001-SO	N	1	C10-C20 Diesel Range Organics	18 U	10	18	10	MG/KG
M8015D/NONE	072SB-0090-0001-SO	N	1	C20-C34 Motor Oil Range Organics	14 J	10	18	10	MG/KG
M8015D/NONE	072SB-0091-0001-SO	N	1	C10-C20 Diesel Range Organics	19 U	11	19	10	MG/KG
M8015D/NONE	072SB-0091-0001-SO	N	1	C20-C34 Motor Oil Range Organics	19 U	11	19	10	MG/KG
M8015D/NONE	072SB-0092-0001-SO	N	1	C10-C20 Diesel Range Organics	19 U	11	19	10	MG/KG
M8015D/NONE	072SB-0092-0001-SO	N	1	C20-C34 Motor Oil Range Organics	19 U	11	19	10	MG/KG
M8015D/NONE	076-0140-0001-ER	N	1	C10-C20 Diesel Range Organics	480 U	230	480	0.5	UG/L
M8015D/NONE	076-0140-0001-ER	N	1	C20-C34 Motor Oil Range Organics	480 U	230	480	0.5	UG/L

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
M8015V/NONE	072SB-0077-0001-SO	FD	1	Petroleum Hydrocarbons C6-C12	2900 J	1700	5000	100	UG/KG
M8015V/NONE	072SB-0079-0001-SO	N	1	Petroleum Hydrocarbons C6-C12	860	50	110	100	UG/KG
M8015V/NONE	072SB-0080-0001-SO	FD	1	Petroleum Hydrocarbons C6-C12	4200 J	1700	5100	100	UG/KG
M8015V/NONE	072SB-0082-0001-SO	FD	2	Petroleum Hydrocarbons C6-C12	37000	3000	8800	100	UG/KG
M8015V/NONE	072SB-0082-0001-SO	FD	2	Petroleum Hydrocarbons C6-C12	43000	3000	8800	100	UG/KG
M8015V/NONE	072SB-0084-0001-SO	N	1	Petroleum Hydrocarbons C6-C12	120 U	54	120	100	UG/KG
M8015V/NONE	072SB-0085-0001-SO	N	1	Petroleum Hydrocarbons C6-C12	130 U	58	130	100	UG/KG
M8015V/NONE	072SB-0087-0001-SO	N	1	Petroleum Hydrocarbons C6-C12	150 U	67	150	100	UG/KG

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW6020/NONE	072SB-0075-0001-SO	N	1	Barium	53	0.011	1.1	1	MG/KG
SW6020/NONE	072SB-0075-0001-SO	N	1	Beryllium	0.63	0.008	0.11	0.1	MG/KG
SW6020/NONE	072SB-0075-0001-SO	N	1	Cadmium	0.16	0.014	0.11	0.1	MG/KG
SW6020/NONE	072SB-0075-0001-SO	N	1	Calcium	2000	1.4	11	10	MG/KG
SW6020/NONE	072SB-0075-0001-SO	N	1	Magnesium	4800	1.2	11	10	MG/KG
SW6020/NONE	072SB-0075-0001-SO	N	1	Selenium	0.5 J	0.055	0.54	0.5	MG/KG
SW6020/NONE	072SB-0076-0001-SO	N	1	Barium	56 J	0.012	1.1	1	MG/KG

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Reporting Anomalies

SDG Name: 240-18703-1_(72-SB_76-TB)

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW6020/NONE	072SB-0076-0001-SO	N	1	Beryllium	0.55	0.0082	0.11	0.1	MG/KG
SW6020/NONE	072SB-0076-0001-SO	N	1	Cadmium	0.18	0.015	0.11	0.1	MG/KG
SW6020/NONE	072SB-0076-0001-SO	N	1	Calcium	1300	1.5	11	10	MG/KG
SW6020/NONE	072SB-0076-0001-SO	N	1	Magnesium	2600	1.2	11	10	MG/KG
SW6020/NONE	072SB-0076-0001-SO	N	1	Selenium	0.56	0.056	0.55	0.5	MG/KG
SW6020/NONE	072SB-0077-0001-SO	FD	1	Barium	95 J	0.012	1.1	1	MG/KG
SW6020/NONE	072SB-0077-0001-SO	FD	1	Beryllium	0.56	0.0083	0.11	0.1	MG/KG
SW6020/NONE	072SB-0077-0001-SO	FD	1	Cadmium	0.22	0.015	0.11	0.1	MG/KG
SW6020/NONE	072SB-0077-0001-SO	FD	1	Calcium	1400	1.5	11	10	MG/KG
SW6020/NONE	072SB-0077-0001-SO	FD	1	Magnesium	2000	1.2	11	10	MG/KG
SW6020/NONE	072SB-0077-0001-SO	FD	1	Selenium	0.7	0.056	0.55	0.5	MG/KG
SW6020/NONE	072SB-0079-0001-SO	N	1	Barium	69	0.013	1.2	1	MG/KG
SW6020/NONE	072SB-0079-0001-SO	N	1	Beryllium	0.6	0.0092	0.12	0.1	MG/KG
SW6020/NONE	072SB-0079-0001-SO	N	1	Cadmium	0.2	0.016	0.12	0.1	MG/KG
SW6020/NONE	072SB-0079-0001-SO	N	1	Calcium	1600	1.6	12	10	MG/KG
SW6020/NONE	072SB-0079-0001-SO	N	1	Magnesium	2700	1.3	12	10	MG/KG
SW6020/NONE	072SB-0079-0001-SO	N	1	Selenium	0.76	0.063	0.62	0.5	MG/KG
SW6020/NONE	072SB-0080-0001-SO	FD	1	Barium	47	0.011	1.1	1	MG/KG
SW6020/NONE	072SB-0080-0001-SO	FD	1	Beryllium	0.63	0.008	0.11	0.1	MG/KG
SW6020/NONE	072SB-0080-0001-SO	FD	1	Cadmium	0.25	0.014	0.11	0.1	MG/KG
SW6020/NONE	072SB-0080-0001-SO	FD	1	Calcium	4600	1.4	11	10	MG/KG
SW6020/NONE	072SB-0080-0001-SO	FD	1	Magnesium	5800	1.2	11	10	MG/KG
SW6020/NONE	072SB-0080-0001-SO	FD	1	Selenium	0.46 J	0.054	0.53	0.5	MG/KG
SW6020/NONE	072SB-0082-0001-SO	FD	1	Barium	38	0.012	1.1	1	MG/KG
SW6020/NONE	072SB-0082-0001-SO	FD	1	Beryllium	0.47	0.0086	0.11	0.1	MG/KG
SW6020/NONE	072SB-0082-0001-SO	FD	1	Cadmium	0.14	0.015	0.11	0.1	MG/KG
SW6020/NONE	072SB-0082-0001-SO	FD	1	Calcium	7500	1.5	11	10	MG/KG
SW6020/NONE	072SB-0082-0001-SO	FD	1	Magnesium	5500	1.2	11	10	MG/KG
SW6020/NONE	072SB-0082-0001-SO	FD	1	Selenium	0.54 J	0.058	0.57	0.5	MG/KG

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Reporting Anomalies

SDG Name: 240-18703-1_(72-SB_76-TB)

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW6020/NONE	072SB-0083-0001-SO	N	1	Selenium	0.47 J	0.052	0.51	0.5	MG/KG
SW6020/NONE	072SB-0084-0001-SO	N	1	Barium	35	0.012	1.1	1	MG/KG
SW6020/NONE	072SB-0084-0001-SO	N	1	Beryllium	0.48	0.0083	0.11	0.1	MG/KG
SW6020/NONE	072SB-0084-0001-SO	N	1	Cadmium	0.14	0.015	0.11	0.1	MG/KG
SW6020/NONE	072SB-0084-0001-SO	N	1	Calcium	7300	1.5	11	10	MG/KG
SW6020/NONE	072SB-0084-0001-SO	N	1	Magnesium	5300	1.2	11	10	MG/KG
SW6020/NONE	072SB-0084-0001-SO	N	1	Selenium	0.49 J	0.056	0.55	0.5	MG/KG
SW6020/NONE	072SB-0085-0001-SO	N	1	Barium	32	0.012	1.1	1	MG/KG
SW6020/NONE	072SB-0085-0001-SO	N	1	Beryllium	0.44	0.0085	0.11	0.1	MG/KG
SW6020/NONE	072SB-0085-0001-SO	N	1	Cadmium	0.13	0.015	0.11	0.1	MG/KG
SW6020/NONE	072SB-0085-0001-SO	N	1	Calcium	8400	1.5	11	10	MG/KG
SW6020/NONE	072SB-0085-0001-SO	N	1	Magnesium	5300	1.2	11	10	MG/KG
SW6020/NONE	072SB-0085-0001-SO	N	1	Selenium	0.46 J	0.057	0.56	0.5	MG/KG
SW6020/NONE	072SB-0086-0001-SO	FD	1	Selenium	0.4 J	0.051	0.51	0.5	MG/KG
SW6020/NONE	072SB-0089-0001-SO	N	1	Selenium	0.46 J	0.052	0.51	0.5	MG/KG
SW6020/NONE	072SB-0090-0001-SO	N	1	Selenium	0.28 J	0.053	0.52	0.5	MG/KG
SW6020/NONE	072SB-0091-0001-SO	N	1	Barium	31	0.012	1.1	1	MG/KG
SW6020/NONE	072SB-0091-0001-SO	N	1	Beryllium	0.46	0.0083	0.11	0.1	MG/KG
SW6020/NONE	072SB-0091-0001-SO	N	1	Cadmium	0.15	0.015	0.11	0.1	MG/KG
SW6020/NONE	072SB-0091-0001-SO	N	1	Calcium	5700	1.5	11	10	MG/KG
SW6020/NONE	072SB-0091-0001-SO	N	1	Magnesium	5400	1.2	11	10	MG/KG
SW6020/NONE	072SB-0091-0001-SO	N	1	Selenium	0.49 J	0.056	0.55	0.5	MG/KG
SW6020/NONE	076-0140-0001-ER	N	1	Cadmium	1 U	0.13	1	0.5	UG/L

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW7471A/NONE	072SB-0075-0001-SO	N	1	Mercury	0.11 U	0.016	0.11	0.1	MG/KG
SW7471A/NONE	072SB-0076-0001-SO	N	1	Mercury	0.14 U	0.019	0.14	0.1	MG/KG
SW7471A/NONE	072SB-0077-0001-SO	FD	1	Mercury	0.13 U	0.019	0.13	0.1	MG/KG
SW7471A/NONE	072SB-0079-0001-SO	N	1	Mercury	0.034 J	0.021	0.15	0.1	MG/KG
SW7471A/NONE	072SB-0080-0001-SO	FD	1	Mercury	0.13 U	0.018	0.13	0.1	MG/KG

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Reporting Anomalies

SDG Name: 240-18703-1_(72-SB_76-TB)

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW7471A/NONE	072SB-0081-0001-SO	N	1	Mercury	0.12 U	0.016	0.12	0.1	MG/KG
SW7471A/NONE	072SB-0082-0001-SO	FD	1	Mercury	0.13 U	0.018	0.13	0.1	MG/KG
SW7471A/NONE	072SB-0083-0001-SO	N	1	Mercury	0.11 U	0.016	0.11	0.1	MG/KG
SW7471A/NONE	072SB-0084-0001-SO	N	1	Mercury	0.13 U	0.018	0.13	0.1	MG/KG
SW7471A/NONE	072SB-0085-0001-SO	N	1	Mercury	0.13 U	0.019	0.13	0.1	MG/KG
SW7471A/NONE	072SB-0086-0001-SO	FD	1	Mercury	0.12 U	0.017	0.12	0.1	MG/KG
SW7471A/NONE	072SB-0088-0001-SO	N	1	Mercury	0.016 J	0.016	0.12	0.1	MG/KG
SW7471A/NONE	072SB-0090-0001-SO	N	1	Mercury	0.11 U	0.015	0.11	0.1	MG/KG
SW7471A/NONE	072SB-0091-0001-SO	N	1	Mercury	0.11 U	0.015	0.11	0.1	MG/KG
SW7471A/NONE	072SB-0092-0001-SO	N	1	Mercury	0.13 U	0.018	0.13	0.1	MG/KG

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW8081/NONE	072SB-0075-0001-SO	N	1	Aldrin	4.6 UJ	1.4	4.6	1.7	UG/KG
SW8081/NONE	072SB-0075-0001-SO	N	1	alpha-BHC (alpha-Hexachlorocyclohexane)	2.8 UJ	0.83	2.8	1.7	UG/KG
SW8081/NONE	072SB-0075-0001-SO	N	1	alpha-Chlordane	3.4 UJ	1.1	3.4	1.7	UG/KG
SW8081/NONE	072SB-0075-0001-SO	N	1	alpha-Endosulfan	1.9 UJ	0.59	1.9	1.7	UG/KG
SW8081/NONE	072SB-0075-0001-SO	N	1	beta-BHC (beta-Hexachlorocyclohexane)	4 UJ	1.3	4	1.7	UG/KG
SW8081/NONE	072SB-0075-0001-SO	N	1	beta-Endosulfan	2.8 UJ	0.93	2.8	1.7	UG/KG
SW8081/NONE	072SB-0075-0001-SO	N	1	delta-BHC (delta-Hexachlorocyclohexane)	4.6 UJ	1.4	4.6	1.7	UG/KG
SW8081/NONE	072SB-0075-0001-SO	N	1	Dieldrin	1.9 UJ	0.54	1.9	1.7	UG/KG
SW8081/NONE	072SB-0075-0001-SO	N	1	Endosulfan Sulfate	3.4 UJ	0.99	3.4	1.7	UG/KG
SW8081/NONE	072SB-0075-0001-SO	N	1	Endrin	1.9 UJ	0.57	1.9	1.7	UG/KG
SW8081/NONE	072SB-0075-0001-SO	N	1	Endrin Aldehyde	3.4 UJ	1.1	3.4	1.7	UG/KG
SW8081/NONE	072SB-0075-0001-SO	N	1	Endrin Ketone	2.3 UJ	0.72	2.3	1.7	UG/KG
SW8081/NONE	072SB-0075-0001-SO	N	1	gamma-BHC (Lindane)	2.8 UJ	0.84	2.8	1.7	UG/KG
SW8081/NONE	072SB-0075-0001-SO	N	1	gamma-Chlordane	1.9 UJ	0.48	1.9	1.7	UG/KG
SW8081/NONE	072SB-0075-0001-SO	N	1	Heptachlor	4 UJ	1.3	4	1.7	UG/KG
SW8081/NONE	072SB-0075-0001-SO	N	1	Heptachlor Epoxide	2.8 UJ	0.91	2.8	1.7	UG/KG
SW8081/NONE	072SB-0075-0001-SO	N	1	Methoxychlor	5.7 UJ	1.7	5.7	1.7	UG/KG
SW8081/NONE	072SB-0075-0001-SO	N	1	p,p'-DDD	2.3 UJ	0.71	2.3	1.7	UG/KG

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AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Reporting Anomalies

SDG Name: 240-18703-1_(72-SB_76-TB)

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW8081/NONE	072SB-0075-0001-SO	N	1	p,p'-DDE	1.9 UJ	0.44	1.9	1.7	UG/KG
SW8081/NONE	072SB-0075-0001-SO	N	1	p,p'-DDT	2.3 UJ	0.72	2.3	1.7	UG/KG
SW8081/NONE	072SB-0082-0001-SO	FD	5	Aldrin	24 UJ	7.2	24	1.7	UG/KG
SW8081/NONE	072SB-0082-0001-SO	FD	5	alpha-BHC (alpha-Hexachlorocyclohexane)	15 UJ	4.4	15	1.7	UG/KG
SW8081/NONE	072SB-0082-0001-SO	FD	5	alpha-Chlordane	18 UJ	5.6	18	1.7	UG/KG
SW8081/NONE	072SB-0082-0001-SO	FD	5	alpha-Endosulfan	10 UJ	3.1	10	1.7	UG/KG
SW8081/NONE	072SB-0082-0001-SO	FD	5	beta-BHC (beta-Hexachlorocyclohexane)	21 UJ	6.6	21	1.7	UG/KG
SW8081/NONE	072SB-0082-0001-SO	FD	5	beta-Endosulfan	15 UJ	4.9	15	1.7	UG/KG
SW8081/NONE	072SB-0082-0001-SO	FD	5	delta-BHC (delta-Hexachlorocyclohexane)	24 UJ	7.2	24	1.7	UG/KG
SW8081/NONE	072SB-0082-0001-SO	FD	5	Dieldrin	10 UJ	2.8	10	1.7	UG/KG
SW8081/NONE	072SB-0082-0001-SO	FD	5	Endosulfan Sulfate	18 UJ	5.2	18	1.7	UG/KG
SW8081/NONE	072SB-0082-0001-SO	FD	5	Endrin	10 UJ	3	10	1.7	UG/KG
SW8081/NONE	072SB-0082-0001-SO	FD	5	Endrin Aldehyde	18 UJ	6	18	1.7	UG/KG
SW8081/NONE	072SB-0082-0001-SO	FD	5	Endrin Ketone	12 UJ	3.8	12	1.7	UG/KG
SW8081/NONE	072SB-0082-0001-SO	FD	5	gamma-BHC (Lindane)	15 UJ	4.4	15	1.7	UG/KG
SW8081/NONE	072SB-0082-0001-SO	FD	5	gamma-Chlordane	10 UJ	2.5	10	1.7	UG/KG
SW8081/NONE	072SB-0082-0001-SO	FD	5	Heptachlor	21 UJ	6.6	21	1.7	UG/KG
SW8081/NONE	072SB-0082-0001-SO	FD	5	Heptachlor Epoxide	15 UJ	4.8	15	1.7	UG/KG
SW8081/NONE	072SB-0082-0001-SO	FD	5	Methoxychlor	30 UJ	9	30	1.7	UG/KG
SW8081/NONE	072SB-0082-0001-SO	FD	5	p,p'-DDD	12 UJ	3.7	12	1.7	UG/KG
SW8081/NONE	072SB-0082-0001-SO	FD	5	p,p'-DDE	10 UJ	2.3	10	1.7	UG/KG
SW8081/NONE	072SB-0082-0001-SO	FD	5	p,p'-DDT	12 UJ	3.8	12	1.7	UG/KG
SW8081/NONE	072SB-0082-0001-SO	FD	5	Toxaphene	400 U	110	400	170	UG/KG
SW8081/NONE	076-0140-0001-ER	N	1	Aldrin	0.048 U	0.0078	0.048	0.03	UG/L
SW8081/NONE	076-0140-0001-ER	N	1	alpha-BHC (alpha-Hexachlorocyclohexane)	0.048 U	0.0067	0.048	0.03	UG/L
SW8081/NONE	076-0140-0001-ER	N	1	Dieldrin	0.048 U	0.0071	0.048	0.03	UG/L
SW8081/NONE	076-0140-0001-ER	N	1	Heptachlor	0.048 U	0.0076	0.048	0.03	UG/L
SW8081/NONE	076-0140-0001-ER	N	1	Heptachlor Epoxide	0.048 U	0.0068	0.048	0.03	UG/L

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Reporting Anomalies

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Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW8082/NONE	072SB-0075-0001-SO	N	1	PCB-1016 (Arochlor 1016)	74 U	24	74	33	UG/KG
SW8082/NONE	072SB-0075-0001-SO	N	1	PCB-1221 (Arochlor 1221)	57 U	18	57	33	UG/KG
SW8082/NONE	072SB-0075-0001-SO	N	1	PCB-1232 (Arochlor 1232)	51 U	16	51	33	UG/KG
SW8082/NONE	072SB-0075-0001-SO	N	1	PCB-1242 (Arochlor 1242)	46 U	15	46	33	UG/KG
SW8082/NONE	072SB-0075-0001-SO	N	1	PCB-1248 (Arochlor 1248)	63 U	19	63	33	UG/KG
SW8082/NONE	072SB-0075-0001-SO	N	1	PCB-1254 (Arochlor 1254)	63 U	19	63	33	UG/KG
SW8082/NONE	072SB-0075-0001-SO	N	1	PCB-1260 (Arochlor 1260)	63 U	19	63	33	UG/KG
SW8082/NONE	072SB-0082-0001-SO	FD	1	PCB-1016 (Arochlor 1016)	78 U	25	78	33	UG/KG
SW8082/NONE	072SB-0082-0001-SO	FD	1	PCB-1221 (Arochlor 1221)	60 U	19	60	33	UG/KG
SW8082/NONE	072SB-0082-0001-SO	FD	1	PCB-1232 (Arochlor 1232)	54 U	17	54	33	UG/KG
SW8082/NONE	072SB-0082-0001-SO	FD	1	PCB-1242 (Arochlor 1242)	48 U	16	48	33	UG/KG
SW8082/NONE	072SB-0082-0001-SO	FD	1	PCB-1248 (Arochlor 1248)	66 U	20	66	33	UG/KG
SW8082/NONE	072SB-0082-0001-SO	FD	1	PCB-1254 (Arochlor 1254)	66 U	20	66	33	UG/KG
SW8082/NONE	072SB-0082-0001-SO	FD	1	PCB-1260 (Arochlor 1260)	66 U	20	66	33	UG/KG
SW8082/NONE	076-0140-0001-ER	N	1	PCB-1016 (Arochlor 1016)	0.48 U	0.16	0.48	0.2	UG/L
SW8082/NONE	076-0140-0001-ER	N	1	PCB-1221 (Arochlor 1221)	0.48 U	0.12	0.48	0.2	UG/L
SW8082/NONE	076-0140-0001-ER	N	1	PCB-1232 (Arochlor 1232)	0.48 U	0.15	0.48	0.2	UG/L
SW8082/NONE	076-0140-0001-ER	N	1	PCB-1242 (Arochlor 1242)	0.48 U	0.21	0.48	0.2	UG/L
SW8082/NONE	076-0140-0001-ER	N	1	PCB-1248 (Arochlor 1248)	0.48 U	0.095	0.48	0.2	UG/L
SW8082/NONE	076-0140-0001-ER	N	1	PCB-1254 (Arochlor 1254)	0.48 U	0.15	0.48	0.2	UG/L
SW8082/NONE	076-0140-0001-ER	N	1	PCB-1260 (Arochlor 1260)	0.48 U	0.16	0.48	0.2	UG/L

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW8260B/NONE	072SB-0075-0001-SO	N	1	1,2-Dichloroethene	8.8 U	0.68	8.8	5	UG/KG
SW8260B/NONE	072SB-0079-0001-SO	N	1	Benzene	46	0.25	5.4	5	UG/KG
SW8260B/NONE	072SB-0079-0001-SO	N	1	Ethylbenzene	30	0.28	5.4	5	UG/KG
SW8260B/NONE	072SB-0079-0001-SO	N	1	tert-Butyl Methyl Ether (MTBE)	5.4 U	0.47	5.4	5	UG/KG
SW8260B/NONE	072SB-0079-0001-SO	N	1	Toluene	140	0.29	5.4	5	UG/KG
SW8260B/NONE	072SB-0079-0001-SO	N	1	Xylenes, Total	230	0.73	11	10	UG/KG
SW8260B/NONE	072SB-0081-0001-SO	N	1	Benzene	7.9 U	0.36	7.9	5	UG/KG

Reporting Anomalies are cases where the reported RL exceeds that specified in the governing project document.

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Reporting Anomalies

SDG Name: 240-18703-1_(72-SB_76-TB)

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW8260B/NONE	072SB-0081-0001-SO	N	1	Ethylbenzene	7.9 U	0.41	7.9	5	UG/KG
SW8260B/NONE	072SB-0081-0001-SO	N	1	tert-Butyl Methyl Ether (MTBE)	7.9 U	0.68	7.9	5	UG/KG
SW8260B/NONE	072SB-0081-0001-SO	N	1	Toluene	5.3 J	0.43	7.9	5	UG/KG
SW8260B/NONE	072SB-0081-0001-SO	N	1	Xylenes, Total	16 U	1.1	16	10	UG/KG
SW8260B/NONE	072SB-0082-0001-SO	FD	1	1,2-Dichloroethene	9.6 U	0.74	9.6	5	UG/KG
SW8260B/NONE	072SB-0085-0001-SO	N	1	Benzene	6 U	0.28	6	5	UG/KG
SW8260B/NONE	072SB-0085-0001-SO	N	1	Ethylbenzene	6 U	0.31	6	5	UG/KG
SW8260B/NONE	072SB-0085-0001-SO	N	1	tert-Butyl Methyl Ether (MTBE)	6 U	0.52	6	5	UG/KG
SW8260B/NONE	072SB-0085-0001-SO	N	1	Toluene	4.3 J	0.32	6	5	UG/KG
SW8260B/NONE	072SB-0085-0001-SO	N	1	Xylenes, Total	12 U	0.8	12	10	UG/KG
SW8260B/NONE	072SB-0087-0001-SO	N	1	Benzene	6.1 U	0.28	6.1	5	UG/KG
SW8260B/NONE	072SB-0087-0001-SO	N	1	Ethylbenzene	6.1 U	0.32	6.1	5	UG/KG
SW8260B/NONE	072SB-0087-0001-SO	N	1	tert-Butyl Methyl Ether (MTBE)	6.1 U	0.52	6.1	5	UG/KG
SW8260B/NONE	072SB-0087-0001-SO	N	1	Toluene	6.2	0.33	6.1	5	UG/KG
SW8260B/NONE	072SB-0087-0001-SO	N	1	Xylenes, Total	12 U	0.81	12	10	UG/KG
SW8260B/NONE	072SB-0089-0001-SO	N	1	Benzene	5.6 U	0.26	5.6	5	UG/KG
SW8260B/NONE	072SB-0089-0001-SO	N	1	Ethylbenzene	5.6 U	0.29	5.6	5	UG/KG
SW8260B/NONE	072SB-0089-0001-SO	N	1	tert-Butyl Methyl Ether (MTBE)	5.6 U	0.48	5.6	5	UG/KG
SW8260B/NONE	072SB-0089-0001-SO	N	1	Toluene	3.8 J	0.3	5.6	5	UG/KG
SW8260B/NONE	072SB-0089-0001-SO	N	1	Xylenes, Total	11 U	0.75	11	10	UG/KG
SW8260B/NONE	072SB-0090-0001-SO	N	1	Benzene	5.3 U	0.24	5.3	5	UG/KG
SW8260B/NONE	072SB-0090-0001-SO	N	1	Ethylbenzene	5.3 U	0.27	5.3	5	UG/KG
SW8260B/NONE	072SB-0090-0001-SO	N	1	tert-Butyl Methyl Ether (MTBE)	5.3 U	0.45	5.3	5	UG/KG
SW8260B/NONE	072SB-0090-0001-SO	N	1	Toluene	2.8 J	0.28	5.3	5	UG/KG
SW8260B/NONE	072SB-0090-0001-SO	N	1	Xylenes, Total	11 U	0.7	11	10	UG/KG
SW8260B/NONE	072SB-0091-0001-SO	N	1	Benzene	6.5 U	0.3	6.5	5	UG/KG
SW8260B/NONE	072SB-0091-0001-SO	N	1	Ethylbenzene	6.5 U	0.34	6.5	5	UG/KG
SW8260B/NONE	072SB-0091-0001-SO	N	1	tert-Butyl Methyl Ether (MTBE)	6.5 U	0.56	6.5	5	UG/KG
SW8260B/NONE	072SB-0091-0001-SO	N	1	Toluene	5 J	0.35	6.5	5	UG/KG

Reporting Anomalies are cases where the reported RL exceeds that specified in the governing project document.

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Reporting Anomalies

SDG Name: 240-18703-1_(72-SB_76-TB)

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW8260B/NONE	072SB-0091-0001-SO	N	1	Xylenes, Total	13 U	0.87	13	10	UG/KG
SW8260B/NONE	076-0140-0001-ER	N	1	1,2-Dichloroethene	2 U	0.34	2	1	UG/L
SW8260B/NONE	076-0141-0001-TB	N	1	1,2-Dichloroethene	2 U	0.34	2	1	UG/L
SW8260B/NONE	076-0142-0001-TB	N	1	1,2-Dichloroethene	2 U	0.34	2	1	UG/L
SW8260B/NONE	076SB-0137-0001-TB	N	1	1,2-Dichloroethene	2 U	0.34	2	1	UG/L
SW8260B/NONE	076SB-0138-0001-TB	N	1	1,2-Dichloroethene	2 U	0.34	2	1	UG/L
SW8260B/NONE	076SB-0139-0001-TB	N	1	1,2-Dichloroethene	2 U	0.34	2	1	UG/L

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW8270C/NONE	072SB-0075-0001-SO	N	1	Benzyl alcohol	380 U	24	380	330	UG/KG
SW8270C/NONE	072SB-0075-0001-SO	N	1	Carbazole	58 U	31	58	50	UG/KG
SW8270C/NONE	072SB-0075-0001-SO	N	1	Cresols, m & p	460 U	23	460	300	UG/KG
SW8270C/NONE	072SB-0075-0001-SO	N	1	Hexachlorocyclopentadiene	380 U	31	380	330	UG/KG
SW8270C/NONE	072SB-0076-0001-SO	N	1	Benzyl alcohol	390 U	25	390	330	UG/KG
SW8270C/NONE	072SB-0076-0001-SO	N	1	Carbazole	59 U	32	59	50	UG/KG
SW8270C/NONE	072SB-0076-0001-SO	N	1	Cresols, m & p	480 U	24	480	300	UG/KG
SW8270C/NONE	072SB-0076-0001-SO	N	1	Hexachlorocyclopentadiene	390 U	32	390	330	UG/KG
SW8270C/NONE	072SB-0077-0001-SO	FD	1	Benzoic acid	810 R	410	810	800	UG/KG
SW8270C/NONE	072SB-0077-0001-SO	FD	1	Benzyl alcohol	410 U	26	410	330	UG/KG
SW8270C/NONE	072SB-0077-0001-SO	FD	1	Carbazole	61 U	33	61	50	UG/KG
SW8270C/NONE	072SB-0077-0001-SO	FD	1	Cresols, m & p	490 U	25	490	300	UG/KG
SW8270C/NONE	072SB-0077-0001-SO	FD	1	Hexachlorocyclopentadiene	410 U	33	410	330	UG/KG
SW8270C/NONE	072SB-0079-0001-SO	N	1	Benzoic acid	870 R	440	870	800	UG/KG
SW8270C/NONE	072SB-0079-0001-SO	N	1	Benzyl alcohol	430 U	28	430	330	UG/KG
SW8270C/NONE	072SB-0079-0001-SO	N	1	Carbazole	66 U	35	66	50	UG/KG
SW8270C/NONE	072SB-0079-0001-SO	N	1	Cresols, m & p	520 U	26	520	300	UG/KG
SW8270C/NONE	072SB-0079-0001-SO	N	1	Hexachlorocyclopentadiene	430 U	35	430	330	UG/KG
SW8270C/NONE	072SB-0080-0001-SO	FD	1	Benzyl alcohol	390 U	25	390	330	UG/KG
SW8270C/NONE	072SB-0080-0001-SO	FD	1	Carbazole	59 U	32	59	50	UG/KG
SW8270C/NONE	072SB-0080-0001-SO	FD	1	Cresols, m & p	470 U	23	470	300	UG/KG

Reporting Anomalies are cases where the reported RL exceeds that specified in the governing project document.

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Reporting Anomalies

SDG Name: 240-18703-1_(72-SB_76-TB)

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW8270C/NONE	072SB-0080-0001-SO	FD	1	Hexachlorocyclopentadiene	390 U	32	390	330	UG/KG
SW8270C/NONE	072SB-0081-0001-SO	N	1	Benzyl alcohol	370 U	24	370	330	UG/KG
SW8270C/NONE	072SB-0081-0001-SO	N	1	Carbazole	56 U	30	56	50	UG/KG
SW8270C/NONE	072SB-0081-0001-SO	N	1	Cresols, m & p	450 U	23	450	300	UG/KG
SW8270C/NONE	072SB-0081-0001-SO	N	1	Hexachlorocyclopentadiene	370 U	30	370	330	UG/KG
SW8270C/NONE	072SB-0082-0001-SO	FD	1	Benzyl alcohol	390 U	25	390	330	UG/KG
SW8270C/NONE	072SB-0082-0001-SO	FD	1	Carbazole	59 U	32	59	50	UG/KG
SW8270C/NONE	072SB-0082-0001-SO	FD	1	Cresols, m & p	470 U	23	470	300	UG/KG
SW8270C/NONE	072SB-0082-0001-SO	FD	1	Hexachlorocyclopentadiene	390 U	32	390	330	UG/KG
SW8270C/NONE	072SB-0083-0001-SO	N	1	Benzyl alcohol	380 U	24	380	330	UG/KG
SW8270C/NONE	072SB-0083-0001-SO	N	1	Carbazole	58 U	31	58	50	UG/KG
SW8270C/NONE	072SB-0083-0001-SO	N	1	Cresols, m & p	460 U	23	460	300	UG/KG
SW8270C/NONE	072SB-0083-0001-SO	N	1	Hexachlorocyclopentadiene	380 U	31	380	330	UG/KG
SW8270C/NONE	072SB-0084-0001-SO	N	1	Benzyl alcohol	380 U	24	380	330	UG/KG
SW8270C/NONE	072SB-0084-0001-SO	N	1	Carbazole	58 U	31	58	50	UG/KG
SW8270C/NONE	072SB-0084-0001-SO	N	1	Cresols, m & p	460 U	23	460	300	UG/KG
SW8270C/NONE	072SB-0084-0001-SO	N	1	Hexachlorocyclopentadiene	380 U	31	380	330	UG/KG
SW8270C/NONE	072SB-0085-0001-SO	N	1	Benzyl alcohol	390 U	25	390	330	UG/KG
SW8270C/NONE	072SB-0085-0001-SO	N	1	Carbazole	58 U	32	58	50	UG/KG
SW8270C/NONE	072SB-0085-0001-SO	N	1	Cresols, m & p	470 U	23	470	300	UG/KG
SW8270C/NONE	072SB-0085-0001-SO	N	1	Hexachlorocyclopentadiene	390 U	32	390	330	UG/KG
SW8270C/NONE	072SB-0086-0001-SO	FD	1	Benzyl alcohol	380 U	24	380	330	UG/KG
SW8270C/NONE	072SB-0086-0001-SO	FD	1	Carbazole	58 U	31	58	50	UG/KG
SW8270C/NONE	072SB-0086-0001-SO	FD	1	Cresols, m & p	460 U	23	460	300	UG/KG
SW8270C/NONE	072SB-0086-0001-SO	FD	1	Hexachlorocyclopentadiene	380 U	31	380	330	UG/KG
SW8270C/NONE	072SB-0087-0001-SO	N	1	Benzyl alcohol	360 U	23	360	330	UG/KG
SW8270C/NONE	072SB-0087-0001-SO	N	1	Carbazole	54 U	29	54	50	UG/KG
SW8270C/NONE	072SB-0087-0001-SO	N	1	Cresols, m & p	430 U	22	430	300	UG/KG
SW8270C/NONE	072SB-0087-0001-SO	N	1	Hexachlorocyclopentadiene	360 U	29	360	330	UG/KG

Reporting Anomalies are cases where the reported RL exceeds that specified in the governing project document.

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Reporting Anomalies

SDG Name: 240-18703-1_(72-SB_76-TB)

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW8270C/NONE	072SB-0088-0001-SO	N	1	Benzyl alcohol	360 U	23	360	330	UG/KG
SW8270C/NONE	072SB-0088-0001-SO	N	1	Carbazole	54 U	29	54	50	UG/KG
SW8270C/NONE	072SB-0088-0001-SO	N	1	Cresols, m & p	430 U	22	430	300	UG/KG
SW8270C/NONE	072SB-0088-0001-SO	N	1	Hexachlorocyclopentadiene	360 U	29	360	330	UG/KG
SW8270C/NONE	072SB-0089-0001-SO	N	1	Benzyl alcohol	370 U	24	370	330	UG/KG
SW8270C/NONE	072SB-0089-0001-SO	N	1	Carbazole	56 U	30	56	50	UG/KG
SW8270C/NONE	072SB-0089-0001-SO	N	1	Cresols, m & p	450 U	22	450	300	UG/KG
SW8270C/NONE	072SB-0089-0001-SO	N	1	Hexachlorocyclopentadiene	370 U	30	370	330	UG/KG
SW8270C/NONE	072SB-0090-0001-SO	N	1	Benzyl alcohol	370 U	24	370	330	UG/KG
SW8270C/NONE	072SB-0090-0001-SO	N	1	Carbazole	56 U	30	56	50	UG/KG
SW8270C/NONE	072SB-0090-0001-SO	N	1	Cresols, m & p	450 U	22	450	300	UG/KG
SW8270C/NONE	072SB-0090-0001-SO	N	1	Hexachlorocyclopentadiene	370 U	30	370	330	UG/KG
SW8270C/NONE	072SB-0091-0001-SO	N	1	Benzyl alcohol	370 U	24	370	330	UG/KG
SW8270C/NONE	072SB-0091-0001-SO	N	1	Carbazole	57 U	31	57	50	UG/KG
SW8270C/NONE	072SB-0091-0001-SO	N	1	Cresols, m & p	450 U	23	450	300	UG/KG
SW8270C/NONE	072SB-0091-0001-SO	N	1	Hexachlorocyclopentadiene	370 U	31	370	330	UG/KG

Test Leach	FieldSample ID	Type	Dilution	Analyte	Result	DL	RL	Project RL	Units
SW8330B/NONE	076-0140-0001-ER	N	1	2-Nitrotoluene	0.5 U	0.088	0.5	0.2	UG/L
SW8330B/NONE	076-0140-0001-ER	N	1	3-Nitrotoluene	0.5 U	0.057	0.5	0.2	UG/L
SW8330B/NONE	076-0140-0001-ER	N	1	4-Nitrotoluene	0.5 U	0.088	0.5	0.2	UG/L

Reporting Anomalies are cases where the reported RL exceeds that specified in the governing project document.

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Worksheet

SDG Name: 240-18703-1_(72-SB_76-TB)

Method: E353.2

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?				
Were samples preserved properly and received in good condition?				
Were holding times met?				
Were sample reciept temperatures met?				
Were QAPP specified RLs achieved?				
Were all QAPP specified target analytes reported?				
Was the initial calibration curve within QAPP acceptance limits?			•	Not Required
Were the ICV/CCVs analyzed (frequency) as required in the QAPP?			•	Not Required
Were ICV/CCV results within QAPP acceptance limits?			•	Not Required
Were the ICB/CCBs analyzed (frequency) as required in the QAPP?			•	Not Required
Was a method blank prepared and analyzed with each batch?				
Were target analytes detected in the ICB/CCB/method blank?			•	Not Required
Was a field blank collected and analyzed?				
Were target analytes reported in the field blank analyses above the MDL?				
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?				
Was a LCS prepared and analyzed with each batch?				
Were the LCS recoveries within QAPP acceptance limits?				
Was a duplicate sample prepared and analyzed with each batch?				
Was the duplicate RPD within QAPP acceptance limits?				
Was a MS/MSD pair prepared with each batch?				
Is the MS/MSD parent sample the one designated by the sampling team?				
Were the MS/MSD recoveries and RPDs within QAPP acceptance limits?				
Were sample concentrations within calibration range?				
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?				
Are all samples associated with QC non-compliances flagged appropriately?				
Are the Qualified, Detected, and Rejected tables of the ADR report in agreement?				

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Method: M8015D

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report?				
Were samples preserved properly and received in good condition?				
Were sample reciept temperatures met?				
Were holding times for prep and analysis met?				
Does the initial calibration curve consist of 5 concentration levels, with the low standard near but > MDL?				
Is the ICAL %RSD within acceptance limits (%D =20%) on both columns?				
Was a second source verification analyzed after the ICAL and all analytes within criteria (%D =20%)?				
Was a CCV run at the beginning of the analytical sequence and every 12 hours?				
Was the CCV a mid-level standard from the initial calibration curve?				
Was the CCV %D within criteria (%D =20%)?				
Was a method blank prepared and analyzed with each batch?				
Were target analytes detected in the method blank above the MDL?				
Was a field blank (equipment or trip) collected and analyzed?				
Were target analytes reported in the field blank analyses above the MDL?				
Were surrogate recoveries within QAPP acceptance limits?				
Was an LCS/LCSD pair prepared and analyzed with each batch? (if applicable)				
Were the LCS recoveries within QAPP acceptance limits?				
Were the LCS/LCSD RPDs within QAPP acceptance limits? (if applicable)				
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits (RPD = 30%) ?				
Is the MS/MSD parent sample the one designated by the sampling team?				
Were MS/MSD recoveries and RPD within QAPP acceptance limits?				
Were all QAPP-specified target analytes reported?				
Were reported sample concentrations within calibration range?				
Are all samples associated with QC non-compliances flagged appropriately?				
Are the Qualified, Detected, and Rejected tables of the ADR report in agreement?				
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?				
Were sample prepration sheets present and filled out appropriately?				
Were instrument run logs present and filled out appropriately?				

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Method: M8015V

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report?				
Were samples preserved properly and received in good condition?				
Were sample reciept temperatures met?				
Were holding times for prep and analysis met?				
Does the initial calibration curve consist of 5 concentration levels, with the low standard near but > MDL?				
Is the ICAL %RSD within acceptance limits (%D =20%) on both columns?				
Was a second source verification analyzed after the ICAL and all analytes within criteria (%D =20%)?				
Was a CCV run at the beginning of the analytical sequence and every 12 hours?				
Was the CCV a mid-level standard from the initial calibration curve?				
Was the CCV %D within criteria (%D =20%)?				
Was a method blank prepared and analyzed with each batch?				
Were target analytes detected in the method blank above the MDL?				
Was a field blank (equipment or trip) collected and analyzed?				
Were target analytes reported in the field blank analyses above the MDL?				
Were surrogate recoveries within QAPP acceptance limits?				
Was an LCS/LCSD pair prepared and analyzed with each batch? (if applicable)				
Were the LCS recoveries within QAPP acceptance limits?				
Were the LCS/LCSD RPDs within QAPP acceptance limits? (if applicable)				
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits (RPD = 30%) ?				
Is the MS/MSD parent sample the one designated by the sampling team?				
Were MS/MSD recoveries and RPD within QAPP acceptance limits?				
Were all QAPP-specified target analytes reported?				
Were reported sample concentrations within calibration range?				
Are all samples associated with QC non-compliances flagged appropriately?				
Are the Qualified, Detected, and Rejected tables of the ADR report in agreement?				
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?				
Were sample prepration sheets present and filled out appropriately?				
Were instrument run logs present and filled out appropriately?				

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Method: SW6020

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?				
Were samples preserved properly and received in good condition?				
Were holding times met?				
Were sample reciept temperatures met?				
Were QAPP specified RLs achieved?				
Were all QAPP specified target analytes reported?				
Was the initial calibration curve within QAPP acceptance limits?			•	Not Required
Were the ICV/CCVs analyzed (frequency) as required in the QAPP?			•	Not Required
Were ICV/CCV results within QAPP acceptance limits?			•	Not Required
Were the ICB/CCBs analyzed (frequency) as required in the QAPP?			•	Not Required
Was a method blank prepared and analyzed with each batch?				
Were target analytes detected in the ICB/CCB/method blank?			•	Not Required
Was a field blank collected and analyzed?				
Were target analytes reported in the field blank analyses above the MDL?				
Was an Interference Check Standard (ICS) run at the beginning and end of every run?			•	Not Required
Was the ICS recovery within QAPP acceptance limits?			•	Not Required
If a field duplicate was analyzed, were the RPDs within criteria?				
Was a LCS prepared and analyzed with each batch?				
Were the LCS recoveries within QAPP acceptance limits?				
Was a MS/MSD pair prepared with each batch?				
Is the MS/MSD parent sample the one designated by the sampling team?				
Were the MS/MSD within QAPP acceptance limits?				
Was a serial dilution prepared and analyzed with each batch?			•	Not Required
Was the serial dilution within QAPP acceptance limits?			•	Not Required
Were sample concentrations within calibration range?				
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?				
Are all samples associated with QC non-compliances flagged appropriately?				
Are the Qualified, Detected, and Rejected tables of the ADR report in agreement?				

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Method: SW7470A

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?				
Were samples preserved properly and received in good condition?				
Were holding times met?				
Were sample reciept temperatures met?				
Were QAPP specified RLs achieved?				
Were all QAPP specified target analytes reported?				
Was the initial calibration curve within QAPP acceptance limits?			•	Not Required
Were the ICV/CCVs analyzed (frequency) as required in the QAPP?			•	Not Required
Were ICV/CCV results within QAPP acceptance limits?			•	Not Required
Were the ICB/CCBs analyzed (frequency) as required in the QAPP?			•	Not Required
Was a method blank prepared and analyzed with each batch?				
Were target analytes detected in the ICB/CCB/method blank?			•	Not Required
Was a field blank collected and analyzed?				
Were target analytes reported in the field blank analyses above the MDL?				
Was the ICS recovery within QAPP acceptance limits?			•	Not Required
If a field duplicate was analyzed, were the RPDs within criteria?				
Was a LCS prepared and analyzed with each batch?				
Were the LCS recoveries within QAPP acceptance limits?				
Was a MS/MSD pair prepared with each batch?				
Is the MS/MSD parent sample the one designated by the sampling team?				
Were the MS/MSD within QAPP acceptance limits?				
Were sample concentrations within calibration range?				
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?				
Are all samples associated with QC non-compliances flagged appropriately?				
Are the Qualified, Detected, and Rejected tables of the ADR report in agreement?				

Method: SW7471A

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?				

Method: SW7471A

Review Questions	Yes	No	NA	Comment
Were samples preserved properly and received in good condition?				
Were holding times met?				
Were sample reciept temperatures met?				
Were QAPP specified RLs achieved?				
Were all QAPP specified target analytes reported?				
Was the initial calibration curve within QAPP acceptance limits?			•	Not Required
Were the ICV/CCVs analyzed (frequency) as required in the QAPP?			•	Not Required
Were ICV/CCV results within QAPP acceptance limits?			•	Not Required
Were the ICB/CCBs analyzed (frequency) as required in the QAPP?			•	Not Required
Was a method blank prepared and analyzed with each batch?				
Were target analytes detected in the ICB/CCB/method blank?			•	Not Required
Was a field blank collected and analyzed?				
Were target analytes reported in the field blank analyses above the MDL?				
Was the ICS recovery within QAPP acceptance limits?			•	Not Required
If a field duplicate was analyzed, were the RPDs within criteria?				
Was a LCS prepared and analyzed with each batch?				
Were the LCS recoveries within QAPP acceptance limits?				
Was a MS/MSD pair prepared with each batch?				
Is the MS/MSD parent sample the one designated by the sampling team?				
Were the MS/MSD within QAPP acceptance limits?				
Were sample concentrations within calibration range?				
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?				
Are all samples associated with QC non-compliances flagged appropriately?				
Are the Qualified, Detected, and Rejected tables of the ADR report in agreement?				

Method: SW8081

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report?				
Were samples preserved properly and received in good condition?				
Were sample reciept temperatures met?				

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Method: SW8081

Review Questions	Yes	No	NA	Comment
Were holding times for prep and analysis met?				
Does the initial calibration curve consist of 5 concentration levels, with the low standard near but > MDL?				
Is the ICAL %RSD within acceptance limits (%D =20%) on both columns?				
Was a second source verification analyzed after the ICAL and all analytes within criteria (%D =20%)?				
Was a CCV run at the beginning of the analytical sequence and every 12 hours?				
Was the CCV a mid-level standard from the initial calibration curve?				
Was the CCV %D within criteria (%D =20%)?				
Was a method blank prepared and analyzed with each batch?				
Were target analytes detected in the method blank above the MDL?				
Was a field blank (equipment or trip) collected and analyzed?				
Were target analytes reported in the field blank analyses above the MDL?				
Were surrogate recoveries within QAPP acceptance limits?				
Was an LCS/LCSD pair prepared and analyzed with each batch? (if applicable)				
Were the LCS recoveries within QAPP acceptance limits?				
Were the LCS/LCSD RPDs within QAPP acceptance limits? (if applicable)				
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits (RPD = 30%) ?				
Were the Breakdown products within QAPP acceptance limits?				
Is the MS/MSD parent sample the one designated by the sampling team?				
Were MS/MSD recoveries and RPD within QAPP acceptance limits?				
Were all QAPP-specified target analytes reported?				
Were reported sample concentrations within calibration range?				
Were RPDs between primary and confirmation columns < 40%?				
Are all samples associated with QC non-compliances flagged appropriately?				
Are the Qualified, Detected, and Rejected tables of the ADR report in agreement?				
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?				
Were sample prepration sheets present and filled out appropriately?				
Were instrument run logs present and filled out appropriately?				

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Method: SW8082

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report?				
Were samples preserved properly and received in good condition?				
Were sample reciept temperatures met?				
Were holding times for prep and analysis met?				
Does the initial calibration curve consist of 5 concentration levels, with the low standard near but > MDL?				
Is the ICAL %RSD within acceptance limits (%D =20%) on both columns?				
Was a second source verification analyzed after the ICAL and all analytes within criteria (%D =20%)?				
Was a CCV run at the beginning of the analytical sequence and every 12 hours?				
Was the CCV a mid-level standard from the initial calibration curve?				
Was the CCV %D within criteria (%D =20%)?				
Was a method blank prepared and analyzed with each batch?				
Were target analytes detected in the method blank above the MDL?				
Was a field blank (equipment or trip) collected and analyzed?				
Were target analytes reported in the field blank analyses above the MDL?				
Were surrogate recoveries within QAPP acceptance limits?				
Was an LCS/LCSD pair prepared and analyzed with each batch? (if applicable)				
Were the LCS recoveries within QAPP acceptance limits?				
Were the LCS/LCSD RPDs within QAPP acceptance limits? (if applicable)				
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits (RPD = 30%) ?				
Were the Breakdown products within QAPP acceptance limits?				
Is the MS/MSD parent sample the one designated by the sampling team?				
Were MS/MSD recoveries and RPD within QAPP acceptance limits?				
Were all QAPP-specified target analytes reported?				
Were reported sample concentrations within calibration range?				
Were RPDs between primary and confirmation columns < 40%?				
Are all samples associated with QC non-compliances flagged appropriately?				
Are the Qualified, Detected, and Rejected tables of the ADR report in agreement?				
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?				

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Method: SW8082

Review Questions	Yes	No	NA	Comment
Were sample prepration sheets present and filled out appropriately?				
Were instrument run logs present and filled out appropriately?				

Method: SW8151

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report?				
Were samples preserved properly and received in good condition?				
Were sample reciept temperatures met?				
Were holding times for prep and analysis met?				
Does the initial calibration curve consist of 5 concentration levels, with the low standard near but > MDL?				
Is the ICAL %RSD within acceptance limits (%D =20%) on both columns?				
Was a second source verification analyzed after the ICAL and all analytes within criteria (%D =20%)?				
Was a CCV run at the beginning of the analytical sequence and every 12 hours?				
Was the CCV a mid-level standard from the initial calibration curve?				
Was the CCV %D within criteria (%D =20%)?				
Was a method blank prepared and analyzed with each batch?				
Were target analytes detected in the method blank above the MDL?				
Was a field blank (equipment or trip) collected and analyzed?				
Were target analytes reported in the field blank analyses above the MDL?				
Were surrogate recoveries within QAPP acceptance limits?				
Was an LCS/LCSD pair prepared and analyzed with each batch? (if applicable)				
Were the LCS recoveries within QAPP acceptance limits?				
Were the LCS/LCSD RPDs within QAPP acceptance limits? (if applicable)				
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits (RPD = 30%) ?				
Were the Breakdown products within QAPP acceptance limits?				
Is the MS/MSD parent sample the one designated by the sampling team?				
Were MS/MSD recoveries and RPD within QAPP acceptance limits?				
Were all QAPP-specified target analytes reported?				

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Method: SW8151

Review Questions	Yes	No	NA	Comment
Were reported sample concentrations within calibration range?				
Were RPDs between primary and confirmation columns < 40%?				
Are all samples associated with QC non-compliances flagged appropriately?				
Are the Qualified, Detected, and Rejected tables of the ADR report in agreement?				
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?				
Were sample prepration sheets present and filled out appropriately?				
Were instrument run logs present and filled out appropriately?				

Method: SW8260B

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?				
Were samples preserved properly and received in good condition?				
Were holding times met?				
Were sample reciept temperatures met?				
Were QAPP specified PQLs achieved?				
Were all QAPP-specified target analytes reported?				
Was the GC/MS system properly tuned based on method criteria?			•	Not Required
Was the criteria met during each 12 hour shift (prior to ICAL and Cal Ver.)?			•	Not Required
Does the initial calibration curve consist of 5 concentration levels, with the low standard near but > MDL?			•	Not Required
Did the Calibration Check Compounds (CCCs) have a relative standard deviation within QAPP acceptance limits?			•	Not Required
Were the average response factors (RFs) for the System Performance Check Compounds (SPCCs) within QAPP acceptance limits?			•	Not Required
Were all other target analytes within criteria? OR Was the average across all target analytes within criteria? Was a different calibration option used?			•	Not Required
If a linear regression curve was used, was the correlation coefficient within criteria?			•	Not Required
Was a second source verification analyzed after the ICAL and all analytes within criteria?			•	Not Required
Was a CCV run at the beginning of the analytical sequence and every 12 hours?			•	Not Required
Was the CCV a mid-level standard from the initial calibration curve?			•	Not Required
Did the CCCs have a %Difference within QAPP acceptance limits?			•	Not Required

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Method: SW8260B

Review Questions	Yes	No	NA	Comment
Were the average RFs for the SPCCs within QAPP acceptance limits?			•	Not Required
Was the average %D (difference or drift) for all target analytes within QAPP acceptance limits?			•	Not Required
Were the internal standards added to every standard, blank, matrix spike, matrix spike duplicate, and sample?			•	Not Required
Were the retention times for all IS compounds within QAPP acceptance limits?			•	Not Required
Are the area counts of all IS compounds within QAPP acceptance limits?			•	Not Required
Was a method blank prepared and analyzed with each batch?				
Were target analytes detected in the method blank above the MDL?				
Was a field blank (equipment or trip) collected and analyzed at the required frequency?				
Were target analytes reported in the field blank analyses above the MDL?				
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?				
Was an LCS/LCSD pair prepared and analyzed with each batch?				
Were the LCS/LCSD recoveries within QAPP acceptance limits?				
Were the LCS/LCSD RPDs within QAPP acceptance limits?				
Was the duplicate RPD within QAPP acceptance limits?				
Are all samples associated with QC non-compliances flagged appropriately?				
Are the Qualified, Detected, and Rejected tables of the ADR report in agreement?				
Was a MS/MSD pair prepared with each batch?				
Is the MS/MSD parent sample the one designated by the sampling team?				
Were MS/MSD recoveries and RPD within QAPP acceptance limits?				
Were surrogate recoveries within QAPP acceptance limits?				
Were reported sample concentrations within calibration range?				
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?				
Were instrument run logs present and filled out appropriately?				
Were sample prepration sheets present and filled out appropriately?				

Method: SW8270C

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?				
Were samples preserved properly and received in good condition?				

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Method: SW8270C

Review Questions	Yes	No	NA	Comment
Were holding times met?				
Were sample reciept temperatures met?				
Were QAPP specified PQLs achieved?				
Were all QAPP-specified target analytes reported?				
Was the GC/MS system properly tuned based on method criteria?			•	Not Required
Was the criteria met during each 12 hour shift (prior to ICAL and Cal Ver.)?			•	Not Required
Does the initial calibration curve consist of 5 concentration levels, with the low standard near but > MDL?			•	Not Required
Did the Calibration Check Compounds (CCCs) have a relative standard deviation within QAPP acceptance limits?			•	Not Required
Were the average response factors (RFs) for the System Performance Check Compounds (SPCCs) within QAPP acceptance limits?			•	Not Required
Were all other target analytes within criteria? OR Was the average across all target analytes within criteria? Was a different calibration option used?			•	Not Required
If a linear regression curve was used, was the correlation coefficient within criteria?			•	Not Required
Was a second source verification analyzed after the ICAL and all analytes within criteria?			•	Not Required
Was a CCV run at the beginning of the analytical sequence and every 12 hours?			•	Not Required
Was the CCV a mid-level standard from the initial calibration curve?			•	Not Required
Did the CCCs have a %Difference within QAPP acceptance limits?			•	Not Required
Were the average RFs for the SPCCs within QAPP acceptance limits?			•	Not Required
Was the average %D (difference or drift) for all target analytes within QAPP acceptance limits?			•	Not Required
Were the internal standards added to every standard, blank, matrix spike, matrix spike duplicate, and sample?			•	Not Required
Were the retention times for all IS compounds within QAPP acceptance limits?			•	Not Required
Are the area counts of all IS compounds within QAPP acceptance limits?			•	Not Required
Was a method blank prepared and analyzed with each batch?				
Were target analytes detected in the method blank above the MDL?				
Was a field blank (equipment or trip) collected and analyzed at the required frequency?				
Were target analytes reported in the field blank analyses above the MDL?				
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?				
Was an LCS/LCSD pair prepared and analyzed with each batch?				

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Method: SW8270C

Review Questions	Yes	No	NA	Comment
Were the LCS/LCSD recoveries within QAPP acceptance limits?				
Were the LCS/LCSD RPDs within QAPP acceptance limits?				
Was the duplicate RPD within QAPP acceptance limits?				
Are all samples associated with QC non-compliances flagged appropriately?				
Are the Qualified, Detected, and Rejected tables of the ADR report in agreement?				
Was a MS/MSD pair prepared with each batch?				
Is the MS/MSD parent sample the one designated by the sampling team?				
Were MS/MSD recoveries and RPD within QAPP acceptance limits?				
Were surrogate recoveries within QAPP acceptance limits?				
Were reported sample concentrations within calibration range?				
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?				
Were instrument run logs present and filled out appropriately?				
Were sample prepration sheets present and filled out appropriately?				

Method: SW8330B

Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report?				
Were samples preserved properly and received in good condition?				
Were sample reciept temperatures met?				
Were holding times for prep and analysis met?				
Does the initial calibration curve consist of 5 concentration levels, with the low standard near but > MDL?				
Is the ICAL %RSD within acceptance limits (%D =20%) on both columns?				
Was a second source verification analyzed after the ICAL and all analytes within criteria (%D =20%)?				
Was a CCV run at the beginning of the analytical sequence and every 12 hours?				
Was the CCV a mid-level standard from the initial calibration curve?				
Was the CCV %D within criteria (%D =20%)?				
Was a method blank prepared and analyzed with each batch?				
Were target analytes detected in the method blank above the MDL?				
Was a field blank (equipment or trip) collected and analyzed?				

AUTOMATED DATA REVIEW SUMMARY for 240-18703-1_(72-SB_76-TB)

Method: SW8330B

Review Questions	Yes	No	NA	Comment
Were target analytes reported in the field blank analyses above the MDL?				
Were surrogate recoveries within QAPP acceptance limits?				
Was an LCS/LCSD pair prepared and analyzed with each batch? (if applicable)				
Were the LCS recoveries within QAPP acceptance limits?				
Were the LCS/LCSD RPDs within QAPP acceptance limits? (if applicable)				
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits (RPD = 30%) ?				
Is the MS/MSD parent sample the one designated by the sampling team?				
Were MS/MSD recoveries and RPD within QAPP acceptance limits?				
Were all QAPP-specified target analytes reported?				
Were reported sample concentrations within calibration range?				
Were RPDs between primary and confirmation columns < 40%?				
Did PDA spectra for reported compounds match associated standard spectra?				
Are all samples associated with QC non-compliances flagged appropriately?				
Are the Qualified, Detected, and Rejected tables of the ADR report in agreement?				
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?				
Were sample prepration sheets present and filled out appropriately?				
Were instrument run logs present and filled out appropriately?				

WORKSHEET 8

Automated Data Review Summary for Field Duplicate

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Field Duplicate Report By Event and Site
Ravenna Army Ammunition Plant
RVAAP, QAPP Oct. 2012

Location	Analysis
77-1037-DU1-SS	E353.2

Sample Date	Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Nitrocellulose	ND	ND	45.0	NA	40	NA	OK

Location	Analysis
77-1037-DU1-SS	SW6020

Sample Date	Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Aluminum	8200	7700	2.50	6.29	50	OK	NA
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Antimony	0.200	0.170	0.170	16.2	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Arsenic	12.0	14.0	0.0830	15.4	50	OK	NA
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Barium	49.0	48.0	0.830	2.06	50	OK	NA
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Beryllium	0.460	0.420	0.0830	9.09	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Cadmium	0.190	0.200	0.0830	5.13	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Calcium	4500	5200	8.30	14.4	50	OK	NA
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Chromium	18.0	15.0	0.170	18.2	50	OK	NA
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Cobalt	7.40	7.70	0.0410	3.97	50	OK	NA
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Copper	16.0	17.0	0.170	6.06	50	OK	NA
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Iron	22000	20000	4.10	9.52	50	OK	NA
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Lead	22.0	21.0	0.0830	4.65	50	OK	NA
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Magnesium	2800	2700	8.30	3.64	50	OK	NA
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Manganese	540	520	0.410	3.77	50	OK	NA

Field Duplicate Report By Event and Site
Ravenna Army Ammunition Plant
RVAAP, QAPP Oct. 2012

Location	Analysis
77-1037-DU1-SS	SW6020

Sample Date	Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Nickel	24.0	28.0	0.0830	15.4	50	OK	NA
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Potassium	830	740	8.30	11.5	50	OK	NA
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Selenium	0.560	0.530	0.410	5.50	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Silver	0.0270	0.0300	0.0830	10.5	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Sodium	29.0	32.0	8.30	9.84	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Thallium	0.130	0.140	0.0830	7.41	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Vanadium	16.0	15.0	0.0830	6.45	50	OK	NA
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Zinc	63.0	62.0	0.410	1.60	50	OK	NA

Location	Analysis
77-1037-DU1-SS	SW7471A

Sample Date	Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Mercury	0.0450	0.0410	0.100	9.30	50	NA	OK

Location	Analysis
77-1037-DU1-SS	SW8081

Sample Date	Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Aldrin	ND	ND	40.0	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	alpha-BHC (alpha-Hexachlorocyclohexane)	ND	ND	25.0	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	alpha-Chlordane	ND	ND	30.0	NA	50	NA	OK

Field Duplicate Report By Event and Site
Ravenna Army Ammunition Plant
RVAAP, QAPP Oct. 2012

Location	Analysis
77-1037-DU1-SS	SW8081

Sample Date	Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	alpha-Endosulfan	ND	ND	17.0	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	beta-BHC (beta-Hexachlorocyclohexane)	ND	ND	35.0	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	beta-Endosulfan	ND	ND	25.0	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	beta-Endosulfan	23.9	ND	25.0	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	delta-BHC (delta-Hexachlorocyclohexane)	ND	ND	40.0	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Dieldrin	ND	ND	17.0	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Endosulfan Sulfate	ND	ND	30.0	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Endrin	ND	ND	17.0	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Endrin Aldehyde	ND	ND	30.0	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Endrin Ketone	ND	ND	20.0	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	gamma-BHC (Lindane)	ND	ND	25.0	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	gamma-Chlordane	ND	ND	17.0	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Heptachlor	ND	ND	35.0	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Heptachlor Epoxide	ND	ND	25.0	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Heptachlor Epoxide	31.7	ND	25.0	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Methoxychlor	ND	ND	50.0	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	p,p'-DDD	ND	ND	20.0	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	p,p'-DDD	29.3	ND	20.0	NA	50	NA	OK

Field Duplicate Report By Event and Site
Ravenna Army Ammunition Plant
RVAAP, QAPP Oct. 2012

Location	Analysis
77-1037-DU1-SS	SW8081

Sample Date	Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	p,p'-DDE	5.20	8.60	17.0	49.3	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	p,p'-DDT	ND	ND	20.0	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Toxaphene	ND	ND	670	NA	50	NA	OK

Location	Analysis
77-1037-DU1-SS	SW8082

Sample Date	Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	PCB-1016 (Arochlor 1016)	ND	ND	65.0	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	PCB-1221 (Arochlor 1221)	ND	ND	50.0	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	PCB-1232 (Arochlor 1232)	ND	ND	45.0	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	PCB-1242 (Arochlor 1242)	ND	ND	40.0	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	PCB-1248 (Arochlor 1248)	ND	ND	55.0	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	PCB-1254 (Arochlor 1254)	ND	ND	55.0	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	PCB-1260 (Arochlor 1260)	ND	ND	55.0	NA	50	NA	OK

Location	Analysis
77-1037-DU1-SS	SW8260B

Sample Date	Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	1,1,1-Trichloroethane	ND	ND	4.90	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	1,1,2,2-Tetrachloroethane	ND	ND	5.10	NA	50	NA	OK

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Location	Analysis
77-1037-DU1-SS	SW8260B

Sample Date	Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	1,1,2-Trichloroethane	ND	ND	5.10	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	1,1-Dichloroethane	ND	ND	5.10	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	1,1-Dichloroethene	ND	ND	5.10	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	1,2-Dibromoethane (EDB)	ND	ND	5.10	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	1,2-Dichloroethane	ND	ND	5.10	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	1,2-Dichloroethene	ND	ND	10.0	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	1,2-Dichloropropane	ND	ND	5.10	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	2-Butanone (MEK)	ND	ND	21.0	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	2-Hexanone	ND	ND	21.0	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	4-Methyl-2-pentanone (MIBK)	ND	0.900	21.0	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Acetone	ND	ND	20.0	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Benzene	ND	ND	5.10	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Bromochloromethane	ND	ND	5.10	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Bromodichloromethane	ND	ND	5.10	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Bromoform	ND	ND	5.10	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Bromomethane	ND	ND	5.10	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Carbon Disulfide	ND	ND	5.10	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Carbon Tetrachloride	ND	ND	4.90	NA	50	NA	OK

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Sample Date	Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Chlorobenzene	ND	ND	5.10	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Chloroethane	ND	ND	5.10	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Chloroform	ND	ND	5.10	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Chloromethane	ND	ND	5.10	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	cis-1,3-Dichloropropene	ND	ND	5.10	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Dibromochloromethane	ND	ND	5.10	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Ethylbenzene	ND	ND	5.10	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Methylene Chloride	ND	ND	5.10	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Styrene	ND	ND	5.10	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	tert-Butyl Methyl Ether (MTBE)	ND	ND	5.10	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Tetrachloroethene (PCE)	ND	ND	5.10	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Toluene	ND	ND	5.10	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	trans-1,3-Dichloropropene	ND	ND	5.10	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Trichloroethene (TCE)	ND	ND	5.10	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Vinyl Chloride	ND	ND	5.10	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Xylenes, Total	ND	ND	10.0	NA	50	NA	OK

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Location	Analysis
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Sample Date	Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	1,2,4-Trichlorobenzene	ND	ND	200	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	1,2-Dichlorobenzene	ND	ND	200	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	1,3-Dichlorobenzene	ND	ND	200	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	1,4-Dichlorobenzene	ND	ND	200	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	2,4,5-Trichlorophenol	ND	ND	610	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	2,4,6-Trichlorophenol	ND	ND	610	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	2,4-Dichlorophenol	ND	ND	610	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	2,4-Dimethylphenol	ND	ND	610	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	2,4-Dinitrophenol	ND	ND	1300	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	2,4-Dinitrotoluene	ND	ND	810	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	2,6-Dinitrotoluene	ND	ND	810	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	2-Chloronaphthalene	ND	ND	200	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	2-Chlorophenol	ND	ND	200	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	2-Methylnaphthalene	54.0	60.0	27.0	10.5	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	2-Methylphenol (o-Cresol)	ND	ND	810	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	2-Nitroaniline	ND	ND	810	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	2-Nitrophenol	ND	ND	200	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	3,3'-Dichlorobenzidine	ND	ND	410	NA	50	NA	OK

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Sample Date	Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	3-Nitroaniline	ND	ND	810	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	4,6-Dinitro-2-Methylphenol	ND	ND	610	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	4-Bromophenyl phenyl ether	ND	ND	200	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	4-Chloro-3-Methylphenol	ND	ND	610	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	4-Chloroaniline	ND	ND	610	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	4-Chlorophenyl Phenyl Ether	ND	ND	200	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	4-Nitroaniline	ND	ND	810	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	4-Nitrophenol	ND	ND	1300	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Acenaphthene	ND	ND	27.0	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Acenaphthylene	ND	ND	27.0	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Anthracene	ND	11.0	27.0	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Benzo(a)anthracene	57.0	48.0	27.0	17.1	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Benzo(a)pyrene	88.0	65.0	27.0	30.1	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Benzo(b)fluoranthene	91.0	81.0	27.0	11.6	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Benzo(g,h,i)perylene	47.0	37.0	27.0	23.8	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Benzo(k)fluoranthene	18.0	17.0	27.0	5.71	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Benzoic acid	ND	ND	2700	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Benzyl alcohol	ND	ND	1300	NA	50	NA	OK

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Sample Date	Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Benzyl butyl phthalate	ND	ND	200	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	bis(2-Chloroethoxy) Methane	ND	ND	410	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	bis(2-Chloroethyl) Ether (2-Chloroethyl Ether)	ND	ND	410	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	bis(2-Chloroisopropyl) Ether	ND	ND	410	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	bis(2-Ethylhexyl) Phthalate	ND	ND	200	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Carbazole	ND	ND	200	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Chrysene	66.0	57.0	27.0	14.6	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Cresols, m & p	ND	ND	1600	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Di-n-Butyl Phthalate	ND	ND	200	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Di-n-Octylphthalate	ND	ND	200	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Dibenz(a,h)anthracene	ND	ND	27.0	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Dibenzofuran	14.0	14.0	200	0.00	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Diethyl Phthalate	ND	ND	200	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Dimethyl Phthalate	ND	ND	200	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Fluoranthene	120	99.0	27.0	19.2	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Fluorene	ND	9.60	27.0	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Hexachlorobenzene	ND	ND	27.0	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Hexachlorobutadiene	ND	ND	200	NA	50	NA	OK

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77-1037-DU1-SS	SW8270C

Sample Date	Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Hexachlorocyclopentadiene	ND	ND	1300	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Hexachloroethane	ND	ND	200	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Indeno(1,2,3-c,d)pyrene	441	44.0	27.0	164	50	NA	397
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Indeno(1,2,3-c,d)pyrene	55.0	44.0	27.0	22.2	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Isophorone	ND	ND	200	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	n-Nitrosodi-n-propylamine	ND	ND	200	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	n-Nitrosodiphenylamine	ND	ND	200	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Naphthalene	44.0	54.0	27.0	20.4	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Nitrobenzene	ND	ND	410	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Pentachlorophenol	ND	ND	610	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Phenanthrene	77.0	64.0	27.0	18.4	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Phenol	ND	ND	200	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Pyrene	95.0	74.0	27.0	24.9	50	NA	OK

Location	Analysis
77-1037-DU1-SS	SW8330B

Sample Date	Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	1,3,5-Trinitrobenzene	ND	ND	0.250	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	1,3-Dinitrobenzene	ND	ND	0.250	NA	50	NA	OK

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77-1037-DU1-SS	SW8330B

Sample Date	Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	2,4,6-Trinitrotoluene	ND	ND	0.250	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	2,4-Dinitrotoluene	ND	ND	0.250	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	2,6-Dinitrotoluene	ND	ND	0.250	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	2-Amino-4,6-dinitrotoluene	ND	ND	0.250	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	2-Nitrotoluene	ND	ND	0.250	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	3-Nitrotoluene	ND	ND	0.250	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	4-Amino-2,6-Dinitrotoluene	ND	ND	0.250	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	4-Nitrotoluene	ND	ND	0.250	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	ND	ND	0.250	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Nitrobenzene	ND	ND	0.250	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Nitroglycerin	ND	0.0830	0.500	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	NITROGUANIDINE	ND	0.0550	0.250	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine (HMX)	ND	ND	0.250	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Pentaerythritol Tetranitrate	ND	ND	0.500	NA	50	NA	OK
Nov 11 2012	077SS-0001M-0001-SO / 077SS-0002M-0001-SO	240-17525-5 / 240-17525-6	Tetryl	ND	0.0280	0.250	NA	50	NA	OK

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil

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ATTACHMENT A

Filed Blank Quality Control
Trip Blanks and Equipment Rinsate Blanks

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Equipment Blank
Chemistry Results
Ravenna Army Ammunition Plant, Quality Assurance Project Plan. Oct. 3. 2012

Locations:	ER-2	ER-1
Field Sample ID:	076-0140-0001-ER	076-0067-0001-ER
Sample Begin Depth:	0	0
Sample End Depth:	0	0
Sample Date:	12/11/2012	11/15/2012
Chlorinated Herbicides by GC Using Methylation		
2,4 DB (UG/L)	4.0 U	4.0 U
2,4,5-T (Trichlorophenoxyacetic Acid) (UG/L)	1.0 U	1.0 U
2,4-D (Dichlorophenoxyacetic Acid) (UG/L)	4.0 U	4.0 U
Dalapon (UG/L)	2.0 U	2.0 U
Dicamba (UG/L)	2.0 U	2.0 U
Dichloroprop (UG/L)	4.0 U	4.0 U
Dinoseb (UG/L)	0.60 U	0.60 U
MCPA (UG/L)	400 UJ	400 UJ
MCPP (UG/L)	400 UJ	400 U
Pentachlorophenol (UG/L)	0.10 U	0.10 U
Silvex (2,4,5-TP) (UG/L)	1.0 U	1.0 U

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Chemistry Results
Ravenna Army Ammunition Plant, Quality Assurance Project Plan, Oct. 3, 2012

Locations:	ER-2	ER-1
Field Sample ID:	076-0140-0001-ER	076-0067-0001-ER
Sample Begin Depth:	0	0
Sample End Depth:	0	0
Sample Date:	12/11/2012	11/15/2012
Mercury in Water (Manual Cold-Vapor Techique)		
Mercury (UG/L)	0.20 U	0.20 U

Equipment Blank
Chemistry Results
Ravenna Army Ammunition Plant, Quality Assurance Project Plan,
Oct. 3. 2012

Locations:	ER-2	ER-1
Field Sample ID:	076-0140-0001-ER	076-0067-0001-ER
Sample Begin Depth:	0	0
Sample End Depth:	0	0
Sample Date:	12/11/2012	11/15/2012
Modified SW8015 for the Determination of Diesel Range		
C10-C20 Diesel Range Organics (UG/L)	480 U	-
C20-C34 Motor Oil Range Organics (UG/L)	480 U	-

Equipment Blank
Chemistry Results
Ravenna Army Ammunition Plant, Quality Assurance Project Plan, Oct. 3, 2012

Locations:	ER-2	ER-1
Field Sample ID:	076-0140-0001-ER	076-0067-0001-ER
Sample Begin Depth:	0	0
Sample End Depth:	0	0
Sample Date:	12/11/2012	11/15/2012
Modified SW8015 for the Determination of		
Petroleum Hydrocarbons C6-C12 (UG/L)	100 U	**33.0 J**

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Chemistry Results
Ravenna Army Ammunition Plant, Quality Assurance Project Plan, Oct. 3, 2012

Locations:	ER-2	ER-1
Field Sample ID:	076-0140-0001-ER	076-0067-0001-ER
Sample Begin Depth:	0	0
Sample End Depth:	0	0
Sample Date:	12/11/2012	11/15/2012
Nitroaromatics and Nitramines by HPLC		
1,3,5-Trinitrobenzene (UG/L)	0.10 U	0.10 U
1,3-Dinitrobenzene (UG/L)	0.10 U	0.10 U
2,4,6-Trinitrotoluene (UG/L)	0.10 U	0.10 U
2,4-Dinitrotoluene (UG/L)	0.10 U	0.10 U
2,6-Dinitrotoluene (UG/L)	0.10 U	0.10 U
2-Amino-4,6-dinitrotoluene (UG/L)	0.20 U	0.21 U
2-Nitrotoluene (UG/L)	0.50 U	0.51 U
3-Nitrotoluene (UG/L)	0.50 U	0.51 U
4-Amino-2,6-Dinitrotoluene (UG/L)	0.10 U	0.10 U
4-Nitrotoluene (UG/L)	0.50 U	0.51 U
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	0.10 U	0.10 U
Nitrobenzene (UG/L)	0.10 U	0.10 U
Nitroglycerin (UG/L)	0.65 U	0.67 U
NITROGUANIDINE (UG/L)	20.0 U	20.0 U
Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine	0.10 U	0.10 U
Pentaerythritol Tetranitrate (UG/L)	0.65 U	0.67 U
Tetryl (UG/L)	0.10 U	0.10 U

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Chemistry Results
Ravenna Army Ammunition Plant, Quality Assurance Project Plan, Oct. 3, 2012

Locations:	ER-2	ER-1
Field Sample ID:	076-0140-0001-ER	076-0067-0001-ER
Sample Begin Depth:	0	0
Sample End Depth:	0	0
Sample Date:	12/11/2012	11/15/2012
Nitrogen, Nitrate-Nitrite (Colorimetric Automated,		
Nitrocellulose (MG/L)	2.0 UJ	2.0 U

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Chemistry Results
Ravenna Army Ammunition Plant, Quality Assurance Project Plan, Oct. 3, 2012

Locations:	ER-2	ER-1
Field Sample ID:	076-0140-0001-ER	076-0067-0001-ER
Sample Begin Depth:	0	0
Sample End Depth:	0	0
Sample Date:	12/11/2012	11/15/2012
Organochlorine Pesticides and PCBs by Capillary		
Aldrin (UG/L)	0.048 U	0.048 U
alpha-BHC (alpha-Hexachlorocyclohexane)	0.048 U	0.048 U
alpha-Chlordane (UG/L)	0.048 U	0.048 U
alpha-Endosulfan (UG/L)	0.048 U	0.048 U
beta-BHC (beta-Hexachlorocyclohexane) (UG/L)	0.048 U	0.048 U
beta-Endosulfan (UG/L)	0.048 U	0.048 U
delta-BHC (delta-Hexachlorocyclohexane) (UG/L)	0.048 U	0.048 U
Dieldrin (UG/L)	0.048 U	0.048 U
Endosulfan Sulfate (UG/L)	0.048 U	0.048 U
Endrin (UG/L)	0.048 U	0.048 U
Endrin Aldehyde (UG/L)	0.048 U	0.048 U
Endrin Ketone (UG/L)	0.048 U	0.048 U
gamma-BHC (Lindane) (UG/L)	0.048 U	0.048 U
gamma-Chlordane (UG/L)	0.048 U	0.048 U
Heptachlor (UG/L)	0.048 U	0.048 U
Heptachlor Epoxide (UG/L)	0.048 U	0.048 U
Methoxychlor (UG/L)	0.095 U	0.096 U
p,p'-DDD (UG/L)	0.048 U	0.048 U
p,p'-DDE (UG/L)	0.048 U	0.048 U
p,p'-DDT (UG/L)	0.048 U	0.048 U
Toxaphene (UG/L)	1.9 UJ	1.9 U

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Chemistry Results
Ravenna Army Ammunition Plant, Quality Assurance Project Plan, Oct. 3, 2012

Locations:	ER-2	ER-1
Field Sample ID:	076-0140-0001-ER	076-0067-0001-ER
Sample Begin Depth:	0	0
Sample End Depth:	0	0
Sample Date:	12/11/2012	11/15/2012
Polychlorinated Biphenyls (PCB)		
PCB-1016 (Arochlor 1016) (UG/L)	0.48 U	0.48 U
PCB-1221 (Arochlor 1221) (UG/L)	0.48 U	0.48 U
PCB-1232 (Arochlor 1232) (UG/L)	0.48 U	0.48 U
PCB-1242 (Arochlor 1242) (UG/L)	0.48 U	0.48 U
PCB-1248 (Arochlor 1248) (UG/L)	0.48 U	0.48 U
PCB-1254 (Arochlor 1254) (UG/L)	0.48 U	0.48 U
PCB-1260 (Arochlor 1260) (UG/L)	0.48 U	0.48 U

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Chemistry Results
Ravenna Army Ammunition Plant, Quality Assurance Project Plan, Oct. 3, 2012

Locations:	ER-2	ER-1
Field Sample ID:	076-0140-0001-ER	076-0067-0001-ER
Sample Begin Depth:	0	0
Sample End Depth:	0	0
Sample Date:	12/11/2012	11/15/2012
Semivolatile Organic Compounds by Capillary		
1,2,4-Trichlorobenzene (UG/L)	0.95 U	0.97 U
1,2-Dichlorobenzene (UG/L)	0.95 U	0.97 U
1,3-Dichlorobenzene (UG/L)	0.95 U	0.97 U
1,4-Dichlorobenzene (UG/L)	0.95 U	0.97 U
2,4,5-Trichlorophenol (UG/L)	4.8 U	4.9 U
2,4,6-Trichlorophenol (UG/L)	4.8 U	4.9 U
2,4-Dichlorophenol (UG/L)	1.9 U	1.9 U
2,4-Dimethylphenol (UG/L)	1.9 U	1.9 U
2,4-Dinitrophenol (UG/L)	4.8 U	4.9 U
2,4-Dinitrotoluene (UG/L)	4.8 U	4.9 U
2,6-Dinitrotoluene (UG/L)	4.8 U	4.9 U
2-Chloronaphthalene (UG/L)	0.95 U	0.97 U
2-Chlorophenol (UG/L)	0.95 U	0.97 U
2-Methylnaphthalene (UG/L)	0.19 U	0.19 U
2-Methylphenol (o-Cresol) (UG/L)	0.95 U	0.97 U
2-Nitroaniline (UG/L)	1.9 U	1.9 U
2-Nitrophenol (UG/L)	1.9 U	1.9 U
3,3'-Dichlorobenzidine (UG/L)	4.8 U	4.9 UJ
3-Nitroaniline (UG/L)	1.9 U	1.9 U
4,6-Dinitro-2-Methylphenol (UG/L)	4.8 U	4.9 U
4-Bromophenyl phenyl ether (UG/L)	1.9 U	1.9 U
4-Chloro-3-Methylphenol (UG/L)	1.9 U	1.9 U
4-Chloroaniline (UG/L)	1.9 U	1.9 U
4-Chlorophenyl Phenyl Ether (UG/L)	1.9 U	1.9 U
4-Nitroaniline (UG/L)	1.9 U	1.9 U
4-Nitrophenol (UG/L)	4.8 UJ	4.9 U
Acenaphthene (UG/L)	0.19 U	0.19 U
Acenaphthylene (UG/L)	0.19 U	0.19 U
Anthracene (UG/L)	0.19 U	0.19 U

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Chemistry Results
Ravenna Army Ammunition Plant, Quality Assurance Project Plan. Oct. 3. 2012

Benzo(a)anthracene (UG/L)	0.19 U	0.19 U
Benzo(a)pyrene (UG/L)	0.19 U	0.19 U
Benzo(b)fluoranthene (UG/L)	0.19 U	0.19 U
Benzo(g,h,i)perylene (UG/L)	0.19 U	0.19 U
Benzo(k)fluoranthene (UG/L)	0.19 U	0.19 U
Benzoic acid (UG/L)	24.0 U	24.0 U
Benzyl alcohol (UG/L)	4.8 U	4.9 U
Benzyl butyl phthalate (UG/L)	0.95 U	0.97 U
bis(2-Chloroethoxy) Methane (UG/L)	0.95 U	0.97 U
bis(2-Chloroethyl) Ether (2-Chloroethyl Ether)	0.95 U	0.97 U
bis(2-Chloroisopropyl) Ether (UG/L)	0.95 U	0.97 U
bis(2-Ethylhexyl) Phthalate (UG/L)	1.9 U	1.9 U
Carbazole (UG/L)	0.95 U	0.97 U
Chrysene (UG/L)	0.19 U	0.19 U
Cresols, m & p (UG/L)	1.9 U	1.9 U
Dibenz(a,h)anthracene (UG/L)	0.19 U	0.19 U
Dibenzofuran (UG/L)	0.95 U	0.97 U
Diethyl Phthalate (UG/L)	0.95 U	0.97 U
Dimethyl Phthalate (UG/L)	0.95 U	0.97 U
Di-n-Butyl Phthalate (UG/L)	0.95 U	0.97 U
Di-n-Octylphthalate (UG/L)	0.95 U	0.97 U
Fluoranthene (UG/L)	0.19 U	0.19 U
Fluorene (UG/L)	0.19 U	0.19 U
Hexachlorobenzene (UG/L)	0.19 U	0.19 U
Hexachlorobutadiene (UG/L)	0.95 U	0.97 U
Hexachlorocyclopentadiene (UG/L)	9.5 U	9.7 U
Hexachloroethane (UG/L)	0.95 U	0.97 U
Indeno(1,2,3-c,d)pyrene (UG/L)	0.19 U	0.19 U
Isophorone (UG/L)	0.95 U	0.97 U
Naphthalene (UG/L)	0.19 U	0.19 U
Nitrobenzene (UG/L)	0.95 U	0.97 U
n-Nitrosodi-n-propylamine (UG/L)	0.95 U	0.97 U
n-Nitrosodiphenylamine (UG/L)	0.95 U	0.97 UJ
Pentachlorophenol (UG/L)	4.8 U	4.9 U
Phenanthrene (UG/L)	0.19 U	0.19 U
Phenol (UG/L)	0.95 U	0.97 U
Pyrene (UG/L)	0.19 U	0.19 U

Equipment Blank
Chemistry Results
Ravenna Army Ammunition Plant, Quality Assurance Project Plan, Oct. 3, 2012

Locations:	ER-2	ER-1
Field Sample ID:	076-0140-0001-ER	076-0067-0001-ER
Sample Begin Depth:	0	0
Sample End Depth:	0	0
Sample Date:	12/11/2012	11/15/2012
Trace Metals by Inductively Coupled		
Aluminum (UG/L)	30.0 U	60.0 U
Antimony (UG/L)	2.0 U	**0.34 J**
Arsenic (UG/L)	1.0 U	5.0 U
Barium (UG/L)	**0.43 J**	5.0 U
Beryllium (UG/L)	1.0 U	1.0 U
Cadmium (UG/L)	1.0 U	2.0 U
Calcium (UG/L)	**82.0 J**	2000 U
Chromium (UG/L)	**0.76 J**	**0.60 J**
Cobalt (UG/L)	**0.036 J**	1.0 U
Copper (UG/L)	2.0 U	4.0 U
Iron (UG/L)	50.0 U	150 U
Lead (UG/L)	1.0 U	1.0 U
Magnesium (UG/L)	100 U	1000 U
Manganese (UG/L)	**1.9 J**	**3.5 J**
Nickel (UG/L)	**0.47 J**	**20.0**
Potassium (UG/L)	100 U	1000 U
Selenium (UG/L)	5.0 U	5.0 U
Silver (UG/L)	1.0 U	1.0 U
Sodium (UG/L)	**150**	1000 U
Thallium (UG/L)	**0.25 J**	**0.75 J**
Vanadium (UG/L)	1.0 U	5.0 U
Zinc (UG/L)	**1.1 J**	**10.0 J**

Trip Blank
Chemistry Results
Ravenna Army Ammunition Plant,
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Locations:	77-1037-DU1-SS	72-1026-R86-SB6	72-1048-RV5-SB3	70-4744-DU1-SB6	76-A3-DU1-SB4
Field Sample ID:	TB-1	TB-2	TB-3	QC TB-1	TB QC-7
Sample Begin Depth:	0	0	0	0	0
Sample End Depth:	0	0	0	0	0
Sample Date:	11/11/2012	12/03/2012	12/03/2012	12/12/2012	11/15/2012
Volatile Organic Compounds by Capillary GC/MS					
1,1,1-Trichloroethane (UG/L)	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane (UG/L)	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane (UG/L)	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane (UG/L)	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene (UG/L)	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane (EDB) (UG/L)	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane (UG/L)	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethene (UG/L)	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichloropropane (UG/L)	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Butanone (MEK) (UG/L)	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
2-Hexanone (UG/L)	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
4-Methyl-2-pentanone (MIBK) (UG/L)	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Acetone (UG/L)	10.0 U	**1.5 J**	10.0 U	10.0 U	10.0 UJ
Benzene (UG/L)	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromochloromethane (UG/L)	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane (UG/L)	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform (UG/L)	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane (UG/L)	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon Disulfide (UG/L)	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon Tetrachloride (UG/L)	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene (UG/L)	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane (UG/L)	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (UG/L)	1.0 U	1.0 U	1.0 U	**0.32 J**	1.0 U
Chloromethane (UG/L)	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene (UG/L)	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane (UG/L)	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene (UG/L)	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride (UG/L)	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene (UG/L)	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ
tert-Butyl Methyl Ether (MTBE) (UG/L)	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene (PCE) (UG/L)	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene (UG/L)	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene (UG/L)	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene (TCE) (UG/L)	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl Chloride (UG/L)	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes, Total (UG/L)	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U

Trip Blank
Chemistry Results
Ravenna Army Ammunition Plant,
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Locations:	76-A1-UST-SB3	76-A6-UST-SB13
Field Sample ID:	TB QC-8	TB QC-9
Sample Begin Depth:	0	0
Sample End Depth:	0	0
Sample Date:	12/11/2012	12/11/2012
Volatile Organic Compounds by Capillary GC/MS		
1,1,1-Trichloroethane (UG/L)	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane (UG/L)	1.0 U	1.0 U
1,1,2-Trichloroethane (UG/L)	1.0 U	1.0 U
1,1-Dichloroethane (UG/L)	1.0 U	1.0 U
1,1-Dichloroethene (UG/L)	1.0 U	1.0 U
1,2-Dibromoethane (EDB) (UG/L)	1.0 U	1.0 U
1,2-Dichloroethane (UG/L)	1.0 U	1.0 U
1,2-Dichloroethene (UG/L)	2.0 U	2.0 U
1,2-Dichloropropane (UG/L)	1.0 U	1.0 U
2-Butanone (MEK) (UG/L)	10.0 U	**0.60 J**
2-Hexanone (UG/L)	10.0 U	10.0 U
4-Methyl-2-pentanone (MIBK) (UG/L)	**0.36 J**	**0.35 J**
Acetone (UG/L)	**12.0**	**12.0**
Benzene (UG/L)	1.0 U	1.0 U
Bromochloromethane (UG/L)	1.0 U	1.0 U
Bromodichloromethane (UG/L)	1.0 U	1.0 U
Bromoform (UG/L)	1.0 U	1.0 U
Bromomethane (UG/L)	1.0 U	1.0 U
Carbon Disulfide (UG/L)	1.0 U	1.0 U
Carbon Tetrachloride (UG/L)	1.0 U	1.0 U
Chlorobenzene (UG/L)	1.0 U	1.0 U
Chloroethane (UG/L)	1.0 U	1.0 U
Chloroform (UG/L)	1.0 U	1.0 U
Chloromethane (UG/L)	1.0 U	1.0 U
cis-1,3-Dichloropropene (UG/L)	1.0 U	1.0 U
Dibromochloromethane (UG/L)	1.0 U	1.0 U
Ethylbenzene (UG/L)	1.0 U	1.0 U
Methylene Chloride (UG/L)	1.0 U	1.0 U
Styrene (UG/L)	1.0 U	1.0 U
tert-Butyl Methyl Ether (MTBE) (UG/L)	1.0 U	1.0 U
Tetrachloroethene (PCE) (UG/L)	1.0 U	1.0 U
Toluene (UG/L)	1.0 U	1.0 U
trans-1,3-Dichloropropene (UG/L)	1.0 U	1.0 U
Trichloroethene (TCE) (UG/L)	1.0 U	1.0 U
Vinyl Chloride (UG/L)	1.0 U	1.0 U
Xylenes, Total (UG/L)	2.0 U	2.0 U

Trip Blank
Chemistry Results
Ravenna Army Ammunition Plant, Quality Assurance Project Plan, Oct. 3, 2012

Locations:	70-4744-DU1-SB6	76-A1-UST-SB3	76-A6-UST-SB13
Field Sample ID:	QC TB-2	QC TB-8	QC TB-9
Sample Begin Depth:	0	0	0
Sample End Depth:	0	0	0
Sample Date:	12/12/2012	12/11/2012	12/11/2012
Modified SW8015 for the Determination of			
Petroleum Hydrocarbons C6-C12 (UG/L)	**37.0 J**	**27.0 J**	100 U

ATTACHMENT B

Source Water

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ECC

Chemistry Results

Ravenna Army Ammunition Plant, Quality Assurance Project Plan, Oct. 3, 2012

Ravenna Army Ammunition Plant

Locations:	SorW-1	SorW-2
Field Sample ID:	070-0056-0001-SOURCE WATER	070-0057-0001-SOURCE WATER
Sample Begin Depth:	0	0
Sample End Depth:	0	0
Sample Date:	12/12/2012	12/12/2012
Volatile Organic Compounds by Capillary GC/MS		
1,1,1-Trichloroethane (UG/L)	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane (UG/L)	1.0 U	1.0 U
1,1,2-Trichloroethane (UG/L)	1.0 U	1.0 U
1,1-Dichloroethane (UG/L)	1.0 U	1.0 U
1,1-Dichloroethene (UG/L)	1.0 U	1.0 U
1,2-Dibromoethane (EDB) (UG/L)	1.0 U	1.0 U
1,2-Dichloroethane (UG/L)	1.0 U	1.0 U
1,2-Dichloroethene (UG/L)	2.0 U	2.0 U
1,2-Dichloropropane (UG/L)	1.0 U	1.0 U
2-Butanone (MEK) (UG/L)	10.0 U	**1.2 J**
2-Hexanone (UG/L)	10.0 U	10.0 U
4-Methyl-2-pentanone (MIBK) (UG/L)	10.0 U	10.0 U
Acetone (UG/L)	10.0 U	**2.1 J**
Benzene (UG/L)	1.0 U	1.0 U
Bromochloromethane (UG/L)	1.0 U	1.0 U
Bromodichloromethane (UG/L)	1.0 U	**3.6**
Bromoform (UG/L)	1.0 U	1.0 U
Bromomethane (UG/L)	1.0 U	1.0 U
Carbon Disulfide (UG/L)	1.0 U	1.0 U
Carbon Tetrachloride (UG/L)	1.0 U	1.0 U
Chlorobenzene (UG/L)	1.0 U	1.0 U
Chloroethane (UG/L)	1.0 U	1.0 U
Chloroform (UG/L)	1.0 U	**5.3**
Chloromethane (UG/L)	1.0 U	1.0 U
cis-1,3-Dichloropropene (UG/L)	1.0 U	1.0 U
Dibromochloromethane (UG/L)	1.0 U	**1.3**
Ethylbenzene (UG/L)	1.0 U	1.0 U
Methylene Chloride (UG/L)	1.0 U	1.0 U
Styrene (UG/L)	1.0 U	1.0 U
tert-Butyl Methyl Ether (MTBE) (UG/L)	1.0 U	1.0 U
Tetrachloroethene (PCE) (UG/L)	1.0 U	1.0 U
Toluene (UG/L)	1.0 U	**0.15 J**
trans-1,3-Dichloropropene (UG/L)	1.0 U	1.0 U
Trichloroethene (TCE) (UG/L)	1.0 U	1.0 U
Vinyl Chloride (UG/L)	1.0 U	1.0 U
Xylenes, Total (UG/L)	2.0 U	2.0 U

Locations:	SorW-1	SorW-2
Field Sample ID:	070-0056-0001-SOURCE WATER	070-0057-0001-SOURCE WATER
Sample Begin Depth:	0	0
Sample End Depth:	0	0
Sample Date:	12/12/2012	12/12/2012
Semivolatile Organic Compounds by Capillary GC/MS		
1,2,4-Trichlorobenzene (UG/L)	0.95 U	0.95 U
1,2-Dichlorobenzene (UG/L)	0.95 U	0.95 U
1,3-Dichlorobenzene (UG/L)	0.95 U	0.95 U
1,4-Dichlorobenzene (UG/L)	0.95 U	0.95 U
2,4,5-Trichlorophenol (UG/L)	4.8 U	4.8 U
2,4,6-Trichlorophenol (UG/L)	4.8 U	4.8 U
2,4-Dichlorophenol (UG/L)	1.9 U	1.9 U
2,4-Dimethylphenol (UG/L)	1.9 U	1.9 U
2,4-Dinitrophenol (UG/L)	4.8 U	4.8 U
2,4-Dinitrotoluene (UG/L)	4.8 U	4.8 U
2,6-Dinitrotoluene (UG/L)	4.8 U	4.8 U
2-Chloronaphthalene (UG/L)	0.95 U	0.95 U
2-Chlorophenol (UG/L)	0.95 U	0.95 U
2-Methylnaphthalene (UG/L)	0.19 U	0.19 U
2-Methylphenol (o-Cresol) (UG/L)	0.95 U	0.95 U
2-Nitroaniline (UG/L)	1.9 U	1.9 U
2-Nitrophenol (UG/L)	1.9 U	1.9 U
3,3'-Dichlorobenzidine (UG/L)	4.8 U	4.8 U
3-Nitroaniline (UG/L)	1.9 U	1.9 U
4,6-Dinitro-2-Methylphenol (UG/L)	4.8 U	4.8 U
4-Bromophenyl phenyl ether (UG/L)	1.9 U	1.9 U
4-Chloro-3-Methylphenol (UG/L)	1.9 U	1.9 U
4-Chloroaniline (UG/L)	1.9 U	1.9 U
4-Chlorophenyl Phenyl Ether (UG/L)	1.9 U	1.9 U
4-Nitroaniline (UG/L)	1.9 U	1.9 U
4-Nitrophenol (UG/L)	4.8 U	4.8 U
Acenaphthene (UG/L)	0.19 U	0.19 U
Acenaphthylene (UG/L)	0.19 U	0.19 U
Anthracene (UG/L)	0.19 U	0.19 U
Benzo(a)anthracene (UG/L)	0.19 U	0.19 U
Benzo(a)pyrene (UG/L)	0.19 U	0.19 U
Benzo(b)fluoranthene (UG/L)	0.19 U	0.19 U
Benzo(g,h,i)perylene (UG/L)	0.19 U	0.19 U
Benzo(k)fluoranthene (UG/L)	0.19 U	0.19 U
Benzoic acid (UG/L)	24.0 U	24.0 U
Benzyl alcohol (UG/L)	4.8 U	4.8 U
Benzyl butyl phthalate (UG/L)	0.95 U	0.95 U
bis(2-Chloroethoxy) Methane (UG/L)	0.95 U	0.95 U
bis(2-Chloroethyl) Ether (2-Chloroethyl Ether)	0.95 U	0.95 U
bis(2-Chloroisopropyl) Ether (UG/L)	0.95 U	0.95 U
bis(2-Ethylhexyl) Phthalate (UG/L)	1.9 U	1.9 U
Carbazole (UG/L)	0.95 U	0.95 U
Chrysene (UG/L)	0.19 U	0.19 U

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Chemistry Results
Ravenna Army Ammunition Plant, Quality Assurance Project Plan, Oct. 3, 2012
Ravenna Army Ammunition Plant

Locations:	SorW-1	SorW-2
Field Sample ID:	070-0056-0001-SOURCE WATER	070-0057-0001-SOURCE WATER
Sample Begin Depth:	0	0
Sample End Depth:	0	0
Sample Date:	12/12/2012	12/12/2012
Semivolatile Organic Compounds by Capillary GC/MS		
Cresols, m & p (UG/L)	1.9 U	1.9 U
Dibenz(a,h)anthracene (UG/L)	0.19 U	0.19 U
Dibenzofuran (UG/L)	0.95 U	0.95 U
Diethyl Phthalate (UG/L)	0.95 U	0.95 U
Dimethyl Phthalate (UG/L)	0.95 U	0.95 U
Di-n-Butyl Phthalate (UG/L)	0.95 U	0.95 U
Di-n-Octylphthalate (UG/L)	0.95 U	0.95 U
Fluoranthene (UG/L)	0.19 U	0.19 U
Fluorene (UG/L)	0.19 U	0.19 U
Hexachlorobenzene (UG/L)	0.19 U	0.19 U
Hexachlorobutadiene (UG/L)	0.95 U	0.95 U
Hexachlorocyclopentadiene (UG/L)	9.5 U	9.5 U
Hexachloroethane (UG/L)	0.95 U	0.95 U
Indeno(1,2,3-c,d)pyrene (UG/L)	0.19 U	0.19 U
Isophorone (UG/L)	0.95 U	0.95 U
Naphthalene (UG/L)	0.19 U	0.19 U
Nitrobenzene (UG/L)	0.95 U	0.95 U
n-Nitrosodi-n-propylamine (UG/L)	0.95 U	0.95 U
n-Nitrosodiphenylamine (UG/L)	0.95 U	0.95 U
Pentachlorophenol (UG/L)	4.8 U	4.8 U
Phenanthrene (UG/L)	0.19 U	0.19 U
Phenol (UG/L)	0.95 U	0.95 U
Pyrene (UG/L)	0.19 U	0.19 U

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Chemistry Results

Ravenna Army Ammunition Plant, Quality Assurance Project Plan, Oct. 3, 2012

Ravenna Army Ammunition Plant

Locations:	SorW-1	SorW-2
Field Sample ID:	070-0056-0001-SOURCE WATER	070-0057-0001-SOURCE WATER
Sample Begin Depth:	0	0
Sample End Depth:	0	0
Sample Date:	12/12/2012	12/12/2012
Trace Metals by Inductively Coupled Plasma/Mass Spectrometry		
Aluminum (UG/L)	**13.0 J**	30.0 U
Antimony (UG/L)	2.0 U	2.0 U
Arsenic (UG/L)	**0.49 J**	1.0 U
Barium (UG/L)	**39.0**	**0.13 J**
Beryllium (UG/L)	1.0 U	1.0 U
Cadmium (UG/L)	1.0 U	1.0 U
Calcium (UG/L)	**66000**	**59.0 J**
Chromium (UG/L)	2.0 U	2.0 U
Cobalt (UG/L)	**0.11 J**	0.50 U
Copper (UG/L)	**0.83 J**	**0.60 J**
Iron (UG/L)	**440**	50.0 U
Lead (UG/L)	1.0 U	1.0 U
Magnesium (UG/L)	**27000**	**29.0 J**
Manganese (UG/L)	**77.0**	5.0 U
Nickel (UG/L)	1.0 U	1.0 U
Potassium (UG/L)	**2500**	100 U
Selenium (UG/L)	5.0 U	5.0 U
Silver (UG/L)	1.0 U	1.0 U
Sodium (UG/L)	**35000**	**1600**
Thallium (UG/L)	1.0 U	1.0 U
Vanadium (UG/L)	1.0 U	1.0 U
Zinc (UG/L)	**18.0**	5.0 U

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Chemistry Results

Ravenna Army Ammunition Plant, Quality Assurance Project Plan, Oct. 3, 2012

Ravenna Army Ammunition Plant

Locations:	SorW-1	SorW-2
Field Sample ID:	070-0056-0001-SOURCE WATER	070-0057-0001-SOURCE WATER
Sample Begin Depth:	0	0
Sample End Depth:	0	0
Sample Date:	12/12/2012	12/12/2012
Mercury in Water (Manual Cold-Vapor Techique)		
Mercury (UG/L)	0.20 U	0.20 U

Locations:	SorW-1	SorW-2
Field Sample ID:	070-0056-0001-SOURCE WATER	070-0057-0001-SOURCE WATER
Sample Begin Depth:	0	0
Sample End Depth:	0	0
Sample Date:	12/12/2012	12/12/2012
Modified SW8015 for the Determination of Gasoline Range Organics in Soil and Water, GC/FID		
Petroleum Hydrocarbons C6-C12 (UG/L)	**39.0 J**	**36.0 J**

APPENDIX E

LABORATORY ANALYTICAL RESULTS, LABORATORY DATA AND CHAIN OF CUSTODY FORMS
(Note – To be provided on CD only)

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APPENDIX F

DATA VALIDATION REPORT
(Note – To be provided on CD only)

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U.S. Army Corps of Engineers
Louisville District

Ravenna Army Ammunition Plant
Ravenna, Ohio
Site Investigation
Compliance Restoration Sites:
RVAAP-70 East Classification Yard, RVAAP-71 Barn No. 5 Petroleum Release RVAAP-72 Facility-Wide USTs, RVAAP-75 George Road Sewer Treatment Plant Mercury Spill, RVAAP-77 Building 1037 Laundry Waste Water Sump and RVAAP-83 Former Buildings 1031 and 1039

Final Data Validation Report
Sample Delivery Groups:
Multiple

August 2014

Prepared for:
U.S. Army Corps of Engineers
Louisville District
Contract No. W912QR-08-D-0012
Delivery Order 001

Prepared by:

North Wind Services
352 Corporate Center Court
Stockbridge, Georgia 30218

MEC^X
12269 East Vassar Drive
Aurora, Colorado 80014

CONTRACTOR STATEMENT OF INDEPENDANT TECHNICAL REVIEW

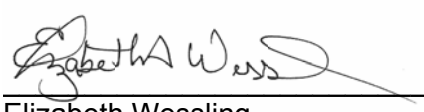
MEC^X, Inc. (MEC^X) has completed the Data Validation Report for Multiple Sample Delivery Groups from the Ravenna Army Ammunition Plant Site Investigation Compliance Restoration Sites.

Notice is hereby given that an independent technical review has been conducted to determine the usability and bias of the analytical data.

Significant concerns and the resolution are as follows:

None

As noted above, all concerns resulting from this independent technical review have been considered.



Elizabeth Wessling
Senior Environmental Chemist
MEC^X Independent Technical Review Team Leader



Patti Meeks, Ph.D.
Senior Environmental Chemist
MEC^X Independent Technical Review Team Member

EXECUTIVE SUMMARY

The overall objective for the project data described in this document is to define the nature and extent of contamination for the completion of Site Investigations (SI) at each Compliance Restoration (CR) site.

Data described in this report are comprised of samples collected from six CR sites at the Ravenna Army Ammunition Plant (RVAAP) by Environmental Chemical Corporation (ECC) from November 2012 to August 2013. The number and matrix of the samples, as described in numerous ECC Site Inspection Reports, are as shown below:

Analysis	Soil		
	MI	Discrete	Duplicate
Metals	35	99	15
Semivolatiles	43	45	10
PAH	0	74	7
Explosives	21	21	4
Propellants[1]	16	19	4
Volatiles	37	27	7
BTEX	0	72	7
Pesticides	4	9	2
PCBs	19	21	4
Herbicides	6	6	6
TPH	25	85	12
Hexavalent Chromium	0	29	3

1 –nitroguanidine and nitrocellulose
MI – multi-incremental
PAH – polynuclear aromatic hydrocarbons
BTEX – benzene, toluene, ethylbenzene, xylenes
PCBs – polychlorinated biphenyls
TPH – total petroleum hydrocarbons

This report details the data validation of approximately 10% of the primary sample data, analysis of field duplicate results, and the determination of data usability of the validated samples. Validation results, field duplicate comparisons, and data usability are presented by site in Sections 4 through 9.

The majority of the primary samples were analyzed for one or more of the following parameters by TestAmerica Laboratories, North Canton (TA-North Canton) located in North Canton, Ohio.

- United States Environmental Protection Agency (USEPA) SW-846 Method 8260B for volatile organic compounds (VOCs)
- USEPA SW-846 Method 8270C for semivolatile compounds (SVOCs) or polynuclear aromatic hydrocarbons (PAHs)
- USEPA SW-846 Method 8015B for total petroleum hydrocarbons (TPH) - gasoline range organics (GRO) and diesel range organics (DRO)

- USEPA SW-846 Method 8081 for pesticides
- USEPA SW-846 Method 8082 for polychlorinated biphenyls (PCBs)
- USEPA SW-846 Method 8151 for herbicides
- USEPA SW-846 Method 6020 for metals
- USEPA SW-846 Method 7470A/7471A for mercury
- USEPA SW-846 Method 7196A for hexavalent chromium

TA-North Canton subcontracted the hexavalent chromium analyses by USEPA SW-846 Method 7196A to TA-Pittsburg. TA-North Canton also subcontracted the following analyses to TA-West Sacramento:

- USEPA SW-846 Method 8330B for explosive compounds
- USEPA SW-846 8330 Modified for nitroguanidine
- Laboratory Standard Operating Procedure (SOP) WS-WC-0050 for nitrocellulose

Samples from two CR sites (71 and 83) collected in August 2013, were analyzed for one or more of the following parameters by CT Laboratories (CT) located in Baraboo, Wisconsin.

- USEPA SW-846 Method 8260C for volatile organic compounds (VOCs)
- USEPA SW-846 Method 8270D for semivolatile compounds (SVOCs) or polynuclear aromatic hydrocarbons (PAHs)
- USEPA SW-846 Method 8015C for total petroleum hydrocarbons (TPH) - gasoline range organics (GRO) and diesel range organics (DRO)
- USEPA SW-846 Method 8081B for pesticides
- USEPA SW-846 Method 8082A for polychlorinated biphenyls (PCBs)
- USEPA SW-846 Method 6010C for metals
- USEPA SW-846 Method 7470A/7471A for mercury
- USEPA SW-846 Method 8330B for explosive compounds
- USEPA SW-846 8330 Modified for nitroguanidine
- USEPA SW-846 Method 9056 Modified for nitrocellulose

The quality assurance (QA) split samples were submitted to Microbac Laboratories (Microbac) in Marietta, Ohio. Michigan and were analyzed for one or more of the aforementioned parameters. These data are discussed in a separate report.

Specific concerns regarding the data are noted below:

- Hexavalent chromium was reported utilizing the method of standard additions (MSA), which is recommended for matrices expected to have interference. Results from MSA are best when the MSA linear regression slope is nearly equivalent to the initial calibration slope; however the slopes for most site samples were more than a factor of 10 less than the initial calibration slope, indicating a nominal change in absorbance was observed in the MSA analyses for a relatively significant change in concentration.

- Due to instrument limitations, the mercury raw data did not list the sample absorbances; therefore, the reviewer was not able to calculate the sample results from the raw data. Additionally, the ICP-MS raw data did not list absorbances for the ICV, CCV, ICSAB, and MRL samples, and the %R was listed instead of the sample concentrations.

Some data were rejected due to quality control outliers. Rejected data, presented in the table below, are not usable. Results with LODs that exceed project criteria may be usable for their intended purposes; however, it is dependent on the final data user to make this determination on a case-by-case basis. All remaining results are usable for their intended purposes as qualified by MEC^{X}.

Table 1. Rejected data

Site	Sample	SDG	Analyte	Reason
70	070SB-044M-0001-SO	240-18581-1	n-Nitrosodiphenylamine	calibration
	070SB-046M-0001-SO	240-18581-1	n-Nitrosodiphenylamine	calibration
	070SS-006M-0001-SO	240-17230-1	4-Chloroaniline	matrix spike
			3,3'-Dichlorobenzidine	matrix spike
71	071SB-0018M-0001-SO	9923	Benzyl alcohol	calibration
	071SB-0013M-0001-SO	99236	Benzyl alcohol	calibration
72	072SB-0014-0001-SO	240-18297	4-Nitroanline	calibration
	072SB-0026-0001-SO	240-18441	Antimony	matrix spike
	072SB-0039-0001-SO	240-18449	Antimony	matrix spike
75	075SD-0002-0001-SD	240-17457	3,3'-Dichlorobenzidine	matrix spike
77	077SS-0001M-0001-SO	240-17525	Benzoic acid	matrix spike
			n-Nitrosodiphenylamine	calibration
83	083SB-0005M-0001-SO	99211	3,5-Dinitroaniline	calibration
			Benzyl alcohol	calibration

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APPENDICES

Appendix A Qualified Sample Forms Is

Appendix B Sample Qualification Summary

Appendix C Primary/Field Duplicate Sample Comparisons

Appendix D Validator Checklists

ACRONYMS AND ABBREVIATIONS

ADR	Automated Data Review
AST	Aboveground Storage Tank
°C	Degrees Celsius
CCB	Continuing Calibration Blank
CCC	Calibration Check Compounds
CCV	Continuing Calibration Verification
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CR	Compliance Restoration
CT	CT Laboratories
CUG	Cleanup Goal
%D	Percent Difference
DL	Detection Limit
DoD	Department of Defense
DRO	Diesel Range Organics
ECC	Environmental Chemical Corporation
EDD	Electronic Data Deliverable
FWQAPP	Facility-Wide Quality Assurance Project Plan
GC/MS	Gas Chromatography/Mass Spectrometry
GRO	Gasoline Range Organics
HHR	Historical Records Review
HTRW	Hazardous, Toxic, Radioactive Waste
ICSA	Interference Check Sample A
ICSAB	Interference Check Sample AB
ICV	Initial Calibration Verification
ICP	Inductively Coupled Plasma
LS	Louisville Supplement
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection
LOQ	Limit of Quantitation
MEC	Munitions and Explosives of Concern
MEC^X	MEC^X, Inc.
Microbac	Microbac Laboratories
MRL	Method Reporting Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PAH	Polynuclear Aromatic Hydrocarbon
PCB	Polychlorinated Biphenyl
QA	Quality Assurance
QAPP	Quality Assurance Project Plan
QC	Quality Control
QSM	Quality Systems Manual
RPD	Relative Percent Difference
RRF	Relative Response Factor
RSD	Relative Standard Deviation
RSL	Regional Screening Levels
RVAAP	Ravenna Army Ammunition Plant
SAIC	Science Applications International Corporation

SAP	Sampling and Analysis Plan
SDG	Sample Delivery Group
SI	Site Investigation
SOP	Standard Operating Procedure
SPCC	System Performance Check Compound
RSL	Regional Screening Level
SVOC	Semivolatile Organic Compound
TA	TestAmerica Laboratories
TPH	Total Petroleum Hydrocarbon
USACE	United State Army Corps of Engineers
USEPA	United State Environmental Protection Agency
VOC	Volatile Organic Compound

1 INTRODUCTION

1.1 Project Overview

The overall objective for the project data described in this document is to define the nature and extent of contamination for the completion of Site Investigations (SI) at each Compliance Restoration (CR) site. Project details can be found in the project documents, including *Final Site Inspection and Remedial Investigation Work Plan at Compliance Restoration Sites* (ECC, 2012).

Data described in this report are comprised of samples collected from six CR sites at the Ravenna Army Ammunition Plant (RVAAP) by Environmental Chemical Corporation (ECC) from November 2012 to August 2013. The number and matrix of the samples, as described in numerous ECC Site Inspection Reports, are as shown below:

Table 2. SI Site sample counts

Analysis	Soil		
	MI	Discrete	Duplicate
Metals	35	99	15
Semivolatiles	43	45	10
PAH	0	74	7
Explosives	21	21	4
Propellants[1]	16	19	4
Volatiles	37	27	7
BTEX	0	72	7
Pesticides	4	9	2
PCBs	19	21	4
Herbicides	6	6	6
TPH	25	85	12
Hexavalent Chromium	0	29	3

1 –nitroguanidine and nitrocellulose
MI – multi-incremental
PAH – polynuclear aromatic hydrocarbons
BTEX – benzene, toluene, ethylbenzene, xylenes
PCBs – polychlorinated biphenyls
TPH – total petroleum hydrocarbons

The majority of the primary samples were analyzed for one or more of the following parameters by TestAmerica Laboratories, North Canton (TA-North Canton) located in North Canton, Ohio.

- United States Environmental Protection Agency (USEPA) SW-846 Method 8260B for volatile organic compounds (VOCs)
- USEPA SW-846 Method 8270C for semivolatile compounds (SVOCs) or polynuclear aromatic hydrocarbons (PAHs)
- USEPA SW-846 Method 8015B for total petroleum hydrocarbons (TPH) - gasoline range organics (GRO) and diesel range organics (DRO)
- USEPA SW-846 Method 8081 for pesticides

- USEPA SW-846 Method 8082 for polychlorinated biphenyls (PCBs)
- USEPA SW-846 Method 8151 for herbicides
- USEPA SW-846 Method 6020 for metals
- USEPA SW-846 Method 7470A/7471A for mercury
- USEPA SW-846 Method 7196A for hexavalent chromium

TA-North Canton subcontracted the hexavalent chromium analyses by USEPA SW-846 Method 7196A to TA-Pittsburg. TA-North Canton also subcontracted the following analyses to TA-West Sacramento:

- USEPA SW-846 Method 8330B for explosive compounds
- USEPA SW-846 8330 Modified for nitroguanidine
- Laboratory Standard Operating Procedure (SOP) WS-WC-0050 for nitrocellulose

Samples (35 primary soil samples and 7 aqueous quality control samples) from two CR sites (71 and 83) collected in August 2013, were analyzed for one or more of the following parameters by CT Laboratories (CT) located in Baraboo, Wisconsin.

- USEPA SW-846 Method 8260C for volatile organic compounds (VOCs)
- USEPA SW-846 Method 8270D for semivolatile compounds (SVOCs) or polynuclear aromatic hydrocarbons (PAHs)
- USEPA SW-846 Method 8015C for total petroleum hydrocarbons (TPH) - gasoline range organics (GRO) and diesel range organics (DRO)
- USEPA SW-846 Method 8081B for pesticides
- USEPA SW-846 Method 8082A for polychlorinated biphenyls (PCBs)
- USEPA SW-846 Method 6010C for metals
- USEPA SW-846 Method 7470A/7471A for mercury
- USEPA SW-846 Method 8330B for explosive compounds
- USEPA SW-846 8330 Modified for nitroguanidine
- USEPA SW-846 Method 9056 Modified for nitrocellulose

The quality assurance (QA) split samples were submitted to Microbac Laboratories (Microbac) in Marietta, Ohio and were analyzed for one or more of the aforementioned parameters. These data are discussed in a separate report.

This report details the data validation of 10% of the primary sample data, analysis of field duplicate results, and the determination of data usability of the validated samples. Validation results, field duplicate comparisons and data usability are presented by site, in Sections 4 through 9.

1.2 Previous Activities and Data

The following summary was adapted from the Facility-Wide Sampling and Analysis Plan for Environmental Investigations at the Ravenna Army Ammunition Plant, Ravenna, Ohio

(FWQAPP) prepared by Science Applications International Corporation (SAIC), March 2001. Site-specific information is presented in Sections 4 through 21.

Located in northeastern Ohio on approximately 21,000 acres, RVAAP was established in 1940 to load, store, and demilitarize conventional artillery ammunition, bombs, mines, fuses and boosters, primers and percussion elements. Originally RVAAP operated as two separate units, the Portage Ordnance Depot and the Ravenna Ordnance Plant. During World War II, a contractor operated the Ravenna Ordnance Depot and the government operated the Portage Ordnance Depot. Ordnance production and storage for World War II continued until August 1945, at which time the facility was renamed the Ravenna Arsenal, and the government assumed control of all operations. Then, from 1951 to 1999, the entire facility was operated by contractors. Ordnance production at the facility was phased out and sent to Plum Brook Ordnance Works in Sandusky, Ohio and Keystone Ordnance Works in Meadville, Pennsylvania. All production at the facility had ceased by 1957 and the plant was placed on standby. In 1961, the plant was operational for seven months, processing and performing explosive melt-out of bombs. After deactivation late in 1961, the facility was renamed RVAAP. From mid-1968 until 1971, the plant was reactivated to load, assemble, and pack munitions on three load lines and two component lines. Operations ceased at Load Lines 1, 2, 3, and 4 in 1971; however, the Lines were reactivated to perform demilitarization operations for several months in 1973 and 1974. In 1992, RVAAP was again placed on inactive status. Salvage and demolition operations started in 1998 and administrative control of the facility was transferred to the Ohio Army National Guard in 1999.

Since 1978, approximately 20 environmental condition investigations have been performed at RVAAP. Only a portion of these investigations are discussed below.

2 DESCRIPTION OF WORK PERFORMED

This section describes the data verification and data validation procedures used during the evaluation of the site samples reported in 40 sample delivery groups (SDGs) from TA-North Canton or CT.

2.1 Data Validation Process

Level IV validation was performed on 10% of the total number of primary samples collected. Primary samples with associated QA and field duplicate samples were prioritized for Level IV validation; however, not all samples validated at Level IV had associated QA or field duplicate samples.

Data validators assessed results based on the FWQAPP, Department of Defense Quality Systems Manual for Environmental Laboratories Version 4.2 (DoD QSM), Louisville DOD Quality Systems Manual Supplement, Version 1 (LS), the specific EPA methods, the National Functional Guidelines for Superfund Organic Methods Data Review (2008), and the National Functional Guidelines for Inorganic Superfund Data Review (2010). The following were reviewed for Level IV validation:

- Sample management (collection techniques, sample containers, preservation, handling, transport, chain-of-custody, holding times),
- Calibration results (initial, continuing, and method reporting limit),
- Method and calibration blank sample results,
- Laboratory control sample (LCS) or LCS/LCS duplicate (LCS/LCSD) recoveries and/or precision,
- Surrogate recoveries (if applicable),
- Metals interference check sample results
- Matrix spike/matrix spike duplicate (MS/MSD) recoveries and precision,
- Laboratory duplicate precision
- Post digestion spike accuracy,
- Serial dilution precision,
- Field QA/QC sample results (equipment rinsate, field blank, trip blank)
- Gas Chromatography/Mass Spectrometry (GC/MS) or inductively coupled plasma (ICP) MS tuning,
- Internal standards performance,
- Sample results verification,
- Target compound identification,
- Raw data.

Blanks – method, calibration, trip, field and equipment – were assessed using the National Functional Guidelines 5× and 10× rules. Target compound detections less than or equal to 5× a blank detection and common laboratory contaminant compound detections less than or equal to 10× a blank detect were qualified as nondetected. Nondetected results were reported at the

limit of detection (LOD) if the original detect was less than or equal to the LOD or reported at the level of contamination if the original detect was greater than the LOD.

ECC provided a list of field blank/source water, equipment rinsate, and trip blank samples collected in association with the SI samples. These samples are listed below.

Table 3. Field blank/source water and equipment rinsate samples

Sampling Event	Applicability	Sample	Water Type	Date Collected	Validator Application
All 2012-2013 Sampling Event	Non-dedicated hand sampling tools	070-0057-0001-Source Water	ECC bottled decontamination water	12/12/2012	Surface soil ("SS") samples collected in 2012
2012 Subsurface Sampling Event	Direct push drilling tools	070-0056-0001-Source Water	Driller bottled decontamination water	12/12/2012	Not used
2013 Subsurface Sampling Event	Direct push drilling tools	079-0007-0001-Source Water	Driller bottled decontamination water	3/14/2013	Not used
2012 SI Sampling Event	Non-dedicated hand sampling tools during sampling event	076-0067-0001-ER	N/A	11/15/2012	Surface soil ("SS") samples collected in November 2012
2012 SI Sampling Event	Non-dedicated hand sampling tools during sampling event	076-0140-0001-ER	N/A	12/9/2012	Surface soil ("SS") samples collected in December 2012
2013 SI Sampling Event and Sites 71 and 83 Sampling Event	Non-dedicated hand sampling tools during sampling event	083SB-0023-0001-ER	N/A	8/15/2013	Surface soil ("SS") samples collected in August 2013

Due to the large number of high concentration detects for metals analytes in samples 070-0056-0001-Source Water and 079-0007-0001-Source Water, these samples were not used to qualify site sample results. Therefore, there was no field blank/source water associated with the subsurface samples.

2.2 Data Validation Qualifiers

Data qualifiers, as defined below, were applied following the FWQAPP and the DoD QSM:

U Nondetected at the limit of detection
The analyte was analyzed for but not definitively detected.

J Estimated
The identification of the analyte is acceptable but the quality assurance criteria indicate that the quantitative values may be outside the normal expected range of precision. Additionally used to identify detects reported below the limit of quantitation (LOQ).

N Identity Presumptive and Tentative
There is presumptive evidence that the analyte is present but it has not been confirmed. There is an indication that the reported analyte is present; however, all quality control requirements necessary for confirmation were not met.

R Rejected
Data are considered to be rejected and shall not be used for environmental decisions.

2.3 Data Validation Flagging Codes

The qualification codes in the following table may have been used to flag the data described in this document: Sample qualifications are summarized in Appendix B. All qualifications and associated qualification codes have been entered into the electronic data deliverables (EDD) received from the laboratories and may be reviewed Appendices A and B of this report.

Table 4. Qualification code reference table

Qualifier	Organics	Inorganics
H	Holding times were exceeded.	Holding times were exceeded.
S	Surrogate recovery was outside QC limits.	The sequence or number of standards used for the calibration was incorrect.
C	Calibration %RSD or %D was noncompliant. MRL was outside control limits or missing.	Correlation coefficient was noncompliant. MRL was outside control limits or missing.
R	Calibration RRF was noncompliant.	%R for calibration is not within control limits.
B	Presumed contamination as indicated by the preparation (method) blank results.	Presumed contamination as indicated by the preparation (method) or calibration blank results.
L	Laboratory Control Sample/Control Sample Duplicate %R was not within control limits.	Laboratory Control Sample %R was not within control limits.
Q	MS/MSD recovery was poor or RPD high.	MS recovery was poor.
E	Not applicable	Duplicates showed poor agreement.
I	Internal standard performance was unsatisfactory.	ICP ICS results were unsatisfactory.
A	Not applicable.	ICP Serial Dilution %D were not within control limits.
M	Tuning (BFB or DFTPP) was noncompliant.	ICPMS tuning was noncompliant
T	Presumed contamination as indicated by the trip blank results.	Not applicable.
+	False positive – reported compound was not present.	False positive – reported compound was not present.
-	False negative – compound was present but not reported.	False negative – compound was present but not reported.
F	Presumed contamination as indicated by the FB or ER results.	Presumed contamination as indicated by the FB or ER results.
$	Reported result or other information was incorrect.	Reported result or other information was incorrect.
?	TIC identity or reported retention time has been changed.	Not applicable.
D	The analysis with this flag should not be used because another more technically sound analysis is available.	The analysis with this flag should not be used because another more technically sound analysis is available.
P	Instrument performance for pesticides was	Post Digestion Spike recovery was not within

Qualifier	Organics	Inorganics
	poor.	control limits.
*II, *III	A deficiency was found that has been described in the "Sample Management," section (*II) or the "Method Analyses" section (*III).	A deficiency was found that has been described in the "Sample Management," section (*II) or the "Method Analyses" section (*III).

3 DATA ACQUISITION ACTIVITIES

3.1 Sample Collection

Samples were collected from November 2012 to August 2013. The samples were submitted under chain of custody to the primary laboratories, TA-North Canton or CT.

Unless otherwise noted In Sections 4 through 9, the chains-of-custody associated with the samples validated at Level IV were appropriately signed by both field and/or laboratory personnel with all samples and analyses accounted for, cooler custody seals intact, and within the temperature limits of 4±2°C. All documentation regarding sample handling as presented in the case narratives, chains of custody, correspondence, and sample condition upon receipt forms was evaluated. No further requests were made to the primary contractor or the laboratories, and no data were qualified.

3.2 Sample Analysis

The primary laboratories, or their subcontractors, analyzed the samples for the parameters shown in the table ined in Section1.1.

3.3 Data Completeness

Data completeness for the project described in this report was found to be generally acceptable as no deliverables were missing.

3.4 Sample Preservation and Holding Time Requirements

All method preservation requirements were met. The extraction and analytical holding times for the soil analyses validated in this document are listed in the table below.

Table 5. Holding times

Method	Analysis	Holding Time	
		Extraction	Analysis
6010C/6020	Metals	N/A	180 days
7471A	Mercury	N/A	28 days
8260B/8260C	VOCs	N/A	14 days
8270C/8270D	SVOCs	14 days	40 days
8015B/8015C	TPH-GRO	N/A	14 days
8015B/8015C	TPH-DRO	14 days	40 days
8081/8081B	Pesticides	14 days	40 days
8082/8082A	PCBs	14 days	40 days
8151	Herbicides	14 days	40 days
8330B	Explosives	14 days	40 days
8330	Nitroguanidine	14 days	40 days
9056M/WS-WC-0050	Nitrocellulose	N/A	28 days
7196A	Hexavalent chromium	30 days	24 hours

Qualifications applied for missed holding times are discussed by Site in Sections 4 through 9.

3.5 Detection Limit Requirements

Limits of detection (LODs) and detection limits for nondetected analytes were compared against the most stringent criteria listed in Tables 5-8, 5-9, and 5-10 of *Final Facility-Wide Human Health Cleanup Goals for the Ravenna Army Ammunition Plant* (2010) or the USEPA Regional Screening Levels (RSLs).

Some LODs and DLs exceeded the cleanup goals (CUGs) or project criteria. These exceedances are reported by site in Sections 4 through 9. As noted in the Executive Summary, results with DLs exceeding project criteria may be usable for their intended purposes; however, it is dependent on the final data user to make this determination on a case-by-case basis.

4 EAST CLASSIFICATION YARD, RVAAP-70

4.1 Current Investigation

ECC completed an SI at the East Classification Yard (RVAAP-70). The SI for RVAAP-70 was conducted in accordance with the *Interim Final Guidance for Performing Site Inspections Under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)* (USEPA 1992).

A historical records review (HRR) evaluation reviewed historic uses at RVAAP-70 for potential environmental concerns with respect to possible hazardous, toxic, and radioactive waste (HTRW) and/or munitions and explosives of concern (MEC) issues (SAIC 2011). The HHR identified the following facilities within RVAAP-70 as candidates for investigation:

- Former Fuel Oil Spill Area – In 1986, a leak of No.5 fuel oil occurred from a former aboveground storage tank (AST) located west of Building 47-40 (Roundhouse). Contaminated soil was stockpiled within the containment area and over 16,000-gallons of fuel oil was salvaged from the containment area. Approximately 120-gallons of oil/soil/straw were disposed of as per Ohio EPA instructions. The spill report indicated samples of contaminated soil were collected for analysis. The laboratory report indicated the soil in the containment area was acceptable for burning; however, no final report regarding the disposition of the contaminated soil was discovered.

- Building 47-40 (Roundhouse) – Although no documented releases were discovered during the HHR, staining was visible on the concrete floor within the building. According to the HHR, chemicals used within the building included engine washing compounds, valve oil, electrolytes (battery maintenance), locomotive black paint, solvents for parts degreasing, lubrication oil, metal preservatives, carbolineum, creosote, and cold patch asphalt. No documented waste management practices were found.

- Former Herbicide Storage Shed – This shed (Building 47-60) was used to house the track-mounted sprayer and herbicides. Herbicide mixing operations may have occurred in this site.

- Outdoor Wash Rack Area – This area was used to wash box cars which carried explosives and engines. An interviewee noted there were no controls in place to collect the wash water.

The data validated in this report are part of the initial intrusive SI at RVAAP-70 conducted to assess the potential presence of contamination. The sample counts, samples selected for data validation, and the field duplicates are presented in the tables below.

Table 6. Total sample count for RVAAP-70

Matrix	Field Duplicates	Split Samples	Explosives	Propellants	Herbicides	PCBs	SVOCs	TPHs	VOCs/BTEX	Metals
Soil	5	0	15	7	14	32	51	18	19	24

Table 7. RVAAP-70 validated samples and methods

Sample ID	SDG	Matrix	Collected	Explosives	Propellants	Herbicides	PCBs	SVOCs	TPHs	VOCs/BTEX	Metals
070SS-0003M-0001-SO	240-17230-1	Soil	11/5/2012					x			
070SS-0006M-0001-SO	240-17230-1	Soil	11/5/2012	x	x	x	x	x	x	x	x
070SB-042M-0001-SO	240-18735-1	Soil	12/7/2012						x		
070SB-044M-0001-SO	240-18581-1	Soil	12/7/2012	x		x	x	x		x	x
070SB-046M-0001-SO	240-18581-1	Soil	12/7/2012					x			

Table 8. RVAAP-70 field duplicate samples

Duplicate Sample ID	Parent Sample
070SS-0007M-0001-SO	070SS-0006M-0001-SO
070SB-0042M-0001-SO	070SB-0043M-0001-SO
070SB-0045M-0001-SO	070SB-0044M-0001-SO
070SB-0047M-0001-SO	070SB-0046M-0001-SO

4.1.1 Sample Collection

The chains-of-custody were appropriately signed and dated by field and laboratory personnel. According to the laboratory Sample Receipt Form, custody seals were not utilized; however, in reviewing the relinquish and receipt times, it appeared the samples were transferred to the laboratory by courier. For SDG 240-18581-1, the laboratory Sample Receipt Checklist did not list a temperature, noted the samples were not received on ice, but also noted the samples were received chilled. No other sample collection issues were noted.

4.1.2 Data Completeness

Data completeness for the project described in this report was found to be generally acceptable as no deliverables were missing from the SDGs reviewed.

4.1.3 Preservation and Holding Time Requirements

A portion of the sample coolers were received at temperatures below the 4 ±2°C control limit; however, as the samples were not noted to be frozen or damaged, no qualifications were

required. All remaining method preservation requirements were met. All holding times, as listed in Table 4, were met.

4.1.4 Detection Limit Requirements

LODs and DLs for nondetected analytes were compared against the most stringent CUGs listed in Tables 5-8, 5-9, and 5-10 of *Final Facility-Wide Human Health Cleanup Goals for the Ravenna Army Ammunition Plant* (2010) or the RSLs if no CUG was listed. The table below lists the number of LODs and DLs that exceeded criteria.

Table 9. RVAAP-70 LOD/DL validated sample exceedances

Method	LOD	DL
Explosives	0	0
Propellants	0	0
PCBs	0	0
Herbicides	0	0
TPH	0	0
SVOCs	12	12
VOCs	0	0
Metals	0	0

Results with LODs/DLs exceeding project criteria may be usable for their intended purposes; however, it is dependent on the final data user to make this determination on a case-by-case basis.

4.2 RVAAP-70 Data Quality Evaluation

This section summarizes the data quality of validated samples for each analytical method evaluated.

4.2.1 Explosives

A total of 15 primary soil samples and 1 field duplicate sample were analyzed by TA-West Sacramento for explosives by USEPA SW-846 Method 8330B. A total of 2 primary soils were validated at Level IV.

- MDL studies were not evaluated as part of this project.
- Calibration:
    - The primary column initial calibration average percent relative standard deviations (%RSDs) for RDX and 2-nitrotoluene exceeded the control limit at 20% and 16%, respectively; therefore, the nondetected results for these compounds were qualified as estimated, "UJ," in 070SS-0006M-0001-SO and 070SB-044M-0001-SO. The qualified results were coded with a "C" qualification code. The remaining initial calibration average %RSDs were within the control limits listed in DoD QSM Table F-3 of ≤15%, or the linear regression r^2 values were ≥0.990.

- The second source initial calibration verification (ICV) standard recoveries were within the control limit listed in DoD QSM Table F-3 of ±20%.
- The continuing calibration verification (CCV) standard %Ds were within the control limits listed in DoD QSM Table F-3 of ±20%.
- Although not required by the DoD QSM, a standard of 3× the DL is required by the FWQAPP. Low-level MRL standards were analyzed in association with the validated samples and the results were within the reasonable control limits of 70-130%.

- Blanks: The method blanks associated with the validated samples had no target compound detects above the control limit listed in DoD QSM Table F-3 of one-half the limit of quantitation (LOQ).

- Laboratory Control Samples: Recoveries were within the control limits listed in DoD QSM Tables G-2 and G-13 and within the reasonable laboratory control limits for nitroglycerin (76-116%) and PETN (76-116%).

- Surrogate Recovery: As no surrogate control limit was listed in the DoD QSM, surrogate recoveries were assessed against the reasonable laboratory-established control limits of 78-118%. Recoveries were within the control limits.

- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on sample 070SS0006M-0001-SO. The recoveries for 4-amino-2,6-dinitrotoluene (124%, 135%) were above the control limit (81-121%); however, qualifications are only applied to detects for high recoveries. Both recoveries for nitroglycerin (63%, 62%) were below the control limits (76-116%); therefore, nondetected nitroglycerin in the parent sample was qualified as estimated, "UJ," and the result coded with a "Q" qualification code.

- Compound Identification: Compound identification was verified for those samples validated at a Level IV. Review of sample chromatograms and retention times indicated no problems with target compound identification.

- Compound Quantification and Reported Detection Limits: As no target compounds were detected in the samples validated at Level IV, compound quantification was verified for a portion of the LCS results. The LOQs were supported by the low point of the initial calibration and the laboratory detection limits (DLs). Any result reported between the DL and the LOQ was qualified as estimated, "J." Reported nondetects are valid to the LOD.

  Confirmation analyses were performed; however, no compounds were confirmed.

  Target compounds 2,4-dinitrotoluene, 2,6-dinitrotoluene, and nitrobenzene were reported by both Method 8330B and 8270C in samples 070SS-0006M-0001-SO and 070SB-044M-0001-SO. As there were no detects for these compounds; the reviewer chose to report the results with the lowest LODs. The 8330B results for nitrobenzene were

rejected, "R," as duplicate data and coded with a "D" qualification code. The 8330B results for 2,4-dinitrotoluene and 2,6-dinitrotoluene were retained.

- System Performance: Review of the raw data indicated no problems with system performance.

- Manual Integrations: Some manual integrations were performed for the initial calibrations and low-level CCVs. All manual integrations were performed in order to report incompletely resolved peaks or to account for baseline anomalies and were deemed acceptable by the reviewer.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

    - Field Blanks and Equipment Rinsates: Sample 070-0057-0001-Source Water was identified as the field blank and sample 076-0067-0001-ER was the equipment rinsate associated with sample 070SS-006M-0001-SO. The field blank and equipment rinsate had no target compound detects. The validated subsurface soil sample had no associated field QC samples.

    - Field Duplicates: One field duplicate sample was collected and analyzed for explosive compounds. The RPD criterion in FWQAPP Table 3-1 of ≤50% was only applied when results for common detects were ≥5× the LOQ. In cases where results were <5× the LOQ, the reasonable control limit of ± the LOQ was applied. All results were within the control limits. See Appendix C for a complete comparison of all primary and field duplicate results.

4.2.2 Propellants

A total of 7 primary soil samples and 1 field duplicate were analyzed by TA-West Sacramento for nitroguanidine by USEPA SW-846 Method 8330 and for nitrocellulose by laboratory standard operating procedure (SOP) WS-WC-0050. A single primary soil sample was validated at Level IV.

- MDL studies were not evaluated as part of this project.

- Calibration:

    - The nitroguanidine initial calibration average percent %RSD was within the control limit listed in DoD QSM Table F-2 of ≤20%. Nitrocellulose linear regression r values were within the control limit listed in the DoD QSM Table F-11 of ≥0.995.

    - The nitroguanidine second source ICV recovery was within the control limits listed in DoD QSM Table F-2 of 85-115%. The nitrocellulose ICV recovery exceeded the

control limit at 192% (limits are 90-110%); however, as nitrocellulose was not detected in the sample, no qualifications were required.

- The nitroguanidine CCV recoveries were within the control limits listed in DoD QSM Table F-2 of 85-115%. The nitrocellulose CCV recoveries were within the control limits listed in DoD QSM Table F-11 of 90-110%.

- Although not required by the DoD QSM, a standard of 3× the DL is required by the FWQAPP. MRL recoveries associated with the sample were within the reasonable control limits of 70-130%.

- Blanks: The method blanks had no target compound detects above the control limits listed in DoD QSM Tables F-2 and F-11 of one-half the LOQ.

- Laboratory Control Samples: No nitroguanidine or nitrocellulose LCS control limits are listed in the DoD QSM; therefore, the laboratory control limits were used to assess the results. All nitroguanidine recoveries were within the control limits of 72-121% for soils. The nitrocellulose recoveries were within the laboratory-established control limits of 34-115% for soils.

- Surrogate Recovery: A surrogate was not required for the analysis of nitroguanidine or nitrocellulose.

- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on sample 070SB-0006M-0001-SO for both propellants. The recoveries were within the laboratory-established control limits of 72-121% for nitroguanidine and 34-115% for nitrocellulose. Both RPDs were ≤20%.

- Compound Identification: Compound identification was verified for the sample validated at a Level IV. Review of the sample chromatograms and retention times indicated no problems with target compound identification.

- Compound Quantification and Reported Detection Limits: Compound quantification was verified for those samples validated at a Level IV. The LOQs were supported by the low point of the initial calibration and the laboratory DLs. Any result reported between the DL and the LOQ was qualified as estimated, "J." Reported nondetects are valid to the LOD.

  Nitroguanidine was not detected in the validated sample; therefore, confirmation analysis was not required.

- System Performance: Review of the raw data indicated no problems with system performance.

- Manual Integrations: Some manual integrations were performed for nitroguanidine. The manual integrations were performed to correct baseline integration. The manual integrations were deemed acceptable by the reviewer.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

    - Field Blanks and Equipment Rinsates: Sample 070-0057-0001-Source Water was identified as the field blank and sample 076-0067-0001-ER was the equipment rinsate associated with the validated site sample. The field blank and equipment rinsate had no target compound detects.

    - Field Duplicates: One field duplicate sample was collected and analyzed for propellants. The RPD criterion in FWQAPP Table 3-1 of ≤50% was only applied when results for common detects were ≥5× the LOQ. In cases where results were <5× the LOQ, the reasonable control limit of ± the LOQ was applied. All results were within the control limits. See Appendix C for a complete comparison of all primary and field duplicate results.

4.2.3 Polychlorinated Biphenyls (PCBs)

A total of 30 primary soil samples and 2 field duplicates samples were analyzed by TA-North Canton for PCBs by USEPA SW-846 Method 8082. A total of 2 primary soil samples were validated at Level IV.

- MDL studies were not evaluated as part of this project.

- Calibration: Calibration criteria listed in the DoD QSM Table F-2 were met.

    - Initial calibration average %RSDs were within the control limit of ≤20%.

    - The second source ICV recoveries were within the control limit of ±20% for all applicable Aroclors.

    - The CCV standard recoveries were within the control limit of ±20%.

    - Although not required by the DoD QSM, a standard of 3× the DL is required by the FWQAPP. MRL standard recoveries were within the reasonable control limit of ±30%.

- Blanks: The method blanks associated with the validated samples had no target compound detects above the control limit listed in the DoD QSM Table F-2, of one-half the LOQ.

- Laboratory Control Samples: Recoveries for Aroclor 1016 and Aroclor 1260 were within the control limits listed in DoD QSM Table G-17.

- Surrogate Recovery: Recoveries were within the control limits listed in DoD QSM Table G-3 of 60-125%.

- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on sample 070SS-0006M-0001-SO. Both recoveries for Aroclor 1016 were above the control limits of 40-140%, at 155% and 149%. The parent sample detect for Aroclor 1242 was qualified as estimated, "J," and coded with a "Q" qualification code. Recoveries for Aroclor 1260 were within the control limits listed in DoD QSM Table G-17 and RPDs for both Aroclors were within the control limit listed in the DoD QSM Table F-2 of ≤30%.

- Compound Identification: Compound identification was verified for the validated samples. Review of the sample chromatograms, standards, and retention times indicated no problems with target compound identification.

- Compound Quantification and Reported Detection Limits: Compound quantification was verified for the validated samples. The LOQs were supported by the low point of the initial calibration and the laboratory DLs. Any result reported between the DL and the LOQ was qualified as estimated, "J." Reported nondetects are valid to the LOD.

  Sample 070SS-0006M-0001-SO was analyzed at a 5× dilution for a high concentration of Aroclor 1242. The intercolumn RPD exceeded the control limit of ≤40%; therefore, the result was qualified as estimated, "J," and coded with a "*III" qualification code.

- System Performance: Review of the raw data indicated no problems with system performance.

- Manual Integrations: Some routine manual integrations were performed for the calibration and QC data associated with the sample data, primarily due to poor baseline integration. All manual integrations reviewed at Level IV were deemed appropriate by the reviewer.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

  - Field Blanks and Equipment Rinsates: Sample 070-0057-0001-Source Water was identified as the field blank and sample 076-0067-0001-ER was the equipment rinsate associated with sample 070SS-006M-0001-SO. The field blank and equipment rinsate had no target compound detects. The validated subsurface soil sample had no associated field QC samples.

  - Field Duplicate Samples: Two field duplicate samples were collected and analyzed for PCBs. The RPD criterion in FWQAPP Table 3-1 of ≤50% was only applied when results for common detects were ≥5× the LOQ. In cases where results were <5× the LOQ, the reasonable control limit of ± the LOQ was applied. The result for Aroclor-1242 in pair 070SS-0006M-0001-SO/070SS-0007M-0001-SO was not within ± the LOQ. The remaining results were within the control limits. See Appendix C for a complete comparison of all primary and field duplicate results.

4.2.4 Herbicides

A total of 12 primary soil samples and 2 field duplicate samples were analyzed by TA-North Canton for herbicides by USEPA SW-846 Method 8151. A total of 2 primary soil samples were validated at Level IV.

- MDL studies were not evaluated as part of this project.
- Calibration:
  - Initial calibration average %RSDs were within the DoD QSM Table F-2 control limit of ≤20% or linear regression r^2 values ≥0.990.
  - The second source ICV recoveries were within the DoD QSM Table F-2 control limit of ±20%.
  - The CCV standard recoveries were within the DoD QSM Table F-2 control limit of ±20%.
  - Although not required by the DoD QSM, a standard of 3× the DL is required by the FWQAPP. MRL standard recoveries affecting sample data were within the reasonable control limit of ±30%, with exceptions noted in the table below. The sample results, all nondetects, were qualified as estimated, "UJ," and coded with a "C" qualification code.

Samples qualified for MRL %Recovery outliers		
Analyte	**%Recoveries**	**Qualified Samples**
MCPP	42% / 59%	070SS-0006M-0001-SO
MCPA	48% / 62%	
MCPP	53%	070SB-0044M-0001-SO
MCPA	56%	

- Blanks: The method blanks associated with the validated samples had no target compound detects above the control limit listed in the DoD QSM Table F-2 of one-half the LOQ.
- Laboratory Control Samples: Recoveries were within the control limits listed in DoD QSM Tables G-2 (poor performers) and G-9, or within laboratory-established control limits when no QSM limits were prescribed. Spiked analytes utilizing laboratory established control limits included dalapon (30-122%) and MCPA (25-132%). The reviewer noted MCPP and pentachlorophenol were not included in the LCS.
- Surrogate Recovery: Recoveries for surrogate 2,4-dichlorophenylacetic acid were within the laboratory-established control limits of 1-122%, as no QSM limits were prescribed.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on samples 070SS-0006M-0001-SO and 070SB-0044M-0001-SO. Recoveries affecting sample data

were within the control limits listed in DoD QSM Tables G-2 (poor performers) and G-9, or within laboratory-established control limits when no QSM limits were prescribed (see Laboratory Control Samples section). Exceptions are noted in the table below. RPDs were within the control limit listed in the DoD QSM Table F-2 of ≤30%. The nondetected parent sample results for the outliers were qualified as estimated, "UJ," and coded with a "Q" qualification code. Pentachlorophenol and MCPP were not spiked in to the MS/MSD.

Samples qualified for MS/MSD %Recovery outliers			
Analyte	**%Recoveries**	**Recovery Limits**	**Qualified Sample(s)**
Dicamba	45% / 51%	55-110%	070SS-0006M-0001-SO
Dichlorprop	57% / 66%	75-140%	

- Compound Identification: Compound identification was verified for the validated samples. Review of the sample chromatograms, standards, and retention times indicated no problems with target compound identification.

- Compound Quantification and Reported Detection Limits: Compound quantification was verified for the validated samples. The LOQs were supported by the low point of the initial calibration and the laboratory DLs. Any result reported between the DL and the LOQ was qualified as estimated, "J." Reported nondetects are valid to the LOD.

- System Performance: Review of the raw data indicated no problems with system performance.

- Manual Integrations: Some routine manual integrations were performed for the calibration and QC data associated with the sample data, primarily to correct baseline integration of pentachlorophenol. All manual integrations reviewed at Level IV were deemed appropriate by the reviewer.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

- Field Blanks and Equipment Rinsates:

    - Field Blanks and Equipment Rinsates: Sample 070-0057-0001-Source Water was identified as the field blank and sample 076-0067-0001-ER was the equipment rinsate associated with sample 070SS-006M-0001-SO. The field blank and equipment rinsate had no target compound detects. The validated subsurface soil sample had no associated field QC samples.

    - Field Duplicate Samples: Two field duplicate samples were collected and analyzed for herbicides. The RPD criterion in FWQAPP Table 3-1 of ≤50% was only applied when results for common detects were ≥5× the LOQ. In cases where results were <5× the LOQ, the reasonable control limit of ± the LOQ was applied. All results

were within the control limits. See Appendix C for a complete comparison of all primary and field duplicate results.

4.2.5 Total Petroleum Hydrocarbons (TPH)

A total of 17 primary soil samples and 2 field duplicate samples were analyzed by TA-North Canton for GRO (C6-C12) and DRO (C10-C20, C20-C34) by USEPA SW-846 Method 8015B. A total of 2 primary soil samples were validated at Level IV.

- MDL studies were not evaluated as part of this project.
- Calibration:
  - Initial calibration average %RSDs were within the DoD QSM Table F-2 vcontrol limit of ≤20% or linear regression r^2 values ≥0.990.
  - The second source ICV recoveries were within the DoD QSM Table F-2 control limit of ±20%.
  - The CCV standard recoveries were within the DoD QSM Table F-2 control limit of ±20%.
  - Although not required by the DoD QSM, a standard of 3× the DL is required by the FWQAPP. MRL standard recoveries affecting sample data were within the reasonable control limit of ±30%, with exception of one recovery of 133% in the beginning MRL associated with the GRO analysis of sample 070SS-0006M-0001-SO. The sample detect was qualified as estimated, "J," and coded with a "C" qualification code.
- Blanks: The method blanks associated with the validated samples had no target compound detects above the control limit listed in the DoD QSM Table F-2, of one-half the LOQ.
- Laboratory Control Samples: As no QSM limits are prescribed, recoveries were within the laboratory-established control limits of 60-142% for GRO, and 47-138% for DRO.
- Surrogate Recovery: As no QSM limits are prescribed, recoveries were within the laboratory-established control limits of 10-150% for GRO surrogate trifluorotoluene and 10-110% for DRO surrogate n-nonane.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on samples 070SS-0006M-0001-SO and 070SB-0042M-0001-SO for both GRO and DRO. As no QSM limits are prescribed, the laboratory-established soil control limits of 10-142% for GRO and 10-199% for DRO were applied, and RPDs were evaluated using the control limit listed in the DoD QSM Table F-2 of ≤30%.

The RPD exceeded the control limit for the GRO MS/MSD of sample 070SS-0006M-0001-SO, at 35%, partially due to a difference in spiking amounts; however, when the difference was accounted for in the calculation, the RPD was still above the control limit at 32%. The detected result associated with the RPD outlier was qualified as estimated, "J," and coded with a "Q" qualification code in sample 070SS-0006M-0001-SO. The remaining RPD was within the control limit.

DRO recoveries for the MS/MSD of sample 070SS-0006M-0001-SO were within the laboratory-established control limits of 10-199%, and the RPD was within the control limit of ≤30%. The DRO concentration in parent sample 070SB-0042M-0001-SO exceeded 4× the spiked amount, and the sample and MS/MSD were also analyzed at 10× dilutions; therefore, recoveries were not evaluated.

- Compound Identification: Compound identification was verified for the validated samples. Review of the sample chromatograms, standards, and retention times indicated no problems with target compound identification. The laboratory analyzed for GRO hydrocarbon range C6-C12, and DRO ranges C10-C20 and C20-C34.

- Compound Quantification and Reported Detection Limits: Compound quantification was verified for the validated samples. The DRO analysis of sample 070SB-0042M-0001-SO required a 10× dilution due to high concentrations of both hydrocarbon ranges. The LOQs were supported by the low point of the initial calibration and the laboratory DLs. Any result reported between the DL and the LOQ was qualified as estimated, "J." Reported nondetects are valid to the LOD.

- System Performance: Review of the raw data indicated no problems with system performance.

- Manual Integrations: Some routine manual integrations were performed for some GRO calibration and QC data associated with the sample data, primarily to correct baseline integration of the surrogate trifluorotoluene. All manual integrations reviewed at Level IV were deemed appropriate by the reviewer.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

- Field Blanks and Equipment Rinsates: QC samples:

    - Trip Blanks: The validated samples had no associated trip blanks analyzed for GRO.

    - Field Blanks and Equipment Rinsates: Sample 070-0057-0001-Source Water was identified as the field blank and sample 076-0067-0001-ER was the equipment rinsate associated with sample 070SS-006M-0001-SO. The field blank and

equipment rinsate had detects for C6-C12 below the LOQ; however, the concentrations were not sufficient to qualify site sample results. The validated subsurface soil sample had no associated field QC samples.

- Field Duplicate Samples: Twoe field duplicate sample was collected and analyzed for GRO. The RPD criterion in FWQAPP Table 3-1 of ≤50% was only applied when results for common detects were ≥5× the LOQ. In cases where results were <5× the LOQ, the reasonable control limit of ± the LOQ was applied. Except as noted below, the results were within the control limits. See Appendix C for a complete comparison of all primary and field duplicate results.

SVOC field duplicate outliers				
Primary Sample	**Field Duplicate**	**Analyte**	**RPD**	**W/In LOQ**
070SS-0006M-0001-SO	070SS-0007M-0001-SO	C20-C34	N/A	No
070SB-0042M-0001-SO	070SB-043M-0001-SO	C6-C12	N/A	No

4.2.6 Semivolatile Organic Compounds (SVOCs)

A total of 47 primary soil samples and 4 field duplicate samples were analyzed by TA-North Canton for SVOCs by USEPA Method 8270C. A total of 4 samples were validated at Level IV.

- MDL studies were not evaluated as part of this project.
- GC/MS Tuning: The DFTPP tunes met the method abundance criteria. The samples were analyzed within 12 hours of the DFTPP injection time.
- Calibration: Calibration criteria listed in the DoD QSM Table F-4 were met, with exceptions affecting sample results noted in the tables below.
  - Initial calibration average RRFs and ICV and CCV RRFs were within method control limits of ≥0.050. All initial calibration %RSDs were within the control limits of ≤30% for calibration check compounds (CCCs) and ≤15% for remaining compounds, or linear regression r^2 values ≥0.990.
  - All second source ICV standard recoveries affecting sample data were within the control limit of ±20%, with the exception of the recovery of 73.3% for 3,3'dichlorobenzidine in one ICV associated with sample 070SS-0003M-0001-SO. The nondetected result was qualified as estimated, "UJ," in the sample and coded with a "C qualification code.
  - Continuing calibration %Ds affecting sample data were within the control limit of ≤20%.
  - Although not required by the DoD QSM, a standard of 3× the DL is required by the FWQAPP. MRL standard recoveries were within the reasonable control limit of ±30%, with exceptions noted in the table below. The nondetected results for n-nitrosodiphenylamine were rejected, "R," in the affected samples and remaining

results listed in the table below, all nondetects, were qualified as estimated, "UJ." All qualified results were coded with a "C" qualification code.

Samples qualified for MRL %R outliers		
Analyte	**%R**	**Qualified Samples**
2,4-dinitrophenol	42%	070SS-0003M-0001-SO 070SS-0006M-0001-SO
4,6-dinitro-2-methylphenol	47%	
2,4-dinitrophenol	57%	070SB-0044M-0001-SO 070SB-0046M-0001-SO
benzo(g,h,i)perylene	62%	
n-nitrosodiphenylamine	**0%**	

- Blanks: The method blanks associated with the validated samples had no target compound detects above the control limits listed in DoD QSM Table F-4 of one-half the LOQ for target compounds, and no common laboratory contaminants detected above the LOQ.

- Laboratory Control Samples: Benzoic acid was reported as not detected in one LCS; however, the recovery calculated from the raw data was acceptable. All LCS recoveries were within the control limits listed in DoD QSM Tables G-2 (poor performers) and G-7. The reviewer noted hexachlorocyclopentadiene was not spiked in the LCS.

- Surrogate Recovery: All surrogate recoveries were within the control limits listed in the DoD QSM Tables G-2 (poor performers) or G-3.

- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on validated samples 070SS-0006M-0001-SO and 070SB-0044M-0001-SO. Sample 070SB-0044M-0001-SO was analyzed at a 10× dilution; therefore, the recoveries were not evaluated, as the spike was considered diluted out.

  As the spiking level was below the DL for benzoic acid, it was reported as "NC" (not calculated); however, the reviewer-calculated recoveries and RPDs from the MS/MSD concentrations in the raw data were within the control limits. Qualifications were not assigned if recoveries were not outside of control limits in both the MS and MSD; however, if RPDs exceeded the control limit due to inconsistent recoveries, parent sample results were qualified.

  The MS and MSD of sample 070SS-0006M-0001-SO had no recoveries of 4-chloroaniline or 3,3-dichlorobenzidine; therefore, the nondetected results for both compounds were rejected, "R," in the parent sample. Recoveries for 3-nitroaniline were below the control limits of 25-110%, at 16% and 13%. The nondetected result for 3-nitroaniline was qualified as estimated, "UJ," for the recovery outliers. The MSD had no recoveries for 4,6-dinitro-2-methylphenol or 4-nitroaniline, resulting in RPDs of 200%, and the MS recovery for 4-nitroaniline was also below the control limits of 35-115%, at 25%. The nondetected results for 4,6-dinitro-2-methylphenol and 4-nitroaniline were qualified as estimated, "UJ," for the RPD outliers, and 4-nitroaniline was also qualified as estimated, "UJ," for the recoveries. Remaining recoveries were within the control limits

listed in DoD QSM Tables G-2 (poor performers) and G-7. The reviewer noted hexachlorocyclopentadiene was not spiked in the MS/MSD. Remaining RPDs were within the control limit of ≤30% listed in DoD QSM Table F-4. All qualified results were coded with a "Q" qualification code.

- Internal Standards Performance: The internal standard area counts and retention times were within the DoD QSM Table F-4 control limits established by the midpoint initial calibration standard: ±30 seconds for retention times and -50% / +100% for internal standard areas.

- Compound Identification: Compound identification was verified for the samples validated at Level IV. Review of the sample chromatograms, retention times, and spectra indicated no problems with target compound identification.

- Compound Quantification and Reported Detection Limits: Compound quantification was verified for the samples validated at Level IV. The LOQs were supported by the low point of the initial calibration and the laboratory DLs. Any result reported between the DL and the LOQ was qualified as estimated, "J," by the laboratory. Reported nondetects are valid to the LOD.

  The samples had a 2-ml final extract volume, resulting in an effective 2× dilution. Sample 070SS-0006M-0001-SO was analyzed at an additional 5× dilution, and the remaining samples at additional 10× dilutions. The case narratives for these SDGs attributed the dilutions to the nature of the sample matrix; however, as all sample chromatograms were scaled to the large aldol condensate peak (an artifact of the preparation process), the matrix interference cited by the laboratory was not visually apparent.

  Target compounds 2,4-dinitrotoluene, 2,6-dinitrotoluene, and nitrobenzene were reported by both Method 8330B and 8270C in samples 070SS-0006M-0001-SO and 070SB-044M-0001-SO. As there were no detects for these compounds; the reviewer chose to report the results with the lowest LODs. The 8270C results for 2,4-dinitrotoluene and 2,6-dinitrotoluene were rejected, "R," as duplicate data and coded with a "D" qualification code. The 8270C results for nitrobenzene were retained.

  Pentachlorophenol was analyzed both by Method 8270 and Method 8151. As the LOQ for Method 8151 was significantly lower than the Method 8270C LOQ, pentachlorophenol in this analysis was rejected, "R," as duplicate data.

- System Performance: Review of the raw data indicated no problems with system performance.

- Manual Integrations: Some routine manual integrations were performed for the samples, and for calibration and QC data associated with the sample data, primarily due to peaks missed or incorrectly chosen by the data system, or poor baseline integration. All manual integrations reviewed were deemed appropriate by the reviewer.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

  - Field Blanks and Equipment Rinsates: Sample 070-0057-0001-Source Water was identified as the field blank and sample 076-0067-0001-ER was the equipment rinsate associated with samples 070SS-0003M-0001-SO and 070SS-006M-0001-SO. The field blank and equipment rinsate had no target compound detects. The validated subsurface soil samples had no associated field QC samples.

  - Field Duplicate Samples: Four field duplicate samples were collected and analyzed for SVOCs. The RPD criterion in FWQAPP Table 3-1 of ≤50% was only applied when results for common detects were ≥5× the LOQ. In cases where results were <5× the LOQ, the reasonable control limit of ± the LOQ was applied. Except as noted below, the results were within the control limits. See Appendix C for a complete comparison of all primary and field duplicate results.

SVOC field duplicate outliers				
Primary Sample	**Field Duplicate**	**Analyte**	**RPD**	**W/In LOQ**
070SS-0006M-0001-SO	070SS-0007M-0001-SO	Pyrene	53%	N/A
		Benzo(a)anthracene	N/A	No
		Benzo(a)pyrene	N/A	No
		Benzo(g,h,i)perylene	N/A	No
		Fluorene	N/A	No
070SB-0042M-0001-SO	070SB-043M-0001-SO	Acenaphthene	N/A	No
		Chrysene	N/A	No

4.2.7 Volatile Organic Compounds (VOCs)

A total of 17 primary soil samples and 2 field duplicate samples were analyzed by TA-North Canton for volatile compounds by USEPA Method 8260B. A total of 2 primary soil sample was validated at Level IV.

- MDL studies were not evaluated as part of this project.

- GC/MS Tuning: The BFB tunes met the method abundance criteria. The samples were analyzed within 12 hours of the BFB injection time.

- Calibration: Calibration criteria listed in DoD QSM Table F-4 were met, with exceptions noted below.

  - Initial calibration average RRFs and ICV and CCV RRFs were within the control limits of ≥0.30 for chlorobenzene and 1,1,2,2-tetrachloroethane, and ≥0.10 for chloromethane, bromoform, and 1,1-dichloroethane.

  - All initial calibration %RSDs were within the method control limits of ≤30% for the CCCs and ≤15% for remaining compounds, or linear regression r^2 values ≥0.990.

- All second source initial calibration verification standard recoveries were within the control limit of ±20%.

- Continuing calibration %Ds affecting validated sample data were within the method control limit of ≤20%.

- Although not required by the DoD QSM, a standard of 3× the DL is required by the FWQAPP. MRL standard recoveries affecting sample data were within the reasonable control limit of ±30%, with exceptions listed in the table below. The sample results, all nondetects, were qualified as estimated, "UJ," and coded with a "C" qualification code.

Samples qualified for MRL recovery outliers		
Analyte	**% Recovery**	**Qualified Sample(s)**
Acetone	58%	070SS-0006M-0001-SO
2-Hexanone	68%	070SB-0044M-0001-SO

- Blanks: The method blanks associated with the validated samples had no target compound detects above the control limits listed in DoD QSM Table F-4 of one-half the LOQ, and no common laboratory contaminants detected above the LOQ, with exceptions affecting sample data listed in the table below. As the sample detects were below the LOQ, results were qualified as nondetected, "U," at the LOQ and coded with a "B" qualification code.

Samples qualified for method blank contamination				
Analyte	**Method Blank Concentration**	**Sample Result (µg/Kg)**	**LOQ (µg/Kg)**	**Associated Sample**
2-Hexanone	2.37(J) µg/Kg	1.8(J)	23	070SS-0044M-0001-SO
Methyl isobutyl ketone	1.41(J) µg/Kg	1.3(J)	23	

- Laboratory Control Samples: LCS/LCSD recoveries were within the control limits listed in DoD QSM Table G-4, and RPDs were within the QSM Table F-4 control limit of ≤30%.

- Surrogate Recovery: Surrogate recoveries affecting sample data were within the control limits listed in DoD QSM Table G-3, with the exception of BFB recovered below the control limits of 85-120% in both samples, at 75% in sample 070SS-0006M-0001-SO and 72% in sample 070SB-0044M-0001-SO. Results in both samples were qualified as estimated, "J," for detects, and "UJ," for nondetects. The qualified results were coded with an "S" qualification code. The MSD analysis of 070SB-0044M-0001-SO had a similar recovery for BFB, suggesting a matrix effect on the surrogate; however, the remaining MS and MSD analyses of both samples were within the control limits.

- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on both validated samples. The MSD of sample 070SS-0006M-0001-SO had recoveries below the control limits of 75-125% for chlorobenzene (69%), ethylbenzene (74%), and styrene (67%); however, qualifications were not assigned if recoveries were not out of control

limits in both the MS and MSD. The laboratory also reported 14 RPDs above the control limit of ≤30% for the MS/MSD of 070SS-0006M-0001-SO; however, the reviewer determined the outliers were due to an approximately 16% difference in spike amounts based on the difference in sample weight. With the disparity of spike amounts taken into account, all RPDs were within the control limit.

All recoveries for 070SB-044M-0001-SO MS/MSD were within the control limits listed in DoD QSM Table G-4 and RPDs were within the control limit listed in DoD QSM Table F-4, with the exception of the RPD for 1,1,2,2-tetrachloroethane, of 57%. The RPD outlier was not due to a disparity in spike amount. The nondetected parent sample result for 1,1,2,2-tetrachloroethane was qualified as estimated, "UJ," and coded with a "Q" qualification code.

- Internal Standards Performance: The internal standard area counts and retention times were within DoD QSM Table F-4 control limits established by the midpoint initial calibration standard: ±30 seconds for retention times and -50% / +100% for internal standard areas.

- Compound Identification: Compound identification was verified for the validated samples. Review of the sample chromatograms, retention times, and spectra indicated no problems with target compound identification.

- Compound Quantification and Reported Detection Limits: Compound quantification was verified for the samples validated at a Level IV. The LOQs were supported by the low point of the initial calibration and the laboratory DLs. Any result reported between the DL and the LOQ was qualified as estimated, "J," by the laboratory. Reported nondetects are valid to the LOD.

- System Performance: Review of the raw data indicated no problems with system performance.

- Manual integrations: Manual integrations were not performed for the validated samples or for associated calibration and QC samples.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

    - Trip Blanks: The trip blanks associated with the validated samples in this SDG had no reportable detects.

    - Field Blanks and Equipment Rinsates: Sample 070-0057-0001-Source Water was identified as the field blank and sample 076-0067-0001-ER was the equipment rinsate associated with sample 070SS-006M-0001-SO. The field blank had detects below the LOQ for acetone, bromodichloromethane, toluene,

dibromochloromethane, 2-butanone, and chloroform, and the equipment rinsate also had a detect below the LOQ for chloroform; however, none of the field QC contaminants were present in the site sample. The validated subsurface soil sample had no associated field QC samples.

- Field Duplicate Samples: Two field duplicate samples were collected and analyzed for VOCs. The RPD criterion in FWQAPP Table 3-1 of ≤50% was only applied when results for common detects were ≥5× the LOQ. In cases where results were <5× the LOQ, the reasonable control limit of ± the LOQ was applied. All results were within the control limits. See Appendix C for a complete comparison of all primary and field duplicate results.

4.2.8 Metals

A total of 22 primary soil samples and 2 field duplicate samples were analyzed by TA-North Canton for metals by USEPA Methods 6020 and 7471A. A total of 2 primary soil samples were validated at Level IV.

- MDL studies were not evaluated as part of this project.
- Calibration: Except as noted below, calibration criteria were met.
  - As per DoD QSM Table F-8, the mass calibrations were ≤0.1 atomic mass units (amu) of the true values and the resolutions were <0.9 amu at full width at 10% peak height. Except as noted below, the %RSDs were within the control limit listed in the DoD QSM Table F-8 of ≤5%. The detected results listed in the table below were qualified as estimated, "J," and were coded with an "M" qualification code.

Samples qualified for tune %RSD outliers		
Analyte	**%RSD**	**Qualified Samples**
^{78}Selenium	20.43	070SS-0006M-0001-SO
^{137}Barium	24.31	070SB-044M-0001-SO
^{138}Barium	9.85	070SB-044M-0001-SO

  - Initial calibration: Linear regression r-values were within the control limit listed in the DoD QSM Tables F-7 and F-8 of ≥0.995.
  - The ICPMS ICV and CCV recoveries were within the control limits listed in DoD QSM Table F-8 of 90-110%. The mercury ICV and CCV recoveries were within the control limits listed in DoD QSM Table F-7 of 90-110% and 80-120%, respectively.
  - CRI/MRL recoveries affecting sample results were within the control limits listed in DoD QSM Tables F-7 and F-8 of 80-120%.
- Blanks: Method blanks had no applicable detects above the control limits listed in DoD QSM Tables F-7 and F-8 of one-half the LOQ or greater than one-tenth the amount

measured in any sample. CCBs had no detects above the control limit listed in DoD QSM Tables F-7 and F-8 of greater than the LOD.

- Interference Check Samples: ICPMS interference check sample A (ICSA) and AB (ICSAB) recoveries were within the control limits listed in DoD QSM Table F-8 of 80-120%. Selenium was detected in the ICSA associated with 070SB-044M-0001-SO at 1.15 µg/L. As the interferents were present in the sample at concentrations similar to the ICSA, selenium detected in 070SB-044M-0001-SO was qualified as estimated with a potential positive bias, "J+," and the qualified result was coded with an "I" qualification code. There were no analytes affecting sample results detected in the ICSA above the control limit listed in DoD QSM Table F-8 of >LOD.

- Laboratory Control Samples: The recoveries were within the control limits listed in DoD QSM Table G-19 of 80-120%. All 6020 RPDs were within the control limit listed in DoD QSM Table F-8 of ≤20%.

- Laboratory Duplicates: Laboratory duplicate analyses were performed on 070SS-0006M-0001-SO for all analytes. Except for the analytes listed below, RPDs were within the control limits listed in DoD QSM Tables F-7 and F-8 of ≤20%. Results listed below were qualified as estimated, "J," and were coded with an "E" qualification code.

Samples qualified for laboratory duplicate outliers		
Analyte	**RPD**	**Qualified sample**
Chromium	42%	070SS-0006M-0001-SO
Cadmium	41%	070SS-0006M-0001-SO
Lead	94%	070SS-0006M-0001-SO

- Matrix Spike/Matrix Spike Duplicate: Except as noted below, recoveries were within the control limits listed in DoD QSM Table G-19 of 80-120%. Matrix spike control limits were not applied when the native sample concentration exceeded the spiked amount by a factor of four or more.

  The results listed in the table below, all detects, were qualified as estimated, "J," and coded with a "Q" qualification code. When no other qualifications with conflicting bias were assigned to a result, detected results with low recoveries were assigned a negative bias, "J-," and detected results with high recoveries were assigned a positive bias, "J+."

Samples qualified for matrix spike recovery outliers		
Parent Sample	**Analyte**	**%R**
070SS-0006M-0001-SO	Antimony	19%
	Chromium	72%
	Potassium	136%
	Selenium	79%
	Vanadium	130%

- Serial Dilution: Except as noted below, serial dilution %Ds were within the control limits listed in DoD QSM Table F-8 of ≤10%. The serial dilution control limit is only applicable when the original sample concentration is minimally ≥50× the LOQ.

  Results listed in the table below were qualified as estimated, "J." The qualified results were coded with an "A" qualification code.

Samples qualified for serial dilution %D outliers			
Parent Sample	**Analyte**	**%Ds**	**Qualified Samples**
070SS-0006M-0001-SO	Copper	15%	070SS-0006M-0001-SO
	Lead	12%	
	Nickel	11%	

- Internal Standards: All ICPMS sample internal standards intensities were within 30-120% of those in the ICV, as per the DOD QSM Table F-8. Yttrium (^{89}Y) was spiked into the QC samples but not the site samples.

- Sample Result Verification: For Level IV validation, calculations were verified and the sample results reported on the sample result summary were verified against the raw data. Manganese in sample 070SS-0006M-0001-SO was reported from a 5× dilution. Any result reported between the DL and the LOQ was qualified as estimated, "J." Reported nondetects are valid to the LOD.

  Due to instrument limitations, the mercury raw data did not list the sample absorbances; therefore, the reviewer was not able to calculate the sample results from the raw data. Additionally, the ICP-MS raw data did not list absorbances for the ICV, CCV, ICSAB, and MRL samples, and the %R was listed instead of the sample concentrations.

- Manual Integrations: No manual integrations were noted in the mercury analyses.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

  - Field Blanks and Equipment Rinsates: Sample 070-0057-0001-Source Water was identified as the field blank and sample 076-0067-0001-ER was the equipment rinsate associated with sample 070SS-006M-0001-SO. The validated subsurface soil sample had no associated field QC samples. Sodium was detected at 1600 µg/L in 070-0057-0001-Source Water; therefore, sodium detected in 070SS-0006M-0001-SO was qualified as nondetected, "U," at the level of contamination. The qualified result was coded with an "F" qualification code. There were other detects in the field QC samples, but non at sufficient concentration to qualify the associated sample.

  - Field Duplicate Samples: A total of two field duplicate samples were collected and analyzed for metals. The RPD criterion in FWQAPP Table 3-1 of ≤50% was only

applied when results for common detects were ≥5× the LOQ. In cases where results were <5× the LOQ, the reasonable control limit of ± the LOQ was applied. The results for beryllium in pair 070SB-046M-0001-SO.070SB-047M-0001-SO were not within ± the LOQ. The remaining results were within the control limits. See Appendix C for a complete comparison of all primary and field duplicate results.

4.3 Data Usability

According to the Draft Site Inspection Report prepared by ECC, the field completeness was 100%.

Four data points were rejected for poor MS/MSD recoveries or calibration outliers. In instances where a data point had multiple results, the reviewer chose the most technically sound result to report and rejected the remaining data points. These rejected data points do not affect data quality or usability and are not included in the table below. Data with LODs or DLs that exceeded the established criteria and data estimated for quality control outliers or for detects between the DL and the LOQ were included in the table below for informational purposes only.

Table 10. Analytical completeness for RVAAP-70 validated primary data

			Number of Results					Percent Complete
Analysis	**Samples Analyzed**	**Analytes per Sample**	**Total**	**Rejected**	**LODs/DLs Exceeding Criteria**	**Estimated for QC Outliers**	**Estimated for Detects <LOQ**	
Explosives*	2	16	30	0	0/0	5	0	100%
Nitroguanidine	1	1	1	0	0/0	0	0	100%
Nitrocellulose	1	1	1	0	0/0	0	1	100%
Herbicides	2	11	22	0	0/0	6	0	100%
PCBs	2	7	14	0	0/0	1	1	100%
SVOCs*	4	66	258	4	12/12	11	4	98.4%
VOCs	2	36	72	0	0/0	72	4	100%
TPH	2	3 or 1	5	0	0/0	1	0	100%
Metals	2	23	42	0	0/0	11	6	100%
		Totals	**445**	**4**	**12/12**	**107**	**16**	**99.1%**

*Results rejected as duplicate data do not appear in the Total Analyte count.

The analytical completeness goal for the project established in the FWQAPP was 90% for each method. The completeness goal was met for all analyses.

4.4 Primary and Field Duplicate Comparison Summary

Primary and field duplicate sample comparisons were considered to be in good agreement as only 2.5% of the field duplicate pair results were above the FWQAPP control limit of 50% or +/- the LOQ for results below 5× the LOQ.

Of the eleven outliers, seven were in pair 070SS-0006M-0001-SO/070SS-0007M-0001-SO, with five of the outliers for SVOCs. All comparison results are presented in Appendix C. A summary of the field duplicate results is presented in the table below. Please note that rejected results were not assessed and the rejected analytes do not appear in the "Total Analytes" field.

Table 11. RVAAP-70 primary/field duplicate sample comparison summary

Method	Primary/Field Duplicate Pairs	Number of Analytes	Total Analytes	Results within control limits	Results above control limit
Explosives*	16	1	15	15	0
Nitroguanidine	1	1	1	1	0
Nitrocellulose	1	1	1	1	0
Herbicides	11	2	22	22	0
PCBs	7	2	14	13	1
SVOCs*	66	4	254	247	7
VOCs	36	2	72	72	0
TPH	2	2 or 3	5	3	2
Metals	23	2	46	45	1

*Results rejected as duplicate data do not appear in the Total Analyte count

4.5 Specific Data Concerns

Specific concerns regarding the data are noted below:

- Due to instrument limitations, the mercury raw data did not list the sample absorbances; therefore, the reviewer was not able to calculate the sample results from the raw data. Additionally, the ICP-MS raw data did not list absorbances for the ICV, CCV, ICSAB, and MRL samples, and the %R was listed instead of the sample concentrations.

In order to avoid repetition of the issues noted above, the following actions should be taken:

- MEC^X recommends the laboratory be requested to alter the IPCMS and mercury instrument set up in order to report mercury and ICPMS raw absorbances and ICPMS ICV, CCV, ICSAB, and MRL concentrations.

5 BARN NUMBER 5 PETROLEUM RELEASE, RVAAP-71

5.1 Current Investigation

ECC completed an SI at the Barn Number 5 Petroleum Release Site (RVAAP-71). This work was carried out in accordance with the *Final Site Inspection/Remedial Investigation Work Plan Addendum for CC RVAAP-71 and CC RVAAP-83* (ECC 2013). The SI for RVAAP-71 was conducted in accordance with the *Interim Final Guidance for Performing Site Inspections Under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)* (USEPA 1992).

In 1964, a gasoline release from a broken underground pipeline occurred in the vicinity of Barn Number 5. As the HHR (ECC, 2012) found no records indicating environmental sampling had been conducted at the site, RVAAP-71 was identified as a candidate for further investigation. Contaminants released at RVAAP-71 were petroleum-related chemicals and were primarily gasoline range hydrocarbons associated with the former buried gasoline pipeline. The HRR evaluation determined there were no historic uses or potential environmental concerns at this site with respect to possible HTRW and/or MEC issues (ECC 2012).

The data validated in this report are part of the initial intrusive SI at RVAAP-71 conducted to assess the potential presence of contamination. The sample counts, samples selected for data validation, and the field duplicates are presented in the tables below.

Table 12. Total sample count for RVAAP-71

Matrix	Primary Samples	Field Duplicates	Split Samples	Explosives	Propellants	PCBs	Pesticide	SVOCs	TPHs	VOCs	Metals
Soil	17	2	4	2	2	2	2	17	17	17	17

Table 13. RVAAP-71 validated samples and methods

Sample ID	SDG	Matrix	Collected	Explosives	Propellants	PCBs	SVOCs	TPHs	VOCs	Metals
071SB-0013M-0001-SO	99236	Soil	8/13/2013				x	x	x	x
071SB-0017M-0001-SO	99236	Soil	8/13/2013	x	x	x				
071SB-0018M-001-SO	99236	Soil	8/13/2013				x	x	x	x

Table 14. RVAAP-71 field duplicate samples

Duplicate Sample ID	Parent Sample
071SB-0014M-0001-SO	071SB-0013M-0001-SO
071SB-0019M-0001-SO	071SB-0018M-0001-SO

5.1.1 Sample Collection

The chains-of-custody were appropriately signed and dated by field and laboratory personnel. Custody seals were intact. The following sample collection issues were noted.

- Two trip blanks were shipped with the samples but were not listed on the chains-of-custody.
- The collection dates for all samples were listed as 2012. The laboratory entered the collection dates correctly, as 2013.

5.1.2 Data Completeness

Data completeness for the project described in this report was found to be generally acceptable as no deliverables were missing from the SDGs reviewed.

5.1.3 Preservation and Holding Time Requirements

The sample coolers were received with temperatures within the control limit of 4 ±2°C. All method preservation requirements were met. All holding times, as listed in Table 4, were met.

5.1.4 Detection Limit Requirements

LODs and DLs for nondetected analytes were compared against the most stringent CUGs listed in Tables 5-8, 5-9, and 5-10 of *Final Facility-Wide Human Health Cleanup Goals for the Ravenna Army Ammunition Plant* (2010) or the RSLs if no CUG was listed. No LODs or DLs exceeded criteria.

5.2 RVAAP-71 Data Quality Evaluation

This section summarizes the data quality of validated samples for each analytical method evaluated.

5.2.1 Explosives

A total of 2 primary soil samples were analyzed by CT for explosives by USEPA SW-846 Method 8330B. A single primary soil sample was validated at Level IV.

- MDL studies were not evaluated as part of this project.
- Calibration:
    - The primary column correlation coefficients were within the control limit listed in DoD QSM Table F-3 of ≤15%, or the linear regression r values were ≥0.990.
    - The second source initial calibration verification standard recoveries were within the control limit listed in DoD QSM Table F-3 of ±20%.

- The CCV standard %Ds were within the control limits listed in DoD QSM Table F-3 of ±20%.

- Although not required by the DoD QSM, a standard of 3× the DL is required by the FWQAPP. The MRLs associated with the sample had low recoveries for 4-amino-2,6-dinitrotoluene (68% and 60%) and 2-nitrotoluene (57%); therefore, the nondetected results for these compounds were qualified as estimated, "UJ," in 071SB-0017M-0001-SO. The qualified results were coded with a "C" qualification code. The remaining MRL standard recoveries were within the reasonable control limits of 70-130%.

- Blanks: The method blank associated with the validated sample had no target compound detects above the control limit listed in DoD QSM Table F-3 of one-half the LOQ.

- Laboratory Control Samples: Recoveries were within the control limits listed in DoD QSM Tables G-2 and G-13 and within the reasonable laboratory control limits for nitroglycerin (66-130%) and PETN (65-134%).

- Surrogate Recovery: As no surrogate control limit was listed in the DoD QSM, surrogate recoveries were assessed against the reasonable laboratory-established control limits of 74-134%. Recoveries were within the control limits.

- Matrix Spike/Matrix Spike Duplicate: No MS/MSD analyses were performed on the validated sample. Method accuracy was evaluated based on LCS results.

- Compound Identification: Compound identification was verified for the sample validated at a Level IV. Review of sample chromatograms and retention times indicated no problems with target compound identification.

- Compound Quantification and Reported Detection Limits: As no target compounds were detected in the sample validated at Level IV, compound quantification was verified for a portion of the LCS results. The LOQs were supported by the low point of the initial calibration and the laboratory DLs. Any result reported between the DL and the LOQ was qualified as estimated, "J." Reported nondetects are valid to the LOD.

  Confirmation analyses were performed; however, no compounds were confirmed.

- System Performance: Review of the raw data indicated no problems with system performance.

- Manual Integrations: Some manual integrations were performed for the initial calibrations and low-level CCVs. All manual integrations were performed in order to report incompletely resolved peaks or to account for baseline anomalies and were deemed acceptable by the reviewer.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

    - Field Blanks and Equipment Rinsates: The site sample had no associated field blank or equipment rinsate samples.

    - Field Duplicates: No explosive field duplicate samples were collected for RVAAP-71.

5.2.2 Propellants

Nine primary soil samples were analyzed by CT for nitroguanidine by USEPA SW-846 Method 8330 and for nitrocellulose by laboratory SOP WS-WC-0050. One primary soil sample was validated at Level IV.

- MDL studies were not evaluated as part of this project.

- Calibration:

    - The nitroguanidine and nitrocellulose correlation coefficients were within the control limit listed in the DoD QSM Tables F-2 and F-11 of ≥0.995.

    - The nitroguanidine second source ICV recovery was within the control limits listed in DoD QSM Table F-2 of 85-115%. The nitrocellulose ICV recoveries were within the control limits listed in DoD QSM Table F-11 of 90-110%.

    - The nitroguanidine CCV recoveries were within the control limits listed in DoD QSM Table F-2 of 85-115%. The nitrocellulose CCV recoveries were within the control limits listed in DoD QSM Table F-11 of 90-110%.

    - Although not required by the DoD QSM, a standard of 3× the DL is required by the FWQAPP. MRL recoveries associated with the sample were within the reasonable control limits of 70-130%.

- Blanks: The method blanks had no target compound detects above the control limits listed in DoD QSM Tables F-2 and F-11 of one-half the LOQ.

- Laboratory Control Samples: No nitroguanidine or nitrocellulose LCS control limits are listed in the DoD QSM; therefore, the laboratory control limits were used to assess the results. All nitroguanidine recoveries were within the control limits of 37-134% for soils. The nitrocellulose recoveries were within the laboratory-established control limits of 63-130% for soils.

- Surrogate Recovery: The nitroguanidine surrogate recovery was within the laboratory control limits of 50-150%. A surrogate was not required for the analysis of nitrocellulose.

- Matrix Spike/Matrix Spike Duplicate: No MS/MSD analyses were performed on the validated sample. Method accuracy was evaluated based on LCS results.

- Compound Identification: Compound identification was verified for the sample validated at a Level IV. Review of the sample chromatograms and retention times indicated no problems with target compound identification.

- Compound Quantification and Reported Detection Limits: Compound quantification was verified for those samples validated at a Level IV. The LOQs were supported by the low point of the initial calibration and the laboratory DLs. Any result reported between the DL and the LOQ was qualified as estimated, "J." Reported nondetects are valid to the LOD.

  Nitroguanidine was not detected in the validated sample; therefore, confirmation analysis was not required.

- System Performance: Review of the raw data indicated no problems with system performance.

- Manual Integrations: Some manual integrations were performed for nitroguanidine. The manual integrations were performed to correct baseline integration. The manual integrations were deemed acceptable by the reviewer.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

  - Field Blanks and Equipment Rinsates: The site sample had no associated field blank or equipment rinsate samples.

  - Field Duplicates: No propellant field duplicate samples were collected for Site 71.

5.2.3 Polychlorinated Biphenyls (PCBs)

A total of 2 primary soil samples were analyzed by CT for PCBs by USEPA SW-846 Method 8082. A single primary soil sample was validated at Level IV.

- MDL studies were not evaluated as part of this project.

- Calibration: Calibration criteria listed in the DoD QSM Table F-2 were met.

  - Initial calibration average %RSDs were within the control limit of ≤20%.

  - The second source ICV recoveries were within the control limit of ±20% for all applicable Aroclors.

  - The CCV standard recoveries were within the control limit of ±20%.

  - Although not required by the DoD QSM, a standard of 3× the DL is required by the FWQAPP. MRL standard recoveries were within the reasonable control limit of ±30%.

- Blanks: The method blank associated with the validated sample had no target compound detects above the control limit listed in the DoD QSM Table F-2, of one-half the LOQ.

- Laboratory Control Samples: Recoveries for Aroclor 1016 and Aroclor 1260 were within the control limits listed in DoD QSM Table G-17.

- Surrogate Recovery: Recoveries were within the control limits listed in DoD QSM Table G-3 of 60-125%.

- Matrix Spike/Matrix Spike Duplicate: No MS/MSD analyses were performed on the validated sample. Method accuracy was evaluated based on LCS results.

- Compound Identification: Compound identification was verified for the validated sample. Review of the sample chromatograms, standards, and retention times indicated no problems with target compound identification.

- Compound Quantification and Reported Detection Limits: Compound quantification was verified for the validated sample. The LOQs were supported by the low point of the initial calibration and the laboratory DLs. Any result reported between the DL and the LOQ was qualified as estimated, "J." Reported nondetects are valid to the LOD.

- System Performance: Review of the raw data indicated no problems with system performance.

- Manual Integrations: Manual integrations were not performed for the validated samples or associated calibration and QC.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

  - Field Blanks and Equipment Rinsates: The site sample had no associated field blank or equipment rinsate samples.

  - Field Duplicates: No field duplicate samples were collected from Site 71 for PCBs.

5.2.4 Total Petroleum Hydrocarbons (TPH)

A total of 17 primary soil samples and 2 field duplicate samples were analyzed by CT for GRO and DRO by USEPA SW-846 Method 8015B. A total of 2 primary soil samples were validated at Level IV.

- MDL studies were not evaluated as part of this project.
- Calibration: Calibration criteria listed in the DoD QSM Table F-2 were met.
    - Initial calibration average %RSDs were within the control limit of ≤20% or linear regression r^2 values ≥0.990.
    - The second source ICV recoveries were within the control limit of ±20%.
    - The CCV standard recoveries affecting sample data were within the control limit of ±20%.
    - Although not required by the DoD QSM, a standard of 3× the DL is required by the FWQAPP. MRL standard recoveries were within the reasonable control limit of ±30%.
- Blanks: The method blanks associated with the validated samples had no target compound detects above the control limit listed in the DoD QSM Table F-2, of one-half the LOQ.
- Laboratory Control Samples: As no QSM limits are prescribed, recoveries were assessed against the laboratory-established control limits of 60-142% for GRO and 47-138% for DRO. All recoveries were within the control limits.
- Surrogate Recovery: As no QSM limits are prescribed, the recoveries were assessed against the laboratory-established control limits of 10-150% for GRO surrogate trifluorotoluene and 10-110% for DRO surrogate n-nonane. All recoveries were within the control limits.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were not performed on a validated sample. Evaluation of method accuracy was based on the LCS results.
- Compound Identification: Compound identification was verified for the validated samples. Review of the sample chromatograms, standards, and retention times indicated no problems with target compound identification.
- Compound Quantification and Reported Detection Limits: Compound quantification was verified for the validated samples. The LOQs were supported by the low point of the initial calibration and the laboratory DLs. Any result reported between the DL and the LOQ was qualified as estimated, "J." Reported nondetects are valid to the LOD.
- System Performance: Review of the raw data indicated no problems with system performance.
- Manual Integrations: Manual integrations were not performed for the validated samples or associated calibration and QC.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

- Field Blanks and Equipment Rinsates: QC samples:

    - Trip Blanks: The GRO analysis was not requested for the trip blanks associated with the validated samples.

    - Field Blanks and Equipment Rinsates: The site sample had no associated field blank or equipment rinsate samples.

    - Field Duplicate Samples: Two field duplicate samples were collected and analyzed for TPH. The RPD criterion in FWQAPP Table 3-1 of ≤50% was only applied when results for common detects were ≥5× the LOQ. In cases where results were <5× the LOQ, the reasonable control limit of ± the LOQ was applied. All results were within the control limits. See Appendix C for a complete comparison of all primary and field duplicate results.

5.2.5 Semivolatile Organic Compounds (SVOCs)

A total of 17 primary soil samples and 2 field duplicate samples were analyzed by CT for SVOCs by USEPA Method 8270D. A total of 2 primary soil samples were validated at Level IV.

- MDL studies were not evaluated as part of this project.

- GC/MS Tuning: The DFTPP tunes met the method abundance criteria. The samples were analyzed within 12 hours of the DFTPP injection time.

- Calibration: Calibration criteria listed in the DoD QSM Table F-4 were met, with exceptions affecting sample results noted in the tables below.

    - Initial calibration average RRFs and ICV and CCV RRFs were within method control limits of ≥0.050 for SPCCs. All initial calibration %RSDs were within the control limits of ≤30% for CCCs and ≤15% for remaining compounds, or linear regression r^2 values ≥0.990, with the exception of %RSDs for benzyl alcohol at 15.2%, benzoic acid at 17.7%, and hexachlorocyclopentadiene at 15.5%. Retained results for the %RSD outliers, all nondetects, were qualified as estimated, “UJ,” in the samples. The qualified results were coded with a “C” qualification code.

    - All second source ICV standard recoveries affecting sample data were within the control limit of ±20%.

    - Continuing calibration %Ds affecting sample data were within the control limit of ≤20%.

- Although not required by the DoD QSM, a standard of 3× the DL is required by the FWQAPP. MRL standard recoveries affecting validated sample data were within the reasonable control limit of ±30%, with the exception of no recovery of benzyl alcohol and a recovery of 60% for 4,6-dinitro-2-methylphenol in the closing MRL. The nondetected results for benzyl alcohol were rejected, "R," and the results for 4,6-dinitro-2-methylphenol were qualified as estimated, "UJ," in samples 071SB-0013M-0001-SO and 071SB-0018M-0001-SO. Qualified results were coded with a "C" qualification code.

- Blanks: The method blanks associated with the validated samples had no target compound detects above the control limits listed in DoD QSM Table F-4 of one-half the LOQ for target compounds, and no common laboratory contaminants detected above the LOQ, with exceptions listed in the table below. Results listed in the table below were qualified as nondetected, "U," at the LOD if detected below the LOD, or at the level of contamination if detected above. Qualified results were coded with a "B" qualification code.

Sample	Analyte	Method Blank (µg/Kg)	Sample (µg/Kg)	LOD (µg/Kg)
071SB-0013M-0001-SO	Benzo(a)anthracene	0.45	0.90	0.82
	Phenanthrene	0.97	4.0	0.82
071SB-0018M-0001-SO	Benzo(a)anthracene	0.45	1.2	0.82
	Naphthalene	0.35	0.35	0.82
	Phenanthrene	.097	4.7	0.82

- Laboratory Control Samples: All LCS recoveries affecting sample data were within the control limits listed in DoD QSM Tables G-2 (poor performers) and G-7.

- Surrogate Recovery: All surrogate recoveries were within the control limits listed in the DoD QSM Tables G-2 (poor performers) or G-3.

- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were not performed on a validated sample. Evaluation of method accuracy was based on the LCS results.

- Internal Standards Performance: The internal standard area counts and retention times were within the DoD QSM Table F-4 control limits established by the midpoint initial calibration standard: ±30 seconds for retention times and -50% / +100% for internal standard areas.

- Compound Identification: Compound identification was verified for the samples validated at Level IV. Review of the sample chromatograms, retention times, and spectra indicated no problems with target compound identification.

- Compound Quantification and Reported Detection Limits: Compound quantification was verified for the samples validated at Level IV. The LOQs were supported by the low point of the initial calibration and the laboratory DLs. Any result reported between the DL and

the LOQ was qualified as estimated, "J," by the laboratory. Reported nondetects are valid to the LOD.

- System Performance: Review of the raw data indicated no problems with system performance.

- Manual Integrations: Some routine manual integrations were performed for calibration and QC data associated with the sample data, primarily to correct the integration of improperly split peaks, or to correct poor baseline integration. The manual integrations reviewed were deemed appropriate by the reviewer.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

    - Field Blanks and Equipment Rinsates: The site samples had no associated field blank or equipment rinsate samples.

    - Field Duplicate Samples: A total of 2 soil field duplicate samples were collected and analyzed for SVOCs. The RPD criterion in FWQAPP Table 3-1 of ≤50% for soil samples was only applied when results for common detects were ≥5× the LOQ. In cases where results were <5× the LOQ, the reasonable control limit of ± the LOQ was applied. The result for naphthalene in pair 071SB-013M-0001-SO/071SB-0014M-0001-SO exceeded ± the LOQ. The remaining results were within the control limits. See Appendix C for a complete comparison of all primary and field duplicate results.

5.2.6 Volatile Organic Compounds (VOCs)

A total of 17 primary soil samples and 2 field duplicate samples were analyzed by CT for volatile compounds by USEPA Method 8260B. A total of 2 primary soil samples were validated at Level IV.

- MDL studies were not evaluated as part of this project.

- GC/MS Tuning: The BFB tunes met the method abundance criteria. The samples were analyzed within 12 hours of the BFB injection time.

- Calibration: Calibration criteria listed in DoD QSM Table F-4 were met, with exceptions noted below.

    - Initial calibration average RRFs and ICV and CCV RRFs were within the control limits of ≥0.30 for chlorobenzene and 1,1,2,2-tetrachloroethane, and ≥0.10 for chloromethane, bromoform, and 1,1-dichloroethane.

- All initial calibration %RSDs were within the method control limits of ≤30% for the CCCs and ≤15% for remaining compounds, or linear regression r^2 values ≥0.990.

- All second source initial calibration verification standard recoveries were within the control limit of ±20%.

- Continuing calibration %Ds affecting validated sample data were within the method control limit of ≤20%, with the exception of low responses for bromomethane (20.3%) and methylene chloride (44.8%). The nondetected results for both target compounds were qualified as estimated, "UJ," in the samples. The qualified results were coded with a "C" qualification code.

- Although not required by the DoD QSM, a standard of 3× the DL is required by the FWQAPP. The MRL standard recoveries affecting sample data were within the reasonable control limit of ±30%.

- Blanks: The method blank associated with the validated samples had no target compound detects above the control limits listed in DoD QSM Table F-4 of one-half the LOQ, and no common laboratory contaminants detected above the LOQ. Methylene chloride was detected in the method blank at 6.4(J) µg/L; therefore, methylene chloride detected in the validated samples was qualified as nondetected, "U," at the levels of contamination.

- Laboratory Control Samples: LCS recoveries affecting validated sample data were within the control limits listed in DoD QSM Table G-4.

- Surrogate Recovery: Surrogate recoveries affecting validated sample data were within the control limits listed in DoD QSM Table G-3.

- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were not performed on a validated sample. Evaluation of method accuracy was based on the LCS results.

- Internal Standards Performance: The internal standard area counts and retention times were within DoD QSM Table F-4 control limits established by the midpoint initial calibration standard: ±30 seconds for retention times and -50% / +100% for internal standard areas.

- Compound Identification: Compound identification was verified for the validated samples. Review of the sample chromatograms, retention times, and spectra indicated no problems with target compound identification.

  The laboratory reported isomers o-xylene and m,p-xylenes as well as total xylenes. The isomers o-xylene and m,p-xylenes were rejected, "R," as duplicate data. The result for total xylenes was retained to maintain consistency with data reported from other laboratories.

- Compound Quantification and Reported Detection Limits: Compound quantification was verified for the samples validated at a Level IV. The LOQs were supported by the low point of the initial calibration and the laboratory DLs. Any result reported between the DL and the LOQ was qualified as estimated, "J," by the laboratory. Reported nondetects are valid to the LOD.

- System Performance: Review of the raw data indicated no problems with system performance.

- Manual integrations: Manual integrations were performed for some calibration and QC data associated with the validated samples, primarily to correct baseline integration. The manual integrations were considered appropriate.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

    - Trip Blanks: The trip blanks associated with the validated samples in this SDG had no detects affecting sample results.

    - Field Blanks and Equipment Rinsates: The site samples had no associated field blank or equipment rinsate samples.

    - Field Duplicate Samples: A total of 2 soil field duplicate samples were collected and analyzed for VOCs. The RPD criterion in FWQAPP Table 3-1 of ≤50% for soil samples was only applied when results for common detects were ≥5× the LOQ. In cases where results were <5× the LOQ, the reasonable control limit of ± the LOQ was applied. The results were within the control limits. See Appendix C for a complete comparison of all primary and field duplicate results.

5.2.7 Metals

A total of 17 primary soil samples and 2 field duplicate samples were analyzed by CT for various metals by USEPA Methods 6010C and 7471B. A total of 2 primary soils, analyzed for lead only, were validated at Level IV.

- MDL studies were not evaluated as part of this project.

- Calibration: Except as noted below, calibration criteria were met.

    - Initial calibration: Linear regression r-values were within the control limit listed in the DoD QSM Table F-7 of ≥0.995.

    - The ICP ICV and CCV recoveries were within the control limits listed in DoD QSM Table F-7 of 90-110%.

- MRL recoveries affecting sample results were within the control limits listed in DoD QSM Table F-7 of 80-120%.

- Blanks: Method blanks had no applicable detects above the control limits listed in DoD QSM Table F-7 of one-half the LOQ or greater than one-tenth the amount measured in any sample. CCBs had no detects above the control limit listed in DoD QSM Table F-7 of greater than the LOD.

- Interference Check Samples: ICP ICSA and ICSAB recoveries were within the control limits listed in DoD QSM Table F-7 of 80-120%. There were no analytes affecting sample results detected in the ICSA above the control limit listed in DoD QSM Table F-7 of >LOD.

- Laboratory Control Samples: All recoveries were within the control limits listed in DoD QSM Table G-19 of 80-120%.

- Laboratory Duplicates: Laboratory duplicate analyses were performed on 071SB-0003M-0001-SO and 071SB-0010M-0001-SO for lead. RPDs were within the control limit listed in DoD QSM Table F-7 of ≤20%.

- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on 071SB-0003M-0001-SO and 071SB-0010M-0001-SO. Except as noted below, recoveries were within the control limits listed in DoD QSM Table G-19 of 80-120%. The results listed in the table below, both detects, were qualified as estimated with a potential low bias, "J-," and coded with a "Q" qualification code.

Samples qualified for MS/MSD recovery outliers			
Parent Sample	**Analyte**	**%R**	**Qualified samples**
071SB-0003M-0001-SO	Lead	67%, 58%	071SB-0013M-0001-SO, 071SB-0018M-0001-SO
071SB-0010M-0001-SO	Lead	57%, 60%	

- Post Digestion Spike: Except as noted below, recoveries were within the control limits listed in DoD QSM Table F-7 of 75-125%. Spike control limits were not applied when the native sample concentration exceeded the spiked amount by a factor of four or more. The results listed in the table below, all detects, were qualified as estimated with a potential low bias, "J-," and coded with a "P" qualification code.

Samples qualified for post digestion spike recovery outliers			
Parent Sample	**Analyte**	**%R**	**Qualified samples**
071SB-0003M-0001-SO	Lead	74%	071SB-0013M-0001-SO, 071SB-0018M-0001-SO
071SB-0010M-0001-SO	Lead	58%	

- Serial Dilution: Serial dilution analyses were performed on 071SB-0003M-0001-SO and 071SB-0010M-0001-SO. The %Ds were within the control limits listed in DoD QSM

Table F-7 of ≤10%. The serial dilution control limit is only applicable when the original sample concentration is minimally ≥50× the LOQ.

- Sample Result Verification: For Level IV validation, calculations were verified and the sample results reported on the sample result summary were verified against the raw data. Lead in 071SB-0003M-0001-SO and 071SB-0010M-0001-SO was reported from a 5× dilution. Any result reported between the DL and the LOQ was qualified as estimated, "J." Reported nondetects are valid to the LOD.

- Manual Integrations: No manual integrations were noted in the mercury analyses.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

    - Field Blanks and Equipment Rinsates: The site sample had no associated field blank or equipment rinsate samples.

    - Field Duplicate Samples: A total of 2 field duplicate samples were collected and analyzed for metals. The RPD criterion in FWQAPP Table 3-1 of ≤50% for soil samples was only applied when results for common detects were ≥5× the LOQ. In cases where results were <5× the LOQ, the reasonable control limit of ± the LOQ was applied. The results were within the control limits. See Appendix C for a complete comparison of all primary and field duplicate results.

5.3 Data Usability

According to the Draft Site Inspection Report prepared by ECC, the field completeness was 100%.

Two data points were rejected for poor calibration recoveries. In instances where a data point had multiple results, the reviewer chose the most technically sound result to report and rejected the remaining data points. These data points data do not affect data quality or usability and are not included in the table below. Data with LODs that exceeded the established criteria and data estimated for quality control outliers or for detects between the DL and the LOQ were included in the table below for informational purposes only.

Table 15. Analytical completeness for RVAAP-71 validated primary data

			Number of Results					
Analysis	**Samples Analyzed**	**Analytes per Sample**	**Total**	**Rejected**	**LODs/DLs Exceeding Criteria**	**Estimated for QC Outliers**	**Estimated for Detects <LOQ**	**Percent Complete**
Explosives*	1	17	17	0	0/0	1	0	100%
Nitroguanidine	1	1	1	0	0/0	0	0	100%
Nitrocellulose	1	1	1	0	0/0	0	0	100%
PCBs	1	9	9	0	0/0	0	0	100%
SVOCs	2	65	130	2	0/0	11	12	98.5%
TPH	2	2	4	0	0/0	0	2	100%
VOCs	2	40	76	0	0/0	4	0	100%
Metals	2	1	2	0	0/0	2	0	100%
		Totals	**240**	**2**	**0/0**	**18**	0/0	**99.2%**

*Results rejected as duplicate data do not appear in the Total Analyte count.

The analytical completeness goal for the project established in the FWQAPP was 90% for each method. The completeness goal was met for all analyses.

5.4 Primary and Field Duplicate Comparison Summary

Primary and field duplicate sample comparisons were considered to be in good agreement as less than 1% of the field duplicate pair results were above the FWQAPP control limit of 50% for soils or +/- the LOQ for results below 5× the LOQ. All comparison results are presented in Appendix C.

Table 16. RVAAP-71 primary/field duplicate sample comparison summary

Method*	Primary/Field Duplicate Pairs	Number of Analytes	Total Analytes	Results within control limits	Results above control limit
SVOCs*	2	65	128	127	1
TPH	2	2	4	4	0
VOCs	2	40	76	76	0
Metals	1	2	2	2	0

*Results rejected as duplicate data do not appear in the Total Analyte count.

5.5 Specific Data Concerns

Specific concerns regarding the data are noted below:

- None

6 FACILITY-WIDE UNDERGROUND STORAGE TANKS, RVAAP-72

6.1 Current Investigation

ECC completed an SI for the Facility-Wide Underground Storage Tanks (RVAAP-72). The SI for RVAAP-72 was conducted in accordance with the USEPA *Interim Final Guidance for Performing Site Inspections Under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)* (USEPA 1992). The HRR identified historic uses and potential environmental concerns at this site with respect to possible HTRW and/or MEC issues (SAIC 2011).

RVAAP-72 consists of 58 underground storage tanks (USTs). Of these, 43 have received a No Further Action (NFA) designation and 15 were identified as candidates for further investigation in the HRR (SAIC 2011b). The data validated in this report are part of the initial intrusive SI at RVAAP-72 conducted to assess the potential presence of contamination. The total sample counts, samples selected for data validation, and the field duplicates are presented in the tables below.

Table 17. Total sample count for RVAAP-72

Matrix	Primary Samples	Field Duplicates	Split Samples	Explosives	Propellants	PCBs	Pesticides	SVOCs/PAHs	TPHs	VOCs/BTEX	Metals	Hexavalent Chromium
Soil	101	10	0	7	7	7	7	74	74	74	74	29

Table 18. RVAAP-72 validated samples and methods

Sample ID	SDG	Matrix	Collected	Explosives	Propellants	PCBs	Pesticides	SVOCs/PAHs	TPHs	VOCs/BTEX	Metals	Hexavalent Chromium
072SB-0001-0001-SO	240-18297-1	Soil	12/3/2012					x	x	x	x	
072SB-0012-0001-SO	240-18297-1	Soil	12/3/2012					x	x	x	x	
072SB-0014-0001-SO	240-18297-1	Soil	12/3/2012	x	x	x	x	x	x	x	x	
072SB-0026-0001-SO	240-18441-1	Soil	12/4/2012					x	x	x	x	
072SB-0030-0001-SO	240-18441-1	Soil	12/4/2012						x	x		
072SB-0039-0001-SO	240-18449-1	Soil	12/5/2012					x	x	x	x	
072SB-0063-0001-SO	240-18544-1	Soil	12/6/2012					x	x	x	x	
072SB-0083-0001-SO	240-18703-1	Soil	12/10/2012						x	x		
072SB-0085-0001-SO	240-18703-1	Soil	12/10/2012						x	x		
076SB-0119-0001-SO	240-18735-1	Soil	12/11/2012									x
076SB-0122-0001-SO	240-18735-1	Soil	12/11/2012									x
076SB-0126-0001-SO	240-18735-1	Soil	12/11/2012									x
076SB-0130-0001-SO	240-18735-1	Soil	12/12/2013									x

Table 19. RVAAP-72 field duplicate samples

Duplicate Sample ID	Parent Sample
072SB-0002-0001-SO	072SB-0001-0001-SO
072SB-0013-0001-SO	072SB-0012-0001-SO
072SB-0027-0001-SO	072SB-0026-0001-SO
072SB-0036-0001-SO	072SB-0035-0001-SO
072SB-0064-0001-SO	072SB-0063-0001-SO
072SB-0077-0001-SO	072SB-076-0001-SO
072SB-0086-0001-SO	072SB-0085-0001-SO
076SB-0089-0001-SO	076SB-0076-0001-SO
076SB-0127-0001-SO	076SB-0126-0001-SO
076SB-0133-0001-SO	076SB-0132-0001-SO

6.1.1 Sample Collection

The chains-of-custody were appropriately signed and dated by field and laboratory personnel. When utilized, cooler custody seals were intact upon receipt at the laboratory. When not utilized, it was determined by reviewing the relinquish and receipt times, that the samples were transferred to the laboratory by courier. With exceptions noted below, no sample collection issues were identified.

- Some corrections made to the chains-of-custody were initialed but not dated and some were neither initialed nor dated.
- Some corrections were made by overwriting the original entry.
- Samples 072SB-0001-0001-SO and 072SB-0012-0001-SO did not have PAHs requested on the chains-of-custody, but this analysis was reported for both samples. There was no documentation for this change.

6.1.2 Data Completeness

Data completeness for the project described in this report was found to be generally acceptable as no deliverables were missing from the SDGs reviewed.

6.1.3 Preservation and Holding Time Requirements

A portion of the sample coolers were received at temperatures nominally below the 4±2°C control limit; however, as the samples were not noted to be frozen or damaged, no qualifications were required. All remaining method preservation requirements were met.

The hexavalent chromium samples were prepared within 30 days of collection but, according to the preparation summary form, the samples were analyzed 24 hours beyond the 24-hour analysis holding time. The hexavalent chromium raw data, however, indicates the samples were prepared and immediately analyzed. In the reviewer's professional opinion, the preparation referred to in the raw data was the addition of the color development reagents and the preparation referred to on the summary form was the sample extraction. As the method

specifically states the 24-hour holding time begins after extraction, the hexavalent chromium results were qualified as estimated, "UJ," for nondetects and estimated with a potential low bias, "J-," for detects. The qualified results were coded with an "H" qualification code. All remaining holding times, as listed in Table 4, were met.

6.1.4 Detection Limit Requirements

LODs and DLs for nondetected analytes were compared against the most stringent CUGs listed in Tables 5-8, 5-9, and 5-10 of *Final Facility-Wide Human Health Cleanup Goals for the Ravenna Army Ammunition Plant* (2010) or the RSLs if no CUG was listed. No LODs or DLs exceeded criteria.

6.2 RVAAP-72 Data Quality Evaluation

This section summarizes the data quality of validated samples for each analytical method evaluated.

6.2.1 Explosives

A total of 7 primary soil samples were analyzed by TA-West Sacramento for explosives by USEPA SW-846 Method 8330B. A single primary soil sample was validated at Level IV.

- MDL studies were not evaluated as part of this project.
- Calibration:
    - The primary column initial calibration average %RSDs for RDX and 2-nitrotoluene exceeded the control limit at 20% and 16%, respectively; therefore, the nondetected results for these compounds were qualified as estimated, "UJ," in 072SB-0014-0001-SO. The qualified results were coded with a "C" qualification code. The remaining initial calibration average %RSDs were within the control limits listed in DoD QSM Table F-3 of ≤15%, or the linear regression r^2 values were ≥0.990.
    - The second source initial calibration verification standard recoveries were within the control limit listed in DoD QSM Table F-3 of ±20%.
    - The CCV standard %Ds were within the control limits listed in DoD QSM Table F-3 of ±20%.
    - Although not required by the DoD QSM, a standard of 3× the DL is required by the FWQAPP. Low-level MRL standards were analyzed in association with the validated samples and the results affecting the sample were within the reasonable control limits of 70-130%.
- Blanks: The method blank associated with the validated sample had no target compound detects above the control limit listed in DoD QSM Table F-3 of one-half the LOQ.

- Laboratory Control Samples: Recoveries were within the control limits listed in DoD QSM Tables G-2 and G-13 and within the reasonable laboratory control limits for nitroglycerin (76-116%) and PETN (76-116%).

- Surrogate Recovery: As no surrogate control limit was listed in the DoD QSM, surrogate recoveries were assessed against the reasonable laboratory-established control limits of 78-118%. Recoveries were within the control limits.

- Matrix Spike/Matrix Spike Duplicate: No MS/MSD analyses were performed on the validated sample. Method accuracy was evaluated based on LCS results.

- Compound Identification: Compound identification was verified for the sample validated at a Level IV. Review of the sample chromatogram and retention times indicated no problems with target compound identification.

  Although not affecting the nondetected sample results, the primary column MRL recoveries for the later eluting compounds were recovered above the control limit. Review of the chromatogram indicated poorer peak shape for these compounds.

- Compound Quantification and Reported Detection Limits: As no target compounds were detected in the sample validated at Level IV, compound quantification was verified for a portion of the LCS results. The LOQs were supported by the low point of the initial calibration and the laboratory DLs. Any result reported between the DL and the LOQ was qualified as estimated, "J." Reported nondetects are valid to the LOD.

  Confirmation analyses were performed; however, no compounds were confirmed.

  Target compounds 2,4-dinitrotoluene, 2,6-dinitrotoluene, and nitrobenzene were reported by both Method 8330B and 8270C in sample 072SB-0014-0001-SO. As there were no detects for these compounds; the reviewer chose to report the results with the lowest LODs. The 8330B result for nitrobenzene was rejected, "R," as duplicate data and coded with a "D" qualification code. The 8330B results for 2,4-dinitrotoluene and 2,6-dinitrotoluene were retained.

- System Performance: Review of the raw data indicated no problems with system performance.

- Manual Integrations: Some manual integrations were performed for the initial calibrations and low-level CCVs. All manual integrations were performed in order to report incompletely resolved peaks or to account for baseline anomalies and were deemed acceptable by the reviewer.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

- Field Blanks and Equipment Rinsates: No field blank or equipment rinsate samples were associated with the validated sample.

- Field Duplicates: No field duplicate samples were collected from RVAAP-72 for explosive compounds.

6.2.2 Propellants

A total of 7 primary soil samples were analyzed by TA-West Sacramento for nitroguanidine by USEPA SW-846 Method 8330 and for nitrocellulose by laboratory SOP WS-WC-0050. A single primary soil sample was validated at Level IV.

- MDL studies were not evaluated as part of this project.

- Calibration:

  - The nitroguanidine initial calibration average percent %RSD was within the control limit listed in DoD QSM Table F-2 of ≤20%. Nitrocellulose linear regression r values were within the control limit listed in the DoD QSM Table F-11 of ≥0.995.

  - The nitroguanidine second source ICV recovery was within the control limits listed in DoD QSM Table F-2 of 85-115%. The nitrocellulose ICV recovery exceeded the control limit at 192% (limits are 90-110%); however, as nitrocellulose was not detected in the sample, no qualifications were required.

  - The nitroguanidine CCV recoveries were within the control limits listed in DoD QSM Table F-2 of 85-115%. The nitrocellulose CCV recoveries were within the control limits listed in DoD QSM Table F-11 of 90-110%.

  - Although not required by the DoD QSM, a standard of 3× the DL is required by the FWQAPP. MRL recoveries associated with the sample were within the reasonable control limits of 70-130%.

- Blanks: The method blanks had no target compound detects above the control limits listed in DoD QSM Tables F-2 and F-11 of one-half the LOQ.

- Laboratory Control Samples: No nitroguanidine or nitrocellulose LCS control limits are listed in the DoD QSM; therefore, the laboratory control limits were used to assess the results. The nitroguanidine recovery was within the control limits of 72-121%. The nitrocellulose recovery was within the laboratory-established control limits of 34-115%.

- Surrogate Recovery: A surrogate was not required for the analysis of nitroguanidine or nitrocellulose.

- Matrix Spike/Matrix Spike Duplicate: No MS/MSD analyses were performed on the validated sample. Method accuracy was evaluated based on LCS results.

- Compound Identification: Compound identification was verified for the sample validated at a Level IV. Review of the sample chromatograms and retention times indicated no problems with target compound identification.

- Compound Quantification and Reported Detection Limits: Compound quantification was verified for the sample validated at a Level IV. The LOQs were supported by the low point of the initial calibration and the laboratory DLs. Any result reported between the DL and the LOQ was qualified as estimated, "J." Reported nondetects are valid to the LOD.

  Nitroguanidine was not detected in the validated sample; therefore, confirmation analysis was not required.

- System Performance: Review of the raw data indicated no problems with system performance.

- Manual Integrations: Some manual integrations were performed for nitroguanidine. The manual integrations were performed to correct baseline integration. The manual integrations were deemed acceptable by the reviewer.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

  - Field Blanks and Equipment Rinsates: No field blank or equipment rinsate samples were associated with the validated sample.

  - Field Duplicates No field duplicate samples were collected from RVAAP-72 for propellants.

6.2.3 Polychlorinated Biphenyls (PCBs)

A total of 7 primary soil samples were analyzed by TA-North Canton for PCBs by USEPA SW-846 Method 8082. A single primary soil sample was validated at Level IV.

- MDL studies were not evaluated as part of this project.

- Calibration: Calibration criteria listed in the DoD QSM Table F-2 were met.

  - Initial calibration average %RSDs were within the control limit of ≤20%.

  - The second source ICV recoveries were within the control limit of ±20% for all applicable Aroclors.

  - The CCV standard recoveries were within the control limit of ±20%.

  - Although not required by the DoD QSM, a standard of 3× the DL is required by the FWQAPP. MRL standard recoveries were within the reasonable control limit of ±30%.

- Blanks: The method blank associated with the validated sample had no target compound detects above the control limit listed in the DoD QSM Table F-2, of one-half the LOQ.

- Laboratory Control Samples: Recoveries for Aroclor 1016 and Aroclor 1260 were within the control limits listed in DoD QSM Table G-17.

- Surrogate Recovery: Recoveries were within the control limits listed in DoD QSM Table G-3 of 60-125%.

- Matrix Spike/Matrix Spike Duplicate: No MS/MSD analyses were performed on the validated sample. Method accuracy was evaluated based on LCS results.

- Compound Identification: Compound identification was verified for the validated sample. Review of the sample chromatograms, standards, and retention times indicated no problems with target compound identification.

- Compound Quantification and Reported Detection Limits: Compound quantification was verified for the validated sample. The LOQs were supported by the low point of the initial calibration and the laboratory DLs. Any result reported between the DL and the LOQ was qualified as estimated, "J." Reported nondetects are valid to the LOD.

- System Performance: Review of the raw data indicated no problems with system performance.

- Manual Integrations: Some routine manual integrations were performed for the calibration and QC data associated with the sample data, primarily due to split incompletely resolved peaks. All manual integrations reviewed were deemed appropriate by the reviewer.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

  - Field Blanks and Equipment Rinsates: No field blank or equipment rinsate samples were associated with the validated sample.

  - Field Duplicates: No field duplicate samples were collected from RVAAP-72 for PCBs.

6.2.4 Pesticides

A total of 7 primary soil samples were analyzed by TA-North Canton for pesticides by USEPA SW-846 Method 8081. A single primary soil sample was validated at Level IV.

- MDL studies were not evaluated as part of this project.
- Calibration: Calibration criteria listed in the DoD QSM Table F-2 were met.
    - Initial calibration average %RSDs were within the control limit of ≤20%.
    - The performance evaluation mixture (PEM) %breakdown results were within the DoD QSM Table F-2 control limit of ≤15%.
    - Both columns had individual toxaphene peaks with %Ds exceeding the control limit. Column CLP-1 had three outliers at -43.2%, -20.2%, and 49.8%, and column CLP-2 had two outliers at -30.1% and -32.9%. The nondetected result for toxaphene in sample 072SB-0014-0001-SO was qualified as estimated, "UJ." The qualified results were coded with a "C" qualification code. The remaining second source ICV recoveries were within the control limit of ±20%.
    - The CCV standard recoveries were within the control limit of ±20%.
    - Although not required by the DoD QSM, a standard of 3× the DL is required by the FWQAPP. MRL standard recoveries were within the reasonable control limit of ±30%.
- Blanks: The method blank associated with the validated sample had no target compound detects above the control limit listed in the DoD QSM Table F-2, of one-half the LOQ.
- Laboratory Control Samples: Recoveries were within the control limits listed in DoD QSM Table G-15. Toxaphene was not spiked in the LCS sample.
- Surrogate Recovery: Recoveries were within the control limits listed in DoD QSM Table G-3 of 60-125%.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on the validated sample, 072SB-0014-0001-SO. Qualifications were only applied for recovery outliers when both the MS and MSD were recovered outside the control limits. Due to generally low recoveries in the MSD, all but four RPDs exceeded the control limit listed in DoD QSM Table F-2 of ≤30%. Sample 072SB-0014-0001-SO results listed in the table below, all nondetects, were qualified as estimated, "UJ," and coded with "Q" qualification codes. The remaining recoveries were within the control limits listed in DoD QSM Table G-15. Toxaphene was not spiked in the MS/MSD samples.

Compounds qualified for MS/MSD outliers				
Compound	MS %R	MSD %R	Limits	%RPD
4,4'-DDD	acceptable	42%	30-135%	37%
4,4'-DDE	66%	45%	70-125%	34%
alpha-BHC	acceptable	44%	60-125%	37%
alpha-Chlordane	62%	41%	65-120%	37%
beta-BHC	acceptable	39%	60-125%	41%
delta-BHC	acceptable	43%	55-130%	40%
Dieldrin	acceptable	46%	65-125%	39%
Endosulfan I	acceptable	39%	15-135%	39%
Endosulfan II	acceptable	acceptable	N/A	37%
Endosulfan sulfate	acceptable	39%	60-135%	35%
Endrin	acceptable	43%	60-135%	36%
Endrin aldehyde	acceptable	acceptable	N/A	36%
Endrin ketone	53%	39%	65-135%	acceptable
gamma-BHC	58%	39%	60-125%	36%
gamma-Chlordane	62%	41%	65-125%	40%
Heptaclor epoxide	acceptable	46%	65-130%	39%
Methoxyclor	53%	40%	55-145%	acceptable

- Compound Identification: Compound identification was verified for the validated sample. Review of the sample chromatograms, standards, and retention times indicated no problems with target compound identification.

- Compound Quantification and Reported Detection Limits: Compound quantification was verified for the validated sample. The LOQs were supported by the low point of the initial calibration and the laboratory DLs. Any result reported between the DL and the LOQ was qualified as estimated, "J." Reported nondetects are valid to the LOD.

- System Performance: Review of the raw data indicated no problems with system performance.

- Manual Integrations: Some routine manual integrations were performed for the calibration and QC data, primarily due to poor baseline integration. All manual integrations reviewed were deemed appropriate by the reviewer.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

    - Field Blanks and Equipment Rinsates: No field blank or equipment rinsate samples were associated with the validated sample.

    - Field Duplicate Samples: No field duplicate samples were collected from Site 72 for pesticide compounds.

6.2.5 Total Petroleum Hydrocarbons (TPH)

A total of 74 primary soil samples and 7 field duplicate samples were analyzed by TA-North Canton for GRO and DRO by USEPA SW-846 Method 8015B. A total of 9 primary soil samples were validated at Level IV.

- MDL studies were not evaluated as part of this project.
- Calibration: Calibration criteria listed in the DoD QSM Table F-2 were met.
    - Initial calibration average %RSDs were within the control limit of ≤20% or linear regression r^2 values ≥0.990.
    - The second source ICV recoveries were within the control limit of ±20%.
    - The CCV standard recoveries affecting sample data were within the control limit of ±20%. One high %D for gasoline range C6-C12 was attributed to carryover from a previous site sample; however, as C6-C12 was not detected in the associated validated sample, no qualification was necessary.
    - Although not required by the DoD QSM, a standard of 3× the DL is required by the FWQAPP. MRL standard recoveries affecting sample data were within the reasonable control limit of ±30%. One high recovery for gasoline range C6-C12 in an ending MRL was attributed to carryover from a previous site sample; however, as C6-C12 was not detected in the associated validated sample, no qualification was necessary.
- Blanks: The method blanks associated with the validated samples had no target compound detects above the control limit listed in the DoD QSM Table F-2, of one-half the LOQ.
- Laboratory Control Samples: As no QSM limits are prescribed, recoveries were assessed against the laboratory-established control limits of 60-142% for GRO and 47-138% for DRO. All recoveries were within the control limits.
- Surrogate Recovery: As no QSM limits are prescribed, the recoveries were assessed against the laboratory-established control limits of 10-150% for GRO surrogate trifluorotoluene and 10-110% for DRO surrogate n-nonane. All recoveries were within the control limits.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on validated samples 072SB-0001-0001-SO, 072SB-0012-0001-SO, 072SB-0026-0001-SO, and 072SB-0063-0001-SO for both GRO and DRO. As no QSM limits are prescribed, the recoveries were assessed against the laboratory-established soil control limits of 10-142% for GRO and 10-199% for DRO, and RPDs were evaluated using the control limit listed in the DoD QSM Table F-2 of ≤30%.

The RPDs exceeded the control limit for the GRO MS/MSDs of samples 072SB-0001-0001-SO and 072SB-0026-0001-SO, at 49% and 67%, respectively. The detected result for the RPD outlier (C6-C12) in sample 072SB-0001-0001-SO was qualified as estimated, "J," and coded with a "Q" qualification code. As C6-C12 was not detected in sample 072SB-0026-0001-SO, and recoveries were within the control limits, no qualifications were assigned for the RPD outlier. The remaining GRO and DRO recoveries and RPDs were within the control limits.

- Compound Identification: Compound identification was verified for the validated samples. Review of the sample chromatograms, standards, and retention times indicated no problems with target compound identification. The laboratory analyzed for GRO hydrocarbon range C6-C12, and DRO ranges C10-C20 and C20-C34.

- Compound Quantification and Reported Detection Limits: Compound quantification was verified for the validated samples. The LOQs were supported by the low point of the initial calibration and the laboratory DLs. Any result reported between the DL and the LOQ was qualified as estimated, "J." Reported nondetects are valid to the LOD.

- System Performance: Review of the raw data indicated no problems with system performance.

- Manual Integrations: Some routine manual integrations were performed for some GRO calibration and QC data associated with the sample data, primarily to correct baseline integration of the surrogate trifluorotoluene. All manual integrations reviewed at Level IV were deemed appropriate by the reviewer.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

    - Trip Blanks: Two of four trip blanks associated with the validated samples had detects below the LOQ for GRO; however, the trip blank concentrations were not sufficient to qualify associated site sample detects.

    - Field Blanks and Equipment Rinsates: No field blank or equipment rinsate samples were associated with the validated samples.

    - Field Duplicate Samples: Seven field duplicate samples were collected and analyzed for GRO. The RPD criterion in FWQAPP Table 3-1 of ≤50% was only applied when results for common detects were ≥5× the LOQ. In cases where

results were <5× the LOQ, the reasonable control limit of ± the LOQ was applied. The results for TPH range C6-C12 in pair 072SB-0001-0001-SO/072SB-0002-0001-SO exceeded ± the LOQ. The remaining results were within the control limits. See Appendix C for a complete comparison of all primary and field duplicate results.

6.2.6 Semivolatile Organic Compounds (SVOCs) and Polynuclear Aromatic Hydrocarbons (PAHs)

A total of 74 primary soil samples and 7 field duplicate samples were analyzed by TA-North Canton for SVOCs and/or PAHS by USEPA Method 8270C. A total of 6 primary soil samples were validated at Level IV.

- MDL studies were not evaluated as part of this project.
- GC/MS Tuning: The DFTPP tunes met the method abundance criteria. The samples were analyzed within 12 hours of the DFTPP injection time.
- Calibration: Calibration criteria listed in the DoD QSM Table F-4 were met, with exceptions affecting sample results noted in the text and table below.
    - Initial calibration average RRFs and ICV and CCV RRFs were within method control limits of ≥0.050. All initial calibration %RSDs were within the control limits of ≤30% for calibration check compounds (CCCs) and ≤15% for remaining compounds, or linear regression r^2 values ≥0.990.
    - All second source ICV standard recoveries affecting sample data were within the control limit of ±20%, with the exception of the recovery of 78.9% for 3,3'-dichlorobenzidine in the ICV associated with sample 072SB-0014-0001-SO. The nondetected result was qualified as estimated, "UJ," in the sample. The qualified result was coded with a "C" qualification code.
    - Continuing calibration %Ds affecting sample data were within the control limit of ≤20%.
    - Although not required by the DoD QSM, a standard of 3× the DL is required by the FWQAPP. MRL standard recoveries were within the reasonable control limit of ±30%, with exceptions noted in the table below. The nondetected result for 4-nitroaniline was rejected, "R," and the remaining results listed in the table below, both nondetects, were qualified as estimated, "UJ." The qualified results were coded with a "C" qualification code.

Samples qualified for MRL %R outliers		
Analyte	**%R**	**Qualified Samples**
2,4-dinitrophenol	55%	072SB-0014-0001-SO
4,6-dinitro-2-methylphenol	69%	
4-nitroaniline	**0%**	

- Blanks: The method blanks associated with the validated samples had no target compound detects above the control limits listed in DoD QSM Table F-4 of one-half the LOQ for target compounds, and no common laboratory contaminants detected above the LOQ. Bis(2-ethylhexyl)phthalate was detected below the LOQ at 19.2(J) µg/Kg in the method blank associated with sample 072SB-0014-0001-SO. The sample result of 22(J) µg/Kg was qualified as nondetected, "U," at the LOQ of 56 µg/Kg, and coded with a "B" qualification code.

- Laboratory Control Samples: All LCS recoveries affecting sample data were within the control limits listed in DoD QSM Tables G-2 (poor performers) and G-7. The reviewer noted hexachlorocyclopentadiene was not spiked in the LCS associated with the full-list analysis of sample 072SB-0014-0001-SO.

- Surrogate Recovery: All applicable surrogate recoveries were within the control limits listed in the DoD QSM Tables G-2 (poor performers) or G-3, with the exception of a recovery of 44% (limits 45-105%) for 2-fluorobiphenyl in sample 072SB-0026-0001-SO. The sample was re-extracted outside of the holding time, with a recovery of 46%. As the recoveries were very similar, indicating a matrix effect on the surrogate, the reviewer chose to retain the original extraction analysis. The retained sample results were qualified as estimated, "J," for detects and "UJ," for nondetects, and were coded with an "S" qualification code. The re-extraction results were rejected, "R," as duplicate data and were coded with a "D" qualification code.

- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on validated samples 072SB-0001-0001-SO, 072SB-0012-0001-SO, 072SB-0026-0001-SO, and 072SB-0063-0001-SO. Recoveries affecting parent sample data were within the control limits listed in DoD QSM Table G-7 and RPDs were within the control limit of ≤30% listed in DoD QSM Table F-4. Hexachlorocyclopentadiene was not spiked in to the MS/MSD.

- Internal Standards Performance: The internal standard area counts and retention times were within the DoD QSM Table F-4 control limits established by the midpoint initial calibration standard: ±30 seconds for retention times and -50% / +100% for internal standard areas.

- Compound Identification: Compound identification was verified for the samples validated at Level IV. Review of the sample chromatograms, retention times, and spectra indicated no problems with target compound identification.

- Compound Quantification and Reported Detection Limits: Compound quantification was verified for the samples validated at Level IV. The LOQs were supported by the low point of the initial calibration and the laboratory DLs. Any result reported between the DL and the LOQ was qualified as estimated, "J," by the laboratory. Reported nondetects are valid to the LOD. The samples had a 2-ml final extract volume, resulting in an effective 2× dilution.

Target compounds 2,4-dinitrotoluene, 2,6-dinitrotoluene, and nitrobenzene were reported by both Methods 8330B and 8270C in sample 072SB-0014-0001-SO. As there were no detects for these compounds; the reviewer chose to report the results with the lowest LODs. The 8270C results for 2,4-dinitrotoluene and 2,6-dinitrotoluene were rejected, "R," as duplicate data and coded with a "D" qualification code. The 8270C result for nitrobenzene was retained.

- System Performance: Review of the raw data indicated no problems with system performance.

- Manual Integrations: Some routine manual integrations were performed for the samples, and for calibration and QC data associated with the sample data, primarily to correct the integration of improperly split peaks, or to correct poor baseline integration. All manual integrations reviewed were deemed appropriate by the reviewer.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

    - Field Blanks and Equipment Rinsates: No field blank or equipment rinsate samples were associated with the validated samples.

    - Field Duplicate Samples: Six field duplicate samples were collected and analyzed for SVOCs. The RPD criterion in FWQAPP Table 3-1 of ≤50% was only applied when results for common detects were ≥5× the LOQ. In cases where results were <5× the LOQ, the reasonable control limit of ± the LOQ was applied. Except as noted below, the results were within the control limits. See Appendix C for a complete comparison of all primary and field duplicate results.

SVOC field duplicate outliers				
Primary Sample	**Field Duplicate**	**Analyte**	**RPD**	**W/In LOQ**
072SB-0026-0001-SO	072SB-0027-0001-SO	Pyrene	N/A	No
		Benzo(a)anthracene	N/A	No
		Benzo(a)pyrene	N/A	No
		Naphthalene	N/A	No
		Benzo(g,h,i)perylene	61	N/A
072SB-035-0001-SO	072SB-0036-0001-SO	2-Methylnaphthylene	N/A	No
		Benzo(a)pyrene	N/A	No
		Phenanthrene	N/A	No
072SB-0076-0001-SO	072SB-0077-0001-SO	Benzo(a)anthracene	N/A	No
		Benzo(a)pyrene	N/A	No
		Benzo(b)fluoranthene	N/A	No
		Benzo(g,h,i)perylene	N/A	No
		Benzo(k)fluoranthene	N/A	No
		Chrysene	N/A	No
		Fluoranthene	N/A	No
		Indeno(1,2,3-cd)pyrene	N/A	No

SVOC field duplicate outliers				
Primary Sample	**Field Duplicate**	**Analyte**	**RPD**	**W/In LOQ**
		Phenanthrene	N/A	No
		Pyrene	N/A	No

6.2.7 Volatile Organic Compounds (VOCs)

A total of 74 primary soil samples and 7 field duplicate samples were analyzed by TA-North Canton for volatile compounds by USEPA Method 8260B. A total of 9 primary soil samples were validated at Level IV.

- MDL studies were not evaluated as part of this project.
- GC/MS Tuning: The BFB tunes met the method abundance criteria. The samples were analyzed within 12 hours of the BFB injection time.
- Calibration: Calibration criteria listed in DoD QSM Table F-4 were met, with exceptions noted below.
    - Initial calibration average RRFs and ICV and CCV RRFs were within the control limits of ≥0.30 for chlorobenzene and 1,1,2,2-tetrachloroethane, and ≥0.10 for chloromethane, bromoform, and 1,1-dichloroethane.
    - All initial calibration %RSDs were within the method control limits of ≤30% for the CCCs and ≤15% for remaining compounds, or linear regression r^2 values ≥0.990.
    - All second source initial calibration verification standard recoveries were within the control limit of ±20%.
    - Continuing calibration %Ds affecting validated sample data were within the method control limit of ≤20%.
    - Although not required by the DoD QSM, a standard of 3× the DL is required by the FWQAPP. Except as noted below, the MRL standard recoveries affecting sample data were within the reasonable control limit of ±30%. Results listed in the table below, all nondetects, were qualified as estimated, "UJ," and coded with a "C" qualification code.

Samples qualified for MRL recovery outliers		
Analyte	**%R**	**Qualified samples**
Acetone	61%, 28%	072SB-0014-0001-SO, 072SB-0030-0001-SO
2-Hexanone	65%	
2-Hexanone	63%	072SB-0039-0001-SO

- Blanks: The method blanks associated with the validated samples had no target compound detects above the control limits listed in DoD QSM Table F-4 of one-half the LOQ, and no common laboratory contaminants detected above the LOQ.

- Laboratory Control Samples: LCS recoveries were within the control limits listed in DoD QSM Table G-4.

- Surrogate Recovery: Except as noted below the surrogate recoveries affecting sample data were within the control limits listed in DoD QSM Table G-3. Results listed in the table below, all nondetects, were qualified as estimated, "UJ." The qualified results were coded with an "S" qualification code.

Samples qualified for surrogate recovery outliers				
Sample	Surrogate	%R	Limits	Qualified Results
072SB-0001-0001-SO	4-bromofluorobenzene	72%	85-120%	all
	toluene-d8	73%	85-115%	
072SB-0012-0001-SO	4-bromofluorobenzene	76%	85-120%	all
072SB-0026-0001-SO	4-bromofluorobenzene	47%	85-120%	all
	toluene-d8	73%	85-115%	
072SB-0030-0001-SO	4-bromofluorobenzene	58%	85-120%	all

- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on samples 072SB-0001-0001-SO, 072SB-0012-0001-SO, 072SB-0026-0001-SO, and 072SB-0063-0001-SO. All recoveries were within the control limits listed in DoD QSM Table G-4 and RPDs were within the control limit listed in DoD QSM Table F-4 of ≤30%.

  All RPDs for the MS/MSD of 072SB-0063-0001-SO exceeded 30%; however, the reviewer determined the outliers were due to an approximately 33% difference in spike amounts based on the difference in sample weight. With the disparity of spike amounts taken into account, all RPDs were within the control limit.

- Internal Standards Performance: With one exception, the internal standard area counts and retention times were within DoD QSM Table F-4 control limits established by the midpoint initial calibration standard: ±30 seconds for retention times and -50% / +100% for internal standard areas. Internal standard 1,4-dichlorobenzene-d4 was recovered below the control limit at 41% in sample 072SB-0030-0001-SO; therefore, the associated compound, nondetected 1,1,2,2-tetrachloroethane, was qualified as estimated, "UJ," and coded with an "I" qualification code.

- Compound Identification: Compound identification was verified for the validated samples. Review of the sample chromatograms, retention times, and spectra indicated no problems with target compound identification.

- Compound Quantification and Reported Detection Limits: Compound quantification was verified for the samples validated at a Level IV. The LOQs were supported by the low point of the initial calibration and the laboratory DLs. Any result reported between the DL and the LOQ was qualified as estimated, "J," by the laboratory. Reported nondetects are valid to the LOD.

- System Performance: Review of the raw data indicated no problems with system performance.

- Manual integrations: Manual integrations were not performed for the validated samples or for associated calibration and QC samples.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

    - Trip Blanks: The trip blanks associated with the validated samples in this SDG had no detects affecting sample results.

    - Field Blanks and Equipment Rinsates: No field blank or equipment rinsate samples were associated with the validated samples.

    - Field Duplicate Samples: Seven field duplicate samples were collected and analyzed for VOCs. The RPD criterion in FWQAPP Table 3-1 of ≤50% was only applied when results for common detects were ≥5× the LOQ. In cases where results were <5× the LOQ, the reasonable control limit of ± the LOQ was applied. Except as noted below, the results were within the control limits. See Appendix C for a complete comparison of all primary and field duplicate results.

VOC field duplicate outliers				
Primary Sample	**Field Duplicate**	**Analyte**	**RPD**	**W/In LOQ**
072SB-0076-0001-SO	072SB-0077-0001-SO	Benzene	N/A	No
		Ethylbenzene	N/A	No
		Toluene	N/A	No
		Xylenes	N/A	No

6.2.8 Metals

A total of 74 primary soil samples and 7 field duplicate samples were analyzed by TA-North Canton for various metals by USEPA Methods 6020 and 7471. A total of 6 primary soils were validated at Level IV.

- MDL studies were not evaluated as part of this project.

- Calibration: Except as noted below, calibration criteria were met.

    - As per DoD QSM Table F-8, the mass calibrations were ≤0.1 amu of the true values and the resolutions were <0.9 amu at full width at 10% peak height. Except as noted below, the %RSDs were within the control limit listed in the DoD QSM Table F-8 of ≤5%. The detected results listed in the table below were qualified as estimated, “J,” and were coded with an “M” qualification code.

Samples qualified for tune %RSD outliers		
Analyte	**%RSD**	**Qualified Samples**
^{137}Barium	35.98	072SB-0026-0001-SO, 072SB-0039-0001-SO
	19.32	072SB-0063-0001-SO
^{138}Barium	7.81	072SB-0063-0001-SO

- Initial calibration: The mercury linear regression correlation coefficients were within the control limit listed in the DoD QSM Table F-7 of ≥0.995. The ICPMS analytes used a single point calibration.

- The ICPMS ICV and CCV recoveries were within the control limits listed in DoD QSM Table F-8 of 90-110%. The mercury ICV and CCV recoveries were within the control limits listed in DoD QSM Table F-7 of 90-110% and 80-120%, respectively.

- CRI/MRL recoveries affecting sample results were within the control limits listed in DoD QSM Tables F-7 and F-8 of 80-120%.

- Blanks: The method blanks had no applicable detects above the control limits listed in DoD QSM Tables F-7 and F-8 of one-half the LOQ or greater than one-tenth the amount measured in any sample. CCBs had no applicable detects above the control limit listed in DoD QSM Tables F-7 and F-8 of greater than the LOD.

- Interference Check Samples: ICPMS ICSA and ICSAB recoveries were within the control limits listed in DoD QSM Table F-8 of 80-120%. Except as noted below, there were no analytes affecting sample results detected in the ICSA above the control limit listed in DoD QSM Table F-8 of >LOD.

  When the interferents were present in the samples at similar concentration to the ICSA, the samples were further reviewed for possible matrix interference, based on detects for unspiked compounds in the ICSA. If the unspiked compounds were present in the samples at concentrations within 10× of the ICSA detect, the results were qualified. Results listed in the table below, all detects, were qualified as estimated, "J," and coded with an "I" qualification code. When no other qualifications with conflicting bias were assigned, the results were qualified as estimated with a potential positive bias, "J+."

Samples qualified for ICSA detects			
SDG	Analyte	Detect (µg/L)	Qualified samples
240-18441-1, 240-18449-1	Cadmium	0.315	072SB-0026-0001-SO, 072SB-0039-0001-SO
	Silver	0.098	
240-18544-1	Antimony	0.32	072SB-0063-0001-SO
	Cadmium	0.385	
	Selenium	0.912	
	Silver	0.15	

- Laboratory Control Samples: The recoveries were within the control limits listed in DoD QSM Table G-19 of 80-120%.

- Laboratory Duplicates: Laboratory duplicate analyses were performed on 072SB-0001-0001-SB, 072SB-0012-0001-SO, 072SB-0026-0001-SO, 073SB-0007M-0001-SO, 072SB-0035-0001-SO, 072SB-0063-0001-SO, 076SB-0090M-0001-SO, 076SB-0091M-0001-SO, 076SB-0100M-0001-SO, and 075TR-0002-0001-SO. The results were only assessed for common detects ≥5× the LOQ. In cases where results were <5× the LOQ, the reasonable control limit of ± the LOQ was applied. Except as noted in the table below, the RPDs were within the control limits listed in DoD QSM Tables F-7 and F-8 of ≤20%.

  Results listed in the table below were qualified as estimated, "J," and coded with an "E" qualification code. As per the *National Function Guidelines*, all samples in an SDG were qualified; however, the parent samples were qualified only for their own outliers.

Samples qualified for laboratory duplicate RPD outliers			
Parent Sample	Analyte	RPD	Qualified samples
072SB-0001-0001-SO	Calcium	28%	072SB-0001-0001-SO, 072SB-0014-0001-SO
072SB-0012-0001-SO	Arsenic	29%	072SB-0012-0001-SO, 072SB-0014-0001-SO
072SB-0035-0001-SO	Potassium	24%	072SB-0039-0001-SO
072SB-0063-0001-SO	Manganese	36%	072SB-0063-0001-SO

- Matrix Spike/Matrix Spike Duplicate: Matrix spike analyses were performed on 072SB-0001-0001-SB, 072SB-0012-0001-SO, 072SB-0026-0001-SO, 073SB-0007M-0001-SO, 072SB-0035-0001-SO, 072SB-0063-0001-SO, 076SB-0090M-0001-SO, 076SB-0091M-0001-SO, 076SB-0100M-0001-SO, and 075TR-0002-0001-SO. The results were not assessed when the native sample concentration exceeded the spiked amount by a factor of four or more. Except as noted in the table below, the recoveries were within the control limits listed in DoD QSM Table G-19 of 80-120%.

  Based on consistently poor recoveries from all SI Sites, the nondetected antimony results associated with recoveries below 30% were rejected, "R," even though the post digestion spike recoveries were acceptable. Detected results listed in the table below were qualified as estimated, "J." In the absence of qualifications with conflicting bias, the results were qualified as estimated with a potential low bias, "J-," or estimated with a potential high bias, "J+." The qualified results were coded with a "Q" qualification code. As per the *National Function Guidelines*, all samples in an SDG were qualified; however, the parent samples were qualified only for their own outliers.

Samples qualified for matrix spike recovery outliers			
Parent Sample	Analyte	%R	Qualified samples
072SB-0001-0001-SO	Arsenic	77%	072SB-0001-0001-SO, 072SB-0014-0001-SO
	Barium	127%	

Samples qualified for matrix spike recovery outliers			
Parent Sample	Analyte	%R	Qualified samples
	Beryllium	79%	
	Calcium	298%	
	Cadmium	79%	
	Nickel	69%	
	Antimony	24%	
	Potassium	55%	
	Selenium	68%	
072SB-0012-0001-SO	Beryllium	78%	072SB-0012-0001-SO, 072SB-0014-0001-SO
	Copper	123%	
	Lead	122%	
	Antimony	18%	
	Potassium	71%	
	Selenium	74%	
072SB-0026-0001-SO	Arsenic	69%	072SB-0026-0001-SO
	Calcium	74%	
	Copper	75%	
	Antimony	**20%**	
	Thallium	75%	
	Selenium	73%	
072SB-0035-0001-SO	Arsenic	64%	072SB-0039-0001-SO
	Barium	32%	
	Beryllium	76%	
	Chromium	73%	
	Nickel	79%	
	Lead	159%	
	Antimony	**23%**	
	Vanadium	61%	
	Potassium	5%	
	Selenium	68%	
072SB-0063-0001-SO	Silver	39%	072SB-0063-0001-SO
	Arsenic	0%	
	Calcium	193%	
	Cadmium	60%	
	Chromium	79%	
	Cobalt	52%	
	Copper	16%	
	Sodium	39%	
	Antimony	28%	
	Potassium	70%	
	Selenium	25%	

Bold analytes were nondetected and rejected in the associated samples.

All post digestion spike recoveries were within the control limits listed in DoD QSM Table F-8 of 75-125%.

- Serial Dilution: Serial dilution analyses were performed on 072SB-0001-0001-SB, 072SB-0012-0001-SO, 072SB-0026-0001-SO, 073SB-0007M-0001-SO, 072SB-0035-0001-SO, 072SB-0063-0001-SO, 076SB-0090M-0001-SO, 076SB-0091M-0001-SO, and 076SB-0100M-0001-SO for the 6020 analytes. A zinc %D associated with sample 072SB-0026-0001-SO exceeded the control limit at 11%; therefore, the zinc detect in the sample was qualified as estimated, "J," and coded with an "A" qualification code. All remaining %Ds were within the control limits listed in DoD QSM Table F-7 and F-8 of ≤10%. The serial dilution control limit is only applicable when the original sample concentration is minimally ≥50× the LOQ.

- Internal Standards: As per the DOD QSM Table F-8, the ICPMS sample internal standards intensities were within 30-120% of those in the ICV. Yttrium (^{89}Y) was spiked into the QC samples but not the site samples.

- Sample Result Verification: For Level IV validation, calculations were verified and the sample results reported on the sample result summary were verified against the raw data. Any result reported between the DL and the LOQ was qualified as estimated, "J." Reported nondetects are valid to the LOD.

  Due to instrument limitations, the mercury raw data did not list the sample absorbances; therefore, the reviewer was not able to calculate the sample results from the raw data. Additionally, the ICP-MS raw data did not list absorbances for the ICV, CCV, ICSAB, and MRL samples, and the %R was listed instead of the sample concentrations.

- Manual Integrations: No manual integrations were noted in the mercury analyses.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

  - Field Blanks and Equipment Rinsates: No field blank or equipment rinsate samples were associated with the validated samples.

  - Field Duplicate Samples: Seven field duplicate samples were collected and analyzed for metals. The RPD criterion in FWQAPP Table 3-1 of ≤50% was only applied when results for common detects were ≥5× the LOQ. In cases where results were <5× the LOQ, the reasonable control limit of ± the LOQ was applied. Except as noted below, all results were within the control limits. See Appendix C for a complete comparison of all primary and field duplicate results.

Metals field duplicate outliers				
Primary Sample	**Field Duplicate**	**Analyte**	**RPD**	**W/In LOQ**
072SB-0001-0001-SO	072SB-0002-0001-SO	Barium	64%	N/A
		Calcium	149%	N/A
072SB-0026-0001-SO	072SB-0027-0001-SO	Arsenic	61%	N/A

Metals field duplicate outliers				
Primary Sample	**Field Duplicate**	**Analyte**	**RPD**	**W/In LOQ**
		Manganese	116%	N/A

6.2.9 General Chemistry - Hexavalent Chromium

A total of 29 primary soil samples and 3 field duplicate samples were analyzed by TA-Pittsburg for hexavalent chromium by USEPA Method 7196A. A total of 4 primary soil samples were validated at Level IV.

- MDL studies were not evaluated as part of this project.
- Calibration: Calibration criteria were met.
    - Initial calibration: The linear regression correlation coefficient was within the control limit listed in DoD QSM Table F-9 of ≥0.995.
    - The ICV and CCV recoveries were within the control limits listed in DoD QSM Table F-9 of 90-110%.
    - Although not required by the DoD QSM, a standard of 3× the DL is required by the FWQAPP. MRL recoveries affecting sample results were within the reasonable control limits of 70-130%.
- Blanks: The method blank and CCBs had no applicable detects above the control limit listed in DoD QSM Table F-9 of one-half the LOQ.
- Laboratory Control Samples: The recoveries were within the matrix spike control limits listed in DoD QSM Table F-9 of 85-115%
- Laboratory Duplicates: A laboratory duplicate analysis was performed on 076SB-0125-0001-SO. Hexavalent chromium was not detected in either sample.
- Matrix Spike/Matrix Spike Duplicate: No MS/MSD analyses were performed on a site sample. Method accuracy was evaluated based on LCS results.
- Sample Result Verification: For Level IV validation, calculations were verified and the sample results reported on the sample result summary were verified against the raw data. Any result reported between the DL and the LOQ was qualified as estimated, "J." Reported nondetects are valid to the LOD.

  Hexavalent chromium was reported utilizing the method of standard additions (MSA), which is recommended for matrices expected to have interference. Results from MSA are best when the MSA linear regression slope is nearly equivalent to the initial calibration slope; however, the slopes for most site samples were more than a factor of 10 less than the initial calibration slope, indicating a nominal change in absorbance is observed in the MSA analyses for a relatively significant change in concentration.

- Manual Integrations: Manual integrations are not applicable to this analysis.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

    - Field Blanks and Equipment Rinsates: No field blank or equipment rinsate samples were associated with the validated samples.

    - Field Duplicate Samples: Four field duplicate samples were collected and analyzed for metals. The RPD criterion in FWQAPP Table 3-1 of ≤50% was only applied when results for common detects were ≥5× the LOQ. In cases where results were <5× the LOQ, the reasonable control limit of ± the LOQ was applied. All results were within the control limits. See Appendix C for a complete comparison of all primary and field duplicate results.

6.3 Data Usability

According to the Draft Site Inspection Report prepared by ECC, the field completeness was 100%.

Three data points were rejected for poor MS/MSD and calibration standard recoveries. In instances where a data point had multiple results, the reviewer chose the most technically sound result to report and rejected the remaining data points. These data points do not affect data quality or usability and are not included in the table below. Data with LODs that exceeded the established criteria and data estimated for quality control outliers or for detects between the DL and the LOQ were included in the table below for informational purposes only.

Table 20. Analytical completeness for RVAAP-72 validated primary data

			Number of Results					
Analysis	**Samples Analyzed**	**Analytes per Sample**	**Total**	**Rejected**	**LODs/DLs Exceeding Criteria**	**Estimated for QC Outliers**	**Estimated for Detects <LOQ**	**Percent Complete**
Explosives*	1	16	15	0	0/0	2	0	100%
Nitroguanidine	1	1	1	0	0/0	0	0	100%
Nitrocellulose	1	1	1	0	0/0	0	0	100%
PCBs	1	7	7	0	0/0	0	0	100%
Pesticides	1	21	21	0	0/0	20	0	100%
TPH	9	3	27	0	0/0	1	0	100%
SVOCs*	6	66 or 16	144	1	0/0	20	7	99.3%
VOCs	9	36 or 4	132	0	0/0	51	3	100%
Metals	6	23	138	2	0/0	60	15	98.6%
Hexavalent chromium	4	1	4	0	0/0	4	1	100%
		Totals	**490**	**3**	**0/0**	**154**	**26**	**99.4%**

*Results rejected as duplicate data do not appear in the Total Analyte count.

The analytical completeness goal for the project established in the FWQAPP was 90% for each method. The completeness goal was met for all analyses.

6.4 Primary and Field Duplicate Comparison Summary

Primary and field duplicate sample comparisons were considered to be in good agreement as only 5.5% of the field duplicate pair results were above the FWQAPP control limit of 50% for soils or +/- the LOQ for results below 5× the LOQ.

Fifteen of the twenty-seven outliers were in pair 072SB-0076-001-SO/072SB-0077-0001-SO and eighteen of the twenty-seven outliers were for SVOCs. In general, 072SB-0077-0001-SO had higher concentrations than 072SB-0076-001-SO. All comparison results are presented in Appendix C.

Table 21. RVAAP-72 primary/field duplicate sample comparison summary

Method	Primary/Field Duplicate Pairs	Number of analytes	Total Analytes	Results within control limits	Results above control limit
TPH	7	3	21	20	1
SVOCs	7	16 or 66	262	244	18
VOCs	7	4 or 5	30	26	4
Metals*	7	23	160	156	4
Hexavalent chromium	3	1	3	3	0
Herbicide	1	11	11	11	0

*Total Analyte count affected by rejected results

6.5 Specific Data Concerns

Specific concerns regarding the data are noted below:

- Hexavalent chromium was reported utilizing MSA, which is recommended for matrices expected to have interference. Results from MSA are best when the MSA linear regression slope is nearly equivalent to the initial calibration slope; however the slopes for most site samples were more than a factor of 10 less than the initial calibration slope, indicating a nominal change in absorbance is observed in the MSA analyses for a relatively significant change in concentration.

- Due to instrument limitations, the mercury raw data did not list the sample absorbances; therefore, the reviewer was not able to calculate the sample results from the raw data. Additionally, the ICP-MS raw data did not list absorbances for the ICV, CCV, ICSAB, and MRL samples, and the %R was listed instead of the sample concentrations.

In order to avoid repetition of the issues noted above, the following actions should be taken:

- MEC^X recommends requesting the laboratory, TA-North Canton, to analyze one MRL standard and one matrix spike by MSA in order to confirm the laboratory's accuracy in reporting hexavalent chromium by MSA.

- MEC^X recommends the laboratory be requested to alter the IPC-MS and mercury instrument set up in order to report mercury and ICP-MS raw absorbances and ICP-MS ICV, CCV, ICSAB, and MRL concentrations.

7 GEORGE ROAD SEWER TREATMENT PLANT MERCURY SPILL, RVAAP-75

7.1 Current Investigation

ECC completed an SI at George Road Sewage Treatment Plant Mercury Spill (RVAAP-75). The SI for RVAAP-75 was conducted in accordance with the USEPA *Interim Final Guidance for Performing Site Inspections Under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)* (USEPA 1992). The HRR identified historic uses and potential environmental concerns at this site with respect to possible HTRW and/or MEC issues (SAIC 2011).

Due to a spill of a one pint jar of elemental mercury within the comminutor building that subsequently entered the building's drain system, the HHR concluded the RVAAP-75 was a candidate for further investigation. The data validated in this report are part of the initial intrusive SI at RVAAP-75 conducted to assess the potential presence of contamination. The total sample counts, samples selected for data validation, and the field duplicates are presented in the tables below.

Table 22. Total sample count for RVAAP-75

Matrix	Primary Samples	Field Duplicates	Split Samples	Explosives	Propellants	PCBs	Pesticides	SVOCs	VOCs	Metals
Soil	8	2	0	1	1	1	1	1	1	8

Table 23. RVAAP-75 validated samples and methods

Sample ID	SDG	Matrix	Collected	Explosives	Propellants	PCBs	SVOCs	VOCs	Metals
075SD-0002-0001-SD	240-17467-1 240-17467-2	Soil	11/9/2012	x	x	x	x	x	x

Table 24. RVAAP-75 field duplicate samples

Duplicate Sample ID	Parent Sample
075TR-0003-0001-SO	075TR-0002-0001-SO
075SD-0003-0001-SD	075SD-0002-0001-SD

7.1.1 Sample Collection

According to the laboratory Sample Receipt Form, custody seals were not utilized; however, in reviewing the relinquish and receipt times, it appeared the samples were transferred to the laboratory by courier. One correction was made to the chain-of-custody by overwriting the original entry. The correction was not initialed or dated. No other sample collection issues were noted.

7.1.2 Data Completeness

Data completeness for the project described in this report was found to be generally acceptable as no deliverables were missing from the SDGs reviewed.

7.1.3 Preservation and Holding Time Requirements

The sample coolers were received within the temperature control limit of 4 ±2°C control limit. All method preservation requirements were met.

All holding times, as listed in Table 4, were met, with the exception of a re-extraction of SVOC sample 075SD-0002-0001-SD, due to a noncompliant method blank. Only target compound bis(2-ethylhexyl)phthalate was reported from the re-extraction analysis. The result was qualified as an estimated nondetect, "UJ," and coded with an "H" qualification code.

7.1.4 Detection Limit Requirements

LODs and DLs for nondetected analytes were compared against the most stringent CUGs listed in Tables 5-8, 5-9, and 5-10 of *Final Facility-Wide Human Health Cleanup Goals for the Ravenna Army Ammunition Plant* (2010) or the RSLs if no CUG was listed. No LODs or DLs exceeded criteria.

7.2 RVAAP-75 Data Quality Evaluation

This section summarizes the data quality of validated samples for each analytical method evaluated.

7.2.1 Explosives

A single soil sample and one field duplicate sample were analyzed by TA-West Sacramento for explosives by USEPA SW-846 Method 8330B. The primary soil sample was validated at Level IV.

- MDL studies were not evaluated as part of this project.
- Calibration:
    - The primary column initial calibration average %RSDs for RDX and 2-nitrotoluene exceeded the control limit at 20% and 16%, respectively; therefore, the nondetected results for these compounds were qualified as estimated, "UJ," in 075SD-0002-0001-SD. The qualified results were coded with a "C" qualification code. The remaining initial calibration average %RSDs were within the control limits listed in DoD QSM Table F-3 of ≤15%, or the linear regression r^2 values were ≥0.990.
    - The second source initial calibration verification standard recoveries were within the control limit listed in DoD QSM Table F-3 of ±20%.

  - The CCV standard %Ds were within the control limits listed in DoD QSM Table F-3 of ±20%.

  - Although not required by the DoD QSM, a standard of 3× the DL is required by the FWQAPP. Low-level MRL standards were analyzed in association with the validated samples and the results were within the reasonable control limits of 70-130%.

- Blanks: The method blank associated with the validated sample had no target compound detects above the control limit listed in DoD QSM Table F-3 of one-half the LOQ.

- Laboratory Control Samples: Recoveries were within the control limits listed in DoD QSM Tables G-2 and G-13 and within the reasonable laboratory control limits for nitroglycerin (76-116%) and PETN (76-116%).

- Surrogate Recovery: As no surrogate control limit was listed in the DoD QSM, surrogate recoveries were assessed against the reasonable laboratory-established control limits of 78-118%. Recoveries affecting sample results were within the control limits.

- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on sample 075SB-0002-0001-SD. Recoveries were within the control limits listed in DoD QSM Tables G-2 and G-13 and within the reasonable laboratory control limits for nitroglycerin (76-116%) and PETN (76-116%). The RPDs were within the control limit listed in DoD QSM Table F-3 of ≤20%.

- Compound Identification: Compound identification was verified for the sample validated at a Level IV. Review of sample chromatograms and retention times indicated no problems with target compound identification. The intercolumn %RPD for tetryl was 105%; therefore, tetryl detected in 075SD-0002-0001-SD was qualified as tentatively identified, "N," and coded with an "*III" qualification code.

  Although not affecting the nondetected sample results, the primary column MRL recoveries for the later eluting compounds were recovered above the control limit. Review of the chromatogram indicated poorer peak shape for these compounds.

- Compound Quantification and Reported Detection Limits: Compound quantification was verified for the sample detect and a portion of the LCS results. The LOQs were supported by the low point of the initial calibration and the laboratory DLs. Any result reported between the DL and the LOQ was qualified as estimated, "J." Reported nondetects are valid to the LOD.

  The intercolumn %RPD for tetryl exceeded the control limit listed in DoD QSM Table F-3 of ≤40%, at 105%; therefore, tetryl detected in 075SD-0002-0001-SD was qualified as estimated, "J," and coded with an "*III" qualification code.

Target compounds 2,4-dinitrotoluene, 2,6-dinitrotoluene, and nitrobenzene were reported by both Method 8330B and 8270C in sample 075SD-0002-0001-SD. As there were no detects for these compounds; the reviewer chose to report the results with the lowest LODs. The 8330B result for nitrobenzene was rejected, "R," as duplicate data and coded with a "D" qualification code. The 8330B results for 2,4-dinitrotoluene and 2,6-dinitrotoluene were retained.

- System Performance: Review of the raw data indicated no problems with system performance.

- Manual Integrations: Some manual integrations were performed for the initial calibrations, CCVs, and the site sample. All manual integrations were performed in order to report closely eluting peaks or to account for baseline anomalies and were deemed acceptable by the reviewer.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

    - Field Blanks and Equipment Rinsates: No field blank or equipment rinsate samples were associated with the validated sample.

    - Field Duplicates: One field duplicate sample was collected and analyzed for explosive compounds. The RPD criterion in FWQAPP Table 3-1 of ≤50% was only applied when results for common detects were ≥5× the LOQ. In cases where results were <5× the LOQ, the reasonable control limit of ± the LOQ was applied. All results were within the control limits. See Appendix C for a complete comparison of all primary and field duplicate results.

7.2.2 Propellants

A single soil sample and one field duplicate sample were analyzed by TA-West Sacramento for nitroguanidine by USEPA SW-846 Method 8330 and for nitrocellulose by laboratory SOP WS-WC-0050. The primary soil sample was validated at Level IV.

- MDL studies were not evaluated as part of this project.

- Calibration:

    - The nitroguanidine initial calibration average percent %RSD was within the control limit listed in DoD QSM Table F-2 of ≤20%. Nitrocellulose linear regression r values were within the control limit listed in the DoD QSM Table F-11 of ≥0.995.

    - The nitroguanidine second source ICV recovery was within the control limits listed in DoD QSM Table F-2 of 85-115%. The nitrocellulose ICV recovery exceeded the

control limit at 192% (limits are 90-110%); however, as nitrocellulose was not detected in the sample, no qualifications were required.

- The nitroguanidine CCV recoveries were within the control limits listed in DoD QSM Table F-2 of 85-115%. The nitrocellulose CCV recoveries were within the control limits listed in DoD QSM Table F-11 of 90-110%.

- Although not required by the DoD QSM, a standard of 3× the DL is required by the FWQAPP. MRL recoveries associated with the sample were within the reasonable control limits of 70-130%.

- Blanks: The method blanks had no target compound detects above the control limits listed in DoD QSM Tables F-2 and F-11 of one-half the LOQ.

- Laboratory Control Samples: No nitroguanidine or nitrocellulose LCS control limits are listed in the DoD QSM; therefore, the laboratory control limits were used to assess the results. The nitroguanidine recovery was within the control limits of 72-121%. The nitrocellulose recovery was within the laboratory-established control limits of 34-115%.

- Surrogate Recovery: A surrogate was not required for the analysis of nitroguanidine or nitrocellulose.

- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on sample 075SD-0002-0001-SD for both propellants. The nitroguanidine recoveries (56%, 58%) were below the laboratory-established control limits of 72-121%; therefore, nondetected nitroguanidine was qualified as estimated, UJ," in 075SD-0002-0001-SD. The qualified result was coded with a "Q" qualification code. The nitrocellulose recoveries were within the laboratory-established control limits of 34-115%. Both RPDs were ≤20%.

- Compound Identification: Compound identification was verified for the sample validated at a Level IV. Review of the sample chromatograms and retention times indicated no problems with target compound identification.

- Compound Quantification and Reported Detection Limits: Compound quantification was verified for the sample validated at a Level IV. The LOQs were supported by the low point of the initial calibration and the laboratory DLs. Any result reported between the DL and the LOQ was qualified as estimated, "J." Reported nondetects are valid to the LOD.

  Nitroguanidine was not detected in the validated sample; therefore, confirmation analysis was not required.

- System Performance: Review of the raw data indicated no problems with system performance.

- Manual Integrations: Some manual integrations were performed for nitroguanidine. The manual integrations were performed to correct baseline integration. The manual integrations were deemed acceptable by the reviewer.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

    - Field Blanks and Equipment Rinsates: No field blank or equipment rinsate samples were associated with the validated sample.

    - Field Duplicates: One field duplicate sample was collected and analyzed for propellants. The RPD criterion in FWQAPP Table 3-1 of ≤50% was only applied when results for common detects were ≥5× the LOQ. In cases where results were <5× the LOQ, the reasonable control limit of ± the LOQ was applied. All results were within the control limits. See Appendix C for a complete comparison of all primary and field duplicate results.

7.2.3 Polychlorinated Biphenyls (PCBs)

A single soil sample and one field duplicate sample were analyzed by TA-North Canton for PCBs by USEPA SW-846 Method 8082. The primary soil sample was validated at Level IV.

- MDL studies were not evaluated as part of this project.

- Calibration: Calibration criteria listed in the DoD QSM Table F-2 were met.

    - Initial calibration average %RSDs were within the control limit of ≤20%.

    - The second source ICV recoveries were within the control limit of ±20% for all applicable Aroclors.

    - The CCV standard recoveries were within the control limit of ±20%.

    - Although not required by the DoD QSM, a standard of 3× the DL is required by the FWQAPP. MRL standard recoveries were within the reasonable control limit of ±30%.

- Blanks: The method blank associated with the validated sample had no target compound detects above the control limit listed in the DoD QSM Table F-2, of one-half the LOQ.

- Laboratory Control Samples: Recoveries for Aroclor 1016 and Aroclor 1260 were within the control limits listed in DoD QSM Table G-17.

- Surrogate Recovery: Recoveries were within the control limits listed in DoD QSM Table G-3 of 60-125%.

- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on sample 075SD-0002-0001-SD. Recoveries were within the control limits listed in DoD QSM Table G-17 and RPDs for both Aroclors were within the control limit listed in the DoD QSM Table F-2 of ≤30%.

- Compound Identification: Compound identification was verified for the validated sample. Review of the sample chromatograms, standards, and retention times indicated no problems with target compound identification.

- Compound Quantification and Reported Detection Limits: Compound quantification was verified for the validated sample. The LOQs were supported by the low point of the initial calibration and the laboratory DLs. Any result reported between the DL and the LOQ was qualified as estimated, "J." Reported nondetects are valid to the LOD.

- System Performance: Review of the raw data indicated no problems with system performance.

- Manual Integrations: Some routine manual integrations were performed for the calibration and QC data associated with the sample data, primarily to correct baseline integration and/or separate coeluting peaks. All manual integrations reviewed were deemed appropriate by the reviewer.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

    - Field Blanks and Equipment Rinsates: No field blank or equipment rinsate samples were associated with the validated sample.

    - Field Duplicate Samples: One field duplicate sample was collected and analyzed for PCBs. The RPD criterion in FWQAPP Table 3-1 of ≤50% was only applied when results for common detects were ≥5× the LOQ. In cases where results were <5× the LOQ, the reasonable control limit of ± the LOQ was applied. All results were within the control limits. See Appendix C for a complete comparison of all primary and field duplicate results.

7.2.4 Semivolatile Organic Compounds (SVOCs)

A single soil sample and one field duplicate sample were analyzed by TA-North Canton for SVOCs by USEPA Method 8270C. The primary soil sample was validated at Level IV.

- MDL studies were not evaluated as part of this project.

- GC/MS Tuning: The DFTPP tunes met the method abundance criteria. The samples were analyzed within 12 hours of the DFTPP injection time.

- Calibration: Calibration criteria listed in the DoD QSM Table F-4 were met, with exceptions affecting sample results noted in the text and table below.

  - Initial calibration average RRFs and ICV and CCV RRFs were within method control limits of ≥0.050 for SPCCs. All initial calibration %RSDs were within the control limits of ≤30% for CCCs and ≤15% for remaining compounds, or linear regression r^2 values ≥0.990.

  - All second source ICV standard recoveries affecting sample data were within the control limit of ±20%, with the exception of the recovery of 79.9% for 3,3'dichlorobenzidine. The associated sample result was rejected for other reasons (see Matrix Spike/Matrix Spike Duplicate section), and was not further qualified for the ICV recovery outlier.

  - Continuing calibration %Ds affecting sample data were within the control limit of ≤20%.

  - Although not required by the DoD QSM, a standard of 3× the DL is required by the FWQAPP. MRL standard recoveries were within the reasonable control limit of ±30%, with exceptions noted in the table below. Results listed in the table below were qualified as estimated, "J," for detects, and "UJ," for nondetects in the affected sample. The qualified results were coded with a "C" qualification code.

Samples qualified for MRL %R outliers		
Analyte	**%R**	**Qualified Samples**
2,4-dinitrophenol	37%	075SD-0002-0001-SD
4,6-dinitro-2-methylphenol	46%	
benzo(g,h,i)perylene	58%	
dibenz(a,h)anthracene	68%	
hexachloroethane	58%	
Indeno(1,2,3-cd)pyrene	67%	

- Blanks: The method blank had a detect below the LOQ for 1,2-dichlorobenzene; however, the sample detect for 1,2-dichlorobenzene exceeded five times the method blank concentration and required no qualification. The method blank also had a detect above the LOQ of 50 µg/Kg for bis(2-ethylhexyl)phthalate at 90 µg/Kg. As the method blank was non-compliant, sample 075SD-0002-0001-SD was re-extracted, with an acceptable result. The laboratory reported both the original and re-extraction analyses for all target compounds except bis(2-ethylhexyl)phthalate, which was reported only from the re-extraction analysis; therefore, the results for all compounds in 075SD-0002-0001-SDRE, except bis(2-ethylhexyl)phthalate, were rejected, "R," in favor of the original results. The method blanks associated with the validated sample had no other target compound detects above the control limits listed in DoD QSM Table F-4 of one-half the LOQ for target compounds, and no other common laboratory contaminants detected above the LOQ.

- Laboratory Control Samples: All LCS recoveries were within the control limits listed in DoD QSM Tables G-2 (poor performers) and G-7. The reviewer noted hexachlorocyclopentadiene was not spiked in the LCS.

- Surrogate Recovery: All surrogate recoveries were within the control limits listed in the DoD QSM Tables G-2 (poor performers) or G-3.

- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on validated sample 075SD-0002-0001-SD. The MS and MSD had recoveries of 5% and 0% for 3,3-dichlorobenzidine; therefore, the nondetected parent sample result was rejected, "R." Recoveries for 4-nitroaniline were below the control limits of 35-115%, at 30% and 25%. The nondetected result for 4-nitroaniline was qualified as estimated, "UJ." The qualified results were coded with a "Q" qualification code. Remaining recoveries affecting parent sample results were within the control limits listed in DoD QSM Tables G-2 (poor performers) and G-7. The reviewer noted hexachlorocyclopentadiene was not spiked in the MS/MSD. RPDs were within the control limit of ≤30% listed in DoD QSM Table F-4**.**

- Internal Standards Performance: The internal standard area counts and retention times were within the DoD QSM Table F-4 control limits established by the midpoint initial calibration standard: ±30 seconds for retention times and -50% / +100% for internal standard areas.

- Compound Identification: Compound identification was verified for the sample validated at Level IV. Review of the sample chromatogram, retention times, and spectra indicated no problems with target compound identification.

- Compound Quantification and Reported Detection Limits: Compound quantification was verified for the sample validated at Level IV. The sample had a 2-ml final extract volume, resulting in an effective 2× dilution. The LOQs were supported by the low point of the initial calibration and the laboratory DLs. Any result reported between the DL and the LOQ was qualified as estimated, "J," by the laboratory. Reported nondetects are valid to the LOD.

  Target compounds 2,4-dinitrotoluene, 2,6-dinitrotoluene, and nitrobenzene were reported by both Method 8330B and 8270C in samples 075SD-0002-0001-SD. As there were no detects for these compounds; the reviewer chose to report the results with the lowest LODs. The 8270C results for 2,4-dinitrotoluene and 2,6-dinitrotoluene were rejected, "R," as duplicate data and coded with a "D" qualification code. The 8270C result for nitrobenzene was retained.

- System Performance: Review of the raw data indicated no problems with system performance.

- Manual Integrations: Some routine manual integrations were performed for the samples, and for calibration and QC data associated with the sample data, primarily due to peaks

missed or incorrectly chosen by the data system, split peaks, or poor baseline integration. All manual integrations reviewed were deemed appropriate by the reviewer.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

  - Field Blanks and Equipment Rinsates: No field blank or equipment rinsate samples were associated with the validated sample.

  - Field Duplicate Samples: One field duplicate sample was collected and analyzed for SVOCs. The RPD criterion in FWQAPP Table 3-1 of ≤50% was only applied when results for common detects were ≥5× the LOQ. In cases where results were <5× the LOQ, the reasonable control limit of ± the LOQ was applied. Except as noted below the results were within the control limits. See Appendix C for a complete comparison of all primary and field duplicate results.

SVOC field duplicate outliers				
Primary Sample	**Field Duplicate**	**Analyte**	**RPD**	**W/In LOQ**
075SD0002-0001-SD	075SD-0003-0001-SD	Benzo(b)fluoranthene	63%	N/A
		Chrysene	155%	N/A
		Phenanthrene	67%	N/A
		1,2-Dichlorobenzene	60%	N/A
		Anthracene	N/A	No
		Fluorene	N/A	No

7.2.5 Volatile Organic Compounds (VOCs)

A single soil sample and one field duplicate sample were analyzed by TA-North Canton for volatile compounds by USEPA Method 8260B. The primary soil sample was validated at Level IV.

- MDL studies were not evaluated as part of this project.

- GC/MS Tuning: The BFB tunes met the method abundance criteria. The samples were analyzed within 12 hours of the BFB injection time.

- Calibration: Calibration criteria listed in DoD QSM Table F-4 were met, with exceptions noted below.

  - Initial calibration average RRFs and ICV and CCV RRFs were within the control limits of ≥0.30 for chlorobenzene and 1,1,2,2-tetrachloroethane, and ≥0.10 for chloromethane, bromoform, and 1,1-dichloroethane.

  - All initial calibration %RSDs were within the method control limits of ≤30% for the CCCs and ≤15% for remaining compounds, or linear regression r^2 values ≥0.990.

- All second source initial calibration verification standard recoveries were within the control limit of ±20%.

- Continuing calibration %Ds affecting validated sample data were within the control limit of ≤20%

- Although not required by the DoD QSM, a standard of 3× the DL is required by the FWQAPP. MRL standard recoveries affecting sample data were within the reasonable control limit of ±30%.

- Blanks: The method blank associated with the validated sample had no target compound detects above the control limits listed in DoD QSM Table F-4 of one-half the LOQ, and no common laboratory contaminants detected above the LOQ, with one exception affecting sample data. Styrene was detected in the method blank at 0.15 µg/Kg. Styrene detected in 075SD-0002-0001-SD between the LOD and LOQ was qualified as nondetected, "U," at the LOQ. The qualified result was coded with a "B" qualification code.

- Laboratory Control Samples: LCS recoveries were within the control limits listed in DoD QSM Table G-4.

- Surrogate Recovery: Surrogate recoveries affecting sample data were within the control limits listed in DoD QSM Table G-3.

- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on validated sample 075SD-0002-0001-SD. Recoveries affecting sample data were within the control limits listed in DoD QSM Table G-4 and RPDs were within the control limit listed in DoD QSM Table F-4, of ≤30%.

- Internal Standards Performance: The internal standard area counts and retention times were within DoD QSM Table F-4 control limits established by the midpoint initial calibration standard: ±30 seconds for retention times and -50% / +100% for internal standard areas.

- Compound Identification: Compound identification was verified for the validated sample. Review of the sample chromatogram, retention times, and spectra indicated no problems with target compound identification.

- Compound Quantification and Reported Detection Limits: Compound quantification was verified for the validated sample. The LOQs were supported by the low point of the initial calibration and the laboratory DLs. Any result reported between the DL and the LOQ was qualified as estimated, "J," by the laboratory. Reported nondetects are valid to the LOD.

- System Performance: Review of the raw data indicated no problems with system performance.

- Manual integrations: Manual integrations were not performed for the validated sample or for associated calibration and QC samples.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

    - Trip Blanks: The trip blank associated with the validated sample in this SDG had no reportable detects above the DL.

    - Field Blanks and Equipment Rinsates: No field blank or equipment rinsate samples were associated with the validated sample.

    - Field Duplicate Samples: One field duplicate sample was collected and analyzed for VOCs. The RPD criterion in FWQAPP Table 3-1 of ≤50% was only applied when results for common detects were ≥5× the LOQ. In cases where results were <5× the LOQ, the reasonable control limit of ± the LOQ was applied. All results were within the control limits. See Appendix C for a complete comparison of all primary and field duplicate results.

7.2.6 Metals

Eight primary soil samples and two field duplicate samples were analyzed by TA-North Canton for various metals by USEPA Methods 6020 and 7471. One primary soil sample was validated at Level IV.

- MDL studies were not evaluated as part of this project.

- Calibration: All calibration criteria were met.

    - As per DoD QSM Table F-8, the mass calibrations were ≤0.1 amu of the true values and the resolutions were <0.9 amu at full width at 10% peak height. The %RSDs were within the control limit listed in the DoD QSM Table F-8 of ≤5%.

    - Initial calibration: The mercury linear regression correlation coefficient was within the control limit listed in the DoD QSM Table F-7 of ≥0.995. The remaining analytes used a single point calibration.

    - The ICPMS ICV and CCV recoveries were within the control limits listed in DoD QSM Table F-8 of 90-110%. The mercury ICV and CCV recoveries were within the control limits listed in DoD QSM Table F-7 of 90-110% and 80-120%, respectively.

    - CRI/MRL recoveries affecting sample results were within the control limits listed in DoD QSM Tables F-7 and F-8 of 80-120%.

- Blanks: The method blanks had no applicable detects above the control limits listed in DoD QSM Tables F-7 and F-8 of one-half the LOQ or greater than one-tenth the amount measured in any sample. CCBs had no applicable detects above the control limit listed in DoD QSM Tables F-7 and F-8 of greater than the LOD.

- Interference Check Samples: ICPMS interference check sample A (ICSA) and AB (ICSAB) recoveries were within the control limits listed in DoD QSM Table F-8 of 80-120%. There were several analytes detected in the ICSA, but not at sufficient concentration to warrant qualification of the site sample.

- Laboratory Control Samples: The recoveries were within the control limits listed in DoD QSM Table G-19 of 80-120%.

- Laboratory Duplicates: A laboratory duplicate analysis was performed on 075SD-0002-0001-SD. The RPDs for aluminum (26%), chromium (21%), sodium (32%), vanadium (24%), and potassium (42%) exceeded the control limit; therefore, detects for these analytes in 075SD-0002-0001-SD were qualified as estimated, "J," and coded with an "E" qualification code. The remaining RPDs were within the control limits listed in DoD QSM Tables F-7 and F-8 of ≤20%. The control limit was only applied when results for common detects were ≥5× the LOQ. In cases where results were <5× the LOQ, the reasonable control limit of ± the LOQ was applied.

- Matrix Spike/Matrix Spike Duplicate: A matrix spike analysis was performed on 075SD-0002-0001-SD. The recoveries for arsenic (76%), barium (57%), chromium (73%), magnesium (69%), nickel (77%), antimony (25%), vanadium (66%), potassium (56%), mercury (60%), and selenium (74%) were below the control limit; therefore, the results for these analytes, all detects, were qualified as estimated with a potential low bias, "J-." The qualified results were coded with a "Q" qualification code. The remaining recoveries were within the control limits listed in DoD QSM Table G-19 of 80-120%. Matrix spike control limits were not applied when the native sample concentration exceeded the spiked amount by a factor of four or more.

  All post digestion spike recoveries were within the control limits listed in DoD QSM Table F-8 of 75-125%.

- Serial Dilution: A serial dilution analysis was performed on 075SD-0002-0001-SD for the 6020 analytes. The %Ds were within the control limits listed in DoD QSM Table F-8 of ≤10%. The serial dilution control limit is only applicable when the original sample concentration is minimally ≥50× the LOQ.

- Internal Standards: As per the DOD QSM Table F-8, the ICPMS sample internal standards intensities were within 30-120% of those in the ICV.

- Sample Result Verification: For Level IV validation, calculations were verified and the sample results reported on the sample result summary were verified against the raw data.

Any result reported between the DL and the LOQ was qualified as estimated, "J." Reported nondetects are valid to the LOD.

Due to instrument limitations, the mercury raw data did not list the sample absorbances; therefore, the reviewer was not able to calculate the sample results from the raw data. Additionally, the ICP-MS raw data did not list absorbances for the ICV, CCV, ICSAB, and MRL samples, and the %R was listed instead of the sample concentrations.

- Manual Integrations: No manual integrations were noted in the mercury analyses.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
    - Field Blanks and Equipment Rinsates: No field blank or equipment rinsate samples were associated with the validated sample.
    - Field Duplicate Samples: One field duplicate sample was collected and analyzed for metals. The RPD criterion in FWQAPP Table 3-1 of ≤50% was only applied when results for common detects were ≥5× the LOQ. In cases where results were <5× the LOQ, the reasonable control limit of ± the LOQ was applied. Except as noted below, the results were within the control limits. See Appendix C for a complete comparison of all primary and field duplicate results.

Metals field duplicate outliers				
Primary Sample	**Field Duplicate**	**Analyte**	**RPD**	**W/In LOQ**
075SD0002-0001-SD	075SD-0003-0001-SD	Beryllium	63%	N/A
		Calcium	155%	N/A
		Magnesium	67%	N/A
		Manganese	60%	N/A
		Sodium	N/A	No
		Mercury	N/A	No

7.3 Data Usability

According to the Draft Site Inspection Report prepared by ECC, the field completeness was 100%.

One data point was rejected for poor MS/MSD recoveries. In instances where a data point had multiple results, the reviewer chose the most technically sound result to report and rejected the remaining data points. These data points do not affect data quality or usability and are not included in the table below. Data with LODs/DLs that exceeded the established criteria and data estimated for quality control outliers or for detects between the DL and the LOQ were included in the table below for informational purposes only.

Table 25. Analytical completeness for RVAAP-75 validated primary data

			Number of Results					
Analysis	**Samples Analyzed**	**Analytes per Sample**	**Total**	**Rejected**	**LODs/DLs Exceeding Criteria**	**Estimated for QC Outliers**	**Estimated for Detects <LOQ**	**Percent Complete**
Explosives*	1	16	15	0	0/0	3	0	100%
Nitroguanidine	1	1	1	0	0/0	1	0	100%
Nitrocellulose	1	1	1	0	0/0	0	0	100%
PCBs	1	7	7	0	0/0	0	0	100%
SVOCs*	1	66	64	1	0/0	8	3	98.4%
VOCs	1	36	36	0	0/0	1	2	100%
Metals	1	23	23	0	0/0	12	1	100%
		Totals	**147**	**1**	**0/0**	**25**	**6**	**99.3%**

*Results rejected as duplicate data do not appear in the Total Analyte count.

The analytical completeness goal for the project established in the FWQAPP was 90% for each method. The completeness goal was met for all analyses.

7.4 Primary and Field Duplicate Comparison Summary

Primary and field duplicate sample comparisons were considered to be in reasonable agreement as only 7.2% of the field duplicate pair results were above the FWQAPP control limit of 50% for soils or +/- the LOQ for results below 5× the LOQ. There were six outliers in the metals and SVOCs. The metals results for 075SD-0003-0001-SD were larger than those for 075SD-0002-0001-SO, while the SVOC result were generally larger in 075SD0002-0001-SO. All comparison results are presented in Appendix C.

Table 26. RVAAP-75 primary/field duplicate sample comparison summary

Method	**Primary/Field Duplicate Pairs**	**Number of Analytes**	**Total Analytes**	**Results within control limits**	**Results above control limit**
Explosives*	1	16	15	15	0
Nitroguanidine	1	1	1	1	0
Nitrocellulose	1	1	1	1	0
PCBs	1	7	7	7	0
Pesticides	1	21	21	21	0
SVOCs*	1	65	62	56	6
VOCs	1	36	36	36	0
Metals	2	23 or 1	24	18	6

*Results rejected as duplicate data do not appear in the Total Analyte count.

7.5 Specific Data Concerns

Specific concerns regarding the data are noted below:

- Due to instrument limitations, the mercury raw data did not list the sample absorbances; therefore, the reviewer was not able to calculate the sample results from the raw data. Additionally, the ICP-MS raw data did not list absorbances for the ICV, CCV, ICSAB, and MRL samples, and the %R was listed instead of the sample concentrations.

In order to avoid repetition of the issues noted above, the following actions should be taken:

- MEC^X recommends the laboratory be requested to alter the IPC-MS and mercury instrument set up in order to report mercury and ICP-MS raw absorbances and ICP-MS ICV, CCV, ICSAB, and MRL concentrations.

8 BUILDING 1037, LAUNDRY WASTE WATER SUMP, RVAAP-77

8.1 Current Investigation

ECC completed an SI at Building 1037 Laundry Waste Water Sump (RVAAP-77). The SI for RVAAP-77 was conducted in accordance with the USEPA *Interim Final Guidance for Performing Site Inspections Under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)* (USEPA 1992). The HRR identified historic uses and potential environmental concerns at this site with respect to possible HTRW and/or MEC issues (SAIC 2011).

The HHR (SAIC 2011) identified RVAAP-77 as a candidate for further investigation due to a waste water sump that received discharge water from the former laundry operation that may have resulted in a release of contaminants. The data validated in this report are part of the initial intrusive SI at RVAAP-77 conducted to assess the potential presence of contamination. The total sample counts, samples selected for data validation, and the field duplicates are presented in the tables below.

Table 27. Total sample count for RVAAP-77

Matrix	Primary Samples	Field Duplicates	Split Samples	Explosives	Propellants	PCBs	Pesticides	SVOCs	VOCs	Metals
Soil	9	1	0	9	9	1	1	1	1	1

Table 28. RVAAP-77 validated samples and methods

Sample ID	SDG	Matrix	Collected	Explosives	Propellants	PCBs	Pesticides	SVOCs	VOCs	Metals
077SS-0001M-0001-SO	240-17525-1	Soil	11/11/2012	x	x	x	x	x	x	x

Table 29. RVAAP-77 field duplicate samples

Duplicate Sample ID	Parent Sample
077SS-0002M-0001-SO	077SS-0001M-0001-SO

8.1.1 Sample Collection

According to the laboratory Sample Receipt Form, custody seals were not utilized; however, in reviewing the relinquish and receipt times, it appeared the samples were transferred to the laboratory by courier. Other than listed below, no sample collection issues were noted.

- Some corrections made to the chains-of-custody were initialed but not dated and some were neither initialed nor dated.

- Some corrections were made by overwriting the original entry.

8.1.2 Data Completeness

Data completeness for the project described in this report was found to be generally acceptable as no deliverables were missing from the SDGs reviewed.

8.1.3 Preservation and Holding Time Requirements

The sample coolers were received within control limit of 4 ±2°C. All other preservation requirements were met. All holding times, as listed in Table 4, were met.

8.1.4 Detection Limit Requirements

LODs and DLs for nondetected analytes were compared against the most stringent CUGs listed in Tables 5-8, 5-9, and 5-10 of *Final Facility-Wide Human Health Cleanup Goals for the Ravenna Army Ammunition Plant* (2010) or the RSLs if no CUG was listed. No LODs or DLs exceeded criteria.

8.2 RVAAP-77 Data Quality Evaluation

This section summarizes the data quality of validated samples for each analytical method evaluated.

8.2.1 Explosives

Nine primary soil samples and one field duplicate sample were analyzed by TA-West Sacramento for explosives by USEPA SW-846 Method 8330B. One primary soil sample was validated at Level IV.

- MDL studies were not evaluated as part of this project.
- Calibration:
    - The primary column initial calibration average %RSDs for RDX and 2-nitrotoluene exceeded the control limit at 20% and 16%, respectively; therefore, the nondetected results for these compounds were qualified as estimated, "UJ," in 077SS-0001M-0001-SO. The qualified results were coded with a "C" qualification code. The remaining initial calibration average %RSDs were within the control limits listed in DoD QSM Table F-3 of ≤15%, or the linear regression r^2 values were ≥0.990.
    - The second source initial calibration verification standard recoveries were within the control limit listed in DoD QSM Table F-3 of ±20%.
    - The CCV standard %Ds were within the control limits listed in DoD QSM Table F-3 of ±20%.

- Although not required by the DoD QSM, a standard of 3× the DL is required by the FWQAPP. Low-level MRL standards were analyzed in association with the validated samples and the results were within the reasonable control limits of 70-130%.

- Blanks: The method blank associated with the validated sample had no target compound detects above the control limit listed in DoD QSM Table F-3 of one-half the LOQ.

- Laboratory Control Samples: Recoveries were within the control limits listed in DoD QSM Tables G-2 and G-13 and within the reasonable laboratory control limits for nitroglycerin (76-116%) and PETN (76-116%).

- Surrogate Recovery: As no surrogate control limit was listed in the DoD QSM, surrogate recoveries were assessed against the reasonable laboratory-established control limits of 78-118%. Recoveries were within the control limits.

- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on sample 077SS-0001M-0001-SO. The recoveries were within the control limits listed in DoD QSM Table s G-2 and G-13 and within the reasonable laboratory control limits for nitroglycerin (76-116%) and PETN (76-116%). The RPDs were within the control limit listed in DoD QSM Table F-3 of ≤20%.

- Compound Identification: Compound identification was verified for the sample validated at a Level IV. Review of sample chromatograms and retention times indicated no problems with target compound identification.

- Compound Quantification and Reported Detection Limits: As no target compounds were detected in the sample validated at Level IV, compound quantification was verified for a portion of the LCS results. The LOQs were supported by the low point of the initial calibration and the laboratory DLs. Any result reported between the DL and the LOQ was qualified as estimated, "J." Reported nondetects are valid to the LOD.

  Confirmation analyses were performed; however, no compounds were confirmed.

  Target compounds 2,4-dinitrotoluene, 2,6-dinitrotoluene, and nitrobenzene were reported by both Method 8330B and 8270C in sample 077SS-0001M-0001-SO. As there were no detects for these compounds; the reviewer chose to report the results with the lowest LODs. The 8330B result for nitrobenzene was rejected, "R," as duplicate data and coded with a "D" qualification code. The 8330B results for 2,4-dinitrotoluene and 2,6-dinitrotoluene were retained.

- System Performance: Review of the raw data indicated no problems with system performance.

- Manual Integrations: Some manual integrations were performed for the initial calibrations and low-level CCVs. All manual integrations were performed in order to report

incompletely resolved peaks or to account for baseline anomalies and were deemed acceptable by the reviewer.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

    - Field Blanks and Equipment Rinsates: Sample 070-0057-0001-Source Water was identified as the field blank and sample 076-0067-0001-ER was the equipment rinsate associated with the validated site sample. The field blank and equipment rinsate had no target compound detects.

    - Field Duplicates: One field duplicate sample was collected and analyzed for explosive compounds. The RPD criterion in FWQAPP Table 3-1 of ≤50% was only applied when results for common detects were ≥5× the LOQ. In cases where results were <5× the LOQ, the reasonable control limit of ± the LOQ was applied. All results were within the control limits. See Appendix C for a complete comparison of all primary and field duplicate results.

8.2.2 Propellants

Nine primary soil samples and one field duplicate sample were analyzed by TA-West Sacramento for nitroguanidine by USEPA SW-846 Method 8330 and for nitrocellulose by laboratory SOP WS-WC-0050. One primary soil sample was validated at Level IV.

- MDL studies were not evaluated as part of this project.

- Calibration:

    - The nitroguanidine initial calibration average percent %RSD was within the control limit listed in DoD QSM Table F-2 of ≤20%. Nitrocellulose linear regression r values were within the control limit listed in the DoD QSM Table F-11 of ≥0.995.

    - The nitroguanidine second source ICV recovery was within the control limits listed in DoD QSM Table F-2 of 85-115%. The nitrocellulose ICV recoveries were within the control limits listed in DoD QSM Table F-11 of 90-110%.

    - The nitroguanidine CCV recoveries were within the control limits listed in DoD QSM Table F-2 of 85-115%. The nitrocellulose CCV recoveries were within the control limits listed in DoD QSM Table F-11 of 90-110%.

    - Although not required by the DoD QSM, a standard of 3× the DL is required by the FWQAPP. MRL recoveries associated with the sample were within the reasonable control limits of 70-130%.

- Blanks: The method blanks had no target compound detects above the control limits listed in DoD QSM Tables F-2 and F-11 of one-half the LOQ.

- Laboratory Control Samples: No nitroguanidine or nitrocellulose LCS control limits are listed in the DoD QSM; therefore, the laboratory control limits were used to assess the results. All nitroguanidine recoveries were within the control limits of 72-121% for soils. The nitrocellulose recoveries were within the laboratory-established control limits of 34-115% for soils.

- Surrogate Recovery: A surrogate was not required for the analysis of nitroguanidine or nitrocellulose.

- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on sample 070SB-0006M-0001-SO for both propellants. The recoveries were within the laboratory-established control limits of 72-121% for nitroguanidine and 34-115% for nitrocellulose. Both RPDs were ≤20%.

- Compound Identification: Compound identification was verified for the sample validated at a Level IV. Review of the sample chromatograms and retention times indicated no problems with target compound identification.

- Compound Quantification and Reported Detection Limits: Compound quantification was verified for the sample validated at a Level IV. The LOQs were supported by the low point of the initial calibration and the laboratory DLs. Any result reported between the DL and the LOQ was qualified as estimated, "J." Reported nondetects are valid to the LOD.

  Nitroguanidine was not detected in the validated sample; therefore, confirmation analysis was not required.

- System Performance: Review of the raw data indicated no problems with system performance.

- Manual Integrations: Some manual integrations were performed for nitroguanidine. The manual integrations were performed to correct baseline integration. The manual integrations were deemed acceptable by the reviewer.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

  - Field Blanks and Equipment Rinsates: Sample 070-0057-0001-Source Water was identified as the field blank and sample 076-0067-0001-ER was the equipment rinsate associated with the validated site sample. The field blank and equipment rinsate had no target compound detects.

- Field Duplicates: One field duplicate sample was collected and analyzed for propellants. The RPD criterion in FWQAPP Table 3-1 of ≤50% was only applied when results for common detects were ≥5× the LOQ. In cases where results were <5× the LOQ, the reasonable control limit of ± the LOQ was applied. All results were within the control limits. See Appendix C for a complete comparison of all primary and field duplicate results.

8.2.3 Polychlorinated Biphenyls (PCBs)

One primary soil sample and one field duplicate sample were analyzed by TA-North Canton for PCBs by USEPA SW-846 Method 8082. The primary soil sample was validated at Level IV.

- MDL studies were not evaluated as part of this project.
- Calibration: Calibration criteria listed in the DoD QSM Table F-2 were met.
  - Initial calibration average %RSDs were within the control limit of ≤20%.
  - The second source ICV recoveries were within the control limit of ±20% for all applicable Aroclors.
  - The CCV recoveries were within the control limit of ±20%.
  - Although not required by the DoD QSM, a standard of 3× the DL is required by the FWQAPP. MRL standard recoveries were within the reasonable control limit of ±30%.
- Blanks: The method blank associated with the validated sample had no target compound detects above the control limit listed in the DoD QSM Table F-2, of one-half the LOQ.
- Laboratory Control Samples: Recoveries for Aroclor 1016 and Aroclor 1260 were within the control limits listed in DoD QSM Table G-17.
- Surrogate Recovery: Recoveries were within the control limits listed in DoD QSM Table G-3 of 60-125%.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on validated sample 077SS-0001M-0001-SO. Recoveries were within the control limits listed in DoD QSM Table G-17 and RPDs for both Aroclors were within the control limit listed in the DoD QSM Table F-2 of ≤30%.
- Compound Identification: Compound identification was verified for the validated sample. Review of the sample chromatograms, standards, and retention times indicated no problems with target compound identification.
- Compound Quantification and Reported Detection Limits: Compound quantification was verified for the validated sample. The LOQs were supported by the low point of the initial

calibration and the laboratory DLs. Any result reported between the DL and the LOQ was qualified as estimated, "J." Reported nondetects are valid to the LOD.

- System Performance: Review of the raw data indicated no problems with system performance.

- Manual Integrations: Some routine manual integrations were performed for the calibration and QC data associated with the sample data, primarily to correct baseline integration and/or separate coeluting peaks. All manual integrations reviewed were deemed appropriate by the reviewer.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

    - Field Blanks and Equipment Rinsates: Sample 070-0057-0001-Source Water was identified as the field blank and sample 076-0067-0001-ER was the equipment rinsate associated with the validated site sample. The field blank and equipment rinsate had no target compound detects.

    - Field Duplicate Samples: One field duplicate sample was collected and analyzed for PCBs. The RPD criterion in FWQAPP Table 3-1 of ≤50% was only applied when results for common detects were ≥5× the LOQ. In cases where results were <5× the LOQ, the reasonable control limit of ± the LOQ was applied. All results were within the control limits. See Appendix C for a complete comparison of all primary and field duplicate results.

8.2.4 Pesticides

One primary soil sample and one field duplicate sample were analyzed by TA-North Canton for pesticides by USEPA SW-846 Method 8081. The primary soil sample was validated at Level IV.

- MDL studies were not evaluated as part of this project.

- Calibration: Calibration criteria listed in the DoD QSM Table F-2 were met, with one exception noted below.

    - Initial calibration average %RSDs were within the control limit of ≤20%.

    - The performance evaluation mixture (PEM) %breakdown results were within the control limit of ≤15%.

    - Both columns had individual toxaphene peaks with %Ds exceeding the control limit. Column CLP-1 had two outliers at -20.9% and 53.7%, and column CLP-2 had two outliers at -34.0% and 88.2%. The nondetected result for toxaphene in sample

077SS-0001M-0001-SO was qualified as estimated, "UJ." The remaining second source ICV recoveries were within the control limit of ±20%.

- The CCV standard recoveries were within the control limit of ±20%.
- Although not required by the DoD QSM, a standard of 3× the DL is required by the FWQAPP. MRL standard recoveries affecting sample data were within the reasonable control limit of ±30%.

- Blanks: The method blank associated with the validated sample had no target compound detects above the control limit listed in the DoD QSM Table F-2, of one-half the LOQ.
- Laboratory Control Samples: Recoveries were within the control limits listed in DoD QSM Table G-15. Toxaphene was not spiked in the LCS sample.
- Surrogate Recovery: Due to dilution of sample 077SS-0001M-0001-SO, the surrogate spike was considered diluted out and recoveries were not evaluated.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on validated sample 077SS-0001M-0001-SO; however, due to dilution, the spike was considered diluted out and recoveries and RPDs were not evaluated. Toxaphene was not spiked in the MS/MSD samples.
- Compound Identification: Compound identification was verified for the validated sample. Review of the sample chromatograms, standards, and retention times indicated no problems with target compound identification.
- Compound Quantification and Reported Detection Limits: Compound quantification was verified for the validated sample. The LOQs were supported by the low point of the initial calibration and the laboratory DLs. Any result reported between the DL and the LOQ was qualified as estimated, "J." Reported nondetects are valid to the LOD. According to the case narrative, sample 077SS-0001M-0001-SO was analyzed at a 10× dilution due to the nature of the sample matrix.
- System Performance: Review of the raw data indicated no problems with system performance.
- Manual Integrations: Some routine manual integrations were performed for the calibration and QC data, primarily due to poor baseline integration. All manual integrations reviewed were deemed appropriate by the reviewer.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

- Field Blanks and Equipment Rinsates: Sample 070-0057-0001-Source Water was identified as the field blank and sample 076-0067-0001-ER was the equipment rinsate associated with the validated site sample. The field blank and equipment rinsate had no target compound detects.

- Field Duplicate Samples: One field duplicate sample was collected and analyzed for pesticide compounds. The RPD criterion in FWQAPP Table 3-1 of ≤50% was only applied when results for common detects were ≥5× the LOQ. In cases where results were <5× the LOQ, the reasonable control limit of ± the LOQ was applied. All results were within the control limits. See Appendix C for a complete comparison of all primary and field duplicate results.

8.2.5 Semivolatile Organic Compounds (SVOCs)

One primary soil sample and one field duplicate sample were analyzed by TA-North Canton for SVOCs by USEPA Method 8270C. The primary soil sample was validated at Level IV.

- MDL studies were not evaluated as part of this project.

- GC/MS Tuning: The DFTPP tunes met the method abundance criteria. The samples were analyzed within 12 hours of the DFTPP injection time.

- Calibration: Calibration criteria listed in the DoD QSM Table F-4 were met, with exceptions affecting sample results noted in the text below.

  - Initial calibration average RRFs and ICV and CCV RRFs were within method control limits of ≥0.050 for SPCCs. All initial calibration %RSDs were within the control limits of ≤30% for CCCs and ≤15% for remaining compounds, or linear regression r^2 values ≥0.990.

  - All second source ICV standard recoveries affecting sample data were within the control limit of ±20%, with the exception of the recovery of 79.9% for 3,3'-dichlorobenzidine. The nondetected result for 3,3'-dichlorobenzidine in sample 077SS-0001M-0001-SO was qualified as estimated, "UJ," and coded with a "C" qualification code.

  - Continuing calibration %Ds affecting sample data were within the control limit of ≤20%.

  - Although not required by the DoD QSM, a standard of 3× the DL is required by the FWQAPP. MRL standard recoveries were within the reasonable control limit of ±30%, with the exception of no recovery of n-nitrosodiphenylamine in the closing MRL. The nondetected result for n-nitrosodiphenylamine in sample 077SS-0001M-0001-SO was rejected, "R," and coded with a "C" qualification code.

- Blanks: The method blank had a detect below the LOQ for bis(2-ethylhexyl)phthalate at 31(J) µg/Kg; however, bis(2-ethylhexyl)phthalate was not detected in the validated

sample. The method blank had no target compound detects above the control limits listed in DoD QSM Table F-4 of one-half the LOQ for target compounds, and no common laboratory contaminants detected above the LOQ.

- Laboratory Control Samples: All LCS recoveries were within the control limits listed in DoD QSM Tables G-2 (poor performers) and G-7. The reviewer noted hexachlorocyclopentadiene was not spiked in the LCS.

- Surrogate Recovery: All surrogate recoveries were within the control limits listed in the DoD QSM Tables G-2 (poor performers) or G-3.

- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on validated sample 077SS-0001M-0001-SO. Benzoic acid was not recovered in the MS or MSD; therefore, the nondetected parent sample result was rejected, "R." The qualified result was coded with a "Q" qualification code. Remaining recoveries affecting parent sample results were within the control limits listed in DoD QSM Tables G-2 (poor performers) and G-7. The reviewer noted hexachlorocyclopentadiene was not spiked in the MS/MSD. RPDs were within the control limit of ≤30% listed in DoD QSM Table F-4**.**

- Internal Standards Performance: The internal standard area counts and retention times were within the DoD QSM Table F-4 control limits established by the midpoint initial calibration standard: ±30 seconds for retention times and -50% / +100% for internal standard areas.

- Compound Identification: Compound identification was verified for the sample validated at Level IV. Review of the sample chromatogram, retention times, and spectra indicated no problems with target compound identification.

- Compound Quantification and Reported Detection Limits: Compound quantification was verified for the sample validated at Level IV. The sample had a 2-ml final extract volume, resulting in an effective 2× dilution. The sample was analyzed at an additional 4× dilution for high concentrations of target compounds. The LOQs were supported by the low point of the initial calibration and the laboratory DLs. Any result reported between the DL and the LOQ was qualified as estimated, "J," by the laboratory. Reported nondetects are valid to the LOD.

  Target compounds 2,4-dinitrotoluene, 2,6-dinitrotoluene, and nitrobenzene were reported by both Method 8330B and 8270C in sample 077SS-0001M-0001-SO. As there were no detects for these compounds; the reviewer chose to report the results with the lowest LODs. The 8270C results for 2,4-dinitrotoluene and 2,6-dinitrotoluene were rejected, "R," as duplicate data and coded with a "D" qualification code. The 8270C result for nitrobenzene was retained.

- System Performance: Review of the raw data indicated no problems with system performance.

- Manual Integrations: Some routine manual integrations were performed for the samples, and for calibration and QC data associated with the sample data, primarily due to peaks missed or incorrectly chosen by the data system, split peaks, or poor baseline integration. All manual integrations reviewed were deemed appropriate by the reviewer.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

    - Field Blanks and Equipment Rinsates: Sample 070-0057-0001-Source Water was identified as the field blank and sample 076-0067-0001-ER was the equipment rinsate associated with the validated site sample. The field blank and equipment rinsate had no target compound detects.

    - Field Duplicate Samples: One field duplicate sample was collected and analyzed for SVOCs. The RPD criterion in FWQAPP Table 3-1 of ≤50% was only applied when results for common detects were ≥5× the LOQ. In cases where results were <5× the LOQ, the reasonable control limit of ± the LOQ was applied. All results were within the control limits. See Appendix C for a complete comparison of all primary and field duplicate results.

8.2.6 Volatile Organic Compounds (VOCs)

One primary soil sample and one field duplicate sample were analyzed by TA-North Canton for volatile compounds by USEPA Method 8260B. The primary soil sample was validated at Level IV.

- MDL studies were not evaluated as part of this project.

- GC/MS Tuning: The BFB tunes met the method abundance criteria. The samples were analyzed within 12 hours of the BFB injection time.

- Calibration: Calibration criteria listed in DoD QSM Table F-4 were met.

    - Initial calibration average RRFs and ICV and CCV RRFs were within the control limits of ≥0.30 for chlorobenzene and 1,1,2,2-tetrachloroethane, and ≥0.10 for chloromethane, bromoform, and 1,1-dichloroethane.

    - All initial calibration %RSDs were within the method control limits of ≤30% for the CCCs and ≤15% for remaining compounds, or linear regression r^2 values ≥0.990.

    - All second source initial calibration verification standard recoveries were within the control limit of ±20%.

    - Continuing calibration %Ds affecting validated sample data were within the control limit of ≤20%

  - Although not required by the DoD QSM, a standard of 3× the DL is required by the FWQAPP. MRL standard recoveries affecting sample data were within the reasonable control limit of ±30%.

- Blanks: The method blank associated with the validated sample had no target compound detects above the control limits listed in DoD QSM Table F-4 of one-half the LOQ, and no common laboratory contaminants detected above the LOQ.

- Laboratory Control Samples: LCS recoveries were within the control limits listed in DoD QSM Table G-4.

- Surrogate Recovery: Surrogate recoveries affecting sample data were within the control limits listed in DoD QSM Table G-3.

- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on validated sample 077SS-0001M-0001-SO. Recoveries affecting sample data were within the control limits listed in DoD QSM Table G-4. RPDs are calculated based on amounts recovered, rather than percent recoveries, and due to the difference in sample amounts of the MS and MSD, 26 of 34 RPDs marginally exceeded the control limit listed in DoD QSM Table F-4, of ≤30%. When the difference in sample amounts was accounted for, all RPDs were within the control limit.

- Internal Standards Performance: The internal standard area counts and retention times were within DoD QSM Table F-4 control limits established by the midpoint initial calibration standard: ±30 seconds for retention times and -50% / +100% for internal standard areas.

- Compound Identification: Compound identification was verified for the validated sample. Review of the sample chromatogram, retention times, and spectra indicated no problems with target compound identification.

- Compound Quantification and Reported Detection Limits: Compound quantification was verified for the validated sample. The LOQs were supported by the low point of the initial calibration and the laboratory DLs. Any result reported between the DL and the LOQ was qualified as estimated, "J," by the laboratory. Reported nondetects are valid to the LOD.

- System Performance: Review of the raw data indicated no problems with system performance.

- Manual integrations: Manual integrations were not performed for the validated sample or for associated calibration and QC samples.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

- Trip Blanks: The trip blank associated with the validated sample in this SDG had no reportable detects above the DL.

- Field Blanks and Equipment Rinsates: Sample 070-0057-0001-Source Water was identified as the field blank and sample 076-0067-0001-ER was the equipment rinsate associated with the validated site sample. The field blank had detects below the LOQ for acetone, bromodichloromethane, toluene, dibromochloromethane, 2-butanone, and chloroform, and the equipment rinsate also had a detect below the LOQ for chloroform; however, none of the field QC contaminants were present in the site sample.

- Field Duplicate Samples: One field duplicate sample was collected and analyzed for VOCs. The RPD criterion in FWQAPP Table 3-1 of ≤50% was only applied when results for common detects were ≥5× the LOQ. In cases where results were <5× the LOQ, the reasonable control limit of ± the LOQ was applied. All results were within the control limits. See Appendix C for a complete comparison of all primary and field duplicate results.

8.2.7 Metals

A total of 1 primary soil sample and 1 field duplicate sample were analyzed by TA-North Canton for metals by USEPA Methods 6020 and 7471A. A single primary soil sample was validated at Level IV.

- MDL studies were not evaluated as part of this project.

- Calibration: Except as noted below, calibration criteria were met.

  - As per DoD QSM Table F-8, the mass calibrations were ≤0.1 amu of the true values and the resolutions were <0.9 amu at full width at 10% peak height. With one exception, the %RSDs were within the control limit listed in the DoD QSM Table F-8 of ≤5%. The ^{137}barium %RSD was 15.47%; therefore, barium detected in 077SS-0001M-0001-SO was qualified as estimated, "J," and coded with an "M" qualification code.

  - Initial calibration: Linear regression correlation coefficients were within the control limit listed in the DoD QSM Tables F-7 and F-8 of ≥0.995.

  - The ICPMS ICV and CCV recoveries were within the control limits listed in DoD QSM Table F-8 of 90-110%. The mercury ICV and CCV recoveries were within the control limits listed in DoD QSM Table F-7 of 90-110% and 80-120%, respectively.

  - CRI/MRL recoveries affecting sample results were within the control limits listed in DoD QSM Tables F-7 and F-8 of 80-120%.

- Blanks: Method blanks had no applicable detects above the control limits listed in DoD QSM Tables F-7 and F-8 of one-half the LOQ or greater than one-tenth the amount measured in any sample. CCBs had no detects above the control limit listed in DoD QSM Tables F-7 and F-8 of greater than the LOD.

- Interference Check Samples: ICPMS ICSA and ICSAB recoveries were within the control limits listed in DoD QSM Table F-8 of 80-120%. Except as noted below, there were no analytes affecting sample results detected in the ICSA above the control limit listed in DoD QSM Table F-8 of >LOD.

  When the interferents were present in the samples at similar concentration to the ICSA, the samples were further reviewed for possible matrix interference, based on detects for unspiked compounds in the ICSA. If the unspiked compounds were present in the samples at concentrations within 10× of the ICSA detect, the results were qualified. Results listed in the table below, all detects, were qualified as estimated, "J," and coded with an "I" qualification code. When no other qualifications with conflicting bias were assigned, the results were qualified as estimated with a potential positive bias, "J+."

Samples qualified for ICSA contamination		
Analyte	**Detect (µg/L)**	**Qualified sample**
Antimony	0.259	077SS-0001M-0001-SO
Cadmium	0.249	
Silver	0.095	

- Laboratory Control Samples: The recoveries were within the control limits listed in DoD QSM Table G-19 of 80-120%.

- Laboratory Duplicates: Laboratory duplicate analyses were performed on 069SS-0001M-0001-S0 and 077SS-0001M-0001-SO for all analytes. The results were only assessed for common detects ≥5× the LOQ. In cases where results were <5× the LOQ, the reasonable control limit of ± the LOQ was applied. Except as listed below, RPDs were within the control limits listed in DoD QSM Tables F-7 and F-8 of ≤20%. Results listed below were qualified as estimated, "J," for detected and, "UJ," for nondetects. The qualified results were coded with an "E" qualification code.

Samples qualified for laboratory duplicate outliers			
Parent sample	**Analyte**	**RPD**	**Qualified sample**
077SS-0001M-0001-SO	Calcium	21%	077SS-0001M-0001-SO
	Sodium	N/A, >±LOQ	

- Matrix Spike/Matrix Spike Duplicate: Matrix spike analyses were performed on 077SS-0001M-0001-SO for all analytes. Except as noted below, recoveries were within the control limits listed in DoD QSM Table G-19 of 80-120%. Matrix spike control limits were not applied when the native sample concentration exceeded the spiked amount by a factor of four or more.

The results listed in the table below, all detects, were qualified as estimated, "J," and coded with a "Q" qualification code. When no other qualifications with conflicting bias were assigned to a result, detected results with low recoveries were assigned a negative bias, "J-," and detected results with high recoveries were assigned a positive bias, "J+."

Samples qualified for matrix spike recovery outliers			
Parent Sample	**Analyte**	**%R**	**Sample qualified**
077SS-0001M-0001-SO	Arsenic	78%	077SS-0001M-0001-SO
	Cadmium	79%	
	Copper	317%	
	Magnesium	132%	
	Antimony	21%	
	Potassium	122%	
	Selenium	72%	

Post digestion spike recoveries for ICPMS metals were all within the control limits listed in DoD QSM Table F-8 of 75-125%.

- Serial Dilution: Except as noted below, serial dilution %Ds were within the control limits listed in DoD QSM Table F-8 of ≤10%. The serial dilution control limit is only applicable when the original sample concentration is minimally ≥50× the LOQ.

  Results listed in the table below were qualified as estimated, "J." The qualified results were coded with an "A" qualification code.

Samples qualified for serial dilution %D outliers			
Parent Sample	**Analyte**	**%Ds**	**Qualified Samples**
077SS-0001M-0001-SO	calcium	12%	077SS-0001M-0001-SO

- Internal Standards: All ICPMS sample internal standards intensities were within 30-120% of those in the ICV, as per the DOD QSM Table F-8. Yttrium (^{89}Y) was spiked into the QC samples but not the site samples.

- Sample Result Verification: For Level IV validation, calculations were verified and the sample result reported on the sample result summary was verified against the raw data. Any result reported between the DL and the LOQ was qualified as estimated, "J." Reported nondetects are valid to the LOD.

  Due to instrument limitations, the mercury raw data did not list the sample absorbances; therefore, the reviewer was not able to calculate the sample results from the raw data. Additionally, the ICP-MS raw data did not list absorbances for the ICV, CCV, ICSAB, and MRL samples, and the %R was listed instead of the sample concentrations.

- Manual Integrations: No manual integrations were noted in the mercury analyses.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

    - Field Blanks and Equipment Rinsates: Sample 070-0057-0001-Source Water was identified as the field blank and sample 076-0067-0001-ER was the equipment rinsate associated with the validated site sample. Sodium was detected at 1600 µg/L in sample 070-0057-0001-Source Water; therefore, sodium detected in 077SS-0001M-0001-SO was qualified as nondetected, "U," at the level of contamination. The qualified result was coded with an "F" qualification code. There were other detects in the field QC samples, but none at sufficient concentration to qualify the site sample.

    - Field Duplicate Samples: One field duplicate sample was collected and analyzed for metals. The RPD criterion in FWQAPP Table 3-1 of ≤50% was only applied when results for common detects were ≥5× the LOQ. In cases where results were <5× the LOQ, the reasonable control limit of ± the LOQ was applied. All results were within the control limits. See Appendix C for a complete comparison of all primary and field duplicate results.

8.3 Data Usability

According to the Draft Site Inspection Report prepared by ECC, the field completeness was 100%.

Two data points were rejected for poor MS/MSD and calibration standard recoveries. In instances where a data point had multiple results, the reviewer chose the most technically sound result to report and rejected the remaining data points. These data points do not affect data quality or usability and are not included in the table below. Data with LODs that exceeded the established criteria and data estimated for quality control outliers or for detects between the DL and the LOQ were included in the table below for informational purposes only.

Table 30. Analytical completeness for RVAAP-77 validated primary data

			Number of Results					Percent Complete
Analysis	**Samples Analyzed**	**Analytes per Sample**	**Total**	**Rejected**	**LODs/DLs Exceeding Criteria**	**Estimated for QC Outliers**	**Estimated for Detects <LOQ**	
Explosives*	1	16	15	0	0/0	2	0	100%
Nitroguanidine	1	1	1	0	0/0	0	0	100%
Nitrocellulose	1	1	1	0	0/0	0	0	100%
PCBs	1	7	7	0	0/0	0	0	100%
Pesticides	1	21	21	0	0/0	1	0	100%

			Number of Results					Percent Complete
Analysis	**Samples Analyzed**	**Analytes per Sample**	**Total**	**Rejected**	**LODs/DLs Exceeding Criteria**	**Estimated for QC Outliers**	**Estimated for Detects <LOQ**	
SVOCs	1	66	64	2	0/0	1	2	96.9%
VOCs	1	36	36	0	0/0	0	0	100%
Metals	1	23	23	0	0/0	11	0	100%
		Totals	**168**	**2**	**0/0**	**15**	**2**	**98.8%**

* Total analyte counts affected by rejected data.

The analytical completeness goal for the project established in the FWQAPP was 90% for each method. The completeness goal was met for all analyses.

8.4 Primary and Field Duplicate Comparison Summary

Primary and field duplicate sample comparisons were considered to be in good agreement as all results were within the control limits listed in the FWQAPP control limit of 50% for soils or +/- the LOQ for results below 5× the LOQ. All comparison results are presented in Appendix C.

Table 31. RVAAP-77 primary/field duplicate sample comparison summary

Method	Primary/Field Duplicate Pairs	Number of Analytes	Total Analytes	Results within control limits	Results above control limit
Explosives*	1	16	15	16	0
Nitroguanidine	1	1	1	1	0
Nitrocellulose*	1	1	1	1	0
PCBs	1	7	7	7	0
Pesticides	1	21	21	21	0
SVOCs*	1	66	62	62	0
VOCs	1	36	36	36	0
Metals	1	23	23	23	0

*Total analyte counts affected by rejected data.

8.5 Specific Data Concerns

Specific concerns regarding the data are noted below:

- Due to instrument limitations, the mercury raw data did not list the sample absorbances; therefore, the reviewer was not able to calculate the sample results from the raw data. Additionally, the ICP-MS raw data did not list absorbances for the ICV, CCV, ICSAB, and MRL samples, and the %R was listed instead of the sample concentrations.

In order to avoid repetition of the issues noted above, the following actions should be taken:

- MEC^X recommends the laboratory be requested to alter the IPC-MS and mercury instrument set up in order to report mercury and ICP-MS raw absorbances and ICP-MS ICV, CCV, ICSAB, and MRL concentrations.

9 FORMER BUILDINGS 1031 AND 1039, RVAAP-83

9.1 Current Investigation

ECC completed an SI at Former Buildings 1031 and 1039. The SI for was conducted in accordance with the *Final Site Inspection/Remedial Investigation Work Plan Addendum for CC RVAAP-71 and CC RVAAP-83* (ECC 2013) and the USEPA *Interim Final Guidance for Performing Site Inspections Under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)* (USEPA 1992).

CC RVAAP-83 is comprised of the Former Building 1031 (Hospital) and the Former Building 1039 (Laboratory). Former Building 1031 received a No Further Action; therefore, no additional investigation activities were required. Former Laboratory Building 1039 (RVAAP-83) was identified as a candidate for further investigation in the HHR due to historical practices. The HHR evaluation determined there were no historic uses or potential environmental concerns at this site with respect to possible HTRW and/or MEC issues (ECC 2012).

The data validated in this report are part of the initial intrusive SI at RVAAP-83 conducted to assess the potential presence of contamination specifically related to the former sump and drainage area identified at Former Laboratory Building 1039. The total sample counts, samples selected for data validation, and the field duplicates are presented in the tables below.

Table 32. Total sample count for RVAAP-83

Matrix	Primary Samples	Field Duplicates	Split Samples	Explosives	Propellants	PCBs	Pesticides	SVOCs	VOCs	Metals
Soil	12	1	2	12	12	1	1	12	12	12

Table 33. RVAAP-83 validated samples and methods

Sample ID	SDG	Matrix	Collected	Explosives	Propellants	PCBs	SVOCs	VOCs	Metals
083SB-0002M-0001-SO	99211	Soil	8/12/2013					x	
083SB-0005M-0001-SO	99211	Soil	8/12/2013	x	x		x	x	x
083SB-0012M-0001-SO	99211	Soil	8/12/2013			x			

Table 34. RVAAP-83 field duplicate samples

Duplicate Sample ID	Parent Sample
083SB-0006-0001SO	083SB-0005-0001-SO

9.1.1 Sample Collection

The chains-of-custody were appropriately signed and dated by field and laboratory personnel. Custody seals were intact. Other than listed below, no sample collection issues were noted.

- A correction was made to the chain-of-custody by overwriting the original entry. The correction was neither initialed nor dated.
- Sample 083SB-0002M-0001-SO was listed on the chain-of-custody twice. One listing requested only VOCs, the other requested the remaining analyses.

9.1.2 Data Completeness

Data completeness for the project described in this report was found to be generally acceptable as no deliverables were missing from the SDGs reviewed.

9.1.3 Preservation and Holding Time Requirements

A portion of the sample coolers were received at temperatures nominally below the 4 ±2°C control limit; however, as the samples were not noted to be frozen or damaged, no qualifications were required. All remaining method preservation requirements were met.

All holding times, as listed in Table 4, were met.

9.1.4 Detection Limit Requirements

LODs and DLs for nondetected analytes were compared against the most stringent CUGs listed in Tables 5-8, 5-9, and 5-10 of *Final Facility-Wide Human Health Cleanup Goals for the Ravenna Army Ammunition Plant* (2010) or the RSLs if no CUG was listed. The table below lists the number of LODs and DLs that exceeded criteria.

Table 35. RVAAP-83 LOD/DL exceedances

Method	LOD	DL
Explosives	0	0
Propellants	0	0
PCBs	0	0
SVOCs	1	0
VOCs	0	0
Metals	0	0

The results with the LOD exceeding project criteria may be usable for their intended purposes; however, it is dependent on the final data user to make this determination on a case-by-case basis.

9.2 RVAAP-83 Data Quality Evaluation

This section summarizes the data quality of validated samples for each analytical method evaluated.

9.2.1 Explosives

A total of 12 primary soil samples and 1 field duplicate sample were analyzed by CT for explosives by USEPA SW-846 Method 8330B. A single primary soil sample was validated at Level IV.

- MDL studies were not evaluated as part of this project.
- Calibration:
    - The primary column correlation coefficients were within the control limit listed in DoD QSM Table F-3 of ≥0.990.
    - The second source initial calibration verification standard recoveries were within the control limit listed in DoD QSM Table F-3 of ±20%.
    - The CCV standard %Ds were within the control limits listed in DoD QSM Table F-3 of ±20%.
    - Although not required by the DoD QSM, a standard of 3× the DL is required by the FWQAPP. The recoveries for 4-amino-2,6-dinitrotoluene (68% and 60%) and 2-nitrotoluene (57%) were below the control limit; therefore the results for these analytes, both nondetects, were qualified as estimated, "UJ," and coded with a "C" qualification code. The remaining recoveries were within the reasonable control limits of 70-130%.

      The laboratory also ran two DL standards. 3,5-dinitroaniline was not detected in one of the DL standards; therefore, nondetected 3,5-dinitroaniline in the sample was rejected, "R," and coded with a "C" qualification code. All other analytes were detected in the DL standards.
- Blanks: The method blank associated with the validated sample had no target compound detects above the control limit listed in DoD QSM Table F-3 of one-half the LOQ.
- Laboratory Control Samples: Recoveries were within the control limits listed in DoD QSM Tables G-2 and G-13 and within the reasonable laboratory control limits for nitroglycerin (66-130%) and PETN (65-132%).
- Surrogate Recovery: As no surrogate control limit was listed in the DoD QSM, the surrogate recovery was assessed against the laboratory-established control limits of 50-150%. The recovery was within the control limits.
- Matrix Spike/Matrix Spike Duplicate: No MS/MSD analyses were performed on the validated sample. Method accuracy was evaluated based on LCS results.

- Compound Identification: Compound identification was verified for the sample validated at a Level IV. Review of the sample chromatograms and retention times indicated no problems with target compound identification.

- Compound Quantification and Reported Detection Limits: As no target compounds were detected in the sample validated at Level IV, compound quantification was verified for a portion of the LCS results. The LOQs were supported by the low point of the initial calibration and the DLs. Any result reported between the DL and the LOQ was qualified as estimated, "J." Reported nondetects are valid to the LOD.

  As no compounds were detected on the primary column, confirmation analysis was not necessary.

  Target compounds 2,4-dinitrotoluene, 2,6-dinitrotoluene, and nitrobenzene were reported by both Method 8330B and 8270C in sample 071SB-0017M-0001-SO. As there were no detects for these compounds; the reviewer chose to report the results with the lowest LODs from the 8270C analysis. The 8330B results for all three target compounds were rejected, "R," as duplicate data and coded with a "D" qualification code.

- System Performance: Review of the raw data indicated no problems with system performance.

- Manual Integrations: Some manual integrations were performed for the initial calibrations and low-level CCVs. All manual integrations were performed in order to report incompletely resolved peaks or to account for baseline anomalies and were deemed acceptable by the reviewer.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

  - Field Blanks and Equipment Rinsates: No field blank or equipment rinsate samples were associated with the validated sample.

  - Field Duplicates: One field duplicate sample was collected and analyzed for explosive compounds. The RPD criterion in FWQAPP Table 3-1 of ≤50% for soil samples and was only applied when results for common detects were ≥5× the LOQ. In cases where results were <5× the LOQ, the reasonable control limit of ± the LOQ was applied. All results were within the control limits. See Appendix C for a complete comparison of all primary and field duplicate results.

9.2.2 Propellants

A total of 12 primary soil samples and 1 field duplicate sample were analyzed by CT for nitroguanidine by USEPA SW-846 Method 8330 and for nitrocellulose by laboratory SOP WS-WC-0050. A single primary soil sample was validated at Level IV.

- MDL studies were not evaluated as part of this project.
- Calibration:
    - The nitroguanidine and nitrocellulose linear regression correlation coefficients were within the control limit listed in the DoD QSM Tables F-2 and F-11 of ≥0.995.
    - The nitroguanidine second source ICV recovery was within the control limits listed in DoD QSM Table F-2 of 85-115%. The nitrocellulose ICV recovery was within the control limits listed in DoD QSM Table F-11 of 90-110%.
    - The nitroguanidine CCV recoveries were within the control limits listed in DoD QSM Table F-2 of 85-115%. The nitrocellulose CCV recoveries were within the control limits listed in DoD QSM Table F-11 of 90-110%.
    - Although not required by the DoD QSM, a standard of 3× the DL is required by the FWQAPP. MRL recoveries associated with the sample were within the reasonable control limits of 70-130%.
- Blanks: The method blanks had no target compound detects above the control limits listed in DoD QSM Tables F-2 and F-11 of one-half the LOQ.
- Laboratory Control Samples: No nitroguanidine or nitrocellulose LCS control limits are listed in the DoD QSM; therefore, the laboratory control limits were used to assess the results. All nitroguanidine recoveries were within the control limits of 37-134%. The nitrocellulose recoveries were within the laboratory-established control limits of 63-130% for soils.
- Surrogate Recovery: The nitroguanidine surrogate recovery was within the laboratory control limits of 74-134%. A surrogate was not required for the analysis of nitrocellulose.
- Matrix Spike/Matrix Spike Duplicate: No MS/MSD analyses were performed on the validated sample. Method accuracy was evaluated based on LCS results.
- Compound Identification: Compound identification was verified for the sample validated at a Level IV. Review of the sample chromatograms and retention times indicated no problems with target compound identification.
- Compound Quantification and Reported Detection Limits: Compound quantification was verified for the sample validated at a Level IV. The LOQs were supported by the low

point of the initial calibration and the laboratory DLs. Any result reported between the DL and the LOQ was qualified as estimated, "J." Reported nondetects are valid to the LOD.

Nitroguanidine was not detected in the validated sample; therefore, confirmation analysis was not required.

- System Performance: Review of the raw data indicated no problems with system performance.

- Manual Integrations: Some manual integrations were performed for nitroguanidine. The manual integrations were performed to correct baseline integration. The manual integrations were deemed acceptable by the reviewer.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

    - Field Blanks and Equipment Rinsates: No field blank or equipment rinsate samples were associated with the validated sample.

    - Field Duplicates: One field duplicate sample was collected and analyzed for nitroguanidine and nitrocellulose. The RPD criterion in FWQAPP Table 3-1 of ≤50% for soil samples and Table 3-2 of ≤30% for aqueous samples was only applied when results for common detects were ≥5× the LOQ. In cases where results were <5× the LOQ, the reasonable control limit of ± the LOQ was applied. All results were within the control limits. See Appendix C for a complete comparison of all primary and field duplicate results.

9.2.3 Polychlorinated Biphenyls (PCBs)

One primary soil sample and one field duplicate sample were analyzed by CT for PCBs by USEPA SW-846 Method 8082. The primary soil sample was validated at Level IV.

- MDL studies were not evaluated as part of this project.

- Calibration: Calibration criteria listed in the DoD QSM Table F-2 were met.

    - Initial calibration average %RSDs were within the control limit of ≤20%.

    - The second source ICV recoveries were within the control limit of ±20% for all applicable Aroclors.

    - The CCV recoveries were within the control limit of ±20%.

  - Although not required by the DoD QSM, a standard of 3× the DL is required by the FWQAPP. MRL standard recoveries were within the reasonable control limit of ±30%.

- Blanks: The method blank associated with the validated sample had no target compound detects above the control limit listed in the DoD QSM Table F-2, of one-half the LOQ.

- Laboratory Control Samples: Recoveries for Aroclor 1016 and Aroclor 1260 were within the control limits listed in DoD QSM Table G-17.

- Surrogate Recovery: Recoveries were within the control limits listed in DoD QSM Table G-3 of 60-125%.

- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on validated sample 083SB-0012M-0001-SO. Recoveries were within the control limits listed in DoD QSM Table G-17 and RPDs for both Aroclors were within the control limit listed in the DoD QSM Table F-2 of ≤30%.

- Compound Identification: Compound identification was verified for the validated sample. Review of the sample chromatograms, standards, and retention times indicated no problems with target compound identification.

- Compound Quantification and Reported Detection Limits: Compound quantification was verified for the validated sample. The LOQs were supported by the low point of the initial calibration and the laboratory DLs. Any result reported between the DL and the LOQ was qualified as estimated, "J." Reported nondetects are valid to the LOD.

- System Performance: Review of the raw data indicated no problems with system performance.

- Manual Integrations: Some routine manual integrations were performed for the calibration and QC data associated with the sample data, primarily to correct baseline integration and/or separate coeluting peaks. All manual integrations reviewed were deemed appropriate by the reviewer.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

  - Field Blanks and Equipment Rinsates: No field blank or equipment rinsate samples were associated with the validated sample.

  - Field Duplicate Samples: One field duplicate sample was collected and analyzed for PCBs. The RPD criterion in FWQAPP Table 3-1 of ≤50% was only applied when results for common detects were ≥5× the LOQ. In cases where results were

<5× the LOQ, the reasonable control limit of ± the LOQ was applied. All results were within the control limits. See Appendix C for a complete comparison of all primary and field duplicate results.

9.2.4 Semivolatile Organic Compounds (SVOCs)

A total of 12 primary soil samples and 1 field duplicate sample were analyzed by TA-North Canton for SVOCs by USEPA Method 8270C. A single primary soil sample was validated at Level IV.

- MDL studies were not evaluated as part of this project.
- GC/MS Tuning: The DFTPP tunes met the method abundance criteria. The samples were analyzed within 12 hours of the DFTPP injection time.
- Calibration: Calibration criteria listed in the DoD QSM Table F-4 were met, with exceptions affecting sample results noted in the text below.
    - Initial calibration average RRFs and ICV and CCV RRFs were within method control limits of ≥0.050 for SPCCs. All initial calibration %RSDs were within the control limits of ≤30% for CCCs and ≤15% for remaining compounds, or linear regression r^2 values ≥0.990, with the exception of %RSDs for benzyl alcohol at 15.2%, benzoic acid at 17.7%, and hexachlorocyclopentadiene at 15.5%. Retained results for the %RSD outliers, all nondetects, were qualified as estimated, "UJ," and coded with a "C" qualification code.
    - All second source ICV standard recoveries affecting sample data were within the control limit of ±20%.
    - Continuing calibration %Ds affecting sample data were within the control limit of ≤20%.
    - Although not required by the DoD QSM, a standard of 3× the DL is required by the FWQAPP. MRL standard recoveries were within the reasonable control limit of ±30%, with the exception of no recoveries of benzyl alcohol in the beginning and closing MRLs, and a recovery of 69% for hexachlorocyclopentadiene in the closing MRL. The nondetected result for benzyl alcohol was rejected, "R," and the result for hexachlorocyclopentadiene was qualified as estimated, "UJ," in sample 083SB-0005M-0001-SO. Both results were coded with a "C" qualification code.
- Blanks: The method blank had no target compound detects above the control limits listed in DoD QSM Table F-4 of one-half the LOQ for target compounds, and no common laboratory contaminants detected above the LOQ.
- Laboratory Control Samples: All LCS recoveries were within the control limits listed in DoD QSM Tables G-2 (poor performers) and G-7.

- Surrogate Recovery: All surrogate recoveries were within the control limits listed in the DoD QSM Tables G-2 (poor performers) or G-3.

- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were not performed on the validated sample of this SDG. Evaluation of method accuracy was based on the LCS results.

- Internal Standards Performance: The internal standard area counts and retention times were within the DoD QSM Table F-4 control limits established by the midpoint initial calibration standard: ±30 seconds for retention times and -50% / +100% for internal standard areas.

- Compound Identification: Compound identification was verified for the sample validated at Level IV. Review of the sample chromatogram, retention times, and spectra indicated no problems with target compound identification.

- Compound Quantification and Reported Detection Limits: Compound quantification was verified for the sample validated at Level IV. The LOQs were supported by the low point of the initial calibration and the laboratory DLs. Any result reported between the DL and the LOQ was qualified as estimated, "J," by the laboratory. Reported nondetects are valid to the LOD.

- System Performance: Review of the raw data indicated no problems with system performance.

- Manual Integrations: Some routine manual integrations were performed for the samples, and for calibration and QC data associated with the sample data, primarily due to incorrectly split peaks, or poor baseline integration. All manual integrations reviewed were deemed appropriate by the reviewer.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

    - Field Blanks and Equipment Rinsates: No field blank or equipment rinsate samples were associated with the validated sample.

    - Field Duplicate Samples: One field duplicate sample was collected and analyzed for SVOCs. The RPD criterion in FWQAPP Table 3-1 of ≤50% was only applied when results for common detects were ≥5× the LOQ. In cases where results were <5× the LOQ, the reasonable control limit of ± the LOQ was applied. Except as noted below, the results were within the control limits. See Appendix C for a complete comparison of all primary and field duplicate results.

SVOC field duplicate outliers				
Primary Sample	**Field Duplicate**	**Analyte**	**RPD**	**W/In LOQ**
083SB-0005M-0001-SD	083SB-0006M-0001-SD	Anthracene	N/A	No
		Benzo(a)anthracene	N/A	No
		Benzo(a)pyrene	N/A	No
		Benzo(b)fluoranthene	N/A	No
		Benzo(g,h,i)perylene	N/A	No
		Fluoranthene	N/A	No
		Indeno(1,2,3-cd)pyrene	N/A	No
		Pyrene	N/A	No

9.2.5 Volatile Organic Compounds (VOCs)

A total of 12 primary soil samples and 1 field duplicate sample were analyzed by CT for volatile compounds by USEPA Method 8260B. Two primary soil samples were validated at Level IV.

- MDL studies were not evaluated as part of this project.
- GC/MS Tuning: The BFB tunes met the method abundance criteria. The samples were analyzed within 12 hours of the BFB injection time.
- Calibration: Calibration criteria listed in DoD QSM Table F-4 were met, with the exception noted below.
    - Initial calibration average RRFs and ICV and CCV RRFs were within the control limits of ≥0.30 for chlorobenzene and 1,1,2,2-tetrachloroethane, and ≥0.10 for chloromethane, bromoform, and 1,1-dichloroethane.
    - All initial calibration %RSDs were within the method control limits of ≤30% for the CCCs and ≤15% for remaining compounds, or linear regression r^2 values ≥0.990.
    - All second source initial calibration verification standard recoveries were within the control limit of ±20%.
    - Continuing calibration %Ds affecting validated sample data were within the control limit of ≤20%
    - Although not required by the DoD QSM, a standard of 3× the DL is required by the FWQAPP. MRL standard recoveries affecting sample data were within the reasonable control limit of ±30%, with the exception of the recovery of 65% for chloroethane in the closing MRL standard. The nondetected result for chloroethane in sample 083SB-0005M-0001-SO was qualified as estimated, "UJ," and coded with a "C" qualification code.
- Blanks: The method blank associated with the validated sample had no target compound detects above the control limits listed in DoD QSM Table F-4 of one-half the LOQ, and no common laboratory contaminants detected above the LOQ. Methylene chloride was detected in the method blank at 5.7(J) µg/L. The methylene chloride result for sample

083SB-0005M-0001-SO, 6.0(J) µg/L, which was above the LOD, was qualified as a nondetect, at the level of contamination.

- Laboratory Control Samples: LCS recoveries affecting sample results were within the control limits listed in DoD QSM Table G-4.

- Surrogate Recovery: Surrogate recoveries affecting sample data were within the control limits listed in DoD QSM Table G-3.

- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were not performed on the validated sample of this SDG.

- Internal Standards Performance: The internal standard area counts and retention times were within DoD QSM Table F-4 control limits established by the midpoint initial calibration standard: ±30 seconds for retention times and -50% / +100% for internal standard areas.

- Compound Identification: Compound identification was verified for the validated sample. Review of the sample chromatogram, retention times, and spectra indicated no problems with target compound identification.

  The laboratory reported isomers o-xylene and m,p-xylenes as well as total xylenes. The isomers o-xylene and m,p-xylenes were rejected, "R," as duplicate data. The result for total xylenes was retained to maintain consistency with data reported from other laboratories.

- Compound Quantification and Reported Detection Limits: Compound quantification was verified for the validated sample. The LOQs were supported by the low point of the initial calibration and the laboratory DLs. Any result reported between the DL and the LOQ was qualified as estimated, "J," by the laboratory. Reported nondetects are valid to the LOD.

- System Performance: Review of the raw data indicated no problems with system performance.

- Manual integrations: Manual integrations were not performed for the validated sample or for associated calibration and QC samples.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

  - Trip Blanks: The trip blanks associated with the validated samples in this SDG had no reportable detects above the DL.

- Field Blanks and Equipment Rinsates: No field blank or equipment rinsate samples were associated with the validated samples.

- Field Duplicate Samples: One field duplicate sample was collected and analyzed for VOCs. The RPD criterion in FWQAPP Table 3-1 of ≤50% was only applied when results for common detects were ≥5× the LOQ. In cases where results were <5× the LOQ, the reasonable control limit of ± the LOQ was applied. All results were within the control limits. See Appendix C for a complete comparison of all primary and field duplicate results.

9.2.6 Metals

A total of 12 primary soil samples and 1 field duplicate sample were analyzed by CT for various metals by USEPA Methods 6010C and 7471B. A single primary soil sample was validated at Level IV.

- MDL studies were not evaluated as part of this project.

- Calibration: Calibration criteria were met.

  - Initial calibration: Linear regression r values were within the control limit listed in the DoD QSM Table F-7 of ≥0.995.

  - The ICP ICV and CCV recoveries were within the control limits listed in DoD QSM Table F-7 of 90-110%. The mercury ICV and CCV recoveries were within the control limits listed in DoD QSM Table F-7 of 90-110% and 80-120%, respectively.

  - CRI/MRL recoveries affecting sample results were within the control limits listed in DoD QSM Table F-7 of 80-120%. When sample results exceeded more than 10× the LOQ, it was the reviewer's professional opinion the CCV results were more indicative of instrument performance; therefore, qualifications were not applied based on MRL results for these analytes.

- Blanks: Method blanks had no applicable detects above the control limits listed in DoD QSM Table F-7 of one-half the LOQ or greater than one-tenth the amount measured in any sample. CCBs had no detects above the control limit listed in DoD QSM Table F-7 of greater than the LOD.

- Interference Check Samples: ICP ICSA and ICSAB recoveries were within the control limits listed in DoD QSM Table F-7 of 80-120%. There were no analytes affecting sample results detected in the ICSA above the control limit listed in DoD QSM Table F-7 of >LOD.

- Laboratory Control Samples: All recoveries were within the control limits listed in DoD QSM Table G-19 of 80-120%.

- Laboratory Duplicates: Laboratory duplicate analyses were performed on 083SB-0004M-0001-SO for all analytes. The results were only assessed for common detects ≥5× the LOQ. In cases where results were <5× the LOQ, the reasonable control limit of ± the LOQ was applied. The RPDs were within the control limit listed in DoD QSM Table F-7 of ≤20% or the results were within ±LOQ.

- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on sample 083SB-0004M-0001-SO. Except as noted below, recoveries were within the control limits listed in DoD QSM Table G-19 of 80-120%. Matrix spike control limits were not applied when the native sample concentration exceeded the spiked amount by a factor of four or more.

  Results listed in the table below, all detects, were qualified as estimated, "J," and coded with a "Q" qualification code. When no other qualifications with conflicting bias were assigned to a result, detected results with low recoveries were assigned a negative bias, "J-," and detected results with high recoveries were assigned a positive bias, "J+." Nondetects with low recoveries were qualified as estimated, "UJ."

Samples qualified for matrix spike recovery outliers				
Parent Sample	**Analyte**	**%R**	**RPD**	**Qualified sample**
083SB-0004M-0001-SO	Arsenic	72%, 65%	acceptable	083SB-0005M-0001-SO
	Barium	74%, 56%	27%	
	Beryllium	75%, 64%	acceptable	
	Chromium	64%, 47%	31%	
	Cobalt	68%, 59%	acceptable	
	Copper	77%, 65%	acceptable	
	Lead	61%, 55%	acceptable	
	Magnesium	78%, 54%	36%	
	Nickel	71%, 57%	22%	
	Vanadium	66%, 57%	acceptable	
	Zinc	73%, 56%	26%	
	Antimony	27%, 5%	137%	
	Selenium	400%, 79%	134%	
	Silver	431%, acceptable	134%	
	Cadmium	62%, 59%	acceptable	
	Thallium	68%, 53%	25%	
	Mercury	123%, acceptable	acceptable	

  The laboratory calculated RPDs based on the recovery amounts and the spike amounts were different. Recovery outliers listed in the table above were calculated based on recoveries. The qualified results were qualified as estimated, "UJ," for nondetects and, "J," for detects. The qualified results were coded with an "*III" qualification code.

- Post Digestion Spike: Except as noted below, recoveries were within the control limits listed in DoD QSM Table F-7 of 75-125%. Spike control limits were not applied when

the native sample concentration exceeded the spiked amount by a factor of four or more.

When no other qualifications with conflicting bias were assigned to a result, detected results with low recoveries were assigned a negative bias, "J-," and detected results with high recoveries were assigned a positive bias, "J+." Nondetects with low recoveries were qualified as estimated, "UJ." All qualified results were coded with a "P" qualification code.

Samples qualified for post digestion spike recovery outliers			
Parent Sample	**Analyte**	**%R**	**Qualified sample**
083SB-0004M-0001-SO	Barium	66%	083SB-0005M-0001-SO
	Beryllium	71%	
	Calcium	0%	
	Chromium	55%	
	Cobalt	70%	
	Lead	64%	
	Magnesium	0%	
	Nickel	72%	
	Vanadium	67%	
	Zinc	68%	
	Cadmium	68%	
	Thallium	61%	

- Serial Dilution: A serial dilution analysis was performed on 083SB-0004M-0001-SO. Except as noted below, serial dilution %Ds were within the control limits listed in DoD QSM Table F-7 of ≤10%. The serial dilution control limit is only applicable when the original sample concentration is minimally ≥50× the LOQ.

  Results listed in the table below were qualified as estimated, "J." The qualified results were coded with an "A" qualification code.

Samples qualified for serial dilution %D outliers			
Parent Sample	**Analyte**	**%Ds**	**Qualified Sample**
083SB-0004M-0001-SO	Barium	13%	083SB-0005M-0001-SO
	Magnesium	40%	

- Sample Result Verification: For Level IV validation, calculations were verified and the sample results reported on the sample result summary were verified against the raw data. All analytes except mercury, potassium, sodium, antimony, selenium, and silver were reported from 5× dilutions. Any result reported between the DL and the LOQ was qualified as estimated, "J." Reported nondetects are valid to the LOD.

Due to instrument limitations, the ICP-MS raw data did not list absorbances for the ICV, CCV, ICSAB, and MRL samples, and the %R was listed instead of the sample concentrations.

During verification of raw sample concentrations, the reviewer noted that selenium and silver were detected in 083SB-0005M-0001-SO at -9.18 and -4.60 µg/L, respectively. Because the absolute value of these concentrations would result in detects greater than the LOD, the LOD was raised to the respective concentrations: 0.24 mg/kg for selenium and 0.12 mg/kg for silver. These analytes were qualified as estimated, "UJ," and coded with a "$" qualification code.

- Manual Integrations: No manual integrations were noted in the mercury analyses.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
    - Field Blanks and Equipment Rinsates: No field blank or equipment rinsate samples were associated with the validated sample.
    - Field Duplicate Samples: One field duplicate sample was collected and analyzed for metals. The RPD criterion in FWQAPP Table 3-1 of ≤50% for soil samples was only applied when results for common detects were ≥5× the LOQ. In cases where results were <5× the LOQ, the reasonable control limit of ± the LOQ was applied. All results were within the control limits. See Appendix C for a complete comparison of all primary and field duplicate results.

9.3 Data Usability

According to the Draft Site Inspection Report prepared by ECC, the field completeness was 100%.

Two data points were rejected for poor calibration check standard recoveries. In instances where a data point had multiple results, the reviewer chose the most technically sound result to report and rejected the remaining data points. These data points do not affect data quality or usability and are not included in the table below. Data with LODs that exceeded the established criteria and data estimated for quality control outliers or for detects between the DL and the LOQ were included in the table below for informational purposes only.

Table 36. Analytical completeness for RVAAP-83 validated primary data

			Number of Results					
Analysis	**Samples Analyzed**	**Analytes per Sample**	**Total**	**Rejected**	**LODs/DLs Exceeding Criteria**	**Estimated for QC Outliers**	**Estimated for Detects <LOQ**	**Percent Complete**
Explosives*	1	17	14	1	0/0	2	0	92.8%
Nitroguanidine	1	1	1	0	0/0	0	0	100%
Nitrocellulose	1	1	1	0	0/0	0	0	100%
PCBs	1	9	9	0	0/0	0	0	100%
SVOCs	1	65	65	1	1/0	2	3	98.5%
VOCs	1	43	41	0	0/0	2	0	100%
Metals	1	23	23	0	0/0	18	2	100%
		Totals	**140**	**1**	**1/0**	**22**	**5**	**99.3%**

*Total analyte counts affected by rejected data.

The analytical completeness goal for the project established in the FWQAPP was 90% for each method. The completeness goal was met for all analyses.

9.4 Primary and Field Duplicate Comparison Summary

Primary and field duplicate sample comparisons were considered to be in reasonable agreement as only 5% of the field duplicate pair results were above the FWQAPP control limit of 50% for soils or +/- the LOQ for results below 5× the LOQ. The outliers were all SVOCs. All field duplicate comparison results are presented in Appendix C.

Table 37. RVAAP-83 primary/field duplicate sample comparison summary

Method	**Primary/Field Duplicate Pairs**	**Number of Analytes**	**Total Analytes**	**Results within control limits**	**Results above control limit**
Explosives*	1	17	13	13	0
Nitroguanidine	1	1	1	1	0
Nitrocellulose	1	1	1	1	0
SVOCs	1	65	64	56	8
VOCs	1	37	37	37	0
Metals	1	23	23	23	0

*Total analyte counts affected by rejected data.

9.5 Specific Data Concerns

Specific concerns regarding the data are noted below:

- Due to instrument limitations, the mercury raw data did not list the sample absorbances; therefore, the reviewer was not able to calculate the sample results from the raw data.

Additionally, the ICP-MS raw data did not list absorbances for the ICV, CCV, ICSAB, and MRL samples, and the %R was listed instead of the sample concentrations.

In order to avoid repetition of the issues noted above, the following actions should be taken:

- MEC^X recommends the laboratory be requested to alter the IPC-MS and mercury instrument set up in order to report mercury and ICP-MS raw absorbances and ICP-MS ICV, CCV, ICSAB, and MRL concentrations.

10 CONCLUSIONS

10.1 Data Qualification Summary

A summary of the qualifications applied to the data can be found in Appendix B.

10.2 Primary and Field Duplicate Summary

Site-specific comparison summaries can be found in Sections 4 through 9. A summary of the results can be found in Appendix C.

10.3 Data Usability

Site-specific data usability summaries can be found in Sections 4 through 9.

11 RECOMMENDATIONS

Specific concerns regarding the data are noted below:

- Hexavalent chromium was reported utilizing the method of standard additions (MSA), which is recommended for matrices expected to have interference. Results from MSA are best when the MSA linear regression slope is nearly equivalent to the initial calibration slope; however the slopes for most site samples were more than a factor of 10 less than the initial calibration slope, indicating a nominal change in absorbance is observed in the MSA analyses for a relatively significant change in concentration.

- Due to instrument limitations, the mercury raw data did not list the sample absorbances; therefore, the reviewer was not able to calculate the sample results from the raw data. Additionally, the ICP-MS raw data did not list absorbances for the ICV, CCV, ICSAB, and MRL samples, and the %R was listed instead of the sample concentrations.

In order to avoid repetition of the issues noted above, the following actions should be taken:

- MEC^X recommends requesting the laboratory, TA-North Canton, to analyze one MRL standard and one matrix spike by MSA in order to confirm the laboratory's accuracy in reporting hexavalent chromium by MSA.

- MEC^X recommends the laboratory be requested to alter the IPC-MS and mercury instrument set up in order to report mercury and ICP-MS raw absorbances and ICP-MS ICV, CCV, ICSAB, and MRL concentrations.

12 REFERENCES

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APPENDIX A

Qualified Sample Result Forms

Qualification Code Reference Table

Qualifier	Organics	Inorganics
H	Holding times were exceeded.	Holding times were exceeded.
S	Surrogate recovery was outside QC limits.	The sequence or number of standards used for the calibration was incorrect.
C	Calibration %RSD or %D was noncompliant.	Correlation coefficient was noncompliant.
R	Calibration RRF was noncompliant.	%R for calibration is not within control limits.
B	Presumed contamination as indicated by the preparation (method) blank results.	Presumed contamination as indicated by the preparation (method) or calibration blank results.
L	Laboratory Control Sample/Control Sample Duplicate %R was not within control limits.	Laboratory Control Sample %R was not within control limits.
Q	MS/MSD recovery was poor or RPD high.	MS recovery was poor.
E	Not applicable	Duplicates showed poor agreement.
I	Internal standard performance was unsatisfactory.	ICP ICS results were unsatisfactory.
A	Not applicable	ICP Serial Dilution %D were not within control limits.
M	Tuning (BFB or DFTPP) was noncompliant.	ICPMS tuning was noncompliant
T	Presumed contamination as indicated by the trip blank results.	Not applicable
+	False positive – reported compound was not present.	False positive – reported compound was not present.
-	False negative – compound was present but not reported.	False negative – compound was present but not reported.
F	Presumed contamination as indicated by the FB or ER results.	Presumed contamination as indicated by the FB or ER results.
$	Reported result or other information was incorrect.	Reported result or other information was incorrect.
?	TIC identity or reported retention time has been changed.	Not applicable.
D	The analysis with this flag should not be used because another more technically sound analysis is available.	The analysis with this flag should not be used because another more technically sound analysis is available.
P	Instrument performance for pesticides was poor.	Post Digestion Spike recovery was not within control limits.
*II, *III	A deficiency was found that has been described in the "Sample Management," section (*II) or the "Method Analyses" section (*III).	A deficiency was found that has been described in the "Sample Management," section (*II) or the "Method Analyses" section (*III).

Validated Sample Result Forms for Sampling : Ravenna Army Ammunition Plant Ravenna, Ohio
Remedial Investigation Compliance Restoration Site: RVAAP-70 East Classification Yard

Sample Delivery Group: 240-17230-1

Analysis Method E353.2

Sample Name 070SS-0006M-0001-SO **AnalysisType:**

Lab Sample Name: 240-17230-6 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitrocellulose	9004-70-0	1	5	1.8	0.78	mg/kg	J	J	

Sample Delivery Group: 240-17230-1

Analysis Method SW6020

Sample Name 070SS-0006M-0001-SO **AnalysisType:**

Lab Sample Name: 240-17230-6 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	9800	9.3	3.7	2.3	mg/kg	J	J	
Antimony	7440-36-0	1.5	0.19	0.14	0.057	mg/kg	J	J-	Q
Arsenic	7440-38-2	18	0.46	0.14	0.048	mg/kg			
Barium	7440-39-3	71	0.46	0.28	0.12	mg/kg			
Beryllium	7440-41-7	0.75	0.093	0.009	0.0032	mg/kg			
Cadmium	7440-43-9	0.46	0.19	0.009	0.0029	mg/kg		J	E
Calcium	7440-70-2	7000	190	93	37	mg/kg	J	J	
Chromium	7440-47-3	35	0.46	0.42	0.15	mg/kg		J-	E, Q
Cobalt	7440-48-4	8.6	0.093	0.014	0.0042	mg/kg			
Copper	7440-50-8	23	0.37	0.28	0.1	mg/kg		J-	A
Iron	7439-89-6	23000	46	28	10	mg/kg	J	J	
Lead	7439-92-1	62	0.28	0.19	0.065	mg/kg		J	A, E
Magnesium	7439-95-4	2800	93	23	8.2	mg/kg			
Manganese	7439-96-5	520	2.3	1.9	0.74	mg/kg	D,J	J	
Nickel	7440-02-0	30	0.46	0.23	0.08	mg/kg		J	A
Potassium	7440-09-7	940	93	9.3	3.5	mg/kg	J	J+	Q
Selenium	7782-49-2	0.99	0.46	0.056	0.019	mg/kg		J-	Q, M
Silver	7440-22-4	0.034	0.093	0.046	0.015	mg/kg	J	J	
Sodium	7440-23-5	55	93	37	13	mg/kg	J	U	F
Thallium	7440-28-0	0.24	0.19	0.14	0.052	mg/kg			
Vanadium	7440-62-2	16	0.46	0.093	0.04	mg/kg	J	J+	Q
Zinc	7440-66-6	110	3.7	1.9	0.93	mg/kg			

Analysis Method SW7471

Sample Name 070SS-0006M-0001-SO **AnalysisType:**

Lab Sample Name: 240-17230-6 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
MERCURY	7439-97-6	0.05	0.091	0.03	0.013	mg/kg	J	J	

Sample Delivery Group: 240-17230-1

Analysis Method SW8015

Sample Name 070SS-0006M-0001-SO **AnalysisType:**

Lab Sample Name: 240-17230-6 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
C10-C20		23	17	9.3	9.3	mg/kg			
C20-C34		110	17	9.3	9.3	mg/kg	M		

Analysis Method SW8082

Sample Name 070SS-0006M-0001-SO **AnalysisType:**

Lab Sample Name: 240-17230-6 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aroclor-1016	12674-11-2	100	320	120	100	ug/kg	U,J	U	
Aroclor-1221	11104-28-2	80	250	120	80	ug/kg	U	U	
Aroclor-1232	11141-16-5	70	220	120	70	ug/kg	U	U	
Aroclor-1242	53469-21-9	380	200	120	65	ug/kg	D	J	Q, *III
Aroclor-1248	12672-29-6	85	270	120	85	ug/kg	U	U	
Aroclor-1254	11097-69-1	85	270	120	85	ug/kg	U	U	
Aroclor-1260	11096-82-5	85	270	120	85	ug/kg	U	U	

Sample Delivery Group: 240-17230-1

Analysis Method SW8151

Sample Name 070SS-0006M-0001-SO **AnalysisType:**

Lab Sample Name: 240-17230-6 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
2,4,5-T		3.7	20	8.3	3.7	ug/kg	U	U	
2,4-D		19	80	33	19	ug/kg	U	U	
2,4-DB		21	80	33	21	ug/kg	U	U	
Dalapon		7.8	40	17	7.8	ug/kg	U	U	
Dicamba		8.1	40	17	8.1	ug/kg	U,J	UJ	Q
Dichlorprop		37	80	67	37	ug/kg	U,J	UJ	Q
Dinoseb		10	12	10	10	ug/kg	U	U	
MCPA		1600	8000	3300	1600	ug/kg	U	UJ	C
MCPP		1500	8000	3300	1500	ug/kg	U	UJ	C
Pentachlorophenol		4.3	10	8.3	4.3	ug/kg	U	U	
Silvex (2,4,5-TP)		4.1	20	8.3	4.1	ug/kg	U,J	U	

Sample Delivery Group: 240-17230-1

Analysis Method SW8260

Sample Name 070SS-0006M-0001-SO **AnalysisType:**

Lab Sample Name: 240-17230-6 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,1,1-Trichloroethane	71-55-6	0.97	8.7	1.7	0.97	ug/kg	U	UJ	S
1,1,2,2-Tetrachloroethane	79-34-5	0.59	8.7	0.87	0.59	ug/kg	U,J	UJ	S
1,1,2-Trichloroethane	79-00-5	0.68	8.7	0.87	0.68	ug/kg	U,J	UJ	S
1,1-Dichloroethane	75-34-3	0.62	8.7	0.87	0.62	ug/kg	U	UJ	S
1,1-Dichloroethene	75-35-4	0.9	8.7	1.7	0.9	ug/kg	U	UJ	S
1,2-Dibromoethane	106-93-4	0.87	8.7	1.7	0.87	ug/kg	U,J	UJ	S
1,2-Dichloroethane	107-06-2	0.59	8.7	0.87	0.59	ug/kg	U	UJ	S
1,2-Dichloroethene, Total	540-59-0	1.3	17	1.7	1.3	ug/kg	U	UJ	S
1,2-Dichloropropane	78-87-5	1.2	8.7	1.7	1.2	ug/kg	U	UJ	S
2-Butanone (MEK)	78-93-3	2.4	35	3.5	2.4	ug/kg	U	UJ	S
2-Hexanone	591-78-6	1.1	35	1.7	1.1	ug/kg	U,J	UJ	S
4-Methyl-2-pentanone (MIBK)	108-10-1	0.94	35	1.7	0.94	ug/kg	U	UJ	S
Acetone	67-64-1	11	35	11	11	ug/kg	U	UJ	C, S
Benzene	71-43-2	0.4	8.7	0.87	0.4	ug/kg	U	UJ	S
Bromochloromethane	74-97-5	1.2	8.7	1.7	1.2	ug/kg	U	UJ	S
Bromodichloromethane	75-27-4	0.49	8.7	0.87	0.49	ug/kg	U,J	UJ	S
Bromoform	75-25-2	0.57	8.7	0.87	0.57	ug/kg	U,J	UJ	S
Bromomethane	74-83-9	0.94	8.7	1.7	0.94	ug/kg	U	UJ	S
Carbon disulfide	75-15-0	0.76	8.7	0.87	0.76	ug/kg	U	UJ	S
Carbon tetrachloride	56-23-5	0.64	8.7	0.87	0.64	ug/kg	U	UJ	S
Chlorobenzene	108-90-7	0.57	8.7	0.87	0.57	ug/kg	U,J	UJ	S
Chloroethane	75-00-3	1.5	8.7	1.7	1.5	ug/kg	U	UJ	S
Chloroform	67-66-3	0.5	8.7	0.87	0.5	ug/kg	U	UJ	S
Chloromethane	74-87-3	0.71	8.7	0.87	0.71	ug/kg	U	UJ	S
cis-1,3-Dichloropropene	10061-01-5	0.59	8.7	0.87	0.59	ug/kg	U	UJ	S
Dibromochloromethane	124-48-1	0.95	8.7	1.7	0.95	ug/kg	U,J	UJ	S
Ethylbenzene	100-41-4	0.45	8.7	0.87	0.45	ug/kg	U,J	UJ	S
Methyl tert-butyl ether	1634-04-4	0.75	8.7	0.87	0.75	ug/kg	U	UJ	S

Sample Delivery Group: 240-17230-1

Methylene Chloride	75-09-2	1.2	8.7	1.7	1.2	ug/kg	U,J	UJ	S
Styrene	100-42-5	0.26	8.7	0.87	0.26	ug/kg	U,J	UJ	S
Tetrachloroethene	127-18-4	0.9	8.7	1.7	0.9	ug/kg	U,J	UJ	S
Toluene	108-88-3	0.47	8.7	0.87	0.47	ug/kg	U,J	UJ	S
trans-1,3-Dichloropropene	10061-02-6	0.94	8.7	1.7	0.94	ug/kg	U,J	UJ	S
Trichloroethene	79-01-6	0.73	8.7	0.87	0.73	ug/kg	U	UJ	S
Vinyl chloride	75-01-4	0.68	8.7	0.87	0.68	ug/kg	U	UJ	S
Xylenes, Total		1.2	17	2.6	1.2	ug/kg	U,J	UJ	S

Sample Delivery Group: 240-17230-1

Analysis Method SW8270

Sample Name 070SS-0003M-0001-SO **AnalysisType:**

Lab Sample Name: 240-17230-3 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2,4-Trichlorobenzene	120-82-1	270	510	270	270	ug/kg	U	U	
1,2-Dichlorobenzene	95-50-1	98	510	270	98	ug/kg	U	U	
1,3-Dichlorobenzene	541-73-1	110	510	270	110	ug/kg	U	U	
1,4-Dichlorobenzene	106-46-7	200	510	270	200	ug/kg	U	U	
2,4,5-Trichlorophenol	95-95-4	250	1500	270	250	ug/kg	U	U	
2,4,6-Trichlorophenol	88-06-2	810	1500	810	810	ug/kg	U	U	
2,4-Dichlorophenol	120-83-2	200	1500	270	200	ug/kg	U	U	
2,4-Dimethylphenol	105-67-9	200	1500	810	200	ug/kg	U	U	
2,4-Dinitrophenol	51-28-5	810	3300	810	810	ug/kg	U	UJ	C
2,4-Dinitrotoluene	121-14-2	270	2000	270	270	ug/kg	U	U	
2,6-Dinitrotoluene	606-20-2	210	2000	270	210	ug/kg	U	U	
2-Chloronaphthalene	91-58-7	33	510	33	33	ug/kg	U	U	
2-Chlorophenol	95-57-8	270	510	270	270	ug/kg	U	U	
2-Methylnaphthalene	91-57-6	540	67	33	33	ug/kg	D		
2-Methylphenol	95-48-7	810	2000	810	810	ug/kg	U	U	
2-Nitroaniline	88-74-4	92	2000	270	92	ug/kg	U	U	
2-Nitrophenol	88-75-5	270	510	270	270	ug/kg	U	U	
3 & 4 Methylphenol		200	4000	810	200	ug/kg	U	U	
3,3'-Dichlorobenzidine	91-94-1	180	1000	810	180	ug/kg	U	UJ	C
3-Nitroaniline	99-09-2	160	2000	810	160	ug/kg	U	U	
4,6-Dinitro-2-methylphenol	534-52-1	810	1500	810	810	ug/kg	U	UJ	C
4-Bromophenyl phenyl ether	101-55-3	130	510	270	130	ug/kg	U	U	
4-Chloro-3-methylphenol	59-50-7	210	1500	270	210	ug/kg	U	U	
4-Chloroaniline	106-47-8	170	1500	270	170	ug/kg	U	U	
4-Chlorophenyl phenyl ether	7005-72-3	130	510	270	130	ug/kg	U	U	
4-Nitroaniline	100-01-6	260	2000	270	260	ug/kg	U	U	
4-Nitrophenol	100-02-7	810	3300	810	810	ug/kg	U	U	
Acenaphthene	83-32-9	550	67	33	33	ug/kg	D		

Acenaphthylene	208-96-8	47	67	33	33	ug/kg	J,D	J
Anthracene	120-12-7	2500	67	33	33	ug/kg	D	
Benzo[a]anthracene	56-55-3	3200	67	33	33	ug/kg	D	
Benzo[a]pyrene	50-32-8	1900	67	33	33	ug/kg	D	
Benzo[b]fluoranthene	205-99-2	3100	67	33	33	ug/kg	D,M	
Benzo[g,h,i]perylene	191-24-2	1100	67	33	33	ug/kg	D	
Benzo[k]fluoranthene	207-08-9	980	67	33	33	ug/kg	D,M	
Benzoic acid	65-85-0	3400	6700	3400	3400	ug/kg	U	U
Benzyl alcohol	100-51-6	210	3300	270	210	ug/kg	U	U
bis (2-chloroisopropyl) ether	108-60-1	96	1000	270	96	ug/kg	U	U
Bis(2-chloroethoxy)methane	111-91-1	220	1000	270	220	ug/kg	U	U
Bis(2-chloroethyl)ether	111-44-4	20	1000	33	20	ug/kg	U	U
Bis(2-ethylhexyl) phthalate	117-81-7	190	510	270	190	ug/kg	U	U
Butyl benzyl phthalate	85-68-7	100	510	270	100	ug/kg	U	U
Carbazole	86-74-8	340	510	270	270	ug/kg	J,D	J
Chrysene	218-01-9	3300	67	33	11	ug/kg	D	
Dibenz(a,h)anthracene	53-70-3	33	67	33	33	ug/kg	U	U
Dibenzofuran	132-64-9	420	510	33	33	ug/kg	J,D	J
Diethyl phthalate	84-66-2	160	510	270	160	ug/kg	U	U
Dimethyl phthalate	131-11-3	170	510	270	170	ug/kg	U	U
Di-n-butyl phthalate	84-74-2	150	510	270	150	ug/kg	U	U
Di-n-octyl phthalate	117-84-0	270	510	270	270	ug/kg	U	U
Fluoranthene	206-44-0	8400	67	33	33	ug/kg	D	
Fluorene	86-73-7	710	67	33	33	ug/kg	D	
Hexachlorobenzene	118-74-1	21	67	33	21	ug/kg	U	U
Hexachlorobutadiene	87-68-3	270	510	270	270	ug/kg	U	U
Hexachlorocyclopentadiene	77-47-4	270	3300	270	270	ug/kg	U	U
Hexachloroethane	67-72-1	91	510	270	91	ug/kg	U	U
Indeno[1,2,3-cd]pyrene	193-39-5	1000	67	33	33	ug/kg	D	
Isophorone	78-59-1	130	510	270	130	ug/kg	U	U
Naphthalene	91-20-3	480	67	33	33	ug/kg	D	
Nitrobenzene	98-95-3	22	1000	33	22	ug/kg	U	U
N-Nitrosodi-n-propylamine	621-64-7	270	510	270	270	ug/kg	U	U

N-Nitrosodiphenylamine	86-30-6	210	510	270	210	ug/kg	U	U	
Pentachlorophenol	87-86-5	810	1500	810	810	ug/kg	U	U	
Phenanthrene	85-01-8	5900	67	33	33	ug/kg	D		
Phenol	108-95-2	270	510	270	270	ug/kg	U	U	
Pyrene	129-00-0	5700	67	33	33	ug/kg	D		

Sample Name 070SS-0006M-0001-SO **AnalysisType:**

Lab Sample Name: 240-17230-6 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2,4-Trichlorobenzene	120-82-1	130	250	130	130	ug/kg	U	U	
1,2-Dichlorobenzene	95-50-1	48	250	130	48	ug/kg	U	U	
1,3-Dichlorobenzene	541-73-1	54	250	130	54	ug/kg	U	U	
1,4-Dichlorobenzene	106-46-7	99	250	130	99	ug/kg	U	U	
2,4,5-Trichlorophenol	95-95-4	120	740	130	120	ug/kg	U	U	
2,4,6-Trichlorophenol	88-06-2	390	740	390	390	ug/kg	U	U	
2,4-Dichlorophenol	120-83-2	99	740	130	99	ug/kg	U	U	
2,4-Dimethylphenol	105-67-9	99	740	390	99	ug/kg	U	U	
2,4-Dinitrophenol	51-28-5	390	1600	390	390	ug/kg	U	UJ	C
2,4-Dinitrotoluene	121-14-2	130	990	130	130	ug/kg	U	R	D
2,6-Dinitrotoluene	606-20-2	100	990	130	100	ug/kg	U	R	D
2-Chloronaphthalene	91-58-7	16	250	16	16	ug/kg	U	U	
2-Chlorophenol	95-57-8	130	250	130	130	ug/kg	U	U	
2-Methylnaphthalene	91-57-6	280	33	16	16	ug/kg	D		
2-Methylphenol	95-48-7	390	990	390	390	ug/kg	U	U	
2-Nitroaniline	88-74-4	45	990	130	45	ug/kg	U	U	
2-Nitrophenol	88-75-5	130	250	130	130	ug/kg	U	U	
3 & 4 Methylphenol		99	2000	390	99	ug/kg	U	U	
3,3'-Dichlorobenzidine	91-94-1	89	490	390	89	ug/kg	U,J	R	Q
3-Nitroaniline	99-09-2	79	990	390	79	ug/kg	U,J	UJ	Q
4,6-Dinitro-2-methylphenol	534-52-1	390	740	390	390	ug/kg	U,J	UJ	C, Q
4-Bromophenyl phenyl ether	101-55-3	64	250	130	64	ug/kg	U	U	
4-Chloro-3-methylphenol	59-50-7	100	740	130	100	ug/kg	U	U	
4-Chloroaniline	106-47-8	84	740	130	84	ug/kg	U,J	R	Q

Sample Delivery Group: 240-17230-1

4-Chlorophenyl phenyl ether	7005-72-3	64	250	130	64	ug/kg	U	U	
4-Nitroaniline	100-01-6	130	990	130	130	ug/kg	U,J	UJ	Q
4-Nitrophenol	100-02-7	390	1600	390	390	ug/kg	U	U	
Acenaphthene	83-32-9	40	33	16	16	ug/kg	D		
Acenaphthylene	208-96-8	16	33	16	16	ug/kg	U	U	
Anthracene	120-12-7	79	33	16	16	ug/kg	D		
Benzo[a]anthracene	56-55-3	160	33	16	16	ug/kg	D		
Benzo[a]pyrene	50-32-8	130	33	16	16	ug/kg	D		
Benzo[b]fluoranthene	205-99-2	200	33	16	16	ug/kg	D,M		
Benzo[g,h,i]perylene	191-24-2	130	33	16	16	ug/kg	D,M		
Benzo[k]fluoranthene	207-08-9	91	33	16	16	ug/kg	D,M		
Benzoic acid	65-85-0	1600	3300	1600	1600	ug/kg	U	U	
Benzyl alcohol	100-51-6	100	1600	130	100	ug/kg	U	U	
bis (2-chloroisopropyl) ether	108-60-1	47	490	130	47	ug/kg	U	U	
Bis(2-chloroethoxy)methane	111-91-1	110	490	130	110	ug/kg	U	U	
Bis(2-chloroethyl)ether	111-44-4	9.9	490	16	9.9	ug/kg	U	U	
Bis(2-ethylhexyl) phthalate	117-81-7	94	250	130	94	ug/kg	U	U	
Butyl benzyl phthalate	85-68-7	49	250	130	49	ug/kg	U	U	
Carbazole	86-74-8	130	250	130	130	ug/kg	U	U	
Chrysene	218-01-9	200	33	16	5.4	ug/kg	D		
Dibenz(a,h)anthracene	53-70-3	16	33	16	16	ug/kg	U	U	
Dibenzofuran	132-64-9	88	250	16	16	ug/kg	J,D	J	
Diethyl phthalate	84-66-2	79	250	130	79	ug/kg	U	U	
Dimethyl phthalate	131-11-3	84	250	130	84	ug/kg	U	U	
Di-n-butyl phthalate	84-74-2	74	250	130	74	ug/kg	U	U	
Di-n-octyl phthalate	117-84-0	130	250	130	130	ug/kg	U	U	
Fluoranthene	206-44-0	370	33	16	16	ug/kg	J,D	J	
Fluorene	86-73-7	38	33	16	16	ug/kg	D		
Hexachlorobenzene	118-74-1	10	33	16	10	ug/kg	U	U	
Hexachlorobutadiene	87-68-3	130	250	130	130	ug/kg	U	U	
Hexachlorocyclopentadiene	77-47-4	130	1600	130	130	ug/kg	U	U	
Hexachloroethane	67-72-1	44	250	130	44	ug/kg	U	U	
Indeno[1,2,3-cd]pyrene	193-39-5	90	33	16	16	ug/kg	D		

Sample Delivery Group: 240-17230-1

Isophorone	78-59-1	64	250	130	64	ug/kg	U	U	
Naphthalene	91-20-3	220	33	16	16	ug/kg	D		
Nitrobenzene	98-95-3	11	490	16	11	ug/kg	U	U	
N-Nitrosodi-n-propylamine	621-64-7	130	250	130	130	ug/kg	U	U	
N-Nitrosodiphenylamine	86-30-6	100	250	130	100	ug/kg	U	U	
Pentachlorophenol	87-86-5	390	740	390	390	ug/kg	U	R	D
Phenanthrene	85-01-8	420	33	16	16	ug/kg	J,D	J	
Phenol	108-95-2	130	250	130	130	ug/kg	U	U	
Pyrene	129-00-0	280	33	16	16	ug/kg	D		

Analysis Method SW8330

Sample Name 070SS-0006M-0001-SO **AnalysisType:**

Lab Sample Name: 240-17230-6 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,3,5-Trinitrobenzene	99-35-4	0.01	0.25	0.05	0.01	mg/kg	U	U	
1,3-Dinitrobenzene	99-65-0	0.0042	0.25	0.05	0.0042	mg/kg	U	U	
2,4,6-Trinitrotoluene	118-96-7	0.019	0.25	0.05	0.019	mg/kg	U	U	
2,4-Dinitrotoluene	121-14-2	0.0053	0.25	0.05	0.0053	mg/kg	U	U	
2,6-Dinitrotoluene	606-20-2	0.0073	0.25	0.05	0.0073	mg/kg	U	U	
2-Amino-4,6-dinitrotoluene	35572-78-2	0.012	0.25	0.05	0.012	mg/kg	U	U	
2-Nitrotoluene	88-72-2	0.013	0.25	0.05	0.013	mg/kg	U	UJ	C
3-Nitrotoluene	99-08-1	0.015	0.25	0.05	0.015	mg/kg	U	U	
4-Amino-2,6-dinitrotoluene	35572-78-2	0.01	0.25	0.05	0.01	mg/kg	U,J	U	
4-Nitrotoluene	99-99-0	0.018	0.25	0.05	0.018	mg/kg	U	U	
HMX	2691-41-0	0.012	0.25	0.05	0.012	mg/kg	U	U	
Nitrobenzene	98-95-3	0.018	0.25	0.05	0.018	mg/kg	U	R	D
Nitroglycerin	55-63-0	0.015	0.5	0.25	0.015	mg/kg	U	UJ	Q
Nitroguanidine	556-88-7	0.019	0.24	0.039	0.019	mg/kg	U	U	
PETN	78-11-5	0.025	0.5	0.25	0.025	mg/kg	U	U	
RDX	121-82-4	0.012	0.25	0.05	0.012	mg/kg	U	UJ	C
Tetryl	479-45-8	0.01	0.25	0.05	0.01	mg/kg	U	U	

Sample Delivery Group: 240-17317-1

Analysis Method M8015V

Sample Name 070SS-0006M-0001-SO **AnalysisType:** N

Lab Sample Name: 240-17317-11 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
PETROLEUM HYDROCARBONS C		58.0	92	46	42	UG/KG	J	J	C, Q

Sample Delivery Group: 240-18581-1

Analysis Method M8015D

Sample Name 070SB-0042M-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18581-1 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
C20-C34 PETROLEUM HYDROCA		430.0	210	110	110	MG/KG	D M		
PHCC10C20		370.0	210	110	110	MG/KG	D		

Sample Delivery Group: 240-18581-1

Analysis Method SW6020

Sample Name 070SB-044M-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18581-3 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
ALUMINUM	7429-90-5	10000.0	2.9	0.59	0.28	MG/KG			
ANTIMONY	7440-36-0	0.098	0.20	0.098	0.045	MG/KG	U	U	
ARSENIC	7440-38-2	7.7	0.098	0.049	0.018	MG/KG			
BARIUM	7440-39-3	64.0	0.98	0.020	0.010	MG/KG	Q	J	M
BERYLLIUM	7440-41-7	0.68	0.098	0.009	0.0074	MG/KG			
CADMIUM	7440-43-9	0.19	0.098	0.029	0.013	MG/KG			
CALCIUM	7440-70-2	7000.0	9.8	2.5	1.3	MG/KG			
CHROMIUM	7440-47-3	14.0	0.20	0.039	0.022	MG/KG			
COBALT	7440-48-4	8.2	0.049	0.009	0.0024	MG/KG	Q		
COPPER	7440-50-8	15.0	0.20	0.059	0.032	MG/KG	Q		
IRON	7439-89-6	20000.0	4.9	2.0	1.1	MG/KG	B		
LEAD	7439-92-1	12.0	0.098	0.029	0.015	MG/KG			
MAGNESIUM	7439-95-4	3400.0	9.8	2.0	1.1	MG/KG			
MANGANESE	7439-96-5	340.0	0.49	0.029	0.016	MG/KG			
NICKEL	7440-02-0	19.0	0.098	0.029	0.011	MG/KG			
POTASSIUM	7440-09-7	800.0	9.8	5.9	3.1	MG/KG			
SELENIUM	7782-49-2	0.47	0.49	0.098	0.050	MG/KG	J Q	J+	I
SILVER	7440-22-4	0.023	0.098	0.029	0.011	MG/KG	J	J	
SODIUM	7440-23-5	89.0	9.8	4.9	2.6	MG/KG			
THALLIUM	7440-28-0	0.13	0.098	0.020	0.010	MG/KG			
VANADIUM	7440-62-2	14.0	0.098	0.059	0.029	MG/KG			
ZINC	7440-66-6	44.0	0.49	0.20	0.064	MG/KG	Q		

Analysis Method SW7471A

Sample Name 070SB-044M-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18581-3 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
MERCURY	7439-97-6	0.017	0.11	0.037	0.016	MG/KG	J	J	

Sample Delivery Group: 240-18581-1

Analysis Method SW8082

Sample Name 070SB-044M-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18581-3 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
PCB-1016 (AROCHLOR 1016)	12674-11-2	24	64	24	21	UG/KG	U	U	
PCB-1221 (AROCHLOR 1221)	11104-28-2	24	49	24	16	UG/KG	U	U	
PCB-1232 (AROCHLOR 1232)	11141-16-5	24	44	24	14	UG/KG	U	U	
PCB-1242 (AROCHLOR 1242)	53469-21-9	24	39	24	13	UG/KG	U	U	
PCB-1248 (AROCHLOR 1248)	12672-29-6	24	54	24	17	UG/KG	U	U	
PCB-1254 (AROCHLOR 1254)	11097-69-1	24	54	24	17	UG/KG	U	U	
PCB-1260 (AROCHLOR 1260)	11096-82-5	24	54	24	17	UG/KG	U	U	

Analysis Method SW8151A

Sample Name 070SB-044M-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18581-3 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
2,4 DB		33	80	33	21	UG/KG	U	U	
2,4,5-T (TRICHLOROPHENOXYAC		8.3	20	8.3	3.7	UG/KG	U	U	
2,4-D (DICHLOROPHENOXYACET		33	80	33	19	UG/KG	U	U	
DALAPON		17	40	17	7.8	UG/KG	U	U	
DICAMBA		17	40	17	8.1	UG/KG	U	U	
DICHLOROPROP		66	80	66	37	UG/KG	U	U	
DINOSEB		10	12	10	10	UG/KG	U	U	
MCPA		3300	8000	3300	1600	UG/KG	U	UJ	C
MCPP		3300	8000	3300	1500	UG/KG	U	UJ	C
PENTACHLOROPHENOL		8.3	10	8.3	4.3	UG/KG	U	U	
SILVEX (2,4,5-TP)		8.3	20	8.3	4.1	UG/KG	U	U	

Sample Delivery Group: 240-18581-1

Analysis Method SW8260B

Sample Name 070SB-044M-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18581-3 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,1,1-TRICHLOROETHANE	71-55-6	1.1	5.7	1.1	0.64	UG/KG	U	UJ	S
1,1,2,2-TETRACHLOROETHANE	79-34-5	0.57	5.7	0.57	0.39	UG/KG	U J	UJ	Q, S
1,1,2-TRICHLOROETHANE	79-00-5	0.57	5.7	0.57	0.44	UG/KG	U	UJ	S
1,1-DICHLOROETHANE	75-34-3	0.57	5.7	0.57	0.41	UG/KG	U	UJ	S
1,1-DICHLOROETHENE	75-35-4	1.1	5.7	1.1	0.59	UG/KG	U	UJ	S
1,2-DIBROMOETHANE (ETHYLEN	106-93-4	1.1	5.7	1.1	0.57	UG/KG	U	UJ	S
1,2-DICHLOROETHANE	107-06-2	0.57	5.7	0.57	0.39	UG/KG	U	UJ	S
1,2-DICHLOROPROPANE	78-87-5	1.1	5.7	1.1	0.78	UG/KG	U	UJ	S
2-HEXANONE	591-78-6	1.8	23	1.1	0.72	UG/KG	J	UJ	B, C, S
ACETONE	67-64-1	41.0	23	7.2	7.2	UG/KG		J	S
BENZENE	71-43-2	1.3	5.7	0.57	0.26	UG/KG	J	J	S
BROMOCHLOROMETHANE	74-97-5	1.1	5.7	1.1	0.81	UG/KG	U	UJ	S
BROMODICHLOROMETHANE	75-27-4	0.57	5.7	0.57	0.32	UG/KG	U	UJ	S
BROMOFORM	75-25-2	0.57	5.7	0.57	0.37	UG/KG	U	UJ	S
BROMOMETHANE	74-83-9	1.1	5.7	1.1	0.61	UG/KG	U	UJ	S
CARBON DISULFIDE	75-15-0	0.57	5.7	0.57	0.50	UG/KG	U	UJ	S
CARBON TETRACHLORIDE	56-23-5	0.57	5.7	0.57	0.42	UG/KG	U	UJ	S
CHLOROBENZENE	108-90-7	0.57	5.7	0.57	0.37	UG/KG	U	UJ	S
CHLOROETHANE	75-00-3	1.1	5.7	1.1	0.98	UG/KG	U	UJ	S
CHLOROFORM	67-66-3	0.57	5.7	0.57	0.33	UG/KG	U	UJ	S
CHLOROMETHANE	74-87-3	0.57	5.7	0.57	0.47	UG/KG	U	UJ	S
CIS-1,3-DICHLOROPROPENE	10061-01-5	0.57	5.7	0.57	0.39	UG/KG	U	UJ	S
DIBROMOCHLOROMETHANE	124-48-1	1.1	5.7	1.1	0.62	UG/KG	U	UJ	S
ETHYLBENZENE	100-41-4	1.8	5.7	0.57	0.30	UG/KG	J	J	S
METHYL ETHYL KETONE (2-BUT	78-93-3	12.0	23	2.3	1.6	UG/KG	J	J	S
METHYL ISOBUTYL KETONE (4-	108-10-1	1.3	23	1.1	0.61	UG/KG	J	UJ	B, S
METHYLENE CHLORIDE	75-09-2	1.1	5.7	1.1	0.76	UG/KG	U	UJ	S
STYRENE	100-42-5	0.57	5.7	0.57	0.17	UG/KG	U	UJ	S

Sample Delivery Group: 240-18581-1

TERT-BUTYL METHYL ETHER	1634-04-4	0.57	5.7	0.57	0.49	UG/KG	U	UJ	S
TETRACHLOROETHYLENE(PCE)	127-18-4	1.1	5.7	1.1	0.59	UG/KG	U	UJ	S
TOLUENE	108-88-3	3.3	5.7	0.57	0.31	UG/KG	J	J	S
TOTAL 1,2-DICHLOROETHENE	540-59-0	1.1	11	1.1	0.87	UG/KG	U	UJ	S
TRANS-1,3-DICHLOROPROPENE	10061-02-6	1.1	5.7	1.1	0.61	UG/KG	U	UJ	S
TRICHLOROETHYLENE (TCE)	79-01-6	0.57	5.7	0.57	0.48	UG/KG	U	UJ	S
VINYL CHLORIDE	75-01-4	0.57	5.7	0.57	0.44	UG/KG	U	UJ	S
XYLENES, TOTAL		1.7	11	1.7	0.76	UG/KG	U	UJ	S

Sample Delivery Group: 240-18581-1

Analysis Method SW8270D

Sample Name 070SB-044M-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18581-3 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2,4-TRICHLOROBENZENE	120-82-1	270	510	270	270	UG/KG	U J	U	
1,2-DICHLOROBENZENE	95-50-1	270	510	270	98	UG/KG	U J	U	
1,3-DICHLOROBENZENE	541-73-1	270	510	270	110	UG/KG	U	U	
1,4-DICHLOROBENZENE	106-46-7	270	510	270	200	UG/KG	U	U	
2,4,5-TRICHLOROPHENOL	95-95-4	270	1500	270	250	UG/KG	U	U	
2,4,6-TRICHLOROPHENOL	88-06-2	810	1500	810	810	UG/KG	U	U	
2,4-DICHLOROPHENOL	120-83-2	270	1500	270	200	UG/KG	U	U	
2,4-DIMETHYLPHENOL	105-67-9	810	1500	810	200	UG/KG	U	U	
2,4-DINITROPHENOL	51-28-5	810	3300	810	810	UG/KG	U	UJ	C
2,4-DINITROTOLUENE	121-14-2	270	2000	270	270	UG/KG	U	R	D
2,6-DINITROTOLUENE	606-20-2	270	2000	270	210	UG/KG	U	R	D
2-CHLORONAPHTHALENE	91-58-7	33	510	33	33	UG/KG	U	U	
2-CHLOROPHENOL	95-57-8	270	510	270	270	UG/KG	U	U	
2-METHYLNAPHTHALENE	91-57-6	33	67	33	33	UG/KG	U	U	
2-METHYLPHENOL (O-CRESOL)	95-48-7	810	2000	810	810	UG/KG	U	U	
2-NITROANILINE	88-74-4	270	2000	270	92	UG/KG	U	U	
2-NITROPHENOL	88-75-5	270	510	270	270	UG/KG	U	U	
3,3'-DICHLOROBENZIDINE	91-94-1	810	1000	810	180	UG/KG	U J	U	
3-NITROANILINE	99-09-2	810	2000	810	160	UG/KG	U	U	
4,6-DINITRO-2-METHYLPHENOL	534-52-1	810	1500	810	810	UG/KG	U	U	
4-BROMOPHENYL PHENYL ETHE	101-55-3	270	510	270	130	UG/KG	U	U	
4-CHLORO-3-METHYLPHENOL	59-50-7	270	1500	270	210	UG/KG	U	U	
4-CHLOROANILINE	106-47-8	270	1500	270	170	UG/KG	U J	U	
4-CHLOROPHENYL PHENYL ETH	7005-72-3	270	510	270	130	UG/KG	U	U	
4-NITROANILINE	100-01-6	270	2000	270	260	UG/KG	U	U	
4-NITROPHENOL	100-02-7	810	3300	810	810	UG/KG	U	U	
ACENAPHTHENE	83-32-9	33	67	33	33	UG/KG	U	U	
ACENAPHTHYLENE	208-96-8	33	67	33	33	UG/KG	U	U	

Sample Delivery Group: 240-18581-1

ANTHRACENE	120-12-7	33	67	33	33	UG/KG	U	U	
BENZO(A)ANTHRACENE	56-55-3	33	67	33	33	UG/KG	U	U	
BENZO(A)PYRENE	50-32-8	33	67	33	33	UG/KG	U	U	
BENZO(B)FLUORANTHENE	205-99-2	33	67	33	33	UG/KG	U	U	
BENZO(G,H,I)PERYLENE	191-24-2	33	67	33	33	UG/KG	U J	UJ	C
BENZO(K)FLUORANTHENE	207-08-9	33	67	33	33	UG/KG	U	U	
BENZOIC ACID	65-85-0	3400	6700	3400	3400	UG/KG	U	U	
BENZYL ALCOHOL	100-51-6	270	3300	270	210	UG/KG	U	U	
BENZYL BUTYL PHTHALATE	85-68-7	270	510	270	100	UG/KG	U	U	
BIS(2-CHLOROETHOXY) METHA	111-91-1	270	1000	270	220	UG/KG	U J	U	
BIS(2-CHLOROETHYL) ETHER (2	111-44-4	33	1000	33	20	UG/KG	U	U	
BIS(2-CHLOROISOPROPYL) ETHE	108-60-1	270	1000	270	96	UG/KG	U	U	
BIS(2-ETHYLHEXYL) PHTHALAT	117-81-7	270	510	270	190	UG/KG	U	U	
CARBAZOLE	86-74-8	270	510	270	270	UG/KG	U	U	
CHRYSENE	218-01-9	33	67	33	11	UG/KG	U	U	
CRESOLS, M & P		810	4000	810	200	UG/KG	U	U	
DIBENZ(A,H)ANTHRACENE	53-70-3	33	67	33	33	UG/KG	U J	U	
DIBENZOFURAN	132-64-9	33	510	33	33	UG/KG	U	U	
DIETHYL PHTHALATE	84-66-2	270	510	270	160	UG/KG	U	U	
DIMETHYL PHTHALATE	131-11-3	270	510	270	170	UG/KG	U	U	
DI-N-BUTYL PHTHALATE	84-74-2	270	510	270	150	UG/KG	U	U	
DI-N-OCTYLPHTHALATE	117-84-0	270	510	270	270	UG/KG	U	U	
FLUORANTHENE	206-44-0	33	67	33	33	UG/KG	U	U	
FLUORENE	86-73-7	33	67	33	33	UG/KG	U	U	
HEXACHLOROBENZENE	118-74-1	33	67	33	21	UG/KG	U	U	
HEXACHLOROBUTADIENE	87-68-3	270	510	270	270	UG/KG	U	U	
HEXACHLOROCYCLOPENTADIE	77-47-4	270	3300	270	270	UG/KG	U	U	
HEXACHLOROETHANE	67-72-1	270	510	270	91	UG/KG	U	U	
INDENO(1,2,3-C,D)PYRENE	193-39-5	33	67	33	33	UG/KG	U J	U	
ISOPHORONE	78-59-1	270	510	270	130	UG/KG	U	U	
NAPHTHALENE	91-20-3	33	67	33	33	UG/KG	U	U	
NITROBENZENE	98-95-3	33	1000	33	22	UG/KG	U	U	
N-NITROSODI-N-PROPYLAMINE	621-64-7	270	510	270	270	UG/KG	U	U	

N-NITROSODIPHENYLAMINE	86-30-6	270	510	270	210	UG/KG	U	R	C
PENTACHLOROPHENOL	87-86-5	810	1500	810	810	UG/KG	U	R	D
PHENANTHRENE	85-01-8	33	67	33	33	UG/KG	U	U	
PHENOL	108-95-2	270	510	270	270	UG/KG	U	U	
PYRENE	129-00-0	33	67	33	33	UG/KG	U	U	

Sample Name 070SB-046M-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18581-5 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2,4-TRICHLOROBENZENE	120-82-1	270	500	270	270	UG/KG	U	U	
1,2-DICHLOROBENZENE	95-50-1	270	500	270	97	UG/KG	U	U	
1,3-DICHLOROBENZENE	541-73-1	270	500	270	110	UG/KG	U	U	
1,4-DICHLOROBENZENE	106-46-7	270	500	270	200	UG/KG	U	U	
2,4,5-TRICHLOROPHENOL	95-95-4	270	1500	270	250	UG/KG	U	U	
2,4,6-TRICHLOROPHENOL	88-06-2	800	1500	800	800	UG/KG	U	U	
2,4-DICHLOROPHENOL	120-83-2	270	1500	270	200	UG/KG	U	U	
2,4-DIMETHYLPHENOL	105-67-9	800	1500	800	200	UG/KG	U	U	
2,4-DINITROPHENOL	51-28-5	800	3300	800	800	UG/KG	U	UJ	C
2,4-DINITROTOLUENE	121-14-2	270	2000	270	270	UG/KG	U	U	
2,6-DINITROTOLUENE	606-20-2	270	2000	270	210	UG/KG	U	U	
2-CHLORONAPHTHALENE	91-58-7	33	500	33	33	UG/KG	U	U	
2-CHLOROPHENOL	95-57-8	270	500	270	270	UG/KG	U	U	
2-METHYLNAPHTHALENE	91-57-6	33	67	33	33	UG/KG	U	U	
2-METHYLPHENOL (O-CRESOL)	95-48-7	800	2000	800	800	UG/KG	U	U	
2-NITROANILINE	88-74-4	270	2000	270	91	UG/KG	U	U	
2-NITROPHENOL	88-75-5	270	500	270	270	UG/KG	U	U	
3,3'-DICHLOROBENZIDINE	91-94-1	800	1000	800	180	UG/KG	U	U	
3-NITROANILINE	99-09-2	800	2000	800	160	UG/KG	U	U	
4,6-DINITRO-2-METHYLPHENOL	534-52-1	800	1500	800	800	UG/KG	U	U	
4-BROMOPHENYL PHENYL ETHE	101-55-3	270	500	270	130	UG/KG	U	U	
4-CHLORO-3-METHYLPHENOL	59-50-7	270	1500	270	210	UG/KG	U	U	
4-CHLOROANILINE	106-47-8	270	1500	270	170	UG/KG	U	U	
4-CHLOROPHENYL PHENYL ETH	7005-72-3	270	500	270	130	UG/KG	U	U	

Sample Delivery Group: 240-18581-1

4-NITROANILINE	100-01-6	270	2000	270	260	UG/KG	U	U	
4-NITROPHENOL	100-02-7	800	3300	800	800	UG/KG	U	U	
ACENAPHTHENE	83-32-9	33	67	33	33	UG/KG	U	U	
ACENAPHTHYLENE	208-96-8	33	67	33	33	UG/KG	U	U	
ANTHRACENE	120-12-7	33	67	33	33	UG/KG	U	U	
BENZO(A)ANTHRACENE	56-55-3	33	67	33	33	UG/KG	U	U	
BENZO(A)PYRENE	50-32-8	33	67	33	33	UG/KG	U	U	
BENZO(B)FLUORANTHENE	205-99-2	33	67	33	33	UG/KG	U	U	
BENZO(G,H,I)PERYLENE	191-24-2	33	67	33	33	UG/KG	U	UJ	C
BENZO(K)FLUORANTHENE	207-08-9	33	67	33	33	UG/KG	U	U	
BENZOIC ACID	65-85-0	3300	6600	3300	3300	UG/KG	U	U	
BENZYL ALCOHOL	100-51-6	270	3300	270	210	UG/KG	U	U	
BENZYL BUTYL PHTHALATE	85-68-7	270	500	270	100	UG/KG	U	U	
BIS(2-CHLOROETHOXY) METHA	111-91-1	270	1000	270	220	UG/KG	U	U	
BIS(2-CHLOROETHYL) ETHER (2	111-44-4	33	1000	33	20	UG/KG	U	U	
BIS(2-CHLOROISOPROPYL) ETHE	108-60-1	270	1000	270	95	UG/KG	U	U	
BIS(2-ETHYLHEXYL) PHTHALAT	117-81-7	270	500	270	190	UG/KG	U	U	
CARBAZOLE	86-74-8	270	500	270	270	UG/KG	U	U	
CHRYSENE	218-01-9	33	67	33	11	UG/KG	U	U	
CRESOLS, M & P		800	4000	800	200	UG/KG	U	U	
DIBENZ(A,H)ANTHRACENE	53-70-3	33	67	33	33	UG/KG	U	U	
DIBENZOFURAN	132-64-9	33	500	33	33	UG/KG	U	U	
DIETHYL PHTHALATE	84-66-2	270	500	270	160	UG/KG	U	U	
DIMETHYL PHTHALATE	131-11-3	270	500	270	170	UG/KG	U	U	
DI-N-BUTYL PHTHALATE	84-74-2	270	500	270	150	UG/KG	U	U	
DI-N-OCTYLPHTHALATE	117-84-0	270	500	270	270	UG/KG	U	U	
FLUORANTHENE	206-44-0	33	67	33	33	UG/KG	U	U	
FLUORENE	86-73-7	33	67	33	33	UG/KG	U	U	
HEXACHLOROBENZENE	118-74-1	33	67	33	21	UG/KG	U	U	
HEXACHLOROBUTADIENE	87-68-3	270	500	270	270	UG/KG	U	U	
HEXACHLOROCYCLOPENTADIE	77-47-4	270	3300	270	270	UG/KG	U	U	
HEXACHLOROETHANE	67-72-1	270	500	270	90	UG/KG	U	U	
INDENO(1,2,3-C,D)PYRENE	193-39-5	33	67	33	33	UG/KG	U	U	

Sample Delivery Group: 240-18581-1

ISOPHORONE	78-59-1	270	500	270	130	UG/KG	U	U	
NAPHTHALENE	91-20-3	33	67	33	33	UG/KG	U	U	
NITROBENZENE	98-95-3	33	1000	33	22	UG/KG	U	U	
N-NITROSODI-N-PROPYLAMINE	621-64-7	270	500	270	270	UG/KG	U	U	
N-NITROSODIPHENYLAMINE	86-30-6	270	500	270	210	UG/KG	U	R	C
PENTACHLOROPHENOL	87-86-5	800	1500	800	800	UG/KG	U	U	
PHENANTHRENE	85-01-8	33	67	33	33	UG/KG	U	U	
PHENOL	108-95-2	270	500	270	270	UG/KG	U	U	
PYRENE	129-00-0	33	67	33	33	UG/KG	U	U	

Analysis Method SW8330

Sample Name 070SB-044M-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18581-3 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,3,5-TRINITROBENZENE	99-35-4	0.048	0.24	0.048	0.0096	MG/KG	U	U	
1,3-DINITROBENZENE	99-65-0	0.048	0.24	0.048	0.0040	MG/KG	U	U	
2,4,6-TRINITROTOLUENE	118-96-7	0.048	0.24	0.048	0.019	MG/KG	U	U	
2,4-DINITROTOLUENE	121-14-2	0.048	0.24	0.048	0.0051	MG/KG	U	U	
2,6-DINITROTOLUENE	606-20-2	0.048	0.24	0.048	0.0070	MG/KG	U	U	
2-AMINO-4,6-DINITROTOLUENE	35572-78-2	0.048	0.24	0.048	0.012	MG/KG	U	U	
2-NITROTOLUENE	88-72-2	0.048	0.24	0.048	0.012	MG/KG	U	UJ	C
3-NITROTOLUENE	99-08-1	0.048	0.24	0.048	0.015	MG/KG	U	U	
4-AMINO-2,6-DINITROTOLUENE	19406-51-0	0.048	0.24	0.048	0.0096	MG/KG	U	U	
4-NITROTOLUENE	99-99-0	0.048	0.24	0.048	0.017	MG/KG	U	U	
HEXAHYDRO-1,3,5-TRINITRO-1,3,	121-82-4	0.048	0.24	0.048	0.012	MG/KG	U	UJ	C
NITROBENZENE	98-95-3	0.048	0.24	0.048	0.017	MG/KG	U	R	D
NITROGLYCERIN	55-63-0	0.24	0.48	0.24	0.014	MG/KG	U	U	
OCTAHYDRO-1,3,5,7-TETRANITR	2691-41-0	0.048	0.24	0.048	0.012	MG/KG	U	U	
PENTAERYTHRITOL TETRANITR	78-11-5	0.24	0.48	0.24	0.024	MG/KG	U	U	
TETRYL	479-45-8	0.048	0.24	0.048	0.0096	MG/KG	U	U	

Sample Delivery Group: 240-18735-1

Analysis Method M8015V

Sample Name 070SB-0042M-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18735-1 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
PETROLEUM HYDROCARBONS C		49	98	49	45	UG/KG	U	U	

Validated Sample Result Forms for Sampling : Ravenna Army Ammunition Plant Ravenna, Ohio
Remedial Investigation Compliance Restoration Site: RVAAP-71 Barn No. 5 Petroleum Release

Sample Delivery Group: 99236_71_0813

Analysis Method BNASIM

Sample Name 071SB-0013M-0001-SO **AnalysisType:** N

Lab Sample Name: 338377 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
2-METHYLNAPHTHALENE	91-57-6	2.9	1.5	0.82	0.23	ug/kg			
ACENAPHTHENE	83-32-9	1	1.5	0.82	0.34	ug/kg	J	J	
ACENAPHTHYLENE	208-96-8	0.82	1.5	0.82	0.25	ug/kg	U	U	
ANTHRACENE	120-12-7	0.82	1.5	0.82	0.32	ug/kg	U	U	
BENZO(A)ANTHRACENE	56-55-3	0.90	1.5	0.82	0.33	ug/kg	JB	U	B
BENZO(A)PYRENE	50-32-8	0.29	1.5	0.82	0.29	ug/kg	J	J	
BENZO(B)FLUORANTHENE	205-99-2	2.3	1.5	0.82	0.41	ug/kg			
BENZO(G,H,I)PERYLENE	191-24-2	1.8	1.5	0.82	0.4	ug/kg			
BENZO(K)FLUORANTHENE	207-08-9	0.82	1.5	0.82	0.38	ug/kg	U	U	
CHRYSENE	218-01-9	4.3	1.5	0.82	0.36	ug/kg			
DIBENZ(A,H)ANTHRACENE	53-70-3	0.82	1.5	0.82	0.36	ug/kg	U	U	
FLUORANTHENE	206-44-0	1	1.5	0.82	0.37	ug/kg	J	J	
FLUORENE	86-73-7	0.93	1.5	0.82	0.37	ug/kg	J	J	
INDENO(1,2,3-C,D)PYRENE	193-39-5	0.52	1.5	0.82	0.37	ug/kg	J	J	
NAPHTHALENE	91-20-3	3.7	1.5	0.82	0.28	ug/kg			
PHENANTHRENE	85-01-8	4.0	1.5	0.8	0.46	ug/kg	B	U	B
PYRENE	129-00-0	1.2	1.5	0.82	0.42	ug/kg	J	J	

Sample Name 071SB-0018M-0001-SO **AnalysisType:** N

Lab Sample Name: 338379 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
2-METHYLNAPHTHALENE	91-57-6	3	1.5	0.82	0.23	ug/kg			
ACENAPHTHENE	83-32-9	0.62	1.5	0.82	0.34	ug/kg	J	J	
ACENAPHTHYLENE	208-96-8	0.82	1.5	0.82	0.25	ug/kg	U	U	

Sample Delivery Group: 99236_71_0813

ANTHRACENE	120-12-7	0.82	1.5	0.82	0.32	ug/kg	U	U	
BENZO(A)ANTHRACENE	56-55-3	1.2	1.5	0.82	0.33	ug/kg	JB	U	B
BENZO(A)PYRENE	50-32-8	0.42	1.5	0.82	0.29	ug/kg	J	J	
BENZO(B)FLUORANTHENE	205-99-2	2.9	1.5	0.82	0.41	ug/kg			
BENZO(G,H,I)PERYLENE	191-24-2	1.5	1.5	0.82	0.4	ug/kg			
BENZO(K)FLUORANTHENE	207-08-9	0.82	1.5	0.82	0.38	ug/kg	U	U	
CHRYSENE	218-01-9	4.8	1.5	0.82	0.36	ug/kg			
DIBENZ(A,H)ANTHRACENE	53-70-3	0.82	1.5	0.82	0.36	ug/kg	U	U	
FLUORANTHENE	206-44-0	1.4	1.5	0.82	0.37	ug/kg	J	J	
FLUORENE	86-73-7	1.1	1.5	0.82	0.37	ug/kg	J	J	
INDENO(1,2,3-C,D)PYRENE	193-39-5	0.61	1.5	0.82	0.37	ug/kg	J	J	
NAPHTHALENE	91-20-3	0.82	1.5	0.82	0.28	ug/kg	JB	U	B
PHENANTHRENE	85-01-8	4.7	1.5	0.82	0.46	ug/kg	B	U	B
PYRENE	129-00-0	1.4	1.5	0.82	0.42	ug/kg	J	J	

Analysis Method E353.2

Sample Name 071SB-0017M-0001-SO **AnalysisType:** N

Lab Sample Name: 338375 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
NITROCELLULOSE	9004-70-0	100	200	100	33	mg/kg	U	U	

Analysis Method ORTPHG

Sample Name 071SB-0013M-0001-SO **AnalysisType:** N

Lab Sample Name: 338378 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
GASOLINE COMPONENTS		2.6	5.3	2.6	1.1	mg/kg	U	U	

Sample Name 071SB-0018M-0001-SO **AnalysisType:** N

Lab Sample Name: 338380 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
GASOLINE COMPONENTS		2.6	5.3	2.6	1.1	mg/kg	U	U	

Sample Delivery Group: 99236_71_0813

Analysis Method SW6010C

Sample Name 071SB-0013M-0001-SO **AnalysisType:** N

Lab Sample Name: 338377 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
LEAD	7439-92-1	9	1.3	0.64	0.21	mg/kg		J-	P, Q

Sample Name 071SB-0018M-0001-SO **AnalysisType:** N

Lab Sample Name: 338379 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
LEAD	7439-92-1	8.8	1.2	0.62	0.2	mg/kg		J-	P, Q

Analysis Method SW8015

Sample Name 071SB-0013M-0001-SO **AnalysisType:** N

Lab Sample Name: 338377 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
DIESEL COMPONENTS		20	41	15	5.1	mg/kg	J	J	

Sample Name 071SB-0018M-0001-SO **AnalysisType:** N

Lab Sample Name: 338379 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
DIESEL COMPONENTS		19	41	15	5.1	mg/kg	J	J	

Sample Delivery Group: 99236_71_0813

Analysis Method SW8082

Sample Name 071SB-0017M-0001-SO **AnalysisType:** N

Lab Sample Name: 338375 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
PCB-1016 (AROCHLOR 1016)	12674-11-2	20	31	20	5.1	ug/kg	U	U	
PCB-1221 (AROCHLOR 1221)	11104-28-2	20	31	20	7.2	ug/kg	U	U	
PCB-1232 (AROCHLOR 1232)	11141-16-5	20	31	20	9.2	ug/kg	U	U	
PCB-1242 (AROCHLOR 1242)	53469-21-9	20	31	20	7.2	ug/kg	U	U	
PCB-1248 (AROCHLOR 1248)	12672-29-6	20	31	20	7.2	ug/kg	U	U	
PCB-1254 (AROCHLOR 1254)	11097-69-1	20	31	20	9.2	ug/kg	U	U	
PCB-1260 (AROCHLOR 1260)	11096-82-5	20	31	20	6.1	ug/kg	U	U	
PCB-1262 (AROCHLOR 1262)	37324-23-5	20	31	20	7.2	ug/kg	U	U	
PCB-1268 (AROCHLOR 1268)	11100-14-4	20	31	20	5.1	ug/kg	U	U	

Sample Delivery Group: 99236_71_0813

Analysis Method SW8260C

Sample Name 071SB-0013M-0001-SO **AnalysisType:** N

Lab Sample Name: 338378 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,1,1-TRICHLOROETHANE	71-55-6	0.93	1.9	0.93	0.28	ug/kg	U	U	
1,1,2,2-TETRACHLOROETHANE	79-34-5	0.93	1.9	0.93	0.47	ug/kg	U	U	
1,1,2-TRICHLOROETHANE	79-00-5	0.93	1.9	0.93	0.37	ug/kg	U	U	
1,1-DICHLOROETHANE	75-34-3	0.93	1.9	0.93	0.37	ug/kg	U	U	
1,1-DICHLOROETHENE	75-35-4	0.93	1.9	0.93	0.37	ug/kg	U	U	
1,2-DIBROMOETHANE (ETHYLEN	106-93-4	0.93	1.9	0.93	0.37	ug/kg	U	U	
1,2-DICHLOROETHANE	107-06-2	0.93	1.9	0.93	0.47	ug/kg	U	U	
1,2-DICHLOROPROPANE	78-87-5	0.93	1.9	0.93	0.37	ug/kg	U	U	
2-HEXANONE	591-78-6	19	37	19	10	ug/kg	U	U	
ACETONE	67-64-1	9.3	19	9.3	9.3	ug/kg	U	U	
BENZENE	71-43-2	0.93	1.9	0.93	0.28	ug/kg	U	U	
BROMOCHLOROMETHANE	74-97-5	0.93	1.9	0.93	0.37	ug/kg	U	U	
BROMODICHLOROMETHANE	75-27-4	0.93	1.9	0.93	0.37	ug/kg	U	U	
BROMOFORM	75-25-2	0.93	1.9	0.93	0.37	ug/kg	U	U	
BROMOMETHANE	74-83-9	0.93	1.9	0.93	0.65	ug/kg	U	UJ	C
CARBON DISULFIDE	75-15-0	1.9	3.7	1.9	0.84	ug/kg	U	U	
CARBON TETRACHLORIDE	56-23-5	0.93	1.9	0.93	0.28	ug/kg	U	U	
CHLOROBENZENE	108-90-7	0.93	1.9	0.93	0.37	ug/kg	U	U	
CHLOROETHANE	75-00-3	0.93	1.9	0.93	0.47	ug/kg	U	U	
CHLOROFORM	67-66-3	0.93	1.9	0.93	0.37	ug/kg	U	U	
CHLOROMETHANE	74-87-3	0.93	1.9	0.93	0.37	ug/kg	U	U	
CIS-1,2-DICHLOROETHYLENE	156-59-2	0.93	1.9	0.93	0.37	ug/kg	U	U	
CIS-1,3-DICHLOROPROPENE	10061-01-5	0.93	1.9	0.93	0.28	ug/kg	U	U	
DIBROMOCHLOROMETHANE	124-48-1	0.93	1.9	0.93	0.37	ug/kg	U	U	
ETHYLBENZENE	100-41-4	0.93	1.9	0.93	0.37	ug/kg	U	U	
M,P-XYLENE (SUM OF ISOMERS)		1.9	3.7	1.9	0.65	ug/kg	U	R	D
METHYL ETHYL KETONE (2-BUT	78-93-3	9.3	19	9.3	9.3	ug/kg	U	U	
METHYL ISOBUTYL KETONE (4-	108-10-1	9.3	19	9.3	9.3	ug/kg	U	U	

METHYLENE CHLORIDE	75-09-2	9.9	9.9	1.9	1.6	ug/kg	Z	UJ	B, C
O-XYLENE (1,2-DIMETHYLBENZ	95-47-6	0.93	1.9	0.93	0.37	ug/kg	U	R	D
STYRENE	100-42-5	0.93	1.9	0.93	0.28	ug/kg	U	U	
TERT-BUTYL METHYL ETHER	1634-04-4	0.93	1.9	0.93	0.37	ug/kg	U	U	
TETRACHLOROETHYLENE(PCE)	127-18-4	0.93	1.9	0.93	0.37	ug/kg	U	U	
TOLUENE	108-88-3	0.93	1.9	0.93	0.37	ug/kg	U	U	
TOTAL 1,2-DICHLOROETHENE	540-59-0	0.93	1.9	0.93	0.37	ug/kg	U	U	
TRANS-1,2-DICHLOROETHENE	156-60-5	0.93	1.9	0.93	0.37	ug/kg	U	U	
TRANS-1,3-DICHLOROPROPENE	10061-02-6	0.93	1.9	0.93	0.37	ug/kg	U	U	
TRICHLOROETHYLENE (TCE)	79-01-6	0.93	1.9	0.93	0.28	ug/kg	U	U	
VINYL CHLORIDE	75-01-4	0.93	1.9	0.93	0.47	ug/kg	U	U	
XYLENES, TOTAL		1.9	3.7	1.9	0.65	ug/kg	U	U	

Sample Name 071SB-0018M-0001-SO **AnalysisType:** N

Lab Sample Name: 338380 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,1,1-TRICHLOROETHANE	71-55-6	0.86	1.7	0.86	0.26	ug/kg	U	U	
1,1,2,2-TETRACHLOROETHANE	79-34-5	0.86	1.7	0.86	0.43	ug/kg	U	U	
1,1,2-TRICHLOROETHANE	79-00-5	0.86	1.7	0.86	0.35	ug/kg	U	U	
1,1-DICHLOROETHANE	75-34-3	0.86	1.7	0.86	0.35	ug/kg	U	U	
1,1-DICHLOROETHENE	75-35-4	0.86	1.7	0.86	0.35	ug/kg	U	U	
1,2-DIBROMOETHANE (ETHYLEN	106-93-4	0.86	1.7	0.86	0.35	ug/kg	U	U	
1,2-DICHLOROETHANE	107-06-2	0.86	1.7	0.86	0.43	ug/kg	U	U	
1,2-DICHLOROPROPANE	78-87-5	0.86	1.7	0.86	0.35	ug/kg	U	U	
2-HEXANONE	591-78-6	17	35	17	9.5	ug/kg	U	U	
ACETONE	67-64-1	8.6	17	8.6	8.6	ug/kg	U	U	
BENZENE	71-43-2	0.86	1.7	0.86	0.26	ug/kg	U	U	
BROMOCHLOROMETHANE	74-97-5	0.86	1.7	0.86	0.35	ug/kg	U	U	
BROMODICHLOROMETHANE	75-27-4	0.86	1.7	0.86	0.35	ug/kg	U	U	
BROMOFORM	75-25-2	0.86	1.7	0.86	0.35	ug/kg	U	U	
BROMOMETHANE	74-83-9	0.86	1.7	0.86	0.6	ug/kg	U	UJ	C
CARBON DISULFIDE	75-15-0	1.7	3.5	1.7	0.78	ug/kg	U	U	
CARBON TETRACHLORIDE	56-23-5	0.86	1.7	0.86	0.26	ug/kg	U	U	

Sample Delivery Group: 99236_71_0813

CHLOROBENZENE	108-90-7	0.86	1.7	0.86	0.35	ug/kg	U	**U**	
CHLOROETHANE	75-00-3	0.86	1.7	0.86	0.43	ug/kg	U	**U**	
CHLOROFORM	67-66-3	0.86	1.7	0.86	0.35	ug/kg	U	**U**	
CHLOROMETHANE	74-87-3	0.86	1.7	0.86	0.35	ug/kg	U	**U**	
CIS-1,2-DICHLOROETHYLENE	156-59-2	0.86	1.7	0.86	0.35	ug/kg	U	**U**	
CIS-1,3-DICHLOROPROPENE	10061-01-5	0.86	1.7	0.86	0.26	ug/kg	U	**U**	
DIBROMOCHLOROMETHANE	124-48-1	0.86	1.7	0.86	0.35	ug/kg	U	**U**	
ETHYLBENZENE	100-41-4	0.86	1.7	0.86	0.35	ug/kg	U	**U**	
M,P-XYLENE (SUM OF ISOMERS)		1.7	3.5	1.7	0.6	ug/kg	U	**R**	**D**
METHYL ETHYL KETONE (2-BUT	78-93-3	8.6	17	8.6	8.6	ug/kg	U	**U**	
METHYL ISOBUTYL KETONE (4-	108-10-1	8.6	17	8.6	8.6	ug/kg	U	**U**	
METHYLENE CHLORIDE	75-09-2	6.3	8.6	1.7	1.5	ug/kg	J	**UJ**	**B, C**
O-XYLENE (1,2-DIMETHYLBENZ	95-47-6	0.86	1.7	0.86	0.35	ug/kg	U	**R**	**D**
STYRENE	100-42-5	0.86	1.7	0.86	0.26	ug/kg	U	**U**	
TERT-BUTYL METHYL ETHER	1634-04-4	0.86	1.7	0.86	0.35	ug/kg	U	**U**	
TETRACHLOROETHYLENE(PCE)	127-18-4	0.86	1.7	0.86	0.35	ug/kg	U	**U**	
TOLUENE	108-88-3	0.86	1.7	0.86	0.35	ug/kg	U	**U**	
TOTAL 1,2-DICHLOROETHENE	540-59-0	0.86	1.7	0.86	0.35	ug/kg	U	**U**	
TRANS-1,2-DICHLOROETHENE	156-60-5	0.86	1.7	0.86	0.35	ug/kg	U	**U**	
TRANS-1,3-DICHLOROPROPENE	10061-02-6	0.86	1.7	0.86	0.35	ug/kg	U	**U**	
TRICHLOROETHYLENE (TCE)	79-01-6	0.86	1.7	0.86	0.26	ug/kg	U	**U**	
VINYL CHLORIDE	75-01-4	0.86	1.7	0.86	0.43	ug/kg	U	**U**	
XYLENES, TOTAL		1.7	3.5	1.7	0.6	ug/kg	U	**U**	

Sample Delivery Group: 99236_71_0813

Analysis Method SW8270D

Sample Name 071SB-0013M-0001-SO **AnalysisType:** N

Lab Sample Name: 338377 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2,4-TRICHLOROBENZENE	120-82-1	62	120	62	22	ug/kg	U	U	
1,2-DICHLOROBENZENE	95-50-1	62	120	62	25	ug/kg	U	U	
1,3-DICHLOROBENZENE	541-73-1	62	120	62	21	ug/kg	U	U	
1,4-DICHLOROBENZENE	106-46-7	62	120	62	20	ug/kg	U	U	
2,2'-OXYBIS(1-CHLORO)PROPAN	108-60-1	62	120	62	31	ug/kg	U	U	
2,4,5-TRICHLOROPHENOL	95-95-4	310	620	310	130	ug/kg	U	U	
2,4,6-TRICHLOROPHENOL	88-06-2	310	620	310	130	ug/kg	U	U	
2,4-DICHLOROPHENOL	120-83-2	310	620	310	120	ug/kg	U	U	
2,4-DIMETHYLPHENOL	105-67-9	310	620	310	100	ug/kg	U	U	
2,4-DINITROPHENOL	51-28-5	310	1000	310	280	ug/kg	U	U	
2,4-DINITROTOLUENE	121-14-2	62	120	62	25	ug/kg	U	U	
2,6-DINITROTOLUENE	606-20-2	62	120	62	25	ug/kg	U	U	
2-CHLORONAPHTHALENE	91-58-7	62	120	62	24	ug/kg	U	U	
2-CHLOROPHENOL	95-57-8	620	2100	620	350	ug/kg	U	U	
2-METHYLPHENOL (O-CRESOL)	95-48-7	620	2100	620	430	ug/kg	U	U	
2-NITROANILINE	88-74-4	62	120	62	24	ug/kg	U	U	
2-NITROPHENOL	88-75-5	310	1000	310	290	ug/kg	U	U	
3,3'-DICHLOROBENZIDINE	91-94-1	150	510	150	150	ug/kg	U	U	
3-NITROANILINE	99-09-2	62	120	62	23	ug/kg	U	U	
4,6-DINITRO-2-METHYLPHENOL	534-52-1	310	1000	310	280	ug/kg	U	UJ	C
4-BROMOPHENYL PHENYL ETHE	101-55-3	62	120	62	26	ug/kg	U	U	
4-CHLORO-3-METHYLPHENOL	59-50-7	620	2100	620	390	ug/kg	U	U	
4-CHLOROANILINE	106-47-8	62	210	62	40	ug/kg	U	U	
4-CHLOROPHENYL PHENYL ETH	7005-72-3	62	120	62	27	ug/kg	U	U	
4-NITROANILINE	100-01-6	62	120	62	31	ug/kg	U	U	
4-NITROPHENOL	100-02-7	620	2100	620	410	ug/kg	U	U	
BENZOIC ACID	65-85-0	1500	3100	1500	300	ug/kg	U	UJ	C
BENZYL ALCOHOL	100-51-6	120	410	120	85	ug/kg	U	R	C

BENZYL BUTYL PHTHALATE	85-68-7	120	410	120	75	ug/kg	U	U	
BIS(2-CHLOROETHOXY) METHA	111-91-1	62	120	62	24	ug/kg	U	U	
BIS(2-CHLOROETHYL) ETHER (2	111-44-4	62	120	62	26	ug/kg	U	U	
CARBAZOLE	86-74-8	62	120	62	29	ug/kg	U	U	
CRESOLS, M & P		1100	3700	1100	670	ug/kg	U	U	
DIBENZOFURAN	132-64-9	62	120	62	25	ug/kg	U	U	
DIETHYL PHTHALATE	84-66-2	120	410	120	66	ug/kg	U	U	
DIMETHYL PHTHALATE	131-11-3	120	410	120	65	ug/kg	U	U	
DI-N-BUTYL PHTHALATE	84-74-2	120	410	120	81	ug/kg	U	U	
DI-N-OCTYLPHTHALATE	117-84-0	62	210	62	61	ug/kg	U	U	
HEXACHLOROBENZENE	118-74-1	62	120	62	29	ug/kg	U	U	
HEXACHLOROBUTADIENE	87-68-3	120	410	120	64	ug/kg	U	U	
HEXACHLOROCYCLOPENTADIE	77-47-4	62	210	62	53	ug/kg	U	UJ	C
HEXACHLOROETHANE	67-72-1	62	120	62	34	ug/kg	U	U	
ISOPHORONE	78-59-1	62	210	62	51	ug/kg	U	U	
NITROBENZENE	98-95-3	62	210	62	61	ug/kg	U	U	
N-NITROSODI-N-PROPYLAMINE	621-64-7	120	410	120	72	ug/kg	U	U	
N-NITROSODIPHENYLAMINE	86-30-6	120	250	120	51	ug/kg	U	U	
PENTACHLOROPHENOL	87-86-5	310	1000	310	250	ug/kg	U	U	
PHENOL	108-95-2	310	620	310	160	ug/kg	U	U	

Sample Name 071SB-0018M-0001-SO **AnalysisType:** N

Lab Sample Name: 338379 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2,4-TRICHLOROBENZENE	120-82-1	61	120	61	21	ug/kg	U	U	
1,2-DICHLOROBENZENE	95-50-1	61	120	61	25	ug/kg	U	U	
1,3-DICHLOROBENZENE	541-73-1	61	120	61	20	ug/kg	U	U	
1,4-DICHLOROBENZENE	106-46-7	61	120	61	19	ug/kg	U	U	
2,2'-OXYBIS(1-CHLORO)PROPAN	108-60-1	61	120	61	31	ug/kg	U	U	
2,4,5-TRICHLOROPHENOL	95-95-4	310	610	310	130	ug/kg	U	U	
2,4,6-TRICHLOROPHENOL	88-06-2	310	610	310	130	ug/kg	U	U	
2,4-DICHLOROPHENOL	120-83-2	310	610	310	120	ug/kg	U	U	
2,4-DIMETHYLPHENOL	105-67-9	310	610	310	100	ug/kg	U	U	

Sample Delivery Group: 99236_71_0813

2,4-DINITROPHENOL	51-28-5	310	1000	310	280	ug/kg	U	U	
2,4-DINITROTOLUENE	121-14-2	61	120	61	25	ug/kg	U	U	
2,6-DINITROTOLUENE	606-20-2	61	120	61	25	ug/kg	U	U	
2-CHLORONAPHTHALENE	91-58-7	61	120	61	23	ug/kg	U	U	
2-CHLOROPHENOL	95-57-8	610	2000	610	350	ug/kg	U	U	
2-METHYLPHENOL (O-CRESOL)	95-48-7	610	2000	610	430	ug/kg	U	U	
2-NITROANILINE	88-74-4	61	120	61	23	ug/kg	U	U	
2-NITROPHENOL	88-75-5	310	1000	310	290	ug/kg	U	U	
3,3'-DICHLOROBENZIDINE	91-94-1	150	510	150	150	ug/kg	U	U	
3-NITROANILINE	99-09-2	61	120	61	22	ug/kg	U	U	
4,6-DINITRO-2-METHYLPHENOL	534-52-1	310	1000	310	280	ug/kg	U	UJ	C
4-BROMOPHENYL PHENYL ETHE	101-55-3	61	120	61	26	ug/kg	U	U	
4-CHLORO-3-METHYLPHENOL	59-50-7	610	2000	610	390	ug/kg	U	U	
4-CHLOROANILINE	106-47-8	61	200	61	40	ug/kg	U	U	
4-CHLOROPHENYL PHENYL ETH	7005-72-3	61	120	61	27	ug/kg	U	U	
4-NITROANILINE	100-01-6	61	120	61	31	ug/kg	U	U	
4-NITROPHENOL	100-02-7	610	2000	610	410	ug/kg	U	U	
BENZOIC ACID	65-85-0	1500	3100	1500	300	ug/kg	U	UJ	C
BENZYL ALCOHOL	100-51-6	120	410	120	85	ug/kg	U	R	C
BENZYL BUTYL PHTHALATE	85-68-7	120	410	120	75	ug/kg	U	U	
BIS(2-CHLOROETHOXY) METHA	111-91-1	61	120	61	23	ug/kg	U	U	
BIS(2-CHLOROETHYL) ETHER (2	111-44-4	61	120	61	26	ug/kg	U	U	
CARBAZOLE	86-74-8	61	120	61	29	ug/kg	U	U	
CRESOLS, M & P		1100	3700	1100	660	ug/kg	U	U	
DIBENZOFURAN	132-64-9	61	120	61	25	ug/kg	U	U	
DIETHYL PHTHALATE	84-66-2	120	410	120	65	ug/kg	U	U	
DIMETHYL PHTHALATE	131-11-3	120	410	120	64	ug/kg	U	U	
DI-N-BUTYL PHTHALATE	84-74-2	120	410	120	81	ug/kg	U	U	
DI-N-OCTYLPHTHALATE	117-84-0	61	200	61	60	ug/kg	U	U	
HEXACHLOROBENZENE	118-74-1	61	120	61	29	ug/kg	U	U	
HEXACHLOROBUTADIENE	87-68-3	120	410	120	63	ug/kg	U	U	
HEXACHLOROCYCLOPENTADIE	77-47-4	61	200	61	53	ug/kg	U	UJ	C
HEXACHLOROETHANE	67-72-1	61	120	61	34	ug/kg	U	U	

Sample Delivery Group: 99236_71_0813

ISOPHORONE	78-59-1	61	200	61	51	ug/kg	U	U
NITROBENZENE	98-95-3	61	200	61	60	ug/kg	U	U
N-NITROSODI-N-PROPYLAMINE	621-64-7	120	410	120	72	ug/kg	U	U
N-NITROSODIPHENYLAMINE	86-30-6	120	250	120	51	ug/kg	U	U
PENTACHLOROPHENOL	87-86-5	310	1000	310	250	ug/kg	U	U
PHENOL	108-95-2	310	610	310	160	ug/kg	U	U

Analysis Method SW8330

Sample Name 071SB-0017M-0001-SO **AnalysisType:** N

Lab Sample Name: 338375 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
NITROGUANIDINE	556-88-7	0.12	0.25	0.12	0.06	mg/kg	U	U	

Sample Delivery Group: 99236_71_0813

Analysis Method SW8330B

Sample Name 071SB-0017M-0001-SO **AnalysisType:** N

Lab Sample Name: 338375 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,3,5-TRINITROBENZENE	99-35-4	0.3	0.5	0.3	0.13	mg/kg	U	U	
1,3-DINITROBENZENE	99-65-0	0.2	0.3	0.2	0.08	mg/kg	U	U	
2,4,6-TRINITROTOLUENE	118-96-7	0.2	0.5	0.2	0.09	mg/kg	U	U	
2,4-DINITROTOLUENE	121-14-2	0.2	0.3	0.2	0.08	mg/kg	U	U	
2,6-DINITROTOLUENE	606-20-2	0.2	0.3	0.2	0.07	mg/kg	U	U	
2-AMINO-4,6-DINITROTOLUENE	35572-78-2	0.2	0.3	0.2	0.09	mg/kg	U	U	
2-NITROTOLUENE	88-72-2	0.2	0.3	0.2	0.09	mg/kg	U	UJ	C
3,5-DINITROANILINE	618-87-1	0.2	0.3	0.2	0.09	mg/kg	U	U	
3-NITROTOLUENE	99-08-1	0.3	0.5	0.3	0.11	mg/kg	U	U	
4-AMINO-2,6-DINITROTOLUENE	19406-51-0	0.2	0.3	0.2	0.08	mg/kg	U	UJ	C
4-NITROTOLUENE	99-99-0	0.2	0.5	0.2	0.1	mg/kg	U	U	
HMX	2691-41-0	0.3	0.5	0.3	0.12	mg/kg	U	U	
NITROBENZENE	98-95-3	0.2	0.5	0.2	0.1	mg/kg	U	U	
NITROGLYCERIN	55-63-0	1.2	2	1.2	0.5	mg/kg	U	U	
PETN	78-11-5	1.2	2	1.2	0.6	mg/kg	U	U	
RDX	121-82-4	0.3	0.5	0.3	0.14	mg/kg	U	U	
TETRYL	479-45-8	0.2	0.3	0.2	0.09	mg/kg	U	U	

Validated Sample Result Forms for Sampling : Ravenna Army Ammunition Plant Ravenna, Ohio
Remedial Investigation Compliance Restoration Site: RVAAP-72 Facility-Wide USTs

Sample Delivery Group: 240-18297-1

Analysis Method E353.2

Sample Name 072SB-0014-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18297-17 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
NITROCELLULOSE	9004-70-0	20	54	20	8.5	MG/KG	U J	U	

Analysis Method M8015D

Sample Name 072SB-0001-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18297-9 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
C10-C20 PETROLEUM HYDROCA		11	20	11	11	MG/KG	U	U	
C20-C34 PETROLEUM HYDROCA		11	20	11	11	MG/KG	U	U	

Sample Name 072SB-0012-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18297-15 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
C10-C20 PETROLEUM HYDROCA		10	19	10	10	MG/KG	U	U	
C20-C34 PETROLEUM HYDROCA		10	19	10	10	MG/KG	U	U	

Sample Name 072SB-0014-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18297-17 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
C10-C20 PETROLEUM HYDROCA		10	19	10	10	MG/KG	U	U	
C20-C34 PETROLEUM HYDROCA		10	19	10	10	MG/KG	U	U	

Sample Delivery Group: 240-18297-1

Analysis Method M8015V

Sample Name 072SB-0001-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18297-9 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
PETROLEUM HYDROCARBONS C		320.0	110	55	50	UG/KG		J	Q

Sample Name 072SB-0012-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18297-15 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
PETROLEUM HYDROCARBONS C		47	93	47	43	UG/KG	U	U	

Sample Name 072SB-0014-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18297-17 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
PETROLEUM HYDROCARBONS C		46	92	46	42	UG/KG	U	U	

Sample Delivery Group: 240-18297-1

Analysis Method SW6020

Sample Name 072SB-0001-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18297-9 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
ALUMINUM	7429-90-5	12000.0	3.1	0.62	0.29	MG/KG	J	J	
ANTIMONY	7440-36-0	0.075	0.21	0.10	0.047	MG/KG	J	J-	Q
ARSENIC	7440-38-2	14.0	0.10	0.051	0.019	MG/KG		J-	Q
BARIUM	7440-39-3	36.0	1.0	0.021	0.011	MG/KG	Q	J+	Q
BERYLLIUM	7440-41-7	0.65	0.10	0.010	0.0077	MG/KG		J-	Q
CADMIUM	7440-43-9	0.15	0.10	0.031	0.014	MG/KG	Q	J-	Q
CALCIUM	7440-70-2	2900.0	10	2.6	1.4	MG/KG	J	J+	E, Q
CHROMIUM	7440-47-3	18.0	0.21	0.041	0.023	MG/KG			
COBALT	7440-48-4	12.0	0.051	0.010	0.0025	MG/KG	Q		
COPPER	7440-50-8	16.0	0.21	0.062	0.034	MG/KG	Q		
IRON	7439-89-6	28000.0	5.1	2.1	1.1	MG/KG	J	J	
LEAD	7439-92-1	11.0	0.10	0.031	0.016	MG/KG			
MAGNESIUM	7439-95-4	6000.0	10	2.1	1.1	MG/KG			
MANGANESE	7439-96-5	190.0	0.51	0.031	0.016	MG/KG	Q J	J	
NICKEL	7440-02-0	29.0	0.10	0.031	0.012	MG/KG	Q	J-	Q
POTASSIUM	7440-09-7	1900.0	10	6.2	3.2	MG/KG	J	J-	Q
SELENIUM	7782-49-2	0.9	0.51	0.10	0.052	MG/KG		J-	Q
SILVER	7440-22-4	0.033	0.10	0.031	0.012	MG/KG	J	J	
SODIUM	7440-23-5	85.0	10	5.1	2.7	MG/KG			
THALLIUM	7440-28-0	0.18	0.10	0.021	0.010	MG/KG			
VANADIUM	7440-62-2	17.0	0.10	0.062	0.031	MG/KG			
ZINC	7440-66-6	59.0	0.51	0.21	0.067	MG/KG	Q		

Sample Name 072SB-0012-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18297-15 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
ALUMINUM	7429-90-5	8500.0	3.2	0.64	0.30	MG/KG	J	J	
ANTIMONY	7440-36-0	0.2	0.21	0.11	0.049	MG/KG	J	J-	Q

ARSENIC	7440-38-2	5.6	0.11	0.053	0.019	MG/KG		J	E
BARIUM	7440-39-3	55.0	1.1	0.021	0.011	MG/KG	Q		
BERYLLIUM	7440-41-7	0.88	0.11	0.011	0.0080	MG/KG		J-	Q
CADMIUM	7440-43-9	0.2	0.11	0.032	0.014	MG/KG	Q		
CALCIUM	7440-70-2	400.0	11	2.7	1.4	MG/KG			
CHROMIUM	7440-47-3	18.0	0.21	0.042	0.024	MG/KG			
COBALT	7440-48-4	18.0	0.053	0.011	0.0025	MG/KG	Q		
COPPER	7440-50-8	31.0	0.21	0.064	0.035	MG/KG	Q	J+	Q
IRON	7439-89-6	37000.0	5.3	2.1	1.1	MG/KG	J	J	
LEAD	7439-92-1	20.0	0.11	0.032	0.016	MG/KG		J+	Q
MAGNESIUM	7439-95-4	4000.0	11	2.1	1.1	MG/KG			
MANGANESE	7439-96-5	910.0	0.53	0.032	0.017	MG/KG	Q J	J	
NICKEL	7440-02-0	31.0	0.11	0.032	0.012	MG/KG	Q		
POTASSIUM	7440-09-7	1000.0	11	6.4	3.4	MG/KG		J-	Q
SELENIUM	7782-49-2	1.0	0.53	0.11	0.054	MG/KG		J-	Q
SILVER	7440-22-4	0.032	0.11	0.032	0.012	MG/KG	J	J	
SODIUM	7440-23-5	60.0	11	5.3	2.8	MG/KG			
THALLIUM	7440-28-0	0.14	0.11	0.021	0.011	MG/KG			
VANADIUM	7440-62-2	17.0	0.11	0.064	0.032	MG/KG			
ZINC	7440-66-6	69.0	0.53	0.21	0.069	MG/KG	Q		

Sample Name 072SB-0014-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18297-17 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
ALUMINUM	7429-90-5	9500.0	3.0	0.60	0.28	MG/KG			
ANTIMONY	7440-36-0	0.13	0.20	0.10	0.046	MG/KG	J	J-	Q
ARSENIC	7440-38-2	5.6	0.10	0.050	0.018	MG/KG		J-	E, Q
BARIUM	7440-39-3	61.0	1.0	0.020	0.011	MG/KG	Q	J+	Q
BERYLLIUM	7440-41-7	0.91	0.10	0.010	0.0075	MG/KG		J-	Q
CADMIUM	7440-43-9	0.26	0.10	0.030	0.013	MG/KG	Q	J-	Q
CALCIUM	7440-70-2	430.0	10	2.5	1.3	MG/KG		J+	E, Q
CHROMIUM	7440-47-3	19.0	0.20	0.040	0.022	MG/KG			
COBALT	7440-48-4	17.0	0.050	0.010	0.0024	MG/KG	Q		

Sample Delivery Group: 240-18297-1

COPPER	7440-50-8	34.0	0.20	0.060	0.033	MG/KG	Q	J+	Q
IRON	7439-89-6	40000.0	5.0	2.0	1.1	MG/KG			
LEAD	7439-92-1	23.0	0.10	0.030	0.015	MG/KG		J+	Q
MAGNESIUM	7439-95-4	4200.0	10	2.0	1.1	MG/KG			
MANGANESE	7439-96-5	840.0	0.50	0.030	0.016	MG/KG	Q		
NICKEL	7440-02-0	34.0	0.10	0.030	0.011	MG/KG	Q	J-	Q
POTASSIUM	7440-09-7	1200.0	10	6.0	3.1	MG/KG		J-	Q
SELENIUM	7782-49-2	1.1	0.50	0.10	0.051	MG/KG		J-	Q
SILVER	7440-22-4	0.036	0.10	0.030	0.011	MG/KG	J	J	
SODIUM	7440-23-5	61.0	10	5.0	2.7	MG/KG			
THALLIUM	7440-28-0	0.12	0.10	0.020	0.010	MG/KG			
VANADIUM	7440-62-2	19.0	0.10	0.060	0.030	MG/KG			
ZINC	7440-66-6	87.0	0.50	0.20	0.065	MG/KG	Q		

Analysis Method SW7471A

Sample Name 072SB-0001-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18297-9 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
MERCURY	7439-97-6	0.039	0.12	0.039	0.016	MG/KG	U	U	

Sample Name 072SB-0012-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18297-15 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
MERCURY	7439-97-6	0.04	0.10	0.034	0.014	MG/KG	J	J	

Sample Name 072SB-0014-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18297-17 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
MERCURY	7439-97-6	0.027	0.098	0.032	0.014	MG/KG	J	J	

Sample Delivery Group: 240-18297-1

Analysis Method SW8081

Sample Name 072SB-0014-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18297-17 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
ALDRIN	309-00-2	1.5	4.6	1.5	1.4	UG/KG	U	U	
ALPHA BHC (ALPHA HEXACHLO	319-84-6	1.5	2.9	1.5	0.83	UG/KG	U J	UJ	Q
ALPHA ENDOSULFAN	959-98-8	0.77	1.9	0.77	0.59	UG/KG	U J	UJ	Q
ALPHA-CHLORDANE	5103-71-9	1.5	3.4	1.5	1.1	UG/KG	U J	UJ	Q
BETA BHC (BETA HEXACHLORO	319-85-7	1.5	4.0	1.5	1.3	UG/KG	U J	UJ	Q
BETA ENDOSULFAN	33213-65-9	1.5	2.9	1.5	0.94	UG/KG	U J	UJ	Q
DELTA BHC (DELTA HEXACHLO	319-86-8	1.5	4.6	1.5	1.4	UG/KG	U J	UJ	Q
DIELDRIN	60-57-1	0.77	1.9	0.77	0.54	UG/KG	U J	UJ	Q
ENDOSULFAN SULFATE	1031-07-8	1.5	3.4	1.5	0.99	UG/KG	U J	UJ	Q
ENDRIN	72-20-8	0.77	1.9	0.77	0.57	UG/KG	U J	UJ	Q
ENDRIN ALDEHYDE	7421-93-4	1.5	3.4	1.5	1.1	UG/KG	U J	UJ	Q
ENDRIN KETONE	53494-70-5	0.77	2.3	0.77	0.72	UG/KG	U J	UJ	Q
GAMMA BHC (LINDANE)	58-89-9	1.5	2.9	1.5	0.85	UG/KG	U J	UJ	Q
GAMMA-CHLORDANE	5566-34-7	0.77	1.9	0.77	0.48	UG/KG	U J	UJ	Q
HEPTACHLOR	76-44-8	1.5	4.0	1.5	1.3	UG/KG	U J	U	
HEPTACHLOR EPOXIDE	1024-57-3	1.5	2.9	1.5	0.91	UG/KG	U J	UJ	Q
METHOXYCHLOR	72-43-5	3.8	5.7	3.8	1.7	UG/KG	U J	UJ	Q
P,P'-DDD	72-54-8	0.77	2.3	0.77	0.71	UG/KG	U J	UJ	Q
P,P'-DDE	72-55-9	0.77	1.9	0.77	0.45	UG/KG	U J	UJ	Q
P,P'-DDT	50-29-3	0.77	2.3	0.77	0.72	UG/KG	U J	U	
TOXAPHENE	8001-35-2	23	77	23	22	UG/KG	U	UJ	C

Sample Delivery Group: 240-18297-1

Analysis Method SW8082

Sample Name 072SB-0014-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18297-17 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
PCB-1016 (AROCHLOR 1016)	12674-11-2	28	74	28	24	UG/KG	U	U	
PCB-1221 (AROCHLOR 1221)	11104-28-2	28	57	28	18	UG/KG	U	U	
PCB-1232 (AROCHLOR 1232)	11141-16-5	28	51	28	16	UG/KG	U	U	
PCB-1242 (AROCHLOR 1242)	53469-21-9	28	46	28	15	UG/KG	U	U	
PCB-1248 (AROCHLOR 1248)	12672-29-6	28	63	28	19	UG/KG	U	U	
PCB-1254 (AROCHLOR 1254)	11097-69-1	28	63	28	19	UG/KG	U	U	
PCB-1260 (AROCHLOR 1260)	11096-82-5	28	63	28	19	UG/KG	U	U	

Sample Delivery Group: 240-18297-1

Analysis Method SW8260B

Sample Name 072SB-0001-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18297-9 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
BENZENE	71-43-2	25	250	25	12	UG/KG	U J	UJ	S
ETHYLBENZENE	100-41-4	9.9	250	9.9	5.4	UG/KG	U J	UJ	S
TOLUENE	108-88-3	25	250	25	17	UG/KG	U J	UJ	S
XYLENES, TOTAL		30	500	30	8.0	UG/KG	U J	UJ	S

Sample Name 072SB-0012-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18297-15 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
BENZENE	71-43-2	0.47	4.7	0.47	0.22	UG/KG	U	UJ	S
ETHYLBENZENE	100-41-4	0.47	4.7	0.47	0.24	UG/KG	U	UJ	S
TOLUENE	108-88-3	0.47	4.7	0.47	0.25	UG/KG	U	UJ	S
XYLENES, TOTAL		1.4	9.4	1.4	0.63	UG/KG	U	UJ	S

Sample Name 072SB-0014-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18297-17 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,1,1-TRICHLOROETHANE	71-55-6	0.88	4.4	0.88	0.49	UG/KG	U	U	
1,1,2,2-TETRACHLOROETHANE	79-34-5	0.44	4.4	0.44	0.30	UG/KG	U	U	
1,1,2-TRICHLOROETHANE	79-00-5	0.44	4.4	0.44	0.34	UG/KG	U	U	
1,1-DICHLOROETHANE	75-34-3	0.44	4.4	0.44	0.32	UG/KG	U	U	
1,1-DICHLOROETHENE	75-35-4	0.88	4.4	0.88	0.46	UG/KG	U	U	
1,2-DIBROMOETHANE (ETHYLEN	106-93-4	0.88	4.4	0.88	0.44	UG/KG	U	U	
1,2-DICHLOROETHANE	107-06-2	0.44	4.4	0.44	0.30	UG/KG	U	U	
1,2-DICHLOROPROPANE	78-87-5	0.88	4.4	0.88	0.60	UG/KG	U	U	
2-HEXANONE	591-78-6	0.88	18	0.88	0.55	UG/KG	U	UJ	C
ACETONE	67-64-1	5.5	18	5.5	5.5	UG/KG	U	UJ	C
BENZENE	71-43-2	0.44	4.4	0.44	0.20	UG/KG	U	U	
BROMOCHLOROMETHANE	74-97-5	0.88	4.4	0.88	0.62	UG/KG	U	U	
BROMODICHLOROMETHANE	75-27-4	0.44	4.4	0.44	0.25	UG/KG	U	U	

Sample Delivery Group: 240-18297-1

BROMOFORM	75-25-2	0.44	4.4	0.44	0.29	UG/KG	U	U
BROMOMETHANE	74-83-9	0.88	4.4	0.88	0.47	UG/KG	U	U
CARBON DISULFIDE	75-15-0	0.44	4.4	0.44	0.39	UG/KG	U	U
CARBON TETRACHLORIDE	56-23-5	0.44	4.4	0.44	0.32	UG/KG	U	U
CHLOROBENZENE	108-90-7	0.44	4.4	0.44	0.29	UG/KG	U	U
CHLOROETHANE	75-00-3	0.88	4.4	0.88	0.75	UG/KG	U	U
CHLOROFORM	67-66-3	0.44	4.4	0.44	0.25	UG/KG	U	U
CHLOROMETHANE	74-87-3	0.44	4.4	0.44	0.36	UG/KG	U	U
CIS-1,3-DICHLOROPROPENE	10061-01-5	0.44	4.4	0.44	0.30	UG/KG	U	U
DIBROMOCHLOROMETHANE	124-48-1	0.88	4.4	0.88	0.48	UG/KG	U	U
ETHYLBENZENE	100-41-4	0.44	4.4	0.44	0.23	UG/KG	U	U
METHYL ETHYL KETONE (2-BUT	78-93-3	1.8	18	1.8	1.2	UG/KG	U	U
METHYL ISOBUTYL KETONE (4-	108-10-1	0.88	18	0.88	0.47	UG/KG	U	U
METHYLENE CHLORIDE	75-09-2	0.88	4.4	0.88	0.59	UG/KG	U	U
STYRENE	100-42-5	0.44	4.4	0.44	0.13	UG/KG	U	U
TERT-BUTYL METHYL ETHER	1634-04-4	0.44	4.4	0.44	0.38	UG/KG	U	U
TETRACHLOROETHYLENE(PCE)	127-18-4	0.88	4.4	0.88	0.46	UG/KG	U	U
TOLUENE	108-88-3	0.44	4.4	0.44	0.24	UG/KG	U	U
TOTAL 1,2-DICHLOROETHENE	540-59-0	0.88	8.8	0.88	0.67	UG/KG	U	U
TRANS-1,3-DICHLOROPROPENE	10061-02-6	0.88	4.4	0.88	0.47	UG/KG	U	U
TRICHLOROETHYLENE (TCE)	79-01-6	0.44	4.4	0.44	0.37	UG/KG	U	U
VINYL CHLORIDE	75-01-4	0.44	4.4	0.44	0.34	UG/KG	U	U
XYLENES, TOTAL		1.3	8.8	1.3	0.59	UG/KG	U	U

Sample Delivery Group: 240-18297-1

Analysis Method SW8270D

Sample Name 072SB-0001-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18297-9 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
ACENAPHTHENE	83-32-9	4.0	8.0	4.0	4.0	UG/KG	U	U	
ACENAPHTHYLENE	208-96-8	4.0	8.0	4.0	4.0	UG/KG	U	U	
ANTHRACENE	120-12-7	4.0	8.0	4.0	4.0	UG/KG	U	U	
BENZO(A)ANTHRACENE	56-55-3	4.0	8.0	4.0	4.0	UG/KG	U	U	
BENZO(A)PYRENE	50-32-8	4.0	8.0	4.0	4.0	UG/KG	U	U	
BENZO(B)FLUORANTHENE	205-99-2	4.0	8.0	4.0	4.0	UG/KG	U	U	
BENZO(G,H,I)PERYLENE	191-24-2	4.0	8.0	4.0	4.0	UG/KG	U	U	
BENZO(K)FLUORANTHENE	207-08-9	4.0	8.0	4.0	4.0	UG/KG	U	U	
CHRYSENE	218-01-9	4.0	8.0	4.0	1.3	UG/KG	U	U	
DIBENZ(A,H)ANTHRACENE	53-70-3	4.0	8.0	4.0	4.0	UG/KG	U	U	
FLUORANTHENE	206-44-0	4.0	8.0	4.0	4.0	UG/KG	U	U	
FLUORENE	86-73-7	4.0	8.0	4.0	4.0	UG/KG	U	U	
INDENO(1,2,3-C,D)PYRENE	193-39-5	4.0	8.0	4.0	4.0	UG/KG	U	U	
NAPHTHALENE	91-20-3	8.9	8.0	4.0	4.0	UG/KG			
PHENANTHRENE	85-01-8	4.0	8.0	4.0	4.0	UG/KG	U	U	
PYRENE	129-00-0	4.0	8.0	4.0	4.0	UG/KG	U	U	

Sample Name 072SB-0012-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18297-15 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
ACENAPHTHENE	83-32-9	3.8	7.6	3.8	3.8	UG/KG	U	U	
ACENAPHTHYLENE	208-96-8	3.8	7.6	3.8	3.8	UG/KG	U	U	
ANTHRACENE	120-12-7	3.8	7.6	3.8	3.8	UG/KG	U	U	
BENZO(A)ANTHRACENE	56-55-3	3.8	7.6	3.8	3.8	UG/KG	U	U	
BENZO(A)PYRENE	50-32-8	3.8	7.6	3.8	3.8	UG/KG	U	U	
BENZO(B)FLUORANTHENE	205-99-2	3.8	7.6	3.8	3.8	UG/KG	U	U	
BENZO(G,H,I)PERYLENE	191-24-2	3.8	7.6	3.8	3.8	UG/KG	U	U	
BENZO(K)FLUORANTHENE	207-08-9	3.8	7.6	3.8	3.8	UG/KG	U	U	

CHRYSENE	218-01-9	3.8	7.6	3.8	1.3	UG/KG	U	U	
DIBENZ(A,H)ANTHRACENE	53-70-3	3.8	7.6	3.8	3.8	UG/KG	U	U	
FLUORANTHENE	206-44-0	3.7	7.6	3.8	3.8	UG/KG	U	U	
FLUORENE	86-73-7	3.8	7.6	3.8	3.8	UG/KG	U	U	
INDENO(1,2,3-C,D)PYRENE	193-39-5	3.8	7.6	3.8	3.8	UG/KG	U	U	
NAPHTHALENE	91-20-3	3.8	7.6	3.8	3.8	UG/KG	U	U	
PHENANTHRENE	85-01-8	3.8	7.6	3.8	3.8	UG/KG	U	U	
PYRENE	129-00-0	3.8	7.6	3.8	3.8	UG/KG	U	U	

Sample Name 072SB-0014-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18297-17 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2,4-TRICHLOROBENZENE	120-82-1	30	56	30	30	UG/KG	U	U	
1,2-DICHLOROBENZENE	95-50-1	30	56	30	11	UG/KG	U	U	
1,3-DICHLOROBENZENE	541-73-1	30	56	30	12	UG/KG	U	U	
1,4-DICHLOROBENZENE	106-46-7	30	56	30	23	UG/KG	U	U	
2,2'-DICHLORODIISOPROPYL ET	39638-32-9	3.7	110	3.7	2.3	UG/KG	U	U	
2,4,5-TRICHLOROPHENOL	95-95-4	30	170	30	28	UG/KG	U	U	
2,4,6-TRICHLOROPHENOL	88-06-2	90	170	90	90	UG/KG	U	U	
2,4-DICHLOROPHENOL	120-83-2	30	170	30	23	UG/KG	U	U	
2,4-DIMETHYLPHENOL	105-67-9	90	170	90	23	UG/KG	U	U	
2,4-DINITROPHENOL	51-28-5	90	370	90	90	UG/KG	U	UJ	C
2,4-DINITROTOLUENE	121-14-2	30	230	30	30	UG/KG	U	R	D
2,6-DINITROTOLUENE	606-20-2	30	230	30	24	UG/KG	U	R	D
2-CHLORONAPHTHALENE	91-58-7	3.7	56	3.7	3.7	UG/KG	U	U	
2-CHLOROPHENOL	95-57-8	30	56	30	30	UG/KG	U	U	
2-METHYLNAPHTHALENE	91-57-6	3.7	7.5	3.7	3.7	UG/KG	U	U	
2-METHYLPHENOL (O-CRESOL)	95-48-7	90	230	90	90	UG/KG	U	U	
2-NITROANILINE	88-74-4	30	230	30	10	UG/KG	U	U	
2-NITROPHENOL	88-75-5	30	56	30	30	UG/KG	U	U	
3,3'-DICHLOROBENZIDINE	91-94-1	90	110	90	20	UG/KG	U	UJ	C
3-NITROANILINE	99-09-2	90	230	90	18	UG/KG	U	U	
4,6-DINITRO-2-METHYLPHENOL	534-52-1	90	170	90	90	UG/KG	U	UJ	C

Sample Delivery Group: 240-18297-1

4-BROMOPHENYL PHENYL ETHE	101-55-3	30	56	30	15	UG/KG	U	U	
4-CHLORO-3-METHYLPHENOL	59-50-7	30	170	30	24	UG/KG	U	U	
4-CHLOROANILINE	106-47-8	30	170	30	19	UG/KG	U	U	
4-CHLOROPHENYL PHENYL ETH	7005-72-3	30	56	30	15	UG/KG	U	U	
4-NITROANILINE	100-01-6	30	230	30	29	UG/KG	U	R	C
4-NITROPHENOL	100-02-7	90	370	90	90	UG/KG	U	U	
ACENAPHTHENE	83-32-9	3.7	7.5	3.7	3.7	UG/KG	U	U	
ACENAPHTHYLENE	208-96-8	3.7	7.5	3.7	3.7	UG/KG	U	U	
ANTHRACENE	120-12-7	3.7	7.5	3.7	3.7	UG/KG	U	U	
BENZO(A)ANTHRACENE	56-55-3	3.7	7.5	3.7	3.7	UG/KG	U	U	
BENZO(A)PYRENE	50-32-8	3.7	7.5	3.7	3.7	UG/KG	U	U	
BENZO(B)FLUORANTHENE	205-99-2	6.7	7.5	3.7	3.7	UG/KG	J M	J	
BENZO(G,H,I)PERYLENE	191-24-2	3.7	7.5	3.7	3.7	UG/KG	U	U	
BENZO(K)FLUORANTHENE	207-08-9	3.7	7.5	3.7	3.7	UG/KG	U	U	
BENZOIC ACID	65-85-0	380	750	380	380	UG/KG	U	U	
BENZYL ALCOHOL	100-51-6	30	370	30	24	UG/KG	U	U	
BENZYL BUTYL PHTHALATE	85-68-7	30	56	30	11	UG/KG	U	U	
BIS(2-CHLOROETHOXY) METHA	111-91-1	30	110	30	25	UG/KG	U	U	
BIS(2-CHLOROISOPROPYL) ETHE	108-60-1	30	110	30	11	UG/KG	U	U	
BIS(2-ETHYLHEXYL) PHTHALAT	117-81-7	56	56	30	21	UG/KG	J	U	B, result from 22
CARBAZOLE	86-74-8	30	56	30	30	UG/KG	U	U	
CHRYSENE	218-01-9	3.7	7.5	3.7	1.2	UG/KG	U	U	
CRESOLS, M & P		90	450	90	23	UG/KG	U	U	
DIBENZ(A,H)ANTHRACENE	53-70-3	3.7	7.5	3.7	3.7	UG/KG	U	U	
DIBENZOFURAN	132-64-9	3.7	56	3.7	3.7	UG/KG	U	U	
DIETHYL PHTHALATE	84-66-2	30	56	30	18	UG/KG	U	U	
DIMETHYL PHTHALATE	131-11-3	30	56	30	19	UG/KG	U	U	
DI-N-BUTYL PHTHALATE	84-74-2	30	56	30	17	UG/KG	U	U	
DI-N-OCTYLPHTHALATE	117-84-0	30	56	30	30	UG/KG	U	U	
FLUORANTHENE	206-44-0	3.7	7.5	3.7	3.7	UG/KG	U	U	
FLUORENE	86-73-7	3.7	7.5	3.7	3.7	UG/KG	U	U	
HEXACHLOROBENZENE	118-74-1	3.7	7.5	3.7	2.4	UG/KG	U	U	
HEXACHLOROBUTADIENE	87-68-3	30	56	30	30	UG/KG	U	U	

Sample Delivery Group: 240-18297-1

HEXACHLOROCYCLOPENTADIE	77-47-4	30	370	30	30	UG/KG	U	U
HEXACHLOROETHANE	67-72-1	30	56	30	10	UG/KG	U	U
INDENO(1,2,3-C,D)PYRENE	193-39-5	3.7	7.5	3.7	3.7	UG/KG	U	U
ISOPHORONE	78-59-1	30	56	30	15	UG/KG	U	U
NAPHTHALENE	91-20-3	5.4	7.5	3.7	3.7	UG/KG	J	J
NITROBENZENE	98-95-3	3.7	110	3.7	2.5	UG/KG	U	U
N-NITROSODI-N-PROPYLAMINE	621-64-7	30	56	30	30	UG/KG	U	U
N-NITROSODIPHENYLAMINE	86-30-6	30	56	30	24	UG/KG	U	U
PENTACHLOROPHENOL	87-86-5	90	170	90	90	UG/KG	U	U
PHENANTHRENE	85-01-8	3.7	7.5	3.7	3.7	UG/KG	U	U
PHENOL	108-95-2	30	56	30	30	UG/KG	U	U
PYRENE	129-00-0	3.7	7.5	3.7	3.7	UG/KG	U	U

Sample Delivery Group: 240-18297-1

Analysis Method SW8330

Sample Name 072SB-0014-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18297-17 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,3,5-TRINITROBENZENE	99-35-4	0.049	0.25	0.049	0.0099	MG/KG	U	U	
1,3-DINITROBENZENE	99-65-0	0.049	0.25	0.049	0.0042	MG/KG	U	U	
2,4,6-TRINITROTOLUENE	118-96-7	0.049	0.25	0.049	0.019	MG/KG	U	U	
2,4-DINITROTOLUENE	121-14-2	0.049	0.25	0.049	0.0052	MG/KG	U	U	
2,6-DINITROTOLUENE	606-20-2	0.049	0.25	0.049	0.0072	MG/KG	U	U	
2-AMINO-4,6-DINITROTOLUENE	35572-78-2	0.049	0.25	0.049	0.012	MG/KG	U	U	
2-NITROTOLUENE	88-72-2	0.049	0.25	0.049	0.013	MG/KG	U	UJ	C
3-NITROTOLUENE	99-08-1	0.049	0.25	0.049	0.015	MG/KG	U	U	
4-AMINO-2,6-DINITROTOLUENE	19406-51-0	0.049	0.25	0.049	0.0099	MG/KG	U	U	
4-NITROTOLUENE	99-99-0	0.049	0.25	0.049	0.018	MG/KG	U	U	
HMX	2691-41-0	0.049	0.25	0.049	0.012	MG/KG	U	U	
NITROBENZENE	98-95-3	0.049	0.25	0.049	0.017	MG/KG	U	R	D
NITROGLYCERIN	55-63-0	0.25	0.49	0.25	0.015	MG/KG	U	U	
NITROGUANIDINE	2691-41-0	0.04	0.25	0.040	0.020	MG/KG	U	U	
PETN	78-11-5	0.25	0.49	0.25	0.025	MG/KG	U	U	
RDX	121-82-4	0.049	0.25	0.049	0.012	MG/KG	U	UJ	C
TETRYL	479-45-8	0.049	0.25	0.049	0.0099	MG/KG	U	U	

Sample Delivery Group: 240-18441-1

Analysis Method M8015D

Sample Name 072SB-0026-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18441-11 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
C10-C20 PETROLEUM HYDROCA		9.6	17	9.6	9.6	MG/KG	U	U	
C20-C34 PETROLEUM HYDROCA		9.6	17	9.6	9.6	MG/KG	U	U	

Sample Name 072SB-0030-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18441-15 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
C10-C20 PETROLEUM HYDROCA		9.7	17	9.7	9.7	MG/KG	U	U	
C20-C34 PETROLEUM HYDROCA		9.7	17	9.7	9.7	MG/KG	U	U	

Analysis Method M8015V

Sample Name 072SB-0026-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18441-11 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
PETROLEUM HYDROCARBONS C		40	80	40	37	UG/KG	U	U	

Sample Name 072SB-0030-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18441-15 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
PETROLEUM HYDROCARBONS C		42	84	42	39	UG/KG	U	U	

Sample Delivery Group: 240-18441-1

Analysis Method SW6020

Sample Name 072SB-0026-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18441-11 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
ALUMINUM	7429-90-5	6000.0	3.0	0.60	0.29	MG/KG	J	J	
ANTIMONY	7440-36-0	0.10	0.20	0.10	0.046	MG/KG	U J	R	Q
ARSENIC	7440-38-2	0.51	0.10	0.050	0.018	MG/KG		J-	Q
BARIUM	7440-39-3	31.0	1.0	0.020	0.011	MG/KG	Q	J	M
BERYLLIUM	7440-41-7	0.69	0.10	0.010	0.0075	MG/KG			
CADMIUM	7440-43-9	0.19	0.10	0.030	0.013	MG/KG	Q	J+	I
CALCIUM	7440-70-2	750.0	10	2.5	1.3	MG/KG		J-	Q
CHROMIUM	7440-47-3	13.0	0.20	0.040	0.022	MG/KG			
COBALT	7440-48-4	5.5	0.050	0.010	0.0024	MG/KG	Q		
COPPER	7440-50-8	17.0	0.20	0.060	0.033	MG/KG	Q	J-	Q
IRON	7439-89-6	11000.0	5.0	2.0	1.1	MG/KG			
LEAD	7439-92-1	8.7	0.10	0.030	0.015	MG/KG			
MAGNESIUM	7439-95-4	2300.0	10	2.0	1.1	MG/KG			
MANGANESE	7439-96-5	210.0	0.50	0.030	0.016	MG/KG	Q J	J	
NICKEL	7440-02-0	16.0	0.10	0.030	0.011	MG/KG	Q		
POTASSIUM	7440-09-7	1300.0	10	6.0	3.2	MG/KG			
SELENIUM	7782-49-2	0.74	0.50	0.10	0.051	MG/KG		J-	Q
SILVER	7440-22-4	0.03	0.10	0.030	0.011	MG/KG	J	J+	I
SODIUM	7440-23-5	71.0	10	5.0	2.7	MG/KG			
THALLIUM	7440-28-0	0.12	0.10	0.020	0.010	MG/KG	J	J-	Q
VANADIUM	7440-62-2	8.9	0.10	0.060	0.030	MG/KG			
ZINC	7440-66-6	45.0	0.50	0.20	0.065	MG/KG	Q	J	A

Analysis Method SW7471A

Sample Name 072SB-0026-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18441-11 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
MERCURY	7439-97-6	0.032	0.097	0.032	0.014	MG/KG	U	U	

Sample Delivery Group: 240-18441-1

Analysis Method SW8260B

Sample Name 072SB-0026-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18441-11 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
BENZENE	71-43-2	0.51	5.1	0.51	0.24	UG/KG	U	UJ	S
ETHYLBENZENE	100-41-4	0.51	5.1	0.51	0.27	UG/KG	U	UJ	S
TOLUENE	108-88-3	0.51	5.1	0.51	0.28	UG/KG	U	UJ	S
XYLENES, TOTAL		1.5	10	1.5	0.69	UG/KG	U	UJ	S

Sample Name 072SB-0030-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18441-15 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,1,1-TRICHLOROETHANE	71-55-6	0.88	4.4	0.88	0.49	UG/KG	U	UJ	S
1,1,2,2-TETRACHLOROETHANE	79-34-5	0.44	4.4	0.44	0.30	UG/KG	U	UJ	S, I
1,1,2-TRICHLOROETHANE	79-00-5	0.44	4.4	0.44	0.34	UG/KG	U	UJ	S
1,1-DICHLOROETHANE	75-34-3	0.44	4.4	0.44	0.32	UG/KG	U	UJ	S
1,1-DICHLOROETHENE	75-35-4	0.88	4.4	0.88	0.46	UG/KG	U	UJ	S
1,2-DIBROMOETHANE (ETHYLEN	06-93-4	0.88	4.4	0.88	0.44	UG/KG	U	UJ	S
1,2-DICHLOROETHANE	107-06-2	0.44	4.4	0.44	0.30	UG/KG	U	UJ	S
1,2-DICHLOROPROPANE	78-87-5	0.88	4.4	0.88	0.61	UG/KG	U	UJ	S
2-HEXANONE	591-78-6	0.88	18	0.88	0.55	UG/KG	U	UJ	C, S
ACETONE	67-64-1	5.5	18	5.5	5.5	UG/KG	U	UJ	C, S
BENZENE	71-43-2	0.44	4.4	0.44	0.20	UG/KG	U	UJ	S
BROMOCHLOROMETHANE	74-97-5	0.88	4.4	0.88	0.62	UG/KG	U	UJ	S
BROMODICHLOROMETHANE	75-27-4	0.44	4.4	0.44	0.25	UG/KG	U	UJ	S
BROMOFORM	75-25-2	0.44	4.4	0.44	0.29	UG/KG	U	UJ	S
BROMOMETHANE	74-83-9	0.88	4.4	0.88	0.47	UG/KG	U	UJ	S
CARBON DISULFIDE	75-15-0	0.44	4.4	0.44	0.39	UG/KG	U	UJ	S
CARBON TETRACHLORIDE	56-23-5	0.44	4.4	0.44	0.33	UG/KG	U	UJ	S
CHLOROBENZENE	108-90-7	0.44	4.4	0.44	0.29	UG/KG	U	UJ	S
CHLOROETHANE	75-00-3	0.88	4.4	0.88	0.76	UG/KG	U	UJ	S
CHLOROFORM	67-66-3	0.44	4.4	0.44	0.26	UG/KG	U	UJ	S

Sample Delivery Group: 240-18441-1

CHLOROMETHANE	74-87-3	0.44	4.4	0.44	0.36	UG/KG	U	UJ	S
CIS-1,3-DICHLOROPROPENE	10061-01-5	0.44	4.4	0.44	0.30	UG/KG	U	UJ	S
DIBROMOCHLOROMETHANE	124-48-1	0.88	4.4	0.88	0.48	UG/KG	U	UJ	S
ETHYLBENZENE	100-41-4	0.44	4.4	0.44	0.23	UG/KG	U	UJ	S
METHYL ETHYL KETONE (2-BUT	78-93-3	1.8	18	1.8	1.2	UG/KG	U	UJ	S
METHYL ISOBUTYL KETONE (4-	108-10-1	0.88	18	0.88	0.47	UG/KG	U	UJ	S
METHYLENE CHLORIDE	75-09-2	0.88	4.4	0.88	0.59	UG/KG	U	UJ	S
STYRENE	100-42-5	0.44	4.4	0.44	0.13	UG/KG	U	UJ	S
TERT-BUTYL METHYL ETHER	1634-04-4	0.44	4.4	0.44	0.38	UG/KG	U	UJ	S
TETRACHLOROETHYLENE(PCE)	127-18-4	0.88	4.4	0.88	0.46	UG/KG	U	UJ	S
TOLUENE	108-88-3	0.44	4.4	0.44	0.24	UG/KG	U	UJ	S
TOTAL 1,2-DICHLOROETHENE	540-59-0	0.88	8.8	0.88	0.68	UG/KG	U	UJ	S
TRANS-1,3-DICHLOROPROPENE	10061-02-6	0.88	4.4	0.88	0.47	UG/KG	U	UJ	S
TRICHLOROETHYLENE (TCE)	79-01-6	0.44	4.4	0.44	0.37	UG/KG	U	UJ	S
VINYL CHLORIDE	75-01-4	0.44	4.4	0.44	0.34	UG/KG	U	UJ	S
XYLENES, TOTAL		1.3	8.8	1.3	0.59	UG/KG	U	UJ	S

Sample Delivery Group: 240-18441-1

Analysis Method SW8270D

Sample Name 072SB-0026-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18441-11 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
ACENAPHTHENE	83-32-9	3.4	6.9	3.4	3.4	UG/KG	U	UJ	S
ACENAPHTHENE	83-32-9	3.5	7.0	3.5	3.5	UG/KG	U H	R	D
ACENAPHTHYLENE	208-96-8	3.4	6.9	3.4	3.4	UG/KG	U	UJ	S
ACENAPHTHYLENE	208-96-8	3.5	7.0	3.5	3.5	UG/KG	U H	R	D
ANTHRACENE	120-12-7	3.4	6.9	3.4	3.4	UG/KG	U	UJ	S
ANTHRACENE	120-12-7	3.5	7.0	3.5	3.5	UG/KG	U H	R	D
BENZO(A)ANTHRACENE	56-55-3	15.0	6.9	3.4	3.4	UG/KG		J	S
BENZO(A)ANTHRACENE	56-55-3	3.5	7.0	3.5	3.5	UG/KG	U H	R	D
BENZO(A)PYRENE	50-32-8	18.0	7.0	3.5	3.5	UG/KG	H	R	D
BENZO(A)PYRENE	50-32-8	18.0	6.9	3.4	3.4	UG/KG		J	S
BENZO(B)FLUORANTHENE	205-99-2	12.0	7.0	3.5	3.5	UG/KG	H	R	D
BENZO(B)FLUORANTHENE	205-99-2	16.0	6.9	3.4	3.4	UG/KG		J	S
BENZO(G,H,I)PERYLENE	191-24-2	130.0	7.0	3.5	3.5	UG/KG	H	R	D
BENZO(G,H,I)PERYLENE	191-24-2	140.0	6.9	3.4	3.4	UG/KG		J	S
BENZO(K)FLUORANTHENE	207-08-9	3.5	7.0	3.5	3.5	UG/KG	U H	R	D
BENZO(K)FLUORANTHENE	207-08-9	5.8	6.9	3.4	3.4	UG/KG	J M	J	S
CHRYSENE	218-01-9	3.5	7.0	3.5	1.2	UG/KG	U H	R	D
CHRYSENE	218-01-9	9.1	6.9	3.4	1.1	UG/KG		J	S
DIBENZ(A,H)ANTHRACENE	53-70-3	3.4	6.9	3.4	3.4	UG/KG	U	UJ	S
DIBENZ(A,H)ANTHRACENE	53-70-3	7.1	7.0	3.5	3.5	UG/KG	H	R	D
FLUORANTHENE	206-44-0	12.0	6.9	3.4	3.4	UG/KG		J	S
FLUORANTHENE	206-44-0	9.5	7.0	3.5	3.5	UG/KG	H	R	D
FLUORENE	86-73-7	10.0	7.0	3.5	3.5	UG/KG	H	R	D
FLUORENE	86-73-7	8.4	6.9	3.4	3.4	UG/KG		J	S
INDENO(1,2,3-C,D)PYRENE	193-39-5	17.0	6.9	3.4	3.4	UG/KG		J	S
INDENO(1,2,3-C,D)PYRENE	193-39-5	18.0	7.0	3.5	3.5	UG/KG	H	R	D
NAPHTHALENE	91-20-3	29.0	6.9	3.4	3.4	UG/KG		J	S
NAPHTHALENE	91-20-3	30.0	7.0	3.5	3.5	UG/KG	H	R	D

Sample Delivery Group: 240-18441-1

PHENANTHRENE	85-01-8	47.0	7.0	3.5	3.5	UG/KG	H	R	D
PHENANTHRENE	85-01-8	50.0	6.9	3.4	3.4	UG/KG		J	S
PYRENE	129-00-0	15.0	7.0	3.5	3.5	UG/KG	H	R	D
PYRENE	129-00-0	16.0	6.9	3.4	3.4	UG/KG		J	S

Sample Delivery Group: 240-18449-1

Analysis Method M8015D

Sample Name 072SB-0039-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18449-6 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
C10-C20 PETROLEUM HYDROCA		11	20	11	11	MG/KG	U	U	
C20-C34 PETROLEUM HYDROCA		11	20	11	11	MG/KG	U	U	

Analysis Method M8015V

Sample Name 072SB-0039-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18449-6 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
PETROLEUM HYDROCARBONS C		750.0	90	45	41	UG/KG			

Sample Delivery Group: 240-18449-1

Analysis Method SW6020

Sample Name 072SB-0039-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18449-6 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
ALUMINUM	7429-90-5	12000.0	3.3	0.67	0.32	MG/KG			
ANTIMONY	7440-36-0	0.11	0.22	0.11	0.051	MG/KG	U	R	Q
ARSENIC	7440-38-2	9.4	0.11	0.056	0.020	MG/KG		J-	Q
BARIUM	7440-39-3	50.0	1.1	0.022	0.012	MG/KG	Q	J-	Q, M
BERYLLIUM	7440-41-7	0.64	0.11	0.011	0.0084	MG/KG		J-	Q
CADMIUM	7440-43-9	0.19	0.11	0.033	0.015	MG/KG	Q	J+	I
CALCIUM	7440-70-2	20000.0	11	2.8	1.5	MG/KG			
CHROMIUM	7440-47-3	18.0	0.22	0.045	0.025	MG/KG		J-	Q
COBALT	7440-48-4	8.5	0.056	0.011	0.0027	MG/KG	Q		
COPPER	7440-50-8	18.0	0.22	0.067	0.037	MG/KG	Q		
IRON	7439-89-6	24000.0	5.6	2.2	1.2	MG/KG			
LEAD	7439-92-1	9.7	0.11	0.033	0.017	MG/KG		J+	Q
MAGNESIUM	7439-95-4	6000.0	11	2.2	1.2	MG/KG			
MANGANESE	7439-96-5	270.0	0.56	0.033	0.018	MG/KG	Q		
NICKEL	7440-02-0	24.0	0.11	0.033	0.013	MG/KG	Q	J-	Q
POTASSIUM	7440-09-7	2500.0	11	6.7	3.5	MG/KG		J-	E, Q
SELENIUM	7782-49-2	0.78	0.56	0.11	0.057	MG/KG		J-	Q
SILVER	7440-22-4	0.029	0.11	0.033	0.013	MG/KG	J	J+	I
SODIUM	7440-23-5	84.0	11	5.6	3.0	MG/KG			
THALLIUM	7440-28-0	0.14	0.11	0.022	0.011	MG/KG			
VANADIUM	7440-62-2	20.0	0.11	0.067	0.033	MG/KG		J-	Q
ZINC	7440-66-6	53.0	0.56	0.22	0.072	MG/KG	Q		

Analysis Method SW7471A

Sample Name 072SB-0039-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18449-6 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
MERCURY	7439-97-6	0.039	0.12	0.039	0.016	MG/KG	U	U	

Sample Delivery Group: 240-18449-1

Analysis Method SW8260B

Sample Name 072SB-0039-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18449-6 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,1,1-TRICHLOROETHANE	71-55-6	0.98	4.9	0.98	0.55	UG/KG	U	U	
1,1,2,2-TETRACHLOROETHANE	79-34-5	0.49	4.9	0.49	0.33	UG/KG	U	U	
1,1,2-TRICHLOROETHANE	79-00-5	0.49	4.9	0.49	0.38	UG/KG	U	U	
1,1-DICHLOROETHANE	75-34-3	0.49	4.9	0.49	0.35	UG/KG	U	U	
1,1-DICHLOROETHENE	75-35-4	0.98	4.9	0.98	0.51	UG/KG	U	U	
1,2-DIBROMOETHANE (ETHYLEN	106-93-4	0.98	4.9	0.98	0.49	UG/KG	U	U	
1,2-DICHLOROETHANE	107-06-2	0.49	4.9	0.49	0.33	UG/KG	U	U	
1,2-DICHLOROPROPANE	78-87-5	0.98	4.9	0.98	0.68	UG/KG	U	U	
2-HEXANONE	591-78-6	0.98	20	0.98	0.62	UG/KG	U	UJ	C
ACETONE	67-64-1	6.2	20	6.2	6.2	UG/KG	U	U	
BENZENE	71-43-2	0.49	4.9	0.49	0.23	UG/KG	U	U	
BROMOCHLOROMETHANE	74-97-5	0.98	4.9	0.98	0.69	UG/KG	U	U	
BROMODICHLOROMETHANE	75-27-4	0.49	4.9	0.49	0.27	UG/KG	U	U	
BROMOFORM	75-25-2	0.49	4.9	0.49	0.32	UG/KG	U	U	
BROMOMETHANE	74-83-9	0.98	4.9	0.98	0.53	UG/KG	U	U	
CARBON DISULFIDE	75-15-0	0.49	4.9	0.49	0.43	UG/KG	U	U	
CARBON TETRACHLORIDE	56-23-5	0.49	4.9	0.49	0.36	UG/KG	U	U	
CHLOROBENZENE	108-90-7	0.49	4.9	0.49	0.32	UG/KG	U	U	
CHLOROETHANE	75-00-3	0.98	4.9	0.98	0.84	UG/KG	U	U	
CHLOROFORM	67-66-3	0.49	4.9	0.49	0.28	UG/KG	U	U	
CHLOROMETHANE	74-87-3	0.49	4.9	0.49	0.40	UG/KG	U	U	
CIS-1,3-DICHLOROPROPENE	10061-01-5	0.49	4.9	0.49	0.33	UG/KG	U	U	
DIBROMOCHLOROMETHANE	124-48-1	0.98	4.9	0.98	0.54	UG/KG	U	U	
ETHYLBENZENE	100-41-4	0.49	4.9	0.49	0.25	UG/KG	U	U	
METHYL ETHYL KETONE (2-BUT	78-93-3	2.0	20	2.0	1.4	UG/KG	U	U	
METHYL ISOBUTYL KETONE (4-	108-10-1	0.98	20	0.98	0.53	UG/KG	U	U	
METHYLENE CHLORIDE	75-09-2	0.98	4.9	0.98	0.66	UG/KG	U	U	
STYRENE	100-42-5	0.49	4.9	0.49	0.15	UG/KG	U	U	

Sample Delivery Group: 240-18449-1

TERT-BUTYL METHYL ETHER	1634-04-4	0.49	4.9	0.49	0.42	UG/KG	U	U
TETRACHLOROETHYLENE(PCE)	127-18-4	0.98	4.9	0.98	0.51	UG/KG	U	U
TOLUENE	108-88-3	0.79	4.9	0.49	0.26	UG/KG	J	J
TOTAL 1,2-DICHLOROETHENE	540-59-0	0.98	9.8	0.98	0.75	UG/KG	U	U
TRANS-1,3-DICHLOROPROPENE	10061-02-6	0.98	4.9	0.98	0.53	UG/KG	U	U
TRICHLOROETHYLENE (TCE)	79-01-6	0.49	4.9	0.49	0.41	UG/KG	U	U
VINYL CHLORIDE	75-01-4	0.49	4.9	0.49	0.38	UG/KG	U	U
XYLENES, TOTAL		1.5	9.8	1.5	0.66	UG/KG	U	U

Analysis Method SW8270D

Sample Name 072SB-0039-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18449-6 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
ACENAPHTHENE	83-32-9	4.0	8.0	4.0	4.0	UG/KG	U	U	
ACENAPHTHYLENE	208-96-8	4.0	8.0	4.0	4.0	UG/KG	U	U	
ANTHRACENE	120-12-7	4.0	8.0	4.0	4.0	UG/KG	U	U	
BENZO(A)ANTHRACENE	56-55-3	5.7	8.0	4.0	4.0	UG/KG	J M	J	
BENZO(A)PYRENE	50-32-8	4.0	8.0	4.0	4.0	UG/KG	U	U	
BENZO(B)FLUORANTHENE	205-99-2	4.3	8.0	4.0	4.0	UG/KG	J M	J	
BENZO(G,H,I)PERYLENE	191-24-2	4.0	8.0	4.0	4.0	UG/KG	U	U	
BENZO(K)FLUORANTHENE	207-08-9	4.0	8.0	4.0	4.0	UG/KG	U	U	
CHRYSENE	218-01-9	7.2	8.0	4.0	1.3	UG/KG	J M	J	
DIBENZ(A,H)ANTHRACENE	53-70-3	4.0	8.0	4.0	4.0	UG/KG	U	U	
FLUORANTHENE	206-44-0	4.0	8.0	4.0	4.0	UG/KG	U	U	
FLUORENE	86-73-7	4.0	8.0	4.0	4.0	UG/KG	U	U	
INDENO(1,2,3-C,D)PYRENE	193-39-5	4.0	8.0	4.0	4.0	UG/KG	U	U	
NAPHTHALENE	91-20-3	5.2	8.0	4.0	4.0	UG/KG	J	J	
PHENANTHRENE	85-01-8	4.0	8.0	4.0	4.0	UG/KG	U	U	
PYRENE	129-00-0	4.0	8.0	4.0	4.0	UG/KG	U	U	

Sample Delivery Group: 240-18544-1

Analysis Method M8015D

Sample Name 072SB-0063-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18544-1 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
C10-C20 PETROLEUM HYDROCA		10	19	10	10	MG/KG	U	U	
C20-C34 PETROLEUM HYDROCA		10	19	10	10	MG/KG	U	U	

Analysis Method M8015V

Sample Name 072SB-0063-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18544-1 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
PETROLEUM HYDROCARBONS C		44	88	44	40	UG/KG	U	U	

Sample Delivery Group: 240-18544-1

Analysis Method SW6020

Sample Name 072SB-0063-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18544-1 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
ALUMINUM	7429-90-5	5400.0	3.1	0.62	0.29	MG/KG			
ANTIMONY	7440-36-0	0.069	0.21	0.10	0.047	MG/KG	J	J	I, Q
ARSENIC	7440-38-2	11.0	0.10	0.052	0.019	MG/KG		J-	Q
BARIUM	7440-39-3	21.0	1.0	0.021	0.011	MG/KG	Q	J	M
BERYLLIUM	7440-41-7	0.4	0.10	0.010	0.0078	MG/KG			
CADMIUM	7440-43-9	0.15	0.10	0.031	0.014	MG/KG	Q	J	I, Q
CALCIUM	7440-70-2	1200.0	10	2.6	1.4	MG/KG		J+	Q
CHROMIUM	7440-47-3	9.2	0.21	0.041	0.023	MG/KG		J-	Q
COBALT	7440-48-4	7.7	0.052	0.010	0.0025	MG/KG	Q	J-	Q
COPPER	7440-50-8	15.0	0.21	0.062	0.034	MG/KG	Q	J-	Q
IRON	7439-89-6	17000.0	5.2	2.1	1.1	MG/KG			
LEAD	7439-92-1	11.0	0.10	0.031	0.016	MG/KG			
MAGNESIUM	7439-95-4	1600.0	10	2.1	1.1	MG/KG			
MANGANESE	7439-96-5	270.0	0.52	0.031	0.016	MG/KG	Q	J	E
NICKEL	7440-02-0	16.0	0.10	0.031	0.012	MG/KG	Q		
POTASSIUM	7440-09-7	950.0	10	6.2	3.3	MG/KG		J-	Q
SELENIUM	7782-49-2	0.38	0.52	0.10	0.053	MG/KG	J	J	I, Q
SILVER	7440-22-4	0.024	0.10	0.031	0.012	MG/KG	J	J	I, Q
SODIUM	7440-23-5	32.0	10	5.2	2.7	MG/KG		J-	Q
THALLIUM	7440-28-0	0.12	0.10	0.021	0.011	MG/KG			
VANADIUM	7440-62-2	9.8	0.10	0.062	0.031	MG/KG			
ZINC	7440-66-6	59.0	0.52	0.21	0.067	MG/KG	Q		

Analysis Method SW7471A

Sample Name 072SB-0063-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18544-1 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
MERCURY	7439-97-6	0.017	0.12	0.041	0.017	MG/KG	J	J	

Sample Delivery Group: 240-18544-1

Analysis Method SW8260B

Sample Name 072SB-0063-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18544-1 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
BENZENE	71-43-2	0.58	5.8	0.58	0.27	UG/KG	U J	U	
ETHYLBENZENE	100-41-4	0.58	5.8	0.58	0.30	UG/KG	U J	U	
TOLUENE	108-88-3	0.58	5.8	0.58	0.32	UG/KG	U J	U	
XYLENES, TOTAL		1.8	12	1.8	0.78	UG/KG	U J	U	

Analysis Method SW8270D

Sample Name 072SB-0063-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18544-1 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
ACENAPHTHENE	83-32-9	3.7	7.6	3.7	3.7	UG/KG	U	U	
ACENAPHTHYLENE	208-96-8	3.7	7.6	3.7	3.7	UG/KG	U	U	
ANTHRACENE	120-12-7	3.7	7.6	3.7	3.7	UG/KG	U	U	
BENZO(A)ANTHRACENE	56-55-3	3.7	7.6	3.7	3.7	UG/KG	U	U	
BENZO(A)PYRENE	50-32-8	3.7	7.6	3.7	3.7	UG/KG	U	U	
BENZO(B)FLUORANTHENE	205-99-2	3.7	7.6	3.7	3.7	UG/KG	U	U	
BENZO(G,H,I)PERYLENE	191-24-2	3.7	7.6	3.7	3.7	UG/KG	U	U	
BENZO(K)FLUORANTHENE	207-08-9	3.7	7.6	3.7	3.7	UG/KG	U	U	
CHRYSENE	218-01-9	3.7	7.6	3.7	1.2	UG/KG	U	U	
DIBENZ(A,H)ANTHRACENE	53-70-3	3.7	7.6	3.7	3.7	UG/KG	U	U	
FLUORANTHENE	206-44-0	3.7	7.6	3.7	3.7	UG/KG	U	U	
FLUORENE	86-73-7	3.7	7.6	3.7	3.7	UG/KG	U	U	
INDENO(1,2,3-C,D)PYRENE	193-39-5	3.7	7.6	3.7	3.7	UG/KG	U	U	
NAPHTHALENE	91-20-3	3.7	7.6	3.7	3.7	UG/KG	U	U	
PHENANTHRENE	85-01-8	3.7	7.6	3.7	3.7	UG/KG	U	U	
PYRENE	129-00-0	3.7	7.6	3.7	3.7	UG/KG	U	U	

Sample Delivery Group: 240-18703-1

Analysis Method M8015D

Sample Name 072SB-0083-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18703-9 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
C10-C20 PETROLEUM HYDROCA		11	19	11	11	MG/KG	U	U	
C20-C34 PETROLEUM HYDROCA		11	19	11	11	MG/KG	U	U	

Sample Name 072SB-0085-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18703-11 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
C10-C20 PETROLEUM HYDROCA		11	20	11	11	MG/KG	U	U	
C20-C34 PETROLEUM HYDROCA		11	20	11	11	MG/KG	U	U	

Analysis Method M8015V

Sample Name 072SB-0083-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18703-9 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
PETROLEUM HYDROCARBONS C		46	93	46	43	UG/KG	U	U	

Sample Name 072SB-0085-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18703-11 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
PETROLEUM HYDROCARBONS C		63	130	63	58	UG/KG	U	U	

Sample Delivery Group: 240-18703-1

Analysis Method SW8260B

Sample Name 072SB-0083-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18703-9 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
BENZENE	71-43-2	0.47	4.7	0.47	0.22	UG/KG	U	U	
ETHYLBENZENE	100-41-4	0.47	4.7	0.47	0.24	UG/KG	U	U	
TOLUENE	108-88-3	2.7	4.7	0.47	0.25	UG/KG	J	J	
XYLENES, TOTAL		1.4	9.4	1.4	0.63	UG/KG	U	U	

Sample Name 072SB-0085-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18703-11 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
BENZENE	71-43-2	0.60	6.0	0.60	0.28	UG/KG	U	U	
ETHYLBENZENE	100-41-4	0.60	6.0	0.60	0.31	UG/KG	U	U	
TOLUENE	108-88-3	4.3	6.0	0.60	0.32	UG/KG	J	J	
XYLENES, TOTAL		1.8	12	1.8	0.80	UG/KG	U	U	

Sample Delivery Group: 240-18735-1

Analysis Method SW7196A

Sample Name 076SB-0119-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18735-8 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
CHROMIUM, HEXAVALENT	18540-29-9	0.91	0.91	0.91	0.31	MG/KG	U	UJ	H

Sample Name 076SB-0122-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18735-11 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
CHROMIUM, HEXAVALENT	18540-29-9	0.94	0.94	0.94	0.32	MG/KG	U	UJ	H

Sample Name 076SB-0126-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18735-15 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
CHROMIUM, HEXAVALENT	18540-29-9	0.31	0.89	0.89	0.30	MG/KG	J	J-	H

Sample Name 076SB-0130-0001-SO **AnalysisType:** N

Lab Sample Name: 240-18735-19 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
CHROMIUM, HEXAVALENT	18540-29-9	0.88	0.88	0.88	0.30	MG/KG	U	UJ	H

Validated Sample Result Forms for Sampling : Ravenna Army Ammunition Plant Ravenna, Ohio
Remedial Investigation Compliance Restoration Site: RVAAP-75
George Road Sewer Treatment Plant Mercury Spill

Sample Delivery Group: 240-17467-1

Analysis Method E353.2

Sample Name 075SD-0002-0001-SD **AnalysisType:** N

Lab Sample Name: 240-17467-2 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
NITROCELLULOSE	9004-70-0	28	78	28	12	MG/KG	U	U	

Analysis Method SW7471A

Sample Name 075SD-0002-0001-SD **AnalysisType:** N

Lab Sample Name: 240-17467-2 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
MERCURY	7439-97-6	0.47	0.15	0.050	0.021	MG/KG	J	J-	Q

Analysis Method SW8082

Sample Name 075SD-0002-0001-SD **AnalysisType:** N

Lab Sample Name: 240-17467-2 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
PCB-1016 (AROCHLOR 1016)	12674-11-2	40	100	40	34	UG/KG	U	U	
PCB-1221 (AROCHLOR 1221)	11104-28-2	40	80	40	26	UG/KG	U	U	
PCB-1232 (AROCHLOR 1232)	11141-16-5	40	72	40	22	UG/KG	U	U	
PCB-1242 (AROCHLOR 1242)	53469-21-9	40	64	40	21	UG/KG	U	U	
PCB-1248 (AROCHLOR 1248)	12672-29-6	40	88	40	27	UG/KG	U	U	
PCB-1254 (AROCHLOR 1254)	11097-69-1	40	88	40	27	UG/KG	U	U	
PCB-1260 (AROCHLOR 1260)	11096-82-5	40	88	40	27	UG/KG	U	U	

Sample Delivery Group: 240-17467-1

Analysis Method SW8260B

Sample Name 075SD-0002-0001-SD **AnalysisType:** N

Lab Sample Name: 240-17467-2 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,1,1-TRICHLOROETHANE	71-55-6	1.5	7.6	1.5	0.86	UG/KG	U J	U	
1,1,2,2-TETRACHLOROETHANE	79-34-5	0.76	7.6	0.76	0.52	UG/KG	U J	U	
1,1,2-TRICHLOROETHANE	79-00-5	0.76	7.6	0.76	0.60	UG/KG	U	U	
1,1-DICHLOROETHANE	75-34-3	0.76	7.6	0.76	0.55	UG/KG	U	U	
1,1-DICHLOROETHENE	75-35-4	1.5	7.6	1.5	0.80	UG/KG	U	U	
1,2-DIBROMOETHANE (ETHYLEN	106-93-4	1.5	7.6	1.5	0.76	UG/KG	U	U	
1,2-DICHLOROETHANE	107-06-2	0.76	7.6	0.76	0.52	UG/KG	U	U	
1,2-DICHLOROPROPANE	78-87-5	1.5	7.6	1.5	1.1	UG/KG	U	U	
2-HEXANONE	591-78-6	1.6	31	1.5	0.96	UG/KG	J	J	
ACETONE	67-64-1	9.6	31	9.6	9.6	UG/KG	U	U	
BENZENE	71-43-2	0.76	7.6	0.76	0.35	UG/KG	U	U	
BROMOCHLOROMETHANE	74-97-5	1.5	7.6	1.5	1.1	UG/KG	U	U	
BROMODICHLOROMETHANE	75-27-4	0.76	7.6	0.76	0.43	UG/KG	U J	U	
BROMOFORM	75-25-2	0.76	7.6	0.76	0.50	UG/KG	U	U	
BROMOMETHANE	74-83-9	1.5	7.6	1.5	0.83	UG/KG	U	U	
CARBON DISULFIDE	75-15-0	1.3	7.6	0.76	0.67	UG/KG	J	J	
CARBON TETRACHLORIDE	56-23-5	0.76	7.6	0.76	0.57	UG/KG	U	U	
CHLOROBENZENE	108-90-7	0.76	7.6	0.76	0.50	UG/KG	U J	U	
CHLOROETHANE	75-00-3	1.5	7.6	1.5	1.3	UG/KG	U J	U	
CHLOROFORM	67-66-3	0.76	7.6	0.76	0.44	UG/KG	U	U	
CHLOROMETHANE	74-87-3	0.76	7.6	0.76	0.63	UG/KG	U	U	
CIS-1,3-DICHLOROPROPENE	10061-01-5	0.76	7.6	0.76	0.52	UG/KG	U J	U	
DIBROMOCHLOROMETHANE	124-48-1	1.5	7.6	1.5	0.84	UG/KG	U	U	
ETHYLBENZENE	100-41-4	0.76	7.6	0.76	0.40	UG/KG	U J	U	
METHYL ETHYL KETONE (2-BUT	78-93-3	3.1	31	3.1	2.1	UG/KG	U	U	
METHYL ISOBUTYL KETONE (4-	108-10-1	1.5	31	1.5	0.83	UG/KG	U	U	
METHYLENE CHLORIDE	75-09-2	1.5	7.6	1.5	1.0	UG/KG	U J	U	
STYRENE	100-42-5	7.6	7.6	0.76	0.23	UG/KG	J	U	B, result from 0.31

Sample Delivery Group: 240-17467-1

TERT-BUTYL METHYL ETHER	1634-04-4	0.76	7.6	0.76	0.66	UG/KG	U	U
TETRACHLOROETHYLENE(PCE)	127-18-4	1.5	7.6	1.5	0.80	UG/KG	U J	U
TOLUENE	108-88-3	0.76	7.6	0.76	0.41	UG/KG	U J	U
TOTAL 1,2-DICHLOROETHENE	540-59-0	1.5	15	1.5	1.2	UG/KG	U J	U
TRANS-1,3-DICHLOROPROPENE	10061-02-6	1.5	7.6	1.5	0.83	UG/KG	U	U
TRICHLOROETHYLENE (TCE)	79-01-6	0.76	7.6	0.76	0.64	UG/KG	U	U
VINYL CHLORIDE	75-01-4	0.76	7.6	0.76	0.60	UG/KG	U	U
XYLENES, TOTAL		2.3	15	2.3	1.0	UG/KG	U J	U

Sample Delivery Group: 240-17467-1

Analysis Method SW8270D

Sample Name 075SD-0002-0001-SD **AnalysisType:** N

Lab Sample Name: 240-17467-2 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2,4-TRICHLOROBENZENE	120-82-1	43	80	43	43	UG/KG	U	U	
1,2,4-TRICHLOROBENZENE	120-82-1	43	80	43	43	UG/KG	U H	R	D
1,2-DICHLOROBENZENE	95-50-1	140.0	80	43	15	UG/KG			
1,2-DICHLOROBENZENE	95-50-1	43	80	43	15	UG/KG	U H	R	D
1,3-DICHLOROBENZENE	541-73-1	43	80	43	18	UG/KG	U H	R	D
1,3-DICHLOROBENZENE	541-73-1	43	80	43	18	UG/KG	U	U	
1,4-DICHLOROBENZENE	106-46-7	43	80	43	32	UG/KG	U H	R	D
1,4-DICHLOROBENZENE	106-46-7	50.0	80	43	32	UG/KG	J	J	
2,2'-OXYBIS(1-CHLORO)PROPAN	108-60-1	43	160	43	15	UG/KG	U	U	
2,2'-OXYBIS(1-CHLORO)PROPAN	108-60-1	43	160	43	15	UG/KG	U H J	R	D
2,4,5-TRICHLOROPHENOL	95-95-4	43	240	43	40	UG/KG	U H	R	D
2,4,5-TRICHLOROPHENOL	95-95-4	43	240	43	40	UG/KG	U	U	
2,4,6-TRICHLOROPHENOL	88-06-2	130	240	130	130	UG/KG	U	U	
2,4,6-TRICHLOROPHENOL	88-06-2	130	240	130	130	UG/KG	U H	R	D
2,4-DICHLOROPHENOL	120-83-2	43	240	43	32	UG/KG	U	U	
2,4-DICHLOROPHENOL	120-83-2	43	240	43	32	UG/KG	U H	R	D
2,4-DIMETHYLPHENOL	105-67-9	130	240	130	32	UG/KG	U	U	
2,4-DIMETHYLPHENOL	105-67-9	130	240	130	32	UG/KG	U H	R	D
2,4-DINITROPHENOL	51-28-5	130	530	130	130	UG/KG	U H	UJ	C
2,4-DINITROPHENOL	51-28-5	130	530	130	130	UG/KG	U	UJ	C
2,4-DINITROTOLUENE	121-14-2	43	320	43	43	UG/KG	U H	R	D
2,4-DINITROTOLUENE	121-14-2	43	320	43	43	UG/KG	U	R	D
2,6-DINITROTOLUENE	606-20-2	43	320	43	33	UG/KG	U	R	D
2,6-DINITROTOLUENE	606-20-2	43	320	43	33	UG/KG	U H	R	D
2-CHLORONAPHTHALENE	91-58-7	5.3	80	5.3	5.3	UG/KG	U H	R	D
2-CHLORONAPHTHALENE	91-58-7	5.3	80	5.3	5.3	UG/KG	U	U	
2-CHLOROPHENOL	95-57-8	43	80	43	43	UG/KG	U H	R	D
2-CHLOROPHENOL	95-57-8	43	80	43	43	UG/KG	U	U	

Sample Delivery Group: 240-17467-1

2-METHYLNAPHTHALENE	91-57-6	18.0	11	5.3	5.3	UG/KG			
2-METHYLNAPHTHALENE	91-57-6	24.0	11	5.3	5.3	UG/KG	H	R	D
2-METHYLPHENOL (O-CRESOL)	95-48-7	130	320	130	130	UG/KG	U	U	
2-METHYLPHENOL (O-CRESOL)	95-48-7	130	320	130	130	UG/KG	U H	R	D
2-NITROANILINE	88-74-4	43	320	43	15	UG/KG	U	U	
2-NITROANILINE	88-74-4	43	320	43	14	UG/KG	U H	R	D
2-NITROPHENOL	88-75-5	43	80	43	43	UG/KG	U	U	
2-NITROPHENOL	88-75-5	43	80	43	43	UG/KG	U H	R	D
3,3'-DICHLOROBENZIDINE	91-94-1	130	160	130	29	UG/KG	U H J	R	D
3,3'-DICHLOROBENZIDINE	91-94-1	130	160	130	29	UG/KG	U J	R	Q
3-NITROANILINE	99-09-2	130	320	130	25	UG/KG	U H J	R	D
3-NITROANILINE	99-09-2	130	320	130	26	UG/KG	U J	U	
4,6-DINITRO-2-METHYLPHENOL	534-52-1	130	240	130	130	UG/KG	U	UJ	C
4,6-DINITRO-2-METHYLPHENOL	534-52-1	130	240	130	130	UG/KG	U H	UJ	C
4-BROMOPHENYL PHENYL ETHE	101-55-3	43	80	43	21	UG/KG	U H	R	D
4-BROMOPHENYL PHENYL ETHE	101-55-3	43	80	43	21	UG/KG	U	U	
4-CHLORO-3-METHYLPHENOL	59-50-7	43	240	43	33	UG/KG	U	U	
4-CHLORO-3-METHYLPHENOL	59-50-7	43	240	43	33	UG/KG	U H	R	D
4-CHLOROANILINE	106-47-8	43	240	43	27	UG/KG	U	U	
4-CHLOROANILINE	106-47-8	43	240	43	27	UG/KG	U H	R	D
4-CHLOROPHENYL PHENYL ETH	7005-72-3	43	80	43	21	UG/KG	U H	R	D
4-CHLOROPHENYL PHENYL ETH	7005-72-3	43	80	43	21	UG/KG	U	U	
4-NITROANILINE	100-01-6	43	320	43	41	UG/KG	U J	UJ	Q
4-NITROANILINE	100-01-6	43	320	43	41	UG/KG	U H J	R	D
4-NITROPHENOL	100-02-7	130	530	130	130	UG/KG	U H	R	D
4-NITROPHENOL	100-02-7	130	530	130	130	UG/KG	U	U	
ACENAPHTHENE	83-32-9	19.0	11	5.3	5.3	UG/KG			
ACENAPHTHENE	83-32-9	27.0	11	5.3	5.3	UG/KG	H	R	D
ACENAPHTHYLENE	208-96-8	13.0	11	5.3	5.3	UG/KG			
ACENAPHTHYLENE	208-96-8	20.0	11	5.3	5.3	UG/KG	H	R	D
ANTHRACENE	120-12-7	57.0	11	5.3	5.3	UG/KG			
ANTHRACENE	120-12-7	77.0	11	5.3	5.3	UG/KG	H	R	D
BENZO(A)ANTHRACENE	56-55-3	140.0	11	5.3	5.3	UG/KG	H	R	D

Sample Delivery Group: 240-17467-1

BENZO(A)ANTHRACENE	56-55-3	230.0	11	5.3	5.3	UG/KG			
BENZO(A)PYRENE	50-32-8	160.0	11	5.3	5.3	UG/KG	H	R	D
BENZO(A)PYRENE	50-32-8	250.0	11	5.3	5.3	UG/KG			
BENZO(B)FLUORANTHENE	205-99-2	200.0	11	5.3	5.3	UG/KG	H	R	D
BENZO(B)FLUORANTHENE	205-99-2	360.0	11	5.3	5.3	UG/KG			
BENZO(G,H,I)PERYLENE	191-24-2	120.0	11	5.3	5.3	UG/KG	J	J	C
BENZO(G,H,I)PERYLENE	191-24-2	85.0	11	5.3	5.3	UG/KG	H	R	D
BENZO(K)FLUORANTHENE	207-08-9	140.0	11	5.3	5.3	UG/KG			
BENZO(K)FLUORANTHENE	207-08-9	83.0	11	5.3	5.3	UG/KG	H	R	D
BENZOIC ACID	65-85-0	530	1100	530	530	UG/KG	U H J	R	D
BENZOIC ACID	65-85-0	530	1100	530	530	UG/KG	U J	U	
BENZYL ALCOHOL	100-51-6	43	530	43	33	UG/KG	U H	R	D
BENZYL ALCOHOL	100-51-6	43	530	43	33	UG/KG	U	U	
BENZYL BUTYL PHTHALATE	85-68-7	43	80	43	16	UG/KG	U H	R	D
BENZYL BUTYL PHTHALATE	85-68-7	43	80	43	16	UG/KG	U	U	
BIS(2-CHLOROETHOXY) METHA	111-91-1	43	160	43	35	UG/KG	U H	R	D
BIS(2-CHLOROETHOXY) METHA	111-91-1	43	160	43	35	UG/KG	U	U	
BIS(2-CHLOROETHYL) ETHER (2	111-44-4	5.3	160	5.3	3.2	UG/KG	U H	R	D
BIS(2-CHLOROETHYL) ETHER (2	111-44-4	5.3	160	5.3	3.2	UG/KG	U	U	
BIS(2-ETHYLHEXYL) PHTHALAT	117-81-7	43	80	43	30	UG/KG	U H	UJ	H
CARBAZOLE	86-74-8	44.0	80	43	43	UG/KG	J	J	
CARBAZOLE	86-74-8	50.0	80	43	43	UG/KG	J H	R	D
CHRYSENE	218-01-9	160.0	11	5.3	1.8	UG/KG	H	R	D
CHRYSENE	218-01-9	270.0	11	5.3	1.8	UG/KG			
CRESOLS, M & P		130	640	130	32	UG/KG	U H	R	D
CRESOLS, M & P		130	640	130	32	UG/KG	U	U	
DIBENZ(A,H)ANTHRACENE	53-70-3	22.0	11	5.3	5.3	UG/KG	H	R	D
DIBENZ(A,H)ANTHRACENE	53-70-3	5.3	11	5.3	5.3	UG/KG	U	UJ	C
DIBENZOFURAN	132-64-9	17.0	80	5.3	5.3	UG/KG	J	J	
DIBENZOFURAN	132-64-9	39.0	80	5.3	5.3	UG/KG	J H	R	D
DIETHYL PHTHALATE	84-66-2	43	80	43	26	UG/KG	U	U	
DIETHYL PHTHALATE	84-66-2	43	80	43	25	UG/KG	U H	R	D
DIMETHYL PHTHALATE	131-11-3	43	80	43	27	UG/KG	U	U	

Sample Delivery Group: 240-17467-1

DIMETHYL PHTHALATE	131-11-3	43	80	43	27	UG/KG	U H	R	D
DI-N-BUTYL PHTHALATE	84-74-2	43	80	43	24	UG/KG	U H	R	D
DI-N-BUTYL PHTHALATE	84-74-2	43	80	43	24	UG/KG	U	U	
DI-N-OCTYLPHTHALATE	117-84-0	43	80	43	43	UG/KG	U H	R	D
DI-N-OCTYLPHTHALATE	117-84-0	43	80	43	43	UG/KG	U	U	
FLUORANTHENE	206-44-0	390.0	11	5.3	5.3	UG/KG	H	R	D
FLUORANTHENE	206-44-0	510.0	11	5.3	5.3	UG/KG			
FLUORENE	86-73-7	5.3	11	5.3	5.3	UG/KG	U	U	
FLUORENE	86-73-7	54.0	11	5.3	5.3	UG/KG	H	R	D
HEXACHLOROBENZENE	118-74-1	5.3	11	5.3	3.3	UG/KG	U H	R	D
HEXACHLOROBENZENE	118-74-1	5.3	11	5.3	3.3	UG/KG	U	U	
HEXACHLOROBUTADIENE	87-68-3	43	80	43	43	UG/KG	U	U	
HEXACHLOROBUTADIENE	87-68-3	43	80	43	43	UG/KG	U H	R	D
HEXACHLOROCYCLOPENTADIE	77-47-4	43	530	43	43	UG/KG	U H	R	D
HEXACHLOROCYCLOPENTADIE	77-47-4	43	530	43	43	UG/KG	U	U	
HEXACHLOROETHANE	67-72-1	43	80	43	14	UG/KG	U H J	R	D
HEXACHLOROETHANE	67-72-1	43	80	43	14	UG/KG	U J	UJ	C
INDENO(1,2,3-C,D)PYRENE	193-39-5	120.0	11	5.3	5.3	UG/KG		J	C
INDENO(1,2,3-C,D)PYRENE	193-39-5	74.0	11	5.3	5.3	UG/KG	H	R	D
ISOPHORONE	78-59-1	43	80	43	21	UG/KG	U H	R	D
ISOPHORONE	78-59-1	43	80	43	21	UG/KG	U	U	
NAPHTHALENE	91-20-3	18.0	11	5.3	5.3	UG/KG			
NAPHTHALENE	91-20-3	41.0	11	5.3	5.3	UG/KG	H	R	D
NITROBENZENE	98-95-3	5.3	160	5.3	3.5	UG/KG	U H J	R	D
NITROBENZENE	98-95-3	5.3	160	5.3	3.5	UG/KG	U	U	
N-NITROSODI-N-PROPYLAMINE	621-64-7	43	80	43	43	UG/KG	U	U	
N-NITROSODI-N-PROPYLAMINE	621-64-7	43	80	43	43	UG/KG	U H	R	D
N-NITROSODIPHENYLAMINE	86-30-6	43	80	43	33	UG/KG	U	U	
N-NITROSODIPHENYLAMINE	86-30-6	43	80	43	33	UG/KG	U H	R	D
PENTACHLOROPHENOL	87-86-5	130	240	130	130	UG/KG	U	U	
PENTACHLOROPHENOL	87-86-5	130	240	130	130	UG/KG	U H	R	D
PHENANTHRENE	85-01-8	260.0	11	5.3	5.3	UG/KG			
PHENANTHRENE	85-01-8	330.0	11	5.3	5.3	UG/KG	H	R	D

Sample Delivery Group: 240-17467-1

PHENOL	108-95-2	43	80	43	43	UG/KG	U H	R	D
PHENOL	108-95-2	43	80	43	43	UG/KG	U	U	
PYRENE	129-00-0	280.0	11	5.3	5.3	UG/KG	H	R	D
PYRENE	129-00-0	390.0	11	5.3	5.3	UG/KG			

Analysis Method SW8330

Sample Name 075SD-0002-0001-SD **AnalysisType:** N

Lab Sample Name: 240-17467-2 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,3,5-TRINITROBENZENE	99-35-4	0.049	0.25	0.049	0.0098	MG/KG	U	U	
1,3-DINITROBENZENE	99-65-0	0.049	0.25	0.049	0.0041	MG/KG	U	U	
2,4,6-TRINITROTOLUENE	118-96-7	0.049	0.25	0.049	0.019	MG/KG	U	U	
2,4-DINITROTOLUENE	121-14-2	0.049	0.25	0.049	0.0052	MG/KG	U	U	
2,6-DINITROTOLUENE	606-20-2	0.049	0.25	0.049	0.0072	MG/KG	U	U	
2-AMINO-4,6-DINITROTOLUENE	35572-78-2	0.049	0.25	0.049	0.012	MG/KG	U	U	
2-NITROTOLUENE	88-72-2	0.049	0.25	0.049	0.013	MG/KG	U	UJ	C
3-NITROTOLUENE	99-08-1	0.049	0.25	0.049	0.015	MG/KG	U	U	
4-AMINO-2,6-DINITROTOLUENE	19406-51-0	0.049	0.25	0.049	0.0098	MG/KG	U	U	
4-NITROTOLUENE	99-99-0	0.049	0.25	0.049	0.018	MG/KG	U	U	
HMX	2691-41-0	0.049	0.25	0.049	0.012	MG/KG	U	U	
NITROBENZENE	98-95-3	0.049	0.25	0.049	0.017	MG/KG	U	R	D
NITROGLYCERIN	55-63-0	0.25	0.49	0.25	0.015	MG/KG	U	U	
NITROGUANIDINE	556-88-7	0.039	0.24	0.039	0.019	MG/KG	U J	UJ	Q
PETN	78-11-5	0.25	0.49	0.25	0.025	MG/KG	U	U	
RDX	121-82-4	0.049	0.25	0.049	0.012	MG/KG	U	UJ	C
TETRYL	479-45-8	0.029	0.25	0.049	0.0098	MG/KG	J	NJ	*III

Sample Delivery Group: 240-17467-2

Analysis Method SW6020

Sample Name 075SD-0002-0001-SD **AnalysisType:** N

Lab Sample Name: 240-17467-2 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
ALUMINUM	7429-90-5	12000.0	4.4	0.88	0.42	MG/KG	J	J	E
ANTIMONY	7440-36-0	0.21	0.29	0.15	0.067	MG/KG	J	J-	Q
ARSENIC	7440-38-2	9.5	0.15	0.074	0.027	MG/KG		J-	Q
BARIUM	7440-39-3	110.0	1.5	0.029	0.016	MG/KG	Q	J-	Q
BERYLLIUM	7440-41-7	0.89	0.15	0.015	0.011	MG/KG			
CADMIUM	7440-43-9	0.63	0.15	0.044	0.019	MG/KG			
CALCIUM	7440-70-2	6400.0	15	3.7	1.9	MG/KG	J	J	
CHROMIUM	7440-47-3	15.0	0.29	0.059	0.033	MG/KG		J-	E, Q
COBALT	7440-48-4	9.6	0.074	0.015	0.0035	MG/KG	Q		
COPPER	7440-50-8	17.0	0.29	0.088	0.049	MG/KG	Q		
IRON	7439-89-6	20000.0	7.4	2.9	1.6	MG/KG	J	J	
LEAD	7439-92-1	22.0	0.15	0.044	0.023	MG/KG			
MAGNESIUM	7439-95-4	2800.0	15	2.9	1.6	MG/KG	J	J-	Q
MANGANESE	7439-96-5	2200.0	0.74	0.044	0.023	MG/KG	Q J	J	
NICKEL	7440-02-0	21.0	0.15	0.044	0.017	MG/KG	Q	J-	Q
POTASSIUM	7440-09-7	1400.0	15	8.8	4.6	MG/KG	J	J-	E, Q
SELENIUM	7782-49-2	1.3	0.74	0.15	0.075	MG/KG		J-	Q
SILVER	7440-22-4	1.5	0.15	0.044	0.017	MG/KG			
SODIUM	7440-23-5	75.0	15	7.4	3.9	MG/KG		J	E
THALLIUM	7440-28-0	0.21	0.15	0.029	0.015	MG/KG			
VANADIUM	7440-62-2	20.0	0.15	0.088	0.044	MG/KG		J-	E, Q
ZINC	7440-66-6	140.0	0.74	0.29	0.095	MG/KG	Q J	J	

Validated Sample Result Forms for Sampling : Ravenna Army Ammunition Plant Ravenna, Ohio
Remedial Investigation Compliance Restoration Site: RVAAP-77 Building 1037 Laundry Waste Water Sump

Sample Delivery Group: 240-17525-1_(77-SS)2

Analysis Method E353.2

Sample Name 077SS-0001M-0001-SO **AnalysisType:** N

Lab Sample Name: 240-17525-5 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
NITROCELLULOSE	9004-70-0	17	45	17	7.1	MG/KG	U	U	

Sample Delivery Group: 240-17525-1_(77-SS)2

Analysis Method SW6020

Sample Name 077SS-0001M-0001-SO **AnalysisType:** N

Lab Sample Name: 240-17525-5 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
ALUMINUM	7429-90-5	8200	2.5	0.5	0.24	MG/KG			
ANTIMONY	7440-36-0	0.2	0.17	0.083	0.038	MG/KG		J	I, Q
ARSENIC	7440-38-2	12	0.083	0.041	0.015	MG/KG		J-	Q
BARIUM	7440-39-3	49	0.83	0.017	0.0088	MG/KG	Q	J	M
BERYLLIUM	7440-41-7	0.46	0.083	0.008	0.0062	MG/KG			
CADMIUM	7440-43-9	0.19	0.083	0.025	0.011	MG/KG		J	I, Q
CALCIUM	7440-70-2	4500	8.3	2.1	1.1	MG/KG		J	A, E
CHROMIUM	7440-47-3	18	0.17	0.033	0.018	MG/KG			
COBALT	7440-48-4	7.4	0.041	0.008	0.002	MG/KG	Q		
COPPER	7440-50-8	16	0.17	0.05	0.027	MG/KG	Q	J	Q
IRON	7439-89-6	22000	4.1	1.7	0.89	MG/KG			
LEAD	7439-92-1	22	0.083	0.025	0.013	MG/KG			
MAGNESIUM	7439-95-4	2800	8.3	1.7	0.89	MG/KG		J+	Q
MANGANESE	7439-96-5	540	0.41	0.025	0.013	MG/KG	Q		
NICKEL	7440-02-0	24	0.083	0.025	0.0093	MG/KG	Q		
POTASSIUM	7440-09-7	830	8.3	5	2.6	MG/KG		J+	Q
SELENIUM	7782-49-2	0.56	0.41	0.083	0.042	MG/KG		J-	Q
SILVER	7440-22-4	0.027	0.083	0.025	0.0094	MG/KG	J	J+	I
SODIUM	7440-23-5	29	8.3	4.1	2.2	MG/KG		UJ	E, F
THALLIUM	7440-28-0	0.13	0.083	0.017	0.0084	MG/KG			
VANADIUM	7440-62-2	16	0.083	0.05	0.025	MG/KG			
ZINC	7440-66-6	63	0.41	0.17	0.054	MG/KG	Q		

Analysis Method SW7471A

Sample Name 077SS-0001M-0001-SO **AnalysisType:** N

Lab Sample Name: 240-17525-5 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
MERCURY	7439-97-6	0.045	0.1	0.033	0.014	MG/KG	J	J	

Sample Delivery Group: 240-17525-1_(77-SS)2

Analysis Method SW8081

Sample Name 077SS-0001M-0001-SO **AnalysisType:** N

Lab Sample Name: 240-17525-5 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
ALDRIN	309-00-2	13	40	13	12	UG/KG	U	U	
ALPHA BHC (ALPHA HEXACHLO	319-84-6	13	25	13	7.3	UG/KG	U	U	
ALPHA ENDOSULFAN	959-98-8	6.7	17	6.7	5.2	UG/KG	U	U	
ALPHA-CHLORDANE	5103-71-9	13	30	13	9.5	UG/KG	U	U	
BETA BHC (BETA HEXACHLORO	319-85-7	13	35	13	11	UG/KG	U J	U	
BETA ENDOSULFAN	33213-65-9	13	25	13	8.2	UG/KG	U	U	
DELTA BHC (DELTA HEXACHLO	319-86-8	13	40	13	12	UG/KG	U	U	
DIELDRIN	60-57-1	6.7	17	6.7	4.7	UG/KG	U	U	
ENDOSULFAN SULFATE	1031-07-8	13	30	13	8.8	UG/KG	U	U	
ENDRIN	72-20-8	6.7	17	6.7	5	UG/KG	U	U	
ENDRIN ALDEHYDE	7421-93-4	13	30	13	10	UG/KG	U	U	
ENDRIN KETONE	53494-70-5	6.7	20	6.7	6.3	UG/KG	U	U	
GAMMA BHC (LINDANE)	58-89-9	13	25	13	7.4	UG/KG	U	U	
GAMMA-CHLORDANE	5566-34-7	6.7	17	6.7	4.2	UG/KG	U	U	
HEPTACHLOR	76-44-8	13	35	13	11	UG/KG	U	U	
HEPTACHLOR EPOXIDE	1024-57-3	13	25	13	8	UG/KG	U J	U	
METHOXYCHLOR	72-43-5	33	50	33	15	UG/KG	U J	U	
P,P'-DDD	72-54-8	6.7	20	6.7	6.2	UG/KG	U	U	
P,P'-DDE	72-55-9	5.2	17	6.7	3.9	UG/KG	J D	J	
P,P'-DDT	50-29-3	6.7	20	6.7	6.3	UG/KG	U	U	
TOXAPHENE	8001-35-2	200	670	200	190	UG/KG	U	UJ	C

Sample Delivery Group: 240-17525-1_(77-SS)2

Analysis Method SW8082

Sample Name 077SS-0001M-0001-SO **AnalysisType:** N

Lab Sample Name: 240-17525-5 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
PCB-1016 (AROCHLOR 1016)	12674-11-2	25	65	25	21	UG/KG	U	U	
PCB-1221 (AROCHLOR 1221)	11104-28-2	25	50	25	16	UG/KG	U	U	
PCB-1232 (AROCHLOR 1232)	11141-16-5	25	45	25	14	UG/KG	U	U	
PCB-1242 (AROCHLOR 1242)	53469-21-9	25	40	25	13	UG/KG	U	U	
PCB-1248 (AROCHLOR 1248)	12672-29-6	25	55	25	17	UG/KG	U	U	
PCB-1254 (AROCHLOR 1254)	11097-69-1	25	55	25	17	UG/KG	U	U	
PCB-1260 (AROCHLOR 1260)	11096-82-5	25	55	25	17	UG/KG	U	U	

Sample Delivery Group: 240-17525-1_(77-SS)2

Analysis Method SW8260B

Sample Name 077SS-0001M-0001-SO **AnalysisType:** N

Lab Sample Name: 240-17525-5 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,1,1-TRICHLOROETHANE	71-55-6	0.99	4.9	0.99	0.55	UG/KG	U J	U	
1,1,2,2-TETRACHLOROETHANE	79-34-5	0.51	5.1	0.51	0.35	UG/KG	U	U	
1,1,2-TRICHLOROETHANE	79-00-5	0.51	5.1	0.51	0.4	UG/KG	U J	U	
1,1-DICHLOROETHANE	75-34-3	0.51	5.1	0.51	0.37	UG/KG	U	U	
1,1-DICHLOROETHENE	75-35-4	1	5.1	1	0.54	UG/KG	U J	U	
1,2-DIBROMOETHANE (ETHYLEN	106-93-4	1	5.1	1	0.51	UG/KG	U J	U	
1,2-DICHLOROETHANE	107-06-2	0.51	5.1	0.51	0.35	UG/KG	U J	U	
1,2-DICHLOROPROPANE	78-87-5	1	5.1	1	0.71	UG/KG	U	U	
2-HEXANONE	591-78-6	1	21	1	0.65	UG/KG	U J	U	
ACETONE	67-64-1	6.2	20	6.2	6.2	UG/KG	U J	U	
BENZENE	71-43-2	0.51	5.1	0.51	0.24	UG/KG	U J	U	
BROMOCHLOROMETHANE	74-97-5	1	5.1	1	0.73	UG/KG	U J	U	
BROMODICHLOROMETHANE	75-27-4	0.51	5.1	0.51	0.29	UG/KG	U J	U	
BROMOFORM	75-25-2	0.51	5.1	0.51	0.34	UG/KG	U J	U	
BROMOMETHANE	74-83-9	1	5.1	1	0.56	UG/KG	U J	U	
CARBON DISULFIDE	75-15-0	0.51	5.1	0.51	0.45	UG/KG	U J	U	
CARBON TETRACHLORIDE	56-23-5	0.49	4.9	0.49	0.37	UG/KG	U J	U	
CHLOROBENZENE	108-90-7	0.51	5.1	0.51	0.34	UG/KG	U J	U	
CHLOROETHANE	75-00-3	1	5.1	1	0.89	UG/KG	U	U	
CHLOROFORM	67-66-3	0.51	5.1	0.51	0.3	UG/KG	U	U	
CHLOROMETHANE	74-87-3	0.51	5.1	0.51	0.42	UG/KG	U	U	
CIS-1,3-DICHLOROPROPENE	10061-01-5	0.51	5.1	0.51	0.35	UG/KG	U	U	
DIBROMOCHLOROMETHANE	124-48-1	1	5.1	1	0.57	UG/KG	U J	U	
ETHYLBENZENE	100-41-4	0.51	5.1	0.51	0.27	UG/KG	U J	U	
METHYL ETHYL KETONE (2-BUT	78-93-3	2.1	21	2.1	1.4	UG/KG	U J	U	
METHYL ISOBUTYL KETONE (4-	108-10-1	1	21	1	0.56	UG/KG	U J	U	
METHYLENE CHLORIDE	75-09-2	1	5.1	1	0.69	UG/KG	U J	U	
STYRENE	100-42-5	0.51	5.1	0.51	0.15	UG/KG	U J	U	

Sample Delivery Group: 240-17525-1_(77-SS)2

TERT-BUTYL METHYL ETHER	1634-04-4	0.51	5.1	0.51	0.44	UG/KG	U J	U
TETRACHLOROETHYLENE(PCE)	127-18-4	1	5.1	1	0.54	UG/KG	U J	U
TOLUENE	108-88-3	0.51	5.1	0.51	0.28	UG/KG	U J	U
TOTAL 1,2-DICHLOROETHENE	540-59-0	1	10	1	0.79	UG/KG	U J	U
TRANS-1,3-DICHLOROPROPENE	10061-02-6	1	5.1	1	0.56	UG/KG	U J	U
TRICHLOROETHYLENE (TCE)	79-01-6	0.51	5.1	0.51	0.43	UG/KG	U	U
VINYL CHLORIDE	75-01-4	0.51	5.1	0.51	0.4	UG/KG	U J	U
XYLENES, TOTAL		1.5	10	1.5	0.69	UG/KG	U J	U

Sample Delivery Group: 240-17525-1_(77-SS)2

Analysis Method SW8270C

Sample Name 077SS-0001M-0001-SO **AnalysisType:** N

Lab Sample Name: 240-17525-5 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2,4-TRICHLOROBENZENE	120-82-1	110	200	110	110	UG/KG	U	U	
1,2-DICHLOROBENZENE	95-50-1	110	200	110	39	UG/KG	U	U	
1,3-DICHLOROBENZENE	541-73-1	110	200	110	45	UG/KG	U	U	
1,4-DICHLOROBENZENE	106-46-7	110	200	110	81	UG/KG	U	U	
2,4,5-TRICHLOROPHENOL	95-95-4	110	610	110	100	UG/KG	U	U	
2,4,6-TRICHLOROPHENOL	88-06-2	320	610	320	320	UG/KG	U	U	
2,4-DICHLOROPHENOL	120-83-2	110	610	110	81	UG/KG	U	U	
2,4-DIMETHYLPHENOL	105-67-9	320	610	320	81	UG/KG	U	U	
2,4-DINITROPHENOL	51-28-5	320	1300	320	320	UG/KG	U	U	
2,4-DINITROTOLUENE	121-14-2	110	810	110	110	UG/KG	U	R	D
2,6-DINITROTOLUENE	606-20-2	110	810	110	85	UG/KG	U	R	D
2-CHLORONAPHTHALENE	91-58-7	13	200	13	13	UG/KG	U	U	
2-CHLOROPHENOL	95-57-8	110	200	110	110	UG/KG	U	U	
2-METHYLNAPHTHALENE	91-57-6	54	27	13	13	UG/KG			
2-METHYLPHENOL (O-CRESOL)	95-48-7	320	810	320	320	UG/KG	U	U	
2-NITROANILINE	88-74-4	110	810	110	37	UG/KG	U	U	
2-NITROPHENOL	88-75-5	110	200	110	110	UG/KG	U	U	
3,3'-DICHLOROBENZIDINE	91-94-1	320	410	320	73	UG/KG	U	UJ	C
3-NITROANILINE	99-09-2	320	810	320	65	UG/KG	U	U	
4,6-DINITRO-2-METHYLPHENOL	534-52-1	320	610	320	320	UG/KG	U	U	
4-BROMOPHENYL PHENYL ETHE	101-55-3	110	200	110	53	UG/KG	U	U	
4-CHLORO-3-METHYLPHENOL	59-50-7	110	610	110	85	UG/KG	U	U	
4-CHLOROANILINE	106-47-8	110	610	110	69	UG/KG	U	U	
4-CHLOROPHENYL PHENYL ETH	7005-72-3	110	200	110	53	UG/KG	U	U	
4-NITROANILINE	100-01-6	110	810	110	110	UG/KG	U	U	
4-NITROPHENOL	100-02-7	320	1300	320	320	UG/KG	U	U	
ACENAPHTHENE	83-32-9	13	27	13	13	UG/KG	U	U	
ACENAPHTHYLENE	208-96-8	13	27	13	13	UG/KG	U	U	

Sample Delivery Group: 240-17525-1_(77-SS)2

ANTHRACENE	120-12-7	13	27	13	13	UG/KG	U	U	
BENZO(A)ANTHRACENE	56-55-3	57	27	13	13	UG/KG			
BENZO(A)PYRENE	50-32-8	88	27	13	13	UG/KG			
BENZO(B)FLUORANTHENE	205-99-2	91	27	13	13	UG/KG			
BENZO(G,H,I)PERYLENE	191-24-2	47	27	13	13	UG/KG	M		
BENZO(K)FLUORANTHENE	207-08-9	18	27	13	13	UG/KG	J M	J	
BENZOIC ACID	65-85-0	1400	2700	1400	1400	UG/KG	U	R	Q
BENZYL ALCOHOL	100-51-6	110	1300	110	85	UG/KG	U	U	
BENZYL BUTYL PHTHALATE	85-68-7	110	200	110	41	UG/KG	U	U	
BIS(2-CHLOROETHOXY) METHA	111-91-1	110	410	110	89	UG/KG	U	U	
BIS(2-CHLOROETHYL) ETHER (2	111-44-4	13	410	13	8.1	UG/KG	U	U	
BIS(2-CHLOROISOPROPYL) ETHE	108-60-1	110	410	110	39	UG/KG	U	U	
BIS(2-ETHYLHEXYL) PHTHALAT	117-81-7	110	200	110	77	UG/KG	U	U	
CARBAZOLE	86-74-8	110	200	110	110	UG/KG	U	U	
CHRYSENE	218-01-9	66	27	13	4.5	UG/KG			
CRESOLS, M & P		320	1600	320	81	UG/KG	U	U	
DIBENZ(A,H)ANTHRACENE	53-70-3	13	27	13	13	UG/KG	U	U	
DIBENZOFURAN	132-64-9	14	200	13	13	UG/KG	J	J	
DIETHYL PHTHALATE	84-66-2	110	200	110	65	UG/KG	U	U	
DIMETHYL PHTHALATE	131-11-3	110	200	110	69	UG/KG	U	U	
DI-N-BUTYL PHTHALATE	84-74-2	110	200	110	61	UG/KG	U	U	
DI-N-OCTYLPHTHALATE	117-84-0	110	200	110	110	UG/KG	U	U	
FLUORANTHENE	206-44-0	120	27	13	13	UG/KG			
FLUORENE	86-73-7	13	27	13	13	UG/KG	U	U	
HEXACHLOROBENZENE	118-74-1	13	27	13	8.5	UG/KG	U	U	
HEXACHLOROBUTADIENE	87-68-3	110	200	110	110	UG/KG	U	U	
HEXACHLOROCYCLOPENTADIE	77-47-4	110	1300	110	110	UG/KG	U	U	
HEXACHLOROETHANE	67-72-1	110	200	110	37	UG/KG	U	U	
INDENO(1,2,3-C,D)PYRENE	193-39-5	55	27	13	13	UG/KG			
ISOPHORONE	78-59-1	110	200	110	53	UG/KG	U	U	
NAPHTHALENE	91-20-3	44	27	13	13	UG/KG			
NITROBENZENE	98-95-3	13	410	13	8.9	UG/KG	U	U	
N-NITROSODI-N-PROPYLAMINE	621-64-7	110	200	110	110	UG/KG	U	U	

Sample Delivery Group: 240-17525-1_(77-SS)2

N-NITROSODIPHENYLAMINE	86-30-6	110	200	110	85	UG/KG	U	R	C
PENTACHLOROPHENOL	87-86-5	320	610	320	320	UG/KG	U	U	
PHENANTHRENE	85-01-8	77	27	13	13	UG/KG			
PHENOL	108-95-2	110	200	110	110	UG/KG	U	U	
PYRENE	129-00-0	95	27	13	13	UG/KG			

Analysis Method SW8330B

Sample Name 077SS-0001M-0001-SO **AnalysisType:** N

Lab Sample Name: 240-17525-5 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,3,5-TRINITROBENZENE	99-35-4	0.05	0.25	0.05	0.01	MG/KG	U	U	
1,3-DINITROBENZENE	99-65-0	0.05	0.25	0.05	0.0042	MG/KG	U	U	
2,4,6-TRINITROTOLUENE	118-96-7	0.05	0.25	0.05	0.019	MG/KG	U	U	
2,4-DINITROTOLUENE	121-14-2	0.05	0.25	0.05	0.0053	MG/KG	U	U	
2,6-DINITROTOLUENE	606-20-2	0.05	0.25	0.05	0.0073	MG/KG	U	U	
2-AMINO-4,6-DINITROTOLUENE	35572-78-2	0.05	0.25	0.05	0.013	MG/KG	U	U	
2-NITROTOLUENE	88-72-2	0.05	0.25	0.05	0.013	MG/KG	U	UJ	C
3-NITROTOLUENE	99-08-1	0.05	0.25	0.05	0.016	MG/KG	U	U	
4-AMINO-2,6-DINITROTOLUENE	19406-51-0	0.05	0.25	0.05	0.01	MG/KG	U	U	
4-NITROTOLUENE	99-99-0	0.05	0.25	0.05	0.018	MG/KG	U	U	
HEXAHYDRO-1,3,5-TRINITRO-1,3,	121-82-4	0.05	0.25	0.05	0.012	MG/KG	U	UJ	C
NITROBENZENE	98-95-3	0.05	0.25	0.05	0.018	MG/KG	U	R	D
NITROGLYCERIN	55-63-0	0.25	0.5	0.25	0.015	MG/KG	U	U	
NITROGUANIDINE	556-88-7	0.04	0.25	0.04	0.02	MG/KG	U	U	
OCTAHYDRO-1,3,5,7-TETRANITR	2691-41-0	0.05	0.25	0.05	0.012	MG/KG	U	U	
PENTAERYTHRITOL TETRANITR	78-11-5	0.25	0.5	0.25	0.025	MG/KG	U	U	
TETRYL	479-45-8	0.05	0.25	0.05	0.01	MG/KG	U	U	

Validated Sample Result Forms for Sampling : Ravenna Army Ammunition Plant Ravenna, Ohio
Remedial Investigation Compliance Restoration Site: RVAAP-83 Former Buildings 1031 and 1039

Sample Delivery Group: 99211_83_0813

Analysis Method BNASIM

Sample Name 083SB-0005M-0001-SO **AnalysisType:** N

Lab Sample Name: 337818 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
2-METHYLNAPHTHALENE	91-57-6	1.9	1.6	0.85	0.23	ug/kg			
ACENAPHTHENE	83-32-9	0.78	1.6	0.85	0.35	ug/kg	J	J	
ACENAPHTHYLENE	208-96-8	0.85	1.6	0.85	0.25	ug/kg	U	U	
ANTHRACENE	120-12-7	2.1	1.6	0.85	0.33	ug/kg			
BENZO(A)ANTHRACENE	56-55-3	7.3	1.6	0.85	0.34	ug/kg			
BENZO(A)PYRENE	50-32-8	3.2	1.6	0.85	0.3	ug/kg			
BENZO(B)FLUORANTHENE	205-99-2	8.9	1.6	0.85	0.42	ug/kg			
BENZO(G,H,I)PERYLENE	191-24-2	6	1.6	0.85	0.41	ug/kg			
BENZO(K)FLUORANTHENE	207-08-9	1.9	1.6	0.85	0.39	ug/kg			
CHRYSENE	218-01-9	8.3	1.6	0.85	0.37	ug/kg			
DIBENZ(A,H)ANTHRACENE	53-70-3	1.2	1.6	0.85	0.37	ug/kg	J	J	
FLUORANTHENE	206-44-0	10	1.6	0.85	0.38	ug/kg			
FLUORENE	86-73-7	0.93	1.6	0.85	0.38	ug/kg	J	J	
INDENO(1,2,3-C,D)PYRENE	193-39-5	3.6	1.6	0.85	0.38	ug/kg			
NAPHTHALENE	91-20-3	2	1.6	0.85	0.29	ug/kg			
PHENANTHRENE	85-01-8	11	1.6	0.85	0.48	ug/kg			
PYRENE	129-00-0	8.1	1.6	0.85	0.43	ug/kg			

Analysis Method E353.2

Sample Name 083SB-0005M-0001-SO **AnalysisType:** N

Lab Sample Name: 337818 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
NITROCELLULOSE	9004-70-0	100	200	100	33	mg/kg	U	U	

Sample Delivery Group: 99211_83_0813

Analysis Method SW6010C

Sample Name 083SB-0005M-0001-SO **AnalysisType:** N

Lab Sample Name: 337818 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
ALUMINUM	7429-90-5	12500	1.2	0.62	0.21	mg/kg			
ANTIMONY	7440-36-0	1.2	4.1	2.1	0.67	mg/kg	JV	J-	Q, *III
ARSENIC	7440-38-2	13.9	4.1	2.1	0.67	mg/kg		J-	Q
BARIUM	7440-39-3	78.1	0.26	0.13	0.047	mg/kg	B	J-	A, P, Q, *III
BERYLLIUM	7440-41-7	0.68	0.21	0.062	0.021	mg/kg		J-	P, Q
CADMIUM	7440-43-9	0.1	0.21	0.1	0.031	mg/kg	U	UJ	P, Q
CALCIUM	7440-70-2	28900	7.3	3.6	1.2	mg/kg		J-	P
CHROMIUM	7440-47-3	18.3	0.73	0.36	0.12	mg/kg		J-	P, Q, *III
COBALT	7440-48-4	11.8	1.2	0.62	0.21	mg/kg		J-	P, Q
COPPER	7440-50-8	21.3	2.1	1	0.36	mg/kg		J-	Q
IRON	7439-89-6	27200	9.3	4.7	1.6	mg/kg			
LEAD	7439-92-1	11.8	1.3	0.65	0.21	mg/kg		J-	P, Q
MAGNESIUM	7439-95-4	7530	4.1	2.1	0.73	mg/kg		J-	A, P, Q, *III
MANGANESE	7439-96-5	428	0.78	0.39	0.13	mg/kg			
NICKEL	7440-02-0	29.2	0.62	0.31	0.11	mg/kg		J-	P, Q, *III
POTASSIUM	7440-09-7	1300	68	34	11	mg/kg			
SELENIUM	7782-49-2	0.24	0.41	0.24	0.062	mg/kg	U	UJ	Q, $, *III
SILVER	7440-22-4	0.12	0.1	0.12	0.018	mg/kg	U	UJ	Q, $, *III
SODIUM	7440-23-5	55.2	25	12	4.1	mg/kg			
THALLIUM	7440-28-0	0.79	2.5	1.2	0.41	mg/kg	JV	J-	P, Q, *III
VANADIUM	7440-62-2	18.8	0.41	0.21	0.062	mg/kg	B	J-	P, Q
ZINC	7440-66-6	70.2	1.6	0.78	0.26	mg/kg		J-	P, Q, *III

Sample Delivery Group: 99211_83_0813

Analysis Method SW7471B

Sample Name 083SB-0005M-0001-SO **AnalysisType:** N

Lab Sample Name: 337818 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
MERCURY	7439-97-6	0.013	0.009	0.004	0.0023	mg/kg		J+	Q

Analysis Method SW8082

Sample Name 083SB-0012M-0001-SO **AnalysisType:** N

Lab Sample Name: 337828 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
PCB-1016 (AROCHLOR 1016)	12674-11-2	21	31	21	5.2	ug/kg	U	U	
PCB-1221 (AROCHLOR 1221)	11104-28-2	21	31	21	7.2	ug/kg	U	U	
PCB-1232 (AROCHLOR 1232)	11141-16-5	21	31	21	9.3	ug/kg	U	U	
PCB-1242 (AROCHLOR 1242)	53469-21-9	21	31	21	7.2	ug/kg	U	U	
PCB-1248 (AROCHLOR 1248)	12672-29-6	21	31	21	7.2	ug/kg	U	U	
PCB-1254 (AROCHLOR 1254)	11097-69-1	21	31	21	9.3	ug/kg	U	U	
PCB-1260 (AROCHLOR 1260)	11096-82-5	21	31	21	6.2	ug/kg	U	U	
PCB-1262 (AROCHLOR 1262)	37324-23-5	21	31	21	7.2	ug/kg	U	U	
PCB-1268 (AROCHLOR 1268)	11100-14-4	21	31	21	5.2	ug/kg	U	U	

Sample Delivery Group: 99211_83_0813

Analysis Method SW8260C

Sample Name 083SB-0002M-0001-SO **AnalysisType:** N

Lab Sample Name: 338808 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
BENZENE	71-43-2	0.95	1.9	0.95	0.28	ug/kg	U	U	
ETHYLBENZENE	100-41-4	0.95	1.9	0.95	0.38	ug/kg	U	U	
TOLUENE	108-88-3	0.95	1.9	0.95	0.38	ug/kg	U	U	
XYLENES, TOTAL		1.9	3.8	1.9	0.66	ug/kg	U	U	

Sample Name 083SB-0005M-0001-SO **AnalysisType:** N

Lab Sample Name: 337819 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,1,1-TRICHLOROETHANE	71-55-6	0.9	1.8	0.9	0.27	ug/kg	U	U	
1,1,2,2-TETRACHLOROETHANE	79-34-5	0.9	1.8	0.9	0.45	ug/kg	U	U	
1,1,2-TRICHLOROETHANE	79-00-5	0.9	1.8	0.9	0.36	ug/kg	U	U	
1,1-DICHLOROETHANE	75-34-3	0.9	1.8	0.9	0.36	ug/kg	U	U	
1,1-DICHLOROETHENE	75-35-4	0.9	1.8	0.9	0.36	ug/kg	U	U	
1,2-DIBROMOETHANE (ETHYLEN	06-93-4	0.9	1.8	0.9	0.36	ug/kg	U	U	
1,2-DICHLOROETHANE	107-06-2	0.9	1.8	0.9	0.45	ug/kg	U	U	
1,2-DICHLOROPROPANE	78-87-5	0.9	1.8	0.9	0.36	ug/kg	U	U	
2-HEXANONE	591-78-6	18	36	18	9.9	ug/kg	U	U	
ACETONE	67-64-1	9	18	9	9	ug/kg	U	U	
BENZENE	71-43-2	0.9	1.8	0.9	0.27	ug/kg	U	U	
BROMOCHLOROMETHANE	74-97-5	0.9	1.8	0.9	0.36	ug/kg	U	U	
BROMODICHLOROMETHANE	75-27-4	0.9	1.8	0.9	0.36	ug/kg	U	U	
BROMOFORM	75-25-2	0.9	1.8	0.9	0.36	ug/kg	U	U	
BROMOMETHANE	74-83-9	0.9	1.8	0.9	0.63	ug/kg	U	U	
CARBON DISULFIDE	75-15-0	1.8	3.6	1.8	0.81	ug/kg	U	U	
CARBON TETRACHLORIDE	56-23-5	0.9	1.8	0.9	0.27	ug/kg	U	U	
CHLOROBENZENE	108-90-7	0.9	1.8	0.9	0.36	ug/kg	U	U	
CHLOROETHANE	75-00-3	0.9	1.8	0.9	0.45	ug/kg	U	UJ	C
CHLOROFORM	67-66-3	0.9	1.8	0.9	0.36	ug/kg	U	U	

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CHLOROMETHANE	74-87-3	0.9	1.8	0.9	0.36	ug/kg	U	**U**	
CIS-1,2-DICHLOROETHYLENE	156-59-2	0.9	1.8	0.9	0.36	ug/kg	U	**U**	
CIS-1,3-DICHLOROPROPENE	10061-01-5	0.9	1.8	0.9	0.27	ug/kg	U	**U**	
DIBROMOCHLOROMETHANE	124-48-1	0.9	1.8	0.9	0.36	ug/kg	U	**U**	
ETHYLBENZENE	100-41-4	0.9	1.8	0.9	0.36	ug/kg	U	**U**	
M,P-XYLENE (SUM OF ISOMERS)		1.8	3.6	1.8	0.63	ug/kg	U	**R**	**D**
METHYL ETHYL KETONE (2-BUT	78-93-3	9	18	9	9	ug/kg	U	**U**	
METHYL ISOBUTYL KETONE (4-	108-10-1	9	18	9	9	ug/kg	U	**U**	
METHYLENE CHLORIDE	75-09-2	6.0	9	1.8	1.5	ug/kg	J	**U**	**B**
O-XYLENE (1,2-DIMETHYLBENZ	95-47-6	0.9	1.8	0.9	0.36	ug/kg	U	**R**	**D**
STYRENE	100-42-5	0.9	1.8	0.9	0.27	ug/kg	U	**U**	
TETRACHLOROETHYLENE(PCE)	127-18-4	0.9	1.8	0.9	0.36	ug/kg	U	**U**	
TOLUENE	108-88-3	0.9	1.8	0.9	0.36	ug/kg	U	**U**	
TOTAL 1,2-DICHLOROETHENE	540-59-0	0.9	1.8	0.9	0.36	ug/kg	U	**U**	
TRANS-1,2-DICHLOROETHENE	156-60-5	0.9	1.8	0.9	0.36	ug/kg	U	**U**	
TRANS-1,3-DICHLOROPROPENE	10061-02-6	0.9	1.8	0.9	0.36	ug/kg	U	**U**	
TRICHLOROETHYLENE (TCE)	79-01-6	0.9	1.8	0.9	0.27	ug/kg	U	**U**	
VINYL CHLORIDE	75-01-4	0.9	1.8	0.9	0.45	ug/kg	U	**U**	
XYLENES, TOTAL		1.8	3.6	1.8	0.63	ug/kg	U	**U**	

Sample Delivery Group: 99211_83_0813

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Sample Name 083SB-0005M-0001-SO **AnalysisType:** N

Lab Sample Name: 337818 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2,4-TRICHLOROBENZENE	120-82-1	64	130	64	22	ug/kg	U	U	
1,2-DICHLOROBENZENE	95-50-1	64	130	64	25	ug/kg	U	U	
1,3-DICHLOROBENZENE	541-73-1	64	130	64	21	ug/kg	U	U	
1,4-DICHLOROBENZENE	106-46-7	64	130	64	20	ug/kg	U	U	
2,2'-OXYBIS(1-CHLORO)PROPAN	108-60-1	64	130	64	32	ug/kg	U	U	
2,4,5-TRICHLOROPHENOL	95-95-4	320	640	320	140	ug/kg	U	U	
2,4,6-TRICHLOROPHENOL	88-06-2	320	640	320	140	ug/kg	U	U	
2,4-DICHLOROPHENOL	120-83-2	320	640	320	130	ug/kg	U	U	
2,4-DIMETHYLPHENOL	105-67-9	320	640	320	110	ug/kg	U	U	
2,4-DINITROPHENOL	51-28-5	320	1100	320	290	ug/kg	U	U	
2,4-DINITROTOLUENE	121-14-2	64	130	64	25	ug/kg	U	U	
2,6-DINITROTOLUENE	606-20-2	64	130	64	25	ug/kg	U	U	
2-CHLORONAPHTHALENE	91-58-7	64	130	64	24	ug/kg	U	U	
2-CHLOROPHENOL	95-57-8	640	2100	640	360	ug/kg	U	U	
2-METHYLPHENOL (O-CRESOL)	95-48-7	640	2100	640	450	ug/kg	U	U	
2-NITROANILINE	88-74-4	64	130	64	24	ug/kg	U	U	
2-NITROPHENOL	88-75-5	320	1100	320	300	ug/kg	U	U	
3,3'-DICHLOROBENZIDINE	91-94-1	160	530	160	160	ug/kg	U	U	
3-NITROANILINE	99-09-2	64	130	64	23	ug/kg	U	U	
4,6-DINITRO-2-METHYLPHENOL	534-52-1	320	1100	320	290	ug/kg	U	U	
4-BROMOPHENYL PHENYL ETHE	101-55-3	64	130	64	27	ug/kg	U	U	
4-CHLORO-3-METHYLPHENOL	59-50-7	640	2100	640	400	ug/kg	U	U	
4-CHLOROANILINE	106-47-8	64	210	64	41	ug/kg	U	U	
4-CHLOROPHENYL PHENYL ETH	7005-72-3	64	130	64	28	ug/kg	U	U	
4-NITROANILINE	100-01-6	64	130	64	32	ug/kg	U	U	
4-NITROPHENOL	100-02-7	640	2100	640	420	ug/kg	U	U	
BENZOIC ACID	65-85-0	1600	3200	1600	310	ug/kg	U	UJ	C
BENZYL ALCOHOL	100-51-6	130	420	130	88	ug/kg	U	R	C

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BENZYL BUTYL PHTHALATE	85-68-7	130	420	130	77	ug/kg	U	U	
BIS(2-CHLOROETHOXY) METHA	111-91-1	64	130	64	24	ug/kg	U	U	
BIS(2-CHLOROETHYL) ETHER (2	111-44-4	64	130	64	27	ug/kg	U	U	
CARBAZOLE	86-74-8	64	130	64	30	ug/kg	U	U	
CRESOLS, M & P		1100	3800	1100	690	ug/kg	U	U	
DIBENZOFURAN	132-64-9	64	130	64	25	ug/kg	U	U	
DIETHYL PHTHALATE	84-66-2	130	420	130	68	ug/kg	U	U	
DIMETHYL PHTHALATE	131-11-3	130	420	130	67	ug/kg	U	U	
DI-N-BUTYL PHTHALATE	84-74-2	130	420	130	84	ug/kg	U	U	
DI-N-OCTYLPHTHALATE	117-84-0	64	210	64	63	ug/kg	U	U	
HEXACHLOROBENZENE	118-74-1	64	130	64	30	ug/kg	U	U	
HEXACHLOROBUTADIENE	87-68-3	130	420	130	66	ug/kg	U	U	
HEXACHLOROCYCLOPENTADIE	77-47-4	64	210	64	55	ug/kg	U	UJ	C
HEXACHLOROETHANE	67-72-1	64	130	64	35	ug/kg	U	U	
ISOPHORONE	78-59-1	64	210	64	53	ug/kg	U	U	
NITROBENZENE	98-95-3	64	210	64	63	ug/kg	U	U	
N-NITROSODI-N-PROPYLAMINE	621-64-7	130	420	130	74	ug/kg	U	U	
N-NITROSODIPHENYLAMINE	86-30-6	130	250	130	53	ug/kg	U	U	
PENTACHLOROPHENOL	87-86-5	320	1100	320	250	ug/kg	U	U	
PHENOL	108-95-2	320	640	320	170	ug/kg	U	U	

Analysis Method SW8330

Sample Name 083SB-0005M-0001-SO **AnalysisType:** N

Lab Sample Name: 337818 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
NITROGUANIDINE	556-88-7	0.12	0.25	0.12	0.06	mg/kg	U	U	

Sample Delivery Group: 99211_83_0813

Analysis Method SW8330B

Sample Name 083SB-0005M-0001-SO **AnalysisType:** N

Lab Sample Name: 337818 **Validation Level:** IV

Analyte	CAS No	Result Value	LOQ	LOD	DL	Result	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,3,5-TRINITROBENZENE	99-35-4	0.3	0.5	0.3	0.13	mg/kg	U	U	
1,3-DINITROBENZENE	99-65-0	0.2	0.3	0.2	0.08	mg/kg	U	U	
2,4,6-TRINITROTOLUENE	118-96-7	0.2	0.5	0.2	0.09	mg/kg	U	U	
2,4-DINITROTOLUENE	121-14-2	0.2	0.3	0.2	0.08	mg/kg	U	R	D
2,6-DINITROTOLUENE	606-20-2	0.2	0.3	0.2	0.07	mg/kg	U	R	D
2-AMINO-4,6-DINITROTOLUENE	35572-78-2	0.2	0.3	0.2	0.09	mg/kg	U	U	
2-NITROTOLUENE	88-72-2	0.2	0.3	0.2	0.09	mg/kg	U	UJ	C
3,5-DINITROANILINE	618-87-1	0.2	0.3	0.2	0.09	mg/kg	U	R	C
3-NITROTOLUENE	99-08-1	0.3	0.5	0.3	0.11	mg/kg	U	U	
4-AMINO-2,6-DINITROTOLUENE	19406-51-0	0.2	0.3	0.2	0.08	mg/kg	U	UJ	C
4-NITROTOLUENE	99-99-0	0.2	0.5	0.2	0.1	mg/kg	U	U	
HEXAHYDRO-1,3,5-TRINITRO-1,3,	121-82-4	0.3	0.5	0.3	0.14	mg/kg	U	U	
NITROBENZENE	98-95-3	0.2	0.5	0.2	0.1	mg/kg	U	R	D
NITROGLYCERIN	55-63-0	1.2	2	1.2	0.5	mg/kg	U	U	
OCTAHYDRO-1,3,5,7-TETRANITR	2691-41-0	0.3	0.5	0.3	0.12	mg/kg	U	U	
PETN	78-11-5	1.2	2	1.2	0.6	mg/kg	U	U	
TETRYL	479-45-8	0.2	0.3	0.2	0.09	mg/kg	U	U	

APPENDIX B

Sample Qualification Summary

Sample	Analyte	Result	Units	LOQ	LOD	Qualifier	Code
070SB-044M-0001-SO	BARIUM	64.0	MG/KG	0.98	0.020	J	M
070SB-044M-0001-SO	SELENIUM	0.47	MG/KG	0.49	0.098	J+	I
070SB-044M-0001-SO	MCPA	3300	UG/KG	8000	3300	UJ	C
070SB-044M-0001-SO	MCPP	3300	UG/KG	8000	3300	UJ	C
070SB-044M-0001-SO	1,1,1-TRICHLOROETHANE	1.1	UG/KG	5.7	1.1	UJ	S
070SB-044M-0001-SO	1,1,2,2-TETRACHLOROETHANE	0.57	UG/KG	5.7	0.57	UJ	Q, S
070SB-044M-0001-SO	1,1,2-TRICHLOROETHANE	0.57	UG/KG	5.7	0.57	UJ	S
070SB-044M-0001-SO	1,1-DICHLOROETHANE	0.57	UG/KG	5.7	0.57	UJ	S
070SB-044M-0001-SO	1,1-DICHLOROETHENE	1.1	UG/KG	5.7	1.1	UJ	S
070SB-044M-0001-SO	1,2-DIBROMOETHANE	1.1	UG/KG	5.7	1.1	UJ	S
070SB-044M-0001-SO	1,2-DICHLOROETHANE	0.57	UG/KG	5.7	0.57	UJ	S
070SB-044M-0001-SO	1,2-DICHLOROPROPANE	1.1	UG/KG	5.7	1.1	UJ	S
070SB-044M-0001-SO	2-HEXANONE	1.8	UG/KG	23	1.1	UJ	B, C, S
070SB-044M-0001-SO	ACETONE	41.0	UG/KG	23	7.2	J	S
070SB-044M-0001-SO	BENZENE	1.3	UG/KG	5.7	0.57	J	S
070SB-044M-0001-SO	BROMOCHLOROMETHANE	1.1	UG/KG	5.7	1.1	UJ	S
070SB-044M-0001-SO	BROMODICHLOROMETHANE	0.57	UG/KG	5.7	0.57	UJ	S
070SB-044M-0001-SO	BROMOFORM	0.57	UG/KG	5.7	0.57	UJ	S
070SB-044M-0001-SO	BROMOMETHANE	1.1	UG/KG	5.7	1.1	UJ	S
070SB-044M-0001-SO	CARBON DISULFIDE	0.57	UG/KG	5.7	0.57	UJ	S
070SB-044M-0001-SO	CARBON TETRACHLORIDE	0.57	UG/KG	5.7	0.57	UJ	S
070SB-044M-0001-SO	CHLOROBENZENE	0.57	UG/KG	5.7	0.57	UJ	S
070SB-044M-0001-SO	CHLOROETHANE	1.1	UG/KG	5.7	1.1	UJ	S
070SB-044M-0001-SO	CHLOROFORM	0.57	UG/KG	5.7	0.57	UJ	S
070SB-044M-0001-SO	CHLOROMETHANE	0.57	UG/KG	5.7	0.57	UJ	S
070SB-044M-0001-SO	CIS-1,3-DICHLOROPROPENE	0.57	UG/KG	5.7	0.57	UJ	S
070SB-044M-0001-SO	DIBROMOCHLOROMETHANE	1.1	UG/KG	5.7	1.1	UJ	S
070SB-044M-0001-SO	ETHYLBENZENE	1.8	UG/KG	5.7	0.57	J	S
070SB-044M-0001-SO	METHYL ETHYL KETONE	12.0	UG/KG	23	2.3	J	S
070SB-044M-0001-SO	METHYL ISOBUTYL KETONE	1.3	UG/KG	23	1.1	UJ	B, S
070SB-044M-0001-SO	METHYLENE CHLORIDE	1.1	UG/KG	5.7	1.1	UJ	S
070SB-044M-0001-SO	STYRENE	0.57	UG/KG	5.7	0.57	UJ	S
070SB-044M-0001-SO	TERT-BUTYL METHYL ETHER	0.57	UG/KG	5.7	0.57	UJ	S
070SB-044M-0001-SO	TETRACHLOROETHYLENE	1.1	UG/KG	5.7	1.1	UJ	S
070SB-044M-0001-SO	TOLUENE	3.3	UG/KG	5.7	0.57	J	S
070SB-044M-0001-SO	TOTAL 1,2-DICHLOROETHENE	1.1	UG/KG	11	1.1	UJ	S
070SB-044M-0001-SO	TRANS-1,3-DICHLOROPROPENE	1.1	UG/KG	5.7	1.1	UJ	S
070SB-044M-0001-SO	TRICHLOROETHYLENE	0.57	UG/KG	5.7	0.57	UJ	S
070SB-044M-0001-SO	VINYL CHLORIDE	0.57	UG/KG	5.7	0.57	UJ	S
070SB-044M-0001-SO	XYLENES, TOTAL	1.7	UG/KG	11	1.7	UJ	S
070SB-044M-0001-SO	2,4-DINITROPHENOL	810	UG/KG	3300	810	UJ	C
070SB-044M-0001-SO	2,4-DINITROTOLUENE	270	UG/KG	2000	270	R	D
070SB-044M-0001-SO	2,6-DINITROTOLUENE	270	UG/KG	2000	270	R	D
070SB-044M-0001-SO	BENZO(G,H,I)PERYLENE	33	UG/KG	67	33	UJ	C
070SB-044M-0001-SO	N-NITROSODIPHENYLAMINE	270	UG/KG	510	270	R	C
070SB-044M-0001-SO	PENTACHLOROPHENOL	810	UG/KG	1500	810	R	D
070SB-044M-0001-SO	2-NITROTOLUENE	0.048	MG/KG	0.24	0.048	UJ	C
070SB-044M-0001-SO	NITROBENZENE	0.048	MG/KG	0.24	0.048	R	D

Sample	Analyte	Result	Units	LOQ	LOD	Qualifier	Code
070SB-044M-0001-SO	RDX	0.048	MG/KG	0.24	0.048	UJ	C
070SB-046M-0001-SO	2,4-DINITROPHENOL	800	UG/KG	3300	800	UJ	C
070SB-046M-0001-SO	BENZO(G,H,I)PERYLENE	33	UG/KG	67	33	UJ	C
070SB-046M-0001-SO	N-NITROSODIPHENYLAMINE	270	UG/KG	500	270	R	C
070SS-0003M-0001-SO	2,4-Dinitrophenol	810	ug/kg	3300	810	UJ	C
070SS-0003M-0001-SO	3,3'-Dichlorobenzidine	180	ug/kg	1000	810	UJ	C
070SS-0003M-0001-SO	4,6-Dinitro-2-methylphenol	810	ug/kg	1500	810	UJ	C
070SS-0006M-0001-SO	C6-C12	58.0	UG/KG	92	46	J	C, Q
070SS-0006M-0001-SO	Antimony	1.5	mg/kg	0.19	0.14	J-	Q
070SS-0006M-0001-SO	Cadmium	0.46	mg/kg	0.19	0.0093	J	E
070SS-0006M-0001-SO	Chromium	35	mg/kg	0.46	0.42	J-	E, Q
070SS-0006M-0001-SO	Copper	23	mg/kg	0.37	0.28	J-	A
070SS-0006M-0001-SO	Lead	62	mg/kg	0.28	0.19	J	A, E
070SS-0006M-0001-SO	Nickel	30	mg/kg	0.46	0.23	J	A
070SS-0006M-0001-SO	Potassium	940	mg/kg	93	9.3	J+	Q
070SS-0006M-0001-SO	Selenium	0.99	mg/kg	0.46	0.056	J-	Q, M
070SS-0006M-0001-SO	Sodium	55	mg/kg	93	37	U	F
070SS-0006M-0001-SO	Vanadium	16	mg/kg	0.46	0.093	J+	Q
070SS-0006M-0001-SO	Aroclor-1242	380	ug/kg	200	120	J	Q, *III
070SS-0006M-0001-SO	Dicamba	8.1	ug/kg	40	17	UJ	Q
070SS-0006M-0001-SO	Dichlorprop	37	ug/kg	80	67	UJ	Q
070SS-0006M-0001-SO	MCPA	1600	ug/kg	8000	3300	UJ	C
070SS-0006M-0001-SO	MCPP	1500	ug/kg	8000	3300	UJ	C
070SS-0006M-0001-SO	1,1,1-Trichloroethane	0.97	ug/kg	8.7	1.7	UJ	S
070SS-0006M-0001-SO	1,1,2,2-Tetrachloroethane	0.59	ug/kg	8.7	0.87	UJ	S
070SS-0006M-0001-SO	1,1,2-Trichloroethane	0.68	ug/kg	8.7	0.87	UJ	S
070SS-0006M-0001-SO	1,1-Dichloroethane	0.62	ug/kg	8.7	0.87	UJ	S
070SS-0006M-0001-SO	1,1-Dichloroethene	0.9	ug/kg	8.7	1.7	UJ	S
070SS-0006M-0001-SO	1,2-Dibromoethane	0.87	ug/kg	8.7	1.7	UJ	S
070SS-0006M-0001-SO	1,2-Dichloroethane	0.59	ug/kg	8.7	0.87	UJ	S
070SS-0006M-0001-SO	1,2-Dichloroethene, Total	1.3	ug/kg	17	1.7	UJ	S
070SS-0006M-0001-SO	1,2-Dichloropropane	1.2	ug/kg	8.7	1.7	UJ	S
070SS-0006M-0001-SO	2-Butanone (MEK)	2.4	ug/kg	35	3.5	UJ	S
070SS-0006M-0001-SO	2-Hexanone	1.1	ug/kg	35	1.7	UJ	S
070SS-0006M-0001-SO	4-Methyl-2-pentanone (MIBK)	0.94	ug/kg	35	1.7	UJ	S
070SS-0006M-0001-SO	Acetone	11	ug/kg	35	11	UJ	C, S
070SS-0006M-0001-SO	Benzene	0.4	ug/kg	8.7	0.87	UJ	S
070SS-0006M-0001-SO	Bromochloromethane	1.2	ug/kg	8.7	1.7	UJ	S
070SS-0006M-0001-SO	Bromodichloromethane	0.49	ug/kg	8.7	0.87	UJ	S
070SS-0006M-0001-SO	Bromoform	0.57	ug/kg	8.7	0.87	UJ	S
070SS-0006M-0001-SO	Bromomethane	0.94	ug/kg	8.7	1.7	UJ	S
070SS-0006M-0001-SO	Carbon disulfide	0.76	ug/kg	8.7	0.87	UJ	S
070SS-0006M-0001-SO	Carbon tetrachloride	0.64	ug/kg	8.7	0.87	UJ	S
070SS-0006M-0001-SO	Chlorobenzene	0.57	ug/kg	8.7	0.87	UJ	S
070SS-0006M-0001-SO	Chloroethane	1.5	ug/kg	8.7	1.7	UJ	S
070SS-0006M-0001-SO	Chloroform	0.5	ug/kg	8.7	0.87	UJ	S
070SS-0006M-0001-SO	Chloromethane	0.71	ug/kg	8.7	0.87	UJ	S
070SS-0006M-0001-SO	cis-1,3-Dichloropropene	0.59	ug/kg	8.7	0.87	UJ	S

Sample	Analyte	Result	Units	LOQ	LOD	Qualifier	Code
070SS-0006M-0001-SO	Dibromochloromethane	0.95	ug/kg	8.7	1.7	UJ	S
070SS-0006M-0001-SO	Ethylbenzene	0.45	ug/kg	8.7	0.87	UJ	S
070SS-0006M-0001-SO	Methyl tert-butyl ether	0.75	ug/kg	8.7	0.87	UJ	S
070SS-0006M-0001-SO	Methylene Chloride	1.2	ug/kg	8.7	1.7	UJ	S
070SS-0006M-0001-SO	Styrene	0.26	ug/kg	8.7	0.87	UJ	S
070SS-0006M-0001-SO	Tetrachloroethene	0.9	ug/kg	8.7	1.7	UJ	S
070SS-0006M-0001-SO	Toluene	0.47	ug/kg	8.7	0.87	UJ	S
070SS-0006M-0001-SO	trans-1,3-Dichloropropene	0.94	ug/kg	8.7	1.7	UJ	S
070SS-0006M-0001-SO	Trichloroethene	0.73	ug/kg	8.7	0.87	UJ	S
070SS-0006M-0001-SO	Vinyl chloride	0.68	ug/kg	8.7	0.87	UJ	S
070SS-0006M-0001-SO	Xylenes, Total	1.2	ug/kg	17	2.6	UJ	S
070SS-0006M-0001-SO	2,4-Dinitrophenol	390	ug/kg	1600	390	UJ	C
070SS-0006M-0001-SO	2,4-Dinitrotoluene	130	ug/kg	990	130	R	D
070SS-0006M-0001-SO	2,6-Dinitrotoluene	100	ug/kg	990	130	R	D
070SS-0006M-0001-SO	3,3'-Dichlorobenzidine	89	ug/kg	490	390	R	Q
070SS-0006M-0001-SO	3-Nitroaniline	79	ug/kg	990	390	UJ	Q
070SS-0006M-0001-SO	4,6-Dinitro-2-methylphenol	390	ug/kg	740	390	UJ	C, Q
070SS-0006M-0001-SO	4-Chloroaniline	84	ug/kg	740	130	R	Q
070SS-0006M-0001-SO	4-Nitroaniline	130	ug/kg	990	130	UJ	Q
070SS-0006M-0001-SO	Pentachlorophenol	390	ug/kg	740	390	R	D
070SS-0006M-0001-SO	2-Nitrotoluene	0.013	mg/kg	0.25	0.05	UJ	C
070SS-0006M-0001-SO	Nitrobenzene	0.018	mg/kg	0.25	0.05	R	D
070SS-0006M-0001-SO	Nitroglycerin	0.015	mg/kg	0.5	0.25	UJ	Q
070SS-0006M-0001-SO	RDX	0.012	mg/kg	0.25	0.05	UJ	C

Sample	Analyte	Result	Units	LOQ	LOD	Qualifier	Code
071SB-0013M-0001-SO	BENZO(A)ANTHRACENE	0.90	ug/kg	1.5	0.82	U	B
071SB-0013M-0001-SO	PHENANTHRENE	4.0	ug/kg	1.5	0.8	U	B
071SB-0013M-0001-SO	LEAD	9	mg/kg	1.3	0.64	J-	P, Q
071SB-0013M-0001-SO	BROMOMETHANE	0.93	ug/kg	1.9	0.93	UJ	C
071SB-0013M-0001-SO	M,P-XYLENE (SUM OF ISOMERS)	1.9	ug/kg	3.7	1.9	R	D
071SB-0013M-0001-SO	METHYLENE CHLORIDE	9.9	ug/kg	9.3	1.9	UJ	B, C
071SB-0013M-0001-SO	O-XYLENE (1,2-DIMETHYLBENZENE)	0.93	ug/kg	1.9	0.93	R	D
071SB-0013M-0001-SO	4,6-DINITRO-2-METHYLPHENOL	310	ug/kg	1000	310	UJ	C
071SB-0013M-0001-SO	BENZOIC ACID	1500	ug/kg	3100	1500	UJ	C
071SB-0013M-0001-SO	BENZYL ALCOHOL	120	ug/kg	410	120	R	C
071SB-0013M-0001-SO	HEXACHLOROCYCLOPENTADIENE	62	ug/kg	210	62	UJ	C
071SB-0017M-0001-SO	2-NITROTOLUENE	0.2	mg/kg	0.3	0.2	UJ	C
071SB-0017M-0001-SO	4-AMINO-2,6-DINITROTOLUENE	0.2	mg/kg	0.3	0.2	UJ	C
071SB-0018M-0001-SO	BENZO(A)ANTHRACENE	1.2	ug/kg	1.5	0.82	U	B
071SB-0018M-0001-SO	NAPHTHALENE	0.82	ug/kg	1.5	0.82	U	B
071SB-0018M-0001-SO	PHENANTHRENE	4.7	ug/kg	1.5	0.82	U	B
071SB-0018M-0001-SO	LEAD	8.8	mg/kg	1.2	0.62	J-	P, Q
071SB-0018M-0001-SO	BROMOMETHANE	0.86	ug/kg	1.7	0.86	UJ	C
071SB-0018M-0001-SO	M,P-XYLENE (SUM OF ISOMERS)	1.7	ug/kg	3.5	1.7	R	D
071SB-0018M-0001-SO	METHYLENE CHLORIDE	6.3	ug/kg	8.6	1.7	UJ	B, C
071SB-0018M-0001-SO	O-XYLENE (1,2-DIMETHYLBENZENE)	0.86	ug/kg	1.7	0.86	R	D
071SB-0018M-0001-SO	4,6-DINITRO-2-METHYLPHENOL	310	ug/kg	1000	310	UJ	C
071SB-0018M-0001-SO	BENZOIC ACID	1500	ug/kg	3100	1500	UJ	C
071SB-0018M-0001-SO	BENZYL ALCOHOL	120	ug/kg	410	120	R	C
071SB-0018M-0001-SO	HEXACHLOROCYCLOPENTADIENE	61	ug/kg	200	61	UJ	C

Sample	Analyte	Result	Units	LOQ	LOD	Qualifier	Code
072SB-0001-0001-SO	C6-C12	320.0	UG/KG	110	55	J	Q
072SB-0001-0001-SO	ANTIMONY	0.075	MG/KG	0.21	0.10	J-	Q
072SB-0001-0001-SO	ARSENIC	14.0	MG/KG	0.10	0.051	J-	Q
072SB-0001-0001-SO	BARIUM	36.0	MG/KG	1.0	0.021	J+	Q
072SB-0001-0001-SO	BERYLLIUM	0.65	MG/KG	0.10	0.010	J-	Q
072SB-0001-0001-SO	CADMIUM	0.15	MG/KG	0.10	0.031	J-	Q
072SB-0001-0001-SO	CALCIUM	2900.0	MG/KG	10	2.6	J+	E, Q
072SB-0001-0001-SO	NICKEL	29.0	MG/KG	0.10	0.031	J-	Q
072SB-0001-0001-SO	POTASSIUM	1900.0	MG/KG	10	6.2	J-	Q
072SB-0001-0001-SO	SELENIUM	0.9	MG/KG	0.51	0.10	J-	Q
072SB-0001-0001-SO	BENZENE	25	UG/KG	250	25	UJ	S
072SB-0001-0001-SO	ETHYLBENZENE	9.9	UG/KG	250	9.9	UJ	S
072SB-0001-0001-SO	TOLUENE	25	UG/KG	250	25	UJ	S
072SB-0001-0001-SO	XYLENES, TOTAL	30	UG/KG	500	30	UJ	S
072SB-0012-0001-SO	ANTIMONY	0.2	MG/KG	0.21	0.11	J-	Q
072SB-0012-0001-SO	ARSENIC	5.6	MG/KG	0.11	0.053	J	E
072SB-0012-0001-SO	BERYLLIUM	0.88	MG/KG	0.11	0.011	J-	Q
072SB-0012-0001-SO	COPPER	31.0	MG/KG	0.21	0.064	J+	Q
072SB-0012-0001-SO	LEAD	20.0	MG/KG	0.11	0.032	J+	Q
072SB-0012-0001-SO	POTASSIUM	1000.0	MG/KG	11	6.4	J-	Q
072SB-0012-0001-SO	SELENIUM	1.0	MG/KG	0.53	0.11	J-	Q
072SB-0012-0001-SO	BENZENE	0.47	UG/KG	4.7	0.47	UJ	S
072SB-0012-0001-SO	ETHYLBENZENE	0.47	UG/KG	4.7	0.47	UJ	S
072SB-0012-0001-SO	TOLUENE	0.47	UG/KG	4.7	0.47	UJ	S
072SB-0012-0001-SO	XYLENES, TOTAL	1.4	UG/KG	9.4	1.4	UJ	S
072SB-0014-0001-SO	ANTIMONY	0.13	MG/KG	0.20	0.10	J-	Q
072SB-0014-0001-SO	ARSENIC	5.6	MG/KG	0.10	0.050	J-	E, Q
072SB-0014-0001-SO	BARIUM	61.0	MG/KG	1.0	0.020	J+	Q
072SB-0014-0001-SO	BERYLLIUM	0.91	MG/KG	0.10	0.010	J-	Q
072SB-0014-0001-SO	CADMIUM	0.26	MG/KG	0.10	0.030	J-	Q
072SB-0014-0001-SO	CALCIUM	430.0	MG/KG	10	2.5	J+	E, Q
072SB-0014-0001-SO	COPPER	34.0	MG/KG	0.20	0.060	J+	Q
072SB-0014-0001-SO	LEAD	23.0	MG/KG	0.10	0.030	J+	Q
072SB-0014-0001-SO	NICKEL	34.0	MG/KG	0.10	0.030	J-	Q
072SB-0014-0001-SO	POTASSIUM	1200.0	MG/KG	10	6.0	J-	Q
072SB-0014-0001-SO	SELENIUM	1.1	MG/KG	0.50	0.10	J-	Q
072SB-0014-0001-SO	ALPHA BHC	1.5	UG/KG	2.9	1.5	UJ	Q
072SB-0014-0001-SO	ALPHA ENDOSULFAN	0.77	UG/KG	1.9	0.77	UJ	Q
072SB-0014-0001-SO	ALPHA-CHLORDANE	1.5	UG/KG	3.4	1.5	UJ	Q
072SB-0014-0001-SO	BETA BHC	1.5	UG/KG	4.0	1.5	UJ	Q
072SB-0014-0001-SO	BETA ENDOSULFAN	1.5	UG/KG	2.9	1.5	UJ	Q
072SB-0014-0001-SO	DELTA BHC	1.5	UG/KG	4.6	1.5	UJ	Q
072SB-0014-0001-SO	DIELDRIN	0.77	UG/KG	1.9	0.77	UJ	Q
072SB-0014-0001-SO	ENDOSULFAN SULFATE	1.5	UG/KG	3.4	1.5	UJ	Q
072SB-0014-0001-SO	ENDRIN	0.77	UG/KG	1.9	0.77	UJ	Q
072SB-0014-0001-SO	ENDRIN ALDEHYDE	1.5	UG/KG	3.4	1.5	UJ	Q
072SB-0014-0001-SO	ENDRIN KETONE	0.77	UG/KG	2.3	0.77	UJ	Q

Sample	Analyte	Result	Units	LOQ	LOD	Qualifier	Code
072SB-0014-0001-SO	GAMMA BHC (LINDANE)	1.5	UG/KG	2.9	1.5	UJ	Q
072SB-0014-0001-SO	GAMMA-CHLORDANE	0.77	UG/KG	1.9	0.77	UJ	Q
072SB-0014-0001-SO	HEPTACHLOR	1.5	UG/KG	4.0	1.5	UJ	Q
072SB-0014-0001-SO	HEPTACHLOR EPOXIDE	1.5	UG/KG	2.9	1.5	UJ	Q
072SB-0014-0001-SO	METHOXYCHLOR	3.8	UG/KG	5.7	3.8	UJ	Q
072SB-0014-0001-SO	P,P'-DDD	0.77	UG/KG	2.3	0.77	UJ	Q
072SB-0014-0001-SO	P,P'-DDE	0.77	UG/KG	1.9	0.77	UJ	Q
072SB-0014-0001-SO	TOXAPHENE	23	UG/KG	77	23	UJ	C
072SB-0014-0001-SO	2-HEXANONE	0.88	UG/KG	18	0.88	UJ	C
072SB-0014-0001-SO	ACETONE	5.5	UG/KG	18	5.5	UJ	C
072SB-0014-0001-SO	2,4-DINITROPHENOL	90	UG/KG	370	90	UJ	C
072SB-0014-0001-SO	2,4-DINITROTOLUENE	30	UG/KG	230	30	R	D
072SB-0014-0001-SO	2,6-DINITROTOLUENE	30	UG/KG	230	30	R	D
072SB-0014-0001-SO	3,3'-DICHLOROBENZIDINE	90	UG/KG	110	90	UJ	C
072SB-0014-0001-SO	4,6-DINITRO-2-METHYLPHENOL	90	UG/KG	170	90	UJ	C
072SB-0014-0001-SO	4-NITROANILINE	30	UG/KG	230	30	R	C
072SB-0014-0001-SO	BIS(2-ETHYLHEXYL) PHTHALATE	56	UG/KG	56	30	U	B
072SB-0014-0001-SO	2-NITROTOLUENE	0.049	MG/KG	0.25	0.049	UJ	C
072SB-0014-0001-SO	NITROBENZENE	0.049	MG/KG	0.25	0.049	R	D
072SB-0014-0001-SO	RDX	0.049	MG/KG	0.25	0.049	UJ	C
072SB-0026-0001-SO	ANTIMONY	0.10	MG/KG	0.20	0.10	R	Q
072SB-0026-0001-SO	ARSENIC	0.51	MG/KG	0.10	0.050	J-	Q
072SB-0026-0001-SO	BARIUM	31.0	MG/KG	1.0	0.020	J	M
072SB-0026-0001-SO	CADMIUM	0.19	MG/KG	0.10	0.030	J+	I
072SB-0026-0001-SO	CALCIUM	750.0	MG/KG	10	2.5	J-	Q
072SB-0026-0001-SO	COPPER	17.0	MG/KG	0.20	0.060	J-	Q
072SB-0026-0001-SO	SELENIUM	0.74	MG/KG	0.50	0.10	J-	Q
072SB-0026-0001-SO	SILVER	0.03	MG/KG	0.10	0.030	J+	I
072SB-0026-0001-SO	THALLIUM	0.12	MG/KG	0.10	0.020	J-	Q
072SB-0026-0001-SO	ZINC	45.0	MG/KG	0.50	0.20	J	A
072SB-0026-0001-SO	BENZENE	0.51	UG/KG	5.1	0.51	UJ	S
072SB-0026-0001-SO	ETHYLBENZENE	0.51	UG/KG	5.1	0.51	UJ	S
072SB-0026-0001-SO	TOLUENE	0.51	UG/KG	5.1	0.51	UJ	S
072SB-0026-0001-SO	XYLENES, TOTAL	1.5	UG/KG	10	1.5	UJ	S
072SB-0026-0001-SO	ACENAPHTHENE	3.4	UG/KG	6.9	3.4	UJ	S
072SB-0026-0001-SO	ACENAPHTHENE	3.5	UG/KG	7.0	3.5	R	D
072SB-0026-0001-SO	ACENAPHTHYLENE	3.4	UG/KG	6.9	3.4	UJ	S
072SB-0026-0001-SO	ACENAPHTHYLENE	3.5	UG/KG	7.0	3.5	R	D
072SB-0026-0001-SO	ANTHRACENE	3.4	UG/KG	6.9	3.4	UJ	S
072SB-0026-0001-SO	ANTHRACENE	3.5	UG/KG	7.0	3.5	R	D
072SB-0026-0001-SO	BENZO(A)ANTHRACENE	15.0	UG/KG	6.9	3.4	J	S
072SB-0026-0001-SO	BENZO(A)ANTHRACENE	3.5	UG/KG	7.0	3.5	R	D
072SB-0026-0001-SO	BENZO(A)PYRENE	18.0	UG/KG	6.9	3.4	J	S
072SB-0026-0001-SO	BENZO(A)PYRENE	18.0	UG/KG	7.0	3.5	R	D
072SB-0026-0001-SO	BENZO(B)FLUORANTHENE	16.0	UG/KG	6.9	3.4	J	S
072SB-0026-0001-SO	BENZO(B)FLUORANTHENE	12.0	UG/KG	7.0	3.5	R	D
072SB-0026-0001-SO	BENZO(G,H,I)PERYLENE	140.0	UG/KG	6.9	3.4	J	S
072SB-0026-0001-SO	BENZO(G,H,I)PERYLENE	130.0	UG/KG	7.0	3.5	R	D

Sample	Analyte	Result	Units	LOQ	LOD	Qualifier	Code
072SB-0026-0001-SO	BENZO(K)FLUORANTHENE	5.8	UG/KG	6.9	3.4	J	S
072SB-0026-0001-SO	BENZO(K)FLUORANTHENE	3.5	UG/KG	7.0	3.5	R	D
072SB-0026-0001-SO	CHRYSENE	9.1	UG/KG	6.9	3.4	J	S
072SB-0026-0001-SO	CHRYSENE	3.5	UG/KG	7.0	3.5	R	D
072SB-0026-0001-SO	DIBENZ(A,H)ANTHRACENE	3.4	UG/KG	6.9	3.4	UJ	S
072SB-0026-0001-SO	DIBENZ(A,H)ANTHRACENE	7.1	UG/KG	7.0	3.5	R	D
072SB-0026-0001-SO	FLUORANTHENE	12.0	UG/KG	6.9	3.4	J	S
072SB-0026-0001-SO	FLUORANTHENE	9.5	UG/KG	7.0	3.5	R	D
072SB-0026-0001-SO	FLUORENE	8.4	UG/KG	6.9	3.4	J	S
072SB-0026-0001-SO	FLUORENE	10.0	UG/KG	7.0	3.5	R	D
072SB-0026-0001-SO	INDENO(1,2,3-C,D)PYRENE	17.0	UG/KG	6.9	3.4	J	S
072SB-0026-0001-SO	INDENO(1,2,3-C,D)PYRENE	18.0	UG/KG	7.0	3.5	R	D
072SB-0026-0001-SO	NAPHTHALENE	29.0	UG/KG	6.9	3.4	J	S
072SB-0026-0001-SO	NAPHTHALENE	30.0	UG/KG	7.0	3.5	R	D
072SB-0026-0001-SO	PHENANTHRENE	50.0	UG/KG	6.9	3.4	J	S
072SB-0026-0001-SO	PHENANTHRENE	47.0	UG/KG	7.0	3.5	R	D
072SB-0026-0001-SO	PYRENE	16.0	UG/KG	6.9	3.4	J	S
072SB-0026-0001-SO	PYRENE	15.0	UG/KG	7.0	3.5	R	D
072SB-0030-0001-SO	1,1,1-TRICHLOROETHANE	0.88	UG/KG	4.4	0.88	UJ	S
072SB-0030-0001-SO	1,1,2,2-TETRACHLOROETHANE	0.44	UG/KG	4.4	0.44	UJ	S, I
072SB-0030-0001-SO	1,1,2-TRICHLOROETHANE	0.44	UG/KG	4.4	0.44	UJ	S
072SB-0030-0001-SO	1,1-DICHLOROETHANE	0.44	UG/KG	4.4	0.44	UJ	S
072SB-0030-0001-SO	1,1-DICHLOROETHENE	0.88	UG/KG	4.4	0.88	UJ	S
072SB-0030-0001-SO	1,2-DIBROMOETHANE	0.88	UG/KG	4.4	0.88	UJ	S
072SB-0030-0001-SO	1,2-DICHLOROETHANE	0.44	UG/KG	4.4	0.44	UJ	S
072SB-0030-0001-SO	1,2-DICHLOROPROPANE	0.88	UG/KG	4.4	0.88	UJ	S
072SB-0030-0001-SO	2-HEXANONE	0.88	UG/KG	18	0.88	UJ	C, S
072SB-0030-0001-SO	ACETONE	5.5	UG/KG	18	5.5	UJ	C, S
072SB-0030-0001-SO	BENZENE	0.44	UG/KG	4.4	0.44	UJ	S
072SB-0030-0001-SO	BROMOCHLOROMETHANE	0.88	UG/KG	4.4	0.88	UJ	S
072SB-0030-0001-SO	BROMODICHLOROMETHANE	0.44	UG/KG	4.4	0.44	UJ	S
072SB-0030-0001-SO	BROMOFORM	0.44	UG/KG	4.4	0.44	UJ	S
072SB-0030-0001-SO	BROMOMETHANE	0.88	UG/KG	4.4	0.88	UJ	S
072SB-0030-0001-SO	CARBON DISULFIDE	0.44	UG/KG	4.4	0.44	UJ	S
072SB-0030-0001-SO	CARBON TETRACHLORIDE	0.44	UG/KG	4.4	0.44	UJ	S
072SB-0030-0001-SO	CHLOROBENZENE	0.44	UG/KG	4.4	0.44	UJ	S
072SB-0030-0001-SO	CHLOROETHANE	0.88	UG/KG	4.4	0.88	UJ	S
072SB-0030-0001-SO	CHLOROFORM	0.44	UG/KG	4.4	0.44	UJ	S
072SB-0030-0001-SO	CHLOROMETHANE	0.44	UG/KG	4.4	0.44	UJ	S
072SB-0030-0001-SO	CIS-1,3-DICHLOROPROPENE	0.44	UG/KG	4.4	0.44	UJ	S
072SB-0030-0001-SO	DIBROMOCHLOROMETHANE	0.88	UG/KG	4.4	0.88	UJ	S
072SB-0030-0001-SO	ETHYLBENZENE	0.44	UG/KG	4.4	0.44	UJ	S
072SB-0030-0001-SO	METHYL ETHYL KETONE	1.8	UG/KG	18	1.8	UJ	S
072SB-0030-0001-SO	METHYL ISOBUTYL KETONE	0.88	UG/KG	18	0.88	UJ	S
072SB-0030-0001-SO	METHYLENE CHLORIDE	0.88	UG/KG	4.4	0.88	UJ	S
072SB-0030-0001-SO	STYRENE	0.44	UG/KG	4.4	0.44	UJ	S
072SB-0030-0001-SO	TERT-BUTYL METHYL ETHER	0.44	UG/KG	4.4	0.44	UJ	S
072SB-0030-0001-SO	TETRACHLOROETHYLENE	0.88	UG/KG	4.4	0.88	UJ	S

Sample	Analyte	Result	Units	LOQ	LOD	Qualifier	Code
072SB-0030-0001-SO	TOLUENE	0.44	UG/KG	4.4	0.44	UJ	S
072SB-0030-0001-SO	TOTAL 1,2-DICHLOROETHENE	0.88	UG/KG	8.8	0.88	UJ	S
072SB-0030-0001-SO	TRANS-1,3-DICHLOROPROPENE	0.88	UG/KG	4.4	0.88	UJ	S
072SB-0030-0001-SO	TRICHLOROETHYLENE	0.44	UG/KG	4.4	0.44	UJ	S
072SB-0030-0001-SO	VINYL CHLORIDE	0.44	UG/KG	4.4	0.44	UJ	S
072SB-0030-0001-SO	XYLENES, TOTAL	1.3	UG/KG	8.8	1.3	UJ	S
072SB-0039-0001-SO	ANTIMONY	0.11	MG/KG	0.22	0.11	R	Q
072SB-0039-0001-SO	ARSENIC	9.4	MG/KG	0.11	0.056	J-	Q
072SB-0039-0001-SO	BARIUM	50.0	MG/KG	1.1	0.022	J-	Q, M
072SB-0039-0001-SO	BERYLLIUM	0.64	MG/KG	0.11	0.011	J-	Q
072SB-0039-0001-SO	CADMIUM	0.19	MG/KG	0.11	0.033	J+	I
072SB-0039-0001-SO	CHROMIUM	18.0	MG/KG	0.22	0.045	J-	Q
072SB-0039-0001-SO	LEAD	9.7	MG/KG	0.11	0.033	J+	Q
072SB-0039-0001-SO	NICKEL	24.0	MG/KG	0.11	0.033	J-	Q
072SB-0039-0001-SO	POTASSIUM	2500.0	MG/KG	11	6.7	J-	E, Q
072SB-0039-0001-SO	SELENIUM	0.78	MG/KG	0.56	0.11	J-	Q
072SB-0039-0001-SO	SILVER	0.029	MG/KG	0.11	0.033	J+	I
072SB-0039-0001-SO	VANADIUM	20.0	MG/KG	0.11	0.067	J-	Q
072SB-0039-0001-SO	2-HEXANONE	0.98	UG/KG	20	0.98	UJ	C
072SB-0063-0001-SO	ANTIMONY	0.069	MG/KG	0.21	0.10	J	I, Q
072SB-0063-0001-SO	ARSENIC	11.0	MG/KG	0.10	0.052	J-	Q
072SB-0063-0001-SO	BARIUM	21.0	MG/KG	1.0	0.021	J	M
072SB-0063-0001-SO	CADMIUM	0.15	MG/KG	0.10	0.031	J	I, Q
072SB-0063-0001-SO	CALCIUM	1200.0	MG/KG	10	2.6	J+	Q
072SB-0063-0001-SO	CHROMIUM	9.2	MG/KG	0.21	0.041	J-	Q
072SB-0063-0001-SO	COBALT	7.7	MG/KG	0.052	0.010	J-	Q
072SB-0063-0001-SO	COPPER	15.0	MG/KG	0.21	0.062	J-	Q
072SB-0063-0001-SO	MANGANESE	270.0	MG/KG	0.52	0.031	J	E
072SB-0063-0001-SO	POTASSIUM	950.0	MG/KG	10	6.2	J-	Q
072SB-0063-0001-SO	SELENIUM	0.38	MG/KG	0.52	0.10	J	I, Q
072SB-0063-0001-SO	SILVER	0.024	MG/KG	0.10	0.031	J	I, Q
072SB-0063-0001-SO	SODIUM	32.0	MG/KG	10	5.2	J-	Q
076SB-0119-0001-SO	CHROMIUM, HEXAVALENT	0.91	MG/KG	0.91	0.91	UJ	H
076SB-0122-0001-SO	CHROMIUM, HEXAVALENT	0.94	MG/KG	0.94	0.94	UJ	H
076SB-0126-0001-SO	CHROMIUM, HEXAVALENT	0.31	MG/KG	0.89	0.89	J-	H
076SB-0130-0001-SO	CHROMIUM, HEXAVALENT	0.88	MG/KG	0.88	0.88	UJ	H

Sample	Analyte	Result	Units	LOQ	LOD	Qualifier	Code
075SD-0002-0001-SD	ALUMINUM	12000.0	MG/KG	4.4	0.88	J	E
075SD-0002-0001-SD	ANTIMONY	0.21	MG/KG	0.29	0.15	J-	Q
075SD-0002-0001-SD	ARSENIC	9.5	MG/KG	0.15	0.074	J-	Q
075SD-0002-0001-SD	BARIUM	110.0	MG/KG	1.5	0.029	J-	Q
075SD-0002-0001-SD	CHROMIUM	15.0	MG/KG	0.29	0.059	J-	E, Q
075SD-0002-0001-SD	MAGNESIUM	2800.0	MG/KG	15	2.9	J-	Q
075SD-0002-0001-SD	NICKEL	21.0	MG/KG	0.15	0.044	J-	Q
075SD-0002-0001-SD	POTASSIUM	1400.0	MG/KG	15	8.8	J-	E, Q
075SD-0002-0001-SD	SELENIUM	1.3	MG/KG	0.74	0.15	J-	Q
075SD-0002-0001-SD	SODIUM	75.0	MG/KG	15	7.4	J	E
075SD-0002-0001-SD	VANADIUM	20.0	MG/KG	0.15	0.088	J-	E, Q
075SD-0002-0001-SD	MERCURY	0.47	MG/KG	0.15	0.050	J-	Q
075SD-0002-0001-SD	STYRENE	7.6	UG/KG	7.6	0.76	U	B
075SD-0002-0001-SD	1,2,4-TRICHLOROBENZENE	43	UG/KG	80	43	R	D
075SD-0002-0001-SD	1,2-DICHLOROBENZENE	43	UG/KG	80	43	R	D
075SD-0002-0001-SD	1,3-DICHLOROBENZENE	43	UG/KG	80	43	R	D
075SD-0002-0001-SD	1,4-DICHLOROBENZENE	43	UG/KG	80	43	R	D
075SD-0002-0001-SD	2,2'-OXYBIS(1-CHLORO)PROPANE	43	UG/KG	160	43	R	D
075SD-0002-0001-SD	2,4,5-TRICHLOROPHENOL	43	UG/KG	240	43	R	D
075SD-0002-0001-SD	2,4,6-TRICHLOROPHENOL	130	UG/KG	240	130	R	D
075SD-0002-0001-SD	2,4-DICHLOROPHENOL	43	UG/KG	240	43	R	D
075SD-0002-0001-SD	2,4-DIMETHYLPHENOL	130	UG/KG	240	130	R	D
075SD-0002-0001-SD	2,4-DINITROPHENOL	130	UG/KG	530	130	UJ	C
075SD-0002-0001-SD	2,4-DINITROPHENOL	130	UG/KG	530	130	R	D
075SD-0002-0001-SD	2,4-DINITROTOLUENE	43	UG/KG	320	43	R	D
075SD-0002-0001-SD	2,4-DINITROTOLUENE	43	UG/KG	320	43	R	D
075SD-0002-0001-SD	2,6-DINITROTOLUENE	43	UG/KG	320	43	R	D
075SD-0002-0001-SD	2,6-DINITROTOLUENE	43	UG/KG	320	43	R	D
075SD-0002-0001-SD	2-CHLORONAPHTHALENE	5.3	UG/KG	80	5.3	R	D
075SD-0002-0001-SD	2-CHLOROPHENOL	43	UG/KG	80	43	R	D
075SD-0002-0001-SD	2-METHYLNAPHTHALENE	24.0	UG/KG	11	5.3	R	D
075SD-0002-0001-SD	2-METHYLPHENOL	130	UG/KG	320	130	R	D
075SD-0002-0001-SD	2-NITROANILINE	43	UG/KG	320	43	R	D
075SD-0002-0001-SD	2-NITROPHENOL	43	UG/KG	80	43	R	D
075SD-0002-0001-SD	3,3'-DICHLOROBENZIDINE	130	UG/KG	160	130	R	Q
075SD-0002-0001-SD	3,3'-DICHLOROBENZIDINE	130	UG/KG	160	130	R	D
075SD-0002-0001-SD	3-NITROANILINE	130	UG/KG	320	130	R	D
075SD-0002-0001-SD	4,6-DINITRO-2-METHYLPHENOL	130	UG/KG	240	130	UJ	C
075SD-0002-0001-SD	4,6-DINITRO-2-METHYLPHENOL	130	UG/KG	240	130	R	D
075SD-0002-0001-SD	4-BROMOPHENYL PHENYL ETHER	43	UG/KG	80	43	R	D
075SD-0002-0001-SD	4-CHLORO-3-METHYLPHENOL	43	UG/KG	240	43	R	D
075SD-0002-0001-SD	4-CHLOROANILINE	43	UG/KG	240	43	R	D
075SD-0002-0001-SD	4-CHLOROPHENYL PHENYL ETHER	43	UG/KG	80	43	R	D
075SD-0002-0001-SD	4-NITROANILINE	43	UG/KG	320	43	UJ	Q
075SD-0002-0001-SD	4-NITROANILINE	43	UG/KG	320	43	R	D
075SD-0002-0001-SD	4-NITROPHENOL	130	UG/KG	530	130	R	D
075SD-0002-0001-SD	ACENAPHTHENE	27.0	UG/KG	11	5.3	R	D

Sample	Analyte	Result	Units	LOQ	LOD	Qualifier	Code
075SD-0002-0001-SD	ACENAPHTHYLENE	20.0	UG/KG	11	5.3	R	D
075SD-0002-0001-SD	ANTHRACENE	77.0	UG/KG	11	5.3	R	D
075SD-0002-0001-SD	BENZO(A)ANTHRACENE	140.0	UG/KG	11	5.3	R	D
075SD-0002-0001-SD	BENZO(A)PYRENE	160.0	UG/KG	11	5.3	R	D
075SD-0002-0001-SD	BENZO(B)FLUORANTHENE	200.0	UG/KG	11	5.3	R	D
075SD-0002-0001-SD	BENZO(G,H,I)PERYLENE	120.0	UG/KG	11	5.3	J	C
075SD-0002-0001-SD	BENZO(G,H,I)PERYLENE	85.0	UG/KG	11	5.3	R	D
075SD-0002-0001-SD	BENZO(K)FLUORANTHENE	83.0	UG/KG	11	5.3	R	D
075SD-0002-0001-SD	BENZOIC ACID	530	UG/KG	1100	530	R	D
075SD-0002-0001-SD	BENZYL ALCOHOL	43	UG/KG	530	43	R	D
075SD-0002-0001-SD	BENZYL BUTYL PHTHALATE	43	UG/KG	80	43	R	D
075SD-0002-0001-SD	BIS(2-CHLOROETHOXY) METHANE	43	UG/KG	160	43	R	D
075SD-0002-0001-SD	BIS(2-CHLOROETHYL) ETHER	5.3	UG/KG	160	5.3	R	D
075SD-0002-0001-SD	BIS(2-ETHYLHEXYL) PHTHALATE	43	UG/KG	80	43	UJ	H
075SD-0002-0001-SD	CARBAZOLE	50.0	UG/KG	80	43	R	D
075SD-0002-0001-SD	CHRYSENE	160.0	UG/KG	11	5.3	R	D
075SD-0002-0001-SD	CRESOLS, M & P	130	UG/KG	640	130	R	D
075SD-0002-0001-SD	DIBENZ(A,H)ANTHRACENE	5.3	UG/KG	11	5.3	UJ	C
075SD-0002-0001-SD	DIBENZ(A,H)ANTHRACENE	22.0	UG/KG	11	5.3	R	D
075SD-0002-0001-SD	DIBENZOFURAN	39.0	UG/KG	80	5.3	R	D
075SD-0002-0001-SD	DIETHYL PHTHALATE	43	UG/KG	80	43	R	D
075SD-0002-0001-SD	DIMETHYL PHTHALATE	43	UG/KG	80	43	R	D
075SD-0002-0001-SD	DI-N-BUTYL PHTHALATE	43	UG/KG	80	43	R	D
075SD-0002-0001-SD	DI-N-OCTYLPHTHALATE	43	UG/KG	80	43	R	D
075SD-0002-0001-SD	FLUORANTHENE	390.0	UG/KG	11	5.3	R	D
075SD-0002-0001-SD	FLUORENE	54.0	UG/KG	11	5.3	R	D
075SD-0002-0001-SD	HEXACHLOROBENZENE	5.3	UG/KG	11	5.3	R	D
075SD-0002-0001-SD	HEXACHLOROBUTADIENE	43	UG/KG	80	43	R	D
075SD-0002-0001-SD	HEXACHLOROCYCLOPENTADIENE	43	UG/KG	530	43	R	D
075SD-0002-0001-SD	HEXACHLOROETHANE	43	UG/KG	80	43	UJ	C
075SD-0002-0001-SD	HEXACHLOROETHANE	43	UG/KG	80	43	R	D
075SD-0002-0001-SD	INDENO(1,2,3-C,D)PYRENE	120.0	UG/KG	11	5.3	J	C
075SD-0002-0001-SD	INDENO(1,2,3-C,D)PYRENE	74.0	UG/KG	11	5.3	R	D
075SD-0002-0001-SD	ISOPHORONE	43	UG/KG	80	43	R	D
075SD-0002-0001-SD	NAPHTHALENE	41.0	UG/KG	11	5.3	R	D
075SD-0002-0001-SD	NITROBENZENE	5.3	UG/KG	160	5.3	R	D
075SD-0002-0001-SD	N-NITROSODI-N-PROPYLAMINE	43	UG/KG	80	43	R	D
075SD-0002-0001-SD	N-NITROSODIPHENYLAMINE	43	UG/KG	80	43	R	D
075SD-0002-0001-SD	PENTACHLOROPHENOL	130	UG/KG	240	130	R	D
075SD-0002-0001-SD	PHENANTHRENE	330.0	UG/KG	11	5.3	R	D
075SD-0002-0001-SD	PHENOL	43	UG/KG	80	43	R	D
075SD-0002-0001-SD	PYRENE	280.0	UG/KG	11	5.3	R	D
075SD-0002-0001-SD	2-NITROTOLUENE	0.049	MG/KG	0.25	0.049	UJ	C
075SD-0002-0001-SD	NITROBENZENE	0.049	MG/KG	0.25	0.049	R	D
075SD-0002-0001-SD	NITROGUANIDINE	0.039	MG/KG	0.24	0.039	UJ	Q
075SD-0002-0001-SD	RDX	0.049	MG/KG	0.25	0.049	UJ	C
075SD-0002-0001-SD	TETRYL	0.029	MG/KG	0.25	0.049	NJ	*III

Sample	Analyte	Result	Units	LOQ	LOD	Qualifier	Code
077SS-0001M-0001-SO	ANTIMONY	0.2	MG/KG	0.17	0.083	J	I, Q
077SS-0001M-0001-SO	ARSENIC	12	MG/KG	0.083	0.041	J-	Q
077SS-0001M-0001-SO	BARIUM	49	MG/KG	0.83	0.017	J	M
077SS-0001M-0001-SO	CADMIUM	0.19	MG/KG	0.083	0.025	J	I, Q
077SS-0001M-0001-SO	CALCIUM	4500	MG/KG	8.3	2.1	J	A, E
077SS-0001M-0001-SO	COPPER	16	MG/KG	0.17	0.05	J	Q
077SS-0001M-0001-SO	MAGNESIUM	2800	MG/KG	8.3	1.7	J+	Q
077SS-0001M-0001-SO	POTASSIUM	830	MG/KG	8.3	5	J+	Q
077SS-0001M-0001-SO	SELENIUM	0.56	MG/KG	0.41	0.083	J-	Q
077SS-0001M-0001-SO	SILVER	0.027	MG/KG	0.083	0.025	J+	I
077SS-0001M-0001-SO	SODIUM	29	MG/KG	8.3	4.1	UJ	E, F
077SS-0001M-0001-SO	TOXAPHENE	200	UG/KG	670	200	UJ	C
077SS-0001M-0001-SO	2,4-DINITROTOLUENE	110	UG/KG	810	110	R	D
077SS-0001M-0001-SO	2,6-DINITROTOLUENE	110	UG/KG	810	110	R	D
077SS-0001M-0001-SO	3,3'-DICHLOROBENZIDINE	320	UG/KG	410	320	UJ	C
077SS-0001M-0001-SO	BENZOIC ACID	0	UG/KG	2700	1400	R	Q
077SS-0001M-0001-SO	N-NITROSODIPHENYLAMINE	110	UG/KG	200	110	R	C
077SS-0001M-0001-SO	2-NITROTOLUENE	0.05	MG/KG	0.25	0.05	UJ	C
077SS-0001M-0001-SO	NITROBENZENE	0.05	MG/KG	0.25	0.05	R	D
077SS-0001M-0001-SO	RDX	0.05	MG/KG	0.25	0.05	UJ	C

Sample	Analyte	Result	Units	LOQ	LOD	Qualifier	Code
083SB-0005M-0001-SO	ANTIMONY	1.2	mg/kg	4.1	2.1	J-	Q
083SB-0005M-0001-SO	ARSENIC	13.9	mg/kg	4.1	2.1	J-	Q
083SB-0005M-0001-SO	BARIUM	78.1	mg/kg	0.26	0.13	J-	A, P, Q, *III
083SB-0005M-0001-SO	BERYLLIUM	0.68	mg/kg	0.21	0.062	J-	P, Q
083SB-0005M-0001-SO	CADMIUM	0.1	mg/kg	0.21	0.1	UJ	P, Q
083SB-0005M-0001-SO	CALCIUM	28900	mg/kg	7.3	3.6	J-	P
083SB-0005M-0001-SO	CHROMIUM	18.3	mg/kg	0.73	0.36	J-	P, Q, *III
083SB-0005M-0001-SO	COBALT	11.8	mg/kg	1.2	0.62	J-	P, Q
083SB-0005M-0001-SO	COPPER	21.3	mg/kg	2.1	1	J-	Q
083SB-0005M-0001-SO	LEAD	11.8	mg/kg	1.3	0.65	J-	P, Q
083SB-0005M-0001-SO	MAGNESIUM	7530	mg/kg	4.1	2.1	J-	A, P, Q, *III
083SB-0005M-0001-SO	NICKEL	29.2	mg/kg	0.62	0.31	J-	P, Q, *III
083SB-0005M-0001-SO	SELENIUM	0.24	mg/kg	0.41	0.24	UJ	Q, $, *III
083SB-0005M-0001-SO	SILVER	0.12	mg/kg	0.1	0.12	UJ	Q, $, *III
083SB-0005M-0001-SO	THALLIUM	0.79	mg/kg	2.5	1.2	J-	P, Q, *III
083SB-0005M-0001-SO	VANADIUM	18.8	mg/kg	0.41	0.21	J-	P, Q
083SB-0005M-0001-SO	ZINC	70.2	mg/kg	1.6	0.78	J-	P, Q, *III
083SB-0005M-0001-SO	MERCURY	0.013	mg/kg	0.0091	0.0046	J+	Q
083SB-0005M-0001-SO	CHLOROETHANE	0.9	ug/kg	1.8	0.9	UJ	C
083SB-0005M-0001-SO	M,P-XYLENE	1.8	ug/kg	3.6	1.8	R	D
083SB-0005M-0001-SO	METHYLENE CHLORIDE	6.0	ug/kg	9	1.8	U	B
083SB-0005M-0001-SO	O-XYLENE	0.9	ug/kg	1.8	0.9	R	D
083SB-0005M-0001-SO	BENZOIC ACID	1600	ug/kg	3200	1600	UJ	C
083SB-0005M-0001-SO	BENZYL ALCOHOL	130	ug/kg	420	130	R	C
083SB-0005M-0001-SO	HEXACHLOROCYCLOPENTADIENE	64	ug/kg	210	64	UJ	C
083SB-0005M-0001-SO	2,4-DINITROTOLUENE	0.2	mg/kg	0.3	0.2	R	D
083SB-0005M-0001-SO	2,6-DINITROTOLUENE	0.2	mg/kg	0.3	0.2	R	D
083SB-0005M-0001-SO	2-NITROTOLUENE	0.2	mg/kg	0.3	0.2	UJ	C
083SB-0005M-0001-SO	3,5-DINITROANILINE	0.2	mg/kg	0.3	0.2	R	C
083SB-0005M-0001-SO	4-AMINO-2,6-DINITROTOLUENE	0.2	mg/kg	0.3	0.2	UJ	C
083SB-0005M-0001-SO	NITROBENZENE	0.2	mg/kg	0.5	0.2	R	D

APPENDIX C

Primary/Field Duplicate Sample Comparisons

Sample	Analyte	Result	Units	LOQ	Qual	Sample	Result	Units	LOQ	Qual	RPD	W/In LOQ
070SB-0042M-0001-SO	C10-C20	370	MG/KG	210		070SB-043M-0001-SO	350	MG/KG	100		N/A	Yes
070SB-0042M-0001-SO	C20-C34	430	MG/KG	210		070SB-043M-0001-SO	400	MG/KG	100		N/A	Yes
070SB-0042M-0001-SO	C6-C12	49	UG/KG	98	U	070SB-043M-0001-SO	980	UG/KG	110		N/A	No
070SB-0042M-0001-SO	1,1,1-TRICHLOROETHANE	0.89	UG/KG	4.5	U	070SB-043M-0001-SO	1.1	UG/KG	5.4	U	N/A	Yes
070SB-0042M-0001-SO	1,1,2,2-TETRACHLOROETHANE	0.45	UG/KG	4.5	U	070SB-043M-0001-SO	0.54	UG/KG	5.4	U	N/A	Yes
070SB-0042M-0001-SO	1,1,2-TRICHLOROETHANE	0.45	UG/KG	4.5	U	070SB-043M-0001-SO	0.54	UG/KG	5.4	U	N/A	Yes
070SB-0042M-0001-SO	1,1-DICHLOROETHANE	0.45	UG/KG	4.5	U	070SB-043M-0001-SO	0.54	UG/KG	5.4	U	N/A	Yes
070SB-0042M-0001-SO	1,1-DICHLOROETHENE	0.89	UG/KG	4.5	U	070SB-043M-0001-SO	1.1	UG/KG	5.4	U	N/A	Yes
070SB-0042M-0001-SO	1,2-DIBROMOETHANE	0.89	UG/KG	4.5	U	070SB-043M-0001-SO	1.1	UG/KG	5.4	U	N/A	Yes
070SB-0042M-0001-SO	1,2-DICHLOROETHANE	0.45	UG/KG	4.5	U	070SB-043M-0001-SO	0.54	UG/KG	5.4	U	N/A	Yes
070SB-0042M-0001-SO	1,2-Dichloroethene, Total	0.89	UG/KG	8.9	U	070SB-043M-0001-SO	1.1	UG/KG	11	U	N/A	Yes
070SB-0042M-0001-SO	1,2-DICHLOROPROPANE	0.89	UG/KG	4.5	U	070SB-043M-0001-SO	1.1	UG/KG	5.4	U	N/A	Yes
070SB-0042M-0001-SO	2-Butanone (MEK)	6.2	UG/KG	18	J	070SB-043M-0001-SO	5.5	UG/KG	21	J	N/A	Yes
070SB-0042M-0001-SO	2-HEXANONE	0.89	UG/KG	18	U	070SB-043M-0001-SO	1.1	UG/KG	21	U	N/A	Yes
070SB-0042M-0001-SO	4-Methyl-2-pentanone (MIBK)	0.89	UG/KG	18	U	070SB-043M-0001-SO	1.1	UG/KG	21	U	N/A	Yes
070SB-0042M-0001-SO	ACETONE	24	UG/KG	18		070SB-043M-0001-SO	27	UG/KG	21		N/A	Yes
070SB-0042M-0001-SO	BENZENE	0.73	UG/KG	4.5	J	070SB-043M-0001-SO	0.84	UG/KG	5.4	J	N/A	Yes
070SB-0042M-0001-SO	BROMOCHLOROMETHANE	0.89	UG/KG	4.5	U	070SB-043M-0001-SO	1.1	UG/KG	5.4	U	N/A	Yes
070SB-0042M-0001-SO	BROMODICHLOROMETHANE	0.45	UG/KG	4.5	U	070SB-043M-0001-SO	0.54	UG/KG	5.4	U	N/A	Yes
070SB-0042M-0001-SO	BROMOFORM	0.45	UG/KG	4.5	U	070SB-043M-0001-SO	0.54	UG/KG	5.4	U	N/A	Yes
070SB-0042M-0001-SO	BROMOMETHANE	0.89	UG/KG	4.5	U	070SB-043M-0001-SO	1.1	UG/KG	5.4	U	N/A	Yes
070SB-0042M-0001-SO	CARBON DISULFIDE	0.45	UG/KG	4.5	U	070SB-043M-0001-SO	0.54	UG/KG	5.4	U	N/A	Yes
070SB-0042M-0001-SO	CARBON TETRACHLORIDE	0.45	UG/KG	4.5	U	070SB-043M-0001-SO	0.54	UG/KG	5.4	U	N/A	Yes
070SB-0042M-0001-SO	CHLOROBENZENE	0.45	UG/KG	4.5	U	070SB-043M-0001-SO	0.54	UG/KG	5.4	U	N/A	Yes
070SB-0042M-0001-SO	CHLOROETHANE	0.89	UG/KG	4.5	U	070SB-043M-0001-SO	1.1	UG/KG	5.4	U	N/A	Yes
070SB-0042M-0001-SO	CHLOROFORM	0.45	UG/KG	4.5	U	070SB-043M-0001-SO	0.54	UG/KG	5.4	U	N/A	Yes
070SB-0042M-0001-SO	CHLOROMETHANE	0.45	UG/KG	4.5	U	070SB-043M-0001-SO	0.54	UG/KG	5.4	U	N/A	Yes
070SB-0042M-0001-SO	CIS-1,3-DICHLOROPROPENE	0.45	UG/KG	4.5	U	070SB-043M-0001-SO	0.54	UG/KG	5.4	U	N/A	Yes
070SB-0042M-0001-SO	DIBROMOCHLOROMETHANE	0.89	UG/KG	4.5	U	070SB-043M-0001-SO	1.1	UG/KG	5.4	U	N/A	Yes
070SB-0042M-0001-SO	ETHYLBENZENE	4.7	UG/KG	4.5		070SB-043M-0001-SO	4.7	UG/KG	5.4	J	N/A	Yes
070SB-0042M-0001-SO	Methyl tert-butyl ether	0.45	UG/KG	4.5	U	070SB-043M-0001-SO	0.54	UG/KG	5.4	U	N/A	Yes
070SB-0042M-0001-SO	METHYLENE CHLORIDE	0.89	UG/KG	4.5	U	070SB-043M-0001-SO	1.8	UG/KG	5.4	J	N/A	Yes
070SB-0042M-0001-SO	STYRENE	0.45	UG/KG	4.5	U	070SB-043M-0001-SO	0.54	UG/KG	5.4	U	N/A	Yes
070SB-0042M-0001-SO	TETRACHLOROETHYLENE	0.89	UG/KG	4.5	U	070SB-043M-0001-SO	1.1	UG/KG	5.4	U	N/A	Yes
070SB-0042M-0001-SO	TOLUENE	2.7	UG/KG	4.5	J	070SB-043M-0001-SO	1.9	UG/KG	5.4	J	N/A	Yes
070SB-0042M-0001-SO	TRANS-1,3-DICHLOROPROPENE	0.89	UG/KG	4.5	U	070SB-043M-0001-SO	1.1	UG/KG	5.4	U	N/A	Yes

Sample	Analyte	Result	Units	LOQ	Qual	Sample	Result	Units	LOQ	Qual	RPD	W/In LOQ
070SB-0042M-0001-SO	Trichloroethene	0.45	UG/KG	4.5	U	070SB-043M-0001-SO	0.54	UG/KG	5.4	U	N/A	Yes
070SB-0042M-0001-SO	VINYL CHLORIDE	0.45	UG/KG	4.5	U	070SB-043M-0001-SO	0.54	UG/KG	5.4	U	N/A	Yes
070SB-0042M-0001-SO	XYLENES, TOTAL	20	UG/KG	8.9		070SB-043M-0001-SO	20	UG/KG	11		N/A	Yes
070SB-0042M-0001-SO	1,2,4-TRICHLOROBENZENE	270	UG/KG	500	U	070SB-043M-0001-SO	270	UG/KG	490	U	N/A	Yes
070SB-0042M-0001-SO	1,2-DICHLOROBENZENE	270	UG/KG	500	U	070SB-043M-0001-SO	270	UG/KG	490	U	N/A	Yes
070SB-0042M-0001-SO	1,3-DICHLOROBENZENE	270	UG/KG	500	U	070SB-043M-0001-SO	270	UG/KG	490	U	N/A	Yes
070SB-0042M-0001-SO	1,4-DICHLOROBENZENE	270	UG/KG	500	U	070SB-043M-0001-SO	270	UG/KG	490	U	N/A	Yes
070SB-0042M-0001-SO	2,4,5-TRICHLOROPHENOL	270	UG/KG	1500	U	070SB-043M-0001-SO	270	UG/KG	1500	U	N/A	Yes
070SB-0042M-0001-SO	2,4,6-TRICHLOROPHENOL	790	UG/KG	1500	U	070SB-043M-0001-SO	790	UG/KG	1500	U	N/A	Yes
070SB-0042M-0001-SO	2,4-DICHLOROPHENOL	270	UG/KG	1500	U	070SB-043M-0001-SO	270	UG/KG	1500	U	N/A	Yes
070SB-0042M-0001-SO	2,4-DIMETHYLPHENOL	790	UG/KG	1500	U	070SB-043M-0001-SO	790	UG/KG	1500	U	N/A	Yes
070SB-0042M-0001-SO	2,4-DINITROPHENOL	790	UG/KG	3300	U	070SB-043M-0001-SO	790	UG/KG	3300	U	N/A	Yes
070SB-0042M-0001-SO	2,4-DINITROTOLUENE	270	UG/KG	2000	U	070SB-043M-0001-SO	270	UG/KG	2000	U	N/A	Yes
070SB-0042M-0001-SO	2,6-DINITROTOLUENE	270	UG/KG	2000	U	070SB-043M-0001-SO	270	UG/KG	2000	U	N/A	Yes
070SB-0042M-0001-SO	2-CHLORONAPHTHALENE	33	UG/KG	500	U	070SB-043M-0001-SO	33	UG/KG	490	U	N/A	Yes
070SB-0042M-0001-SO	2-CHLOROPHENOL	270	UG/KG	500	U	070SB-043M-0001-SO	270	UG/KG	490	U	N/A	Yes
070SB-0042M-0001-SO	2-METHYLNAPHTHALENE	680	UG/KG	66		070SB-043M-0001-SO	660	UG/KG	66		3	N/A
070SB-0042M-0001-SO	2-METHYLPHENOL	790	UG/KG	2000	U	070SB-043M-0001-SO	790	UG/KG	2000	U	N/A	Yes
070SB-0042M-0001-SO	2-NITROANILINE	270	UG/KG	2000	U	070SB-043M-0001-SO	270	UG/KG	2000	U	N/A	Yes
070SB-0042M-0001-SO	2-NITROPHENOL	270	UG/KG	500	U	070SB-043M-0001-SO	270	UG/KG	490	U	N/A	Yes
070SB-0042M-0001-SO	3,3'-DICHLOROBENZIDINE	790	UG/KG	990	U	070SB-043M-0001-SO	790	UG/KG	990	U	N/A	Yes
070SB-0042M-0001-SO	3-NITROANILINE	790	UG/KG	2000	U	070SB-043M-0001-SO	790	UG/KG	2000	U	N/A	Yes
070SB-0042M-0001-SO	4,6-DINITRO-2-METHYLPHENOL	790	UG/KG	1500	U	070SB-043M-0001-SO	790	UG/KG	1500	U	N/A	Yes
070SB-0042M-0001-SO	4-BROMOPHENYL PHENYL ETHER	270	UG/KG	500	U	070SB-043M-0001-SO	270	UG/KG	490	U	N/A	Yes
070SB-0042M-0001-SO	4-CHLORO-3-METHYLPHENOL	270	UG/KG	1500	U	070SB-043M-0001-SO	270	UG/KG	1500	U	N/A	Yes
070SB-0042M-0001-SO	4-CHLOROANILINE	270	UG/KG	1500	U	070SB-043M-0001-SO	270	UG/KG	1500	U	N/A	Yes
070SB-0042M-0001-SO	4-CHLOROPHENYL PHENYL ETHER	270	UG/KG	500	U	070SB-043M-0001-SO	270	UG/KG	490	U	N/A	Yes
070SB-0042M-0001-SO	4-NITROANILINE	270	UG/KG	2000	U	070SB-043M-0001-SO	270	UG/KG	2000	U	N/A	Yes
070SB-0042M-0001-SO	4-NITROPHENOL	790	UG/KG	3300	U	070SB-043M-0001-SO	790	UG/KG	3300	U	N/A	Yes
070SB-0042M-0001-SO	ACENAPHTHENE	380	UG/KG	66		070SB-043M-0001-SO	260	UG/KG	66		N/A	No
070SB-0042M-0001-SO	ACENAPHTHYLENE	79	UG/KG	66		070SB-043M-0001-SO	61	UG/KG	66	J	N/A	Yes
070SB-0042M-0001-SO	ANTHRACENE	33	UG/KG	66	U	070SB-043M-0001-SO	33	UG/KG	66	U	N/A	Yes
070SB-0042M-0001-SO	Benzo[a]anthracene	140	UG/KG	66		070SB-043M-0001-SO	150	UG/KG	66		N/A	Yes
070SB-0042M-0001-SO	Benzo[a]pyrene	41	UG/KG	66	J	070SB-043M-0001-SO	51	UG/KG	66	J	N/A	Yes
070SB-0042M-0001-SO	Benzo[b]fluoranthene	34	UG/KG	66	J	070SB-043M-0001-SO	33	UG/KG	66	J	N/A	Yes
070SB-0042M-0001-SO	Benzo[g,h,i]perylene	57	UG/KG	66	J	070SB-043M-0001-SO	33	UG/KG	66	U	N/A	Yes

Sample	Analyte	Result	Units	LOQ	Qual	Sample	Result	Units	LOQ	Qual	RPD	W/In LOQ
070SB-0042M-0001-SO	Benzo[k]fluoranthene	33	UG/KG	66	U	070SB-043M-0001-SO	33	UG/KG	66	U	N/A	Yes
070SB-0042M-0001-SO	BENZOIC ACID	3300	UG/KG	6500	U	070SB-043M-0001-SO	3300	UG/KG	6500	U	N/A	Yes
070SB-0042M-0001-SO	BENZYL ALCOHOL	270	UG/KG	3300	U	070SB-043M-0001-SO	270	UG/KG	3300	U	N/A	Yes
070SB-0042M-0001-SO	BENZYL BUTYL PHTHALATE	270	UG/KG	500	U	070SB-043M-0001-SO	270	UG/KG	490	U	N/A	Yes
070SB-0042M-0001-SO	BIS(2-CHLOROETHOXY) METHANE	270	UG/KG	990	U	070SB-043M-0001-SO	270	UG/KG	990	U	N/A	Yes
070SB-0042M-0001-SO	BIS(2-CHLOROETHYL) ETHER	33	UG/KG	990	U	070SB-043M-0001-SO	33	UG/KG	990	U	N/A	Yes
070SB-0042M-0001-SO	BIS(2-CHLOROISOPROPYL) ETHER	270	UG/KG	990	U	070SB-043M-0001-SO	270	UG/KG	990	U	N/A	Yes
070SB-0042M-0001-SO	BIS(2-ETHYLHEXYL) PHTHALATE	270	UG/KG	500	U	070SB-043M-0001-SO	270	UG/KG	490	U	N/A	Yes
070SB-0042M-0001-SO	CARBAZOLE	270	UG/KG	500	U	070SB-043M-0001-SO	270	UG/KG	490	U	N/A	Yes
070SB-0042M-0001-SO	CHRYSENE	190	UG/KG	66		070SB-043M-0001-SO	98	UG/KG	66		N/A	No
070SB-0042M-0001-SO	CRESOLS, M & P	790	UG/KG	4000	U	070SB-043M-0001-SO	790	UG/KG	3900	U	N/A	Yes
070SB-0042M-0001-SO	DIBENZ(A,H)ANTHRACENE	33	UG/KG	66	U	070SB-043M-0001-SO	33	UG/KG	66	U	N/A	Yes
070SB-0042M-0001-SO	DIBENZOFURAN	250	UG/KG	500	J	070SB-043M-0001-SO	180	UG/KG	490	J	N/A	Yes
070SB-0042M-0001-SO	DIETHYL PHTHALATE	270	UG/KG	500	U	070SB-043M-0001-SO	270	UG/KG	490	U	N/A	Yes
070SB-0042M-0001-SO	DIMETHYL PHTHALATE	270	UG/KG	500	U	070SB-043M-0001-SO	270	UG/KG	490	U	N/A	Yes
070SB-0042M-0001-SO	DI-N-BUTYL PHTHALATE	270	UG/KG	500	U	070SB-043M-0001-SO	270	UG/KG	490	U	N/A	Yes
070SB-0042M-0001-SO	Di-n-octyl phthalate	270	UG/KG	500	U	070SB-043M-0001-SO	270	UG/KG	490	U	N/A	Yes
070SB-0042M-0001-SO	FLUORANTHENE	170	UG/KG	66		070SB-043M-0001-SO	120	UG/KG	66		N/A	Yes
070SB-0042M-0001-SO	FLUORENE	650	UG/KG	66		070SB-043M-0001-SO	500	UG/KG	66		26	N/A
070SB-0042M-0001-SO	HEXACHLOROBENZENE	33	UG/KG	66	U	070SB-043M-0001-SO	33	UG/KG	66	U	N/A	Yes
070SB-0042M-0001-SO	HEXACHLOROBUTADIENE	270	UG/KG	500	U	070SB-043M-0001-SO	270	UG/KG	490	U	N/A	Yes
070SB-0042M-0001-SO	HEXACHLOROCYCLOPENTADIENE	270	UG/KG	3300	U	070SB-043M-0001-SO	270	UG/KG	3300	U	N/A	Yes
070SB-0042M-0001-SO	HEXACHLOROETHANE	270	UG/KG	500	U	070SB-043M-0001-SO	270	UG/KG	490	U	N/A	Yes
070SB-0042M-0001-SO	Indeno[1,2,3-cd]pyrene	33	UG/KG	66	U	070SB-043M-0001-SO	33	UG/KG	66	U	N/A	Yes
070SB-0042M-0001-SO	ISOPHORONE	270	UG/KG	500	U	070SB-043M-0001-SO	270	UG/KG	490	U	N/A	Yes
070SB-0042M-0001-SO	NAPHTHALENE	50	UG/KG	66	J	070SB-043M-0001-SO	51	UG/KG	66	J	N/A	Yes
070SB-0042M-0001-SO	NITROBENZENE	33	UG/KG	990	U	070SB-043M-0001-SO	33	UG/KG	990	U	N/A	Yes
070SB-0042M-0001-SO	N-NITROSODI-N-PROPYLAMINE	270	UG/KG	500	U	070SB-043M-0001-SO	270	UG/KG	490	U	N/A	Yes
070SB-0042M-0001-SO	N-NITROSODIPHENYLAMINE	270	UG/KG	500	U	070SB-043M-0001-SO	270	UG/KG	490	U	N/A	Yes
070SB-0042M-0001-SO	PENTACHLOROPHENOL	790	UG/KG	1500	U	070SB-043M-0001-SO	790	UG/KG	1500	U	N/A	Yes
070SB-0042M-0001-SO	PHENANTHRENE	1000	UG/KG	66		070SB-043M-0001-SO	810	UG/KG	66		21	N/A
070SB-0042M-0001-SO	PHENOL	270	UG/KG	500	U	070SB-043M-0001-SO	270	UG/KG	490	U	N/A	Yes
070SB-0042M-0001-SO	PYRENE	1000	UG/KG	66		070SB-043M-0001-SO	730	UG/KG	66		31	N/A
070SB-044M-0001-SO	2,4 DB	33	UG/KG	80	U	070SB-045M-0001-SO	33	UG/KG	79	U	N/A	Yes
070SB-044M-0001-SO	2,4,5-T	8.3	UG/KG	20	U	070SB-045M-0001-SO	8.3	UG/KG	20	U	N/A	Yes
070SB-044M-0001-SO	2,4-D	33	UG/KG	80	U	070SB-045M-0001-SO	33	UG/KG	79	U	N/A	Yes

Sample	Analyte	Result	Units	LOQ	Qual	Sample	Result	Units	LOQ	Qual	RPD	W/In LOQ
070SB-044M-0001-SO	DALAPON	17	UG/KG	40	U	070SB-045M-0001-SO	17	UG/KG	40	U	N/A	Yes
070SB-044M-0001-SO	DICAMBA	17	UG/KG	40	U	070SB-045M-0001-SO	17	UG/KG	40	U	N/A	Yes
070SB-044M-0001-SO	Dichlorprop	66	UG/KG	80	U	070SB-045M-0001-SO	66	UG/KG	79	U	N/A	Yes
070SB-044M-0001-SO	DINOSEB	10	UG/KG	12	U	070SB-045M-0001-SO	9.9	UG/KG	12	U	N/A	Yes
070SB-044M-0001-SO	MCPA	3300	UG/KG	8000	UJ	070SB-045M-0001-SO	3300	UG/KG	7900	U	N/A	Yes
070SB-044M-0001-SO	MCPP	3300	UG/KG	8000	UJ	070SB-045M-0001-SO	3300	UG/KG	7900	U	N/A	Yes
070SB-044M-0001-SO	PENTACHLOROPHENOL	8.3	UG/KG	10	U	070SB-045M-0001-SO	8.3	UG/KG	9.9	U	N/A	Yes
070SB-044M-0001-SO	SILVEX (2,4,5-TP)	8.3	UG/KG	20	U	070SB-045M-0001-SO	8.3	UG/KG	20	U	N/A	Yes
070SB-044M-0001-SO	1,2,4-TRICHLOROBENZENE	270	UG/KG	510	U	070SB-045M-0001-SO	270	UG/KG	500	U	N/A	Yes
070SB-044M-0001-SO	1,2-DICHLOROBENZENE	270	UG/KG	510	U	070SB-045M-0001-SO	270	UG/KG	500	U	N/A	Yes
070SB-044M-0001-SO	1,3-DICHLOROBENZENE	270	UG/KG	510	U	070SB-045M-0001-SO	270	UG/KG	500	U	N/A	Yes
070SB-044M-0001-SO	1,4-DICHLOROBENZENE	270	UG/KG	510	U	070SB-045M-0001-SO	270	UG/KG	500	U	N/A	Yes
070SB-044M-0001-SO	2,4,5-TRICHLOROPHENOL	270	UG/KG	1500	U	070SB-045M-0001-SO	270	UG/KG	1500	U	N/A	Yes
070SB-044M-0001-SO	2,4,6-TRICHLOROPHENOL	810	UG/KG	1500	U	070SB-045M-0001-SO	800	UG/KG	1500	U	N/A	Yes
070SB-044M-0001-SO	2,4-DICHLOROPHENOL	270	UG/KG	1500	U	070SB-045M-0001-SO	270	UG/KG	1500	U	N/A	Yes
070SB-044M-0001-SO	2,4-DIMETHYLPHENOL	810	UG/KG	1500	U	070SB-045M-0001-SO	800	UG/KG	1500	U	N/A	Yes
070SB-044M-0001-SO	2,4-DINITROPHENOL	810	UG/KG	3300	UJ	070SB-045M-0001-SO	800	UG/KG	3300	U	N/A	Yes
070SB-044M-0001-SO	2,4-DINITROTOLUENE	270	UG/KG	2000	R	070SB-045M-0001-SO	270	UG/KG	2000	U	N/A	N/A
070SB-044M-0001-SO	2,6-DINITROTOLUENE	270	UG/KG	2000	R	070SB-045M-0001-SO	270	UG/KG	2000	U	N/A	N/A
070SB-044M-0001-SO	2-CHLORONAPHTHALENE	33	UG/KG	510	U	070SB-045M-0001-SO	33	UG/KG	500	U	N/A	Yes
070SB-044M-0001-SO	2-CHLOROPHENOL	270	UG/KG	510	U	070SB-045M-0001-SO	270	UG/KG	500	U	N/A	Yes
070SB-044M-0001-SO	2-METHYLNAPHTHALENE	33	UG/KG	67	U	070SB-045M-0001-SO	81	UG/KG	67		N/A	Yes
070SB-044M-0001-SO	2-METHYLPHENOL	810	UG/KG	2000	U	070SB-045M-0001-SO	800	UG/KG	2000	U	N/A	Yes
070SB-044M-0001-SO	2-NITROANILINE	270	UG/KG	2000	U	070SB-045M-0001-SO	270	UG/KG	2000	U	N/A	Yes
070SB-044M-0001-SO	2-NITROPHENOL	270	UG/KG	510	U	070SB-045M-0001-SO	270	UG/KG	500	U	N/A	Yes
070SB-044M-0001-SO	3,3'-DICHLOROBENZIDINE	810	UG/KG	1000	U	070SB-045M-0001-SO	800	UG/KG	1000	U	N/A	Yes
070SB-044M-0001-SO	3-NITROANILINE	810	UG/KG	2000	U	070SB-045M-0001-SO	800	UG/KG	2000	U	N/A	Yes
070SB-044M-0001-SO	4,6-DINITRO-2-METHYLPHENOL	810	UG/KG	1500	U	070SB-045M-0001-SO	800	UG/KG	1500	U	N/A	Yes
070SB-044M-0001-SO	4-BROMOPHENYL PHENYL ETHER	270	UG/KG	510	U	070SB-045M-0001-SO	270	UG/KG	500	U	N/A	Yes
070SB-044M-0001-SO	4-CHLORO-3-METHYLPHENOL	270	UG/KG	1500	U	070SB-045M-0001-SO	270	UG/KG	1500	U	N/A	Yes
070SB-044M-0001-SO	4-CHLOROANILINE	270	UG/KG	1500	U	070SB-045M-0001-SO	270	UG/KG	1500	U	N/A	Yes
070SB-044M-0001-SO	4-CHLOROPHENYL PHENYL ETHER	270	UG/KG	510	U	070SB-045M-0001-SO	270	UG/KG	500	U	N/A	Yes
070SB-044M-0001-SO	4-NITROANILINE	270	UG/KG	2000	U	070SB-045M-0001-SO	270	UG/KG	2000	U	N/A	Yes
070SB-044M-0001-SO	4-NITROPHENOL	810	UG/KG	3300	U	070SB-045M-0001-SO	800	UG/KG	3300	U	N/A	Yes
070SB-044M-0001-SO	ACENAPHTHENE	33	UG/KG	67	U	070SB-045M-0001-SO	33	UG/KG	67	U	N/A	Yes
070SB-044M-0001-SO	ACENAPHTHYLENE	33	UG/KG	67	U	070SB-045M-0001-SO	33	UG/KG	67	U	N/A	Yes

Sample	Analyte	Result	Units	LOQ	Qual	Sample	Result	Units	LOQ	Qual	RPD	W/In LOQ
070SB-044M-0001-SO	ANTHRACENE	33	UG/KG	67	U	070SB-045M-0001-SO	33	UG/KG	67	U	N/A	Yes
070SB-044M-0001-SO	Benzo[a]anthracene	33	UG/KG	67	U	070SB-045M-0001-SO	33	UG/KG	67	U	N/A	Yes
070SB-044M-0001-SO	Benzo[a]pyrene	33	UG/KG	67	U	070SB-045M-0001-SO	33	UG/KG	67	U	N/A	Yes
070SB-044M-0001-SO	Benzo[b]fluoranthene	33	UG/KG	67	U	070SB-045M-0001-SO	33	UG/KG	67	U	N/A	Yes
070SB-044M-0001-SO	Benzo[g,h,i]perylene	33	UG/KG	67	UJ	070SB-045M-0001-SO	33	UG/KG	67	U	N/A	Yes
070SB-044M-0001-SO	Benzo[k]fluoranthene	33	UG/KG	67	U	070SB-045M-0001-SO	33	UG/KG	67	U	N/A	Yes
070SB-044M-0001-SO	BENZOIC ACID	3400	UG/KG	6700	U	070SB-045M-0001-SO	3300	UG/KG	6600	U	N/A	Yes
070SB-044M-0001-SO	BENZYL ALCOHOL	270	UG/KG	3300	U	070SB-045M-0001-SO	270	UG/KG	3300	U	N/A	Yes
070SB-044M-0001-SO	BENZYL BUTYL PHTHALATE	270	UG/KG	510	U	070SB-045M-0001-SO	270	UG/KG	500	U	N/A	Yes
070SB-044M-0001-SO	BIS(2-CHLOROETHOXY) METHANE	270	UG/KG	1000	U	070SB-045M-0001-SO	270	UG/KG	1000	U	N/A	Yes
070SB-044M-0001-SO	BIS(2-CHLOROETHYL) ETHER	33	UG/KG	1000	U	070SB-045M-0001-SO	33	UG/KG	1000	U	N/A	Yes
070SB-044M-0001-SO	BIS(2-CHLOROISOPROPYL) ETHER	270	UG/KG	1000	U	070SB-045M-0001-SO	270	UG/KG	1000	U	N/A	Yes
070SB-044M-0001-SO	BIS(2-ETHYLHEXYL) PHTHALATE	270	UG/KG	510	U	070SB-045M-0001-SO	270	UG/KG	500	U	N/A	Yes
070SB-044M-0001-SO	CARBAZOLE	270	UG/KG	510	U	070SB-045M-0001-SO	270	UG/KG	500	U	N/A	Yes
070SB-044M-0001-SO	CHRYSENE	33	UG/KG	67	U	070SB-045M-0001-SO	33	UG/KG	67	U	N/A	Yes
070SB-044M-0001-SO	CRESOLS, M & P	810	UG/KG	4000	U	070SB-045M-0001-SO	800	UG/KG	4000	U	N/A	Yes
070SB-044M-0001-SO	DIBENZ(A,H)ANTHRACENE	33	UG/KG	67	U	070SB-045M-0001-SO	33	UG/KG	67	U	N/A	Yes
070SB-044M-0001-SO	DIBENZOFURAN	33	UG/KG	510	U	070SB-045M-0001-SO	33	UG/KG	500	U	N/A	Yes
070SB-044M-0001-SO	DIETHYL PHTHALATE	270	UG/KG	510	U	070SB-045M-0001-SO	270	UG/KG	500	U	N/A	Yes
070SB-044M-0001-SO	DIMETHYL PHTHALATE	270	UG/KG	510	U	070SB-045M-0001-SO	270	UG/KG	500	U	N/A	Yes
070SB-044M-0001-SO	DI-N-BUTYL PHTHALATE	270	UG/KG	510	U	070SB-045M-0001-SO	270	UG/KG	500	U	N/A	Yes
070SB-044M-0001-SO	Di-n-octyl phthalate	270	UG/KG	510	U	070SB-045M-0001-SO	270	UG/KG	500	U	N/A	Yes
070SB-044M-0001-SO	FLUORANTHENE	33	UG/KG	67	U	070SB-045M-0001-SO	33	UG/KG	67	U	N/A	Yes
070SB-044M-0001-SO	FLUORENE	33	UG/KG	67	U	070SB-045M-0001-SO	33	UG/KG	67	U	N/A	Yes
070SB-044M-0001-SO	HEXACHLOROBENZENE	33	UG/KG	67	U	070SB-045M-0001-SO	33	UG/KG	67	U	N/A	Yes
070SB-044M-0001-SO	HEXACHLOROBUTADIENE	270	UG/KG	510	U	070SB-045M-0001-SO	270	UG/KG	500	U	N/A	Yes
070SB-044M-0001-SO	HEXACHLOROCYCLOPENTADIENE	270	UG/KG	3300	U	070SB-045M-0001-SO	270	UG/KG	3300	U	N/A	Yes
070SB-044M-0001-SO	HEXACHLOROETHANE	270	UG/KG	510	U	070SB-045M-0001-SO	270	UG/KG	500	U	N/A	Yes
070SB-044M-0001-SO	Indeno[1,2,3-cd]pyrene	33	UG/KG	67	U	070SB-045M-0001-SO	33	UG/KG	67	U	N/A	Yes
070SB-044M-0001-SO	ISOPHORONE	270	UG/KG	510	U	070SB-045M-0001-SO	270	UG/KG	500	U	N/A	Yes
070SB-044M-0001-SO	NAPHTHALENE	33	UG/KG	67	U	070SB-045M-0001-SO	69	UG/KG	67		N/A	Yes
070SB-044M-0001-SO	NITROBENZENE	33	UG/KG	1000	U	070SB-045M-0001-SO	33	UG/KG	1000	U	N/A	Yes
070SB-044M-0001-SO	N-NITROSODI-N-PROPYLAMINE	270	UG/KG	510	U	070SB-045M-0001-SO	270	UG/KG	500	U	N/A	Yes
070SB-044M-0001-SO	N-NITROSODIPHENYLAMINE	270	UG/KG	510	R	070SB-045M-0001-SO	270	UG/KG	500	U	N/A	N/A
070SB-044M-0001-SO	PENTACHLOROPHENOL	810	UG/KG	1500	R	070SB-045M-0001-SO	800	UG/KG	1500	U	N/A	N/A
070SB-044M-0001-SO	PHENANTHRENE	33	UG/KG	67	U	070SB-045M-0001-SO	45	UG/KG	67	J	N/A	Yes

Sample	Analyte	Result	Units	LOQ	Qual	Sample	Result	Units	LOQ	Qual	RPD	W/In LOQ
070SB-044M-0001-SO	PHENOL	270	UG/KG	510	U	070SB-045M-0001-SO	270	UG/KG	500	U	N/A	Yes
070SB-044M-0001-SO	PYRENE	33	UG/KG	67	U	070SB-045M-0001-SO	33	UG/KG	67	U	N/A	Yes
070SB-046M-0001-SO	ALUMINUM	6900	MG/KG	2.9		070SB-047M-0001-SO	9700	MG/KG	3		34	N/A
070SB-046M-0001-SO	ANTIMONY	0.097	MG/KG	0.19	U	070SB-047M-0001-SO	0.1	MG/KG	0.2	U	N/A	Yes
070SB-046M-0001-SO	ARSENIC	7.8	MG/KG	0.1		070SB-047M-0001-SO	8.1	MG/KG	0.1		4	N/A
070SB-046M-0001-SO	BARIUM	39	MG/KG	0.97		070SB-047M-0001-SO	55	MG/KG	1		34	N/A
070SB-046M-0001-SO	BERYLLIUM	0.35	MG/KG	0.1		070SB-047M-0001-SO	0.49	MG/KG	0.1		N/A	No
070SB-046M-0001-SO	CADMIUM	0.15	MG/KG	0.1		070SB-047M-0001-SO	0.17	MG/KG	0.1		N/A	Yes
070SB-046M-0001-SO	CALCIUM	1600	MG/KG	9.7		070SB-047M-0001-SO	1500	MG/KG	10		6	N/A
070SB-046M-0001-SO	CHROMIUM	9.8	MG/KG	0.19		070SB-047M-0001-SO	14	MG/KG	0.2		35	N/A
070SB-046M-0001-SO	COBALT	5.5	MG/KG	0.05		070SB-047M-0001-SO	7.6	MG/KG	0.05		32	N/A
070SB-046M-0001-SO	COPPER	14	MG/KG	0.19		070SB-047M-0001-SO	16	MG/KG	0.2		13	N/A
070SB-046M-0001-SO	IRON	16000	MG/KG	4.9		070SB-047M-0001-SO	20000	MG/KG	5		22	N/A
070SB-046M-0001-SO	LEAD	12	MG/KG	0.1		070SB-047M-0001-SO	14	MG/KG	0.1		15	N/A
070SB-046M-0001-SO	MAGNESIUM	1700	MG/KG	9.7		070SB-047M-0001-SO	2500	MG/KG	10		38	N/A
070SB-046M-0001-SO	MANGANESE	220	MG/KG	0.49		070SB-047M-0001-SO	270	MG/KG	0.5		20	N/A
070SB-046M-0001-SO	NICKEL	12	MG/KG	0.1		070SB-047M-0001-SO	17	MG/KG	0.1		34	N/A
070SB-046M-0001-SO	POTASSIUM	630	MG/KG	9.7		070SB-047M-0001-SO	850	MG/KG	10		30	N/A
070SB-046M-0001-SO	SELENIUM	0.31	MG/KG	0.49	J	070SB-047M-0001-SO	0.4	MG/KG	0.5	J	N/A	Yes
070SB-046M-0001-SO	SILVER	0.026	MG/KG	0.1	J	070SB-047M-0001-SO	0.029	MG/KG	0.1	J	N/A	Yes
070SB-046M-0001-SO	SODIUM	69	MG/KG	9.7		070SB-047M-0001-SO	91	MG/KG	10		28	N/A
070SB-046M-0001-SO	THALLIUM	0.098	MG/KG	0.1		070SB-047M-0001-SO	0.13	MG/KG	0.1		N/A	Yes
070SB-046M-0001-SO	VANADIUM	12	MG/KG	0.1		070SB-047M-0001-SO	16	MG/KG	0.1		29	N/A
070SB-046M-0001-SO	ZINC	37	MG/KG	0.49		070SB-047M-0001-SO	45	MG/KG	0.5		20	N/A
070SB-046M-0001-SO	Aroclor-1016	25	UG/KG	65	U	070SB-047M-0001-SO	25	UG/KG	65	U	N/A	Yes
070SB-046M-0001-SO	Aroclor-1221	25	UG/KG	50	U	070SB-047M-0001-SO	25	UG/KG	50	U	N/A	Yes
070SB-046M-0001-SO	Aroclor-1232	25	UG/KG	45	U	070SB-047M-0001-SO	25	UG/KG	45	U	N/A	Yes
070SB-046M-0001-SO	Aroclor-1242	25	UG/KG	40	U	070SB-047M-0001-SO	25	UG/KG	40	U	N/A	Yes
070SB-046M-0001-SO	Aroclor-1248	25	UG/KG	55	U	070SB-047M-0001-SO	25	UG/KG	55	U	N/A	Yes
070SB-046M-0001-SO	Aroclor-1254	25	UG/KG	55	U	070SB-047M-0001-SO	25	UG/KG	55	U	N/A	Yes
070SB-046M-0001-SO	Aroclor-1260	25	UG/KG	55	U	070SB-047M-0001-SO	25	UG/KG	55	U	N/A	Yes
070SB-046M-0001-SO	MERCURY	0.018	MG/KG	0.09	J	070SB-047M-0001-SO	0.021	MG/KG	0.091	J	N/A	Yes
070SB-046M-0001-SO	1,2,4-TRICHLOROBENZENE	270	UG/KG	500	U	070SB-047M-0001-SO	270	UG/KG	510	U	N/A	Yes
070SB-046M-0001-SO	1,2-DICHLOROBENZENE	270	UG/KG	500	U	070SB-047M-0001-SO	270	UG/KG	510	U	N/A	Yes
070SB-046M-0001-SO	1,3-DICHLOROBENZENE	270	UG/KG	500	U	070SB-047M-0001-SO	270	UG/KG	510	U	N/A	Yes
070SB-046M-0001-SO	1,4-DICHLOROBENZENE	270	UG/KG	500	U	070SB-047M-0001-SO	270	UG/KG	510	U	N/A	Yes

Sample	Analyte	Result	Units	LOQ	Qual	Sample	Result	Units	LOQ	Qual	RPD	W/In LOQ
070SB-046M-0001-SO	2,4,5-TRICHLOROPHENOL	270	UG/KG	1500	U	070SB-047M-0001-SO	270	UG/KG	1500	U	N/A	Yes
070SB-046M-0001-SO	2,4,6-TRICHLOROPHENOL	800	UG/KG	1500	U	070SB-047M-0001-SO	810	UG/KG	1500	U	N/A	Yes
070SB-046M-0001-SO	2,4-DICHLOROPHENOL	270	UG/KG	1500	U	070SB-047M-0001-SO	270	UG/KG	1500	U	N/A	Yes
070SB-046M-0001-SO	2,4-DIMETHYLPHENOL	800	UG/KG	1500	U	070SB-047M-0001-SO	810	UG/KG	1500	U	N/A	Yes
070SB-046M-0001-SO	2,4-DINITROPHENOL	800	UG/KG	3300	UJ	070SB-047M-0001-SO	810	UG/KG	3300	U	N/A	Yes
070SB-046M-0001-SO	2,4-DINITROTOLUENE	270	UG/KG	2000	U	070SB-047M-0001-SO	270	UG/KG	2000	U	N/A	Yes
070SB-046M-0001-SO	2,6-DINITROTOLUENE	270	UG/KG	2000	U	070SB-047M-0001-SO	270	UG/KG	2000	U	N/A	Yes
070SB-046M-0001-SO	2-CHLORONAPHTHALENE	33	UG/KG	500	U	070SB-047M-0001-SO	33	UG/KG	510	U	N/A	Yes
070SB-046M-0001-SO	2-CHLOROPHENOL	270	UG/KG	500	U	070SB-047M-0001-SO	270	UG/KG	510	U	N/A	Yes
070SB-046M-0001-SO	2-METHYLNAPHTHALENE	33	UG/KG	67	U	070SB-047M-0001-SO	34	UG/KG	67	J	N/A	Yes
070SB-046M-0001-SO	2-METHYLPHENOL	800	UG/KG	2000	U	070SB-047M-0001-SO	810	UG/KG	2000	U	N/A	Yes
070SB-046M-0001-SO	2-NITROANILINE	270	UG/KG	2000	U	070SB-047M-0001-SO	270	UG/KG	2000	U	N/A	Yes
070SB-046M-0001-SO	2-NITROPHENOL	270	UG/KG	500	U	070SB-047M-0001-SO	270	UG/KG	510	U	N/A	Yes
070SB-046M-0001-SO	3,3'-DICHLOROBENZIDINE	800	UG/KG	1000	U	070SB-047M-0001-SO	810	UG/KG	1000	U	N/A	Yes
070SB-046M-0001-SO	3-NITROANILINE	800	UG/KG	2000	U	070SB-047M-0001-SO	810	UG/KG	2000	U	N/A	Yes
070SB-046M-0001-SO	4,6-DINITRO-2-METHYLPHENOL	800	UG/KG	1500	U	070SB-047M-0001-SO	810	UG/KG	1500	U	N/A	Yes
070SB-046M-0001-SO	4-BROMOPHENYL PHENYL ETHER	270	UG/KG	500	U	070SB-047M-0001-SO	270	UG/KG	510	U	N/A	Yes
070SB-046M-0001-SO	4-CHLORO-3-METHYLPHENOL	270	UG/KG	1500	U	070SB-047M-0001-SO	270	UG/KG	1500	U	N/A	Yes
070SB-046M-0001-SO	4-CHLOROANILINE	270	UG/KG	1500	U	070SB-047M-0001-SO	270	UG/KG	1500	U	N/A	Yes
070SB-046M-0001-SO	4-CHLOROPHENYL PHENYL ETHER	270	UG/KG	500	U	070SB-047M-0001-SO	270	UG/KG	510	U	N/A	Yes
070SB-046M-0001-SO	4-NITROANILINE	270	UG/KG	2000	U	070SB-047M-0001-SO	270	UG/KG	2000	U	N/A	Yes
070SB-046M-0001-SO	4-NITROPHENOL	800	UG/KG	3300	U	070SB-047M-0001-SO	810	UG/KG	3300	U	N/A	Yes
070SB-046M-0001-SO	ACENAPHTHENE	33	UG/KG	67	U	070SB-047M-0001-SO	33	UG/KG	67	U	N/A	Yes
070SB-046M-0001-SO	ACENAPHTHYLENE	33	UG/KG	67	U	070SB-047M-0001-SO	33	UG/KG	67	U	N/A	Yes
070SB-046M-0001-SO	ANTHRACENE	33	UG/KG	67	U	070SB-047M-0001-SO	33	UG/KG	67	U	N/A	Yes
070SB-046M-0001-SO	Benzo[a]anthracene	33	UG/KG	67	U	070SB-047M-0001-SO	33	UG/KG	67	U	N/A	Yes
070SB-046M-0001-SO	Benzo[a]pyrene	33	UG/KG	67	U	070SB-047M-0001-SO	33	UG/KG	67	U	N/A	Yes
070SB-046M-0001-SO	Benzo[b]fluoranthene	33	UG/KG	67	U	070SB-047M-0001-SO	33	UG/KG	67	U	N/A	Yes
070SB-046M-0001-SO	Benzo[g,h,i]perylene	33	UG/KG	67	UJ	070SB-047M-0001-SO	33	UG/KG	67	U	N/A	Yes
070SB-046M-0001-SO	Benzo[k]fluoranthene	33	UG/KG	67	U	070SB-047M-0001-SO	33	UG/KG	67	U	N/A	Yes
070SB-046M-0001-SO	BENZOIC ACID	3300	UG/KG	6600	U	070SB-047M-0001-SO	3400	UG/KG	6700	U	N/A	Yes
070SB-046M-0001-SO	BENZYL ALCOHOL	270	UG/KG	3300	U	070SB-047M-0001-SO	270	UG/KG	3300	U	N/A	Yes
070SB-046M-0001-SO	BENZYL BUTYL PHTHALATE	270	UG/KG	500	U	070SB-047M-0001-SO	270	UG/KG	510	U	N/A	Yes
070SB-046M-0001-SO	BIS(2-CHLOROETHOXY) METHANE	270	UG/KG	1000	U	070SB-047M-0001-SO	270	UG/KG	1000	U	N/A	Yes
070SB-046M-0001-SO	BIS(2-CHLOROETHYL) ETHER	33	UG/KG	1000	U	070SB-047M-0001-SO	33	UG/KG	1000	U	N/A	Yes
070SB-046M-0001-SO	BIS(2-CHLOROISOPROPYL) ETHER	270	UG/KG	1000	U	070SB-047M-0001-SO	270	UG/KG	1000	U	N/A	Yes

Sample	Analyte	Result	Units	LOQ	Qual	Sample	Result	Units	LOQ	Qual	RPD	W/In LOQ
070SB-046M-0001-SO	BIS(2-ETHYLHEXYL) PHTHALATE	270	UG/KG	500	U	070SB-047M-0001-SO	270	UG/KG	510	U	N/A	Yes
070SB-046M-0001-SO	CARBAZOLE	270	UG/KG	500	U	070SB-047M-0001-SO	270	UG/KG	510	U	N/A	Yes
070SB-046M-0001-SO	CHRYSENE	33	UG/KG	67	U	070SB-047M-0001-SO	33	UG/KG	67	U	N/A	Yes
070SB-046M-0001-SO	CRESOLS, M & P	800	UG/KG	4000	U	070SB-047M-0001-SO	810	UG/KG	4000	U	N/A	Yes
070SB-046M-0001-SO	DIBENZ(A,H)ANTHRACENE	33	UG/KG	67	U	070SB-047M-0001-SO	33	UG/KG	67	U	N/A	Yes
070SB-046M-0001-SO	DIBENZOFURAN	33	UG/KG	500	U	070SB-047M-0001-SO	33	UG/KG	510	U	N/A	Yes
070SB-046M-0001-SO	DIETHYL PHTHALATE	270	UG/KG	500	U	070SB-047M-0001-SO	270	UG/KG	510	U	N/A	Yes
070SB-046M-0001-SO	DIMETHYL PHTHALATE	270	UG/KG	500	U	070SB-047M-0001-SO	270	UG/KG	510	U	N/A	Yes
070SB-046M-0001-SO	DI-N-BUTYL PHTHALATE	270	UG/KG	500	U	070SB-047M-0001-SO	270	UG/KG	510	U	N/A	Yes
070SB-046M-0001-SO	Di-n-octyl phthalate	270	UG/KG	500	U	070SB-047M-0001-SO	270	UG/KG	510	U	N/A	Yes
070SB-046M-0001-SO	FLUORANTHENE	33	UG/KG	67	U	070SB-047M-0001-SO	33	UG/KG	67	U	N/A	Yes
070SB-046M-0001-SO	FLUORENE	33	UG/KG	67	U	070SB-047M-0001-SO	33	UG/KG	67	U	N/A	Yes
070SB-046M-0001-SO	HEXACHLOROBENZENE	33	UG/KG	67	U	070SB-047M-0001-SO	33	UG/KG	67	U	N/A	Yes
070SB-046M-0001-SO	HEXACHLOROBUTADIENE	270	UG/KG	500	U	070SB-047M-0001-SO	270	UG/KG	510	U	N/A	Yes
070SB-046M-0001-SO	HEXACHLOROCYCLOPENTADIENE	270	UG/KG	3300	U	070SB-047M-0001-SO	270	UG/KG	3300	U	N/A	Yes
070SB-046M-0001-SO	HEXACHLOROETHANE	270	UG/KG	500	U	070SB-047M-0001-SO	270	UG/KG	510	U	N/A	Yes
070SB-046M-0001-SO	Indeno[1,2,3-cd]pyrene	33	UG/KG	67	U	070SB-047M-0001-SO	33	UG/KG	67	U	N/A	Yes
070SB-046M-0001-SO	ISOPHORONE	270	UG/KG	500	U	070SB-047M-0001-SO	270	UG/KG	510	U	N/A	Yes
070SB-046M-0001-SO	NAPHTHALENE	33	UG/KG	67	U	070SB-047M-0001-SO	33	UG/KG	67	U	N/A	Yes
070SB-046M-0001-SO	NITROBENZENE	33	UG/KG	1000	U	070SB-047M-0001-SO	33	UG/KG	1000	U	N/A	Yes
070SB-046M-0001-SO	N-NITROSODI-N-PROPYLAMINE	270	UG/KG	500	U	070SB-047M-0001-SO	270	UG/KG	510	U	N/A	Yes
070SB-046M-0001-SO	N-NITROSODIPHENYLAMINE	270	UG/KG	500	R	070SB-047M-0001-SO	270	UG/KG	510	U	N/A	N/A
070SB-046M-0001-SO	PENTACHLOROPHENOL	800	UG/KG	1500	U	070SB-047M-0001-SO	810	UG/KG	1500	U	N/A	Yes
070SB-046M-0001-SO	PHENANTHRENE	33	UG/KG	67	U	070SB-047M-0001-SO	33	UG/KG	67	U	N/A	Yes
070SB-046M-0001-SO	PHENOL	270	UG/KG	500	U	070SB-047M-0001-SO	270	UG/KG	510	U	N/A	Yes
070SB-046M-0001-SO	PYRENE	33	UG/KG	67	U	070SB-047M-0001-SO	33	UG/KG	67	U	N/A	Yes
070SS-0006M-0001-SO	Nitrocellulose	1	mg/kg	5	J	070SS-0007M-0001-SO	0.9	mg/kg	5	J	N/A	Yes
070SS-0006M-0001-SO	Aluminum	9800	mg/kg	9.3		070SS-0007M-0001-SO	9700	mg/kg	9.6		1	N/A
070SS-0006M-0001-SO	Antimony	1.5	mg/kg	0.19	J-	070SS-0007M-0001-SO	1.1	mg/kg	0.19		31	N/A
070SS-0006M-0001-SO	Arsenic	18	mg/kg	0.46		070SS-0007M-0001-SO	19	mg/kg	0.48		5	N/A
070SS-0006M-0001-SO	Barium	71	mg/kg	0.46		070SS-0007M-0001-SO	67	mg/kg	0.48		6	N/A
070SS-0006M-0001-SO	Beryllium	0.75	mg/kg	0.09		070SS-0007M-0001-SO	0.72	mg/kg	0.096		4	N/A
070SS-0006M-0001-SO	Cadmium	0.46	mg/kg	0.19	J	070SS-0007M-0001-SO	0.31	mg/kg	0.19		N/A	Yes
070SS-0006M-0001-SO	Calcium	7000	mg/kg	190		070SS-0007M-0001-SO	4500	mg/kg	190		43	N/A
070SS-0006M-0001-SO	Chromium	35	mg/kg	0.46	J-	070SS-0007M-0001-SO	21	mg/kg	0.48		50	N/A
070SS-0006M-0001-SO	Cobalt	8.6	mg/kg	0.09		070SS-0007M-0001-SO	8.2	mg/kg	0.096		5	N/A

Sample	Analyte	Result	Units	LOQ	Qual	Sample	Result	Units	LOQ	Qual	RPD	W/In LOQ
070SS-0006M-0001-SO	Copper	23	mg/kg	0.37	J-	070SS-0007M-0001-SO	22	mg/kg	0.38		4	N/A
070SS-0006M-0001-SO	Iron	23000	mg/kg	46		070SS-0007M-0001-SO	22000	mg/kg	48		4	N/A
070SS-0006M-0001-SO	Lead	62	mg/kg	0.28	J	070SS-0007M-0001-SO	42	mg/kg	0.29		38	N/A
070SS-0006M-0001-SO	Magnesium	2800	mg/kg	93		070SS-0007M-0001-SO	2400	mg/kg	96		15	N/A
070SS-0006M-0001-SO	Manganese	520	mg/kg	2.3		070SS-0007M-0001-SO	430	mg/kg	0.48		19	N/A
070SS-0006M-0001-SO	Nickel	30	mg/kg	0.46	J	070SS-0007M-0001-SO	27	mg/kg	0.48		11	N/A
070SS-0006M-0001-SO	Potassium	940	mg/kg	93	J+	070SS-0007M-0001-SO	1000	mg/kg	96		6	N/A
070SS-0006M-0001-SO	Selenium	0.99	mg/kg	0.46	J-	070SS-0007M-0001-SO	1.2	mg/kg	0.48		N/A	Yes
070SS-0006M-0001-SO	Silver	0.034	mg/kg	0.09	J	070SS-0007M-0001-SO	0.037	mg/kg	0.096	J	N/A	Yes
070SS-0006M-0001-SO	Sodium	55	mg/kg	93	U	070SS-0007M-0001-SO	49	mg/kg	96	J	N/A	Yes
070SS-0006M-0001-SO	Thallium	0.24	mg/kg	0.19		070SS-0007M-0001-SO	0.19	mg/kg	0.19		N/A	Yes
070SS-0006M-0001-SO	Vanadium	16	mg/kg	0.46	J+	070SS-0007M-0001-SO	16	mg/kg	0.48		0	N/A
070SS-0006M-0001-SO	Zinc	110	mg/kg	3.7		070SS-0007M-0001-SO	110	mg/kg	3.8		0	N/A
070SS-0006M-0001-SO	MERCURY	0.05	mg/kg	0.09	J	070SS-0007M-0001-SO	0.067	mg/kg	0.11	J	N/A	Yes
070SS-0006M-0001-SO	C10-C20	23	mg/kg	17		070SS-0007M-0001-SO	30	mg/kg	9.3	9.3	N/A	Yes
070SS-0006M-0001-SO	C20-C34	110	mg/kg	17		070SS-0007M-0001-SO	150	mg/kg	17		N/A	No
070SS-0006M-0001-SO	Aroclor-1016	100	ug/kg	320	U	070SS-0007M-0001-SO	21	ug/kg	66	U	N/A	Yes
070SS-0006M-0001-SO	Aroclor-1221	80	ug/kg	250	U	070SS-0007M-0001-SO	16	ug/kg	51	U	N/A	Yes
070SS-0006M-0001-SO	Aroclor-1232	70	ug/kg	220	U	070SS-0007M-0001-SO	14	ug/kg	45	U	N/A	Yes
070SS-0006M-0001-SO	Aroclor-1242	380	ug/kg	200	J	070SS-0007M-0001-SO	13	ug/kg	40	U	N/A	No
070SS-0006M-0001-SO	Aroclor-1248	85	ug/kg	270	U	070SS-0007M-0001-SO	120	ug/kg	56		N/A	Yes
070SS-0006M-0001-SO	Aroclor-1254	85	ug/kg	270	U	070SS-0007M-0001-SO	17	ug/kg	56	U	N/A	Yes
070SS-0006M-0001-SO	Aroclor-1260	85	ug/kg	270	U	070SS-0007M-0001-SO	43	ug/kg	56	J	N/A	Yes
070SS-0006M-0001-SO	2,4,5-T	3.7	ug/kg	20	U	070SS-0007M-0001-SO	3.8	ug/kg	20	U	N/A	Yes
070SS-0006M-0001-SO	2,4-D	19	ug/kg	80	U	070SS-0007M-0001-SO	19	ug/kg	80	U	N/A	Yes
070SS-0006M-0001-SO	2,4-DB	21	ug/kg	80	U	070SS-0007M-0001-SO	22	ug/kg	80	U	N/A	Yes
070SS-0006M-0001-SO	Dalapon	7.8	ug/kg	40	U	070SS-0007M-0001-SO	7.8	ug/kg	40	U	N/A	Yes
070SS-0006M-0001-SO	Dicamba	8.1	ug/kg	40	UJ	070SS-0007M-0001-SO	8.1	ug/kg	40	U	N/A	Yes
070SS-0006M-0001-SO	Dichlorprop	37	ug/kg	80	UJ	070SS-0007M-0001-SO	37	ug/kg	80	U	N/A	Yes
070SS-0006M-0001-SO	Dinoseb	10	ug/kg	12	U	070SS-0007M-0001-SO	10	ug/kg	12	U	N/A	Yes
070SS-0006M-0001-SO	MCPA	1600	ug/kg	8000	UJ	070SS-0007M-0001-SO	1700	ug/kg	8000	U	N/A	Yes
070SS-0006M-0001-SO	MCPP	1500	ug/kg	8000	UJ	070SS-0007M-0001-SO	1500	ug/kg	8000	U	N/A	Yes
070SS-0006M-0001-SO	Pentachlorophenol	4.3	ug/kg	10	U	070SS-0007M-0001-SO	4.3	ug/kg	10	U	N/A	Yes
070SS-0006M-0001-SO	Silvex (2,4,5-TP)	4.1	ug/kg	20	U	070SS-0007M-0001-SO	4.1	ug/kg	20	U	N/A	Yes
070SS-0006M-0001-SO	1,3,5-Trinitrobenzene	0.01	mg/kg	0.25	U	070SS-0007M-0001-SO	0.01	mg/kg	0.25	U	N/A	Yes
070SS-0006M-0001-SO	1,3-Dinitrobenzene	0.004	mg/kg	0.25	U	070SS-0007M-0001-SO	0.0042	mg/kg	0.25	U	N/A	Yes

Sample	Analyte	Result	Units	LOQ	Qual	Sample	Result	Units	LOQ	Qual	RPD	W/In LOQ
070SS-0006M-0001-SO	2,4,6-Trinitrotoluene	0.019	mg/kg	0.25	U	070SS-0007M-0001-SO	0.019	mg/kg	0.25	U	N/A	Yes
070SS-0006M-0001-SO	2,4-Dinitrotoluene	0.005	mg/kg	0.25	U	070SS-0007M-0001-SO	0.0053	mg/kg	0.25	U	N/A	Yes
070SS-0006M-0001-SO	2,6-Dinitrotoluene	0.007	mg/kg	0.25	U	070SS-0007M-0001-SO	0.0073	mg/kg	0.25	U	N/A	Yes
070SS-0006M-0001-SO	2-Amino-4,6-dinitrotoluene	0.012	mg/kg	0.25	U	070SS-0007M-0001-SO	0.013	mg/kg	0.25	U	N/A	Yes
070SS-0006M-0001-SO	2-Nitrotoluene	0.013	mg/kg	0.25	UJ	070SS-0007M-0001-SO	0.013	mg/kg	0.25	U	N/A	Yes
070SS-0006M-0001-SO	3-Nitrotoluene	0.015	mg/kg	0.25	U	070SS-0007M-0001-SO	0.016	mg/kg	0.25	U	N/A	Yes
070SS-0006M-0001-SO	4-Amino-2,6-dinitrotoluene	0.01	mg/kg	0.25	U	070SS-0007M-0001-SO	0.01	mg/kg	0.25	U	N/A	Yes
070SS-0006M-0001-SO	4-Nitrotoluene	0.018	mg/kg	0.25	U	070SS-0007M-0001-SO	0.018	mg/kg	0.25	U	N/A	Yes
070SS-0006M-0001-SO	HMX	0.012	mg/kg	0.25	U	070SS-0007M-0001-SO	0.012	mg/kg	0.25	U	N/A	Yes
070SS-0006M-0001-SO	Nitrobenzene	0.018	mg/kg	0.25	R	070SS-0007M-0001-SO	0.018	mg/kg	0.25	U	N/A	N/A
070SS-0006M-0001-SO	Nitroglycerin	0.015	mg/kg	0.5	UJ	070SS-0007M-0001-SO	0.015	mg/kg	0.5	U	N/A	Yes
070SS-0006M-0001-SO	PETN	0.025	mg/kg	0.5	U	070SS-0007M-0001-SO	0.025	mg/kg	0.5	U	N/A	Yes
070SS-0006M-0001-SO	RDX	0.012	mg/kg	0.25	UJ	070SS-0007M-0001-SO	0.012	mg/kg	0.25	U	N/A	Yes
070SS-0006M-0001-SO	Tetryl	0.01	mg/kg	0.25	U	070SS-0007M-0001-SO	0.029	mg/kg	0.25	J	N/A	Yes
070SS-0006M-0001-SO	1,1,1-Trichloroethane	0.97	ug/kg	8.7	UJ	070SS-0007M-0001-SO	0.82	ug/kg	7.4	U	N/A	Yes
070SS-0006M-0001-SO	1,1,2,2-Tetrachloroethane	0.59	ug/kg	8.7	UJ	070SS-0007M-0001-SO	0.5	ug/kg	7.4	U	N/A	Yes
070SS-0006M-0001-SO	1,1,2-Trichloroethane	0.68	ug/kg	8.7	UJ	070SS-0007M-0001-SO	0.57	ug/kg	7.4	U	N/A	Yes
070SS-0006M-0001-SO	1,1-Dichloroethane	0.62	ug/kg	8.7	UJ	070SS-0007M-0001-SO	0.53	ug/kg	7.4	U	N/A	Yes
070SS-0006M-0001-SO	1,1-Dichloroethene	0.9	ug/kg	8.7	UJ	070SS-0007M-0001-SO	0.77	ug/kg	7.4	U	N/A	Yes
070SS-0006M-0001-SO	1,2-Dibromoethane	0.87	ug/kg	8.7	UJ	070SS-0007M-0001-SO	0.74	ug/kg	7.4	U	N/A	Yes
070SS-0006M-0001-SO	1,2-Dichloroethane	0.59	ug/kg	8.7	UJ	070SS-0007M-0001-SO	0.5	ug/kg	7.4	U	N/A	Yes
070SS-0006M-0001-SO	1,2-Dichloroethene, Total	1.3	ug/kg	17	UJ	070SS-0007M-0001-SO	1.1	ug/kg	15	U	N/A	Yes
070SS-0006M-0001-SO	1,2-Dichloropropane	1.2	ug/kg	8.7	UJ	070SS-0007M-0001-SO	1	ug/kg	7.4	U	N/A	Yes
070SS-0006M-0001-SO	2-Butanone (MEK)	2.4	ug/kg	35	UJ	070SS-0007M-0001-SO	2.1	ug/kg	29	U	N/A	Yes
070SS-0006M-0001-SO	2-Hexanone	1.1	ug/kg	35	UJ	070SS-0007M-0001-SO	0.93	ug/kg	29	U	N/A	Yes
070SS-0006M-0001-SO	4-Methyl-2-pentanone (MIBK)	0.94	ug/kg	35	UJ	070SS-0007M-0001-SO	0.8	ug/kg	29	U	N/A	Yes
070SS-0006M-0001-SO	Acetone	11	ug/kg	35	UJ	070SS-0007M-0001-SO	28	ug/kg	29	J	N/A	Yes
070SS-0006M-0001-SO	Benzene	0.4	ug/kg	8.7	UJ	070SS-0007M-0001-SO	0.34	ug/kg	7.4	U	N/A	Yes
070SS-0006M-0001-SO	Bromochloromethane	1.2	ug/kg	8.7	UJ	070SS-0007M-0001-SO	1	ug/kg	7.4	U	N/A	Yes
070SS-0006M-0001-SO	Bromodichloromethane	0.49	ug/kg	8.7	UJ	070SS-0007M-0001-SO	0.41	ug/kg	7.4	U	N/A	Yes
070SS-0006M-0001-SO	Bromoform	0.57	ug/kg	8.7	UJ	070SS-0007M-0001-SO	0.49	ug/kg	7.4	U	N/A	Yes
070SS-0006M-0001-SO	Bromomethane	0.94	ug/kg	8.7	UJ	070SS-0007M-0001-SO	0.8	ug/kg	7.4	U	N/A	Yes
070SS-0006M-0001-SO	Carbon disulfide	0.76	ug/kg	8.7	UJ	070SS-0007M-0001-SO	0.65	ug/kg	7.4	U	N/A	Yes
070SS-0006M-0001-SO	Carbon tetrachloride	0.64	ug/kg	8.7	UJ	070SS-0007M-0001-SO	0.54	ug/kg	7.4	U	N/A	Yes
070SS-0006M-0001-SO	Chlorobenzene	0.57	ug/kg	8.7	UJ	070SS-0007M-0001-SO	0.49	ug/kg	7.4	U	N/A	Yes
070SS-0006M-0001-SO	Chloroethane	1.5	ug/kg	8.7	UJ	070SS-0007M-0001-SO	1.3	ug/kg	7.4	U	N/A	Yes

Sample	Analyte	Result	Units	LOQ	Qual	Sample	Result	Units	LOQ	Qual	RPD	W/In LOQ
070SS-0006M-0001-SO	Chloroform	0.5	ug/kg	8.7	UJ	070SS-0007M-0001-SO	0.43	ug/kg	7.4	U	N/A	Yes
070SS-0006M-0001-SO	Chloromethane	0.71	ug/kg	8.7	UJ	070SS-0007M-0001-SO	0.6	ug/kg	7.4	U	N/A	Yes
070SS-0006M-0001-SO	cis-1,3-Dichloropropene	0.59	ug/kg	8.7	UJ	070SS-0007M-0001-SO	0.5	ug/kg	7.4	U	N/A	Yes
070SS-0006M-0001-SO	Dibromochloromethane	0.95	ug/kg	8.7	UJ	070SS-0007M-0001-SO	0.81	ug/kg	7.4	U	N/A	Yes
070SS-0006M-0001-SO	Ethylbenzene	0.45	ug/kg	8.7	UJ	070SS-0007M-0001-SO	0.38	ug/kg	7.4	U	N/A	Yes
070SS-0006M-0001-SO	Methyl tert-butyl ether	0.75	ug/kg	8.7	UJ	070SS-0007M-0001-SO	0.63	ug/kg	7.4	U	N/A	Yes
070SS-0006M-0001-SO	Methylene Chloride	1.2	ug/kg	8.7	UJ	070SS-0007M-0001-SO	0.99	ug/kg	7.4	U	N/A	Yes
070SS-0006M-0001-SO	Styrene	0.26	ug/kg	8.7	UJ	070SS-0007M-0001-SO	0.22	ug/kg	7.4	U	N/A	Yes
070SS-0006M-0001-SO	Tetrachloroethene	0.9	ug/kg	8.7	UJ	070SS-0007M-0001-SO	0.77	ug/kg	7.4	U	N/A	Yes
070SS-0006M-0001-SO	Toluene	0.47	ug/kg	8.7	UJ	070SS-0007M-0001-SO	0.4	ug/kg	7.4	U	N/A	Yes
070SS-0006M-0001-SO	trans-1,3-Dichloropropene	0.94	ug/kg	8.7	UJ	070SS-0007M-0001-SO	0.8	ug/kg	7.4	U	N/A	Yes
070SS-0006M-0001-SO	Trichloroethene	0.73	ug/kg	8.7	UJ	070SS-0007M-0001-SO	0.62	ug/kg	7.4	U	N/A	Yes
070SS-0006M-0001-SO	Vinyl chloride	0.68	ug/kg	8.7	UJ	070SS-0007M-0001-SO	0.57	ug/kg	7.4	U	N/A	Yes
070SS-0006M-0001-SO	Xylenes, Total	1.2	ug/kg	17	UJ	070SS-0007M-0001-SO	0.99	ug/kg	15	U	N/A	Yes
070SS-0006M-0001-SO	1,2,4-Trichlorobenzene	130	ug/kg	250	U	070SS-0007M-0001-SO	130	ug/kg	250	U	N/A	Yes
070SS-0006M-0001-SO	1,2-Dichlorobenzene	48	ug/kg	250	U	070SS-0007M-0001-SO	48	ug/kg	250	U	N/A	Yes
070SS-0006M-0001-SO	1,3-Dichlorobenzene	54	ug/kg	250	U	070SS-0007M-0001-SO	55	ug/kg	250	U	N/A	Yes
070SS-0006M-0001-SO	1,4-Dichlorobenzene	99	ug/kg	250	U	070SS-0007M-0001-SO	99	ug/kg	250	U	N/A	Yes
070SS-0006M-0001-SO	2,4,5-Trichlorophenol	120	ug/kg	740	U	070SS-0007M-0001-SO	120	ug/kg	750	U	N/A	Yes
070SS-0006M-0001-SO	2,4,6-Trichlorophenol	390	ug/kg	740	U	070SS-0007M-0001-SO	400	ug/kg	750	U	N/A	Yes
070SS-0006M-0001-SO	2,4-Dichlorophenol	99	ug/kg	740	U	070SS-0007M-0001-SO	99	ug/kg	750	U	N/A	Yes
070SS-0006M-0001-SO	2,4-Dimethylphenol	99	ug/kg	740	U	070SS-0007M-0001-SO	99	ug/kg	750	U	N/A	Yes
070SS-0006M-0001-SO	2,4-Dinitrophenol	390	ug/kg	1600	UJ	070SS-0007M-0001-SO	400	ug/kg	1600	U	N/A	Yes
070SS-0006M-0001-SO	2,4-Dinitrotoluene	130	ug/kg	990	R	070SS-0007M-0001-SO	130	ug/kg	990	U	N/A	N/A
070SS-0006M-0001-SO	2,6-Dinitrotoluene	100	ug/kg	990	R	070SS-0007M-0001-SO	100	ug/kg	990	U	N/A	N/A
070SS-0006M-0001-SO	2-Chloronaphthalene	16	ug/kg	250	U	070SS-0007M-0001-SO	16	ug/kg	250	U	N/A	Yes
070SS-0006M-0001-SO	2-Chlorophenol	130	ug/kg	250	U	070SS-0007M-0001-SO	130	ug/kg	250	U	N/A	Yes
070SS-0006M-0001-SO	2-Methylnaphthalene	280	ug/kg	33		070SS-0007M-0001-SO	260	ug/kg	33		7	N/A
070SS-0006M-0001-SO	2-Methylphenol	390	ug/kg	990	U	070SS-0007M-0001-SO	400	ug/kg	990	U	N/A	Yes
070SS-0006M-0001-SO	2-Nitroaniline	45	ug/kg	990	U	070SS-0007M-0001-SO	45	ug/kg	990	U	N/A	Yes
070SS-0006M-0001-SO	2-Nitrophenol	130	ug/kg	250	U	070SS-0007M-0001-SO	130	ug/kg	250	U	N/A	Yes
070SS-0006M-0001-SO	3 & 4 Methylphenol	99	ug/kg	2000	U	070SS-0007M-0001-SO	99	ug/kg	2000	U	N/A	Yes
070SS-0006M-0001-SO	3,3'-Dichlorobenzidine	89	ug/kg	490	R	070SS-0007M-0001-SO	90	ug/kg	500	U	N/A	N/A
070SS-0006M-0001-SO	3-Nitroaniline	79	ug/kg	990	UJ	070SS-0007M-0001-SO	80	ug/kg	990	U	N/A	Yes
070SS-0006M-0001-SO	4,6-Dinitro-2-methylphenol	390	ug/kg	740	UJ	070SS-0007M-0001-SO	400	ug/kg	750	U	N/A	Yes
070SS-0006M-0001-SO	4-Bromophenyl phenyl ether	64	ug/kg	250	U	070SS-0007M-0001-SO	65	ug/kg	250	U	N/A	Yes

Sample	Analyte	Result	Units	LOQ	Qual	Sample	Result	Units	LOQ	Qual	RPD	W/In LOQ
070SS-0006M-0001-SO	4-Chloro-3-methylphenol	100	ug/kg	740	U	070SS-0007M-0001-SO	100	ug/kg	750	U	N/A	Yes
070SS-0006M-0001-SO	4-Chloroaniline	84	ug/kg	740	R	070SS-0007M-0001-SO	85	ug/kg	750	U	N/A	N/A
070SS-0006M-0001-SO	4-Chlorophenyl phenyl ether	64	ug/kg	250	U	070SS-0007M-0001-SO	65	ug/kg	250	U	N/A	Yes
070SS-0006M-0001-SO	4-Nitroaniline	130	ug/kg	990	UJ	070SS-0007M-0001-SO	130	ug/kg	990	U	N/A	Yes
070SS-0006M-0001-SO	4-Nitrophenol	390	ug/kg	1600	U	070SS-0007M-0001-SO	400	ug/kg	1600	U	N/A	Yes
070SS-0006M-0001-SO	Acenaphthene	40	ug/kg	33		070SS-0007M-0001-SO	68	ug/kg	33		N/A	Yes
070SS-0006M-0001-SO	Acenaphthylene	16	ug/kg	33	U	070SS-0007M-0001-SO	16	ug/kg	33	U	N/A	Yes
070SS-0006M-0001-SO	Anthracene	79	ug/kg	33		070SS-0007M-0001-SO	110	ug/kg	33		N/A	Yes
070SS-0006M-0001-SO	Benzo[a]anthracene	160	ug/kg	33		070SS-0007M-0001-SO	230	ug/kg	33		N/A	No
070SS-0006M-0001-SO	Benzo[a]pyrene	130	ug/kg	33		070SS-0007M-0001-SO	190	ug/kg	33		N/A	No
070SS-0006M-0001-SO	Benzo[b]fluoranthene	200	ug/kg	33		070SS-0007M-0001-SO	300	ug/kg	33		40	N/A
070SS-0006M-0001-SO	Benzo[g,h,i]perylene	130	ug/kg	33		070SS-0007M-0001-SO	190	ug/kg	33		N/A	No
070SS-0006M-0001-SO	Benzo[k]fluoranthene	91	ug/kg	33		070SS-0007M-0001-SO	120	ug/kg	33		N/A	Yes
070SS-0006M-0001-SO	Benzoic acid	1600	ug/kg	3300	U	070SS-0007M-0001-SO	1700	ug/kg	3300	U	N/A	Yes
070SS-0006M-0001-SO	Benzyl alcohol	100	ug/kg	1600	U	070SS-0007M-0001-SO	100	ug/kg	1600	U	N/A	Yes
070SS-0006M-0001-SO	bis (2-chloroisopropyl) ether	47	ug/kg	490	U	070SS-0007M-0001-SO	47	ug/kg	500	U	N/A	Yes
070SS-0006M-0001-SO	Bis(2-chloroethoxy)methane	110	ug/kg	490	U	070SS-0007M-0001-SO	110	ug/kg	500	U	N/A	Yes
070SS-0006M-0001-SO	Bis(2-chloroethyl)ether	9.9	ug/kg	490	U	070SS-0007M-0001-SO	9.9	ug/kg	500	U	N/A	Yes
070SS-0006M-0001-SO	Bis(2-ethylhexyl) phthalate	94	ug/kg	250	U	070SS-0007M-0001-SO	94	ug/kg	250	U	N/A	Yes
070SS-0006M-0001-SO	Butyl benzyl phthalate	49	ug/kg	250	U	070SS-0007M-0001-SO	50	ug/kg	250	U	N/A	Yes
070SS-0006M-0001-SO	Carbazole	130	ug/kg	250	U	070SS-0007M-0001-SO	130	ug/kg	250	U	N/A	Yes
070SS-0006M-0001-SO	Chrysene	200	ug/kg	33		070SS-0007M-0001-SO	270	ug/kg	33		30	N/A
070SS-0006M-0001-SO	Dibenz(a,h)anthracene	16	ug/kg	33	U	070SS-0007M-0001-SO	16	ug/kg	33	U	N/A	Yes
070SS-0006M-0001-SO	Dibenzofuran	88	ug/kg	250	J	070SS-0007M-0001-SO	100	ug/kg	250	J	N/A	Yes
070SS-0006M-0001-SO	Diethyl phthalate	79	ug/kg	250	U	070SS-0007M-0001-SO	80	ug/kg	250	U	N/A	Yes
070SS-0006M-0001-SO	Dimethyl phthalate	84	ug/kg	250	U	070SS-0007M-0001-SO	85	ug/kg	250	U	N/A	Yes
070SS-0006M-0001-SO	Di-n-butyl phthalate	74	ug/kg	250	U	070SS-0007M-0001-SO	75	ug/kg	250	U	N/A	Yes
070SS-0006M-0001-SO	Di-n-octyl phthalate	130	ug/kg	250	U	070SS-0007M-0001-SO	130	ug/kg	250	U	N/A	Yes
070SS-0006M-0001-SO	Fluoranthene	370	ug/kg	33		070SS-0007M-0001-SO	610	ug/kg	33		49	N/A
070SS-0006M-0001-SO	Fluorene	38	ug/kg	33		070SS-0007M-0001-SO	77	ug/kg	33		N/A	No
070SS-0006M-0001-SO	Hexachlorobenzene	10	ug/kg	33	U	070SS-0007M-0001-SO	10	ug/kg	33	U	N/A	Yes
070SS-0006M-0001-SO	Hexachlorobutadiene	130	ug/kg	250	U	070SS-0007M-0001-SO	130	ug/kg	250	U	N/A	Yes
070SS-0006M-0001-SO	Hexachlorocyclopentadiene	130	ug/kg	1600	U	070SS-0007M-0001-SO	130	ug/kg	1600	U	N/A	Yes
070SS-0006M-0001-SO	Hexachloroethane	44	ug/kg	250	U	070SS-0007M-0001-SO	45	ug/kg	250	U	N/A	Yes
070SS-0006M-0001-SO	Indeno[1,2,3-cd]pyrene	90	ug/kg	33		070SS-0007M-0001-SO	110	ug/kg	33		N/A	Yes
070SS-0006M-0001-SO	Isophorone	64	ug/kg	250	U	070SS-0007M-0001-SO	65	ug/kg	250	U	N/A	Yes

Sample	Analyte	Result	Units	LOQ	Qual	Sample	Result	Units	LOQ	Qual	RPD	W/In LOQ
070SS-0006M-0001-SO	Naphthalene	220	ug/kg	33		070SS-0007M-0001-SO	220	ug/kg	33		0	N/A
070SS-0006M-0001-SO	Nitrobenzene	11	ug/kg	490	U	070SS-0007M-0001-SO	11	ug/kg	500	U	N/A	Yes
070SS-0006M-0001-SO	N-Nitrosodi-n-propylamine	130	ug/kg	250	U	070SS-0007M-0001-SO	130	ug/kg	250	U	N/A	Yes
070SS-0006M-0001-SO	N-Nitrosodiphenylamine	100	ug/kg	250	U	070SS-0007M-0001-SO	100	ug/kg	250	U	N/A	Yes
070SS-0006M-0001-SO	Pentachlorophenol	390	ug/kg	740	R	070SS-0007M-0001-SO	400	ug/kg	750	U	N/A	N/A
070SS-0006M-0001-SO	Phenanthrene	420	ug/kg	33		070SS-0007M-0001-SO	650	ug/kg	33		43	N/A
070SS-0006M-0001-SO	Phenol	130	ug/kg	250	U	070SS-0007M-0001-SO	130	ug/kg	250	U	N/A	Yes
070SS-0006M-0001-SO	Pyrene	280	ug/kg	33		070SS-0007M-0001-SO	480	ug/kg	33		53	N/A
070SS-0006M-0001-SO	Nitroguanidine	0.019	mg/kg	0.24	U	070SS-0007M-0001-SO	0.019	mg/kg	0.24	U	N/A	Yes

Sample	Analyte	Result	Units	LOQ	LOD	Qual	Sample	Result	LOQ	LOD	Qual	RPD	W/In LOQ
071SB-0013M-0001-SO	Diesel	20	mg/kg	41	15	J	071SB-0014M-0001-SO	21	41	15	J	N/A	Yes
071SB-0013M-0001-SO	Gasoline	2.6	mg/kg	5.3	2.6	U	071SB-0014M-0001-SO	2.8	5.6	2.8	U	N/A	Yes
071SB-0013M-0001-SO	LEAD	9	mg/kg	1.3	0.64	J-	071SB-0014M-0001-SO	11	1.3	0.65		20	N/A
071SB-0013M-0001-SO	1,1,1-TRICHLOROETHANE	0.93	ug/kg	1.9	0.93	U	071SB-0014M-0001-SO	0.93	1.9	0.93	U	N/A	Yes
071SB-0013M-0001-SO	1,1,2,2-TETRACHLOROETHANE	0.93	ug/kg	1.9	0.93	U	071SB-0014M-0001-SO	0.93	1.9	0.93	U	N/A	Yes
071SB-0013M-0001-SO	1,1,2-TRICHLOROETHANE	0.93	ug/kg	1.9	0.93	U	071SB-0014M-0001-SO	0.93	1.9	0.93	U	N/A	Yes
071SB-0013M-0001-SO	1,1-DICHLOROETHANE	0.93	ug/kg	1.9	0.93	U	071SB-0014M-0001-SO	0.93	1.9	0.93	U	N/A	Yes
071SB-0013M-0001-SO	1,1-DICHLOROETHENE	0.93	ug/kg	1.9	0.93	U	071SB-0014M-0001-SO	0.93	1.9	0.93	U	N/A	Yes
071SB-0013M-0001-SO	1,2-DIBROMOETHANE	0.93	ug/kg	1.9	0.93	U	071SB-0014M-0001-SO	0.93	1.9	0.93	U	N/A	Yes
071SB-0013M-0001-SO	1,2-DICHLOROETHANE	0.93	ug/kg	1.9	0.93	U	071SB-0014M-0001-SO	0.93	1.9	0.93	U	N/A	Yes
071SB-0013M-0001-SO	1,2-Dichloroethene, Total	0.93	ug/kg	1.9	0.93	U	071SB-0014M-0001-SO	0.93	1.9	0.93	U	N/A	Yes
071SB-0013M-0001-SO	1,2-DICHLOROPROPANE	0.93	ug/kg	1.9	0.93	U	071SB-0014M-0001-SO	0.93	1.9	0.93	U	N/A	Yes
071SB-0013M-0001-SO	2-Butanone (MEK)	9.3	ug/kg	19	9.3	U	071SB-0014M-0001-SO	9.3	19	9.3	U	N/A	Yes
071SB-0013M-0001-SO	2-HEXANONE	19	ug/kg	37	19	U	071SB-0014M-0001-SO	19	37	19	U	N/A	Yes
071SB-0013M-0001-SO	4-Methyl-2-pentanone (MIBK)	9.3	ug/kg	19	9.3	U	071SB-0014M-0001-SO	9.3	19	9.3	U	N/A	Yes
071SB-0013M-0001-SO	ACETONE	9.3	ug/kg	19	9.3	U	071SB-0014M-0001-SO	9.3	19	9.3	U	N/A	Yes
071SB-0013M-0001-SO	BENZENE	0.93	ug/kg	1.9	0.93	U	071SB-0014M-0001-SO	0.93	1.9	0.93	U	N/A	Yes
071SB-0013M-0001-SO	BROMOCHLOROMETHANE	0.93	ug/kg	1.9	0.93	U	071SB-0014M-0001-SO	0.93	1.9	0.93	U	N/A	Yes
071SB-0013M-0001-SO	BROMODICHLOROMETHANE	0.93	ug/kg	1.9	0.93	U	071SB-0014M-0001-SO	0.93	1.9	0.93	U	N/A	Yes
071SB-0013M-0001-SO	BROMOFORM	0.93	ug/kg	1.9	0.93	U	071SB-0014M-0001-SO	0.93	1.9	0.93	U	N/A	Yes
071SB-0013M-0001-SO	BROMOMETHANE	0.93	ug/kg	1.9	0.93	UJ	071SB-0014M-0001-SO	0.93	1.9	0.93	U	N/A	Yes
071SB-0013M-0001-SO	CARBON DISULFIDE	1.9	ug/kg	3.7	1.9	U	071SB-0014M-0001-SO	1.9	3.7	1.9	U	N/A	Yes
071SB-0013M-0001-SO	CARBON TETRACHLORIDE	0.93	ug/kg	1.9	0.93	U	071SB-0014M-0001-SO	0.93	1.9	0.93	U	N/A	Yes
071SB-0013M-0001-SO	CHLOROBENZENE	0.93	ug/kg	1.9	0.93	U	071SB-0014M-0001-SO	0.93	1.9	0.93	U	N/A	Yes
071SB-0013M-0001-SO	CHLOROETHANE	0.93	ug/kg	1.9	0.93	U	071SB-0014M-0001-SO	0.93	1.9	0.93	U	N/A	Yes
071SB-0013M-0001-SO	CHLOROFORM	0.93	ug/kg	1.9	0.93	U	071SB-0014M-0001-SO	0.93	1.9	0.93	U	N/A	Yes
071SB-0013M-0001-SO	CHLOROMETHANE	0.93	ug/kg	1.9	0.93	U	071SB-0014M-0001-SO	0.93	1.9	0.93	U	N/A	Yes
071SB-0013M-0001-SO	CIS-1,2-DICHLOROETHYLENE	0.93	ug/kg	1.9	0.93	U	071SB-0014M-0001-SO	0.93	1.9	0.93	U	N/A	Yes
071SB-0013M-0001-SO	CIS-1,3-DICHLOROPROPENE	0.93	ug/kg	1.9	0.93	U	071SB-0014M-0001-SO	0.93	1.9	0.93	U	N/A	Yes
071SB-0013M-0001-SO	DIBROMOCHLOROMETHANE	0.93	ug/kg	1.9	0.93	U	071SB-0014M-0001-SO	0.93	1.9	0.93	U	N/A	Yes
071SB-0013M-0001-SO	ETHYLBENZENE	0.93	ug/kg	1.9	0.93	U	071SB-0014M-0001-SO	0.93	1.9	0.93	U	N/A	Yes
071SB-0013M-0001-SO	Methyl tert-butyl ether	0.93	ug/kg	1.9	0.93	U	071SB-0014M-0001-SO	0.93	1.9	0.93	U	N/A	Yes
071SB-0013M-0001-SO	METHYLENE CHLORIDE	9.9	ug/kg	9.9	1.9	UJ	071SB-0014M-0001-SO	1.9	9.3	1.9	J	N/A	Yes
071SB-0013M-0001-SO	STYRENE	0.93	ug/kg	1.9	0.93	U	071SB-0014M-0001-SO	0.93	1.9	0.93	U	N/A	Yes
071SB-0013M-0001-SO	TETRACHLOROETHYLENE	0.93	ug/kg	1.9	0.93	U	071SB-0014M-0001-SO	0.93	1.9	0.93	U	N/A	Yes
071SB-0013M-0001-SO	TOLUENE	0.93	ug/kg	1.9	0.93	U	071SB-0014M-0001-SO	0.93	1.9	0.93	U	N/A	Yes

Sample	Analyte	Result	Units	LOQ	LOD	Qual	Sample	Result	LOQ	LOD	Qual	RPD	W/In LOQ
071SB-0013M-0001-SO	TRANS-1,2-DICHLOROETHENE	0.93	ug/kg	1.9	0.93	U	071SB-0014M-0001-SO	0.93	1.9	0.93	U	N/A	Yes
071SB-0013M-0001-SO	TRANS-1,3-DICHLOROPROPENE	0.93	ug/kg	1.9	0.93	U	071SB-0014M-0001-SO	0.93	1.9	0.93	U	N/A	Yes
071SB-0013M-0001-SO	TRICHLOROETHYLENE	0.93	ug/kg	1.9	0.93	U	071SB-0014M-0001-SO	0.93	1.9	0.93	U	N/A	Yes
071SB-0013M-0001-SO	VINYL CHLORIDE	0.93	ug/kg	1.9	0.93	U	071SB-0014M-0001-SO	0.93	1.9	0.93	U	N/A	Yes
071SB-0013M-0001-SO	Xylenes, Total	1.9	ug/kg	3.7	1.9	U	071SB-0014M-0001-SO	1.9	3.7	1.9	U	N/A	Yes
071SB-0013M-0001-SO	1,2,4-TRICHLOROBENZENE	62	ug/kg	120	62	U	071SB-0014M-0001-SO	62	120	62	U	N/A	Yes
071SB-0013M-0001-SO	1,2-DICHLOROBENZENE	62	ug/kg	120	62	U	071SB-0014M-0001-SO	62	120	62	U	N/A	Yes
071SB-0013M-0001-SO	1,3-DICHLOROBENZENE	62	ug/kg	120	62	U	071SB-0014M-0001-SO	62	120	62	U	N/A	Yes
071SB-0013M-0001-SO	1,4-DICHLOROBENZENE	62	ug/kg	120	62	U	071SB-0014M-0001-SO	62	120	62	U	N/A	Yes
071SB-0013M-0001-SO	2,2'-OXYBIS(1-CHLORO)PROPANE	62	ug/kg	120	62	U	071SB-0014M-0001-SO	62	120	62	U	N/A	Yes
071SB-0013M-0001-SO	2,4,5-TRICHLOROPHENOL	310	ug/kg	620	310	U	071SB-0014M-0001-SO	310	620	310	U	N/A	Yes
071SB-0013M-0001-SO	2,4,6-TRICHLOROPHENOL	310	ug/kg	620	310	U	071SB-0014M-0001-SO	310	620	310	U	N/A	Yes
071SB-0013M-0001-SO	2,4-DICHLOROPHENOL	310	ug/kg	620	310	U	071SB-0014M-0001-SO	310	620	310	U	N/A	Yes
071SB-0013M-0001-SO	2,4-DIMETHYLPHENOL	310	ug/kg	620	310	U	071SB-0014M-0001-SO	310	620	310	U	N/A	Yes
071SB-0013M-0001-SO	2,4-DINITROPHENOL	310	ug/kg	1000	310	U	071SB-0014M-0001-SO	310	1000	310	U	N/A	Yes
071SB-0013M-0001-SO	2,4-DINITROTOLUENE	62	ug/kg	120	62	U	071SB-0014M-0001-SO	62	120	62	U	N/A	Yes
071SB-0013M-0001-SO	2,6-DINITROTOLUENE	62	ug/kg	120	62	U	071SB-0014M-0001-SO	62	120	62	U	N/A	Yes
071SB-0013M-0001-SO	2-CHLORONAPHTHALENE	62	ug/kg	120	62	U	071SB-0014M-0001-SO	62	120	62	U	N/A	Yes
071SB-0013M-0001-SO	2-CHLOROPHENOL	620	ug/kg	2100	620	U	071SB-0014M-0001-SO	620	2100	620	U	N/A	Yes
071SB-0013M-0001-SO	2-METHYLNAPHTHALENE	2.9	ug/kg	1.5	0.82		071SB-0014M-0001-SO	3.2	1.5	0.82		N/A	Yes
071SB-0013M-0001-SO	2-METHYLPHENOL	620	ug/kg	2100	620	U	071SB-0014M-0001-SO	620	2100	620	U	N/A	Yes
071SB-0013M-0001-SO	2-NITROANILINE	62	ug/kg	120	62	U	071SB-0014M-0001-SO	62	120	62	U	N/A	Yes
071SB-0013M-0001-SO	2-NITROPHENOL	310	ug/kg	1000	310	U	071SB-0014M-0001-SO	310	1000	310	U	N/A	Yes
071SB-0013M-0001-SO	3 & 4 Methylphenol	1100	ug/kg	3700	1100	U	071SB-0014M-0001-SO	1100	3700	1100	U	N/A	Yes
071SB-0013M-0001-SO	3,3'-DICHLOROBENZIDINE	150	ug/kg	510	150	U	071SB-0014M-0001-SO	150	510	150	U	N/A	Yes
071SB-0013M-0001-SO	3-NITROANILINE	62	ug/kg	120	62	U	071SB-0014M-0001-SO	62	120	62	U	N/A	Yes
071SB-0013M-0001-SO	4,6-DINITRO-2-METHYLPHENOL	310	ug/kg	1000	310	UJ	071SB-0014M-0001-SO	310	1000	310	U	N/A	Yes
071SB-0013M-0001-SO	4-BROMOPHENYL PHENYL ETHER	62	ug/kg	120	62	U	071SB-0014M-0001-SO	62	120	62	U	N/A	Yes
071SB-0013M-0001-SO	4-CHLORO-3-METHYLPHENOL	620	ug/kg	2100	620	U	071SB-0014M-0001-SO	620	2100	620	U	N/A	Yes
071SB-0013M-0001-SO	4-CHLOROANILINE	62	ug/kg	210	62	U	071SB-0014M-0001-SO	62	210	62	U	N/A	Yes
071SB-0013M-0001-SO	4-CHLOROPHENYL PHENYL ETHER	62	ug/kg	120	62	U	071SB-0014M-0001-SO	62	120	62	U	N/A	Yes
071SB-0013M-0001-SO	4-NITROANILINE	62	ug/kg	120	62	U	071SB-0014M-0001-SO	62	120	62	U	N/A	Yes
071SB-0013M-0001-SO	4-NITROPHENOL	620	ug/kg	2100	620	U	071SB-0014M-0001-SO	620	2100	620	U	N/A	Yes
071SB-0013M-0001-SO	ACENAPHTHENE	1	ug/kg	1.5	0.82	J	071SB-0014M-0001-SO	1.1	1.5	0.82	J	N/A	Yes
071SB-0013M-0001-SO	ACENAPHTHYLENE	0.82	ug/kg	1.5	0.82	U	071SB-0014M-0001-SO	0.82	1.5	0.82	U	N/A	Yes
071SB-0013M-0001-SO	ANTHRACENE	0.82	ug/kg	1.5	0.82	U	071SB-0014M-0001-SO	0.82	1.5	0.82	U	N/A	Yes

Sample	Analyte	Result	Units	LOQ	LOD	Qual	Sample	Result	LOQ	LOD	Qual	RPD	W/In LOQ
071SB-0013M-0001-SO	Benzo[a]anthracene	0.90	ug/kg	1.5	0.90	U	071SB-0014M-0001-SO	1.2	1.5	0.82	J	N/A	Yes
071SB-0013M-0001-SO	Benzo[a]pyrene	0.29	ug/kg	1.5	0.82	J	071SB-0014M-0001-SO	0.52	1.5	0.82	J	N/A	Yes
071SB-0013M-0001-SO	Benzo[b]fluoranthene	2.3	ug/kg	1.5	0.82		071SB-0014M-0001-SO	2.8	1.5	0.82		N/A	Yes
071SB-0013M-0001-SO	Benzo[g,h,i]perylene	1.8	ug/kg	1.5	0.82		071SB-0014M-0001-SO	2.2	1.5	0.82		N/A	Yes
071SB-0013M-0001-SO	Benzo[k]fluoranthene	0.82	ug/kg	1.5	0.82	U	071SB-0014M-0001-SO	1.7	1.5	0.82		N/A	Yes
071SB-0013M-0001-SO	BENZOIC ACID	1500	ug/kg	3100	1500	UJ	071SB-0014M-0001-SO	1500	3100	1500	U	N/A	Yes
071SB-0013M-0001-SO	BENZYL ALCOHOL	120	ug/kg	410	120	R	071SB-0014M-0001-SO	120	410	120	U	N/A	N/A
071SB-0013M-0001-SO	BENZYL BUTYL PHTHALATE	120	ug/kg	410	120	U	071SB-0014M-0001-SO	120	410	120	U	N/A	Yes
071SB-0013M-0001-SO	BIS(2-CHLOROETHOXY) METHANE	62	ug/kg	120	62	U	071SB-0014M-0001-SO	62	120	62	U	N/A	Yes
071SB-0013M-0001-SO	BIS(2-CHLOROETHYL) ETHER	62	ug/kg	120	62	U	071SB-0014M-0001-SO	62	120	62	U	N/A	Yes
071SB-0013M-0001-SO	CARBAZOLE	62	ug/kg	120	62	U	071SB-0014M-0001-SO	62	120	62	U	N/A	Yes
071SB-0013M-0001-SO	CHRYSENE	4.3	ug/kg	1.5	0.82		071SB-0014M-0001-SO	5.1	1.5	0.82		N/A	Yes
071SB-0013M-0001-SO	DIBENZ(A,H)ANTHRACENE	0.82	ug/kg	1.5	0.82	U	071SB-0014M-0001-SO	0.82	1.5	0.82	U	N/A	Yes
071SB-0013M-0001-SO	DIBENZOFURAN	62	ug/kg	120	62	U	071SB-0014M-0001-SO	62	120	62	U	N/A	Yes
071SB-0013M-0001-SO	DIETHYL PHTHALATE	120	ug/kg	410	120	U	071SB-0014M-0001-SO	120	410	120	U	N/A	Yes
071SB-0013M-0001-SO	DIMETHYL PHTHALATE	120	ug/kg	410	120	U	071SB-0014M-0001-SO	120	410	120	U	N/A	Yes
071SB-0013M-0001-SO	DI-N-BUTYL PHTHALATE	120	ug/kg	410	120	U	071SB-0014M-0001-SO	120	410	120	U	N/A	Yes
071SB-0013M-0001-SO	DI-N-OCTYLPHTHALATE	62	ug/kg	210	62	U	071SB-0014M-0001-SO	62	210	62	U	N/A	Yes
071SB-0013M-0001-SO	FLUORANTHENE	0.82	ug/kg	1.5	0.82	J	071SB-0014M-0001-SO	1.2	1.5	0.82	J	N/A	Yes
071SB-0013M-0001-SO	FLUORENE	0.93	ug/kg	1.5	0.82	J	071SB-0014M-0001-SO	1.1	1.5	0.82	J	N/A	Yes
071SB-0013M-0001-SO	HEXACHLOROBENZENE	62	ug/kg	120	62	U	071SB-0014M-0001-SO	62	120	62	U	N/A	Yes
071SB-0013M-0001-SO	HEXACHLOROBUTADIENE	120	ug/kg	410	120	U	071SB-0014M-0001-SO	120	410	120	U	N/A	Yes
071SB-0013M-0001-SO	HEXACHLOROCYCLOPENTADIENE	62	ug/kg	210	62	UJ	071SB-0014M-0001-SO	62	210	62	U	N/A	Yes
071SB-0013M-0001-SO	HEXACHLOROETHANE	62	ug/kg	120	62	U	071SB-0014M-0001-SO	62	120	62	U	N/A	Yes
071SB-0013M-0001-SO	Indeno[1,2,3-cd]pyrene	0.52	ug/kg	1.5	0.82	J	071SB-0014M-0001-SO	0.71	1.5	0.82	J	N/A	Yes
071SB-0013M-0001-SO	ISOPHORONE	62	ug/kg	210	62	U	071SB-0014M-0001-SO	62	210	62	U	N/A	Yes
071SB-0013M-0001-SO	NAPHTHALENE	3.7	ug/kg	1.5	0.82		071SB-0014M-0001-SO	0.82	1.5	0.82	J	N/A	No
071SB-0013M-0001-SO	NITROBENZENE	62	ug/kg	210	62	U	071SB-0014M-0001-SO	62	210	62	U	N/A	Yes
071SB-0013M-0001-SO	N-NITROSODI-N-PROPYLAMINE	120	ug/kg	410	120	U	071SB-0014M-0001-SO	120	410	120	U	N/A	Yes
071SB-0013M-0001-SO	N-NITROSODIPHENYLAMINE	120	ug/kg	250	120	U	071SB-0014M-0001-SO	120	250	120	U	N/A	Yes
071SB-0013M-0001-SO	PENTACHLOROPHENOL	310	ug/kg	1000	310	U	071SB-0014M-0001-SO	310	1000	310	U	N/A	Yes
071SB-0013M-0001-SO	PHENANTHRENE	4.0	ug/kg	1.5	4.0	U	071SB-0014M-0001-SO	4.1	1.5	0.82		N/A	Yes
071SB-0013M-0001-SO	PHENOL	310	ug/kg	620	310	U	071SB-0014M-0001-SO	310	620	310	U	N/A	Yes
071SB-0013M-0001-SO	PYRENE	1.2	ug/kg	1.5	0.82	J	071SB-0014M-0001-SO	1.4	1.5	0.82	J	N/A	Yes
071SB-0018M-0001-SO	Diesel	19	mg/kg	41	15	J	071SB-0019M-0001-SO	22	41	15	J	N/A	Yes
071SB-0018M-0001-SO	Gasoline	2.6	mg/kg	5.3	2.6	U	071SB-0019M-0001-SO	2.8	5.7	2.8	U	N/A	Yes

Sample	Analyte	Result	Units	LOQ	LOD	Qual	Sample	Result	LOQ	LOD	Qual	RPD	W/In LOQ
071SB-0018M-0001-SO	LEAD	8.8	mg/kg	1.2	0.62	J-	071SB-0019M-0001-SO	8.2	0.25	0.13		N/A	Yes
071SB-0018M-0001-SO	1,1,1-TRICHLOROETHANE	0.86	ug/kg	1.7	0.86	U	071SB-0019M-0001-SO	0.97	1.9	0.97	U	N/A	Yes
071SB-0018M-0001-SO	1,1,2,2-TETRACHLOROETHANE	0.86	ug/kg	1.7	0.86	U	071SB-0019M-0001-SO	0.97	1.9	0.97	U	N/A	Yes
071SB-0018M-0001-SO	1,1,2-TRICHLOROETHANE	0.86	ug/kg	1.7	0.86	U	071SB-0019M-0001-SO	0.97	1.9	0.97	U	N/A	Yes
071SB-0018M-0001-SO	1,1-DICHLOROETHANE	0.86	ug/kg	1.7	0.86	U	071SB-0019M-0001-SO	0.97	1.9	0.97	U	N/A	Yes
071SB-0018M-0001-SO	1,1-DICHLOROETHENE	0.86	ug/kg	1.7	0.86	U	071SB-0019M-0001-SO	0.97	1.9	0.97	U	N/A	Yes
071SB-0018M-0001-SO	1,2-DIBROMOETHANE	0.86	ug/kg	1.7	0.86	U	071SB-0019M-0001-SO	0.97	1.9	0.97	U	N/A	Yes
071SB-0018M-0001-SO	1,2-DICHLOROETHANE	0.86	ug/kg	1.7	0.86	U	071SB-0019M-0001-SO	0.97	1.9	0.97	U	N/A	Yes
071SB-0018M-0001-SO	1,2-Dichloroethene, Total	0.86	ug/kg	1.7	0.86	U	071SB-0019M-0001-SO	0.97	1.9	0.97	U	N/A	Yes
071SB-0018M-0001-SO	1,2-DICHLOROPROPANE	0.86	ug/kg	1.7	0.86	U	071SB-0019M-0001-SO	0.97	1.9	0.97	U	N/A	Yes
071SB-0018M-0001-SO	2-Butanone (MEK)	8.6	ug/kg	17	8.6	U	071SB-0019M-0001-SO	9.7	19	9.7	U	N/A	Yes
071SB-0018M-0001-SO	2-HEXANONE	17	ug/kg	35	17	U	071SB-0019M-0001-SO	19	39	19	U	N/A	Yes
071SB-0018M-0001-SO	4-Methyl-2-pentanone (MIBK)	8.6	ug/kg	17	8.6	U	071SB-0019M-0001-SO	9.7	19	9.7	U	N/A	Yes
071SB-0018M-0001-SO	ACETONE	8.6	ug/kg	17	8.6	U	071SB-0019M-0001-SO	9.7	19	9.7	U	N/A	Yes
071SB-0018M-0001-SO	BENZENE	0.86	ug/kg	1.7	0.86	U	071SB-0019M-0001-SO	0.97	1.9	0.97	U	N/A	Yes
071SB-0018M-0001-SO	BROMOCHLOROMETHANE	0.86	ug/kg	1.7	0.86	U	071SB-0019M-0001-SO	0.97	1.9	0.97	U	N/A	Yes
071SB-0018M-0001-SO	BROMODICHLOROMETHANE	0.86	ug/kg	1.7	0.86	U	071SB-0019M-0001-SO	0.97	1.9	0.97	U	N/A	Yes
071SB-0018M-0001-SO	BROMOFORM	0.86	ug/kg	1.7	0.86	U	071SB-0019M-0001-SO	0.97	1.9	0.97	U	N/A	Yes
071SB-0018M-0001-SO	BROMOMETHANE	0.86	ug/kg	1.7	0.86	UJ	071SB-0019M-0001-SO	0.97	1.9	0.97	U	N/A	Yes
071SB-0018M-0001-SO	CARBON DISULFIDE	1.7	ug/kg	3.5	1.7	U	071SB-0019M-0001-SO	1.9	3.9	1.9	U	N/A	Yes
071SB-0018M-0001-SO	CARBON TETRACHLORIDE	0.86	ug/kg	1.7	0.86	U	071SB-0019M-0001-SO	0.97	1.9	0.97	U	N/A	Yes
071SB-0018M-0001-SO	CHLOROBENZENE	0.86	ug/kg	1.7	0.86	U	071SB-0019M-0001-SO	0.97	1.9	0.97	U	N/A	Yes
071SB-0018M-0001-SO	CHLOROETHANE	0.86	ug/kg	1.7	0.86	U	071SB-0019M-0001-SO	0.97	1.9	0.97	U	N/A	Yes
071SB-0018M-0001-SO	CHLOROFORM	0.86	ug/kg	1.7	0.86	U	071SB-0019M-0001-SO	0.97	1.9	0.97	U	N/A	Yes
071SB-0018M-0001-SO	CHLOROMETHANE	0.86	ug/kg	1.7	0.86	U	071SB-0019M-0001-SO	0.97	1.9	0.97	U	N/A	Yes
071SB-0018M-0001-SO	CIS-1,2-DICHLOROETHYLENE	0.86	ug/kg	1.7	0.86	U	071SB-0019M-0001-SO	0.97	1.9	0.97	U	N/A	Yes
071SB-0018M-0001-SO	CIS-1,3-DICHLOROPROPENE	0.86	ug/kg	1.7	0.86	U	071SB-0019M-0001-SO	0.97	1.9	0.97	U	N/A	Yes
071SB-0018M-0001-SO	DIBROMOCHLOROMETHANE	0.86	ug/kg	1.7	0.86	U	071SB-0019M-0001-SO	0.97	1.9	0.97	U	N/A	Yes
071SB-0018M-0001-SO	ETHYLBENZENE	0.86	ug/kg	1.7	0.86	U	071SB-0019M-0001-SO	0.97	1.9	0.97	U	N/A	Yes
071SB-0018M-0001-SO	Methyl tert-butyl ether	0.86	ug/kg	1.7	0.86	U	071SB-0019M-0001-SO	0.97	1.9	0.97	U	N/A	Yes
071SB-0018M-0001-SO	METHYLENE CHLORIDE	6.3	ug/kg	8.6	1.7	UJ	071SB-0019M-0001-SO	1.9	9.7	1.9	J	N/A	Yes
071SB-0018M-0001-SO	STYRENE	0.86	ug/kg	1.7	0.86	U	071SB-0019M-0001-SO	0.97	1.9	0.97	U	N/A	Yes
071SB-0018M-0001-SO	TETRACHLOROETHYLENE	0.86	ug/kg	1.7	0.86	U	071SB-0019M-0001-SO	0.97	1.9	0.97	U	N/A	Yes
071SB-0018M-0001-SO	TOLUENE	0.86	ug/kg	1.7	0.86	U	071SB-0019M-0001-SO	0.97	1.9	0.97	U	N/A	Yes
071SB-0018M-0001-SO	TRANS-1,2-DICHLOROETHENE	0.86	ug/kg	1.7	0.86	U	071SB-0019M-0001-SO	0.97	1.9	0.97	U	N/A	Yes
071SB-0018M-0001-SO	TRANS-1,3-DICHLOROPROPENE	0.86	ug/kg	1.7	0.86	U	071SB-0019M-0001-SO	0.97	1.9	0.97	U	N/A	Yes

Sample	Analyte	Result	Units	LOQ	LOD	Qual	Sample	Result	LOQ	LOD	Qual	RPD	W/In LOQ
071SB-0018M-0001-SO	TRICHLOROETHYLENE	0.86	ug/kg	1.7	0.86	U	071SB-0019M-0001-SO	0.97	1.9	0.97	U	N/A	Yes
071SB-0018M-0001-SO	VINYL CHLORIDE	0.86	ug/kg	1.7	0.86	U	071SB-0019M-0001-SO	0.97	1.9	0.97	U	N/A	Yes
071SB-0018M-0001-SO	Xylenes, Total	1.7	ug/kg	3.5	1.7	U	071SB-0019M-0001-SO	1.9	3.9	1.9	U	N/A	Yes
071SB-0018M-0001-SO	1,2,4-TRICHLOROBENZENE	61	ug/kg	120	61	U	071SB-0019M-0001-SO	62	120	62	U	N/A	Yes
071SB-0018M-0001-SO	1,2-DICHLOROBENZENE	61	ug/kg	120	61	U	071SB-0019M-0001-SO	62	120	62	U	N/A	Yes
071SB-0018M-0001-SO	1,3-DICHLOROBENZENE	61	ug/kg	120	61	U	071SB-0019M-0001-SO	62	120	62	U	N/A	Yes
071SB-0018M-0001-SO	1,4-DICHLOROBENZENE	61	ug/kg	120	61	U	071SB-0019M-0001-SO	62	120	62	U	N/A	Yes
071SB-0018M-0001-SO	2,2'-OXYBIS(1-CHLORO)PROPANE	61	ug/kg	120	61	U	071SB-0019M-0001-SO	62	120	62	U	N/A	Yes
071SB-0018M-0001-SO	2,4,5-TRICHLOROPHENOL	310	ug/kg	610	310	U	071SB-0019M-0001-SO	310	620	310	U	N/A	Yes
071SB-0018M-0001-SO	2,4,6-TRICHLOROPHENOL	310	ug/kg	610	310	U	071SB-0019M-0001-SO	310	620	310	U	N/A	Yes
071SB-0018M-0001-SO	2,4-DICHLOROPHENOL	310	ug/kg	610	310	U	071SB-0019M-0001-SO	310	620	310	U	N/A	Yes
071SB-0018M-0001-SO	2,4-DIMETHYLPHENOL	310	ug/kg	610	310	U	071SB-0019M-0001-SO	310	620	310	U	N/A	Yes
071SB-0018M-0001-SO	2,4-DINITROPHENOL	310	ug/kg	1000	310	U	071SB-0019M-0001-SO	310	1000	310	U	N/A	Yes
071SB-0018M-0001-SO	2,4-DINITROTOLUENE	61	ug/kg	120	61	U	071SB-0019M-0001-SO	62	120	62	U	N/A	Yes
071SB-0018M-0001-SO	2,6-DINITROTOLUENE	61	ug/kg	120	61	U	071SB-0019M-0001-SO	62	120	62	U	N/A	Yes
071SB-0018M-0001-SO	2-CHLORONAPHTHALENE	61	ug/kg	120	61	U	071SB-0019M-0001-SO	62	120	62	U	N/A	Yes
071SB-0018M-0001-SO	2-CHLOROPHENOL	610	ug/kg	2000	610	U	071SB-0019M-0001-SO	620	2100	620	U	N/A	Yes
071SB-0018M-0001-SO	2-METHYLNAPHTHALENE	3	ug/kg	1.5	0.82		071SB-0019M-0001-SO	3.9	1.5	0.82		N/A	Yes
071SB-0018M-0001-SO	2-METHYLPHENOL	610	ug/kg	2000	610	U	071SB-0019M-0001-SO	620	2100	620	U	N/A	Yes
071SB-0018M-0001-SO	2-NITROANILINE	61	ug/kg	120	61	U	071SB-0019M-0001-SO	62	120	62	U	N/A	Yes
071SB-0018M-0001-SO	2-NITROPHENOL	310	ug/kg	1000	310	U	071SB-0019M-0001-SO	310	1000	310	U	N/A	Yes
071SB-0018M-0001-SO	3 & 4 Methylphenol	1100	ug/kg	3700	1100	U	071SB-0019M-0001-SO	1100	3700	1100	U	N/A	Yes
071SB-0018M-0001-SO	3,3'-DICHLOROBENZIDINE	150	ug/kg	510	150	U	071SB-0019M-0001-SO	150	510	150	U	N/A	Yes
071SB-0018M-0001-SO	3-NITROANILINE	61	ug/kg	120	61	U	071SB-0019M-0001-SO	62	120	62	U	N/A	Yes
071SB-0018M-0001-SO	4,6-DINITRO-2-METHYLPHENOL	310	ug/kg	1000	310	UJ	071SB-0019M-0001-SO	310	1000	310	U	N/A	Yes
071SB-0018M-0001-SO	4-BROMOPHENYL PHENYL ETHER	61	ug/kg	120	61	U	071SB-0019M-0001-SO	62	120	62	U	N/A	Yes
071SB-0018M-0001-SO	4-CHLORO-3-METHYLPHENOL	610	ug/kg	2000	610	U	071SB-0019M-0001-SO	620	2100	620	U	N/A	Yes
071SB-0018M-0001-SO	4-CHLOROANILINE	61	ug/kg	200	61	U	071SB-0019M-0001-SO	62	210	62	U	N/A	Yes
071SB-0018M-0001-SO	4-CHLOROPHENYL PHENYL ETHER	61	ug/kg	120	61	U	071SB-0019M-0001-SO	62	120	62	U	N/A	Yes
071SB-0018M-0001-SO	4-NITROANILINE	61	ug/kg	120	61	U	071SB-0019M-0001-SO	62	120	62	U	N/A	Yes
071SB-0018M-0001-SO	4-NITROPHENOL	610	ug/kg	2000	610	U	071SB-0019M-0001-SO	620	2100	620	U	N/A	Yes
071SB-0018M-0001-SO	ACENAPHTHENE	0.62	ug/kg	1.5	0.82	J	071SB-0019M-0001-SO	0.82	1.5	0.82	U	N/A	Yes
071SB-0018M-0001-SO	ACENAPHTHYLENE	0.82	ug/kg	1.5	0.82	U	071SB-0019M-0001-SO	0.82	1.5	0.82	U	N/A	Yes
071SB-0018M-0001-SO	ANTHRACENE	0.82	ug/kg	1.5	0.82	U	071SB-0019M-0001-SO	0.82	1.5	0.82	U	N/A	Yes
071SB-0018M-0001-SO	Benzo[a]anthracene	1.2	ug/kg	1.5	1.2	U	071SB-0019M-0001-SO	1.3	1.5	0.82	J	N/A	Yes
071SB-0018M-0001-SO	Benzo[a]pyrene	0.42	ug/kg	1.5	0.82	J	071SB-0019M-0001-SO	0.51	1.5	0.82	J	N/A	Yes

Sample	Analyte	Result	Units	LOQ	LOD	Qual	Sample	Result	LOQ	LOD	Qual	RPD	W/In LOQ
071SB-0018M-0001-SO	Benzo[b]fluoranthene	2.9	ug/kg	1.5	0.82		071SB-0019M-0001-SO	3.2	1.5	0.82		N/A	Yes
071SB-0018M-0001-SO	Benzo[g,h,i]perylene	1.5	ug/kg	1.5	0.82		071SB-0019M-0001-SO	2.1	1.5	0.82		N/A	Yes
071SB-0018M-0001-SO	Benzo[k]fluoranthene	0.82	ug/kg	1.5	0.82	U	071SB-0019M-0001-SO	0.4	1.5	0.82	J	N/A	Yes
071SB-0018M-0001-SO	BENZOIC ACID	1500	ug/kg	3100	1500	UJ	071SB-0019M-0001-SO	1500	3100	1500	U	N/A	Yes
071SB-0018M-0001-SO	BENZYL ALCOHOL	120	ug/kg	410	120	R	071SB-0019M-0001-SO	120	410	120	U	N/A	N/A
071SB-0018M-0001-SO	BENZYL BUTYL PHTHALATE	120	ug/kg	410	120	U	071SB-0019M-0001-SO	120	410	120	U	N/A	Yes
071SB-0018M-0001-SO	BIS(2-CHLOROETHOXY) METHANE	61	ug/kg	120	61	U	071SB-0019M-0001-SO	62	120	62	U	N/A	Yes
071SB-0018M-0001-SO	BIS(2-CHLOROETHYL) ETHER	61	ug/kg	120	61	U	071SB-0019M-0001-SO	62	120	62	U	N/A	Yes
071SB-0018M-0001-SO	CARBAZOLE	61	ug/kg	120	61	U	071SB-0019M-0001-SO	62	120	62	U	N/A	Yes
071SB-0018M-0001-SO	CHRYSENE	4.8	ug/kg	1.5	0.82		071SB-0019M-0001-SO	5.5	1.5	0.82		N/A	Yes
071SB-0018M-0001-SO	DIBENZ(A,H)ANTHRACENE	0.82	ug/kg	1.5	0.82	U	071SB-0019M-0001-SO	0.36	1.5	0.82	J	N/A	Yes
071SB-0018M-0001-SO	DIBENZOFURAN	61	ug/kg	120	61	U	071SB-0019M-0001-SO	62	120	62	U	N/A	Yes
071SB-0018M-0001-SO	DIETHYL PHTHALATE	120	ug/kg	410	120	U	071SB-0019M-0001-SO	120	410	120	U	N/A	Yes
071SB-0018M-0001-SO	DIMETHYL PHTHALATE	120	ug/kg	410	120	U	071SB-0019M-0001-SO	120	410	120	U	N/A	Yes
071SB-0018M-0001-SO	DI-N-BUTYL PHTHALATE	120	ug/kg	410	120	U	071SB-0019M-0001-SO	120	410	120	U	N/A	Yes
071SB-0018M-0001-SO	DI-N-OCTYLPHTHALATE	61	ug/kg	200	61	U	071SB-0019M-0001-SO	62	210	62	U	N/A	Yes
071SB-0018M-0001-SO	FLUORANTHENE	1.4	ug/kg	1.5	0.82	J	071SB-0019M-0001-SO	1.4	1.5	0.82	J	N/A	Yes
071SB-0018M-0001-SO	FLUORENE	1.1	ug/kg	1.5	0.82	J	071SB-0019M-0001-SO	0.82	1.5	0.82	J	N/A	Yes
071SB-0018M-0001-SO	HEXACHLOROBENZENE	61	ug/kg	120	61	U	071SB-0019M-0001-SO	62	120	62	U	N/A	Yes
071SB-0018M-0001-SO	HEXACHLOROBUTADIENE	120	ug/kg	410	120	U	071SB-0019M-0001-SO	120	410	120	U	N/A	Yes
071SB-0018M-0001-SO	HEXACHLOROCYCLOPENTADIENE	61	ug/kg	200	61	UJ	071SB-0019M-0001-SO	62	210	62	U	N/A	Yes
071SB-0018M-0001-SO	HEXACHLOROETHANE	61	ug/kg	120	61	U	071SB-0019M-0001-SO	62	120	62	U	N/A	Yes
071SB-0018M-0001-SO	Indeno[1,2,3-cd]pyrene	0.61	ug/kg	1.5	0.82	J	071SB-0019M-0001-SO	0.69	1.5	0.82	J	N/A	Yes
071SB-0018M-0001-SO	ISOPHORONE	61	ug/kg	200	61	U	071SB-0019M-0001-SO	62	210	62	U	N/A	Yes
071SB-0018M-0001-SO	NAPHTHALENE	0.35	ug/kg	1.5	0.82	U	071SB-0019M-0001-SO	0.82	1.5	0.82	J	N/A	Yes
071SB-0018M-0001-SO	NITROBENZENE	61	ug/kg	200	61	U	071SB-0019M-0001-SO	62	210	62	U	N/A	Yes
071SB-0018M-0001-SO	N-NITROSODI-N-PROPYLAMINE	120	ug/kg	410	120	U	071SB-0019M-0001-SO	120	410	120	U	N/A	Yes
071SB-0018M-0001-SO	N-NITROSODIPHENYLAMINE	120	ug/kg	250	120	U	071SB-0019M-0001-SO	120	250	120	U	N/A	Yes
071SB-0018M-0001-SO	PENTACHLOROPHENOL	310	ug/kg	1000	310	U	071SB-0019M-0001-SO	310	1000	310	U	N/A	Yes
071SB-0018M-0001-SO	PHENANTHRENE	4.7	ug/kg	1.5	4.7	U	071SB-0019M-0001-SO	4.8	1.5	0.82		N/A	Yes
071SB-0018M-0001-SO	PHENOL	310	ug/kg	610	310	U	071SB-0019M-0001-SO	310	620	310	U	N/A	Yes
071SB-0018M-0001-SO	PYRENE	1.4	ug/kg	1.5	0.82	J	071SB-0019M-0001-SO	1.4	1.5	0.82	J	N/A	Yes

Sample	Analyte	Result	Units	LOQ	LOD	Qual	Sample	Result	LOQ	LOD	Qual	RPD	W/In LOQ
072SB-0001-0001-SO	ALUMINUM	12000	MG/KG	3.1	0.62	J	072SB-0002-0001-SO	12000	2.9	0.58		0	N/A
072SB-0001-0001-SO	ANTIMONY	0.075	MG/KG	0.21	0.1	J-	072SB-0002-0001-SO	0.083	0.19	0.096	J	N/A	Yes
072SB-0001-0001-SO	ARSENIC	14	MG/KG	0.1	0.051	J-	072SB-0002-0001-SO	7.8	0.096	0.048		35	N/A
072SB-0001-0001-SO	BARIUM	36	MG/KG	1	0.021	J+	072SB-0002-0001-SO	87	0.96	0.019		64	N/A
072SB-0001-0001-SO	BERYLLIUM	0.65	MG/KG	0.1	0.01	J-	072SB-0002-0001-SO	0.6	0.096	0.0096		5	N/A
072SB-0001-0001-SO	CADMIUM	0.15	MG/KG	0.1	0.031	J-	072SB-0002-0001-SO	0.19	0.096	0.029		N/A	Yes
072SB-0001-0001-SO	CALCIUM	2900	MG/KG	10	2.6	J+	072SB-0002-0001-SO	28000	9.6	2.4		149	N/A
072SB-0001-0001-SO	CHROMIUM	18	MG/KG	0.21	0.041		072SB-0002-0001-SO	19	0.19	0.039		4	N/A
072SB-0001-0001-SO	COBALT	12	MG/KG	0.051	0.01		072SB-0002-0001-SO	9.6	0.048	0.0096		14	N/A
072SB-0001-0001-SO	COPPER	16	MG/KG	0.21	0.062		072SB-0002-0001-SO	17	0.19	0.058		4	N/A
072SB-0001-0001-SO	IRON	28000	MG/KG	5.1	2.1	J	072SB-0002-0001-SO	26000	4.8	1.9		5	N/A
072SB-0001-0001-SO	LEAD	11	MG/KG	0.1	0.031		072SB-0002-0001-SO	10	0.096	0.029		6	N/A
072SB-0001-0001-SO	MAGNESIUM	6000	MG/KG	10	2.1		072SB-0002-0001-SO	8100	9.6	1.9		21	N/A
072SB-0001-0001-SO	MANGANESE	190	MG/KG	0.51	0.031	J	072SB-0002-0001-SO	270	0.48	0.029		25	N/A
072SB-0001-0001-SO	NICKEL	29	MG/KG	0.1	0.031	J-	072SB-0002-0001-SO	25	0.096	0.029		10	N/A
072SB-0001-0001-SO	POTASSIUM	1900	MG/KG	10	6.2	J-	072SB-0002-0001-SO	2100	9.6	5.8		7	N/A
072SB-0001-0001-SO	SELENIUM	0.9	MG/KG	0.51	0.1	J-	072SB-0002-0001-SO	0.9	0.48	0.096		N/A	Yes
072SB-0001-0001-SO	SILVER	0.033	MG/KG	0.1	0.031	J	072SB-0002-0001-SO	0.034	0.096	0.029	J	N/A	Yes
072SB-0001-0001-SO	SODIUM	85	MG/KG	10	5.1		072SB-0002-0001-SO	100	9.6	4.8		11	N/A
072SB-0001-0001-SO	THALLIUM	0.18	MG/KG	0.1	0.021		072SB-0002-0001-SO	0.15	0.096	0.019		N/A	Yes
072SB-0001-0001-SO	VANADIUM	17	MG/KG	0.1	0.062		072SB-0002-0001-SO	20	0.096	0.058		11	N/A
072SB-0001-0001-SO	ZINC	59	MG/KG	0.51	0.21		072SB-0002-0001-SO	52	0.48	0.19		8	N/A
072SB-0001-0001-SO	C10-C20	11	MG/KG	20	11	U	072SB-0002-0001-SO	11	19	11	U	N/A	Yes
072SB-0001-0001-SO	C20-C34	11	MG/KG	20	11	U	072SB-0002-0001-SO	11	19	11	U	N/A	Yes
072SB-0001-0001-SO	C6-C12	320	UG/KG	110	55	J	072SB-0002-0001-SO	180	100	50		N/A	No
072SB-0001-0001-SO	MERCURY	0.039	MG/KG	0.12	0.039	U	072SB-0002-0001-SO	0.034	0.1	0.034	U	N/A	Yes
072SB-0001-0001-SO	BENZENE	25	UG/KG	250	25	UJ	072SB-0002-0001-SO	24	240	24	U	N/A	Yes
072SB-0001-0001-SO	ETHYLBENZENE	9.9	UG/KG	250	9.9	UJ	072SB-0002-0001-SO	9.5	240	9.5	U	N/A	Yes
072SB-0001-0001-SO	TOLUENE	25	UG/KG	250	25	UJ	072SB-0002-0001-SO	24	240	24	U	N/A	Yes
072SB-0001-0001-SO	XYLENES, TOTAL	30	UG/KG	500	30	UJ	072SB-0002-0001-SO	29	480	29	U	N/A	Yes
072SB-0001-0001-SO	ACENAPHTHENE	4	UG/KG	8	4	U	072SB-0002-0001-SO	3.9	7.8	3.9	U	N/A	Yes
072SB-0001-0001-SO	ACENAPHTHYLENE	4	UG/KG	8	4	U	072SB-0002-0001-SO	3.9	7.8	3.9	U	N/A	Yes
072SB-0001-0001-SO	ANTHRACENE	4	UG/KG	8	4	U	072SB-0002-0001-SO	3.9	7.8	3.9	U	N/A	Yes
072SB-0001-0001-SO	Benzo[a]anthracene	4	UG/KG	8	4	U	072SB-0002-0001-SO	3.9	7.8	3.9	U	N/A	Yes
072SB-0001-0001-SO	Benzo[a]pyrene	4	UG/KG	8	4	U	072SB-0002-0001-SO	3.9	7.8	3.9	U	N/A	Yes
072SB-0001-0001-SO	Benzo[b]fluoranthene	4	UG/KG	8	4	U	072SB-0002-0001-SO	3.9	7.8	3.9	U	N/A	Yes

Sample	Analyte	Result	Units	LOQ	LOD	Qual	Sample	Result	LOQ	LOD	Qual	RPD	W/In LOQ
072SB-0001-0001-SO	Benzo[g,h,i]perylene	4	UG/KG	8	4	U	072SB-0002-0001-SO	3.9	7.8	3.9	U	N/A	Yes
072SB-0001-0001-SO	Benzo[k]fluoranthene	4	UG/KG	8	4	U	072SB-0002-0001-SO	3.9	7.8	3.9	U	N/A	Yes
072SB-0001-0001-SO	CHRYSENE	4	UG/KG	8	4	U	072SB-0002-0001-SO	3.9	7.8	3.9	U	N/A	Yes
072SB-0001-0001-SO	DIBENZ(A,H)ANTHRACENE	4	UG/KG	8	4	U	072SB-0002-0001-SO	3.9	7.8	3.9	U	N/A	Yes
072SB-0001-0001-SO	FLUORANTHENE	4	UG/KG	8	4	U	072SB-0002-0001-SO	3.9	7.8	3.9	U	N/A	Yes
072SB-0001-0001-SO	FLUORENE	4	UG/KG	8	4	U	072SB-0002-0001-SO	3.9	7.8	3.9	U	N/A	Yes
072SB-0001-0001-SO	Indeno[1,2,3-cd]pyrene	4	UG/KG	8	4	U	072SB-0002-0001-SO	3.9	7.8	3.9	U	N/A	Yes
072SB-0001-0001-SO	NAPHTHALENE	8.9	UG/KG	8	4		072SB-0002-0001-SO	3.9	7.8	3.9	U	N/A	Yes
072SB-0001-0001-SO	PHENANTHRENE	4	UG/KG	8	4	U	072SB-0002-0001-SO	3.9	7.8	3.9	U	N/A	Yes
072SB-0001-0001-SO	PYRENE	4	UG/KG	8	4	U	072SB-0002-0001-SO	3.9	7.8	3.9	U	N/A	Yes
072SB-0012-0001-SO	ALUMINUM	8500	MG/KG	3.2	0.64	J	072SB-0013-0001-SO	9600	3	0.59		8	N/A
072SB-0012-0001-SO	ANTIMONY	0.2	MG/KG	0.21	0.11	J-	072SB-0013-0001-SO	0.14	0.2	0.099	J	N/A	Yes
072SB-0012-0001-SO	ARSENIC	5.6	MG/KG	0.11	0.053	J	072SB-0013-0001-SO	4.7	0.099	0.049		11	N/A
072SB-0012-0001-SO	BARIUM	55	MG/KG	1.1	0.021		072SB-0013-0001-SO	53	0.99	0.02		2	N/A
072SB-0012-0001-SO	BERYLLIUM	0.88	MG/KG	0.11	0.011	J-	072SB-0013-0001-SO	0.81	0.099	0.0099		5	N/A
072SB-0012-0001-SO	CADMIUM	0.2	MG/KG	0.11	0.032		072SB-0013-0001-SO	0.23	0.099	0.03		N/A	Yes
072SB-0012-0001-SO	CALCIUM	400	MG/KG	11	2.7		072SB-0013-0001-SO	450	9.9	2.5		8	N/A
072SB-0012-0001-SO	CHROMIUM	18	MG/KG	0.21	0.042		072SB-0013-0001-SO	20	0.2	0.039		7	N/A
072SB-0012-0001-SO	COBALT	18	MG/KG	0.053	0.011		072SB-0013-0001-SO	17	0.049	0.0099		4	N/A
072SB-0012-0001-SO	COPPER	31	MG/KG	0.21	0.064	J+	072SB-0013-0001-SO	33	0.2	0.059		4	N/A
072SB-0012-0001-SO	IRON	37000	MG/KG	5.3	2.1	J	072SB-0013-0001-SO	36000	4.9	2		2	N/A
072SB-0012-0001-SO	LEAD	20	MG/KG	0.11	0.032	J+	072SB-0013-0001-SO	17	0.099	0.03		11	N/A
072SB-0012-0001-SO	MAGNESIUM	4000	MG/KG	11	2.1		072SB-0013-0001-SO	4300	9.9	2		5	N/A
072SB-0012-0001-SO	MANGANESE	910	MG/KG	0.53	0.032	J	072SB-0013-0001-SO	700	0.49	0.03		17	N/A
072SB-0012-0001-SO	NICKEL	31	MG/KG	0.11	0.032		072SB-0013-0001-SO	32	0.099	0.03		2	N/A
072SB-0012-0001-SO	POTASSIUM	1000	MG/KG	11	6.4	J-	072SB-0013-0001-SO	1200	9.9	5.9		13	N/A
072SB-0012-0001-SO	SELENIUM	1	MG/KG	0.53	0.11	J-	072SB-0013-0001-SO	1.1	0.49	0.099		N/A	Yes
072SB-0012-0001-SO	SILVER	0.032	MG/KG	0.11	0.032	J	072SB-0013-0001-SO	0.037	0.099	0.03	J	N/A	Yes
072SB-0012-0001-SO	SODIUM	60	MG/KG	11	5.3		072SB-0013-0001-SO	66	9.9	4.9		6	N/A
072SB-0012-0001-SO	THALLIUM	0.14	MG/KG	0.11	0.021		072SB-0013-0001-SO	0.11	0.099	0.02		N/A	Yes
072SB-0012-0001-SO	VANADIUM	17	MG/KG	0.11	0.064		072SB-0013-0001-SO	18	0.099	0.059		4	N/A
072SB-0012-0001-SO	ZINC	69	MG/KG	0.53	0.21		072SB-0013-0001-SO	80	0.49	0.2		10	N/A
072SB-0012-0001-SO	C10-C20	10	MG/KG	19	10	U	072SB-0013-0001-SO	10	18	10	U	N/A	Yes
072SB-0012-0001-SO	C20-C34	10	MG/KG	19	10	U	072SB-0013-0001-SO	10	18	10	U	N/A	Yes
072SB-0012-0001-SO	C6-C12	47	UG/KG	93	47	U	072SB-0013-0001-SO	48	96	48	U	N/A	Yes
072SB-0012-0001-SO	MERCURY	0.04	MG/KG	0.1	0.034	J	072SB-0013-0001-SO	0.021	0.097	0.032	J	N/A	Yes

Sample	Analyte	Result	Units	LOQ	LOD	Qual	Sample	Result	LOQ	LOD	Qual	RPD	W/In LOQ
072SB-0012-0001-SO	BENZENE	0.47	UG/KG	4.7	0.47	UJ	072SB-0013-0001-SO	0.45	4.5	0.45	U	N/A	Yes
072SB-0012-0001-SO	ETHYLBENZENE	0.47	UG/KG	4.7	0.47	UJ	072SB-0013-0001-SO	0.45	4.5	0.45	U	N/A	Yes
072SB-0012-0001-SO	TOLUENE	0.47	UG/KG	4.7	0.47	UJ	072SB-0013-0001-SO	0.45	4.5	0.45	U	N/A	Yes
072SB-0012-0001-SO	XYLENES, TOTAL	1.4	UG/KG	9.4	1.4	UJ	072SB-0013-0001-SO	1.3	8.9	1.3	U	N/A	Yes
072SB-0012-0001-SO	ACENAPHTHENE	3.8	UG/KG	7.6	3.8	U	072SB-0013-0001-SO	3.6	7.3	3.6	U	N/A	Yes
072SB-0012-0001-SO	ACENAPHTHYLENE	3.8	UG/KG	7.6	3.8	U	072SB-0013-0001-SO	3.6	7.3	3.6	U	N/A	Yes
072SB-0012-0001-SO	ANTHRACENE	3.8	UG/KG	7.6	3.8	U	072SB-0013-0001-SO	3.6	7.3	3.6	U	N/A	Yes
072SB-0012-0001-SO	Benzo[a]anthracene	3.8	UG/KG	7.6	3.8	U	072SB-0013-0001-SO	3.6	7.3	3.6	U	N/A	Yes
072SB-0012-0001-SO	Benzo[a]pyrene	3.8	UG/KG	7.6	3.8	U	072SB-0013-0001-SO	3.6	7.3	3.6	U	N/A	Yes
072SB-0012-0001-SO	Benzo[b]fluoranthene	3.8	UG/KG	7.6	3.8	U	072SB-0013-0001-SO	4.4	7.3	3.6	J	N/A	Yes
072SB-0012-0001-SO	Benzo[g,h,i]perylene	3.8	UG/KG	7.6	3.8	U	072SB-0013-0001-SO	3.6	7.3	3.6	U	N/A	Yes
072SB-0012-0001-SO	Benzo[k]fluoranthene	3.8	UG/KG	7.6	3.8	U	072SB-0013-0001-SO	3.6	7.3	3.6	U	N/A	Yes
072SB-0012-0001-SO	CHRYSENE	3.8	UG/KG	7.6	3.8	U	072SB-0013-0001-SO	3.6	7.3	3.6	U	N/A	Yes
072SB-0012-0001-SO	DIBENZ(A,H)ANTHRACENE	3.8	UG/KG	7.6	3.8	U	072SB-0013-0001-SO	3.6	7.3	3.6	U	N/A	Yes
072SB-0012-0001-SO	FLUORANTHENE	3.8	UG/KG	7.6	3.8	U	072SB-0013-0001-SO	3.6	7.3	3.6	U	N/A	Yes
072SB-0012-0001-SO	FLUORENE	3.8	UG/KG	7.6	3.8	U	072SB-0013-0001-SO	3.6	7.3	3.6	U	N/A	Yes
072SB-0012-0001-SO	Indeno[1,2,3-cd]pyrene	3.8	UG/KG	7.6	3.8	U	072SB-0013-0001-SO	3.6	7.3	3.6	U	N/A	Yes
072SB-0012-0001-SO	NAPHTHALENE	3.8	UG/KG	7.6	3.8	U	072SB-0013-0001-SO	3.6	7.3	3.6	U	N/A	Yes
072SB-0012-0001-SO	PHENANTHRENE	3.8	UG/KG	7.6	3.8	U	072SB-0013-0001-SO	3.6	7.3	3.6	U	N/A	Yes
072SB-0012-0001-SO	PYRENE	3.8	UG/KG	7.6	3.8	U	072SB-0013-0001-SO	3.6	7.3	3.6	U	N/A	Yes
072SB-0026-0001-SO	ALUMINUM	6000	MG/KG	3	0.6	J	072SB-0027-0001-SO	5900	3.1	0.61		1	N/A
072SB-0026-0001-SO	ANTIMONY	0.1	MG/KG	0.2	0.1	R	072SB-0027-0001-SO	0.082	0.2	0.1	J	N/A	N/A
072SB-0026-0001-SO	ARSENIC	0.51	MG/KG	0.1	0.05	J-	072SB-0027-0001-SO	1.1	0.1	0.051		56	N/A
072SB-0026-0001-SO	BARIUM	31	MG/KG	1	0.02	J	072SB-0027-0001-SO	16	1	0.02		38	N/A
072SB-0026-0001-SO	BERYLLIUM	0.69	MG/KG	0.1	0.01		072SB-0027-0001-SO	0.58	0.1	0.01		11	N/A
072SB-0026-0001-SO	CADMIUM	0.19	MG/KG	0.1	0.03	J+	072SB-0027-0001-SO	0.15	0.1	0.031		N/A	Yes
072SB-0026-0001-SO	CALCIUM	750	MG/KG	10	2.5	J-	072SB-0027-0001-SO	710	10	2.6		4	N/A
072SB-0026-0001-SO	CHROMIUM	13	MG/KG	0.2	0.04		072SB-0027-0001-SO	13	0.2	0.041		0	N/A
072SB-0026-0001-SO	COBALT	5.5	MG/KG	0.05	0.01		072SB-0027-0001-SO	6.2	0.051	0.01		8	N/A
072SB-0026-0001-SO	COPPER	17	MG/KG	0.2	0.06	J-	072SB-0027-0001-SO	17	0.2	0.061		0	N/A
072SB-0026-0001-SO	IRON	11000	MG/KG	5	2		072SB-0027-0001-SO	12000	5.1	2		6	N/A
072SB-0026-0001-SO	LEAD	8.7	MG/KG	0.1	0.03		072SB-0027-0001-SO	10	0.1	0.031		9	N/A
072SB-0026-0001-SO	MAGNESIUM	2300	MG/KG	10	2		072SB-0027-0001-SO	2100	10	2		6	N/A
072SB-0026-0001-SO	MANGANESE	210	MG/KG	0.5	0.03		072SB-0027-0001-SO	84	0.51	0.031		50	N/A
072SB-0026-0001-SO	NICKEL	16	MG/KG	0.1	0.03		072SB-0027-0001-SO	25	0.1	0.031		32	N/A
072SB-0026-0001-SO	POTASSIUM	1300	MG/KG	10	6		072SB-0027-0001-SO	1100	10	6.1		11	N/A

Sample	Analyte	Result	Units	LOQ	LOD	Qual	Sample	Result	LOQ	LOD	Qual	RPD	W/In LOQ
072SB-0026-0001-SO	SELENIUM	0.74	MG/KG	0.5	0.1	J-	072SB-0027-0001-SO	0.68	0.51	0.1		N/A	Yes
072SB-0026-0001-SO	SILVER	0.03	MG/KG	0.1	0.03	J+	072SB-0027-0001-SO	0.061	0.1	0.031	J	N/A	Yes
072SB-0026-0001-SO	SODIUM	71	MG/KG	10	5		072SB-0027-0001-SO	69	10	5.1		2	N/A
072SB-0026-0001-SO	THALLIUM	0.12	MG/KG	0.1	0.02	J-	072SB-0027-0001-SO	0.11	0.1	0.02		N/A	Yes
072SB-0026-0001-SO	VANADIUM	8.9	MG/KG	0.1	0.06		072SB-0027-0001-SO	9.7	0.1	0.061		6	N/A
072SB-0026-0001-SO	ZINC	45	MG/KG	0.5	0.2	J	072SB-0027-0001-SO	33	0.51	0.2		20	N/A
072SB-0026-0001-SO	C10-C20	9.6	MG/KG	17	9.6	U	072SB-0027-0001-SO	9.6	17	9.6	U	N/A	Yes
072SB-0026-0001-SO	C20-C34	9.6	MG/KG	17	9.6	U	072SB-0027-0001-SO	9.6	17	9.6	U	N/A	Yes
072SB-0026-0001-SO	C6-C12	40	UG/KG	80	40	U	072SB-0027-0001-SO	48	97	48	U	N/A	Yes
072SB-0026-0001-SO	MERCURY	0.032	MG/KG	0.097	0.032	U	072SB-0027-0001-SO	0.022	0.1	0.033	J	N/A	Yes
072SB-0026-0001-SO	BENZENE	0.51	UG/KG	5.1	0.51	UJ	072SB-0027-0001-SO	0.44	4.4	0.44	U	N/A	Yes
072SB-0026-0001-SO	ETHYLBENZENE	0.51	UG/KG	5.1	0.51	UJ	072SB-0027-0001-SO	0.44	4.4	0.44	U	N/A	Yes
072SB-0026-0001-SO	TOLUENE	0.51	UG/KG	5.1	0.51	UJ	072SB-0027-0001-SO	0.44	4.4	0.44	U	N/A	Yes
072SB-0026-0001-SO	XYLENES, TOTAL	1.5	UG/KG	10	1.5	UJ	072SB-0027-0001-SO	1.3	8.8	1.3	U	N/A	Yes
072SB-0026-0001-SO	ACENAPHTHENE	3.4	UG/KG	6.9	3.4	UJ	072SB-0027-0001-SO	3.4	6.9	3.4	U	N/A	Yes
072SB-0026-0001-SO	ACENAPHTHYLENE	3.4	UG/KG	6.9	3.4	UJ	072SB-0027-0001-SO	3.4	6.9	3.4	U	N/A	Yes
072SB-0026-0001-SO	ANTHRACENE	3.4	UG/KG	6.9	3.4	UJ	072SB-0027-0001-SO	3.4	6.9	3.4	U	N/A	Yes
072SB-0026-0001-SO	BENZO(A)ANTHRACENE	15	UG/KG	6.9	3.4	J	072SB-0027-0001-SO	4.4	6.9	3.4	J	N/A	No
072SB-0026-0001-SO	BENZO(A)PYRENE	18	UG/KG	6.9	3.4	J	072SB-0027-0001-SO	3.4	6.9	3.4	U	N/A	No
072SB-0026-0001-SO	BENZO(B)FLUORANTHENE	16	UG/KG	6.9	3.4	J	072SB-0027-0001-SO	15	6.9	3.4		N/A	Yes
072SB-0026-0001-SO	BENZO(G,H,I)PERYLENE	140	UG/KG	6.9	3.4	J	072SB-0027-0001-SO	42	6.9	3.4		61	N/A
072SB-0026-0001-SO	BENZO(K)FLUORANTHENE	5.8	UG/KG	6.9	3.4	J	072SB-0027-0001-SO	3.4	6.9	3.4	U	N/A	Yes
072SB-0026-0001-SO	CHRYSENE	9.1	UG/KG	6.9	3.4	J	072SB-0027-0001-SO	9.1	6.9	3.4		N/A	Yes
072SB-0026-0001-SO	DIBENZ(A,H)ANTHRACENE	3.4	UG/KG	6.9	3.4	UJ	072SB-0027-0001-SO	3.4	6.9	3.4	U	N/A	Yes
072SB-0026-0001-SO	FLUORANTHENE	12	UG/KG	6.9	3.4	J	072SB-0027-0001-SO	10	6.9	3.4		N/A	Yes
072SB-0026-0001-SO	FLUORENE	8.4	UG/KG	6.9	3.4	J	072SB-0027-0001-SO	3.4	6.9	3.4	U	N/A	Yes
072SB-0026-0001-SO	INDENO(1,2,3-C,D)PYRENE	17	UG/KG	6.9	3.4	J	072SB-0027-0001-SO	12	6.9	3.4		N/A	Yes
072SB-0026-0001-SO	NAPHTHALENE	29	UG/KG	6.9	3.4	J	072SB-0027-0001-SO	14	6.9	3.4		N/A	No
072SB-0026-0001-SO	PHENANTHRENE	50	UG/KG	6.9	3.4	J	072SB-0027-0001-SO	36	6.9	3.4		21	N/A
072SB-0026-0001-SO	PYRENE	16	UG/KG	6.9	3.4	J	072SB-0027-0001-SO	7.1	6.9	3.4		N/A	No
072SB-0035-0001-SO	ALUMINUM	11000	MG/KG	3.3	0.66	J	072SB-0036-0001-SO	9600	3.4	0.68		9	N/A
072SB-0035-0001-SO	ANTIMONY	0.11	MG/KG	0.22	0.11	J	072SB-0036-0001-SO	0.11	0.23	0.11	U	N/A	Yes
072SB-0035-0001-SO	ARSENIC	13	MG/KG	0.11	0.055		072SB-0036-0001-SO	15	0.11	0.056		10	N/A
072SB-0035-0001-SO	BARIUM	27	MG/KG	1.1	0.022		072SB-0036-0001-SO	23	1.1	0.023		10	N/A
072SB-0035-0001-SO	BERYLLIUM	0.58	MG/KG	0.11	0.011		072SB-0036-0001-SO	0.56	0.11	0.011		2	N/A
072SB-0035-0001-SO	CADMIUM	0.15	MG/KG	0.11	0.033		072SB-0036-0001-SO	0.15	0.11	0.034		N/A	Yes

Sample	Analyte	Result	Units	LOQ	LOD	Qual	Sample	Result	LOQ	LOD	Qual	RPD	W/In LOQ
072SB-0035-0001-SO	CALCIUM	7500	MG/KG	11	2.8		072SB-0036-0001-SO	6300	11	2.8		11	N/A
072SB-0035-0001-SO	CHROMIUM	16	MG/KG	0.22	0.044		072SB-0036-0001-SO	14	0.23	0.045		9	N/A
072SB-0035-0001-SO	COBALT	11	MG/KG	0.055	0.011		072SB-0036-0001-SO	9.9	0.056	0.011		7	N/A
072SB-0035-0001-SO	COPPER	18	MG/KG	0.22	0.066		072SB-0036-0001-SO	16	0.23	0.068		8	N/A
072SB-0035-0001-SO	IRON	26000	MG/KG	5.5	2.2	J	072SB-0036-0001-SO	25000	5.6	2.3		3	N/A
072SB-0035-0001-SO	LEAD	11	MG/KG	0.11	0.033		072SB-0036-0001-SO	9.1	0.11	0.034		12	N/A
072SB-0035-0001-SO	MAGNESIUM	6000	MG/KG	11	2.2		072SB-0036-0001-SO	5200	11	2.3		9	N/A
072SB-0035-0001-SO	MANGANESE	290	MG/KG	0.55	0.033		072SB-0036-0001-SO	280	0.56	0.034		2	N/A
072SB-0035-0001-SO	NICKEL	26	MG/KG	0.11	0.033		072SB-0036-0001-SO	24	0.11	0.034		5	N/A
072SB-0035-0001-SO	POTASSIUM	2300	MG/KG	11	6.6		072SB-0036-0001-SO	1800	11	6.8		16	N/A
072SB-0035-0001-SO	SELENIUM	0.28	MG/KG	0.55	0.11	J	072SB-0036-0001-SO	0.71	0.56	0.11		N/A	Yes
072SB-0035-0001-SO	SILVER	0.036	MG/KG	0.11	0.033	J	072SB-0036-0001-SO	0.031	0.11	0.034	J	N/A	Yes
072SB-0035-0001-SO	SODIUM	97	MG/KG	11	5.5		072SB-0036-0001-SO	78	11	5.6		14	N/A
072SB-0035-0001-SO	THALLIUM	0.15	MG/KG	0.11	0.022		072SB-0036-0001-SO	0.11	0.11	0.023		N/A	Yes
072SB-0035-0001-SO	VANADIUM	18	MG/KG	0.11	0.066		072SB-0036-0001-SO	14	0.11	0.068		16	N/A
072SB-0035-0001-SO	ZINC	54	MG/KG	0.55	0.22		072SB-0036-0001-SO	67	0.56	0.23		15	N/A
072SB-0035-0001-SO	C10-C20	17	MG/KG	20	11	J	072SB-0036-0001-SO	20	19	10		N/A	Yes
072SB-0035-0001-SO	C20-C34	30	MG/KG	20	11		072SB-0036-0001-SO	27	19	10		N/A	Yes
072SB-0035-0001-SO	C6-C12	48	UG/KG	96	48	U	072SB-0036-0001-SO	65	130	65	U	N/A	Yes
072SB-0035-0001-SO	MERCURY	0.045	MG/KG	0.14	0.045	U	072SB-0036-0001-SO	0.036	0.11	0.036	U	N/A	Yes
072SB-0035-0001-SO	BENZENE	0.52	UG/KG	5.2	0.52	U	072SB-0036-0001-SO	0.48	4.8	0.48	U	N/A	Yes
072SB-0035-0001-SO	ETHYLBENZENE	0.52	UG/KG	5.2	0.52	U	072SB-0036-0001-SO	0.48	4.8	0.48	U	N/A	Yes
072SB-0035-0001-SO	Methyl tert-butyl ether	0.52	UG/KG	5.2	0.52	U	072SB-0036-0001-SO	0.48	4.8	0.48	U	N/A	Yes
072SB-0035-0001-SO	TOLUENE	0.52	UG/KG	5.2	0.52	U	072SB-0036-0001-SO	0.48	4.8	0.48	U	N/A	Yes
072SB-0035-0001-SO	Xylenes, Total	1.6	UG/KG	10	1.6	U	072SB-0036-0001-SO	1.4	9.6	1.4	U	N/A	Yes
072SB-0035-0001-SO	1,2,4-TRICHLOROBENZENE	32	UG/KG	60	32	U	072SB-0036-0001-SO	31	57	31	U	N/A	Yes
072SB-0035-0001-SO	1,2-DICHLOROBENZENE	32	UG/KG	60	32	U	072SB-0036-0001-SO	31	57	31	U	N/A	Yes
072SB-0035-0001-SO	1,3-DICHLOROBENZENE	32	UG/KG	60	32	U	072SB-0036-0001-SO	31	57	31	U	N/A	Yes
072SB-0035-0001-SO	1,4-DICHLOROBENZENE	32	UG/KG	60	32	U	072SB-0036-0001-SO	31	57	31	U	N/A	Yes
072SB-0035-0001-SO	2,2'-Dichlorodiisopropyl ether	4	UG/KG	120	4	U	072SB-0036-0001-SO	3.8	110	3.8	U	N/A	Yes
072SB-0035-0001-SO	2,4,5-TRICHLOROPHENOL	32	UG/KG	180	32	U	072SB-0036-0001-SO	31	170	31	U	N/A	Yes
072SB-0035-0001-SO	2,4,6-TRICHLOROPHENOL	96	UG/KG	180	96	U	072SB-0036-0001-SO	92	170	92	U	N/A	Yes
072SB-0035-0001-SO	2,4-DICHLOROPHENOL	32	UG/KG	180	32	U	072SB-0036-0001-SO	31	170	31	U	N/A	Yes
072SB-0035-0001-SO	2,4-DIMETHYLPHENOL	96	UG/KG	180	96	U	072SB-0036-0001-SO	92	170	92	U	N/A	Yes
072SB-0035-0001-SO	2,4-DINITROPHENOL	96	UG/KG	400	96	U	072SB-0036-0001-SO	92	380	92	U	N/A	Yes
072SB-0035-0001-SO	2,4-DINITROTOLUENE	32	UG/KG	240	32	U	072SB-0036-0001-SO	31	230	31	U	N/A	Yes

Sample	Analyte	Result	Units	LOQ	LOD	Qual	Sample	Result	LOQ	LOD	Qual	RPD	W/In LOQ
072SB-0035-0001-SO	2,6-DINITROTOLUENE	32	UG/KG	240	32	U	072SB-0036-0001-SO	31	230	31	U	N/A	Yes
072SB-0035-0001-SO	2-CHLORONAPHTHALENE	4	UG/KG	60	4	U	072SB-0036-0001-SO	3.8	57	3.8	U	N/A	Yes
072SB-0035-0001-SO	2-CHLOROPHENOL	32	UG/KG	60	32	U	072SB-0036-0001-SO	31	57	31	U	N/A	Yes
072SB-0035-0001-SO	2-METHYLNAPHTHALENE	13	UG/KG	8	4		072SB-0036-0001-SO	27	7.6	3.8		N/A	No
072SB-0035-0001-SO	2-Methylphenol	96	UG/KG	240	96	U	072SB-0036-0001-SO	92	230	92	U	N/A	Yes
072SB-0035-0001-SO	2-NITROANILINE	32	UG/KG	240	32	U	072SB-0036-0001-SO	31	230	31	U	N/A	Yes
072SB-0035-0001-SO	2-NITROPHENOL	32	UG/KG	60	32	U	072SB-0036-0001-SO	31	57	31	U	N/A	Yes
072SB-0035-0001-SO	3 & 4 Methylphenol	96	UG/KG	480	96	U	072SB-0036-0001-SO	92	460	92	U	N/A	Yes
072SB-0035-0001-SO	3,3'-DICHLOROBENZIDINE	96	UG/KG	120	96	U	072SB-0036-0001-SO	92	110	92	U	N/A	Yes
072SB-0035-0001-SO	3-NITROANILINE	96	UG/KG	240	96	U	072SB-0036-0001-SO	92	230	92	U	N/A	Yes
072SB-0035-0001-SO	4,6-DINITRO-2-METHYLPHENOL	96	UG/KG	180	96	U	072SB-0036-0001-SO	92	170	92	U	N/A	Yes
072SB-0035-0001-SO	4-BROMOPHENYL PHENYL ETHER	32	UG/KG	60	32	U	072SB-0036-0001-SO	31	57	31	U	N/A	Yes
072SB-0035-0001-SO	4-CHLORO-3-METHYLPHENOL	32	UG/KG	180	32	U	072SB-0036-0001-SO	31	170	31	U	N/A	Yes
072SB-0035-0001-SO	4-CHLOROANILINE	32	UG/KG	180	32	U	072SB-0036-0001-SO	31	170	31	U	N/A	Yes
072SB-0035-0001-SO	4-CHLOROPHENYL PHENYL ETHER	32	UG/KG	60	32	U	072SB-0036-0001-SO	31	57	31	U	N/A	Yes
072SB-0035-0001-SO	4-NITROANILINE	32	UG/KG	240	32	U	072SB-0036-0001-SO	31	230	31	U	N/A	Yes
072SB-0035-0001-SO	4-NITROPHENOL	96	UG/KG	400	96	U	072SB-0036-0001-SO	92	380	92	U	N/A	Yes
072SB-0035-0001-SO	ACENAPHTHENE	4	UG/KG	8	4	U	072SB-0036-0001-SO	3.8	7.6	3.8	U	N/A	Yes
072SB-0035-0001-SO	ACENAPHTHYLENE	4	UG/KG	8	4	U	072SB-0036-0001-SO	3.8	7.6	3.8	U	N/A	Yes
072SB-0035-0001-SO	ANTHRACENE	4	UG/KG	8	4	U	072SB-0036-0001-SO	3.8	7.6	3.8	U	N/A	Yes
072SB-0035-0001-SO	Benzo[a]anthracene	4	UG/KG	8	4	U	072SB-0036-0001-SO	3.8	7.6	3.8	U	N/A	Yes
072SB-0035-0001-SO	Benzo[a]pyrene	4	UG/KG	8	4	U	072SB-0036-0001-SO	13	7.6	3.8		N/A	No
072SB-0035-0001-SO	Benzo[b]fluoranthene	4.9	UG/KG	8	4	J	072SB-0036-0001-SO	7.8	7.6	3.8		N/A	Yes
072SB-0035-0001-SO	Benzo[g,h,i]perylene	11	UG/KG	8	4		072SB-0036-0001-SO	17	7.6	3.8		N/A	Yes
072SB-0035-0001-SO	Benzo[k]fluoranthene	4	UG/KG	8	4	U	072SB-0036-0001-SO	3.8	7.6	3.8	U	N/A	Yes
072SB-0035-0001-SO	BENZOIC ACID	400	UG/KG	790	400	U	072SB-0036-0001-SO	380	760	380	U	N/A	Yes
072SB-0035-0001-SO	BENZYL ALCOHOL	32	UG/KG	400	32	U	072SB-0036-0001-SO	31	380	31	U	N/A	Yes
072SB-0035-0001-SO	BENZYL BUTYL PHTHALATE	32	UG/KG	60	32	U	072SB-0036-0001-SO	31	57	31	U	N/A	Yes
072SB-0035-0001-SO	BIS(2-CHLOROETHOXY) METHANE	32	UG/KG	120	32	U	072SB-0036-0001-SO	31	110	31	U	N/A	Yes
072SB-0035-0001-SO	BIS(2-CHLOROISOPROPYL) ETHER	32	UG/KG	120	32	U	072SB-0036-0001-SO	31	110	31	U	N/A	Yes
072SB-0035-0001-SO	BIS(2-ETHYLHEXYL) PHTHALATE	43	UG/KG	60	32	J	072SB-0036-0001-SO	30	57	31	J	N/A	Yes
072SB-0035-0001-SO	CARBAZOLE	32	UG/KG	60	32	U	072SB-0036-0001-SO	31	57	31	U	N/A	Yes
072SB-0035-0001-SO	CHRYSENE	4	UG/KG	8	4	U	072SB-0036-0001-SO	3.8	7.6	3.8	U	N/A	Yes
072SB-0035-0001-SO	DIBENZ(A,H)ANTHRACENE	4	UG/KG	8	4	U	072SB-0036-0001-SO	3.8	7.6	3.8	U	N/A	Yes
072SB-0035-0001-SO	DIBENZOFURAN	8.4	UG/KG	60	4		072SB-0036-0001-SO	20	57	3.8	J	N/A	Yes
072SB-0035-0001-SO	DIETHYL PHTHALATE	32	UG/KG	60	32	U	072SB-0036-0001-SO	31	57	31	U	N/A	Yes

Sample	Analyte	Result	Units	LOQ	LOD	Qual	Sample	Result	LOQ	LOD	Qual	RPD	W/In LOQ
072SB-0035-0001-SO	DIMETHYL PHTHALATE	32	UG/KG	60	32	U	072SB-0036-0001-SO	31	57	31	U	N/A	Yes
072SB-0035-0001-SO	DI-N-BUTYL PHTHALATE	32	UG/KG	60	32	U	072SB-0036-0001-SO	31	57	31	U	N/A	Yes
072SB-0035-0001-SO	DI-N-OCTYLPHTHALATE	32	UG/KG	60	32	U	072SB-0036-0001-SO	31	57	31	U	N/A	Yes
072SB-0035-0001-SO	FLUORANTHENE	6.4	UG/KG	8	4	J	072SB-0036-0001-SO	6.5	7.6	3.8	J	N/A	Yes
072SB-0035-0001-SO	FLUORENE	4	UG/KG	8	4	U	072SB-0036-0001-SO	7.2	7.6	3.8	J	N/A	Yes
072SB-0035-0001-SO	HEXACHLOROBENZENE	4	UG/KG	8	4	U	072SB-0036-0001-SO	3.8	7.6	3.8	U	N/A	Yes
072SB-0035-0001-SO	HEXACHLOROBUTADIENE	32	UG/KG	60	32	U	072SB-0036-0001-SO	31	57	31	U	N/A	Yes
072SB-0035-0001-SO	HEXACHLOROCYCLOPENTADIENE	32	UG/KG	400	32	U	072SB-0036-0001-SO	31	380	31	U	N/A	Yes
072SB-0035-0001-SO	HEXACHLOROETHANE	32	UG/KG	60	32	U	072SB-0036-0001-SO	31	57	31	U	N/A	Yes
072SB-0035-0001-SO	Indeno[1,2,3-cd]pyrene	4	UG/KG	8	4	U	072SB-0036-0001-SO	9.8	7.6	3.8		N/A	Yes
072SB-0035-0001-SO	ISOPHORONE	32	UG/KG	60	32	U	072SB-0036-0001-SO	31	57	31	U	N/A	Yes
072SB-0035-0001-SO	NAPHTHALENE	7	UG/KG	8	4	J	072SB-0036-0001-SO	9.8	7.6	3.8		N/A	Yes
072SB-0035-0001-SO	NITROBENZENE	4	UG/KG	120	4	U	072SB-0036-0001-SO	3.8	110	3.8	U	N/A	Yes
072SB-0035-0001-SO	N-NITROSODI-N-PROPYLAMINE	32	UG/KG	60	32	U	072SB-0036-0001-SO	31	57	31	U	N/A	Yes
072SB-0035-0001-SO	N-NITROSODIPHENYLAMINE	32	UG/KG	60	32	U	072SB-0036-0001-SO	31	57	31	U	N/A	Yes
072SB-0035-0001-SO	PENTACHLOROPHENOL	96	UG/KG	180	96	U	072SB-0036-0001-SO	92	170	92	U	N/A	Yes
072SB-0035-0001-SO	PHENANTHRENE	13	UG/KG	8	4		072SB-0036-0001-SO	32	7.6	3.8		N/A	No
072SB-0035-0001-SO	PHENOL	32	UG/KG	60	32	U	072SB-0036-0001-SO	31	57	31	U	N/A	Yes
072SB-0035-0001-SO	PYRENE	10	UG/KG	8	4		072SB-0036-0001-SO	10	7.6	3.8		N/A	Yes
072SB-0063-0001-SO	ALUMINUM	5400	MG/KG	3.1	0.62		072SB-0064-0001-SO	5500	2.7	0.54		1	N/A
072SB-0063-0001-SO	ANTIMONY	0.069	MG/KG	0.21	0.1	J	072SB-0064-0001-SO	0.061	0.18	0.09	J	N/A	Yes
072SB-0063-0001-SO	ARSENIC	11	MG/KG	0.1	0.052	J-	072SB-0064-0001-SO	10	0.09	0.045		6	N/A
072SB-0063-0001-SO	BARIUM	21	MG/KG	1	0.021	J	072SB-0064-0001-SO	23	0.9	0.018		6	N/A
072SB-0063-0001-SO	BERYLLIUM	0.4	MG/KG	0.1	0.01		072SB-0064-0001-SO	0.38	0.09	0.009		N/A	Yes
072SB-0063-0001-SO	CADMIUM	0.15	MG/KG	0.1	0.031	J	072SB-0064-0001-SO	0.19	0.09	0.027		N/A	Yes
072SB-0063-0001-SO	CALCIUM	1200	MG/KG	10	2.6	J+	072SB-0064-0001-SO	1100	9	2.2		6	N/A
072SB-0063-0001-SO	CHROMIUM	9.2	MG/KG	0.21	0.041	J-	072SB-0064-0001-SO	9	0.18	0.036		1	N/A
072SB-0063-0001-SO	COBALT	7.7	MG/KG	0.052	0.01	J-	072SB-0064-0001-SO	7.6	0.045	0.009		1	N/A
072SB-0063-0001-SO	COPPER	15	MG/KG	0.21	0.062	J-	072SB-0064-0001-SO	14	0.18	0.054		5	N/A
072SB-0063-0001-SO	IRON	17000	MG/KG	5.2	2.1		072SB-0064-0001-SO	18000	4.5	1.8		4	N/A
072SB-0063-0001-SO	LEAD	11	MG/KG	0.1	0.031		072SB-0064-0001-SO	9.7	0.09	0.027		8	N/A
072SB-0063-0001-SO	MAGNESIUM	1600	MG/KG	10	2.1		072SB-0064-0001-SO	1700	9	1.8		4	N/A
072SB-0063-0001-SO	MANGANESE	270	MG/KG	0.52	0.031	J	072SB-0064-0001-SO	420	0.45	0.027		31	N/A
072SB-0063-0001-SO	NICKEL	16	MG/KG	0.1	0.031		072SB-0064-0001-SO	19	0.09	0.027		12	N/A
072SB-0063-0001-SO	POTASSIUM	950	MG/KG	10	6.2	J-	072SB-0064-0001-SO	960	9	5.4		1	N/A
072SB-0063-0001-SO	SELENIUM	0.38	MG/KG	0.52	0.1	J	072SB-0064-0001-SO	0.21	0.45	0.09	J	N/A	Yes

Sample	Analyte	Result	Units	LOQ	LOD	Qual	Sample	Result	LOQ	LOD	Qual	RPD	W/In LOQ
072SB-0063-0001-SO	SILVER	0.024	MG/KG	0.1	0.031	J	072SB-0064-0001-SO	0.028	0.09	0.027	J	N/A	Yes
072SB-0063-0001-SO	SODIUM	32	MG/KG	10	5.2	J-	072SB-0064-0001-SO	27	9	4.5		N/A	Yes
072SB-0063-0001-SO	THALLIUM	0.12	MG/KG	0.1	0.021		072SB-0064-0001-SO	0.13	0.09	0.018		N/A	Yes
072SB-0063-0001-SO	VANADIUM	9.8	MG/KG	0.1	0.062		072SB-0064-0001-SO	9.6	0.09	0.054		1	N/A
072SB-0063-0001-SO	ZINC	59	MG/KG	0.52	0.21		072SB-0064-0001-SO	52	0.45	0.18		8	N/A
072SB-0063-0001-SO	C10-C20	10	MG/KG	19	10	U	072SB-0064-0001-SO	10	18	10	U	N/A	Yes
072SB-0063-0001-SO	C20-C34	10	MG/KG	19	10	U	072SB-0064-0001-SO	10	18	10	U	N/A	Yes
072SB-0063-0001-SO	C6-C12	44	UG/KG	88	44	U	072SB-0064-0001-SO	42	83	42	U	N/A	Yes
072SB-0063-0001-SO	MERCURY	0.017	MG/KG	0.12	0.041	J	072SB-0064-0001-SO	0.024	0.12	0.04	J	N/A	Yes
072SB-0063-0001-SO	BENZENE	0.58	UG/KG	5.8	0.58	U	072SB-0064-0001-SO	0.42	4.2	0.42	U	N/A	Yes
072SB-0063-0001-SO	ETHYLBENZENE	0.58	UG/KG	5.8	0.58	U	072SB-0064-0001-SO	0.42	4.2	0.42	U	N/A	Yes
072SB-0063-0001-SO	TOLUENE	0.58	UG/KG	5.8	0.58	U	072SB-0064-0001-SO	0.94	4.2	0.42	J	N/A	Yes
072SB-0063-0001-SO	XYLENES, TOTAL	1.8	UG/KG	12	1.8	U	072SB-0064-0001-SO	1.3	8.4	1.3	U	N/A	Yes
072SB-0063-0001-SO	ACENAPHTHENE	3.7	UG/KG	7.6	3.7	U	072SB-0064-0001-SO	3.7	7.4	3.7	U	N/A	Yes
072SB-0063-0001-SO	ACENAPHTHYLENE	3.7	UG/KG	7.6	3.7	U	072SB-0064-0001-SO	3.7	7.4	3.7	U	N/A	Yes
072SB-0063-0001-SO	ANTHRACENE	3.7	UG/KG	7.6	3.7	U	072SB-0064-0001-SO	3.7	7.4	3.7	U	N/A	Yes
072SB-0063-0001-SO	BENZO(A)ANTHRACENE	3.7	UG/KG	7.6	3.7	U	072SB-0064-0001-SO	3.7	7.4	3.7	U	N/A	Yes
072SB-0063-0001-SO	BENZO(A)PYRENE	3.7	UG/KG	7.6	3.7	U	072SB-0064-0001-SO	3.7	7.4	3.7	U	N/A	Yes
072SB-0063-0001-SO	BENZO(B)FLUORANTHENE	3.7	UG/KG	7.6	3.7	U	072SB-0064-0001-SO	3.7	7.4	3.7	U	N/A	Yes
072SB-0063-0001-SO	BENZO(G,H,I)PERYLENE	3.7	UG/KG	7.6	3.7	U	072SB-0064-0001-SO	3.7	7.4	3.7	U	N/A	Yes
072SB-0063-0001-SO	BENZO(K)FLUORANTHENE	3.7	UG/KG	7.6	3.7	U	072SB-0064-0001-SO	3.7	7.4	3.7	U	N/A	Yes
072SB-0063-0001-SO	CHRYSENE	3.7	UG/KG	7.6	3.7	U	072SB-0064-0001-SO	3.7	7.4	3.7	U	N/A	Yes
072SB-0063-0001-SO	DIBENZ(A,H)ANTHRACENE	3.7	UG/KG	7.6	3.7	U	072SB-0064-0001-SO	3.7	7.4	3.7	U	N/A	Yes
072SB-0063-0001-SO	FLUORANTHENE	3.7	UG/KG	7.6	3.7	U	072SB-0064-0001-SO	3.7	7.4	3.7	U	N/A	Yes
072SB-0063-0001-SO	FLUORENE	3.7	UG/KG	7.6	3.7	U	072SB-0064-0001-SO	3.7	7.4	3.7	U	N/A	Yes
072SB-0063-0001-SO	INDENO(1,2,3-C,D)PYRENE	3.7	UG/KG	7.6	3.7	U	072SB-0064-0001-SO	3.7	7.4	3.7	U	N/A	Yes
072SB-0063-0001-SO	NAPHTHALENE	3.7	UG/KG	7.6	3.7	U	072SB-0064-0001-SO	3.7	7.4	3.7	U	N/A	Yes
072SB-0063-0001-SO	PHENANTHRENE	3.7	UG/KG	7.6	3.7	U	072SB-0064-0001-SO	3.7	7.4	3.7	U	N/A	Yes
072SB-0063-0001-SO	PYRENE	3.7	UG/KG	7.6	3.7	U	072SB-0064-0001-SO	3.7	7.4	3.7	U	N/A	Yes
072SB-0076-0001-SO	ALUMINUM	12000	MG/KG	3.3	0.66		072SB-0077-0001-SO	11000	3.3	0.67		6	N/A
072SB-0076-0001-SO	ANTIMONY	0.11	MG/KG	0.22	0.11	U	072SB-0077-0001-SO	0.11	0.22	0.11	U	N/A	Yes
072SB-0076-0001-SO	ARSENIC	14	MG/KG	0.11	0.055		072SB-0077-0001-SO	15	0.11	0.055		5	N/A
072SB-0076-0001-SO	BARIUM	56	MG/KG	1.1	0.022		072SB-0077-0001-SO	95	1.1	0.022		38	N/A
072SB-0076-0001-SO	BERYLLIUM	0.55	MG/KG	0.11	0.011		072SB-0077-0001-SO	0.56	0.11	0.011		N/A	Yes
072SB-0076-0001-SO	CADMIUM	0.18	MG/KG	0.11	0.033		072SB-0077-0001-SO	0.22	0.11	0.033		N/A	Yes
072SB-0076-0001-SO	CALCIUM	1300	MG/KG	11	2.7		072SB-0077-0001-SO	1400	11	2.8		5	N/A

Sample	Analyte	Result	Units	LOQ	LOD	Qual	Sample	Result	LOQ	LOD	Qual	RPD	W/In LOQ
072SB-0076-0001-SO	CHROMIUM	14	MG/KG	0.22	0.044		072SB-0077-0001-SO	13	0.22	0.044		5	N/A
072SB-0076-0001-SO	COBALT	9.2	MG/KG	0.055	0.011		072SB-0077-0001-SO	15	0.055	0.011		35	N/A
072SB-0076-0001-SO	COPPER	14	MG/KG	0.22	0.066		072SB-0077-0001-SO	9.9	0.22	0.067		22	N/A
072SB-0076-0001-SO	IRON	24000	MG/KG	5.5	2.2		072SB-0077-0001-SO	24000	5.5	2.2		0	N/A
072SB-0076-0001-SO	LEAD	20	MG/KG	0.11	0.033		072SB-0077-0001-SO	19	0.11	0.033		3	N/A
072SB-0076-0001-SO	MAGNESIUM	2600	MG/KG	11	2.2		072SB-0077-0001-SO	2000	11	2.2		17	N/A
072SB-0076-0001-SO	MANGANESE	330	MG/KG	0.55	0.033		072SB-0077-0001-SO	1700	0.55	0.033		116	N/A
072SB-0076-0001-SO	NICKEL	19	MG/KG	0.11	0.033		072SB-0077-0001-SO	15	0.11	0.033		15	N/A
072SB-0076-0001-SO	POTASSIUM	1200	MG/KG	11	6.6		072SB-0077-0001-SO	820	11	6.7		24	N/A
072SB-0076-0001-SO	SELENIUM	0.56	MG/KG	0.55	0.11		072SB-0077-0001-SO	0.7	0.55	0.11		N/A	Yes
072SB-0076-0001-SO	SILVER	0.037	MG/KG	0.11	0.033	J	072SB-0077-0001-SO	0.045	0.11	0.033	J	N/A	Yes
072SB-0076-0001-SO	SODIUM	45	MG/KG	11	5.5		072SB-0077-0001-SO	36	11	5.5		N/A	Yes
072SB-0076-0001-SO	THALLIUM	0.15	MG/KG	0.11	0.022		072SB-0077-0001-SO	0.16	0.11	0.022		N/A	Yes
072SB-0076-0001-SO	VANADIUM	19	MG/KG	0.11	0.066		072SB-0077-0001-SO	21	0.11	0.067		7	N/A
072SB-0076-0001-SO	ZINC	52	MG/KG	0.55	0.22		072SB-0077-0001-SO	45	0.55	0.22		9	N/A
072SB-0076-0001-SO	C10-C20	11	MG/KG	20	11	U	072SB-0077-0001-SO	11	20	11	U	N/A	Yes
072SB-0076-0001-SO	C20-C34	11	MG/KG	20	11	U	072SB-0077-0001-SO	11	20	11	U	N/A	Yes
072SB-0076-0001-SO	C6-C12	70	UG/KG	94	47	J	072SB-0077-0001-SO	2900	5000	2500	J	N/A	Yes
072SB-0076-0001-SO	2,4 DB	40	UG/KG	95	40	U	072SB-0077-0001-SO	40	96	40	U	N/A	Yes
072SB-0076-0001-SO	2,4,5-T	9.9	UG/KG	24	9.9	U	072SB-0077-0001-SO	10	24	10	U	N/A	Yes
072SB-0076-0001-SO	2,4-D	40	UG/KG	95	40	U	072SB-0077-0001-SO	40	96	40	U	N/A	Yes
072SB-0076-0001-SO	DALAPON	20	UG/KG	48	20	U	072SB-0077-0001-SO	20	48	20	U	N/A	Yes
072SB-0076-0001-SO	DICAMBA	20	UG/KG	48	20	U	072SB-0077-0001-SO	20	48	20	U	N/A	Yes
072SB-0076-0001-SO	DICHLOROPROP	79	UG/KG	95	79	U	072SB-0077-0001-SO	80	96	80	U	N/A	Yes
072SB-0076-0001-SO	DINOSEB	12	UG/KG	14	12	U	072SB-0077-0001-SO	12	14	12	U	N/A	Yes
072SB-0076-0001-SO	MCPA	4000	UG/KG	9500	4000	U	072SB-0077-0001-SO	4000	9600	4000	U	N/A	Yes
072SB-0076-0001-SO	MCPP	4000	UG/KG	9500	4000	U	072SB-0077-0001-SO	4000	9600	4000	U	N/A	Yes
072SB-0076-0001-SO	PENTACHLOROPHENOL	9.9	UG/KG	12	9.9	U	072SB-0077-0001-SO	10	12	10	U	N/A	Yes
072SB-0076-0001-SO	SILVEX (2,4,5-TP)	9.9	UG/KG	24	9.9	U	072SB-0077-0001-SO	10	24	10	U	N/A	Yes
072SB-0076-0001-SO	MERCURY	0.045	MG/KG	0.14	0.045	U	072SB-0077-0001-SO	0.044	0.13	0.044	U	N/A	Yes
072SB-0076-0001-SO	BENZENE	9.9	UG/KG	4	0.4		072SB-0077-0001-SO	1.8	4.6	0.46	J	N/A	No
072SB-0076-0001-SO	ETHYLBENZENE	22	UG/KG	4	0.4		072SB-0077-0001-SO	0.71	4.6	0.46	J	N/A	No
072SB-0076-0001-SO	Methyl tert-butyl ether	0.4	UG/KG	4	0.4	U	072SB-0077-0001-SO	0.46	4.6	0.46	U	N/A	Yes
072SB-0076-0001-SO	TOLUENE	52	UG/KG	4	0.4		072SB-0077-0001-SO	6.7	4.6	0.46		N/A	No
072SB-0076-0001-SO	Xylenes, Total	150	UG/KG	8	1.2		072SB-0077-0001-SO	5.4	9.2	1.4	J	N/A	No
072SB-0076-0001-SO	1,2,4-TRICHLOROBENZENE	32	UG/KG	59	32	U	072SB-0077-0001-SO	33	61	33	U	N/A	Yes

Sample	Analyte	Result	Units	LOQ	LOD	Qual	Sample	Result	LOQ	LOD	Qual	RPD	W/In LOQ
072SB-0076-0001-SO	1,2-DICHLOROBENZENE	32	UG/KG	59	32	U	072SB-0077-0001-SO	33	61	33	U	N/A	Yes
072SB-0076-0001-SO	1,3-DICHLOROBENZENE	32	UG/KG	59	32	U	072SB-0077-0001-SO	33	61	33	U	N/A	Yes
072SB-0076-0001-SO	1,4-DICHLOROBENZENE	32	UG/KG	59	32	U	072SB-0077-0001-SO	33	61	33	U	N/A	Yes
072SB-0076-0001-SO	2,4,5-TRICHLOROPHENOL	32	UG/KG	180	32	U	072SB-0077-0001-SO	33	180	33	U	N/A	Yes
072SB-0076-0001-SO	2,4,6-TRICHLOROPHENOL	95	UG/KG	180	95	U	072SB-0077-0001-SO	98	180	98	U	N/A	Yes
072SB-0076-0001-SO	2,4-DICHLOROPHENOL	32	UG/KG	180	32	U	072SB-0077-0001-SO	33	180	33	U	N/A	Yes
072SB-0076-0001-SO	2,4-DIMETHYLPHENOL	95	UG/KG	180	95	U	072SB-0077-0001-SO	98	180	98	U	N/A	Yes
072SB-0076-0001-SO	2,4-DINITROPHENOL	95	UG/KG	390	95	U	072SB-0077-0001-SO	98	410	98	U	N/A	Yes
072SB-0076-0001-SO	2,4-DINITROTOLUENE	32	UG/KG	240	32	U	072SB-0077-0001-SO	33	250	33	U	N/A	Yes
072SB-0076-0001-SO	2,6-DINITROTOLUENE	32	UG/KG	240	32	U	072SB-0077-0001-SO	33	250	33	U	N/A	Yes
072SB-0076-0001-SO	2-CHLORONAPHTHALENE	3.9	UG/KG	59	3.9	U	072SB-0077-0001-SO	4.1	61	4.1	U	N/A	Yes
072SB-0076-0001-SO	2-CHLOROPHENOL	32	UG/KG	59	32	U	072SB-0077-0001-SO	33	61	33	U	N/A	Yes
072SB-0076-0001-SO	2-METHYLNAPHTHALENE	3.9	UG/KG	7.9	3.9	U	072SB-0077-0001-SO	4.1	8.2	4.1	U	N/A	Yes
072SB-0076-0001-SO	2-Methylphenol	95	UG/KG	240	95	U	072SB-0077-0001-SO	98	250	98	U	N/A	Yes
072SB-0076-0001-SO	2-NITROANILINE	32	UG/KG	240	32	U	072SB-0077-0001-SO	33	250	33	U	N/A	Yes
072SB-0076-0001-SO	2-NITROPHENOL	32	UG/KG	59	32	U	072SB-0077-0001-SO	33	61	33	U	N/A	Yes
072SB-0076-0001-SO	3 & 4 Methylphenol	95	UG/KG	480	95	U	072SB-0077-0001-SO	98	490	98	U	N/A	Yes
072SB-0076-0001-SO	3,3'-DICHLOROBENZIDINE	95	UG/KG	120	95	U	072SB-0077-0001-SO	98	120	98	U	N/A	Yes
072SB-0076-0001-SO	3-NITROANILINE	95	UG/KG	240	95	U	072SB-0077-0001-SO	98	250	98	U	N/A	Yes
072SB-0076-0001-SO	4,6-DINITRO-2-METHYLPHENOL	95	UG/KG	180	95	U	072SB-0077-0001-SO	98	180	98	U	N/A	Yes
072SB-0076-0001-SO	4-BROMOPHENYL PHENYL ETHER	32	UG/KG	59	32	U	072SB-0077-0001-SO	33	61	33	U	N/A	Yes
072SB-0076-0001-SO	4-CHLORO-3-METHYLPHENOL	32	UG/KG	180	32	U	072SB-0077-0001-SO	33	180	33	U	N/A	Yes
072SB-0076-0001-SO	4-CHLOROANILINE	32	UG/KG	180	32	U	072SB-0077-0001-SO	33	180	33	U	N/A	Yes
072SB-0076-0001-SO	4-CHLOROPHENYL PHENYL ETHER	32	UG/KG	59	32	U	072SB-0077-0001-SO	33	61	33	U	N/A	Yes
072SB-0076-0001-SO	4-NITROANILINE	32	UG/KG	240	32	U	072SB-0077-0001-SO	33	250	33	U	N/A	Yes
072SB-0076-0001-SO	4-NITROPHENOL	95	UG/KG	390	95	U	072SB-0077-0001-SO	98	410	98	U	N/A	Yes
072SB-0076-0001-SO	ACENAPHTHENE	3.9	UG/KG	7.9	3.9	U	072SB-0077-0001-SO	4.1	8.2	4.1	U	N/A	Yes
072SB-0076-0001-SO	ACENAPHTHYLENE	7.6	UG/KG	7.9	3.9	J	072SB-0077-0001-SO	4.1	8.2	4.1	U	N/A	Yes
072SB-0076-0001-SO	ANTHRACENE	5.8	UG/KG	7.9	3.9	J	072SB-0077-0001-SO	4.8	8.2	4.1	J	N/A	Yes
072SB-0076-0001-SO	Benzo[a]anthracene	55	UG/KG	7.9	3.9		072SB-0077-0001-SO	24	8.2	4.1		N/A	No
072SB-0076-0001-SO	Benzo[a]pyrene	40	UG/KG	7.9	3.9		072SB-0077-0001-SO	16	8.2	4.1		N/A	No
072SB-0076-0001-SO	Benzo[b]fluoranthene	65	UG/KG	7.9	3.9		072SB-0077-0001-SO	22	8.2	4.1		N/A	No
072SB-0076-0001-SO	Benzo[g,h,i]perylene	34	UG/KG	7.9	3.9		072SB-0077-0001-SO	20	8.2	4.1		N/A	No
072SB-0076-0001-SO	Benzo[k]fluoranthene	22	UG/KG	7.9	3.9		072SB-0077-0001-SO	8.9	8.2	4.1		N/A	No
072SB-0076-0001-SO	BENZOIC ACID	400	UG/KG	780	400	U	072SB-0077-0001-SO	410	810	410	U	N/A	Yes
072SB-0076-0001-SO	BENZYL ALCOHOL	32	UG/KG	390	32	U	072SB-0077-0001-SO	33	410	33	U	N/A	Yes

Sample	Analyte	Result	Units	LOQ	LOD	Qual	Sample	Result	LOQ	LOD	Qual	RPD	W/In LOQ
072SB-0076-0001-SO	BENZYL BUTYL PHTHALATE	32	UG/KG	59	32	U	072SB-0077-0001-SO	33	61	33	U	N/A	Yes
072SB-0076-0001-SO	BIS(2-CHLOROETHOXY) METHANE	32	UG/KG	120	32	U	072SB-0077-0001-SO	33	120	33	U	N/A	Yes
072SB-0076-0001-SO	BIS(2-CHLOROETHYL) ETHER	3.9	UG/KG	120	3.9	U	072SB-0077-0001-SO	4.1	120	4.1	U	N/A	Yes
072SB-0076-0001-SO	BIS(2-CHLOROISOPROPYL) ETHER	32	UG/KG	120	32	U	072SB-0077-0001-SO	33	120	33	U	N/A	Yes
072SB-0076-0001-SO	BIS(2-ETHYLHEXYL) PHTHALATE	24	UG/KG	59	32	J	072SB-0077-0001-SO	33	61	33	U	N/A	Yes
072SB-0076-0001-SO	CARBAZOLE	32	UG/KG	59	32	U	072SB-0077-0001-SO	33	61	33	U	N/A	Yes
072SB-0076-0001-SO	CHRYSENE	41	UG/KG	7.9	3.9		072SB-0077-0001-SO	17	8.2	4.1		N/A	No
072SB-0076-0001-SO	DIBENZ(A,H)ANTHRACENE	3.9	UG/KG	7.9	3.9	U	072SB-0077-0001-SO	4.1	8.2	4.1	U	N/A	Yes
072SB-0076-0001-SO	DIBENZOFURAN	3.9	UG/KG	59	3.9	U	072SB-0077-0001-SO	4.1	61	4.1	U	N/A	Yes
072SB-0076-0001-SO	DIETHYL PHTHALATE	32	UG/KG	59	32	U	072SB-0077-0001-SO	33	61	33	U	N/A	Yes
072SB-0076-0001-SO	DIMETHYL PHTHALATE	32	UG/KG	59	32	U	072SB-0077-0001-SO	33	61	33	U	N/A	Yes
072SB-0076-0001-SO	DI-N-BUTYL PHTHALATE	32	UG/KG	59	32	U	072SB-0077-0001-SO	33	61	33	U	N/A	Yes
072SB-0076-0001-SO	DI-N-OCTYLPHTHALATE	32	UG/KG	59	32	U	072SB-0077-0001-SO	33	61	33	U	N/A	Yes
072SB-0076-0001-SO	FLUORANTHENE	96	UG/KG	7.9	3.9		072SB-0077-0001-SO	34	8.2	4.1		N/A	No
072SB-0076-0001-SO	FLUORENE	3.9	UG/KG	7.9	3.9	U	072SB-0077-0001-SO	4.1	8.2	4.1	U	N/A	Yes
072SB-0076-0001-SO	HEXACHLOROBENZENE	3.9	UG/KG	7.9	3.9	U	072SB-0077-0001-SO	4.1	8.2	4.1	U	N/A	Yes
072SB-0076-0001-SO	HEXACHLOROBUTADIENE	32	UG/KG	59	32	U	072SB-0077-0001-SO	33	61	33	U	N/A	Yes
072SB-0076-0001-SO	HEXACHLOROCYCLOPENTADIENE	32	UG/KG	390	32	U	072SB-0077-0001-SO	33	410	33	U	N/A	Yes
072SB-0076-0001-SO	HEXACHLOROETHANE	32	UG/KG	59	32	U	072SB-0077-0001-SO	33	61	33	U	N/A	Yes
072SB-0076-0001-SO	Indeno[1,2,3-cd]pyrene	22	UG/KG	7.9	3.9		072SB-0077-0001-SO	10	8.2	4.1		N/A	No
072SB-0076-0001-SO	ISOPHORONE	32	UG/KG	59	32	U	072SB-0077-0001-SO	33	61	33	U	N/A	Yes
072SB-0076-0001-SO	NAPHTHALENE	3.9	UG/KG	7.9	3.9	U	072SB-0077-0001-SO	4.1	8.2	4.1	U	N/A	Yes
072SB-0076-0001-SO	NITROBENZENE	3.9	UG/KG	120	3.9	U	072SB-0077-0001-SO	4.1	120	4.1	U	N/A	Yes
072SB-0076-0001-SO	N-NITROSODI-N-PROPYLAMINE	32	UG/KG	59	32	U	072SB-0077-0001-SO	33	61	33	U	N/A	Yes
072SB-0076-0001-SO	N-NITROSODIPHENYLAMINE	32	UG/KG	59	32	U	072SB-0077-0001-SO	33	61	33	U	N/A	Yes
072SB-0076-0001-SO	PENTACHLOROPHENOL	95	UG/KG	180	95	U	072SB-0077-0001-SO	98	180	98	U	N/A	Yes
072SB-0076-0001-SO	PHENANTHRENE	47	UG/KG	7.9	3.9		072SB-0077-0001-SO	21	8.2	4.1		N/A	No
072SB-0076-0001-SO	PHENOL	32	UG/KG	59	32	U	072SB-0077-0001-SO	33	61	33	U	N/A	Yes
072SB-0076-0001-SO	PYRENE	77	UG/KG	7.9	3.9		072SB-0077-0001-SO	26	8.2	4.1		N/A	No
072SB-0085-0001-SO	C10-C20	11	MG/KG	20	11	U	072SB-0086-0001-SO	11	19	11	U	N/A	Yes
072SB-0085-0001-SO	C20-C34	11	MG/KG	20	11	U	072SB-0086-0001-SO	11	19	11	U	N/A	Yes
072SB-0085-0001-SO	C6-C12	63	UG/KG	130	63	U	072SB-0086-0001-SO	43	87	43	U	N/A	Yes
072SB-0085-0001-SO	BENZENE	0.6	UG/KG	6	0.6	U	072SB-0086-0001-SO	0.48	4.8	0.48	U	N/A	Yes
072SB-0085-0001-SO	ETHYLBENZENE	0.6	UG/KG	6	0.6	U	072SB-0086-0001-SO	0.48	4.8	0.48	U	N/A	Yes
072SB-0085-0001-SO	TOLUENE	4.3	UG/KG	6	0.6	J	072SB-0086-0001-SO	2.6	4.8	0.48	J	N/A	Yes
072SB-0085-0001-SO	XYLENES, TOTAL	1.8	UG/KG	12	1.8	U	072SB-0086-0001-SO	1.4	9.6	1.4	U	N/A	Yes

Sample	Analyte	Result	Units	LOQ	LOD	Qual	Sample	Result	LOQ	LOD	Qual	RPD	W/In LOQ
072SB-0086-0001-SO	ALUMINUM	8900	MG/KG	3	0.61		072SB-0085-0001-SO	9600	3.4	0.68		5	N/A
072SB-0086-0001-SO	ANTIMONY	0.1	MG/KG	0.2	0.1	U	072SB-0085-0001-SO	0.077	0.23	0.11	J	N/A	Yes
072SB-0086-0001-SO	ARSENIC	13	MG/KG	0.1	0.051		072SB-0085-0001-SO	18	0.11	0.056		23	N/A
072SB-0086-0001-SO	BARIUM	27	MG/KG	1	0.02		072SB-0085-0001-SO	32	1.1	0.023		12	N/A
072SB-0086-0001-SO	BERYLLIUM	0.35	MG/KG	0.1	0.01		072SB-0085-0001-SO	0.44	0.11	0.011		N/A	Yes
072SB-0086-0001-SO	CADMIUM	0.092	MG/KG	0.1	0.03	J	072SB-0085-0001-SO	0.13	0.11	0.034		N/A	Yes
072SB-0086-0001-SO	CALCIUM	5200	MG/KG	10	2.5		072SB-0085-0001-SO	8400	11	2.8		34	N/A
072SB-0086-0001-SO	CHROMIUM	11	MG/KG	0.2	0.04		072SB-0085-0001-SO	13	0.23	0.045		11	N/A
072SB-0086-0001-SO	COBALT	8.5	MG/KG	0.051	0.01		072SB-0085-0001-SO	11	0.056	0.011		18	N/A
072SB-0086-0001-SO	COPPER	15	MG/KG	0.2	0.061		072SB-0085-0001-SO	19	0.23	0.068		16	N/A
072SB-0086-0001-SO	IRON	22000	MG/KG	5.1	2		072SB-0085-0001-SO	25000	5.6	2.3		9	N/A
072SB-0086-0001-SO	LEAD	9.3	MG/KG	0.1	0.03		072SB-0085-0001-SO	13	0.11	0.034		23	N/A
072SB-0086-0001-SO	MAGNESIUM	4200	MG/KG	10	2		072SB-0085-0001-SO	5300	11	2.3		16	N/A
072SB-0086-0001-SO	MANGANESE	260	MG/KG	0.51	0.03		072SB-0085-0001-SO	380	0.56	0.034		27	N/A
072SB-0086-0001-SO	NICKEL	19	MG/KG	0.1	0.03		072SB-0085-0001-SO	23	0.11	0.034		13	N/A
072SB-0086-0001-SO	POTASSIUM	1400	MG/KG	10	6.1		072SB-0085-0001-SO	1600	11	6.8		9	N/A
072SB-0086-0001-SO	SELENIUM	0.4	MG/KG	0.51	0.1	J	072SB-0085-0001-SO	0.46	0.56	0.11	J	N/A	Yes
072SB-0086-0001-SO	SILVER	0.022	MG/KG	0.1	0.03	J	072SB-0085-0001-SO	0.03	0.11	0.034	J	N/A	Yes
072SB-0086-0001-SO	SODIUM	63	MG/KG	10	5.1		072SB-0085-0001-SO	72	11	5.6		9	N/A
072SB-0086-0001-SO	THALLIUM	0.1	MG/KG	0.1	0.02		072SB-0085-0001-SO	0.14	0.11	0.023		N/A	Yes
072SB-0086-0001-SO	VANADIUM	13	MG/KG	0.1	0.061		072SB-0085-0001-SO	15	0.11	0.068		10	N/A
072SB-0086-0001-SO	ZINC	44	MG/KG	0.51	0.2		072SB-0085-0001-SO	52	0.56	0.23		11	N/A
072SB-0086-0001-SO	MERCURY	0.04	MG/KG	0.12	0.04	U	072SB-0085-0001-SO	0.044	0.13	0.044	U	N/A	Yes
072SB-0086-0001-SO	1,2,4-TRICHLOROBENZENE	31	UG/KG	58	31	U	072SB-0085-0001-SO	32	58	32		N/A	Yes
072SB-0086-0001-SO	1,2-DICHLOROBENZENE	31	UG/KG	58	31	U	072SB-0085-0001-SO	32	58	32		N/A	Yes
072SB-0086-0001-SO	1,3-DICHLOROBENZENE	31	UG/KG	58	31	U	072SB-0085-0001-SO	32	58	32		N/A	Yes
072SB-0086-0001-SO	1,4-DICHLOROBENZENE	31	UG/KG	58	31	U	072SB-0085-0001-SO	32	58	32		N/A	Yes
072SB-0086-0001-SO	2,4,5-TRICHLOROPHENOL	31	UG/KG	170	31	U	072SB-0085-0001-SO	32	180	32		N/A	Yes
072SB-0086-0001-SO	2,4,6-TRICHLOROPHENOL	92	UG/KG	170	92	U	072SB-0085-0001-SO	94	180	94		N/A	Yes
072SB-0086-0001-SO	2,4-DICHLOROPHENOL	31	UG/KG	170	31	U	072SB-0085-0001-SO	32	180	32		N/A	Yes
072SB-0086-0001-SO	2,4-DIMETHYLPHENOL	92	UG/KG	170	92	U	072SB-0085-0001-SO	94	180	94		N/A	Yes
072SB-0086-0001-SO	2,4-DINITROPHENOL	92	UG/KG	380	92	U	072SB-0085-0001-SO	94	390	94		N/A	Yes
072SB-0086-0001-SO	2,4-DINITROTOLUENE	31	UG/KG	230	31	U	072SB-0085-0001-SO	32	230	32		N/A	Yes
072SB-0086-0001-SO	2,6-DINITROTOLUENE	31	UG/KG	230	31	U	072SB-0085-0001-SO	32	230	32		N/A	Yes
072SB-0086-0001-SO	2-CHLORONAPHTHALENE	3.8	UG/KG	58	3.8	U	072SB-0085-0001-SO	3.9	58	3.9		N/A	Yes
072SB-0086-0001-SO	2-CHLOROPHENOL	31	UG/KG	58	31	U	072SB-0085-0001-SO	32	58	32		N/A	Yes

Sample	Analyte	Result	Units	LOQ	LOD	Qual	Sample	Result	LOQ	LOD	Qual	RPD	W/In LOQ
072SB-0086-0001-SO	2-METHYLNAPHTHALENE	3.8	UG/KG	7.7	3.8	U	072SB-0085-0001-SO	3.9	7.8	3.9		N/A	Yes
072SB-0086-0001-SO	2-Methylphenol	92	UG/KG	230	92	U	072SB-0085-0001-SO	94	230	94		N/A	Yes
072SB-0086-0001-SO	2-NITROANILINE	31	UG/KG	230	31	U	072SB-0085-0001-SO	32	230	32		N/A	Yes
072SB-0086-0001-SO	2-NITROPHENOL	31	UG/KG	58	31	U	072SB-0085-0001-SO	32	58	32		N/A	Yes
072SB-0086-0001-SO	3 & 4 Methylphenol	92	UG/KG	460	92	U	072SB-0085-0001-SO	94	470	94		N/A	Yes
072SB-0086-0001-SO	3,3'-DICHLOROBENZIDINE	92	UG/KG	120	92	U	072SB-0085-0001-SO	94	120	94		N/A	Yes
072SB-0086-0001-SO	3-NITROANILINE	92	UG/KG	230	92	U	072SB-0085-0001-SO	94	230	94		N/A	Yes
072SB-0086-0001-SO	4,6-DINITRO-2-METHYLPHENOL	92	UG/KG	170	92	U	072SB-0085-0001-SO	94	180	94		N/A	Yes
072SB-0086-0001-SO	4-BROMOPHENYL PHENYL ETHER	31	UG/KG	58	31	U	072SB-0085-0001-SO	32	58	32		N/A	Yes
072SB-0086-0001-SO	4-CHLORO-3-METHYLPHENOL	31	UG/KG	170	31	U	072SB-0085-0001-SO	32	180	32		N/A	Yes
072SB-0086-0001-SO	4-CHLOROANILINE	31	UG/KG	170	31	U	072SB-0085-0001-SO	32	180	32		N/A	Yes
072SB-0086-0001-SO	4-CHLOROPHENYL PHENYL ETHER	31	UG/KG	58	31	U	072SB-0085-0001-SO	32	58	32		N/A	Yes
072SB-0086-0001-SO	4-NITROANILINE	31	UG/KG	230	31	U	072SB-0085-0001-SO	32	230	32		N/A	Yes
072SB-0086-0001-SO	4-NITROPHENOL	92	UG/KG	380	92	U	072SB-0085-0001-SO	94	390	94		N/A	Yes
072SB-0086-0001-SO	ACENAPHTHENE	3.8	UG/KG	7.7	3.8	U	072SB-0085-0001-SO	3.9	7.8	3.9		N/A	Yes
072SB-0086-0001-SO	ACENAPHTHYLENE	3.8	UG/KG	7.7	3.8	U	072SB-0085-0001-SO	3.9	7.8	3.9		N/A	Yes
072SB-0086-0001-SO	ANTHRACENE	3.8	UG/KG	7.7	3.8	U	072SB-0085-0001-SO	3.9	7.8	3.9		N/A	Yes
072SB-0086-0001-SO	Benzo[a]anthracene	3.8	UG/KG	7.7	3.8	U	072SB-0085-0001-SO	3.9	7.8	3.9		N/A	Yes
072SB-0086-0001-SO	Benzo[a]pyrene	3.8	UG/KG	7.7	3.8	U	072SB-0085-0001-SO	3.9	7.8	3.9		N/A	Yes
072SB-0086-0001-SO	Benzo[b]fluoranthene	3.8	UG/KG	7.7	3.8	U	072SB-0085-0001-SO	3.9	7.8	3.9		N/A	Yes
072SB-0086-0001-SO	Benzo[g,h,i]perylene	3.8	UG/KG	7.7	3.8	U	072SB-0085-0001-SO	3.9	7.8	3.9		N/A	Yes
072SB-0086-0001-SO	Benzo[k]fluoranthene	3.8	UG/KG	7.7	3.8	U	072SB-0085-0001-SO	3.9	7.8	3.9		N/A	Yes
072SB-0086-0001-SO	BENZOIC ACID	380	UG/KG	760	380	U	072SB-0085-0001-SO	390	770	390		N/A	Yes
072SB-0086-0001-SO	BENZYL ALCOHOL	31	UG/KG	380	31	U	072SB-0085-0001-SO	32	390	32		N/A	Yes
072SB-0086-0001-SO	BENZYL BUTYL PHTHALATE	31	UG/KG	58	31	U	072SB-0085-0001-SO	32	58	32		N/A	Yes
072SB-0086-0001-SO	BIS(2-CHLOROETHOXY) METHANE	31	UG/KG	120	31	U	072SB-0085-0001-SO	32	120	32		N/A	Yes
072SB-0086-0001-SO	BIS(2-CHLOROETHYL) ETHER	3.8	UG/KG	120	3.8	U	072SB-0085-0001-SO	3.9	120	3.9		N/A	Yes
072SB-0086-0001-SO	BIS(2-CHLOROISOPROPYL) ETHER	31	UG/KG	120	31	U	072SB-0085-0001-SO	32	120	32		N/A	Yes
072SB-0086-0001-SO	BIS(2-ETHYLHEXYL) PHTHALATE	31	UG/KG	58	31	U	072SB-0085-0001-SO	32	58	32		N/A	Yes
072SB-0086-0001-SO	CARBAZOLE	31	UG/KG	58	31	U	072SB-0085-0001-SO	32	58	32		N/A	Yes
072SB-0086-0001-SO	CHRYSENE	3.8	UG/KG	7.7	3.8	U	072SB-0085-0001-SO	3.9	7.8	3.9		N/A	Yes
072SB-0086-0001-SO	DIBENZ(A,H)ANTHRACENE	3.8	UG/KG	7.7	3.8	U	072SB-0085-0001-SO	3.9	7.8	3.9		N/A	Yes
072SB-0086-0001-SO	DIBENZOFURAN	3.8	UG/KG	58	3.8	U	072SB-0085-0001-SO	3.9	58	3.9		N/A	Yes
072SB-0086-0001-SO	DIETHYL PHTHALATE	31	UG/KG	58	31	U	072SB-0085-0001-SO	32	58	32		N/A	Yes
072SB-0086-0001-SO	DIMETHYL PHTHALATE	31	UG/KG	58	31	U	072SB-0085-0001-SO	32	58	32		N/A	Yes
072SB-0086-0001-SO	DI-N-BUTYL PHTHALATE	31	UG/KG	58	31	U	072SB-0085-0001-SO	32	58	32		N/A	Yes

Sample	Analyte	Result	Units	LOQ	LOD	Qual	Sample	Result	LOQ	LOD	Qual	RPD	W/In LOQ
072SB-0086-0001-SO	DI-N-OCTYLPHTHALATE	31	UG/KG	58	31	U	072SB-0085-0001-SO	32	58	32		N/A	Yes
072SB-0086-0001-SO	FLUORANTHENE	3.8	UG/KG	7.7	3.8	U	072SB-0085-0001-SO	3.9	7.8	3.9		N/A	Yes
072SB-0086-0001-SO	FLUORENE	3.8	UG/KG	7.7	3.8	U	072SB-0085-0001-SO	3.9	7.8	3.9		N/A	Yes
072SB-0086-0001-SO	HEXACHLOROBENZENE	3.8	UG/KG	7.7	3.8	U	072SB-0085-0001-SO	3.9	7.8	3.9		N/A	Yes
072SB-0086-0001-SO	HEXACHLOROBUTADIENE	31	UG/KG	58	31	U	072SB-0085-0001-SO	32	58	32		N/A	Yes
072SB-0086-0001-SO	HEXACHLOROCYCLOPENTADIENE	31	UG/KG	380	31	U	072SB-0085-0001-SO	32	390	32		N/A	Yes
072SB-0086-0001-SO	HEXACHLOROETHANE	31	UG/KG	58	31	U	072SB-0085-0001-SO	32	58	32		N/A	Yes
072SB-0086-0001-SO	Indeno[1,2,3-cd]pyrene	3.8	UG/KG	7.7	3.8	U	072SB-0085-0001-SO	3.9	7.8	3.9		N/A	Yes
072SB-0086-0001-SO	ISOPHORONE	31	UG/KG	58	31	U	072SB-0085-0001-SO	32	58	32		N/A	Yes
072SB-0086-0001-SO	NAPHTHALENE	3.8	UG/KG	7.7	3.8	U	072SB-0085-0001-SO	3.9	7.8	3.9		N/A	Yes
072SB-0086-0001-SO	NITROBENZENE	3.8	UG/KG	120	3.8	U	072SB-0085-0001-SO	3.9	120	3.9		N/A	Yes
072SB-0086-0001-SO	N-NITROSODI-N-PROPYLAMINE	31	UG/KG	58	31	U	072SB-0085-0001-SO	32	58	32		N/A	Yes
072SB-0086-0001-SO	N-NITROSODIPHENYLAMINE	31	UG/KG	58	31	U	072SB-0085-0001-SO	32	58	32		N/A	Yes
072SB-0086-0001-SO	PENTACHLOROPHENOL	92	UG/KG	170	92	U	072SB-0085-0001-SO	94	180	94		N/A	Yes
072SB-0086-0001-SO	PHENANTHRENE	3.8	UG/KG	7.7	3.8	U	072SB-0085-0001-SO	3.9	7.8	3.9		N/A	Yes
072SB-0086-0001-SO	PHENOL	31	UG/KG	58	31	U	072SB-0085-0001-SO	32	58	32		N/A	Yes
072SB-0086-0001-SO	PYRENE	3.8	UG/KG	7.7	3.8	U	072SB-0085-0001-SO	3.9	7.8	3.9		N/A	Yes
076SB-0126-0001-SO	Hexavalent chromium	0.31	MG/KG	0.89	0.89	J-	076SB-0127-0001-SO	0.89	0.89	0.89	U	N/A	Yes
076SB-0076-0001-SO	Hexavalent chromium	0.33	MG/KG	0.8	0.8	J	076SB-0089-0001-SO	0.45	0.8	0.8	J	N/A	Yes
076SB-0132-0001-SO	Hexavalent chromium	0.99	MG/KG	0.99	0.99	U	076SB-0133-0001-SO	0.39	0.98	0.98	J	N/A	Yes

Sample	Analyte	Result	Units	LOQ	LOD	Qual	Sample	Result	LOQ	LOD	Qual	RPD	W/In LOQ
075SD-0002-0001-SD	NITROCELLULOSE	28	MG/KG	78	28		075SD-0003-0001-SD	28	76	28	U	N/A	Yes
075SD-0002-0001-SD	ALUMINUM	12000	MG/KG	4.4	0.88	J	075SD-0003-0001-SD	16000	4.6	0.91		29	N/A
075SD-0002-0001-SD	ANTIMONY	0.21	MG/KG	0.29	0.15	J-	075SD-0003-0001-SD	0.43	0.3	0.15		N/A	Yes
075SD-0002-0001-SD	ARSENIC	9.5	MG/KG	0.15	0.074	J-	075SD-0003-0001-SD	9	0.15	0.076		5	N/A
075SD-0002-0001-SD	BARIUM	110	MG/KG	1.5	0.029	J-	075SD-0003-0001-SD	130	1.5	0.03		17	N/A
075SD-0002-0001-SD	BERYLLIUM	0.89	MG/KG	0.15	0.015		075SD-0003-0001-SD	1.7	0.15	0.015		63	N/A
075SD-0002-0001-SD	CADMIUM	0.63	MG/KG	0.15	0.044		075SD-0003-0001-SD	0.76	0.15	0.046		N/A	Yes
075SD-0002-0001-SD	CALCIUM	6400	MG/KG	15	3.7		075SD-0003-0001-SD	50000	15	3.8		155	N/A
075SD-0002-0001-SD	CHROMIUM	15	MG/KG	0.29	0.059	J-	075SD-0003-0001-SD	21	0.3	0.061		33	N/A
075SD-0002-0001-SD	COBALT	9.6	MG/KG	0.074	0.015		075SD-0003-0001-SD	11	0.076	0.015		14	N/A
075SD-0002-0001-SD	COPPER	17	MG/KG	0.29	0.088		075SD-0003-0001-SD	21	0.3	0.091		21	N/A
075SD-0002-0001-SD	IRON	20000	MG/KG	7.4	2.9		075SD-0003-0001-SD	19000	7.6	3		5	N/A
075SD-0002-0001-SD	LEAD	22	MG/KG	0.15	0.044		075SD-0003-0001-SD	32	0.15	0.046		37	N/A
075SD-0002-0001-SD	MAGNESIUM	2800	MG/KG	15	2.9	J-	075SD-0003-0001-SD	5600	15	3		67	N/A
075SD-0002-0001-SD	MANGANESE	2200	MG/KG	0.74	0.044		075SD-0003-0001-SD	4100	7.6	0.46		60	N/A
075SD-0002-0001-SD	NICKEL	21	MG/KG	0.15	0.044	J-	075SD-0003-0001-SD	21	0.15	0.046		0	N/A
075SD-0002-0001-SD	POTASSIUM	1400	MG/KG	15	8.8	J-	075SD-0003-0001-SD	1200	15	9.1		15	N/A
075SD-0002-0001-SD	SELENIUM	1.3	MG/KG	0.74	0.15	J-	075SD-0003-0001-SD	1.4	0.76	0.15		N/A	Yes
075SD-0002-0001-SD	SILVER	1.5	MG/KG	0.15	0.044		075SD-0003-0001-SD	2.3	0.15	0.046		42	N/A
075SD-0002-0001-SD	SODIUM	75	MG/KG	15	7.4	J	075SD-0003-0001-SD	310	15	7.6		N/A	No
075SD-0002-0001-SD	THALLIUM	0.21	MG/KG	0.15	0.029		075SD-0003-0001-SD	0.15	0.15	0.03		N/A	Yes
075SD-0002-0001-SD	VANADIUM	20	MG/KG	0.15	0.088	J-	075SD-0003-0001-SD	15	0.15	0.091		29	N/A
075SD-0002-0001-SD	ZINC	140	MG/KG	0.74	0.29		075SD-0003-0001-SD	130	0.76	0.3		7	N/A
075SD-0002-0001-SD	ALDRIN	42	UG/KG	130	42		075SD-0003-0001-SD	21	63	21	U	N/A	Yes
075SD-0002-0001-SD	ALPHA BHC	42	UG/KG	80	42		075SD-0003-0001-SD	21	39	21	U	N/A	Yes
075SD-0002-0001-SD	ALPHA ENDOSULFAN	21	UG/KG	54	21		075SD-0003-0001-SD	10	27	10	U	N/A	Yes
075SD-0002-0001-SD	ALPHA-CHLORDANE	42	UG/KG	96	42		075SD-0003-0001-SD	21	47	21	U	N/A	Yes
075SD-0002-0001-SD	BETA BHC	42	UG/KG	110	42		075SD-0003-0001-SD	21	55	21	U	N/A	Yes
075SD-0002-0001-SD	BETA ENDOSULFAN	42	UG/KG	80	42		075SD-0003-0001-SD	21	39	21	U	N/A	Yes
075SD-0002-0001-SD	DELTA BHC	42	UG/KG	130	42		075SD-0003-0001-SD	21	63	21	U	N/A	Yes
075SD-0002-0001-SD	DIELDRIN	21	UG/KG	54	21		075SD-0003-0001-SD	10	27	10	U	N/A	Yes
075SD-0002-0001-SD	ENDOSULFAN SULFATE	42	UG/KG	96	42		075SD-0003-0001-SD	21	47	21	U	N/A	Yes
075SD-0002-0001-SD	ENDRIN	21	UG/KG	54	21		075SD-0003-0001-SD	10	27	10	U	N/A	Yes
075SD-0002-0001-SD	ENDRIN ALDEHYDE	42	UG/KG	96	42		075SD-0003-0001-SD	21	47	21	U	N/A	Yes

Sample	Analyte	Result	Units	LOQ	LOD	Qual	Sample	Result	LOQ	LOD	Qual	RPD	W/In LOQ
075SD-0002-0001-SD	ENDRIN KETONE	21	UG/KG	64	21		075SD-0003-0001-SD	10	31	10	U	N/A	Yes
075SD-0002-0001-SD	GAMMA BHC (LINDANE)	42	UG/KG	80	42		075SD-0003-0001-SD	21	39	21	U	N/A	Yes
075SD-0002-0001-SD	GAMMA-CHLORDANE	21	UG/KG	54	21		075SD-0003-0001-SD	10	27	10	U	N/A	Yes
075SD-0002-0001-SD	HEPTACHLOR	42	UG/KG	110	42		075SD-0003-0001-SD	21	55	21	U	N/A	Yes
075SD-0002-0001-SD	HEPTACHLOR EPOXIDE	42	UG/KG	80	42		075SD-0003-0001-SD	21	39	21	U	N/A	Yes
075SD-0002-0001-SD	METHOXYCHLOR	110	UG/KG	160	110		075SD-0003-0001-SD	52	78	52	U	N/A	Yes
075SD-0002-0001-SD	P,P'-DDD	21	UG/KG	64	21		075SD-0003-0001-SD	10	31	10	U	N/A	Yes
075SD-0002-0001-SD	P,P'-DDE	13	UG/KG	54	21		075SD-0003-0001-SD	10	27	10	U	N/A	Yes
075SD-0002-0001-SD	P,P'-DDT	29	UG/KG	64	21		075SD-0003-0001-SD	10	31	10	U	N/A	Yes
075SD-0002-0001-SD	TOXAPHENE	640	UG/KG	2100	640		075SD-0003-0001-SD	310	1000	310	U	N/A	Yes
075SD-0002-0001-SD	Aroclor-1016	40	UG/KG	100	40	U	075SD-0003-0001-SD	39	100	39	U	N/A	Yes
075SD-0002-0001-SD	Aroclor-1221	40	UG/KG	80	40	U	075SD-0003-0001-SD	39	78	39	U	N/A	Yes
075SD-0002-0001-SD	Aroclor-1232	40	UG/KG	72	40	U	075SD-0003-0001-SD	39	70	39	U	N/A	Yes
075SD-0002-0001-SD	Aroclor-1242	40	UG/KG	64	40	U	075SD-0003-0001-SD	39	63	39	U	N/A	Yes
075SD-0002-0001-SD	Aroclor-1248	40	UG/KG	88	40	U	075SD-0003-0001-SD	39	86	39	U	N/A	Yes
075SD-0002-0001-SD	Aroclor-1254	40	UG/KG	88	40	U	075SD-0003-0001-SD	39	86	39	U	N/A	Yes
075SD-0002-0001-SD	Aroclor-1260	40	UG/KG	88	40	U	075SD-0003-0001-SD	39	86	39	U	N/A	Yes
075SD-0002-0001-SD	1,3,5-TRINITROBENZENE	0.049	MG/KG	0.25	0.049		075SD-0003-0001-SD	0.05	0.25	0.05	U	N/A	Yes
075SD-0002-0001-SD	1,3-DINITROBENZENE	0.049	MG/KG	0.25	0.049		075SD-0003-0001-SD	0.05	0.25	0.05	U	N/A	Yes
075SD-0002-0001-SD	2,4,6-TRINITROTOLUENE	0.049	MG/KG	0.25	0.049		075SD-0003-0001-SD	0.05	0.25	0.05	U	N/A	Yes
075SD-0002-0001-SD	2,4-DINITROTOLUENE	0.049	MG/KG	0.25	0.049		075SD-0003-0001-SD	0.05	0.25	0.05	U	N/A	Yes
075SD-0002-0001-SD	2,6-DINITROTOLUENE	0.049	MG/KG	0.25	0.049		075SD-0003-0001-SD	0.05	0.25	0.05	U	N/A	Yes
075SD-0002-0001-SD	2-AMINO-4,6-DINITROTOLUENE	0.049	MG/KG	0.25	0.049		075SD-0003-0001-SD	0.05	0.25	0.05	U	N/A	Yes
075SD-0002-0001-SD	2-NITROTOLUENE	0.049	MG/KG	0.25	0.049	UJ	075SD-0003-0001-SD	0.05	0.25	0.05	U	N/A	Yes
075SD-0002-0001-SD	3-NITROTOLUENE	0.049	MG/KG	0.25	0.049		075SD-0003-0001-SD	0.05	0.25	0.05	U	N/A	Yes
075SD-0002-0001-SD	4-AMINO-2,6-DINITROTOLUENE	0.049	MG/KG	0.25	0.049		075SD-0003-0001-SD	0.05	0.25	0.05	U	N/A	Yes
075SD-0002-0001-SD	4-NITROTOLUENE	0.049	MG/KG	0.25	0.049		075SD-0003-0001-SD	0.05	0.25	0.05	U	N/A	Yes
075SD-0002-0001-SD	HMX	0.049	MG/KG	0.25	0.049		075SD-0003-0001-SD	0.05	0.25	0.05	U	N/A	Yes
075SD-0002-0001-SD	NITROBENZENE	0.049	MG/KG	0.25	0.049	R	075SD-0003-0001-SD	0.05	0.25	0.05	U	N/A	N/A
075SD-0002-0001-SD	NITROGLYCERIN	0.25	MG/KG	0.49	0.25		075SD-0003-0001-SD	0.25	0.5	0.25	U	N/A	Yes
075SD-0002-0001-SD	PETN	0.25	MG/KG	0.49	0.25		075SD-0003-0001-SD	0.25	0.5	0.25	U	N/A	Yes
075SD-0002-0001-SD	RDX	0.049	MG/KG	0.25	0.049	UJ	075SD-0003-0001-SD	0.05	0.25	0.05	U	N/A	Yes
075SD-0002-0001-SD	TETRYL	0.029	MG/KG	0.25	0.049	NJ	075SD-0003-0001-SD	0.05	0.25	0.05	U	N/A	Yes
075SD-0002-0001-SD	MERCURY	0.47	MG/KG	0.15	0.05	J-	075SD-0003-0001-SD	1.1	0.16	0.054		N/A	No

Sample	Analyte	Result	Units	LOQ	LOD	Qual	Sample	Result	LOQ	LOD	Qual	RPD	W/In LOQ
075SD-0002-0001-SD	1,1,1-TRICHLOROETHANE	1.5	UG/KG	7.6	1.5	U	075SD-0003-0001-SD	1.6	8	1.6	U	N/A	Yes
075SD-0002-0001-SD	1,1,2,2-TETRACHLOROETHANE	0.76	UG/KG	7.6	0.76	U	075SD-0003-0001-SD	0.8	8	0.8	U	N/A	Yes
075SD-0002-0001-SD	1,1,2-TRICHLOROETHANE	0.76	UG/KG	7.6	0.76	U	075SD-0003-0001-SD	0.8	8	0.8	U	N/A	Yes
075SD-0002-0001-SD	1,1-DICHLOROETHANE	0.76	UG/KG	7.6	0.76	U	075SD-0003-0001-SD	0.8	8	0.8	U	N/A	Yes
075SD-0002-0001-SD	1,1-DICHLOROETHENE	1.5	UG/KG	7.6	1.5	U	075SD-0003-0001-SD	1.6	8	1.6	U	N/A	Yes
075SD-0002-0001-SD	1,2-DIBROMOETHANE	1.5	UG/KG	7.6	1.5	U	075SD-0003-0001-SD	1.6	8	1.6	U	N/A	Yes
075SD-0002-0001-SD	1,2-DICHLOROETHANE	0.76	UG/KG	7.6	0.76	U	075SD-0003-0001-SD	0.8	8	0.8	U	N/A	Yes
075SD-0002-0001-SD	1,2-DICHLOROETHENE, total	1.5	UG/KG	15	1.5	U	075SD-0003-0001-SD	1.6	16	1.6	U	N/A	Yes
075SD-0002-0001-SD	1,2-DICHLOROPROPANE	1.5	UG/KG	7.6	1.5	U	075SD-0003-0001-SD	1.6	8	1.6	U	N/A	Yes
075SD-0002-0001-SD	2-BUTANONE (MEK)	3.1	UG/KG	31	3.1	U	075SD-0003-0001-SD	3.2	32	3.2	U	N/A	Yes
075SD-0002-0001-SD	2-HEXANONE	1.6	UG/KG	31	1.5	J	075SD-0003-0001-SD	1.6	32	1.6	U	N/A	Yes
075SD-0002-0001-SD	4-METHYL-2-PENTANONE (MIBK)	1.5	UG/KG	31	1.5	U	075SD-0003-0001-SD	1.6	32	1.6	J	N/A	Yes
075SD-0002-0001-SD	ACETONE	9.6	UG/KG	31	9.6	U	075SD-0003-0001-SD	10	32	10	U	N/A	Yes
075SD-0002-0001-SD	BENZENE	0.76	UG/KG	7.6	0.76	U	075SD-0003-0001-SD	0.8	8	0.8	U	N/A	Yes
075SD-0002-0001-SD	BROMOCHLOROMETHANE	1.5	UG/KG	7.6	1.5	U	075SD-0003-0001-SD	1.6	8	1.6	U	N/A	Yes
075SD-0002-0001-SD	BROMODICHLOROMETHANE	0.76	UG/KG	7.6	0.76	U	075SD-0003-0001-SD	0.8	8	0.8	U	N/A	Yes
075SD-0002-0001-SD	BROMOFORM	0.76	UG/KG	7.6	0.76	U	075SD-0003-0001-SD	0.8	8	0.8	U	N/A	Yes
075SD-0002-0001-SD	BROMOMETHANE	1.5	UG/KG	7.6	1.5	U	075SD-0003-0001-SD	1.6	8	1.6	U	N/A	Yes
075SD-0002-0001-SD	CARBON DISULFIDE	1.3	UG/KG	7.6	0.76	J	075SD-0003-0001-SD	0.8	8	0.8	U	N/A	Yes
075SD-0002-0001-SD	CARBON TETRACHLORIDE	0.76	UG/KG	7.6	0.76	U	075SD-0003-0001-SD	0.8	8	0.8	U	N/A	Yes
075SD-0002-0001-SD	CHLOROBENZENE	0.76	UG/KG	7.6	0.76	U	075SD-0003-0001-SD	0.8	8	0.8	U	N/A	Yes
075SD-0002-0001-SD	CHLOROETHANE	1.5	UG/KG	7.6	1.5	U	075SD-0003-0001-SD	1.6	8	1.6	U	N/A	Yes
075SD-0002-0001-SD	CHLOROFORM	0.76	UG/KG	7.6	0.76	U	075SD-0003-0001-SD	0.8	8	0.8	U	N/A	Yes
075SD-0002-0001-SD	CHLOROMETHANE	0.76	UG/KG	7.6	0.76	U	075SD-0003-0001-SD	0.8	8	0.8	U	N/A	Yes
075SD-0002-0001-SD	CIS-1,3-DICHLOROPROPENE	0.76	UG/KG	7.6	0.76	U	075SD-0003-0001-SD	0.8	8	0.8	U	N/A	Yes
075SD-0002-0001-SD	DIBROMOCHLOROMETHANE	1.5	UG/KG	7.6	1.5	U	075SD-0003-0001-SD	1.6	8	1.6	U	N/A	Yes
075SD-0002-0001-SD	ETHYLBENZENE	0.76	UG/KG	7.6	0.76	U	075SD-0003-0001-SD	0.8	8	0.8	U	N/A	Yes
075SD-0002-0001-SD	Methyl tert-butyl ether	0.76	UG/KG	7.6	0.76	U	075SD-0003-0001-SD	0.8	8	0.8	U	N/A	Yes
075SD-0002-0001-SD	METHYLENE CHLORIDE	1.5	UG/KG	7.6	1.5	U	075SD-0003-0001-SD	4.1	8	1.6	J	N/A	Yes
075SD-0002-0001-SD	STYRENE	7.6	UG/KG	7.6	0.76	U	075SD-0003-0001-SD	0.8	8	0.8	J	N/A	Yes
075SD-0002-0001-SD	TETRACHLOROETHYLENE	1.5	UG/KG	7.6	1.5	U	075SD-0003-0001-SD	1.6	8	1.6	U	N/A	Yes
075SD-0002-0001-SD	TOLUENE	0.76	UG/KG	7.6	0.76	U	075SD-0003-0001-SD	0.8	8	0.8	U	N/A	Yes
075SD-0002-0001-SD	TRANS-1,3-DICHLOROPROPENE	1.5	UG/KG	7.6	1.5	U	075SD-0003-0001-SD	1.6	8	1.6	U	N/A	Yes
075SD-0002-0001-SD	TRICHLOROETHYLENE	0.76	UG/KG	7.6	0.76	U	075SD-0003-0001-SD	0.8	8	0.8	U	N/A	Yes

Sample	Analyte	Result	Units	LOQ	LOD	Qual	Sample	Result	LOQ	LOD	Qual	RPD	W/In LOQ
075SD-0002-0001-SD	VINYL CHLORIDE	0.76	UG/KG	7.6	0.76	U	075SD-0003-0001-SD	0.8	8	0.8	U	N/A	Yes
075SD-0002-0001-SD	XYLENES, TOTAL	2.3	UG/KG	15	2.3	U	075SD-0003-0001-SD	2.4	16	2.4	U	N/A	Yes
075SD-0002-0001-SD	1,2,4-TRICHLOROBENZENE	43	UG/KG	80	43	U	075SD-0003-0001-SD	42	78	42	U	N/A	Yes
075SD-0002-0001-SD	1,2-DICHLOROBENZENE	140	UG/KG	80	43		075SD-0003-0001-SD	42	78	42	J	N/A	No
075SD-0002-0001-SD	1,3-DICHLOROBENZENE	43	UG/KG	80	43	U	075SD-0003-0001-SD	42	78	42	U	N/A	Yes
075SD-0002-0001-SD	1,4-DICHLOROBENZENE	50	UG/KG	80	43	J	075SD-0003-0001-SD	42	78	42	U	N/A	Yes
075SD-0002-0001-SD	2,4,5-TRICHLOROPHENOL	43	UG/KG	240	43	U	075SD-0003-0001-SD	42	240	42	U	N/A	Yes
075SD-0002-0001-SD	2,4,6-TRICHLOROPHENOL	130	UG/KG	240	130	U	075SD-0003-0001-SD	130	240	130	U	N/A	Yes
075SD-0002-0001-SD	2,4-DICHLOROPHENOL	43	UG/KG	240	43	U	075SD-0003-0001-SD	42	240	42	U	N/A	Yes
075SD-0002-0001-SD	2,4-DIMETHYLPHENOL	130	UG/KG	240	130	U	075SD-0003-0001-SD	130	240	130	U	N/A	Yes
075SD-0002-0001-SD	2,4-DINITROPHENOL	130	UG/KG	530	130	UJ	075SD-0003-0001-SD	130	520	130	U	N/A	Yes
075SD-0002-0001-SD	2,4-DINITROTOLUENE	43	UG/KG	320	43	R	075SD-0003-0001-SD	42	310	42	U	N/A	N/A
075SD-0002-0001-SD	2,6-DINITROTOLUENE	43	UG/KG	320	43	R	075SD-0003-0001-SD	42	310	42	U	N/A	N/A
075SD-0002-0001-SD	2-CHLORONAPHTHALENE	5.3	UG/KG	80	5.3	U	075SD-0003-0001-SD	5.2	78	5.2	U	N/A	Yes
075SD-0002-0001-SD	2-CHLOROPHENOL	43	UG/KG	80	43	U	075SD-0003-0001-SD	42	78	42	U	N/A	Yes
075SD-0002-0001-SD	2-METHYLNAPHTHALENE	18	UG/KG	11	5.3		075SD-0003-0001-SD	15	10	5.2		N/A	Yes
075SD-0002-0001-SD	2-METHYLPHENOL	130	UG/KG	320	130	U	075SD-0003-0001-SD	130	310	130	U	N/A	Yes
075SD-0002-0001-SD	2-NITROANILINE	43	UG/KG	320	43	U	075SD-0003-0001-SD	42	310	42	U	N/A	Yes
075SD-0002-0001-SD	2-NITROPHENOL	43	UG/KG	80	43	U	075SD-0003-0001-SD	42	78	42	U	N/A	Yes
075SD-0002-0001-SD	3 & 4 Methylphenol	130	UG/KG	640	130	U	075SD-0003-0001-SD	130	630	130	U	N/A	Yes
075SD-0002-0001-SD	3,3'-DICHLOROBENZIDINE	130	UG/KG	160	130	R	075SD-0003-0001-SD	130	160	130	U	N/A	N/A
075SD-0002-0001-SD	3-NITROANILINE	130	UG/KG	320	130	U	075SD-0003-0001-SD	130	310	130	U	N/A	Yes
075SD-0002-0001-SD	4,6-DINITRO-2-METHYLPHENOL	130	UG/KG	240	130	UJ	075SD-0003-0001-SD	130	240	130	U	N/A	Yes
075SD-0002-0001-SD	4-BROMOPHENYL PHENYL ETHER	43	UG/KG	80	43	U	075SD-0003-0001-SD	42	78	42	U	N/A	Yes
075SD-0002-0001-SD	4-CHLORO-3-METHYLPHENOL	43	UG/KG	240	43	U	075SD-0003-0001-SD	42	240	42	U	N/A	Yes
075SD-0002-0001-SD	4-CHLOROANILINE	43	UG/KG	240	43	U	075SD-0003-0001-SD	42	240	42	U	N/A	Yes
075SD-0002-0001-SD	4-CHLOROPHENYL PHENYL ETHER	43	UG/KG	80	43	U	075SD-0003-0001-SD	42	78	42	U	N/A	Yes
075SD-0002-0001-SD	4-NITROANILINE	43	UG/KG	320	43	UJ	075SD-0003-0001-SD	42	310	42	U	N/A	Yes
075SD-0002-0001-SD	4-NITROPHENOL	130	UG/KG	530	130	U	075SD-0003-0001-SD	130	520	130	U	N/A	Yes
075SD-0002-0001-SD	ACENAPHTHENE	19	UG/KG	11	5.3		075SD-0003-0001-SD	14	10	5.2		N/A	Yes
075SD-0002-0001-SD	ACENAPHTHYLENE	13	UG/KG	11	5.3		075SD-0003-0001-SD	12	10	5.2		N/A	Yes
075SD-0002-0001-SD	ANTHRACENE	57	UG/KG	11	5.3		075SD-0003-0001-SD	33	10	5.2		N/A	No
075SD-0002-0001-SD	Benzo[a]anthracene	230	UG/KG	11	5.3		075SD-0003-0001-SD	150	10	5.2		42	N/A
075SD-0002-0001-SD	Benzo[a]pyrene	250	UG/KG	11	5.3		075SD-0003-0001-SD	160	10	5.2		44	N/A

Sample	Analyte	Result	Units	LOQ	LOD	Qual	Sample	Result	LOQ	LOD	Qual	RPD	W/In LOQ
075SD-0002-0001-SD	Benzo[b]fluoranthene	360	UG/KG	11	5.3		075SD-0003-0001-SD	210	10	5.2		53	N/A
075SD-0002-0001-SD	Benzo[g,h,i]perylene	120	UG/KG	11	5.3	J	075SD-0003-0001-SD	80	10	5.2		40	N/A
075SD-0002-0001-SD	Benzo[k]fluoranthene	140	UG/KG	11	5.3		075SD-0003-0001-SD	100	10	5.2		33	N/A
075SD-0002-0001-SD	BENZOIC ACID	530	UG/KG	1100	530	U	075SD-0003-0001-SD	520	1000	520	U	N/A	Yes
075SD-0002-0001-SD	BENZYL ALCOHOL	43	UG/KG	530	43	U	075SD-0003-0001-SD	34	520	42	J	N/A	Yes
075SD-0002-0001-SD	BENZYL BUTYL PHTHALATE	43	UG/KG	80	43	U	075SD-0003-0001-SD	41	78	42	J	N/A	Yes
075SD-0002-0001-SD	BIS(2-CHLOROETHOXY) METHANE	43	UG/KG	160	43	U	075SD-0003-0001-SD	42	160	42	U	N/A	Yes
075SD-0002-0001-SD	BIS(2-CHLOROETHYL) ETHER	5.3	UG/KG	160	5.3	U	075SD-0003-0001-SD	5.2	160	5.2	U	N/A	Yes
075SD-0002-0001-SD	BIS(2-ETHYLHEXYL) PHTHALATE	43	UG/KG	80	43	UJ	075SD-0003-0001-SD	41	78	42	J	N/A	Yes
075SD-0002-0001-SD	CARBAZOLE	44	UG/KG	80	43	J	075SD-0003-0001-SD	42	78	42	U	N/A	Yes
075SD-0002-0001-SD	CHRYSENE	270	UG/KG	11	5.3		075SD-0003-0001-SD	160	10	5.2		51	N/A
075SD-0002-0001-SD	DIBENZ(A,H)ANTHRACENE	5.3	UG/KG	11	5.3	UJ	075SD-0003-0001-SD	5.2	10	5.2	U	N/A	Yes
075SD-0002-0001-SD	DIBENZOFURAN	17	UG/KG	80	5.3	J	075SD-0003-0001-SD	15	78	5.2	J	N/A	Yes
075SD-0002-0001-SD	DIETHYL PHTHALATE	43	UG/KG	80	43	U	075SD-0003-0001-SD	42	78	42	U	N/A	Yes
075SD-0002-0001-SD	DIMETHYL PHTHALATE	43	UG/KG	80	43	U	075SD-0003-0001-SD	42	78	42	U	N/A	Yes
075SD-0002-0001-SD	DI-N-BUTYL PHTHALATE	43	UG/KG	80	43	U	075SD-0003-0001-SD	42	78	42	U	N/A	Yes
075SD-0002-0001-SD	DI-N-OCTYLPHTHALATE	43	UG/KG	80	43	U	075SD-0003-0001-SD	42	78	42	U	N/A	Yes
075SD-0002-0001-SD	FLUORANTHENE	510	UG/KG	11	5.3		075SD-0003-0001-SD	310	10	5.2		49	N/A
075SD-0002-0001-SD	FLUORENE	5.3	UG/KG	11	5.3	U	075SD-0003-0001-SD	17	10	5.2		N/A	No
075SD-0002-0001-SD	HEXACHLOROBENZENE	5.3	UG/KG	11	5.3	U	075SD-0003-0001-SD	5.2	10	5.2	U	N/A	Yes
075SD-0002-0001-SD	HEXACHLOROBUTADIENE	43	UG/KG	80	43	U	075SD-0003-0001-SD	42	78	42	U	N/A	Yes
075SD-0002-0001-SD	HEXACHLOROCYCLOPENTADIENE	43	UG/KG	530	43	U	075SD-0003-0001-SD	42	520	42	U	N/A	Yes
075SD-0002-0001-SD	HEXACHLOROETHANE	43	UG/KG	80	43	UJ	075SD-0003-0001-SD	42	78	42	U	N/A	Yes
075SD-0002-0001-SD	Indeno[1,2,3-cd]pyrene	120	UG/KG	11	5.3	J	075SD-0003-0001-SD	77	10	5.2		44	N/A
075SD-0002-0001-SD	ISOPHORONE	43	UG/KG	80	43	U	075SD-0003-0001-SD	42	78	42	U	N/A	Yes
075SD-0002-0001-SD	NAPHTHALENE	18	UG/KG	11	5.3		075SD-0003-0001-SD	12	10	5.2		N/A	Yes
075SD-0002-0001-SD	NITROBENZENE	5.3	UG/KG	160	5.3	U	075SD-0003-0001-SD	5.2	160	5.2	U	N/A	Yes
075SD-0002-0001-SD	N-NITROSODI-N-PROPYLAMINE	43	UG/KG	80	43	U	075SD-0003-0001-SD	42	78	42	U	N/A	Yes
075SD-0002-0001-SD	N-NITROSODIPHENYLAMINE	43	UG/KG	80	43	U	075SD-0003-0001-SD	42	78	42	U	N/A	Yes
075SD-0002-0001-SD	PENTACHLOROPHENOL	130	UG/KG	240	130	U	075SD-0003-0001-SD	130	240	130	U	N/A	Yes
075SD-0002-0001-SD	PHENANTHRENE	260	UG/KG	11	5.3		075SD-0003-0001-SD	140	10	5.2		60	N/A
075SD-0002-0001-SD	PHENOL	43	UG/KG	80	43	U	075SD-0003-0001-SD	42	78	42	U	N/A	Yes
075SD-0002-0001-SD	PYRENE	390	UG/KG	11	5.3		075SD-0003-0001-SD	240	10	5.2		48	N/A
075SD-0002-0001-SD	NITROGUANIDINE	0.039	MG/KG	0.24	0.039	UJ	075SD-0003-0001-SD	0.039	0.25	0.039	U	N/A	Yes
075TR-0002-0001-SO	MERCURY	0.046	MG/KG	0.14	0.046	U	075TR-0003-0001-SO	0.046	0.14	0.046	U	N/A	Yes

Sample	Analyte	Result	Units	LOQ	LOD	Qual	Sample	Result	LOQ	LOD	Qual	RPD	W/In LOQ
077SS-0001M-0001-SO	NITROCELLULOSE	17	MG/KG	45	17	UJ	077SS-0002M-0001-SO	18	49	18	U	N/A	Yes
077SS-0001M-0001-SO	ALUMINUM	8200	MG/KG	2.5	0.5		077SS-0002M-0001-SO	7700	2.7	0.54		2	N/A
077SS-0001M-0001-SO	ANTIMONY	0.2	MG/KG	0.17	0.083	J	077SS-0002M-0001-SO	0.17	0.18	0.089	J	N/A	Yes
077SS-0001M-0001-SO	ARSENIC	12	MG/KG	0.08	0.041	J-	077SS-0002M-0001-SO	14	0.09	0.045		4	N/A
077SS-0001M-0001-SO	BARIUM	49	MG/KG	0.83	0.017	J	077SS-0002M-0001-SO	48	0.89	0.018		1	N/A
077SS-0001M-0001-SO	BERYLLIUM	0.46	MG/KG	0.08	0.008		077SS-0002M-0001-SO	0.42	0.09	0.009		N/A	Yes
077SS-0001M-0001-SO	CADMIUM	0.19	MG/KG	0.08	0.025	J	077SS-0002M-0001-SO	0.2	0.09	0.027		N/A	Yes
077SS-0001M-0001-SO	CALCIUM	4500	MG/KG	8.3	2.1	J	077SS-0002M-0001-SO	5200	8.9	2.2		4	N/A
077SS-0001M-0001-SO	CHROMIUM	18	MG/KG	0.17	0.033		077SS-0002M-0001-SO	15	0.18	0.036		5	N/A
077SS-0001M-0001-SO	COBALT	7.4	MG/KG	0.04	0.008		077SS-0002M-0001-SO	7.7	0.05	0.009		1	N/A
077SS-0001M-0001-SO	COPPER	16	MG/KG	0.17	0.05	J	077SS-0002M-0001-SO	17	0.18	0.054		2	N/A
077SS-0001M-0001-SO	IRON	22000	MG/KG	4.1	1.7		077SS-0002M-0001-SO	20000	4.5	1.8		2	N/A
077SS-0001M-0001-SO	LEAD	22	MG/KG	0.08	0.025		077SS-0002M-0001-SO	21	0.09	0.027		1	N/A
077SS-0001M-0001-SO	MAGNESIUM	2800	MG/KG	8.3	1.7	J+	077SS-0002M-0001-SO	2700	8.9	1.8		1	N/A
077SS-0001M-0001-SO	MANGANESE	540	MG/KG	0.41	0.025		077SS-0002M-0001-SO	520	0.45	0.027		1	N/A
077SS-0001M-0001-SO	NICKEL	24	MG/KG	0.08	0.025		077SS-0002M-0001-SO	28	0.09	0.027		4	N/A
077SS-0001M-0001-SO	POTASSIUM	830	MG/KG	8.3	5	J+	077SS-0002M-0001-SO	740	8.9	5.4		3	N/A
077SS-0001M-0001-SO	SELENIUM	0.56	MG/KG	0.41	0.083	J-	077SS-0002M-0001-SO	0.53	0.45	0.089		N/A	Yes
077SS-0001M-0001-SO	SILVER	0.027	MG/KG	0.08	0.025	J+	077SS-0002M-0001-SO	0.03	0.09	0.027	J	N/A	Yes
077SS-0001M-0001-SO	SODIUM	29	MG/KG	8.3	4.1	UJ	077SS-0002M-0001-SO	32	8.9	4.5		N/A	Yes
077SS-0001M-0001-SO	THALLIUM	0.13	MG/KG	0.08	0.017		077SS-0002M-0001-SO	0.14	0.09	0.018		N/A	Yes
077SS-0001M-0001-SO	VANADIUM	16	MG/KG	0.08	0.05		077SS-0002M-0001-SO	15	0.09	0.054		2	N/A
077SS-0001M-0001-SO	ZINC	63	MG/KG	0.41	0.17		077SS-0002M-0001-SO	62	0.45	0.18		0	N/A
077SS-0001M-0001-SO	ALDRIN	13	UG/KG	40	13	U	077SS-0002M-0001-SO	13	39	13	U	N/A	Yes
077SS-0001M-0001-SO	ALPHA BHC	13	UG/KG	25	13	U	077SS-0002M-0001-SO	13	25	13	U	N/A	Yes
077SS-0001M-0001-SO	ALPHA ENDOSULFAN	6.7	UG/KG	17	6.7	U	077SS-0002M-0001-SO	6.6	17	6.6	U	N/A	Yes
077SS-0001M-0001-SO	ALPHA-CHLORDANE	13	UG/KG	30	13	U	077SS-0002M-0001-SO	13	30	13	U	N/A	Yes
077SS-0001M-0001-SO	BETA BHC	13	UG/KG	35	13	U	077SS-0002M-0001-SO	13	34	13	U	N/A	Yes
077SS-0001M-0001-SO	BETA ENDOSULFAN	13	UG/KG	13	17	U	077SS-0002M-0001-SO	13	25	13	U	N/A	Yes
077SS-0001M-0001-SO	DELTA BHC	13	UG/KG	40	13	U	077SS-0002M-0001-SO	13	39	13	U	N/A	Yes
077SS-0001M-0001-SO	DIELDRIN	6.7	UG/KG	17	6.7	U	077SS-0002M-0001-SO	6.6	17	6.6	U	N/A	Yes
077SS-0001M-0001-SO	ENDOSULFAN SULFATE	13	UG/KG	30	13	U	077SS-0002M-0001-SO	13	30	13	U	N/A	Yes
077SS-0001M-0001-SO	ENDRIN	6.7	UG/KG	17	6.7	U	077SS-0002M-0001-SO	6.6	17	6.6	U	N/A	Yes
077SS-0001M-0001-SO	ENDRIN ALDEHYDE	13	UG/KG	30	13	U	077SS-0002M-0001-SO	13	30	13	U	N/A	Yes
077SS-0001M-0001-SO	ENDRIN KETONE	6.7	UG/KG	20	6.7	U	077SS-0002M-0001-SO	6.6	20	6.6	U	N/A	Yes
077SS-0001M-0001-SO	GAMMA BHC (LINDANE)	13	UG/KG	25	13	U	077SS-0002M-0001-SO	13	25	13	U	N/A	Yes

Sample	Analyte	Result	Units	LOQ	LOD	Qual	Sample	Result	LOQ	LOD	Qual	RPD	W/In LOQ
077SS-0001M-0001-SO	GAMMA-CHLORDANE	6.7	UG/KG	17	6.7	U	077SS-0002M-0001-SO	6.6	17	6.6	U	N/A	Yes
077SS-0001M-0001-SO	HEPTACHLOR	13	UG/KG	35	13	U	077SS-0002M-0001-SO	13	34	13	U	N/A	Yes
077SS-0001M-0001-SO	HEPTACHLOR EPOXIDE	31.7	UG/KG	25	13	U	077SS-0002M-0001-SO	13	25	13	U	N/A	Yes
077SS-0001M-0001-SO	METHOXYCHLOR	33	UG/KG	50	33	U	077SS-0002M-0001-SO	32	49	32	U	N/A	Yes
077SS-0001M-0001-SO	P,P'-DDD	6.7	UG/KG	20	6.7	U	077SS-0002M-0001-SO	6.6	20	6.6	U	N/A	Yes
077SS-0001M-0001-SO	P,P'-DDE	5.2	UG/KG	17	6.7	J	077SS-0002M-0001-SO	8.6	17	6.6		N/A	Yes
077SS-0001M-0001-SO	P,P'-DDT	6.7	UG/KG	20	6.7	U	077SS-0002M-0001-SO	6.6	20	6.6	U	N/A	Yes
077SS-0001M-0001-SO	TOXAPHENE	200	UG/KG	670	200	UJ	077SS-0002M-0001-SO	200	660	200	U	N/A	Yes
077SS-0001M-0001-SO	Aroclor-1016	25	UG/KG	65	25	U	077SS-0002M-0001-SO	24	64	24	U	N/A	Yes
077SS-0001M-0001-SO	Aroclor-1221	25	UG/KG	50	25	U	077SS-0002M-0001-SO	24	49	24	U	N/A	Yes
077SS-0001M-0001-SO	Aroclor-1232	25	UG/KG	45	25	U	077SS-0002M-0001-SO	24	44	24	U	N/A	Yes
077SS-0001M-0001-SO	Aroclor-1242	25	UG/KG	40	25	U	077SS-0002M-0001-SO	24	39	24	U	N/A	Yes
077SS-0001M-0001-SO	Aroclor-1248	25	UG/KG	55	25	U	077SS-0002M-0001-SO	24	54	24	U	N/A	Yes
077SS-0001M-0001-SO	Aroclor-1254	25	UG/KG	55	25	U	077SS-0002M-0001-SO	24	54	24	U	N/A	Yes
077SS-0001M-0001-SO	Aroclor-1260	25	UG/KG	55	25	U	077SS-0002M-0001-SO	24	54	24	U	N/A	Yes
077SS-0001M-0001-SO	1,3,5-TRINITROBENZENE	0.05	MG/KG	0.25	0.05	U	077SS-0002M-0001-SO	0.05	0.25	0.05	U	N/A	Yes
077SS-0001M-0001-SO	1,3-DINITROBENZENE	0.05	MG/KG	0.25	0.05	U	077SS-0002M-0001-SO	0.05	0.25	0.05	U	N/A	Yes
077SS-0001M-0001-SO	2,4,6-TRINITROTOLUENE	0.05	MG/KG	0.25	0.05	U	077SS-0002M-0001-SO	0.05	0.25	0.05	U	N/A	Yes
077SS-0001M-0001-SO	2,4-DINITROTOLUENE	0.05	MG/KG	0.25	0.05	U	077SS-0002M-0001-SO	0.05	0.25	0.05	U	N/A	Yes
077SS-0001M-0001-SO	2,6-DINITROTOLUENE	0.05	MG/KG	0.25	0.05	U	077SS-0002M-0001-SO	0.05	0.25	0.05	U	N/A	Yes
077SS-0001M-0001-SO	2-AMINO-4,6-DINITROTOLUENE	0.05	MG/KG	0.25	0.05	U	077SS-0002M-0001-SO	0.05	0.25	0.05	U	N/A	Yes
077SS-0001M-0001-SO	2-NITROTOLUENE	0.05	MG/KG	0.25	0.05	UJ	077SS-0002M-0001-SO	0.05	0.25	0.05	U	N/A	Yes
077SS-0001M-0001-SO	3-NITROTOLUENE	0.05	MG/KG	0.25	0.05	U	077SS-0002M-0001-SO	0.05	0.25	0.05	U	N/A	Yes
077SS-0001M-0001-SO	4-AMINO-2,6-DINITROTOLUENE	0.05	MG/KG	0.25	0.05	U	077SS-0002M-0001-SO	0.05	0.25	0.05	U	N/A	Yes
077SS-0001M-0001-SO	4-NITROTOLUENE	0.05	MG/KG	0.25	0.05	U	077SS-0002M-0001-SO	0.05	0.25	0.05	U	N/A	Yes
077SS-0001M-0001-SO	HMX	0.05	MG/KG	0.25	0.05	U	077SS-0002M-0001-SO	0.05	0.25	0.05	U	N/A	Yes
077SS-0001M-0001-SO	NITROBENZENE	0.05	MG/KG	0.25	0.05	R	077SS-0002M-0001-SO	0.05	0.25	0.05	U	N/A	Yes
077SS-0001M-0001-SO	NITROGLYCERIN	0.25	MG/KG	0.5	0.25	U	077SS-0002M-0001-SO	0.083	0.5	0.25	J	N/A	Yes
077SS-0001M-0001-SO	PETN	0.25	MG/KG	0.5	0.25	U	077SS-0002M-0001-SO	0.25	0.5	0.25	U	N/A	Yes
077SS-0001M-0001-SO	RDX	0.05	MG/KG	0.25	0.05	UJ	077SS-0002M-0001-SO	0.05	0.25	0.05	U	N/A	Yes
077SS-0001M-0001-SO	TETRYL	0.05	MG/KG	0.25	0.05	U	077SS-0002M-0001-SO	0.028	0.25	0.05	J	N/A	Yes
077SS-0001M-0001-SO	MERCURY	0.045	MG/KG	0.1	0.033	J	077SS-0002M-0001-SO	0.041	0.1	0.032	J	N/A	Yes
077SS-0001M-0001-SO	1,1,1-TRICHLOROETHANE	0.99	UG/KG	4.9	0.99	U	077SS-0002M-0001-SO	0.75	3.7	0.75	U	N/A	Yes
077SS-0001M-0001-SO	1,1,2,2-TETRACHLOROETHANE	0.51	UG/KG	5.1	0.51	U	077SS-0002M-0001-SO	0.46	4.6	0.46	U	N/A	Yes
077SS-0001M-0001-SO	1,1,2-TRICHLOROETHANE	0.51	UG/KG	5.1	0.51	U	077SS-0002M-0001-SO	0.46	4.6	0.46	U	N/A	Yes
077SS-0001M-0001-SO	1,1-DICHLOROETHANE	0.51	UG/KG	5.1	0.51	U	077SS-0002M-0001-SO	0.46	4.6	0.46	U	N/A	Yes

Sample	Analyte	Result	Units	LOQ	LOD	Qual	Sample	Result	LOQ	LOD	Qual	RPD	W/In LOQ
077SS-0001M-0001-SO	1,1-DICHLOROETHENE	1	UG/KG	5.1	1	U	077SS-0002M-0001-SO	0.92	4.6	0.92	U	N/A	Yes
077SS-0001M-0001-SO	1,2-DIBROMOETHANE	1	UG/KG	5.1	1	U	077SS-0002M-0001-SO	0.92	4.6	0.92	U	N/A	Yes
077SS-0001M-0001-SO	1,2-DICHLOROETHANE	0.51	UG/KG	5.1	0.51	U	077SS-0002M-0001-SO	0.46	4.6	0.46	U	N/A	Yes
077SS-0001M-0001-SO	1,2-Dichloroethene, Total	1	UG/KG	10	1	U	077SS-0002M-0001-SO	0.92	9.2	0.92	U	N/A	Yes
077SS-0001M-0001-SO	1,2-DICHLOROPROPANE	1	UG/KG	5.1	1	U	077SS-0002M-0001-SO	0.92	4.6	0.92	U	N/A	Yes
077SS-0001M-0001-SO	2-Butanone (MEK)	2.1	UG/KG	21	2.1	U	077SS-0002M-0001-SO	1.8	18	1.8	U	N/A	Yes
077SS-0001M-0001-SO	2-HEXANONE	1	UG/KG	21	1	U	077SS-0002M-0001-SO	0.92	18	0.92	J	N/A	Yes
077SS-0001M-0001-SO	4-Methyl-2-pentanone (MIBK)	1	UG/KG	21	1	U	077SS-0002M-0001-SO	0.9	18	0.92	J	N/A	Yes
077SS-0001M-0001-SO	ACETONE	6.2	UG/KG	20	6.2	U	077SS-0002M-0001-SO	4.7	15	4.7	U	N/A	Yes
077SS-0001M-0001-SO	BENZENE	0.51	UG/KG	5.1	0.51	U	077SS-0002M-0001-SO	0.46	4.6	0.46	U	N/A	Yes
077SS-0001M-0001-SO	BROMOCHLOROMETHANE	1	UG/KG	5.1	1	U	077SS-0002M-0001-SO	0.92	4.6	0.92	U	N/A	Yes
077SS-0001M-0001-SO	BROMODICHLOROMETHANE	0.51	UG/KG	5.1	0.51	U	077SS-0002M-0001-SO	0.46	4.6	0.46	U	N/A	Yes
077SS-0001M-0001-SO	BROMOFORM	0.51	UG/KG	5.1	0.51	U	077SS-0002M-0001-SO	0.46	4.6	0.46	U	N/A	Yes
077SS-0001M-0001-SO	BROMOMETHANE	1	UG/KG	5.1	1	U	077SS-0002M-0001-SO	0.92	4.6	0.92	U	N/A	Yes
077SS-0001M-0001-SO	CARBON DISULFIDE	0.51	UG/KG	5.1	0.51	U	077SS-0002M-0001-SO	0.46	4.6	0.46	U	N/A	Yes
077SS-0001M-0001-SO	CARBON TETRACHLORIDE	0.49	UG/KG	4.9	0.49	U	077SS-0002M-0001-SO	0.37	3.7	0.37	U	N/A	Yes
077SS-0001M-0001-SO	CHLOROBENZENE	0.51	UG/KG	5.1	0.51	U	077SS-0002M-0001-SO	0.46	4.6	0.46	U	N/A	Yes
077SS-0001M-0001-SO	CHLOROETHANE	1	UG/KG	5.1	1	U	077SS-0002M-0001-SO	0.92	4.6	0.92	U	N/A	Yes
077SS-0001M-0001-SO	CHLOROFORM	0.51	UG/KG	5.1	0.51	U	077SS-0002M-0001-SO	0.46	4.6	0.46	U	N/A	Yes
077SS-0001M-0001-SO	CHLOROMETHANE	0.51	UG/KG	5.1	0.51	U	077SS-0002M-0001-SO	0.46	4.6	0.46	U	N/A	Yes
077SS-0001M-0001-SO	CIS-1,3-DICHLOROPROPENE	0.51	UG/KG	5.1	0.51	U	077SS-0002M-0001-SO	0.46	4.6	0.46	U	N/A	Yes
077SS-0001M-0001-SO	DIBROMOCHLOROMETHANE	1	UG/KG	5.1	1	U	077SS-0002M-0001-SO	0.92	4.6	0.92	U	N/A	Yes
077SS-0001M-0001-SO	ETHYLBENZENE	0.51	UG/KG	5.1	0.51	U	077SS-0002M-0001-SO	0.46	4.6	0.46	U	N/A	Yes
077SS-0001M-0001-SO	METHYLENE CHLORIDE	1	UG/KG	5.1	1	U	077SS-0002M-0001-SO	0.92	4.6	0.92	U	N/A	Yes
077SS-0001M-0001-SO	STYRENE	0.51	UG/KG	5.1	0.51	U	077SS-0002M-0001-SO	0.46	4.6	0.46	U	N/A	Yes
077SS-0001M-0001-SO	Methyl tert-butyl ether	0.51	UG/KG	5.1	0.51	U	077SS-0002M-0001-SO	0.46	4.6	0.46	U	N/A	Yes
077SS-0001M-0001-SO	TETRACHLOROETHYLENE	1	UG/KG	5.1	1	U	077SS-0002M-0001-SO	0.92	4.6	0.92	U	N/A	Yes
077SS-0001M-0001-SO	TOLUENE	0.51	UG/KG	5.1	0.51	U	077SS-0002M-0001-SO	0.46	4.6	0.46	U	N/A	Yes
077SS-0001M-0001-SO	TRANS-1,3-DICHLOROPROPENE	1	UG/KG	5.1	1	U	077SS-0002M-0001-SO	0.92	4.6	0.92	U	N/A	Yes
077SS-0001M-0001-SO	TRICHLOROETHYLENE	0.51	UG/KG	5.1	0.51	U	077SS-0002M-0001-SO	0.46	4.6	0.46	U	N/A	Yes
077SS-0001M-0001-SO	VINYL CHLORIDE	0.51	UG/KG	5.1	0.51	U	077SS-0002M-0001-SO	0.46	4.6	0.46	U	N/A	Yes
077SS-0001M-0001-SO	XYLENES, TOTAL	1.5	UG/KG	10	1.5	U	077SS-0002M-0001-SO	1.4	9.2	1.4	U	N/A	Yes
077SS-0001M-0001-SO	1,2,4-TRICHLOROBENZENE	110	UG/KG	200	110	U	077SS-0002M-0001-SO	67	120	67	U	N/A	Yes
077SS-0001M-0001-SO	1,2-DICHLOROBENZENE	110	UG/KG	200	110	U	077SS-0002M-0001-SO	67	120	67	U	N/A	Yes
077SS-0001M-0001-SO	1,3-DICHLOROBENZENE	110	UG/KG	200	110	U	077SS-0002M-0001-SO	67	120	67	U	N/A	Yes
077SS-0001M-0001-SO	1,4-DICHLOROBENZENE	110	UG/KG	200	110	U	077SS-0002M-0001-SO	67	120	67	U	N/A	Yes

Sample	Analyte	Result	Units	LOQ	LOD	Qual	Sample	Result	LOQ	LOD	Qual	RPD	W/In LOQ
077SS-0001M-0001-SO	2,4,5-TRICHLOROPHENOL	110	UG/KG	610	110	U	077SS-0002M-0001-SO	67	370	67	U	N/A	Yes
077SS-0001M-0001-SO	2,4,6-TRICHLOROPHENOL	320	UG/KG	610	320	U	077SS-0002M-0001-SO	200	370	200	U	N/A	Yes
077SS-0001M-0001-SO	2,4-DICHLOROPHENOL	110	UG/KG	610	110	U	077SS-0002M-0001-SO	67	370	67	U	N/A	Yes
077SS-0001M-0001-SO	2,4-DIMETHYLPHENOL	320	UG/KG	610	320	U	077SS-0002M-0001-SO	200	370	200	U	N/A	Yes
077SS-0001M-0001-SO	2,4-DINITROPHENOL	320	UG/KG	1300	320	U	077SS-0002M-0001-SO	200	820	200	U	N/A	Yes
077SS-0001M-0001-SO	2,4-DINITROTOLUENE	110	UG/KG	810	110	R	077SS-0002M-0001-SO	67	500	67	U	N/A	N/A
077SS-0001M-0001-SO	2,6-DINITROTOLUENE	110	UG/KG	810	110	R	077SS-0002M-0001-SO	67	500	67	U	N/A	N/A
077SS-0001M-0001-SO	2-CHLORONAPHTHALENE	13	UG/KG	200	13	U	077SS-0002M-0001-SO	8.2	120	8.2	U	N/A	Yes
077SS-0001M-0001-SO	2-CHLOROPHENOL	110	UG/KG	200	110	U	077SS-0002M-0001-SO	67	120	67	U	N/A	Yes
077SS-0001M-0001-SO	2-METHYLNAPHTHALENE	54	UG/KG	27	13		077SS-0002M-0001-SO	60	17	8.2		N/A	Yes
077SS-0001M-0001-SO	2-METHYLPHENOL	320	UG/KG	810	320	U	077SS-0002M-0001-SO	200	500	200	U	N/A	Yes
077SS-0001M-0001-SO	2-NITROANILINE	110	UG/KG	810	110	U	077SS-0002M-0001-SO	67	500	67	U	N/A	Yes
077SS-0001M-0001-SO	2-NITROPHENOL	110	UG/KG	200	110	U	077SS-0002M-0001-SO	67	120	67	U	N/A	Yes
077SS-0001M-0001-SO	3 & 4 Methylphenol	320	UG/KG	1600	320	U	077SS-0002M-0001-SO	200	1000	200	U	N/A	Yes
077SS-0001M-0001-SO	3,3'-DICHLOROBENZIDINE	320	UG/KG	410	320	UJ	077SS-0002M-0001-SO	200	250	200	U	N/A	Yes
077SS-0001M-0001-SO	3-NITROANILINE	320	UG/KG	810	320	U	077SS-0002M-0001-SO	200	500	200	U	N/A	Yes
077SS-0001M-0001-SO	4,6-DINITRO-2-METHYLPHENOL	320	UG/KG	610	320	U	077SS-0002M-0001-SO	200	370	200	U	N/A	Yes
077SS-0001M-0001-SO	4-BROMOPHENYL PHENYL ETHER	110	UG/KG	200	110	U	077SS-0002M-0001-SO	67	120	67	U	N/A	Yes
077SS-0001M-0001-SO	4-CHLORO-3-METHYLPHENOL	110	UG/KG	610	110	U	077SS-0002M-0001-SO	67	370	67	U	N/A	Yes
077SS-0001M-0001-SO	4-CHLOROANILINE	110	UG/KG	610	110	U	077SS-0002M-0001-SO	67	370	67	U	N/A	Yes
077SS-0001M-0001-SO	4-CHLOROPHENYL PHENYL ETHER	110	UG/KG	200	110	U	077SS-0002M-0001-SO	67	120	67	U	N/A	Yes
077SS-0001M-0001-SO	4-NITROANILINE	110	UG/KG	810	110	U	077SS-0002M-0001-SO	67	500	67	U	N/A	Yes
077SS-0001M-0001-SO	4-NITROPHENOL	320	UG/KG	1300	320	U	077SS-0002M-0001-SO	200	820	200	U	N/A	Yes
077SS-0001M-0001-SO	ACENAPHTHENE	13	UG/KG	27	13	U	077SS-0002M-0001-SO	8.2	17	8.2	U	N/A	Yes
077SS-0001M-0001-SO	ACENAPHTHYLENE	13	UG/KG	27	13	U	077SS-0002M-0001-SO	8.2	17	8.2	U	N/A	Yes
077SS-0001M-0001-SO	ANTHRACENE	13	UG/KG	27	13	U	077SS-0002M-0001-SO	11	17	8.2	J	N/A	Yes
077SS-0001M-0001-SO	Benzo[a]anthracene	57	UG/KG	27	13		077SS-0002M-0001-SO	48	17	8.2		N/A	Yes
077SS-0001M-0001-SO	Benzo[a]pyrene	88	UG/KG	27	13		077SS-0002M-0001-SO	65	17	8.2		N/A	Yes
077SS-0001M-0001-SO	Benzo[b]fluoranthene	91	UG/KG	27	13		077SS-0002M-0001-SO	81	17	8.2		N/A	Yes
077SS-0001M-0001-SO	Benzo[g,h,i]perylene	47	UG/KG	27	13		077SS-0002M-0001-SO	37	17	8.2		N/A	Yes
077SS-0001M-0001-SO	Benzo[k]fluoranthene	18	UG/KG	27	13	J	077SS-0002M-0001-SO	17	17	8.2		N/A	Yes
077SS-0001M-0001-SO	BENZOIC ACID	1400	UG/KG	2700	1400	R	077SS-0002M-0001-SO	830	1600	830	U	N/A	N/A
077SS-0001M-0001-SO	BENZYL ALCOHOL	110	UG/KG	1300	110	U	077SS-0002M-0001-SO	67	820	67	U	N/A	Yes
077SS-0001M-0001-SO	BENZYL BUTYL PHTHALATE	110	UG/KG	200	110	U	077SS-0002M-0001-SO	67	120	67	U	N/A	Yes
077SS-0001M-0001-SO	BIS(2-CHLOROETHOXY) METHANE	110	UG/KG	410	110	U	077SS-0002M-0001-SO	67	250	67	U	N/A	Yes
077SS-0001M-0001-SO	BIS(2-CHLOROETHYL) ETHER	13	UG/KG	410	13	U	077SS-0002M-0001-SO	8.2	250	8.2	U	N/A	Yes

Sample	Analyte	Result	Units	LOQ	LOD	Qual	Sample	Result	LOQ	LOD	Qual	RPD	W/In LOQ
077SS-0001M-0001-SO	BIS(2-CHLOROISOPROPYL) ETHER	110	UG/KG	410	110	U	077SS-0002M-0001-SO	67	250	67	U	N/A	Yes
077SS-0001M-0001-SO	BIS(2-ETHYLHEXYL) PHTHALATE	110	UG/KG	200	110	U	077SS-0002M-0001-SO	67	120	67	J	N/A	Yes
077SS-0001M-0001-SO	CARBAZOLE	110	UG/KG	200	110	U	077SS-0002M-0001-SO	67	120	67	U	N/A	Yes
077SS-0001M-0001-SO	CHRYSENE	66	UG/KG	27	13		077SS-0002M-0001-SO	57	17	8.2		N/A	Yes
077SS-0001M-0001-SO	DIBENZ(A,H)ANTHRACENE	13	UG/KG	27	13	U	077SS-0002M-0001-SO	8.2	17	8.2	U	N/A	Yes
077SS-0001M-0001-SO	DIBENZOFURAN	14	UG/KG	200	13	J	077SS-0002M-0001-SO	14	120	8.2		N/A	Yes
077SS-0001M-0001-SO	DIETHYL PHTHALATE	110	UG/KG	200	110	U	077SS-0002M-0001-SO	67	120	67	U	N/A	Yes
077SS-0001M-0001-SO	DIMETHYL PHTHALATE	110	UG/KG	200	110	U	077SS-0002M-0001-SO	67	120	67	U	N/A	Yes
077SS-0001M-0001-SO	DI-N-BUTYL PHTHALATE	110	UG/KG	200	110	U	077SS-0002M-0001-SO	67	120	67	U	N/A	Yes
077SS-0001M-0001-SO	DI-N-OCTYLPHTHALATE	110	UG/KG	200	110	U	077SS-0002M-0001-SO	67	120	67	U	N/A	Yes
077SS-0001M-0001-SO	FLUORANTHENE	120	UG/KG	27	13		077SS-0002M-0001-SO	99	17	8.2		N/A	Yes
077SS-0001M-0001-SO	FLUORENE	13	UG/KG	27	13	U	077SS-0002M-0001-SO	9.6	17	8.2		N/A	Yes
077SS-0001M-0001-SO	HEXACHLOROBENZENE	13	UG/KG	27	13	U	077SS-0002M-0001-SO	8.2	17	8.2	U	N/A	Yes
077SS-0001M-0001-SO	HEXACHLOROBUTADIENE	110	UG/KG	200	110	U	077SS-0002M-0001-SO	67	120	67	U	N/A	Yes
077SS-0001M-0001-SO	HEXACHLOROCYCLOPENTADIENE	110	UG/KG	1300	110	U	077SS-0002M-0001-SO	67	820	67	U	N/A	Yes
077SS-0001M-0001-SO	HEXACHLOROETHANE	110	UG/KG	200	110	U	077SS-0002M-0001-SO	67	120	67	U	N/A	Yes
077SS-0001M-0001-SO	Indeno[1,2,3-cd]pyrene	55	UG/KG	27	13		077SS-0002M-0001-SO	44	17	8.2		N/A	Yes
077SS-0001M-0001-SO	ISOPHORONE	110	UG/KG	200	110	U	077SS-0002M-0001-SO	67	120	67	U	N/A	Yes
077SS-0001M-0001-SO	NAPHTHALENE	44	UG/KG	27	13		077SS-0002M-0001-SO	54	17	8.2		N/A	Yes
077SS-0001M-0001-SO	NITROBENZENE	13	UG/KG	410	13	U	077SS-0002M-0001-SO	8.2	250	8.2	U	N/A	Yes
077SS-0001M-0001-SO	N-NITROSODI-N-PROPYLAMINE	110	UG/KG	200	110	U	077SS-0002M-0001-SO	67	120	67	U	N/A	Yes
077SS-0001M-0001-SO	N-NITROSODIPHENYLAMINE	110	UG/KG	200	110	R	077SS-0002M-0001-SO	67	120	67	U	N/A	N/A
077SS-0001M-0001-SO	PENTACHLOROPHENOL	320	UG/KG	610	320	U	077SS-0002M-0001-SO	200	370	200	U	N/A	Yes
077SS-0001M-0001-SO	PHENANTHRENE	77	UG/KG	27	13		077SS-0002M-0001-SO	64	17	8.2		N/A	Yes
077SS-0001M-0001-SO	PHENOL	110	UG/KG	200	110	U	077SS-0002M-0001-SO	67	120	67	U	N/A	Yes
077SS-0001M-0001-SO	PYRENE	95	UG/KG	27	13		077SS-0002M-0001-SO	74	17	8.2		N/A	Yes
077SS-0001M-0001-SO	NITROGUANIDINE	0.04	MG/KG	0.25	0.04	U	077SS-0002M-0001-SO	0.055	0.24	0.039	J	N/A	Yes

Sample	Analyte	Result	Units	LOQ	LOD	Qual	Sample	Result	LOQ	LOD	Qual	RPD	W/In LOQ
083SB-0005M-0001-SO	NITROCELLULOSE	100	mg/kg	200	100	U	083SB-0006M-0001-SO	100	200	100	U	N/A	Yes
083SB-0005M-0001-SO	1,3,5-TRINITROBENZENE	0.3	mg/kg	0.5	0.3	U	083SB-0006M-0001-SO	0.3	0.5	0.3	U	N/A	Yes
083SB-0005M-0001-SO	1,3-DINITROBENZENE	0.2	mg/kg	0.3	0.2	U	083SB-0006M-0001-SO	0.2	0.3	0.2	U	N/A	Yes
083SB-0005M-0001-SO	2,4,6-TRINITROTOLUENE	0.2	mg/kg	0.5	0.2	U	083SB-0006M-0001-SO	0.2	0.5	0.2	U	N/A	Yes
083SB-0005M-0001-SO	2,4-DINITROTOLUENE	0.2	mg/kg	0.3	0.2	R	083SB-0006M-0001-SO	0.2	0.3	0.2	U	N/A	N/A
083SB-0005M-0001-SO	2,6-DINITROTOLUENE	0.2	mg/kg	0.3	0.2	R	083SB-0006M-0001-SO	0.2	0.3	0.2	U	N/A	N/A
083SB-0005M-0001-SO	2-AMINO-4,6-DINITROTOLUENE	0.2	mg/kg	0.3	0.2	U	083SB-0006M-0001-SO	0.2	0.3	0.2	U	N/A	Yes
083SB-0005M-0001-SO	2-NITROTOLUENE	0.2	mg/kg	0.3	0.2	UJ	083SB-0006M-0001-SO	0.2	0.3	0.2	U	N/A	Yes
083SB-0005M-0001-SO	3,5-DINITROANILINE	0.2	mg/kg	0.3	0.2	R	083SB-0006M-0001-SO	0.2	0.3	0.2	U	N/A	N/A
083SB-0005M-0001-SO	3-NITROTOLUENE	0.3	mg/kg	0.5	0.3	U	083SB-0006M-0001-SO	0.3	0.5	0.3	U	N/A	Yes
083SB-0005M-0001-SO	4-AMINO-2,6-DINITROTOLUENE	0.2	mg/kg	0.3	0.2	UJ	083SB-0006M-0001-SO	0.2	0.3	0.2	U	N/A	Yes
083SB-0005M-0001-SO	4-NITROTOLUENE	0.2	mg/kg	0.5	0.2	U	083SB-0006M-0001-SO	0.2	0.5	0.2	U	N/A	Yes
083SB-0005M-0001-SO	HMX	0.3	mg/kg	0.5	0.3	U	083SB-0006M-0001-SO	0.3	0.5	0.3	U	N/A	Yes
083SB-0005M-0001-SO	NITROBENZENE	0.2	mg/kg	0.5	0.2	R	083SB-0006M-0001-SO	0.2	0.5	0.2	U	N/A	N/A
083SB-0005M-0001-SO	NITROGLYCERIN	1.2	mg/kg	2	1.2	U	083SB-0006M-0001-SO	1.2	2	1.2	U	N/A	Yes
083SB-0005M-0001-SO	PETN	1.2	mg/kg	2	1.2	U	083SB-0006M-0001-SO	1.2	2	1.2	U	N/A	Yes
083SB-0005M-0001-SO	RDX	0.3	mg/kg	0.5	0.3	U	083SB-0006M-0001-SO	0.3	0.5	0.3	U	N/A	Yes
083SB-0005M-0001-SO	TETRYL	0.2	mg/kg	0.3	0.2	U	083SB-0006M-0001-SO	0.2	0.3	0.2	U	N/A	Yes
083SB-0005M-0001-SO	ALUMINUM	12500	mg/kg	1.2	0.62		083SB-0006M-0001-SO	10800	1.2	0.59		4	N/A
083SB-0005M-0001-SO	ANTIMONY	1.2	mg/kg	4.1	2.1	J-	083SB-0006M-0001-SO	1	4	2	J	N/A	Yes
083SB-0005M-0001-SO	ARSENIC	13.9	mg/kg	4.1	2.1	J-	083SB-0006M-0001-SO	12.6	4	2		N/A	Yes
083SB-0005M-0001-SO	BARIUM	78.1	mg/kg	0.26	0.13	J-	083SB-0006M-0001-SO	70.2	0.25	0.12		3	N/A
083SB-0005M-0001-SO	BERYLLIUM	0.68	mg/kg	0.21	0.062	J-	083SB-0006M-0001-SO	0.61	0.2	0.059		N/A	Yes
083SB-0005M-0001-SO	CADMIUM	0.1	mg/kg	0.21	0.1	UJ	083SB-0006M-0001-SO	0.046	0.2	0.099	J	N/A	Yes
083SB-0005M-0001-SO	CALCIUM	28900	mg/kg	7.3	3.6	J-	083SB-0006M-0001-SO	24400	6.9	3.5		4	N/A
083SB-0005M-0001-SO	CHROMIUM	18.3	mg/kg	0.73	0.36	J-	083SB-0006M-0001-SO	16.2	0.69	0.35		3	N/A
083SB-0005M-0001-SO	COBALT	11.8	mg/kg	1.2	0.62	J-	083SB-0006M-0001-SO	11	1.2	0.59		2	N/A
083SB-0005M-0001-SO	COPPER	21.3	mg/kg	2.1	1	J-	083SB-0006M-0001-SO	19.9	2	0.99		2	N/A
083SB-0005M-0001-SO	IRON	27200	mg/kg	9.3	4.7		083SB-0006M-0001-SO	23800	8.9	4.5		3	N/A
083SB-0005M-0001-SO	LEAD	11.8	mg/kg	1.3	0.65	J-	083SB-0006M-0001-SO	10.8	1.2	0.62		2	N/A
083SB-0005M-0001-SO	MAGNESIUM	7530	mg/kg	4.1	2.1	J-	083SB-0006M-0001-SO	6660	4	2		3	N/A
083SB-0005M-0001-SO	MANGANESE	428	mg/kg	0.78	0.39		083SB-0006M-0001-SO	380	0.74	0.37		3	N/A
083SB-0005M-0001-SO	NICKEL	29.2	mg/kg	0.62	0.31	J-	083SB-0006M-0001-SO	27	0.59	0.3		2	N/A
083SB-0005M-0001-SO	POTASSIUM	1300	mg/kg	68	34		083SB-0006M-0001-SO	1250	65	33		1	N/A
083SB-0005M-0001-SO	SELENIUM	0.24	mg/kg	0.41	0.24	UJ	083SB-0006M-0001-SO	0.2	0.4	0.2	U	N/A	Yes
083SB-0005M-0001-SO	SILVER	0.12	mg/kg	0.1	0.12	UJ	083SB-0006M-0001-SO	0.05	0.099	0.05	U	N/A	Yes

Sample	Analyte	Result	Units	LOQ	LOD	Qual	Sample	Result	LOQ	LOD	Qual	RPD	W/In LOQ
083SB-0005M-0001-SO	SODIUM	55.2	mg/kg	25	12		083SB-0006M-0001-SO	53.7	24	12		N/A	Yes
083SB-0005M-0001-SO	THALLIUM	0.79	mg/kg	2.5	1.2	J-	083SB-0006M-0001-SO	0.24	0.48	0.24	U	N/A	Yes
083SB-0005M-0001-SO	VANADIUM	18.8	mg/kg	0.41	0.21	J-	083SB-0006M-0001-SO	16.7	0.4	0.2		3	N/A
083SB-0005M-0001-SO	ZINC	70.2	mg/kg	1.6	0.78	J-	083SB-0006M-0001-SO	64.1	1.5	0.74		2	N/A
083SB-0005M-0001-SO	MERCURY	0.013	mg/kg	0.009	0.005	J+	083SB-0006M-0001-SO	0.012	0.009	0.004		N/A	Yes
083SB-0005M-0001-SO	1,1,1-TRICHLOROETHANE	0.9	ug/kg	1.8	0.9	U	083SB-0006M-0001-SO	0.91	1.8	0.91	U	N/A	Yes
083SB-0005M-0001-SO	1,1,2,2-TETRACHLOROETHANE	0.9	ug/kg	1.8	0.9	U	083SB-0006M-0001-SO	0.91	1.8	0.91	U	N/A	Yes
083SB-0005M-0001-SO	1,1,2-TRICHLOROETHANE	0.9	ug/kg	1.8	0.9	U	083SB-0006M-0001-SO	0.91	1.8	0.91	U	N/A	Yes
083SB-0005M-0001-SO	1,1-DICHLOROETHANE	0.9	ug/kg	1.8	0.9	U	083SB-0006M-0001-SO	0.91	1.8	0.91	U	N/A	Yes
083SB-0005M-0001-SO	1,1-DICHLOROETHENE	0.9	ug/kg	1.8	0.9	U	083SB-0006M-0001-SO	0.91	1.8	0.91	U	N/A	Yes
083SB-0005M-0001-SO	1,2-DIBROMOETHANE	0.9	ug/kg	1.8	0.9	U	083SB-0006M-0001-SO	0.91	1.8	0.91	U	N/A	Yes
083SB-0005M-0001-SO	1,2-DICHLOROETHANE	0.9	ug/kg	1.8	0.9	U	083SB-0006M-0001-SO	0.91	1.8	0.91	U	N/A	Yes
083SB-0005M-0001-SO	1,2-Dichloroethene, Total	0.9	ug/kg	1.8	0.9	U	083SB-0006M-0001-SO	0.91	1.8	0.91	U	N/A	Yes
083SB-0005M-0001-SO	1,2-DICHLOROPROPANE	0.9	ug/kg	1.8	0.9	U	083SB-0006M-0001-SO	0.91	1.8	0.91	U	N/A	Yes
083SB-0005M-0001-SO	2-BUTANONE (MEK)	9	ug/kg	18	9	U	083SB-0006M-0001-SO	9.1	18	9.1	U	N/A	Yes
083SB-0005M-0001-SO	2-HEXANONE	18	ug/kg	36	18	U	083SB-0006M-0001-SO	18	36	18	U	N/A	Yes
083SB-0005M-0001-SO	4-Methyl-2-pentanone (MIBK)	9	ug/kg	18	9	U	083SB-0006M-0001-SO	9.1	18	9.1	U	N/A	Yes
083SB-0005M-0001-SO	ACETONE	9	ug/kg	18	9	U	083SB-0006M-0001-SO	9.1	18	9.1	U	N/A	Yes
083SB-0005M-0001-SO	BENZENE	0.9	ug/kg	1.8	0.9	U	083SB-0006M-0001-SO	0.91	1.8	0.91	U	N/A	Yes
083SB-0005M-0001-SO	BROMOCHLOROMETHANE	0.9	ug/kg	1.8	0.9	U	083SB-0006M-0001-SO	0.91	1.8	0.91	U	N/A	Yes
083SB-0005M-0001-SO	BROMODICHLOROMETHANE	0.9	ug/kg	1.8	0.9	U	083SB-0006M-0001-SO	0.91	1.8	0.91	U	N/A	Yes
083SB-0005M-0001-SO	BROMOFORM	0.9	ug/kg	1.8	0.9	U	083SB-0006M-0001-SO	0.91	1.8	0.91	U	N/A	Yes
083SB-0005M-0001-SO	BROMOMETHANE	0.9	ug/kg	1.8	0.9	U	083SB-0006M-0001-SO	0.91	1.8	0.91	U	N/A	Yes
083SB-0005M-0001-SO	CARBON DISULFIDE	1.8	ug/kg	3.6	1.8	U	083SB-0006M-0001-SO	1.8	3.6	1.8	U	N/A	Yes
083SB-0005M-0001-SO	CARBON TETRACHLORIDE	0.9	ug/kg	1.8	0.9	U	083SB-0006M-0001-SO	0.91	1.8	0.91	U	N/A	Yes
083SB-0005M-0001-SO	CHLOROBENZENE	0.9	ug/kg	1.8	0.9	U	083SB-0006M-0001-SO	0.91	1.8	0.91	U	N/A	Yes
083SB-0005M-0001-SO	CHLOROETHANE	0.9	ug/kg	1.8	0.9	UJ	083SB-0006M-0001-SO	0.91	1.8	0.91	U	N/A	Yes
083SB-0005M-0001-SO	CHLOROFORM	0.9	ug/kg	1.8	0.9	U	083SB-0006M-0001-SO	0.91	1.8	0.91	U	N/A	Yes
083SB-0005M-0001-SO	CHLOROMETHANE	0.9	ug/kg	1.8	0.9	U	083SB-0006M-0001-SO	0.91	1.8	0.91	U	N/A	Yes
083SB-0005M-0001-SO	CIS-1,2-DICHLOROETHYLENE	0.9	ug/kg	1.8	0.9	U	083SB-0006M-0001-SO	0.91	1.8	0.91	U	N/A	Yes
083SB-0005M-0001-SO	CIS-1,3-DICHLOROPROPENE	0.9	ug/kg	1.8	0.9	U	083SB-0006M-0001-SO	0.91	1.8	0.91	U	N/A	Yes
083SB-0005M-0001-SO	DIBROMOCHLOROMETHANE	0.9	ug/kg	1.8	0.9	U	083SB-0006M-0001-SO	0.91	1.8	0.91	U	N/A	Yes
083SB-0005M-0001-SO	ETHYLBENZENE	0.9	ug/kg	1.8	0.9	U	083SB-0006M-0001-SO	0.91	1.8	0.91	U	N/A	Yes
083SB-0005M-0001-SO	METHYLENE CHLORIDE	6.0	ug/kg	9	1.8	U	083SB-0006M-0001-SO	1.8	9.1	1.8	J	N/A	Yes
083SB-0005M-0001-SO	STYRENE	0.9	ug/kg	1.8	0.9	U	083SB-0006M-0001-SO	0.91	1.8	0.91	U	N/A	Yes
083SB-0005M-0001-SO	TETRACHLOROETHYLENE	0.9	ug/kg	1.8	0.9	U	083SB-0006M-0001-SO	0.91	1.8	0.91	U	N/A	Yes

Sample	Analyte	Result	Units	LOQ	LOD	Qual	Sample	Result	LOQ	LOD	Qual	RPD	W/In LOQ
083SB-0005M-0001-SO	TOLUENE	0.9	ug/kg	1.8	0.9	U	083SB-0006M-0001-SO	0.91	1.8	0.91	U	N/A	Yes
083SB-0005M-0001-SO	TRANS-1,2-DICHLOROETHENE	0.9	ug/kg	1.8	0.9	U	083SB-0006M-0001-SO	0.91	1.8	0.91	U	N/A	Yes
083SB-0005M-0001-SO	TRANS-1,3-DICHLOROPROPENE	0.9	ug/kg	1.8	0.9	U	083SB-0006M-0001-SO	0.91	1.8	0.91	U	N/A	Yes
083SB-0005M-0001-SO	TRICHLOROETHYLENE	0.9	ug/kg	1.8	0.9	U	083SB-0006M-0001-SO	0.91	1.8	0.91	U	N/A	Yes
083SB-0005M-0001-SO	VINYL CHLORIDE	0.9	ug/kg	1.8	0.9	U	083SB-0006M-0001-SO	0.91	1.8	0.91	U	N/A	Yes
083SB-0005M-0001-SO	XYLENES, TOTAL	1.8	ug/kg	3.6	1.8	U	083SB-0006M-0001-SO	1.8	3.6	1.8	U	N/A	Yes
083SB-0005M-0001-SO	1,2,4-TRICHLOROBENZENE	64	ug/kg	130	64	U	083SB-0006M-0001-SO	62	120	62	U	N/A	Yes
083SB-0005M-0001-SO	1,2-DICHLOROBENZENE	64	ug/kg	130	64	U	083SB-0006M-0001-SO	62	120	62	U	N/A	Yes
083SB-0005M-0001-SO	1,3-DICHLOROBENZENE	64	ug/kg	130	64	U	083SB-0006M-0001-SO	62	120	62	U	N/A	Yes
083SB-0005M-0001-SO	1,4-DICHLOROBENZENE	64	ug/kg	130	64	U	083SB-0006M-0001-SO	62	120	62	U	N/A	Yes
083SB-0005M-0001-SO	2,2'-OXYBIS(1-CHLORO)PROPANE	64	ug/kg	130	64	U	083SB-0006M-0001-SO	62	120	62	U	N/A	Yes
083SB-0005M-0001-SO	2,4,5-TRICHLOROPHENOL	320	ug/kg	640	320	U	083SB-0006M-0001-SO	310	620	310	U	N/A	Yes
083SB-0005M-0001-SO	2,4,6-TRICHLOROPHENOL	320	ug/kg	640	320	U	083SB-0006M-0001-SO	310	620	310	U	N/A	Yes
083SB-0005M-0001-SO	2,4-DICHLOROPHENOL	320	ug/kg	640	320	U	083SB-0006M-0001-SO	310	620	310	U	N/A	Yes
083SB-0005M-0001-SO	2,4-DIMETHYLPHENOL	320	ug/kg	640	320	U	083SB-0006M-0001-SO	310	620	310	U	N/A	Yes
083SB-0005M-0001-SO	2,4-DINITROPHENOL	320	ug/kg	1100	320	U	083SB-0006M-0001-SO	310	1000	310	U	N/A	Yes
083SB-0005M-0001-SO	2,4-DINITROTOLUENE	64	ug/kg	130	64	U	083SB-0006M-0001-SO	62	120	62	U	N/A	Yes
083SB-0005M-0001-SO	2,6-DINITROTOLUENE	64	ug/kg	130	64	U	083SB-0006M-0001-SO	62	120	62	U	N/A	Yes
083SB-0005M-0001-SO	2-CHLORONAPHTHALENE	64	ug/kg	130	64	U	083SB-0006M-0001-SO	62	120	62	U	N/A	Yes
083SB-0005M-0001-SO	2-CHLOROPHENOL	640	ug/kg	2100	640	U	083SB-0006M-0001-SO	620	2100	620	U	N/A	Yes
083SB-0005M-0001-SO	2-METHYLNAPHTHALENE	1.9	ug/kg	1.6	0.85		083SB-0006M-0001-SO	2	1.5	0.82		N/A	Yes
083SB-0005M-0001-SO	2-METHYLPHENOL	640	ug/kg	2100	640	U	083SB-0006M-0001-SO	620	2100	620	U	N/A	Yes
083SB-0005M-0001-SO	2-NITROANILINE	64	ug/kg	130	64	U	083SB-0006M-0001-SO	62	120	62	U	N/A	Yes
083SB-0005M-0001-SO	2-NITROPHENOL	320	ug/kg	1100	320	U	083SB-0006M-0001-SO	310	1000	310	U	N/A	Yes
083SB-0005M-0001-SO	3 & 4 Methylphenol	1100	ug/kg	3800	1100	U	083SB-0006M-0001-SO	1100	3700	1100	U	N/A	Yes
083SB-0005M-0001-SO	3,3'-DICHLOROBENZIDINE	160	ug/kg	530	160	U	083SB-0006M-0001-SO	150	520	150	U	N/A	Yes
083SB-0005M-0001-SO	3-NITROANILINE	64	ug/kg	130	64	U	083SB-0006M-0001-SO	62	120	62	U	N/A	Yes
083SB-0005M-0001-SO	4,6-DINITRO-2-METHYLPHENOL	320	ug/kg	1100	320	U	083SB-0006M-0001-SO	310	1000	310	U	N/A	Yes
083SB-0005M-0001-SO	4-BROMOPHENYL PHENYL ETHER	64	ug/kg	130	64	U	083SB-0006M-0001-SO	62	120	62	U	N/A	Yes
083SB-0005M-0001-SO	4-CHLORO-3-METHYLPHENOL	640	ug/kg	2100	640	U	083SB-0006M-0001-SO	620	2100	620	U	N/A	Yes
083SB-0005M-0001-SO	4-CHLOROANILINE	64	ug/kg	210	64	U	083SB-0006M-0001-SO	62	210	62	U	N/A	Yes
083SB-0005M-0001-SO	4-CHLOROPHENYL PHENYL ETHER	64	ug/kg	130	64	U	083SB-0006M-0001-SO	62	120	62	U	N/A	Yes
083SB-0005M-0001-SO	4-NITROANILINE	64	ug/kg	130	64	U	083SB-0006M-0001-SO	62	120	62	U	N/A	Yes
083SB-0005M-0001-SO	4-NITROPHENOL	640	ug/kg	2100	640	U	083SB-0006M-0001-SO	620	2100	620	U	N/A	Yes
083SB-0005M-0001-SO	ACENAPHTHENE	0.78	ug/kg	1.6	0.85	J	083SB-0006M-0001-SO	0.71	1.5	0.82	J	N/A	Yes
083SB-0005M-0001-SO	ACENAPHTHYLENE	0.85	ug/kg	1.6	0.85	U	083SB-0006M-0001-SO	0.82	1.5	0.82	U	N/A	Yes

Sample	Analyte	Result	Units	LOQ	LOD	Qual	Sample	Result	LOQ	LOD	Qual	RPD	W/In LOQ
083SB-0005M-0001-SO	ANTHRACENE	2.1	ug/kg	1.6	0.85		083SB-0006M-0001-SO	7.5	1.5	0.82		N/A	No
083SB-0005M-0001-SO	Benzo[a]anthracene	7.3	ug/kg	1.6	0.85		083SB-0006M-0001-SO	11	1.5	0.82		N/A	No
083SB-0005M-0001-SO	Benzo[a]pyrene	3.2	ug/kg	1.6	0.85		083SB-0006M-0001-SO	1.4	1.5	0.82	J	N/A	No
083SB-0005M-0001-SO	Benzo[b]fluoranthene	8.9	ug/kg	1.6	0.85		083SB-0006M-0001-SO	5.1	1.5	0.82		N/A	No
083SB-0005M-0001-SO	Benzo[g,h,i]perylene	0.85	ug/kg	1.6	0.85		083SB-0006M-0001-SO	3.8	1.5	0.82		N/A	No
083SB-0005M-0001-SO	Benzo[k]fluoranthene	1.9	ug/kg	1.6	0.85		083SB-0006M-0001-SO	0.98	1.5	0.82	J	N/A	Yes
083SB-0005M-0001-SO	BENZOIC ACID	1600	ug/kg	3200	1600	UJ	083SB-0006M-0001-SO	1500	3100	1500	U	N/A	Yes
083SB-0005M-0001-SO	BENZYL ALCOHOL	130	ug/kg	420	130	R	083SB-0006M-0001-SO	120	410	120	U	N/A	N/A
083SB-0005M-0001-SO	BENZYL BUTYL PHTHALATE	130	ug/kg	420	130	U	083SB-0006M-0001-SO	120	410	120	U	N/A	Yes
083SB-0005M-0001-SO	BIS(2-CHLOROETHOXY) METHANE	64	ug/kg	130	64	U	083SB-0006M-0001-SO	62	120	62	U	N/A	Yes
083SB-0005M-0001-SO	BIS(2-CHLOROETHYL) ETHER	64	ug/kg	130	64	U	083SB-0006M-0001-SO	62	120	62	U	N/A	Yes
083SB-0005M-0001-SO	CARBAZOLE	64	ug/kg	130	64	U	083SB-0006M-0001-SO	62	120	62	U	N/A	Yes
083SB-0005M-0001-SO	CHRYSENE	8.3	ug/kg	1.6	0.85		083SB-0006M-0001-SO	8.3	1.5	0.82		0	N/A
083SB-0005M-0001-SO	DIBENZ(A,H)ANTHRACENE	1.2	ug/kg	1.6	0.85	J	083SB-0006M-0001-SO	0.75	1.5	0.82	J	N/A	Yes
083SB-0005M-0001-SO	DIBENZOFURAN	64	ug/kg	130	64	U	083SB-0006M-0001-SO	62	120	62	U	N/A	Yes
083SB-0005M-0001-SO	DIETHYL PHTHALATE	130	ug/kg	420	130	U	083SB-0006M-0001-SO	120	410	120	U	N/A	Yes
083SB-0005M-0001-SO	DIMETHYL PHTHALATE	130	ug/kg	420	130	U	083SB-0006M-0001-SO	120	410	120	U	N/A	Yes
083SB-0005M-0001-SO	DI-N-BUTYL PHTHALATE	130	ug/kg	420	130	U	083SB-0006M-0001-SO	120	410	120	U	N/A	Yes
083SB-0005M-0001-SO	DI-N-OCTYLPHTHALATE	64	ug/kg	210	64	U	083SB-0006M-0001-SO	62	210	62	U	N/A	Yes
083SB-0005M-0001-SO	FLUORANTHENE	10	ug/kg	1.6	0.85		083SB-0006M-0001-SO	4.1	1.5	0.82		N/A	No
083SB-0005M-0001-SO	FLUORENE	0.93	ug/kg	1.6	0.85	J	083SB-0006M-0001-SO	0.74	1.5	0.82	J	N/A	Yes
083SB-0005M-0001-SO	HEXACHLOROBENZENE	64	ug/kg	130	64	U	083SB-0006M-0001-SO	62	120	62	U	N/A	Yes
083SB-0005M-0001-SO	HEXACHLOROBUTADIENE	130	ug/kg	420	130	U	083SB-0006M-0001-SO	120	410	120	U	N/A	Yes
083SB-0005M-0001-SO	HEXACHLOROCYCLOPENTADIENE	64	ug/kg	210	64	UJ	083SB-0006M-0001-SO	62	210	62	U	N/A	Yes
083SB-0005M-0001-SO	HEXACHLOROETHANE	64	ug/kg	130	64	U	083SB-0006M-0001-SO	62	120	62	U	N/A	Yes
083SB-0005M-0001-SO	Indeno[1,2,3-cd]pyrene	3.6	ug/kg	1.6	0.85		083SB-0006M-0001-SO	1.8	1.5	0.82		N/A	No
083SB-0005M-0001-SO	ISOPHORONE	64	ug/kg	210	64	U	083SB-0006M-0001-SO	62	210	62	U	N/A	Yes
083SB-0005M-0001-SO	NAPHTHALENE	2	ug/kg	1.6	0.85		083SB-0006M-0001-SO	2.6	1.5	0.82		N/A	Yes
083SB-0005M-0001-SO	NITROBENZENE	64	ug/kg	210	64	U	083SB-0006M-0001-SO	62	210	62	U	N/A	Yes
083SB-0005M-0001-SO	N-NITROSODI-N-PROPYLAMINE	130	ug/kg	420	130	U	083SB-0006M-0001-SO	120	410	120	U	N/A	Yes
083SB-0005M-0001-SO	N-NITROSODIPHENYLAMINE	130	ug/kg	250	130	U	083SB-0006M-0001-SO	120	250	120	U	N/A	Yes
083SB-0005M-0001-SO	PENTACHLOROPHENOL	320	ug/kg	1100	320	U	083SB-0006M-0001-SO	310	1000	310	U	N/A	Yes
083SB-0005M-0001-SO	PHENANTHRENE	11	ug/kg	1.6	0.85		083SB-0006M-0001-SO	7.7	1.5	0.82		9	N/A
083SB-0005M-0001-SO	PHENOL	320	ug/kg	640	320	U	083SB-0006M-0001-SO	310	620	310	U	N/A	Yes
083SB-0005M-0001-SO	PYRENE	8.1	ug/kg	1.6	0.85		083SB-0006M-0001-SO	3.6	1.5	0.82		N/A	No
083SB-0005M-0001-SO	NITROGUANIDINE	0.12	mg/kg	0.25	0.12	U	083SB-0006M-0001-SO	0.12	0.25	0.12	U	N/A	Yes

APPENDIX D

Validator Checklists

NITROAROMATICS & NITRAMINE DATA ANALYSIS (EXPLOSIVE RESIDUES) CHECKLIST

07055-0006M-0001-SO +prep -6

07055B-044M-0001-SO -3

Project Name: RVAAP CR Site 70

Laboratory: TA

Batch Number(s): _____

Sample Delivery Group: 240-17230, 18581-1

	Yes	No
1. Holding Time: Were samples analyzed within holding time?	[N]	[ ]
2. Initial Calibration:		
• Did the initial calibration consist of five standards?	[N]	[ ]
• Did the RSD meet the criteria ≤ 20% for each individual Calibration Compound or r ≥ 0.99?	[ ]	[N]
• Was manual integration "M" performed? If the answer is "Yes", check for supporting documents.	[N]	[ ]
• Was the manual integration necessary?	[ ]	[ ]
If the answer is "no", contact the laboratory inquiring about the reasons behind the manual integration, and **inform the District Chemist immediately if there were no valid reasons.**		
3. QCMDL:		
• Was MDL Check performed?	[ ]	[N]
4. QCMRL:		
• Were QC/MRL run at the beginning and end of every daily sequence or every 12 hours??	[N]	[ ]
• Was the percentage "D" for QC/MRL ≤ 30%?	[N]	[ ]
5. Initial Calibration Verification (ICV):	[N]	[ ]

	Yes	No
• Was the ICV made of a 2nd source?	N	[ ]
• Was the mid level (2nd source) recovery within 85 - 115%?		
6. Continuing Calibration Verification (CCV): {Daily calibration}		
• Was midpoint calibration standard conducted at the beginning of the day?	N	[ ]
• Was midpoint calibration standard conducted every ten samples or every twelve hours?	N	[ ]
• Was midpoint calibration standard conducted after the last sample of the day?	N	[ ]
• Did the CCV meet the minimum requirements (D ≤ 15% with a maximum D ≤ 20% for a specific compound if the mean D ≤ 15%)?	N	[ ]
7. Sample Analysis:		
• Was the RRT of an identified component within the retention time window created as SW-846 requires?	N	[ ]
• Were all identified hits, above the initial calibration curve, diluted and reanalyzed? N/A	[ ]	[ ]
• Were all identified hits confirmed on a second column?	N	[ ]
• Was RPD of target analyte confirmation ≤ 40? N/A	[ ]	[ ]
• Was there a shoulder on the 2,4,6-TNT peak? N/A	[ ]	[ ]
If the answer is "Yes", then tetryl decomposition is suspected. Peak height rather than peak area should be used for calculating TNT concentration. If teryl was identified in aqueous samples, was pH adjusted to <3? If the answer is "No", then check for tetryl decomposition, and qualify hits with **"J"** accordingly.	[ ]	[ ]
8. Sample Quality Control:	N	[ ]
• Method Blanks: Were target analytes ≤ 1/2 MRL?		
• LCS: Were the percent recoveries for LCS within the limits?	N	[ ]

	Yes	No
• MS/MSD: Were the percent recoveries within limits?	[ ]	[N]
Were the RPDs within control limits?		
• System Monitoring Compounds (Surrogates): Were surrogate recoveries within QC limits?	[N]	[ ]

9. Comments (attach additional sheets if necessary):

Validated/Reviewed by:

Signature: Patti Meeks Date: 3/12/13

Name: Patti Meeks

MS/D 0006M for Nitroguanidine w/in lab limits 72-121%
+ EX 4-amino ↑ 124/135% 80-125%
~~NG~~ NG ↓ 63/62 lab limits 76-116%
~~tetryl~~ ↓ ~~43/46~~ w/in QSM

~~044M for nitroguanidine - OK~~
~~EX - OK~~

8330B 1° ICAL RDX %RSD 20%
2NT 16%
} 006M + 044M

NITROAROMATICS & NITRAMINE DATA ANALYSIS (EXPLOSIVE RESIDUES) CHECKLIST

~~0835B-0005m-0001-~~
0715B-0017m-0001-50

Project Name: RVAAP OR Site 71

Laboratory: CT

Batch Number(s): _____

Sample Delivery Group: 599236

	Yes	No	
1. Holding Time: Were samples analyzed within holding time?	[N]	[ ]	
2. Initial Calibration:			
• Did the initial calibration consist of five standards?	[N]	[ ]	
• Did the RSD meet the criteria ≤ 20% for each individual Calibration Compound or r ≥ 0.99?	[N]	[ ]	
• Was manual integration "M" performed? If the answer is "Yes", check for supporting documents.	[N]	[ ]	
• Was the manual integration necessary?	[N]	[ ]	
If the answer is "no", contact the laboratory inquiring about the reasons behind the manual integration, and **inform the District Chemist immediately if there were no valid reasons.**			
3. QCMDL:			
• Was MDL Check performed?	[N]	[ ]	all detected
4. QCMRL:			
• Were QC/MRL run at the beginning and end of every daily sequence or every 12 hours??	[N]	[ ]	
• Was the percentage "D" for QC/MRL ≤ 30%?	[ ]	[N]	
5. Initial Calibration Verification (ICV):	[N]	[ ]	

	Yes	No
• Was the ICV made of a 2nd source?	[ ]	[ ]
• Was the mid level (2nd source) recovery within 85 - 115%?		
6. Continuing Calibration Verification (CCV): {Daily calibration}		
• Was midpoint calibration standard conducted at the beginning of the day?	[ ]	[ ]
• Was midpoint calibration standard conducted every ten samples or every twelve hours?	[ ]	[ ]
• Was midpoint calibration standard conducted after the last sample of the day?	[ ]	[ ]
• Did the CCV meet the minimum requirements (D ≤ 15% with a maximum D ≤ 20% for a specific compound if the mean D ≤ 15%)?	[ ]	[ ]
7. Sample Analysis:		
• Was the RRT of an identified component within the retention time window created as SW-846 requires?	[ ] no detects	[ ]
• Were all identified hits, above the initial calibration curve, diluted and reanalyzed?	[ ]	[ ]
• Were all identified hits confirmed on a second column?	[ ]	[ ]
• Was RPD of target analyte confirmation ≤ 40?	[ ]	[ ]
• Was there a shoulder on the 2,4,6-TNT peak?	[ ]	[ ]
If the answer is "Yes", then tetryl decomposition is suspected. Peak height rather than peak area should be used for calculating TNT concentration. If teryl was identified in aqueous samples, was pH adjusted to <3? If the answer is "No", then check for tetryl decomposition, and qualify hits with **"J"** accordingly.	[ ]	[ ]
8. Sample Quality Control:		
• Method Blanks: Were target analytes ≤ 1/2 MRL?	[ ]	[ ]
• LCS: Were the percent recoveries for LCS within the limits?	[ ]	[ ]

	Yes	No
• MS/MSD: Were the percent recoveries within limits? none	[ ]	[ ]
Were the RPDs within control limits?		
• System Monitoring Compounds (Surrogates): Were surrogate recoveries within QC limits?	[N]	[ ]

9. Comments (attach additional sheets if necessary):

Validated/Reviewed by:

Signature: Patti Meeks Date: 4/7/14

Name: Patti Meeks

MRL 8/27 9:49
4-amino 68%/60% (8/27 19:36)
2-NT 57%

3,5 DNA not usual analyte
MDL 0.044

NITROAROMATICS & NITRAMINE DATA ANALYSIS (EXPLOSIVE RESIDUES) CHECKLIST

0725B-6014-0001

Project Name: RVAAP SWMU Site 72

Laboratory: TA - N Canton

Batch Number(s): _____

Sample Delivery Group: 240748297

	Yes	No
1. Holding Time: Were samples analyzed within holding time?	[N]	[ ]
2. Initial Calibration:		
• Did the initial calibration consist of five standards?	[N]	[ ]
• Did the RSD meet the criteria ≤ 20% for each individual Calibration Compound or r ≥ 0.99?	[ ]	[N]
• Was manual integration "M" performed? If the answer is "Yes", check for supporting documents.	[N]	[ ]
• Was the manual integration necessary?	[N]	[ ]
If the answer is "no", contact the laboratory inquiring about the reasons behind the manual integration, and **inform the District Chemist immediately if there were no valid reasons.**		
3. QCMDL:		
• Was MDL Check performed?	[ ]	[N]
4. QCMRL:		
• Were QC/MRL run at the beginning and end of every daily sequence or every 12 hours??	[N]	[ ]
• Was the percentage "D" for QC/MRL ≤ 30%?	[NA]	[N]
5. Initial Calibration Verification (ICV):	[N]	[ ]

- Was the ICV made of a 2nd source? [ ] [ ]

- Was the mid level (2nd source) recovery within 85 - 115%?

6. Continuing Calibration Verification (CCV):
{Daily calibration}
   - Was midpoint calibration standard conducted at the beginning of the day? [ ] [ ]
   - Was midpoint calibration standard conducted every ten samples or every twelve hours? [ ] [ ]
   - Was midpoint calibration standard conducted after the last sample of the day? [ ] [ ]
   - Did the CCV meet the minimum requirements (D ≤ 15% with a maximum D ≤ 20% for a specific compound if the mean D ≤ 15%)? [ ] [ ]

7. Sample Analysis:
   - Was the RRT of an identified component within the retention time window created as SW-846 requires? [ ] [ ] N/A
   - Were all identified hits, above the initial calibration curve, diluted and reanalyzed? [ ] [ ]
   - Were all identified hits confirmed on a second column? [ ] [ ]
   - Was RPD of target analyte confirmation ≤ 40? [ ] [ ]
   - Was there a shoulder on the 2,4,6-TNT peak? [ ] [ ]

   If the answer is "Yes", then tetryl decomposition is suspected. Peak height rather than peak area should be used for calculating TNT concentration. If teryl was identified in aqueous samples, was pH adjusted to <3? [ ] [ ]
   If the answer is "No", then check for tetryl decomposition, and qualify hits with **"J"** accordingly.

8. Sample Quality Control:
   - Method Blanks: Were target analytes ≤ 1/2 MRL? [ ] [ ]
   - LCS: Were the percent recoveries for LCS within the limits? [ ] [ ]

	Yes	No
• MS/MSD: Were the percent recoveries within limits? none	[ ]	[ ]
Were the RPDs within control limits? ↓		
• System Monitoring Compounds (Surrogates): Were surrogate recoveries within QC limits?	[✓]	[ ]

9. Comments (attach additional sheets if necessary):

Validated/Reviewed by:

Signature: Patti Meeks Date: 3/24/14

Name: Patti Meeks

8330 1° %RSD
20% RDX
16% 2-NT

Nitrocell
ICV 82% but ND

NITROAROMATICS & NITRAMINE DATA ANALYSIS (EXPLOSIVE RESIDUES) CHECKLIST

67550-0002-0001-SD

Project Name: RVAAP CR Site 75

Laboratory: TA N Canton

Batch Number(s): _____

Sample Delivery Group: 240-17467-1

	Yes	No
1. Holding Time: Were samples analyzed within holding time?	[ ]	[ ]
2. Initial Calibration:		
• Did the initial calibration consist of five standards?	[ ]	[ ]
• Did the RSD meet the criteria ≤ 20% for each individual Calibration Compound or r ≥ 0.99?	[ ]	[ ]
• Was manual integration "M" performed? If the answer is "Yes", check for supporting documents.	[ ]	[ ]
• Was the manual integration necessary?	[ ]	[ ]
If the answer is "no", contact the laboratory inquiring about the reasons behind the manual integration, and **inform the District Chemist immediately if there were no valid reasons.**		
3. QCMDL:		
• Was MDL Check performed?	[ ]	[ ]
4. QCMRL:		
• Were QC/MRL run at the beginning and end of every daily sequence or every 12 hours??	[ ]	[ ]
• Was the percentage "D" for QC/MRL ≤ 30%?	[ ]	[ ]
5. Initial Calibration Verification (ICV):	[ ]	[ ]

	Yes	No
• Was the ICV made of a 2nd source?	[N]	[ ]
• Was the mid level (2nd source) recovery within 85 - 115%?		
6. Continuing Calibration Verification (CCV): {Daily calibration}		
• Was midpoint calibration standard conducted at the beginning of the day?	[N]	[ ]
• Was midpoint calibration standard conducted every ten samples or every twelve hours?	[N]	[ ]
• Was midpoint calibration standard conducted after the last sample of the day?	[N]	[ ]
• Did the CCV meet the minimum requirements (D ≤ 15% with a maximum D ≤ 20% for a specific compound if the mean D ≤ 15%)?	[N]	[ ]
7. Sample Analysis:		
• Was the RRT of an identified component within the retention time window created as SW-846 requires?	[N]	[ ]
• Were all identified hits, above the initial calibration curve, diluted and reanalyzed?	[N]	[ ]
• Were all identified hits confirmed on a second column?	[N]	[ ]
• Was RPD of target analyte confirmation ≤ 40?	[ ]	[N]
• Was there a shoulder on the 2,4,6-TNT peak?	[ ]	[N]
If the answer is "Yes", then tetryl decomposition is suspected. Peak height rather than peak area should be used for calculating TNT concentration. If teryl was identified in aqueous samples, was pH adjusted to <3? If the answer is "No", then check for tetryl decomposition, and qualify hits with **"J"** accordingly.	[ ]	[ ]
8. Sample Quality Control:		
• Method Blanks: Were target analytes ≤ 1/2 MRL?	[N]	[ ]
• LCS: Were the percent recoveries for LCS within the limits?	[N]	[ ]

	Yes	No
• MS/MSD: Were the percent recoveries within limits? Were the RPDs within control limits?	[ ]	[N]
• System Monitoring Compounds (Surrogates): Were surrogate recoveries within QC limits?	[ ]	[N]

↑ but w/ NDs

9. Comments (attach additional sheets if necessary):

Validated/Reviewed by:

Signature: Patti Meeks Date: 3/24/14

Name: Patti Meeks

Nitroguan MS/D
56/58% limits 72-121% "UJ"

EX MSD
~~Hmx 79/78%~~ OK NG limits 76-116%

Ex conf surr 310% used for 246 + NB

Tetryl intercdun 105%

1° ICAL %RSD RDX = 20%
2-NT = 16%

NC ICV
187%
but ND
MS/D w/in 34-115

No custody seals
Temps OK
overwritten, lined out, some initialed, none dated

NITROAROMATICS & NITRAMINE DATA ANALYSIS (EXPLOSIVE RESIDUES) CHECKLIST

07755-0001m-0001-SO

Project Name: RVAAP SR Site 77

Laboratory: TA-N Canton

Batch Number(s): _____

Sample Delivery Group: 240-17525

	Yes	No
1. Holding Time: Were samples analyzed within holding time?	[Y]	[ ]
2. Initial Calibration:		
• Did the initial calibration consist of five standards?	[Y]	[ ]
• Did the RSD meet the criteria ≤ 20% for each individual Calibration Compound or r ≥ 0.99?	[ ]	[N]
• Was manual integration "M" performed? If the answer is "Yes", check for supporting documents.	[N]	[ ]
• Was the manual integration necessary?	[ ]	[ ]
If the answer is "no", contact the laboratory inquiring about the reasons behind the manual integration, and **inform the District Chemist immediately if there were no valid reasons.**		
3. QCMDL:		
• Was MDL Check performed?	[ ]	[ ]
4. QCMRL:		
• Were QC/MRL run at the beginning and end of every daily sequence or every 12 hours??	[Y]	[ ]
• Was the percentage "D" for QC/MRL ≤ 30%?	[Y]	[ ]
5. Initial Calibration Verification (ICV):	[Y]	[ ]

	Yes	No
• Was the ICV made of a 2nd source?	[Y]	[ ]
• Was the mid level (2nd source) recovery within 85 - 115%?		
6. Continuing Calibration Verification (CCV): {Daily calibration}		
• Was midpoint calibration standard conducted at the beginning of the day?	[Y]	[ ]
• Was midpoint calibration standard conducted every ten samples or every twelve hours?	[Y]	[ ]
• Was midpoint calibration standard conducted after the last sample of the day?	[Y]	[ ]
• Did the CCV meet the minimum requirements (D ≤ 15% with a maximum D ≤ 20% for a specific compound if the mean D ≤ 15%)?	[Y]	[ ]
7. Sample Analysis:		
• Was the RRT of an identified component within the retention time window created as SW-846 requires? N/A	[ ]	[ ]
• Were all identified hits, above the initial calibration curve, diluted and reanalyzed?	[ ]	[ ]
• Were all identified hits confirmed on a second column?	[ ]	[ ]
• Was RPD of target analyte confirmation ≤ 40?	[ ]	[ ]
• Was there a shoulder on the 2,4,6-TNT peak?	[ ]	[ ]
If the answer is "Yes", then tetryl decomposition is suspected. Peak height rather than peak area should be used for calculating TNT concentration. If teryl was identified in aqueous samples, was pH adjusted to <3? If the answer is "No", then check for tetryl decomposition, and qualify hits with **"J"** accordingly.	[ ]	[ ]
8. Sample Quality Control:		
• Method Blanks: Were target analytes ≤ 1/2 MRL?	[Y]	[ ]
• LCS: Were the percent recoveries for LCS within the limits?	[Y]	[ ]

	Yes	No
• MS/MSD: Were the percent recoveries within limits?	[ ]	[ ]
Were the RPDs within control limits?		
• System Monitoring Compounds (Surrogates): Were surrogate recoveries within QC limits?	[ ]	[ ]

9. Comments (attach additional sheets if necessary):

Validated/Reviewed by:

Signature: Patti Meek Date: 3/26/14

Name: Patti Meek

MS/D on 0001M

%RSD RDX (20%), 2-NT (16%)

Custody Seals used
0002m - no VO on COC — listed on sep
some T ↓
overwritten

VERSION 5 June 2002
no init or date

U.S. Army Corps of Engineers Louisville District - LCG

NITROAROMATICS & NITRAMINE DATA ANALYSIS (EXPLOSIVE RESIDUES) CHECKLIST

083 SB-0005m-0001

Project Name: RVAAP CR Site 83

Laboratory: CT

Batch Number(s): _____

Sample Delivery Group: 99211

	Yes	No
1. Holding Time: Were samples analyzed within holding time?	[N]	[ ]
2. Initial Calibration:		
• Did the initial calibration consist of five standards?	[N]	[ ]
• Did the RSD meet the criteria ≤ 20% for each individual Calibration Compound or r ≥ 0.99?	[N]	[ ]
• Was manual integration "M" performed? If the answer is "Yes", check for supporting documents.	[N]	[ ]
• Was the manual integration necessary?	[N]	[ ]
If the answer is "no", contact the laboratory inquiring about the reasons behind the manual integration, and **inform the District Chemist immediately if there were no valid reasons.**		
3. QCMDL:		
• Was MDL Check performed?	[N]	[ ]
4. QCMRL:		
• Were QC/MRL run at the beginning and end of every daily sequence or every 12 hours??	[N]	[ ]
• Was the percentage "D" for QC/MRL ≤ 30%?	[N]	[ ]
5. Initial Calibration Verification (ICV):	[N]	[ ]

	Yes	No
• Was the ICV made of a 2nd source?	[ ]	[ ]
• Was the mid level (2nd source) recovery within 85 - 115%?		
6. Continuing Calibration Verification (CCV): {Daily calibration}		
• Was midpoint calibration standard conducted at the beginning of the day?	[ ]	[ ]
• Was midpoint calibration standard conducted every ten samples or every twelve hours?	[ ]	[ ]
• Was midpoint calibration standard conducted after the last sample of the day?	[ ]	[ ]
• Did the CCV meet the minimum requirements (D ≤ 15% with a maximum D ≤ 20% for a specific compound if the mean D ≤ 15%)?	[ ]	[ ]
7. Sample Analysis:		
• Was the RRT of an identified component within the retention time window created as SW-846 requires? N/A	[ ]	[ ]
• Were all identified hits, above the initial calibration curve, diluted and reanalyzed?	[ ]	[ ]
• Were all identified hits confirmed on a second column?	[ ]	[ ]
• Was RPD of target analyte confirmation ≤ 40?	[ ]	[ ]
• Was there a shoulder on the 2,4,6-TNT peak?	[ ]	[ ]
If the answer is "Yes", then tetryl decomposition is suspected. Peak height rather than peak area should be used for calculating TNT concentration. If teryl was identified in aqueous samples, was pH adjusted to <3? If the answer is "No", then check for tetryl decomposition, and qualify hits with **"J"** accordingly.	[ ]	[ ]
8. Sample Quality Control:		
• Method Blanks: Were target analytes ≤ 1/2 MRL?	[ ]	[ ]
• LCS: Were the percent recoveries for LCS within the limits?	[ ]	[ ]

	Yes	No
• MS/MSD: Were the percent recoveries within limits? none	[ ]	[ ]
Were the RPDs within control limits?		
• System Monitoring Compounds (Surrogates): Were surrogate recoveries within QC limits?	[ ]	[ ] 64% w/in lab 50-150% 115% w/in lab 74-134% NC

9. Comments (attach additional sheets if necessary):

Validated/Reviewed by:

Signature: Patti Meeks Date: 3/31/14

Name: Patti Meeks

MRL 4-amino 68% +60%
2-NT 57%

~~POLY CHLORINATED BIPHENYLS (PCB/AROCLORS)~~ Herbicides CHECKLIST

MC

Project Name: RVAAP CR Site 70

Laboratory: TA - North Canton

Batch Number(s): 64956, 69221

Sample Delivery Group: 17230, 18581

	Yes	No
1. Holding Time:		
(a) Were samples extracted within holding time?	[✓]	[ ]
(b) Were samples analyzed within holding time?	[✓]	[ ]
2. Initial Calibration:		
• Did the initial calibration consist of five standards?	[✓]	[ ]
• ~~Did Aroclors 1016 and 1260 meet the~~ RSD ≤ 20% or the r ≥ 0.99? MC	[✓]	[ ]
• Was manual integration "M" performed? If the answer is "Yes", check for supporting documents.	[✓]	[ ]
• Was the manual integration necessary?	[✓]	[ ]
If the answer is "no", contact the laboratory inquiring about the reasons behind the manual integration, and **inform the District Chemist immediately if there were no valid reasons.**		
3. QCMDL:		
• Was MDL Check performed?	[ ]	[✓]
4. QCMRL:		
• Were QC/MRL run at the beginning and end of every daily sequence or every 12 hours??	[✓]	[ ]
• Was the QC/MRL between 70-130% R MC	[✓]	
5. Initial Calibration Verification (ICV):		
Is the mid level (2nd source) recovery within ~~85 – 115%~~ QSM ±20%?	[ ]	[ ]

	Yes	No
6. Continuing Calibration Verification (CCV):		
• Was CCV conducted every 12 hours?	[✓]	[ ]
• Was Drift or D ≤ 15% from the initial calibration with a maximum %D < 20% for a specific compound?	[✓]	[ ]
7. Sample Analysis:		
• Was the RRT of an identified component within the retention time window created as SW-846 requires?	[✓]	[ ]
• Were samples with levels higher than the calibration range (E), diluted and re-analyzed?	N/A [ ]	[ ]
• Were identified Aroclors confirmed on a second GC column?	[ ]	[ ]
• Were individual Aroclor standards used to determine the pattern of the peaks? (Individual Aroclors are 1221, 1232, 1242, 1248, and 1254. Both Aroclor 1016, and 1260 can be used from the mixed calibration standards.)	[ ]	[ ]
• Was RPD of target analyte conformation ≤ 40?	N/A [ ]	[ ]
8. Sample Quality Control:		
• Method Blanks: Were target analytes ≤ 1/2 MRL?	[✓]	[ ]
• LCS: Were the percent recoveries for LCS within the limits?	[✓]	[ ]
• MS/MSD: Were the percent recoveries within limits? see comments	[ ]	[✓]
Were the RPDs within control limits?	[✓]	[ ]
• System Monitoring Compounds (Surrogates): are surrogate recoveries within QC limits?	[✓]	[ ]

9. Comments (attach additional sheets if necessary):
See attached MRL and MS/SD qual. tables

Validated/Reviewed by:

Signature: M Calvin

Date: 3.18.2014

Name: L.S. Calvin

- MRL standard recoveries affecting sample data were within the reasonable control limit of ±30%, with exceptions noted in the table below. The sample results, all nondetects, were qualified as estimated, "UJ," and coded with a "C" qualification code.

Samples qualified for MRL %Recovery outliers		
Analyte	**%Recoveries**	**Qualified Samples**
MCPP	42% / 59%	070SS-0006M-0001-SO
MCPA	48% / 62%	
MCPP	53%	070SB-0044M-0001-SO
MCPA	56%	

- Blanks: The method blanks associated with the validated samples had no target compound detects above the control limit listed in the DoD QSM Table F-2 of one-half the RL.

- Blank Spikes and Laboratory Control Samples: Recoveries were within the control limits listed in DoD QSM Tables G-2 (poor performers) and G-9, or within laboratory-established control limits when no QSM limits were prescribed. Spiked analytes utilizing laboratory established control limits included dalapon (30-122%) and MCPA (25-132%). The reviewer noted MCPP and pentachlorophenol were not included in the LCS.

- Surrogate Recovery: Recoveries were within the laboratory-established control limits, as no QSM limits were prescribed.

- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on samples 070SS-0006M-0001-SO and 070SB-0044M-0001-SO. Recoveries affecting sample data were within the control limits listed in DoD QSM Tables G-2 (poor performers) and G-9, or within laboratory-established control limits when no QSM limits were prescribed (see Blank Spikes and Laboratory Control Samples section). Exceptions are noted in the table below. RPDs were within the control limit listed in the DoD QSM Table F-2 of ≤30%. The nondetected parent sample results for the outliers were qualified as estimated, "UJ," and coded with a "Q" qualification code.

Samples qualified for MS/MSD %Recovery outliers			
Analyte	**%Recoveries**	**Recovery Limits**	**Qualified Sample(s)**
Dicamba	45% / 51%	55-110%	070SS-0006M-0001-SO
Dichlorprop	57% / 66%	75-140%	

- Compound Identification: Compound identification was verified for the validated samples. Review of the sample chromatograms, standards, and retention times indicated no problems with target compound identification.

- Compound Quantification and Reported Detection Limits: Compound quantification was verified for the validated samples. The LOQs were supported by the low point of the

ICP METALS ANALYSIS ~~(6010)~~ 6020 + 7471A CHECKLIST

Project Name: RVAAP CR Site 70

Laboratory: TA North Canton

Batch Number(s): _____

Sample Delivery Group: 240-17230-1 and 240-18581-1

	Yes	No
1. Holding Time:		
• Were samples analyzed within holding time (6-Months)?	[✓]	[ ]
2. Initial Calibration:		
• Did the initial calibration consist of		
One calibration standard and a blank?	[✓]	[ ]
three calibration standards and a blank?	[ ]	[ ]
• Was R ≥ 0.995	[✓]	[ ]
3. QCMDL:		
• Was MDL Check performed?	[ ]	[✓]
QCMRL:		
• Were QC/MRL run at the beginning and end of every daily sequence or every 12 hours??	[✓]	[ ]
	[✓]	[ ]
• Was the QC/MRL between 70-130% R? Common Elements can be between the MRL and 2X MRL level (Fe, Al, Mg and Ca)	[✓]	[ ]
4. Initial Calibration Verification (ICV):		
• Is the mid level (2nd source) recovery within 90 - 110%?		
5. Initial Calibration Blank (ICP):		

	Yes	No
• Were analytes in the blank ≤ 1/2 MRL?	[ ]	[Y] but okay

6. Interelement Check Standard:

• Was ICS-A (interferents only) conducted at the beginning of analytical sequence?	[Y]	[ ]
• Was ICS-AB results within QC limits (80-120)?	[Y]	[ ]

7. Continuing calibration Blank (CCB):

• Was CCB conducted every 10 samples?	[Y]	[ ]
• Was CCB conducted at end of the analytical sequence?	[Y]	[ ]
• Were analytes ≤ 1/2 MRL?	[ ]	[Y] but okay

8. Continuing Calibration Verification (CCV):

• Was CCV conducted every 10 samples?	[Y]	[ ]
• Was CCV conducted at end of the analytical sequence?	[Y]	[ ]
• Was the %R between 90-110?	[Y]	[ ]

9. Sample Analysis:

• Were samples with levels higher than the calibration range (E), diluted and re-analyzed?	[Y] Mn (5x)	[ ]

10. Sample Quality Control:

• Method Blanks: Were target analytes ≤ 1/2 MRL?	[ ]	[Y] but okay
• LCS: Were the percent recoveries for LCS within the limits?	[Y]	[ ]
• MS: Were the percent recoveries within limits?	[ ]	[Y]
• MD: Were the RPDs within control limits?	[ ] N/A	[ ]

11. Serial Dilution:

• Was serial dilution (1:4) conducted when needed?	[Y]	[ ]

	Yes	No
• Was there an agreement between diluted and undiluted results (<10%)?	[ ]	[ ]

12. Method of Standard Addition (MSA):

• Was MSA performed on samples suspected of matrix effect (R ≥ 0.995)?	[ ] N/A	[ ]

13. Comments (attach additional sheets if necessary):

07055-0006M-0001-SO (0.66g : 0.1L and 1.08g : 6.1L)

07058-044M-0001-SO (0.54g : 0.1L and 1.03g : 0.1L)

Tune RSD for ^{78}Se = 20.43%

Tune RSD for ^{137}Ba = 24.31%
^{138}Ba = 9.85%

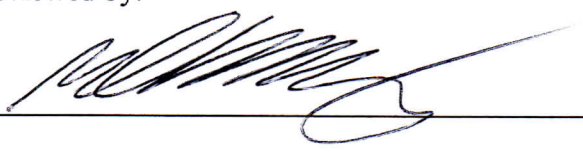
Dup outliers: (Cr, 42%) (Cd, 41%) (Pb, 94%)

Se in ICSA at 1.15 µg/L

MS outliers: (Sb, 19%) (Cr, 72%) (K, 136%) (Se, 199%) (V, 130%)

SD outliers: (Cu, 15%) (Pb, 12%) (Ni, 11%)

Validated/Reviewed by:

Signature: 

Date: 3/30/14

Name: Michael Cherny

ICP METALS ANALYSIS (6010)C CHECKLIST

Project Name: RVAAP Cr Site 71

Laboratory: CT Laboratories

Batch Number(s): _____

Sample Delivery Group: 99236

	Yes	No
1. Holding Time:		
• Were samples analyzed within holding time (6-Months)?	[✓]	[ ]
2. Initial Calibration:		
• Did the initial calibration consist of		
One calibration standard and a blank?	[✓]	[ ]
three calibration standards and a blank?	[✓]	[ ]
• Was R ≥ 0.995	[✓]	[ ]
3. QCMDL:		
• Was MDL Check performed?	[ ]	[✓]
QCMRL:		
• Were QC/MRL run at the beginning and end of every daily sequence or every 12 hours??	[✓]	[ ]
	[✓]	[ ]
• Was the QC/MRL between 70-130% R? Common Elements can be between the MRL and 2X MRL level (Fe, Al, Mg and Ca)	[✓]	[ ]
4. Initial Calibration Verification (ICV):		
• Is the mid level (2nd source) recovery within 90 - 110%?		
5. Initial Calibration Blank (ICP):		

	Yes	No
• Were analytes in the blank ≤ 1/2 MRL?	[Y]	[ ]

6. Interelement Check Standard:

• Was ICS-A (interferents only) conducted at the beginning of analytical sequence?	[Y]	[ ]
• Was ICS-AB results within QC limits (80-120)?	[Y]	[ ]

7. Continuing calibration Blank (CCB):

• Was CCB conducted every 10 samples?	[Y]	[ ]
• Was CCB conducted at end of the analytical sequence?	[Y]	[ ]
• Were analytes ≤ 1/2 MRL?	[Y]	[ ]

8. Continuing Calibration Verification (CCV):

• Was CCV conducted every 10 samples?	[Y]	[ ]
• Was CCV conducted at end of the analytical sequence?	[Y]	[ ]
• Was the %R between 90-110?	[Y]	[ ]

9. Sample Analysis:

• Were samples with levels higher than the calibration range (E), diluted and re-analyzed?	[Y] 5X	[ ]

10. Sample Quality Control:

• Method Blanks: Were target analytes ≤ 1/2 MRL?	[Y]	[ ]
• LCS: Were the percent recoveries for LCS within the limits?	[Y]	[ ]
• MS: Were the percent recoveries within limits?	[ ]	[Y]
• MD: Were the RPDs within control limits?	[Y]	[ ]

11. Serial Dilution:

• Was serial dilution (1:4) conducted when needed?	[Y]	[ ]

	Yes	No
• Was there an agreement between diluted and undiluted results (<10%)?	[✓]	[ ]

12. Method of Standard Addition (MSA):

• Was MSA performed on samples suspected of matrix effect (R ≥ 0.995)?	[ ]	N/A	[ ]

13. Comments (attach additional sheets if necessary):

071SB-0018M-0001-SO 97.6% solid 5x dilution
071SB-0013M-0001-SO 97.5% solid .052 : 2.05g

MS/D outliers
-0003M-0001 (67%, 58%)
-0010M-0001 (57%, 60%)

PDS outliers
-0003M-0001 (74%)
-0010M-0001 (58%)

Validated/Reviewed by:

Signature: [signature]

Date: 4/14/14

Name: Michael Cherny

ICP METALS ANALYSIS (6010) CHECKLIST

0725B-0001 (0.61:100, 1.16:100) 83.8%
0725B-0012 (0.66:100, 1.06:100) 88.8%
0725B-0014 (0.69:100, 1.13:100) 88.7%

Project Name: RVAAP CR Site 72

Laboratory: TA-N Canton

Batch Number(s): _____

Sample Delivery Group: 240-18297

	Yes	No
1. Holding Time:		
• Were samples analyzed within holding time (6-Months)?	[N]	[ ]
2. Initial Calibration:		
• Did the initial calibration consist of		
One calibration standard and a blank?	[N]	[ ]
three calibration standards and a blank?	[ ]	[ ]
• Was R ≥ 0.995	[N]	[ ]
3. QCMDL:		
• Was MDL Check performed?	[ ]	[N]
QCMRL:		
• Were QC/MRL run at the beginning and end of every daily sequence or every 12 hours??	[N]	[ ]
	[ ]	[ ]
• Was the QC/MRL between 70-130% R? Common Elements can be between the MRL and 2X MRL level (Fe, Al, Mg and Ca)	[ ]	[ ]
4. Initial Calibration Verification (ICV):		
• Is the mid level (2nd source) recovery within 90 - 110%?		
5. Initial Calibration Blank (ICP):		

	Yes	No	
• Were analytes in the blank ≤ 1/2 MRL?	[ ]	~~[N]~~	insuff
6. Interelement Check Standard:			
• Was ICS-A (interferents only) conducted at the beginning of analytical sequence?	~~[N]~~	[ ]	
• Was ICS-AB results within QC limits (80-120)?	~~[N]~~	[ ]	
7. Continuing calibration Blank (CCB):			
• Was CCB conducted every 10 samples?	~~[N]~~	[ ]	
• Was CCB conducted at end of the analytical sequence?	~~[N]~~	[ ]	
• Were analytes ≤ 1/2 MRL?	[ ]	~~[N]~~	insuff
8. Continuing Calibration Verification (CCV):			
• Was CCV conducted every 10 samples?	~~[N]~~	[ ]	
• Was CCV conducted at end of the analytical sequence?	~~[N]~~	[ ]	
• Was the %R between 90-110?	~~[ ]~~	[ ]	
9. Sample Analysis:			
• Were samples with levels higher than the calibration range (E), diluted and re-analyzed? N/A	[ ]	[ ]	
10. Sample Quality Control:			
• Method Blanks: Were target analytes ≤ 1/2 MRL?	PM ~~[N]~~	~~[N]~~	insuff
• LCS: Were the percent recoveries for LCS within the limits?	~~[N]~~	[ ]	
• MS: Were the percent recoveries within limits?	[ ]	~~[N]~~	
• MD: Were the RPDs within control limits?	[ ]	~~[N]~~	
11. Serial Dilution:			
• Was serial dilution (1:4) conducted when needed?	~~[N]~~	[ ]	

	Yes	No
• Was there an agreement between diluted and undiluted results (<10%)?	~~[ ]~~	[ ]

12. Method of Standard Addition (MSA):

• Was MSA performed on samples suspected of matrix effect (R ≥ 0.995)? N/A	[ ]	[ ]

13. Comments (attach additional sheets if necessary):

MS/~~D~~ 0725B-0001 As (77), Ba (127), Be (79), Ca (298), Cd (79), Ni (69), Sb (24), K (55), Se (68)
0725B-0012 Be (78), Cu (123), Pb (122), Sb (18), ~~K (71)~~, Se (74)

PDS - " OK

Dup 0725B-0001 Ca (28)
0725B-0012 As (29)

SD " OK

~~MB + Se = -0.983 w -0.0943 mg/kg J-~~

ICSA - insoff

Validated/Reviewed by:

Signature: Patti Meek Date: 3/25/14

Name: Patti Meek

ICP METALS ANALYSIS (~~6010~~) 6020+7471A CHECKLIST

Project Name: RVAAP CR Site 72

Laboratory: TA North Canton

Batch Number(s): _____

Sample Delivery Group: 240-18441-1, 240-18449-1 and 240-18544-1

	Yes	No
1. Holding Time:		
• Were samples analyzed within holding time (6-Months)?	[Y]	[ ]
2. Initial Calibration:		
• Did the initial calibration consist of		
One calibration standard and a blank?	[Y]	[ ]
three calibration standards and a blank?	[ ]	[ ]
• Was R ≥ 0.995	[Y]	[ ]
3. QCMDL:		
• Was MDL Check performed?	[ ]	[Y]
QCMRL:		
• Were QC/MRL run at the beginning and end of every daily sequence or every 12 hours??	[Y]	[ ]
	[Y]	[ ]
• Was the QC/MRL between 70-130% R? Common Elements can be between the MRL and 2X MRL level (Fe, Al, Mg and Ca)	[Y]	[ ]
4. Initial Calibration Verification (ICV):		
• Is the mid level (2nd source) recovery within 90 - 110%?		
5. Initial Calibration Blank (ICP):		

	Yes	No
• Were analytes in the blank ≤ 1/2 MRL?	[✓]	[ ]

6. Interelement Check Standard:

• Was ICS-A (interferents only) conducted at the beginning of analytical sequence?	[✓]	[ ]
• Was ICS-AB results within QC limits (80-120)?	[✓]	[ ]

7. Continuing calibration Blank (CCB):

• Was CCB conducted every 10 samples?	[✓]	[ ]
• Was CCB conducted at end of the analytical sequence?	[✓]	[ ]
• Were analytes ≤ 1/2 MRL?	[ ]	[✓] but okay

8. Continuing Calibration Verification (CCV):

• Was CCV conducted every 10 samples?	[✓]	[ ]
• Was CCV conducted at end of the analytical sequence?	[✓]	[ ]
• Was the %R between 90-110?	[✓]	[ ]

9. Sample Analysis:

• Were samples with levels higher than the calibration range (E), diluted and re-analyzed?	[ ] N/A	[ ]

10. Sample Quality Control:

• Method Blanks: Were target analytes ≤ 1/2 MRL?	[ ]	[✓] but okay
• LCS: Were the percent recoveries for LCS within the limits?	[✓]	[ ]
• MS: Were the percent recoveries within limits?	[ ]	[✓]
• MD: Were the RPDs within control limits?	[ ] N/A	[ ]

11. Serial Dilution:

• Was serial dilution (1:4) conducted when needed?	[✓]	[ ]

	Yes	No
• Was there an agreement between diluted and undiluted results (<10%)?	[ ]	[✓]

12. Method of Standard Addition (MSA):

• Was MSA performed on samples suspected of matrix effect (R ≥ 0.995)?	[ ] N/A	[ ]

13. Comments (attach additional sheets if necessary):

—SDG 240-18441-1 0725B-0026-0001-SO
.64g : .1L : 1.03g 96.8% ~~solid~~
Tune RSD for ^{137}Ba = 35.981%
ICSA detects: Cd @ 0.315 µg/L
As @ 0.098 µg/L MS outliers: (As, 69%) (Ca, 74%) (Cu, 75%) (Sb, 20%) * (Tl, 75%) (Se, 73%)
SD outliers: (Zn, 11%)

—SDG 240-18449-1
0725B-0039-0001-SO
.61g : .1L : 1.07g 83.7% solid
Same ICSA detects ↑ Same Tune RSD ↑
Dup outlier: (K, 24%) MS outliers: (As, 64%) (Ba, 32%)
↳ Sample: (Be, 76%) (Cr, 73%)
0725B-0035-0001 (Ni, 79%) (Pb, 159%)
* (Sb, 23%) (U, 61%)
(see next page) (K, 5%) (Se, 68%)

Validated/Reviewed by:

Signature: [signature]

Date: 4/2/14

Name: Michael Cheny

SDG 240-18544-1

072SB-0063-0001-SO

.55g : .1L : 1.09g 88.8% solid

Tune RSD outliers: (^{137}Ba, 19.32%) (^{138}Ba, 7.81%)

Dup outlier: (Mn, 36%)

MS outliers: (~~Ag~~, 39%), (~~As~~, 0%), (Ca, 193%), (Cd, 60%), (Cr, 79%), (Co, 52%), (Cu, 16%), (Na, 39%), (Sb, 28%), (K, 70%), (Sc, 25%)

ICSA detects: (Sb, 0.32µg/L) (Cd, 0.385 ") (Se, 0.912 ") (Ag, 0.15 ")

There were a few matching MS outliers in other spiked samples in this SDG.

ICP METALS ANALYSIS (6010) CHECKLIST

0755D-0002-0001

Project Name: RVAAP CR Site 75

Laboratory: TA-N Canton

Batch Number(s): _____

Sample Delivery Group: ~~20~~ 240-17467-1

	Yes	No
1. Holding Time:		
• Were samples analyzed within holding time (6-Months)?	[N]	[ ]
2. Initial Calibration:		
• Did the initial calibration consist of		
One calibration standard and a blank?	[ ]	[ ]
three calibration standards and a blank?	[ ]	[ ]
• Was $R \geq 0.995$	[ ]	[ ]
3. QCMDL:		
• Was MDL Check performed?	[ ]	[ ]
QCMRL:		
• Were QC/MRL run at the beginning and end of every daily sequence or every 12 hours??	[ ]	[ ]
• Was the QC/MRL between 70-130% R? Common Elements can be between the MRL and 2X MRL level (Fe, Al, Mg and Ca)	[ ]	[ ]
4. Initial Calibration Verification (ICV):	[ ]	[ ]
• Is the mid level (2nd source) recovery within 90 - 110%?		
5. Initial Calibration Blank (ICP):		

	Yes	No	
• Were analytes in the blank ≤ 1/2 MRL?	[ ]	[N]	insuff
6. Interelement Check Standard:			
• Was ICS-A (interferents only) conducted at the beginning of analytical sequence?	[ ]	[ ]	
• Was ICS-AB results within QC limits (80-120)?	[ ]	[ ]	
7. Continuing calibration Blank (CCB):			
• Was CCB conducted every 10 samples?	[ ]	[ ]	
• Was CCB conducted at end of the analytical sequence?	[ ]	[ ]	
• Were analytes ≤ 1/2 MRL?	[ ]	[ ]	insuff
8. Continuing Calibration Verification (CCV):			
• Was CCV conducted every 10 samples?	[ ]	[ ]	
• Was CCV conducted at end of the analytical sequence?	[ ]	[ ]	
• Was the %R between 90-110?	[ ]	[ ]	
9. Sample Analysis:			
• Were samples with levels higher than the calibration range (E), diluted and re-analyzed? N/A	[ ]	[ ]	
10. Sample Quality Control:			
• Method Blanks: Were target analytes ≤ 1/2 MRL?	[ ]	[N]	but insuff.
• LCS: Were the percent recoveries for LCS within the limits?	[ ]	[ ]	
• MS: Were the percent recoveries within limits?	[ ]	[ ]	
• MD: Were the RPDs within control limits?	[ ]	[ ]	
11. Serial Dilution:			
• Was serial dilution (1:4) conducted when needed?	[ ]	[ ]	

	Yes	No
• Was there an agreement between diluted and undiluted results (<10%)?	~~[ ]~~	[ ]

12. Method of Standard Addition (MSA):

• Was MSA performed on samples suspected of matrix effect (R ≥ 0.995)? N/A	[ ]	[ ]

13. Comments (attach additional sheets if necessary):

Validated/Reviewed by:

Signature: Patti Meeks

Date: 3/24/14

Name: Patti Meeks

MS Hg = 60% dup OK

MS
As (76, ~~[illegible]~~)
Ba (57, ~~[illegible]~~)
Cr (73, ~~[illegible]~~)
Mg (69, ~~[illegible]~~)
Ni (77, ~~[illegible]~~)
Sb (25, ~~[illegible]~~)
V (66, ~~[illegible]~~)
K (56, ~~[illegible]~~)
Se (74

PDS OK

Dup
Al (26)
Cr (21)
Na (32)
V (24)
K (42)

SD OK

ICP METALS ANALYSIS (~~6010~~) CHECKLIST 6020 + 7471A

Project Name: RVAAP CR Site 77

Laboratory: TA North Canton

Batch Number(s): _____

Sample Delivery Group: 240-17525-1/2

	Yes	No
1. Holding Time:		
• Were samples analyzed within holding time (6-Months)?	[✓]	[ ]
2. Initial Calibration:		
• Did the initial calibration consist of		
One calibration standard and a blank?	[✓]	[ ]
three calibration standards and a blank?	[ ]	[ ]
• Was R ≥ 0.995	[✓]	[ ]
3. QCMDL:		
• Was MDL Check performed?	[ ]	[✓]
QCMRL:		
• Were QC/MRL run at the beginning and end of every daily sequence or every 12 hours??	[✓]	[ ]
	[✓]	[ ]
• Was the QC/MRL between 70-130% R? Common Elements can be between the MRL and 2X MRL level (Fe, Al, Mg and Ca)	[✓]	[ ]
4. Initial Calibration Verification (ICV):		
• Is the mid level (2nd source) recovery within 90 - 110%?		
5. Initial Calibration Blank (ICP):		

	Yes	No
• Were analytes in the blank ≤ 1/2 MRL?	[✓]	[ ]

6. Interelement Check Standard:

• Was ICS-A (interferents only) conducted at the beginning of analytical sequence?	[✓]	[ ]
• Was ICS-AB results within QC limits (80-120)?	[✓]	[ ]

7. Continuing calibration Blank (CCB):

• Was CCB conducted every 10 samples?	[✓]	[ ]
• Was CCB conducted at end of the analytical sequence?	[✓]	[ ]
• Were analytes ≤ 1/2 MRL?	[✓]	[ ]

8. Continuing Calibration Verification (CCV):

• Was CCV conducted every 10 samples?	[✓]	[ ]
• Was CCV conducted at end of the analytical sequence?	[✓]	[ ]
• Was the %R between 90-110?	[✓]	[ ]

9. Sample Analysis:

• Were samples with levels higher than the calibration range (E), diluted and re-analyzed?	[ ] N/A	[ ]

10. Sample Quality Control:

• Method Blanks: Were target analytes ≤ 1/2 MRL?	[✓]	[ ]
• LCS: Were the percent recoveries for LCS within the limits?	[✓]	[ ]
• MS: Were the percent recoveries within limits?	[ ]	[✓]
• MD: Were the RPDs within control limits?	[ ] N/A	[ ]

11. Serial Dilution:

• Was serial dilution (1:4) conducted when needed?	[✓]	[ ]

	Yes	No
• Was there an agreement between diluted and undiluted results (<10%)?	[ ]	[✓]

12. Method of Standard Addition (MSA):

• Was MSA performed on samples suspected of matrix effect (R ≥ 0.995)?	[ ]	N/A	[ ]

13. Comments (attach additional sheets if necessary):

0775S-0001M-0001-S①
0.6g : 0.1L : 1.121g Tune RSD outlier: ^{137}Ba - 15.47%

Detects in ICSA:
Sb - 0.259 µg/L
Cd - 0.249 "
Ag - 0.095 "

Dup outliers:
(Ca, 21%) - 0695S-0001M
(Ca, 21%) (Na ≥ LOQ) > 0775S-0001M

MS outliers
(As, 72%) (Cd, 79%), (Cu, 75%),
(Sb, 22%) (Se, 64%) - 0695S-0001

(As, 78%) (Cd, 79%) (Cu, 317%)
(Mg, 132%) (Sb, 21%) (K, 172%)
(Se, 72%) - 0775S-0001M

SD outliers:
(Ca, 11%) - 0695S-0001M
(Ca, 12%) - 0775S-0001M

Validated/Reviewed by:

Signature: [signature] Date: 4/7/14

Name: Michael Cherny

ICP METALS ANALYSIS (6010) +7471B CHECKLIST

Project Name: RVAAP Cr site 83

Laboratory: CT Laboratories

Batch Number(s): _____

Sample Delivery Group: 99211

	Yes	No
1. Holding Time:		
• Were samples analyzed within holding time (6-Months)?	[✓]	[ ]
2. Initial Calibration:		
• Did the initial calibration consist of		
One calibration standard and a blank?	[✓]	[ ]
three calibration standards and a blank?	[✓]	[ ]
• Was R ≥ 0.995	[✓]	[ ]
3. QCMDL:		
• Was MDL Check performed?	[ ]	[✓]
QCMRL:		
• Were QC/MRL run at the beginning and end of every daily sequence or every 12 hours??	[✓]	[ ]
	[✓]	[ ]
• Was the QC/MRL between 70-130% R? Common Elements can be between the MRL and 2X MRL level (Fe, Al, Mg and Ca)	>10x LOQ	
	[✓]	[ ]
4. Initial Calibration Verification (ICV):		
• Is the mid level (2nd source) recovery within 90 - 110%?		
5. Initial Calibration Blank (ICP):		

	Yes	No
• Were analytes in the blank ≤ 1/2 MRL?	[Y]	[ ]

6. Interelement Check Standard:

• Was ICS-A (interferents only) conducted at the beginning of analytical sequence?	[Y]	[ ]
• Was ICS-AB results within QC limits (80-120)?	[Y]	[ ]

7. Continuing calibration Blank (CCB):

• Was CCB conducted every 10 samples?	[Y]	[ ]
• Was CCB conducted at end of the analytical sequence?	[Y]	[ ]
• Were analytes ≤ 1/2 MRL?	[Y]	[ ]

8. Continuing Calibration Verification (CCV):

• Was CCV conducted every 10 samples?	[Y]	[ ]
• Was CCV conducted at end of the analytical sequence?	[Y]	[ ]
• Was the %R between 90-110?	[Y]	[ ]

9. Sample Analysis:

• Were samples with levels higher than the calibration range (E), diluted and re-analyzed? 5X	[Y]	[ ]

10. Sample Quality Control:

• Method Blanks: Were target analytes ≤ 1/2 MRL?	[Y]	[ ]
• LCS: Were the percent recoveries for LCS within the limits?	[Y]	[ ]
• MS: Were the percent recoveries within limits?	[ ]	[Y]
• MD: Were the RPDs within control limits?	[ ]	[Y]

11. Serial Dilution:

• Was serial dilution (1:4) conducted when needed?	[Y]	[ ]

	Yes	No
• Was there an agreement between diluted and undiluted results (<10%)?	[ ]	[✓]

12. Method of Standard Addition (MSA):

• Was MSA performed on samples suspected of matrix effect (R ≥ 0.995)?	[ ]	N/A	[ ]

13. Comments (attach additional sheets if necessary):

0835B-0005M-0001-SO 94.1% solid
Hg -> 0.58g & 0.025L MT -> 2.05g & 0.05L

MS/MSD outliers: -0835B-0004M
(As, 72%, 65%), (Ba, 74%, 56%), (Be, 75%, 64%),
(Cr, 64%, 47%), (Co, 68%, 54%), (Cu, 77%, 65%),
(Pb, 61%, 51%), (Mg, 78%, 54%), (Ni, 71%, 57%),
(V, 66%, 57%), (Zn, 73%, 56%), (Sb, 27%, 5%),
(Se, 400%, 79%), (Ag, 43%, OK), (Cd, 62%, 59%),
(Hg, 123%, OK), (Tl, 68%, 53%)

PDS outliers: -0835B-0004M
(Ba, 66%), (Be, 71%), (Ca, 0%), (Cr, 55%),
(Co, 70%), (Pb, 64%), (Mg, 0%), (Ni, 72%),
(V, 67%), (Zn, 68%), (Cd, 68%), (Tl, 61%)

SD outliers: -0835B-0004M
(Ba, 13%), (Mg, 40%)

Negative sample Results:
Ag: -4.60 µg/L
Se: -9.18 µg/L

Validated/Reviewed by:

Signature: [signature] Date: 4/7/14

Name: Michael Cherny

POLY CHLORINATED BIPHENYLS (PCB/AROCLORS) CHECKLIST

Project Name: RVAAP CR Site 70

Laboratory: TA North Canton

Batch Number(s): 165555, 169415

Sample Delivery Group: 17230, 18581

	Yes	No
1. Holding Time:		
(a) Were samples extracted within holding time?	[✓]	[ ]
(b) Were samples analyzed within holding time?	[✓]	[ ]
2. Initial Calibration:		
• Did the initial calibration consist of five standards?	[✓]	[ ]
• Did Aroclors 1016 and 1260 meet the RSD ≤ 20% or the r ≥ 0.99?	[✓]	[ ]
• Was manual integration "M" performed? If the answer is "Yes", check for supporting documents.	[✓]	[ ]
• Was the manual integration necessary? If the answer is "no", contact the laboratory inquiring about the reasons behind the manual integration, and **inform the District Chemist immediately if there were no valid reasons.**	[✓]	[ ]
3. QCMDL:		
• Was MDL Check performed?	DIC [✓]	[✓]
4. QCMRL:		
• Were QC/MRL run at the beginning and end of every daily sequence or every 12 hours??	[✓]	[ ]
• Was the QC/MRL between 70-130% R	[✓]	[ ]
5. Initial Calibration Verification (ICV): Is the mid level (2nd source) recovery within ~~85 - 115%~~ QSM ± 20%?	[✓]	[ ]

	Yes	No
6. Continuing Calibration Verification (CCV):		
• Was CCV conducted every 12 hours?	[✓]	[ ]
QSM ≤20%		
• Was Drift or D~~≤ 15%~~ from the initial calibration with a maximum %D < 20% for a specific compound?	[✓]	[ ]
7. Sample Analysis:		
• Was the RRT of an identified component within the retention time window created as SW-846 requires?	[✓]	[ ]
• Were samples with levels higher than the calibration range (E), diluted and re-analyzed?	[✓]	[ ]
• Were identified Aroclors confirmed on a second GC column?	[✓]	[ ]
• Were individual Aroclor standards used to determine the pattern of the peaks? (Individual Aroclors are 1221, 1232, 1242, 1248, and 1254. Both Aroclor 1016, and 1260 can be used from the mixed calibration standards.)	[✓]	[ ]
• Was RPD of target analyte conformation ≤ 40? Av. 1242 44.1% J/*M	[ ]	[✓]
8. Sample Quality Control:		
• Method Blanks: Were target analytes ≤ 1/2 MRL?	[✓]	[ ]
• LCS: Were the percent recoveries for LCS within the limits?	[✓]	[ ]
• MS/MSD: Were the percent recoveries within limits? Av. 1016 155/149% (40-140) -000QM	[ ]	[✓]
Were the RPDs within control limits? Av. 1242 J/Q	[✓]	[ ]
• System Monitoring Compounds (Surrogates): are surrogate recoveries within QC limits?	[✓]	[ ]

9. Comments (attach additional sheets if necessary):
Sample 07055-00016M-0001-50/5X dilution

Validated/Reviewed by:

Signature: L S Calvin

Date: 3.19.2014

Name: L.S. Calvin

POLY CHLORINATED BIPHENYLS (PCB/AROCLORS) CHECKLIST

Project Name: RVAAP CR Site 71

Laboratory: CT Labs

Batch Number(s): 44519

Sample Delivery Group: 99236

	Yes	No
1. Holding Time:		
(a) Were samples extracted within holding time?	[✓]	[ ]
(b) Were samples analyzed within holding time?	[✓]	[ ]
2. Initial Calibration:		
• Did the initial calibration consist of five standards?	[✓]	[ ]
• Did Aroclors 1016 and 1260 meet the RSD ≤ 20% or the r ≥ 0.99?	[✓]	[ ]
• Was manual integration "M" performed? If the answer is "Yes", check for supporting documents.	[ ]	[✓]
• Was the manual integration necessary? N/A	[ ]	[ ]
If the answer is "no", contact the laboratory inquiring about the reasons behind the manual integration, and **inform the District Chemist immediately if there were no valid reasons.**		
3. QCMDL:		
• Was MDL Check performed?	[ ]	[✓]
4. QCMRL:		
• Were QC/MRL run at the beginning and end of every daily sequence or every 12 hours??	[✓]	[ ]
• Was the QC/MRL between 70-130% R	[✓]	[ ]
5. Initial Calibration Verification (ICV):		
Is the mid level (2nd source) recovery within ~~85 - 115%~~ RSM ± 20%?	[✓]	[ ]

	Yes	No
6. Continuing Calibration Verification (CCV):		
• Was CCV conducted every 12 hours?	[✓]	[ ]
AC QSM ≤20% • Was Drift or D ~~≤ 15%~~ from the initial calibration with a maximum %D < 20% for a specific compound?	[✓]	[ ]
7. Sample Analysis:		
• Was the RRT of an identified component within the retention time window created as SW-846 requires?	[✓]	[ ]
• Were samples with levels higher than the calibration range (E), diluted and re-analyzed? N/A	[ ]	[ ]
• Were identified Aroclors confirmed on a second GC column?	[✓]	[ ]
• Were individual Aroclor standards used to determine the pattern of the peaks? (Individual Aroclors are 1221, 1232, 1242, 1248, and 1254. Both Aroclor 1016, and 1260 can be used from the mixed calibration standards.)	[✓]	[ ]
• Was RPD of target analyte conformation ≤ 40? (QC)	[✓]	[ ]
8. Sample Quality Control:		
• Method Blanks: Were target analytes ≤ 1/2 MRL? ND	[✓]	[ ]
• LCS: Were the percent recoveries for LCS within the limits?	[✓]	[ ]
• MS/MSD: Were the percent recoveries within limits? N/A	[ ]	[ ]
Were the RPDs within control limits?	[ ]	[ ]
• System Monitoring Compounds (Surrogates): are surrogate recoveries within QC limits?	[✓]	[ ]

9. Comments (attach additional sheets if necessary):

Validated/Reviewed by:

Signature: L.S. Calvin

Date: 4.7.2014

Name: L.S. Calvin

POLY CHLORINATED BIPHENYLS (PCB/AROCLORS) CHECKLIST

Project Name: RVAAP CR Site 72 0725B-0014-0001

Laboratory: TA-N Canton

Batch Number(s): _____

Sample Delivery Group: 240-18297

	Yes	No
1. Holding Time:		
(a) Were samples extracted within holding time?	[N]	[ ]
(b) Were samples analyzed within holding time?	[ ]	[ ]
2. Initial Calibration:		
• Did the initial calibration consist of five standards?	[N]	[ ]
• Did Aroclors 1016 and 1260 meet the RSD ≤ 20% or the r ≥ 0.99?	[ ]	[ ]
• Was manual integration "M" performed? If the answer is "Yes", check for supporting documents.	[ ]	[ ]
• Was the manual integration necessary?	[ ]	[ ]
If the answer is "no", contact the laboratory inquiring about the reasons behind the manual integration, and **inform the District Chemist immediately if there were no valid reasons.**		
3. QCMDL:		
• Was MDL Check performed?	[ ]	[N]
4. QCMRL:		
• Were QC/MRL run at the beginning and end of every daily sequence or every 12 hours??	[N]	[ ]
• Was the QC/MRL between 70-130% R	[N]	[ ]
5. Initial Calibration Verification (ICV):		
Is the mid level (2nd source) recovery within 85 - 115%?	[N]	[ ]

	Yes	No
6. Continuing Calibration Verification (CCV):		
• Was CCV conducted every 12 hours?	[N]	[ ]
• Was Drift or D ≤ 15% from the initial calibration with a maximum %D < 20% for a specific compound?	[ ]	[ ]
7. Sample Analysis:		
• Was the RRT of an identified component within the retention time window created as SW-846 requires? N/A	[ ]	[ ]
• Were samples with levels higher than the calibration range (E), diluted and re-analyzed?	[ ]	[ ]
• Were identified Aroclors confirmed on a second GC column?	[N]	[ ]
• Were individual Aroclor standards used to determine the pattern of the peaks? (Individual Aroclors are 1221, 1232, 1242, 1248, and 1254. Both Aroclor 1016, and 1260 can be used from the mixed calibration standards.)	[ ]	[ ]
• Was RPD of target analyte conformation ≤ 40? N/A	[ ]	[ ]
8. Sample Quality Control:		
• Method Blanks: Were target analytes ≤ 1/2 MRL?	[ ]	[ ]
• LCS: Were the percent recoveries for LCS within the limits?	[ ]	[ ]
• MS/MSD: Were the percent recoveries within limits? None	[ ]	[ ]
Were the RPDs within control limits?	[ ]	[ ]
• System Monitoring Compounds (Surrogates): are surrogate recoveries within QC limits?	[ ]	[ ]

9. Comments (attach additional sheets if necessary):

Validated/Reviewed by:

Signature: Patti Meek

Date: 3/24/14

Name: Patti Meeks

POLY CHLORINATED BIPHENYLS (PCB/AROCLORS) CHECKLIST

Project Name: RVAAP CR Site 75

Laboratory: TA-North Canton

Batch Number(s): 45753

Sample Delivery Group: 17467

	Yes	No
1. Holding Time:		
(a) Were samples extracted within holding time?	[✓]	[ ]
(b) Were samples analyzed within holding time?	[✓]	[ ]
2. Initial Calibration:		
• Did the initial calibration consist of five standards?	[✓]	[ ]
• Did Aroclors 1016 and 1260 meet the RSD ≤ 20% or the r ≥ 0.99?	[✓]	[ ]
• Was manual integration "M" performed? If the answer is "Yes", check for supporting documents.	[✓]	[ ]
• Was the manual integration necessary? If the answer is "no", contact the laboratory inquiring about the reasons behind the manual integration, and **inform the District Chemist immediately if there were no valid reasons.**	[✓]	[ ]
3. QCMDL:		
• Was MDL Check performed?	[ ]	[✓]
4. QCMRL:		
• Were QC/MRL run at the beginning and end of every daily sequence or every 12 hours??	[✓]	[ ]
• Was the QC/MRL between 70-130% R	[✓]	[ ]
5. Initial Calibration Verification (ICV):		
Is the mid level (2nd source) recovery within ~~85 - 115%~~ QSM ± 20%?	[✓]	[ ]

	Yes	No
6. Continuing Calibration Verification (CCV):		
• Was CCV conducted every 12 hours? QSM ≤ 20%	[✓]	[ ]
• Was Drift or D ~~≤ 15%~~ from the initial calibration with a maximum %D < 20% for a specific compound?	[✓]	[ ]
7. Sample Analysis:		
• Was the RRT of an identified component within the retention time window created as SW-846 requires?	[✓]	[ ]
• Were samples with levels higher than the calibration range (E), diluted and re-analyzed? N/A	[ ]	[ ]
• Were identified Aroclors confirmed on a second GC column? sample ND N/A	[ ]	[ ]
• Were individual Aroclor standards used to determine the pattern of the peaks? (Individual Aroclors are 1221, 1232, 1242, 1248, and 1254. Both Aroclor 1016, and 1260 can be used from the mixed calibration standards.)	[✓]	[ ]
• Was RPD of target analyte conformation ≤ 40? N/A	[ ]	[ ]
8. Sample Quality Control:		
• Method Blanks: Were target analytes ≤ 1/2 MRL?	[✓]	[ ]
• LCS: Were the percent recoveries for LCS within the limits?	[✓]	[ ]
• MS/MSD: Were the percent recoveries within limits?	[✓]	[ ]
Were the RPDs within control limits?	[✓]	[ ]
• System Monitoring Compounds (Surrogates): are surrogate recoveries within QC limits?	[✓]	[ ]

9. Comments (attach additional sheets if necessary):

Validated/Reviewed by:

Signature: D A Calvin Date: 3-20-2014

Name: D.S. Calvin

POLY CHLORINATED BIPHENYLS (PCB/AROCLORS) CHECKLIST

Project Name: RVAAP CR Site 77

Laboratory: TA - N. Canton

Batch Number(s): 165753

Sample Delivery Group: 17525

	Yes	No
1. Holding Time:		
(a) Were samples extracted within holding time?	[✓]	[ ]
(b) Were samples analyzed within holding time?	[✓]	[ ]
2. Initial Calibration:		
• Did the initial calibration consist of five standards?	[✓]	[ ]
• Did Aroclors 1016 and 1260 meet the RSD ≤ 20% or the r ≥ 0.99?	[✓]	[ ]
• Was manual integration "M" performed? If the answer is "Yes", check for supporting documents.	[✓]	[ ]
• Was the manual integration necessary?	[✓]	[ ]
If the answer is "no", contact the laboratory inquiring about the reasons behind the manual integration, and **inform the District Chemist immediately if there were no valid reasons.**		
3. QCMDL:		
• Was MDL Check performed?	[ ]	[✓]
4. QCMRL:		
• Were QC/MRL run at the beginning and end of every daily sequence or every 12 hours??	[✓]	[ ]
• Was the QC/MRL between 70-130% R	[✓]	[ ]
5. Initial Calibration Verification (ICV):		
Is the mid level (2nd source) recovery within ~~85 – 115%~~ 'QSM ±20%?	[✓]	[ ]

	Yes	No
6. Continuing Calibration Verification (CCV):		
• Was CCV conducted every 12 hours?	[✓]	[ ]
• Was Drift or D ≤ 15% from the initial calibration with a maximum %D < 20% for a specific compound?	[✓]	[ ]
7. Sample Analysis:		
• Was the RRT of an identified component within the retention time window created as SW-846 requires?	[✓]	[ ]
• Were samples with levels higher than the calibration range (E), diluted and re-analyzed? N/A	[ ]	[ ]
• Were identified Aroclors confirmed on a second GC column?	[✓]	[ ]
• Were individual Aroclor standards used to determine the pattern of the peaks? (Individual Aroclors are 1221, 1232, 1242, 1248, and 1254. Both Aroclor 1016, and 1260 can be used from the mixed calibration standards.)	[✓]	[ ]
• Was RPD of target analyte conformation ≤ 40? (MS/MSD) Sample ND	[✓]	[ ]
8. Sample Quality Control:		
• Method Blanks: Were target analytes ≤ 1/2 MRL? ND	[✓]	[ ]
• LCS: Were the percent recoveries for LCS within the limits?	[✓]	[ ]
• MS/MSD: Were the percent recoveries within limits?	[✓]	[ ]
Were the RPDs within control limits?	[✓]	[ ]
• System Monitoring Compounds (Surrogates): are surrogate recoveries within QC limits?	[✓]	[ ]

9. Comments (attach additional sheets if necessary):

Validated/Reviewed by:

Signature: [signature] Date: 3.28.2014

Name: L.S. Calvin

POLY CHLORINATED BIPHENYLS (PCB/AROCLORS) CHECKLIST

Project Name: RVAAP CR Site 83

Laboratory: CT Labs

Batch Number(s): 45487

Sample Delivery Group: 99211

	Yes	No
1. Holding Time:		
(a) Were samples extracted within holding time?	[✓]	[ ]
(b) Were samples analyzed within holding time?	[✓]	[ ]
2. Initial Calibration:		
• Did the initial calibration consist of five standards?	[✓]	[ ]
• Did Aroclors 1016 and 1260 meet the RSD ≤ 20% or the r ≥ 0.99?	[✓]	[ ]
• Was manual integration "M" performed? If the answer is "Yes", check for supporting documents.	[✓]	[ ]
• Was the manual integration necessary?	[✓]	[ ]
If the answer is "no", contact the laboratory inquiring about the reasons behind the manual integration, and **inform the District Chemist immediately if there were no valid reasons.**		
3. QCMDL:		
• Was MDL Check performed?	[ ]	[✓]
4. QCMRL:		
• Were QC/MRL run at the beginning and end of every daily sequence or every 12 hours??	[✓]	[ ]
• Was the QC/MRL between 70-130% R	[✓]	[ ]
5. Initial Calibration Verification (ICV):		
Is the mid level (2nd source) recovery within ~~85 - 115%?~~ @SM ± 20%	[✓]	[ ]

	Yes	No
6. Continuing Calibration Verification (CCV):		
• Was CCV conducted every 12 hours?	[✓]	[ ]
• Was Drift or D ~~≤ 15%~~ QSM ≤ 20% from the initial calibration with a maximum %D < 20% for a specific compound? NC	[✓]	[ ]
7. Sample Analysis:		
• Was the RRT of an identified component within the retention time window created as SW-846 requires?	[✓]	[ ]
• Were samples with levels higher than the calibration range (E), diluted and re-analyzed?	N/A [ ]	[ ]
• Were identified Aroclors confirmed on a second GC column?	[ ]	[ ]
• Were individual Aroclor standards used to determine the pattern of the peaks? (Individual Aroclors are 1221, 1232, 1242, 1248, and 1254. Both Aroclor 1016, and 1260 can be used from the mixed calibration standards.)	[✓]	[ ]
• Was RPD of target analyte conformation ≤ 40? (LCS)	[✓]	[ ]
8. Sample Quality Control:		
• Method Blanks: Were target analytes ≤ 1/2 MRL? N/D	[✓]	[ ]
• LCS: Were the percent recoveries for LCS within the limits?	[✓]	[ ]
• MS/MSD: Were the percent recoveries within limits? NC N/A	[✓]	[ ]
Were the RPDs within control limits?	[✓]	[ ]
• System Monitoring Compounds (Surrogates): are surrogate recoveries within QC limits?	[✓]	[ ]

9. Comments (attach additional sheets if necessary):

Validated/Reviewed by:

Signature: L.S. Calvin

Date: 4.4.2014 ~~4.4~~ MC

Name: L.S. Calvin

ORGANOCHLORINE PESTICIDES ANALYSIS CHECKLIST

Project Name: RVAAP CR Site 72 07258-0014-0001

Laboratory: TA- N. Canton

Batch Number(s): _____

Sample Delivery Group: 240-18297

	Yes	No
1. Holding Time:		
(a) Were samples extracted within holding time?	[X]	[ ]
(b) Were samples analyzed within holding time?	[X]	[ ]
2. DDT/Endrin Breakdown:		
• Was breakdown ≤ 15%?	[X]	[ ]
3. Initial Calibration:		
• Did the initial calibration consist of five standards?	[X]	[ ]
• Did all compounds meet the RSD ≤ 20% or r ≥ 0.99?	[X]	[ ]
• Was manual integration "M" performed? If the answer is "Yes", check for supporting documents.	[X]	[ ]
• Was the manual integration necessary?	[X]	[ ]
If the answer is "no", contact the laboratory inquiring about the reasons behind the manual integration, and **inform the District Chemist immediately if there were no valid reasons.**		
4. QCMDL:		
• Was MDL Check performed?	[ ]	[X]
5. QCMRL:		
• Were QC/MRL run at the beginning and end of every daily sequence or every 12 hours??	[X]	[ ]
• Was the QC/MRL between 70-130% R	[X]	[ ]

	Yes	No
6. Initial Calibration Verification (ICV):		
• Is the mid level (2nd source) recovery within 85 - 115%?	[ ]	[N]
7. Continuing Calibration Verification (CCV):		
• Was CCV conducted every 12 hours?	[N]	[ ]
• Was Drift or D ≤ 15% from the initial calibration with a maximum D ≤ 20% for a specific compound?	[ ]	[ ]
8. Sample Analysis:		
• Was the RRT of an identified component within the retention time window created as SW-846 requires? N/A	[ ]	[ ]
• Were samples with levels higher than the calibration range (E), diluted and re-analyzed?	[ ]	[ ]
• Were identified compounds confirmed on a second GC column?	[ ]	[ ]
• Was RPD of target analyte confirmation ≤ 40?	[ ]	[ ]
9. Sample Quality Control:		
• Method Blanks: Were target analytes ≤ 1/2 MRL?	[N]	[ ]
• LCS: Were the percent recoveries for LCS within the limits?	[N]	[ ]
• MS/MSD: Were the percent recoveries within limits?	[ ]	[N]
Were the RPD within control limits?	[ ]	[N]
• System Monitoring Compounds (Surrogates): are surrogate recoveries within QC limits?	[N]	[ ]

10. Comments (attach additional sheets if necessary):

Validated/Reviewed by:

Signature: Patti Meeks Date: 3/25/14

Name: Patti Meeks

MS/D on 0014 limits
DDE (66%, 45) 70-125%
Sulfate (57, 39) 60-135%
γ BHC (58%, 39) 60-125%
δ-ch (62%, 41%) 65-125%
methoxy (55%, 40%) 55-145%
MSD out: DDT (40, 45-140)
α-BHC (44, 60-125)

ICV CLP-1
Toc -43.2, -24.2, 49.8 + 2 ok
ICV CLP-2
Tox -39.1, -32.9 + 30%

ORGANOCHLORINE PESTICIDES ANALYSIS CHECKLIST

Project Name: RVAAP CR Site 77

Laboratory: TA-North Canton

Batch Number(s): 165753

Sample Delivery Group: 17525

	Yes	No
1. Holding Time:		
(a) Were samples extracted within holding time?	[✓]	[ ]
(b) Were samples analyzed within holding time?	[ ] ✓	[ ]
2. DDT/Endrin Breakdown:		
• Was breakdown ≤ 15%?	[✓]	[ ]
3. Initial Calibration:		
• Did the initial calibration consist of five standards?	[✓]	[ ]
• Did all compounds meet the RSD ≤ 20% or r ≥ 0.99?	[✓]	[ ]
• Was manual integration "M" performed? If the answer is "Yes", check for supporting documents.	[✓]	[ ]
• Was the manual integration necessary? If the answer is "no", contact the laboratory inquiring about the reasons behind the manual integration, and **inform the District Chemist immediately if there were no valid reasons.**	[✓]	[ ]
4. QCMDL:		
• Was MDL Check performed?	[ ]	[✓]
5. QCMRL:		
• Were QC/MRL run at the beginning and end of every daily sequence or every 12 hours??	[✓]	[ ]
• Was the QC/MRL between 70-130% R (those affecting sa sample data)	[✓]	[ ]

	Yes	No
6. Initial Calibration Verification (ICV): QSM ± 20 % • Is the mid level (2nd source) recovery within ~~85 - 115%~~?	[✓]	[ ]
7. Continuing Calibration Verification (CCV):		
• Was CCV conducted every 12 hours?	[✓]	[ ]
• Was Drift or D ≤ 15% from the initial calibration with a maximum D ≤ 20% for a specific compound?	[ ]	[✓]

toxaphene CLP1 -20.9/53.7 CLP2 -34.0/88.2 UJ/C

8. Sample Analysis:		
• Was the RRT of an identified component within the retention time window created as SW-846 requires?	[✓]	[ ]
• Were samples with levels higher than the calibration range (E), diluted and re-analyzed? N/A	[ ]	[ ]
• Were identified compounds confirmed on a second GC column?	[✓]	[ ]
• Was RPD of target analyte confirmation ≤ 40?	[✓]	[ ]
9. Sample Quality Control:		
• Method Blanks: Were target analytes ≤ 1/2 MRL? N/D	[✓]	[ ]
• LCS: Were the percent recoveries for LCS within the limits?	[✓]	[ ]
• MS/MSD: Were the percent recoveries within limits? N/A (not evaluated at 10X dilution)	[ ]	[ ]
Were the RPD within control limits?	[ ]	[ ]
• System Monitoring Compounds (Surrogates): are surrogate recoveries within QC limits? not evaluated @ 10X dilution	[ ]	[ ]

10. Comments (attach additional sheets if necessary):
10X dilution – sample matrix

Validated/Reviewed by:

Signature: L.A Calvin

Date: 3.28.2014

Name: L.S. Calvin

SEMIVOLATILE ORGANIC ANALYSIS CHECKLIST

Project Name: RVAAP CR Site 70

Laboratory: TA- North Canton

Batch Number(s): 65169, 69432

Sample Delivery Group: 17230, 18548

	Yes	No
1. Sample Holding Time:		
(a) Were samples extracted within holding time?	[✓]	[ ]
(b) Were samples analyzed within holding time?	[✓]	[ ]
2. Instrument Tuning:		
Was the DFTPP tune performed at the beginning of each 12-hour period during which samples were analyzed?	[✓]	[ ]
3. Ion Mass Assignments:		
Was mass assignment based on m/z 198?	[✓]	[ ]
4. Ion Abundance:		
Indicate if DFTPP ions abundance relative to m/z 198 base peak met the ions abundance criteria:		
m/z — Acceptance Criteria		
51 — 30.0 - 60.0 %	[✓]	[ ]
68 — < 2% of mass 69	[✓]	[ ]
70 — < 2% of mass 69	[✓]	[ ]
127 — 40-60%	[✓]	[ ]
197 — < 1%	[✓]	[ ]
198 — 100%, Base peak	[✓]	[ ]
199 — 5-9%	[✓]	[ ]
275 — 10 - 30%	[✓]	[ ]
365 — > 1%	[✓]	[ ]
441 — present but < mass 443	[✓]	[ ]
442 — > 40%	[✓]	[ ]
443 — 17-23% of mass 442	[✓]	[ ]

		Yes	No
5.0 Initial Calibration:			
• Did the initial calibration consist of five or more standards?	5-stds more	[ ] [✓]	[ ] [ ]
If the calibration curve consists of 5-standards, check validity of the calibration model.			
Was the linear model applied?		[✓]	[ ]
• Did the followings System Performance Check Compounds (SPCC) meet the minimum mean response factor (RF)?			
	RF		
N-nitroso-di-n-propylamine	0.05	[✓]	[ ]
Hexachlorocyclopentadiene	0.05	[✓]	[ ]
2,4-dinitrophenol	0.05	[✓]	[ ]
4-nitrophenol	0.05	[✓]	[ ]
• Did the RSD meet the criteria ≤ 30% for the followings each individual Calibration Check Compound (CCC)?			
Base/Neutral Fraction:			
Acenaphthene		[✓]	[ ]
1,4-Dichlorobenzene		[✓]	[ ]
Hexachlorobutadiene		[✓]	[ ]
Diphenylamine		[✓]	[ ]
Di-n-octylphthalate		[✓]	[ ]
Fluoranthene		[✓]	[ ]
Benzo(a)pyrene		[✓]	[ ]
Acid Fraction:			
4-Chloro-3-methylphenol		[✓]	[ ]
2,4-Dichlorophenol		[✓]	[ ]
2-Nitrophenol		[✓]	[ ]
Phenol		[✓]	[ ]
Pentachlorophenol		[✓]	[ ]
2,4,6-Trichlorophenol		[✓]	[ ]
• Are the RSDs for the remaining target analytes ≤ 15%?		[✓]	[ ]
• If the answer is "No", are the mean RSDs ≤ 15% or r ≥ 0.99 with a mean RSD ≤ 15% with a maximum RSD ≤ 30%?		N/A [ ] ↓ [ ]	[ ] [ ]

	Yes	No
• Was manual integration "M" performed?	[✓]	[ ]
If the answer is "Yes", check for supporting documents.		
• Was the manual integration necessary?	[✓]	[ ]
If the answer is "No", contact the laboratory inquiring about the reasons behind the manual integration, and **inform the District Chemist immediately if there were no valid reasons**.		

6. QCMDL:

• Was MDL Check performed?	[ ]	[✓]

7. QCMRL:

• Were QC/MRL run at the beginning and end of every daily sequence or every 12 hours?	[✓]	[ ]
• Was the QC/MRL between 70-130% R see comments	[ ]	[✓]
• For the non-contaminants of concern was the QC/MRL between 50-150% (Sporadic Marginal Failure)? N/A	[ ]	[ ]

8. Initial Calibration Verification (ICV):

• Is the mid level (2nd source) recovery within ~~70-130%~~ @SM ±20% for contaminants of concern ? 3,3'-DCB 73.5% ULJ/C in 0003 M	[ ]	[✓]
• Is the mid level (2nd source) recovery within 50-150% for non-contaminants of concern (Sporadic Marginal Failure)? N/A	[ ]	[ ]

9. Continuing Calibration Verification (CCV):

• Was CCV conducted every 12 hours?	[✓]	[ ]
• Did any of SPCC meet the minimum RF values?	[✓]	[ ]

		Yes	No
N-nitroso-di-n-propylamine	0.05	[✓]	[ ]
Hexachlorocyclopentadiene	0.05	[✓]	[ ]
2,4-dinitrophenol	0.05	[✓]	[ ]
4-nitrophenol	0.05	[✓]	[ ]

- Did the CCC meet the minimum requirements (D ≤ 20%) for the followings?

Base/Neutral Fraction:

Acenaphthene	[✓]	[ ]
1,4-Dichlorobenzene	[✓]	[ ]
Hexachlorobutadiene	[✓]	[ ]
Diphenylamine	[✓]	[ ]
Di-n-octylphthalate	[✓]	[ ]
Fluoranthene	[✓]	[ ]
Benzo(a)pyrene	[✓]	[ ]

Acid Fraction:

4-Chloro-3-methylphenol	[✓]	[ ]
2,4-Dichlorophenol	[✓]	[ ]
2-Nitrophenol	[✓]	[ ]
Phenol	[✓]	[ ]
Pentachlorophenol	[✓]	[ ]
2,4,6-Trichlorophenol	[✓]	[ ]

- Primary Evaluation: Was Drift or D ≤ 20% calculated from the initial calibration? [✓] [ ]
- Alternative Evaluation: Maximum allowable Drift/D for each target analyte is ≤ 30%. N/A [ ] [ ]

10. Sample Analysis:

- Was the RRT of an identified component within ± 0.06 RRT units of the RRT of the standard component? [✓] [ ]
- Did the abundance of ions in the sample spectra agree within 30% of the major ions (> 10% of the base ion) in the standard spectra? [✓] [ ]
- Were the internal standard areas within the QC limits (from -50% to +200%)? [✓] [ ]

11. Sample Quality Control:

	Yes	No
• Method Blanks: Were target analytes ≤ 1/2 MRL?	[✓]	[ ]
• LCS: Were the percent recoveries for LCS within the limits?	[✓]	[ ]
• MS/MSD: Were the percent recoveries within limits? see comments ↓	[ ]	[✓]
Were the RPD within control limits?	[ ]	[✓]
• System Monitoring Compounds (Surrogates): are surrogate recoveries within QC limits?	[✓]	[ ]

12. Comments (attach additional sheets if necessary):

Pentachlophenol R/D - reported from 8151 analysis (8270 R/D)
2,4-DNT and 2,6-DNT reported, from 8330 analysis ↓
MS/MSD 0006M: 4-CA and 3,3-DCB not recovered R/Q
3-NA ↓ 16%, 13% (25-110%) UJ/Q
RPDs: 46DN 2MP, 4NA (200%) UJ/Q
~~0006~~
-0006M 5X DL | all 2 ml final extract volume
remaining 10X ↓
MRL outliers: see attached

Validated/Reviewed by:

Signature: M Calvin

Date: 3.17.2014

Name: L.S. Calvin

SV

Samples qualified for MRL %R outliers		
Analyte	**%R**	**Qualified Samples**
2,4-dinitrophenol	42%	070SS-0003M-0001-SO
4,6-dinitro-2-methylphenol	47%	070SS-0006M-0001-SO
2,4-dinitrophenol	57%	070SB-0044M-0001-SO 070SB-0046M-0001-SO
benzo(g,h,i)perylene	62%	
n-nitrosodiphenylamine	**0%**	

All UJ/C in affected samples.

SEMIVOLATILE ORGANIC ANALYSIS CHECKLIST

Project Name: RVAAP CR Site 71

Laboratory: CT Labs

Batch Number(s): 45514, 45513

Sample Delivery Group: 99236

	Yes	No
1. Sample Holding Time:		
(a) Were samples extracted within holding time?	[✓]	[ ]
(b) Were samples analyzed within holding time?	[✓]	[ ]
2. Instrument Tuning: Was the DFTPP tune performed at the beginning of each 12-hour period during which samples were analyzed?	[✓]	[ ]
3. Ion Mass Assignments: Was mass assignment based on m/z 198?	[✓]	[ ]
4. Ion Abundance: Indicate if DFTPP ions abundance relative to m/z 198 base peak met the ions abundance criteria:		

m/z	Acceptance Criteria		
51	30.0 - 60.0 %	[✓]	[ ]
68	< 2% of mass 69	[✓]	[ ]
70	< 2% of mass 69	[✓]	[ ]
127	40-60%	[✓]	[ ]
197	< 1%	[✓]	[ ]
198	**100%, Base peak**	[✓]	[ ]
199	5-9%	[✓]	[ ]
275	10 - 30%	[✓]	[ ]
365	> 1%	[✓]	[ ]
441	present but < mass 443	[✓]	[ ]
442	> 40%	[✓]	[ ]
443	17-23% of mass 442	[✓]	[ ]

		Yes	No
5.0 Initial Calibration:			
• Did the initial calibration consist of five or more standards?	5-stds	[✓]	[ ]
	more	[ ]	[ ]
If the calibration curve consists of 5-standards, check validity of the calibration model.			
Was the linear model applied?		[✓]	[ ]
• Did the followings System Performance Check Compounds (SPCC) meet the minimum mean response factor (RF)?			
	RF		
N-nitroso-di-n-propylamine	0.05	[✓]	[ ]
Hexachlorocyclopentadiene	0.05	[✓]	[ ]
2,4-dinitrophenol	0.05	[✓]	[ ]
4-nitrophenol	0.05	[✓]	[ ]
• Did the RSD meet the criteria ≤ 30% for the followings each individual Calibration Check Compound (CCC)?			
Base/Neutral Fraction:			
Acenaphthene		[✓]	[ ]
1,4-Dichlorobenzene		[✓]	[ ]
Hexachlorobutadiene		[✓]	[ ]
Diphenylamine		[✓]	[ ]
Di-n-octylphthalate		[✓]	[ ]
Fluoranthene		[✓]	[ ]
Benzo(a)pyrene		[✓]	[ ]
Acid Fraction:			
4-Chloro-3-methylphenol		[✓]	[ ]
2,4-Dichlorophenol		[✓]	[ ]
2-Nitrophenol		[✓]	[ ]
Phenol		[✓]	[ ]
Pentachlorophenol		[✓]	[ ]
2,4,6-Trichlorophenol		[✓]	[ ]
• Are the RSDs for the remaining target analytes ≤ 15%? see comments		[ ]	[✓]
• If the answer is "No", are the mean RSDs ≤ 15% or r ≥ 0.99 with a mean RSD ≤ 15% with a maximum RSD ≤ 30%?	N/A	[ ]	[ ]
		[ ]	[ ]

	Yes	No
• Was manual integration "M" performed?	[✓]	[ ]
If the answer is "Yes", check for supporting documents.		
• Was the manual integration necessary?	[✓]	[ ]
If the answer is "No", contact the laboratory inquiring about the reasons behind the manual integration, and **inform the District Chemist immediately if there were no valid reasons**.		

6. QCMDL:

• Was MDL Check performed?	[ ]	[✓]

7. QCMRL:

• Were QC/MRL run at the beginning and end of every daily sequence or every 12 hours?	[✓]	[ ]
• Was the QC/MRL between 70-130% R see comments	[ ]	[✓]
• For the non-contaminants of concern was the QC/MRL between 50-150% (Sporadic Marginal Failure)? N/A	[ ]	[ ]

8. Initial Calibration Verification (ICV):

• Is the mid level (2nd source) recovery within ~~70-130%~~ QSM ±20% for contaminants of concern ?	[✓]	[ ]
• Is the mid level (2nd source) recovery within 50-150% for non-contaminants of concern (Sporadic Marginal Failure)? N/A	[ ]	[ ]

9. Continuing Calibration Verification (CCV):

• Was CCV conducted every 12 hours?	[✓]	[ ]
• Did any of SPCC meet the minimum RF values?	[✓]	[ ]

		Yes	No
N-nitroso-di-n-propylamine	0.05	[✓]	[ ]
Hexachlorocyclopentadiene	0.05	[✓]	[ ]
2,4-dinitrophenol	0.05	[✓]	[ ]
4-nitrophenol	0.05	[✓]	[ ]

- Did the CCC meet the minimum requirements (D ≤ 20%) for the followings?

Base/Neutral Fraction:

Acenaphthene	[✓]	[ ]
1,4-Dichlorobenzene	[✓]	[ ]
Hexachlorobutadiene	[✓]	[ ]
Diphenylamine	[✓]	[ ]
Di-n-octylphthalate	[✓]	[ ]
Fluoranthene	[✓]	[ ]
Benzo(a)pyrene	[✓]	[ ]

Acid Fraction:

4-Chloro-3-methylphenol	[✓]	[ ]
2,4-Dichlorophenol	[✓]	[ ]
2-Nitrophenol	[✓]	[ ]
Phenol	[✓]	[ ]
Pentachlorophenol	[✓]	[ ]
2,4,6-Trichlorophenol	[✓]	[ ]

- Primary Evaluation: Was Drift or D ≤ 20% calculated from the initial calibration? ~~see comments~~ ✓ yes [✓] MC [✓] MC
- Alternative Evaluation: Maximum allowable Drift/D for each target analyte is ≤ 30%. N/A [ ] [ ]

10. Sample Analysis:

- Was the RRT of an identified component within ± 0.06 RRT units of the RRT of the standard component? [✓] [ ]
- Did the abundance of ions in the sample spectra agree within 30% of the major ions (> 10% of the base ion) in the standard spectra? [✓] [ ]
- Were the internal standard areas within the QC limits (from -50% to +200%)? [✓] [ ]

11. Sample Quality Control:

	Yes	No
• Method Blanks: Were target analytes ≤ 1/2 MRL? ND	[✓]	[ ]
• LCS: Were the percent recoveries for LCS within the limits? ~~(those affecting~~ MC	[✓]	[ ]
• MS/MSD: Were the percent recoveries within limits? N/A	[ ]	[ ]
Were the RPD within control limits?	[ ]	[ ]
• System Monitoring Compounds (Surrogates): are surrogate recoveries within QC limits?	[✓]	[ ]

12. Comments (attach additional sheets if necessary):

R/C MRLs: benzyl alcohol 0%
NJ/C 4,6DN-2-MP 60%

ICAL %RSD: benzyl alcohol 15.2
benzoic acid 17.7 NJ/C
hexachlorocyclopentadiene 15.5
(benzyl alcohol not retained - MRL)

Validated/Reviewed by:

Signature: M A Calvin Date: 04.08.2014

Name: L.S. Calvin

SEMIVOLATILE ORGANIC ANALYSIS CHECKLIST

Project Name: RVAAP CR Site 72

Laboratory: TA - North Canton

Batch Number(s): 68168, 68363, 69035, 69176, 69432

Sample Delivery Group: 18297, 18441, 18449, 18544

		Yes	No
1.	Sample Holding Time:		
	(a) Were samples extracted within holding time?	[✓]	[ ]
	(b) Were samples analyzed within holding time?	[✓]	[ ]
2.	Instrument Tuning:		
	Was the DFTPP tune performed at the beginning of each 12-hour period during which samples were analyzed?	[✓]	[ ]
3.	Ion Mass Assignments:		
	Was mass assignment based on m/z 198?	[✓]	[ ]
4.	Ion Abundance:		
	Indicate if DFTPP ions abundance relative to m/z 198 base peak met the ions abundance criteria:		

m/z	Acceptance Criteria		
51	30.0 - 60.0 %	[✓]	[ ]
68	< 2% of mass 69	[✓]	[ ]
70	< 2% of mass 69	[✓]	[ ]
127	40-60%	[✓]	[ ]
197	< 1%	[✓]	[ ]
198	**100%, Base peak**	[✓]	[ ]
199	5-9%	[✓]	[ ]
275	10 - 30%	[✓]	[ ]
365	> 1%	[✓]	[ ]
441	present but < mass 443	[✓]	[ ]
442	> 40%	[✓]	[ ]
443	17-23% of mass 442	[✓]	[ ]

		Yes	No
5.0 Initial Calibration:			
• Did the initial calibration consist of five or more standards?	5-stds	[✓]	[ ]
	more	[ ]	[ ]
If the calibration curve consists of 5-standards, check validity of the calibration model.			
Was the linear model applied?		[✓]	[ ]
• Did the followings System Performance Check Compounds (SPCC) meet the minimum mean response factor (RF)?			
	RF		
N-nitroso-di-n-propylamine	0.05	[✓]	[ ]
Hexachlorocyclopentadiene	0.05	[✓]	[ ]
2,4-dinitrophenol	0.05	[✓]	[ ]
4-nitrophenol	0.05	[✓]	[ ]
• Did the RSD meet the criteria ≤ 30% for the followings each individual Calibration Check Compound (CCC)?			
Base/Neutral Fraction:			
Acenaphthene		[✓]	[ ]
1,4-Dichlorobenzene		[✓]	[ ]
Hexachlorobutadiene		[✓]	[ ]
Diphenylamine		[✓]	[ ]
Di-n-octylphthalate		[✓]	[ ]
Fluoranthene		[✓]	[ ]
Benzo(a)pyrene		[✓]	[ ]
Acid Fraction:			
4-Chloro-3-methylphenol		[✓]	[ ]
2,4-Dichlorophenol		[✓]	[ ]
2-Nitrophenol		[✓]	[ ]
Phenol		[✓]	[ ]
Pentachlorophenol		[✓]	[ ]
2,4,6-Trichlorophenol		[✓]	[ ]
• Are the RSDs for the remaining target analytes ≤ 15%?		[✓]	[ ]
• If the answer is "No", are the mean RSDs ≤ 15% or r ≥ 0.99 with a mean RSD ≤ 15% with a maximum RSD ≤ 30%?		N/A [ ]	[ ]
		↓ [ ]	[ ]

	Yes	No
• Was manual integration "M" performed?	[✓]	[ ]
If the answer is "Yes", check for supporting documents.		
• Was the manual integration necessary?	[✓]	[ ]
If the answer is "No", contact the laboratory inquiring about the reasons behind the manual integration, and **inform the District Chemist immediately if there were no valid reasons**.		

6. QCMDL:

• Was MDL Check performed?	[✓]	[ ]

7. QCMRL:

• Were QC/MRL run at the beginning and end of every daily sequence or every 12 hours?	[✓]	[ ]
• Was the QC/MRL between 70-130% R see comments	[ ]	[✓]
• For the non-contaminants of concern was the QC/MRL between 50-150% (Sporadic Marginal Failure)? N/A	[ ]	[ ]

8. Initial Calibration Verification (ICV):

• Is the mid level (2nd source) recovery within ~~70-130%~~ QSM ± 20% for contaminants of concern ? 3,3'-DCB-21.1% UJ/C in-0014	[ ]	[✓]
• Is the mid level (2nd source) recovery within 50-150% for non-contaminants of concern (Sporadic Marginal Failure)? N/A	[ ]	[ ]

9. Continuing Calibration Verification (CCV):

• Was CCV conducted every 12 hours?	[✓]	[ ]
• Did any of SPCC meet the minimum RF values?	[✓]	[ ]

		Yes	No
N-nitroso-di-n-propylamine	0.05	[✓]	[ ]
Hexachlorocyclopentadiene	0.05	[✓]	[ ]
2,4-dinitrophenol	0.05	[✓]	[ ]
4-nitrophenol	0.05	[ ]	[ ]

- Did the CCC meet the minimum requirements (D ≤ 20%) for the followings?

Base/Neutral Fraction:

Acenaphthene	[✓]	[ ]
1,4-Dichlorobenzene	[✓]	[ ]
Hexachlorobutadiene	[✓]	[ ]
Diphenylamine	[✓]	[ ]
Di-n-octylphthalate	[✓]	[ ]
Fluoranthene	[✓]	[ ]
Benzo(a)pyrene	[✓]	[ ]

Acid Fraction:

4-Chloro-3-methylphenol	[✓]	[ ]
2,4-Dichlorophenol	[✓]	[ ]
2-Nitrophenol	[✓]	[ ]
Phenol	[✓]	[ ]
Pentachlorophenol	[✓]	[ ]
2,4,6-Trichlorophenol	[✓]	[ ]

- Primary Evaluation: Was Drift or D ≤ 20% calculated from the initial calibration? [✓] [ ]
- Alternative Evaluation: Maximum allowable Drift/D for each target analyte is ≤ 30%. N/A [ ] [ ]

10. Sample Analysis:

- Was the RRT of an identified component within ± 0.06 RRT units of the RRT of the standard component? [✓] [ ]
- Did the abundance of ions in the sample spectra agree within 30% of the major ions (> 10% of the base ion) in the standard spectra? [✓] [ ]
- Were the internal standard areas within the QC limits (from -50% to +200%)? [✓] [ ]

11. Sample Quality Control:

	Yes	No
• Method Blanks: Were target analytes ≤ 1/2 MRL? bis 19.2J u/B @ RL 54 in-0014	[✓]	[ ]
• LCS: Were the percent recoveries for LCS within the limits?	[✓]	[ ]
• MS/MSD: Were the percent recoveries within limits?	[✓]	[ ]
Were the RPD within control limits?	[✓]	[ ]
• System Monitoring Compounds (Surrogates): are surrogate recoveries within QC limits?	[ ]	[ ]

2-Fluorobiphenyl 44% (45-105) in-0026
Re-extr. out of HT. RB R/D, orig J, UJ/S

12. Comments (attach additional sheets if necessary):

MRL assoc w/ full list - 0014 4-NA 0% R/C
24DN2MP 69% } UJ/C
24DNP 55% }

- 2,4- and 2,6-dinitrotoluene rejected R/D (reported only from 5330B analysis)

Validated/Reviewed by:

Signature: L A Calvin Date: 3-21-2014

Name: Lisa Calvin

SEMIVOLATILE ORGANIC ANALYSIS CHECKLIST

Project Name: RVAAP CR Site 75

Laboratory: TA - North Canton

Batch Number(s): 65933, 67436 (re-extr.)

Sample Delivery Group: 17467

		Yes	No
1.	Sample Holding Time: RE out / bis UJ/H		
	(a) Were samples extracted within holding time?	[✓]	[ ]
	(b) Were samples analyzed within holding time?	[✓]	[ ]
2.	Instrument Tuning:		
	Was the DFTPP tune performed at the beginning of each 12-hour period during which samples were analyzed?	[✓]	[ ]
3.	Ion Mass Assignments:		
	Was mass assignment based on m/z 198?	[✓]	[ ]
4.	Ion Abundance:		
	Indicate if DFTPP ions abundance relative to m/z 198 base peak met the ions abundance criteria:		
	m/z — Acceptance Criteria		
	51 — 30.0 - 60.0 %	[✓]	[ ]
	68 — < 2% of mass 69	[✓]	[ ]
	70 — < 2% of mass 69	[✓]	[ ]
	127 — 40-60%	[✓]	[ ]
	197 — < 1%	[✓]	[ ]
	198 — 100%, Base peak	[✓]	[ ]
	199 — 5-9%	[✓]	[ ]
	275 — 10 - 30%	[✓]	[ ]
	365 — > 1%	[✓]	[ ]
	441 — present but < mass 443	[✓]	[ ]
	442 — > 40%	[✓]	[ ]
	443 — 17-23% of mass 442	[✓]	[ ]

		Yes	No
5.0 Initial Calibration:			
• Did the initial calibration consist of five or more standards?	5-stds	[✓]	[ ]
	more	[✓]	[ ]
If the calibration curve consists of 5-standards, check validity of the calibration model.			
Was the linear model applied?		[✓]	[ ]
• Did the followings System Performance Check Compounds (SPCC) meet the minimum mean response factor (RF)?			
	RF		
N-nitroso-di-n-propylamine	0.05	[✓]	[ ]
Hexachlorocyclopentadiene	0.05	[✓]	[ ]
2,4-dinitrophenol	0.05	[✓]	[ ]
4-nitrophenol	0.05	[✓]	[ ]
• Did the RSD meet the criteria ≤ 30% for the followings each individual Calibration Check Compound (CCC)?			
Base/Neutral Fraction:			
Acenaphthene		[✓]	[ ]
1,4-Dichlorobenzene		[✓]	[ ]
Hexachlorobutadiene		[✓]	[ ]
Diphenylamine		[✓]	[ ]
Di-n-octylphthalate		[✓]	[ ]
Fluoranthene		[✓]	[ ]
Benzo(a)pyrene		[✓]	[ ]
Acid Fraction:			
4-Chloro-3-methylphenol		[✓]	[ ]
2,4-Dichlorophenol		[✓]	[ ]
2-Nitrophenol		[✓]	[ ]
Phenol		[✓]	[ ]
Pentachlorophenol		[✓]	[ ]
2,4,6-Trichlorophenol		[✓]	[ ]
• Are the RSDs for the remaining target analytes ≤ 15%? (those affecting sample data)		[✓]	[ ]
• If the answer is "No", are the mean RSDs ≤ 15% or r ≥ 0.99 with a mean RSD ≤ 15% with a maximum RSD ≤ 30%?		N/A [ ]	[ ]

	Yes	No
• Was manual integration "M" performed?	[✓]	[ ]
If the answer is "Yes", check for supporting documents.		
• Was the manual integration necessary?	[✓]	[ ]
If the answer is "No", contact the laboratory inquiring about the reasons behind the manual integration, and **inform the District Chemist immediately if there were no valid reasons.**		

6. QCMDL:

• Was MDL Check performed?	[ ]	[✓]

7. QCMRL:

• Were QC/MRL run at the beginning and end of every daily sequence or every 12 hours?	[✓]	[ ]
• Was the QC/MRL between 70-130% R see comments	[ ]	[✓]
• For the non-contaminants of concern was the QC/MRL between 50-150% (Sporadic Marginal Failure)? N/A	[ ]	[ ]

8. Initial Calibration Verification (ICV):

• Is the mid level (2nd source) recovery within ~~70-130%~~ QSM ±20% for contaminants of concern ?	[✓]	[ ]
• Is the mid level (2nd source) recovery within 50-150% for non-contaminants of concern (Sporadic Marginal Failure)? N/A	[ ]	[ ]

9. Continuing Calibration Verification (CCV):

• Was CCV conducted every 12 hours?	[✓]	[ ]
• Did any of SPCC meet the minimum RF values?	[✓]	[ ]

		Yes	No
N-nitroso-di-n-propylamine	0.05	[✓]	[ ]
Hexachlorocyclopentadiene	0.05	[✓]	[ ]
2,4-dinitrophenol	0.05	[✓]	[ ]
4-nitrophenol	0.05	[✓]	[ ]

- Did the CCC meet the minimum requirements (D ≤ 20%) for the followings?

Base/Neutral Fraction:

Acenaphthene	[✓]	[ ]
1,4-Dichlorobenzene	[✓]	[ ]
Hexachlorobutadiene	[✓]	[ ]
Diphenylamine	[✓]	[ ]
Di-n-octylphthalate	[✓]	[ ]
Fluoranthene	[✓]	[ ]
Benzo(a)pyrene	[✓]	[ ]

Acid Fraction:

4-Chloro-3-methylphenol	[✓]	[ ]
2,4-Dichlorophenol	[✓]	[ ]
2-Nitrophenol	[✓]	[ ]
Phenol	[✓]	[ ]
Pentachlorophenol	[✓]	[ ]
2,4,6-Trichlorophenol	[✓]	[ ]

- Primary Evaluation: Was Drift or D ≤ 20% calculated from the initial calibration? [✓] [ ]
- Alternative Evaluation: Maximum allowable Drift/D for each target analyte is ≤ 30%. N/A [ ] [ ]

10. Sample Analysis:

- Was the RRT of an identified component within ± 0.06 RRT units of the RRT of the standard component? [✓] [ ]
- Did the abundance of ions in the sample spectra agree within 30% of the major ions (> 10% of the base ion) in the standard spectra? [ ] [✓]
- Were the internal standard areas within the QC limits (from -50% to +200%)? [✓] [ ]

11. Sample Quality Control:

	Yes	No
• Method Blanks: Were target analytes ≤ 1/2 MRL? see comments	[ ]	[✓]
• LCS: Were the percent recoveries for LCS within the limits?	[✓]	[ ]
• MS/MSD: Were the percent recoveries within limits? (R/Q) 3,3' DCB 5%/Q, +- N/A 30/25% (35-115) (UJ/Q)	[ ]	[✓]
Were the RPD within control limits?	[✓]	[ ]
• System Monitoring Compounds (Surrogates): are surrogate recoveries within QC limits?	[✓]	[ ]

12. Comments (attach additional sheets if necessary):

- Original MS: bis-2(ethylhexyl) phthalate >10Q @ 90.1 ug/kg RE for bis only. Bis reported out of HT from re-extr.
- 2,4-DNT and 2,6-DNT reported from 8330 analysis

MRLs

benzo(g,h,i)perylene	58%	J/C
dibenz(a,h)anthracene	68%	UJ/C
4,6-dinitro-2-methylphenol	46%	UJ/C
2,4-dinitrophenol	37%	UJ/C
hexachloroethane	58%	UJ/C
indeno(1,2,3-cd)pyrene	167%	J/C

Validated/Reviewed by:

Signature: L.S. Calvin Date: 3·20·2014

Name: L.S. Calvin

SEMIVOLATILE ORGANIC ANALYSIS CHECKLIST

Project Name: RVAAP CR Site 77

Laboratory: TA - North Canton

Batch Number(s): 465931

Sample Delivery Group: 17525

		Yes	No
1.	Sample Holding Time:		
	(a) Were samples extracted within holding time?	[✓]	[ ]
	(b) Were samples analyzed within holding time?	[✓]	[ ]
2.	Instrument Tuning:		
	Was the DFTPP tune performed at the beginning of each 12-hour period during which samples were analyzed?	[✓]	[ ]
3.	Ion Mass Assignments:		
	Was mass assignment based on m/z 198?	[✓]	[ ]
4.	Ion Abundance:		
	Indicate if DFTPP ions abundance relative to m/z 198 base peak met the ions abundance criteria:		
	m/z — Acceptance Criteria		
	51 — 30.0 - 60.0 %	[✓]	[ ]
	68 — < 2% of mass 69	[✓]	[ ]
	70 — < 2% of mass 69	[✓]	[ ]
	127 — 40-60%	[✓]	[ ]
	197 — < 1%	[✓]	[ ]
	198 — 100%, Base peak	[✓]	[ ]
	199 — 5-9%	[✓]	[ ]
	275 — 10 - 30%	[✓]	[ ]
	365 — > 1%	[✓]	[ ]
	441 — present but < mass 443	[✓]	[ ]
	442 — > 40%	[✓]	[ ]
	443 — 17-23% of mass 442	[✓]	[ ]

		Yes	No
5.0 Initial Calibration:			
• Did the initial calibration consist of five or more standards?	5-stds	[✓]	[ ]
	more	[✓]	[ ]
If the calibration curve consists of 5-standards, check validity of the calibration model.			
Was the linear model applied?		[✓]	[ ]
• Did the followings System Performance Check Compounds (SPCC) meet the minimum mean response factor (RF)?			
	RF		
N-nitroso-di-n-propylamine	0.05	[✓]	[ ]
Hexachlorocyclopentadiene	0.05	[✓]	[ ]
2,4-dinitrophenol	0.05	[✓]	[ ]
4-nitrophenol	0.05	[✓]	[ ]
• Did the RSD meet the criteria ≤ 30% for the followings each individual Calibration Check Compound (CCC)?			
Base/Neutral Fraction:			
Acenaphthene		[✓]	[ ]
1,4-Dichlorobenzene		[✓]	[ ]
Hexachlorobutadiene		[✓]	[ ]
Diphenylamine		[✓]	[ ]
Di-n-octylphthalate		[✓]	[ ]
Fluoranthene		[✓]	[ ]
Benzo(a)pyrene		[✓]	[ ]
Acid Fraction:			
4-Chloro-3-methylphenol		[✓]	[ ]
2,4-Dichlorophenol		[✓]	[ ]
2-Nitrophenol		[✓]	[ ]
Phenol		[✓]	[ ]
Pentachlorophenol		[✓]	[ ]
2,4,6-Trichlorophenol		[✓]	[ ]
• Are the RSDs for the remaining target analytes ≤ 15%?		[✓]	[ ]
• If the answer is "No", are the mean RSDs ≤ 15% or r ≥ 0.99 with a mean RSD ≤ 15% with a maximum RSD ≤ 30%?		N/A [ ]	[ ]
		[ ]	[ ]

	Yes	No
• Was manual integration "M" performed?	[✓]	[ ]
If the answer is "Yes", check for supporting documents.		
• Was the manual integration necessary?	[✓]	[ ]
If the answer is "No", contact the laboratory inquiring about the reasons behind the manual integration, and **inform the District Chemist immediately if there were no valid reasons**.		

6. QCMDL:

• Was MDL Check performed?	[ ]	[✓]

7. QCMRL:

• Were QC/MRL run at the beginning and end of every daily sequence or every 12 hours?	[✓]	[ ]
• Was the QC/MRL between 70-130%R	[ ]	[✓]
N-nitrosodiphenylamine not recovered/closing R/C		
• For the non-contaminants of concern was the QC/MRL between 50-150% (Sporadic Marginal Failure)?	N/A [ ]	[ ]

8. Initial Calibration Verification (ICV):

	[✓] NC	[✓]
QSM ±20%		
• Is the mid level (2nd source) recovery within ~~70-130%~~ for contaminants of concern ? 3,3'-DCB -21.1 NC		
• Is the mid level (2nd source) recovery within 50-150% for non-contaminants of concern (Sporadic Marginal Failure)? N/A	[ ]	[ ]

9. Continuing Calibration Verification (CCV):

• Was CCV conducted every 12 hours?	[✓]	[ ]
• Did any of SPCC meet the minimum RF values?	[✓]	[ ]

		Yes	No
N-nitroso-di-n-propylamine	0.05	[✓]	[ ]
Hexachlorocyclopentadiene	0.05	[✓]	[ ]
2,4-dinitrophenol	0.05	[✓]	[ ]
4-nitrophenol	0.05	[✓]	[ ]

- Did the CCC meet the minimum requirements (D ≤ 20%) for the followings?

Base/Neutral Fraction:

Acenaphthene	[✓]	[ ]
1,4-Dichlorobenzene	[✓]	[ ]
Hexachlorobutadiene	[✓]	[ ]
Diphenylamine	[✓]	[ ]
Di-n-octylphthalate	[✓]	[ ]
Fluoranthene	[✓]	[ ]
Benzo(a)pyrene	[✓]	[ ]

Acid Fraction:

4-Chloro-3-methylphenol	[✓]	[ ]
2,4-Dichlorophenol	[✓]	[ ]
2-Nitrophenol	[✓]	[ ]
Phenol	[✓]	[ ]
Pentachlorophenol	[✓]	[ ]
2,4,6-Trichlorophenol	[✓]	[ ]

- Primary Evaluation: Was Drift or D ≤ 20% calculated from the initial calibration? [✓] [ ]
- Alternative Evaluation: Maximum allowable Drift/D for each target analyte is ≤ 30%. N/A [ ] [ ]

10. Sample Analysis:

- Was the RRT of an identified component within ± 0.06 RRT units of the RRT of the standard component? [✓] [ ]
- Did the abundance of ions in the sample spectra agree within 30% of the major ions (> 10% of the base ion) in the standard spectra? [✓] [ ]
- Were the internal standard areas within the QC limits (from -50% to +200%)? [✓] [ ]

11. Sample Quality Control:

	Yes	No
• Method Blanks: Were target analytes ≤ 1/2 MRL? bis 30.7J / ND in sample	[✓]	[ ]
• LCS: Were the percent recoveries for LCS within the limits?	[✓]	[ ]
• MS/MSD: Were the percent recoveries within limits? benzoic acid not recovered R/Q	[ ]	[✓]
Were the RPD within control limits?	[✓]	[ ]
• System Monitoring Compounds (Surrogates): are surrogate recoveries within QC limits?	[✓]	[ ]

12. Comments (attach additional sheets if necessary):

Validated/Reviewed by:

Signature: M Calvin Date: 3·28·2014

Name: L.S. Calvin

SEMIVOLATILE ORGANIC ANALYSIS CHECKLIST

Project Name: RVAAP CR Site 83

Laboratory: CT Labs

Batch Number(s): 45489, 45490

Sample Delivery Group: 99211

	Yes	No
1. Sample Holding Time:		
(a) Were samples extracted within holding time?	[✓]	[ ]
(b) Were samples analyzed within holding time?	[✓]	[ ]
2. Instrument Tuning:		
Was the DFTPP tune performed at the beginning of each 12-hour period during which samples were analyzed?	[✓]	[ ]
3. Ion Mass Assignments:		
Was mass assignment based on m/z 198?	[✓]	[ ]
4. Ion Abundance:		
Indicate if DFTPP ions abundance relative to m/z 198 base peak met the ions abundance criteria:		
m/z — Acceptance Criteria		
51 — 30.0 - 60.0 %	[✓]	[ ]
68 — < 2% of mass 69	[✓]	[ ]
70 — < 2% of mass 69	[✓]	[ ]
127 — 40-60%	[✓]	[ ]
197 — < 1%	[✓]	[ ]
198 — 100%, Base peak	[✓]	[ ]
199 — 5-9%	[✓]	[ ]
275 — 10 - 30%	[✓]	[ ]
365 — > 1%	[✓]	[ ]
441 — present but < mass 443	[✓]	[ ]
442 — > 40%	[✓]	[ ]
443 — 17-23% of mass 442	[✓]	[ ]

		Yes	No
5.0 Initial Calibration:			
• Did the initial calibration consist of five or more standards?	5-stds	[✓]	[ ]
	more	[✓]	[ ]
If the calibration curve consists of 5-standards, check validity of the calibration model.			
Was the linear model applied?		[✓]	[ ]
• Did the followings System Performance Check Compounds (SPCC) meet the minimum mean response factor (RF)?			
	RF		
N-nitroso-di-n-propylamine	0.05	[✓]	[ ]
Hexachlorocyclopentadiene	0.05	[✓]	[ ]
2,4-dinitrophenol	0.05	[✓]	[ ]
4-nitrophenol	0.05	[✓]	[ ]
• Did the RSD meet the criteria ≤ 30% for the followings each individual Calibration Check Compound (CCC)?			
Base/Neutral Fraction:			
Acenaphthene		[✓]	[ ]
1,4-Dichlorobenzene		[✓]	[ ]
Hexachlorobutadiene		[✓]	[ ]
Diphenylamine		[✓]	[ ]
Di-n-octylphthalate		[✓]	[ ]
Fluoranthene		[✓]	[ ]
Benzo(a)pyrene		[✓]	[ ]
Acid Fraction:			
4-Chloro-3-methylphenol		[✓]	[ ]
2,4-Dichlorophenol		[✓]	[ ]
2-Nitrophenol		[✓]	[ ]
Phenol		[✓]	[ ]
Pentachlorophenol		[✓]	[ ]
2,4,6-Trichlorophenol		[✓]	[ ]
• Are the RSDs for the remaining target analytes ≤ 15%? see comments		[ ]	[✓]
• If the answer is "No", are the mean RSDs ≤ 15% or r ≥ 0.99 with a mean RSD ≤ 15% with a maximum RSD ≤ 30%? yes		[ ] N/A	[ ]

	Yes	No
• Was manual integration "M" performed?	[✓]	[ ]
If the answer is "Yes", check for supporting documents.		
• Was the manual integration necessary?	[✓]	[ ]
If the answer is "No", contact the laboratory inquiring about the reasons behind the manual integration, and **inform the District Chemist immediately if there were no valid reasons**.		

6. QCMDL:

• Was MDL Check performed?	[ ]	[✓]

7. QCMRL:

• Were QC/MRL run at the beginning and end of every daily sequence or every 12 hours?	[✓]	[ ]
• Was the QC/MRL between 70-130% R (see comments)	[ ]	[✓]
• For the non-contaminants of concern was the QC/MRL between 50-150% (Sporadic Marginal Failure)?	N/A [ ]	[ ]

8. Initial Calibration Verification (ICV):

	[✓]	[ ]
• Is the mid level (2nd source) recovery within 70-130% for contaminants of concern ?		
• Is the mid level (2nd source) recovery within 50-150% for non-contaminants of concern (Sporadic Marginal Failure)?	N/A [ ]	[ ]

9. Continuing Calibration Verification (CCV):

• Was CCV conducted every 12 hours?	[✓]	[ ]
• Did any of SPCC meet the minimum RF values?	[✓]	[ ]

		Yes	No
N-nitroso-di-n-propylamine	0.05	[✓]	[ ]
Hexachlorocyclopentadiene	0.05	[✓]	[ ]
2,4-dinitrophenol	0.05	[✓]	[ ]
4-nitrophenol	0.05	[✓]	[ ]

- Did the CCC meet the minimum requirements (D ≤ 20%) for the followings?

Base/Neutral Fraction:

Acenaphthene	[✓]	[ ]
1,4-Dichlorobenzene	[✓]	[ ]
Hexachlorobutadiene	[✓]	[ ]
Diphenylamine	[✓]	[ ]
Di-n-octylphthalate	[✓]	[ ]
Fluoranthene	[✓]	[ ]
Benzo(a)pyrene	[✓]	[ ]

Acid Fraction:

4-Chloro-3-methylphenol	[✓]	[ ]
2,4-Dichlorophenol	[✓]	[ ]
2-Nitrophenol	[✓]	[ ]
Phenol	[✓]	[ ]
Pentachlorophenol	[✓]	[ ]
2,4,6-Trichlorophenol	[✓]	[ ]

- Primary Evaluation: Was Drift or D ≤ 20% calculated from the initial calibration? [✓] [ ]
- Alternative Evaluation: Maximum allowable Drift/D for each target analyte is ≤ 30%. N/A [ ] [ ]

10. Sample Analysis:

- Was the RRT of an identified component within ± 0.06 RRT units of the RRT of the standard component? [✓] [ ]
- Did the abundance of ions in the sample spectra agree within 30% of the major ions (> 10% of the base ion) in the standard spectra? [✓] [ ]
- Were the internal standard areas within the QC limits (from -50% to +200%)? [✓] [ ]

11. Sample Quality Control:

	Yes	No
• Method Blanks: Were target analytes ≤ 1/2 MRL? ND	[✓]	[ ]
• LCS: Were the percent recoveries for LCS within the limits?	[ ] ✓	[ ]
• MS/MSD: Were the percent recoveries within limits? N/A	[ ]	[ ]
Were the RPD within control limits?	[ ]	[ ]
• System Monitoring Compounds (Surrogates): are surrogate recoveries within QC limits?	[✓]	[ ]

12. Comments (attach additional sheets if necessary):

MRL: benzyl alcohol, not recovered/beg+end R/C
hexachlorocyclopentadiene 69%/ending ~~R/NC~~ UJ/C

ICAL RSDs: benzyl alcohol 15.2 UJ/C
benzoic acid 17.7 (R/C for MRL)
hexachlorocyclopentadiene 15.5 UJ/C

NC ~~{2,4-dinitrotoluene 2,6-dinitrotoluene} reported from 8330/RPD in 8270C~~

Validated/Reviewed by:

Signature: A.S. Calvin Date: 4.4.2014

Name: L.S. Calvin

Total Petroleum Hydrocarbons (TPH)

~~POLY CHLORINATED BIPHENYLS (PCB/AROCLORS)~~ CHECKLIST

Project Name: RVAAP CR Site 70

Laboratory: TA - North Canton

Batch Number(s): 65273, 69738 / 65134, 70013

Sample Delivery Group: 17230, 17317, 18581, 18735

	Yes	No
1. Holding Time:		
(a) Were samples extracted within holding time?	[✓]	[ ]
(b) Were samples analyzed within holding time?	[✓]	[ ]
2. Initial Calibration:		
• Did the initial calibration consist of five standards?	[✓]	[ ]
NC • ~~Did Aroclors 1016 and 1260 meet the~~ RSD ≤ 20% or the r ≥ 0.99?	[ ]	[ ]
• Was manual integration "M" performed? If the answer is "Yes", check for supporting documents. TFT - GRO	[✓]	[✓] NC
• Was the manual integration necessary? NC N/A	[✓]	[ ]
If the answer is "no", contact the laboratory inquiring about the reasons behind the manual integration, and **inform the District Chemist immediately if there were no valid reasons.**		
3. QCMDL:		
• Was MDL Check performed?	[ ]	[✓]
4. QCMRL:		
• Were QC/MRL run at the beginning and end of every daily sequence or every 12 hours??	[✓]	[ ]
• Was the QC/MRL between 70-130% R	[ ]	[✓]
C6-C12 133% J/C in-0006M		
5. Initial Calibration Verification (ICV):		
Is the mid level (2nd source) recovery within ~~85 - 115%?~~ QSM ± 20%	[✓]	[ ]

	Yes	No
6. Continuing Calibration Verification (CCV):		
• Was CCV conducted every 12 hours? QSM ≤20%	[✓]	[ ]
• Was Drift or D ~~≤ 15%~~ from the initial calibration with a maximum %D < 20% for a specific compound?	[✓]	[ ]
7. Sample Analysis:		
• Was the RRT of an identified component within the retention time window created as SW-846 requires?	[✓]	[ ]
• Were samples with levels higher than the calibration range (E), diluted and re-analyzed? 10X -0042M / DRO	[✓]	[ ]
• Were identified Aroclors confirmed on a second GC column?	N/A [ ]	[ ]
• Were individual Aroclor standards used to determine the pattern of the peaks? (Individual Aroclors are 1221, 1232, 1242, 1248, and 1254. Both Aroclor 1016, and 1260 can be used from the mixed calibration standards.)	[ ]	[ ]
• Was RPD of target analyte conformation ≤ 40?	[ ]	[ ]
8. Sample Quality Control:		
• Method Blanks: Were target analytes ≤ 1/2 MRL?	[✓]	[ ]
• LCS: Were the percent recoveries for LCS within the limits?	[✓]	[ ]
• MS/MSD: Were the percent recoveries within limits?	[✓]	[ ]
Were the RPDs within control limits? -0004M 35% (≤30%) J/Q	[ ]	[✓]
• System Monitoring Compounds (Surrogates): are surrogate recoveries within QC limits?	[✓]	[ ]

9. Comments (attach additional sheets if necessary):

Validated/Reviewed by:

Signature: L S Calvin Date: 3-19-2014

Name: L.S. Calvin

Total Petroleum Hydrocarbons (TPH) ~~POLY CHLORINATED BIPHENYLS (PCB/AROCLORS)~~ CHECKLIST

Project Name: RVAAP CR Site 71

Laboratory: CT Labs

Batch Number(s): 45509, 45515

Sample Delivery Group: 99236

	Yes	No
1. Holding Time:		
(a) Were samples extracted within holding time?	[✓]	[ ]
(b) Were samples analyzed within holding time?	[✓]	[ ]
2. Initial Calibration:		
• Did the initial calibration consist of five standards?	[✓]	[ ]
• Did Aroclors 1016 and 1260 meet the RSD ≤ 20% or the r ≥ 0.99?	[✓]	[ ]
• Was manual integration "M" performed? If the answer is "Yes", check for supporting documents.	[ ]	[✓]
• Was the manual integration necessary? N/A	[ ]	[ ]
If the answer is "no", contact the laboratory inquiring about the reasons behind the manual integration, and **inform the District Chemist immediately if there were no valid reasons.**		
3. QCMDL:		
• Was MDL Check performed?	[ ]	[✓]
4. QCMRL:		
• Were QC/MRL run at the beginning and end of every daily sequence or every 12 hours??	[✓]	[ ]
• Was the QC/MRL between 70-130% R	[✓]	[ ]
5. Initial Calibration Verification (ICV):		
Is the mid level (2nd source) recovery within ~~85 - 115%~~ QSM ±20% JC	[✓]	[ ]

	Yes	No
6. Continuing Calibration Verification (CCV):		
• Was CCV conducted every 12 hours?	[✓]	[ ]
• Was Drift or D ~~≤ 15%~~ QSM ≥ 20% from the initial calibration with a maximum %D < 20% for a specific compound? NC	[✓]	[ ]
7. Sample Analysis:		
• Was the RRT of an identified component within the retention time window created as SW-846 requires?	[✓]	[ ]
• Were samples with levels higher than the calibration range (E), diluted and re-analyzed? N/A	[ ]	[ ]
• Were identified Aroclors confirmed on a second GC column? N/A	[ ]	[ ]
• Were individual Aroclor standards used to determine the pattern of the peaks? (Individual Aroclors are 1221, 1232, 1242, 1248, and 1254. Both Aroclor 1016, and 1260 can be used from the mixed calibration standards.)	[ ]	[ ]
• Was RPD of target analyte conformation ≤ 40? N/A	[ ]	[ ]
8. Sample Quality Control:		
• Method Blanks: Were target analytes ≤ 1/2 MRL? ND	[✓]	[ ]
• LCS: Were the percent recoveries for LCS within the limits?	[✓]	[ ]
• MS/MSD: Were the percent recoveries within limits? N/A	[ ]	[ ]
Were the RPDs within control limits?	[ ]	[ ]
• System Monitoring Compounds (Surrogates): are surrogate recoveries within QC limits?	[✓]	[ ]

9. Comments (attach additional sheets if necessary):

Validated/Reviewed by:

Signature: L.S. Calvin Date: 4.7.2014

Name: L.S. Calvin

Total Petroleum Hydrocarbons (TPH) ~~POLY CHLORINATED BIPHENYLS~~ DRO ~~(PCB/AROCLORS)~~ CHECKLIST

Project Name: RVAAP CR Site 72

Laboratory: TA-North Canton

Batch Number(s): DRO: 68154, 68574, 69161, 69020
GRO: ~~68246, 68680~~, 69142, 69738

Sample Delivery Group: 18297, 18441, 18449, 18544, 18703

	Yes	No
1. Holding Time:		
(a) Were samples extracted within holding time?	[✓]	[ ]
(b) Were samples analyzed within holding time?	[✓]	[ ]
2. Initial Calibration:		
• Did the initial calibration consist of five standards?	[✓]	[ ]
• ~~Did Aroclors 1016 and 1260 meet the~~ RSD ≤ 20% or the r ≥ 0.99?	[✓]	[ ]
• Was manual integration "M" performed? If the answer is "Yes", check for supporting documents.	[✓]	[ ]
• Was the manual integration necessary?	[✓]	[ ]
If the answer is "no", contact the laboratory inquiring about the reasons behind the manual integration, and **inform the District Chemist immediately if there were no valid reasons.**		
3. QCMDL:		
• Was MDL Check performed?	[ ]	[✓]
4. QCMRL:		
• Were QC/MRL run at the beginning and end of every daily sequence or every 12 hours??	[✓]	[ ]
• Was the QC/MRL between 70-130% R	[✓]	[ ]
5. Initial Calibration Verification (ICV):		
Is the mid level (2nd source) recovery within ~~85 - 115%~~ QSM ±20%?	[✓]	[ ]

	Yes	No
6. Continuing Calibration Verification (CCV):		
• Was CCV conducted every 12 hours?	[✓]	[ ]
• Was Drift or D ≤ 15% from the initial calibration with a maximum %D < 20% for a specific compound? those detecting sample data	[✓]	[ ]
7. Sample Analysis:		
• Was the RRT of an identified component within the retention time window created as SW-846 requires?	[✓]	[ ]
• Were samples with levels higher than the calibration range (E), diluted and re-analyzed? N/A	[ ]	[ ]
• Were identified Aroclors confirmed on a second GC column?	[ ]	[ ]
• Were individual Aroclor standards used to determine the pattern of the peaks? (Individual Aroclors are 1221, 1232, 1242, 1248, and 1254. Both Aroclor 1016, and 1260 can be used from the mixed calibration standards.) N/A	[ ]	[ ]
• Was RPD of target analyte conformation ≤ 40?	[ ]	[ ]
8. Sample Quality Control:		
• Method Blanks: Were target analytes ≤ 1/2 MRL? (ND)	[✓]	[ ]
• LCS: Were the percent recoveries for LCS within the limits?	[✓]	[ ]
• MS/MSD: Were the percent recoveries within limits?	[✓]	[ ]
Were the RPDs within control limits? C_6-C_{12} 49% -0001 / 61% 0026	[ ]	[✓]
• System Monitoring Compounds (Surrogates): are surrogate recoveries within QC limits?	[✓]	[ ]

9. Comments (attach additional sheets if necessary):

One MPI + CCV had high recoveries due to sample carryover; however, associated samples were ND and not affected.

Validated/Reviewed by:

Signature: LS Calvin

Date: 3.25.2014

Name: LS Calvin

VERSION 5
June 2002

U.S. Army Corps of Engineers Louisville District - LCG

VOLATILE ORGANIC ANALYSIS CHECKLIST

Project Name: RVAAP CR Site 70

Laboratory: TA - North Canton

Batch Number(s): 168897, 168905

Sample Delivery Group (SDG): 17230, 18581

	Yes	No
1. Holding Time:		
(a) Were samples preserved?	[✓]	[ ]
(b) Were samples analyzed within holding time?	[✓]	[ ]
2. Was the BFB tune performed at the beginning of each 12-hour period during which samples were analyzed?	[✓]	[ ]
3. Was mass assignment based on m/z 95?	[✓]	[ ]
4. Indicate if BFB ions abundance relative to m/z 95 base peak met the ions abundance criteria:		

m/z	Acceptance Criteria		
50	15.0 - 40.0 %	[✓]	[ ]
75	30.0 - 66.0 %	[✓]	[ ]
95	**100%, Base Peak**	[✓]	[ ]
96	5.0 - 9.0%	[✓]	[ ]
173	<2.0% of m/z 174	[✓]	[ ]
174	>50%	[✓]	[ ]
175	5.0 - 9.0% of mass 174	[✓]	[ ]
176	95.0 - 101.0% of m/z 174	[✓]	[ ]
177	5.0 - 9.0% of m/z 176	[✓]	[ ]

The relative ion abundance of m/z 95/96, m/z 174/176, and 176/177 are of critical importance.

The relative ion abundance of m/z 50 and 75 are of lower importance.

	Yes	No
5. Initial Calibration:		
• Did the initial calibration consist of five standards?	[✓]	[ ]
• Did the System Performance Check Compounds (SPCC) meet the minimum mean response factor (RF)?		
RF		
Chloromethane 0.1	[✓]	[ ]
1,1-Dichloroethane 0.1	[✓]	[ ]
Bromoform 0.1	[✓]	[ ]
Chlorobenzene 0.3	[✓]	[ ]
1,1,2,2-Tetrachloroethane 0.3	[✓]	[ ]
• Did the RSD meet the criteria ≤ 30% for each individual Calibration Check Compound (CCC)?		
1,1-Dichloroethene	[✓]	[ ]
Chloroform	[✓]	[ ]
1,2-Dichloropropane	[✓]	[ ]
Toluene	[✓]	[ ]
Ethylbenzene	[✓]	[ ]
Vinyl chloride	[✓]	[ ]
• Are the RSDs for the remaining target analytes ≤ 15% or r ≥ 0.99 with a mean RSD ≤ 15% with a maximum RSD ≤ 20%?	[✓]	[ ]
If the answer is "No", are the mean RSDs ≤ 15%? N/A	[ ]	[ ]
• Was manual integration "M" performed?	[ ]	[✓]
If the answer is "Yes", check for supporting documents. N/A	[ ]	[ ]
• Was the manual integration necessary?	[ ]	[ ]
If the answer is "No", contact the laboratory inquiring about the reasons behind the manual integration, and **inform the District Chemist immediately if there were no valid reasons**.		
6. QCMDL:	[ ]	[✓]
• Was MDL Check performed?		
7. QCMRL:	[✓]	[ ]

	Yes	No
• Were QC/MRL run at the beginning and end of every daily sequence or every 12 hours?	[✓]	[ ]
• Was the QC/MRL between 70-130% R acetone 58% 0705-0006M-0001-SO 2-Hexanone 68% 0705B-0044M-0001-SO	[ ]	[✓] - WJ/C
• For the non-contaminants of concern was the QC/MRL between 60-140% (Sporadic Marginal Failure) N/A	[ ]	[ ]
8. Initial Calibration Verification (ICV):	[✓]	[ ]
• Is the mid level (2nd source) recovery within 80 - 120% for contaminants of concern ?		
• Is the mid level (2nd source) recovery within 60-140% for non-contaminants of concern (Sporadic Marginal Failure)?		
9. Continuing Calibration Verification (CCV):		
• Was CCV conducted every 12 hours?	[✓]	[ ]
• Did SPCC meet the RF values?	[✓]	[ ]
RF		
Chloromethane 0.1	[✓]	[ ]
1,1-Dichloroethane 0.1	[✓]	[ ]
Bromoform 0.1	[✓]	[ ]
Chlorobenzene 0.3	[✓]	[ ]
1,1,2,2-Tetrachloroethane 0.3	[✓]	[ ]
• Did the CCC meet the minimum requirements (D ≤ 20%)?	[✓]	[ ]
1,1-Dichloroethene	[✓]	[ ]
Chloroform	[✓]	[ ]
1,2-Dichloropropane	[✓]	[ ]
Toluene	[✓]	[ ]
Ethylbenzene	[✓]	[ ]
Vinyl chloride	[✓]	[ ]
• Primary Evaluation: Was the mean, Drift or D ≤ 20% from the initial calibration?	[✓]	[ ]
• Alternative Evaluation: Maximum allowable Drift/D for		

	Yes	No
each target analyte is ≤ 30% when mean D ≤ 20%? N/A	[ ]	[ ]

10. Sample Analysis:

• Was the RRT of an identified component within ± 0.06 RRT units of the RRT of the standard component?	[✓]	[ ]
• Did the abundance of ions in the sample spectra agree within 30% of the major ions (> 10% of the base ion) in the standard spectra?	[✓]	[ ]
• Were the internal standard areas within the QC limits (from -50% to +200%)?	[✓]	[ ]

11. Sample Quality Control:

• Method Blanks: Were target analytes ≤ 1/2 MRL? 2-hexanone, MIBK / U @ 2QQ in 0006M	[✓]	[ ]
• LCS: Were the percent recoveries for LCS within the limits?	[✓]	[ ]
• MS/MSD: Were the percent recoveries within limits? (those affecting sample data	[✓]	[ ]
Were the RPD within control limits? 1,1,2,2,-TCA 51% UJ/Q in 0044M	[ ]	[✓]
System Monitoring Compounds (Surrogates): are surrogate recoveries within QC limits (50-150%)?	[ ]	[✓]

12. Comments (attach additional sheets if necessary):

BFB ↓ 75% (0006M) and 72% (0044M) results J or UJ/Q

Validated/Reviewed by:
Signature: L.S. Calvin

Date: 3.12.2014

Name: L.S. Calvin

VOLATILE ORGANIC ANALYSIS CHECKLIST

Project Name: RVAAP CR Site 71

Laboratory: CT Labs

Batch Number(s): 45500

Sample Delivery Group (SDG): 992316

	Yes	No
1. Holding Time:		
(a) Were samples preserved?	[✓]	[ ]
(b) Were samples analyzed within holding time?	[✓]	[ ]
2. Was the BFB tune performed at the beginning of each 12-hour period during which samples were analyzed?	[✓]	[ ]
3. Was mass assignment based on m/z 95?	[✓]	[ ]
4. Indicate if BFB ions abundance relative to m/z 95 base peak met the ions abundance criteria:		

m/z	Acceptance Criteria		
50	15.0 - 40.0 %	[✓]	[ ]
75	30.0 - 66.0 %	[✓]	[ ]
95	**100%, Base Peak**	[✓]	[ ]
96	5.0 - 9.0%	[✓]	[ ]
173	<2.0% of m/z 174	[✓]	[ ]
174	>50%	[✓]	[ ]
175	5.0 - 9.0% of mass 174	[✓]	[ ]
176	95.0 - 101.0% of m/z 174	[✓]	[ ]
177	5.0 - 9.0% of m/z 176	[✓]	[ ]

The relative ion abundance of m/z 95/96, m/z 174/176, and 176/177 are of critical importance.

The relative ion abundance of m/z 50 and 75 are of lower importance.

	Yes	No
5. Initial Calibration:		
• Did the initial calibration consist of five standards?	[✓]	[ ]
• Did the System Performance Check Compounds (SPCC) meet the minimum mean response factor (RF)?		
RF		
Chloromethane 0.1	[✓]	[ ]
1,1-Dichloroethane 0.1	[✓]	[ ]
Bromoform 0.1	[✓]	[ ]
Chlorobenzene 0.3	[✓]	[ ]
1,1,2,2-Tetrachloroethane 0.3	[✓]	[ ]
• Did the RSD meet the criteria ≤ 30% for each individual Calibration Check Compound (CCC)?		
1,1-Dichloroethene	[✓]	[ ]
Chloroform	[✓]	[ ]
1,2-Dichloropropane	[✓]	[ ]
Toluene	[✓]	[ ]
Ethylbenzene	[✓]	[ ]
Vinyl chloride	[✓]	[ ]
• Are the RSDs for the remaining target analytes ≤ 15% or r ≥ 0.99 with a mean RSD ≤ 15% with a maximum RSD ≤ 20%?	[✓]	[ ]
If the answer is "No", are the mean RSDs ≤ 15%?	N/A [ ]	[ ]
• Was manual integration "M" performed?	[✓]	[ ]
If the answer is "Yes", check for supporting documents.	[✓]	[ ]
• Was the manual integration necessary?	[✓]	[ ]
If the answer is "No", contact the laboratory inquiring about the reasons behind the manual integration, and **inform the District Chemist immediately if there were no valid reasons**.		
6. QCMDL:	[ ]	[✓]
• Was MDL Check performed?		
7. QCMRL:	[✓]	[ ]

	Yes	No
• Were QC/MRL run at the beginning and end of every daily sequence or every 12 hours?	[✓]	[ ]
• Was the QC/MRL between 70-130% R (applicable)	[✓]	[ ]
• For the non-contaminants of concern was the QC/MRL between 60-140% (Sporadic Marginal Failure) N/A	[ ]	[ ]

8. Initial Calibration Verification (ICV):

• Is the mid level (2nd source) recovery within 80 - 120% for contaminants of concern ?	[✓]	[ ]
• Is the mid level (2nd source) recovery within 60-140% for non-contaminants of concern (Sporadic Marginal Failure)? N/A		

9. Continuing Calibration Verification (CCV):

• Was CCV conducted every 12 hours?		[✓]	[ ]
• Did SPCC meet the RF values?		[✓]	[ ]
RF			
Chloromethane	0.1	[✓]	[ ]
1,1-Dichloroethane	0.1	[✓]	[ ]
Bromoform	0.1	[✓]	[ ]
Chlorobenzene	0.3	[✓]	[ ]
1,1,2,2-Tetrachloroethane	0.3	[✓]	[ ]
• Did the CCC meet the minimum requirements (D ≤ 20%)?		[✓]	[ ]
1,1-Dichloroethene		[✓]	[ ]
Chloroform		[✓]	[ ]
1,2-Dichloropropane		[✓]	[ ]
Toluene		[✓]	[ ]
Ethylbenzene		[✓]	[ ]
Vinyl chloride		[✓]	[ ]
• Primary Evaluation: Was the mean, Drift or D ≤ 20% from the initial calibration? ↓ bromomethane 20.3, methylene chloride 44.8	[ ]	[✓]	
• Alternative Evaluation: Maximum allowable Drift/D for			

	Yes	No
each target analyte is ≤ 30% when mean D ≤ 20%? N/A	[ ]	[ ]

10. Sample Analysis:

• Was the RRT of an identified component within ± 0.06 RRT units of the RRT of the standard component?	[✓]	[ ]
• Did the abundance of ions in the sample spectra agree within 30% of the major ions (> 10% of the base ion) in the standard spectra?	[✓]	[ ]
• Were the internal standard areas within the QC limits (from -50% to +200%)?	[✓]	[ ]

11. Sample Quality Control:

• Method Blanks: Were target analytes ≤ 1/2 MRL? ND	[✓]	[ ]
• LCS: Were the percent recoveries for LCS within the limits?	[✓]	[ ]
• MS/MSD: Were the percent recoveries within limits? N/A	[ ]	[ ]
Were the RPD within control limits? ↓	[ ]	[ ]
System Monitoring Compounds (Surrogates): are surrogate recoveries within QC limits (50-150%)?	[✓]	[ ]

12. Comments (attach additional sheets if necessary):

Validated/Reviewed by:
Signature: M Calvin

Date: 4.8.2014

Name: L.S. Calvin

VOLATILE ORGANIC ANALYSIS CHECKLIST

02250-0001
-0012
-0014

Project Name: RVAAP CR Site 72

Laboratory: TA - N Canton

Batch Number(s): _____

Sample Delivery Group (SDG): 240-18291

	Yes	No
1. Holding Time:		
(a) Were samples preserved?	[Y]	[ ]
(b) Were samples analyzed within holding time?	[Y]	[ ]
2. Was the BFB tune performed at the beginning of each 12-hour period during which samples were analyzed?	[Y]	[ ]
3. Was mass assignment based on m/z 95?	[Y]	[ ]
4. Indicate if BFB ions abundance relative to m/z 95 base peak met the ions abundance criteria:		

m/z	Acceptance Criteria		
50	15.0 - 40.0 %	[Y]	[ ]
75	30.0 - 66.0 %	[Y]	[ ]
95	**100%, Base Peak**	[Y]	[ ]
96	5.0 - 9.0%	[Y]	[ ]
173	<2.0% of m/z 174	[Y]	[ ]
174	>50%	[Y]	[ ]
175	5.0 - 9.0% of mass 174	[Y]	[ ]
176	95.0 - 101.0% of m/z 174	[Y]	[ ]
177	5.0 - 9.0% of m/z 176	[Y]	[ ]

The relative ion abundance of m/z 95/96, m/z 174/176, and 176/177 are of critical importance.

The relative ion abundance of m/z 50 and 75 are of lower importance.

	Yes	No
5. Initial Calibration:		
• Did the initial calibration consist of five standards?	[ ]	[ ]
• Did the System Performance Check Compounds (SPCC) meet the minimum mean response factor (RF)?		
Chloromethane (RF 0.1)	[ ]	[ ]
1,1-Dichloroethane (RF 0.1)	[ ]	[ ]
Bromoform (RF 0.1)	[N]	[ ]
Chlorobenzene (RF 0.3)	[N]	[ ]
1,1,2,2-Tetrachloroethane (RF 0.3)	[ ]	[ ]
• Did the RSD meet the criteria ≤ 30% for each individual Calibration Check Compound (CCC)?		
1,1-Dichloroethene	[N]	[ ]
Chloroform	[N]	[ ]
1,2-Dichloropropane	[ ]	[ ]
Toluene	[N]	[ ]
Ethylbenzene	[N]	[ ]
Vinyl chloride	[ ]	[ ]
• Are the RSDs for the remaining target analytes ≤ 15% or r ≥ 0.99 with a mean RSD ≤ 15% with a maximum RSD ≤ 20%?	[N]	[ ]
If the answer is "No", are the mean RSDs ≤ 15%?	[ ]	[ ]
• Was manual integration "M" performed?	[ ]	[N]
If the answer is "Yes", check for supporting documents.	[ ]	
• Was the manual integration necessary?		
If the answer is "No", contact the laboratory inquiring about the reasons behind the manual integration, and **inform the District Chemist immediately if there were no valid reasons.**	[ ]	[ ]
6. QCMDL:		
• Was MDL Check performed?	[ ]	[N]
7. QCMRL:	[ ]	[ ]

	Yes	No
• Were QC/MRL run at the beginning and end of every daily sequence or every 12 hours?	[Y]	[ ]
• Was the QC/MRL between 70-130% R	[ ]	[N]
• For the non-contaminants of concern was the QC/MRL between 60-140% (Sporadic Marginal Failure)	[N]	[ ]

8. Initial Calibration Verification (ICV):

• Is the mid level (2nd source) recovery within 80 - 120% for contaminants of concern ?	[Y]	[ ]
• Is the mid level (2nd source) recovery within 60-140% for non-contaminants of concern (Sporadic Marginal Failure)?		

9. Continuing Calibration Verification (CCV):

• Was CCV conducted every 12 hours?	[Y]	[ ]
• Did SPCC meet the RF values?	[Y]	[ ]

RF

Chloromethane	0.1	[Y]	[ ]
1,1-Dichloroethane	0.1	[Y]	[ ]
Bromoform	0.1	[Y]	[ ]
Chlorobenzene	0.3	[N]	[ ]
1,1,2,2-Tetrachloroethane	0.3	[Y]	[ ]

• Did the CCC meet the minimum requirements (D ≤ 20%)?	[N]	[ ]
1,1-Dichloroethene	[Y]	[ ]
Chloroform	[Y]	[ ]
1,2-Dichloropropane	[Y]	[ ]
Toluene	[Y]	[ ]
Ethylbenzene	[N]	[ ]
Vinyl chloride	[Y]	[ ]
• Primary Evaluation: Was the mean, Drift or D ≤ 20% from the initial calibration?	[Y]	[ ]
• Alternative Evaluation: Maximum allowable Drift/D for		

	Yes	No
each target analyte is ≤ 30% when mean D ≤ 20%?	[ ]	[ ]

10. Sample Analysis:

• Was the RRT of an identified component within ± 0.06 RRT units of the RRT of the standard component? N/A	[ ]	[ ]
• Did the abundance of ions in the sample spectra agree within 30% of the major ions (> 10% of the base ion) in the standard spectra?	[ ]	[ ]
• Were the internal standard areas within the QC limits (from -50% to +200%)?	[N]	[ ]

11. Sample Quality Control:

• Method Blanks: Were target analytes ≤ 1/2 MRL?	[ ]	[N] Sample ND
• LCS: Were the percent recoveries for LCS within the limits?	[N]	[ ]
• MS/MSD: Were the percent recoveries within limits?	[N]	[ ]
Were the RPD within control limits?	[N]	[ ]
System Monitoring Compounds (Surrogates): are surrogate recoveries within QC limits (50-150%)?	[ ]	[N]

12. Comments (attach additional sheets if necessary):

Surr: -0001 BFB 72% (85-120)
Tol-d8 73% (85-115%
-0012 BFB 76%

MS/D -0001
-0012 OK

MRL: acetone 61, 28
2-hex 65

MB: 2-hex, but sample ND
TB: acetone, but " "

Validated/Reviewed by:
Signature: Patti Meeks

Date: 3/25/14

Name: Patti Meeks

VOLATILE ORGANIC ANALYSIS CHECKLIST

-026
-030
~~-029~~
-039
-063
-083
-085

Project Name: RVAAP CR Site 72

Laboratory: TA - N Canton

Batch Number(s): _____

Sample Delivery Group (SDG): 240 - 18441-1, 18449, 18544, 18703

	Yes	No
1. Holding Time:		
(a) Were samples preserved?	[ ]	[ ]
(b) Were samples analyzed within holding time?	[X]	[ ]
2. Was the BFB tune performed at the beginning of each 12-hour period during which samples were analyzed?	[X]	[ ]
3. Was mass assignment based on m/z 95?	[X]	[ ]
4. Indicate if BFB ions abundance relative to m/z 95 base peak met the ions abundance criteria:		

m/z	Acceptance Criteria		
50	15.0 - 40.0 %	[X]	[ ]
75	30.0 - 66.0 %	[X]	[ ]
95	**100%, Base Peak**	[X]	[ ]
96	5.0 - 9.0%	[X]	[ ]
173	<2.0% of m/z 174	[X]	[ ]
174	>50%	[X]	[ ]
175	5.0 - 9.0% of mass 174	[X]	[ ]
176	95.0 - 101.0% of m/z 174	[X]	[ ]
177	5.0 - 9.0% of m/z 176	[X]	[ ]

The relative ion abundance of m/z 95/96, m/z 174/176, and 176/177 are of critical importance.

The relative ion abundance of m/z 50 and 75 are of lower importance.

	Yes	No
5. Initial Calibration:		
• Did the initial calibration consist of five standards?	[ ]	[ ]
• Did the System Performance Check Compounds (SPCC) meet the minimum mean response factor (RF)?		
Chloromethane (RF 0.1)	[ ]	[ ]
1,1-Dichloroethane (RF 0.1)	[ ]	[ ]
Bromoform (RF 0.1)	[ ]	[ ]
Chlorobenzene (RF 0.3)	[ ]	[ ]
1,1,2,2-Tetrachloroethane (RF 0.3)	[ ]	[ ]
• Did the RSD meet the criteria ≤ 30% for each individual Calibration Check Compound (CCC)?		
1,1-Dichloroethene	[ ]	[ ]
Chloroform	[ ]	[ ]
1,2-Dichloropropane	[ ]	[ ]
Toluene	[ ]	[ ]
Ethylbenzene	[ ]	[ ]
Vinyl chloride	[ ]	[ ]
• Are the RSDs for the remaining target analytes ≤ 15% or r ≥ 0.99 with a mean RSD ≤ 15% with a maximum RSD ≤ 20%?	[ ]	[ ]
If the answer is "No", are the mean RSDs ≤ 15%?	[ ]	[ ]
• Was manual integration "M" performed?	[ ]	[ ]
If the answer is "Yes", check for supporting documents.	[ ]	[ ]
• Was the manual integration necessary?		
If the answer is "No", contact the laboratory inquiring about the reasons behind the manual integration, and **inform the District Chemist immediately if there were no valid reasons.**	[ ]	[ ]
6. QCMDL:	[ ]	[ ]
• Was MDL Check performed?		
7. QCMRL:	[ ]	[ ]

	Yes	No
• Were QC/MRL run at the beginning and end of every daily sequence or every 12 hours?	[ ]	[ ]
• Was the QC/MRL between 70-130% R	[ ]	[ ]
• For the non-contaminants of concern was the QC/MRL between 60-140% (Sporadic Marginal Failure)	[ ]	[ ]
8. Initial Calibration Verification (ICV):	[ ]	[ ]
• Is the mid level (2nd source) recovery within 80 - 120% for contaminants of concern ?		
• Is the mid level (2nd source) recovery within 60-140% for non-contaminants of concern (Sporadic Marginal Failure)?		
9. Continuing Calibration Verification (CCV):		
• Was CCV conducted every 12 hours?	[ ]	[ ]
• Did SPCC meet the RF values?	[ ]	[ ]

RF

Chloromethane	0.1	[ ]	[ ]
1,1-Dichloroethane	0.1	[ ]	[ ]
Bromoform	0.1	[ ]	[ ]
Chlorobenzene	0.3	[ ]	[ ]
1,1,2,2-Tetrachloroethane	0.3	[ ]	[ ]

• Did the CCC meet the minimum requirements (D ≤ 20%)?	[ ]	[ ]
1,1-Dichloroethene	[ ]	[ ]
Chloroform	[ ]	[ ]
1,2-Dichloropropane	[ ]	[ ]
Toluene	[ ]	[ ]
Ethylbenzene	[ ]	[ ]
Vinyl chloride	[ ]	[ ]
• Primary Evaluation: Was the mean, Drift or D ≤ 20% from the initial calibration?	[ ]	[ ]
• Alternative Evaluation: Maximum allowable Drift/D for		

	Yes	No
each target analyte is ≤ 30% when mean D ≤ 20%?	[ ]	[ ]

10. Sample Analysis:

• Was the RRT of an identified component within ± 0.06 RRT units of the RRT of the standard component?	[ ]	[ ]
• Did the abundance of ions in the sample spectra agree within 30% of the major ions (> 10% of the base ion) in the standard spectra?	[ ]	[ ]
• Were the internal standard areas within the QC limits (from -50% to +200%)?	[ ]	[ ]

11. Sample Quality Control:

• Method Blanks: Were target analytes ≤ 1/2 MRL?	[ ]	[ ]
• LCS: Were the percent recoveries for LCS within the limits?	[ ]	[ ]
• MS/MSD: Were the percent recoveries within limits?	[ ]	[ ]
Were the RPD within control limits?	[ ]	[ ]
System Monitoring Compounds (Surrogates): are surrogate recoveries within QC limits (50-150%)?	[ ]	[ ]

12. Comments (attach additional sheets if necessary):

Surr:
BFB 47%, Td8 73% (-026)
BFB 58% (-030)
MS/D 0725B-0026-0001 ok
MRL acetone (61 + 28%) } -030
2-hex (65%)

IS DCB ↑ 41% in -30
~~CCV bromomethane -31%D~~

MRL (039)
2-hex 63%
~~4-methyl-2 69%~~

Validated/Reviewed by:
Signature: Patti Meeks Date: 3/26/14

Name: Patti Meeks

MS/D 0725B-0063-0001 OK - RPDs out, but diff spike amounts used

VOLATILE ORGANIC ANALYSIS CHECKLIST

Project Name: RVAAP CR Site 75

Laboratory: TA- North Canton

Batch Number(s): 65171

Sample Delivery Group (SDG): 17467

	Yes	No
1. Holding Time:		
(a) Were samples preserved?	[✓]	[ ]
(b) Were samples analyzed within holding time?	[✓]	[ ]
2. Was the BFB tune performed at the beginning of each 12-hour period during which samples were analyzed?	[✓]	[ ]
3. Was mass assignment based on m/z 95?	[✓]	[ ]
4. Indicate if BFB ions abundance relative to m/z 95 base peak met the ions abundance criteria:		

m/z	Acceptance Criteria		
50	15.0 - 40.0 %	[✓]	[ ]
75	30.0 - 66.0 %	[✓]	[ ]
95	**100%, Base Peak**	[✓]	[ ]
96	5.0 - 9.0%	[✓]	[ ]
173	<2.0% of m/z 174	[✓]	[ ]
174	>50%	[✓]	[ ]
175	5.0 - 9.0% of mass 174	[✓]	[ ]
176	95.0 - 101.0% of m/z 174	[✓]	[ ]
177	5.0 - 9.0% of m/z 176	[✓]	[ ]

The relative ion abundance of m/z 95/96, m/z 174/176, and 176/177 are of critical importance.

The relative ion abundance of m/z 50 and 75 are of lower importance.

	Yes	No
5. Initial Calibration:		
• Did the initial calibration consist of five standards?	[✓]	[ ]
• Did the System Performance Check Compounds (SPCC) meet the minimum mean response factor (RF)?		
RF		
Chloromethane 0.1	[✓]	[ ]
1,1-Dichloroethane 0.1	[✓]	[ ]
Bromoform 0.1	[✓]	[ ]
Chlorobenzene 0.3	[✓]	[ ]
1,1,2,2-Tetrachloroethane 0.3	[✓]	[ ]
• Did the RSD meet the criteria ≤ 30% for each individual Calibration Check Compound (CCC)?		
1,1-Dichloroethene	[✓]	[ ]
Chloroform	[✓]	[ ]
1,2-Dichloropropane	[✓]	[ ]
Toluene	[✓]	[ ]
Ethylbenzene	[✓]	[ ]
Vinyl chloride	[✓]	[ ]
• Are the RSDs for the remaining target analytes ~~≤ 15%~~ or r ≥ 0.99 with a mean RSD ≤ 15% with a maximum RSD ≤ 20%?	[✓]	[ ]
If the answer is "No", are the mean RSDs ≤ 15%? N/A	[ ]	[ ]
• Was manual integration "M" performed?	[ ]	[✓]
If the answer is "Yes", check for supporting documents. N/A	[ ]	[ ]
• Was the manual integration necessary?	[ ]	[ ]
If the answer is "No", contact the laboratory inquiring about the reasons behind the manual integration, and **inform the District Chemist immediately if there were no valid reasons.**		
6. QCMDL:	[ ]	[✓]
• Was MDL Check performed?		
7. QCMRL:	[✓]	[ ]

	Yes	No
• Were QC/MRL run at the beginning and end of every daily sequence or every 12 hours?	[✓]	[ ]
• Was the QC/MRL between 70-130% R	[✓]	[ ]
• For the non-contaminants of concern was the QC/MRL between 60-140% (Sporadic Marginal Failure) N/A	[ ]	[ ]

8. Initial Calibration Verification (ICV):

	[✓]	[ ]
• Is the mid level (2nd source) recovery within 80 - 120% for contaminants of concern ?		
• Is the mid level (2nd source) recovery within 60-140% for non-contaminants of concern (Sporadic Marginal Failure)? N/A		

9. Continuing Calibration Verification (CCV):

• Was CCV conducted every 12 hours?	[✓]	[ ]
• Did SPCC meet the RF values?	[✓]	[ ]

RF

Chloromethane	0.1	[✓]	[ ]
1,1-Dichloroethane	0.1	[✓]	[ ]
Bromoform	0.1	[✓]	[ ]
Chlorobenzene	0.3	[✓]	[ ]
1,1,2,2-Tetrachloroethane	0.3	[✓]	[ ]

• Did the CCC meet the minimum requirements (D ≤ 20%)?	[✓]	[ ]
1,1-Dichloroethene	[✓]	[ ]
Chloroform	[✓]	[ ]
1,2-Dichloropropane	[✓]	[ ]
Toluene	[✓]	[ ]
Ethylbenzene	[✓]	[ ]
Vinyl chloride	[✓]	[ ]
• Primary Evaluation: Was the mean, Drift or D ≤ 20% from the initial calibration?	[✓]	[ ]
• Alternative Evaluation: Maximum allowable Drift/D for		

	Yes	No
each target analyte is ≤ 30% when mean D ≤ 20%? N/A	[ ]	[ ]

10. Sample Analysis:

	Yes	No
• Was the RRT of an identified component within ± 0.06 RRT units of the RRT of the standard component?	[✓]	[ ]
• Did the abundance of ions in the sample spectra agree within 30% of the major ions (> 10% of the base ion) in the standard spectra?	[✓]	[ ]
• Were the internal standard areas within the QC limits (from -50% to +200%)?	[✓]	[ ]

11. Sample Quality Control:

	Yes	No
• Method Blanks: Were target analytes ≤ 1/2 MRL? Styrene 0.151J / U/B@20Q in sample	[✓]	[ ]
• LCS: Were the percent recoveries for LCS within the limits?	[✓]	[ ]
• MS/MSD: Were the percent recoveries within limits?	[✓]	[ ]
Were the RPD within control limits?	[✓]	[ ]
System Monitoring Compounds (Surrogates): are surrogate recoveries within QC limits ~~(50-150%)?~~ QSM limits	[✓]	[ ]

12. Comments (attach additional sheets if necessary):

Validated/Reviewed by:
Signature: L.S. Calvin

Date: 3.20.2014

Name: L.S. Calvin

77 HAC

VERSION 5
June 2002

U.S. Army Corps of Engineers Louisville District - LCG

VOLATILE ORGANIC ANALYSIS CHECKLIST

Project Name: RVAAP CR Site 77

Laboratory: TA - North Canton

Batch Number(s): 460014, 460020

Sample Delivery Group (SDG): 17525

	Yes	No
1. Holding Time:		
(a) Were samples preserved?	[✓]	[ ]
(b) Were samples analyzed within holding time?	[✓]	[ ]
2. Was the BFB tune performed at the beginning of each 12-hour period during which samples were analyzed?	[✓]	[ ]
3. Was mass assignment based on m/z 95?	[✓]	[ ]
4. Indicate if BFB ions abundance relative to m/z 95 base peak met the ions abundance criteria:		

m/z	Acceptance Criteria		
50	15.0 - 40.0 %	[✓]	[ ]
75	30.0 - 66.0 %	[✓]	[ ]
95	**100%, Base Peak**	[✓]	[ ]
96	5.0 - 9.0%	[✓]	[ ]
173	<2.0% of m/z 174	[✓]	[ ]
174	>50%	[✓]	[ ]
175	5.0 - 9.0% of mass 174	[✓]	[ ]
176	95.0 - 101.0% of m/z 174	[✓]	[ ]
177	5.0 - 9.0% of m/z 176	[✓]	[ ]

The relative ion abundance of m/z 95/96, m/z 174/176, and 176/177 are of critical importance.

The relative ion abundance of m/z 50 and 75 are of lower importance.

	Yes	No
5. Initial Calibration:		
• Did the initial calibration consist of five standards?	[✓]	[ ]
• Did the System Performance Check Compounds (SPCC) meet the minimum mean response factor (RF)?		
RF		
Chloromethane 0.1	[✓]	[ ]
1,1-Dichloroethane 0.1	[✓]	[ ]
Bromoform 0.1	[✓]	[ ]
Chlorobenzene 0.3	[✓]	[ ]
1,1,2,2-Tetrachloroethane 0.3	[✓]	[ ]
• Did the RSD meet the criteria ≤ 30% for each individual Calibration Check Compound (CCC)?		
1,1-Dichloroethene	[✓]	[ ]
Chloroform	[✓]	[ ]
1,2-Dichloropropane	[✓]	[ ]
Toluene	[✓]	[ ]
Ethylbenzene	[✓]	[ ]
Vinyl chloride	[✓]	[ ]
• Are the RSDs for the remaining target analytes ≤ 15% or r ≥ 0.99 with a mean RSD ≤ 15% with a maximum RSD ≤ 20%?	[✓]	[ ]
If the answer is "No", are the mean RSDs ≤ 15%?	N/A [ ]	[ ]
• Was manual integration "M" performed?	[ ]	[ ]
If the answer is "Yes", check for supporting documents.	[ ]	[ ]
• Was the manual integration necessary?		
If the answer is "No", contact the laboratory inquiring about the reasons behind the manual integration, and **inform the District Chemist immediately if there were no valid reasons**.	[ ]	[ ]
6. QCMDL:	[ ]	[✓]
• Was MDL Check performed?		
7. QCMRL:	[✓]	[ ]

	Yes	No
• Were QC/MRL run at the beginning and end of every daily sequence or every 12 hours?	[✓]	[ ]
• Was the QC/MRL between 70-130% R (those affecting sample data)	[✓]	[ ]
• For the non-contaminants of concern was the QC/MRL between 60-140% (Sporadic Marginal Failure) N/A	[ ]	[ ]

8. Initial Calibration Verification (ICV):

	[✓]	[ ]
• Is the mid level (2nd source) recovery within 80 - 120% for contaminants of concern ?		
• Is the mid level (2nd source) recovery within 60-140% for non-contaminants of concern (Sporadic Marginal Failure)? N/A		

9. Continuing Calibration Verification (CCV):

• Was CCV conducted every 12 hours?	[✓]	[ ]
• Did SPCC meet the RF values?	[✓]	[ ]

RF

Chloromethane	0.1	[✓]	[ ]
1,1-Dichloroethane	0.1	[✓]	[ ]
Bromoform	0.1	[✓]	[ ]
Chlorobenzene	0.3	[✓]	[ ]
1,1,2,2-Tetrachloroethane	0.3	[✓]	[ ]

• Did the CCC meet the minimum requirements (D ≤ 20%)?	[✓]	[ ]
1,1-Dichloroethene	[✓]	[ ]
Chloroform	[✓]	[ ]
1,2-Dichloropropane	[✓]	[ ]
Toluene	[✓]	[ ]
Ethylbenzene	[✓]	[ ]
Vinyl chloride	[ ]	[ ]
• Primary Evaluation: Was the mean, Drift or D ≤ 20% from the initial calibration?	[✓]	[ ]

• Alternative Evaluation: Maximum allowable Drift/D for

	Yes	No
each target analyte is ≤ 30% when mean D ≤ 20%? N/A	[ ]	[ ]

10. Sample Analysis:

	Yes	No
• Was the RRT of an identified component within ± 0.06 RRT units of the RRT of the standard component?	[✓]	[ ]
• Did the abundance of ions in the sample spectra agree within 30% of the major ions (> 10% of the base ion) in the standard spectra?	[✓]	[ ]
• Were the internal standard areas within the QC limits (from -50% to +200%)?	[✓]	[ ]

11. Sample Quality Control:

	Yes	No
• Method Blanks: Were target analytes ≤ 1/2 MRL?	[✓]	[ ]
• LCS: Were the percent recoveries for LCS within the limits?	[✓]	[ ]
• MS/MSD: Were the percent recoveries within limits?	[✓]	[ ]
Were the RPD within control limits? (with ∆ sample amts. taken into account)	[✓]	[ ]
System Monitoring Compounds (Surrogates): are surrogate recoveries within QC limits ~~(50-150%)?~~ QSM limits	[✓]	[ ]

12. Comments (attach additional sheets if necessary):

Validated/Reviewed by:
Signature: L.S. Calvin

Date: 3.28.2014

Name: L.S. Calvin

VOLATILE ORGANIC ANALYSIS CHECKLIST

Project Name: RVAAP CR Site 83

Laboratory: CT Labs

Batch Number(s): 45499

Sample Delivery Group (SDG): 99211

	Yes	No
1. Holding Time:		
(a) Were samples preserved?	[✓]	[ ]
(b) Were samples analyzed within holding time?	[✓]	[ ]
2. Was the BFB tune performed at the beginning of each 12-hour period during which samples were analyzed?	[✓]	[ ]
3. Was mass assignment based on m/z 95?	[✓]	[ ]
4. Indicate if BFB ions abundance relative to m/z 95 base peak met the ions abundance criteria:		

m/z	Acceptance Criteria		
50	15.0 - 40.0 %	[✓]	[ ]
75	30.0 - 66.0 %	[✓]	[ ]
95	**100%, Base Peak**	[✓]	[ ]
96	5.0 - 9.0%	[✓]	[ ]
173	<2.0% of m/z 174	[✓]	[ ]
174	>50%	[✓]	[ ]
175	5.0 - 9.0% of mass 174	[✓]	[ ]
176	95.0 - 101.0% of m/z 174	[✓]	[ ]
177	5.0 - 9.0% of m/z 176	[✓]	[ ]

The relative ion abundance of m/z 95/96, m/z 174/176, and 176/177 are of critical importance.

The relative ion abundance of m/z 50 and 75 are of lower importance.

	Yes	No
5. Initial Calibration:		
• Did the initial calibration consist of five standards?	[✓]	[ ]
• Did the System Performance Check Compounds (SPCC) meet the minimum mean response factor (RF)?		
RF		
Chloromethane 0.1	[✓]	[ ]
1,1-Dichloroethane 0.1	[✓]	[ ]
Bromoform 0.1	[✓]	[ ]
Chlorobenzene 0.3	[✓]	[ ]
1,1,2,2-Tetrachloroethane 0.3	[✓]	[ ]
• Did the RSD meet the criteria ≤ 30% for each individual Calibration Check Compound (CCC)?		
1,1-Dichloroethene	[✓]	[ ]
Chloroform	[✓]	[ ]
1,2-Dichloropropane	[✓]	[ ]
Toluene	[✓]	[ ]
Ethylbenzene	[✓]	[ ]
Vinyl chloride	[✓]	[ ]
• Are the RSDs for the remaining target analytes ≤ 15% or r ≥ 0.99 with a mean RSD ≤ 15% with a maximum RSD ≤ 20%?	[✓]	[ ]
If the answer is "No", are the mean RSDs ≤ 15%?	N/A [ ]	[ ]
• Was manual integration "M" performed?	[✓]	[ ]
If the answer is "Yes", check for supporting documents.	[✓]	[ ]
• Was the manual integration necessary?	[✓]	[ ]
If the answer is "No", contact the laboratory inquiring about the reasons behind the manual integration, and **inform the District Chemist immediately if there were no valid reasons.**		
6. QCMDL:	[ ]	[✓]
• Was MDL Check performed?		
7. QCMRL:	[✓]	[ ]

	Yes	No
• Were QC/MRL run at the beginning and end of every daily sequence or every 12 hours?	[✓]	[ ]
• Was the QC/MRL between 70-130% R Chloroethane 65% closing - UJ/C -0005M	[ ]	[✓]
• For the non-contaminants of concern was the QC/MRL between 60-140% (Sporadic Marginal Failure) N/A	[ ]	[ ]

8. Initial Calibration Verification (ICV):

those affecting sample data	[✓]	[ ]
• Is the mid level (2nd source) recovery within 80 - 120% for contaminants of concern ? methylene chloride ↑ (J/B in SA - no ICV cal. qual) UJC		
• Is the mid level (2nd source) recovery within 60-140% for non-contaminants of concern (Sporadic Marginal Failure)? N/A		

9. Continuing Calibration Verification (CCV):

• Was CCV conducted every 12 hours?	[✓]	[ ]
• Did SPCC meet the RF values?	[✓]	[ ]

RF

Chloromethane	0.1	[✓]	[ ]
1,1-Dichloroethane	0.1	[✓]	[ ]
Bromoform	0.1	[✓]	[ ]
Chlorobenzene	0.3	[✓]	[ ]
1,1,2,2-Tetrachloroethane	0.3	[✓]	[ ]

• Did the CCC meet the minimum requirements (D ≤ 20%)?	[✓]	[ ]
1,1-Dichloroethene	[✓]	[ ]
Chloroform	[✓]	[ ]
1,2-Dichloropropane	[✓]	[ ]
Toluene	[✓]	[ ]
Ethylbenzene	[✓]	[ ]
Vinyl chloride	[✓]	[ ]
• Primary Evaluation: Was the mean, Drift or D ≤ 20% from the initial calibration?	[ ]	[✓]
UJC methylene chloride ↓ 36.6% D / 130% R see comments		
• Alternative Evaluation: Maximum allowable Drift/D for		

	Yes	No
each target analyte is ≤ 30% when mean D ≤ 20%? N/A	[ ]	[ ]

10. Sample Analysis:

• Was the RRT of an identified component within ± 0.06 RRT units of the RRT of the standard component?	[✓]	[ ]
• Did the abundance of ions in the sample spectra agree within 30% of the major ions (> 10% of the base ion) in the standard spectra?	[✓]	[ ]
• Were the internal standard areas within the QC limits (from -50% to +200%)?	[✓]	[ ]

11. Sample Quality Control:

• Method Blanks: Were target analytes ≤ 1/2 MRL? RL=10 >½ @5.1 methylene chloride u/B in 0005M at level of contamination	[ ]	[✓]
• LCS: Were the percent recoveries for LCS within the limits? methylene chloride ↑ not reportable in sample	[ ]	[✓]
• MS/MSD: Were the percent recoveries within limits? N/A	[ ]	[ ]
Were the RPD within control limits?	[ ]	[ ]
System Monitoring Compounds (Surrogates): are surrogate recoveries within QC limits (50-150%)?	[✓]	[ ]

12. Comments (attach additional sheets if necessary):

CCV: methylene chloride %D ↓ 42.4% -0005M UJ/C
Assoc TBs - no reportable detects.

Validated/Reviewed by:
Signature:

LSCalvin

Date: 4.3.2014

Name: L.S. Calvin

APPENDIX G

IDW DISPOSAL LETTER REPORT

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February 8, 2013

Mr. Eric Cheng, P.E.
Technical Manager
U.S. Army Corps of Engineers, Louisville District
600 Martin Luther King Jr. Place
Louisville, Kentucky 40202-0059

Subject: Investigation-Derived Waste Letter Report
2011 Performance-Based Acquisition
Environmental Investigation and Remediation
14 Compliance Restoration Sites
Ravenna Army Ammunition Plant, Ravenna, Ohio
Contract No. W912QR-04-D-0039
Delivery Order No. 0004
Project No. 5161.004

Dear Mr. Cheng:

Investigation activities in accordance with the Site Inspection and Remedial Investigation Work Plan (October 2012) were conducted from November 5, 2012 through December 12, 2012. These activities resulted in the generation of Investigation-Derived Waste (IDW) consisting of soil cuttings from direct push borings and equipment decontamination fluids. The purpose of this letter report is to characterize and classify IDW for disposal and to propose methods for disposing the IDW.

This letter report includes a summary of IDW generated, the origin of the IDW (Table 1), as well as proposed classification and recommendations for disposal of the IDW (Table 2). This letter report follows guidance established by the following:

1.) The Facility-Wide Sampling and Analysis Plan (SAIC 2011), and
2.) Final Site Inspection and Remedial Investigation (SI/RI) Work Plan (ECC 2012).

Three distinct IDW streams were sampled as part of the SI/RI Work Plan field activities. Each waste stream was composited and sampled per requirements outlined in Section 7.0 of the Facility-Wide Sampling and Analysis Plan (FWSAP) and SI/RI Work Plan. IDW streams generated are:

- One (1) 55-gallon drum containing equipment decontamination fluids (Liquinox, distilled water [DI], and diluted hydrochloric/nitric acids), sampled on December 12, 2012,
- Three (3) 55-gallon drums containing soils from SI/RI sampling activities, sampled on December 12, 2012, and
- One (1) 20-gallon drum containing soils from RI sampling activities, sampled on December 21, 2012.

Per Section 7.0 of the Facility-Wide SAP, three composite samples were collected for Toxicity Characteristic Leaching Procedure (TCLP) parameters and submitted for laboratory analysis to characterize the following waste streams for disposal:

- Liquid IDW

The liquid sample (070-0059-0001-IDW TCLP) characterized one drum of decontamination fluid containing 2% hydrochloric/10% nitric acids, DI water, and Liquinox.

- Solid IDW

The solid sample (070-0058-0001-IDW TCLP) was composited from three, 55-gallon drums containing soil cuttings.

A third solid sample (076-0146-0001-IDW-TCLP) was composited from one, 20-gallon drum containing soil cuttings. This drum was sampled separately as the soils may have been impacted with poly chlorinated biphynels (PCBs). These soils originated from drill cuttings collected at Building U-20 at CC-RVAAP-76 Depot Area. Building U-20 is a former incinerator.

Table 1 summarizes the IDW samples collected.

Table 1 – Summary of Site Inspection/Remedial Investigation Investigation-Derived Waste

Container Type and Size	Contents	Generation Dates	Sample ID
55- Gallon Closed Top Drum	De-con fluids from sampling equipment and decontamination	5 November 2012 through 12 December 2012	070-0059-0001-IDW TCLP
55- Gallon Closed Top Drum	Soil Cuttings	5 November 2012 through 12 December 2012	070-0058-0001-IDW TCLP
55- Gallon Closed Top Drum	Soil Cuttings	5 November 2012 through 12 December 2012	070-0058-0001-IDW TCLP
55- Gallon Closed Top Drum	Soil Cuttings	5 November 2012 through 12 December 2012	070-0058-0001-IDW TCLP
20-Gallon Closed Top Drum	Soil Cuttings	21 December 2012	076-0146-0001-IDW-TCLP

Per Section 8.0 of the FWSAP, non-indiginous IDW is characterized for disposal on the basis of composite samples collected and submitted for laboratory analysis to characterize the waste stream for disposal. Upon receipt of analytical results from the laboratory, the analytical data was reviewed to determine if the waste was potentially hazardous. This review consisted of a comparison of the analytical results against the TCLP criteria presented in Table 8-1 and 8-2, Maximum Concentration of Contaminants for the Toxicity Characteristic (40 Code of Federal Regulation (CFR) 261.24), as presented in the FWSAP. The results of this review are summarized below.

IDW –FLUIDS

One liquid composite sample (070-0059-0001-IDW TCLP) was collected. **Attachment 1** presents the analytical laboratory data for TCLP analysis for IDW fluids generated during the November 5 through December 12, 2012 field activities. All analytical results were below regulatory levels as presented in Tables 8-1 and 8-2 in the FWSAP.

IDW –SOLIDS

Two solid composite samples (070-0059-0001-IDW TCLP, and 076-0146-0001-IDW TCLP) were collected. **Attachment 2** presents the analytical laboratory data for TCLP analysis for IDW solids generated during the November 5 through December 12, 2012 field activities. All analytical results were below regulatory levels as presented in Tables 8-1 and 8-2 in the FWSAP.

Please note the IDW addressed in this letter report has been characterized under provisions of the FWSAP using TCLP analysis and process knowledge. Unless RVAAP has additional information that would result in the IDW meeting, or containing materials that meet, the definition of a listed hazardous waste as defined in 40 CFR Part 261 Subpart D, it is recommended that the IDW, as presently characterized, be disposed as summarized in Table 2.

Table 2 - Summary of Final Waste Classification and Recommended Options

Medium	Waste Criterion	Disposal Recommendation
Water	Inorganics, Organics	Permitted Wastewater Treatment Facility or Permitted Solid Waste Facility
Soils	Inorganics, Organics	Permitted Wastewater Treatment Facility or Permitted Solid Waste Facility
Soils	Inorganics, Organics	Permitted Wastewater Treatment Facility or Permitted Solid Waste Facility

Since RVAAP, under RCRA, is the generator of this material, ECC requests concurrence or direction on the waste classification prior to disposal to ensure materials are properly disposed. Following your direction and immediate approval, ECC will proceed with appropriate waste disposal.

Should you have any questions or wish to discuss the proposed activities further, please do not hesitate to contact the undersigned at 508-229-2270, ext. 109, or via email.

Regards,
ECC



Alexander Easterday
Sr. Project Manager

Copy: Ann Wood, ARNGD
Katie Tait, OHARNG
Mark Patterson, RVAAP Facility Manager
Eileen Mohr, Ohio EPA
Kevin Palombo, Ohio EPA

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ATTACHMENTS

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Attachment 1 – IDW Analytical Results – Fluids

Analysis Type	Chemical	Units	Reporting Limit (mg/L)	TCLP Criteria (mg/L)	Results
					070-0059-0001-IDW-TCLP
Semi-Volatile Organics	1,4-Dichlorobenzene	mg/L	0.0040	7.50	0.00080 U
Semi-Volatile Organics	2,4,5-Trichlorophenol	mg/L	0.020	400.00	0.00080 U
Semi-Volatile Organics	2,4,6-Trichlorophenol	mg/L	0.020	2.00	0.00080 U
Semi-Volatile Organics	2,4-Dinitrotoluene	mg/L	0.020	0.13	0.00080 U
Semi-Volatile Organics	Hexachlorobenzene	mg/L	0.020	0.13	0.00010 U
Semi-Volatile Organics	Hexachlorobutadiene	mg/L	0.020	0.50	0.00080 U
Semi-Volatile Organics	Hexachloroethane	mg/L	0.020	3.00	0.00080 U
Semi-Volatile Organics	Nitrobenzene	mg/L	0.0040	2.00	0.00010 U
Semi-Volatile Organics	Pentachlorophenol	mg/L	0.040	100.00	0.0024 U
Semi-Volatile Organics	Pyidine	mg/L	0.020	5.00	0.00080 U
TCLP Metals	Arsenic	mg/L	2.0	5.00	0.0040 U
TCLP Metals	Barium	mg/L	40	100.00	0.24 J
TCLP Metals	Cadmium	mg/L	0.40	1.00	0.0040 U
TCLP Metals	Chromium	mg/L	2.0	5.00	0.012 J
TCLP Metals	Lead	mg/L	2.0	5.00	0.015 J
TCLP Metals	Mercury	mg/L	0.0020	0.20	0.00020 J
TCLP Metals	Selenium	mg/L	1.0	1.00	0.040 U
TCLP Metals	Silver	mg/L	2.0	5.00	0.0020 U
TCLP Herbicides	2,4,5-TP (Silvex)	mg/L	0.050	1.00	0.00010 U
TCLP Herbicides	2,4-D	mg/L	0.25	10.00	0.00039 J
TCLP Pesticides and/or PCBs	Chlordane	mg/L	0.030	0.03	0.000079 U
TCLP Pesticides and/or PCBs	Endrin	mg/L	0.010	0.02	0.000026 U
TCLP Pesticides and/or PCBs	Gamma-BHC (Lindane)	mg/L	0.010	0.40	0.000024 U
TCLP Pesticides and/or PCBs	Heptachlor	mg/L	0.010	0.01	0.000024 U
TCLP Pesticides and/or PCBs	Heptachlor Epoxide	mg/L	0.010	0.01	0.000024 U
TCLP Pesticides and/or PCBs	Methoxychlor	mg/L	0.030	10.00	0.000077 U
TCLP Pesticides and/or PCBs	Toxaphene	mg/L	0.50	0.50	0.0012 U
Volatile Organics	1,1-Dichloroethene	mg/L	0.050	0.7	0.025 U
Volatile Organics	1,2-Dichloroethane	mg/L	0.050	0.50	0.025 U
Volatile Organics	2-Butanone	mg/L	0.50	200	0.050 U
Volatile Organics	Benzene	mg/L	0.050	0.50	0.025 U
Volatile Organics	Carbon Tetrachloride	mg/L	0.050	0.50	0.025 U
Volatile Organics	Chlorobenzene	mg/L	0.050	100.00	0.025 U
Volatile Organics	Chloroform	mg/L	0.050	6.00	0.027 J
Volatile Organics	Tetrachloroethylene	mg/L	0.050	0.70	0.025 U
Volatile Organics	Trichloroethene	mg/L	0.050	0.50	0.025 U
Volatile Organics	Vinyl Chloride	mg/L	0.050	0.2	0.025 U

Notes:
J – Estimated Value
mg/L – milligrams per liter
U- Undetected above laboratory reporting limit

Attachment 2 – IDW Analytical Results – Solids

Analysis Type	Chemical	Units	Reporting Limit (mg/L)	TCLP Criteria (mg/L)	Results	
					070-0058-0001-IDW- TCLP	076-0146-0001-IDW-TCLP[1]
Semi-Volatile Organics	1,4-Dichlorobenzene	mg/L	0.0040	7.50	0.00080 U	0.00080 U
Semi-Volatile Organics	2,4,5-Trichlorophenol	mg/L	0.020	400.00	0.00080 U	0.00080 U
Semi-Volatile Organics	2,4,6-Trichlorophenol	mg/L	0.020	2.00	0.00080 U	0.00080 U
Semi-Volatile Organics	2,4-Dinitrotoluene	mg/L	0.020	0.13	0.00080 U	0.00080 U
Semi-Volatile Organics	Hexachlorobenzene	mg/L	0.020	0.13	0.00010 U	0.00010 U
Semi-Volatile Organics	Hexachlorobutadiene	mg/L	0.020	0.50	0.00080 U	0.00080 U
Semi-Volatile Organics	Hexachloroethane	mg/L	0.020	3.00	0.00080 U	0.00080 U
Semi-Volatile Organics	Nitrobenzene	mg/L	0.0040	2.00	0.00010 U	0.00010 U
Semi-Volatile Organics	Pentachlorophenol	mg/L	0.040	100.00	0.0024 U	0.0024 U
Semi-Volatile Organics	Pyidine	mg/L	0.020	5.00	0.00080 U	0.00080 U
TCLP Metals	Arsenic	mg/L	0.50	5.00	0.0044 J	0.0045 J
TCLP Metals	Barium	mg/L	10	100.00	0.29 J	0.28 J
TCLP Metals	Cadmium	mg/L	0.10	1.00	0.0016 J	0.00089 J
TCLP Metals	Chromium	mg/L	0.50	5.00	0.0024 J	0.0035 J
TCLP Metals	Lead	mg/L	0.50	5.00	0.0090 J	0.0050 J
TCLP Metals	Mercury	mg/L	0.0020	0.20	0.00020 J	0.00020 J
TCLP Metals	Selenium	mg/L	0.25	1.00	0.0066 J	0.0054 J
TCLP Metals	Silver	mg/L	0.50	5.00	0.0050 U	0.0050 U
TCLP Herbicides	2,4,5-TP (Silvex)	mg/L	0.050	1.00	0.00010 U	0.00010 U
TCLP Herbicides	2,4-D	mg/L	0.25	10.00	0.00025 U	0.00025 U
TCLP Pesticides	Chlordane	mg/L	0.030	0.03	0.000079 U	0.000079 U
TCLP Pesticides	Endrin	mg/L	0.010	0.02	0.000026 U	0.000026 U
TCLP Pesticides	Gamma-BHC (Lindane)	mg/L	0.010	0.40	0.000024 U	0.000024 U
TCLP Pesticides	Heptachlor	mg/L	0.010	0.01	0.000024 U	0.000024 U
TCLP Pesticides	Heptachlor Epoxide	mg/L	0.010	0.01	0.000024 U	0.000024 U
TCLP Pesticides	Methoxychlor	mg/L	0.030	10.00	0.000077 U	0.000077 U
TCLP Pesticides	Toxaphene	mg/L	0.5	0.50	0.0012 U	0.0012 U
Volatile Organics	1,1-Dichloroethene	mg/L	0.025	0.7	0.013 U	0.013 U
Volatile Organics	1,2-Dichloroethane	mg/L	0.025	0.50	0.013 U	0.013 U
Volatile Organics	2-Butanone	mg/L	0.25	200	0.025 U	0.025 U
Volatile Organics	Benzene	mg/L	0.025	0.50	0.013 U	0.013 U
Volatile Organics	Carbon Tetrachloride	mg/L	0.025	0.50	0.013 U	0.013 U
Volatile Organics	Chlorobenzene	mg/L	0.025	100.00	0.013 U	0.013 U
Volatile Organics	Chloroform	mg/L	0.025	6.00	0.013 U	0.013 U
Volatile Organics	Tetrachloroethylene	mg/L	0.025	0.70	0.025 U	0.025 U
Volatile Organics	Trichloroethene	mg/L	0.025	0.50	0.013 U	0.013 U
Volatile Organics	Vinyl Chloride	mg/L	0.025	0.20	0.013 U	0.013 U
PCBs	Aroclor – 1221	µg/Kg	60	NC	NA	30 U
PCBs	Aroclor – 1016	µg/Kg	78	NC	NA	30 U
PCBs	Aroclor – 1232	µg/Kg	54	NC	NA	30 U
PCBs	Aroclor – 1242	µg/Kg	48	NC	NA	30 U
PCBs	Aroclor – 1248	µg/Kg	66	NC	NA	30 U
PCBs	Aroclor – 1254	µg/Kg	66	NC	NA	30 U
PCBs	Aroclor – 1260	µg/Kg	68	NC	NA	30 U

Notes:

1 – Sample analysis included PCBs. IDW originated from Building U-20 located at CC-RVAAP-76 Depot Area.
NA – Not Analyzed
J – Estimated Value
mg/L – milligrams per liter
U- Undetected above laboratory reporting limit
µg/Kg – micrograms per kilogram
NC – No Criteria

Ohio EPA
40 years and moving forward

John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

March 15, 2013

CERTIFIED MAIL
7012 1010 0000 9467 5335

Mr. Mark Patterson, Facility Manager
Ravenna Army Ammunition Plant
8451 State Route 5
Ravenna, OH 44266

Re: Investigation-Derived Waste Report 2011 Performance-Based Acquisition Environmental Investigation and Remediation 14 Compliance Restoration Sites, Ravenna Army Ammunition Plant (Ohio EPA ID # 267-000859-155)

Dear Mr. Patterson:

The Ohio Environmental Protection Agency (Ohio EPA) has received and reviewed the Investigation-Derived Waste Report 2011 Performance-Based Acquisition Environmental Investigation and Remediation 14 Compliance Restoration Sites, Ravenna Army Ammunition Plant. The document was received at Ohio EPA, Northeast District Office (NEDO), Division of Environmental Response and Revitalization (DERR) on March 7, 2013. The document was prepared for the U.S. Army Corps of Engineers (USACE), Louisville District by Environmental Chemical Corporation (ECC), under contract No. W912QR-04-D-0039.

This report is approved and Ohio EPA concurs that the IDW (soil cuttings) from the December 12, 2012 sampling event may be disposed as contaminated, non-hazardous waste and that it be sent off-site for disposal to a permitted water treatment facility.

If you have any questions, please call Eileen Mohr, NEDO, DERR at (330) 963-1221.

Sincerely,

Nancy Zikmanis

Nancy Zikmanis, CHMM, Environmental Supervisor
Division of Environmental Response and Revitalization

ED:NZ/kss

cc: Katie Tate, OHNGB
Ann Wood, NGB

ec: Vicki Deppisch, Ohio EPA, NEDO, DERR
Eileen Mohr, Ohio EPA, NEDO, DERR
Justin Burke, Ohio EPA, NEDO, DERR

E-MAILED
3-18-2013 GH

Scanned
By: GH
Date: 3-18-2013

Northeast District Office • 2110 East Aurora Road • Twinsburg, OH 44087-1924
www.epa.ohio.gov • (330) 963-1200 • (330) 487-0769 (fax)

RECEIVED
3-18-2013 GH

UNITED STATES POSTAL SERVICE

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• Sender: Please print your name, address, and ZIP+4 in this box •

OHIO EPA
NORTHEAST DISTRICT OFFICE
2110 EAST AURORA ROAD
TWINSBURG OH 44087

SENDER: *COMPLETE THIS SECTION*

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

MARK PATTERSON
RAVENNA ARMY AMMUNITION PLANT
8451 STATE ROUTE 5
RAVENNA OH 44266

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X [signature] ☒ Agent ☐ Addressee

B. Received by *(Printed Name)* Gail Harris
C. Date of Delivery 3-18-2013

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☒ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

2. Article Number 7012 1010 0000 9467 5335 (03/15/13 K.Schillo for ED)
(Transfer from service label)

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

COPY

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
OH5 210 020 736	1	330-677-0785	040513-01

5. Generator's Name and Mailing Address
Ravenna Army Ammunition Plant
8451 State Route 5
Ravenna, Ohio 44266
Generator's Phone: 330-358-2920

Generator's Site Address (if different than mailing address)
Same

6. Transporter 1 Company Name: Emerald Environmental Services, Inc
U.S. EPA ID Number: OHR 000 102 053

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address
Vexor Technology
955 West Smith Road
Medina, Ohio 44256
Facility's Phone: 330-721-9773
U.S. EPA ID Number: OHD 077 772 895

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	Non DOT Regulated, Non Hazardous Material (Decon Fluid)	001	DM	~~$300~~ EST 40	G	
2.	Non DOT Regulated, Non Hazardous Material (Soil Cuttings)	004	DM	EST 1100	P	
3.						
4.						

13. Special Handling Instructions and Additional Information
9. 1.) Approval # VEX25095
9. 2.) Approval # VEX25094
Alternative Emergency Contact: John Miller 508-509-1784
Job Number 13-0081 EES

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

Generator's/Offeror's Printed/Typed Name: Christy Esler
Signature: Christy Esler
Month: 4 Day: 5 Year: 2013

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: SCOTT PFAHL
Signature:
Month: 4 Day: 5 Year: 13

Transporter 2 Printed/Typed Name:
Signature:
Month: Day: Year:

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

17c. Signature of Alternate Facility (or Generator)
Month: Day: Year:

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: JOE MYERS
Signature:
Month: 4 Day: 5 Year: 13

169-BLC-O 5 11977 (Rev. 8/06)

TRANSPORTER #1

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APPENDIX H

SITE PHOTOGRAPHS

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View of sampling equipment set up along east (rear) side of Building 1037. Area of former sump is indicated by stakes with flagging in background. Direct push drill rig is setting on soil boring location.



View of staked soil boring locations at former waste water sump at Building 1037. Manhole surrounded by stakes/flagging to prevent site workers from stepping on manhole cover.



View of sample collection at CC RVAAP-77.

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View of direct push drill rig setting up on boring location at CC RVAAP-77.



View of open manhole next to former laundry sump.



View down manhole next to former laundry sump. Sealed pipe at top of photo leads to former laundry sump. A sediment sample was planned to be collected from the bottom of the manhole, however no sediment was observed in the manhole.



View of sample intervals 1-4 ft and 4-7 ft from soil boring SB2. Photo # 1 and Photo #2.



View of sample intervals 1-4 ft and 4-7 ft from soil boring SB5. Circular object on the table to the right is a scale to weigh sample containers to ensure enough sample material has been collected to complete analysis. Photo # 3.